BRATISLAVA LAW REVIEW

PUBLISHED BY
THE FACULTY OF LAW,
COMENIUS UNIVERSITY
IN BRATISLAVA

ISSN (print): 2585-7088
ISSN (electronic): 2644-6359

INTERNATIONAL TRADE LAW AND EMERGING TECHNOLOGIES – A CONCEPTUAL FRAMEWORK /

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The underlining research of this paper has been conducted within the project "Legal issues of Autonomous Vehicles" (project No. GINOP-2.3.4-15-2016-00003 Center for University-Industry Cooperation at Széchenyi University).

Abstract: *The paper aims to establish a conceptual framework for a relation between technological development and the international trade law. Uncovering the complex interaction between these two areas of the social reality is important today, when we are witnessing an intense period of technological revolution, which transforms not only the trade, but also the whole economy, and at the same time, it also creates challenges to the international trade law. The paper sheds light on the background of these processes and offers an introductory analysis with the aim of mapping the topic and the relevant literature. For this reason, the paper examines the roots of this context, and tries to respond the questions, what are the main challenges this revolution poses to international trade law, and how this area of law can rely upon its infrastructure to respond these challenges.*

Key words: *new technologies; industry 4.0; autonomous vehicles; technology and law; international trade law, WTO*

Suggested citation:
Horváthy, B. (2020). International Trade Law and Emerging Technologies – A Conceptual Framework. *Bratislava Law Review*, 4(2), 9-20. https://doi.org/10.46282/blr.2020.4.2.201

Submitted: 15 September 2020
Accepted: 30 November 2020
Published: 31 December 2020

1. INTRODUCTION

The complex interaction between international trade law and technological development was observed long before the ongoing "digital industrial revolution" (Schwab, 2015).[1] These challenges posed by the technology were mostly indirect, i.e. the technology primarily affected the trade itself, which reacted on the regulation of international trade. One can think of how the advent of the steamships or the railway changed radically the forms of international trade, creating new cross-border transactions and generating new legal problems (Cottier, 2017; Ciuriak, 2018).

Today, we are witnessing a similarly intense period of technological development that stimulates the transformation of economy, and at the same time, creates challenges to the international trade law. These challenges stem not only from the technological change itself, but also from the fact that technological revolutions have been accelerated considerably in the recent decades. Early technological changes took shape over

[1] The current technological development is frequently called as the 4th industrial revolution.

generations until it became widespread in everyday practice, but as we could observe recently, the transition from the analogue to digital technology took only a few decades. Therefore, not only the extent and complexity but also the dynamic of the technological development has changed radically (Baldwin, 2016; Curiak, 2018).

The emergence and spread of new technologies, digitalization, artificial intelligence, automation, or autonomous vehicles also lead to the spread of new products and new services, shedding light on certain new problems of international trade regulations, such as the application of intellectual property rights and industrial property, or trade adverse effects of standards or technical regulations (Gasser, 2015; Glancy, 2015). Some of these challenges relate to the fact that today, the legal framework for the application of these new technologies is predominantly determined by domestic laws (or, to certain extent, regional integrations, like the EU law), therefore the relevant norms, technical rules, and standards may still differ significantly from each other. Due to the lack of substantial international unification, the diverging national regulations may constitute obstacles to international trade, making the exports and imports of the products and services based on these new technological innovations more difficult.

For this reason, the international trade law should find ways and means of regulating or, where appropriate, standardizing requirements for new technologies. On the other hand, the impact of some new, "disruptive technologies"[2] cannot be neglected either, because they require an entirely new approach of international trade law. Sometimes even new forms of regulations are needed, which are adequately able to create entirely new channels, instruments, transactions and, possibly, even revolutionary financial environments (Burri and Cottier, 2012; Cottier, 1996; Porter and Heppelmann, 2014).[3] In the latter cases, the national regulations are not able at all to address the complex problems the new technologies are posing effectively, therefore, the response of international trade law is often forced to go beyond the task of harmonizing diverse national laws. Consequently, new technologies stimulate not only the harmonization, but also the unification, requiring more intensive cooperation of the countries.

The following paper aims at shedding light on the background of these processes, and tries to establish a conceptual framework covering the current "digital revolution" and international trade regulation. The paper just wants to make the nexus between the technology and international trade law visible and therefore, offers an introductory analysis with the aim of mapping the topic and the relevant literature. For this reason, the paper discusses, after analysing the roots of this context, the main challenges this revolution poses to international trade law, and the way this area of law can rely upon its infrastructure to respond to these challenges.[4]

[2] The new technologies are "disruptive" in a sense that these are now building entirely new structures in a way that, at the same time, "disrupt" or even demolish our traditional social structures, our traditional knowledge etc. (see Manyika et. al., 2013).

[3] See e.g. cryptocurrencies. The development of digital technologies is also drastically transforming the way how trade is handled. Not only the impact of the internet and the various platforms can be realized now, but, e.g. the Internet of Things (IoT) can be used now to trace products from the very beginning of the production process to delivering it to the consumer, which might result in simplification of the customs barriers and safety standards. But the proliferation of artificial intelligence can optimize the trade process, and blockchain technology can contribute to "streamlining" the contractual basis of trade transactions. However, in addition to their fundamental commercial benefits, these technologies will evidently help to reduce the costs of trade.

[4] The paper, however, does not address the nexus between the technology and the so called "private standards". Private actors, like NGOs, industrial associations etc. are setting standards as well, which might shape the international trade, but the following analysis is restricted to the relation of the international trade law and, to certain extent, the domestic laws to the technology (see Cottier, 2017 for 'private standards').

2. INTERACTION BETWEEN TECHNOLOGY, TRADE AND INTERNATIONAL TRADE LAW

In the past, the development of international trade was directly influenced by technological advances of transport and communication, as these technological innovations reduced the costs of international trade drastically. However, the trade also reacted to these processes: the technological development created new trade techniques and instruments, which generated more and more trade. The increasing volume of international trade contributed to better access to national markets, increased the interdependence between domestic markets, and strengthened economic integration. These tendencies have been accelerated in the last century, particularly after the World War II. Even in this period, the development of transport and communication technologies has been the most important vehicle of these processes, which contributed to further cost reductions in international trade (Jacks, Meissner, & Novy, 2018; Hummels, 2007; WTO, 2018.).[5] It is also notable, that the technological development affected positively not only trade, but also the whole economy (Jacks, Meissner, & Novy, 2018).[6]

In addition to this development, structural changes have also been taking place in trade. The technological advances enabled the production and distribution having been detached gradually from the domestic processes, thus creating global value chains (Baldwin, 2016). More recently, the "disruptive technologies" are bringing about even more drastic changes. According to the predictions (WTO, 2018, pp. 35–39.), three major structural changes have been apparent recently. First, online markets are spreading, operating in a global, international space, which is posing special regulatory challenges. Second, new products are emerging (media services, personalized goods and services, etc.) that are demanding an increasing share of international trade. Third, digital international markets are emerging and accompanied by a much wider range of products, and at this point, it is very important that stepping into the digital trade is much easier and also cheaper than competing in traditional trade platforms (Khan, 2019).

As this short historical introduction shows, the technology has always been going hand in hand with the trade. The trade was stimulated by technology and contributed to the development of trade. But what can we say about the role of law and legal regulation? The law has always had a place in this context. It is due to the fact that since the technological development has been an important driving factor, it was not only reflected by the trade, but also by the law itself. Not surprisingly, as the law constantly tries to follow the changing societal environment (Abbott, 1997), therefore, the law also played a major role in the development mentioned above. The new inventions in the field of transport helped in channelling products from local, national markets into international trade much more efficiently, thus the new transport technologies contributed to the expansion of the dimension of the international division of labour and the overall volume of international trade, and the law was an important catalyst in these processes. But what is highly important for the role of the law is that even today, the law could and can not only adopt to the development, but as a catalyst, the law is able to react to the technology and trade as well.

[5] It is estimated that the overall costs of trade have fallen by 16% nominally in the period between 1950 and 2000. For instance, the introduction and spread of containers in maritime freight transport led to a significant reduction in ad valorem transport charges. The rail transport conditions will be significantly improved. The electrification of railways, the spread of high-speed trains and intermodal transport are helping to reduce rail transport costs even today. Moreover, e air freight has also been experiencing rapid growth in the second half of the last century. The communication costs have fallen even faster thanks to the satellites, optical cables, mobile communication devices, etc.

[6] In the second half of the 20th century, the per capita GDP increased annually by 3% on average.

DOI: 10.46282/blr.2020.4.2.201

In other words, the connection of technology to international trade law can be described as a "dialectic relationship" (Cottier, 2017). This concept means that the relationship between these areas is shaped by mutual interaction. On the one hand, the technological development affects the law, and on the other hand, the law itself has implications on technological advance, thanks to the specific infrastructure of international trade law. The technology, however, is not only an external factor influencing the trade and law: a great proportion of products traded internationally are somewhat "technological products", i.e. products representing highly developed technological innovations at the markets. It is true not only for the trade in goods, but also for the international trade in services. It means that both the infrastructures provided by technological advances (e.g. internet) and the revolutionary technological inventions (e.g. international telecommunication services, etc.) are subjects of the trade in services. In other words, international trade law reflects on the technological developments shaping the space in which international trade is taking place, and on the other hand, the law must also respond to the challenges arising from new products and services, which have been created by the technological development.

The role of the law is more palpable, if we think of the fact that the technological progress alone does not automatically guarantee the benefits arising from the expanding trade and specifically, the larger and more predictable global value chains. Rather, the experience of the last two centuries shows that the most favourable trade effects can be achieved if the law regulates and controls the technological development.

Behind these transformations, the law mitigates the risks arising from new technologies, defines the framework for the application of new technologies by introducing technical regulations and standards, and by adopting other sectoral norms. These new norms usually appear first in national law, but differences in the domestic regulatory models and regulations may adversely affect international trade. Therefore, national regulations may constitute a barrier to trade and the international trade law comes into the picture here: it plays an important role to harmonize national standards, possibly even through mutual recognition, and by removing regulatory barriers as non-tariff measures.

In addition to the previous characteristics, another essential feature of this dialectic relationship is that the law itself has major implications on the development of technology. In this respect, domestic norms play an important role in creating legal environment for application and development of technologies, therefore, the specific rules of commercial law, competition law, tax law, or industrial property law might determine the way technology can be applied, and in this context, the way the technology proliferates. Moreover, international trade law is also relevant in this context by setting a framework for these domestic regulations and influencing their application. In other words, an increase in trade associated with technological development is also encouraged by international trade law by extending, where appropriate, certain legal guarantees for the use of technology at global level (see, for example, the role of GATS and TRIPS, etc.). At the same time, the international trade law lays down a framework for restrictive domestic policies as well, namely assesses certain social, health or environmental risks, and says how the member states may justify and approve national restrictions on technology, narrowing down its development indirectly (see, for example, Article XX of the GATT).

It arises from the above concept of dialectic interaction that the technological development affects legal regulation as an essential factor, however, the latter is able to react and determine which technologies are accepted, in which ways these technologies can be used, or conversely, which technologies are not allowed to be adopted.

3. TECHNOLOGICAL CHALLENGES AND THE REACTION OF INTERNATIONAL COURTS

3.1. Methods and instruments of international trade law

We have seen that an interaction between technology and international trade law exists, and now there is a question, in what ways and means the international trade law has been able to respond to the challenges posed by the technological development. One of the main functions of international trade law, as mentioned in the introduction, is to reconcile differing domestic laws in order to prevent national technological standards from making restrictions in the international trade. The methods of international trade law can range from technical cooperation between states, through harmonization of standards, to the development of unified international rules.

The least intensive interaction between different regulatory regimes is recorded in technical cooperation. This type of cooperation does not affect domestic decision-making and regulatory autonomy, but allows for informal and formal exchange of coordination of research and other technology related knowledge, which is important in the implementation mechanisms (e.g. testing, licensing, etc.). Therefore, in practice, the regulatory cooperation means collaboration of research institutions and offices of two or more countries, and these mechanisms enable participating governments to share the data collected in the background research, as well as discuss their proposals on domestic technical regulations and standards, even before the regulations are adopted. This kind of cooperation is usually anchored in bilateral trade agreements, but also multilateral rules lay down similar mechanisms of cooperation between the contractual parties. A striking example of a multilateral mechanism is the WTO Agreement on Technical Barriers to Trade (TBT) reguiring the Member States to provide information and to notify the domestic rules when introducing any standard that may constitute a restriction on trade.[7] The results of the subsequent negotiations or consultations held with other WTO Members should be considered in the course of preparation and adoption of new standards and technical rules. However, cooperation can be successful only if the states concerned are able to reconcile their regulatory priorities, which can easily lead to convergence. Without such mutual understanding, the cooperation alone will not deliver the expected results (Cottier, 1996; Pollack, 2009; Cottier, 2017).

Stronger coherence between different domestic regulatory regimes can be achieved by setting down minimum requirements. In this case, the international trade law (e.g. treaty provisions) lays down obligatory requirements concerning domestic technical regulations, standards, procedural requirements, or other technical norms, which must be adopted by the countries concerned. However, it is not the required unification, it does not limit completely the regulatory leeway of the participating countries, they may adopt additional rules concerning the technologies in question. The WTO legal framework on intellectual property rights is based on this logical setting. The TRIPS Agreement lays down a minimum level of protection and requires Member States to adopt and implement these requirements into the domestic law, but allows them to provide more comprehensive protection, i.e. a higher level of standards are fully compatible with this obligation.[8] The advantage of this method is that the parties can find a compromise on the minimum requirements more easily than they could agree on unified standards.

[7] See TBT 2.9. (For further analysis, see Wolfrum, Stoll, & Seibert-Fohr, 2007).

[8] For instance, TRIPS has been providing patent protection for twenty years, but the Member States may apply stricter rules in the pharmaceutical sector. Some preferential trade agreements comprehensively complement the minimum rules of TRIPS in the so-called "TRIPS plus" provisions.

DOI: 10.46282/blr.2020.4.2.201

Under this process, the international trade law harmonizes directly the domestic regulations, but only to the minimum level. Therefore, the level and content of the requirements may still differ significantly from one country to another, which might pose also trade barriers between the participating countries.

Contrary to the minimum requirements that do not eliminate the risk of trade obstacles, setting down maximum requirements for technology standards operates in a different manner. The adoption of "regulatory caps" can efficiently prevent trade barriers and also support international competition. This approach is applied rarely in the WTO law, one example is the plurilateral GATS obligation on telecommunications services. This covers specific principles laid down in the "Reference Paper",[9] which includes also good practices on the limitations of domestic technology regulations. This category of instruments can be approached also from a wider perspective. Cottier and Oesch argue that all WTO rules should be considered as a certain kind of a technology related "maximum standard" that tightens the regulatory leeway of the WTO members *vis-à-vis* the technology (2005). In this interpretation, e.g. the WTO rules on subsidies and other specific areas of WTO law are covered by this category.

As for the relevant instruments of international trade law, an attention should be paid also to the mutual recognition mechanisms of technology standards. Mutual recognition means an acceptance and application of technical norms, which have been laid down by another country. Mutual recognition can take place without explicit coordination on the basis of reciprocity, but is most often achieved through bilateral mutual recognition agreements (MRAs) (Schroder, 2011). The rules for recognizing MRAs can be assessed as preferences granted to the parties and therefore are forming an exception to the principle of most-favoured-nation treatment (MFN).[10] MRAs are necessarily based on the mutual trust of the parties, in other terms, they show confidence in the certification procedures, the institutions, licensing authorities, etc. of the other contracting party. The countries accept the evidence and facts produced by the other countries´ authorities, and rely upon these concerns when allowing the product arising from the other party to enter their domestic market. In practice, it means that the approval of the products by the authorities of the exporting country is accepted by the importing country. Mutual recognition can considerably facilitate the spread of new technologies in the countries covered by the agreement.

It is important, however, that the acceptance of equivalence of standards differs from the mutual recognition mechanisms. Equivalence of technical specifications means that the requirements for products or manufacturing processes approved by another state are considered to be of equal value despite existing differences. Once a product has been lawfully placed on the market in a country, the importing country recognizes the lawfulness of the marketing on the grounds that foreign rules provide a similar level of protection but are not necessarily defined in the same way. Some examples of equivalence can be found in the regional integrations (see EU internal market and trade in goods covered by the EEA Agreement), but equivalence of standards is not required by WTO law. The TBT Agreement only recommends the parties to apply equivalence, but does not oblige the parties to introduce this approach.[11] The principle of equivalence may also appear in free trade agreements in conjunction with regulatory cooperation between

[9] At this time, 82 WTO Member States joined the Reference Paper. Telecommunications Services: Reference Paper 24 April 1996 Negotiating group on basic telecommunications https://www.wto.org/english/tratop_e/serv_e/telecom_e/tel23_e.htm.

[10] According to Article 6.3 of the TBT.

[11] Cottier, on the other hand, argues that this is tacitly exempting parties from the MFN that are applying the principle of equivalence (2017).

the parties, e.g. by the Comprehensive Economic and Trade Agreement (CETA) between Canada and the European Union.

Finally, the unification can be highlighted as an important regulatory method. The unification means an adoption and implementation of uniform standards and regulations for specific technologies, which mostly take place within bilateral or multilateral agreements. As a result of the unification, the same standard will apply to all participating countries. As the applicable rules are identical, they will be able to effectively remove the trade barriers and ensuring a level playing field. As far as technologies are concerned, a unified law can also mean the uniformity of standards related to production and marketing, but this method has remained exceptional in the international trade law. The TBT Agreement refers to harmonized standards and the SPS Agreement refers to common food safety standards and provides for the application of those standards in cases where the WTO Members concerned are specifically bound by those uniform provisions (Gruszczynski, 2010).[12] It is important, however, that under WTO law, the Member States retain the power of applying stricter standards, instead of the uniform rules. It weakens the scope of the harmonized standards to certain extent, given that stricter regulation may also constitute a barrier to trade.[13]

However, there is no doubt that greater harmonization in the field of standards and the application of the harmonized standards can have an impact not only on the countries concerned. Where cooperation on standards takes place between markets with higher trade volumes, the regulatory cooperation can also have a spill-over effect, consequently the third countries will also adapt to the standard or technical norm on the basis of a voluntary decision. This process is particularly important in the field of technologies such as autonomous driving vehicles. It is expected that the key players in this sector, like the US and the EU, will be able to determine the basic technical standards that will be applied to the technology in question, and thus even bilateral cooperation can have a global impact. If technical regulations are adopted by more and more third countries, involving even larger markets, the technical rules can be formally raised to multilateral level by international standard-setting bodies, creating new, global standards.

This process is of great importance for further development of technology. The standards that are spreading globally also determine the market and the production, which will shape further directions of the technological development. There is a couple of examples in the past, where spreading technical rules generated a kind of "competition between standards", and the market was to select the standard that was finally adopted and implemented globally. This process is facilitated within the infrastructure of international trade law, therefore this experience can be considered also in the future, when new technologies come into existence. For instance, it might be specifically important to predict possible outcomes of the "competition between standards", because there are plenty of cases in the near past, where ultimately, not the most efficient, not the most consumer-friendly, etc. standard won this competition (Ciuriak & Ptashkina, 2018; Ciuriak, 2019).[14]

[12] Article 2.4 TBT provides that Members shall apply such regulations, where they exist domestically, and the same shall apply to the food safety standards in line with Article 3.1 of SPS Agreement.

[13] The WTO dispute settlement ruling on hormone-treated meat between the US and the EU has explicitly confirmed this possibility, thus reducing the scope for harmonized standards for Member States. DS26: European Communities — Measures Concerning Meat and Meat Products (Hormones). https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds26_e.htm.

[14] We might remember the "war of the video formats" in the '70s, when VHS and BETA standards were in harsh competition, which eventually led to the proliferation of VHS, but some argued that VHS quality was below BETA. One can observe, metaphorically, the "war of standards" at the moment e.g. in the area of technologies

DOI: 10.46282/blr.2020.4.2.201

3.2. Specific instruments of the WTO law

After reviewing the methods of regulation, we will finally examine below the means by which the regulation of the World Trade Organization, as the basis of international trade law, can provide answers to the present technological challenges. Although the core of WTO law dates back a quarter of a century, this regulatory system is also relevant in the context of digitalisation and new technologies, so it would be an exaggeration to say that the technological revolution has been taking place in a "legal vacuum" (Aaronson & Leblond, 2018).[15] These challenges, however, may include the adjustment of existing regulations and the creation of new rules in some areas.

WTO law defines the process of international trade in new technologies through a number of instruments. In this respect, the key principles of the WTO – non-discrimination, most-favoured-nation, national treatment – are also essential in the sectors affected by new technologies, Moreover, in addition to the general rules, specific WTO agreements governing trade in goods, services and intellectual property rights, and other instruments, e.g. provisions on subsidies, technical rules, public procurement or trade facilitation also encompass a number of standards that may affect certain aspects of digital technologies (Burri, 2019).

In addition to the basic standards of the WTO, the Member States have made new commitments in some areas over the last two decades. First, the Information Technology Agreement (ITA) is chiefly relevant to our topic, as it complements the WTO rules of trade in goods in a subsidiary manner in the field of the technologies. The original agreement concluded by WTO members at the Singapore Ministerial Conference in December 1996 entered into force in 1997.[16] The whole set of information technology (IT) products are covered by the agreement, it requires all participants to eliminate the applicable MFN duties. The impact of the agreement is immense, it consists of about 200 tariff groups, including computers, telephones, and other electronic devices, covering not only the IT end-products, but also a large scale of parts and components.

The tariff-free treatment introduced by ITA contributed considerably to the development of information technologies. The agreement played a major role in the expansion of trade in IT products, increasing the trade volume drastically to a four-times higher level in the last two decades.[17] The higher trade and production volumes generated lower costs, which also made the prices cheaper. Even though the technological advance has significantly transformed the IT industry, the range of products covered by the ITA has remained unchanged for a longer time and slightly become obsolete. For this reason, in 2012, six countries (EU, US, Japan, Korea, Taiwan and Costa Rica) began negotiations to expand the scope of the agreement. Later, more countries joined these negotiations,

relevant for the autonomous driving. We are facing this process at the very beginning, it means that we have to overcome several technological uncertainties and problems, therefore at the moment it is still difficult to develop technical regulations that will predictably provide the most optimal regulatory framework of autonomous driving, tackling the technical challenges, questions of the safety and consumer protection, environmental problems, etc. It needs intensive multilateral cooperation of states, otherwise, there is a risk that the future standards of autonomous driving will be determined by partial strategic interests of individual countries or, where appropriate, narrower industry or corporate interests, as it happened to the video formats.

[15] Aaronson and Leblond recall the development of GATS as an early example, i.e. the GATS Council on Services found that much of e-commerce falls within the GATS' scope and that GATS obligations cover measures affecting the electronic delivery of services even in 1999 (2018, p. 7). In contrast to this view, Burri and Cottier argue that no real advance has been made since the Uruguay Round in this area (2012, p. 2).

[16] WTO Ministerial declaration of 16 December 2015, on the expansion of trade in information technology products (06926/2016). The agreement was originally concluded by only 29 WTO members, but now has 82 participants already.

[17] 20 Years of the Information Technology Agreement. Boosting trade, innovation and digital connectivity (2017). Geneva: World Trade Organization, p. 12.

which resulted in an amendment on 24 July 2015 with a new product list covering more than two hundred additional products.[18] Even the original list covered by the original agreement included already vital IT products, and the new list added other essential components and tools, e.g. new generation semiconductors, GPS navigation systems, telecommunication satellites, touch screens, optical lenses used in cameras, ultrasonic sensors, etc. The amendment aims at lifting all tariffs vis-à-vis the products covered by the new list, but not immediately, the parties were required to submit schedules for each product for a maximum 7 years-long transitional period (3 years for standard products, 5 years for sensitive products and 7 years for exceptional cases). At the end of the transitional period, most of the customs duties previously applied on the covered IT products will be abolished. Considering also the long-term commitments made by the parties, the ITA will strengthen the global value chains in the IT industry, facilitating the expansion of technological development. The more favourable environment of digital technologies will definitely contribute to the development of cutting-edge technologies, e.g. the trade of autonomous vehicles, as well (Ciuriak, 2019).

Besides the IT agreement, the ongoing negotiations on e-commerce can be mentioned as an example, where multilateral commitments are expected under the umbrella of the World Trade Organization. The negotiations began in 1998 having arrived at an intensive stage in the last few years,[19] but the parties have not been able to reach a compromise, therefore the negotiations are still ongoing. [20]

Beyond the trade in goods, the level of liberalization in other WTO trade regimes is definitely lower. Trade in services might have significance for the new technologies, but the WTO rules (GATS) still provide less impressive framework. Currently, the rules on the relevant industrial sectors, like telecommunications, computer, audiovisual and financial services differ significantly from certain types of services, which are still strictly regulated and limited in the domestic laws (e.g. content-related services). Looking at the individual commitments of the WTO Member States, it is obvious that the computer services and some related services are relatively liberalized, which might favourably imply new technologies and the development of related services. There is a striking example of the European Union that extended its concession to all IT services covered by GATS (e.g. computer consultancy services; software development; data processing services, etc.), providing wide market access. Even though these are anchored in individual concessions depending on the discretion of individual member states, and not set down in multilateral rules yet, these commitments might affect the trade significantly if key players, like the EU, are committed to open up their markets. Not less importantly, these concessions cannot be modified or recalled unilaterally, therefore leave very little room for the Member States to impose restrictions.

Consequently, certain aspects of new technologies and digitalisation have already their own place in the current structure of the WTO law, but a more common and conceptually coherent approach to the technology is still lacking. Even though the WTO is facing an institutional crisis at this time, the member states are discussing reform

[18] The products on the new list are estimated to have an annual trade turnover of more than $ 1.3 billion, accounting for about 10% of current total global trade. Source: Recommendation of the European Parliament on the draft Council decision on the conclusion, on behalf of the European Union, of an agreement in the form of the Declaration on the Expansion of Trade in Information Technology Products (ITA) (06925/2016 – C8-0141/2016 – 2016/0067(NLE)).

[19] WTO Members Submit Proposals Aimed at Advancing Exploratory E-commerce Work. Bridges 22 (13), April 19. Retrieved from: www.ictsd.org/bridges-news/bridges/news/wto-members-submit-proposals-aimedat-advancing-exploratory-e-commerce.

[20] Joint Statement on Electronic Commerce. WTO press release WT/L/1056, January 25, 2019.

DOI: 10.46282/blr.2020.4.2.201

proposals since 2018 (Evenett, 2018; Hoekman, 2018; Schneider-Petsinger, 2019).[21] This ongoing reform process gives also an opportunity to rethink how the WTO could react to the current technological challenges in a more appropriate way.

4. CONCLUSION

The discourse surrounding the implications of the technological development on international trade law provides a plausible understanding of the nexus between these two components of the social reality. As indicated in the above analysis, the dialectic relationship between technological development and international trade law raises regulatory needs against the latter at several points. Technology alone changes the conditions of international trade, e.g. by contributing to the reduction of trade costs or by introducing new forms of trade, e.g. promoting the creation of online trading spaces. On the other hand, technology also has an impact on the subject of trade, products and services, so it can generate a regulatory need as well. It is important to note, however, that the role of international trade law is in many cases only indirect, i.e. the regulatory needs are settled directly by the domestic law, but the leeway of the national legislator is framed and restricted by international trade law by various means. Even though its direct role is less relevant, it is still palpable, this is typically reflected in regional or bilateral trade law regulations (e.g. in EU law), but it forms rather an exception in multilateral trade law.

Within international trade law, the paper also examined the WTO law, concluding that the current legal infrastructure of the World Trade Organization can also address fundamental challenges arising from issues related to new technologies. Among these rules, it was clear that the general principles governing trade in goods, as well as certain specific standards, in particular the Agreement on Technical Barriers to Trade (TBT), are of greater importance. However, other trade agreements, including agreements regulating co-operation in the field of standards (harmonization, mutual recognition, etc.) and regional trade agreements are of great importance in the field of technical regulations and standards. In this respect, WTO law therefore remains in the background, but by enforcing the WTO general obligations and commitments, it can prevent the member states from raising trade barriers that could constrain the spread of technology and also reduce competition.

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[21] Not unimportantly, the current WTO institutional crisis also has a connection to the technology. The current tensions has been triggered by the Chinese practice towards investors, requiring foreign businesses to share their technologies in exchange for market access. This practice called "forced technology transfer" is seen as not legal under the WTO rules. For the WTO crisis and the Chinese practice, see Evenett, (2018).

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