

**EXPLORING ALGORITHMIC GOVERNANCE IN
INTERNATIONAL TRADE LAW: AN ANALYSIS OF THE
UNITED STATES, EUROPEAN UNION, AND CHINA**

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ABSTRACT

This Note aims to explore a new global framework for governing algorithms under international trade law. Algorithms are instructions for solving a problem or completing a task based on the past data collected from the users of applications operated by transnational big tech companies. Using the implied adverse effects of algorithms (e.g., people being unaware that their choices and decisions will be driven by an inaccessible algorithmic system) and the trend of algorithmic governance in different jurisdictions, this Note aims to compare the actions taken by the United States, China, and the European Union, about how they react to the algorithmic era, and how they regulate the use of algorithms conducted by covered entities and develop an international framework for the global governance on algorithms. There are commonalities and differences among the actions taken by the United States, China, and the EU. There is a prevalent legislative trend to regulate algorithmic tools by mandating transparency and accountability to prevent adverse effects for personal information possessors. Based on the analysis of synthesizing the differences, this Note sees a possibility to explore a global framework for algorithmic governance and provides two directions on global governance on the algorithms which consists of strengthening the global collaboration and setting up a relevant multilateral treaty.

I. INTRODUCTION

In the digital economy era, algorithms use complex mathematical equations pivotal to “select[ing] information, automatically assign[ing] relevance to people and keep[ing] people from drowning in an information flood.”¹ It has greatly improved the efficiency of data processing, predicting customer behavior through algorithm models, and carrying out accurate business push behavior, which greatly reduces the merchants’ cost of customer acquisition.² In addition to these positive impacts, there are also negative outcomes, such as the unreasonable use of

¹ Florian Saurwein et al., *Governance of Algorithms: Options and Limitations*, 17 INFO 35, 35 (2015), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2710400.

² *Id.*

algorithms: discrimination, inducing addiction, affecting public opinion, among others.³

This Note examines three jurisdictions: the United States, China, and the European Union. The reasons for those three jurisdictions are explained below. The United States owns the world's largest number of technology companies, and its legislation on the governance of algorithms will have a great impact globally because those technology companies operate on a global scale.⁴ Although the EU does not have many big technology companies, it took the first step to govern the algorithms and have had some success in developing multilateral agreements on the regulation of technology, such as an AI Act.⁵ China was the first country to bring legislation on algorithms into practice, so its practice can provide some experience in an international framework on the governance of algorithms.⁶

This Note aims to compare the actions taken by these different countries in reaction to this algorithmic era and how they regulate the use of algorithms. The U.S. Algorithmic Accountability Act intends to increase transparency in how algorithms and automated systems are used in decision-making contexts to reduce discriminatory, biased, or harmful outcomes.⁷ The EU carries out institutional arrangements for the registration and filing of artificial intelligence algorithms to ensure the transparency of high-risk applications.⁸ China emphasizes algorithmic

³ See Borji Ali & AI Quintic, *A Categorical Archive of ChatGPT Failures*, ARXIV, at 11 (2023), <https://arxiv.org/pdf/2302.03494.pdf>.

⁴ See Jonathan Ponciano, *The World's Largest Technology Companies In 2023: A New Leader Emerges*, FORBES (Jun 8, 2023, 6:15 AM), <https://www.forbes.com/sites/jonathanponciano/2023/06/08/the-worlds-largest-technology-companies-in-2023-a-new-leader-emerges/?sh=3c5da0635d1d>; Daniel J. Felz et al., *Privacy, Cyber & Data Strategy: AI Regulation in the U.S.: What's Coming and What Companies Need to do in 2023*, ALSTON & BIRD (Dec. 9, 2022), <https://www.alston.com/en/insights/publications/2022/12/ai-regulation-in-the-us>.

⁵ Piero Cingari, *Why Can't European Tech Firms Compete With Their US Counterparts?*, EURONEWS.BUSINESS (Dec. 21, 2023, 7:00 AM), <https://www.euronews.com/business/2023/12/21/why-cant-european-tech-firms-compete-with-their-us-counterparts>; *EU AI Act: First Regulation on Artificial Intelligence*, EUR. PARLIAMENT (Feb. 19, 2023), <https://www.europarl.europa.eu/topics/en/article/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence>.

⁶ Matt Sheehan, *China's AI Regulations and How they Get Made*, CARNEGIE ENDOWMENT FOR INT'L PEACE (July 10, 2023), <https://carnegieendowment.org/2023/07/10/china-s-ai-regulations-and-how-they-get-made-pub-90117>.

⁷ Michael Scherman et al., *US Lawmakers Propose Algorithmic Accountability Act Intended to Regulate AI*, MCCARTHY TETRAUT: TECHLEX (Apr. 22, 2019), <https://www.mccarthy.ca/en/insights/blogs/snippets/us-lawmakers-propose-algorithmic-accountability-act-intended-regulate-ai>.

⁸ See generally 2016 O.J. (L 119).

transparency in the processing of personal information and guarantees the individual's right to choose whether they use an algorithm.⁹

There are commonalities and differences among the actions taken by the United States, China, and the EU. There is a prevalent legislative trend to regulate algorithmic tools by mandating transparency and accountability to prevent adverse effects for personal information possessors. Based on an analysis that synthesizes the different approaches, we can consider new global solutions. The next part will introduce why it is important to consider new global solutions to govern the algorithms used by transnational business entities.

A. The Importance of Global Governance of Algorithmic Tools

Generally, the adverse effects created by algorithms make it urgent to formulate ways to protect people's rights, especially considering people are tied together by some transnational business entities. In 2019, “[Meta/]Facebook count[ed] 2 billion users, Google represent[ed] 90% of global searches, [and] Apple's market capitalization reached \$1 trillion.”¹⁰ The huge economic size of these entities and the huge scale of their users mean that potentially adverse effects will be magnified on a global scale.

Countries have developed their own regulations or legislative actions to regulate the use of algorithms. There are “[a]t least 60 countries have adopted artificial intelligence or algorithms laws and regulations since 2017.”¹¹ The United Kingdom has frequently underlined its intention to become an “AI Superpower” and published an AI rule book;¹² even though India does not have regulations for algorithms and AI, they have an Information Technology Act, designed to protect personal data.¹³ Concerns about impending obstacles to international collaboration are raised by the growth of AI governance. That is to say, any new legislation will have a significant impact on global markets due to the increasing prevalence of AI

⁹ Hulianwang Xinxu Fuwu Suanfa Tuijian Guanli Guiding (互联网信息服务算法推荐管理规定) [Provisions on Administration of Algorithmic Recommendation in the Internet Information Service 2021] (promulgated by the Ministry of Industry and Information Technology, the Ministry of Public Security and the State Administration of Market Supervision and Administration., Dec. 31, 2021, effective Mar. 1, 2022) [hereinafter 2021 Algorithmic Recommendation Provisions], https://www.gov.cn/zhengce/zhengceku/2022-01/04/content_5666429.htm (China).

¹⁰ Aastha Bansal & Srishti Nair, *Algorithm, Law and Democracy*, 15 SUPREMO AMICUS 16, 18 (2020).

¹¹ Kerem Gülen, *Round Table: Will There be a Global Consensus over AI Regulation*, DATA CONOMY (Oct. 24, 2022), <https://dataconomy.com/2022/10/24/artificial-intelligence-laws-and-regulations/>.

¹² *Id.*

¹³ *Id.*

in both physical products and online services.¹⁴ Consequently, the adverse effects will be felt by the whole world, and transnational business entities should have a common guide on the use of algorithms to protect people's rights. In addition, it is necessary to ensure the accountability of business entities whenever an algorithmic infringement occurs across borders. When considering national security and sovereignty concerns, a third-party institution—which can reach fairness and transparency in the investigation process—should play an important role to investigate the issue.

In sum, regulating algorithms is not only a national matter but also a global one. Countries can create some solutions to the global governance of algorithms by reaching agreement on covered entities, including the substance of the governance, general principles, and sanctions. This Note advocates for global co-operation on this issue.

B. Roadmap

To introduce the background of the algorithmic governance, Part II will start with definitions of algorithmic tools and governance of algorithms. It will bring in the adverse effects of the usage of algorithms, especially under the circumstances of the transnational business entities in enlarging the influence of algorithms. This section also briefly covers the history of the legislation in the three jurisdictions under analysis.

Parts III to V will introduce some details and specific actions brought by the United States, China, and the EU. It will also cover criticisms and advantages of the different approaches from these jurisdictions.

Part VI will compare the approaches to algorithmic governance in the United States, China, and the EU. It will analyze the commonalities and differences among the jurisdictions and examine ideas for reconciling them. The basic ideas in Part VI are to address four dimensions: covered entities, transparency, self-assessment, and sanctions in a potential international framework of global algorithmic governance.

Part VII will propose two suggestions to explain possible global regulation of algorithms: to strengthen the global collaboration among the different jurisdictions and to advocate for a multilateral agreement and a third-party institution to help coordinate the global algorithmic governance.

¹⁴ Gülen, *supra* note 11.

II. BACKGROUND

A. Defining Algorithmic Tools

It is hard to define algorithms and many researchers have provided definitions over the years.¹⁵ However, these definitions are not aligned with the modern usage of the word “algorithm.”¹⁶ Technically speaking, “[a]lgorithms are instructions for solving a problem or completing a task.”¹⁷ Artificial intelligence cannot function without algorithms.¹⁸ Much of what we see and do online is a product of algorithms.¹⁹ Some modern online algorithms seem to be automated-selection processes and work as “input-throughput-output” systems.²⁰ The data is collected in the input phase, and the throughput phase includes analysis of the collected data.²¹ When individuals receive targeted “push information,” they are experiencing the output phase.²² The algorithmic tools explored in this Note follow a similar process, known as an “input-throughput-output” system (ITO) which is shown below.²³

¹⁵ Noson S. Yanofsky, *Towards a Definition of Algorithm*, 21 J. LOGIC & COMPUTATION 253, 253 (2010); see also Andreas Blass & Yuri Gurevich, *Algorithms: A Quest for Absolute Definitions*, <https://www.microsoft.com/en-us/research/wp-content/uploads/2017/01/164.pdf> (last visited Feb. 19, 2022); Yiannis N. Moschovakis, *What is an Algorithm?*, in MATHEMATICS UNLIMITED – 2001 AND BEYOND 919 (Björn Engquist & Wilfried Schmid eds., 2014).

¹⁶ Yanofsky, *supra* note 15; Blass & Gurevich, *supra* note 15; Moschovakis, *supra* note 15.

¹⁷ Lee Rainie & Janna Anderson, *Code-Dependent: Pros and Cons of the Algorithm Age*, PEW RSCH. CTR. (Feb. 8, 2017), <https://www.pewresearch.org/internet/2017/02/08/code-dependent-pros-and-cons-of-the-algorithm-age/>.

¹⁸ *Id.*

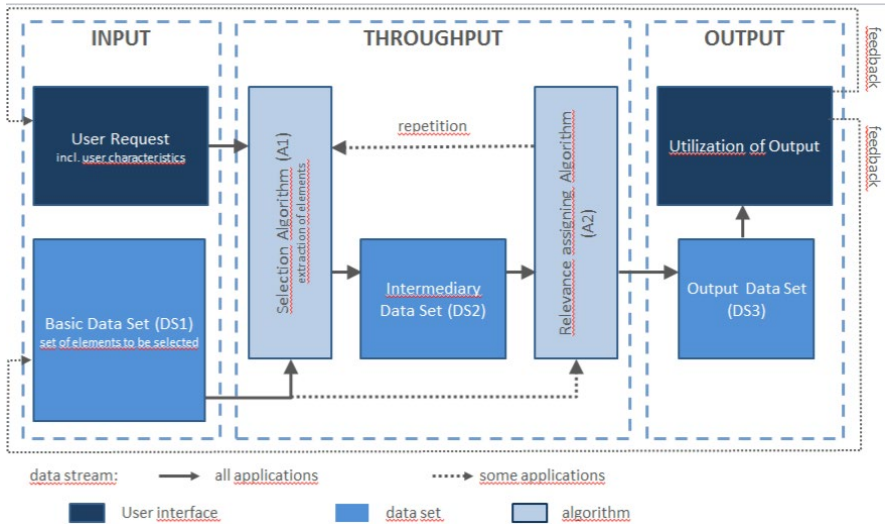
¹⁹ *Id.*

²⁰ Michael Latzer & Natascha Just, *Governance by and of Algorithms on the Internet: Impact and Consequences*, in OXFORD RSCH. ENCYCLOPEDIA OF COMMUN 1, 2 (Oxford Univ. Press, 2020).

²¹ *Id.*

²² See *id.*

²³ Michael Latzer et al., *The Economics of Algorithmic Selection on the Internet*, in HANDBOOK ON THE ECONOMICS OF THE INTERNET 395, 398 (2016).



Examples of such an ITO system include: search applications (e.g., Google Search, Bing, Baidu in China); aggregation applications (e.g., Google News, Aktuelle Nachrichten in Germany); recommendation applications (e.g., Spotify, Netflix); scoring applications (e.g., eBay’s buyer/ seller reviews, Reddit, Digg).²⁴ Business entities or online platforms can analyze massive past user data through various algorithmic models to recommend and provide specific information, which is a prediction of users’ preferences.²⁵ So-called automated decision-making is the opposite of decision-making of natural persons and refers to the use of computer technology, algorithmic programs, deep learning, or neural networks to process critical data and to generate decisions on the data subject automatically.²⁶

A good example is a Twitter bot called Tay, which is a kind of bot software programmed to tweet (or retweet), launched by Microsoft.²⁷ The company

²⁴ Latzer et al., *supra* note 23, at 399.

²⁵ See J. Ben Schafer et al., *E-Commerce Recommendation Applications*, 5 DATA MINING & KNOWLEDGE DISCOVERY 115, 116 (2001).

²⁶ *What is Automated Individual Decision-Making and Profiling*, INFO. COMMR’S OFF., <https://ico.org.uk/for-organisations/guide-to-data-protection/guide-to-the-general-data-protection-regulation-gdpr/automated-decision-making-and-profiling/what-is-automated-individual-decision-making-and-profiling/> (last visited Apr. 20, 2023).

²⁷ See Caroline Sindere, *Microsoft’s Tay is an Example of Bad Design*, MEDIUM (Mar. 24, 2016), <https://medium.com/@carolinesindere/microsoft-s-tay-is-an-example-of-bad-design-d4e65bb2569f>.

conducted an experiment by engaging in a conversation with Tay.²⁸ The more users that chat with Tay, the more information Tay receives, and the bot gets “smarter” more quickly by collecting the conversation’s information.²⁹ Although this bot was designed to engage and entertain people through casual conversation,³⁰ within 24 hours the bot started tweeting racial slurs and hate comments³¹ because the underlying algorithms learned some “bad behaviors” when users employed inappropriate language.³² It is not the first example of web-based software resulting in the embarrassment of its developers.³³ In 2015, Google released an online bot to learn how to label people appearing in photos.³⁴ Unfortunately, this software also labeled the photos in ways that were not racially equitable.³⁵

With the development of technology and artificial intelligence, ChatGPT represents a new trend among algorithms.³⁶ ChatGPT, which is an algorithm based on a large language model, has also reflected the discrimination and stereotyping found in society.³⁷ It has been reported that ChatGPT wrote a Python program to check a person’s abilities according to race, sex, and other characteristics.³⁸ When a previous version of ChatGPT was asked to determine whether a person was a good scientist, it provided answers that favored white males.³⁹ Although the company behind ChatGPT, OpenAI, hired some employees to check and delete harmful content (e.g., hate speech, discrimination), they only paid their employees \$2 per day, which barely compensated for the mental health effects they suffered.⁴⁰

Algorithms can *only* recognize and leverage patterns, associations, and correlations in statistics and can be taught to make predications based on those statistics.⁴¹ For example, AI software can find a “signal” in the “noise” of data and

²⁸ M.J. Wolf et al., *Why Should We Have Seen That: Comments on Microsoft’s Tay “Experiment” and Wider Implications*, 1 ORBIT J. 1, 3 (2016).

²⁹ Bansal & Nair, *supra* note 10, at 18.

³⁰ Daniel Victor, *Microsoft Created a Twitter Bot to Learn From Users. It Quickly Became a Racist Jerk*, N.Y. TIMES (Mar. 24, 2016), <https://www.nytimes.com/2016/03/25/technology/microsoft-created-a-twitter-bot-to-learn-from-users-it-quickly-became-a-racist-jerk.html>.

³¹ Wolf et al., *supra* note 28, at 1.

³² Victor, *supra* note 30.

³³ Wolf et al., *supra* note 28, at 2.

³⁴ *Id.*

³⁵ *Id.* “In May of 2015, Google released ‘Google Photos,’ an online bot that, among other things, ‘learned’ from users how to label photos. Unfortunately, the software was found to be labeling photos of black people as ‘gorillas.’” Conor Dougherty, *Google Photos Mistakenly Labels Black People “Gorillas”*, N.Y. TIMES: BITS (Oct. 7, 2016), <https://bits.blogs.nytimes.com/2015/07/01/google-photos-mistakenly-labels-black-people-gorillas/>.

³⁶ Ali & Quintic, *supra* note 3, at 2.

³⁷ *Id.* at 11.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ Bansal & Nair, *supra* note 10, at 16–17.

find solutions at a complex level of which human beings are incapable.⁴² AI uses its underlying algorithms to “impart autonomy to the data model and emulate human cognition and understanding.”⁴³

B. Defining Algorithmic Governance

Two concepts are discussed widely: governance *by* algorithms and governance *of* algorithms. Governance by algorithms directs attention to mechanisms affecting individuals and society with respect to their opportunities and risks.⁴⁴ On the other hand, governance of algorithms means controlling algorithms’ influential, but adverse effects.⁴⁵ In addition to the experiment mentioned above, there are other adverse effects created by algorithms. They include men seeing more highly paid job advertisements on a website than women,⁴⁶ and a white woman’s photo appearing in the search results for “professional hair” while a Black woman’s photo appeared after searching for “unprofessional hair.”⁴⁷ However, it cannot be said that the algorithm is “sexist” or “racist”;⁴⁸ the algorithm just reflects social bias from the data it collects.⁴⁹

Considering this implicit adverse effect generated by the use of algorithms,⁵⁰ there is growing pressure to regulate algorithms more closely.⁵¹ Legislators should develop supervisory regulation “for a consumer policy dedicated to delivering adequate protection to data subjects in individual cases without losing sight of economic opportunities provided by new technologies.”⁵² Doing so will require answers to questions about society and politics, including who will be protected and who will be supervised⁵³ and how to limit the risk of algorithms to

⁴² See Philip Boucher, *Artificial Intelligence: How Does it Work, Why Does It Matter, and What Can We Do About It?*, EUR. PARLIAMENT (Jun. 2020), [https://www.europarl.europa.eu/RegData/etudes/STUD/2020/641547/EPRS_STU\(2020\)641547_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2020/641547/EPRS_STU(2020)641547_EN.pdf).

⁴³ *Understanding the Relationship Between Data Science, Artificial Intelligence and Machine Learning*, SARTORIUS: SCI. SNIPPETS BLOG (Jul. 15, 2020), <https://www.sartorius.com/en/knowledge/science-snippets/data-science-vs-artificial-intelligence-vs-machine-learning-602514>.

⁴⁴ Latzer & Just, *supra* note 20, at 8.

⁴⁵ Saurwein et al., *supra* note 1, at 36.

⁴⁶ Melinda Lohmann, *Rise and Regulation of Algorithms*, BERKELEY GLOB. SOC’Y (Nov. 1, 2018), <https://berkeleyglobalsociety.com/perspectives/rise-and-regulation-of-algorithms/>.

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ Lohmann, *supra* note 46.

⁵² Mario Martini, *Fundamentals of a Regulatory System for Algorithm-Based Processes*, FED’N GER. CONSUMER ORGS. 9 (2019), https://www.vzbv.de/sites/default/files/downloads/2019/07/19/martini_regulatory_system_algorithm_based_processes.pdf.

⁵³ *Id.*

customers from the perspective of ethics and legitimacy.⁵⁴ The next section explains what risks will be brought by the algorithms, and how globalization will enlarge the risks and influence.

C. Potential Adverse Effects of Globalization

Societies across the world have entered into an algorithmic era with the prosperity of the internet economy.⁵⁵ Algorithms are influencing people's decisions across diverse tasks, both large and small, from online shopping to bank credit.⁵⁶ The same properties of scale, complexity, and autonomous model inference are also linked to increasing concerns that many algorithmic systems are oblivious to how their decisions affect users and lack clear explanations for those decisions.⁵⁷ Often, people are unaware that their choices and decisions will be driven by an inaccessible algorithmic system because it will only show information that people may prefer based on their past usage data.⁵⁸ Such lack of transparency will introduce numerous concerns, including opacity, lack of accountability, power imbalances, discriminatory effects, hassle, indignity from being treated by a machine, lack of due process, and an insatiable appetite for surveillance.⁵⁹

Some examples have shown the adverse effects brought by algorithmic systems. In 2000, Amazon experimented with a differential pricing scheme.⁶⁰ At that time, an Amazon user reported that he found the price of DVD items he had previously viewed had dropped from \$26.24 to \$22.74 after he deleted his browser's Amazon cookies.⁶¹ Because the Amazon system identified the buyer as a regular customer by his cookies, and because regular customers might be willing to pay more than others for an item, customers often see different prices for the same

⁵⁴ Martini, *supra* note 52.

⁵⁵ See Caixia Zou & Fanyu Zhang, *Algorithm Interpretation Right - The First Step to Algorithmic Governance*, 13 BEIJING L. REV. 227, 227 (2022).

⁵⁶ Nicol Turner Lee et al., *Algorithmic Bias Detection and Mitigation: Best Practices and Policies to Reduce Consumer Harms*, BROOKINGS (May 22, 2019), <https://www.brookings.edu/articles/algorithmic-bias-detection-and-mitigation-best-practices-and-policies-to-reduce-consumer-harms/>.

⁵⁷ *A Governance Framework for Algorithmic Accountability and Transparency*, at 1, STOA (2019) PE 624.262 (April 2019), [https://www.europarl.europa.eu/RegData/etudes/STUD/2019/624262/EPRS_STU\(2019\)624262_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2019/624262/EPRS_STU(2019)624262_EN.pdf).

⁵⁸ Zou & Zhang, *supra* note 55, at 234.

⁵⁹ Jane Bambauer & Tal Zarsky, *The Algorithm Game*, 94 NOTRE DAME L. REV. 1, 2–3 (2018); see also Cary Coglianese & Alicia Lai, *Algorithm vs. Algorithm*, 71 DUKE L.J. 1281 (2022).

⁶⁰ Anita Ramasastry, *Websites That Charge Different Customers Different Prices: Is Their "Price Customization" Illegal? Should It Be?*, FINDLAW (June 20, 2005), <https://supreme.findlaw.com/legal-commentary/websites-that-charge-different-customers-different-prices.html>.

⁶¹ *Id.*

item.⁶² As another example, the criminal background check algorithm, Correctional Offender Management Profiling for Alternative Sanctions (COMPAS), which is commonly used in the United States, was reported to be significantly biased.⁶³ If so, people's legal rights—not just their rights in marketplaces—are threatened by algorithms.⁶⁴ An assessment of COMPAS found it was more likely to incorrectly attribute a higher risk of recidivism to Black people.⁶⁵ To the contrary, white people were judged as low-risk more often.⁶⁶ Based on an assessment of 10,000 criminal defendants in Florida whose responses to the COMPAS questionnaire were used to analyze recidivism risk, the researchers found that the rates judged by COMPAS predicted 61 percent of recidivism correctly in 2 years; however, the rate could only predict 20 percent of violent recidivism correctly.⁶⁷ In other words, the algorithms may strengthen stereotypes or mislead judgment on the merits of a lawsuit.

Some scholars also argue that the application of algorithms will affect democratic norms, such as preventing the enrichment of power.⁶⁸ Because technological platforms, which can drive public opinion, are dominated by social elites, social media can unduly influence voter behavior toward particular outcomes that may reflect neither a democratic mandate nor an informed choice.⁶⁹

Additionally, the application of algorithms can influence free expression on digital platforms.⁷⁰ Traditionally, platforms create an oversight board for an ex-

⁶² See Ramasastry, *supra* note 60.

⁶³ Jeff Larson et al., *How We Analyzed the COMPAS Algorithm*, PROPUBLICA (May 23, 2016), <https://www.propublica.org/article/how-we-analyzed-the-compas-recidivism-algorithm>. COMPAS is “one of the commercial tools made by Northpointe, Inc. to discover the underlying accuracy of their recidivism algorithm and to test whether the algorithm was biased against certain groups.” *Id.* The ProPublica study found that “[a]cross the nation, judges, probation, and parole officers are increasingly using algorithms to assess a criminal defendant’s likelihood of becoming a recidivist—a term used to describe criminals who re-offend. *Id.* There are dozens of these risk assessment algorithms in use. *Id.* Many states have built their own assessments, and several academics have written tools. *Id.* There are also two leading nationwide tools offered by commercial vendors.” *Id.*

⁶⁴ Zou & Zhang, *supra* note 55, at 229.

⁶⁵ Andrew Lee Park, *Injustice Ex Machina: Predictive Algorithms in Criminal Sentencing*, UCLA L. REV. (Feb. 19, 2019), <https://www.uclalawreview.org/injustice-ex-machina-predictive-algorithms-in-criminal-sentencing/>.

⁶⁶ Larson et al., *supra* note 63.

⁶⁷ *Id.*

⁶⁸ See Bansal & Nair, *supra* note 10, at 18; Pascal Bernard, *Is AI a Threat to Democracy?*, MEDIUM (May 21, 2019), <https://towardsdatascience.com/is-ai-a-threat-to-democracy-4bef3e5fcfdd>.

⁶⁹ See Bansal & Nair, *supra* note 10, at 18; Bernard, *supra* note 68.

⁷⁰ Jennifer Cobbe, *Algorithmic Censorship by Social Platforms: Power and Resistance*, 34 PHIL. & TECH. 739, 750 (2021), <https://link.springer.com/article/10.1007/s13347-020-00429-0>.

post review of posts.⁷¹ The employment of algorithms is more like an ex-ante review over user expression.⁷² The move from ex-post to ex-ante review of user content exacerbates the imprecision of the regulation on online content because algorithms cannot predict precisely what one may say potentially via their account.⁷³ And the fact remains that, although human content moderation is necessarily imperfect, it still does a much better job of explaining its reasoning than machine learning does.⁷⁴ Because of how machine processes learn, every incorrect decision that AI makes with respect to content moderation comes at the expense of user speech.⁷⁵

The United States understood the potential adverse effect of algorithms in the Algorithmic Accountability Act of 2019.⁷⁶ The federal government tried to regulate algorithmic systems to avoid inaccuracy, bias, or discrimination, or when they facilitate decision-making about sensitive aspects of consumers' lives by evaluating consumers' behavior.⁷⁷ The next Part discusses that legislation by starting with the governance of algorithms in the United States.

III. ALGORITHMIC GOVERNANCE IN THE UNITED STATES

The U.S. government's initial legislation for regulating algorithms was proposed in 2019.⁷⁸ In April 2019, Democratic lawmakers in the U.S. House of Representatives and the U.S. Senate introduced the Algorithmic Accountability Act.⁷⁹ The proposed legislation was intended to regulate automatic decision systems for risks to "privacy and security of personal information" and risks of "inaccurate, unfair, biased, or discriminatory decisions."⁸⁰ Covered entities must also "reasonably address" the results of their assessments.⁸¹ However, the 2019 version

⁷¹ See generally Gianclaudio Malgieri & Frank Pasquale, *Licensing High-Risk Artificial Intelligence: Toward Ex Ante Justification for a Disruptive Technology*, 52 COMPUT. L. & SEC. REV. 1, 2 (April 2024), <https://www.sciencedirect.com/science/article/pii/S0267364923001097>.

⁷² *Id.*

⁷³ Enrique Armijo, *Speech Regulation by Algorithm*, 30 WM. & MARY BILL RTS. J. 245, 247 (2021).

⁷⁴ *Id.* at 247.

⁷⁵ *Id.*

⁷⁶ See Algorithmic Accountability Act of 2019, H.R. 2231, 116th Cong. (2019–2020).

⁷⁷ *Id.*

⁷⁸ Scherman et al., *supra* note 7.

⁷⁹ H.R. 2231.

⁸⁰ Mark MacCarthy, *An Examination of the Algorithmic Accountability Act of 2019* 1–2 (Oct. 24, 2019) (unnumbered working paper) (Transatlantic Working Grp.), <https://ssrn.com/abstract=3615731>.

⁸¹ *Id.*

of the Algorithmic Accountability Act failed to gain enough support to become law.⁸²

Over the intervening years, numerous reports of flawed algorithm systems emerged about problems in health care, housing, lending, and education.⁸³ In February 2022, U.S. Democratic lawmakers introduced in both the Senate (S. 3572) and the House of Representatives (H.R. 6580) a bill titled the “Algorithmic Accountability Act of 2022”⁸⁴ (AAA), an updated version of the Act introduced in 2019.⁸⁵ The AAA was reintroduced when artificial intelligence moved to the forefront of the legislative agenda of several U.S. cities and states, such as the case of New York City enacting a law requiring bias audits for automated decision systems for employment.⁸⁶

Part III reviews the Algorithmic Accountability Act of 2022 with respect to coverage, substance, and sanctions.

A. Coverage

Although the AAA regulates the definition of covered entities, it lacks some clarity.⁸⁷ The AAA mostly aims to regulate businesses that deploy automated decision systems (ADS)⁸⁸ and augmented critical decision processes (ACDP).⁸⁹

Except for classifications based on technologies, the AAA provides an exemption for small- and medium-sized enterprises (SMEs),⁹⁰ which means that the AAA only applies to companies that meet one of the following three criteria:

⁸² MacCarthy, *supra* note 80.

⁸³ Scherman et al., *supra* note 7; *see also* OFF. OF U.S. SEN. RON WYDEN, 117th Cong., SUPPORT FOR ALGORITHMIC ACCOUNTABILITY ACT OF 2022 (2022), <https://www.wyden.senate.gov/imo/media/doc/Support%20for%20the%20Algorithmic%20Accountability%20Act%20of%202022.pdf>.

⁸⁴ Algorithmic Accountability Act of 2022, H.R. 6580, 117th Cong. (2022); *see also* Charles S. Morgan et al., *U.S. House and Senate Reintroduce the Algorithmic Accountability Act Intended to Regulate AI*, MCCARTHY TETRAULT (Apr. 8, 2022) <https://www.mccarthy.ca/en/insights/blogs/techlex/us-house-and-senate-reintroduce-algorithmic-accountability-act-intended-regulate-ai#page=1>.

⁸⁵ H.R. 2231.

⁸⁶ Furkan Gursoy et al., *A Critical Assessment of the Algorithmic Accountability Act of 2022* 1, 1 (Mar. 3, 2022) (unpublished paper), <https://ssrn.com/abstract=4193199>.

⁸⁷ *Id.* at 7.

⁸⁸ H.R. 6580, § 2(2) (The ADS means “any system, software or process that use computation, the result of which serves as a basis for a decision or judgment. It also includes one process derived from machine learning, statistics, or other data processing or artificial intelligence techniques and excluding passive computing infrastructure.”).

⁸⁹ *Id.* § 2(1) (The ACDP is similar to ADS and is “a process, procedure or other activity that employs an automated decision system to make a critical decision.”).

⁹⁰ Jakob Mökander et al., *The US Algorithmic Accountability Act of 2022 vs. The EU Artificial Intelligence Act: What Can They Learn From Each Other?*, 32 MINDS & MACHS. 751, 754 (2022), <https://doi.org/10.1007/s11023-022-09612-y>.

(a) annual revenue over \$50 million, (b) over \$250 million in equity value, or (c) over 1 million users.⁹¹

Here, although the exemption of SMEs is understandable in terms of cost control,⁹² it may not be helpful for the objective of the bill.⁹³ Users' data will not be protected in these highly concentrated markets,⁹⁴ and they will be harmed if companies try to seek exemption "by outsourcing tasks via 'creative accounting.'"⁹⁵ Although the AAA requires smaller corporations that are "substantially owned, operated, or controlled by a 'large[r] corporation'. . . to follow these [regulations],"⁹⁶ there are no specific provisions to carry it out.

In addition, the scope of covered entities may be efficient for classifying less complex organizations that just deploy ADS.⁹⁷ However, it does not clarify how to incentivize compliance among multi-developer or foreign entities.⁹⁸ For instance, if there is a business entity which has multiple developers, but none of them meet the criteria of "large companies" in the AAA,⁹⁹ or if there is a business entity which is developed by the company,¹⁰⁰ there is no foreign provision to provide regulation.

B. Substance

The Substance section will introduce two major requirements in the AAA: (1) an impact assessment, which requires the covered entities to conduct a self-assessment themselves; and (2) transparency, which requires the covered entities to disclose certain information to the government.

1. Impact Assessment

The AAA relies on impact assessments, conducted by business entities themselves in consultation with internal and external stakeholders,¹⁰¹ to understand the potential risk of algorithms' impact on society.¹⁰² Although there are specific requirements for the content of impact assessment reports,¹⁰³ reporting may be

⁹¹ Mökander, *supra* note 90.

⁹² *Id.*

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ Gursoy et al., *supra* note 86, at 4.

⁹⁸ *Id.* at 5.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at 2.

¹⁰² H.R. 6580, § 4(a).

¹⁰³ Gursoy et al., *supra* note 86, at 4.

unreliable.¹⁰⁴ The AAA allows business entities to establish the methods, metrics, and acceptable performance levels required in the impact assessment report.¹⁰⁵ Although it is hard to set up a uniform standard due to the lack of mature methods, metrics, and acceptable performance levels,¹⁰⁶ “it should . . . be highlighted that providing practically limitless flexibility to the entities in performing impact assessments may result in cherry-picking or even manipulation.”¹⁰⁷

The AAA confirmed the Federal Trade Commission’s (FTC) role in enforcing the Act and the regulations promulgated under it.¹⁰⁸ The FTC commits to filing the impact assessment reports.¹⁰⁹ However, the FTC cannot access details and important information in the impact assessment, such as comparative analysis with preexisting processes, privacy evaluations, stakeholders’ suggestions, and so on.¹¹⁰ Therefore, the FTC cannot decide whether the impact assessment is efficient, complete, and appropriate.¹¹¹

Another issue for the FTC is that it does not have the authority to evaluate the performance and information submitted to them.¹¹² Therefore, the FTC cannot set minimum standards to judge how business entities perform based on their own methods, metrics, and acceptable performance levels.¹¹³ To some extent, an impact assessment cannot efficiently prevent the abuse of algorithms and avoid the adverse effects of algorithmic activities conducted by the business entities.

¹⁰⁴ Gursoy et al., *supra* note 86, at 5.

¹⁰⁵ H.R. 6580, § 4 (a).

¹⁰⁶ Gursoy et al., *supra* note 86, at 5.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.* at 2.

¹⁰⁹ H.R. 6580, § 9. The AAA required the impact assessment includes: (1) a description of the existing process for the same decision alongside comparative analysis of the benefits, need, and intended use; (2) identifications of the consultation stakeholders and their suggestions; (3) evaluation for privacy risks and measures to enhance privacy; (4) document methods, metrics, suitable datasets, criteria for successful performance, and other standards; (5) evaluation of performance in test and deployed conditions and for different demographic groups; (6) the trainings for relevant agents regarding the risks and best practices for similar ADS; (7) assessment of the need for limitations on the use of ADS and develop such limitations into the product or its terms of use; (8) documentation of the metadata of datasets and other input information used in the development, testing; (9) evaluation of the rights of consumers in terms of transparency; (10) identify likely adverse effects in a structured way and assess relevant mitigation strategies; (11) description of the development, testing, and deployment processes; (12) identification of capabilities, tools, standards, and protocols to improve the ADS or the impact assessment; (13) a rationale if any of the above requirements are not followed; and (14) other studies and evaluations the FTC finds appropriate. *Id.*

¹¹⁰ Gursoy et al., *supra* note 86, at 6.

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *Id.*

2. Transparency

In addition to the submission of the impact assessment report, the AAA requires covered entities to submit an annual report,¹¹⁴ which would be summarized and published publicly by the FTC.¹¹⁵ Meanwhile, there is a requirement to develop a publicly accessible repository that lists the identity of covered entities, the critical algorithmic decision, prohibited uses, sources of data for the ADS, types of technical and business metrics used to assess performance, and a link to the instructions on how to contest, correct, appeal, or opt-out of ADS.¹¹⁶ However, the public only has access to minimal information because the published information only includes a limited subset of information from the summary reports.¹¹⁷

If individuals cannot obtain sufficient information about the business entities' algorithms and their accountability, they will never appreciate that their rights are potentially infringed by the covered entities.¹¹⁸ Although it is hard to set up uniform standards for the disclosure of information due to the relative lack of research on this question,¹¹⁹ that obstacle cannot be an excuse for restricting public access to key information that is useful for self-protection.¹²⁰

C. Sanctions

There is no specific statutory sanction for violation of the Act in the AAA,¹²¹ but a violation may trigger the applicable terms and provisions of the Federal Trade Commission Act (FTCA).¹²² Any violations of the AAA will be treated as a "violation of a rule defining an unfair or deceptive act or practice."¹²³ The FTC has discretion to apply other rules in the FTCA and pursue penalties against covered entities.¹²⁴ There is no specific monitoring and evaluation of the summary or annual reports, although there is detailed guidelines for completing

¹¹⁴ H.R. 6580, § 3(b)(1)(C). The Act required the covered entities to "disclose their status as a covered entity to any person, partnership, or corporation that sells, licenses, or otherwise provides through a commercial relationship" deploying the ADS or ACDP to eliminate or mitigate any negative impact made by an ACDP, to establish guidelines to count for the number of the consumers to determine its status. *Id.*

¹¹⁵ § 6(a).

¹¹⁶ H.R. 6580, § 6(b)(1)(A)(i).

¹¹⁷ § 6(b)(D)(v).

¹¹⁸ Gursoy et al., *supra* note 86, at 6.

¹¹⁹ *Id.*

¹²⁰ *Id.*

¹²¹ H.R. 6580, § 9(a)(1).

¹²² 15 U.S.C. § 57a (a)(1)(B).

¹²³ 16 C.F.R. § 1.8.

¹²⁴ Morgan et al., *supra* note 84.

impact assessments.¹²⁵ At the end of the day, the FTC can only require covered entities to submit the required documentation.¹²⁶

Generally, the United States has taken some actions to regulate algorithms, depending heavily on the extent to which the covered entities coordinate with the supervision department and follow the requirements in the AAA.¹²⁷ The next Part will discuss the legislation in China.

IV. ALGORITHMIC GOVERNANCE IN CHINA

China has been focusing on the protection of data and regulation of algorithms, as indicated by its Cybersecurity Law,¹²⁸ Data Security Law,¹²⁹ and Personal Information Protection Law.¹³⁰ Additionally, the E-Commerce Law, the Network Information Content Ecological Governance Regulations, and the Personal Information Protection Law, which have been implemented as earlier experiments, touch on the algorithmic responsibility of platforms to varying degrees.¹³¹

In 2021, the Chinese government published the Provisions on Administration of Algorithmic Recommendation in the Internet Information Service (2021 Algorithmic Recommendation Provisions) (PAAR).¹³² The PAAR is the first departmental regulation focusing on algorithmic governance in China and the first to recognize algorithmic accountability.¹³³

This Part will introduce the PAAR in terms of its coverage, substance, and sanctions.

¹²⁵ Gursoy et al., *supra* note 86, at 6.

¹²⁶ *Id.*

¹²⁷ Mökander et al., *supra* note 90, at 755.

¹²⁸ 中华人民共和国网络安全法 [Cybersecurity Law of the People's Republic of China] (promulgated by the Standing Comm. Nat'l People's Cong., Nov. 7, 2016, effective June 1, 2017) 2016 STANDING COMM. NAT'L PEOPLE'S CONG. GAZ. 53 (China).

¹²⁹ 中华人民共和国数据安全法 [Data Security Law of the People's Republic of China] (promulgated by the Standing Comm. Nat'l People's Cong., June 10, 2021, effective Sept. 1, 2021) 2021 STANDING COMM. NAT'L PEOPLE'S CONG. GAZ. 84 (China).

¹³⁰ 个人信息保护法 [Personal Information Protection Law of the People's Republic of China] (promulgated by the Standing Comm. Nat'l People's Cong., Aug. 20, 2021, effective Nov. 1, 2021) 2021 STANDING COMM. NAT'L PEOPLE'S CONG. GAZ. 91 (China).

¹³¹ Matt Sheehan & Sharon Du, *What China's Algorithm Registry Reveals about AI Governance*, CARNEGIE ENDOWMENT FOR INT'L PEACE (Dec. 9, 2022), <https://carnegieendowment.org/2022/12/09/what-china-s-algorithm-registry-reveals-about-ai-governance-pub-88606>.

¹³² 2021 Algorithmic Recommendation Provisions, *supra* note 9

¹³³ Sheehan, *supra* note 6.

A. Coverage

The PAAR is applicable to all entities that apply algorithmic recommendation technology when providing internet information services in the People's Republic of China.¹³⁴ The PAAR defines algorithmic recommendation technology as fitting within five classifications.¹³⁵ Algorithmic recommendation technology includes not only the most familiar applications in advertising (e.g., short video scenarios of personalized notification systems), but also synthetization systems (e.g., article generation algorithms, face replacement algorithms), sorting selection systems (e.g., search engine advertising sorting algorithms, e-commerce platform store sorting algorithms), retrieval filtering systems (e.g., search engines applied to various public search engines, internal search engines of e-commerce or content platforms to filter undesirable information), and arrangement and decision systems (e.g., order matching algorithms of online taxi platforms, take-away platforms).¹³⁶

Unlike the AAA, the PAAR tries to cover as many business entities as possible because it does not classify the covered entities by scale; therefore, SMEs and large companies are all regulated by the PAAR in China. Classifying by algorithm technology avoids the vagueness of applicability to business entities that use multiple technologies in their operations.

B. Substance

The Substance section will introduce the major parts in the PAAR: (1) transparency requirements, and a mandatory registration regime aiming to make covered entities disclose certain information; (2) self-assessment regime, which is for the covered entities to supervise themselves.

1. Mandatory Registration and Transparency

The PAAR requires a mandatory registration for some covered entities, which deserves attention because of the impact on Chinese businesses as well as possible sharing of best practices with other jurisdictions.¹³⁷ The PAAR requires entities that provide platforms for public opinions or social advocacy with algorithm recommendation services to submit information about their name, service, application, algorithmic system, impact assessment, and

¹³⁴ 2021 Algorithmic Recommendation Provisions, *supra* note 9, § 2.

¹³⁵ *Id.*

¹³⁶ Wu Weiming & Liu Yundong, *Comments on Regulation on the Administration of Algorithmic Recommendation of Internet Information Services*, ALLBRIGHT L. OFFS. (Jan. 7, 2022), <https://www.allbrightlaw.com/CN/10475/d570a5091e2ed844.aspx>.

¹³⁷ Sheehan & Du, *supra* note 131.

pre-publication information.¹³⁸

A first batch of 30 algorithmic registrations arrived in August 2022.¹³⁹ The filings include some of the biggest internet companies in China, including Alibaba, Tencent, and ByteDance.¹⁴⁰ However, the companies did not include detailed and useful information to help the registration authority with investigating and evaluating algorithmic technology they used.¹⁴¹ In the filing, there is no information about how the algorithms are trained and how they might perform;¹⁴² rather, they only contain some technical information that is inaccessible to people with little knowledge of how algorithms function.¹⁴³

Similar to the dilemma of annual reports in the United States pursuant to the AAA, PAAR registration has no specific, uniform requirements for the disclosure of information. Although the PAAR establishes a procedure for re-registering if a covered entity fails to provide complete information, there is no standard for deciding how they originally performed.

2. Self-Assessment

The PAAR requires covered entities to conduct a self-assessment and provides guidelines for this assessment based on the potential impact of the algorithmic systems.¹⁴⁴ Covered entities are encouraged to optimize mechanisms for improving transparency and expandability, avoiding adverse effects, and preventing or reducing potential disputes.¹⁴⁵ However, there are no other detailed requirements for self-assessment.¹⁴⁶

Unlike the AAA, self-assessment is not a major approach for supervising algorithms under the PAAR because it emphasizes the executive department's lead role in the monitoring of algorithms. It may be a reason why the government does not specify detailed requirements for a self-assessment. To some extent, keeping the government's leading status in supervision may protect fairness and avoid any vagueness around self-assessment, because during the process, the supervision by government provides clear guidelines. The government shall treat each covered

¹³⁸ 2021 Algorithmic Recommendation Provisions, *supra* note 9, art. 24.

¹³⁹ Sheehan & Du, *supra* note 131.

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ *Id.* (“For instance, the filing for Weibo’s ‘hot search’ feature describes the algorithm as adding together ‘search popularity, discussion popularity, and dissemination popularity,’ multiplied by an ‘interaction rate coefficient.’ That may be an accurate description, but it is also so high level that an observer with no knowledge of this specific algorithm could essentially guess it.”).

¹⁴⁴ 2021 Algorithmic Recommendation Provisions, *supra* note 9, §§ 8–12.

¹⁴⁵ § 8.

¹⁴⁶ *Id.*

entity equally and let them obey the same standard.¹⁴⁷ In addition to not providing an opportunity for covered entities to correct themselves, the PAAR also leaves room for covered entities to imagine optimal policies themselves. In other words, covered entities may set up some strict principles to regulate themselves in their usage of algorithms, which is a good result. On the other hand, they might also misuse or abuse algorithmic systems until someone discovers their illegal actions.

C. Sanctions

There are straightforward sanctions for violations of the PAAR. The main measures are fines, ranging from 10,000 RMB to 100,000 RMB.¹⁴⁸ Other sanctions include warnings, public criticism by supervision departments, ordering a deadline for correction, ordering the suspension of information updates, and other punitive measures.¹⁴⁹ With respect to monetary sanctions, it is hard to label them as punitive because the fined amount is so small in proportion to the assets of larger companies. Meanwhile, the other administrative sanctions are more likely to notify the public about how covered entities have violated the PAAR.

To sum up, the PAAR has a complete system to govern the operation of algorithms at each stage by putting more responsibilities on the supervision departments. This kind of governance is central and covers as many entities as possible. Although the PAAR provides a clear guideline for the governance of algorithms, it requires a powerful executing agency supervising the covered entities to ensure the covered entities follow the relevant regulations. The next Part will discuss the governance of algorithms in the Europe Union.

V. ALGORITHMIC GOVERNANCE IN THE EUROPEAN UNION

In the European Union (EU), policymakers have tackled the issue of algorithmic regulation and accountability by introducing two comprehensive legislative proposals.¹⁵⁰ They are the Digital Services Act (DSA) and the Artificial Intelligence Act (AI Act).¹⁵¹ In April 2021, the European Commission published a new proposal to address the AI Act.¹⁵² The legal framework focuses on the specific

¹⁴⁷ 2021 Algorithmic Recommendation Provisions, *supra* note 9, art. 4.

¹⁴⁸ *Id.* § 31.

¹⁴⁹ *Id.*

¹⁵⁰ Spandana Singh, *Regulating Platform Algorithms: Approaches for EU and U.S. Policymakers*, NEW AM. (Dec. 1, 2021), <https://www.newamerica.org/oti/briefs/regulating-platform-algorithms/>.

¹⁵¹ *Id.*

¹⁵² Tambiana Madiega, *Briefing EU Legislation in Progress – Artificial Intelligence Act*, EUR. PARLIAMENTARY RSCH. SERV. (June 22, 2023), [https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698792/EPRS_BRI\(2021\)698792_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698792/EPRS_BRI(2021)698792_EN.pdf).

utilization of AI systems and associated risks.¹⁵³ The proposed AI Act is a horizontal legislative instrument, which will be applicable to all AI systems across all sectors as well as applications placed on the market or used in the EU.¹⁵⁴

The AI Act provides a truly wide scope for the definition of AI systems, which both expands the reach of regulation and also potentially leads to confusion.¹⁵⁵ Article 3, combined with Annex I, defines an AI system as software that is developed with (1) “[m]achine learning approaches, including supervised, unsupervised and reinforcement learning;” (2) “[l]ogic- and knowledge-based approaches;” [and] (3) “[s]tatistical approaches, Bayesian estimation, search and optimization methods.”¹⁵⁶ Therefore, the definition of AI systems aims to be as technology-neutral and sustainability-promoting as possible, taking into account the fast technological and market developments related to AI.¹⁵⁷

A. Coverage

The AI Act categorizes all AI systems within four types.¹⁵⁸ First, applications and systems that create an unacceptable risk, such as government-run social scoring, are banned.¹⁵⁹ Second, high-risk applications, such as a CV-scanning tools that ranks job applicants, are subject to specific legal requirements.¹⁶⁰ Third are systems requiring increased transparency measures such as chatbots, emotion recognition systems, and biometric categorization systems.¹⁶¹ Lastly, applications not explicitly banned or listed as high-risk are largely left unregulated.¹⁶²

¹⁵³ Madiaga, *supra* note 152.

¹⁵⁴ *Id.*

¹⁵⁵ Nathalie A. Smuha et al., *How the EU Can Achieve Legally Trustworthy AI: A Response to the European Commission’s Proposal for an Artificial Intelligence Act* 14 (Aug. 31, 2021) (unpublished paper), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3899991.

¹⁵⁶ EUR. COMM’N, *Proposal for a Regulation Laying Down Harmonised Rules on Artificial Intelligence* art. 3, annex 1 (Apr. 21, 2021), <https://digital-strategy.ec.europa.eu/en/library/proposal-regulation-laying-down-harmonised-rules-artificial-intelligence>.

¹⁵⁷ *Id.*

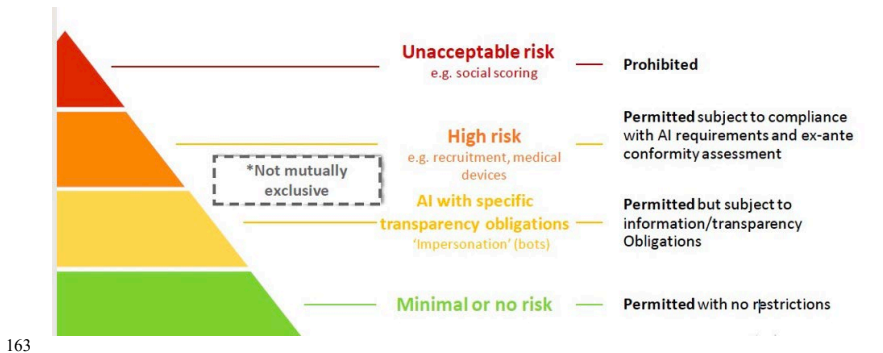
¹⁵⁸ *The EU Artificial Intelligence Act*, EU A.I. ACT, [hereinafter EU A.I. Act], <https://artificialintelligenceact.eu> (last visited Jan. 22, 2023).

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*; see also Maruiz Kop, *EU Artificial Intelligence Act: The European Approach to AI*, STANFORD-VIENNA TRANSATLANTIC TECH. L. F. 8, 10 (Oct. 1, 2021), <https://law.stanford.edu/publications/eu-artificial-intelligence-act-the-european-approach-to-ai/>.

¹⁶¹ See EU A.I. Act; see also Andrew J. Freyer & Patricia Rodriguez, *EU Takes Steps Toward Regulating Use of Artificial Intelligence with the AI Act*, LEXOLOGY (Jan. 8, 2024), <https://www.lexology.com/library/detail.aspx?g=17066894-33a1-4dca-9e72-8e1c6fbe315c>.

¹⁶² *Id.*



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Based on Article 6 and Annex III, high-risk systems generally include any AI platform that might harm the health and safety, or fundamental rights of natural persons listed in Annex III.¹⁶⁴

However, this classification may still not be sufficiently stratified to adequately protect fundamental rights in practice.¹⁶⁵ Only those AI systems that are identified as “high-risk” by the European Commission are subject to supervision, such as ensuring high-quality data, testing for bias, or securing human oversight.¹⁶⁶ In this classification method, all AI systems will be deemed either high-risk or safe.¹⁶⁷ But, in fact, some AI systems may infringe on fundamental rights and cause harm to health and safety by recommending spam advertisements or driving public opinion in unexpected ways,¹⁶⁸ especially for aviation equipment, toys, and medical devices that may directly affect people’s safety when operated.¹⁶⁹

¹⁶³ Luilla Sioli, *A European Strategy for Artificial Intelligence* (Apr. 23, 2021), <https://www.ceps.eu/wp-content/uploads/2021/04/AI-Presentation-CEPS-Webinar-L.-Sioli-23.4.21.pdf>.

¹⁶⁴ EU AI Act, tit. III, art. 6 (full text available at https://www.europarl.europa.eu/doceo/document/TA-9-2024-0138_EN.pdf).

¹⁶⁵ Smuha et al., *supra* note 155, at 13.

¹⁶⁶ *Id.*; see also Michael Veale & Frederik Zuiderveen Borgesius, *Demystifying the Draft EU Artificial Intelligence Act*, 22 *COMPUTER L. R. INT’L* 97 (2021).

¹⁶⁷ Smuha et al., *supra* note 155, at 13; Veale & Zuiderveen Borgesius, *supra* note 166, at 110.

¹⁶⁸ *Id.*

¹⁶⁹ Joas van Ham, *AI Legislation EU: Major Impact on Organizations*, CONSIDERATI (Apr. 22, 2021), <https://www.considerati.com/news/ai-legislation-eu-major-impact-on-organisations.html>.

B. Substance

Like introductions of the AAA and the PAAR, this Part will also introduce how the AI Act issues the requirements on (1) transparency, which requires the covered entities disclose certain information to the public; and (2) the self-assessment conducted by the covered entities.

1. Transparency

The AI Act only requires certain systems to account for their transparency.¹⁷⁰ These systems include those that: (1) interact with humans, (2) are used to detect emotions or determine association with (social) categories based on biometric data, or (3) generate or manipulate content (e.g., deep fakes).¹⁷¹ The only exemptions are for minimal-risk AI systems.¹⁷²

Covered AI systems must inform users of the circumstances in which they will interact with the AI system,¹⁷³ and that interaction does not guarantee that the person will be protected from adverse effects on account of their use.¹⁷⁴ Second, the system must disclose its salient features to users.¹⁷⁵ Then, a publicly accessible EU database must exist for high-risk AI systems, although the required information in that database is fairly limited (e.g., a “system’s capabilities and limitations, algorithms, data, training, testing, and validation processes used, as well as documentation that describes how identified risks have been managed”).¹⁷⁶ The database does not provide individuals with sufficient information to potentially question and contest the AI system’s impact.¹⁷⁷

2. Self-Assessment

As with algorithmic governance in U.S. and China, Title III of the proposed AI Act requires high-risk systems, including those systems intended to be used as product safety components, to conduct self-assessments based on the

¹⁷⁰ EU AI Act, tit. IV, art. 52.

¹⁷¹ EUR. COMM’N, *supra* note 156.

¹⁷² *Shaping Europe’s Digital Future: AI Act*, EUR. COMM’N (Mar. 6, 2024), <https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai>.

¹⁷³ See EU AI Act, tit. VI.

¹⁷⁴ Smuha et al., *supra* note 155, at 43.

¹⁷⁵ *Id.* at 42.

¹⁷⁶ *European Commission’s Propose Regulation on Artificial Intelligence: Requirements on High-Risk AI systems*, DECHERT LLP (June 17, 2021), <https://www.dechert.com/knowledge/onpoint/2021/6/european-commission-s-proposed-regulation-on-artificial-intellig.html>.

¹⁷⁷ *Id.*

procedures of Annexes VI and VII.¹⁷⁸ The providers of a high-risk system must upload system-specific documents about their quality management systems. Notified entities, including several private sector certification firms, then examine all the documents.¹⁷⁹ According to Article 17, the quality management system considers several features, such as compliance with regulations, technical specifications, and risk management.¹⁸⁰ The provider will receive a certification as proof of qualification.¹⁸¹

Despite the promise of self-assessment, the practice may be too non-committal¹⁸² in nature because the AI Act relies heavily on companies themselves without sufficient oversight.¹⁸³ For example, “[f]or most standalone high-risk systems (and, eventually, all such systems), providers can mark the systems as in conformity using only self-assessment.”¹⁸⁴ This situation will leave a high level of discretion to private entities, either domestic or transnational.¹⁸⁵

C. Sanctions

EU’s AI Act, like the General Data Protection Regulation (GDPR), sets a blueprint for global governance of algorithms.¹⁸⁶ It takes courage and creativity to legislate through these stormy, interdisciplinary waters, forcing U.S. and Chinese companies to conform to values-based EU standards before their AI products and services can access the European market and its 450 million consumers.¹⁸⁷ Consequentially, the proposal has extraterritorial effect.¹⁸⁸

According to Article 71, the AI Act subjects covered entities to administrative fines of up to 10,000,000 EUR or up to 3% of a company’s total worldwide annual revenue for the preceding financial year, whichever is higher.¹⁸⁹ In addition, if a covered entity deploys a prohibited AI system, the fines will be up to 200,000,000 EUR.¹⁹⁰

In general, the AI Act also has a complete system to govern the usage of algorithms. The AI Act is more likely to find a way to balance government

¹⁷⁸ EU AI Act, tit. II, art. 5, annex VII.

¹⁷⁹ Veale & Zuiderveen Borgesius, *supra* note 166, at 106.

¹⁸⁰ EU AI Act, tit. III, art 17.

¹⁸¹ *Id.* art 44.

¹⁸² Kop, *supra* note 160, at 8.

¹⁸³ Smuha et al., *supra* note 155, at 37.

¹⁸⁴ Veale & Zuiderveen Borgesius, *supra* note 166, at 106.

¹⁸⁵ Smuha et al., *supra* note 155.

¹⁸⁶ Antonino J. Jara, *AI Act and Data Spaces: the EU Approves the World’s First AI Law*, (Dec. 2023), <https://www.linkedin.com/pulse/ai-act-data-spaces-eu-approves-worlds-first-law-dr-antonio-j-jara-11bqf/>.

¹⁸⁷ Kop, *supra* note 160, at 10.

¹⁸⁸ *Id.*

¹⁸⁹ EU AI Act, tit. X, art 71.

¹⁹⁰ *Id.*

supervision and self-supervision. It also brings in a third-party to inspect the qualifications of covered entities and notifies the public of the algorithms to which they are exposed.¹⁹¹ Although the covered entities under the AI Act are limited, the AI Act provides a system which can balance the relevant parties in the governance.

On account of the introduction of legislation in those three jurisdictions, the next Part will issue a comparative analysis on the information above.

VI. COMPARATIVE ANALYSIS

This Part compares the different approaches reflected in the laws of the United States, China, and the EU in terms of coverage, substance, and sanctions and discusses which elements are better for a set of international guidelines.

A. Classifying System of Coverage

The United States, China, and the EU all classify algorithmic systems when specifying which entities are covered.

Unlike the European AI Act, there is no risk-based approach in the U.S. AAA or the Chinese PAAR.¹⁹² The AAA does not ban or impose strict conditions on high-risk applications, and the bill does not categorize an ADS by the probability and severity of its associated risks.¹⁹³ While the bill categorizes covered entities by scale, different ADS have different potential risks and may need differentiated regulations.¹⁹⁴ Similarly, the PAAR categorizes algorithms by their techniques rather than their potential for risk.¹⁹⁵

However, the European Commission's regulation of algorithms relies heavily on a risk-based approach for applications it deems as dangerous to public safety or welfare.¹⁹⁶ Only some algorithms identified by the European Commission will be treated as high-risk systems.¹⁹⁷ Others not specifically listed as such might pose a risk to fundamental rights in practice. But they are not subjected to these requirements, or to an impact assessment and other mechanisms that require providers to reflect on potential risks.¹⁹⁸ For this concern, the PAAR covers a wide variety of algorithms by different technical categories and supervises these

¹⁹¹ See generally AI Act tit. V, art. 44.

¹⁹² See generally Gursoy et al., *supra* note 86; 2021 Algorithmic Recommendation Provisions, *supra* note 9; Arjun Kharpal & Evelyn Cheng, *The Latest Target of China's Tech Regulation Blitz: Algorithms*, CNBC, (Sept. 2, 2021), <https://www.cnbc.com/2021/09/03/chinas-tech-regulation-turns-to-algorithms.html>.

¹⁹³ Gursoy et al., *supra* note 86.

¹⁹⁴ *Id.*

¹⁹⁵ 2021 Algorithmic Recommendation Provisions, *supra* note 9, art. 2.

¹⁹⁶ Smuha et al., *supra* note 155, at 2.

¹⁹⁷ *Id.*

¹⁹⁸ *Id.*

algorithms equally.¹⁹⁹ Limiting the scope of covered entities, however, would be an even better way to save costs and resources from a global perspective. Therefore, the risk-based approach is better at concentrating on the algorithms that need to be supervised, although it may need a detailed clarification to update the list of covered entities under scrutiny.

B. Transparency

“Transparency has been a focal point of civil society and researcher advocacy with internet platforms.”²⁰⁰ The United States, China, and the EU all require transparency in the operation of algorithms.²⁰¹

For public transparency, only the EU provides public access to regulatory information, albeit only in limited amounts.²⁰² The AI Act includes a publicly accessible database for disclosure by algorithm providers.²⁰³ However, under the AAA and PAAR, only the government may access the database of information about covered systems.²⁰⁴ Disclosing covered entities’ information to the public can bolster broader supervision of their activities. In addition to disclosing limited information, the EU lets the public know the importance of supervising covered entities and lets the public participate by reporting potential violations of the AI Act.²⁰⁵

With respect to individual-level transparency, the U.S. Algorithmic Justice and Online Platform Transparency Act (AJOPTA) would require platforms to explain to users what sorts of personal information they collect to enable algorithmic processes, how they collect these data, how they use them to train or facilitate algorithmic processes, and how these algorithmic processes use data to curate users’ experiences.²⁰⁶ Similarly, the PAAR requires user-level disclosure.²⁰⁷ Under the PAAR, covered entities are required to notify users about the provision of algorithmic recommendation services, as well as their basic principles, purpose, intent, and main operation mechanisms.²⁰⁸ Unlike the PAAR and AJOPTA, there is a significant transparency gap in the AI Act. Although the covered entities under the AI Act need to disclose that users are interacting with algorithmic systems and

¹⁹⁹ See generally 2021 Algorithmic Recommendation Provisions, *supra* note 9, art. 2.

²⁰⁰ Singh, *supra* note 150.

²⁰¹ See generally H.R. 6580, § 3(1)(b); EU AI Act, tit. IV, art. 52; 2021 Algorithmic Recommendation Provisions, *supra* note 9, arts. 2, 24.

²⁰² Smuha et al., *supra* note 155, at 3.

²⁰³ *Id.*

²⁰⁴ 2021 Algorithmic Recommendation Provisions, *supra* note 9, art. 28; H.R. 6580, § 6 (b)(D)(v).

²⁰⁵ *Transparency Obligations*, E.U. AI ACT, <https://www.euaiact.com/key-issue/5> (last visited Mar. 19, 2024); See also, EU AI Act, tit. III, arts. 13, 62.

²⁰⁶ Singh, *supra* note 150.

²⁰⁷ *Id.*

²⁰⁸ 2021 Algorithmic Recommendation Provisions, *supra* note 9, § 15.

the systems' most salient features,²⁰⁹ the AI Act does not require covered entities to disclose information about how they train these systems—a significant transparency gap.²¹⁰

The operation mechanism of algorithms plays an important role in the transparency requirement, as mentioned in the AAA and the PAAR. If there is a global standard, disclosure of how algorithms work should be a requirement.

C. Self-Assessment

Self-assessment is an important means of algorithmic governance that requires covered entities to conduct self-assessments and report the results to the governmental departments that manage them.²¹¹ Across the three jurisdictions, this method generates the same concern that it is not binding and non-committal.

In the AI Act, there is a relatively fair and complete system for conducting assessments and for private-sector reviewers to examine documentation and issue certifications where appropriate.²¹² The situation is tricky, however, because there is no supervision over the process, and so much discretion is left to the private sector.²¹³ Like the EU, the United States also heavily relies on self-assessments.²¹⁴ The FTC, as the governmental department tasked with oversight, examines self-assessment results.²¹⁵

However, unlike the EU and the United States, China does not heavily rely on self-assessments. Although there is some self-evaluation required, there are no specific details in the PAAR explaining how to conduct one.²¹⁶ In China, the government relies more on a department's oversight than on the registered, covered entities.²¹⁷

In the international context, self-assessment will play an important role in the governance of algorithms. Because it is hard to reach an agreement on direct supervision of covered entities, it is better to create a third-party monitoring framework to strengthen the reliability of self-assessments. The member states that participate in the multilateral agreement on algorithmic governance can work through the standards of the self-assessment.

²⁰⁹ 2021 Algorithmic Recommendation Provisions, *supra* note 9, § 15.

²¹⁰ Singh, *supra* note 150.

²¹¹ *See generally* H.R. 6580, §. 4; 2021 Algorithmic Recommendation Provisions, *supra* note 9, arts. 8, 24; EU AI Act, tit. II, art. 5.

²¹² *See generally* EU AI Act, tit. III, art. 44.

²¹³ Smuha et al., *supra* note 155, at 11.

²¹⁴ *See generally* H.R. 6580, § 4.

²¹⁵ *See generally id.* § 9.

²¹⁶ *See generally* 2021 Algorithmic Recommendation Provisions, *supra* note 9, §§ 7, 8, 24.

²¹⁷ *See generally id.* § 28.

D. Sanctions

The major sanctions for covered entities are fines; both the EU and China set up a standard of the punitive fines,²¹⁸ while the United States has not set up any sanctions in the AAA.²¹⁹ Imposing fines can be an efficient way to punish covered entities either domestically or globally. However, the difficulty in imposing fines lies in how to effectively collect them. Due to the different situations faced and created by transnational business entities, it is hard to collect fines without strong enforcement capacity. Additionally, China has some administrative measures to punish covered entities, such as warnings and mandating corrections by a deadline.²²⁰ Nevertheless, any measure short of national-level sanctions will be hard to enforce.

To solve these problems and offset the limitations of existing issues for algorithmic governance in a global context, the following section will discuss some recommendations for establishing a global framework.

VII. RECOMMENDATIONS

A. Global Collaboration

On one hand, the obstacle of algorithmic governance over transnational entities follows from how digital technology is deployed around the world.²²¹ The algorithms, which analyze data from nearly every country, cannot be governed by a specific jurisdiction and its government.²²² Nor can we hope for a strong central authority to regulate all covered entities. On the other hand, an “unsolved equation is the breadth of laws dealing with globally produced and commercialized technologies and robot-generated inventions.”²²³ Therefore, a global response is urgent and required.²²⁴

The key challenge for the governance of algorithms is how the covered entities demonstrate how they deploy algorithms and whether the algorithms are

²¹⁸ See 2021 Algorithmic Recommendation Provisions, *supra* note 9, § 31; EU AI Act, tit. X, art 71.

²¹⁹ See generally H.R. 6580.

²²⁰ 2021 Algorithmic Recommendation Provisions, *supra* note 9, § 31.

²²¹ Amandeep S. Gill & Stefan Germann, *Conceptual and Normative Approaches to AI Governance for a Global Digital Ecosystem Supportive of the UN Sustainable Development Goals (SDGs)*, 2 AI & ETHICS 293, 297 (2021).

²²² *Id.*

²²³ Patricia G Rêgo de Almedia et al., *Artificial Intelligence Regulation: A Meta-Framework for Formulation and Governance*, 53 HAWAII INT’L CONF. ON SYS. SCIS. 5257, 5258 (2020).

²²⁴ Gill & Germann, *supra* note 221, at 297.

used appropriately.²²⁵ To govern the algorithms of transnational business entities, it will be necessary to bridge different standards and promote transparency.²²⁶

There are also some actions that can be taken to supplement the promotion of transparency.²²⁷ One way is to rely on supervision algorithms, which will be used to oversee algorithms provided by covered entities and enhance transparency in the process.²²⁸ Another way is to create an “Explainable Artificial Intelligence standard for the creation of coding models oriented towards a global comprehension.”²²⁹ With such an explicit standard, it will be easier for covered entities to design algorithms that the public can understand when used. At the same time, a clear standard for allowable data techniques will make it easy for the supervising institutions to collaborate with each other and act in the face of potential violations.

Promoting transparency is highly dependent on global collaboration among individuals, states, markets, private sectors, and technicians, among others.²³⁰ Strong transparency also provides an example for countries that have not previously addressed algorithmic governance.²³¹ In the process of setting up transparency standards, it can be an industry standard to encourage them.²³²

B. Multilateral Treaty and Global Governance Coordinating Committee

Establishing a multilateral agreement to cover as many transnational entities as possible might offer an efficient way to govern algorithms. In fact, the EU-U.S. Trade and Technology Council had a long discussion about algorithmic governance in 2021.²³³ Meanwhile, governmental officers from both parties expressed optimism about their shared intentions around AI governance, specifically citing consensus on both a risk-based approach and on prohibiting extreme cases of governmental social scoring.²³⁴

By setting up a multilateral agreement, there could be a global standard for the governance of algorithms. Member states could reach an agreement on global standards for transparency and let covered entities disclose the information based on common sense to ensure fairness and protect the public. In such an agreement,

²²⁵ de Almedia et al., *supra* note 223, at 5258.

²²⁶ Gill & Germann, *supra*, note 221, at 296.

²²⁷ de Almedia et al., *supra* note 223, at 5258.

²²⁸ *Id.*

²²⁹ *Id.*

²³⁰ Gill & Germann, *supra* note 221, at 297.

²³¹ *Id.*

²³² *Id.*

²³³ Alex Engler, *The EU and U.S. are Starting to Align on AI Regulation*, BROOKINGS (Feb. 1, 2022), <https://www.brookings.edu/blog/techtank/2022/02/01/the-eu-and-u-s-are-starting-to-align-on-ai-regulation/>.

²³⁴ *Id.*

states can pay much more attention to finding common purpose, principles, and social values.²³⁵

Additionally, member states could set up a third-party institution to examine self-assessments and file documents. In this way, covered entities would be treated equally, and users would benefit from worldwide protection.

Such an international treaty needs an institution to carry it out. Governance of algorithms might also benefit from a panel to whom covered entities might appeal or that might arbitrate regulatory decisions. Some international institutions have set examples for lodging grievances and dispensing remedies.²³⁶ The World Trade Organization (WTO) has a panel for resolving disputes among member countries, which provides a forum for countries to negotiate with each other.²³⁷ At all stages, disputing countries are encouraged to consult with each other and settle “out of court.”²³⁸ Furthermore, the WTO Director-General remains available for consultation, to mediate, or to help achieve a conciliation.²³⁹ As with the WTO Dispute Settlement Body, a forum for countries to resolve their disputes on algorithmic governance might allow covered entities to solve conflicts among themselves and provide people affected negatively by algorithms remedies.

VIII. CONCLUSION

National legislative trends are a reminder that it is time to globalize algorithmic governance. Based on adverse effects brought about by the worldwide use of algorithms, especially the potential global impact of algorithms created by transnational business entities, there is a growing pressure to unite countries in the governance of algorithms.²⁴⁰

In light of this Note’s comparative analysis, the United States, China, and the EU have all introduced or passed legislation about algorithmic governance, even if some of their provisions are not as detailed as one would like.²⁴¹ Existing

²³⁵ Gill & Germann, *supra* note 221, at 297.

²³⁶ *Non-Judicial Grievance Mechanism*, NAT’L ACTION PLANS ON BUS. & HUM. RTS., <https://globalnaps.org/issue/non-judicial-grievance-mechanisms/> (last visited Mar. 19, 2024).

²³⁷ WORLD TRADE ORG., *The Panel Process*, https://www.wto.org/english/thewto_e/whatis_e/tif_e/disp2_e.htm (last visited Feb. 20, 2023).

²³⁸ *Id.*

²³⁹ *Id.*

²⁴⁰ Claudio Feijóo et al., *Harnessing Artificial Intelligence (AI) to Increase Wellbeing for All: The Case for a New Technology Diplomacy*, TELECOMMUNICATIONS POL’Y (July 2020), <https://www.sciencedirect.com/science/article/pii/S030859612030080X>.

²⁴¹ See generally H.R. 6580; 2021 Algorithmic Recommendation Provisions, *supra* note 9; EU AI Act; See also Bill Whyman, *AI Regulation is Coming – What is the Likely Outcome?*, CSIS (Oct. 10, 2023), <https://www.csis.org/blogs/strategic-technologies-blog/ai-regulation-coming-what-likely-outcome>.

regulations on algorithmic governance are almost all domestic; however, transnational business entities that deploy algorithms around the world affect international commerce and norms.²⁴² In that case, cross-border and uniform governance of algorithms requires cooperation among countries, based on the trend towards harmonization in national legislation.

To conduct algorithmic governance around the world, a multilateral framework should be based on the common purpose and solutions of the United States, China, and the EU. In this hypothetical international framework, this Note pays more attention to the covered entities, transparency, self-assessment, and sanctions. Those four dimensions provide the most salient criteria for designing a new framework because the different legislations all pay attention to them. For the covered entities, the risk-based approach issued by AI Act is more likely to be acceptable in the global governance. As to transparency and self-assessment, both requirements need to be fulfilled by the coordination of a third-party institution to play a role as a supervisor. Fines are still the most efficient way to punish the covered entities. A high-level standard of sanctions will have a better effect on global algorithmic governance.

A global response to governing algorithms is necessary. An international framework consisting of a uniform standard of transparency, a multilateral agreement, and a panel to provide a grievance mechanism to the people affected by algorithms could be a step in the right direction.

²⁴² See Joshua P. Meltzer, *The Impact of Artificial Intelligence on International Trade*, BROOKINGS (Dec. 13, 2018), <https://www.brookings.edu/articles/the-impact-of-artificial-intelligence-on-international-trade/>.