



## HOW DOES DIGITALIZATION CHANGE THE ROLE OF CUSTOMS AUTHORITIES AND THE IMPLEMENTATION OF THEIR FISCAL FUNCTION

Alevtina Viktorovna Ivanushenko

The Russian Customs Academy, Lubertsy, Russia. Email: av.ivanushenko@customs-academy.ru, alevtinaivanushenko@gmail.com (penulis berkorespondensi)

### ARTICLE INFORMATION

#### ARTICLE HISTORY

Received

12 September 2023

Accepted to be published

24 November 2023

#### KEYWORDS:

Digital Economy

Customs and Tax

Administrations

Global Supply Chain

Global Value Chain

E-commerce

Digital Trade

Disruptive Technologies

Customs Valuation

### ABSTRACT

Mekanisme regulasi perdagangan internasional di seluruh dunia tidak sejalan dengan perkembangan teknologi dan model bisnis yang dihasilkannya. Globalisasi digital membawa era baru aliran global, suatu era di mana aliran data menjadi lebih penting daripada perdagangan fisik. Dengan cara ini, persentase pendapatan yang dikumpulkan oleh instansi kepabeanan dan cukai untuk pendapatan anggaran dalam jangka panjang dapat menurun. Artikel ini mengeksplorasi tantangan ekonomi digital dengan menganalisis penelitian terkini di bidang perdagangan internasional dan perspektif instansi kepabeanan dan cukai. Perhatian khusus diberikan pada istilah "digitalisasi" dan fungsi fiskal instansi kepabeanan dan cukai. Jenis penelitian deskriptif digunakan di sini. Penelitian ini dibangun berdasarkan tinjauan ketentuan hukum saat ini di bidang penilaian bea cukai, perdagangan elektronik, edisi terkini ketentuan IMF, WTO, WCO, OECD terkait topik-topik seperti digitalisasi, ekonomi digital, rantai pasok 4.0, teknologi disruptif dalam bea cukai. Area kerja aktual untuk bea cukai disorot. Rekomendasi di bidang berikut yang diusulkan adalah: kualifikasi personel, integritas organisasional, implementasi teknologi, model kerja berbasis data.

*Foreign trade regulation mechanisms all around the world have not kept pace with technology and the business models it creates. Digital globalization brings the new era of global flows, an era in which data flows are becoming more important than physical trade. In this way the percentage of revenue collected by a customs administration to budget revenues in the longer term may decline. The article explores the challenges of the digital economy analysing the latest research in the field of foreign trade and customs administrations perspectives. The special attention was paid to the term «digitalisation» and the fiscal function of customs administrations. There the descriptive type of research has been used. The research was built based on the review of the current legal provision in the field of customs valuation, e-commerce, IMF, WTO, WCO, OECD latest editions related the topics as digitalization, digital economy, supply chains 4.0, disruptive technologies in customs. Actual areas of work for customs were highlighted. Recommendations in the following spheres were proposed: personnel qualification, organisational integrity, technology implementation, data driven models of work.*

## 1. INTRODUCTION

What are the ways of the foreign trade regulation's evolution?

Based on the economic and technological formation that has developed in a given period of time. Which in turn defines supply chain and value added models. And they also become the subject of regulation and control. The peculiarity of today's time is that we are in a situation of catching up development. Regulatory mechanisms have not kept pace with technology and the business models it creates. On the agenda of the customs administrations of the world are the issues of compliance with the current practice of the changing reality. These are the problems that are the focus of the study.

What have been crucially changed? In before-pandemic 2016 McKinsey Global Institute published the report «Digital globalization: the new era of global flows» stating that soaring flows of data and information now generate more economic value than the global goods trade (McKinsey, 2016). The pandemic made a boom in all areas related to the digital. The main drivers of growth in cross-border flows are intangible assets, services, talents. Flows of services, international students, and intellectual property grew about twice as fast as goods flows in 2010–19. Data flows grew at nearly 50 percent annually (McKinsey, 2022). At the same time the global goods trade has flattened. Data-driven business

models are rapidly growing affecting all stages from production to the provision of services, some of which also include cross-border exchange (Azcárraga P., Azael A., Matsudaira T., Montagnat-Rentier G., Nagy J., and Clark R., 2022).

At the same time, the division into trade in tangible and intangible assets is rather conditional, because almost every international trade operation has a digital component in one way or another.

We are witnessing a formation of fundamentally new model of foreign trade. As Christine Lagarde wrote in the IMF blog «we are entering a new era of trade—an era in which data flows are becoming more important than physical trade» (Lagarde, 2018).

Slowdown in traditional trade growth (the tendency dubbed as «slowbalisation») has implications for customs' revenue collection regardless of the types of duties and taxes levied. Taking into account the fact that these taxes are based on the import value, customs administrations should be aware that revenue collection may not increase as fast as it did previously (unless a new tax on imports is adopted, such as the carbon border tax in the EU (Trade in Value Added, European Union, 2023). In this way the percentage of revenue collected by a customs administration to budget revenues in the longer term may decline for as long as import growth slows down, and the speed of decline would be accelerated as the capacity of domestic tax administration increases and the compliance of domestic taxpayers improves.

The objectives of the research: to highlight the main challenges the customs administrations face; to define the development areas for customs administrations.

## 2. LITERATURE REVIEW

The research was built based on the review of the current legal provision in the field of customs valuation, e-commerce, IMF, WTO, WCO, OECD latest editions related the topics as digitalization, digital economy, supply chains 4.0, disruptive technologies in customs (WCO/WTO study Report on Disruptive Technologies, June 2022).

Mr. Tadatsugu Matsudaira, Michael Daly explored how trade and tax policies are shaping customs. Sheri Rosenow, Emmanuelle Ganne, Milena Budimirovic investigated the role of advanced technologies in cross-border trade. Sam Fleuter provides a new system of classifying digital products as goods or services.

Analytical materials on the international trade, TradeTech, supply chains forecasts also have been researched.

### 2.1. What has changed in trade? How did the 4th industrial revolution affect trade?

First and foremost, the division into traditional trade (physical goods: raw materials, materials, equipment, etc.) and trade with a digital element. The important concepts should be distinguished, the

difference between electronic and digital commerce should be clarified.

In accordance with the commonly accepted definition, electronic commerce is that of goods and services ordered by digital means and delivered either physically or digitally. E-commerce can be referred to as physical goods bought via digital platforms that could be shipped overseas into foreign markets. Digital trade is the transfer of data, products, or services by electronic means, usually the Internet. Digital trade can play a role in e-commerce by facilitating the buying, selling, and servicing of physical goods and services (Benson, 2019). Also, there is an increasing frequency of combining both physical and digital elements in a single sale (for example, a physical good with a digital subscription service). It is important to highlight that the cost of digital element in the price of the final goods can be several times higher than the price of the tangible component.

Thus, the concept of a product has become much broader. Commodity now refers to a wide range of assets. Including information, the result of intellectual activity, etc.

Secondly, a new way of delivering goods has appeared, over the network, if we are considering a digital product.

The role of new subjects participating in international trade is being strengthened. The status of an exporter and an importer, which previously belonged only to a company, has actually been given to an individual today. If earlier the traditional foreign trade was the B2B (Business to Business) segment, today the seller and the buyer are more and more often a person. And these are B2C (Business to Consumer), C2C (Consumer to Consumer), and even P2P (Peer to Peer) models in the sharing economy.

A new way and place of purchase, electronic trading platforms on the Internet, Internet platforms. Service platforms allow you to create a variety of business models, such as drop shipping, wholesaling/warehousing, private label manufacturing contracts, white labelling, crowd-funding and subscription services, trade in secondhand items.

New business models have given rise to a number of new participants in operations, often intermediaries: Internet platforms, marketplaces, logistics centers, social media, influencers.

Business models of the digital economy today have already been studied and described in some detail by experts from international organizations (Tax Challenges, OECD, 2021).

The chains of formation of the final cost of goods for new trade become more complicated. One or another intangible asset may be included in the cost at different stages of delivery. The intermediary can participate and increase the price of the goods due to its services in different countries. Many intangible inputs, parties with information relevant to the Custom Value may be in many different jurisdictions.

Pricing models are getting more complex. Prices on Internet platforms can be formed under the influence of complex algorithms for analyzing databases and identifying buyers and their previous purchases. This is not always a transparent process. Various sales (flash sales) are constantly held. Moreover, prices can be customized.

## 2.2. The impact of the changes on the fiscal function of the customs authorities

As to the work of customs administrations, in particular for the purposes of customs valuation, new aspects give rise to a large number of challenges and questions. New forms of trade are carried out in large volumes of small deliveries, which is accompanied by an array of information inaccessible to the customs authorities. The container revolution gave way to a new postal shipping format, there is the shift from «containerization to parcelization» (Azcárraga P., Azael A., Matsudaira T., Montagnat-Rentier G., Nagy J., and Clark R. 2022).

An increase in the volume of categories of goods, which include an intangible asset, makes it difficult to determine the customs value. What is the cost of intermediary services? What is the value of the deal? What is the place and moment of the transaction? Which of the transactions and values is taken as a basis for customs valuation? How to work with new price information? What is the price information for customs purposes? How long will existing approaches to customs valuation be relevant? None of the participants in a complex model can have complete information about the all-deal detail - it's complex to make a full picture of the deal (GROOBY, 2023). Symposium on E-Commerce and Customs Valuation, 15 February 2023, was dedicated to these topics among other things.

## 2.3. The current legal regulation

As for e-commerce. For the purposes of today's customs assessment, the world uses the Agreement on the Application of Article VII of the GATT 1994, according to which «...customs value should be based on simple and equitable criteria consistent with commercial practices and that valuation procedures should be of general application without distinction between sources of supply». But it is important to understand that there were no various sources of supply at the time of development.

WCO released Technical Specifications Framework of Standards on cross-border E-commerce (TECHNICAL SPECIFICATIONS WCO, 2023). A collection of case studies is regularly published from the practice of working with e-commerce in member countries and their experience in implementing WCO standards, including various approaches to e-commerce taxation in different countries (E-Commerce, WCO, 2023).

The next significant difficulty is in the application of the term «electronic transmissions». «Electronic transmissions are free of Customs duties», in

accordance with the World Trade Organization (WTO) Moratorium on Customs Duties on Electronic Transactions 1998. But today e-mails are not only letters and documents. This is software, music, movies, games, books, etc., often an integral part of a traditional product.

WTO members deepen discussion on e-commerce moratorium. There are different approaches discussed. For example, Indonesia shared its perspective on the e-commerce moratorium and presented its draft regulation containing provisions on the imposition of customs duties on electronically transmitted digital goods. Singapore presented its submission on the wider economic and social benefits of the moratorium on businesses and consumers, in addition to its fiscal implications and impact on development.

In addition, a number of different approaches as to what electronic transmissions refers to coexist across these agreements. These can be grouped into four broad categories, based on whether countries have further clarified the concept of electronic transmissions in at least one of their trade agreements: 1. No additional clarification of what electronic transmissions are (China, New Zealand) 2. Electronic transmissions as 'digital products' (United States and Singapore) 3. Electronic transmissions, or delivery by electronic means, as services (CARIFORUM countries and the European Union) 4. Overlapping approaches on the classification of electronic transmissions (Colombia) (Moratorium, OECD, 2023).

Digital agenda. The issues of technology application and the digital future of customs have been discussed for several years. Work on the introduction of technologies is carried out by customs administrations everywhere. There are results of implementation - the latest joint study of the WTO and the WCO with surveys of administrations of different countries. Blockchain, artificial intelligence, big data analytics, biometrics, drones, virtual and augmented reality are the technologies that have already enhanced the efficiency of customs authorities in advanced countries and will continue to serve the purposes of ensuring control, security, and transparent implementation of the fiscal function by customs administrations. The application of the technology for the control procedures, however, generates a number of risks and challenges.

The priority for the customs authorities today is data-driven models of work. This gives unlimited possibilities for control, however, there are a lot of efficiency issues. The economic effect of collecting, storing and processing data, which affects trading operations, should significantly increase the cost of resources for this activity.

It is extremely important to avoid duplication of information agencies within the state, as well as between different countries, it's unreasonably expensive. In recent years, experts have referred to this problem under the term «Silo mentality» -

fragmentation, lack of unified access to common data, differentiation of ownership of data and the results of their work within one organization. This term, which initially appeared in the business environment, becomes relevant for the activities of departments and states. Global supply chains and global value chains are becoming more and more complex. A number of modern studies are devoted to the analysis of the new 'Supply Chains 4.0'. The components are produced in different countries, adding value in different jurisdictions. Access to this information for the purpose of control the reliable cost of the final imported goods in the conditions of disparate data ownership is virtually impossible.

The potential role that opens government data can play in digital trade is extremely high. In particular, as part of solving this problem, initiatives to develop the international Customs data ecosystem are supported by the WCO. «The WCO recognized these developments and started exploring how the global Customs community can contribute to the principle of open government data» (WCO, 2021) said the WCO Secretary General, Dr Kunio Mikuriya. This way a Manifesto for Data Mobilisation in Customs (Tax Challenges OECD, 2023) was published, where a better use of Customs data was explored. The principle of open government data is the core. And this is the remedy for silo mentality and the way to overcome the difficulties in achieving long-term goals.

Blockchain technology can also become the optimal tool here. Each of a number of transactions within a long value chain will be recorded, which means that data on intermediary services will be transparent. But such a scenario for storing and using data is possible only in a situation of cooperation between administrations.

However, the introduction of blockchain technology in the control of foreign trade transactions is related to technological challenges. (WCO, 2019). The technology frees participants from duplicating documents and information and allows automatic collection of data on shipments, creating digital analogues of cargo declarations and other documents. But at the same time, it does not confirm that the shipment of the goods actually took place. Procedures for using the technology require further development. And it is possible to use other solutions and technologies, in particular the Internet of things.

When analyzing technologies, it is important to pay attention to the division into the so-called emerging and disruptive ones. The latter are largely subject to research since they significantly change the prevailing conditions.

3D printing technology, the most disruptive (WCO/WTO, 2022). WTO and WCO studies distinguish it into separate categories. 3D printing is changing the concept of goods and production. Technology makes it possible to transfer physical goods anywhere in the world through the electronic transfer of software. Thus, bypassing import, a new product (the most expensive component of which is an intellectual

product created in another country) enters the territory of the foreign state without crossing the border. Thus, the way of carrying out trade, the concept of a border, a flow of goods, a commodity is completely changed. The question arises of what to consider as the place and moment of the transaction, the origin of the goods. The consumer actually acquires the status of a producer («prosumer»). A unified approach to the regulation of products of this technology has not yet been developed.

There is a debate on whether intangible goods (3D renderings) should be classified as traditional goods which follow the provision of GATT or as services which follow the provision of GATS (Fleuter, 2016).

It's clear that we need to make the generally accepted consistent classification of digital goods and to reach a resolution on the legal treatment of digital products.

At the same time, according to experts, 1.4 million 3D printers were sold in the world in 2018, and by 2027 this mark will reach 8 million devices (Statista, 2021). The global 3D printing market was valued at \$13.7 billion in 2020 and plans to grow to \$63.46 billion by 2026 (Mordor Intelligence, 2021).

Such disruptive technologies require non-standard solutions. And here it is worth voicing the main problem and direction of activity of customs administrations in the short term.

### 3. RESEARCH METHODOLOGY

There the descriptive type of research have been used. The current customs legal regulatory provisions relevant to the digital economy have been analyzed. Latest studies with the results of disruptive technologies implementation by customs administrations were explored.

### 4. RESULTS AND FINDINGS

#### 4.1. Findings

What areas of work may be most relevant. In a dynamically changing economic environment, it is critically important to pay increased attention to education and continuous professional development of personnel in the field of foreign trade regulation. It is necessary to monitor new tools, methods, business models for the timely development of policy responses in terms of taxation. Crucial: «Understanding the business!» (Taxud, 2023) Mastering the details of new activities with a delay, which is typical of modern reality, deprives the state of the possibility of replenishing the budget revenues. As you know, business derives the greatest profit from new tools at the very first stages of their implementation, when the regulator is completely unprepared for any retaliatory measures.

As for the taxation of foreign trade operations and the implementation of the fiscal function by the customs authorities. Working solely within the framework of finding effective solutions in the customs assessment of new forms of trade may not be



enough. We have already mentioned that modern supply chains and value chains are multi-component and will constantly grow in complexity with new participants, intermediaries. The customs authorities should pay attention not only to the costs, but to the participants and their relations. It's useful to look for opportunities to monitor the inclusion of intangible assets in the cost of goods at different stages of the final value of goods formation.

According to the latest data, about 70% of international trade today involves global value chains (GVCs), as services, raw materials, parts, and components cross borders – often numerous times. (GVC OECD, 2023) Raw materials, services, a whole range of related components and operations are added to the price of goods. This means that the role of VAT is increasing. Experts in recent years have repeatedly emphasized the importance of this tax, as well as its greater neutrality for business in comparison with other elements in the composition of customs payments (customs duties, excises). And the IMF, in particular, has warned that customs authorities may underestimate the impact of the VAT and the need to improve the administration of this tax. (Azcárraga P., Azael A., Matsudaira T., Montagnat-Rentier G., Nagy J., and Clark R.. 2022)

Issues of interaction with tax authorities and other countries on the formation of the VAT base are being updated. Within this direction, the OECD is implementing the TiVA initiative (Trade in Value Added, OECD, 2023) - database on VAT in the countries of the world (currently 76 countries are connected to the project) to identify imbalances in the reflection of the base for calculating the VAT.

The need to strengthen the interaction between customs and tax authorities is considered by world institutions as an effective means of controlling increasingly complex supply chains. For example, the OECD conducted a study on the relevance of the current customs valuation systems for determining origin to the new realities of trade (Customs Valuation and Rules of Origin, OECD, 2023). And it was concluded that the current customs rules are quite flexible, fully meet the needs of accounting for trade in complex configurations of «goods-services», and radical changes do not seem appropriate. At the same time, the organization considers active cooperation between the two departments important.

Customs authorities can provide information available to them about transactions in the framework of the formation of the cost of imported goods. Share taxpayer profile data. It is expedient to talk about the development of unified databases of the two departments.

The need to develop interaction between customs and tax administrations is also supported by studies of the relevance of existing corporate taxation systems. In particular, EU experts say that the tax system does not fully meet the requirements of the digital economy, in particular, it does not take into account

complex multi-component business models with a large number of participants and intermediaries.

It is also possible to revise the system of foreign trade taxation, rates and limits of tax-free import of goods. In different countries today, these values are different.

These proposals have recently been repeatedly voiced by world experts. The WTO Trade Facilitation Agreement creates conditions for the implementation of this policy everywhere (European Union, 2018).

As for the digital agenda, work on the introduction of digital technologies in the activities of the customs authorities must certainly continue. Blockchain, the Internet of things, big data, biometrics, artificial intelligence, machine learning are technologies that are already being successfully tested in the practice of customs authorities.

As to the disruptive 3D printing, common regulatory approaches need to be developed collaboratively.

The term «electronic transmissions» needs to be revised including the latest trends and digital economy opportunities. The common approach to the definition and relevant legal provisions need to be developed.

Estimates of the potential fiscal implications of the Moratorium suggest that potential customs revenue losses, including from replacement of trade in «digitisable goods» with their digital equivalent, would be small and could be offset through VAT/GST revenue (Moratorium, OECD, 2023).

Approaches in the work of customs administrations must be changed. A lot has been done in recent years. But if we use the concepts of digitalization, it is more correct to say that the customs authorities are moving from digitization to digitalization (McKinsey, 2022), attempts to create regulatory systems adequate to the modern economic agenda actually based on the reformation of the current package of norms. At the same time, the stage of digital transformation is only just outlined. «Customs administrations are in the journey from digitization to digitalization». (Azcárraga P., Azael A., Matsudaira T., Montagnat-Rentier G., Nagy J., and Clark R.. 2022)

The shift of the vector to digital transformation is fundamental. Which also requires a completely different quality of human resources. The development of a full-fledged strategy for the digital transformation of customs authorities is the key to the sustainable development of the customs administrations and compliance with the requirements of the digital economy.

#### 4.2. Discussion

The research defines the general development areas for customs administrations not including detailed recommendations for different countries. The proposed areas need to be detailed depending on the national peculiarities.

There are different technology adoption rates in countries. The level of digital competence customs have about the digital economy issues varies. Which means that national recommendations need to be customised.

As to the proposals on the tax customs administrations collaboration. This is question of discussion too. Foreign trade regulation authorities arranged differently. There is a well-organised data exchange between administrations in some countries. VAT regulations very as well.

As to the «electronic transmissions» and new version of this term usage for customs valuation goals, common approaches need to be developed. The separate issues as 3D-printing require a detailed multidisciplinary discussion. These topics are out the current research limits.

The final concept needs to be explored is the strategy of the customs administrations digital transformation. There are no common understandings of what is it. What are the approaches may meet the modern digital economy requirements. This is the issue for the future study.

## 5. CONCLUSIONS

The current research does not contain detailed recommendations to the customs administrations. It identified the main challenges the customs administrations face and defined the development areas. It's clear that foreign trade patterns crucially changed. Customs administrations need to match them.

There are main spheres to develop: personnel qualification, organisational integrity, technology implementation, data driven models of work.

## 6. RECOMMENDATION

Taking into consideration the national features the following recommendations can be accepted for execution.

- 1) The continuous professional development of personnel in the field of foreign trade regulation. New tools, methods, business models in the modern economy need to be monitored and explored.
- 2) Working on definitions of «digital» terms. The term «electronic transmissions» needs to be revised including the latest trends and digital economy opportunities.
- 3) Strengthening the interaction between customs and tax authorities as an effective means of controlling increasingly complex supply chains.
- 4) Possible revision of the foreign trade taxation system, rates and limits of tax-free import of goods.
- 5) The work on the digital technologies implementation in the activities of the customs authorities must certainly continue.
- 6) Common regulatory approaches in respect of the disruptive technologies such as 3D printing need to be developed collaboratively.

- 7) The development of a full-fledged strategy for the digital transformation of customs authorities is needed.

## REFERENCES

- Azcárraga P., Azael A., Matsudaira T., Montagnat-Rentier G., Nagy J., and Clark R.. (2022). *Customs Matters: Strengthening Customs Administration in a Changing World*. International Monetary Fund, 40 <https://www.elibrary.imf.org/display/book/9798400200120/9798400200120.xml?code=imf.org>
- In-text reference:** (Azcárraga P., Azael A., Matsudaira T., Montagnat-Rentier G., Nagy J., and Clark R.. 2022)
- Fleuter, S. (2016). *The Role of Digital Products Under the WTO: A New Framework for GATT and GATS Classification*. Chicago Journal of International Law (Vol. 17 No. 1) <https://cjl.uchicago.edu/print-archive/role-digital-products-under-wto-new-framework-gatt-and-gats-classification>
- In-text reference:** (Fleuter, 2016)
- Mikuriya, K., Cantens, T. (2021). *If algorithms dream of Customs, do customs officials dream of algorithms? A manifesto for data mobilisation in Customs*. Special 2020 Edition of the World Customs Journal (Vol.14 No.2) [https://www.wcoomd.org/-/media/wco/public/global/pdf/topics/research/research-paper-series/48\\_manifesto\\_for\\_data\\_mobilization\\_for\\_customs.pdf?la=en](https://www.wcoomd.org/-/media/wco/public/global/pdf/topics/research/research-paper-series/48_manifesto_for_data_mobilization_for_customs.pdf?la=en)
- In-text reference:** (Tax Challenges OECD, 2023)
- Addressing the Tax Challenges of the Digital Economy, Action 1 - 2015 Final Report*. (2015). Retrieved from the official website of the OECD <https://www.oecd.org/ctp/addressing-the-tax-challenges-of-the-digital-economy-action-1-2015-final-report-9789264241046-en.htm>
- In-text reference:** (Tax Challenges, OECD, 2021)
- Global value chains and trade. The trade policy implications of global value chains*. Retrieved from the official website of the OECD. <https://www.oecd.org/trade/topics/global-value-chains-and-trade/>
- In-text reference:** (GVC OECD, 2023)
- FUTURE OF CUSTOMS Blockchain: policy and legal considerations, interoperability, standardization and governance model*. (2019). Round table discussion PERMANENT TECHNICAL COMMITTEE - 223<sup>rd</sup>/224<sup>th</sup>

Sessions - 5 - 8. <https://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/ressources/permanent-technical-committee/223-224/pc0542e1a.pdf?la=en>

**In-text reference:** (WCO, 2019)

*Fair Taxation of the Digital Economy, Taxation and Customs Union – European Commission.* (2018). An official website of the European Union [https://taxation-customs.ec.europa.eu/fair-taxation-digital-economy\\_en](https://taxation-customs.ec.europa.eu/fair-taxation-digital-economy_en)

**In-text reference:** (European Union, 2018)

*Interactions Between Goods and Services in International Trade: Implications for Customs Valuation and Rules of Origin.* Retrieved from the official website of the OECD. (2023) N 274 <https://www.oecd-ilibrary.org/docserver/e4c86fdd-en.pdf?expires=1692876533&id=id&accname=guest&checksum=7E858B9579A6B90C1ED93EB7E7D0F9DD>

**In-text reference:** (Customs Valuation and Rules of Origin, OECD, 2023)

*Trade in Value Added.* Retrieved from the official website of the OECD <https://www.oecd.org/sti/ind/measuring-trade-in-value-added.htm>

**In-text reference:** (Trade in Value Added, OECD, 2023)

*Carbon Border Adjustment Mechanism.* Retrieved from the official website of the European Union. [https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism\\_en](https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en)

**In-text reference:** (Trade in Value Added, European Union, 2023)

*Compendium of Case Studies on E-Commerce. The 4th edition.* (2023). Retrieved from the official website of the WCO [https://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/activities-and-programmes/ecommerce/e-commerce-compendium\\_en.pdf?db=web](https://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/activities-and-programmes/ecommerce/e-commerce-compendium_en.pdf?db=web)

**In-text reference:** (E-Commerce, WCO, 2023)

McKinsey Global Institute. *Global flows: The ties that bind in an interconnected world.* (2022) Discussion Paper. Retrieved from the official website of the McKinsey, 204 <https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/global-flows-the-ties-that-bind-in-an-interconnected-world>

**In-text reference:** (McKinsey, 2022)

*TECHNICAL SPECIFICATIONS FRAMEWORK OF STANDARDS ON CROSS-BORDER E-COMMERCE.* (2023). Retrieved from the official website of the WCO [https://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/activities-and-programmes/ecommerce/technical-specifications\\_en.pdf?db=web](https://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/activities-and-programmes/ecommerce/technical-specifications_en.pdf?db=web)

**In-text reference:** (TECHNICAL SPECIFICATIONS WCO, 2023)

*Understanding the potential scope, definition and impact of the WTO e-commerce Moratorium.* (2023) Working Party of the Trade Committee. OECD [https://one.oecd.org/document/TAD/TC/WP\(2023\)6/FINAL/en/pdf](https://one.oecd.org/document/TAD/TC/WP(2023)6/FINAL/en/pdf)

**In-text reference:** (Moratorium, OECD, 2023)

*WCO Welcomes G7 Trade Ministers' Digital Trade Principles.* (2021) Retrieved from the official website of the WCO <https://www.wcoomd.org/en/media/newsroom/2021/october/wco-welcomes-g7-trade-ministers-digital-trade-principles.aspx>

**In-text reference:** (WCO, 2021)

Benson, E. (2019). *E-Commerce vs. Digital Trade.* Retrieved from the BFNA website <https://www.bfna.org/digital-world/e-commerce-vs-digital-trade-3tsxyi3owh/>

**In-text reference:** (Benson, 2019)

González, D. (2022). *Now is the time to think big on customs reform.* Retrieved from the official website of the The World Trade Organization (WTO) [https://www.wto.org/english/news\\_e/news22\\_e/ddgag\\_20jan22\\_e.htm](https://www.wto.org/english/news_e/news22_e/ddgag_20jan22_e.htm)

**In-text reference:** (González, 2022)

GROOBY, G. (2023). *The impact of E-Commerce on Customs valuation and control.* Symposium on E-Commerce and Customs Valuation. Retrieved from the WCO official website <https://www.wcoomd.org/-/media/wco/public/global/pdf/events/2023/symposium-on-ecommerce/session-2-gael-grooby-the-impact-of-ecommerce-on-customs-valuation-and-control-february.pdf?la=en>

**In-text reference:** (GROOBY, 2023)

Lagarde, C. (2018). *Creating a Better Global Trade System.* Retrieved from the official IMF Blog website.

<https://blogs.imf.org/2018/05/29/creating-a-better-global-trade-system/>

**In-text reference:** (Lagarde, 2018)

Taxud, D. (2023) *Evaluation of the EU VAT e-commerce package: Customs Valuation aspects*. Retrieved from the WCO official website <https://www.wcoomd.org/-/media/wco/public/global/pdf/events/2023/symposium-on-ecommerce/session-3-dg-taxud-valuation-aspects-ecommerce.pdf?la=en>

**In-text reference:** (Taxud, 2023)

Manyika, J., Susan Lund J., Bughin J., Woetzel J., Stamenov K., and Dhingra D. (2016). *Digital globalization: The new era of global flows*. McKinsey Global Institute Report. Retrieved from the McKinsey official website <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/digital-globalization-the-new-era-of-global-flows>

**In-text reference:** (McKinsey, 2016)

Seong J., White O., Woetzel J., Smit S., Devesa T., Birshan M. Samandari H. (2022). *Global flows: The ties that bind in an interconnected world*. McKinsey Global Institute. Discussion Paper. McKinsey Global Institute Report. Retrieved from the McKinsey <https://www.mckinsey.com/capabilities/stra>

tegy-and-corporate-finance/our-insights/global-flows-the-ties-that-bind-in-an-interconnected-world

**In-text reference:** (McKinsey, 2022)

WCO/WTO Study Report on Disruptive Technologies. (2022) Retrieved from the WTO website [https://www.wto.org/english/res\\_e/booksp\\_e/wco-wto\\_e.pdf](https://www.wto.org/english/res_e/booksp_e/wco-wto_e.pdf)

**In-text reference:** (WCO/WTO, 2022)

3D printers - worldwide unit shipments 2018 & 2027. (2021). Retrieved from the Statista website <https://www.statista.com/statistics/370297/worldwide-shipments-3d-printers/>

**In-text reference:** (Statista, 2021)

3D printing market size&share analysis - growth trends&forecasts (2023 - 2028). (2021). Retrieved from the Mordor Intelligence website

<https://www.mordorintelligence.com/industry-reports/3d-printing-market>

**In-text reference:** (Mordor Intelligence, 2021)