

## ARTIFICIAL INTELLIGENCE AND INTERNATIONAL ECONOMIC LAW

Artificial intelligence (AI) technologies are transforming economies, societies, and geopolitics. Enabled by the exponential increase of data that is collected, transmitted, and processed transnationally, these changes have important implications for international economic law (IEL). This volume examines the dynamic interplay between AI and IEL by addressing an array of critical new questions, including: How to conceptualize, categorize, and analyze AI for purposes of IEL? How is AI affecting established concepts and rubrics of IEL? Is there a need to reconfigure IEL, and if so, how? Contributors also respond to other cross-cutting issues, including digital inequality, data protection, algorithms and ethics, the regulation of AI-use cases (autonomous vehicles), and systemic shifts in e-commerce (digital trade) and industrial production (fourth industrial revolution).

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

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. He tweets @ChingFuLin.

Thomas Streinz is Adjunct Professor of Law and Executive Director, 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. He tweets @t\_streinz.

This title is also available as Open Access on Cambridge Core with funding support by the Erasmus+ Programme of the European Union.



# Artificial Intelligence and International Economic Law

DISRUPTION, REGULATION, AND RECONFIGURATION

Edited by

**SHIN-YI PENG** 

National Tsing Hua University

**CHING-FU LIN** 

National Tsing Hua University

THOMAS STREINZ

New York University School of Law







Shaftesbury Road, Cambridge CB2 8EA, United Kingdom

One Liberty Plaza, 20th Floor, New York, NY 10006, USA

477 Williamstown Road, Port Melbourne, VIC 3207, Australia

314–321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre, New Delhi – 110025, India 103 Penang Road, #05–06/07, Visioncrest Commercial, Singapore 238467

Cambridge University Press is part of Cambridge University Press & Assessment, a department of the University of Cambridge.

We share the University's mission to contribute to society through the pursuit of education, learning and research at the highest international levels of excellence.

www.cambridge.org

Information on this title: www.cambridge.org/9781108949064

DOI: 10.1017/9781108954006

© Cambridge University Press & Assessment 2021

Published with the support of the Erasmus+ Program me of the European Union

This work is in copyright. It is subject to statutory exceptions and to the provisions of relevant licensing agreements; with the exception of the Creative Commons version the link for which is provided below, no reproduction of any part of this work may take place without the written permission of Cambridge University Press & Assessment.

An online version of this work is published at doi.org/10.1017/9781108954006 under a Creative Commons Open Access license CC-BY-NC-ND 4.0 which permits re-use, distribution and reproduction in any medium for non-commercial purposes providing appropriate credit to the original work is given. You may not distribute derivative works without permission. To view a copy of this license, visit https://creativecommons.org/licenses/by-nc-nd/4.0

All versions of this work may contain content reproduced under license from third parties. Permission to reproduce this third-party content must be obtained from these third parties directly. When citing this work, please include a reference to the DOI 10.1017/9781108954006

First published 2021 First paperback edition 2024

A catalogue record for this publication is available from the British Library

ISBN 978-1-108-84493-2 Hardback ISBN 978-1-108-94906-4 Paperback

Cambridge University Press & Assessment has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.



## Contents

List	t of Figures	bage viii
List	t of Contributors	ix
Pref	face	xi
1	Artificial Intelligence and International Economic Law: A Research and Policy Agenda Shin-yi Peng, Ching-Fu Lin, and Thomas Streinz	<b>1</b>
	PART I SYSTEMIC SHIFTS IN THE GLOBAL ECONOMIC ORDER	
2	Trade Law in a Data-Driven Economy: The Need for Modesty and Resilience Gregory Shaffer	29
3	Global Law in the Face of Datafication and Artificial Intelligence Rolf H. Weber	54
4	Trading Artificial Intelligence: Economic Interests, Societal Choice and Multilateral Rules Dan Ciuriak and Vlada Rodionova	es, 7º
	PART II RECONCEPTUALIZING WORLD TRADE ORGANIZATION LAW FOR THE ARTIFICIAL INTELLIGENCE ECONOMY	
5	Trade Rules for Industry 4.0: Why the Technical Barriers to Trade Agreement Matters Even More Aik Hoe Lim	97
6	Autonomous Vehicle Standards under the Technical Barriers to Trade Agreement: Disrupting the Boundaries? Shin-yi Peng	121

V



vi	Contents	
7	Convergence, Complexity and Uncertainty: Artificial Intelligence and Intellectual Property Protection Bryan Mercurio and Ronald Yu	139
8	Are Digital Trade Disputes "Trade Disputes"? Yuka Fukunaga	155
	PART III DATA REGULATION AS ARTIFICIAL INTELLIGENCE REGULATION	
9	International Economic Law's Regulation of Data as a Resource for the Artificial Intelligence Economy Thomas Streinz	175
10	Data Protection and Artificial Intelligence: The European Union's Internal Approach and Its Promotion through Trade Agreements Alan Hervé	193
11	<b>Data Portability in a Data-Driven World</b> Frederike Zufall and Raphael Zingg	215
	PART IV INTERNATIONAL ECONOMIC LAW LIMITS TO ARTIFICIAL INTELLIGENCE REGULATION	
12	Public Morals, Trade Secrets, and the Dilemma of Regulating Automated Driving Systems Ching-Fu Lin	237
13	International Trade Law and Data Ethics: Possibilities and Challenges Neha Mishra	255
14	Disciplining Artificial Intelligence Policies: World Trade Organization Law as a Sword and a Shield Kelly K. Shang and Rachel R. Du	<sup>2</sup> 74
	PART V RECONFIGURATION OF INTERNATIONAL ECONOMIC LAW	
15	Across the Great Wall: E-commerce Joint Statement Initiative Negotiation and China Henry Gao	295



	Contents	vii
16	The Next Great Global Knowledge Infrastructure Land Rush Has Begun: Will the USA or China Prevail? Jane K. Winn and Yi-Shyuan Chiang	319
17	Trade Law Architecture after the Fourth Industrial Revolution Lisa Toohey	337



## Figures

1.1	Artificial intelligence regulation in the context of international	
	economic law	þage 12
6.1	(Re)classification of connected and autonomous vehicle standards	128
6.2	Co-governance of connected and autonomous vehicle standards	134
11.1	Data types and examples	217
11.2	Data value of raw data and generated data	220



### Contributors

**Yi-Shyuan Chiang** LLM candidate at the National Tsing Hua University Institute of Law for Science and Technology

Dan Ciuriak Director and Principal, Ciuriak Consulting Inc. (Ottawa); Senior Fellow with the Centre for International Governance Innovation (Waterloo); Fellow-in-Residence with the CD Howe Institute (Toronto); Distinguished Fellow with the Asia Pacific Foundation of Canada (Vancouver)

**Rachel R. Du** Master of Advanced Studies in International Law and Economics (MILE), World Trade Institute, University of Bern

Yuka Fukunaga Professor, Waseda University

Henry Gao Associate Professor of Law, Singapore Management University

Alan Hervé Professor and Jean Monnet Chair, Sciences Po Rennes

Aik Hoe Lim Director, Trade and Environment Division, World Trade Organization

Ching-Fu Lin Associate Professor of Law, National Tsing Hua University

Bryan Mercurio Simon FS Li Professor of Law, Chinese University of Hong Kong

Neha Mishra Lecturer, ANU College of Law, Australian National University

Shin-yi Peng Distinguished Professor of Law, National Tsing Hua University

Vlada Rodionova Associate, Ciuriak Consulting Inc.

Gregory Shaffer Chancellor's Professor of Law, University of California, Irvine

Kelly K. Shang Fellow, World Trade Institute, University of Bern

**Thomas Streinz** Adjunct Professor of Law and Executive Director, Guarini Global Law & Tech, New York University School of Law



x

Cambridge University Press & Assessment 978-1-108-94906-4 — Artificial Intelligence and International Economic Law Disruption, Regulation, and Reconfiguration Edited by Shin-yi Peng , Ching-Fu Lin , Thomas Streinz Frontmatter

More Information

List of Contributors

Lisa Toohey Professor of Law and Deputy Head (Research) at Newcastle Law School, University of Newcastle, Australia

**Rolf H. Weber** Professor for International Business and Economic Law, Faculty of Law, University of Zurich; Practicing Attorney-at-Law, Zurich

Jane K. Winn Professor of Law, University of Washington School of Law

Ronald Yu Research Associate, Chinese University of Hong Kong

**Raphael Zingg** Assistant Professor, Waseda University, Institute for Advanced Study, Tokyo; Research Affiliate at the ETH Zurich, Center for Law and Economics

Frederike Zufall Senior Research Fellow, Max Planck Institute for Research on Collective Goods, Bonn, Germany; Adjunct Researcher, Waseda Institute for Advanced Study, Tokyo



#### Preface

The chapters assembled in this volume were written on machines distributed across four continents by humans who have devoted a significant part of their professional lives to studying and practicing international economic law.

Most authors met in person in Taipei in the fall of 2019 for the Society of International Economic Law's (SIEL's) Asian International Economic Law Network (AIELN) sixth biennial conference, International Trade Regime for the Data-Driven Economy: How Will Artificial Intelligence Transform International Economic Law?, organized by the Institute of Law for Science and Technology at National Tsing Hua University (NTHU). The editors and contributors are grateful to the chairs, discussants, and participants on various panels for their inputs, which fueled the momentum for our collective endeavor. The programmatic theme of the conference animated our discussions then and laid the groundwork for the framing of this book. Our insights were further developed and refined through scholarly debates and discussions and are now the joint product of twenty-one authors.

We thank the many humans who made this event, and by extension this volume, possible. We would like to express our gratitude to the anonymous reviewers of the book proposal for all their critical comments on the book as a whole, as well as on individual chapters. We thank Sally Evans-Darby for her careful editing of the final manuscript. We would also like to acknowledge a number of promising graduate students at NTHU – thanks go to Sharu Luo for his excellent editorial work as well as I-Ching Chen, Yen-Chieh Lin, and Tzu-Yin Hsu for their coordinative assistance.

This collaborative project received generous financial and technical support from SIEL and AIELN, Taiwan's Ministry of Science and Technology, the Research Center for Humanities and Social Sciences at NTHU, and the Jean Monnet Network – Trade & Investment in Services Associates (TIISA), co-funded by the Erasmus+ Programme of the European Union. We are particularly thankful to TIISA Director Jane Drake-Brockman and other steering committee members who have been generous in sharing their expertise, and for the funding from the Erasmus+ Programme of the European Union that makes this book freely available



xii Preface

online under a Creative Commons Open Access license. Last but not least, we are indebted to Matt Gallaway, Cameron Daddis, and the rest of the team at Cambridge University Press for their invaluable guidance and support throughout the publication process.

This book was finalized while countries around the world were still confronting a global public health crisis caused by the COVID-19 pandemic. Many came to rely on digital services as an infrastructure for social interaction and professional endeavors, including academic and educational work. The pandemic seems to have precipitated a further shift toward digital technologies and artificial intelligence. It is our hope that this book will contribute to an informed discussion about the relevance of and implications for international economic law beyond the pandemic.