The Dangers of AI Nationalism and Beggar-Thy-Neighbour Policies*

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As they attempt to nurture and govern AI, some nations are acting in ways that – with or without direct intent – discriminate among foreign market actors. For example, some governments are excluding foreign firms from access to incentives for high-speed computing, or requiring local content in the AI supply chain, or adopting export controls for the advanced chips that power many types of AI. If policy makers in country X can limit access to the building blocks of AI – whether funds, data or high-speed computing power – it might slow down or limit the AI prowess of its competitors in country Y and/or Z. At the same time, however, such policies could violate international trade norms of non-discrimination. Moreover, if policy makers can shape regulations in ways that benefit local AI competitors, they may also impede the competitiveness of other nations' AI developers. Such regulatory policies could be discriminatory and breach international trade rules as well as long-standing rules about how nations and firms compete – which, over time, could reduce trust among nations. In this article, the author attempts to illuminate AI nationalism and its consequences by answering four questions:

- *What are nations doing to nurture AI capacity within their borders?*
- *Are some of these actions trade distorting?*
- *Are some nations adopting twenty-first century beggar thy neighbour policies?*
- *What are the implications of such trade-distorting actions?*

The author finds that AI nationalist policies appear to help countries with the largest and most established technology firms across multiple levels of the AI value chain. Hence, policy makers' efforts to dominate these sectors, as example through large investment sums or beggar thy neighbour policies are not a good way to build trust.

Keywords: AI, nationalism, protectionism, export controls, subsidies, regulations, trust, sovereignty

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1 INTRODUCTION

In 2017, Russian President Vladimir Putin told the Russian people that 'artificial intelligence is the future … for all humankind … .Whoever becomes the leader in this sphere will become the ruler of the world'.[1] In 2018, Google CEO Sundar Pichai put forward a different vision of AI, asserting that it was more important than fire or electricity (Clifford 2018)

While this author cannot read the future, both men appear prescient today. We live in a time when more than one-third of the world's nations have a strategy and established funding and/or incentives to encourage AI development (Struett et al. 2024). Moreover, government officials are enacting a wide range of policies that allow them to nurture AI while protecting their constituents from harm.[2] Given the importance of AI to the economy and national security, national government efforts to promote AI capability are understandable (Benson: 2024). Taxpayers want to fund AI that redounds to the nation, its firms and its people. To achieve this goal, many government officials want to be *sovereign* over how their nation designs, deploys and governs AI and its components.

However, some nations are acting in ways that – with or without direct intent – discriminate among foreign market actors. For example, some governments are excluding foreign firms from access to incentives for high-speed computing, or requiring local content in the AI supply chain, or adopting export controls for the advanced chips that power many types of AI. If policy makers in country *X* can limit access to the building blocks of AI – whether funds, data or high-speed computing power – it might slow down or limit the AI prowess of its competitors in country *Y* and/or *Z*. At the same time, however, such policies could violate international trade norms of non-discrimination. Moreover, if policy makers can shape regulations in ways that benefit local AI competitors, they may also impede the competitiveness of other nations' AI developers. Such regulatory policies could be discriminatory and breach international trade rules as well as long-standing rules about how nations and firms compete – which, over time, could reduce trust among nations.

Officials from many governments are determined to nurture AI, despite the risks it poses to democracy, human rights and employment, among other areas (Leyden 2024). Moreover, they understand that AI can be a public good when it is used to mitigate complex problems affecting society (Gopinath 2023; Okolo 2023). However, when policy makers take steps to advance AI within their borders, they may make it harder for policy makers from countries with less capital, expertise, infrastructure and data prowess to develop AI systems that

[1] www.rt.com/news/401731-ai-rule-world-putin.
[2] *See* www.oecd.ai.

could meet the needs of their often-developing world constituents. In so doing, these officials could undermine the potential of AI to enhance human welfare and impede the development of more trustworthy AI around the world (Slavkovik 2024; Brynjolfsson and Unger 2023; Agrawal et al. 2017; AI Safety Institute and UK Department for Science, Innovation & Technology 2023).

Officials may have several reasons to act in a trade distorting manner. First, policymakers may be under pressure from business leaders and other policymakers to limit the market power of foreign competitors. Secondly, officials may also want to use trade (for example, export controls) as a lever to prod other governments to change their behaviour (Buchanan 2020). Thirdly, policymakers may believe that they must rely solely on domestic suppliers of AI and cloud services to ensure local control or that various troves of data are adequately protected (US Government Accountability Office 2022). Alternatively, these same officials may conclude that for national security reasons they must impede the ability of other nations to compete in AI.

The US provides an extreme example. The US has made it harder for China to develop cutting edge AI by limiting access to key inputs for AI (chips, personal data, and capital.) One might argue that the US is using *beggar thy neighbour* AI policies against China's development of AI.

Economist Joan Robinson defined beggar thy neighbour policies as international economic policies 'designed to benefit one nation at the expense of the rest'. Robinson used the term to characterize attempts by nation-states during the Great Depression to shore up domestic employment by manipulating currency rates and/or the prices of tradable goods with tariffs. (Robinson: 1937; Mokyr: 2003). Today however, economists define it as taking actions to provide benefits to country A at the expense of country B and/or C (WTO: 2009; Rodrik: 2024).

Herein, the author attempts to illuminate AI nationalism and its consequences by answering four questions:

- What are nations doing to nurture AI capacity within their borders?
- Are some of these actions trade distorting?
- Are some nations adopting twenty-first century beggar thy neighbour policies?
- What are the implications of such trade-distorting actions?

2 METHODOLOGY

To answer question one, on government steps to nurture AI, the author uses process tracing and qualitative evidence . Process tracing is an in-depth within-case-study method used in the social sciences for identifying and tracing causal mechanisms (Beach and Brun Pederson 2019).

To answer question two, the author examines how governments foster two key components of the AI supply chain: data and infrastructure. By focusing on these components, the author can illuminate among discriminatory and nondiscriminatory action to hinder a competitor nation.

To answer question three, the author examines whether US or global efforts to limit access to capital, data, and chips make it harder for China and other nations to compete in AI.

Finally, to answer the fourth question, the author uses economics and governance literature to examine the potential unintended consequences of AI nationalism.

The cases described below are selective, descriptive and incomplete. Most countries have not adopted AI nationalist policies (Struett et al. 2025). The countries that are adopting AI nationalist policies tend to be wealthy nations with already strong AI capacity, such as the United States, China and the European Union (Maslej et al. 2023; Chavez 2023). I also discuss how wealthy countries, such as Saudi Arabia and the United Arab Emirates (UAE) are trying to attract AI expertise and capital, in short to buy their way into the top tier of AI producers.

3 SOME DEFINITIONS AND CONTEXT

AI

The author uses the OECD's definition of an AI system – 'a machine-based system that … infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments (Russell et al. 2023)'.

AI SOVEREIGNTY AND AI NATIONALISM

Policy makers in many countries want to be sovereign over AI to ensure that their nation reaps the benefits of AI while minimizing many of its potential costs — to jobs, social stability, equity and so forth (OECD (2023, 14.) National policies to promote AI may also help citizens in other countries. Nonetheless, in making a case for these policies, policy makers generally want to show voters that their ideas will improve their voters' quality or standard of life.

Several scholars use the term 'AI sovereignty· to describe 'the capacity of a given country to understand, develop, and regulate AI systems' (Belli 2023, 27). Such capacity gives a nation the ability to retain control, agency and self-determination over AI systems (*ibid*.). In contrast, Pablo Chavez focuses on outcomes:

'Sovereign AI involves national governments' strategic development and deployment of AI technologies to protect national sovereignty, security, economic competitiveness and societal well-being' (Chavez 2024). I will show that because these policies are oriented towards the nation, the author believes 'AI nationalism' is a better term to describe these policies.

4. WHAT DO WE MEAN BY 'TRADE-DISTORTING PRACTICES' OR 'PROTECTIONISM'?

Protectionists generally believe that the government should intervene to ensure that domestic producers dominate the domestic market. When government officials use protectionist tools such as tariffs, quotas, subsidies or performance requirements, they are changing market conditions, which could have implications for productivity and economic efficiency (Irwin 1996, 6).

Policymakers have long used trade agreements to limit how and when nations can utilize policies that distort trade.[3] At the same time, some domestic policies may, without intent, favour domestic producers over foreign producers. For this reason, trade agreements include exceptions that allow governments to breach trade agreement rules to achieve other important domestic policy goals, such as protecting public health, privacy or national security (Aaronson 2018; National Board of Trade Sweden 2016, 5).

The US Government has long expressed concerns about policies that distort the exchange of data across borders. For example, the US has criticized data localization policies, which can be use[d] by government for surveillance and to compromise civil and political liberties (Office of the USTR 2024a). The USTR has also identified problematic data policies across a range of countries, including China and Russia. Finally, the US has noted that AI regulation could distort trade. (Office of the USTR 2023, 153). (Office of the USTR 2024b, 148). In contrast, neither Canada[4] nor the European Union – both significant exporters of AI – reported any barriers to data or AI as of December 2023.[5]

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[3] *See* https://trade.ec.europa.eu/access-to-markets/en/content/digital-trade-0.

[4] House of Commons, *Non-tariff Barriers to Trade: Some Canadian Perspectives* (Dec. 2023) (Chair: Judy A. Sgro) and House of Commons, Standing Committee on International Trade, *Evidence*, 44–1, No 060 (27 Apr. 2023), online: www.ourcommons.ca/DocumentViewer/en/44-1/CIIT/meeting-60/evidence#Int-12168373.

[5] EC, *Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the Implementation and Enforcement of EU Trade Policy*, COM(2023)740 (15 Nov. 2023), online: https://ec.europa.eu/transparency/documents-register/detail?ref=COM(2023)740&lang=en.

5 BRIEF HISTORY OF DATA, DIGITAL AND AI SOVEREIGNTY

Policy makers in several countries have argued that just as they are sovereign over their people and natural resources, they are also sovereign over data produced by or attributed to their constituents. India, as example, has stressed that data is a sovereign asset and Indian control of its data is 'non-negotiable' (ET Bureau 2019; Agrawal 2019; Ranganathan 2019). EU Internal Market Commissioner Thierry Breton has stated that 'European data will be used for European companies in priority, for us to create value in Europe' (Delcker 2020). Some called this trend 'digital sovereignty' – while others used the term 'data sovereignty' (Chander and Le 2015; Chander and Sun 2021).

Countries tend to use broad rationales to justify their digital or data sovereignty. India used social stability as well as human rights arguments. The United States, Canada and the European Union tend to use national security rationales. China uses national security and social stability arguments (Aaronson 2021; Bradford 2023; Chavez 2022).

But not all nations can achieve digital sovereignty. The World Bank argues that lower-income countries do not have the infrastructure and skills to capture and value data (World Bank 2020, 2). They will need to import data analytics to ensure that their other goods and services remain competitive. Hence, the world is increasingly dividing into digital haves – countries with expertise in data and data-driven services, – and digital have nots (Banga 2019; UNCTAD 2019).

However, the governments that have been the most vocal about data/digital sovereignty, such as India, South Africa and the European Union, are not quite the same as those attempting to advance AI sovereignty and AI nationalism (China, the United States and the European Union, among others), although there is some overlap.

AI nationalism took hold in the United States and gradually spread among many of its close allies and trading partners, after China announced that AI development would be a top national priority in 2015 (Larsen 2022; Office of the USTR 2024b, 51; and McBride and Chatzky 2019).

In 2017, the Chinese government released the 'New Generation Artificial Intelligence (AI) Development Plan' designed to build up indigenous capacity at home as well as exports. China began to use subsidies, research and development (R&D) investment, venture funds and forced technology transfer to stimulate domestic AI (Luong et al. 2023). Soon thereafter, policy makers in the United States and other developed countries, such as Australia, Canada, Japan, the Netherlands, and the United Kingdom, began to see China's efforts to become a dominant player in advanced technology as a national security problem (McBride and Chatzky 2019; Kennedy 2015).

The movement toward AI sovereignty is particularly strong in Europe. After the 2008 global financial crisis, European officials also began to focus less on exporting to the global economy and more on achieving ensuring that the European Union would not be dependent on any other country or groups of countries. The European Union now describes this policy as 'open strategic autonomy' or 'strategic sovereignty' (Damen 2022). However, some scholars argue that this approach reduces its competitiveness in data-driven sectors (Bauer and Pandya 2024).

6. HOW DO NATIONS NURTURE AI?

Governments that want to nurture sovereign AI usually begin with a strategy and then take steps to realize that strategy. AI strategies are innovation policies designed to signal that the government views a particular technology as a priority (OECD: 2010) In 2003, the Digital Trade and Data Governance Hub found forty-three of a sample of sixty-eight countries and the European Union had an AI strategy (Struett et al. 2024).

Next, policy makers work to direct public and private funds toward enhancing research and capacity building within the nation. These investments in AI R&D are difficult to track over time and across countries, agencies and approaches (for example, public-private partnerships) (Clark, Zhang and Sellitto; Galindo-Rueda and Cairns 2021). Moreover, many governments do not disclose all of their public funded AI related investments. However, here are some statistics:

1. US government investment in AI R&D grew from USD 2.45 billion in 2021 to an estimated USD 3.1 billion in 2024.[6]
2. In February 2024, the UK government announced it would invest GBP 100 million in UK AI R&D (UK Research and Innovation 2024)
3. In 2025, the European Union announced plans to invest a total of 200 billion in AI.[7]
4. In March 2024, the Saudi government announced that it would invest USD forty billion of its sovereign wealth fun into domestic and international AI developers (Farrell and Copeland 2024).

Most countries simply cannot match these funding levels.

[6] www.nitrd.gov/apps/itdashboard/ai-rd-investments/.

[7] https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence; and https://ec.europa.eu/commission/presscorner/detail/en/speech_25_471.

The US stands out among the nations seeking to develop AI. The US has the world's largest share of AI production and venture capital investment in AI.[8] The US also has a trade surplus in digital trade, and AI exports are a large share of that surplus.[9] Some officials and academic economists have claimed that China uses exports to build market share through economically large and persistent trade surpluses, matched by equally persistent current account deficits held by their trading partners. (Bernstein: 2024, Pettis: 2023) The economist John Maynard Keynes believed that big, persistent trade surpluses are always the product of 'beggar thy neighbor' policies. According to Michael Pettis, when nations use domestic policies to increase their competitiveness in sectors such as AI, they have a beggar thy neighbour impact. (Pettis: 2023; 2024)

7. HOW AI NATIONALISM MAY DISTORT TRADE IN AI

There are three ways policymakers can distrot trade:

(a) Through distoriting
(b) Cross-border exchange of data, through
(c) Infrastructural subsidies and through capital control

7.1 Restrictions on data

Data sets are an essential element of AI. If a data set is inaccurate, incomplete or unrepresentative, it will likely yield inaccurate, incomplete or biased results (Aaronson 2024; Mazzucato et al. 2022). In general, AI developers want data sets that capture the real world, so the larger and more representative the underlying data set is, the better (Buchanan 2020). For this reason, AI developers often supplement their proprietary data sets with data licensed from data brokers and/or web-scraped data. They believe that acquisition of such data from multiple sources, venues and countries will yield more accurate, complete and representative data sets (Aaronson 2024).

7.1.1 Data protection laws

In the last decade, many nations adopted rules that require certain types of sensitive personal data to be stored in local servers or forbid cross-border transfer of such data. These rules are meant to protect privacy and not distort trade, yet they can have a trade-distorting effect. For example, the EU General Data Protection

[8] https://www.oecd.org/en/topics/artificial-intelligence.html.
[9] https://bidenwhitehouse.archives.gov/cea/written-materials/2024/06/10/what-drives-the-u-s-services-trade-surplus-growth-in-digitally-enabled-services-exports/

Regulation (GDPR) permits data to flow freely to those nations which it deems have established adequate levels of personal data protection. However, adequacy is a complicated process. The adoption of an adequacy decision involves: a proposal from the European Commission; an opinion of the European Data Protection Board; an approval from representatives from EU countries; and finally, the adoption of the decision by the European Commission. However, as of 2024, the EU deemed only fifteen nations as 'adequate'.[10]

In 2023, after several years of debate, India enacted strict rules governing personal data collection and monetization by firms in the Digital Personal Data Protection Act (DPDPA). Building on the European Union's GDPR, the DPDPA permits cross-border data transfers to jurisdictions outside of India other than those jurisdictions specifically identified by the Indian government on its list of countries to which data transfers are restricted (to be published); otherwise, the DPDPA does not require the implementation of a transfer mechanism.[11] Here, again, without intent, privacy regulation could distort trade.

Meanwhile, China has long restricted cross-border data flows through its Great Firewall. In September 2022, the Chinese government implemented an administrative process to review data transfers through government security assessments for certain volumes and kinds of data.[12] In 2023, the Chinese government announced new restrictions on 'important' and personal data – but neither term was clearly defined in the regulations. EU officials complained to the Chinese government that the lack of clarity was causing confusion and could lead to disinvestment (Reuters 2023a; Cash 2023). Moreover, US officials found these rules difficult to comply with (International Trade Administration 2023).

In March 2024, the Chinese government revised its rules, noting that the Cyberspace Administration of China would exempt data collected and generated in activities such as international trade and cross-border transportation that do not contain personal information or 'important data'. However, some foreign firms reported that they did not understand how the government defined 'important data'.[13] Hence, China's approach to regulation still yields confusion.

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[10] https://commission.europa.eu/law/law-topic/data-protection/international-dimension-data-protection/adequacy-decisions_en.

[11] www.dlapiperdataprotection.com/index.html?t=law&c=IN; *also see* Anirudh Burman, *Understanding India's New Data Protection Law*. (Carnegie Endowment for International Peace 3 Oct. 2023), https://carnegieindia.org/2023/10/03/understanding-india-s-new-data-protection-law-pub-90624.

[12] Companies that are transferring less data or otherwise do not trigger the security assessment requirement can rely on a less burdensome 'standard contract' filing to ensure their data transfers are compliant (Samm Sacks, Yan Luo & Graham Webster, *Mapping U.S.-China Data De-Risking* 8 (DigiChina 29 Feb. 2024), https://digichina.stanford.edu/work/mapping-u-s-china-data-de-risking/).

[13] https://www.reuters.com/technology/cybersecurity/chinas-cyberspace-regulator-issues-rules-facilitate-cross-border-data-flow-2024-03-22/.

The United States views Russia's personal data protection law as a barrier to trade because it requires that 'certain electronically collected data about Russian citizens be processed and stored in Russia'. The requirements also raise concerns about state surveillance (Office of the USTR 2024, 310).

Meanwhile, because the United States lacks a personal data protection law, the country has had to resort to ad hoc policies to protect personal data. But these ad hoc policies are not generic but rather aimed at US adversaries. In February 2024, President Joe Biden issued an executive order that required the Department of Justice (DoJ) to issue regulations that establish clear protections for Americans' sensitive personal data from access and exploitation by countries of concern, such as China, Iran and Russia. In addition, officials noted that the sale of Americans' data raises significant … national security risks (The White House 2024a). In December 2024, after public comment, the DoJ issued a final rule the identified types of transactions that are prohibited and restricted; countries of concern and classes of covered persons with whom the regulations prohibit or restrict transactions involving government-related data or bulk US sensitive personal data. It also established a process to issue, modify or rescind licences authorizing otherwise prohibited or restricted transactions. The final rule will go into effect April 2025 (US DoJ: 2025).

In 2023, at an international meeting of data privacy officials, Singapore's Personal Data Protection Commission Deputy Commissioner Denise Wong notes these restrictions limit how and whether data can be transferred from one jurisdiction to another and distort trade. She stressed that the number and complexity of these rules hinder data collection and sharing, which may make it harder to nurture AI and/or use AI to mitigate wicked problems. (LaCasse 2024; Aaronson: 2023b).

7.1.2 Restrictions on the free flow of data: data localization

Governments increasingly control the flow of data by limiting its movement or delineating how and where it can be stored. States argue that they are only restricting the free flow of data to data they deem sensitive or related to national security. Policy makers may also argue that such restrictions are necessary to protect privacy or create jobs. The Biden Administration defined data localization as:

> measures designed to protect, favor, or stimulate domestic industries, service providers, and/or intellectual property (IP) at the expense of goods, services, or IP from other countries. Localization barriers are measures that can serve as disguised trade barriers when they unreasonably differentiate between domestic and foreign products, services, IP or suppliers, and may or may not be consistent with WTO rules.[14]

[14] *See* https://ustr.gov/trade-topics/localization-barriers.

Nonetheless, in its 2024 trade barrier report, the USTR noted that seven countries have data localization policies that distort trade.[15] Data localization rules were generally not designed to advance local AI, but some governments see these rules as an incentive for nurturing AI (McKinsey & Company 2022). Moreover, some US firms are using these rules to build their business by encouraging sovereign AI.[16]

Data localization rules can distort trade and reduce cross-border investment. They may also reduce local provision of cloud services because compliance with such rules is expensive. Giant cloud providers, such as Amazon, Google and Microsoft, can more easily amortize these costs (McKinsey and Co. 2022).

7.1.3 Data-sharing initiatives

Many governments have established initiatives or incentives to encourage data sharing among various sectors of society. When entities share data, they increase its generativity – expanding its utility to diverse individuals, entities and groups. Such an approach can be particularly helpful to countries with relatively few AI firms or small populations.

For example, Colombia (MinTIC 2022),[17] Japan[18] and South Korea (Hwang 2022), have created data-sharing initiatives. Japan made a point of declaring that its data spaces are open to domestic and foreign companies – it wants to ensure that 'non-Japanese companies are not left behind by utilizing Data Spaces'.[19]

In contrast, the European Union created common *data infrastructures* and *governance frameworks*, which facilitate data pooling, access and sharing. These data spaces are supposed to be open for the participation of all organizations and individuals. However, the data spaces are designed to make data available and exchangeable among EU entities. Businesses, public administrations and individuals will control the data they generate. The European Union asserts that these data spaces will enhance the development of new data-driven products and services among its members, forming the core of an interconnected and competitive

[15] Office of the USTR (2024b) Bangladesh, 25; China, 67; El Salvador, 125; Korea, 242; Pakistan, 278; Russia, 310; and Vietnam, 370.

[16] https://www.marketwatch.com/story/nvidia-just-created-a-new-multibillion-dollar-business-from-scratch-a97c7df4; and https://blogs.nvidia.com/blog/what-is-sovereign-ai/.

[17] Colombia, Resolution 460, *Por la cual se expide el Plan Nacional de Infraestructura de Datos y su hoja de ruta en el desarrollo de la Politica de Gobierno Digital, y se dictan los lineamientos generales para su implementación* (15 Feb. 2022).

[18] https://www.meti.go.jp/english/press/2023/0429_001.html and https://www.japanindustrynews.com/2023/05/japan-launches-ouranos-initiative-for-cross-border-data-sharing-and-collaboration/.

[19] *See* www.ipa.go.jp/en/digital/data/data-spaces.html.

European data economy.[20] The EU says this strategy will put 'people first in developing technology and defending and promoting European values and rights in the digital world'.[21] In so doing, the European Union will ensure 'data sovereignty' (European Commission 2024).[22]

Data-sharing initiatives could distort trade if they do not allow foreign participation and, hence, limit access to information. But they are not necessarily trade-distorting.

7.1.4 Rules requiring AI developers to provide information on data provenance

Most countries do not require that AI developers provide information on the provenance/sources of their data and how they obtained that data. But policy makers around the world, including in the United States,[23] are considering such regulations. Data transparency can help avoid problems, such as bias, pornography, and misusing or illegally using copyrighted or personal data. Such provisions might also build trust among AI stakeholders. Moreover, data transparency can facilitate reproducibility of research results, which, in turn, will yield scientific progress (Longpre et al. 2024; Aaronson 2024).

The EU AI Act requires that AI developers disclose information about training, validation and testing data sets for high-risk AI systems and provide a summary of copyright-protected training data used in foundation models.[24] AI developers of high-risk systems must provide information such as how the data was obtained, labelled and processed (Aaronson 2024). The law does not require developers of other types of systems to provide such information. Such regulations are not intended to discriminate among domestic and foreign producers but could be perceived as discriminatory as the bulk of high-risk AI models are American and/or Chinese. Other nations, including the United States, are considering incentivizing data provenance requirements through various strategies, such as corporate governance or consumer disclosure rules, but have not yet moved beyond guidelines.[25]

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[20] *See* https://digital-strategy.ec.europa.eu/en/policies/data-spaces; EC, *Commission Staff Working Document on Common European Data Spaces*, SWD(2024) 21 final, online: https://digital-strategy.ec.europa.eu/en/library/second-staff-working-document-data-spaces.

[21] *See* https://digital-strategy.ec.europa.eu/en/policies/strategy-data.

[22] *See* https://digital-strategy.ec.europa.eu/en/policies/strategy-data; https://digital-strategy.ec.europa.eu/en/policies/data-spaces.

[23] US, Bill H.R.7766, *Protecting Consumers from Deceptive AI Act*, 118th Cong, online: www.congress.gov/bill/118th-congress/house-bill/7766?q=%7B%22search%22%3A%22data+provenance%22%7D&s=1&r=1.

[24] *See* https://artificialintelligenceact.eu/article/10/.

[25] For example, the US House of Representatives proposed the AI Foundation Model Transparency Act (Beyer 2023).

8. POTENTIALLY TRADE-DISTORTING RESTRICTIONS ON INFRASTRUCTURE

To build and run AI systems, AI developers need access to networked computers powered by advanced computer chips that have superior processing speed, computational power and energy efficiency. Hereafter, the author calls these assets 'AI infrastructure'. Countries that have larger supplies of the latest supercomputing infrastructure, are more likely to be countries where AI developers make advancements in the field (Buchanan 2020, 7–8). Although AI infrastructure is largely owned and operated by private sector entities, governments have long attempted to control that infrastructure to meet domestic policy priorities (Floridi 2020). Some governments, in particular the US, are taking actions on infrastructure that affect competitors in other nations.

8.1 Export controls on chips

Almost every device, from cars to toasters, includes semiconductors. However, the most advanced semiconductors are also key components of weapons and policing devices. In 2022, the United States initiated export controls on semiconductors to certain nations, including China and Russia, to prevent these nations from obtaining advanced chips for military or surveillance purposes (Harris 2024b; US Mission China 2022). Over time, America's export controls got broader and tougher. US officials aimed to make it harder for Chinese and Russian firms to develop AI and other advanced technologies (Harris 2023a, 2023b; Braithwaite 2024; Kharpal 2022).

In September 2023, the Dutch government imposed additional restrictions on the export of machines that make advanced chips. It justified its actions by stating that it was acting to protect national security by limiting China's ability to make chips for AI.[26] The UK,[27] Canadian[28] and Japanese[29] governments soon followed with their own controls on semiconductor exports.

While many US allies voluntarily adopted these controls, policymakers warned and even bullied others. On 6 March 2024, the US Departments of Justice, Commerce and Treasury issued a Tri-Seal Compliance Note emphasizing the obligations of non-US persons to comply with US sanctions and export control

[26] https://apnews.com/article/semiconductor-chips-china-asml-netherlands-washington-d988faf1d7f8339f9fc62a4725095798.
[27] www.telegraph.co.uk/business/2024/01/01/britain-cracks-down-semiconductor-sales-china/.
[28] www.international.gc.ca/controls-controles/us-eu/index.aspx?lang=eng.
[29] https://asia.nikkei.com/Business/Tech/Semiconductors/Japan-s-new-chip-equipment-Nexport-rules-take-effect-Sunday.

laws. Under US export controls, 'foreign-produced items located outside of the United States that are produced using certain US-controlled technology, software, or production equipment are subject to the EAR when exported from abroad, reexported, or transferred in-country to certain countries or parties on the Entity List' (Department of Commerce, Department of the Treasury and DoJ 2024; Pillsbury Winthrop Shaw Pittman LLP 2024).

US officials state that export controls are not designed to contain China's economic growth but are targeted at technologies with military applications (US Department of Commerce 2023). However, the United States keeps changing and adding to these rules, which can cause confusion, alienate US trade partners, and increase compliance costs of foreign market actors.[30]

Not surprisingly, Chinese officials see these policies as discriminatory and designed to make it harder for Chinese entities to stimulate growth or create advanced AI. Zhang Yunquan, a member of the Chinese People's Political Consultative Conference National Committee and a computer scientist at the Chinese Academy of Sciences, said if China falls behind on its ability to create sovereign AI, 'we may face the risk of being sanctioned and suppressed' (Caiyu and Juecheng 2024).

Chinese officials are retaliating, by developing efforts to 'delete America from its technology' (Lin 2024). In 2022, China's State-Owned Assets Supervision and Administration Commission issued a directive, Document 79, which requires state-owned companies in finance, energy and other sectors to replace foreign software in their information technology systems by 2027. These companies must report quarterly on their progress. The journal also reports that the buy-local policy is trickling down to privately run companies, which are showing greater inclination to buy domestic software, according to Morgan Stanley's CIO survey (Lin: 2024.). Subsidization of Cloud Infrastructure and High-Speed Computing.

In the first sixty years of AI development, most AI models were developed by academics. But as the speed of computers has advanced, many universities and research organizations cannot afford to provide their researchers and students with the high-speed computing they need to continue to innovate (Maslej et al. 2023). Therefore, policy makers around the world are trying to increase access to those resources and, in so doing, make it possible for more researchers to participate in such research.

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[30] www.bis.gov/ear; and Hyok Jung Kim, *U.S. Semiconductor Export Controls and Their Implications to Korea*, KIEP Research Paper (2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4764043.

For example, in her 2023 state of the Union address, EU President Ursula von der Leyen announced a new initiative to make Europe's supercomputers available to European AI startups to train their trustworthy AI models.[31] These supercomputers include LUMI, hosted by a consortium of partners from Belgium, the Czech Republic, Denmark, Estonia, Finland, Iceland, Norway, Poland, Sweden and Switzerland (Häkkinen 2022). The European Commission also announced a 'Large AI Grand Challenge', which gives AI startups financial support and supercomputing access.[32]

The European Union is also funding what it calls 'AI factories' in which it will acquire, upgrade and operate AI-dedicated supercomputers to enable fast machine learning and training of large general-purpose AI models. At these AI factories, public and private users, start-ups and innovators can develop, test, evaluate and validate large-scale AI models, providing supercomputer-friendly programming facilities and other AI-enabling services. These opportunities are available only to European entities (European Commission 2023).

In March 2024, *The Financial Times* reported that some seventeen city governments in China pledged to provide 'computing vouchers' to subsidize AI start-ups facing rising data centre costs. These costs are increasing as a direct result of the United States and its allies making it harder for Chinese entities to get access to high-speech computer chips. The vouchers can be used to rent time in state-run AI data centres to train and run the companies' LLMs (Olcott and Liu 2024).

In addition, in January 2024, the US government initiated the National Artificial Intelligence Research Resource (NAIRR) pilot program. The program is designed to connect US researchers to the computational, data, software, model and training resources they need to participate in AI research. US officials hope that access to these resources will democratize AI, and academics will be able to produce new models and strategies for AI. (McKenzie 2024) [33] The NAIRR is only available to researchers in the United States, but it appears foreign researchers at US institutions will be welcome to participate once it is fully implemented (NAIRR Task Force 2023, 47).[34]

These initiatives are designed to help domestic competitors excel in AI. They may be trade distorting if foreign market actors are excluded, but they are not designed to distort trade.

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[31] *See* https://state-of-the-union.ec.europa.eu/state-union-2023_en.
[32] https://eurohpc-ju.europa.eu/winners-announced-large-ai-grand-challenge-2024-06-26_en.
[33] https://new.nsf.gov/focus-areas/artificial-intelligence/nairr#about-the-nairr-pilot-bcb.
[34] NAIRR Task Force 2023, C-4.

9. DENYING VENTURE CAPITAL AND EXPERTISE TO OTHER NATIONS

October 2024 was a banner month for US efforts to make it harder for some countries to nurture AI. First, the Justice Department issued its proposed rules limiting China, Russia, Iran, North Korea and Venezuelan access to troves of personal data (and some US government data) (DoJ: 2024) Secondly, the US Department of Treasury issued a final rule designed to restrict and monitor foreign investment in AI in China. The Department noted that cross-border investment flows have long contributed to US economic vitality, and the implementation of the Outbound Order is consistent with our longstanding commitment to open investment that does not threaten our national security interests. But AI investment in China could accelerate the successful development of sensitive technologies and products by 'countries of concern', such as China and Russia (US Department of Treasury 2024a). The order made it harder for Chinese entities working in these fields to obtain related services. In its justification, Treasury stated that intangible benefits like managerial assistance, access to investment and talent networks that often accompany such capital flows must not be used to help countries of concern develop their military, intelligence, and cyber capabilities(US Department of the Treasury: 2024). These actions are noteworthy for two reasons: they go beyond what any other nation has done, and they appear inconsistent with America's long-time support for the free flow of data among nations (with certain exceptions).

10. WHY IS AI NATIONALISM PROBLEMATIC? FINDINGS AND LESSONS FROM THE ECONOMICS AND GOVERNANCE LITERATURE

10.1 Effects on innovation

AI nationalism may not facilitate domestic innovation in AI. Some scholars (Bloom et al: 2016 and Gorodnichenko et al. 2015) argue that Chinese import competition induced innovative activity in exposed domestic sectors in Europe. However, Autor et al. (2020) finds it reduces innovation in the US. A recent World Bank Study found US export controls reduced innovation in both countries (Cao et al. 2024). Aghion et al. (2017) looked at the early impact of AI and found ambiguous results. Hence, there is no clear answer.

AI nationalism may, over time, affect innovation in the home country. When one country tries to limit competition in new technologies through export restrictions, it may find its home market is characterized by oligopolies or monopolies. In so doing, the country has reduced incentives for innovation. Over time,

these giant companies may take their success for granted and become lazy or less adept at innovation (Akcigit et al. 2019; Lenway et al. 1996).

AI nationalism could also reduce the pace of development. If AI nationalism leads to oligopolies and monopolies, there will be less competition. With less competition, prices are often higher, which disproportionately hurts the poor, especially in developing economies, contributing to rising inequality. Moreover, business dynamism is important for innovation and economic growth to lift people out of poverty (Mytelka 1999; World Bank 20).

Comptition has benefits for AI stakeholders. US and EU firms need foreign AI competitors to keep them on their toes or their firms may get lazy. Foreign firms may compete over attributes that consumers and governments may desire, such as more trustworthy, open or participatory AI (Aaronson 2023a; Carrozza et al. 2022). Finally, AI research is international. Researchers in one country benefit from research reproduced and replicated in another, building on progress (Maslej et al. 2023).

10.2 Effectiveness at nurturing AI systems

AI nationalism may not yield competitiveness as AI evolves (Schoelkopf et al. 2024; McKendrick 2019).[35] Competitiveness is a dynamic process that will change over time as consumer demand, technology, society and polity evolve. Governments cannot keep up with these changes, but governments can serve as a 'catalyst and challenger' (Porter 1990).

AI systems are complex, comprised of applications, risks, benefits, uncertainties, stakeholders and public concerns. Indeed, no single entity is capable of fully governing them. Instead, policy makers must create a systemic approach to governance that cuts across sectors and disciplinary silos and solicits and addresses the concerns of many stakeholders around the world (Marchant and Wallach 2015; Mathews, Fabi and Offodile 2022). Policy makers struggle to develop such an approach.

AI nationalism is not a systemic approach because adherents view AI development as a zero-sum game in which only one player can win. Hence, that player adopts policies that benefit local competitors. However, over the long run, that approach could be short-sighted because the research and data underpinning AI is global and constantly changing.

[35] https://openai.com/research/video-generation-models-as-world-simulators; https://blog.research.google/; and Surden 2024.

10.3 Effects on monopolies

AI nationalism may further encourage monopolistic markets. According to the US Federal Trade Commission, which, along with the DoJ, regulates competition, only some twenty firms possess the cloud infrastructure, computing power, access to capital and vast troves of data to develop and deploy tools to create LLMs (Staff in the Bureau of Competition & Office of Technology 2023). These firms are also concentrated in a few advanced developed countries – in North America, Asia and Europe. As a result, a few companies with expertise in AI could hold outsized influence over a significant swath of economic activity (Staff in the Bureau of Competition & Office of Technology 2023; Hacker, Engel and Mauer 2023). These giant firms often lobby against regulation. Yet, sometimes they act as de facto private regulators, particularly in technologies such as AI, whereas policy makers are just learning how to govern (Hearn 2024). According to the UK Competition and Markets Authority, these firms shield themselves from competition; distort choice in financial markets; and forge partnerships that exacerbate existing positions of market power through the value chain. (UK Competition and Markets Authority 2024). Over time, these firms may control so much of the market that competition is limited. Executives could have fewer incentives to innovate and protect the rights of key stakeholders including workers and consumers (Aghion et al. 2021; Philippon 2019).

Policymakers in both the US and China understand that these giant firms are getting too big and powerful. In 2019–2020, the Chinese Communist Party became increasingly threatened by the market power and societal clout of China's giant tech firms. In 2020, the government warned twenty-seven major internet companies that they were violating China's antitrust and fair competition practices. The government fined some of these firms and prevented some of the largest initial public offerings and mergers. However, by 2022, as growth slowed in China, President Xi Jinping changed course. At an address before the Central Economic Work Conference in Beijing, he stated that internet platforms will be supported to 'fully display their capabilities' in boosting the economy, job creation and international competition (Zhang: 2023). Although he did not acknowledge it publicly, this crackdown crippled its most competitive tech giants for several years (Zhang: 2024).

Meanwhile, American officials began to challenge big tech mergers and acquisitions as well as investigating how these firms use and store data. The Federal Trade Commission and Justice Department fined several firms and has thus far won a case challenging Google's monopoly search engine.[36] But while US

[36] https://www.justice.gov/opa/pr/justice-department-statements-us-district-court-district-columbias-decision-us-v-google; and https://www.npr.org/2024/08/05/nx-s1-5064624/google-justice-department-antitrust-search.

officials want to challenge some of these practices, they also worry that their efforts to limit the market clout of America's tech giants could weaken the ability of US firms to compete with China's tech behemoths, which are subsidized and supported to a much greater degree than those in the United States (Lewis 2024; Congressional Research Service 2024; Bradford 2023). As of this writing, the United States seems to be leaning toward ensuring US competitiveness for national security reasons (Sullivan: 2024).

Finally, America's rethink of competition policy in the digital era is occurring while the country appears to be reconsidering its position on digital trade agreements. The Biden USTR pulled back from explicit support of specific positions regarding the free flow of data, data localization and source codes. At the same time, other US agencies expressed their support for the open internet and the free flow of data (Lester 2024; Aaronson 2023a).

Ironically, this rethink has real implications for US competitiveness in various forms of AI. All types of AI require constant updating and new sources and types of data. One way to improve generative AI is to increase the quality and supply of data that underpins it AI developers, deployers and users will be better off if this data is obtained through an accountable, transparent set of rules negotiated globally, such as at the WTO (Aaronson 2023c).

10.4 Undermining the public good nature of AI

A growing number of researchers, international organizations and policy makers also acknowledge that monopolistic markets for AI could lead to a global imbalance among countries with firms that have the resources to build foundation models and those that rely on pretrained foundation models. If so, innovation could be limited. (OECD 2024, 43).I. As the CEO of the UK Competition and Markets Authority concluded, 'Without fair, open, and effective competition … we see a real risk that the full potential of organizations or individuals to use AI to innovate and disrupt will not be realized, nor its benefits shared widely across society' (Gov.UK 2024b).

Finally, when countries insist their data or AI is sovereign, they are basically saying the benefits of data and AI should only accrue within their borders. In so doing, they risk the generativity of data and AI (Aaronson 2021). Such a perspective is unfortunate, given the global nature of the AI supply chain and ongoing international work on AI as a global public good.

11 IS THE US ADOPTING BEGGAR THY NATION TRADE POLICIES?

The US has gone farther than any other nation to deny another country, China, access to key elements of the AI supply chain: chips, data, and capital. Moreover, it has demanded other countries join it in these restrictions for national security reasons.

The author cannot think of any other situation where one country has denied so many components to produce a good or service. The COVID pandemic and the Russia/Ukraine war led many nations to institute restrictive export policies. But these policies were often counterproductive. They exacerbated price and supply volatilities.[37] Moreover, it could lead to a backlash towards both nations.[38]

f US variants of AI are to be world class, the US needs Chinese data pools to ensure AI is as accurate, complete and representative as possible.

The US is also sending mixed messages about China to China and other nations. The US frequently states that collaborating with other nations on AI is a priority and an opportunity. In his October 2024 speech, National Security Advisor Sullivan noted that the US had created the: first-ever International Code of Conduct on AI with our G7 partners, working with some twenty-four nations on AI Safety; releasing the political Declaration on the Military Use of AI, endorsed by some fifty countries and sponsored the first-ever U.N. General Assembly Resolution on AI, which passed unanimously. He also noted that the US frequently met with Chinese officials on AI. But these actions 'do not diminish our deep concerns about the ways in which the PRC continues to use AI to repress its population, spread misinformation, and undermine the security of the United States and our allies and partners'. (Sullivan: 2024). At the February 2025, AI Summit, US Vice President Vance said policymakers were overly focused on AI risk and should turn their focus to less regulation and more towards AI opportunity.[39]

But US efforts at international cooperation do not diminish or negate the fact that the US is denying one nation, China, its main competitor in AI development access to key elements of the supply chain (chips, data, and capital). However, the US does not deny other authoritarian countries such as Saudi Arabia and the UAE access to these supply chain components.

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[37] https://www.ifpri.org/blog/trade-policy-and-food-price-volatility-beggar-thy-neighbor-or-beggar-thyself/.

[38] https://merchantmachine.co.uk/china-vs-us/.

[39] https://www.presidency.ucsb.edu/documents/remarks-the-vice-president-the-artificial-intelligence-action-summit-paris-france.

12 FINDINGS FROM THE ANALYSIS

1. Some Western nations have relied on export controls as a means of slowing down China's AI competitiveness. No one knows if these steps will slow down authoritarian use of AI. Moreover, export controls are the policy equivalent of the game whack-a-mole.[40] Scholars have found they are often ineffective (Bown 2023; Lewis 2023; Shivakumar et al. 2022). Finally, export controls often damage the target and the sender, including US firms that rely on China as a key market (Mui 2024).
2. Competition among nations on AI investment could stimulate more innovation; however, only a few countries have the funds to compete. Even wealthy countries such as Germany cannot keep up with the biggest spenders – the Americans, Saudis, and the Chinese. (Reuters 2023b).
3. Nations that adopt tight controls on cross-border data flows are unlikely to deter their adversaries from acquiring large troves of data. US adversaries can combine these troves with other troves they have gathered, purchased or stolen to make predictions about future policies or behaviours. Here, again, policy makers are playing a game of whack-a-mole. Instead, they should ensure that data subjects are protected by purpose limitation provisions. Such provisions require that data cannot be sold for a purpose that is not defined at the moment of collection (Rieke et al. 2016, 22).
4. AI nationalist strategies could alienate developing countries. Officials and firms in these countries are in a Catch-22: they need AI to export, yet they must pay the cost of AI services as rents to the very countries that specialize in AI and highly subsidize AI research and capacity (Goldberg 2024; Aaronson 2023b). These developing countries are also more vulnerable to risks such as cybercrime. If it is harder for them to tackle such risks with AI, cybercrimes could spread.
5. AI nationalist strategies could also alienate smaller open economies. For example, AI advisers in Australia noted that 'the concentration of generative AI resources within a small number of large multinational and primarily US-based technology companies poses potentials [*sic*] risks to Australia' (Bell et al. 2023, 8) In a similar vein, the Dutch government noted that the Netherlands is

[40] https://en.wiktionary.org/wiki/whack-a-mole.

increasingly reliant on US firms that control access to data, computing power and AI development capacity. The government concluded, 'This may lead to strategic dependencies', an area of risk for the Netherlands (Government of the Netherlands 2024, 14).

6. AI nationalism could further the already overly strong oligopolistic positions of data giants in the United States and China and AI beggar thy neighbour policies could alienate other countries.

13 CONCLUSION

Around the world, policy makers see AI as essential to economic growth and progress. AI is, at bottom, a global product – built over time on large troves of the world's data and knowledge. Yet some officials in some countries are limiting access to the building blocks of AI – whether funds, data or high-speed computing power – to slow down or limit the AI prowess of their competitors in country *Y* and/or *Z*. Meanwhile, some officials are also shaping regulations in ways that benefit local AI competitors and, in so doing, they may also impede the competitiveness of other nations' AI developers. These steps, over time, could reduce the potential of AI and data. Moreover, as the author has shown, sovereign AI policies could backfire, alienating potential allies and further dividing the world into AI haves and have nots.

Finally, it seems strange that the US is so determined to deny China, an authoritarian nation, access to key elements of the AI supply chain, but not other authoritarian nations such as the Saudis and the UAE, with which it is generally aligned. Such inconsistency is not likely to build trust in US policies among international audiences.

Perhaps Putin is right – the nation that leads in AI will rule the world. But AI competition is not a zero-sum game. More AI competition will lead to better AI. Moreover, AI internationalism is more likely to achieve the promise of AI – to enhance human capability and improve human welfare.

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