



International Centre for Trade  
and Sustainable Development

# Facilitation 2.0: E-Commerce and Trade in the Digital Age

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Think Piece



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Facilitation 2.0 is a comprehensive approach to twenty-first-century trade conceived by ICTSD that encompasses services, goods, investment, and e-commerce. It builds on the Trade Facilitation Agreement of the World Trade Organization and lays out a possible way forward for its expansion, while providing an innovative narrative for coherent policymaking at the domestic, regional, and multilateral levels.

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## **Abbreviations**

|       |   |
|-------|---|
| CPTPP | Comprehensive and Progressive Agreement for Trans-Pacific Partnership |
| EU    | European Union  |
| GDPR  | General Data Protection Regulation                                    |
| ICT   | information and communication technology                              |
| MSMEs | micro, small, and medium-sized enterprises                            |
| NAFTA | North Atlantic Free Trade Agreement                                   |
| PTA   | preferential trade agreement  |
| RCEP  | Regional Comprehensive Economic Partnership                           |
| SDGs  | Sustainable Development Goals   |
| TTIP  | Transatlantic Trade and Investment Partnership                        |
| TPP   | Trans-Pacific Partnership   |
| US    | United States   |
| WTO   | World Trade Organization  |

## Executive Summary

In today's digitalised and globalised economies, many seemingly simple transactions are subject simultaneously to numerous regulations. A purchase of an item online is an electronic transaction that involves the provision of a good along with a number of services (electronic payment, delivery, etc.) and crosscuts at least three directly related policy areas—trade in goods, trade in services, and electronic commerce—touching upon various other regulatory domains, including intellectual property rights, data flows, and competition policy. With a growing number of transactions available on the internet, the interconnection between regulatory issues creates unprecedented complexities for both transaction subjects and policymakers.

Through the lens of Facilitation 2.0, one can identify and target the development of simplified and harmonised procedures to facilitate cross-border exchanges of goods, services, and knowledge. In the case of e-commerce, these measures include trade facilitation measures to speed up the movement of goods and services across borders; measures conducive to creating a level playing field and favourable environment for businesses and consumers; and measures related to adjacent policy areas to minimise potential negative effects on traditional economic practices.

Preferential trade agreements comprise the most comprehensive sets of international regulations to date and cover many of the measures suggested by the multidimensional nature of the Facilitation 2.0 approach. Modern e-commerce regulatory hubs correspond to the countries with the highest volumes of e-commerce as measured by the value of transactions—China, the United States, the European Union, Japan, and the Republic of Korea—along with regulatory champions, such as Canada and Australia. An extensive network of trade agreements between these economies suggests the following sets of measures are used to regulate and promote e-commerce:

- General provisions: include issues related to cooperation or dialogue on a predetermined array of policy areas, transparency, non-discriminatory treatment of digital products, electronic supply of services, and domestic regulatory frameworks. General provisions crosscut the entire domain of e-commerce regulations and thus do not regulate any specific type of transaction or policy area.
- Trade facilitation measures: encompass customs duties, paperless trading, electronic signature, and electronic certification. Trade facilitation measures relate specifically to ensuring faster and easier movement of goods and services across the border, and streamlining transactions accompanying trade flows.

- Conducive environment: relates to provisions regulating online consumer protection, personal data protection, unsolicited (commercial) email, access to and use of the internet, and cybersecurity. These types of measure ensure a safer and more secure transaction environment, creating more potential for the expansion of cross-border e-commerce.
- Technological issues: include location of computing facilities, treatment of source code, and cross-border transfer of information. This type of provision relates to measures requiring a conceptual position on the functionality of the entire digital domain and e-commerce systems from a technological perspective.

The number of provisions and their depth has increased in recent years. Considering these dynamics, the new generation of trade agreements might be more detailed and go beyond soft commitment and simple cooperation. As computer technology evolves, paperless trading is becoming a more convenient and cheaper way of conducting trade. Single windows, digital signatures, and electronic authentication are examples of technologies that have evolved as a response to complicated bureaucratic procedures. Paperless trading is in the interests of businesses and consumers, as long as it ensures safe and reliable transactions and is thus a potential area for convergence.

Conducive environment and technological issues (such as data privacy, location of computing facilities, free flow of data across borders, and net neutrality), however, face a number of fundamental conceptual differences in approaches in different economies. The existing conceptual differences pose a potential threat to the development of a coherent regulatory environment envisioned by Facilitation 2.0. However, these discrepancies can be seen as a natural outcome of policies aligning with incentives, stemming from inherent differences in market structures and regulatory priorities. Thus, the evolution of e-commerce and technological development would continue to define policy frameworks in the future.

Having an increasing impact on economic development, e-commerce, particularly in developing countries, has raised concerns about sustainability. Ensuring balanced development of the e-commerce sector across different countries and regions, securing equal rights and opportunities for internet users through adequate and harmonised regulations, and minimising negative effects on adjacent regulatory domains are just some of the many challenges that need to be taken into account when formulating cross-border e-commerce rules.

Some of the existing measures in trade agreements, particularly those related to trade facilitation, play an important role in achieving relevant Sustainable Development Goals. Trade facilitation measures, for instance, have a direct effect on achieving increases in exports (Goal 17.11) through advancing the speed of transactions and simplifying exporting procedures, promoting the entrance of new firms to exporting markets, and expanding the level of incumbent exporter operators. Measures aimed at establishing a conducive environment for business play a major role in achieving

the goal of assisting micro, small, and medium-sized enterprises in gaining access to financial services (Goal 8.3). In particular, verifiable online transaction records and cybersecurity measures enhance trust in online payment systems and expand financing opportunities. General provisions, such as transparency, are also critical for integrating smaller firms into global value chains (Goal 9.3), as they face high fixed costs of collecting and analysing information about export markets. Access to and use of the internet and transparency provisions are particularly relevant for the promotion and development of women entrepreneurship (Goal 8.5). The effects of e-commerce in developing markets with weaker regulatory structures are, however, ambiguous, leading to a more cautious approach to new regulations adoption.

# 1. Introduction

Digitalised transactions and e-commerce have become an integral part of our everyday lives and now underpin business operations all around the world. Everybody who has ever performed an internet-based transaction has become a consumer and a producer of digitalised content. While the concept of consumption is clear, the production process does not necessarily involve real production of a good or a service: it can be personal data, provided to the other suppliers, that creates value. Goods, services, data, and financial resources flow across national borders in an uninterrupted stream, while domestic and international regulation try to catch up with the increasing complexity of global interconnectedness.

This paper attempts to conceptually address some of the most important aspects of international regulation. First, it highlights the importance of an holistic approach and the interaction of different regulatory frameworks. As many transactions are being brought into the digital realm, the regulation of goods and services trade and investment is also governed online. While the trade rules of the World Trade Organization (WTO) are technologically neutral, they do not always correspond to the new types of multilevel cross-border interaction. Thus, this paper identifies broad regulatory clusters that are instrumental in ensuring an efficient economic environment.

Second, the paper analyses provisions of a representative universe of preferential trade agreements (PTAs), which reflect some of the most advanced international regulations to date. The provisions in these agreements differ in the level of commitment, with some imposing stricter guidance on the application of a given measure, and others leaving enforcement to the discretion of the signatories. This analysis helps to identify best practices and the areas of potential convergence across agreements.

Third, the paper comments on the relationship between sustainability and e-commerce development, establishing a clear link with specific reference to the goals and targets of the United Nations 2030 Agenda.

## 2. Facilitation 2.0: Context

In today's digitalised and globalised economies, many seemingly simple transactions are subject simultaneously to numerous regulations. Consider an example of buying an item online—an electronic transaction that involves the provision of a good along with a number of services (electronic payment, delivery, etc.). This type of transaction crosscuts at least three directly related policy areas—trade in goods, trade in services, and electronic commerce—and touches upon various other regulatory domains, including intellectual property rights, data flows, and competition policy. With a growing number of transactions available on the internet, the interconnection between regulatory issues creates unprecedented complexities for both transaction subjects and policymakers.

This highlights the importance of an holistic and integrated approach to regulation and policymaking, namely the concept of Facilitation 2.0 (Meléndez-Ortiz 2018). With its core in multidimensionality, Facilitation 2.0 involves identifying and targeting the development of simplified and harmonised procedures to facilitate cross-border exchanges of goods, services, and knowledge.

Figure 1 is a graphical representation of the concept applied to e-commerce, along with the main policy areas that comprise a coherent regulatory environment. The categorisation of various measures and aspects of regulation follows from the structure and texts of trade agreements and broader analysis of issues related to digital trade (Ciuriak and Ptashkina 2018). The intuition is simple. First, both goods and services are traded online. This type of interaction creates direct overlap between trade in goods and

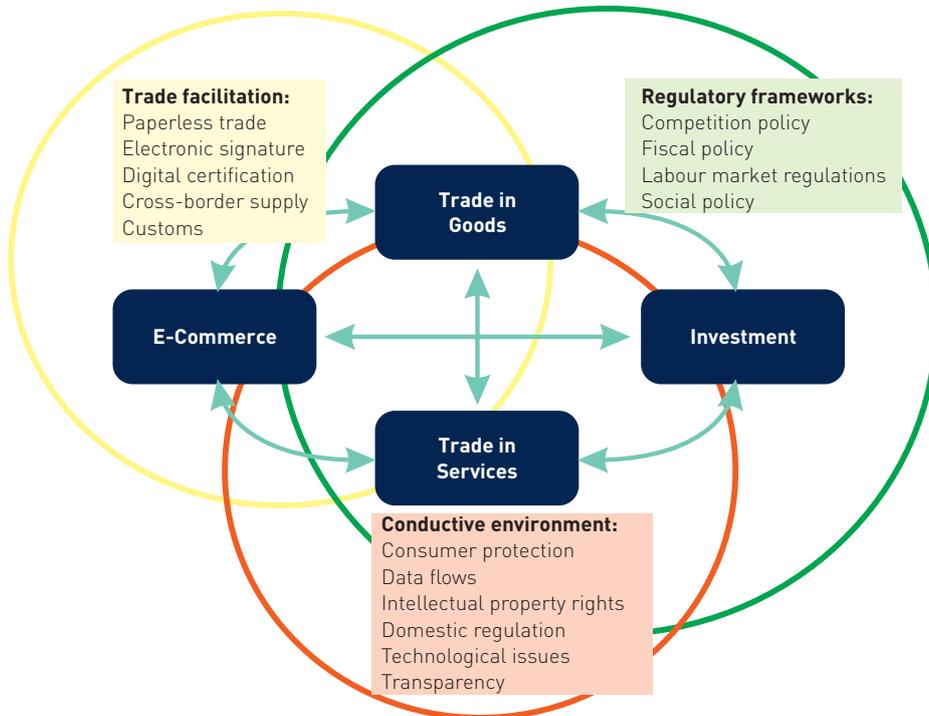
e-commerce and underpins the electronic supply of services. Subsequently, services provisions are linked intimately to investment. Investment, in turn, determines the structures of markets where all the other types of transaction occur.

As represented in Figure 1, the corresponding policy domains apply to all the different trade-related transactions. First, for the purposes of this paper, trade facilitation measures are confined to the intersection of electronic commerce and goods and services trade. Narrowly defined, they include measures related to paperless trade, electronic signatures and authentication, digital certification, cross-border supply of goods and services using electronic means, and all the related customs regulations. Clearly, this definition leaves out measures related to investment facilitation, as broadly defined by Facilitation 2.0, but creates clarity with respect to analysing free trade agreement chapters related to e-commerce.

Conducive (enabling) measures represent a set of regulations that do not relate directly to trade facilitation but are aimed at creating a level playing field and favourable environment for businesses and consumers. These measures include consumer and personal data protection, intellectual property rights, domestic regulation, technological issues, and transparency and reporting provisions. Enabling regulations crosscut all aspects of international trade and indirectly facilitate a smooth operational setting. Regulatory frameworks are defined as a broad set of adjacent policy areas, such as labour market conditions, competition, and fiscal and social policies. Traditional labour markets are being transformed by a surging number of platforms for the provision of services online (Horton, Kerr, and Stanton 2017). These processes are reflected in rising concerns about the efficiency of social policies and competition regulations. Taxation becomes even more of an issue in the absence of clearly defined geographical borders.

**Figure 1.**

Facilitation 2.0: environment and corresponding policy areas from the perspective of e-commerce and digital transactions



Source: Author

Consider two simple examples that demonstrate the extent to which electronic commerce and digital economy have transformed the provision of goods and services and expanded the application of corresponding regulations. The first example—a purchase of a good online, as discussed above—involves a movement of a physical good across a border, thus requiring a usual set of regulations of trade in goods (customs procedures, import duties, etc.). Nowadays, through paperless trade provisions and electronic authentication, these procedures can be streamlined. Furthermore, depending on the nature of the good, various technical or sanitary and phytosanitary regulations might apply, with electronic certification developed to facilitate faster approval.

In addition, online commerce usually involves registration on a website along with the requirement to provide personal information. Consequently, consumers have to be sure that their data and rights are protected throughout the entire process of transaction (for example, that their personal data are not traded with other companies for commercial purposes) and after the transaction is performed (for example, that there is no unsolicited subscription to electronic correspondence). These rights are guaranteed by the regulations in the conducive environment.

Finally, the provision of goods online changes traditional commercial practices and may alter the competitive environment. The effects can be twofold: competition can change the pool of suppliers to those with the highest productivity and thus increase market efficiency. Alternatively, it could also force local communities out of business, leading to greater income inequality. The latter effect can be more pronounced in developing countries, where regulatory and legal frameworks are not mature enough.

The provision of certain services online may also trigger the application of investment regulations. The examples include platform-based transportation services (such as Uber) or delivery services (such as Amazon). While all the enabling environment measures still apply, and the adjacent market regulations are still valid, there is also an additional

layer of investment decisions for companies deciding to operate in overseas markets. Setting up a platform for utilising services abroad, for instance, involves market research, the creation of the platform itself, and continuous monitoring of compliance with internal regulations.

### 3. E-Commerce Agenda in Trade Agreements

Digital transformation has facilitated old modes of trade and created entirely new ones (Ciuriak and Ptashkina 2018), thus increasing the complexity of the regulatory environment. These changes have to be aggregated and viewed from a prism of an integrated trade agenda, with PTAs comprising the most comprehensive sets of international regulations to date.<sup>1</sup>

The measures outlined in various agreements have been studied extensively. Wu (2017) provides an inventory of various legal disciplines and obligations found in trade agreements and describes them in detail. Monteiro and Teh (2017) review the different types of provision that explicitly address e-commerce and show that the provisions are highly heterogeneous. Alschner, Siermann, and Skougarevskiy (2017) use text-mining techniques to identify similarities among the texts of trade agreements and demonstrate the existence of broad regulatory clusters. A conceptual view of similarly composed regulatory hubs is analysed in Ciuriak and Ptashkina (2018).

Not surprisingly, these regulatory hubs correspond to the economies with the highest volumes of e-commerce, as measured by the value of transactions: China, the United States (US), the

<sup>1</sup> For a broader discussion on the issues related to digital trade, see Ciuriak and Ptashkina (2018).

European Union (EU), Japan, and the Republic of Korea.<sup>2</sup> In addition, regulatory champions include Canada and Australia, the active participants in international discussions on the topic. These countries are tied by an extensive network of trade agreements, as represented in Figure 2.

The sizes of the bubbles in Figure 2 represent the relative sizes of e-commerce markets, as measured

<sup>2</sup> Statistics compiled from “Key Figures of E-Commerce.” <https://www.statista.com/markets/413/topic/544/key-figures-of-e-commerce/>.

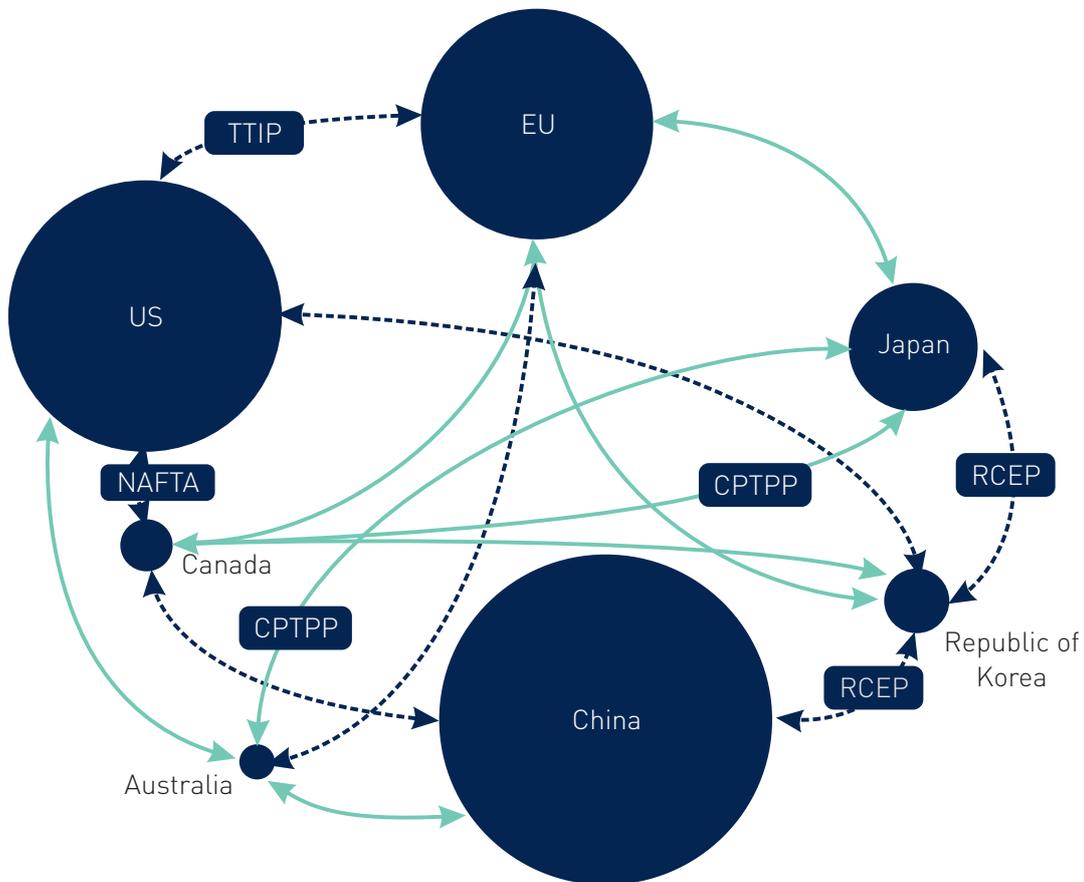
by the revenue of the e-commerce sector.<sup>3</sup> The green arrows indicate a trade agreement in force or signed

<sup>3</sup> The size of e-commerce markets is proxied by a measurable indicator of total retail revenue in the e-commerce sector. As stated in the methodological note of the statistics source, the e-commerce market encompasses the sale of physical goods via a digital channel to a private end-user. Incorporated in this definition are purchases via desktop computers (including notebooks and laptops) and purchases via mobile devices (such as smartphones and tablets). The following are not included in the e-commerce market: digitally distributed services, digital media downloads or streams, digitally distributed goods in business-to-business markets, and digital purchase or resale of used, defective, or repaired goods (re-commerce and consumer-to-consumer).

### Figure 2.

Network of trade agreements among main regulatory hubs in e-commerce

- Trade agreement in force or signed
- - - → Trade agreement under negotiation, consideration, or consultation



Source: Author

between any two given economies; the dashed blue lines indicate agreements under negotiation, renegotiation, consideration, or consultation. Only the agreements with standalone e-commerce chapters are considered. The wider trade deals, such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the Regional Comprehensive Economic Partnership (RCEP), might overlap with existing bilateral trade accords and are indicated in the figure. Australia, Canada, the EU, and Japan are actively participating in trade deals, while China has only one international agreement in force with Australia and intends to cooperate with a number of other countries through the RCEP. The US, which has been the leader in setting the regulatory rules in past decades, at present is not participating in major trade deals: it has exited the Trans-Pacific Partnership (TPP), has suspended transatlantic negotiations, and is not considering e-commerce an important element in the North Atlantic Free Trade Agreement (NAFTA) renegotiation.

Provisions in these agreements can be summarised into several groups, similar to the logic used earlier:

- General provisions: include issues related to cooperation or dialogue on a predetermined array of policy areas, transparency, non-discriminatory treatment of digital products, electronic supply of services, and domestic regulatory frameworks. General provisions crosscut the entire domain of e-commerce regulations, and thus do not regulate any specific type of transaction or policy area. These types of measure are typically included in PTA chapters on other trade-related policy areas (services trade, investment, etc.) and are a focus of multilateral discussions.
- Trade facilitation measures: encompass customs duties, paperless trading, electronic signature, and electronic certification. Trade facilitation measures relate specifically to ensuring faster and easier movement of goods and services across the border, and streamlining transactions accompanying trade flows. These measures are technical in nature, since their implementation requires recognition of standards and technological tools and the creation of databases and templates. Thus, these measures are addressed at a deeper level in PTAs or promoted by specific plurilateral institutions and international fora (such as the Economic and Social Commission for Asia and the Pacific or the Asia-Pacific Economic Cooperation Forum).
- Conducive environment: relates to provisions regulating online consumer protection, personal data protection, unsolicited (commercial) email, internet access and use, and cybersecurity. These measures do not directly facilitate the speed of movement of goods and services across borders, but rather relate to the quality of transactions and thus also their quantity. Put differently, the safer and more secure the transaction environment, the greater the potential to expand the scale of cross-border e-commerce. Conducive environment provisions have come to the forefront with the expansion of the digital economy and online transactions, including e-commerce, and are therefore a relatively “young” regulative domain, addressed mostly in PTAs.
- Technological issues: include the location of computing facilities, the treatment of source code, and cross-border transfers of information. This type of provision relates to measures requiring a conceptual position on the functionality of the entire digital domain and e-commerce systems from a technological perspective. For example, countries that require locating computing facilities in their own territories, and thus not participating in agreements that eliminate this requirement, do so for considerations of retaining control over information processing and storage. Net neutrality or the application of new technologies (such as block chain) would potentially also be included into this category, but they are not yet

part of PTAs. The formulation of these provisions requires deep understanding of underlying technological issues and is at the frontier of knowledge regarding the future development of digital economy.

While the existence of standalone chapters and the number of provisions (analysed in Monteiro and Teh 2017) provides some information on the state of play in international e-commerce, it is not sufficient to identify the levels of convergence among trade agreements. Table 1 represents a more detailed analysis, drawing on the semantic structures and intended word meanings. In other words, the level of commitment of the parties to a given regulatory measure is identified by the use of words. The analysis broadly reveals the measures that are common to the selected universe of recent agreements and identifies which provisions are usually enforceable and which are left to the discretion of participating parties. The exact methodology underpinning the classification is as follows: articles that use words such as “shall” and “commit” are classified as those stipulating strong commitment, while terms such as “endeavour,” “strive,” and “recognise the importance of” demonstrate soft commitment. In addition, some agreements view a number of measures as purely areas of potential discussion, cooperation, and information exchange. For RCEP, since the agreement text is not available at the time of writing, the information is drawn from working group meeting documents.

This methodology is applied to the texts of e-commerce chapters of selected agreements among the regulatory champions in the area and leaders in the e-commerce market identified earlier. The analysis is intended to map the relevant provisions and distinguish among different levels of enforcement. It is important to note that often WTO-plus provisions (such as e-commerce) are carved out of dispute settlement application and thus are not enforceable even with strong language. From the selected agreements, however, this is only the case for the Australia–China agreement. In addition, CPTPP excludes the application of dispute

settlement to some parts of the e-commerce chapter for Malaysia and Viet Nam for two years.

What is immediately visible from Table 1 is that trade facilitation measures are the ones that are included in e-commerce chapters more often and are mostly formulated as strong commitments relative to other types of measure. In particular, abolishment of customs duties is written into all the agreements in the list. Paperless trading is often represented in a separate article, but most agreements formulate it as a soft commitment, except for the deal between China and Australia. Perhaps surprisingly, electronic signature and electronic authentication are not always present in tandem. The reason is that, in some agreements, the provisions are formulated so as not to create unnecessary legislative barriers for the application of electronic signature and authentication, while leaving out any hard commitments on the application of these measures.

General provisions are formulated as strong commitments, but these do not provide for any substantive regulation. For example, provisions on domestic regulatory frameworks stipulate that each party can implement the measures in accordance with its domestic legislation, and some mention compliance with international treaties. Transparency is explicitly written only into the Australia–China agreement and potentially will be included in RCEP.

Conducive environment and technological issues are among the newest provisions being written into trade agreements. Most of these, clearly, take the form of softer commitments or cooperation requirements. Consumer protection provisions have strong language in the Australia–Republic of Korea agreement and in the CPTPP. Personal data protection is binding in the agreements of Australia, Canada, and the EU. The EU also passed the General Data Protection Regulation (GDPR)—a comprehensive set of regulations that applies to all companies that provide services on the territory of the EU, regardless of the companies’ locations. Cybersecurity is rarely mentioned in trade texts and takes the form of cooperation and discussion commitment.

**Table 1.**

Regulations and their relative strength in standalone e-commerce chapters in a representative universe of agreements

|   |                 |
|---|-----------------|
| X | Hard commitment |
| X | Soft commitment |
| X | Cooperation     |
| X | No text         |

| Provision/<br>agreement                                   | EU-<br>Japan | EU-<br>Republic<br>of Korea | EU-<br>Canada | US-<br>Australia | US-<br>Republic<br>of Korea | Canada-<br>Republic<br>of Korea | Australia-<br>Japan | Australia-<br>Republic<br>of Korea | Australia-<br>China | CPTPP | RCEP |
|---|--------------|-----------------------------|---------------|------------------|-----------------------------|---------------------------------|---------------------|------------------------------------|---------------------|-------|------|
| <b>General provisions</b>                                 |              |                             |               |                  |                             |                                 |                     |                                    |                     |       |      |
| Cooperation   | X            | X                           | X             |                  |                             | X                               | X                   |                                    | X                   | X     | X    |
| Transparency  |              |                             |               |                  |                             |                                 |                     |                                    | X                   |       |      |
| Non-discriminatory treatment of digital products          |              |                             |               | X                | X                           |                                 | X                   |                                    |                     | X     | X    |
| Domestic regulatory frameworks and international treaties | X            | X                           | X             |                  |                             |                                 | X                   | X                                  | X                   | X     |      |
| <b>Trade facilitation</b>                                 |              |                             |               |                  |                             |                                 |                     |                                    |                     |       |      |
| Customs duties  | X            | X                           | X             | X                | X                           | X                               | X                   | X                                  | X                   | X     | X    |
| Paperless trading   |              | X                           |               | X                | X                           | X                               | X                   | X                                  | X                   | X     | X    |
| Electronic signature                                      | X            | X                           | X             |                  | X                           |                                 | X                   | X                                  | X                   | X     | X    |
| Electronic authentication                                 | X            |                             |               | X                | X                           | X                               |                     | X                                  | X                   | X     | X    |
| <b>Conducive environment</b>                              |              |                             |               |                  |                             |                                 |                     |                                    |                     |       |      |
| Online consumer protection                                | X            | X                           |               | X                | X                           | X                               | X                   | X                                  | X                   | X     | X    |
| Personal data protection                                  |              |                             | X             |                  |                             | X                               | X                   | X                                  | X                   | X     | X    |
| Unsolicited (commercial) email                            | X            | X                           | X             |                  |                             |                                 | X                   | X                                  | X                   | X     | X    |
| Access to and use of internet                             |              |                             |               |                  | X                           |                                 |                     |                                    |                     | X     |      |
| Cybersecurity   | X            |                             |               |                  |                             |                                 | X                   |                                    |                     | X     |      |
| <b>Technological issues</b>                               |              |                             |               |                  |                             |                                 |                     |                                    |                     |       |      |
| Location of computing facilities                          |              |                             |               |                  |                             |                                 |                     |                                    |                     | X     | X    |
| Non-disclosure of source code                             | X            |                             |               |                  |                             |                                 |                     |                                    |                     | X     | X    |
| Cross-border transfer of information/free flow of data    |              |                             |               |                  |                             | X                               |                     |                                    |                     | X     | X    |

Source: Author

The number of provisions and their depth has increased in recent years. Considering these dynamics, the new generation of trade agreements might be more detailed and go beyond soft commitment and simple cooperation. As computer technology evolves, paperless trading is becoming a more convenient and cheaper way of conducting trade (Duval and Mengjing 2017). While different platforms and regulations are at times not compatible across borders, it does not mean that ensuring interoperability among various software platforms is impossible or even difficult. Single windows, digital signatures, and electronic authentication are examples of technologies that have evolved as a response to complicated bureaucratic procedures. Paperless trading is in the interests of businesses and consumers as long as it ensures safe and reliable transactions and is thus a potential area for convergence. In fact, the efficiency, application, and enforcement of paperless trading measures depend largely on the desire of regulatory authorities to unify technological platforms.

Conducive environment and technological issues, however, face a number of fundamental differences in approaches in different economies. Data privacy, for example, is a major element in the EU's Digital Single Market strategy and has been at the centre of attention with GDPR coming into force. The US is less focused on protecting personal information, as many companies use it for commercial purposes and data comprises a lucrative market of its own. Recent remarks by the European Parliament<sup>4</sup> on the improper functioning of the EU-US Privacy Shield agreement and the adoption of the Clarifying Lawful Overseas Use of Data Act (CLOUD Act) in the US are cases in point to demonstrate the fundamental differences in the way personal data are treated across the Atlantic. The location of computing facilities, free flow of data across borders, and net

neutrality (which is not part of the selected universe of trade agreements' agenda) are also areas where there exist conceptual differences in approaches in major regulatory hubs (see Ciuriak and Ptashkina 2018). The existing conceptual differences pose a potential threat to the development of a coherent regulatory environment envisioned by the Facilitation 2.0 concept. However, these discrepancies can be seen as a natural outcome of policies aligning with incentives, stemming from inherent differences in market structures and regulatory priorities. Thus, the evolution of e-commerce and technological development would continue to define the policy frameworks in the future.

## 4. E-Commerce and Sustainable Development

The expansion of electronic commerce and online operations in recent decades has transformed the nature of a number of economic transactions. These changes, however, are virtually impossible to estimate quantitatively, as they involve utility trade-offs. Intuitively, however, overall welfare is increasing, as consumers get access to wider varieties of cheaper products, and firms increase the speed of transactions and streamline their operations to achieve greater efficiency. Electronic commerce, therefore, is compounded with economic development, and thus requires a balanced approach to achieve sustainability.

Challenges are numerous, ranging from ensuring balanced development of the e-commerce sector across different countries and regions, to securing equal rights and opportunities for internet users through adequate and harmonised regulation. Thus, viewing e-commerce from the perspective of sustainability is an important part of the digital economy agenda. This section briefly reviews the relevance of e-commerce for achieving the Sustainable Development Goals (SDGs) and draws on the previous sections to identify measures relevant for the sustainability agenda (see Figure 3).

<sup>4</sup> See <http://www.europarl.europa.eu/news/en/press-room/20180628IPR06836/suspend-eu-us-data-exchange-deal-unless-us-complies-by-1-september-say-meps>.

In general, the development of information and communication technologies (ICTs) is viewed by the United Nations General Assembly as a means to advance the 2030 Agenda for Sustainable Development by progressing on all 17 SDGs. The expansion of electronic commerce and digitalised transactions, as a part of ICT development process, has specific relevance to a number of SDGs.

First, e-commerce relates directly to Goal 17.11, targeting the increase in exports, with a view to doubling the least developed countries' share of global exports by 2020. In particular, e-commerce expands business growth opportunities through lowering transaction costs. Through e-commerce platforms, sellers in developing countries can have easier access to a wider range of potential customers in international markets. In addition, the increase in exports can be achieved through enhanced productivity and access to remote order and delivery of goods and services for the business operation.

In general, all the types of provision included in PTAs and identified earlier can be viewed as direct or indirect instruments to increase exports. Trade facilitation measures have a direct effect through advancing the speed of transactions and simplifying exporting procedures, promoting the entrance of new firms to exporting markets and expanding the level of incumbent exporter operators. The inclusion of paperless trading provisions in trade agreements, use of electronic signatures, and electronic authentication, especially in the context of developing countries, can ensure a safer transaction environment, as digitalised transactions are easier to monitor and verify. Thus, these practices can reduce the extent of traditional problems associated with delays at customs and ensure more efficient supply chain management. General provisions (such as transparency), conducive environment measures, and technological issues all act as indirect instruments to expand exports through ensuring better business conditions and consumer safety.

Goal 8.3—assistance to micro, small, and medium-sized enterprises (MSMEs) in gaining access

to financial services—is also related directly to e-commerce. Clearly, the development of online and mobile payment platforms has facilitated transactions for small companies. In addition, development of peer-to-peer collaboration and alternative funding (through, for example, crowdfunding platforms) offers easier access to financial resources.

Considering these mechanisms, conducive environment measures play a major role in achieving this goal. In particular, verifiable online transaction records and cybersecurity measures enhance trust in online payment systems and expand financing opportunities. Furthermore, ensuring a level playing field with respect to internet access and use can free a part of firms' own financial resources through lower costs of selling goods and services online.

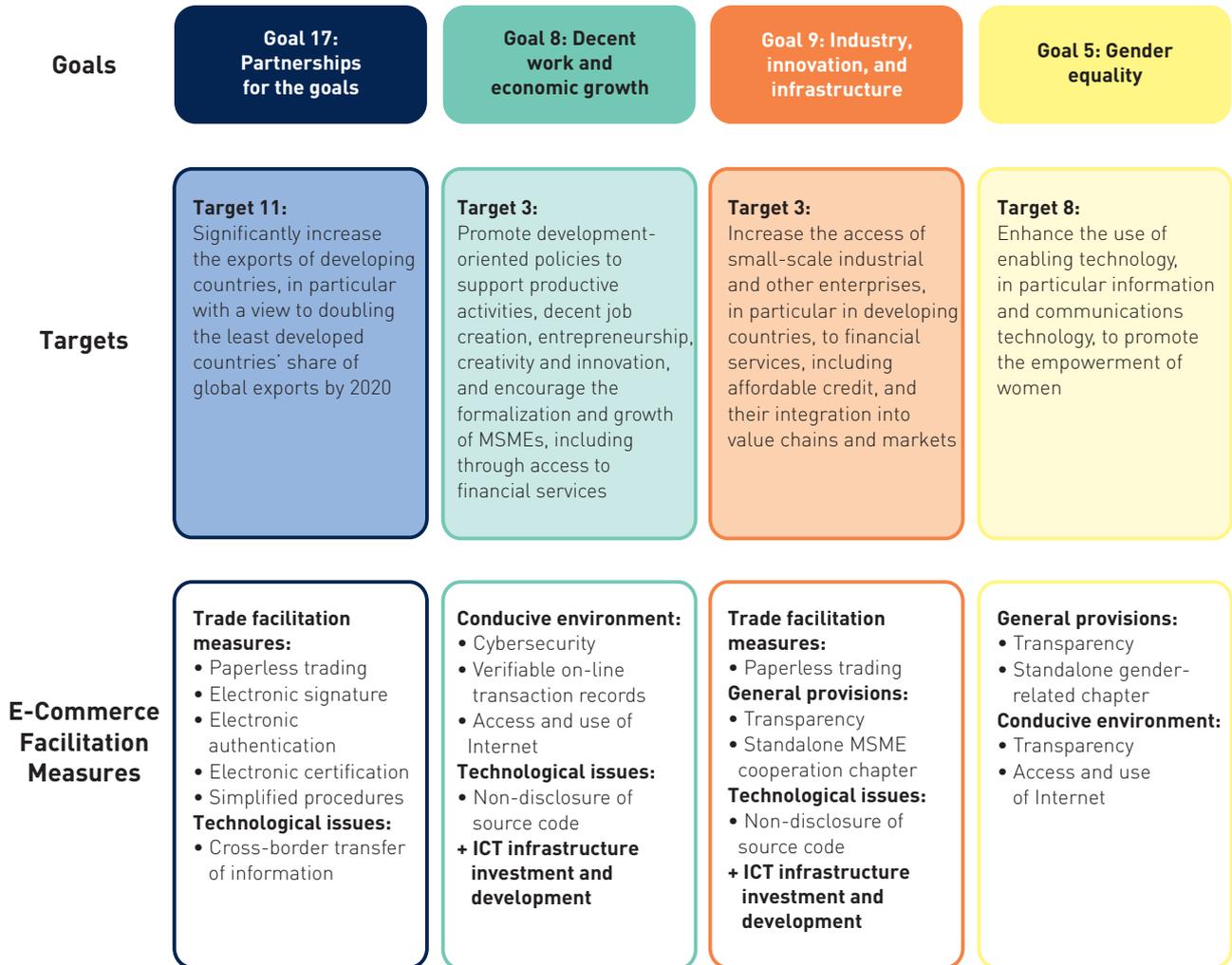
Similarly, MSME integration into value chains and markets, contained in Goal 9.3, is sustained by the development of e-commerce. This is reflected in easier access to new customers and enhanced interconnectedness and innovation opportunities. New cloud-based solutions and use of remote services can reduce fixed costs for businesses to enter the market and operationalise online transactions.

As MSMEs face higher costs of entering export markets relative to their size (when compared with large companies), trade facilitation measures and, in particular, paperless trading play a major role in reducing these costs. General provisions, such as transparency, are also critical for smaller firms, as they face high fixed costs of collecting and analysing information about export markets. In addition, many e-commerce chapters include separate provisions for MSMEs, which prescribe additional cooperation on related issues.

Last, but not least, e-commerce, through all the mechanisms mentioned above, can promote the empowerment of women as entrepreneurs and traders, as set out by Goal 5.8. Women in developing countries are often employed in home production of artisanal products, and thus have a potential to sell their merchandise online. ICT is thus instrumental

**Figure 3.**

Sustainable Development Goals and the most relevant facilitation measures in the area of e-commerce



Source: Author

in building conditions for women entrepreneurship. Access to and use of the internet and transparency provisions are particularly relevant for the promotion and development of women entrepreneurship.

Digital transformation, however, can have heterogeneous impacts across the board, as uneven access to ICTs can result in inequitable distribution of wealth, leaving behind people with less education and lower literacy and the poorest cohort of the population unable to make initial investments

to access the internet. Moreover, transition to digitalised technologies might lead to disruption of local practices, especially in traditional communities, as incumbents in developing markets are exposed to more competition. Furthermore, ICT penetration into working practices changes the composition of skill requirements and generates structural shifts in labour markets. All of these threats should be addressed with the use of effective and efficient policy instruments.

In the spectrum of international trade regulation, developing countries are often less keen on agreeing to extensive digital trade provisions, but some (for example, Colombia and Costa Rica) include extensive e-commerce chapters in their trade agreements (Wu 2017). Many developing countries and small open economies are thus prone to adopting measures and approaches that have been developed earlier by the regulatory champions.

The process is likely to be path-dependent: whichever side they choose may define the entire subsequent development of the area and have effects on the adjacent regulatory domains, such as competition and labour markets. The issue is even more pronounced for the least developed members separated from the advanced economies by persistent digital divide. Unbalanced domestic regulatory structures may exacerbate the negative aspects of digital transformation, while muting the positive ones. The main question is whether international commitments, such as those written in trade agreements, would have positive effects on the local markets. This indeterminacy explains the cautious approach of many developing governments to adopting binding regulations on e-commerce in an international agreement.

## 5. Conclusion

As international goods and services trade increasingly shifts into the digital realm, electronic commerce regulation, both domestic and cross-border, is becoming more important. While the trade rules of the WTO are technologically neutral, they do not always correspond to the new types of multilevel cross-border interaction. The Facilitation 2.0 concept makes it possible to identify broad regulatory clusters for the area of e-commerce and categorise various measures accordingly. Coupled with the analysis of the texts of PTAs, this paper helps to identify the scope of current international regulation of e-commerce, and similarities and differences in the existing regulatory frameworks. Having an increasing impact on economic development, e-commerce, particularly in developing countries, has raised concerns about sustainability. Ensuring balanced development of the e-commerce sector across different countries and regions, securing equal rights and opportunities for internet users through adequate and harmonised regulation, and minimising negative effects on adjacent regulatory domains are just some of the many challenges that need to be taken into account when formulating cross-border e-commerce rules. As suggested in this paper, some of the existing measures in trade agreements, particularly those related to trade facilitation, play an important role in achieving relevant SDGs.

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Jointly implemented by the International Centre for Trade and Sustainable Development (ICTSD) and the Inter-American Development Bank (IDB), the RTA Exchange works in the interest of the sharing of ideas, experiences to date, and best practices to harvest innovation from RTAs and leverage lessons learned towards progress at the multilateral level. Conceived in the context of the E15 Initiative, the RTA Exchange creates a space where stakeholders can access the collective international knowledge on RTAs and engage in dialogue on RTA-related policy issues.

