

D International cooperation to make trade and AI work for all

As trade shapes the development and deployment of AI, and AI could, in turn, reshape global trade, stronger international trade cooperation, both at the WTO and with other international organizations, is important to ensure that AI is beneficial and that the benefits of AI are more widely shared. This chapter explores how the WTO can better address emerging trade-related challenges posed by AI. While existing WTO rules already promote more open, predictable trade in AI-related goods and services, it could be rendered more inclusive by improving AI-related market access, regulatory coherence and support for developing economies. The WTO can help advance a more inclusive AI future that requires open, predictable, forward-looking, flexible trade policies and enhanced international cooperation. It can help to foster dialogue on trade-related aspects of AI and collaborate with other international organizations to address digital divides, manage environmental and labour impacts of AI, and respond to market concentration in the AI sector.

Contents

1. Inclusive AI would benefit from more cooperation at the WTO	88
2. Greater coordination between the WTO and other international organizations is needed for more inclusive AI	103
3. Conclusions	111

KEY POINTS

- WTO agreements already help to support AI development and deployment by promoting open markets in AI-related goods and services, supporting AI innovation and diffusion through intellectual property rights and knowledge-sharing, and encouraging greater regulatory coherence on trade-related aspects of AI.
- An increasing number of trade-related policies relevant to AI have been discussed in various WTO bodies, although these have so far focused more on goods than on services.
- Improving the predictability of trade in AI-related goods and services – by lowering bound tariffs, reducing or eliminating applied tariffs on key raw materials and equipment, and improving market access commitments in AI-related services – could encourage AI investment, especially in developing economies, and help to make it more affordable and inclusive.
- Addressing regulatory fragmentation in AI-related policies would benefit both developers and users by fostering innovation through better access to inputs, markets and opportunities across borders – an objective the WTO can support through more informed discussion on trade-related aspects of digital policy, including data governance.
- Leveraging AI to implement WTO agreements presents both opportunities and challenges: it can help streamline trade procedures, particularly benefiting small enterprises and developing economies, but concerns about confidentiality, potential bias and a lack of transparency and fairness must be addressed to uphold WTO principles.
- Cross-institutional collaboration is important, as many trade-related AI challenges extend beyond the WTO's scope and require more coordinated efforts with other international organizations and initiatives to ensure that trade, competition, labour and environmental policies support more inclusive AI.

1. Inclusive AI would benefit from more cooperation at the WTO

International cooperation can help to address negative cross-border spillovers, improve the credibility of domestic policies and encourage better policy coordination. These considerations are just as relevant – if not more so – in the context of AI, given its far-reaching implications across borders, sectors and policy areas. As AI becomes more integrated in the global economy, trade-related challenges are becoming more prominent. An open and predictable trade environment is important to support AI development and deployment, by facilitating access to data, computational resources, talent and global markets. The ability of AI creators to operate across borders supports innovation and helps broaden the diffusion of AI benefits. However, while differences in national approaches to data governance, AI regulation, IP and competition policy reflect domestic priorities, they can also contribute to regulatory fragmentation, with potential implications for international trade. In the absence of cooperation, governments may resort to beggar-thy-neighbour measures, such as export restrictions on critical inputs or laxer regulations, which can have unintended effects on other economies and on the inclusiveness of AI development and deployment. Similarly, trade uncertainty and a lack of credible domestic policies may affect trust in digital markets and reduce incentives for AI-related investment, innovation and trade.

This chapter examines the role of international cooperation in addressing these challenges and ensuring that the gains from AI are more equitably distributed. It explores how the WTO can contribute to making AI more inclusive by fostering open, predictable and transparent trade in AI-related goods and services, and by providing a platform for dialogue and rulemaking. It highlights the information-sharing function of WTO commitments, and the potential for clarifying disciplines to meet emerging needs. The chapter then looks beyond the WTO, to examine how greater coherence is needed in trade policy and other relevant policy areas, such as digital infrastructure development, competition law, environmental policy and investment policy, to bridge the digital divide and prevent the fragmentation of AI governance. By promoting synergies across these

domains, international cooperation can help to reduce wasteful obstacles to trade and to anchor regulatory commitments. Together, these efforts can foster a global policy environment that supports inclusive and sustainable AI-driven growth.

(a) The WTO covers many aspects of AI trade, making its benefits more accessible for all

WTO agreements cover important AI-related trade issues that enable and support the development and deployment of AI. This includes promoting predictable and non-discriminatory market access for essential hardware, information and communication technology (ICT), and digital goods and services; promoting IP rights related to AI algorithms, training data and outputs; and preventing trade distortions and unfair competitive advantages stemming from AI subsidies. It also involves fostering transparent, least-trade-restrictive and less fragmented standards, technical regulations and conformity assessments for AI goods (WTO, 2024a).

(i) *WTO agreements help to make AI-related goods and services more widely available and affordable*

The General Agreement on Tariffs and Trade (GATT) promotes non-discriminatory trade in AI-related goods, including the raw materials used to produce them. The GATT's non-discrimination principles – most-favoured-nation (MFN) and national treatment – help to make access to AI-related goods more inclusive by promoting equal treatment of imports from all WTO members. The GATT further commits WTO members to reduce their tariffs on AI-related goods, including by binding them at agreed maximum levels. Predictable tariffs reduce uncertainty and lower risks and costs for firms of all sizes, including micro, small and medium-sized enterprises (MSMEs), making it easier for them to trade and invest in AI. This helps to broaden access to AI-related goods in all economies, including developing economies.

The WTO's Information Technology Agreement (ITA) further supports AI by making ICT that is key for the development and application of AI more affordable. This plurilateral agreement builds on the GATT by binding and eliminating customs duties on a wide range of IT goods, including many that are essential for AI, such as semiconductors and computer equipment (WTO, 2018). As of 2025, 82 WTO members, representing about 97 per cent

of world trade in IT goods, are parties to the ITA. Furthermore, in 2015, 54 of these members agreed to eliminate tariffs on 201 additional IT-related goods under the ITA Expansion (ITA 2) Agreement. Discussions continue on the possibility of further expanding its scope. The tariff elimination under both ITA and ITA 2 is applied on an MFN basis, thereby benefitting all WTO members. This provides firms producing AI-enabling goods, including those in economies that are not part of the ITA, with the opportunity to engage in AI-related international markets under more open and predictable conditions.

The WTO's General Agreement on Trade in Services (GATS) supports more open and predictable trade in services involved in developing and deploying AI. As discussed in Chapter B, computer and telecommunications services supply the technical infrastructure, specialized software, data processing and expertise needed for AI systems. AI is also reshaping trade in services by enhancing productivity, lowering costs and creating new kinds of services. AI-related services can be traded internationally through various channels, including the cross-border digital supply of AI-related services (such as software development, data analysis or remote consulting), the establishment of a commercial presence abroad to deploy or maintain AI systems, and the temporary movement of specialists who travel to deliver or customize AI solutions. The cost of trading AI-related services internationally depends on several factors, including the trade policies that economies apply to services. Under the GATS, WTO members make commitments that set the level of market access openness and guarantee non-discriminatory treatment for foreign suppliers of AI-related services. A total of 116 WTO members has made commitments with regard to telecommunications services, and about 60 per cent have also made specific commitments with regard to computer services (WTO, 2019). GATS commitments help make the trade environment for AI-related services more predictable, supporting the monetization of AI technologies, attracting investment, and enabling international scaling of operations, thus fostering the development and deployment of AI across borders. However, gaps may exist between these commitments and the policies actually applied. For example, a country's GATS schedule might list restrictions on foreign AI firms offering data-processing services, but in practice those restrictions are not applied. Such

discrepancies reduce predictability of AI-related GATS commitments.

The WTO's moratorium on customs duties for electronic transmissions can support AI-related digital trade, though members have differing views on its renewal. In place since 1998 and periodically renewed, the WTO moratorium prevents the imposition of customs tariffs on electronic transmissions, keeping costs lower and facilitating digital trade, including in AI-related trade. Its most recent extension, agreed at the 13th WTO Ministerial Conference in 2024, keeps the moratorium in place until the 14th Ministerial Conference (due to be held in March 2026) or 31 March 2026, whichever comes first. The Ministerial Decision on the Work Programme on Electronic Commerce¹ further notes that the moratorium will expire on that date. There is, however, no consensus among WTO members on the renewal of the moratorium on customs duties. Supporters of the moratorium argue that it has fostered a stable environment for digital trade, while others voice concerns about unclear scope, potential revenue losses and constraints on their ability to respond to evolving technological developments and industrial needs (IMF et al., 2023). WTO members have long debated whether certain digital products fall under the rules for goods or services, an issue that may become more relevant in the context of AI systems, though it is not yet discussed in the WTO context.

(ii) The WTO can help promote AI innovation and adoption while safeguarding against unfair trade practices

The WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) can support AI development and deployment by encouraging innovation. Although it does not include any explicit provisions on AI, its rules apply equally to AI-related products, such as AI training data, chips and computer programmes, including algorithms, reflecting its technological neutrality. The TRIPS Agreement sets minimum standards for the protection and enforcement of IP rights related to AI technologies and AI-generated creations, including copyrights, patents, trademarks, industrial designs and trade secrets. As discussed in Chapter C, IP rights provide the legal certainty and exclusive, time-limited control over the innovation that can incentivize investment in AI research and development (R&D).² This, in turn, encourages innovators to

take risks that advance AI-related technologies (WTO, 2020). Effective IP frameworks can also facilitate cross-border AI technology pooling, which can strengthen complex global supply chains and support the creation of AI-driven intangible assets, as well as facilitating international trade in IP-protected AI systems, algorithms and related licences. Moreover, well-functioning IP ecosystems can foster collaboration between public research institutions and private firms, allowing commercially viable AI-related innovations to benefit from broader diffusion prospects. Trade openness, supported by other WTO agreements, further helps to create the enabling environment that AI developers need to access markets, inputs and opportunities across borders.

While the use of copyrighted material to train AI models and the determination of ownership of AI-generated content raise legal challenges, the TRIPS Agreement provides a framework for protecting the rights of creators. As discussed in Chapter B, AI – and in particular generative AI models, such as large language models and image generators – relies on vast datasets for training. These data are often compiled by scraping internet content, which includes material protected by copyright and made available for sale, such as articles, books, images and videos. This practice has sparked significant legal and ethical debates (Samuelson, 2023). For instance, recent lawsuits have involved Google and OpenAI facing allegations of large-scale data scraping without publishers' consent. Whether exceptions and limitations to copyrights apply to training data, the TRIPS Agreement covers the conditions under which such exceptions, including for text- and data-mining in AI development, may be granted. Similarly, although it is unclear whether IP rights protect works created solely by AI, their possible application to human-led innovations and creations assisted by AI may give inventors and creators a way to safeguard their economic interests and promote further innovation (WTO, 2024a).

The TRIPS Agreement seeks to incentivize AI innovation and mechanisms that promote the diffusion and licensing of AI-related technology. It gives owners of IP rights related to AI technologies the flexibility to decide how openly or restrictively they exercise those rights, shaping how AI innovations spread and evolve. For instance, AI creators applying for patents must disclose their inventions in sufficient detail to

enable replication, granting early public access to emerging technological knowledge that can spur further innovation and technology transfer. Similarly, AI developers who rely on copyright protection for their software can publish their algorithms, promoting transparency instead of keeping these algorithms hidden as trade secrets. Domestic IP systems based on TRIPS standards provide the basis for AI innovators to also license their inventions, often subject to a fee, which can attract investment and accelerate the commercialization of new AI-related products. Other AI developers may adopt open source licences that let others freely use, modify and share AI innovations, potentially fostering broader collaboration.

The WTO's plurilateral Government Procurement Agreement 2012 (GPA 2012) can help promote open, transparent and competitive innovation procurement in AI technology. Governments, especially in developed and emerging economies, increasingly use public procurement not only to meet routine needs, but also to help create or reshape markets in ways that drive innovation, including in the context of AI. This so-called "innovation procurement" leverages a government's purchasing power to buy either the process of innovation itself, such as R&D activities, or its innovative products (WTO, 2020). As of 2025, 49 WTO members are covered by the GPA 2012, which requires them to procure covered AI-related goods and services in accordance with GPA 2012 rules, including the obligation not to discriminate against suppliers from other GPA Parties. The GPA 2012 also allows governments to award public contracts based on criteria not related to price alone, encourages performance-based technical specifications and provides flexibilities for purchasing prototypes, all of which can help to drive early-stage AI development. This can allow governments to tap into innovative global suppliers' AI capabilities and promote inclusive access for start-ups and MSMEs to additional government procurement markets. MSMEs are often at the forefront of AI innovation. Mindful of what MSMEs can contribute, the WTO Committee on Government Procurement has adopted a list of best practices aiming at promoting participation by MSMEs in government procurement.

Several WTO agreements also seek to promote technology transfer, which can support the development and deployment of AI. The TRIPS Agreement requires developed members to provide

incentives to their enterprises and institutions to promote and encourage technology transfer, which may include AI-related technologies, to least-developed countries (LDCs) (Fernández, 2025). A few developed economies, including the European Union, Canada, Switzerland and the United States, have adopted programmes to support the transfer of AI-related technologies to some LDCs.³ Furthermore, the GATS encourages developed members to make commitments that help developing economies to gain commercial access to technology, including potentially AI-related technologies. As discussed below, WTO technical assistance initiatives can help LDCs develop their approach in the trade–technology transfer space, including considering the enabling environment they wish to create and clarifying what they want to achieve, which in the early stages may focus more on AI adoption and in the medium term on AI development.

The WTO’s Agreement on Subsidies and Countervailing Measures (SCM) can help to support more inclusive AI development by limiting the risks of subsidy competition. As discussed in chapters B and C, governments that wish to attract AI-related companies within their borders may try to outbid each other by offering generous subsidies. This can lead to an inefficient use of public money and distort competition, disadvantaging companies in economies that cannot afford such incentives. In that context, the SCM Agreement sets rules to ensure that public financial support measures for AI-related goods benefiting certain companies or industries do not distort trade or trigger retaliatory actions between economies. It separates automatically challengeable prohibited subsidies, which are presumed to distort trade by being tied to export performance or local content requirement, from actionable subsidies, which require evidence of adverse trade effects before any remedies can be applied. Remedies for both prohibited and actionable subsidies can be pursued through multilateral dispute settlement or by imposing countervailing duties.

The WTO’s Agreement on Safeguards allows the temporary restriction of imports of AI-related goods to shield domestic industries from damaging import spikes. As discussed in Chapter B, a major challenge is the uncertain impact of AI on global labour markets. AI could boost trade opportunities for developing economies, potentially disrupting the job market in developed economies,

while also enabling developed economies to bring back outsourced production, potentially harming employment in developing economies. These dynamics could lead to social tensions and protectionist pressures. The Agreement on Safeguards allows members to restrict imports temporarily when a surge in imports of AI-related goods under certain conditions causes or threatens serious harm to domestic AI industries. Members using safeguards may have to offer compensation (or accept retaliation) to affected exporting economies to preserve the balance of concessions under the WTO (WTO, 2017b).

More informed discussions may be warranted to ensure that WTO disciplines remain effective in supporting inclusive AI. AI is likely to disrupt existing trade patterns, with the services sector, particularly digitally delivered services, likely to be most affected. In addition, AI presents new IP challenges related to authorship, ownership and enforcement. While WTO agreements provide a foundation for global trade, some may not yet fully capture the trade-related implications of AI, particularly in ways that support the promotion of more inclusive AI development and deployment. As discussed below, these issues, including those related to IP, safeguards and support measures, may benefit from closer consideration.

(iii) The WTO helps to minimize trade restrictions while balancing legitimate interests

General exceptions under WTO agreements may offer, under certain conditions, flexibility to adopt trade-restrictive AI measures aimed at public interest objectives. As AI technologies raise complex ethical, safety and societal concerns, governments may invoke general exceptions, such as those under the GATT and GATS, to justify regulations aimed at legitimate public policy objectives, such as protecting public morals and human life. However, any such measures must comply with WTO conditions, including non-discrimination and proportionality, and should not serve as disguised restrictions on trade. While no WTO disputes to date have directly addressed AI-specific regulations, past cases suggest that measures justified under general exceptions must show a clear link to the policy objective and that no less trade-restrictive alternative is reasonably available.

The WTO's Agreement on Technical Barriers to Trade (TBT) promotes regulatory convergence and mutual recognition to facilitate trade in AI-related goods. It requires members to ensure that their standards and regulations, including those on AI-related products, are non-discriminatory and no more trade-restrictive than necessary to achieve their legitimate objectives, such as product safety or consumer protection (WTO, 2024a). The TBT Agreement further requires members to use relevant international standards when developing domestic regulations on AI-related goods, on the premise that this avoids duplicative testing of AI models and devices, lowers compliance costs and shortens regulatory cycles. In cases where harmonization is not feasible, it encourages governments to accept each other's testing and certification results (mutual recognition) and to treat different rules as equal if they achieve the same goals (equivalence). This helps to avoid duplicate checks and keeps certification procedures from becoming a barrier to trade in AI-related goods (Meltzer, 2023).

The TBT Agreement promotes inclusive participation in international standard-setting for AI-related goods, yet developing economies remain underrepresented in AI standard-setting. International standards set best practices, support interoperability and reduce trade barriers for AI goods and services, particularly benefiting MSMEs engaged in international markets. The TBT Agreement encourages members to participate actively in the development of international standards, including those for AI-related goods. According to the TBT Committee's Six Principles for the Development of International Standards, Guides and Recommendations,⁴ international standards should be developed transparently, through open and consensus-based processes, should remain relevant and coherent, and should take into account the needs of developing economies. As discussed in Section D.2, international efforts are underway to develop AI standards through various organizations. Although the participation of developing economies in standard-setting processes has improved, it remains limited due to resource, expertise and language constraints. For example, although over 70 per cent of WTO members are low-income or middle-income economies, only 38 per cent of participants in the AI standard-setting work of the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) are from developing economies.⁵

(iv) The WTO offers a forum to build shared understanding on trade-related AI issues

Transparency provisions in WTO agreements help members to monitor AI regulatory developments affecting trade. All WTO agreements include transparency provisions requiring members to notify to the WTO and publish new or amended laws and regulations that impact trade, including those related to AI, and to set up enquiry points for stakeholders.⁶ In the case of the TRIPS Agreement, laws and regulations need to be notified, however publication requirements also apply to final judicial decisions and administrative rulings of general application, which are important in monitoring developments related to AI. The TBT Agreement requires members to notify AI-related technical regulations at the draft stage, allowing other members to comment, adapt and prepare, and thereby helping to level the playing field. The ePing SPS and TBT platform sends alerts on members' notifications, including AI-related ones, enabling stakeholders to track developments and engage early.⁷ Although TBT notifications that explicitly address AI are still limited,⁸ an increasing number of measures covering AI-relevant products, such as cybersecurity certification, have been notified in the last four years. Similarly, AI has been explicitly discussed in the trade policy reviews reports – the WTO's mechanism for periodically examining members' trade policies – of several WTO members in the last three years.⁹ Other relevant transparency provisions include the obligation under the SCM Agreement to notify subsidy programmes regularly, reducing the risk of hidden subsidy escalation and helping firms to compete on more equal terms.

The WTO serves as a forum for dialogue on AI-related trade issues. Different WTO institutional bodies give members a space to discuss AI-related trade measures. If a member believes a proposed AI regulation might unfairly restrict its exports or create unnecessary trade barriers, it can raise its concern early in the relevant committee, and thereby possibly avoid costly disputes later on. Through regular discussions, members can learn from each other's experiences with AI, understand different regulatory approaches, and explore areas of common interest. For instance, the WTO's TBT Committee organized a thematic session on regulatory cooperation for emerging technologies in November 2023, with contributions from international standard-setting bodies and member-led experience-sharing.¹⁰ Other WTO bodies, such as the TRIPS

Council, have also held AI-related discussions. WTO bodies also issue voluntary guidance (“soft law”) that can support members in their AI-related trade policies. For instance, the 2024 TBT Committee Guidelines on designing and applying certification procedures call for conformity assessment procedures to be adaptive and responsive and to remain relevant in the face of uncertainty due to rapidly changing technological trends.

AI and inclusive trade considerations have been raised in several WTO settings.

Recently, members held dedicated discussions on the implications of AI for trade under the Work Programme on Electronic Commerce with a particular focus on bridging the digital divide, addressing the specific needs of MSMEs in an AI-driven economy, and ensuring that technological progress supports inclusive trade. The Work Programme allows members to explore both the trade opportunities and challenges posed by emerging digital technologies,

such as AI, in a multilateral setting. Digitalization, including AI, has also been a key focus of the Informal Working Group on MSMEs. Thematic discussions and practical tools like the Trade4MSMEs platform provide businesses with insights on AI tools for trade. Box D.1 provides some examples of how helping MSMEs to adopt AI technologies can enable them to succeed in the global marketplace.

Despite some progress, transparency and information-sharing on some AI-related trade issues remain challenging.

While services trade stands to benefit the most from AI, information-sharing on services trade measures remains limited. Notifications of services measures under the GATS are relatively scarce compared to other WTO agreements dealing with regulatory measures. The paucity of services notifications may reflect the self-judging and narrower scope of transparency-related GATS obligations, the complexity and breadth of the services economy, the extensive role of domestic regulation,

Box D.1: Selected examples of how AI technologies can help MSMEs to grow internationally

AI tools help MSMEs by reducing market research and targeted advertising costs. Unplug Studio is a technology-focused website development company based in El Salvador that incorporates AI across multiple business functions. Aside from driving efficiency and improving client satisfaction, AI has been instrumental in Unplug Studio’s expansion into EU markets, particularly into the Netherlands. By leveraging AI-driven market research tools, the company has been able to gain insights into consumer behaviour and industry trends, which has allowed it to tailor its offerings for new overseas markets. The company also uses AI to plan its marketing campaigns to enable more targeted advertising. Unplug Studio is aligned with EU web accessibility standards and data privacy regulations, and actively monitors developments to ensure compliance.

AI-powered agronomic advice can help small businesses to improve agricultural productivity.

Farmerline, a Ghana-based agritech company, offers a marketplace platform that helps over 2.3 million smallholder farmers to gain access to technology, finance and information. Their conversational AI tool, Darli AI, delivers personalized, voice-based and text-based agronomic advice in 27 languages, and is accessible on even basic mobile phones. The tool can adjust advice based on location, weather data, crop stage and farmer feedback. Farmers that have adopted the tool in pilot areas have seen improvements in crop yield of up to 35 per cent. Farmerline is now able to serve farmers globally and meet the communication needs of farmers in more than 50 countries globally.

AI can help businesses in regions where regional languages and dialects are prevalent.

LAfricaMobile is a pan-African B2B mobile communications and marketing company based in Dakar, Senegal. It introduced AI into its services in 2023. The company employs an innovative text-to-speech tool that converts written content into regional languages, such as Wolof and Diola. Although major companies like Google offer multilingual AI tools, they lack support for many African languages and dialects. LAfricaMobile’s service allows their business, non-governmental organization and government institution clients to engage regional communities better and enable inclusive communications. However, regulatory considerations, particularly in areas such as data privacy and ethical AI usage, may impact the company’s ability to train AI models effectively.

Source: International Trade Centre (ITC).

and the challenges of coordinating across multiple agencies to identify relevant measures. Similarly, the use of the WTO's Council for Trade in Services to discuss specific trade concerns is a relatively recent development. While several trade concerns relevant to AI have been raised in the Council, they often involve politically sensitive matters tied to national security, making them harder to resolve. As discussed below, members could make greater use of the WTO to address trade-related AI issues.

(b) Greater cooperation among WTO members could help make AI work for all

While it already contributes to AI development and deployment, the WTO could do more to foster an environment that is supportive of more inclusive AI. The WTO can help not only to keep markets open, but also to make them more open and predictable specifically for trade in AI-related goods and services. It can advance potential rulemaking in key areas, including data policy coordination, the investment environment and strategic trade policies, and it can enhance trust by promoting transparency, dialogue and experience-sharing with regard to trade-related AI measures. In addition, as discussed in Section D.2, coordination between the WTO and other international organizations can help to make trade and other AI-related policies more coherent and mutually supportive. In parallel, AI technologies may help with the easier implementation of certain WTO functions (see Box D.2), although this might also pose some risks if AI technologies are not sufficiently overseen.

(i) AI markets could be made more inclusive by ensuring WTO remains relevant for AI trade

The matter of ensuring that the WTO remains relevant for AI trade touches on different areas, including market access, safeguards and subsidies. As discussed above, the WTO can help to foster the development and deployment of AI by keeping markets open, which can ease access both to key AI-enabling products and to exports of AI-enabled products. This section discusses how strengthening WTO members' existing market access commitments could help to create a more supportive environment for AI. At the same time, WTO agreements can help to safeguard market access against unfair practices and to address domestic disruptions. However, existing WTO agreements may not fully account for the evolving challenges and opportunities associated with AI-related trade, and this may warrant further consideration.

Members can improve their market access to IT goods by joining the ITA and ITA 2, and this, in turn, could foster more inclusive AI development and deployment. As discussed above, the ITA and ITA 2 play a key enabling role for AI by making the hardware and tools needed for AI more affordable and widely available. Yet, as a plurilateral agreement, the ITA still holds significant potential for broader membership expansion. While the Agreement enjoys strong uptake among high-income economies, where approximately 86 per cent are parties to the ITA, its membership among lower-income economies remains limited:¹¹ only 5 per cent of low-income and 27 per cent of lower middle-income WTO members are parties to it. While ITA members have bound their tariff rates to zero, non-ITA members maintain significantly higher final bound and MFN applied rates, up to 87 per cent on goods not covered by the ITA expansion. Making binding tariff-cutting commitments under the ITA could help to create a more predictable trading environment conducive to investment and competitiveness in AI-related activities (WTO, 2017a).

Lowering bound tariffs on AI-related raw materials would provide more predictability for investors. As noted in Chapter B, many essential raw materials, including rare earths metals, are geographically concentrated, so that most economies engaged in the production of AI-enabling goods are obliged to import them. Although MFN applied tariffs on these AI-enabling intermediate goods are generally low, ranging between 3 per cent and 7 per cent, bound tariffs remain relatively high, between 20 per cent and 45 per cent. Although both tariff rates decrease with income level, the gap between bound and applied MFN rates, known as “water”, is still sizeable, especially for low-income economies (see Figure D.1). However, while these tariff flexibilities can help to address specific development concerns, they come at the cost of predictability (WTO, 2024b). In that context, lowering bound tariffs on these goods could help reduce trade policy uncertainty, support investment and strengthen firms' positions in highly competitive AI-related global value chains.

Advancing cooperation among WTO members with regard to export restrictions could also help to support a more predictable trade environment, including for key AI inputs. The raw materials used to produce AI-related inputs, such as microchips and batteries, may be subject to strategic trade policies, such as export measures. While quantitative export restrictions are subject to

Box D.2: AI can support certain WTO functions, but its use can also present some risks

The WTO's main objective is to help international trade to flow as freely and predictably as possible. It pursues this goal by facilitating trade negotiations, trade policy monitoring, dispute settlement, technical assistance and cooperation with other international organizations. Some of these WTO functions could potentially benefit from the integration of AI technologies, although significant risks, including with respect to the trustworthiness of AI, limit its potential applications in some areas.

The WTO's trade policy monitoring and review exercises could be enhanced by means of AI. The WTO monitors and reviews members' trade policies and practices and promotes transparency. AI-driven systems could help members in this process by scraping the web for relevant trade policy information and automatically organizing and translating it. AI could also analyse large volumes of trade policy data, potentially in real time, to detect broader patterns and trends in tariff and non-tariff measures over time. AI chatbots could offer users personalized guidance for certain tools, such as for the ePing SPS and TBT platform (i.e., a platform which facilitates the tracking of information on sanitary and phytosanitary (SPS) measures and technical barriers to trade (TBT)), to improve the accuracy and relevance of WTO members' notifications.

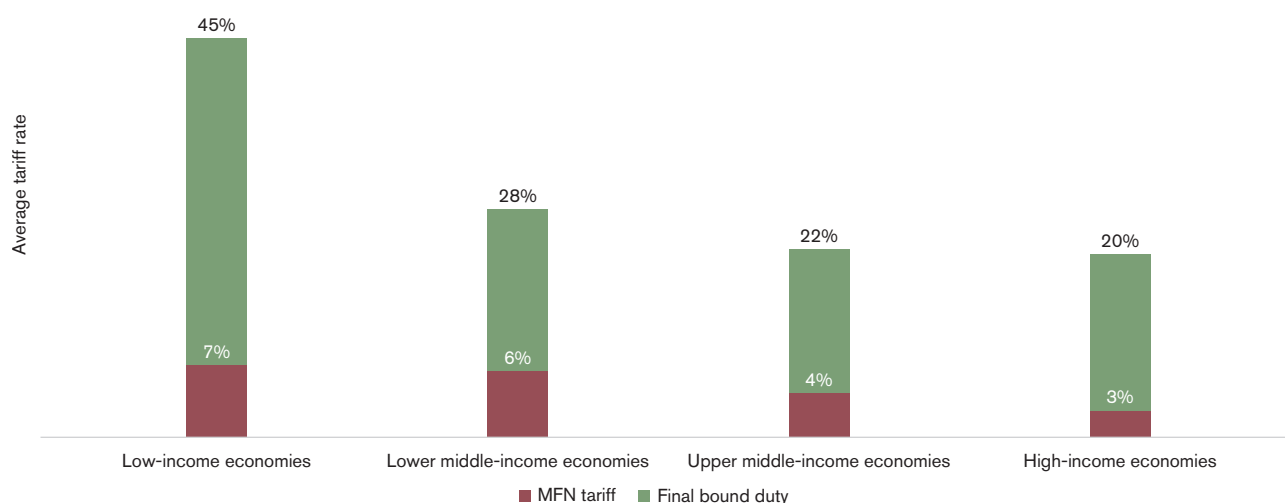
AI could help, to a certain extent, with WTO trade negotiations. The WTO serves as a forum for its members to negotiate new trade agreements and update existing rules. AI-driven algorithms could help negotiators to locate and manage pertinent information more systematically and efficiently, as well as to identify potential trading opportunities and evaluate the best alternatives for a negotiated agreement (Eidenmueller, 2024). AI models, in particular large language models that address confidentiality issues, could also assist in drafting the legal text of agreements.

AI could assist members in the resolution of WTO disputes. The WTO provides a structured process for resolving trade disputes between members under its Dispute Settlement Understanding (DSU). By automating the analysis of large datasets, such as trade regulations, past rulings and expert commentary, AI could assist members contemplating litigation with issue-spotting and drafting, potentially shortening timelines and lowering costs. This capability could be especially valuable for developing economies that face resource constraints in complex litigations (Abad, 2024). Assuming appropriate confidentiality safeguards are in place, adjudicators and parties could also benefit from using AI to process communications and organize materials in a secure framework, without substituting human judgement or departing from the record. AI-powered machine translation can also complement existing tools by helping to reduce language-related barriers and promoting equal access to information.

However, while AI technologies offer promising support for certain WTO functions, their use must be carefully governed. AI systems often struggle to process unstructured data and cannot capture emotional or non-verbal cues, elements that can be critical for building trust in negotiations. Current AI systems may produce inaccurate or unverifiable content, or omit context (Ma et al., 2024), and external tools may not guarantee confidentiality or prevent retention or secondary use of data. AI models may encode biases where training data are unrepresentative, risking the loss of cultural and linguistic nuance (Abad, 2024). In addition, there is a risk that certain developments in generative AI, such as synthetic audio or video ("deepfakes"), could, if misused, undermine trust or disrupt negotiation dynamics and dispute resolution. Mitigation may require human oversight at all stages, restricted and auditable environments, documented data handling and retention limits, and the ability to trace and challenge outputs.

GATT disciplines,¹² WTO members can, in principle, apply export taxes, as only a few have made binding commitments regarding their use. However, beyond contributing to trade uncertainty, strategic trade policies can impose significant negative spillovers, either directly or indirectly along AI global value chains, potentially affecting AI producers in other

economies. There may be scope for mutually beneficial commitments on export taxes, although individual governments' willingness to commit may depend on their specific policy objectives for using such measures. Trade-offs to exchange concessions could be found, for example, between export taxes on natural resources and import tariffs on higher

Figure D.1: Lower-income economies tend to impose higher bound tariffs on AI-related raw materials

Source: WTO Secretariat.

Note: Simple average, based on 2024 or the latest available year.

value-added products (WTO, 2010). Although not specific to AI, a limited but growing number of cooperation agreements on inputs that are critical to AI – focusing on the extraction, processing and governance of critical minerals, such as rare earths elements and advanced semiconductors – have been negotiated at the bilateral level (Dufour et al., 2025).

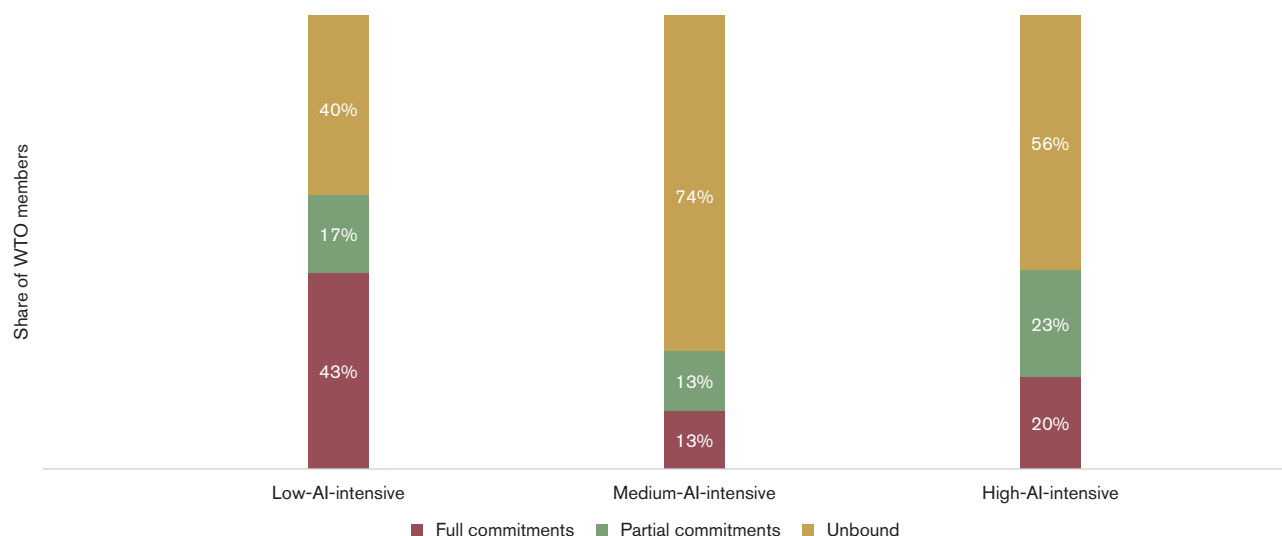
Market access to services particularly relevant to AI remains limited, and trade costs remain high. As discussed in Chapter C, restrictions on trade in AI-intensive services remain pervasive, but differ across income groups and modes of service supply. For instance, they tend to be higher for commercial presence abroad (mode 3 of the four GATS modes of supply)¹³ in lower-income economies, and for cross-border service trade (mode 1 of the GATS) in upper middle-economies. At the same time, few WTO members have made commitments under the GATS to open their high AI-intensity service sectors to foreign competition compared to other sectors – only 20 per cent of members have made full commitments, and only 23 per cent have made partial commitments (see Figure D.2). In other words, predictability for foreign suppliers and investors tends to be lower in AI-intensive service sectors than in other parts of the services economy in a majority of WTO members.

Commitments in high AI-intensity services sectors are particularly limited in low-income economies. While WTO members'

GATS commitments to opening high-AI-intensity service sectors, such as cloud services, increase with income level, they remain particularly limited in low-income economies, with almost 80 per cent of these members having made no commitments in high-AI-intensity service sectors, compared to 32 per cent in low-AI-intensity sectors, such as travel. Although members tend to be more open to allowing a commercial presence (GATS mode 3) in their markets than cross-border remote digital delivery (GATS mode 1) in AI-intensive sectors, both modes show very low shares for low-income economies, suggesting a relatively less predictable and open environment for AI-related service trade in low-income economies compared to middle-income and high-income members (see Figure D.3).

Binding members' current trade regime on AI-related services through GATS commitments would enhance predictability, while further market-opening, calibrated to implementation capacity, would create new opportunities for AI trade. As discussed in Chapter B, AI adoption could improve productivity and reduce trade costs, with digitally delivered services potentially experiencing the largest trade growth (WTO, 2024a). Improving GATS commitments for AI-related services could amplify these benefits. For example, GATS mode 1 commitments could ensure that the cross-border supply of AI-related services is not hindered by undue restrictions, such as licensing

Figure D.2: The share of full and partial commitments tends to be relatively low for high-AI-intensive and medium-AI-intensive services



Source: WTO Secretariat, based on Calvino et al. (2024) AI-intensity classification.

Note: Most services sectors are classified as high-AI-intensive. Retailing, education and health-related and social services fall into the medium-AI-intensive category, while travel services are considered low-AI-intensive.

requirements or internet bandwidth limits, thereby improving predictability and lowering the risk of future trade barriers on AI-related services. Some scholars argue that AI's autonomous capabilities could raise questions under the GATS about service qualifications, the classification of AI-generated services, and the determination of their origin, such as automated legal advice (WTO, 2024a). Binding GATS mode 3 commitments could encourage more diverse international investment in local AI-related services markets and foster technology transfer, skills development and infrastructure-building (WTO, 2019). Deeper commitments could benefit from special and differential treatment (S&DT) provisions (i.e., special treatment given to developing economies, including LDCs, in WTO agreements) that provide relevant policy space for these economies without undermining the predictability and stability of trade policies achieved through credible commitments (WTO, 2024b).

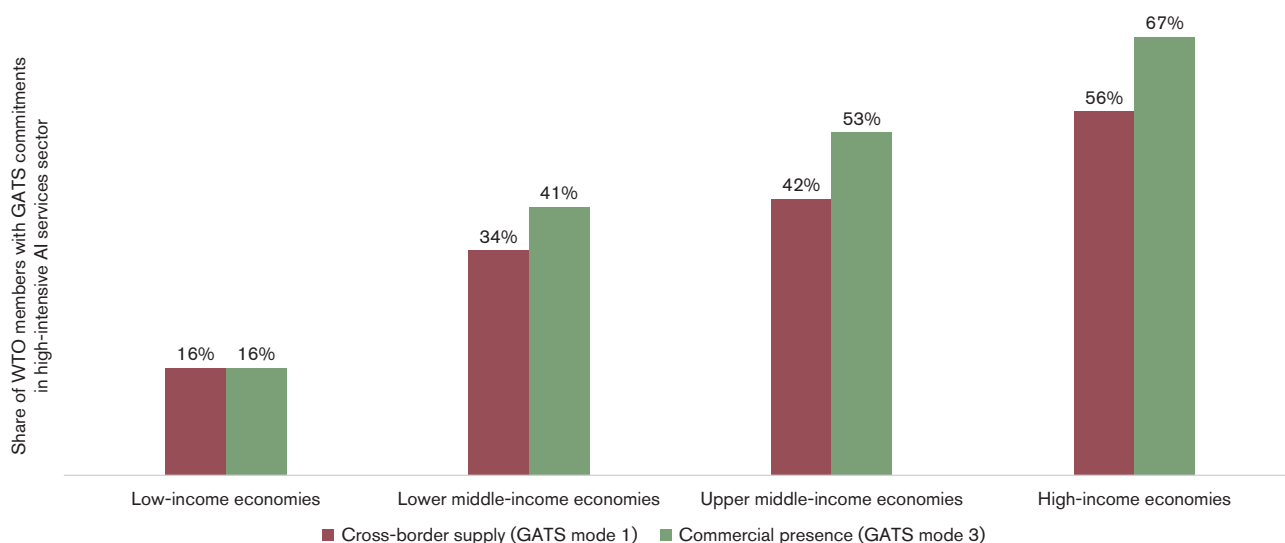
WTO technical assistance could help developing members, particularly LDCs, in applying AI solutions to the implementation of WTO agreements. By leveraging advanced algorithms and machine learning, AI can assist governments in meeting their WTO obligations, improving the coherence, predictability and transparency of trade policies, and, by extension, lowering compliance costs (see Box D.3). This could

be particularly beneficial for MSMEs and developing economies, which often have to comply with complex trade regulations (WTO, 2024b). As discussed below, capacity-building and technical assistance initiatives, such as the WTO-led Aid for Trade,¹⁴ could help to bridge the digital divide and strengthen the capacity of developing economies to adopt trade-related AI solutions. At the same time, attention must be paid to the fact that using AI to implement WTO agreements could incur risks such as bias and inaccuracy.

The limited scope of the SCM Agreement raises questions as to its ability to address wider disparities in AI development and deployment.

The Agreement¹⁵ applies only to subsidies on AI-related goods (e.g., hardware) and excludes services and IP essential to AI technologies. Its applicability, as discussed above, is also limited to so-called specific subsidies, excluding general, or economy-wide, support available to all firms for AI development and deployment. As a result, many subsidies related to AI may not be covered by WTO disciplines, potentially making it harder for new or smaller players to compete, and thereby widening technological and economic gaps. This could be further affected by certain R&D subsidies that can be challenged following the expiration of the “non-actionable subsidies” category (which once covered certain R&D, environmental and regional development subsidies), potentially discouraging government

Figure D.3: Market access commitments for high-AI-intensive services sectors under the GATS rise with income level



Source: WTO Secretariat, based on Calvino et al. (2024) AI-intensity classification.

Note: Most services sectors are classified as high-AI-intensive. Retailing, education and health-related and social services fall into the medium-AI-intensive category, while travel services are considered low-AI-intensive.

support for AI research and innovation that could generate widespread benefits. More discussion on these issues at the WTO could contribute to more inclusive gains from AI.

The limited applicability of the WTO's Agreement on Safeguards calls into question its ability to address potentially broader AI-related disruptions. The Agreement¹⁶ only applies to safeguards on AI-related goods. Yet, as discussed in Chapter B, the impact of AI could be particularly disruptive for services trade compared to merchandise trade, as it could reduce demand for traditional services by automating tasks, while boosting digitally delivered services. Although the Agreement on Safeguards does not provide safeguard mechanisms to prevent or remedy injury to domestic suppliers due to sudden surges in service imports, members can shape the scope and pace of their commitments, including through phased trade-opening, to allow time for market and regulatory adjustment. This flexibility may help to address concerns that could otherwise discourage market-opening, potentially limiting the global diffusion of AI-related services and undermining efforts to ensure broader access to AI's benefits. This remains an area that would benefit from further WTO discussion.

(ii) Dialogue among WTO members on key new AI-related issues could help to make AI more inclusive

Fragmented data rules may hinder inclusive AI, underscoring the need for deeper discussions.

As discussed in Chapter C, AI's requirement of large datasets to enable it to learn and improve its performance is reshaping data usage (WTO, 2024a). While there are legitimate reasons for diversity in data regulation, the current regulatory landscape is becoming increasingly complex and fragmented, and this could potentially undermine opportunities for innovation and efficiency (IMF et al., 2023). Less trade-restrictive data regulations could help to promote more inclusive AI development and deployment by enabling governments to achieve their public policy objectives while allowing data flows and AI services to operate across borders (Jones, 2023). An increasing number of regional trade agreements (RTAs) and a few digital economy agreements include specific provisions requiring cross-border data flows for digital trade, with exceptions for privacy, security or public policy objectives, and exemptions, most notably for government procurement (see Box D.4). Although there are no explicit WTO provisions on cross-border data flows, existing WTO rules, including the GATS, remain relevant to measures that affect such flows. Meanwhile, 91 WTO members negotiated

specific rules on digital trade issues, including personal data protection, under the Joint Statement Initiative on E-commerce. Cross-border data flows and data localization provisions were initially discussed but are not currently part of the agreement. A so-called “stabilized” text of the e-commerce agreement was published in July 2024.¹⁷ Further WTO discussions could help to build a shared understanding of AI-related data challenges, which are particularly important for smaller economies and MSMEs.

Strengthened discussions on IP approaches to AI training data may be warranted, given their implications for inclusive AI. As discussed above, training AI requires data, some of which may be copyrighted. The TRIPS Agreement sets forth obligations for protecting copyrighted works but does not provide specific guidance on how IP rules apply to copyrighted works for AI training. Members may, consistent with these obligations, adopt the solutions best suited to their laws and economic interests.

Box D.3: AI can support more inclusive implementation of WTO agreements, provided that potential risks are managed

AI could support the implementation of the WTO’s Trade Facilitation Agreement (TFA). The Agreement promotes the use of ICT, including in electronic customs processes, to simplify and expedite the flow of goods across borders. As discussed in Chapter B, AI could make customs systems more agile and resilient by improving efficiency, enhancing security, and providing deeper insights into trade flows (PWC, 2024). For example, Brazil’s customs have adopted AI applications to enhance import processing and responsiveness, and to assist traders in classifying goods based on product descriptions (Segalla Reis, 2025). Similarly, Germany’s customs have implemented AI voice chatbots to improve efficiency, reduce employee workloads and enhance 24/7 customer service (WCO, 2025).

The implementation of the TRIPS Agreement, in particular the registration, management and enforcement of IP rights, could be facilitated with AI. AI can help IP offices process applications more efficiently, detect IP infringements, such as trademark counterfeiting and copyright piracy, for instance through content recognition software, and monitor trade to identify violations of TRIPS-covered rights.

AI could facilitate implementation of the GPA 2012, particularly relating to transparency, timesaving and accountability. The GPA 2012 encourages the use of electronic means for procurement processes. AI can improve transparency and efficiency at every stage of the government procurement process (Deloitte, 2025; Coglianese, 2024). During the preparatory phase, it can help with the analysis of expenditure data to find savings, improve planning and forecast demand. During the tendering phase, it can automate document generation, bid evaluation and administrative tasks, particularly for standard purchases. AI can also enhance data quality, detect errors and duplicates, and flag potential misconduct by identifying anomalies such as irregular tenders or price changes.

Implementation of the WTO’s Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and of the TBT Agreement could be facilitated by AI. AI-supported technology could enable the early detection of pests and diseases, improve risk assessments and strengthen biosecurity monitoring. It could also be applied to automate compliance checks, translate and help clarify technical regulations, and help members to navigate diverse regulatory environments more efficiently.

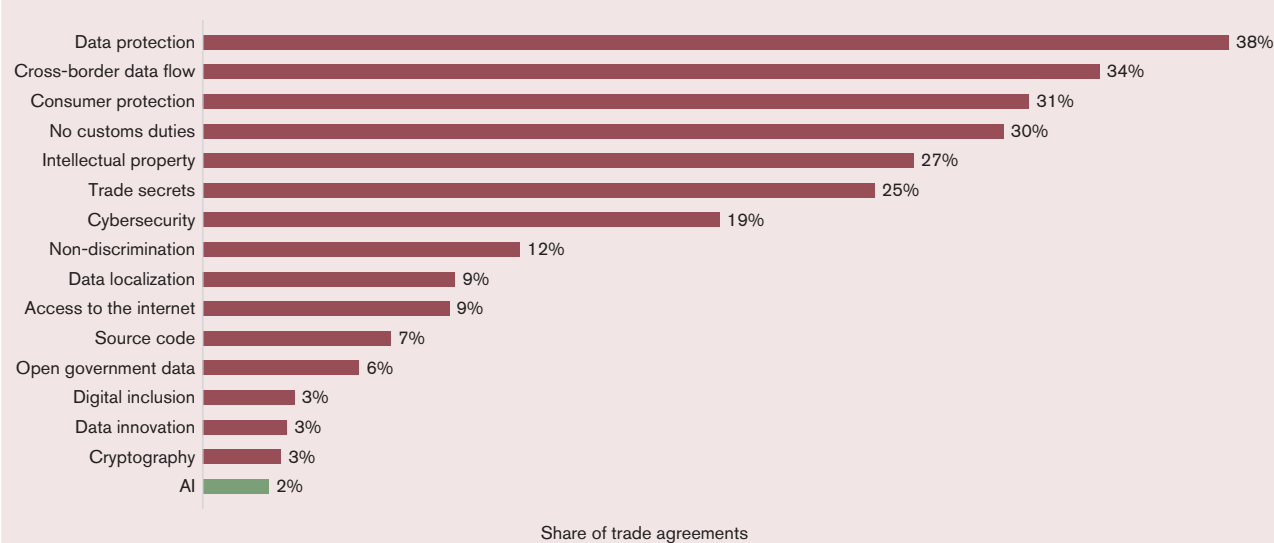
However, despite the potential of AI to improve the implementation of WTO agreements, its use must be approached with caution. Risks inherent in AI arise from its complexity, opacity and potential for bias and inaccuracy, whether these are due to the data sources or embedded in flawed design. Such risks could, for instance, lead to the misclassification of businesses or regions as high-risk, effectively restricting market access and potentially undermining WTO principles such as MFN treatment or commitments under preferential schemes like the Generalized System of Preferences (GSP).¹⁸ Human supervision remains crucial, and addressing the risk of AI-induced discrimination is essential to ensure fair and inclusive trade practices.

Box D.4: Trade agreements increasingly address different aspects of AI

Although an increasing number of RTAs include provisions on AI-related issues, explicit provisions on AI are still limited. As shown in Figure D.4, only 2 per cent of RTAs and digital economy agreements (as of September 2025) currently incorporate explicit AI-related provisions. These provisions generally recognize AI's potential to deliver social and economic benefits, and, in some agreements, its role in facilitating international trade. Other provisions call for cooperation in developing policy frameworks aligned with international standards, and encourage the exchange of information and experiences. Only a few agreements commit the parties to collaborate in AI-related research, development and investment.

Some AI-related issues appear more widely in RTAs and digital economy agreements, such as cross-border data flows, data localization and source code. While some AI-related provisions clarify specific provisions in WTO agreements, other provisions expand commitments found in the WTO framework or establish new ones (Monteiro and Teh, 2017; Burri, Callo-Müller and Mesmer, 2025). Some agreements include commitments to avoid unnecessary barriers to cross-border electronic data flows. A few newer agreements go further, requiring parties to permit such transfers, including personal data, for business purposes, while acknowledging each party's right to maintain its own regulatory requirements. Some RTAs prohibit data localization requirements except when necessary to achieve legitimate public policy objectives. More recent RTAs explicitly prohibit requirements to transfer or access mass-market software source code as a condition for importing, selling or using software or products that contain it. These AI-related provisions complement other provisions relevant to AI, including those on market access commitments in digital services and domestic telecommunications regulatory frameworks (WTO, 2024a; 2018).

Figure D.4: Explicit provisions on AI in trade agreements remain limited



Source: WTO Secretariat, based on Burri et al. (2023) "Trade Agreement Provisions on Electronic-commerce and Data" (TAPED) database.¹⁹

Different approaches have been adopted to determine whether copyrighted materials can be used for AI training. In some cases, this depends on the purpose of the training (e.g., research), on specific text- and data-mining exceptions (which sometimes allow rights-holders to opt out), or on broader principles, such as fair use (which allows limited use

of copyrighted material without permission if certain criteria are met). Regulatory approaches that require AI models to comply with domestic regulations on training data, even when that training occurs abroad, may drive up AI development costs or limit the availability of AI solutions. Fragmented IP approaches to training data could therefore raise barriers for

smaller firms and undermine efforts to make AI more inclusive. Informed discussions at the WTO and the World Intellectual Property Organization (WIPO) can help to identify balanced solutions to incentivize and facilitate AI development and its creative and innovative use by humans, while also protecting the interests of creators. Advancing discussions on IP approaches related to AI-generated innovations and algorithms could also help to ensure AI becomes more inclusive (WTO, 2024a).

To further foster inclusiveness, the WTO Working Group on Trade and Transfer of Technology could be used to continue addressing AI technology gaps. This working group²⁰ is tasked with examining how trade relates to technology transfer and ways to boost technology flows to developing economies. The effectiveness of certain WTO provisions on technology transfer – while not specifically related to AI – has been questioned by some members.²¹ Revitalizing discussions in the working group could help to encourage members to propose practical ways to address AI-related technology gaps through trade.

More transparent and streamlined investment rules and processes could facilitate investments, including in AI. The fragmentation of investment rules can make it harder for investors to navigate different legal and regulatory environments, potentially reducing opportunities, especially in fields like AI that require global coordination. The Investment Facilitation for Development (IFD) Agreement, negotiated by 127 WTO members, including 90 developing economies, 27 of which are LDCs, seeks to make investment rules clearer, simplify procedures for investment, promote regulatory coherence and cooperation, and support sustainable development goals, including poverty reduction and job creation. Implementing the IFD Agreement could help members, in particular developing economies, to harness trade-led growth potential from comparative advantage in key AI-related inputs by fostering investments.²²

The growing intersection between technical regulations for AI-enabled goods and those for AI-related services would benefit from deeper consideration to promote greater regulatory predictability. As AI-related services are increasingly embedded in AI-enabled goods, and are also traded as standalone services, the standards, compatibility and certification related to these services are likely to become relatively more

important in AI trade. For instance, autonomous vehicles are AI-enabled goods that rely heavily on embedded services, such as real-time data processing, connectivity and continuous algorithmic decision-making (WTO, 2024a). This dual coverage of AI-related products may challenge standardization and conformity assessment, potentially making it harder to determine how compliance to standards should be assessed. Better coordination between the regulatory spheres for AI-related goods and services would help reduce regulatory fragmentation. Existing regulatory disciplines in the GATS, including those related to transparency that apply to AI-related services, are more limited than comparable provisions in other WTO agreements, particularly the TBT Agreement. Fewer services trade measures, whether AI-related or otherwise, have been notified to the Council for Trade in Services. As of July 2025, the Council had received a total of 811 notifications from WTO members on transparency,²³ of which 90 notifications relate to digital regulation.²⁴ The paucity of notifications of services regulations could create information gaps that may hinder more inclusive participation in AI-related trade. In that context, discussions at the WTO could help foster a better understanding of the issues at stake.

Greater discussion of specific trade concerns in the Council for Trade in Services could also help address regulatory fragmentation. While regulatory differences may reflect legitimate policy choices, different regulations on AI-related services, such as those related to data flows, can hinder cross-border trade in these services (see Box D.5 on financial services). Discussion of specific trade concerns in the Council for Trade in Services is a relatively recent phenomenon, beginning in 2014. In recent years, a majority of these concerns have related to the digital economy, in particular cybersecurity and cross-border data flows – issues also relevant for AI. Most of these specific trade concerns have involved high-profile and politically sensitive issues, with national security frequently cited by members as the justification. As a result, these discussions have been less conducive to resolution through dialogue, despite the fact that some of the measures in question were still in draft form and were, therefore, potentially more open to adjustment. As of 2025, only six specific trade concerns broadly related to the digital economy have been raised in the Council for Trade in Services, compared to more than 71 trade concerns on AI-related goods, such as chips, microchips, semiconductors, integrated

circuits, wafers, gallium and germanium, raised in other bodies. Of these, 38 were raised in the TBT Committee, 18 in the Council for Trade in Goods and 14 in the Committee on Market Access, while one trade concern was raised in the Committee on Import Licensing. While there may be various reasons why WTO members are hesitant to raise services-related specific trade concerns, this contrast highlights the untapped potential of the Council for Trade in Services as a forum for addressing regulatory issues related to services.

Striking the right balance between WTO commitments and effective flexibilities is essential to leveraging AI in support of greater inclusiveness across economies. WTO agreements include over 155 special and differential treatment (S&DT) provisions designed to support developing members. These include measures to expand trade opportunities, safeguard trade interests, allow flexibility in commitments, extend transition periods for the implementation of agreements, provide technical assistance and offer LDC-specific support.

Box D.5: International regulatory cooperation can help advance AI opportunities in finance

AI is rapidly reshaping the financial sector by enhancing efficiency, accuracy and personalization of financial products and services. A 2024 survey of 56 diverse financial institutions found that 88 per cent are using AI, with most others planning adoption soon. All surveyed firms reported that they had increased AI investment in 2024, with half boosting AI investment by more than 25 per cent compared to 2023 (IIF and EY, 2025). AI helps to streamline loan and insurance processes, improve fraud detection, enable personalized financial advice, and automate forecasting and trading in asset management and securities markets. The financial industry is also gradually adopting generative AI for internal processes, such as summarizing and translating documents and information retrieval (OECD and FSB, 2024).

As financial institutions embrace AI, they will also have to navigate an evolving and complex landscape of technical standards and regulations. Financial service suppliers integrating AI into their operations must comply with both conduct and licensing obligations under financial regulation, as well as AI-specific laws and guidelines. These overlapping requirements may become more pronounced and burdensome as regulators respond to AI's growing impact on financial services.

Jurisdictions are taking two main approaches to AI regulation: a principles-based approach or a rules-based approach. Jurisdictions taking a principles-based approach rely on non-binding principles, often supported by technical standards and cross-sectoral regulations; examples are Singapore, the United Kingdom and the United States (Crisanto et al., 2024). While recognising AI-related risks, they view strict regulation as premature given AI's ongoing evolution. Jurisdictions following a rules-based approach (e.g., Brazil, China, the European Union and Qatar) are introducing AI legislation to ensure regulatory clarity, enable enforcement against unlawful AI deployment, and protect consumers' rights from potential harms.

The lack of harmonized AI standards poses challenges for cross-border financial firms. As economies and regions develop their own approaches, financial firms operating across borders may encounter conflicting requirements. Regulatory fragmentation may lead financial suppliers to tailor their AI governance practices, product development, third-party due diligence and risk management separately for each jurisdiction, making it difficult to manage risks consistently across the enterprise (USDT, 2024). Similarly, data localization laws in various jurisdictions may restrict cross-border data flows, impacting financial institutions' ability to outsource AI functions abroad.

AI interoperability across different regulatory regimes is crucial to minimize cross-border frictions and facilitate compliance for firms operating in foreign markets. International cooperation aimed at promoting interoperability and alignment of regulatory approaches to AI is underway in different forums, including the Financial Stability Board (FSB), the G7 and the G20. Since establishing its AI subcommittee, the International Organization for Standardization (ISO) has expanded its focus to AI in financial services. Earlier this year, the ISO technical committee on financial services and the ISO subcommittee dedicated to AI formed a joint working group to develop a technical report outlining requirements for managing AI in the sector (ISO, 2025).

Preferential schemes and technical assistance programmes have enhanced export opportunities from developing economies and LDCs (WTO, 2024b). If AI can help with the administrative costs associated with preferential schemes, and provided that it is not biased against small business, it could further help developing economies and LDCs to take advantage of these S&DT-related export opportunities. Members hold different views on proposals to modify S&DT provisions. A key point of discussion is whether such provisions should be applied uniformly to all developing economies, or whether they should be tailored to address specific needs. Notwithstanding these different views, international cooperation can support low-income economies in implementing their commitments. New commitments in services and goods would need to be accompanied by increased investment in physical and digital infrastructure (see Section D.2), enhanced technical assistance and capacity-building for technical regulations and standards, and innovative Aid for Trade financing.

2. Greater coordination between the WTO and other international organizations is needed for more inclusive AI

A growing number of international initiatives specifically focused on AI have emerged in recent years, covering diverse aspects of its ecosystem. These initiatives, covering different areas such as ethics and safety, involve a wide range of stakeholders, including governments, intergovernmental organizations, standard-setting bodies and private companies. Most take the form of high-level AI principles, voluntary guidelines, codes of conduct or policy toolkits, while some contribute to the development of AI standards. Despite these differences, most aim to promote safe, trustworthy, ethical, transparent and interoperable AI, and to encourage coordinated action to identify and manage AI-related risks and challenges (see Box D.6). These AI-related international initiatives complement other initiatives related to ICT and the digital economy. These AI-focused initiatives also complement broader international efforts and the ongoing work of international organizations related to digital technologies and governance.

Several challenges affecting the inclusiveness of AI-driven trade growth lie partly outside the scope of the WTO, highlighting the need

for greater policy coherence and cross-institutional collaboration. Inclusive AI-driven trade growth requires a “trade and” strategy, one that combines open and predictable trade in AI-related goods and services with complementary policies that address broader development challenges. As discussed in Chapter B, these include bridging the digital divide, addressing AI-related labour market disruptions, fostering fairer competition and mitigating environmental effects – however, these are areas led by international organizations other than the WTO. While most AI-specific initiatives do not explicitly reference international trade, many reflect these concerns (see Figure D.5). Greater coordinated international efforts to address these challenges could help to ensure that the gains from AI and trade are more broadly shared within and across economies.

(a) Inclusive AI requires international cooperation to bridge digital infrastructural and regulatory gaps

A more inclusive and equitable access to the benefits of AI requires coordinated global action to close digital infrastructure, skills and regulatory gaps, particularly in developing economies. With 2.6 billion people still offline, mostly in developing economies (ITU, 2024), and key digital resources, including skills, mostly concentrated in developed economies, significant public and private investment, estimated at US\$ 418 billion, is necessary to provide reliable, affordable access to the internet and digital networks (Oughton, Amaglobeli and Moszoro, 2023). In particular, 58 per cent of LDCs lack the basic regulatory and technical capacity needed to support cross-border digital work, including AI-related activities (UNDP, 2024). While investment in digital infrastructure and skills development, as well as the development of regulatory frameworks, were often treated as separate tracks in the past, there is now a growing recognition that aligning them could help to create synergies, especially in developing economies. The positive effects of digitalization depend not just on access to technology, but on supportive governance structures. For example, WTO estimates suggest that the reduction in trade costs generated by improved digital connectivity more than doubles in middle-income and low-income economies with an enabling regulatory environment for digitally delivered services (Bellucci, Rubínová and Piermartini, 2023). While a robust regulatory framework can

Box D.6: AI safety institutes can help to shape inclusive approaches to managing AI risks

Growing concerns about AI safety have led some advanced and emerging economies to establish dedicated institutes that aim to build the expertise needed to understand and manage AI risks.

As discussed in Section B.1(b), the rapid evolution of AI poses safety risks ranging from malicious uses and technical malfunctions to wider systemic threats. As these risks can arise throughout the AI value chain, from development to deployment, technical expertise is needed to understand both the process and the evolving trajectory of AI capabilities. In response to growing concerns about AI safety, some governments, mainly in advanced economies such as Australia, Canada, France, Germany, Italy, Japan, the Republic of Korea, Singapore and the United States, have established AI safety institutes. Similar efforts are also emerging in a few developing economies, including Brazil. These institutes tend to be national government entities that conduct research, develop safety benchmarks and testing protocols, and facilitate information exchanges and collaborations.

As AI systems operate across borders, international collaboration is increasingly important to promote AI safety and to keep risk management approaches interoperable and current.

Sharing information on technological developments and emerging risks can help governments to remain informed. Working toward alignment on evaluation methods can help to strengthen their robustness and applicability across diverse cultural, linguistic and societal contexts. Such coordination also helps promote greater interoperability and consistency in testing approaches. In addition, collaboration offers opportunities to pool expertise, particularly given the current global shortage of AI safety experts. Recent collaborations include the International Network of AI Safety Institutes, established in 2024 by 10 governments to support alignment on evaluation methods, and multistakeholder initiatives launched in 2025, such as the International AI Safety Report and the Singapore Consensus on Global AI Safety Research Priorities, which outline shared research goals and priorities to AI risk assessment.

Broadening the participation of lower-income economies is critical to make global AI safety standards more inclusive and to help AI systems to perform reliably across diverse contexts.

As AI safety institutes help to shape domestic and potentially international technical and industry standards, the limited participation from lower-income economies means that there is a risk of overlooking their specific contexts and vulnerabilities. Resource constraints and a global shortage of AI safety expertise may pose challenges to establishing dedicated institutes in some settings; nevertheless, the participation of lower-income economies can be supported through collaborative approaches, such as joint testing and regional initiatives. One such example is the Asia-Pacific AI Safety Red Teaming Challenge, which seeks to assess how AI models perform in regional cultures and languages.

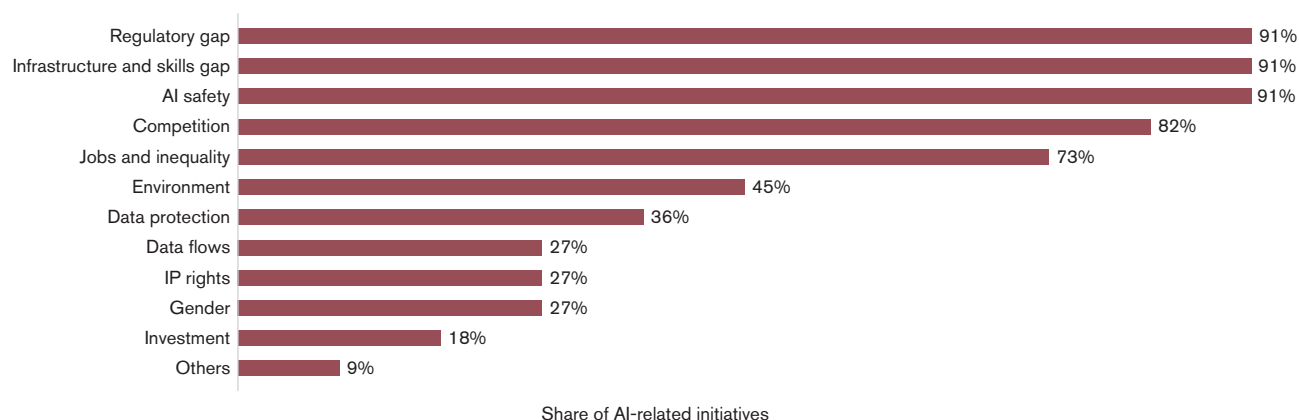
help to foster trust in digital markets, strong institutional capacity is also essential to develop digital infrastructure and skills, and to enforce the regulatory framework (Nordås and Xu, 2025).

(i) Bridging the global AI divide requires substantial investment in infrastructure and skills

International cooperation and pooled funding are key to bridging AI-related infrastructure and skills gaps. Meeting the growing need for IT infrastructure and specialized digital skills to develop and deploy AI demands major investments, as AI technologies rely on advanced computing power, reliable connectivity and a highly trained workforce

– all of which require substantial financial resources to build, scale and sustain AI-related capacity, particularly in regions with underdeveloped digital foundations (OECD, 2025). Inclusive capacity-building is emerging as a central pillar of international AI governance, with global initiatives, such as the UN AI Advisory Body, the UN Global Digital Compact, the OECD's Recommendation of the Council on Artificial Intelligence, the AI Action Summit and the Global AI Governance Action Plan, calling for investment, cooperation and shared infrastructure to help all economies access and benefit from AI technologies. Several international initiatives, including UNESCO's Recommendation on the Ethics of AI (2021) and the African Declaration on Artificial Intelligence

Figure D.5: The key international policy initiatives on AI tend to focus on the same areas of discussion



Source: WTO Secretariat.

Note: The chart shows how often each topic appears across the following 11 international AI-related policy initiatives: OECD AI principles (2023); G20 AI Principles (2019); UNESCO Recommendation on the Ethics of AI (2021); G7 Hiroshima Process on Generative AI, AI Guiding Principles, and AI Code of Conduct (2023); AI Safety Summit “Bletchley Declaration” on AI Safety (2023); UN General Assembly AI Resolution (2024); Council of Europe Framework Convention on AI, Human Rights, Democracy and the Rule of Law (2023); Seoul Summit agreement to launch an international network of AI Safety Institutes;²⁵ Final Report of the UN AI Advisory Body (2024); Adoption of the UN Global Digital Compact (2024); and International Scientific Report on the Safety of Advanced AI (2024). The “others” category includes culture, education and health.

(signed by the African Union, Smart Africa and 49 African economies in April 2025), also underscore the critical role of investing in open public data to promote inclusive and responsible AI development (OECD, 2024a). While some WTO agreements, such as the GATS and ITA, can help attract private AI-related investment by promoting openness and reducing barriers to trade, collaborative financial efforts between international organizations, development banks and direct donor funding can further contribute to bridging the AI divide (WTO, 2024a). Although not specific to AI, multilateral and regional development banks are increasingly supporting digital transformation through targeted investments in broadband infrastructure, digital public services and skills development in developing economies, laying critical groundwork for future AI-related opportunities.²⁶ Meanwhile, several international organizations already propose AI-specific initiatives supporting developing economies through targeted efforts in skills development, capacity-building and AI-related policymaking.²⁷

While still limited, trade-related initiatives are beginning to incorporate provisions on AI cooperation. Explicit provisions related to digital inclusion and skills appear in 13 RTAs and digital economy agreements. These provisions, predominantly found in agreements between more digitally advanced economies, remain limited in scope and highlight the need for greater cooperation.

Some of these provisions complement some explicit AI-related provisions promoting cooperation on AI research and regulation (see Box D.3). In parallel, a few cooperation agreements related to inputs particularly relevant for AI development have been negotiated, focusing on strengthening supply chain resilience and governance around critical materials such as rare earths elements and advanced semiconductors. Although not always specific to AI, several multilateral trade initiatives also contribute to narrowing digital infrastructure and skills gaps by leveraging trade for inclusive digital development, such as the WTO-led Aid for Trade initiative,²⁸ which supports developing economies in building trade capacity, and the Enhanced Integrated Framework,²⁹ which assists LDCs in integrating into the global trading system (WTO and OECD, 2024). Building on this foundation, these and similar programmes could be further leveraged to support more inclusive participation in AI-led trade.

(ii) International cooperation can help to reduce regulatory gaps in more inclusive ways

Strengthening international cooperation to address regulatory gaps is key to advancing inclusive AI. An effective domestic regulatory framework for AI – covering areas such as data governance, product safety and consumer protection

– is critical for fostering trust and confidence among firms and consumers, thereby supporting AI-enabled trade. Yet, in many developing economies, regulatory frameworks for AI remain limited, incomplete or not yet fully effective. As discussed above, efforts to bridge the digital divide depend in part on closing the digital regulatory gap. In that context, the WTO and the World Bank are working together on a project titled “Digital Trade for Africa”, which is helping certain African economies to develop the regulatory framework and infrastructure they need to seize digital trade opportunities (IMF et al., 2023).³⁰ A similar initiative is being developed for Latin America and the Caribbean, involving the WTO, the World Bank and the Inter-American Development Bank. Another relevant initiative is the Women Exporters in the Digital Economy (WEIDE) Fund, launched by the WTO Secretariat and the International Trade Centre (ITC) in February 2024. This fund aims to help women entrepreneurs to leverage international trade and digitalization to grow their business. When the expertise of each international organization is leveraged through partnerships, this can amplify their respective efforts, so that a greater impact may be achieved than when each international organization works in isolation. This model of cooperation could be extended to support more inclusive access to AI opportunities through trade.

Greater international cooperation can help address AI regulatory fragmentation, thereby creating the conditions required for more inclusive AI. As discussed in Chapter C, national approaches to AI regulation vary in priorities, scope and implementation, resulting in increasing regulatory fragmentation (Fritz and Giardini, 2024). This AI-related regulatory fragmentation can generate unnecessary costs and confer an unfair advantage on some economies. AI policy coordination can help to prevent such fragmentation and ensure that domestic AI standards are more interoperable and inclusive, and that they align with international norms (WTO, 2024a). Several international bodies are already working on AI-related standards and guidelines that could help to address AI regulatory fragmentation. For instance, the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) are developing technical documents on AI, including regarding terminology, risk management and governance. The Institute of Electrical and Electronics Engineers (IEEE) is focusing on guidelines and specifications related to the ethical and societal

aspects of AI. The International Telecommunication Union (ITU) is addressing AI in the context of telecommunications and digital technologies, particularly with regard to interoperability.³¹ Nonetheless, further international cooperation on AI is needed, as underscored by the UN’s final report on “Governing AI for Humanity” (2024),³² which identifies three global AI governance gaps: representation, coordination and implementation.³³ Taking these gaps into account is particularly important to ensure that developing economies, especially LDCs, can access shared best practices, technical assistance and capacity-building support.

Strengthening coordination and coherence on trade-related aspects of AI is key to promoting a more inclusive participation in AI-driven trade opportunities. While most AI-specific initiatives do not explicitly reference the WTO, many address issues with clear trade and WTO relevance, such as the role of regulations and standards in governing AI, the importance of interoperability, the need to avoid regulatory fragmentation, and the importance of IP protection and enforcement. One exception is the final report of the UN AI Advisory Body on “Governing AI for Humanity”,³⁴ which explicitly references the WTO and highlights the relevance for AI of several WTO agreements, including the GATT, the GATS, the ITA, the TBT Agreement, the TFA and the TRIPS Agreement, and emphasizes the need for coordination across international organizations (WTO, 2024a).³⁵

(b) Strengthening competition can help make AI more accessible and inclusive

AI’s potential to foster inclusive growth depends in part on market competition, including whether markets are open and accessible or dominated by a few players. As discussed in Chapter B, the AI ecosystem, which includes data, computing power, cloud infrastructure and foundational models, remains highly concentrated and is dominated by only a few firms. This concentration risk raises barriers to market entry, limiting innovation and exacerbating global digital divides. Smaller firms, particularly in developing economies, can face steep challenges in accessing high-quality datasets, interoperable platforms and affordable computing resources. In the absence of sufficient competition, there is a risk that the benefits of AI are being concentrated among a limited number of actors, potentially limiting broader inclusiveness (see Philippe Aghion’s opinion piece).

While differences in national approaches are to be expected, limited coordination on AI-related competition may lead to trade frictions that risk undermining efforts to make AI more inclusive.

Approaches to addressing competition challenges in AI vary significantly across economies. While some governments may invest in public infrastructure, open-source models or national datasets, others may face institutional or technical constraints. As a result, dominant AI firms can operate across jurisdictions with little coordinated oversight, increasing the risk of fragmentation and inconsistent enforcement. Although some of these regulatory differences may reflect legitimate domestic priorities and capacities, and, in some cases, national security considerations, they can spill over into trade tensions, particularly if governments adopt conflicting rules or restrict access to AI inputs and technologies. Such tensions could undermine global inclusiveness, especially if digitally constrained economies are forced to rely on inferior or more expensive AI options. In the absence of a more coherent international approach, disparities in AI development and deployment could widen, leaving some economies at the margins of the AI transformation.

International cooperation could play an important role in addressing AI-related competition challenges, but concrete efforts remain limited and largely concentrated among advanced economies.

International cooperation could help to foster a shared understanding of AI-related competition challenges, promote more consistent enforcement and offer a platform for knowledge exchange and capacity-building, especially for governments with fewer resources. Cooperation could also facilitate the resolution of cross-border disputes involving global AI firms. Yet, international cooperation addressing anti-competitive behaviour remains relatively limited, and AI is no exception. Some recent efforts – such as those of the OECD and the G7 – call for regulatory frameworks to be adapted, best practices to be shared and common standards to be developed to ensure competitive AI markets, yet concrete cooperation is still in the early stages.³⁶ International debates sometimes point to open-source and open-weight AI models – where open-source models disclose their architecture, code and training data, and open-weight models release only the trained parameters³⁷ – as potential tools to promote competition and inclusiveness by lowering entry barriers, enabling broader participation and

enhancing transparency, though they also raise concerns about how they are to be overseen and how they might potentially be misused (UN, 2024). As discussed above, efforts to promote open public data and digital infrastructure can also help to level the playing field by lowering barriers to entry and enabling broader participation in AI development. However, to move beyond early-stage initiatives, broader and more sustained engagement, including from developing economies, is needed if cooperation on AI-related competition challenges is to become more inclusive.

International trade cooperation can also help to strengthen competition in AI-related markets, but additional efforts are needed to ensure more firms can enter these market and more customers can benefit.

As noted earlier, uncoordinated competition policies can lead to trade tensions, potentially worsening market concentration and undermining the inclusiveness of AI. While the WTO does not have a comprehensive agreement on competition policy, it does contribute to enhancing the coordination of competition policies by keeping markets open through existing agreements and through instruments such as accession protocols (Anderson et al., 2018). In parallel, RTAs have become the main venue for trade-related cooperation on competition policy. An increasing number of RTAs include provisions that promote fair market conditions through cooperation among authorities, commitments to uphold national competition laws, and, in some cases, rules governing state-owned enterprises (Mattoo, Rocha and Ruta, 2020). A much more limited number of recent RTAs and digital economy agreements, mainly among high-income economies, incorporate competition provisions specific to digital markets, focusing on information exchange, capacity-building and enforcement cooperation, though these provisions do not specifically address AI (Burri, Callo-Müller and Kugler, 2023). As this area of trade cooperation continues to evolve, broader participation by developing economies will be essential to ensure that the benefits of AI are more inclusively shared. The WTO could help with the coordination of competition policies through further collaboration with other international organizations to support more dialogue, information-sharing and capacity-building on competition issues relevant to the AI-driven economy.

AI, innovation and inclusive growth

By Philippe Aghion

Professor of Economics at the Collège de France and INSEAD (Institut Européen d'Administration des Affaires)
and visiting professor at the London School of Economics

AI has the potential to foster significant economic growth by automating tasks in goods and services production, and in the generation of ideas, improving technological innovation. That, in turn, accelerates creative destruction – new technologies replacing old ones.

While automation may reduce the incentive to outsource some tasks, developing economies can still benefit from AI by leapfrogging in technology adoption and improving education delivery, much like mobile technology did in the past.

However, access to data and infrastructure is critical. Developing economies need support in building capabilities, such as access to data and computing power. Global cooperation is essential to ensure inclusive access to AI's inputs, as highlighted by the AI Summit in Paris earlier this year.³⁸ Sound competition policy is also essential, as dominant firms may use AI to entrench market power. Automation may reduce outsourcing incentives and displace jobs, but productivity gains can boost demand and employment. Education and labour market policies are key to helping workers adapt.

As to whether AI may drive more outsourcing from developed to developing economies, or rather a trend toward reshoring, this is complex. Automation could reduce the need to outsource, particularly for tasks that can now be done more cheaply at home, potentially slowing the convergence process for developing economies. However, I don't believe AI will completely upend the existing division of labour in global value chains.

For example, ChatGPT and similar technologies mainly affect services. Over the short to medium term, I expect existing trade patterns – where emerging countries focus on manufacturing and advanced economies on services – to persist. But we need to monitor this closely.

Concerning the kinds of policies needed to ensure that AI promotes employment and reduces inequality in both developed and developing economies, the most important starting point is education. A strong, inclusive education system ensures that more people can benefit from AI rather than be replaced by it. More educated workers are more likely to be complemented by AI, not substituted.

Beyond education, active labour market policies are crucial. I'm a strong advocate of the Danish "flexicurity" model, where workers receive generous support and retraining if they lose their jobs. This combination of flexibility for firms and security for workers helps economies adapt to technological change. Elements of this approach can be scaled regionally in larger countries.

The growing concentration of AI capabilities among a few dominant firms and countries is a serious issue. As with the IT revolution, AI is currently dominated by a few big tech firms – especially those that control the cloud infrastructure. To counterbalance this, we need robust competition policy.

I support open-source models and caution against excessive regulation, which established firms can navigate more easily than new entrants. Governments also have a role to play in subsidizing access to data and computing power for smaller firms to ensure a level playing field.

Disclaimer

Opinion pieces are the sole responsibility of their authors. They do not necessarily reflect the opinions or views of WTO members or the WTO Secretariat.

(c) Managing labour market disruptions from AI is important to supporting AI-enabled trade

In response to potential labour market disruption from AI, governments may try to protect jobs by adopting unilateral measures that ultimately affect trade with other economies and risk undermining the benefits of AI-enabled trade. As discussed in Chapter B, AI may affect jobs and wages directly through automation and indirectly by reshaping comparative advantages. These changes in trade patterns would impact labour markets in complex ways, creating both opportunities and risks for firms and workers, with outcomes depending on sectoral dynamics and investment in AI-related infrastructure and skills. Adjustment policies, such as training and job search assistance or unemployment benefits, can help to facilitate labour movements from contracting to expanding sectors without resorting to trade-distorting measures (WTO, 2017b, 2024b). However, governments could also respond to AI-related labour market disruption, including its trade-related effects, by adopting trade measures, such as tariffs and subsidies, that risk harming other economies. While not specific to AI, empirical evidence suggests that unilateral digital trade restrictions can have broader development implications, disproportionately affecting lower-income economies and potentially constraining their ability to benefit from AI-related opportunities (IMF et al., 2023).

Uncoordinated national approaches to regulating AI-driven platforms that supply work across borders can hinder more inclusive participation in AI-enabled economic opportunities. While informal employment is still widespread globally, accounting for nearly 60 per cent of the workforce, it tends to be even more prevalent in sectors relying on digital labour platforms – online marketplaces that connect workers with clients for tasks (ILO, 2021). Workers providing cross-border services through these digital labour platforms can fall into “regulatory blind spots”, as they may be excluded from both home and host country labour protections, such as minimum wages, overtime pay or health insurance, due to non-standard employment status and misalignments between national labour systems, raising concerns about fairness and inclusion (UN and ILO, 2024). This exclusion is not necessarily a product of national inaction in itself, but of the difficulty in adapting territorial labour regimes to digitally mediated, location-independent work.

Uncoordinated policy responses to these challenges can create further distortions for market participants and constrain broader access to the economic opportunities enabled by AI.

International trade cooperation already offers some avenues to help address AI-related labour market challenges while preserving the benefits of an open trading system. While the International Labour Organization (ILO) plays a central role in promoting decent work through international labour standards, the multilateral trading system is also relevant for addressing trade-related labour impacts, including those driven by AI. While potentially trade-distortive measures, such as subsidies, adopted in response to increased import competition, are subject to WTO rules, the multilateral trade system allows the adoption of non-discriminatory labour and social policies to address trade-related labour-market disruptions (WTO, 2024b, 2017b). RTAs are also increasingly incorporating labour provisions aimed at upholding certain ILO standards and promoting cooperation, including on labour market adjustment. Sometimes negotiated as part of RTAs, mutual recognition agreements of digital skills and credentials have been found to facilitate smoother labour market adjustments and reduce protectionist pressures (OECD, 2023). While these mechanisms are not specific to AI, they provide a useful foundation for more inclusive and coordinated responses to potential AI-related labour market disruptions.

Better coordination across international organizations could help address AI-driven labour market disruptions and promote more inclusive AI, while limiting the risk of protectionist responses. Although it is ultimately the responsibility of governments to ensure that their AI, trade and labour policies are coherent and mutually supportive, international cooperation can play an important complementary role. Although trade and labour data collection is well established, analysis of the interlinkages between trade and employment in response to technological changes, such as AI, remains limited. Greater international cooperation on collecting AI-specific data could support more informed and coherent policymaking. Advancing international discussions on how to address gaps in labour protection for workers operating virtually across jurisdictions is also important, as AI is accelerating the growth of cross-border digitally delivered services. Further international cooperation on skills recognition, reskilling and labour mobility could also help to align

workforce development with the evolving trade and employment patterns driven by AI. Building on its existing functions, the WTO could help to support more coherent policy responses to AI-driven trade and labour market disruptions by facilitating dialogue on the trade-related aspects of these impacts through its existing bodies, enhancing transparency via mechanisms such as trade policy reviews, and contributing to joint analysis and information-sharing with other international organizations.

(d) Addressing the environmental impact of AI can help to make its development and deployment more sustainable and inclusive

Uncoordinated efforts to manage the environmental impact of AI risk creating trade tensions, potentially undermining environmental protection. As discussed in Chapter B, while AI can help improve energy and resource efficiency and promote environmental innovation, its current development and use consume large amounts of energy and resources, including rare minerals and water, and generate electronic waste (Kshetri, 2024; OECD, 2022). For instance, data centres, cryptocurrencies and AI accounted for around 2 per cent of global electricity demand in 2022. Electricity demand from data centres alone is projected to more than double by 2030 (IEA, 2025). Without some degree of regulatory alignment, governments are likely to adopt different environmental regulations based on national circumstances and priorities, potentially placing those with stricter rules at a competitive disadvantage. This could result in downward pressure on environmental standards, or prompt the use of trade measures, such as tariffs or subsidies, to offset perceived imbalances. Such actions may shift environmental burdens to other economies, undermine international cooperation and worsen overall environmental outcomes (WTO, 2022a). In contrast, open trade supported by appropriate environmental policies can contribute to environmental gains by allowing green comparative advantages to materialize (WTO, 2023).

International cooperation on the environmental impact of AI is still at an early stage, with most efforts so far focused on high-level declarations and few voluntary initiatives. Statements such as those made in the contexts of the UN's Global Digital Compact,³⁹ the G7 or the OECD increasingly acknowledge the need to minimize the environmental footprint of AI systems, particularly

by reducing energy and resource consumption in data centres and related infrastructure. Recent multi-stakeholder initiatives, including those led or supported by the UN – such as the AI for Good platform⁴⁰ and the Coalition for Environmentally Sustainable AI⁴¹ – reflect growing recognition of the issue, but concrete commitments remain limited. Some technical guidance and pilot projects have been launched, such as the ITU Focus Group on Environmental Efficiency for Artificial Intelligence and Other Emerging Technologies,⁴² but these efforts often fall under broader sustainable development goals, and systematic cooperation on mitigating the environmental impact of AI has yet to emerge. Existing initiatives also tend to give little attention to the role of trade and trade policy in enabling more sustainable AI development and deployment.

Promoting coherence between trade-related and environment-related aspects of AI can help to support a more inclusive and sustainable AI transition. Greater alignment between trade and environmental policies can help to ease regulatory frictions, lower the risk of environmental degradation and support the effective use of natural resources such as affordable renewable energy, which might otherwise be constrained by fragmented rules. In that context, international trade cooperation can help facilitate resource-sharing and technology transfer, and can enhance transparency and accountability with regard to environmental protection. International trade in environmental goods and services can also help to mitigate some of the environmental impacts of AI, for instance, by improving access to energy-efficient cooling systems and low-carbon energy technologies for data centres, and by supporting sustainable AI development and deployment. These efforts are needed to help manage the environmental impacts of AI more effectively across borders, while also creating trade opportunities for broader participation in AI value chains.

Greater trade cooperation among international organizations could further help make AI more sustainable and inclusive. While potentially trade-distortive measures adopted to address the environmental impact of AI, such as tariffs and subsidies, are subject to WTO disciplines, the multilateral trading system does not preclude governments from adopting non-discriminatory environmental policies (WTO, 2022b). By keeping markets open, the WTO can help to ensure that there are environmental gains from trade when economies

specialize based on their environmental comparative advantage (Le Moigne et al., 2025). By promoting transparency, facilitating dialogue and supporting policy coherency, the WTO can also help to build mutual understanding around trade-related measures aimed at addressing the environmental impact of AI. However, as discussed above, the environmental dimensions of AI are being addressed mainly in separate digital governance and sustainability forums. Greater engagement – both within the WTO and in collaboration with other international organizations and the private sector – could help members to gain a better understanding of how trade policy interacts with these issues, and to support more coherent, mutually reinforcing approaches.

3. Conclusions

The WTO contributes to the development and deployment of AI by maintaining a more open and predictable trading environment. Open, predictable, transparent, forward-looking, and flexible trade-related AI policies can not only support the deployment of AI technologies, but also benefit AI developers and creators by facilitating market access, knowledge exchange and cross-border collaboration. Existing WTO rules help reduce trade barriers and promote non-discriminatory access to AI-related goods and services. WTO rules also support innovation by protecting IP rights relevant to AI innovation and creation, and encouraging technology diffusion and collaboration. Furthermore, the WTO promotes international regulatory coherence and standards for AI-related goods. Transparency and dialogue on trade-related AI policies are supported through WTO mechanisms that allow WTO members to monitor and comment on relevant regulatory developments. WTO bodies promote cooperation on trade-related AI issues and offer a platform for members to build shared understanding and raise and address concerns.

Although existing WTO rules can be applied to AI-related trade, a business-as-usual approach is unlikely to ensure that the benefits of AI are more widely shared. Four areas for consideration stand out: (1) improving market access conditions for AI-related trade; (2) addressing regulatory fragmentation in AI; (3) using AI responsibly in the implementation of WTO disciplines; and (4) promoting more “trade-and” international cooperation for inclusive AI.

Easing access to markets for AI-related goods and services can help to make the benefits of AI more widely available. Lowering bound tariffs on AI-related raw materials and goods, which would be helped by an increased number of WTO members acceding to the ITA and ITA 2, would improve trade predictability and contribute to making AI-related tools more affordable, thereby facilitating the development and deployment of AI, especially for firms and economies with limited resources. Similarly, improving services commitments in AI-related sectors, whether by binding the applied trade regime or through further openness, would provide firms with greater assurance that market conditions are likely to remain stable long enough to justify investments and the scaling of AI-related operations. However, striking an appropriate balance between binding commitments, aligned with each member’s capacity to implement them, and policy flexibility is important to preserve the stability and predictability associated with credible commitments, and to promote inclusive AI.

Addressing regulatory fragmentation in AI through more informed discussion can help to identify less trade-restrictive approaches that contribute to more inclusive AI. WTO discussions could help find balanced and interoperable approaches to cross-border data flows, the use of training data, and IP rights related to AI-generated contents. In this context, a group of WTO members participating in the Joint Initiative on E-commerce recently reached a stable draft of an agreement covering some areas related to AI. However, more could be done at the WTO level. This includes strengthening the organization’s role in fostering transparency and dialogue in AI-related services regulations. There is also scope for further discussion on the treatment of subsidies and safeguards linked to AI, some of which may not fall under existing disciplines, potentially making it more difficult to keep AI markets more open and to address related disruptions.

Further efforts are needed to promote the use of AI in implementing WTO disciplines, while addressing associated risks that can undermine trust and inclusiveness. Provided that confidentiality concerns are effectively addressed, machine learning applications, in line with members’ WTO obligations, could help to streamline customs procedures and public procurement processes, facilitate IP enforcement and the timely notification of trade policy to the WTO, and support compliance with technical and health requirements, thereby reducing trade costs, particularly for smaller firms and economies. Safe and trustworthy

AI tools could also potentially enhance some of the WTO's core functions, including monitoring, negotiations and dispute settlement, by improving information management, streamlining processes and supporting more timely and inclusive decision-making. However, biased AI algorithms could reinforce forms of discrimination that WTO agreements are intended to address. In this context, more discussion is needed on how to manage these risks, including the potential role that open-source AI solutions could play in supporting transparency, accountability and broader access.

Several challenges that shape the inclusiveness of AI lie partly outside the WTO's mandate, highlighting the need for greater policy coherence and collaboration. Addressing these challenges requires a “trade and” approach. In that context, enhanced cooperation between the WTO and other international organizations and initiatives could help to ensure that the growing role of AI, and the trade it enables, benefits more people. Closing the digital divide, managing AI-related labour market adjustments, aligning trade with environmental goals and addressing

market concentration are some of the key areas in which international cooperation can help to ensure that AI-related trade contributes to more inclusive and sustainable outcomes. While some initiatives already exist, enhanced international cooperation is still needed to help close digital divides by supporting sustained investment in digital infrastructure, AI skills development and regulatory capacity. Greater collaboration among international organizations working on AI, labour and trade could promote complementary policies that preserve the benefits of open trade, while managing AI-led labour market adjustments. More international cooperation could also promote more environmentally sustainable AI value chains by addressing the risk of trade tensions arising from uncoordinated trade- and environment-related policies relevant to AI and enabling benefits for economies stemming from production specializations related to green comparative advantages. Finally, improved coordination between trade and competition policies could help to address market concentration in AI-related sectors and support more inclusive participation in AI-driven growth.

Endnotes

- 1 WTO official document number WT/MIN(24)/38 – available from https://www.wto.org/english/thewto_e/minist_e/mc13_e/documents_e.htm.
- 2 Unlike other IP rights, the protection granted to trade secrets is not time-limited.
- 3 See, for instance, WTO official documents IP/C/R/TTI/CAN/2; IP/C/R/TTI/CAN/3; IP/C/R/TTI/CAN/4; IP/C/R/TTI/EU/2; IP/C/R/TTI/EU/4; IP/C/R/TTI/CHE/2; IP/C/R/TTI/CHE/3; IP/C/R/TTI/CHE/4; IP/C/R/TTI/USA/2; IP/C/R/TTI/USA/3; IP/C/R/TTI/USA/4, available via <https://docs.wto.org/>.
- 4 See https://www.wto.org/english/tratop_e/tbt_e/principles_standards_tbt_e.htm.
- 5 The ISO/IEC Joint Technical Committee 1, Subcommittee 42 on artificial intelligence is one of the main global processes adopting standards that address various aspects, including explainability, transparency, bias and governance of AI systems (WTO, 2024a).
- 6 Other transparency provisions relevant to AI governance include those in the GATS and in the TRIPS Agreement.
- 7 Available at <https://eping.wto.org/>.
- 8 See, for instance, WTO official documents G/TBT/N/CHN/1921; G/TBT/N/EU/850; G/TBT/N/KEN/1604, available via <https://docs.wto.org/>.

- 9 See, for instance, WTO official documents WT/TPR/S/438/Rev.1; WT/TPR/S/442; WT/TPR/S/455; WT/TPR/S/458, available via <https://docs.wto.org/>.
- 10 See https://www.wto.org/english/tratop_e/tbt_e/tbt_0711202310_e/tbt_0711202310_e.htm.
- 11 High-income economies, as defined by the World Bank income group classification, that are not part of the ITA include Antigua and Barbuda; Barbados; Brunei Darussalam; Chile; Guyana; Saint Kitts and Nevis; Trinidad and Tobago; and Uruguay. See <https://blogs.worldbank.org/en/opendata/understanding-country-income--world-bank-group-income-classifica>.
- 12 Some WTO members have imposed export restrictions on products entering the AI value chain, invoking the security exception of GATT Article XXI as justification. More information can be found in the WTO trade concerns database, available at <https://tradeconcerns.wto.org>.
- 13 See www.wto.org/english/tratop_e/serv_e/gatsqa_e.htm.
- 14 See https://www.wto.org/english/tratop_e/devel_e/a4t_e/aid4trade_e.htm.
- 15 The full text of the Agreement on Subsidies and Countervailing Measures is available at https://www.wto.org/english/docs_e/legal_e/scm_e.htm.
- 16 The full text of the Agreement on Safeguards is available at https://www.wto.org/english/docs_e/legal_e/sg_e.htm.

- 17 As of December 2024, 71 members had confirmed their support for the so-called “stabilized” text of the Agreement on Electronic Commerce. See https://www.wto.org/english/tratop_e/ecom_e/xcom_e/joint_statement_e.htm.
- 18 See https://www.wto.org/english/tratop_e/devel_e/dev_special_differential_provisions_e.htm.
- 19 See <https://www.unilu.ch/en/faculties/faculty-of-law/professorships/burri-mira/research/taped/>.
- 20 See https://www.wto.org/english/tratop_e/devel_e/dev_wkgp_trade_transfer_technology_e.htm.
- 21 See, for instance, WTO official documents WT/GC/W/868; G/C/W/825; WT/COMTD/W/270; IP/C/W/695; WT/WGTTT/W/33, available via <https://docs.wto.org/>.
- 22 The group of WTO members co-sponsoring the IFD Agreement requested its incorporation into the WTO framework as a plurilateral agreement, open for all WTO members to join. More information is available at https://www.wto.org/english/tratop_e/invfac_public_e/invfac_intro_e.htm.
- 23 See https://www.wto.org/english/docs_e/legal_e/gats_e.htm#art3.
- 24 The number of notifications has been determined based on a keyword search. Documents were identified as relevant if they contained any of the following terms: digital, cyber, internet, e-commerce, computer, cloud, online, virtual, fintech, blockchain, network, platform. Notifications in goods trade are of a much higher order of magnitude. In 2024, the volume of notifications of technical regulations and conformity assessment procedures submitted to the TBT Committee only reached a new annual record of 4,334. Given the limited number of GATS notifications, parallel efforts have emerged, notably through the release of the WTO Director-General’s Monitoring Report and the I-TIP services database to enhance members’ awareness of services measures. More information available at <https://itip-services-worldbank.wto.org/SearchApplied.aspx>.
- 25 See www.industry.gov.au/publications/seouldeclaration-countries-attending-ai-seoul-summit-21-22-may-2024.
- 26 For instance, the World Bank (2025) has several digital projects worth US\$ 450.8 million, including one in Chad to expand broadband access and strengthen digital public services, and another in Togo focused on broadband connectivity, digital skills and entrepreneurship. The European Investment Bank has invested US\$ 20 million in a US\$ 250 million digital infrastructure fund for Sub-Saharan Africa (<https://www.eib.org/en/products/equity/funds/convergence-partners-digital-infrastructure-fund>). The Inter-American Development Bank has various projects worth US\$ 11 million to improve digital connectivity and support digital transformation in Latin America and the Caribbean (<https://www.iadb.org/en/project-search>). Through the Open Source Ecosystem Enabler project (<https://www.itu.int/en/ITU-D/ICT-Applications/Pages/Initiatives/OSEEPSI/home.aspx>), the International Telecommunication Union (ITU) and the United Nations Development Programme (UNDP) (2025) support the adoption of open-source technologies for digital government services.
- 27 For instance, the ITU’s AI Skills Coalition provides open training on generative AI, machine learning and AI for sustainable development through an inclusive online platform. The Commonwealth Artificial Intelligence Consortium (<https://caic.thecommonwealth.org>) AI Academy offers free AI courses and works with private firms to boost infrastructure in member states (CAIC, 2025). WIPO also supports informed policymaking on AI and IP through resources and practical guidance.
- 28 See https://www.wto.org/english/tratop_e/devel_e/a4t_e/aid4trade_e.htm.
- 29 See <https://enhancedif.org/en>.
- 30 The pilot economies for the “Digital Trade for Africa” project are Benin, Côte d’Ivoire, Ghana, Kenya, Nigeria and Rwanda.
- 31 The OECD and UNESCO, while not standard-setting bodies *per se*, have also developed international AI policy frameworks, such as the OECD AI Principles and the UNESCO Recommendation on the Ethics of AI, respectively.
- 32 See <https://www.un.org/en/ai-advisory-body>.
- 33 For instance, until the 2024 launch of the Global Dialogue on AI under the UN Global Digital Compact, 118 economies, mostly developing ones, were not party to any intergovernmental discussions on AI governance according to the UN AI Advisory Body (2024). Only a few high-income economies participate in most or all AI-related initiatives.
- 34 See <https://www.un.org/en/ai-advisory-body>.
- 35 The final report of the UN AI Advisory Body also calls for the creation of a “Global AI Data Framework” involving different actors, such as economies and relevant international organizations, including the WTO. See <https://www.un.org/en/ai-advisory-body>.
- 36 Several recent initiatives address anti-competitive behaviour in AI, including the International Competition Network call for action against anti-competitive conduct in AI, the amended OECD Recommendation on AI (2024), the G7 Digital Competition Communiqués (2023 and 2024), the joint statement of the European Union, United Kingdom and United States, and the EU-US Joint Roadmap.
- 37 According to <https://opensource.org/ai/open-weights>, “Open Weights refer to the final weights and biases of a trained neural network. These values, once locked in, determine how the model interprets input data and generates outputs”.
- 38 See <https://www.elysee.fr/en/sommet-pour-l-action-sur-l-ia>.
- 39 See <https://www.un.org/digital-emerging-technologies/global-digital-compact>.
- 40 See <https://aiforgood.itu.int/>.
- 41 See <https://www.sustainableaicoalition.org/>.
- 42 See <https://www.itu.int/en/ITU-T/focusgroups/ai4ee/Pages/default.aspx>.