Southeast Asian countries rise to power. It also provides a roadmap for the smooth management of these geopolitical shifts when they occur.

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Artificial Intelligence and International Economic Law

by Shin-yi Peng, Ching-Fu Lin, and Thomas Streinz
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In an age where today's cutting-edge technologies quickly become obsolete, *Artificial Intelligence and International Economic Law* discusses the legal challenges related to the introduction of artificial intelligence (AI) technologies. Published in October 2021, this edited collection comprises 17 chapters divided into five parts. Each part of the book explores a different aspect of the use of AI systems and considers the resulting regulatory challenges in international economic law. AI technologies constitute complex sociotechnical systems involving humans, machines, algorithms, and data, and their deployment raises legal questions across a wide range of domains including, but not limited to, data protection and privacy law, antidiscrimination law, intellectual property law, and tort law.

Overall, the book offers a broad analysis of the regulatory challenges that AI will pose to the International Economic Law (IEL) framework and provides excellent guidance for lawyers, practitioners, policymakers, and academics that wish to understand the intricacies behind the adoption of AI applications in an ever-increasing number of personal and professional domains.

1. A Diversity of Perspectives

The book brings together a vast array of experts in the field of IEL and new technologies. The editors have been fortunate in being able to secure contributors from different academic, professional, and geographical backgrounds so as to be able to offer a broad range of views. To provide a few examples, *Artificial Intelligence and International Economic Law* contains contributions from Henry Gao, Associate Professor of Law at the Singapore Management University, Aik Hoe Lim, Director of the Trade and Environment Division at the World Trade Organization, Neha Mishra, Lecturer at the Australian National University, and Rolf H. Weber, Professor for International Business and Economic Law at the University of Zurich.

This edited collection is the result of cooperation between three distinguished academics, Shin-yi Peng, Ching-Fu Lin, and Thomas Streinz who brought together most of the contributors in a workshop in Chinese Taipei in the fall of 2019. This workshop was part of the activities organized by the Society of International Economic Law's (SIEL's) Asian International Economic Law Network (AIELN). It took place during the sixth biennial conference, entitled, 'International Trade Regime for the Data-Driven Economy: How Will Artificial Intelligence Transform

International Economic Law?' that was organized by the Institute of Law for Science and Technology at National Tsing Hua University (NTHU).

Shin-yi Peng is Distinguished Professor of Law at National Tsing Hua University. Her main field of expertise is international trade law, with a focus on trade in services, digital trade, and data governance. She is former Commissioner of the National Communications Commission of Taiwan and she has served as Vice President of the Society of International Economic Law. Professor Peng is also a member of the Indicative List of Panellists for resolving WTO disputes.

Ching-Fu Lin is Associate Professor at National Tsing Hua University, where he teaches artificial intelligence law and policy, international law and global governance, and law and technology.

Thomas Streinz is Adjunct Professor of Law and Executive Director for the Guarini Global Law & Tech at New York University School of Law. He co-convenes the Guarini Colloquium: Regulating Global Digital Corporations and co-teaches a course on Global Data Law. His research encompasses global digital governance, global law and technology, and the regulation of the global data economy.

2. A Comprehensive Look at AI and IEL

As mentioned above, the book consists of 17 chapters divided into five parts. The first three chapters cover the systemic shifts in the global economic order and explain the necessity to address these changes with attention to the challenges posed by the transition to an economic model shaped by AI and digital data. These three chapters describe the readjustments that an economy increasingly based on data needs to undertake to support the deployment of AI capabilities.

In the first of these three chapters, Gregory Shaffer argues that trade law needs to adjust to these developments. He regards trade law as a 'channelling tool' in the digital economy that can help to maximize the benefits of the rise of AI. As it is an opening chapter, the scope of this contribution is limited to the overview of the risks arising from the widespread introduction of AI, but it explains with great clarity the values that are at stake in the race for dominance in AI technologies.

In the second chapter, Rolf H. Weber discusses the need for more coordination in the governance of the digital world. He contends that rule-making in the field of AI should build on clear regulatory principles such as transparency, accountability, safety, and robustness. The third chapter, by Dan Ciuriak and Vlada Rodionova, closes Part I by discussing the effect that the introduction of AI in the global trading system may have on the traditional international trade law dichotomy between trade and non-trade concerns. Indeed, the complexity of AI systems makes it difficult to balance the right to adopt regulatory policies with trade-restrictive effects to address societal concerns, on the one hand, and the need to avoid arbitrary and unjustifiable protectionism, on the other. The authors rightly point out that the introduction of AI in multiple aspects of everyday life will present States with a number of societal concerns that may clash with States' obligations. In their view, while most of societal concerns relating to the introduction of AI may be easily addressed consistently with international obligations, others may prove difficult to regulate without violating their international obligations.

The next part brings together four chapters that focus on the relevance of the WTO agreements with regard to domestic measures regulating the development and use of AI systems. Of particular note is the chapter by Aik Hoe Lim. Lim describes the relevance of, and the landscape provided by, the Technical Barriers to Trade (TBT) Agreement as an instrument that can contain and limit unnecessary regulatory divergence and reduce costs related to the transition toward 'Industry 4.0.' This chapter is a must read for Non-Tariffs Barriers (NTB) specialists and analysts who want to learn about the functioning of the TBT Agreement with respect to new technologies and about the applicability of the TBT Agreement to measures regulating such technologies.

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In her chapter, Shin-yi Peng continues the discussion on AI and standards but approaches this subject from a different angle. Peng focuses on the automotive industry and explains its importance for shaping standards for future developments and the commercialization of autonomous vehicles. The choice of autonomous vehicles as a case study is ideal because it allows Peng to focus on a sector that has already made substantial steps towards the development of standards for AI systems and thus provides a considerable amount of study material. Her discussion highlights that while the automotive industry is in a better position than governments to develop standards that are more suitable to provide a transparent and non-discriminatory regulatory framework, these standards may not constitute technical regulations or international standards within the meaning of the TBT Agreement. In fact, these privately developed standards would not constitute technical regulations, as long as they are not mandatory, and they would arguably not constitute international standards either, due to the lack of WTO Member involvement in their development. This then leaves open the question on the applicability of the rules contained in the TBT Agreement in such circumstances. The chapter provides inspiration for further research that goes beyond the case of autonomous vehicles and will surely contribute to the legal debate on the role of standards to ensure the safety and interoperability of technology intensive products.

In the following chapter, Bryan Mercurio and Ronald Yu discuss a different, yet decisive, element in which WTO law can complement the discussion surrounding the debate on international economic law and AI, namely WTO Intellectual Property (IP) rights. Their discussion focuses on the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). The authors contend that AI raises new challenges regarding the protection of IP rights and they submit that today's IP rights protection system has to evolve to account for the introduction of AI. Their chapter considers the role of AI in producing IP products in a legal framework that does not yet consider AI-produced IP as capable of receiving protection. In this context, the chapter discusses the possibility of considering AI as an IP rights holder and the potential consequences for doing so. Mercurio and Yu were unable to include an assessment of a decision by a South African court from July 2021, which, for the first time, granted a patent to an invention developed by an AI system. This, however, does not detract from the depth and relevance of Mercurio and Yu's analysis.

The concluding chapter of Part II discusses the future of trade disputes in the age of AI.Yuka Fukunaga. Fukunaga discusses the role of the WTO dispute settlement mechanism regarding the interpretation and application of rules developed to address the rise of AI. In her contribution, Fukunaga sheds light on the nature of trade disputes based on internal measures that regulate AI, but at the same time restrict trade, and she provides an analysis of the differences between these 'new' disputes and traditional trade disputes.

Part III and Part IV explore the interplay between IEL and the domestic regulation of AI. Part III focuses on data regulation as a form of AI regulation, while Part IV addresses a broader array of regulatory efforts, ranging from standard-setting to ethics and the limits IEL imposes on such initiatives. Part III opens with a chapter from Thomas Streinz in which he conceptualizes data as a resource for the AI economy. He acknowledges the concentration of data in Chinese and US big tech companies and analyses governmental efforts to redistribute data. For example, Streinz notes that governments have adopted different policies to redistribute the advantages that come with possessing data. These policies include data localization requirements, open data initiatives, and mandatory data sharing. However, IEL often clashes with such initiatives, since the whole IEL framework favours liberalization, although it allows non-economic concerns to prevail under certain conditions. Streinz suggests that domestic measures should take into account the enormous investments, research, and development on data that the engineering of AI systems requires. However, certain types of data do not fall under the protection from trade restrictions afforded by the WTO agreements, such as the General Agreement on Trade in Services (GATS). Streinz contends that data that is not produced for commercial sale or

distribution, but for example, is generated or assembled for machine-learning purposes, would appear to escape the digital product category.

Similarly, if data is used to train algorithms that provide services, only the services, but not the data used to provide the services, enjoy protections under the GATS. Therefore, the author submits that GATS commitments apply if the data is a service in itself and not just a means to produce a service, and only if the WTO member in question has made specific commitments in respect of services liberalization in its schedule. Streinz thus effectively argues that data used as a mean to produce a service may not receive protection against trade-restrictive measures, such as those in the GATS, and that this may result in non-challengeable barriers to trade.

Continuing with the analysis of domestic regulation of AI, Alan Hervé compares the EU's model of data protection with the US model. The author examines whether these two models can coexist when scrutinized under the IEL lens. Part III ends with the chapter from Frederike Zufall and Raphael Zingg. Zufall and Zingg focus on a specific aspect of the EU's regulatory policy, namely the right to data portability for personal and non-personal data. The authors discuss whether AI development and deployment would benefit from such a regulatory approach adopted in an IEL instrument at the international level.

Part IV begins with Ching-Fu Lin's chapter in which he describes some of the complex issues surrounding the increasing advancements in AI development. The chapter adds another layer of specificity to the discussion around autonomous vehicles and focuses the debate on the ethical questions raised by algorithmic design. Indeed, this is a central aspect for ensuring a safe environment for humans when interacting with AI systems. The reader will undoubtedly welcome the comprehensiveness of Lin's analysis, which covers not only a wide array of national approaches to issues of AI ethics, but also current developments at the international level. The author argues that existing IEL should evolve in a direction that ensures the preservation of diverging AI regulatory concerns, such as cultural specificities or national societal values, even if they might lead to a less unitary regulatory landscape and may become subject to challenges under existing IEL.

In the subsequent chapter, Neha Mishra continues the discussion on the development of ethical rules for AI and analyses whether the GATS general exceptions framework provides sufficient means to defend legitimate regulatory policies and whether it would allow distinguishing such measures from those that have a protectionist intent. Part IV concludes the discussion on domestic regulations and AI by analysing a specific aspect of governmental actions with regard to AI. In this chapter, Kelly K. Shang and Rachel R. Du evaluate the compatibility of government-mandated data-sharing mechanisms and governmental sanctions against countries that use AI technology to undermine fundamental rights or national security.

Part V, which concludes this volume, contains three chapters the main purpose of which is to stimulate further debate about the relationship between AI and IEL. In the first chapter, Henry Gao assesses the potential of an international treaty, or of a similar instrument, to regulate electronic commerce and digital trade under the umbrella of the WTO. He does so from the perspective of China, one of the countries with the most comprehensive regulations on data. At first glance, this approach may seem unusual, but the reader soon realizes that it provides an invaluable point of view. In fact, the analysis of China's negotiating position in the context of the WTO Joint Statement Initiative (JSI) is likely not as well-known as the negotiating positions of Western countries. It is obvious that knowledge of China's policy concerns is crucial, given the country's central position in the AI industry. Jane K. Winn and Yi-Shyuan Chiang analyse the competition between the US and China in the race to become the predominant player in AI and assess the most recent trends in this economic rivalry between these two world leaders in AI research. The final chapter by Lisa Toohey examines how AI and other technologies could be used to improve the adoption and application of IEL norms.

3. Foundation for Future Discussion

Artificial Intelligence and International Economic Law is a timely publication, as it is one of the first contributions that analyses the necessity to adjust the IEL framework to accommodate the introduction of AI in economic relationships. All chapters are published in Open Access and can be freely downloaded from the Cambridge Core website. Each chapter guides the reader through the intricacies of AI without ever becoming too technical. The focus always remains on how IEL can adapt to embrace the AI revolution, and this book offers abundant inspiration to ensure that the technological race will not take place without a referee, namely IEL. In other words, *Artificial Intelligence and International Economic Law* promises to become a seminal work on AI and international law and to open the path for future research and publishing on the matter.

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