Policy Dialogue on AI in Trade Context for Enhanced Cooperation within APEC

APEC Digital Economy Steering Group

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Asia-Pacific
Economic Cooperation

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Executive Summary[1]

This study on AI and International Trade for Enhanced Cooperation within the Asia-Pacific Economic Cooperation (APEC) outlines the evolving landscape of artificial intelligence (AI), which is increasingly being recognized as a general-purpose technology capable of reshaping trade dynamics.

This study aims to strengthen knowledge of AI and its possible impact on trade within APEC AI has the potential to enhance productivity gains, accelerate scientific progress, and address climate change, but its challenges including privacy cannot be overlooked.

This study examines the impact AI can have on trade, identifying three channels that AI can influence international trade. First, AI can facilitate trade, by improving the efficiency and transparency of customs systems and enhancing productivity in supply chain management. Second, AI can act as a catalyst to change trade patterns, affecting the trade of goods and services among APEC economies. Third, AI can serve as a medium to promote evolution and change of existing trade norms.

The report identifies key discussions among APEC economies and international fora. APEC economies are implementing policies related to AI to foster innovation while addressing challenges related to the digital transformation. Discussions within international fora such as the Organisation for Economic Co-operation and Development (OECD), the United Nations (UN), G20, and G7 have taken place to establish AI principles and initiatives, addressing various issues related to AI. For example, the World Trade Organization (WTO) also recently published a report on issues related to AI and trade, "Trading with Intelligence – How AI Shapes and is Shaped by International Trade" (WTO, 2024).

This study concludes with suggestions for APEC, proposing several categories that APEC can

[1] [DISCLAIMER: This research paper is based on the authors' independent research and on reports issued by various international organizations and academic institutions. The views expressed herein, as well as those reflected in any cited reports or articles, do not necessarily represent the consensus positions of the APEC economies. This paper, together with the suggestions it contains, is provided for the sole purpose of informing discussion.]

contribute to in relation to AI and trade. The categories include: facilitating trade with AI and minimizing of the AI divide, researching trade pattern shifts due to AI, understanding the relevance of AI to trade norms, and supporting the private sector.

I. Introduction

A. Background

The release of ChatGPT in November 2022 marked a significant milestone, making generative artificial intelligence (AI) accessible not only to experts but also to the general public. This event demonstrated the reality and potential of AI as a general-purpose technology. Over the past several years, AI has advanced at an unprecedented pace, being widely applied across various domains and poised to impact society beyond individual industries.

The advancement of AI is anticipated to enhance productivity, accelerate scientific progress, and contribute to addressing environmental challenges (OECD, 2024[47-48]):

- **Enhancing Productivity Gains**: AI-driven automation and optimization enhance efficiency in industries ranging from manufacturing to finance. While projections vary on AI's contribution to gross domestic product (GDP) growth, some research estimate USD 900 billion market growth by 2026 (IDC, 2022[67]) and USD 1.5 trillion by 2030 (Thormundsson, 2022[68]).

- **Accelerating Scientific Progress**: AI-powered research expedites discoveries in medicine, material science, and other fields. For example, AI can assist health care providers with better image interpretation and automation of medical records (Harvard Medical School, 2024). AI can also drive progress in areas such as nuclear fusion and generating new life-saving antibodies to treat disease (Stanford, 2023[72]; Yang, 2023[73]).

- **Addressing Environmental Challenges**: AI is expected to enhance energy efficiency, climate modeling, and sustainable resource management. For example, AI can assist in addressing environmental challenges, including building open-source data and AI systems by using advanced climate modeling, and developing evidence-based AI interventions in open systems (United Nations, 2023[2]).

On the contrary, the advancement of AI also raises questions related to security, accessibility, and reliability.

A number of economies have or currently are formulating strategies on AI to maximize the benefits while mitigating the associated risks and concerns. Similarly, various multilateral fora are encouraging discussions on shared concerns, values, and ethical guidelines.

AI's rapid evolution necessitates a balanced approach that fosters innovation.

B. Objective of the Study

AI is a cross-cutting technology that is poised to influence economic activities, including international trade. The impacts of AI technology can be shaped by regulatory and public policy measures. For instance, a number of multilateral fora and individual economies have begun working on establishing governance frameworks for AI, with the aim of enhancing the positive impacts of AI.

APEC, as an incubator of new ideas, should address emerging issues regarding AI and make meaningful contributions on ways to enhance economic cooperation within APEC. This study is designed to provide APEC economies the opportunity to share knowledge and views on AI in the trade context. This study is further intended to provide building blocks for cooperation within APEC, to understand and share the benefits and risks of this emerging technology, and to foster its secure, accessible, and reliable development.

The study will employ a three-pronged approach to achieve its objectives:

- **Survey Policies and Initiatives of Multilateral Fora and APEC Economies**: The study will survey policies and initiatives being discussed within multilateral fora and individual APEC economies regarding AI and trade to identify areas where APEC may contribute to.

- **Evaluate Impacts of AI on Trade:** This study will examine the connection between policies related to AI and their impact on regional trade and investment flows, which ultimately affect economic cooperation.

- **Suggestions for APEC:** This study provides suggestions for APEC, a dynamic and flexible

economic forum, on how APEC and its member economies may contribute to addressing the developments arising from the impact of AI on trade.

AI is transforming the global trade landscape, presenting both opportunities and challenges for APEC economies. To harness the opportunities of AI as a growth engine, carefully designed policy and institutional frameworks should guide AI design and use. Multilateral efforts are already underway, including the APEC AI Initiative, that may provide useful reference points. At the same time, economies are developing policy, legislation and regulation, that focus on realizing the benefits and managing the adverse effects of AI and facilitating the secure, reliable, and accessible development and use of AI.

Against this backdrop, upbringing its unique stance as the incubator of ideas, APEC has carried out projects related to AI across various fora, including the 2023 Digital Month that allowed stakeholder engagement and discussions on artificial intelligence (APEC, 2023). Further, the APEC Ministers Responsible for Trade Joint Statement 2024 encouraged APEC economies to seek innovative and, interconnected growth by continuing to exchange views and contribute to the relevant ongoing international discussions on AI as appropriate (APEC, 2024).

APEC could benefit from deepening its analysis and identifying key elements for formulating suggestions on how AI can be utilized to facilitate trade within the APEC region. This study aims to foster dialogue on AI within the trade context, exploring how APEC economies can cooperate and exchange experiences in applying AI tools to facilitate trade. Recognizing the growing need to build capacity for understanding AI technologies in the trade context, this study will also provide suggestions for sharing relevant policies and best practices.

II. Impact of AI on Trade

A. Introduction

The AI industry is narrowly defined as an industry that produces and provides AI software, hardware, and services. However, the interconnected AI industry ecosystem encompasses the downstream industry that produces and provides products and services using AI as well as the AI upstream industry including data collection, purchase, and construction consulting, data trading and analysis.

The AI industry ecosystem can be established in a wide range of areas, including data collection and goods/services that apply AI. The downstream and upstream industries are areas that have been addressed through trade agreements, in close connection with cross-border trade.

[Table 2-1] Examples of Application of AI in Commercial Activities

Logistics	AI systems can help optimize warehouse usage by predicting demand, organizing inventories, improving efficiency across supply chains, and tracking the movement of parcels.
Customs	AI is being used to read and understand descriptions of commercial goods and classify these against customs codes in the Harmonized System to help companies identify requirements related to customs procedures and duties. AI is also increasingly used to identify counterfeited products.
Transport	AI systems are at the heart of autonomous vehicles, using complex machine learning systems to interpret road signs, read maps, and recognize and react to danger factors. In other applications, ML and human inputs are combined to optimize navigational software using real time traffic data and historic information to predict the best route options for road users. Beyond the automotive industry, AI is also used in other transport operations, including air and maritime transport to improve scheduling, optimize use of load space and capacity, and analyze other real time input into the transport process.
Financial services	Financial institutions leverage AI systems to improve financial decisions, generate efficiencies through greater automation, personalize financial services, assess creditworthiness, detect fraud, and reduce customer service costs, among others.

Professional services	Professionals such as lawyers, engineers and architects can leverage AI systems to create efficiencies in their work. For instance, AI can analyse large volumes of case law, saving crucial time for the lawyers.
Marketing and advertising	AI systems help to augment consumer experience and personalize content, while making more accurate predictions for targeted advertising for goods and services.
Agriculture	AI systems can help analyze farm data in real time, predicting the consequences of weather conditions, water usage, soil health and other variable factors. This can help farmers increase crop yield and quality and identify what to plant, how, where, and when.
Virtual assistants	AI systems empower software that relies on natural language processing and can respond to spoken or written commands and questions. Virtual assistants are employed to reduce costs in consumer relations, and improve tailoring and customization of services.
Health care	AI systems are increasingly used in medical diagnostics, prevention of disease outbreaks, development of new drugs, and administrative tasks related to healthcare delivery among other uses.
Language learning and automated translation	Developments in natural language processing improve automated language learning, translation processes, and facilitate the automation of simple communications.
Entertainment services	AI systems can be leveraged to improve user experience of online streaming services through better tailoring and customization of content suggestions. Moreover, AI can also reduce poor image quality in case of increased bandwidth usage.

Source: OECD, 2022[5-6]

Development in AI technology is expected to create new opportunities for international trade by improving productivity, accelerating the transition to service economy, and bringing about changes in the downstream and upstream industries, which will in turn have a significant impact on trade (Meltzer, 2018).

B. Three Channels that AI can Influence International Trade

1) AI as a tool for facilitating trade

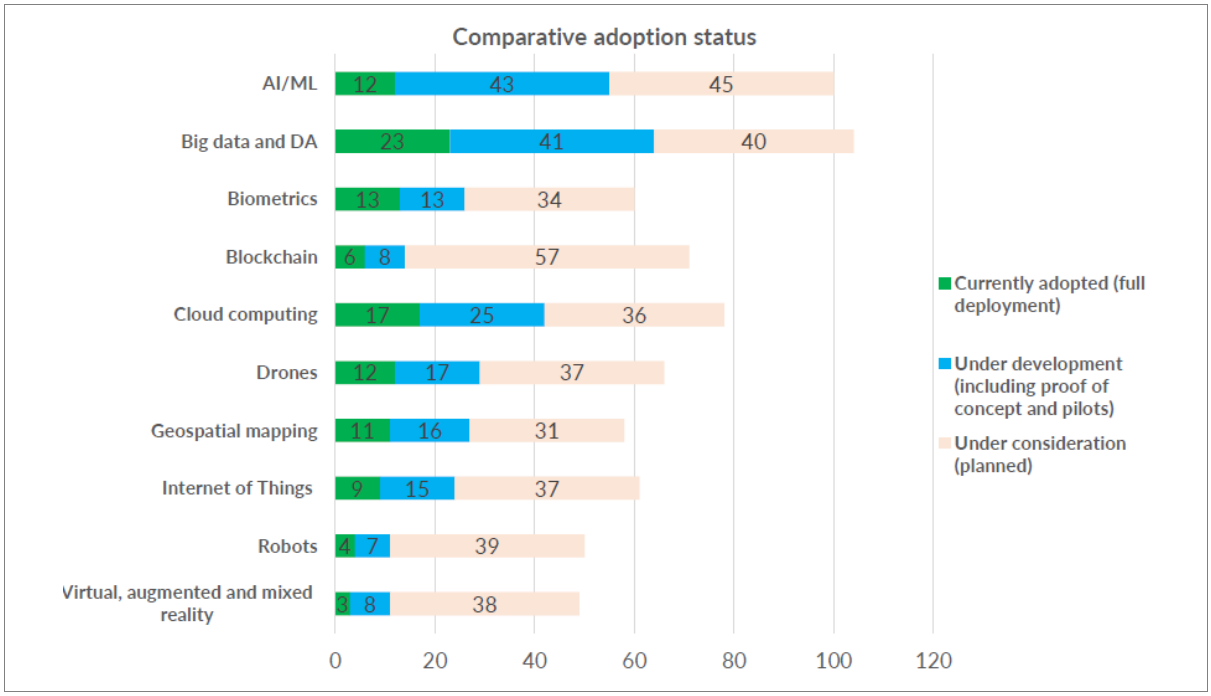
(a) Trade facilitation

The application of AI can enhance the efficiency and transparency of customs operations by reducing unnecessary or excessive administrative burdens on corporations. In particular, AI can be applied across key areas such as compliance (e.g., post-audit and violation detection), monitoring (e.g., risk management and service performance monitoring), and detection (e.g., detection of abnormal transactions or smuggled goods) (WCO news, 2024).

Many economies are already utilizing AI to streamline customs operations.[2] According to a WCO survey, 100 out of 116 economies are considering or have already adopted AI technology in their customs administration, indicating that many economies are positively evaluating the use of AI in customs operations. Customs authorities have also recognized the benefits of utilizing AI to enhance risk management, profiling, fraud detection and compliance (WTO and WCO, 2022[3]).

[2] For example, the Korea Customs Service has been promoting the acceleration of smart innovation in customs operations by utilizing AI.

[Figure 2-1] Results of the Smart Customs Survey by WCO



Source: WCO, 2024[9]

One notable example of leveraging AI in customs administration can be found in Dubai. Dubai Customs has applied AI to facilitate various points of its customs process. First, it utilizes an AI application, which assists users in identifying the correct HS codes for their items while submitting their customs declarations electronically. The customs authority also launched the Robotic Process Automation Smart Refund System, which utilizes AI for the automation of claim and refund processes. Finally, Dubai Customs has launched a remote inspection initiative for authorized economic operator companies, enabling AI-powered robots with thermal and infrared cameras to conduct their inspections (WTO, 2024[20]).

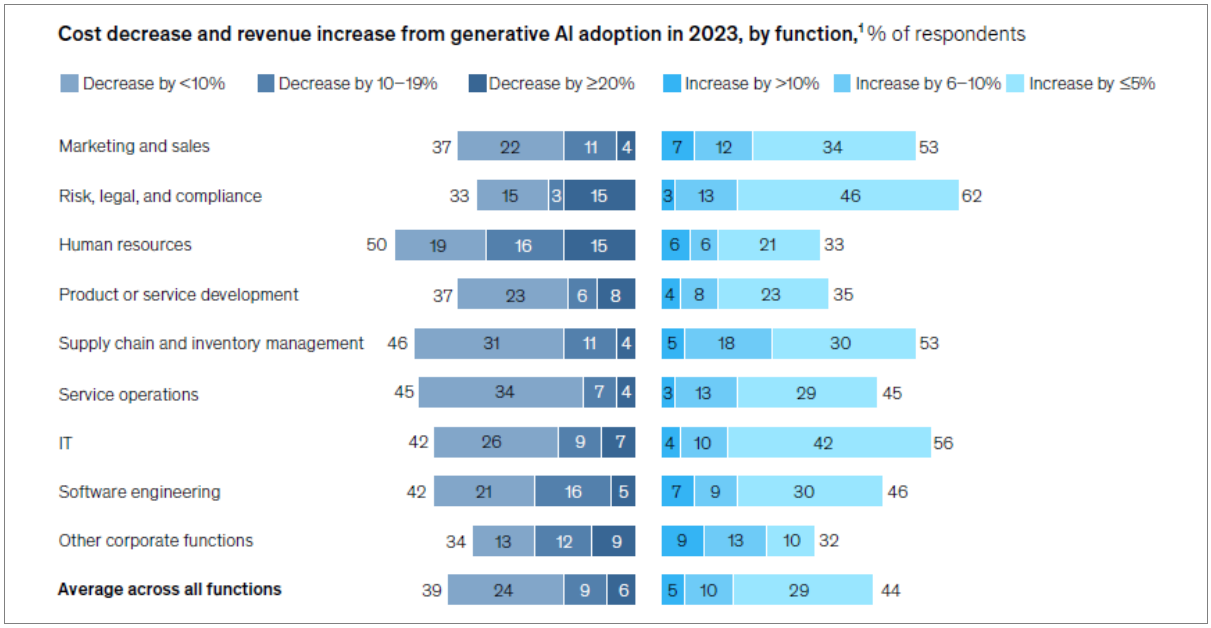
(b) Management of global supply chains

AI can affect the management and development of global supply chains by predicting future trends, managing supply chain risks, and streamlining inventory management (Meltzer, 2018). AI systems can collect and analyze extensive data throughout the various points of supply chain which enables stakeholders to predict demand and optimize inventory levels. For instance, AI can be used to facilitate real-time tracking and monitoring of shipments, which can enhance productivity.

Moreover, AI can create interactive maps of global supply chains using collected data, thereby enabling agile risk management. For example, in a case where a pharmaceutical company leveraged an AI-enabled value chain management system to detect a supplier's insolvency, the company was able to successfully mitigate risk and avoid a product shortage by quickly alerting upstream suppliers and securing alternative materials (WTO, 2024[18-22]).

A study from McKinsey & Company similarly demonstrates that the application of generative AI enabled cost reductions and revenue increases with respect to supply chain and inventory management (McKinsey & Company, 2024).

[Figure 2-2] Cost Reductions from Generative AI



Source: McKinsey & Company, 2024[Exhibit 6]

In this regard, a survey report from Thomson Reuters highlights a gradual but notable shift in the adoption of global trade management technology (Thomson Reuters, 2023[16]). In 2022, nearly half (49%) of surveyed businesses reported being either behind the adoption curve or only in the early stages of technology implementation. In 2023, the share of companies in those early stages dropped to 43%, while 57% now report having technological solutions in place or actively exploring emerging technologies such as AI to strengthen their global trade functions.

[Figure 2-3] Leveraging Technology for Global Trade Management

Source: Thomson Reuters, 2023[16]

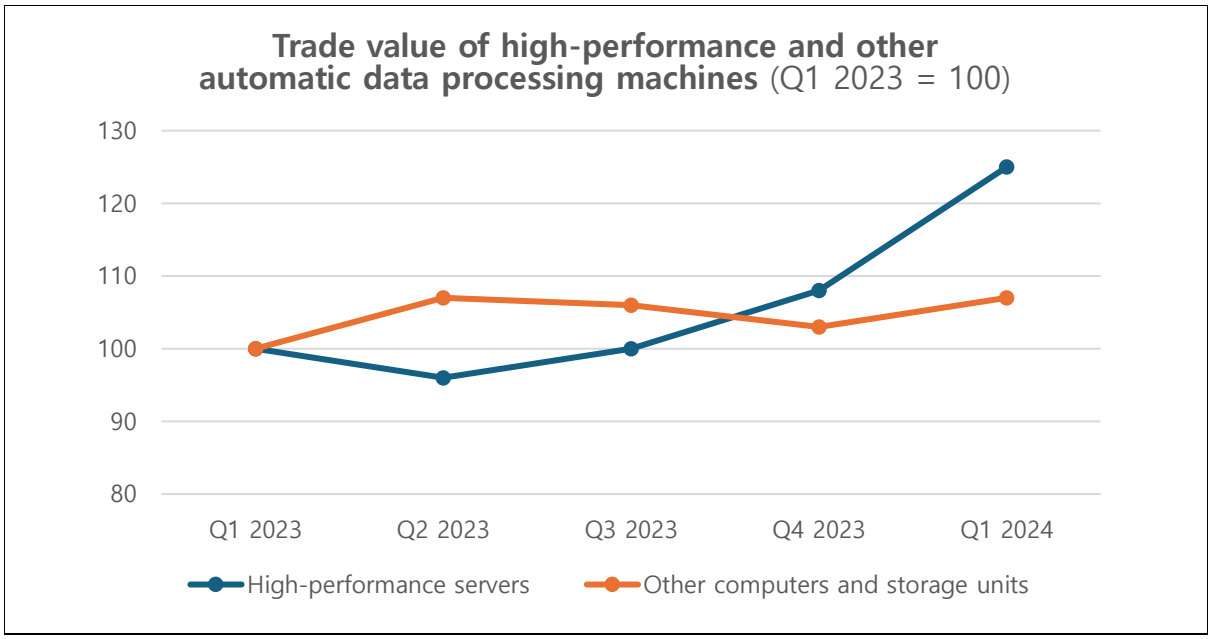
2) AI as a catalyst to change trade patterns

(a) Goods

AI can be integrated into the production process of goods to drive digital transformation, foster productivity innovation, and generate new added value. Trade in ICT-enabled goods has been consistently increasing due to digitization. In addition, AI is a technology that can be used more comprehensively than existing digital technologies and also for general purposes. For example, AI semiconductors can be applied comprehensively to automobiles, data servers, smartphones, PCs, and home appliances. A study by the Software Policy & Research Institute (SPRi) explains that the adoption of AI can lead to changes in trade patterns with respect to goods by making digitization faster and more advanced (SPRi, 2023a[7-9]).

According to a survey of Korean companies, the average contribution of AI to sales growth in the manufacturing industry was 27.4% in 2021, surpassing the service industry which recorded 21% (SPRi, 2023b[30]). This indicates that the growing use of AI will likely drive demand for ICT-enabled goods, which in turn may have an impact on international trade flows of goods. In fact, a survey by UNCTAD shows that the trade of AI-related equipment surged in the first quarter of 2024 (UNCTAD, 2024[1]).

[Figure 2-4] Trade in AI-related Equipment



Source: UNCTAD, 2024[1]

(b) Services

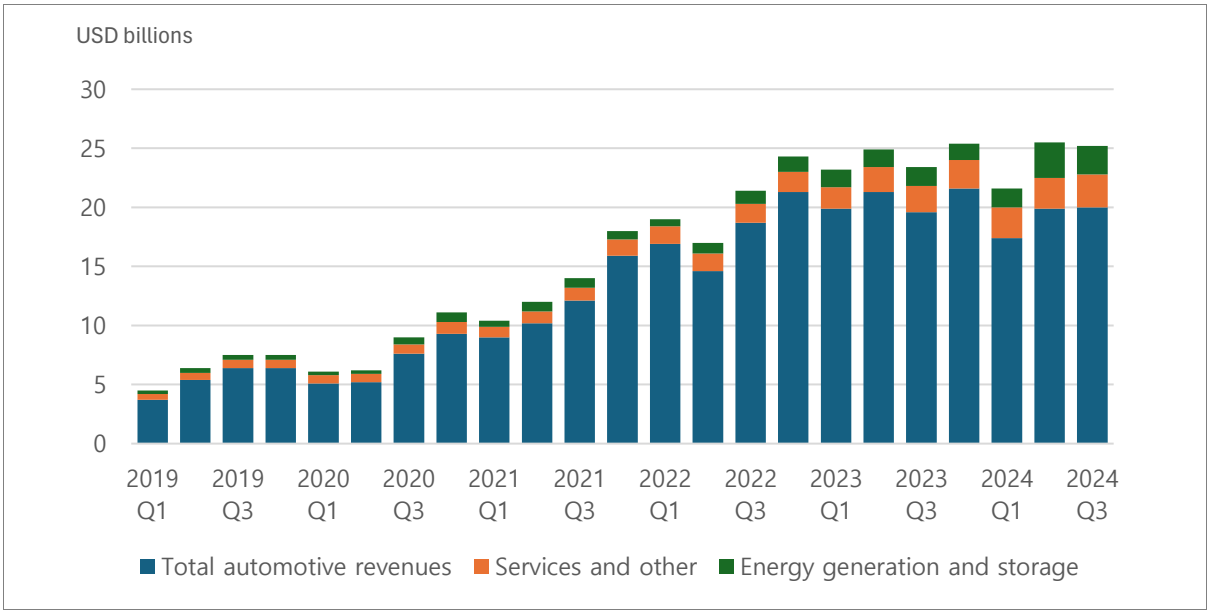
AI contributes to the expansion of trade in services by reducing barriers and associated costs. This reduction facilitates the expansion of cross-border service trade and encourages the entry of new providers. As a result, AI helps accelerate the transition toward a service-based economy.

AI, as an intermediate service, can lower communication and coordination costs, streamline contracting processes through tools such as smart contracts, enable remote work, and overcome language barriers in cross-border transactions through real-time translation. These capabilities significantly reduce the costs of trading services across borders. In particular, as service-based export growth is relatively significant in emerging economies, the integration of AI into the service sector may offer these economies greater growth potential compared to developed economies (Baldwin, 2023).

In addition, AI can stimulate further trade in services linked to the operation and management of goods. For example, AI directly enhances the performance and safety of autonomous vehicles and plays a central role in achieving fully autonomous driving. Consequently, growth in the trade of autonomous vehicles is accompanied by rising demand for AI-related services

that support this technology. In this context, Tesla's growing service revenues illustrate how advances in technologies can generate parallel expansion in AI-enabled service trade (CNBC, 2024).

[Figure 2-5] Tesla Quarterly Revenues by Segment



Source: CNBC, 2024

3) AI as a medium to facilitate the evolution of trade norms

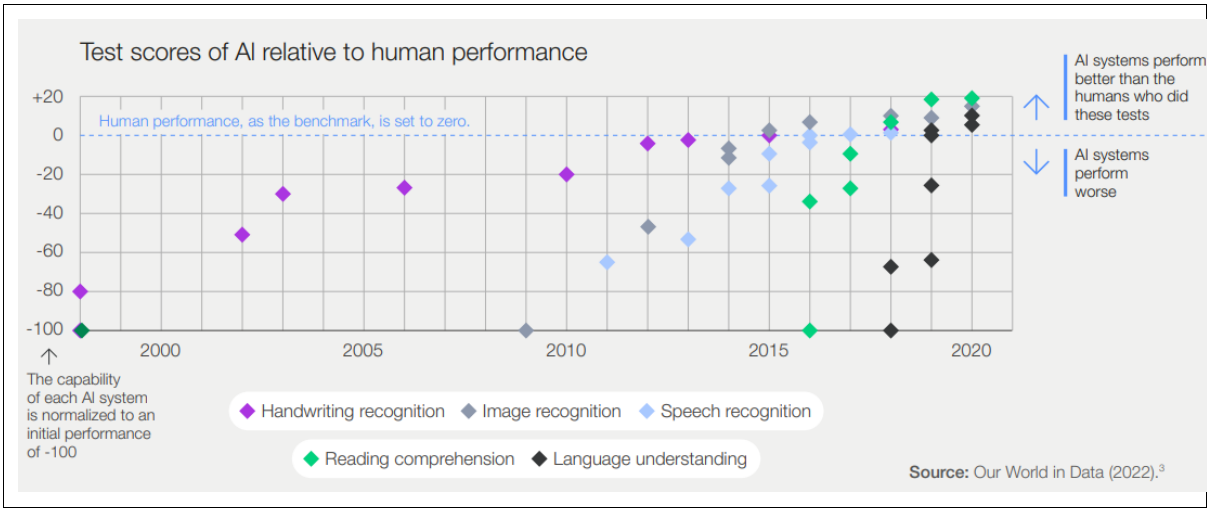
The WTO agreements, which forms the foundation of international trade norms, primarily covers the trade of goods and services, along with intellectual property rights. The WTO also established a formal dispute settlement mechanism between its members. After the adoption of the WTO agreements, economies have expanded the scope of trade rules through free trade agreements (FTAs) and regional trade agreements (RTAs), extending coverage to areas not covered by the WTO framework, including investment, environment, labor, competition, and e-commerce.

Since the commercial use and application of AI have only recently emerged, most existing trade agreements, including the WTO agreements and FTAs/RTAs, do not contain provisions that directly concern AI. Instead, e-commerce chapters of FTAs and the ongoing WTO negotiations on the Agreement on Electronic Commerce focus on measures affecting trade conducted through electronic means. Notably, e-commerce chapters in a number of FTAs and digital

partnership agreements include independent norms related to data, which is a key component in the AI-related industry, as well as consumer and personal data protection.

Unlike conventional digital technologies, AI seeks to replicate aspects of human perception, reasoning, and learning abilities using computer technology. As such, it is distinguished from existing technologies by its capacity for learning, adaptability, reasoning, and problem-solving. In this respect, a white paper published by the World Economic Forum (WEF) shows that AI capabilities and performance have quickly moved beyond human abilities (WEF, 2024[7-8]).

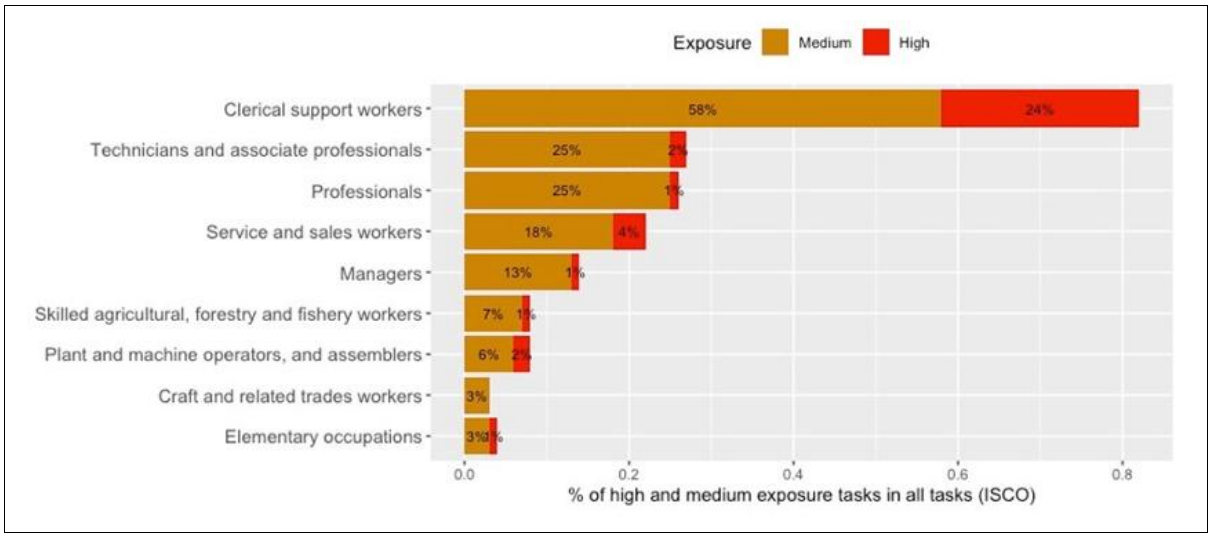
[Figure 2-6] Test Scores of AI Relative to Human Performance



Source: WEF, 2024[7]

The advancement of AI is also expected to have a significant impact across industries, not only by enhancing productivity through digital transformation but also by replacing human labor in certain tasks (OECD, 2023[95-96]).

[Figure 2-7] Tasks with Medium and High-level Exposure to Generative AI by Occupation



Source: ILO, 2023[24]

Therefore, AI and its application across industries are expected to influence trade and, more broadly, raise new questions for existing trade norms. While it is important to be cautious in defining or establishing the future relationship between AI and trade norms, given that AI technology continues to evolve rapidly, it is equally important to acknowledge current realities. AI-enabled goods and services are crossing borders under the framework of existing trade rules. Accordingly, there is a clear need to examine the relationship between AI and trade norms, particularly from the perspective of APEC economies and their pursuit of innovative, inclusive, interconnected, and sustainable long-term growth.

[Table 2-1] Issues Regarding AI-enabled Goods and Services

	Trade Norm	Application	Issues
Goods	GATT	As a matter of principle, GATT and GATS applies to the trade of AI-enabled goods and	Should AI-enabled goods and services be treated as like products with goods and services without AI? Does Processes and Production Methods (PPM) discussed in relation to trade and

Services	GATS	services	environment also apply to the trade of AI-enabled goods and services? Classification of AI-enabled services Should AI-enabled services be classified according to the type of service ultimately provided, or as a data processing service (considering that data processing is a core component of AI)?

Through these discussions, AI may function as a means to promote trade in a positive direction without being at odds with existing trade norms, and also as a medium to facilitate the evolution of existing trade norms.

III. Discussion on AI Governance

A. APEC Economies

While there is no universally agreed international norm for AI regulation, individual economies are seeking a balanced approach that encourages the development and use of AI without hindering AI innovation.

The majority of APEC member economies have either announced their AI strategies or AI-related policy initiatives or are actively discussing their adoption.

[Table 3-1] AI Strategies by APEC Economies

APEC Economies	AI Domestic Strategy
Australia	Australia National AI Plan (2025)
Brunei Darussalam	-
Canada	Pan-Canadian AI Strategy (2017)
Chile	AI National Policy (2019)
People's Republic of China	National New Generation AI Plan (2017), Global AI Governance Initiative (2023), The Opinions of the State Council on Further Implementing the "Artificial Intelligence Plus" Initiative (2025)
Hong Kong, China	Hong Kong Innovation and Technology Development Blueprint (2022), Ethical Artificial Intelligence Framework (2022)[3], Hong Kong Generative Artificial Intelligence Technical and Application Guideline (2025)
Indonesia	National AI Strategy (2020)
Japan	AI Strategy (2019)
Republic of Korea	National Strategy for AI (2020)
Malaysia	Artificial Intelligence Roadmap 2021-2025 (2021), National Guidelines on AI Governance and Ethics (2024)
Mexico	Proposal for the National Agenda for Artificial Intelligence for Mexico 2024-2030 (2024)
New Zealand	Public Service AI Framework (2025)
Papua New Guinea	-

[3] Updated in 2023 and 2024.

Peru	National AI Strategy (2021)
The Philippines	National AI Strategy Roadmap (2021)
Russia	National Strategy for the Development of Artificial Intelligence Through 2030 (2019)
Singapore	National AI Strategy 2.0 (2023)
Chinese Taipei	AI Action Plan (2018-2021) (2018)
Thailand	Thailand National AI Strategy and Action Plan (2022)
United States	America's AI Action Plan (2025)
Viet Nam	National Strategy on R&D and Application of AI (2021)

Source: OECD.AI Homepage. Available at https://oecd.ai/en/dashboards/national.

A recent study by Stanford University surveyed 114 economies from 2016 to 2024 and found that 39 economies have enacted at least one AI-related law, collectively passing a total of 204 AI-related laws (Stanford, 2025[337]). This could potentially mean the emergence of 39 distinct AI governance frameworks, each reflecting different legal, cultural, and policy priorities.

In fact, AI governance varies widely across jurisdictions, beginning with the fundamental issue of the definition of AI. What qualifies as "AI" is not uniform, as legal systems adopt different interpretations depending on their regulatory goals and contexts. This divergence creates challenges for cross-border coherence, as even within a single jurisdiction different laws may define AI in distinct ways.

Beyond differences in definition, governance frameworks also diverge in their regulatory form. Some jurisdictions adopt binding approaches that establish legal obligations, enforcement mechanisms, and penalties for non-compliance. Others rely on non-binding frameworks, which set out voluntary principles or soft law guidance that shape behavior without formal enforceability. This distinction between binding and non-binding approaches reflects broader differences in how jurisdictions balance regulatory certainty against flexibility and innovation.

Differences also emerge in the scope of application. Some frameworks adopt a horizontal approach, applying broadly across all sectors, while others take a sector-specific approach that focuses on areas such as healthcare, finance, or transportation. Horizontal approaches promote consistency and coherence across industries, but may lack the flexibility required for nuanced, context-specific regulation. In contrast, sector-specific frameworks allow for tailored oversight

but carry the risk of fragmentation and regulatory gaps between sectors.

Institutional design and substantive focus further contribute to the diversity of governance models. Certain jurisdictions rely on existing regulatory bodies to oversee AI, while others have established or proposed new agencies dedicated to this purpose. The substantive priorities of governance frameworks also vary. Taken together, these elements create a wide range of governance models. For example, Korea adopted a horizontal, binding framework with enforcement mechanisms, whereas Singapore and the United States have opted for sector-specific, non-binding or semi-binding strategies that concentrate on high-risk or high-impact sectors. China adopts a governance model that integrates technology and administration, leveraging flexible and scalable standard specifications to support the implementation of policies and regulations with enforcement mechanisms.

B. Multilateral Forums and International Organizations

AI is emerging as a key agenda in existing multilateral forums and international organizations such as the UN, the OECD, G20, the Association of Southeast Asian Nations (ASEAN), and BRICS. While these discussions are anticipating expectations for innovation and development through AI, they intend to derive concrete measures such as adopting guidelines and initiatives related to the development, deployment, and implementation of AI systems.

In addition, new types of AI-specific platforms have emerged. However, the guidelines and initiatives developed or announced through multilateral forums or platforms have taken the form of non-legally binding principles or guidance.

[Table 3-2] AI Governance Initiatives by Multilateral Forums and International Organizations

1	African Union	Multistakeholder consultations on a Continental Strategy on AI (April 2024), AUDA-NEPAD White Paper: Regulation and Responsible Adoption of AI in Africa (June 2023)
2	ASEAN	ASEAN Guide on Al Governance and Ethics (Feb 2024)
3	BRICS	Agreement to establish a BRICS AI Study Group (Aug 2023)
4	Council of Europe	Framework Convention on AI, Human Rights, Democracy and the Rule of Law (17 May 2024)

5	Digital Cooperation Organization	Generative AI Shaping the Digital Economy (Jan 2024)
6	European Union	EU AI ACT (April 2024 version of text)
7	EU-US Trade and Technology Council	Joint Statement (April 2024) Joint Roadmap (Dec 2022)
8	Latin America and the Caribbean	The Santiago Declaration to Promote Ethical AI (Oct 2023)
9	G7 Hiroshima Process	G7 International Guiding Principles and Code of Conduct for Organizations Developing Advanced AI Systems (Oct 2023)
10	G20	Endorsement of OECD Recommendations on AI (June 2019) and G20 AI principles (June 2019) CAIPD AI Statements (Dec 2023)
11	GCC	Ethical Framework for AI in the work of Attorneys-General and Public Prosecutors' (Oct 2023)
12	Global Partnership on AI	Multistakeholder Initiative hosted by OECD (June 2020) Ministerial declaration (December 2023)
13	ITU	AI for Good Summit 2024: AI Governance Day (May 2024)
14	ISO	Two key AI standards agreed. AI Management system (Dec 2023), AI Guidance On Risk Management (Feb 2023)
15	IEEE	Recommended Practice For Organizational Governance Of AI (Feb 2020), Algorithmic Bias Considerations (Sept 2023)
16	League of Arab States	Arab AI Working Group to Develop an Arab AI Strategy (Feb 2021)
17	Nordic Council of Ministers	Declaration on AI in the Nordic-Baltic Region (May 2018)
18	Southern Africa	Windhoek Statement on AI in Southern Africa (Sept 2022)
19	OECD	Recommendations on AI (May 2019), OECD AI Policy Observatory (Feb 2020), OECD Framework For The Classification Of AI Systems (Feb 2022), AI Language Models Technological, Socio-Economic And Policy Considerations (April 2023)
20	MERCOSUR	Declaration on Principles of Human Rights in the field of AI (Nov 2023)
21	Responsible AI in the Military Domain Summit (REAIM)	Call to Action (Netherlands and Republic of Korea led process) Political Declaration (US initiative) (Feb 2023)
22	UNESCO	UNESCO Recommendation on Ethics of AI (Nov 2021)
23	UN High-Level Advisory Board on AI	Interim Report on Governing AI for Humanity (Dec 2023)

24	UN Inter-Agency Working Group on AI	Terms of Reference (March 2021), UN System White Paper in AI Governance (May 2024)
25	UN General Assembly	Resolution A/78/256 Seizing the opportunities of safe, secure and trustworthy AI systems for sustainable development (March 2024)
26	UN Security Council	High-level debate on AI convened by UK (July 2023), Arria-formula meeting on AI, peace and security convened by UAE and Albania (Dec 2023)
27	UN Human Rights Council	Resolution 42/15 The Right to Privacy in the Digital Age (7 Oct 2019)
28	WHO	Ethics and governance of AI for health Guidance on large multi-modal models (Jan 2024)

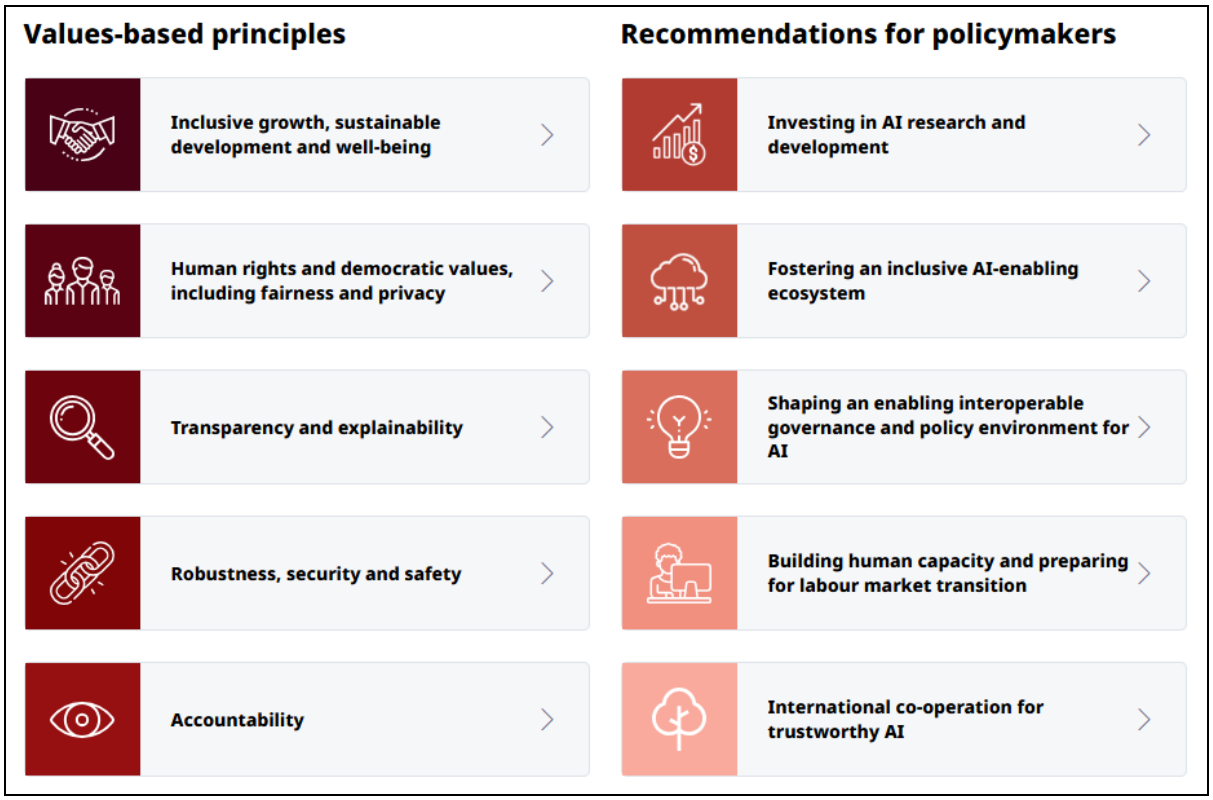
Source: ITU, 2024

1) OECD

In 2019, the OECD adopted the Recommendation of the Council on Artificial Intelligence (also known as the OECD AI Principles) at the Ministerial Council, with subsequent amendments introduced in 2023 and 2024 (OECD, 2024b). The OECD AI Principles aim to foster AI innovation and build public trust by promoting the responsible stewardship of trustworthy AI, while respecting human rights and democratic values.

As the first intergovernmental standard on AI, the OECD AI Principles define the scope of AI and set out key principles and policy recommendations related to AI. The OECD AI Principles have since served as a foundational reference for economies and international organizations in shaping policies and guidance on the responsible development and use of AI. As of September 2025, 47 economies have committed to the OECD AI Principles.

[Figure 3-1] OECD AI Principles



Source: OECD.AI Homepage. https://oecd.ai/en/ai-principles.

2) UN

The United Nations adopted two key resolutions regarding AI by consensus at the General Assembly.

- **Seizing the Opportunities of Safe, Secure, and Trustworthy Artificial Intelligence Systems for Sustainable Development (A/78/L.49, March 2024)**: This resolution emphasizes safety, security, and trustworthiness as core principles and calls for the utilization of AI to achieve the Sustainable Development Goals (SDGs) (UN, 2024a).

- **Enhancing International Cooperation on Capacity-building of Artificial Intelligence (A/78/L.86, June 2024)**: Centered on a human-centered approach, this resolution focuses on strengthening international cooperation and support for developing economies to ensure that the benefits of AI technologies are shared equitably among all economies and to bridge the digital divide (UN, 2024b).

UN Chief Executives Board for Coordination also published the “United Nations system white paper on artificial intelligence governance: an analysis of current institutional models and related functions and existing international normative frameworks within the United Nations system that are applicable to artificial intelligence governance” (UN System White Paper on AI Governance) summarizing the work of the United Nations system on AI governance (UN, 2024c). The UN System White Paper on AI Governance identifies the existing normative and policy instruments within the UN system and notes the importance of engaging the private sector and providing capacity development.

Apart from resolutions adopted at the General Assembly and the UN System White Paper on AI Governance, the UN has actively adopted recommendations and resolutions regarding AI.

[Table 3-3] Major UN Recommendations or Resolutions on AI

November 2021	UNESCO	Adopted the “Recommendation on the Ethics of Artificial Intelligence” to address ethical issues throughout the entire process, from research, design, development, launch, and use of AI, to maintenance, operation, trading, financing, monitoring and evaluation, validation, deconstruction, and disposal of AI systems (UNESCO, 2022) As the first significant recommendation to propose human-centered values and principles to be applied to the overall research, development and utilization of AI systems, it provided guidelines for the introduction and operation of relevant laws and regulations in member states
July 2023	UN Human Rights Council	Adopted the “New and emerging digital technologies and human rights: resolution” (UNHRC, 2023)
March 2024	UN General Assembly	Adopted “Seizing the opportunities of safe, secure and trustworthy artificial intelligence systems for sustainable development”, which suggested the potential contribution of AI to achieving the SDGs, emphasizing the need to use AI in a way that respects and protects human rights, freedoms, and international law, the importance of global consensus on AI governance, and the need for consistent discussions on regulatory approaches
June 2024	UN General	Adopted “Enhancing International Cooperation on Capacity-building of Artificial Intelligence” to ensure that all economies

	Assembly	can equally benefit from AI technology and to bridge the digital divide, with a human-centered approach and respect for human rights and international law as the principles of AI development, and to strengthen international cooperation and support for developing economies
September 2024	UN AI Advisory Body	Released final report of "Governing AI for Humanity" (UN AI Advisory Body, 2024) Recommended the establishment of an international scientific panel on AI, the facilitation of policy dialogue on AI governance, the establishment of an AI standards exchange mechanism, the creation of a global AI capacity development network, the establishment of a global fund for AI, the development of a global AI data framework, and the establishment of a dedicated AI office within the UN Secretariat
September 2024	UN Summit of the Future	Adopted "Global Digital Compact" as an annex to the "Pact for the Future" Global Digital Compact suggested among others, to "advance responsible, equitable and interoperable data governance approaches" and to "enhance international governance of artificial intelligence for the benefit of humanity"

3) G20

Discussions at the G20 on digital economy have centered on inclusive growth and bridging the digital divide. In June 2019, leaders committed to a human-centered approach to AI and adopted the non-binding G20 AI Principles at the G20 Summit (G20, 2019).[4] The G20 Digital Economy Ministers' Declaration in July 2020 reaffirmed the commitment to promoting a human-centered approach to AI in relation to trustworthy AI. The Declaration expressed continued support for the G20 AI Principles and pledged further progress and called for ongoing discussions aligned with the G20 AI Principles among various stakeholders. It also

[4] G20 2019 Leaders' Declaration: "12. To further promote innovation in the digital economy, we support the sharing of good practices on effective policy and regulatory approaches and frameworks that are innovative as well as agile, flexible, and adapted to the digital era, including through the use of regulatory sandboxes. The responsible development and use of Artificial Intelligence (AI) can be a driving force to help advance the SDGs and to realize a sustainable and inclusive society. To foster public trust and confidence in AI technologies and fully realize their potential, we commit to a human-centered approach to AI, and welcome the non-binding G20 AI Principles, drawn from the Organization for Economic Cooperation and Development (OECD) Recommendation on AI."

provided Examples of National Policies to Advance the G20 AI Principles as its Annex 1.

In September 2023, G20 Leaders' Declaration included "Harnessing AI Responsibly for Good and For All" as a key agenda item and reaffirmed the commitment made in 2019 to the G20 AI Principles. The Leaders aimed to maximize the benefits of AI while considering associated risks through innovation-driven regulations and governance and committed to promoting responsible AI to achieve the Sustainable Development Goals (SDGs).

G20 Digital Economy Working Group in 2024 (Brazil), identified "AI for Sustainable Development and Inequalities Reduction" as a key agenda item. G20 Digital Economy Ministers' Declaration on 13 September 2024 reaffirmed the importance of the digital economy and emphasized the need for international cooperation to ensure that AI contributes to inclusive and sustainable development and the reduction of inequalities, while preventing the widening of the digital divide between economies (G20, 2024).

4) G7

Since 2019, G7 has been discussing Data Free Flow with Trust (DFFT) as a key agenda item in digital-related matters. Afterwards, there was significant progress in AI discussions with the announcement of the "Hiroshima AI Process" at the 2023 G7 Summit. G7 has been working closely with the OECD on this initiative. As part of the Hiroshima AI Process, the "Guiding Principles" (applicable to all actors) and a "Code of Conduct" for developers of advanced AI systems were announced.

In June 2020, the Global Partnership on AI (GPAI) was established and is operating as a global multistakeholder initiative to promote the development and use of trustworthy AI. Discussions are underway regarding the need for competition authorities' involvement to ensure fair competition related to AI, as well as the development of an action plan for the use of AI in the labor sector.

5) WTO

WTO recently published a report on the intersection of AI and international trade, "Trading

with Intelligence" (WTO, 2024). The report explains how AI is a trade issue, illustrating its distinct characteristics, its opportunities of overcoming trade costs, transforming patterns of trade, and driving productivity increases, while also noting the AI divide it may cause. Then, it discusses how the AI-related regulations and measures are fragmented, and how WTO, as the rules-based global body, can utilize its rules and forum to contribute to promoting the benefits of AI while limiting its potential risks.

C. APEC's Prospective Role

The fragmentation of governance frameworks across definitions, scope, and regulatory approaches may create challenges for interoperability of governance frameworks. This patchwork risks creating regulatory uncertainty for global trade and innovation.

The WTO has introduced an important dimension by framing AI as a trade issue, emphasizing its potential to reduce trade costs, transform supply chains, and drive productivity, while also warning of an emerging AI divide. From this perspective, the discussion on AI governance includes economic and trade considerations.

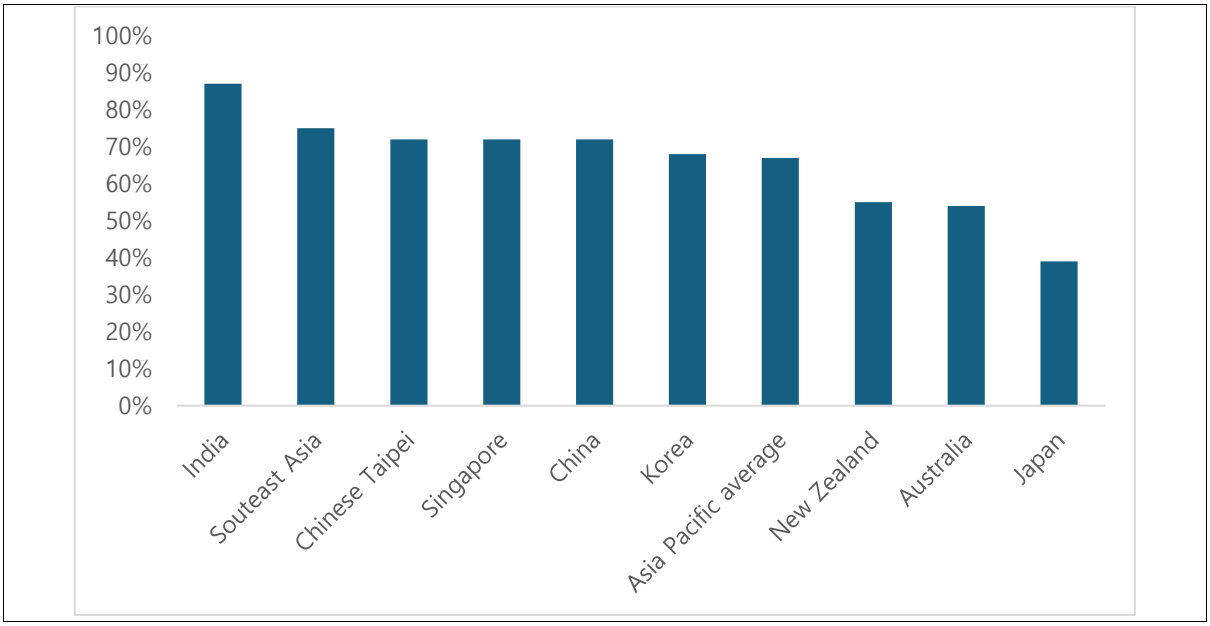
In this evolving landscape, APEC has a unique role to play. As a trade and economy focused forum, APEC can complement existing initiatives by examining how AI can be leveraged to facilitate trade, enhance digital connectivity, and mitigate risks of fragmentation. This could involve promoting interoperability of governance approaches across economies, supporting capacity-building among developing members, and advancing trade-facilitation measures that harness AI. By doing so, APEC can ensure that its contribution reflects its core mission while contributing to global discussions harnessing AI.

IV. Suggestions

Given the stage and speed of AI technology development and the diversity of APEC economies, we recommend continuous efforts to facilitate follow-up discussions on AI for trade within the Digital Economy Steering Group (DESG), while encouraging continued engagement from the private sector.

AI technology is increasingly being adopted in the Asia-Pacific region at a rapid pace, with developing economies being relatively more active in their acceptance. Considering the rapid development of AI technology, it is necessary to discuss and proactively prepare for trade-related issues that may arise when AI technology/systems mature. While respecting the discussions on the safety of AI that are currently being intensively discussed, initiating policy dialogues from the perspective of, and in the context of trade is in line with the unique characteristics and role of APEC as an incubator of new ideas.

[Figure 4-1] Adoption of Generative AI in the Asia Pacific



Source: Deloitte, 2024[6]

A. Facilitation of trade and minimization of AI divide

The adoption of AI technologies demands both technical capacity and financial resources, which are unevenly distributed across firms and Economies. To help mitigate the AI divide, APEC could facilitate information sharing and provide educational opportunities. APEC economies could share AI application cases in public sectors for the facilitation of trade. For example, Korea Public Procurement Service launched an AI-based public software (SW) project ordering support system. It is a platform built by incorporating AI technology into a large amount of procurement information in order to make it easier for companies placing orders that have difficulty ordering SW projects due to complex and diverse legal systems to create requests for proposals.

Furthermore, APEC economies could work together to narrow the divide among economies in the ability to leverage AI to promote trade. For instance, in the field of customs administration, differences in technical capacity and financial resources among APEC economies can create significant disparities. To address this challenge, APEC could play a leading role in supporting the development and application of interoperable customs administration systems, ensuring that economies at different levels of readiness are able to benefit from technological advances. Where needed, this effort could be complemented by capacity-building programs, training, and targeted resource support for individual economies, thereby promoting adoption of AI-enabled trade systems across the region.

Moreover, as highlighted during the workshop, efforts to address the divide could also benefit from seeking financial contributions or cooperation from the private sector or international organizations.[5] To this end, APEC could explore funding avenues, including joint initiatives with other international organizations, to enable sustainable support for AI capacity building and system development.

Other suggestions focused on narrowing the AI divide that were discussed during the workshop include (i) discovering and sharing policy best practices that would increase the involvement of small and medium-sized enterprises in AI-enabled goods and services trade, (ii) developing practical guidelines or checklists to help companies facilitate cross-border transactions,

B. Research on the shift in trade patterns

A survey on the level of AI utilization by companies in APEC economies, along with the sharing of domestic policy issues related to the classification of AI-enabled goods and services, could provide useful areas for cooperation.

An illustrative example comes from Australia, where the government published a discussion paper titled “Review of AI and the Australian Consumer Law (ACL)” (The Commonwealth of Australia, 2024). Following its release, the Australian Treasury sought public input on how the

[5] Mr. Jun Xu, remarks during panel discussion, Workshop on “Policy Dialogue on AI in the Trade Context for Enhanced Cooperation within APEC”.

ACL applies to AI-enabled goods and services, including the applicability of existing principles, the remedies available to consumers in cases of malfunction or harm, and the mechanisms for allocating liability among manufacturers and suppliers.

As such, an analysis of direct and indirect impacts of major AI-related policies on AI-enabled goods/services trade is another possible option for cooperation within APEC.

C. Understanding the relevance to trade norms

During the workshop, speakers from both public and private sectors raised various suggestions to improve the understanding of the relevance of AI to trade norms. One suggestion was for APEC economies to consider establishing an AI-in-Trade Information Hub, a platform to allow sharing information on AI frameworks cross the APEC region.[6]

Given the diversity of AI governance approaches in the region, we recommend commissioning a report from the APEC Policy Support Unit (PSU) on areas of compatibility and divergence among AI governance frameworks within APEC. The report could map key policy domains (e.g., transparency, accountability, testing and evaluation, and liability), identifying where interoperability, mutual recognition, or good-practice guidance could lower barriers to trade.

Based on the findings of the report from the APEC PSU, APEC economies could then consider setting up the AI-in-Trade Information Hub as a practical next step. Such a platform could serve as a dynamic space for dialogue, peer learning, and technical cooperation. By facilitating the exchange of knowledge and experiences, the platform would help economies better align their approaches, identify emerging challenges, and develop innovative solutions.

In the longer term, the platform could evolve into a trusted regional reference point that strengthens policy coherence, fosters business confidence, and supports capacity building across economies. Ultimately, this initiative would contribute to lowering trade barriers, promoting AI adoption, and ensuring that the benefits of digital transformation are shared

[6] Mr. Heesik Yoon, *Understanding Opportunities and Challenges for AI Firms Entering the Global Market*, Workshop on "Policy Dialogue on AI in the Trade Context for Enhanced Cooperation within APEC".

broadly within the APEC region.

D. Supporting the private sector

To support the private sector and facilitate trade across APEC, members should collaborate on sharing information and discussions on AI technical standards that promote interoperability and reduce regulatory fragmentation. APEC could encourage the participation of various stakeholders from the public and private sectors, as well as academia to examine the potential benefits of such standards.

We also recommend that members consider participating in an APEC Cross-Border AI Sandbox, as suggested during the workshop, that would function as a safe harbor to test innovative AI products and compliance solutions in a controlled environment against a supervised framework that consists of relevant AI governance frameworks from several APEC economies.[7] This would de-risk innovation and allow regulators to foster interoperability without forcing legal harmonization. The results of such tests could also be anonymized and shared among APEC economies as case studies.

This balance between innovation and regulation is exemplified in Singapore's recent development, where the Competition & Consumer Commission (CCS) developed an "AI Markets (AIM) Toolkit" in collaboration with IMDA. The AIM Toolkit was designed to help AI developers and deployers self-assess whether their AI models and business practices are in compliance with the Competition Act and the Consumer Protection (Fair Trading) Act.

[7] *Id.*

Annex 1: Workshop Agenda

Workshop: Policy Dialogue on AI in the Trade Context for Enhanced Cooperation within APEC

Date: 30 July 2025

Venue: Incheon Songdo Convensia, Incheon, Republic of Korea

Time	Meeting
09:30 - 10:00 (30’)	**Registration**
10:00 - 10:15 (15’)	**Opening & Group Photo**
10:15 - 11:15 (60’)	**Session 1: The Role of AI in Trade Facilitation** ***Exploring the Prospective Role of AI in Facilitating Trade Procedures*** **(30’)** **Speaker 1: Ms. Meeyoung CHA of Max Planck Institute for Security and Privacy (MPI-SP) (15’)** **Speaker 2: Ms. Laura KUUSELA of the Organisation for Economic Co-operation and Development (OECD) (15’)** – Explain how AI can impact trade procedures, such as utilizing AI systems and machine learning in customs administration and relying on big data and AI to facilitate anomaly identification. ***APEC Economies’ Experience with Utilizing AI in Customs Administration*** **(30’)** **Speaker 1: Mr. Jungsuk KIM of the Customs Uni-Pass International Agency (CUPIA) (15’)** **Speaker 2: Mr. Xu JUN of China Customs (15’)** – Share best practices on implementation of AI technology and suggest how APEC economies may take a more coordinated approach in applying AI technology to trade procedures.
11:15 - 11:35 (20’)	**Coffee Break**
11:35 - 12:20 (45’)	**Session 2: Understanding the Diversity in AI Governance Frameworks and Its Challenges** ***Introducing Diversity in AI Governance Framework*** **(15’)** **Speaker 1: Mr. Jae Hee KIM of Shin & Kim LLC** – Overview of diverse AI governance frameworks among different economies. ***Navigating Discussions within International Fora*** **(30’)** **Speaker 1: Hyunjin LEE of the Korea Institute for International Economic Policy (15’)** **Speaker 2: Mr. Eldo SIMANJUNTAK of the APEC Secretariat (15’)**

	– Broad and comparative overview of AI relevant discussions within multilateral forums and international organizations.
12:20 - 13:50 (90’)	**Lunch**
13:50 - 14:50 (60’)	**Session 3: Capacity Building for Private Firms and Industries** ***Understanding Opportunities and Challenges for AI Firms Entering the Global Market*** **(45’)** **Speaker 1: Mr. Heesik YOON of Microsoft (15’)** **Speaker 2: Ms. Hua WANG of Global Innovation Forum (15’)** **Speaker 3: Mr. Dongsoo LEE of NAVER Cloud (15’)** – Discuss how different regulations and standards have influenced private firms and industries, focusing on the challenges that different AI regulations and standards raise. ***Measures to Strengthen Capacities of Private Firms within APEC*** **(15’)** **Speaker: Mr. Bumjin KIM of MegazoneCloud / ABAC Korea Alternative Member** – Introduce possible measures to enhance capabilities of private firms, including capacity building programs, information sharing, and technical assistance.
14:50 - 15:10 (20’)	**Coffee Break**
15:10 - 16:00 (50’)	**Panel Discussion** **Moderator: Sangchul PARK of Seoul National University School of Law** – Share ideas on AI-related trade issues and discuss how APEC economies can collaborate – Discuss how to facilitate cooperation between the public and private sectors

Annex 2: Workshop Summary Report

The APEC Workshop on "Policy Dialogue on AI in the Trade Context for Enhanced Cooperation within APEC" was held to encourage discussion on AI as a tool to facilitate trade and economic integration among APEC economies. The workshop provided a platform for sharing knowledge, best practices, and valuable insights regarding AI and trade.

Opening Remarks
The workshop began with welcoming remarks by Mr. Choong Jong Oh.

Speaker: Mr. Choong Jong OH, Director General for Multilateral Trade and Legal Affairs

Mr. Oh emphasized the increasing interconnection between AI and trade, with AI fundamentally reshaping the global trade landscape on the one hand, and AI-enabled goods and services giving rise to new types of trade on the other. He noted that the need for greater alignment and harmonization of AI related policies across jurisdictions is growing. He also encouraged cooperation between the public and private sector. Mr. Oh concluded by highlighting the workshop's alignment with all three pillars of APEC's theme of this year, which are to connect, innovate, and prosper.

Presentation Highlights

1. Session 1: The Role of AI in Trade Facilitation

1.1. Exploring the Prospective Role of AI in Facilitating Trade Procedures
- *Presenter: Prof. Meeyoung Cha, Director, Max Planck Institute for Security and Privacy*

- The presentation focused on AI-driven methods to tackle inefficiencies in trade procedures by addressing illegal, illicit trade and misclassification.

- Through the presentation, Prof. Cha explained how modern algorithms can assist customs officers, and shared her experience of formulating a mathematical formula to ensure that the AI model serves two objectives of the correct classification and the maximum increase in the revenue that comes from the classifications.

- She emphasized the importance of transparency and capacity building. She noted that making an algorithm explainable is essential in giving ownership to the officers operating the algorithm.

- *Key Takeaways*: It is important to collaborate with the field. Shared standards will facilitate transactions between economies. We should have innovation with integrity.

1.2. The Role of AI in Trade Facilitation

- Presenter: Ms. Laura Kuusela, Trade Policy Analyst, OECD

- Ms. Kuusela explained the relationship between AI and trade, addressing both the impacts AI has on trade and the role of trade in adopting and diffusing AI technologies.

- She emphasized the importance of democratizing AI trade and explained the key enabling factors to realize AI's full potential for trade. Ms. Kuusela also highlighted two findings from OECD work: (1) data localization requirements have become more common and the nature of the requirements has become more restrictive and (2) it would be important to have convergent approaches to data flows that are open but maintain appropriate safeguards.

- She mentioned that using AI in border processes can accelerate goods clearance at the border.

- *Key Takeaways*: The relationship between trade and AI is symbiotic. AI also raises new challenges, including growing digital divides and environmental considerations. OECD data and analysis inform efforts to harness AI for trade facilitation.

1.3. AI-Driven Innovations in Customs Compliance

- Presenter: Jungsuk Kim, General Manager, CUPIA

- Mr. Kim addressed the recent advancement of AI and how customs has been incorporating AI into customs administration.

- He detailed the major changes in reviewing of invoice documents due to the advancement of AI agents. He also presented other cases of AI utilization in customs administration, including cargo selectivity, HS code classification, and inspection reports.

- *Key Takeaways*: AI will not replace humans but support them in the customs administration so that they can focus more on the oversight, decision making and handling exceptions.

1.4. Generative AI Empowers Modernization of Customs Work

- Presenter: Jun Xu, Director of International Cooperation Department, China Customs

- Mr. Xu presented the challenges faced by customs and the use of large language models in customs administration and customer services.

- He explained that China customs have established an initial AI computing environment, with four large language model clusters.

- He elaborated on the specific usage of AI in customs administration, including intelligent document review, customs commodity classification, and customs enforcement and supervision.

- Mr. Xu also emphasized the role of AI in boosting enterprise-oriented customs services and shared the case of intelligent customer service.

- *Key Takeaways*: We need to focus on the quality of data and AI training. Utilization of AI should be monitored and adjusted by humans.

2. Session 2: Understanding the Diversity in AI Governance Frameworks and Its Challenges

2.1. Diversity in AI Governance Frameworks
- Presenter: Jae Hee Kim, Partner, Shin & Kim LLC

- Mr. Kim highlighted the diversity in AI governance and identified five major differences, which are definition, form of governance, regulatory approach, regulatory authority and focus areas.

- He then detailed Korea's AI governance, which took a relatively horizontal approach. Korea enacted an Act on the Development of Artificial Intelligence and Establishment of Trust, which is geared towards high impact AI and generative AI.

- He also explained EU approach, which is also relatively horizontal. EU adopted the EU AI Act, a binding legal framework, which features risk-based classification and obligations for high-risk AI.

- Mr. Kim addressed the US approach. The recent AI action plan focuses on certain sectors.

- *Key Takeaways*: There are various approaches to AI governance and differences in AI governance are potential trade barriers.

2.2. Charting the Course: A Trade-Centric AI Governance Framework
- Presenter: Hyunjin Lee, Associate Research Fellow, Korea Institute for International Economic Policy

- Mr. Lee explained the four channels of AI innovation's impact on trade: AI for trade, trade for AI, AI-enabled trade, and AI-driven trade governance.

- He first emphasized the impact AI has on trade, driving growth in various sectors and eliminating inefficiencies. He also addressed trade for AI, noting that there has been an

explosive growth in AI chip market. Mr. Lee noted that new forms of trade are emerging due to AI.

- He addressed AI-driven trade governance, focusing on the lessons learned from MRT statement. He pointed out that the key challenge for APEC is to realize inclusive AI governance leveraging AI for economic growth.

- *Key Takeaways*: There are gaps between economies and gaps within economies, both which need to be addressed to align AI in a fragmented world.

2.3. Current Developments and the Emerging Regulatory Landscape
- Presenter: Eldo Simanjuntak, Researcher, APEC Policy Support Unit

- Mr. Simanjuntak helped navigate different AI governance within APEC. He presented different international regulatory initiatives on AI, including the OECD AI Principles. He also noted that APEC economies are key players in international AI governance initiatives.

- He then explained the approaches adopted in domestic governance. They share some key similarities but have differences. For instance, some have risk-based tiering of AI systems, while most have built-in measures to facilitate innovation and scalability.

- He also addressed the soft governance approach and emphasized that they could serve as precursors to future regulations.

- *Key Takeaways*: It is important to create common understanding of the basic principles behind different regulatory frameworks to address potential regulatory fragmentation.

3. Session 3: Capacity Building for Private Firms and Industries

3.1. Understanding Opportunities and Challenges for AI Firms Entering the Global Market
- Presenter: Heesik Yoon, Director of Government Affairs, Microsoft Korea

- Mr. Yoon proposed a three-pillar framework for capacity building. The first pillar is APEC cross-border AI sandbox, which can serve as a safe harbor to test innovation. The second is AI-in-Trade information hub, which is expected to solve the information gap. Finally, he proposed a scalable technical assistance program. He also elaborated on how the three pillars can work together.

- He concluded by giving future directions to achieve a cohesive, innovation-friendly AI ecosystem. Mr. Yoon emphasized the importance of the engagement of the private sector

and suggested the establishment of a public-private task force. He also proposed to form a pilot group to launch the first sandbox.

- *Key Takeaways*: Cooperation between the public and the private sector is essential to create a cohesive, innovation-friendly AI ecosystem.

3.2. Navigating AI Regulations Across Borders

- *Presenter: Hua Wang, Executive Director, Global Innovation Forum*

- Ms. Wang illustrated a case of an AI tool which was successful in one region but faced difficulties in another because of the different regulatory framework. She highlighted the need for harmonized regulations.

- She noted several real-world barriers to AI, including policy fragmentation and trust issues.

- Ms. Wang suggested prioritizing interoperability, co-creating with SMEs, supporting capacity-building and doubling down on digital trust.

- *Key Takeaways*: Different regulatory frameworks may act as a barrier to AI and trade. Capacity-building is essential to assist the SMEs.

3.3. Accelerating Journey to Sovereign AI

- *Presenter: Dongsoo Lee, Executive Vice President, NAVER Cloud*

- Mr. Lee explained the concept of Sovereign AI and introduced NAVER's HyperCLOVA X, which is NAVER's own large language model.

- He also gave examples of sovereign AI. First, he presented NAVER CareCall, which is used to address the needs of the elderly. Second, he shared the cases of collaboration with the public sector, such as Korea Hydro & Nuclear Power Co., LTD and Bank of Korea.

- *Key Takeaways*: Sovereign AI can empower each economy to address their own challenges with their own AI capabilities.

3.4. Measures to Strengthen Capacities of Private Firms within APEC

- *Presenter: Bumjin Kim, Senior Vice President, MegazoneCloud*

- Mr. Kim presented the three pillars of AI, which are power, chips and data. He emphasized that the three pillars are distributed unevenly.

- He then elaborated on the priorities and steps to take to ensure AI innovation can be shared in sustainable, equitable and secure manners. The suggestions included (1) the

adoption of common evidence-based metric for sustainability, (2) alignment of baseline laws and creating multi-stakeholder sandbox for regulation, and (3) the adoption of risk-based governance to enhance trust.

- *Key Takeaways*: We should set priorities and future directions to ensure AI innovation is shared.

4. Panel discussion

The panel discussion provided a rich and diverse exchange of perspectives and insights on the interconnection between AI and trade. Moderated by Prof. Sangchul Park, the session featured contributions from both the public and the private sector.

4.1. **Prof. Meeyoung Cha** shared her insights into the current state of AI research in smell recognition, particularly in the context of multimodal learning. She explained that the machines are now able to smell and identify very accurately the components behind the smell. Therefore, she expected that the customs officers will in the future be equipped with smell recognition AI technology. However, she also pointed out that the smugglers will also have the technology to disguise the smell, increasing the need to develop better technology.

4.2. **Ms. Laura Kuusela** expressed her views on extraterritorial application of regulation. Prof. Park asked Ms. Kuusela about her perspective on the emerging challenge of the blurring line between international trade and a foreign company "doing business" within an economy. Ms. Kuusela emphasized the balance between trade openness and the public policy objectives, including protection of personal data and domestic security. She noted that the policymakers should be mindful of the potential trade implications.

4.3. **Mr. Jun Xu**, when inquired about the automation biases and false positives, shared his experience at customs. He explained that AI is assisting customs officers to do their job, and the officers have to take the final responsibilities. He also shared the recent development in China customs, which is a decision to establish a monitoring and adjusting team for AI application. The frontier officers will provide feedback and relevant departments will jointly research and adjust the algorithms.

4.4. **Mr. Jae Hee Kim** explained his views on the background behind Korea's choice of horizontal regulatory frameworks and Korea's measures to mitigate the potential downsides of the approach. He also explained the Korean government's consideration of making detailed guidelines in the subordinate regulations. Finally, he added that the AI Basic Act will take effect next year and there is room for amendments and discussions.

4.5. **Mr. Eldo Simanjuntak** provided insights into the role international norms, international standards and local regulations can play to ensure greater coherence. He proposed an idea of APEC members unilaterally mapping the frameworks. He also suggested that the industries

work together to work on international standards. Alternatively, he raised the possibility of the governments of each economy promoting the existing standards.

4.6. **Mr. Hee Yoon** shared his views on the domains or technologies that are best suited for a cross-economy sandbox model. He firstly elaborated the idea of the sandbox and clarified that the goal of sandbox is to address the issue of regulatory fragmentation. He suggested the possibility of jointly creating a platform that companies can export the products outside their economies through the power of AI. Mr. Yoon also mentioned that the areas in which we can best apply the sandbox are AI-driven customs and supply chain transparency.

4.7. **Ms. Hua Wang** explained that the international standards are non-binding but practical tools that help companies trade responsibly across borders. She also emphasized that APEC is well positioned to lead in four areas, which are transparency, risk categories, plug and play toolkits and data and norms. She concluded by stating that we need practical interoperable standards that the SMEs can use right now.

4.8. **Mr. Dongsoo Lee** explained how sovereign AI can be reconciled with the need to maintain access to state-of-the-art foreign foundation models. He noted that one company or one economy cannot encompass all the sectors. Therefore, he stated that we can deploy various language models to meet different kinds of requirements.

Three additional questions from the audience were addressed, and the key points are summarized as follows:

- **Mr. Dongsoo Lee** answered the question on the problem of the quality and transparency of sovereign AI compared to the open-source model. He answered that the quality of AI depends on the quality of the data, which makes it challenging to address the problem. However, he added that the situation is getting better as the data acquisition technology is improving.

- **Ms. Laura Kuusela** answered the question that enquired the areas or directions in which the AI technology is expected to further expand in the field of international trade. She answered that we will have to think about how AI and other emerging technologies affect how and what we trade. And we will have to question if the currently existing instruments are sufficient to address the issues.

- **Mr. Jun Xu** addressed an enquiry on how small economies with relatively small amount of data can cope with adopting AI solutions. He advised that they invite some kind of financial contribution or cooperation with the private sector or the international organizations. He also suggested focusing the resources on the key priorities.

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