

Mapping the EU's digital trade

A global leader hidden in plain sight?

EUROPE IN THE WORLD

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#trade #digital

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Introduction

The pandemic has moved our work and life online and accelerated the European Union's transition towards a digital economy. Surveys show that up to three quarters of European employees would like to continue teleworking in the future.¹ Digital networks deliver video to the 141 million Europeans that are subscribing to streaming services for entertainment.² Moreover, the volume of physical goods that businesses and consumers order online has increased by 58% in 2020 alone.³ Such developments are deeply altering the structure of the European economy and have become important drivers for productivity.⁴ At the same time, the center of the world economy is shifting east. The European Commission estimates that 85% of future economic growth will take place outside of the EU-and much of it in the digital sector.⁵ It is therefore crucial that the EU connects with the markets of the future, so that Europe remains at the forefront of the digital transformation.

A widely held view is that the EU currently tries to make up for shortcomings in its digital economy with excessive regulation against foreign competition. French President Emmanuel Macron summarized this predicament, when he wrote in 2020

1 Eurofound, 2021, Working during COVID-19

4 See in particular the work of the OECD on this topic.

.³ Intelligence d of The author would like to k express his sincere gratitude e to Barbara D'Andrea Adrian,

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² The Hollywood Reporter, 2021, European Streaming Market Tops \$14 Billion, Netflix, Amazon Dominate

³ Estimates by Oscar de Bok, Global chief executive officer, DHL Supply Chain, at the World Trade Symposium 2021

⁵ European Commission, 2021, Trade Policy Review - An Open, Sustainable and Assertive Trade Policy

that the US has the GAFA (in reference to Google, Apple, Facebook, and Amazon) and China the BATX (in reference to Baidu, Alibaba, Tencent, and Xiaomi), but the EU only the GDPR (in reference to the General Data Protection Regulation).⁶ Although Europe only has few large technology companies with a market capitalization that approaches the largest American and Chinese platforms, this narrative may at the same time be short selling an important strength that is hidden in plain view: the EU's central role in the emerging digital trade regime as the world's leading exporter and importer of digitally deliverable services and a key player in the quickly developing regulatory sphere for digital trade.

In fact, as the data in the analysis below shows, **the EU exports and imports more digitally deliverable services than other leading economies, such as the United States, China, or India.** On the one hand, this means that the EU must safeguard the market access interests of its firms-and perhaps do so more aggressively than it has in the recent past. On the other hand, its leading role as an importer of digitally deliverable services can help to explain the 'Brussels effect' in the global digital economy.⁷

With its recent privacy, platform, competition and data regulations, the EU has been responding to the functional demands that arise in a globally integrated digital economy, which grew around a largely self-regulated internet. The lack of rules allowed for rapid growth and development, but it has also raised questions about the appropriate role of government as data crossing international borders creates externalities and regulatory gaps. Consumers, for example, are worried about their privacy if personal data are stored outside of their jurisdiction. Businesses must deal with digital market access barriers when trying to sell their goods and services across borders. EU trade policy is not a new tool to address such gaps. The EU has therefore included digital trade provisions in its trade agreements as far back as 2001 and in a total of twenty-four agreements to date, continuously expanding their scope and scale over the years. The 2021 EU Trade Policy Review, which is guiding the current European trade agenda, also recognizes the role of trade policy in the digital economy:

'the digital transformation is [a] key enabler of sustainable development, but also a space of competition and inadequate multilateral governance. As it embarks on its Digital Decade, supporting Europe's digital transformation is a priority both in internal and external policies including trade policy and instruments.'⁸

This indicates that EU trade policy will continue to increasingly address crossborder transactions in the digital realm, which can be subsumed under the emerging 'digital trade' paradigm.

Discussions around digital trade developed in the early 2010s from the non-binding internet governance agenda and the long-dormant e-commerce work program of the WTO and have seen rapid advances in recent years.⁹ Despite this, **policymakers still have a somewhat fuzzy understanding of digital trade, both in terms of its definition and measurement.** While the EU Commission is beginning to take the

⁶ Emmanuel Macron, 2021, LinkedIn post on European technological sovereignty

⁷ Anu Bradford, 2020, The Brussels effect: How the European Union rules the world. Oxford University Press, Oxford.

⁸ European Commission (2021) Trade Policy Review - An Open, Sustainable and Assertive Trade Policy

⁹ Shamel Azmeh, Christopher Foster, Jaime Echavarri, The International Trade Regime and the Quest for Free Digital Trade, International Studies Review, Volume 22, Issue 3, September 2020, pp. 671–692

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need for a digital trade strategy more seriously, the member states must quickly improve their understanding about Europe's strengths in digital trade and how to use them as a leverage in promoting its regulatory model for the digital economy.

This policy paper contributes to the evolving debate by attempting to map the size and direction of the European Union's digital trade and analyzing recent European efforts to regulate cross-border digital flows in trade agreements and a new generation of digital partnerships.

I • What is digital trade and how does it differ from e-commerce?

The term digital trade has not been in use for very long. In fact, there is at least one other competing terminology, which can lead to confusion among both policy makers and the general public. In 1998, when WTO members first decided to discuss issues related to the then-nascent internet, they chose to table a work programme on electronic commerce, or e-commerce, which was defined as the 'production, distribution, marketing, sale or delivery of goods and services by electronic means'.¹⁰ However, the term e-commerce is somewhat ambiguous as in common usage it often also refers to domestic commercial activities by electronic means. The term digital trade, on the other hand, more clearly delineates that there is an international dimension to some commercial electronic activities. While 'e-commerce' continues to be widely used in the trade policy community, most notably in the WTO Joint Initiative on electronic commerce, this is increasingly a historic artifact. A growing number of countries, including the EU, the US and international organizations like the OECD are instead switching to the term 'digital trade'.

The most authoritative definition of this concept is provided by the Inter-Agency Task Force on International Trade's Expert Group on Measuring Digital Trade:

'All trade that is digitally ordered and/or digitally delivered.'

Whereas digitally ordered trade is defined as:

'The international sale or purchase of a good or service, conducted over computer networks by methods specifically designed for the purpose of receiving or placing orders.'¹²

And digitally delivered trade is defined as:

'International transactions that are delivered remotely in an electronic format, using computer networks specifically designed for the purpose.'¹³

While digitally ordered trade in this definition encompasses the international exchange of both goods and services, digital delivery is exclusively referring to the exchange of services. The terminology has implications for the scope of international negotiations, as some countries want to avoid commitments on services liberalization and prefer broader terminology that leaves them with policy space. The coexistence of the terms e-commerce and digital may therefore point to deeper cleavages amongst WTO members. However, as the next section will show, from a technical perspective, a more precise definition is crucial for accurate measurement and this paper will therefore exclusively use the 'digital trade' lexicon.

12 Ibid.

3 • Jacques Delors Institute • Policy Paper

¹⁰ WTO, 1998, Work Programme on Electronic Commerce, WT/L/274, p.1

¹¹ OECD, WTO, IMF, 2020, Handbook on Measuring Digital Trade, Version 1, p.11

¹³ Ibid.

The most significant achievement of the aforementioned WTO work programme on electronic commerce was the temporary 'Moratorium on Customs Duties on Electronic Transmission', signed in 1998 and reaffirmed biennially at WTO's ministerial conferences.¹⁴ Although a number of significant issues on 'trade-related aspects of global e-commerce' were initially identified, discussions amongst WTO members were divided up among the committees for goods, services, trade-related aspects of intellectual property rights (TRIPS), and trade and development.¹⁵ The flailing Doha Round all but guaranteed that there was little progress on finding common rules for digital trade, which continued to grow at breakneck speed. In the absence of progress to update the multilateral rulebook on digital trade, more and more countries started to address digital trade in bilateral trade agreements.

The Trade Agreements Provisions on Electronic-commerce and Data (TAPED) project at the University of Lucerne has shown that the first regional trade agreement (RTA) with a provision on digital trade was an accord between Jordan and the US, signed in 2000, and the first RTA with a dedicated chapter on digital trade was the agreement between South Korea and the US, signed in 2007.¹⁶ In the years since, an increasing share of RTAs features provisions on digital trade, while the number of provisions per agreement is increasing as well. Of the total 345 RTAs concluded between 2000 and June 2019, 182 contain provisions related to digital trade and 77 have a dedicated chapter.¹⁷ With lack of progress in the Doha Round, trade agreements have therefore served as a laboratory for the regulation of digital trade.

Table 1 lists the key provisions related to digital trade that can be found in trade agreements and that have recently also been included in negotiations at the WTO. It shows that some provisions address mostly the facilitation of digitally ordered goods, such as de minimis requirements, changes to customs procedures, and market access and national treatment for logistics services. There are also a number of cross-cutting provisions that affect both digitally ordered goods and services and digitally deliverable services, such as competition clauses, consumer protection, data protection, digital taxation, digital trade-related intellectual property, the facilitation of electronic transactions, government procurement, internet access, and open government data. Lastly, there are provisions that mostly address the delivery of digital services, such as those on cross-border data flows, cryptography, customs duties on electronic transmissions, cybersecurity cooperation, data localization, intermediary liability, net neutrality, source code protection, spam, and technological neutrality.

The delivery of digital services, in particular discussions around cross-border data flows, customs duties on electronic transmissions, and data localization measures have proven to be amongst the most contentious topics in negotiations on digital trade. At the WTO, customs duties on electronic transmissions have also become a controversial topic in recent years, as some developing countries, such as India and South Africa, are worried about the customs revenue implications from lower

¹⁴ Note that the moratorium has become a more heated topic of debate in recent years.

¹⁵ Yasmin Ismail, 2020, E-commerce in the World Trade Organization: History and latest developments in the negotiations under the Joint Statement Initiative, International Institute for Sustainable Development (IISD) and CUTS International, Geneva, pp.8-9

¹⁶ https://www.unilu.ch/en/faculties/faculty-of-law/professorships/managing-director-internationalisation/research/taped/; The United States' dominant position in the technology sector is a key factor behind their aggressive push to incorporate digital trade provisions into major trade agreements such as negotiations for the (failed) Transatlantic Trade and Investment Partnership (TTIP), the (failed) Comprehensive and Progressive Agreement for Trans-Pacific Partnership (TPP), the United States-Mexico-Canada Agreement (USMCA), and most recently the Indo-Pacific Economic Framework (IPEF).

¹⁷ Ibid.

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trade in goods due to digitization.¹⁸ These negotiations therefore point to the centrality of data in digital trade, around which at least three different models of digital trade that have evolved.¹⁹ First, a liberal US model that prizes openness -an offensive position that is aided by the strong position of US technology firms in both digitally-ordered goods (e.g. Amazon and eBay) and digitally-delivered services (e.g. Google and Facebook). Second, a Chinese model, that is offensive on digitally ordered trade of goods (benefiting firms like Alibaba and JD.com), but defensive on digitally deliverable services, which are at odds with the Chinese system of censorship. Lastly, the EU, which is the world's largest export of goods and services and therefore has strong interests in facilitating both digitally-ordered goods and digitally deliverable services, but whose strong privacy regulation has sometimes seen it take a somewhat defensive position on digitally deliverable services.²⁰ Section four of this paper will return to the regulatory aspects of the EU's digital trade agenda with a detailed map of the digital trade provisions that have been employed in the EU's trade agreements. But before, the next section will take a closer look at the size and composition of the EU's digital trade.

¹⁸ *Cf.* Nicolas Köhler-Suzuki, 2020, New evidence on the impact of customs duties for digitizable products and electronic transmissions. The cases of Egypt and Vietnam, Dalberg, p.3

¹⁹ Ferracane, Martina Francesca; van der Marel, Erik. 2021. Regulating Personal Data: Data Models and Digital Services Trade. Policy Research Working Paper No. 9596. World Bank, Washington, DC.

²⁰ Note that some critics charge the EU's privacy regulations are a hidden form of digital protectionism, given that only one of the largest thirty internet firms is European (Spotify). *Cf.* Nicolas Köhler-Suzuki, 2020, Strategic Choices for the EU's Digital Trade Policy after the US Elections, Jacques Delors Institute

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TABLE 1. A glossary of key digital trade issues

Competition	Addressing negative externalities of platform business models and network effects that are amplified
	through digital markets
Consumer protection	Addressing misleading, fraudulent and deceptive commercial cross-border activities in the digital
	realm; consumer redress mechanisms; transparency on transaction costs, warranty periods and expi-
	ration dates
Cross-border data flows	Prohibiting restrictions on the cross-border transfer of information
Cryptography	Restrictions on the transfer of encryption keys
Customs duties on	Prohibiting the levying of tariffs on the content and/or carrier medium of electronically transmitted
electronic transmissions	information, often in reference to the 1998 WTO Moratorium on Customs Duties on Electronic Trans-
	missions (subject to reapproval by WTO Ministerial Conferences)
Cybersecurity cooperation	Intergovernmental cooperation to address security externalities arising from digital integration
Data localization	Requiring the use of computing facilities in the jurisdiction of a territory as a precondition to conduct
	business there.
Data protection	Recognition of privacy safeguards for personal and/or confidential non-personal data
Digital taxation	Taxes on digital services to address negative externalities from the cross-border exchange of data,
	such as Base Erosion and Profit Shifting (BEPS). This can also include principles and mechanisms to
	address the challenges for the collection of Value Added Tax (VAT) on cross-border sales of digitally
	ordered goods and services.
Digital trade facilitation	De minimis requirements for digitally purchased goods, changes to customs procedures, electronic
	interfaces for exchanging data with customs authorities and system interoperability, market access
	and national treatment obligations for logistics services, paperless trade and technological solutions
	for customs clearance
Digital trade-related	Remedies to digital copyright infringement, such as online piracy or counterfeit goods ordered online
intellectual property	
Facilitation of electronic	Electronic transaction frameworks; including standards on electronic authentication, electronic signa-
transactions	tures or digital certificates; electronic contracts; electronic invoicing; electronic payments services;
	harmonization of domestic electronic commerce regulation with the 1996 UNCITRAL Model Law on
	Electronic Commerce
Government procurement	Commitments to electronic tendering of government procurement
Intermediary liability	Legal responsibility of digital platforms for what their users do and say
Internet access	Ensuring that users have access to the internet on a fair, reasonable and non-discriminatory basis
Net neutrality	Non-discriminatory treatment of digital communications by Internet Service Providers (ISPs)
Open government data	Public access and use of non-confidential government data in a machine-readable and open format
Regulatory transparency	Transparency on laws related to electronic commerce, electronic availability of trade-related informa-
	tion
Source code protection	Prohibitions against the transfer of, or access to, the source code of software as a condition for import,
	distribution, or sale
Spam	Safeguards against unsolicited electronic messages (sometimes also subsumed under consumer
	protection)
Technological neutrality	Digitally delivered services will be treated no less favorable than services delivered via other modes of
	supply (also defined in the 1996 UNCITRAL Model Law on Electronic Commerce)

▲ Source: Author's compilation based on TAPED database and provisions in the consolidated negotiating text of the WTO Joint Initiative on electronic commerce (INF/ECOM/62/Rev.1)

II • Measuring the EU's digital trade: how much, what, and with whom?

The definition of digital trade as a composite of digitally ordered goods and services and digitally delivered services provides some clarity which economic activity should be analyzed to get a picture of the EU's digital trade. However, statistical measurement of digital trade is still at nascent stage. The latest EU Trade Policy Review recognizes these shortcomings and calls for a European analytical framework for the measurement of data flows to better assess their size and value.²¹ However, as the debate on EU digital trade is gathering steam, it is useful to get a first idea about its size, structure, and direction.

I HOW TO ESTIMATE THE VALUE OF DIGITAL TRADE

While more precise information on the value of data flows will become available in the future, new experimental datasets from the WTO offer some first insights. The Trade in Services data by mode of supply (TiSMoS) dataset for the first time allows us to disaggregate services trade data by mode of supply.²² In the digital age, it can safely be assumed that a majority of the cross-border supply of services (Mode 1) is delivered via digital networks.²³ There is thus a close correlation between Mode 1 services data and digitally delivered trade as defined by the Expert Group on Measuring Digital Trade.²⁴ Moreover, the WTO-OECD Balanced Trade in Services (BaTiS) dataset captures 90% of EU services trade on a bilateral basis. However, for the purpose of this study there are some limitations that come with these databases. First, while the WTO has recently started to publish export data for digitally deliverable services, extra-EU TiSMoS data to compute digitally deliverable imports and sectoral breakdowns is for now still aggregated for the EU-28 -*i.e.* including the UK.²⁵ Second, the BaTiS data doesn't include digitally tradeable sectors other than insurance and pension services, financial services, charges for the use of intellectual property; telecommunications computer, and information services. Third, as the data is based on cross-border payments, it doesn't include free digital services, in which no monetary transaction takes place, but data crosses borders that may thereafter be monetized, e.g. for analytical or advertisement purposes. Fourth, services data does not provide insight into the value of digitally ordered goods. The Expert Group on Measuring Digital Trade proposes to fill this gap through surveys, financial transaction information, and Universal Postal Union data to break down B2B and

- 21 EU European Commission, 2021, Trade Policy Review An Open, Sustainable and Assertive Trade Policy
- 22 Services trade data is based on Balance of Payments Statistics (BOPS). The allocation by Mode of Supply is an expert estimate for each service category. *Cf.* Wettstein *et al.*, 2019, A Global Trade in Services Data Set by Mode of Supply (TiSMoS), WTO.
- 23 The four modes of supply for services under the General Agreement on Trade in Services (GATS) are: cross-border supply (Mode 1), whereas services are provided from the territory of one country into the territory of another; consumption abroad (Mode 2), whereas service provision in the territory of one country to the consumer of another country; commercial presence (Mode 3), whereas the service provider establishes a physical presence in another country to provide the service; and presence of natural persons (Mode 4), whereas the service provider sends personnel to another country to provide the service.
- 24 Note that many, but not all Mode 1 services are supplied via digital networks. According to the Handbook on Measuring Digital Trade, other forms of cross-border supply of services include phone, fax or manually typed email. In addition, the Handbook recognizes that some transactions for digitally delivered trade can also take place under Mode 2, such as telecommunications services received abroad, and encourages statistical agencies to use complementary survey tools to derive estimates (p.13). However, these data are not yet available and for the purpose of this study, a less precise estimate using Mode 1 data as 'reasonable approximation' (p.14) will be used to give an early estimate of EU digital trade.
- **25** An update to the TiSMoS dataset, including EU-27 data on extra-EU trade, is likely to be published in the coming months.
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B2C transactions.²⁶ In the meantime, there is not yet comprehensive data available for extra-EU trade. With these limitations in mind, there are still important insights that the data can offer for the EU's digitally deliverable services trade.

While some services, such as construction, are by definition not supplied across borders since they require a physical presence in the receiving territory, many other contemporary services depend on digital networks for delivery. Few architectural firms today will deliver their blueprints by mail or fax. Similarly, the original Netflix delivery of physical DVDs by mail has been surpassed many times over by content delivery via digital networks. For digital trade, this concept applies to cross-border delivery and the Handbook on Measuring Digital Trade identifies twelve categories of services that are digitally deliverable: Insurance and pensions services; financial services; charges for the use of intellectual property; telecommunications, computer, and information services; research and development services; professional and management consulting services; architectural, engineering, scientific and other technical services; other business services; audio-visual services; health services; education services; and heritage and recreational services.²⁷

I THE EU'S LEADERSHIP IN DIGITALLY DELIVERABLE SERVICES

Figure 1 shows that the EU-27 is the world's largest exporter of digitally deliverable services. It exported digitally deliverable services valued at 314 billion USD in 2010, which increased to 770 billion USD in 2022. Throughout the 2010s, the EU-27 exported more digitally deliverable services than the United States and the gap has widened in recent years. The EU-27 also exported about two times as many digitally deliverable services as the United Kingdom, and about three times as much as India and China. This data runs counter to the expectation that the United States is the greatest beneficiary of free cross-border data flows and shows that the EU should be just as invested in the topic.



FIGURE 1. The world's five leading exporters of digitally deliverable services

26 Cf. Chapter 3 of the Handbook on Measuring Digital Trade

27 OECD, WTO, IMF, 2020, Handbook on Measuring Digital Trade, Version 1, p.13; note that for presentation purposes this paper excludes the estimates of imports and exports of digital intermediation services, covered in various parts of EBOPS.

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Figure 2 shows the composition of the EU's digitally deliverable services exports. Contrary to many popular illustrations of digital trade applications, telehealth and online education are only a small fraction of the EU's digital services exports. Even the exports of audiovisual and related services, which presumably includes one of the EU's largest technology firms-the Swedish music streaming giant Spotify-amounted to only one per cent of all digitally deliverable services exports.



FIGURE 2. Composition of EU-28 digitally deliverable services exports

Instead, the data shows significant shares for telecommunications computer and information services (23%); professional and management consulting services (11%); other business services (10%); research and development services (7%) and architectural, engineering, scientific and other technical services (6%). The 19% share for financial services is also noteworthy but may be a particular reflection of the United Kingdom's financial sector. Moreover, data for intellectual property charges are likely an artefact of tax avoidance strategies of multinational corporations rather than a reflection of real underlying economic activity.²⁸ However, the composition is still indicative that several economic sectors outside of a more narrowly defined scope for the digital economy make up a significant share in the EU's digitally deliverable services exports and should be closely consulted for digital market access concerns.

²⁸ Cf. Brad Setser, 2020, When the Services Trade Data Tells You More About Tax Avoidance Than About Actual Trade, Council on Foreign Relations

FIGURE 3. The European Union's digitally deliverable services imports



Figure 3 shows that the EU-28 was also the largest importer of digitally deliverable services in the 2010s. It imported digitally deliverable services valued at 256 billion USD in 2010, which increased to 410 billion USD in 2017. This is equivalent to about forty to eighty per cent more than US imports of digitally deliverable during the same period, about six to eight times as much as India and about three to four times as much as China. Data for the EU-27 would likely be about 12 per cent lower, which would still place make the EU-27 the largest importer of digitally deliverable services over the last decade.²⁹ This emphasizes the market power of the EU in digital trade. It also underlines why the General Data Protection Regulation (GDPR) had such a strong influence on privacy legislation worldwide.³⁰ The data suggests that the EU can continue to leverage the weight of its digital market to influence future global regulatory regimes for the digital economy, including those on digital taxation, competition, and artificial intelligence.

Figure 4 reveals that the most critical economic sectors for EU-28 imports of digitally deliverable services are financial services (13%); telecommunications, computer and information services as well as professional and management consulting services (both 12%); research and development services and other business services (both 11%). Comparable to the EU's digitally deliverable services exports, telehealth, online education services, and audio-visual services only have a minor role. The data for charges for the use of intellectual property, much like the data for digitally deliverable services exports, can be largely discounted as a statistical artifact. In short, the data suggests that, similar to digitally deliverable services exports, the EU should take a holistic picture of digital flows into the Union that goes beyond a narrowly defined technology sector when it engages with partner countries to regulate cross-border regulatory spillovers.

Unfortunately, there is currently no available bilateral data on the trade of digitally deliverable services under Mode 1. However, the World Trade Organization's statistics on bilateral services trade for all modes of delivery can still provide an indication of the European Union's main trading partners in the digital domain.³¹ In order to

²⁹ Estimate based on 2019 Eurostat data for all services imports (all modes of supply) for the EU-28 (2065 billion EUR) in comparison with the EU-27 (1823 billion EUR).

³⁰ *Cf.* Anu Bradford, 2020, The Brussels Effect, How the European Union Rules the World. Oxford University Press, Oxford.

³¹ WTO, 2019, WTO-OECD Balanced Trade in Services Dataset (BaTiS); note that the April 2023 version of BaTiS does not contain extra-EU data on a bilateral basis.



FIGURE 4. Composition of EU-28 digitally deliverable services imports

gain a clearer picture, it is necessary to focus on the more narrowly defined sectors of telecommunications, computer, and information services, as the inclusion of other digitally deliverable services that are largely delivered through other modes would skew the data. The data, as presented in Figure 3, reveal that nine countries in the recent past made up 60% of the EU's extra-EU trade in telecommunications, computer, and information services, with a total value of 183 billion USD in 2019. These countries, listed in descending order of magnitude, are the United Kingdom, United States, Switzerland, China, Japan, India, Russia, Canada, and Brazil. This highlights the importance of the size of a partner economy and distance to the EU in determining trade patterns.

Figure 5 shows that the value of extra-EU trade in telecommunications, computer, and information services has grown significantly between 2013 and 2019, with the United Kingdom and United States each accounting for around 30% of EU-27 totals. However, this growth has been more moderate with the other top nine partner countries. The data on trade of digitally deliverable services in EU suggests that policy makers in Europe should focus on digital trade negotiations with its top trading partners. This is particularly important in light of the ongoing discussions (and potential legal challenges) surrounding the Trans-Atlantic Data Privacy Framework and the EU-UK Trade and Cooperation Agreement. As the data shows, the US and UK are among the EU's top trading partners in the digital domain, making it crucial for Europe to ensure that any agreements reached with these countries are favorable for the EU's exporters of digital services.





The EU has digital trade agreements in place with just three of its top nine digital partner economies: the UK, Japan, and Canada. Furthermore, the EU-Mercosur agreement, which includes a digital trade chapter, is yet to be ratified. While adequacy decisions and data transfer frameworks have been established with Switzerland and the United States, these do not extend to other areas of digital trade such as market access and national treatment, prohibition of electronic customs duties, digital trade facilitation and consumer protection.

III . How does the EU regulate digital trade?

In recent years, the regulation of digital trade in the Asia-Pacific region has garnered significant attention amongst policymakers, with accelerated discussions surrounding agreements such as the Transpacific Partnership (TPP). Following the United States' withdrawal from the TPP in early 2017, there has been an increasing number of digital trade agreements, such as the 2020 Digital Economy Partnership Agreement (DEPA) between Singapore, New Zealand, and Chile and the 2022 Korea-Singapore Digital Partnership Agreement.

However, the European Union has also had a long history of including electronic commerce in its trade agreements and has more recently moved towards soft law frameworks with other partners. While the Asia-Pacific may have served as a policy laboratory for digital trade regulation, the EU's efforts are frequently overlooked, in particular considering the substantial global reach of the EU's wide network of trade agreements.

The European Union has been incorporating digital trade provisions into its trade agreements for almost two decades, according to data from the Trade Agreements Provisions on Electronic-commerce and Data (TAPED) database from the University of Lucerne, which is presented in Table 2.³² It shows that already in the early 2000s, the EU began including provisions for data in its trade agreements, primarily focusing on trade facilitation and intellectual property (IP) that covered some aspects of digital trade. However, at the time there were no standalone digital trade or e-commerce chapters in these agreements.

This started to change in the late 2000s, when the EU began including more comprehensive digital provisions. This trend was particularly evident in the EU's Free Trade Agreement with South Korea, which was signed in 2010 and included the EU's most comprehensive e-commerce chapter to that date. Notably, this is indicative to a certain amount of policy diffusion, as South Korea had signed an FTA with the United States in 2007 which was South Korea's most comprehensive trade agreement on electronic commerce at that time. More recently, the EU's trade agreeements have included even greater coverage and more binding provisions for digital trade. This is particularly true of the 2020 EU–UK Trade and Cooperation Agreement and the soon-to-be ratified FTA with New Zealand.

The omissions in the EU's trade agreements are as significant as their inclusions, as they provide insight into the EU's policy preferences. Specifically, the EU's trade agreements lack provisions concerning digital trade, such as: (1) constraints on data localization requirements, (except for non-binding provisions in the FTAs with Colombia-Peru, Mexico, and Japan), although this has recently changed in the EU-UK Trade and Cooperation Agreement and the FTA with New Zealand, (2) national and MFN treatment in digital trade, (3) reference to the 1996 UNCITRAL Model Law on Electronic Commerce, (4) open government data or public access to government information, (5) principles on access to and use of the internet for electronic commerce (except for a soft provision in the EU-Mexico Modernised Global Agreement), (6) net neutrality rules, (7) prohibition of intermediary liability of interactive computer services (which is championed by the United States, similar to section 230 of the US Communications Decency Act), and (8) cryptography.

Consequently, it is evident that the EU has a distinct and continually evolving approach to digital trade when compared to other economies.

³² Mira Burri, 2023, A Dataset on Digital Trade Provisions

TABLE 2. EU trade agreements with digital trade commitments

			E-commerce chapter	Technological neutrality	Market access and national treatment	Prohibition of customs duties	Dispute settlement	Transparency	Digital trade facilitation	Electronic signatures	Consumer protection	Data protection	Data flows	Spam	Cybersecurity	Source code	Intellectual property	Government procurement
Agreement	Signed	In force										1						
Egypt AA	2001	2004							O								0	
Algeria AA	2002	2005							O			•	O				0	
Chile AA	2002	2003			O							Ð	0				0	•
Bosnia and Herzegovina	2008	2008			O							0					O	
SAA																		
CARIFORUM EPA	2008	2008			•	•	•		•	0	0	Ð	0	0			0	0
Côte d'Ivoire EPA	2008	2016										0						
Papua New Guinea and	2009	2009						0	O			Ð						
Fiji IPA																		
Cameroon EPA	2009	2013										•	0				O	0
South Korea FTA	2010	2011	Х		•	•	•		0	0	0	Ð		0			O	
Central America EU FTA	2012	2013	Х		•	•	•		•	0	0	O		0			O	0
Colombia Peru FTA	2012/2014	2013	Х		•	•	•		O	0	0	O		0	0		O	0
Moldova AA	2014	2014	Х		•	•	•			0	0	Ð		0	0		O	
Georgia AA	2014	2016	Х		•	•	•			0	0	O		0			Ð	
Ukraine AA	2014	2017	Х		•	•	•			0	0	●		0			O	
Ghana EPA	2016	2016							O			Ð						
Canada CETA	2016	2017	Х		•	•	•	0	0	0	0	O		0			Ð	0
		(provisionally)																
Armenia CEPA	2017	2018	Х		•	•	•	0	0	0	0	O		0			Ð	
Japan EPA	2018	2019	Х	0	Ð	•	•	0	0	•	0	Ð	Ð	•	O	•	Ð	
Singapore FTA	2018	2019	Х		•	•	•	0	0	0	Ð	O		0			Ð	0
Mexico (update)	2018	not yet	х		•	•	•			Ð	Ð	Ð	Ð	•	0	•	Ð	0
		ratifFled																
Vietnam FTA	2019	2020	Х		•	•	•	0		0	Ð	O		0			Ð	0
MERCOSUR AA	2019	not yet	Х	0	•	•			0	•	O	0		0			0	0
		ratified																
UK TCA	2020	2021	Х	•		•				•	0	•	•	•		•		
New Zealand FTA	2023	not yet	Х			•	•	•	O	•	O	0	•	•	0	•	•	0
	(negotiations concluded)	ratified																

• binding commitments

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 \bigcirc non-binding commitments

- ▲ Note: Agreements under negotiation are subject to change, some TAPED categories were combined for presentation purposes (digital trade facilitation and intellectual property)
 ▲ Source: Author's compilation of data adapted from Trade Agreements Provisions on Electronic-commerce and Data
- (TAPED)

I WTO NEGOTIATIONS AND EMERGING MODELS FOR COOPERATION

The European Union is actively participating in the World Trade Organization's Joint Initiative on E-commerce, which began in 2017 and now involves over 87 WTO members. The initiative focuses on six key themes, including enabling electronic commerce, openness and electronic commerce, trust and digital trade, cross-cutting issues, telecommunications, and market access.³³ These subjects overlap significantly with the objectives the EU has pursued bilaterally. Most notably, the EU negotiation position emphasizes securing improved market access for goods and services, consumer benefits, fair competition within the telecommunications sector, and an extension of the moratorium on customs duties on electronic transmissions.³⁴ While a plurilateral or multilateral outcome would be desirable to avoid duplication and achieve common global standards across a large number of countries, it remains questionable at this point if the e-commerce negotiations at the WTO can be successfully concluded, particularly due to significant differences in preferences on data governance among some major participants, which may prove to be insurmountable obstacles.³⁵

Perhaps as a fallback option, the EU has therefore recently started to conclude stand-alone 'digital partnerships' with Japan (May 2022), South Korea (November 2022) and Singapore (December 2022), which may serve as a template for cooperation on digital issues with other countries. The digital partnership model is emerging as a distinct approach to digital trade compared to the commitments seen in traditional EU trade agreements. It covers a range of substantive issue areas, including privacy, cybersecurity, and data governance. It also includes specific digital trade issues, such as paperless trading, electronic invoicing, digital identities, and online consumer protection.³⁶ Notably, the agreements emphasize is the EU's conditional safeguards approach to data flows, which differs from the more laissez-faire approach of the US and the restrictive Chinese model.³⁷ The digital partnerships also establish coordination mechanisms with partner countries on issues such as semiconductors, 5G networks, high performance computing, quantum technology, artificial intelligence, digital connectivity, and distributed ledger technologies. Crucially, however, the commitments in these partnerships are on a soft-law basis and are non-binding for signatories. Instead, they are intended as process-driven, with meetings at the ministerial level, known as 'Digital Partnership Councils'. Notably, within the European Commission, DG CONNECT is responsible for these partnerships, rather than DG TRADE, which is traditionally in charge of goods and services trade negotiations. While their non-binding nature may provide greater flexibility, it raises an existential question for the digital trade agenda, which was born precisely to include digital regulations in trade regimes, which have a greater degree of enforceability than most other international agreements.³⁸

Still, as tensions continue to rise between China and other global powers, discussions surrounding technology and trade are also taking center stage in other new international fora that the EU engages in. For example, the EU-US Trade and Technology Council (TTC), which was established in June 2021, has largely focused on issues such as semiconductor supply chains, AI regulation, investment screening, and export controls. However, discussions also include topics on the digital trade

37 World Bank, 2021, Regulating Personal Data: Data Models and Digital Services Trade

³³ WTO, 2023, Joint Initiative on E-commerce

³⁴ European Parliament, 2022, WTO e-commerce negotiations

³⁵ Borderlex, 2023, WTO e-commerce plurilateral: what negotiators need to work out in 2023

³⁶ European Commission, 2022, Japan-EU Digital Partnership

³⁸ Shamel Azmeh, Christopher Foster, Jaime Echavarri, The International Trade Regime and the Quest for Free Digital Trade, International Studies Review, Volume 22, Issue 3, September 2020, pp. 671–692

agenda, such as cybersecurity data and platform governance. Moreover, similar to the Digital Partnership model, the TTC model could proliferate in the future. For example, in April 2022 the EU established a second TTC, with India, which includes discussions around strategic technologies, digital governance, and digital connectivity.³⁹

I COMPARING THE EU'S DIGITAL TRADE ARRANGEMENTS WITH THE US AND CHINA

The EU therefore has an extensive network of 24 trade agreements with provisions for digital trade, 15 of which feature dedicated chapters for such issues, along with additional regulatory cooperation arrangements with five other countries. How does this compare to the digital trade engagement of the EU's main competitors, the US and China?

According to the TAPED database, the United States has entered into 15 trade agreements that contain digital trade chapters and are currently in force.⁴⁰ These agreements include RTAs with Singapore (2003), Chile (2004), Australia (2004), Morocco (2004), CAFTA and the Dominican Republic (2004), Bahrain (2004), Oman (2006), Peru (2006), Colombia (2006), Panama (2006), South Korea (2007), the Trans-Pacific Partnership (2016), the United States-Mexico-Canada Agreement (2018), and Japan (2019). However, comprehensive data flow provisions with binding prohibitions on data localization have only been included in the agreements signed after the TPP, from which the US notably withdrew in 2017. Additionally, the Biden administration has put the negotiations of new trade agreements on hold and its reluctance to grant market access to the US for domestic political reasons raises uncertainty about the data and privacy component in the more recent Indo-Pacific Economic Framework, which includes a number of partner countries.

China has also entered into several trade agreements that contain digital trade chapters: South Korea (2015), Australia (2015), the Eurasian Economic Union (2018), Singapore (2019), Mauritius (2019, Cambodia (2020), the Regional Comprehensive Economic Partnership or RCEP (2020), and New Zealand (2021). China's agreements particularly feature provisions on prohibition customs duties on electronic transmissions, electronic signatures, and digital trade facilitation, as well as consumer protection and cybersecurity measures. However, for now China's only agreement with enforceable data localization restrictions is RCEP, which also include significant national security exceptions.

In summary, the EU has currently a greater number of trade agreements that cover digital trade than either the United States or China. Furthermore, the EU has established new templates for cooperating on digital trade with partner countries through digital partnerships and trade and cooperation councils, which can be quickly scaled to other partner countries. The US, however, has been slow to engage in meaningful trade agreements, while China's agreements appear to favor a model with wide-ranging exemptions that call into question their enforceability.

³⁹ European Commission, 2023, EU-India: new Trade and Technology Council to lead on digital transformation, green technologies and trade

⁴⁰ Mira Burri, 2023, A Dataset on Digital Trade Provisions

Conclusions

This analysis demonstrates that the European Union is a prominent player in the export and import of digital services and at the forefront of regulating digital trade with international partners. It also highlights that discussions surrounding technology leadership often neglect the fact that, in the context of the digital transformation of the economy, it is necessary to expand our definition of the technology sector and take into account the role of other digitally deliverable services when designing digital trade policies and market access strategies. These firms are increasingly dependent on cross-border digital infrastructure and data flows.

In line with this, the European Commission's 2030 Digital Compass Communication, which serves as a strategic medium-term framework for the EU's digital transformation, calls for the formation of digital partnerships with like-minded partners. The EU can leverage its extensive network of trade agreements and cooperation arrangements, which already have substantial coverage of digital trade issues, to maintain a competitive advantage over its main rivals in the digital economy. The data on digitally deliverable services exports presented in this paper suggest that **the EU should also adopt an offensive approach to promote its interests abroad, while continuing to uphold the European model for the digital economy, which prioritizes consumer rights and other public policy objectives**. The Commission should moreover review, after a period of experimentation, whether binding or non-binding pathways of cooperation are more effective in promoting European interests and values.

Finally, the analysis highlights that there is still a lack of sufficient data to fully understand the cross-border digital economy. In light of this, the EU should support and expand support for the OECD, UNCTAD, and WTO's work on measuring the digital economy, including databases such as WTO TiSMoS and BaTiS, and to consistently update them with time series data for extra-EU-27 trade to help policymaking in a post-Brexit EU. Future European legislation could also mandate reporting requirements for firms to improve the measurement of digital trade and support better policies to address the challenges of the digital transformation.

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