

## BIG DATA AND GLOBAL TRADE LAW

This collection explores the relevance of global trade law for data, big data and cross-border data flows. Contributing authors from different disciplines including law, economics and political science analyze developments at the World Trade Organization and in preferential trade venues by asking what future-oriented models for data governance are available and viable in the area of trade law and policy. The collection paints the broad picture of the interaction between digital technologies and trade regulation as well as provides in-depth analyses of critical to the data-driven economy issues, such as privacy and AI, and different countries' perspectives. This title is also available as Open Access on Cambridge Core.

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# Big Data and Global Trade Law

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Previously, Joris van Hoboken was a postdoctoral research fellow at the Information Law Institute (ILI) at New York University, School of Law (2013–2016), a visiting scholar at the NYU Stern Center for Business and Human Rights (2015–2016), and a lecturer at CornellTech (2016). In 2008, he was a visiting scholar at the Berkman Klein Center for Internet and Society at Harvard University. Between 2007 and 2017, van Hoboken served on the board of directors of the Dutch digital rights organization Bits of Freedom.

Joris van Hoboken obtained his PhD from the University of Amsterdam on the topic of search engines and freedom of expression (2012) and has graduate degrees in Law (2006, University of Amsterdam, cum laude) and Theoretical Mathematics (2002, University of Amsterdam, cum laude). For his PhD thesis, he received the award of the Praemium Erasmianum Foundation. Van Hoboken is a regular speaker at international events and conferences and has conducted research for the European Commission, ENISA, UNESCO, Upturn, and The Open Society Foundation. His work has been covered in *NRC Handelsblad*, *De Correspondent*,

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## Abbreviations

|                   |   |
|-------------------|---|
| <b>AANZFAT</b>    | ASEAN–Australia–New Zealand Free Trade Area                               |
| <b>AEO</b>        | authorized economic operators   |
| <b>AI</b>         | artificial intelligence   |
| <b>ANTAI</b>      | National Authority of Transparency and Access to Information (Panama)     |
| <b>APEC</b>       | Asia-Pacific Economic Cooperation   |
| <b>ASEAN</b>      | Association of Southeast Asian Nations                                    |
| <b>B2B</b>        | business to business  |
| <b>B2C</b>        | business to consumer  |
| <b>BCR</b>        | Binding Corporate Rules   |
| <b>BOPCOM</b>     | Balance of Payment Committee (IMF)  |
| <b>BverGE</b>     | Bundesverfassungsgericht (German Constitutional Court)                    |
| <b>CAC</b>        | Cyberspace Administration of China  |
| <b>CARIFORUM</b>  | Caribbean Forum   |
| <b>CBPR</b>       | Cross-Border Privacy Rules  |
| <b>CCPA</b>       | California Consumer Privacy Act   |
| <b>CDPA</b>       | Copyright, Design and Patents Act (UK)                                    |
| <b>CEFTA</b>      | Central European Free Trade Agreement                                     |
| <b>CEPA</b>       | Closer Economic Partnership Agreement (between New Zealand and Singapore) |
| <b>CERNET</b>     | China Education and Research Network                                      |
| <b>CETA</b>       | Comprehensive Economic and Trade Agreement (between Canada and the EU)    |
| <b>CFREU</b>      | Charter of Fundamental Rights of the European Union                       |
| <b>ChAFTA</b>     | China–Australia Free Trade Agreement                                      |
| <b>CHINAGBNET</b> | China Golden Bridge Network   |
| <b>CHINANET</b>   | China Public Computer Network   |

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|-----------|--|
| CJEU      | Court of Justice of the European Union   |
| CLOUD Act | Clarifying Lawful Overseas Use of Data Act (US)  |
| CNIL      | Commission Nationale de l'Informatique et des Libertés<br>(French Data Protection Authority) |
| CPC       | UN Central Product Classification  |
| CPTPP     | Comprehensive and Progressive Agreement for Trans-Pacific<br>Partnership                     |
| CSIS      | Centre for Strategic and International Studies   |
| CSTNET    | China Science and Technology Network   |
| CTS       | Council for Trade in Services  |
| CUSMA     | Canada–United States–Mexico Agreement  |
| DEPA      | Digital Economy Partnership Agreement (between Chile, New<br>Zealand and Singapore)          |
| DGCE      | General Directorate of Electronic Commerce (Panama)  |
| DL        | deep learning  |
| DNA       | deoxyribonucleic acid  |
| DPA       | data protection authority  |
| DPIA      | data privacy impact assessment   |
| DPO       | data protection officer  |
| DSCI      | Data Security Council of India   |
| DSU       | Dispute Settlement Understanding   |
| DTE       | Digital Trade Estimates  |
| DTL       | distributed ledger technology  |
| DTRI      | Digital Trade Restrictiveness Index  |
| DUNS      | Data Universal Numbering System  |
| EAEU      | Eurasian Economic Union  |
| EC        | European Communities/European Community  |
| ECFI      | European Court of First Instance   |
| ECLI      | European Case Law Identifier   |
| EDI       | electronic data interchange  |
| EDPB      | European Data Protection Board   |
| EDPS      | European Data Protection Supervisor  |
| EDRi      | European Digital Rights  |
| EEA       | European Economic Area   |
| EFF       | Electronic Frontier Foundation   |
| EFTA      | European Free Trade Association  |
| EPA       | Economic Partnership Agreement   |
| EPC       | Electronic Product Code  |
| EPO       | European Patent Office   |
| EU        | European Union   |
| E-WTP     | Electronic World Trade Platform  |

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|---------------|--|
| <b>FCA</b>    | Financial Conduct Authority  |
| <b>FINMA</b>  | Finanzmarktaufsicht (Swiss Financial Market Supervisory Authority) |
| <b>FTA</b>    | free trade agreement   |
| <b>FTC</b>    | Federal Trade Commission   |
| <b>GATS</b>   | General Agreement on Trade in Services                             |
| <b>GATT</b>   | General Agreement on Tariffs and Trade                             |
| <b>GB</b>     | gigabyte   |
| <b>GCC</b>    | Gulf Cooperation Council   |
| <b>GDP</b>    | gross domestic product   |
| <b>GDPR</b>   | General Data Protection Regulation (EU)                            |
| <b>GFIN</b>   | Global Financial Innovation Network                                |
| <b>GSBN</b>   | Global Shipping Business Network                                   |
| <b>GTAP</b>   | Global Trade Analysis Project                                      |
| <b>GVC</b>    | global value chain   |
| <b>IAPP</b>   | International Association of Privacy Professionals                 |
| <b>ICANN</b>  | Internet Corporation for Assigned Names and Numbers                |
| <b>ICC</b>    | International Chamber of Commerce                                  |
| <b>ICO</b>    | Initial Coin Offerings   |
| <b>ICRIER</b> | Indian Council for Research on International Economic Relations    |
| <b>ICT</b>    | information and communication technology                           |
| <b>ICTSD</b>  | International Centre for Trade and Sustainable Development         |
| <b>IDB</b>    | Inter-American Development Bank                                    |
| <b>IDEA</b>   | International Digital Economy Agreement                            |
| <b>IEEE</b>   | Institute of Electrical and Electronics Engineers                  |
| <b>IEFT</b>   | Internet Engineering Task Force                                    |
| <b>IEL</b>    | international economic law   |
| <b>IGF</b>    | Internet Governance Forum  |
| <b>ILO</b>    | International Labour Organization                                  |
| <b>IMF</b>    | International Monetary Fund  |
| <b>INATBA</b> | International Association for Trusted Blockchain Applications      |
| <b>IoT</b>    | Internet of Things   |
| <b>IP</b>     | intellectual property  |
| <b>IPRs</b>   | intellectual property rights                                       |
| <b>ISIC</b>   | International Standard Industry Classification                     |
| <b>ISO</b>    | International Organization for Standardization                     |
| <b>ISP</b>    | Internet service provider  |
| <b>IT</b>     | information technology   |
| <b>ITA</b>    | Information Technology Agreement                                   |
| <b>ITIF</b>   | Information Technology and Innovation Foundation                   |

|         |  |
|---------|--|
| ITU     | International Telecommunication Union  |
| JORF    | Journal Officiel de la République Française (government gazette of the French Republic)                  |
| JSI     | Joint Statement on Electronic Commerce Initiative  |
| LAC     | Latin American countries   |
| LDC     | least-developed country  |
| MASP    | Multi-annual Strategic Plan  |
| MEI     | Ministry of Electronic Industry (China)  |
| MFN     | most favoured nation   |
| MII     | Ministry of Information Industry (China)   |
| MIIT    | Ministry of Industry and Information Technology (China)  |
| ML      | machine learning   |
| MPS     | Ministry of Public Security (China)  |
| MPT     | Ministry of Posts and Telecommunications (China)   |
| NAFTA   | North American Free Trade Agreement  |
| NASSCOM | National Association of Software and Services Companies (India)  |
| NBER    | National Bureau of Economic Research (USA)   |
| NCTS    | New Computerised Transit System  |
| NDPA    | General Directorate of Transparency, Access to Public Information and Protection of Personal Data (Peru) |
| NFA     | National Food Authority (Philippines)  |
| NIST    | National Institute of Standards and Technology (USA)   |
| NPC     | National People's Congress (China)   |
| NRDB    | National Register of Data Bases (Colombia)   |
| NT      | national treatment   |
| OAS     | Organization of American States  |
| OECD    | Organisation for Economic Co-operation and Development   |
| OJ      | Official Journal of the European Union   |
| OSS     | open-source software   |
| P2P     | peer-to-peer   |
| PAAP    | Pacific Alliance Additional Protocol   |
| PAFTA   | Peru–Australia Free Trade Agreement  |
| PatA    | Swiss Federal Act on Patents for Inventions  |
| PDLP    | Personal Data Protection Law (Peru)  |
| PETs    | Privacy-Enhancing Technologies   |
| PII     | Personally Identifiable Information  |
| PIPEDA  | Personal Information Protection and Electronic Documents Act   |
| PoET    | proof of elapsed time  |
| PoS     | proof of stake   |
| PoW     | proof of work  |

*List of Abbreviations*

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|           |   |
|-----------|---|
| PPM       | process and production method   |
| PRODHAB   | Agency for the Protection of Data of Inhabitants (Costa Rica)                         |
| PTA       | preferential trade agreement  |
| QR Code   | Quick Response Code   |
| RCEP      | Regional Comprehensive Economic Partnership   |
| R&D       | research and development  |
| ReCAPTCHA | Reverse Completely Automated Public Turing test to Tell<br>Computers and Humans Apart |
| RFID      | Radio Frequency Identification  |
| RGPD      | Le Règlement Général sur la Protection des Données (GDPR)                             |
| SAD       | Single Administrative Document  |
| SAFTA     | South Asian Free Trade Area   |
| SIC       | Superintendence of Industry and Commerce (Colombia)                                   |
| SMEs      | small- and medium-sized enterprises   |
| SPS       | WTO Agreement on Sanitary and Phytosanitary Measures                                  |
| SQL       | Structured Query Language   |
| StGB      | Schweizerisches Strafgesetzbuch (Swiss Criminal Code)                                 |
| TAPED     | Trade Agreement Provisions on Electronic Commerce<br>and Data                         |
| TBT       | WTO Agreement on Technical Barriers to Trade  |
| TDM       | text and data mining  |
| TFA       | Trade Facilitation Agreement  |
| TFP       | total factor productivity   |
| TiSA      | Trade in Services Agreement   |
| TPA       | Trade Promotion Agreement   |
| TPP       | Trans-Pacific Partnership Agreement   |
| TRIPS     | WTO Agreement on Trade-Related Aspects of Intellectual<br>Property Rights             |
| TTIP      | Transatlantic Trade and Investment Partnership  |
| UDHR      | Universal Declaration of Human Rights   |
| UK        | United Kingdom  |
| UN        | United Nations  |
| UN/CEFACT | United Nations Centre for Trade Facilitation and Electronic<br>Business               |
| UNCITRAL  | United Nations Commission on International Trade Law                                  |
| UNCTAD    | United Nations Conference on Trade and Development                                    |
| UNIDROIT  | International Institute for the Unification of Private Law                            |
| UNIS      | United Nations Information Service  |
| UNT       | Universal Trade Network   |
| US        | United States   |
| USITC     | United States International Trade Commission  |

|              |  |
|--------------|--|
| <b>USMCA</b> | United States–Mexico–Canada Agreement    |
| <b>VPN</b>   | Virtual Private Network                  |
| <b>WCO</b>   | World Customs Organization               |
| <b>WEF</b>   | World Economic Forum                     |
| <b>WIPO</b>  | World Intellectual Property Organization |
| <b>WTO</b>   | World Trade Organization                 |
| <b>ZKP</b>   | Zero-Knowledge Proof                     |