

Where Trade Meets Tech:

The AI Frontier

December 2025



Promoting Innovation Worldwide

Artificial intelligence (AI) innovation has transformed trade policy, and trade is an important enabler for driving further technological innovation. AI is already changing the way countries exchange goods and services, from automating customs to powering smart logistics. At the same time, AI itself has become a globally traded asset. AI models, software, cloud platforms, chips, and the data centers that power them make up an ecosystem of upstream and downstream infrastructure and technologies—known as the AI technology stack—that drives the industry’s growing market potential.

AI innovation and deployment builds on the foundations and benefits of existing digital trade rules and norms, including provisions to promote cross-border data flows, interoperable standards, and open technology markets. The growth of generative AI, geopolitical competition over compute infrastructure, as well as digital sovereignty and national security considerations make it more critical that trade policy is developed in a way that supports AI development and diffusion. To sustain innovation, mitigate risk, and maintain global competitiveness, policymakers should focus on continuing to adopt AI-supporting digital trade rules, strengthen international cooperation to address barriers to trade, and consider work on areas where trade rules may need to evolve to handle AI-specific considerations while building on digital trade foundations.

In this paper, ITI outlines how trade and AI reinforce one another and provides policy considerations to define, facilitate, and promote AI exports in an era of significant policymaker interest and changes in both trade and AI.

How AI and Trade Intersect

How Does AI Transform Trade?

AI enables growth in the global digital economy by enhancing productivity, enabling cross-border trade of digital services, and optimizing supply chains. Through customs automation, smart logistics, and predictive analysis in supply chains, AI simplifies current trade processes.¹

For instance, AI models and blockchains enable pre-import classification, cost forecasting, and preliminary checks on trader identity and declarations.² McKinsey estimates that corporate adoption of AI could generate up to \$4.4 trillion in productivity gains globally, including significant impact in sectors like IT, professional services, finance, and trade-related services. By enhancing faster processes, transparency, and security, AI is no longer just a supplementary tool but has become a necessity to advancing efficiency and resilience in global trade.

AI also reduces trade costs by removing barriers and reducing trade logistics, documentation, and compliance fees throughout the supply chain. AI tools can identify inaccuracies in data by examining traded goods' description, origin, and destination, and it can provide instant translations of this information in different languages. In addition, AI can help secure physical and digital supply chains.

AI as a Traded Asset

Besides improving efficiency of trade processes, AI itself has become a global asset that countries trade every day. The global AI market is expected to skyrocket from \$189 billion in 2023 to \$4.8 trillion by 2033, and AI's share of the global frontier technology market could increase from 7% to 29%.³ The AI technology stack encompasses the ecosystem of upstream and downstream infrastructure and technologies that make AI development and deployment possible.

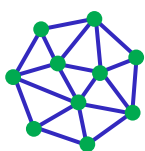
It consists of the following layers:⁴



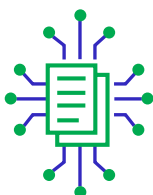
The Infrastructure Layer: The base layer of the AI technology stack is comprised of hardware, physical, and digital infrastructure that powers AI systems, particularly foundation models.



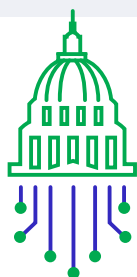
The Data Layer: The quality, representativeness, and reliability of AI systems largely relies on the data they are trained on and have access to while operating.



The Model Development and Operations Layer: This layer of the AI technology stack includes tooling that enables model training and optimization, as well as AI models.



The Application Layer: This layer is the part of the AI technology stack that most people interact with during daily life. This is the layer where AI systems are integrated into the tools we use at home, at work, and across industries, and where end-users interact with their outputs. Ultimately, this layer is crucial for generating the social and economic value that will convey the benefits of AI.



Cross-Layer of Governance, Security, and Trust: Governance is a cross-cutting function that permeates every layer of the AI technology stack—from infrastructure to applications. Governance includes tools and frameworks for data collection and use, including specific to provenance, compliance, security-by-design, auditability, transparency, and traceability that help measure and manage risks.

The AI technology stack also helps to illustrate how AI is now traded in the form of both physical goods and services. The goods include technology hardware, equipment, and infrastructure components such as advanced semiconductors or data center equipment. Services include consumer-facing applications, traditional categories of services that become AI-powered, as well as intermediate services that underpin AI development. Importantly, digital delivery of AI-powered services generates new cross-border data flows and requires different architectures for transfer.

Each layer of the AI technology stack is globally distributed. As a result, policy choices that implicate trade in AI do not just affect national markets but also affect the entire technology stack.

Digital Trade Policies as the Foundation for Trade that Supports AI

Many existing digital trade policies and approaches remain applicable for promoting trade of AI. Governments have included robust digital trade and e-commerce chapters in bilateral and multilateral agreements, with AI-trade enabling policies such as **prohibitions on data localization and source code/algorithm disclosure requirements, commitments to enable cross-border data flows**, and agreements for **risk-based regulatory principles** embedded across trade agreements. According to the OECD, nearly half of all regional trade agreements in recent decades have included digital trade provisions.⁵

While most of these recent trade agreements do not have AI-specific provisions, many of them have digital trade commitments that are applicable to AI and other technology areas. For instance, the 2020 U.S.-Mexico-Canada Agreement (USMCA) explicitly promotes cross-border data flows across the three countries, which is crucial for training models and supporting the AI industry. It also integrates risk-based principles in its personal data protection rules and cybersecurity provisions.⁶

Existing trade rules can help promote trade and deployment of AI by **supporting the use of internationally recognized, voluntary standards** to reduce technical barriers to trade. For instance, provisions in the World Trade Organizations (WTO's) Technical Barriers to Trade (TBT) Agreement, as well as digital chapters in agreements like the USMCA, encourage countries to base domestic regulations on globally recognized standards and to pursue interoperability wherever possible. These commitments were originally designed to support trade in digital services and ICT products. However, they remain relevant to AI and other emerging technologies, which often operate across borders and sectors.

The WTO Moratorium on Customs Duties on Electronic Transmissions also remains essential to supporting AI innovation and trade. For more than 25 years, this multilateral agreement has supported innovation, economic growth, and supply chain resiliency across the world by prohibiting customs duties on data flows and digital content. The moratorium provides the global regulatory certainty needed for technology innovators and users, including for AI, and prevents the imposition of tariffs and onerous compliance regimes that would limit access to new technologies.



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In the mid-1990s, dozens of governments recognized the need for their own economies to access ICT hardware at a low cost to fuel economic growth and productivity. This led to unilateral elimination of tariffs on ICT hardware – both finished products and components – which accelerated the adoption of ICT around the world. Now, over 80 governments have bound their tariff rates at zero to enable affordable ICT diffusion around the world. This has contributed to the development of AI and other technologies by providing access to the most innovative technology inputs, regardless of where they are assembled.

Governments should adhere to their duty-free commitments on ICT products, and where tariffs are used to protect national security interests, they should only impose tariffs on ICT as a last resort as these tariffs would slow productivity growth and hinder innovation for technologies including AI in their own economy. Policymakers should also avoid tariffs on parts and components that are used in the domestic manufacture of ICT hardware.

These examples of existing trade rules show that broader commitments to promote data flows, reduce trade barriers, and reduce tariff and compliance burdens on ICT products, are helping to empower the AI industry's success. Policymakers should aim to strengthen and build on these foundational trade elements as part of an AI-supporting comprehensive policy approach.



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Key Policy Questions for AI and Trade

As AI becomes a key component of economic growth and strategic competition, policymakers may grapple with how the rapid growth of AI should fit into the existing global trade regime. Defining AI exports and calibrating policies on tariff treatment can help in this effort. AI is not limited to foundation models but instead comprises a stack of tangible and intangible goods. Trade policy actions and approaches can impact AI development and innovation throughout the stack, with follow-on effects spreading to additional layers.

For example, tariffs and other import measures on essential materials required to construct data centers and power AI, including ICT products and broader building materials such as steel and aluminum, may further exacerbate the impact of limited supply, subsequent rising prices, and procurement delays that have already been straining the technology sector.

For example, the lead time for large power transformers in the United States has stretched to 2-4 years.⁷ Tariff-induced delays may extend these timelines by at least an additional 28 weeks and raise material cost indexes between 5-15%, significantly delaying data center construction.^{8,9} These delays, in turn, may drive up leasing rates and cloud service pricing by 15-20%.¹⁰

Trade policy approaches that cause market volatility and harm long-term investor confidence in AI innovation may undermine AI policy goals around the world. Despite continuing AI growth, companies may have to reduce their spending on AI-enhanced enterprise software to make up for trade remedy-related costs.¹¹

Restrictions on the ability to export AI can also have significant impacts on AI development, particularly if restrictions are overly broad or divergent. It is important to ensure that export controls, and other review authorities, realize economic security objectives through a process of robust stakeholder engagement during development and implementation, provide sufficient transition periods, and are based on clearly identified national security objectives. Governments should also prioritize close coordination with allies to ensure that sanctions meet their intended objectives and do not inadvertently open market opportunities for competitors.

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Policy Considerations to Facilitate Trade of AI

The following recommendations highlight how policymakers can promote AI exports, enable trust, and support cross-border AI deployment.



Maintain and improve existing international agreements to include AI provisions. Existing trade policy approaches already support the development and deployment of AI, and trade policy does not need to be reinvented for AI. Before enacting new policies or agreements, policymakers should consider existing commitments that support AI policy goals such as maintaining and making permanent the WTO Moratorium on Customs Duties on Electronic Transmissions and make adjustments only if needed.



Prioritize international collaboration. While the examples above demonstrate the continued importance of multilateral cooperation and commitments, countries should also pursue plurilateral cooperation on trustworthy AI and trade. Plurilateral approaches involve meeting with smaller groups that share like-minded interests, which can bear more pragmatic and effective weight. Countries should seek trade commitments and agreements to align AI approaches with other partners to allow for interoperable rules and commitments around the world. Governments should also work to add cooperation mechanisms to existing and future agreements.



Facilitate Security for AI and AI for Security: Two important aspects of security are present in the AI realm: the security of AI itself to ensure it operates as intended and using AI-enabled security mechanisms to combat AI-driven cyber threats. Governments should utilize trade discussions and agreements to share information about best practices in securing AI, as well as in using AI to mitigate cyber threats. Existing cybersecurity obligations in existing trade commitments could be expanded to account for both the security of AI itself and to counter cyber attacks using AI.



Promote risk-based regulation and trade coherence. Policymakers should build on existing trade commitments and adopt flexible, risk-based approaches that can evolve alongside innovation. For instance, WTO's Technical Barriers to Trade (TBT) Agreement aims to ensure that technical regulations, standards, and conformity assessment procedures should be adopted in the least trade-restrictive manner and do not hinder trade unnecessarily.¹² Such an approach can offer flexibility without fragmentation. Similarly, trade policy approaches developed for AI should aim to prevent trade barriers.

→ **Facilitate standardization and interoperability.** Policymakers should strengthen cooperation through mutual recognition of AI conformity assessments and support the development, adoption, and recognition of industry-led, multi-stakeholder, and AI-specific international standards. Embedding these practices in trade agreements may reduce compliance costs for AI developers and foster trust, scale, and cross-border market access in the global AI economy.

→ **Enable cross-border data flows.** The ability to transfer information across borders is an essential enabler for AI. Many existing digital trade rules and agreements include commitments to protect and facilitate these data flows. Governments should ensure that privacy and security conditions attached to the transfer of data are reasonable and proportionate and provide for a range of available transfer mechanisms. Governments should support multilateral initiatives where possible, such as the Global Cross Border Privacy Rules system and the Privacy Recognition for Processors, and encourage other governments to take similar approaches via new trade commitments and rules.

Conclusion

Existing trade policy rules and frameworks provide a helpful starting point for governments considering AI. Rather than starting from scratch to build a new AI-specific trade policy, what policymakers need now is precision: adapting existing approaches to address the specific risks of AI, without sacrificing the openness and flexibility that digital trade depends on.

Efforts should focus on addressing barriers to trade that may limit AI opportunities, continuing to adopt core digital trade rules that underpin the growth of AI and other technologies, and working with stakeholders and international partners to consider areas where trade rules may need to evolve to respond to technological change and advancement. In this work, policymakers should look to reinforce and build from the trade principles that have supported technological innovation for decades.

A coherent strategy that aligns economic competitiveness, national security, and responsible AI development is critical. Trade policy can, and should, serve as a catalyst for open, secure, and inclusive global AI development and deployment.

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