



<https://doi.org/10.15407/econforecast.2020.01.079>

УДК 339.54+339.9

JEL : F13, F15, F55

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NEW INSTITUTIONAL FORMATS IN THE DEVELOPMENT OF GLOBAL E-COMMERCE

The article examines the growing trends of institutionalization of the global e-commerce. It reveals the multilevel and multifaceted character of this process, which extends to the policies of both national states and international organizations and regional associations, and involves both state and non-state structures.

The identified main changes in national institutional systems related to digital transformation embrace: a clearer definition of strategic priorities and tools for stimulating investment in digital infrastructure and developing digital competences; creation of free e-commerce zones; and implementation of a sound legal framework for digital transactions focusing on consumer protection, personal data and intellectual property, guaranteeing cybersecurity, promoting competition and enhancing competitiveness for small, medium and micro-enterprises. At the same time, there is an increase in "electronic protectionism" and measures to restrict the freedom of commercial operations in cyberspace.

The author argues that the global nature of cyberspace determines the centrality of global and regional international organizations in the creation of the latest institutional digital trade formats. A key role in the mechanisms of global regulation of e-commerce should be played by the World Trade Organization, which requires adjustments and innovations in its mechanisms and agreements, in particular for the implementation of regulatory standards for the innovative institutional e-business formats. At the same time, there is a process of forming a network of international organizations for digital trade regulation, with increased differentiation and specialization, on the one hand, and coordination and cooperation of their regulatory functions – on the other hand. Regional policies and regulatory institutions, as well as regional integration associations play an important role in this system. However, the institutional support for digital commerce at the regional level is characterized by a considerable level of heterogeneity, and driven by cultural traditions and differences in the levels of socio-economic development.

Prepared within the research on "Formation of the Institutions of International Electronic Commerce in the Conditions of Emerging Information and Network Based Economy" topic of "Research on the Institutional Architectonics of Information and Network Economics" project at the Institute for Economics and Forecasting of NAS of Ukraine" (2018-2020), state registration No 0117U001686.

Keywords: *international organizations, e-commerce, digital trade (commerce), digital infrastructure, trade policy, national and international trade regulation, international organizations and associations, international law*

Over the recent decade, the trends towards the digitalization of economic activities have developed extremely intensively and cause large-scale changes in the mechanisms of market operations, which is becoming one of the mainstays of the Fourth Industrial Revolution that is presently gaining momentum in the world. However, fundamental functional changes in the mechanisms of world trade, which are due to the emergence and spread of new technologies, cannot be successful and safe without appropriate development of the institutional base of international market operations, which is the formation of standards and rules of the world economy for the digital era. This question is relevant not only for the technology leader countries, but also for all those who do not want to remain on the sidelines of the world economy and become a marginal link. In other words, it is a strategic challenge for all.

However, it should be noted that the innovative nature of the changes taking place in global markets cannot fit into the "old bags" of conventional institutional approaches, since the former require equally innovative approaches in the development of socio-economic institutions. And this, in turn, significantly increases the importance of relevant research, which should answer many questions raised by current digital trends. Although the number of scientific researches on these issues grows rapidly both globally and in Ukraine (most intensively within relevant research programs conducted by various international organizations), scientific support still lags behind the needs of the fast-moving economic practice. Economic science is mainly commenting on the trends that are already making their way rather than anticipating the consequences of the spread of the latest formats and tools of market operations and market regulation. And this carries significant risks, since new digital technologies are not a panacea with undoubtedly positive effects, as the latter are in reality quite contradictory and can have clearly negative consequences in case of an erroneous development policy.

The purpose of this article is to summarize the latest trends and real experience in the area of institutionalization of the global e-commerce and to form an idea of the systemic, multi-level and multifaceted nature of this process, which should be taken into account in the development policy of any country, including Ukraine. The author tries to determine the main priorities in this field, and identify new opportunities, alternatives and risks that arise in the context of the above mentioned institutional changes.

Changes in national regulatory systems

The adaptation of national systems of economic regulation to the challenges of digital transformation leads to significant changes in the institutional architectonics of national economies. The main priorities of such changes are closely related to a clearer definition of *strategic priorities and tools to encourage digital transformation*.

It is primarily about encouraging investment in the digital development aimed at *creation of digital infrastructure and organization of appropriate digital competencies*. For this purpose, measures are taken to not only improve the regulatory environment and facilitate investment procedures, but also to disseminate digital standards, promote the creation of production clusters and business incubators. Equally important is the encouragement of appropriate investments in electricity supply (digital technologies require adequate energy supply), and rationalization of transport and logistics systems and payment systems [1].

In particular, the governments, as shown by the experience of a number of countries around the world, can significantly facilitate digital transformation through direct public investment in key areas that technologically ensure the introduction of new institutional formats of digital transactions. Thus, in India, Bangladesh, Kenya, Tanzania, such investments have been aimed at expanding payment systems and micro-financing small businesses based on mobile communications. And in Thailand, for this purpose, the government sponsored deployment of the payment system *PromptPay*, which provides equal access for all and involves all this country's major banks [2, p. 133].

The most common approach in such policy consists in the creation of an appropriate infrastructure to ensure rapid exchange of data in electronic form, which leads to increased digitalization in public administration and in the regulation of economic and trade activities. First of all, it is about the so-called *EDI (electronic data interchange)* systems that are increasingly diversified and cover a wide range of participants involved in cross-border commercial operations and in their regulation, such as customs, border control, relevant departments at the ministries of trade, industry and agriculture, commercial banks, carrier companies, which together form a "single window"¹ system. A promising area for trade optimization is creation of a framework for automation of port operations, including the introduction of blockchain technologies to optimize the entire port logistics system (such pilot projects have already started, in particular, in the United Arab Emirates, Singapore, and Belgium (the Port of Antwerp)).

But the most radical steps in this direction are taken in China, where, by the government's decision, *free e-commerce pilot integrated zones* have been created since 2015: the first such zone, established in Hangzhou in 2016, has now been supplemented by 12 more in Shanghai and Tianjin, Chongqing and others. In such areas, online integrated service platforms are created, covering customs clearance, logistics, tax refunds, payment system, fundraising and risk management services, as well as autonomous industrial parks that provide services throughout the whole industrial chain². In total, more than 400 third-party e-platforms have been installed in these pilot areas, and about 20,000 e-commerce cross-border companies have been registered.

Similar measures are implemented in other East Asian countries. For example, the Malaysian government in partnership with *Alibaba Group* and *Malaysia Digital Economy Corporation (MDEC)* has created the Digital Free Trade Zone, which represents a combination

¹ In particular, the introduction of electronic platforms for customs clearance of goods (automated customs data processing systems) has significantly (by 24 hours) reduced the time of such procedures in a number of countries, and in the case of integration of electronic procedures of customs, tax and other administrative bodies (an example here is Brazil) - by 72 hours [4, p. 37]. The transition from paper documents to electronic technologies reduced the average time spent on customs clearance at the border in 165 countries from more than 80 to less than 30 hours for export operations and from about 110 to less than 40 hours for imports [3, p. 81].

² An example of such a platform is the cross-border e-commerce platform *buyeasi.com* created in the Shanghai Free Trade Zone [6].

of a physically existing special area and a virtual platform through which companies, especially small, medium and micro ones can enter foreign markets [2, p. 146–148].

The policy of national governments is increasingly aimed at creating appropriate domestic institutional preconditions, which, on the one hand, would promote the spread of e-commerce, in particular, via stimulation of investment in the development of appropriate digital infrastructure, and on the other hand, streamline such operations in accordance with social requirements for consumer protection, privacy and cybersecurity³. The main goals of such an institutional development policy are:

— **introduction of a reliable legal basis for digital transactions**, including requirements for the validity of electronic contracts and signatures of counterparties. Overall, according to UNCTAD [7], it is in this legislation area that the greatest progress has been made: 79% of member countries have already adopted relevant laws. Such activities are becoming increasingly coherent and are based on the 1996 *UNCITRAL Model Law on Electronic Commerce*⁴.

— **ensuring reliable consumer protection in e-commerce**: in this area, UNCTAD registers the slowest progress - so far only 52% of countries have relevant legislation [7], the African countries being the biggest laggards in these terms. However, similar problems are also characteristic even for some countries with a developed e-commerce potential (for example, such legislation does not exist in India and Belarus, and there is no information about its existence in the Russian Federation and Japan). Most legislative acts in the sphere of e-commerce are aimed at protecting consumers from fraud and deception, as well as from intrusive online advertising. In particular, a number of countries have approved legislation against sending unsolicited (without the consumer's direct consent) commercial e-mails messages (known as "spam"), which are considered intrusions into private life;

— **guaranteeing the protection of personal data**. So far, the situation in this area is not much better than with consumer protection, as only 58% of UNCTAD member states presently have relevant legislation. Moreover, even in countries where such laws are in force, regulatory gaps and exceptions are often observed, in particular, in relation to small businesses (in Australia and Canada) or small data sets (in Japan). Sometimes such laws are limited to individual sectors (health care, credit operations) or there are exceptions regarding individual entities (like children or hired personnel) or sources of data collection (e.g. online data collection). Such exceptions vary from country to country, which creates a problem in e-commerce for participants located in functionally different jurisdictions [9]. It is clear that absence or functional incompatibility of personal data protection regimes can significantly discourage the development of digital space operations due to the factor of mistrust, excessively complex control mechanisms and various kind of dispute between participants. In this context, it should be noted that the most significant institutional innovation in privacy regulation was the entry into force on 25.05.2018 of the relevant EU Regulation - *General Data Protection Regulation*, whose violation can entail fines of up to 4% of the violator company's total annual turnover or up to 20 million euros. It should be noted, however, that strengthening the protection of personal data can also have certain negative consequences in terms of

³ Progress in building such an institutional system on the global scale is generally monitored via *the UNCTAD Global Cyberlaw Tracker*. This tool monitors the state of e-commerce legislation in 194 UNCTAD member countries in four main areas: e-transactions, consumer protection, data protection (privacy) and cybercrime.

⁴ In general, as of the end of 2019, this model law became the basis or influenced the formation of national legislation in the field of e-commerce in 72 countries and 151 separate jurisdictions [8].

technological progress, in particular, as to the spread of innovations involving the use of artificial intelligence [2, p. 140];

— **introduction of effective laws for cybersecurity protection.** The general aggravation of the problems of international security and geopolitical confrontation encourages an intensive spread of appropriate regulatory measures. Today, almost 3/4 (72%) of countries already have relevant laws. Such legal frameworks are complemented by new approaches to regulation, which are more strategically oriented due to the enactment of ***national cybersecurity strategies***. It should be noted, however, that this process is progressing at a slightly slower pace than the implementation of legal cybersecurity framework. Thus, according to the International Telecommunication Union [10]⁵, in 2018, only 38% of the surveyed countries had published cybersecurity strategies and only 11% - a special strategic document on these issues, while in 12% of countries development of such strategies was under way. However, it should be noted that cybersecurity measures often conceal the steps of "electronic protectionism" intended at restricting the freedom of commercial operations in cyberspace. One of the most effective tools in this context has been the requirement to "localize data" – requiring operators to perform transactions only through local banking institutions or requiring that personal information about their clients (e.g. medical or tax payments data) be stored exclusively on the territory of the country of their residence (i.e. the servers supporting such transactions must be located in the territory of the clients' resident country), while the transfer of such data abroad is subject to restrictions and certain conditions [2, p. 143–144];

— **conducting a policy to encourage competition.** The practice of developing digital innovations shows that they induce the effect of market dominance ("the winner takes all"), or a situation of "zero-sum game", when a few of giant companies monopolize the main flows due to their critical advantage in the latest digital technologies⁶. As experts emphasize [2, p. 142], systems based on automated processing of large databases (*bigdata*), create opportunities for so-called "*reactive algorithmic pricing*", which promotes effects similar to those of price matching, with a resulting tendency to price increase. Thus, there is a need of a policy aimed at correcting distortions in the competitive environment and ***strengthening competitive opportunities for small, medium and micro businesses***;

— **introduction of new, more effective tools for intellectual property protection.** Via a number of platforms and social networks, cyberspace has created unprecedented opportunities for illegal copying and distribution of products formally protected by intellectual property rights. By offering consumers preferential, and often free access to protected content, the operators of these platforms and networks earn huge funds from payments for advertising. Such a situation requires updating the existing mechanisms for the protection of intellectual property in accordance with the specific features of digital business patterns. This includes in particular the use of trademark protection mechanisms for the services marks within the framework of the domain name system⁷ operation, as there may be a collision of public and private law norms.

⁵ This international organization develops the Global Cybersecurity Index (GCI), which measures countries' commitment to cybersecurity globally based on an analysis of five pillars - (i) legal measures, (ii) technical measures, (iii) organizational measures, (iv) capacity building and (v) cooperation measures - with the formation of a total GCI score.

⁶ This is evidenced by the facts of antitrust lawsuits against such well-known companies as Intel Corporation and Google.

⁷ The operator of this system is the private entity ICANN - Internet Corporation for Assigned Names and Numbers.

Changes in the mechanisms of global and regional international organizations

The system of international organizations plays an extremely important role in the development of e-commerce, because the benefits and risks of such trade show up most fully in the single global space. Lack or slow progress in creating optimal global conditions for development and regulation of e-commerce transactions inevitably lead to the fragmentation of the single system of global regulation of the Internet space, which can take three forms (technical, governmental, and commercial fragmentation), and can take place at different structural levels⁸. Such fragmentation occurs when regional agreements are used instead of global regulation, or autonomous national systems for regulating cyberspace operations are used as primary regulatory tools. To solve these problems and introduce a single, open and safe Internet for all, in the opinion of authors of the report of the Global Commission on Internet Governance [12], it is necessary to conclude a new global social compact.

Undoubtedly, this implies a synergetic, by its nature, interaction at different levels of public organization and with the participation of different, by composition, legal status and activity type, international organizations - both governmental and non-governmental, and both global and regional.

The World Trade Organization (WTO) should perform a key role in this process, as it acts as a truly global governance structure. However, appropriate institutional adjustments and innovations should take place in its mechanisms and in the structure of the agreements in force within its framework, which should be a subject of multilateral negotiations within the WTO on the e-commerce agenda⁹.

These include, first of all, the following possible changes.

1. The possibility of merging two basic WTO agreements - GATT (General Agreement on Tariffs and Trade) and GATS (General Agreement on Trade in Services), which is required by the growing merger and interpenetration of the regimes of trade in goods and services in the context of digitalization, with an increasing role of GATS [2, p. 150].

2. Specifying, in the structure of WTO agreements, certain features of commercial transactions exactly in online mode, as currently the GATS system is "technology-neutral", i.e. in principle it equally treats all modes of commercial transactions. One of the most difficult issues in this regard is the practice of applying exceptions to the general trade regime under Articles XIV and XIVbis, according to which Member States may deviate from the GATS provisions in regard to public policy objectives (protection of morals, public order, ensuring compliance with laws and regulations to protect the privacy of individuals, preventing fraud and deception), if such deviations are *necessary* to achieve these public goals (that is, cannot be achieved by alternative means), do not introduce unjustified discrimination between member countries and are not used as a hidden means to restrict trade. Another important issue is the adjustment of regulatory norms for various types of online services, which are still beyond the scope of multilateral regulation, for example, for online retail services.

⁸ Today, the fragmentation of the Internet can be traced at the infrastructural level (lack of basic Internet technologies, such as Internet data exchange points - IXP), which limits the users' access to the network and prevents them from receiving high quality service. At the logical level, there is an incomplete transition from Internet protocols version 4 (IPv4) to version 6 (IPv6), which creates compatibility issues, while at the level of Internet content, fragmentation occurs through the practice of political censorship. At the institutional level, there are different legal regimes and regulatory environments with various standards and laws governing the cyberspace [12, p. 52].

⁹ This agenda is most actively promoted today by the informal group "*Friends of E-commerce for Development*" created in 2017, consisting of: Argentina, Chile, China, Colombia, Costa Rica, Guatemala, Kazakhstan, Kenya, Mexico, Moldova, Montenegro, Nigeria, Pakistan, Sri Lanka and Uruguay.

3. Development and implementation of new regulations for the latest institutional formats of business related to digital technologies and commercial data transmission (including markets for CAD-file exchange), and the activities performed by new company types (CAD-designers, *3D-printshops*), as well as new types of professions directly related to the provision of services in digital environment (CAD-designers and programmers, after-sales service specialists, experts and consultants in materials for 3D printing, etc.). At the same time, one of the most difficult problems is the adaptation of the mechanisms in the system of intellectual property protection (including trademarks for goods and services), which is mainly based on relevant national territorially-based registration procedures, to the conditions of functioning in the extraterritorial global digital environment [2, p. 158, 165].

4. In the absence of a single universal agreement within the WTO on the integrated regulation of e-commerce, individual initiatives with a limited number of participants become important, which allow to advance the e-commerce agenda. Among them, worth mentioning is the *Enabling E-commerce* initiative, which the WTO approved during the 11th WTO Ministerial Conference in Buenos Aires in November 2017 and has been implementing in partnership with the World Economic Forum and the *Electronic World Trade Platform (eWTP - <https://www.ewtp.org/>)*. This initiative is intended to bridge the gap between e-commerce policy and practice, emphasizing specific needs of SMEs. Specialized resources for the dissemination of relevant commercial information, such as the *Integrated Trade Intelligence Portal*, which provides information on changes in the regulatory environment, also play an important role in promoting e-commerce.

Given the global nature of digital markets and the complex nature of operations performed in digital markets, which are fundamentally impossible to regulate from a single center of global governance, WTO policy should aim at establishing a **network of globally operating international organizations entitled to regulate e-commerce**. Already today, we can say that there is a process of outlining the roles of various participants within this system (Table 1).

The above data indicate the following main trends in the formation of an institutional structure for multilateral global regulation of e-commerce:

- formation of a multilevel system of regulatory bodies including both intergovernmental organizations and international non-governmental ones;
- growing differentiation and specialization of the regulatory functions, which is based on specific competencies of individual international organizations and requires increased coordination and cooperation between various organizations in addressing complex e-commerce issues;
- as the system of global regulation diversifies, emergence of areas of cross-regulatory competences requiring cooperation between various international organizations, becomes more pronounced, up to the formation of common institutional formats, policy initiatives and interaction platforms. As a result, the growing specialization of regulatory functions leads to increased integration of these functions and emergence, on that basis, of a corresponding global regulatory system.

It should be noted, however, that these trends do not mean a harmonious development of the institutional framework for international regulation. The latter still remains largely asymmetric, and with obvious regulatory gaps, especially as to the regulation of competition in digital markets. Therefore, this and many other important issues of the institutional development of e-commerce are under the dominant influence of national or regional policy instruments and regulatory institutions. In this context, there is no reason to consider the global level of regulation to be self-sufficient, as it actually acts like the upper part of a multilevel international institutional system.

Table 1
The main components of the global network of international organizations to regulate e-trade

Organization name	Capacity and knowledge building	Trade promotion and ICT infrastructure	Creation of regulatory framework, incl. intellectual property issues	Promotion of digital inclusion and development, incl. support for small, medium and micro enterprises (SMMEs)
UNCTAD	Program for trade training (including distance education) and technical assistance <i>Train for Trade programme</i> , which includes the formation of competencies in e-commerce and related investments	<i>Automated System for Customs Data (ASYCUDA)</i> , active in more than 90 countries	<i>The E-commerce and Law Reform Programme</i> , which provides developing countries with access to expert assistance on e-commerce legislation and helps them develop effective laws on consumer protection and combat against cybercrime, data protection and privacy, protection of intellectual property and electronic signatures	In cooperation with the World Bank (" <i>eTrade for Development</i> " program), the <i>eTrade for all</i> initiative has been launched to help developing countries expand their digital entrepreneurship and improve the efficiency of e-commerce, as well as overcome the limiting factors, improve regulatory environment for digital markets based on world best practices, and promoting customs procedures and logistics schemes to reduce costs in e-commerce.
	Program for rapid assessment of the level of readiness for e-commerce in the least developed countries (ICT infrastructure levels, electronic payment systems, trade logistics, access to finance, and skills development) and formulations of proposals to bridge the gaps			
	<i>ICT Policy Review Programme (ICTPR)</i> to provide governments with technical assistance and advice on strategic issues related to e-trade			
Other UN institutions	<i>United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT)</i> : measures to simplify and standardize and harmonize trade procedures and information flows, incl. development of a model agreement for the exchange in electronic data (<i>Model Interchange Agreement for the International Commercial Use of Electronic Data Interchange, EDI</i>)		United Nations Commission on International Trade Law (<i>UNCITRAL</i>): development of harmonized rules for commercial transactions, including model laws for e-commerce and electronic transferable records (presently in use in more than 150 jurisdictions in 70 countries) <i>The United Nations Convention on the Use of Electronic Communications in International Contracts</i> : the principle of equal legal force for contracts concluded in paper and electronic forms.	Participation in the activities of the <i>Global Trade Helpdesk</i> , established in December 2017 in cooperation with the ITC and the WTO to provide SMMEs with data on trade and investment.
				<i>The Transparency in Trade Initiative (TNT)</i> . (TNT, 2018). implemented in partnership with ITC, the World Bank and the AfDB and aims to simplify data collection on customs tariffs and non-tariff tools, as well as other data on trade, and provide easy and free access to them.



Continuation of Table 1

International Trade Centre (ITC) - a multilateral agency with a mandate from the WTO and UNCTAD				<p>A series of resolutions since 2013 on mechanisms for the protection of privacy in the digital age, in accordance with international law, and on the protection of human rights, which, in particular, prohibit the sale, without the person's consent, of his or her personal data for commercial purposes</p> <p>UN Governmental Groups of Experts on Developments in the Field of Information and Telecommunications in the Context of International Security, UNGGE), with the task to identify existing and potential threats arising from the use of ICT, and to propose international cooperation measures in response to such threats.</p> <p>United Nations Office on Drugs and Crime (UNODC): UNODC Global Programme on Cybercrime, which provides assistance and advice on capacity building.</p>	
				<p>Launch in December 2017, together with UNCTAD and the WTO, of the <i>Global Trade Helpline</i>, a web portal containing up-to-date commercial information for SMEs, including that on significant trade and investment decisions that create new commercial opportunities.</p> <p>The <i>E-Solutions Programme</i> aims at facilitating e-commerce for SMEs via the establishment of joint structures for technology dissemination and service delivery, which should simplify allocation of export and payment costs and a better understanding of foreign market trends. The program helps create legal and logistics systems that reduce barriers to e-commerce, and organizes special events and advertising campaigns and partnerships with international trading platforms.</p> <p>Together with the World Bank: a project to organize virtual market spaces (<i>Virtual Market Places, VMPs</i>), aimed at unlocking the unused potential for economic growth for SMEs in the Middle East and North Africa, in particular, via assisting in the development of new</p>	

Continuation of Table 1

				business models to raise competitiveness and enter new markets. <i>The Transparency in Trade (TNT)</i> initiative, being implemented in partnership with UNCTAD, the World Bank and the ADB, aims to simplify collection of data on customs tariff levels and non-tariff tools, as well as other trade data and to provide free and unrestricted access to them.
International Telecommunication Union (ITU)	ITU Academy: courses (including online ones) on the formation of ICT competencies and transactions in the digital environment. Campaign (jointly with the ILO) for the creation of digital competencies in young people "Digital Skills for Decent Jobs for Youth"	A program for trade promotion and reform with the use of enhanced public-private dialogue and cooperation between key stakeholders (modernization and automation of border crossing procedures, assistance to MSMEs in overcoming barriers and capacity building in e-trade). A program for the development of telecommunications sector to promote international cooperation in technical assistance and the establishment and development of telecommunications networks and ICT equipment in developing countries.	The Infrastructure, Enabling Environment and E-Applications Department: Promoting regulatory systems to encourage ICT investment and equal and secure access to ICT for all participants. The Global Cybersecurity Agenda (GCA) and the implementation of Global Cybersecurity Index: to facilitate international cooperation on these issues.	
			Guidelines for Consumer Protection in the Context of Electronic Commerce of 09.12.1999. Guidelines on the Protection of Privacy and Transborder Flows of Personal Data.	Joint with the WTO Aid for Trade Initiative, aimed at promoting digital cohesion and inclusiveness.
Organisation for Economic Co-operation and Development (OECD)				
International Labour Organization (ILO)	Campaign (jointly with ITU) for the formation of digital competencies in young people - "Digital Skills for Decent Jobs for Youth"			
World Customs Organization (WCO)		E-Commerce Working Group (since 2016) to develop proposals to facilitate customs clearance of low-cost supplies, incl. simplification of mechanisms for collecting duties and taxes and customs control, development of standards to harmonize approaches to cross-border parcel delivery.	Guiding Principles for Cross-Border E-Commerce: relate to risk management, security, and legal framework necessary for the operation of commercial supply chains.	



End of Table 1

The World Bank	Trade Facilitation Support Program	Multi-donor trust foundation Digital Development Partnership (2016) aimed to support developing countries in strengthening regulatory framework for creating a proper business climate and competencies that would allow firms to use digital technologies to raise the levels of competitiveness, opportunities and innovation.	In cooperation with the UNCTAD <i>eTrade for all</i> initiative: the <i>eTrade for Development</i> program aimed to assist developing countries in expanding digital entrepreneurship, establishing e-commerce efficiency and key constraints, improving the regulatory environment for digital markets via the use of world best practices, and simplifying the introduction of customs procedures and logistical conditions that would help reduce the costs associated with the movement of goods in e-commerce.
	Transport and ICT Global Practice program, which helps governments implement new and innovative technologies in these areas.	Together with ITC: a project for organizing Virtual Market Places (VMPs) for SMEs in the Middle East and North Africa.	
International Chamber of Commerce (ICC)		ICC Banking Commission: Developing strategies to address the challenges of digitizing trade finance by assessing the digital compatibility of the existing rules and developing a minimum set of standards required to ensure digital connectivity between service providers and legal validity of data and documents in digital form.	<i>The Transparency in Trade Initiative (TNT)</i> . (TNT, 2018), implemented in partnership with UNCTAD, ITC and the ADB, which aims to facilitate the collection of data on customs tariff levels and non-tariff tools, as well as other trade data and to provide easy and free access to them.
International Organization for Standardization (ISO)		Identifying priority areas for standardization and developing prospective standards to promote interoperability, accelerate the spread of innovation and the use of blockchain technologies.	
World Intellectual Property Organization (WIPO)		WIPO's Standing Committee on the Law of Trademarks, Industrial Designs and Geographical Indications: joint recommendations concerning provisions of protection of well-known trademarks (1999), which apply to Internet transactions; protection of marks, and other industrial property rights in signs, on the Internet (2001).	
Universal Postal Union (UPU)		Uses so-called "Internet Treaties" tool - on copyright and performance and phonograms, incl. rules for their distribution on the Internet.	<i>The Easy Export Program</i> - with an emphasis on creating a simplified and harmonized system of export services for SMEs within the national postal infrastructure.
World Economic Forum (WEF)		A project on e-trade and cross-border data flows, aimed at supporting public-private partnerships in defining the framework of e-commerce policy, with an emphasis on inclusive and sustainable development.	Partnership with the WTO and the <i>Electronic World Trade Platform (eWTP)</i> in the December 2017 <i>Enabling E-commerce Initiative</i> , which aims to bridge the gap between global e-commerce policy and practice via a dialogue on the challenges facing the SMEs.

Source: compiled by the author based on: [2, p. 171–177] and Internet data.

Especially active in regulating e-commerce issues at the regional level are **regional international financial institutions** and, first of all, **regional development banks**. Thus, the *Inter-American Development Bank (IADB)* is active in personnel training for customs clearance, certification procedures, and establishment of single windows for relevant operations. It is one of the initiators (together with *Google, DHL, Sealand* (aMAERSK Company), *Facebook* and *MasterCard*) of the "*Connect Americas Platform*" (<https://connectamericas.com/>), which is an open social platform that promotes international activities via networking, data dissemination, exchange of experience, and online training.

The *African Development Bank (AfDB)* performs important functions to support the participation of SMMEs in e-commerce, in close integration, within the so-called *The Transparency in Trade initiative (TNT)*, with the respective functions of UNCTAD, the International Trade Center and the World Bank.

The *Asian Development Bank (ADB)* performs large-scale research projects to help create proper conditions for the spread of e-commerce. In particular, together with the United Nations Economic Commission for Asia and the Pacific, it prepared a fundamental report "Embracing the E-commerce Revolution in Asia and the Pacific" [13]. The bank adopts a comprehensive approach and aims to unite efforts of various potential stakeholders (international organizations, national governments, trade and industrial associations, business companies, and consumers) and implement a comprehensive development policy that includes creation of legislative and regulatory mechanisms for e-commerce, harmonization of national legal norms and standards, deployment of modern ICT infrastructure and expansion of technological and economic opportunities for network access, as well as development of a financial infrastructure to serve digital economy. Success of this approach is confirmed by the fact that the Asia-Pacific region has become the area of the most intensive development of e-commerce, which is likely to account for almost a half of global B2C e-commerce in 2020 [13, p. 6].

In most cases, regional IFIs are active conductors of policies initiated and launched by relevant **regional integration associations** such as Asia-Pacific Economic Cooperation (APEC), Association of Southeast Asian Nations (ASEAN), African Union, etc.

In this context, one can use as an example the African Union with its *Agenda 2063* [14], which provides a program to promote digital entrepreneurship, ICT integration and the dissemination of relevant digital competences. Among the 15 key projects of this development strategy, three are directly related to the digital sphere: creation of the Pan-African E-Network, the project of an African Virtual and E-university, and the project of creating reliable cybersecurity [15]. In accordance with this strategy, on March 21, 2018, an agreement was concluded to establish the *African Continental Free Trade Area (AfCFTA)*, which came in force on May 30, 2019 and actually became active in July 2019 for its 27 member countries. Among the five key components of this FTA mechanism are an online trading negotiation system and a digital payment system [16].

ASEAN, for its part, has approved an e-commerce work program for the period 2017-2025 [17], which covers the tasks of infrastructure development (five initiatives), education and technological competencies in the context of human capacity building (three initiatives), consumer protection (9), modernization of the legal framework for operations in the digital space (5), promotion of competition (1), improvement of logistics (1) and defining a general framework for e-commerce (1). As to the latter item, in November 2018, the *ASEAN Agreement on Electronic Commerce* was signed [18], which, according to calculations [19], will lead to an increase in e-commerce by 2025 from the current 72 up to 240 billion USD.

Within the APEC, the *APEC Internet and Digital Economy Roadmap* [20] has been adopted, which focuses on digital infrastructure development, promoting the interoperability of relevant national systems and ensuring broad access to broadband Internet networks¹⁰. A special group on the development of e-commerce created in this institution coordinates relevant national policies and promotes formation of transparent and predictable regulatory systems in this field [21].

An analysis of legal provisions of the current regional trade agreements as of August 2018 made by WTO experts [2, p. 178] shows that of the 362 agreements notified in the WTO, including 286 agreements that are actually in force, 217 agreements contained provisions relating to digital technologies.

Below is a list of key issues covered by the regulatory institutions of the regional trade agreements¹¹.

1. *Establishing rules for market access and conducting e-commerce transactions.*

For the most part, reference is made to WTO rules in this area and general principles of trade regulation are established, with an emphasis on the principle of non-discrimination applied to digital products, obligations are made on the non-application of duties on digital products or electronic transactions, and on the liberalization of e-commerce (with a more liberal regime than provided for in the GATS agreement, especially in the telecommunications and computer services sectors). Some recently concluded agreements set out provisions for cross-border data transmission and the use and localization of computer facilities that serve such operations, as well as for the access to program codes. And only in few agreements do the parties undertake not to set barriers to cross-border information flows, including the transfer of personal data for commercial use. However, even such agreements reserve the right of national authorities to apply appropriate mechanisms for the protection of personal data and confidentiality of personal transactions and accounts [2, p. 179–182].

2. *Regulation of telecommunications regime issues.*

Obligations mostly include harmonization of internal regulatory regimes in this field, extending the scope of such regulation beyond the limits established by the relevant WTO rules, in particular, extending regulation to all communication formats (mobile, satellite, Internet) and services provided through them. Some agreements set regulatory requirements for pricing mechanisms, competitive access to network infrastructure, interoperability, the order of Internet use, the distribution of costs between network providers, etc.

3. *Coordination of internal regulatory framework for e-commerce.*

The main issues in this context are consumer protection mechanisms, methods of electronic authentication and protection of personal data, and, to a lesser extent, issues related to preventing unsolicited messaging (spam) and to cybersecurity (although the latter aspect is now receiving much more attention and an extended regional regulation in this field should be expected). Most often, member countries of regional associations refer to the UNCITRAL

¹⁰ The APEC Roadmap identifies 11 key areas to focus on: digital infrastructure development; promoting interoperability; achieving universal broadband access; developing a holistic government policy framework for the Internet and the digital economy; promoting the coherence and cooperation of regulatory approaches affecting the Internet and the digital economy; promotion of innovations and introduction of enabling technologies and services; increasing trust and security in the use of ICT; promoting the free flow of information and data necessary for the development of the Internet and the digital economy, in compliance with applicable laws and regulations; improving baseline Internet and digital economy measurements; raising the inclusiveness of the Internet and digital economy; facilitation of e-commerce and cooperation in the field of e-trade [20, p. 2]. A special institute, the *Digital Economy Steering Group*, has been set up to guide the implementation of this Roadmap.

¹¹ For the complete list of these issues, see [2, p. 196].

Model Law on Electronic Commerce and only in some cases to the 2005 *UN Convention on the Use of Electronic Communications in International Contracts* [22]. In the aspect of electronic authentication, the obligations are usually related to recognition and interoperability of digital certificates, and ensuring security standards. As to consumer protection mechanisms, the main issues here include promoting fair business practices and opportunities for consumers to resolve cross-border disputes. However, the provisions on protection against fraud and deceptive business practices are only found in a limited number of regional agreements¹² [2, p. 185].

4. Regulation of intellectual property protection in the digital environment.

The provisions of regional agreements in this field include obligations on copyright and related rights with reference to WIPO's generally accepted Internet agreements (WIPO Performance and Phonograms Agreement [23] and WIPO Copyright Agreement of 20 December 1996 [24]), and, in some agreements, the obligation to join or to ensure compliance with the provisions of the *Beijing Treaty on Audiovisual Performances* of 24.06.2012 [25], which is especially relevant for performances in the digital environment. They can also set standards for technological protection and protection of signals transmitted over satellite and cable networks¹³, provisions for the protection of digital trademarks, management of the Internet domain name system and the responsibility of Internet service providers¹⁴, and government use of software [2, p. 187–189].

5. Standardization of e-governance issues.

The provisions of regional agreements in this field are primarily related to the introduction of paperless managerial technologies, such as the electronic form of submission and processing of documents on exports and imports, electronic system of certificates of origin, automated customs clearance, electronic public procurement systems, and, in some agreements also an electronic trademark registration system. Many agreements oblige the parties to publish, in an electronic public form, specific information and documents related to trade regulations, including relevant draft laws and other legislation, as well as technical rules (technical regulations, sanitary and phytosanitary regulations, etc.).

Assessing in general the present system of institutional support for e-commerce at the regional level, one should note its significant heterogeneity, due to the adaptation to regional institutional traditions and conditions, as well as to the current levels of economic and social development.

Conclusions

The main priorities of change in national institutional systems related to digital transformation include: a clearer definition of strategic priorities and tools to encourage digital transformation: first of all, encouragement of investment in digital infrastructure (including electronic data exchange systems) and creation of appropriate digital competencies; creation of pilot comprehensive zones of free e-commerce; introduction of a sound legal framework for digital operations focused on reliable consumer protection in the field of e-commerce and

¹² Only a few recently concluded agreements refer to good business practices and commitments to encourage private sector self-regulation in these matters, including the standardization of information provided to consumers on terms of use, prices and surcharges and protected forms of payment, and the adoption of codes of conduct, model treaties, guidelines and mechanisms for law enforcement and dispute settlement based on international standards.

¹³ These are, in particular, the provisions of the Convention Relating to the Distribution of Programme-Carrying Signals Transmitted by Satellite of 21.05.1974.

¹⁴ Some agreements provide for the possibility of terminating the online account of repeated infringers of intellectual property rights.

protection of personal data and intellectual property, effective mechanisms (laws and national strategies) to protect cybersecurity, and encouraging competition in cyberspace and strengthening competitive capacity for small, medium and micro businesses. However, in a number of countries, in the context of strengthening the regulation of operations in the digital space, steps are taken towards "electronic protectionism" aimed at restricting the freedom of commercial operations in cyberspace (in particular, via "data localization" requirements, and restrictions on data transfer abroad).

A central place in the creation of the latest institutional formats for commercial operations in cyberspace belongs to the changes in the mechanisms of global and regional international organizations, which is due to the global nature of cyberspace. This involves synergistic interaction at various levels of public organization and with the participation of different (in terms of composition, legal status and nature) international organizations - governmental and non-governmental, global and regional ones, as well as preventing fragmentation of the Internet space.

The World Trade Organization is to play a key role in the mechanisms of global regulation of e-commerce, for which purpose institutional adjustments and innovations in its mechanisms and in the structure of existing agreements should take place in the framework of multilateral negotiations on e-commerce agenda. Among them: possible unification of the two basic WTO agreements (GATT and GATS); specification, in the structure of WTO agreements, of certain features of commercial transactions performed exactly online, extension of the current regulations to various types of online services that are presently still outside the scope of multilateral regulation (such as online retail services); development and implementation of new regulations for the newest institutional formats of business and new types of firms and professions related to digital technologies and commercial data transfer; and development of initiatives and platforms with a limited number of participants that allow to promote the e-commerce agenda.

Given the global nature of digital markets and the complex nature of transactions in digital markets, under way are the formation of an extensive and multilevel network of globally operating international organizations to regulate e-commerce, increasing differentiation and specialization of their functions of regulation and coordination and cooperation between various organizations. This leads to the emergence and expanded activities of cross-regulatory competences, with required cooperation between various international organizations, up to the emergence of common institutional formats, political initiatives and interaction platforms.

The asymmetric nature of the existing global e-commerce regulation system and the presence of regulatory gaps, in particular in the regulation of competition in digital markets, both determine the important role of regional policy tools and regulatory institutions, especially regional financial institutions (including regional development banks) and regional integration associations and unions. The latter establish specific (for certain important aspects) rules of market access and operations in e-commerce, telecommunications, protection of intellectual property in the digital environment and e-governance, as well as harmonize the internal regulatory framework for e-commerce of the participating countries. However, the process of developing regional institutional support systems for e-commerce is characterized by significant heterogeneity, due to cultural traditions and differences in the levels of socio-economic development.

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Received 15.01.20.

Reviewed 03.03.20.

Signed for print 15.06.20.

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НОВІ ІНСТИТУЦІЙНІ ФОРМАТИ РОЗВИТКУ СВІТОВОЇ ЕЛЕКТРОННОЇ ТОРГІВЛІ

У статті розглядаються наростаючі тенденції інституціоналізації сфери світової електронної торгівлі. Відзначається, що цей процес є багаторівневим та багатоаспектним, поширюється на політику як національних держав, так і міжнародних організацій та регіональних об'єднань, залучає як державні, так і недержавні структури.

Виявлено головні напрями змін в національних інституційних системах, пов'язаних з цифровою трансформацією, – чіткіше визначення стратегічних пріоритетів та інструментів стимулювання інвестицій у цифрову інфраструктуру та формування цифрових компетенцій; створення зон вільної електронної комерції; запровадження надійної правової основи для цифрових операцій з орієнтацією на захист прав споживачів, особистих даних та інтелектуальної власності, гарантування кібербезпеки, заохочення конкуренції та посилення конкурентних мож-

ливостей для малих, середніх та мікропідприємств. Водночас відзначається посилення "електронного протекціонізму" та заходів щодо обмеження свободи комерційних операцій у кіберпросторі.

Автор доводить, що глобальний характер кіберпростору зумовлює центральне місце глобальних та регіональних міжнародних організацій у створенні новітніх інституційних форматів цифрової торгівлі. Ключову роль у механізмах глобального регулювання електронної торгівлі має відігравати Світова організація торгівлі, що потребує корекцій та інновацій у її механізмах та угодах, зокрема для впровадження норм регулювання для новітніх інституційних форматів здійснення електронного бізнесу. Одночасно відбувається процес формування мережі міжнародних організацій з регулювання цифрової торгівлі, наростання диференціації та спеціалізації й координації і кооперації їх регулюючих функцій. Важливу роль у цій системі відіграють регіональні політики та регулюючі інститути, регіональні інтеграційні об'єднання. Проте інституційне забезпечення цифрової торгівлі на регіональному рівні характеризується значним рівнем гетерогенності, зумовленої культурними традиціями та розбіжностями в рівнях соціально-економічного розвитку.

Підготовлено у рамках дослідження за розділом "Формування інститутів міжнародної електронної торгівлі в умовах становлення інформаційно-мережевої економіки" теми НДР "Формування інституційної архітектури інформаційно-мережевої економіки" ДУ "Інститут економіки та прогнозування НАН України" (2018–2020 рр.), № держреєстрації 0117U001686.

Ключові слова : електронна торгівля, цифрова торгівля, цифрова інфраструктура, торгова політика, національне і міжнародне регулювання торгівлі, міжнародні організації та об'єднання, міжнародно-правові норми