Forum: United Nations Economic and Social Council

Issue: Considering the effects of fast expanding AI Tollbooth market on the international transactions

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Introduction

With the ongoing development of technology, artificial intelligence (AI) has quickly become part of almost every area of modern life. It is a fast-expanding tool that continues to grow because it makes life easier. This growing system referred to as "AI tollbooths." These digital tools serve as intermediaries controlling access to vital infrastructure, levying usage fees, and handling cross-border data flows. However, their increasing questions equity, regulation, and digital sovereignty.

The different perspectives of developed and developing nations, as well as the economic consequences of AI tollbooths on global markets, the regulatory and political issues they create, ethical questions will all be explored in this study guide.

Definition of Key Terms

Artificial Intelligence (AI):

Human intelligence in machines and software, with human skills such as decision-making, language processing, and data analysis without constant human input.

AI Tollbooth:

A metaphor used to describe AI systems or platforms.

International Transactions:

The exchange of goods, services, capital, or data between entities in different countries.

Data Sovereignty:

The principle that data is governed by the laws of the country.

Digital Divide:

The gap between individuals or nations that have access to modern digital technologies and those that do not.

Algorithmic Bias:

Systematic and repeatable errors in AI systems that unfairly disadvantage certain groups or countries.

Fintech:

Short for "financial technology" refers to the use of software and AI-driven tools to support or automate financial services.

Background Information

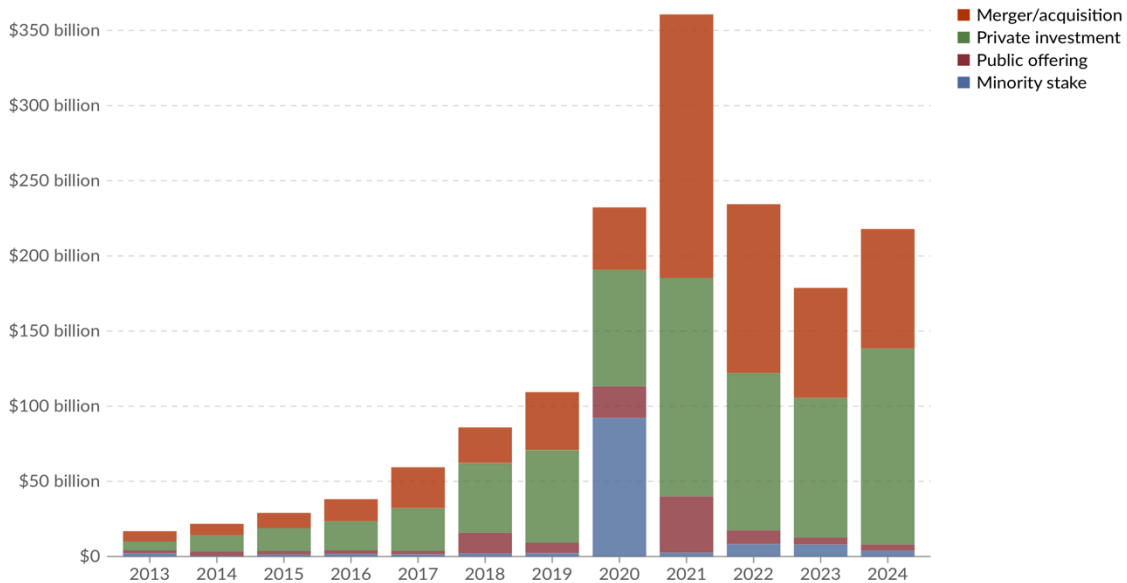### The Fast Expansion of AI in Global Economic Systems

Artificial intelligence has been increasingly integrated into the backbone of global trade, banking, logistics, and communication, it used to be an option now it is a necessity. As AI becomes more entrenched transaction systems, access to such technologies has started to resemble a toll-based model, where users, especially in international contexts, must pay fees or surrender data to use essential digital services.

Annual global corporate investment in artificial intelligence, by type
This data is expressed in US dollars, adjusted for inflation.

Our World in Data

Legend:
- Merger/acquisition
- Private investment
- Public offering
- Minority stake

Y-axis: $0, $50 billion, $100 billion, $150 billion, $200 billion, $250 billion, $300 billion, $350 billion

X-axis: 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024

Data source: Quid via AI Index Report (2025); U.S. Bureau of Labor Statistics (2025)   OurWorldinData.org/artificial-intelligence | CC BY
Note: Data is expressed in constant 2021 US$. Inflation adjustment is based on the US Consumer Price Index (CPI).

A chart showing the increase in AI-related investments in trade and finance globally over the past 10 years.

AI Tollbooth

The term "AI tollbooth" refers to digital barriers created by AI platforms, which regulate access to infrastructure and services that are essential for international transactions. For example, an e-commerce company may need to use cloud services, digital ID verification, or real-time payment systems, all of which may be controlled by AI algorithms developed by a handful of powerful corporations. These tools often come with subscription fees, or data requirements.

Centralization of Power

Most AI infrastructure is developed and hosted by companies based in a few powerful countries. The distribution of AI infrastructure around the world reveals stark disparities, with certain regions dominating the global landscape. North

America, Europe, and East Asia, particularly countries like the United States, China, and Japan, have made significant investments in AI technologies, these regions benefit from advanced technological ecosystems and ample financial resources to develop AI tools and services. On the other side many developing countries in Africa, Southeast Asia, and Latin America face barriers in accessing or developing similar infrastructures and often rely on external providers for AI services, leaving them vulnerable to higher costs, data sovereignty concerns, and digital dependency. This uneven distribution of AI infrastructure further exacerbates the digital divide and makes it harder for lower-income countries to participate equally in the fast-expanding AI tollbooth market and international transactions. This creates a concentration of control over digital infrastructure in the hands of select actors. Companies such as Amazon Web Services, Google Cloud, and Alibaba Cloud dominate the digital services market, often setting terms of access and usage for international clients. This centralization gives these corporations and their home nations considerable leverage over global trade networks. This trend can be viewed as a form of digital dependency, where countries and businesses must rely on foreign-owned AI services to participate in the international economy.

Many developing countries lack the technological infrastructure to integrate AI into their trade and financial sectors. As a result, they either depend on expensive foreign systems or are excluded altogether, which deepens the digital divide and limits their economic competitiveness. Without equal access to AI tools, enterprises in low-income regions struggle to enter or sustain themselves in international markets.

Regulatory Gaps and Digital Sovereignty Concerns

There are currently no universally accepted regulations that govern the ethical use or accessibility of AI tollbooths. While regional efforts like the EU's Artificial Intelligence Act are advancing, a global framework is still missing, which raises critical concerns around data sovereignty and brings up questions like who controls the data collected by AI systems? and digital colonialism, a term describing how

developing countries may be subject to the control of digital infrastructure by foreign corporations and governments.

Major Countries and Organizations Involved

United States

United States is home to global leaders like Google, Amazon, Microsoft, and IBM. These companies dominate AI infrastructure services around the world. The U.S. emphasizes a market-driven approach to AI However, this approach raises concerns about data privacy and the ethical practice of AI, especially in international transactions.

China

China makes significant investments in AI infrastructure and research. The country's government has actively supported AI through its Next Generation Artificial Intelligence Development Plan, which aims to position China as the world's AI innovation leader by 2030. Chinese companies such as Baidu, Tencent and Alibaba are major players in the AI space. China's state-driven model allows the government to control and monitor data flows more efficiently Concerns about data sovereignty, and the lack of transparency in China's AI system have raised issues for other nations, especially in the context of cross-border transactions.

European Union

The European Union takes a progressive stance on data privacy and ethical practices in AI. The General Data Protection Regulation (GDPR), which came into effect in 2018, set a global benchmark for data protection and privacy and has an impact on international AI operations. EU's Artificial Intelligence Act, proposed in 2021, seeks to create a legal framework for the safe and ethical use of AI. EU aims to ensure that AI technologies are aligned with European values such as human rights and privacy.

India

The Indian government has made strides in developing AI through its National AI Strategy In the context of international transactions, India has implemented the Unified Payments Interface (UPI), a state-led digital payment system that operates without foreign AI tollbooths. India's approach to AI development focuses on creating affordable, scalable solutions for its vast population, while also protecting data sovereignty.

International Telecommunication Union (ITU)

The ITU works to promote the development and standardization of digital technologies, including AI. The International Telecommunication Union has been working to promote discussions on AI ethics, governance and its impact on international transactions. It aims to narrow the digital divide and ensure that developing countries have a voice in the global AI sector.

World Trade Organization (WTO)

As AI continues to impact trade practices, the WTO has launched discussions on how AI could affect the global economy, intellectual property and e-commerce regulations. While the WTO has yet to issue comprehensive guidelines on AI, it is exploring the impact of AI trade barriers and services on international trade, seeking ways to ensure fair trade and competition across borders.

United Nations Conference on Trade and Development (UNCTAD)

Through its Digital Economy Report, the United Nations Conference on Trade and Development examines the opportunities and challenges that artificial intelligence brings to international trade.

Timeline of Events

Date	Event
May 25, 2018	Enforcement of GDPR
June 4, 2018	India releases "AI for All" strategy
January 1, 2021	The United States enacts the National AI Initiative Act
April 21, 2021	The European Commission proposes the Artificial Intelligence Act
August 2021	UNCTAD publishes the *Digital Economy Report 2021*,
2022	China expands its Digital Silk Road
October 2023	Developing countries raised concerns at WTO about AI monopolies and lack of equitable access.

Relevant UN Resolutions and Other Documents

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- UN General Assembly Resolution A/RES/77/316 (2023)
  A UN resolution recognizing the impact of AI on sustainable development and emphasizing international cooperation on safe and equitable AI use.
- UNESCO Recommendation on the Ethics of Artificial Intelligence (2021)
  A global framework that sets ethical standards for AI development.
- European Commission Artificial Intelligence Act (Proposed in 2021)
  Legal proposal to regulate AI in the European Union.

Previous Attempts to Solve the Issue

G20 Osaka Summit
One of the earliest multilateral efforts to tackle AI governance took place during the G20 Summit in Osaka, where leaders endorsed the G20 AI Principles which directly tying into the global concern over how AI tollbooths could be regulated fairly across nations but lacked binding enforcement mechanisms by leaving AI tollbooth regulation fragmented and dependent on national interests.

UNESCO Recommendation on the Ethics of Artificial Intelligence
This recommendation marked the first globally agreed framework on AI. It attempted to create parity in digital development and responsible deployment, but so many countries and companies did not adopt its guidelines.

OECD's Global Partnership on AI
Brought countries and experts together to guide the responsible use of AI. It included task forces on data governance and commercialization but lacked enough strong regulatory powers to curb monopolistic AI tollbooth operators.

European Union's Draft Artificial Intelligence Act
This legislation, while not yet fully implemented, proposed a risk-based classification of AI tools and recognized the cross-border implications of AI infrastructure and aimed to create regulatory harmony within the EU that could later extend to international trade systems. But it's still in draft form with uncertain global reach which limits its impact beyond EU borders.

UNCTAD trade for All Initiative
Through capacity-building programs, it sought to reduce the dependency of

low-income nations on foreign-controlled AI services, but struggled with limited funding and implementation capacity

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Possible Solutions

Establishment of a Global AI Interoperability Framework
Member states could collaborate under the auspic United Nations to develop a standardized protocol for AI integration.

Creation of an International AI Equity Fund
A multilateral fund contributed to by technologically advanced nations and managed by an impartial UN body could be established to support the development of AI capabilities in low-income countries.

Mandating Transparency Mechanisms for AI Service Providers
Requiring international digital infrastructure providers to disclose their algorithmic pricing models and access conditions would reduce the potential for abuse in tollbooth systems.

Regional AI Development Hubs and Knowledge Transfer Agreements
Establishment of regionally distributed AI research and development hubs, with mandatory technology-sharing clauses,

Incentivizing Open-Source Alternatives to Tollbooth AI Services
International financial and reputational incentives could be offered to private sector actors and research institutions that contribute to or develop open-access AI systems.

Integrating AI Capacity Building into Existing UN Development Programs
Rather than launching new mechanisms, the UN could embed AI-related infrastructure development and digital literacy into ongoing frameworks such as the Sustainable Development Goals (SDGs) and the UNDP Digital Strategy.

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