

# GLOBAL ECONOMIC RELATIONS

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## INTERNATIONAL TRADE IN THE CONTEXT OF SPREADING PRODUCTION NETWORKS

*It has been proved that during global production fragmentation, the economic entities gain access to new technologies, forming a new system of international economic relations where protectionism is unacceptable to all members of the network. The obtained conclusions are recommended for considering for economic policy of the key entities of international production networks functioning in the XXI century.*

*Keywords:* regulation of international trade, preferential trade agreements, international production networks, production fragmentation, multinational corporations, WTO.

*Мазараки А., Дугинец А. Международная торговля при распространении производственных сетей. Доказано, что в процессе фрагментации глобального производства экономические субъекты получают доступ к новым технологиям, формируя новую систему международных экономических отношений, в которой протекционизм неприемлем для всех участников сети. Полученные выводы рекомендованы для учета в экономической политике ключевых субъектов функционирования международных производственных сетей в XXI в.*

*Ключевые слова:* регулирование международной торговли, преференциальные торговые соглашения, международные производственные сети, фрагментация производства, транснациональные корпорации, ВТО.

**Background.** Since the early 1990s, the structure of world production and trade has undergone some changes. Thus, the reduction in trade costs due to the spread of technological progress and total trade liberalization has led to the expanding and deepening of production fragmentation around the world. This, in turn, has reduced the barriers in the sectors that support

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the international production networks (IPN) operation (transport, finance, telecommunications, etc.), leading to an increase in the internationalization of certain links (see [1] for more details). Considering the global nature of production, investment, and trade, the government of any country, including Ukraine, needs to understand which factors are facilitating or slowing participation in the IPN. *Firstly*, it is about the work quality of institutions and infrastructure, the availability of incentives for investors and firms operating in the local market, the level of corruption. The foregoing affects investment decision making for entering the IPN, which is formed by several factors. First, the complication of the international division of labor process (IDL), which went into the intra-sectoral division due to production fragmentation processes spreading beyond national economies. *Secondly*, the acceleration of scientific and technological progress and technological change, which serve today as the basis of international production and the driving force of world trade.

Consequently, in the XXI century, due to the above factors, the production processes transformation took place that resulted in changing from natural resources (in particular, land and relatively unskilled labor) to human-created assets (buildings and structures), and then to insensitive assets (knowledge and information). Thus, according to the United States Bureau of Statistics, in 1950, 80 % of the value-added in US industrial production was primary either the processed materials or raw materials themselves, and just 20 % of the value-added was the knowledge itself. Before the year 2000, the proportions had changed significantly, accounting for 25 % and 75 %, respectively [2]. Besides, in the book value of assets, the market value component of companies has been declining lately. Thus, for most companies, the ratio of intellectual/ or innovative capital to physical and financial is 5:1 to 16:1 [3]. The change in the value structure, its fragmentation through across countries fragmentation, and the complexity of defining its volume by network links has raised the issue that not only trade statistics but also trade policies require reevaluation and updates to reflect the new structure of world trade for expansion of international industrial networks. It should be noted that the current trade rules were created for the terms of the XX century when most of the goods were produced mainly in one country. But in the twenty-first century, these rules do not fit modern models of international trade, as expansion of production fragmentation has led to the dichotomy between the trade realities and its regulatory framework at the WTO level.

Traditional approaches to assessing economic effects resulting from the formation of international production networks are losing their relevance, given that in the context of large-scale multilateral and bilateral reduction of tariff barriers, the real causes of production fragmentation processes development are related to the institutional changes and the elimination of non-tariff barriers for enhancing competitiveness of foreign recipient countries in terms of multiple cross-border movement of intermediate goods and services. The problem is compounded by the fact that countries use different

rules to determine the country of goods origin. In addition to the generally accepted criterion of sufficient processing, other criteria, such as changes in tariff classification, ad valorem percent, etc. are also applied. Domination in the trade flows of intermediate goods and services, intellectual property rights, a growing share of the import component in exports are transforming requirements for the content of the trade policy. The complexity of trade's structure and nature requires adequate institutional support, which guarantees the rights of investors and right holders of all types in all links of the IPN. On the other hand, modern Preferential Trade Agreements (PTA) is an important argument in making decisions by major companies to locate a particular production abroad. But the variety and complexity of rules for determining the country of the origin of the goods lead to regulatory fragmentation, creating trade barriers, increasing costs and, consequently, the final cost of goods to consumers. Therefore, further regulation system transformation of international trade towards harmonization and simplification of rules of the origin of the goods will stimulate the formation and development of production networks in the world economy.

**Analysis of recent research and publications.** In the modern scientific literature, a considerable number of publications are devoted to the study of the effects of the productions' formation in world economy. The implications identification of country involvement in production fragmentation processes, the assessment of value flows and some aspects of coordinating the operation of IPN are discussed in K. DeBacker and S. Miroudot [4], G. Gereffi and D. Wyman [5], R. Stöllinger [6], R. Johnson and G. Noguera [7]. It should also be noted that different institutions create competing tables, each designed for a specific analytical purpose, so their presentation format, industry classification and types of supporting information are different. In the issue of the World Expenditure Tables and their international (interregional) modifications, cross-border trade flows are decomposed into components of analogous transactions between industries and end consumers within the national economy. Typically, the task is to identify the value-added of national and foreign origin in the aggregate exports of a particular country. For example, in October 2015, based on TiVA, OECD-WTO calculations, in absolute terms, gross exports from Germany and Spain, as well as France and Poland, increased most significantly from 1995 to 2011 [8].

Such a significant delay in providing information is due to the high complexity of its processing, as well as to the frequency of calculating Cost-Production tables by individual countries since they are not calculated annually in all countries. It should be noted that in these statistical databases there are no data on the Ukrainian economy, and in general, as of October 2018, there are data for almost 70 countries up to 2011 (TiVA) and 43 countries until 2014 [8].

Another feature of international production networks research is related to TNCs' investment activity, which has a significant impact on value-added trade [9–12]. It was given that factors that determine value-added trade can

equally influence FDI, it is important to consider the nature of the latter. Thus, the FDI aimed at gaining market share or providing proximity to the consumer is more likely to lead to a decrease in value-added exports from the investor country (exporting country). Different requirements for the localization level can similarly be affected. On the other hand, the country that FDI may increase value flows to partner countries that have previously cooperated with the exporting investor [13].

The innovative economy development has led to a dynamic increase in the number of corporate integration and merging, as well as creation of alliances in the 1990s, followed by the new category formation, the "alliance economy". This is the main factor determining the level and direction of foreign direct investment (FDI) at the present stage. By integration and merging each other, companies have an impact on the development of individual markets and the economic policies of individual countries. The last decade of the XX century differed by a high number and high cost of the integrations and merges. For example, UNCTAD's integration data, merging and non-ownership cooperation agreements show that direct investment, licensing, franchising and other corporate alliance schemes were advancing [14].

In terms of the sectoral structure of cross-border integration and merging, the highest share of such transactions is in high-tech industries. For instance, enhancing the effectiveness of TNCs through integration is particularly acute in the automotive sector, where the primary integration purpose is to achieve optimum vehicle production. Over the past twenty years, automakers have either consolidated through merging or integration into strategic alliances. It was given that the automotive industry has limited growth potential, which results in the volatile dynamics of the automaker's financial performance; it is precisely the integration and merging that allow overcoming the growth potential barrier.

A considerable number of agreements were concluded in the telecommunications, aviation and pharmaceutical sectors, which allowed for the distribution of R&D costs and the necessary synergy from the agreement. It should be noted that virtually all major pharmacological companies use integration and merging to consolidate their competitors by merging competitors as they increase the cost of developing new drugs and as a growth strategy (e.g., Aventis, AstraZeneca, Glaxo Smith Kline, Aventis-Sanofi).

International organizations such as UNCTAD [15], the World Economic Forum [16] and the Group of Twenty have also been involved in discussing the topic of value-added through international trade mechanisms. In September 2013, the Heads of State and Government of the G20 were presented with a joint OECD, WTO and UNCTAD report on the results of global product chain analysis, their relationship with trade and investment, job creation and economic development [16].

In 2016, the United Nations Economic Commission for Europe prepared a report on "Global Manufacturing Measurement Guide", which continues the logic of the report "The Impact of Globalization on National Accounts",

although in the former case, more attention is paid to multinational enterprises involved in global production [17]. It should be noted that recently IPN includes companies that specialize in the production of individual components of a particular end product. That is, the world production represents groups of subsidiaries and branches of the same multinational enterprise that are linked together in a global production chain. This type of international corporate structure is mainly addressed in the Global Manufacturing Measurement Guide. Also, at the end of 2017, the WTO website published a report "Global value chain development report 2017" [18] with main purpose to identify the changing nature of international trade in terms of expansion of international production networks (available for 1995–2014).

Notwithstanding the significant contribution of existing developments in research of economic effects of international production formation, it should be noted that there is another aspect that must be considered when analyzing the distribution of value among network members. This is a value assessment of concluding (or having) regional trade agreements on trade between elements of the network, which is located mainly within the territories of the parties to this agreement.

Thus, this article's **aim** is to identify the regulation features of world trade for the expansion of international production networks.

**Materials and methods.** The complex of complementary methods of scientific research of economic processes and phenomena was used to realize the research's purpose: system-structural, comparative analysis, comparative and statistical analysis; territorial, resource, information, process and institutional approaches for analyzing formation and functioning of international production networks. The research's information base includes statistical and analytical materials and information-analytical collections, newsletters and reviews of international organizations; information materials of national and international research centers; a wide range of local and international literature sources, results of own scientific researches, analytical and informative materials from open sources.

**Results.** Most commonly, a trade agreement is the result of increased economic ties between companies in different countries (which may be reflected in increased trade intensity between the partner countries). In other words, the economic integration is not only a legal tendency towards production fragmentation and trade processes within a certain region but also the result of the interaction of economic entities of different countries, combined by geographical, linguistic, cultural proximity, similarity of business practices and their state regulation features. It should be noted that at the time of signing the GATT, no trade agreement has been concluded in the world. But between 1948 and 1994, 123 notifications were sent to GATT, of which 49 regional trade agreements were registered: 45 for goods and 4 for services [19].

The growth dynamics analysis of regional trade agreements in the years 1948–2015 shows a marked increase in the number of integration associations since the 1990s [19]. It was at this time that most of the integration

blocs were formed, such as MERCOSUR (1992), FTA Agreement between ASEAN countries (1992), EU (1993), NAFTA (1994). Most agreements were created as a free trade area with 262 valid agreements; other forms are customs union, economic integration, and agreements in a particular area. Thus, FTA agreements between countries are the most widespread in the world, accounting for almost 60 % of the total preferential trade agreements. But this research will further use the term "preferential trade agreement" to mean all trade agreements that are the subject of granting preferences in trade between countries, both unilaterally and on a reciprocal basis. It should be emphasized that most of these agreements in the XX century aimed at trade-in end goods when the exporter aimed to penetrate the market of the partner country to the detriment of the protectionist interests of the national producer. In the context of global fragmentation, where the share of imported components in most countries' exports is more than 60 %, both sides are interested in reducing barriers to trade. The effects of tariff- and non-tariff barriers will be proportional to the number of times the product crosses national borders due to the different production stages being located in different countries.

In recent years, bilateral preferential trade agreements have been the most widespread, with countries not located close geographically but with similar economic and political interests. Thus, according to WTO statistics, the number of agreements concluded between developed and developing countries, so-called North-South agreements, has increased. In the total number of transactions, they represent 50 % agreements, with "South-South" – 40 % and "North-North" – 10 % [19]. This tendency can be explained by increasing fragmentation in these areas, as well as the wish of developing countries to make progress by transferring technology from developed countries. And in the 21<sup>st</sup> century a new type of preferential trade agreement is being formed, which stipulates, on the one hand, an obligation on a contractual basis to accelerate customs and border procedures, and on the other, an obligation on institutional and legislative changes in national economies, namely: in investment, services, competition, intellectual property rights, labor and the environment.

PTA provides countries with benefits in both trade and economic spheres: reducing tariff barriers and liberalizing non-tariff regulation assist to increase trade, develop cooperative links between countries, and create value-added chains. Therefore, the signing of the agreement can be a tool to protect both the already functioning international production network and the impetus and condition for the development in the territories of the partner countries of new IPN. However, another option is that simplifying access to a more favorable institutional environment or to higher quality services that have an increasing role in the production process will cause the relocation of production, thereby altering value-added routes and reducing value-added exports from the country (which is part of the integration group).

World experience confirms that PTA is one of the important aspects of embedding in the IPN (along with the formation of advanced scientific and technological base, availability of a developed system of institutions).

The main feature of trade facilitation networks is their complementarity, that is, agreements aimed at creating the most favorable conditions for cross-industry cooperation, importing components into countries and exporting the final benefits from them. All EU countries, as a single integration group, pursue similar goals for free trade negotiations with third countries. A large part of the PTA is concluded by the EU on the WTO + principle, i.e. agreements cover, in addition to tariff preferences for trade in goods, the issues of regulating trade in services, conducting joint investment projects, harmonizing approaches in human rights, working conditions, etc. This creates the right conditions for IPN formation in partner countries since their development is impossible without an effective system of protection of intellectual property rights and even low labor costs will not be able to attract production to the country without certain patent protection mechanisms. In this regard, the liberalization between the parties to the agreement is possible, reducing competition from the IPN of other countries [20]. Also, the EU vertical restraint [21] mechanism also ensures their competitiveness under FTAs. Thanks to such regulation, European companies have preferential opportunities to integrate into the international production network, unlike foreign counterparties, given their legal affiliation with third countries. In the end, European (especially German) distributors always have constant contact with manufacturers overseas and virtually never go out of the IPN, while being as close to the target consumer as possible, thus getting most of the value-added that is generated by the network. Confirming the benefits of concluding preferential trade agreements shortly, the EU plans to sign agreements with the US, Vietnam, Thailand, Singapore, Morocco, Malaysia, Japan, India. These bilateral agreements will complete preparations for the formation of an expanded pan-Euro-Mediterranean diagonal cumulation zone between the EU, the Middle East, and the EFTA.

Besides, the Economic Partnership Agreements between the EU and the countries of Africa, the Caribbean, and the Pacific will come into force soon. Trade cooperation based on the Economic Partnership Agreements is envisaged by the Cotonou Treaty and symbolizes shifting from unilateral preferences, which expired in 2007 [22].

The United States and China should also be taken into account as they may sign new mega-regional agreements in the configuration and scale of the issues covered. These include: the Trans-Pacific Partnership (TPP); EU–US Transatlantic Trade and Investment Partnership (TTIP), as well as the Regional Comprehensive Economic Partnership (RCEP), under which auspices China wants to establish FTAs with ASEAN and New Zealand, Australia, India, Japan, and South Korea (countries participating in regional cooperation of ASEAN + 1, ASEAN + 3, ASEAN + 6 formats). If like the TPP, the TTIP and the RCEP will be signed, the share of all mega partnerships will account for more than 75 % of the world trade. Mega-regional agreements, on the one hand, can exacerbate the "stratification" of trade regimes and, on the other, be the basis for initiatives to further integrate preferential zones and move towards a unified trading space.

An analysis of recent years' trends in the formation of mega-regional preferential partnerships, such as TPP, TTIP, RCEP allows to conclude that the main purpose of these agreements is to reach new standards in trade of goods and services, investments, environment, working conditions, intellectual property, fight against intellectual property, corruption and competition. This is first and foremost an attempt to create institutionally compatible legal and regulatory environments for world preferential trade. That is, these agreements can be defined as a tool for maintaining and enhancing the competitiveness of countries for expanding international production networks.

It should be noted that the preferential rules of origin (PRO), which are an integral part of any preferential trade agreement, are of utmost importance for the effective operation of international production networks. But the diversity of preferential PROs creates an additional burden for the customs services and those authorities responsible for administering PTA. Therefore, given the current trend towards consolidation (the Pan-Euro-Med Convention), the application of the most successful means of determining the country of origin for expansion of global manufacturing systems in the context of institutional preferential trade agreements, it can be argued that the mechanism of full accumulation will be most convenient. In other words, simplification and mutual recognition of origin criteria can become a platform for the dissemination of the main mechanisms of preferential rules of origin multilaterally. In this case, however, the question arises as to whether the imported sector merged the imported product in the statistical database; its intended use for intermediate purposes or final consumption and the like.

The lack of progress in the Doha Round of multilateral trade negotiations may be indicative of the inefficiency created in the XX century of the multilateral regulation mechanism due to inability to resolve the XXI century trade issues related to the multiple cross-border movement of intermediate goods, services, capital, intellectual property in terms of international production networks' functioning. The reasons for such inefficiency include the growing number of new WTO members, which has made it difficult to find compromise solutions; strengthening protectionist attitudes in the world after the 2008 global financial crisis; increasing disagreement between countries on the compromise and balance of mutual concessions; the disappointment of private business in the WTO as a place to address their problems related to the trade growth of intermediate goods; increasing geopolitical imbalances in the world. Taking into account the aforementioned, as well as the results of the conducted analysis of available research in this field, *tables 1, 2* outline the main directions of international trade regulation transformation due to the development of international production networks at national and international levels. Considering the fact that the countries' integration level into IPN is different, the most stimulating effect for business is usually achieved when carrying out a set of measures aimed at ensuring economic and political stability, development of human capital, creation of quality national infrastructure of roads, ports, and telecommunications.



Table 1

**International trade regulation transformation due to development of international production networks (national level)**

Scope	Direction of change	Content of change
Customs Tariff Policy	Approaches and Optimality Criteria	The protection degree calculation must include not only import duties on end products but also duties on the imported components used, in particular cases, when components are protected by a higher rate than the end products.
	Export development	Preventing shrinking and anti-export shifts of promising sectors, which produce high value-added products that occur in case of their continued high tariff protection
Introducing protectionism	Adjusting the model of protectionism	Encouraging imports of raw materials and components concerning the prospective export of end goods
	Protecting the national links of the IPN	Ensuring multiple smooth border crossings, promoting their regulatory systems and protecting intellectual property in the partner countries of the network
	Multilateral Trade Negotiations	Promotion of the Trade Facilitation Agreement (reduction of border crossing costs and costs within Partner Countries), Services Agreement, TISA (reduction of barriers to access to service markets), Counterfeiting Agreement, ACTA (to protect intellectual property rights), etc.

Source: Compiled and supplemented by [18; 23].

Table 2

**International trade regulation transformation due to the development of international production networks (international level)**

Scope	Direction of change	Content of change
International Economic Integration	Transposition of PTA decisions into the Global Level of Regulation	The issues are aimed at reducing trade costs in affiliate countries' network members (simplifying regulation, limiting local component requirements)
		Measures aimed at protecting functioning IPN (rules of origin, rules of competition)
		Monitor regional negotiations on non-WTO investment and competition issues
Coordinating international trade facilitation	Coordination of "hard and soft infrastructure packages"	Hard infrastructure includes transport, roads, communication, which is necessary for the functioning of a modern industrial country. Soft infrastructure intends to support the country's economic, medical, cultural and social standards
		Interaction of countries in coordinated information support of international industrial cooperation
	Strengthening cooperation and coordination between partners	Avoiding duplication of actions to support regional actions aimed at simplifying trade procedures and programs that include both national and regional aspects (streamlining and harmonizing border crossing procedures on land, reviewing legislation and improving the functioning of transit regimes through regional integration and project integration corridors)

Source: Compiled and supplemented by [18].

The policies implemented to support individual sectors of the economy to assist specific companies are not always of a success. As a rule, it leads to the creation of monopolies, reduced competition, rising costs, which does not allow creating the potential of global or regional competitiveness. Therefore, an approach that covers the entire production chain is required, with trade agreements being only part of that complex of institutional infrastructure that influences the decisions of companies and corporations to fragment their production systems.

Increasingly, attention is being paid to measures at the national level to increase production opportunities and attractiveness for international investors, especially with a focus on education and technical training of the workforce (see *table 1, 2*). During the fragmentation of global production, economic entities gain access to the latest technologies, forming a new system of international economic relations where protectionism is unacceptable to all the network members. It is in the first place contrary to the interests of TNCs and national economies, as international trade is weakened under the high level of customs tariff protection and non-tariff barriers to trade.

There are identified two key points of methodological discourse on determining the directions of international trade regulation transformation for formation and development of the IPN in the example of three countries: A (supplier), B (intermediate production) and C (end consumer), which in future researches can serve as a basis for justification proposals at national and international levels of the regulatory process:

*The distribution of value added by the links of international production network:*

- when the aggregate output in country B increases, the value-added exported from country A increases to produce goods for the country of end consumption C. On the one hand, the expansion of production/production capacity in country B necessitates a disproportionate increase in value-added exports from country A within the IPN. *Firstly*, due to the increasing demand for goods within the intermediary country (in particular within other production chains), it needs more value-added imports (passing through established channels, that is, within existing GVC and IPN) to meet the same demand (by *secondly*) in country C. *Secondly*, the higher the output/demand increase in intermediate country B, the greater the increase in value-added exports, which is related to the implementation of research and development, that is, value-added exports embodied in high-tech products to preserve the exporting country's competitiveness in the global market (production chain A-B-C). In other words, it is an increase in aggregate economic capacity of country B within the IPN, which contributes to increasing its ability to export value-added. The greater the involvement of the supplier country in the network of countries with economic potential (including country A itself) in the IPN, the more significant country's GDP change influence on the increase in value-added exports (in particular by realizing the scale effect, improving the effectiveness of interaction between companies). Further, the FDI implementation in an intermediate country B may increase the country's participation in IPN,

thereby increasing the impact of that country's GDP growth on value-added exports from the country (FDI companies additionally supply the value-added they create in their mother country A);

- the greater the GDP growth in the country of final consumers, the greater the increase in value-added exports from country A (exporting to country C through country B) embodied in both final and intermediate goods (i.e., the greater the value-added is needed for satisfaction of this demand, in particular through the participation of country B). Thus, the FDI implementation in country B may lead to an increase in output and demand for exporter goods, which will increase value-added exports from countries B and C. Thus, an increase in output in the importing country C will contribute to an increase in value-added exports to that country by an increase in exports of business services and services to the population, i.e., by increasing supplies of goods and services not previously supplied to the country;

- the higher the economic and innovative development of country B, the greater the chance of an increase in value-added exports in a particular country B, and the smaller the increase in value-added exports from A to C. This effect is explained by the drag effect [24]: all other countries consume more value from country A (including end goods that are directly exported from A or other routes), as well as increasing the likelihood of a country which value-added imports are more economically profitable for the importing country (e.g., through lower transaction costs). Moreover, the greater (in the previous period) the share of value-added exported from A to C through intermediate country B (i.e., the greater the involvement of the exporting country in the IPN), the more significant the negative impact of changes in the value-added in country B. This can be explained by the fact that other countries, with which partner countries have production fragmentation, are more intensively "dragging" part of the value-added for their industries (and expansion of production capacity in countries A and B is not immediately possible).

*Transformation of trade policy to create prerequisites for integration in the IPN:*

- the relationship between the development of IPN and forming of preferential trade agreements is bilateral, which, on the one hand, manifests in countries already involved in international production fragmentation, seeking to enter into more widespread and comprehensive PTA with partners for the guaranteed movement of intermediate goods and services. This addresses the barriers associated with suppliers and consumers in third countries that lead to increased costs between trading partners. On the other hand, preferential trade agreements stimulate new production networks, providing simplified trade between the links of the production chain, which requires constant institutional changes to increase the investment attractiveness of the national economy;

- further multilateral liberalization in WTO format at a deeper level in PTA format is a more promising direction for the development of international trade since preferential liberalization is not completely without disadvantages compared to multilateral regulation. Thus, by increasing the number of PTA, there is a risk that, *firstly*, having achieved their goals of liberalization within

the bilateral or regional formats, the most active countries – the IPN participants will not be interested in promoting liberalization at the multilateral level. *Secondly*, there is a paradox in the world practice for the rapid growth of concluded PTA where preferential tariff incentives tend to decline. *Thirdly*, international production networks are expanding in the global economy precisely through multinational universal standards and norms that create conditions for the IPN not to remain predominantly regional. However, it should be noted that further multilateral liberalization in the WTO format will become possible if the expediency of unifying international trade regulation rules goes beyond the business and protectionist interests of individual groups.

It should be emphasized that in many fundamental documents one of the priorities of social, economic and industrial policy is expansion recognition of the country's integration into the world economy based on its integration into the IPN and support of the export of high value-added products. It should be noted that, according to OECD research, the reduction of barriers in the process of production fragmentation can cause a global GDP growth of 4.7 %. This is 6 times more than can be obtained from the complete cancellation of all current import tariffs [25].

So, it could be concluded that in the XXI century the expansion of preferential trade agreements is a certain institutional response to the problems and needs of trade-related to the removal of production internationally. This complicates the task for WTO to carry out its traditional activities aimed at ensuring mutual entering markets. Perhaps the future direction of WTO development will be to find an approach that can facilitate "deep" integration while preserving the principles of non-discrimination and reciprocity.

**Conclusion.** Transformation trends in the global reproduction process regulation in the development of international production networks are characterized, on the one hand, by the extension of preferential trade agreements as a tool to protect and stimulate development in the territories of the partner countries of international production networks links, which increases the tendency to consolidate these agreements and the future of mega-regional trading blocs such as the Transatlantic Trade and Investment Partnership, Regional Comprehensive Economic Partnership. On the other hand, there is uncertainty about the movement of value and value structure across the network links, which leads to discrepancies between foreign trade practices, its normative regulation (obsolescence of WTO principles) and evaluation (lack of information about which sector of the economy consumes imported product, as well as intended for intermediate use or final consumption).

In the XXI century, protectionism is at odds with the interests of both national economies and TNCs, as the former is not profitable to trade with its partners in the IPN and the latter between its structural units for high levels of customs tariff protection and the non-tariff trade barriers. Recognizing this, all parties involved in production networks are seeking to reduce customs tariffs, simplify trade procedures and develop investment cooperation through bilateral or regional trade and investment agreements. Considering that TNCs play a major role in coordinating the international production networks

functioning of TNCs, in the coming years the issue of developing new harmonized rules and norms in trade will no longer be solved by multilateral negotiations of the World Trade Organization, but above all in the negotiations on the trade agreements conclusion that often lobby for TNCs. This is confirmed by the fact that most countries have already joined more than one PTA, and one can assume that all the trends characteristic of the last decade, such as: involvement in global reproductive processes of countries at all levels of economic development in all regions of the world; withdrawal from non-reciprocal preferences in agreements with developing countries; changing the configuration of PTA participants, increasing the number of agreements between existing integration units (e.g. the Pan-Euro-Med Convention), expanding and deepening PTA coverage to determine the nature of trade cooperation in the global economy. It is possible that even after the new opportunities for bilateral cooperation are exhausted, the tendency to consolidate PTA will increase with the emergence of new mega-regional trade blocs.

## REFERENCES

1. Baldwin, R., & Venables, A. (2013). Spiders and Snakes: Offshoring and Agglomeration in the Global Economy. *Journal of International Economics*. (Vol. 90). (Issue 2), (pp. 245-254). DOI: 10.1016/j.jinteco.2013.02.005 [in English].
2. Carlota, Perez (2011). Finance and technical change: A long term view. *African Journal of Science, Technology, Innovation and Development*. (Vol. 3). (Issue 1), (pp. 10-35) [in English].
3. Arndt, S. W. (1997). Globalization and the Open Economy. *North American Journal of Economics and Finance*. (Vol. 8). (Issue 1), (pp. 71-79). DOI: 10.1016/S1062-9408(97)90020-6 [in English].
4. DeBacker, K., & Miroudot, S. (2014). Mapping global value chains. *ECB Working Paper*. 1677. DOI: 10.1787/18166873 [in English].
5. Gereffi, G., & Wyman, D. L. (Eds.) (2014). *Manufacturing miracles: paths of industrialization in Latin America and East Asia*. (Vol. 1189). Princeton University Press [in English].
6. Stöllinger, R., Hanzl-Weiss, D., Leitner, S. M., & Stehrer, R. (2018). *Global and Regional Value Chains: how important, how different?* Vienna: Institute for International Economic Studies [in English].
7. Johnson, R. C., & Noguera, G. (2012). Accounting for intermediates: Production sharing and trade in value added. *Journal of International Economics*. (Vol. 86). (Issue 2), (pp. 224-236). DOI: 10.1016/j.jinteco.2011.10.003 [in English].
8. OECD (2015). Trade in Value Added. Retrieved from <https://stats.oecd.org/index.aspx?queryid=66237> [in English].
9. Blonigen, B. A. (2001). In search of substitution between foreign production and exports. *Journal of International Economics*. (Vol. 53), (pp. 81-104). DOI: 10.1016/S0022-1996(00)00066-0 [in English].
10. Head, K., & Ries, J. (2004). Exporting and FDI as alternative strategies. *Oxford Review of Economic Policy*. (Vol. 20). (Issue 2), (pp. 409-423). DOI: 10.1093/oxrep/grh024 [in English].
11. Kleinert, J. (2003). Growing Trade in Intermediate Goods: Outsourcing, Global Sourcing or Increasing Importance of MNE Networks? *Review of International Economics*. (Vol. 11), 3, 467. DOI: 10.1111/1467-9396.00396 [in English].

12. Baier, S. L., & Bergstrand, J. H. (2007). Do free trade agreements actually increase members' international trade? *Journal of international Economics*. (Vol. 71), 1, 72-95. DOI: 10.1016/j.jinteco.2006.02.005 [in English].
13. Kleinert, J., & Toubal, F. (2013). Production versus distribution-oriented FDI. *Review of World Economics*. (Vol. 149). (Issue 3), (pp. 423-442). DOI: 10.1007/s10290-013-0158-1 [in English].
14. UNCTAD (2016). Global Investment Trends Monitor. 22. 20 January. Retrieved from [http://unctad.org/en/PublicationsLibrary/webdiaeia2016d1\\_en.pdf](http://unctad.org/en/PublicationsLibrary/webdiaeia2016d1_en.pdf) [in English].
15. UNCTAD (2013). Global Value Chains and Development: Investment and Value Added Trade in the Global Economy. New York and Geneva: United Nations [in English].
16. WEF (2012). The Shifting Geography of Global Value Chains: Implications for Developing Countries and Trade Policy. Geneva: World Economic Forum. Retrieved from [http://www3.weforum.org/docs/WEF\\_GAC\\_GlobalTradeSystem\\_Report\\_2012.pdf](http://www3.weforum.org/docs/WEF_GAC_GlobalTradeSystem_Report_2012.pdf) [in English].
17. UNECE (2015). Guide to Measuring Global Production. United nations New York and Geneva. 159. Retrieved from [http://www.unece.org/fileadmin/DAM/stats/publications/015/Guide\\_to\\_Measuring\\_Global\\_Production\\_2015.pdf](http://www.unece.org/fileadmin/DAM/stats/publications/015/Guide_to_Measuring_Global_Production_2015.pdf) [in English].
18. The World Bank (2017). Global value chain development report 2017. Measuring and Analyzing the Impact of GVCs on Economic Development. International Bank for Reconstruction and Development. Retrieved from [https://www.wto.org/english/res\\_e/publications\\_e/gvcd\\_report\\_17\\_e.htm](https://www.wto.org/english/res_e/publications_e/gvcd_report_17_e.htm) [in English].
19. WTO (2019). Regional trade agreements (RTAs) Database World Trade Organization web-page. Retrieved from [https://www.wto.org/english/tratop\\_e/region\\_e/region\\_e.htm](https://www.wto.org/english/tratop_e/region_e/region_e.htm) [in English].
20. Orece, G., & Rocha, N. (2014). Deep integration and production networks: an empirical analysis. *The World Economy*. (Vol. 37). 1, (pp. 106-136). DOI: 10.1111/twec.12076 [in English].
21. EC (2010). Guidelines on Vertical Restraints. European Commission Notice. Retrieved from [http://ec.europa.eu/competition/antitrust/legislation/guidelines\\_vertical\\_en.pdf](http://ec.europa.eu/competition/antitrust/legislation/guidelines_vertical_en.pdf) [in English].
22. EC (2019). International cooperation and development. ACP – The Cotonou Agreement. Retrieved from [https://ec.europa.eu/europeaid/regions/african-caribbean-and-pacific-acp-region/cotonou-agreement\\_en](https://ec.europa.eu/europeaid/regions/african-caribbean-and-pacific-acp-region/cotonou-agreement_en) [in English].
23. WTO (2017). World Trade Statistical Review 2017. Retrieved from [https://www.wto.org/english/res\\_e/statis\\_e/statis\\_e.htm](https://www.wto.org/english/res_e/statis_e/statis_e.htm) [in English].
24. Baldwin, R., & Taglioni, D. (2011). Gravity chains: Estimating bilateral trade flows when parts and components trade is important. *Journal of Banking and Financial Economics*. (Issue 2). (pp. 61-82) [in English].
25. WTO (2013). Connecting to Value Chains. World Trade Organization: Fourth Global. Review of Aid For Trade 2013. Geneva: Summary Report [in English].

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**Мазаракі А., Дугінець Г. Міжнародна торгівля при поширенні виробничих мереж.**

**Постановка проблеми.** Зміна структури доданої вартості, її рознесення завдяки фрагментації по різних країнах і складність визначення її обсягів за ланками мереж актуалізували питання, що не тільки торгова статистика, але й торгова політика вимагає переоцінки та оновлення з метою відображення нової структури світової торгівлі при поширенні міжнародних виробничих мереж.

*Аналіз останніх досліджень і публікацій* показав, що попри наявність окремих наукових доробок залишається невирішеним питання оцінювання впливу на укладання (або наявність) регіональних торговельних угод за торгівлі між елементами міжнародної виробничої мережі, що розташовується переважно на території країн-учасниць цієї угоди.

**Мета статті** – виявлення особливостей регулювання світової торгівлі в умовах поширення міжнародних виробничих мереж.

**Матеріали та методи.** Комплекс взаємодоповнювальних методів наукового дослідження економічних процесів та явищ з використанням статистичних й аналітичних матеріалів Організації економічного співробітництва та розвитку, Групи Світового банку, Світової організації торгівлі, Європейського бюро статистики, а також результати власних наукових досліджень.

**Результати дослідження.** У процесі фрагментації глобального виробництва економічні суб'єкти отримують доступ до новітніх технологій, формуючи нову систему міжнародних економічних відносин, в якій протекціонізм є неприйнятним для всіх учасників мережі. Усвідомлюючи це, учасники міжнародних виробничих мереж (МВМ) прагнуть до зниження митних тарифів, спрощення процедур торгівлі та розвитку інвестиційного співробітництва шляхом двосторонніх чи регіональних преференційних угод як стимулу розвитку на територіях країн-партнерів ланок міжнародних виробничих мереж. Обґрунтовано, що головною особливістю мереж, які формуються в умовах спрощення торгівлі, є їх компліментарність, тобто угоди, спрямовані на створення найвигідніших умов міжгалузевого співробітництва, імпорту компонентів у країни та експорту кінцевих благ з них. Результати аналізу тенденцій формування у перспективі мегарегіональних преференційних партнерств (Транстихоокеанське партнерство (ТТП) між США, Брунеєм, Канадою, Новою Зеландією, Сінгапуром, Австралією, Мексикою, В'єтнамом, Малайзією, Чилі, Перу та Японією; Трансатлантичне торговельне та інвестиційне партнерство (ТТІП) між ЄС і США, а також Регіональне всебічне економічне партнерство (РВЕП) свідчать, що метою цих угод є формування інституційно сумісних правового та регулятивного середовищ для світової преференційної торгівлі. Проте як інструмент збереження та підвищення конкурентоспроможності держав в умовах поширення міжнародних виробничих мереж різноманітність преференційних торговельних угод з різними правилами походження товарів призводить до нормативної фрагментації, створення торговельних бар'єрів, збільшення витрат і відповідно вартості товарів для споживачів. Враховуючи, що основну роль у координації зазначених процесів відіграють ТНК, розробка та обґрунтування нових гармонізованих правил і норм у торгівлі відбуватимуться під час переговорів щодо преференційних торговельних угод, а не в рамках багатосторонніх переговорів СОТ.

**Висновки.** У процесі фрагментації глобального виробництва відбувається формування нової системи міжнародних економічних відносин, в якій учасники МВМ прагнуть до зниження митних тарифів, спрощення процедур торгівлі та розвитку інвестиційного співробітництва шляхом преференційних торговельних угод як інструменту захисту та стимулювання розвитку на територіях країн-партнерів ланок мереж. З огляду на те, що основну роль у координації цих процесів відіграють ТНК, розробка та обґрунтування нових гармонізованих правил і норм відбуватимуться при укладанні преференційних торговельних угод, а не багатосторонніх переговорів СОТ, що актуалізує подальші дослідження в цьому напрямі з метою вирішення питань, пов'язаних з багаторазовим транскордонним переміщенням проміжних товарів, послуг, капіталу, об'єктів інтелектуальної власності тощо.

**Ключові слова:** регулювання міжнародної торгівлі, преференційні торговельні угоди, міжнародні виробничі мережі, фрагментація виробництва, транснаціональні корпорації, СОТ.