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## TRADE GOVERNANCE IN THE DIGITAL AGE

The development of new digital technologies has resulted in significant transformations in daily life, from the arrival of online shopping to more fundamental changes in the ways we work and communicate. Many of these changes raise questions that transcend market access and liberalisation and demand cooperation and coherent regulatory design. International trade regulation has hitherto not reacted in a forward-looking manner to the digital revolution; particularly at the multilateral level, legal engineering has yielded few tangible results.

This book examines whether WTO laws possess the necessary flexibility and resilience to accommodate the changes brought about by burgeoning digital trade. By revealing both the potential and the limitations of the WTO framework, it provides a broad picture of the interaction between digital technologies and trade regulation; links the often disconnected discourses of international trade law, intellectual property and cyberlaw; and explores discrete problems in different domains of global trade regulation.

MIRA BURRI is a Senior Research Fellow at the World Trade Institute and Lecturer in International Media Law at the University of Bern, Switzerland.

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# TRADE GOVERNANCE IN THE DIGITAL AGE

World Trade Forum

Edited by

MIRA BURRI AND THOMAS COTTIER



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## P R E F A C E

The World Trade Forum has existed since 1997 and has, year after year, established itself as the meeting hub for academia, policy makers, international organisations, and civil society representatives to discuss the new and unsettled questions of the global trading system and to look for future-oriented solutions. In 2010, the fourteenth World Trade Forum, held, as tradition goes, at the World Trade Institute in Bern, took up a particularly thorny topic that challenges not only trade regulation but also many other areas, and essentially all levels of governance.

Embracing the amazing advances in digital technologies, specifically the Internet's wide spread, its deep impact on the economy and continuing integration into the social and cultural fabric of society, a group of outstanding experts gathered together to ask whether international economic law, as created in the analogue/offline era, is capable of facing the reality of digital trade. The answers given and recommendations made differed, but all agreed that both swift responses and apt regulatory design are badly needed.

This book is the result of the contributions to the World Trade Forum, albeit now in a more distilled and succinct form. Needless to say, the volume is only the end product of an exceptional cooperative effort and would not have been possible without the dedicated input of many outstanding people. Particular thanks are owed to the conference participants for their intellectually stimulating presentations and excellent texts, and to those who spurred the debates by acting as discussants. We would like in this context to express our gratitude to Carsten Fink, Rohan Kariyawasam, John Palfrey, Amy Porges, Cyrill Rigamonti, Pierre Sauvé, Rolf Weber, and Sacha Wunsch-Vincent. It is only through the collaborative work of all participants that we could meet the challenge of linking the previously disconnected discourses of international trade, intellectual property and cyberlaw with all their specific and often overly technical issues in an attempt to offer a meaningful, forward-looking analysis of trade governance in the digital age.

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PREFACE

We thank the Ecoscientia Foundation for its continued support of the World Trade Forum. We are grateful to the Swiss National Science Foundation as some of the papers emanate from the NCCR Trade Regulation. We also wish to thank Margrit Vetter and Gaby Hofer for the smooth organisation of yet another event and for making everyone feel welcome. This volume would not have been possible without the dedicated work of Susan Kaplan in reviewing the manuscripts. Finally, our heartfelt thanks are owed to Finola O’Sullivan and her excellent team at Cambridge University Press for their unfailing support and strong commitment to the World Trade Forum series.

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## ABBREVIATIONS

AANZFTA	ASEAN–Australia–New Zealand Free Trade Area
ABTS	Agreement on Basic Telecommunications Services
ACP	African, Caribbean and Pacific Group of States
ACTA	Anti-Counterfeiting Trade Agreement
ADP	automatic data processing
ADSL	asymmetric digital subscriber line
AGRA	Alliance for a Green Revolution in Africa
AIDS	acquired immunodeficiency syndrome
APEC	Asia-Pacific Economic Cooperation
API	application programming interface
ASEAN	Association of Southeast Asian Nations
ATM	asynchronous transfer mode
B2B	business-to-business
B2C	business-to-consumer
BEREC	Body of European Regulators for Electronic Communications
BOP	balance of payments
BSAC	British Screen Advisory Council
BTA	Basic Agreement on Telecommunications
CAFTA-DR	Dominican Republic–Central America Free Trade Agreement
ccTLD	country-code top-level domain
CEPT	European Conference of Postal and Telecommunications Administrations
CERN	Conseil Européen pour la Recherche Nucléaire; European Organization for Nuclear Research
CISG	Convention on the International Sale of Goods
CPC	UN Central Product Classification
CTS	Council for Trade in Services
DDA	Doha Development Agenda
DMCA	Digital Millennium Copyright Act
DoJ	U.S. Department of Justice
DPI	deep packet inspection
DRM	digital rights management
DSL	digital subscriber line

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DTH	direct-to-home (satellite services)
EAC	East African Community
ECJ	The Court of Justice of the European Union
ECN	Electronic Communications Network
ECOSOC	UN Economic and Social Council
ECS	Electronic Communications Service
EDI	electronic data interchange
EFF	Electronic Frontier Foundation
EFTA	European Free Trade Association
EIFL	Electronic Information for Libraries
ETO	Electronic Trade Opportunities
EU	European Union
EUCD	European Union Copyright Directive
FCC	Federal Communications Commission
FDI	foreign direct investment
FLOSS	free/libre open source software
FPDs	flat panel display devices
FOCAC	Forum Africa–China Cooperation
FTA	free trade agreement
FTC	Federal Trade Commission
FTTH	fibre to the home
FTTK	fibre to the kerb
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
HFC	hybrid fibre-coaxial
HIV/AIDS	human immunodeficiency virus/acquired immunodeficiency syndrome
HLEG	High Level Expert Group
HS	Harmonized Commodity Description and Coding System
HTTP	hypertext transfer protocol
IaaS	(cloud) infrastructure as a service
ICANN	Internet Corporation for Assigned Names and Numbers
ICC	International Chamber of Commerce
ICT	information and communication technology
ICT4D	information and communication technologies for development
IEC	International Electrotechnical Commission
IEL	international economic law
IFC	International Finance Corporation
IFLA	International Federation of Libraries and Archives
IFRS	International Financial Reporting Standards
IGOs	inter-governmental organisations

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IIPA	International Intellectual Property Alliance
ILM	International Legal Materials
IMF	International Monetary Fund
IoT	Internet of Things
IP	intellectual property
IPRs	intellectual property rights
IPTV	Internet protocol television
ISDN	Integrated Services Digital Network
ISO	International Organization for Standardization
ISP	Internet service provider
IT	information technology
ITA	Information Technology Agreement
ITC	International Trade Centre
ITU	International Telecommunication Union
IXPs	Internet exchange points
LDC	least-developed country
LECS	local exchange carriers
LLU	local loop unbundling
MFMs	multifunctional digital machines
MFN	most favoured nation
MVNO	mobile virtual network operator
NAFTA	North American Free Trade Agreement
NCA	national competition authority
NGN	next-generation network
NPRM	notice of proposed rulemaking
NRA	national regulatory authority
NT	national treatment
NWICO	New World Information and Communication Order
OECD	Organisation for Economic Co-operation and Development
OSAA	Office of the Special Advisor for Africa
P2P	peer-to-peer (networking)
PaaS	(cloud) platform as a service
PLMN	public land mobile network
PSTN	public switched telephone network
PTA	preferential trade agreement
QoS	quality of service
RFID	radio frequency identification
RMI	rights management information
SaaS	software as a service
SEC	U.S. Securities and Exchange Commission
SMEs	small and medium-sized enterprises
SMP	significant market power

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## LIST OF ABBREVIATIONS

STBCs	set-top boxes which have a communication function
TBT	WTO Agreement on Technical Barriers to Trade
TCP/IP	transmission control protocol/Internet protocol
TFEU	Treaty on the Functioning of the European Union
TPMs	technological protection measures
TRIPS	WTO Agreement on Trade-Related Aspects of Intellectual Property Rights
TRTA	trade-related technical assistance
UDRP	Uniform Domain Name Dispute Resolution Policy
UN	United Nations
UNCID	Uniform Rules of Conduct for Interchange of Trade Data by Teletransmission
UNCITRAL	United Nations Commission on International Trade Law
UNCOPUOS	United Nations Committee on the Peaceful Uses of Outer Space
UNCTAD	United Nations Conference on Trade and Development
UNTS	United Nations Treaty Series
UPU	Universal Postal Union
USTR	United States Trade Representative
VCLT	Vienna Convention on the Law of Treaties
VoIP	voice over Internet protocol
VPNs	virtual private networks
VSAT	very small aperture terminal
WCT	WIPO Copyright Treaty
WIPO	World Intellectual Property Organization
WPPT	WIPO Performances and Phonograms Treaty
WSIS	World Summit on the Information Society
WTO	World Trade Organization
WTPF	World Trade Point Federation