Management Theory and Studies for Rural Business and Infrastructure Development
eISSN 2345-0355. 2018. Vol. 40. No. 1: 103–117.
Article DOI: https://doi.org/10.15544/mts.2018.10

TRADE FACILITATION AND ECONOMIC DEVELOPMENT: COOPERATION BETWEEN UKRAINE AND THE COUNTRIES OF NORTH AMERICA

Olha Yatsenko[1], **Kenneth C. Schneeberger**[2], **Tetiana Tananaiko**[3]
[1] *Prof. habil. Dr Kyiv National Economic University Named After Vadym Hetman. Peremogy avn. 54/1. 03680, Kyiv, Ukraine. Tel. +380679529916. E-mail yacenkoolgakneu@gmail.com*
[2] *Ph.D., Director, CAFNR International Programs, College of Agriculture, Food and Natural Resources, University of Missouri, Columbia, the United States of America. E-mail schneebergerk@missouri.edu*
[3] *Master, Kyiv National Economic University Named After Vadym Hetman. Peremogy avn. 54/1. 03680, Kyiv, Ukraine. Tel. +380639749945. E-mail tetiana_tananaiko@ukr.net*

Received 20 02 2018; accepted 13 03 2018

The article substantiates the expediency of trade facilitation between Ukraine and the countries of North America. This is a recent problem for Ukraine as the country affected by geopolitical risks. One of the solutions, needed in order to materialize the national economic interests and to defend the state sovereignty, is to enhance partnership with the countries of North America which are acknowledged leaders of the global economy. The purpose of this article is to justify recommendations related to development and implementation of trade and economic cooperation between Ukraine and the countries of North America. The main issue is the development of cooperation under the protective trade policy of the USA and Canada. Using the GTAP model, the article provides several scenarios of trade and economic cooperation with the purpose of choosing the best one. The article also corroborates and offers focus areas and tools to improve trade relations between the countries.

Key words: international trade, nontariff methods, tariff regulation, trade policy, trade and economic cooperation, GTAP, Ukraine, USA, Canada, countries of North America.
JEL Codes: F10, F13, F17.

1. Introduction

The globalization of trade and economic relations that have shown unprecedented dynamics on the beginning of the third millennium has been radically transforming the distribution system of the global economy by setting its new paradigm. According to it, on the one hand, the developed countries increase their global economic domination and, on the other hand, such increase creates opportunities to establish new centers of the global economic competition. For Ukraine, affected by geopolitical risks, the development of a partnership with the countries of North America as the leaders of the global economy is of utmost importance both for materialization of its national interests and asserting its state sovereignty.

Trade and economic cooperation under the globalization of the world economy was studied by S. Anderson, J. Bhagvati, P. Krugman, R. Lawrence, and M. Heart. D. Lukianenko (2001) believes that the globalization enhances the development of trade cooperation, at the same time it threatens the developing countries with exposures they cannot fight. Z. Brzezinski, T. Melnik, V. Movchan (2014) sfocus on the prospects of cooperation between Ukraine and the USA in their studies. Ya. Stoliarchuk (2013) explains all actions of the USA in the global arena with one single purpose – to secure is position of the global leader. M. Yülek (Yülek, 2015) studied substantiation of the effect of global crises and the necessary measures to minimize negative effect upon the economy and trade and economic cooperation by means of efficient policy. The peculiarities of trade and economic cooperation of the countries and the effect of global factors upon sectoral economy, forecasting, and modeling of the interaction between them are highlighted in a number of works by O. Yatsenko (Yatsenko, 2017).

The matter of international economic relations with Canada was studied by Kh. Gorgiy, B. Murakoza, R. Nellert, H. Raff (2015). J. Francois, B. McDonald, H. Nordstrom (Francois, 1996), T. Hertel, K. Yanagishima, B. Dimaranan (Hertel, 1996), K. Anderson, B. Dimaranan, B. Hoekman, W. Martin (Anderson, 2003) modeled possible consequences of Uruguay and Doha Rounds of trade negotiations within the WTO using the GTAP model. In this context, H. Van Mein and F. Van Tongeren (Van Mein, 2003) have paid special attention to the relations between developed and developing countries. Meanwhile, despite the growth of interest in this area, scientific works still lack thorough research of the matters related to development of trade and economic relations with the countries of North America influenced by endogenous and exogenous factors.

The purpose of this article is to justify recommendations related to development and implementation of trade and economic cooperation between Ukraine and the countries of North America taking into account the protective trade policy of the USA and Canada.

2. Methodology

The methodological basis of this research is the author's approach to the analysis of ways and tools for improvement of trade and economic cooperation between Ukraine and the countries of North America. This involves the joint application of a set of well-known common scientific methods, as well as a special method – GTAP model for scenarios. In addition, other special research methods were used, including comparative and statistical analysis, correlation and regression analysis methods, and time series analysis method.

3. Results of research

Conceptual framework for the development of trade and economic cooperation between countries influenced by global risks

There are four levels of international economic relations: international contracts, interaction, cooperation, and integration. The international economic coopera-

eISSN 2345-0355. 2018. Vol. 40. No. 1: 103–117.
Article DOI: https://doi.org/10.15544/mts.2018.10

tion is characterized as strong and long-term economic ties of cooperative nature, which are based on common, initially manifested and approved intentions, secured in long-term economic agreements and contracts (Galperina, 2014).

The modern concept of international cooperation has several specific features which are hard to dispute: it is based on synergistic partnership between the countries that defines an effective and flexible approach to the increase of welfare both for all countries and for every individual country; information is regarded as a restorative source giving life for a new system of international relations; there is free circulation of ideas, goods and services within the framework of cooperation, as well as information exchange through international networks (Guzhva 2009).

The trade and economic cooperation has no sense if it is inefficient. Economic efficiency of foreign trade is regarded as the efficiency of foreign trade defined by a number of complex indexes characterizing the expediency of export and import operations. Quantitatively, it may be assessed by calculating the indexes of economic efficiency of export-import operations, which, in their turn, are also divided into two subgroups: macroeconomic indexes of foreign trade efficiency and foreign trade operations efficiency indexes.

In order to assess the efficiency of trade and economic cooperation between the countries, the major international organizations such as the IMF (Review of the IMF's…, 2017), OECD (World Trade Indicators…, 2015), the World Bank (Global Trade Alert…, 2017), WEF (The Global Enabling…, 2016) calculate the respective indexes annually (Table 1).

Table 1. Indexes Assessing the Conditions of International Trade Between the Countries

Index	Characteristics
IMF Trade Restrictiveness Index – TRI	This index consists of three components: the Overall Trade Restrictiveness Index); the Tariff Restrictiveness Rating; and the Non-tariff Restrictiveness Rating.
World Trade Indicators	It consists of 5 indicators: trade policy, foreign conditions, institutional environment, trade infrastructure and trade efficiency. A weighted assessment of 80 indicators allows characterizing the aspects that restrict trade cooperation.
Global Trade Alert	It assesses the modern state policy measures that discriminate foreign trade. This research takes into account tariff and non-tariff restrictive measures applied by the countries (prohibition of export and import, customs tariffs, export subsidies, special protective measures and phytosanitary measures).
Global Enabling Trade Report	It is based on almost 50 modern economic indexes for 136 countries. It measures factors facilitating the development of trade and consists of four sub-indexes: access to markets, administrative formalities of customs clearance, transport and communication infrastructure, and the business environment.

Trade and economic determinants of development of cooperation between Ukraine and the countries of North America

With the growing role of continental economic clusters, it becomes more and more important for Ukraine to develop the trade and economic cooperation and its determinants with the global leaders, such as the USA and Canada, which are defined as ones of the most important strategic partners in accordance with the export strategy of Ukraine. The interaction with the USA is implemented within the framework of the updated Priorities for U.S.–Ukraine Cooperation (Road Map) (Priorities…, 2008), while the trade relations with Canada have advanced to the next stage upon signing and entry into force of the Free Trade Agreement (Free Trade Agreement…, 2017). In this context, the analysis of the structure of trade and trade policy of Ukraine in its relations with the countries of North America becomes even more interesting.

The USA takes the 7th place by the value of Ukraine's foreign trade with the countries of the world (Table 2), with its share of 3.8% of the total value, while Canada takes the 44th place (0.3% of the total value). Commodity trade of Ukraine with the countries of North America is characterized by negative balance (State Statistics…, 2017).

Table 2. Geographic Structure of Foreign Commodity Trade of Ukraine with the Countries of North America in 2011–2016, million USD

Index	Year					
	2011	2012	2013	2014	2015	2016
Canada	122.6	107.2	57.4	72.5	30.2	28.9
% of the total value	0.18	0.16	0.09	0.13	0.08	0.08
USA	1113.7	1014.6	888.3	667.9	481.8	426.5
% of the total value	1.63	1.47	1.40	1.24	1.26	1.17
TOTAL	68394.2	68809.8	63312.0	53901.7	38127.2	36361.7
Canada	207.8	193.0	243.1	191.5	206.3	217.3
% of the total value	0.25	0.23	0.32	0.35	0.55	0.55
USA	2591.2	2905.2	2759.2	1928.9	1480.7	1687.9
% of the total value	3.14	3.43	3.58	3.54	3.95	4.30
Total	82608.2	84658.0	76986.8	54428.7	37516.4	39249.8
Balance	–1562.7	–1976.4	–2056.6	–1380.0	–1175.0	–1449.8

The commodity structure of Ukraine's trade with the countries of North America has not changed qualitatively in the last seven years. The structure of Ukraine's export to the USA was dominated by ferrous metals (64%), machinery (4.5%), dairy products, honey (4.3%), fats and oils (–2.2%); and to Canada – by non-precious metals (17%), machinery (13%), vegetable products (11%), transport vehicles (9%), dairy products, honey (6%), timber (4%). The commodity structure of import to Ukraine was dominated by products with a high added value: from the USA – supplies of mineral fuels (25%), machinery (23%), motor transport vehicles (19%), seeds (4.4%), pharmaceutical products (3.6%), as well as mineral fuel (68%), machinery

eISSN 2345-0355. 2018. Vol. 40. No. 1: 103–117.
Article DOI: https://doi.org/10.15544/mts.2018.10

(8%), pharmaceutical products (8%), fish products (5%), motor transport vehicles (3%) from Canada.

Studying the trade in services, it should be noted that the leading positions were taken by the IT, material resource processing services, transport and business services, repair and technical maintenance services. Financial, professional, consulting, transport, travel, and IT services dominate among import services (Figure 1).

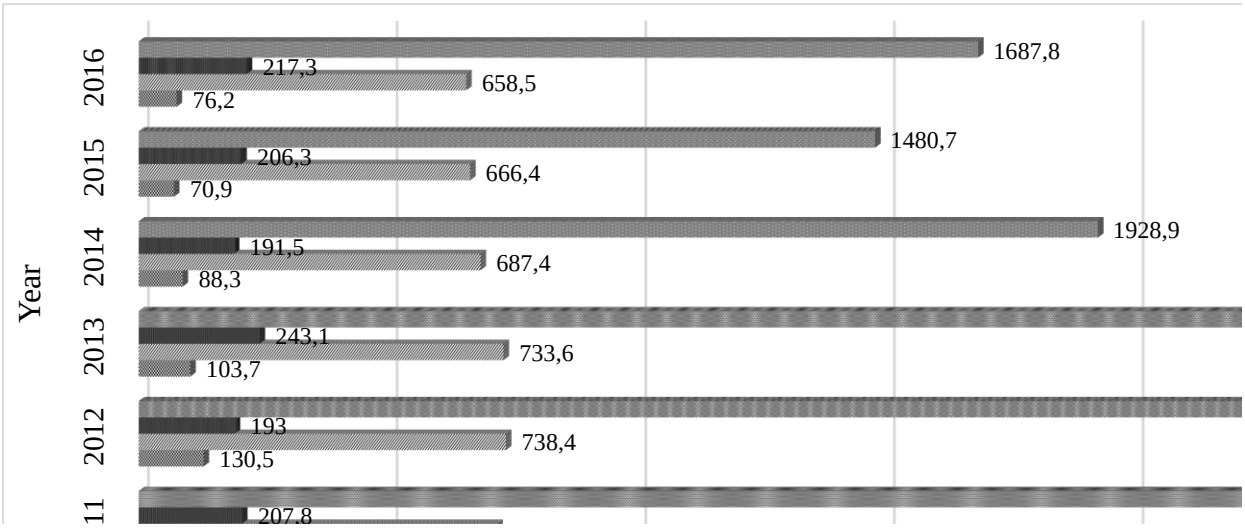

Fig. 1. Dynamics of trade in services between Ukraine and the countries of North America in 2011–2016

The trade policy of the countries has a significant effect upon the development of trade and economic cooperation. Lack of a free trade agreement with the USA is currently compensated by the US Generalized System of Preference – GSP (Generalized…, 2017) – designed to enhance the economic growth in the developing countries. Preferences of the GSP program allow duty-free entry of over 3,500 types of products from Ukraine to the USA. Within the frameworks of the GSP, the value of exported goods from Ukraine to the USA was between USD 26 and 70 million in 2012–2016; however, currently, there is a problem with prolonging this mode for Ukraine after its expiration in the end of 2017.

In accordance with the provisions of the Free Trade Agreement, Canada has removed 98% of customs duties for Ukrainian goods. Ukraine will also be able to supply defined export positions of agricultural products to Canada at a 0% rate but only within the frameworks of predetermined quotes. Preferences approved by the government within the Free Trade Agreement will help Ukraine regulate its trade balance with Canada, as Ukraine's export value to Canada is three times less than its import.

However, Canada still applies general tariff rates for another 2% of commodities for which it did not remove customs duties, and the USA applies tariff rates for the group of products not covered by the GSP. The analysis of customs duties shows that the share of bound tariff rates, i.e. the rates fixed in the concessions, exceeds 99% in the countries of North America. The USA has established the highest rates for

dairy products (16%), sugar and confectionery products (13.2%), beverages and tobacco products (15%) and clothes (11.6%). Among Canadian goods, high tariff rates are established for animal products (average 27%), dairy products (218%), cereals (17.6%), clothes (10.6%) and textile (17.2%).

Along with the tariff methods established by legislation, non-tariff methods are used more and more often as more and more countries are attracted by the neo-protectionism policy in the current conditions. The motives of its application for both countries are purely economic (control of import volumes, facilitation of export, restrictions on export of deficit goods etc.). The USA applies these methods actively to support the national security system, economic independence, or as a measure in response to the same measures applied against it. First of all, these are technical barriers, as there are over 2,700 various organizations operating in the USA and dealing with the development of standards. There is a similar situation in Canada: nine Standards Development Organizations (SDOs) are operating in this country. This creates obstacles for the entry of products on the North America markets despite the lack of harmonization between Ukrainian and international standards.

Another important issue is the use of sanitary and phytosanitary measures. The animal product trade is the most problematic area for trade with the USA due to the introduction of trade restrictions for the products originating from the regions affected by various diseases or epidemics. In many cases, the US government uses complex and time-consuming procedures to develop rules for renewing the trade. The Canadian Food Inspection Agency also introduces significant legislative and regulatory changes in the standards: The Safe Food for Canadians Act and the Agricultural Growth Bill, which enable application of preventive SPS. Another one urgent and relevant problem is export subsidiaries granted by North American countries, especially in the agricultural sphere. Antidumping measures have been introduced against of the import of several defined positions of metallurgic and chemical industry products originating from Ukraine, for instance, for iron manganese silicate and dry urea import to the USA (abolished in December 2016) or for industrial steel, in particular, carbon and alloy steel rods (hot-rolled rods), which came under investigation in the USA in April 2017.

To define the reasons of the instability of growth of export volumes to the countries of North America, it is expedient to perform a correlation and regression analysis and find out if it depends on the change of the gross domestic product index. The correlation factor (r) for the time series of sixteen years is 0.6664. The correlation factor is more than 0, so there is a direct relationship, i.e. the growth of export rates to the countries of North America also increases the GDP index. As the value of the correlation factor is within the $0.5 \leq r \geq 0.7$ range, the relationship between these indexes may be characterized as notable. A regression equation shall be as follows: $y = 60.352x + 35671$ (Figure 2); where X is an export value, and Y is the GDP value. This equation shows to what extend the GDP value will grow if the Ukraine's export to the North America countries increases by 1 million US dollars.

eISSN 2345-0355. 2018. Vol. 40. No. 1: 103–117.
Article DOI: https://doi.org/10.15544/mts.2018.10

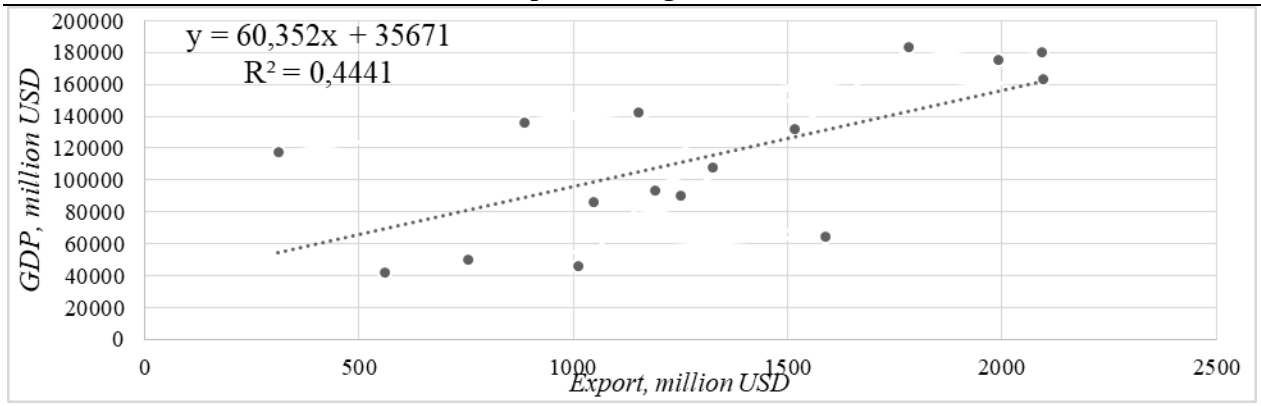

Fig. 2. A regression equation and an export determination factor for the export to the North American countries and GDP of Ukraine

Just like for the majority of countries with an emerging market, for Ukraine the dependence of economic growth on export has increased significantly in the later years (if a correlation is calculated for the last 7 years, it makes 0.93, which proves a very strong connection), and it continues to grow. This means, on the one hand, that our country is slowly integrating into the global economy; however, on the other hand, it proves gradual exhaustion of this economic growth resource.

Improvement Trends for the Cooperation between Ukraine and North America Countries

Just like for the majority of emerging markets, the dependence of economic growth on export has increased significantly for Ukraine in the later years (if a correlation is calculated for the last 7 years, it is 0.93, which proves a very strong relationship), and it continues to grow. On the one hand, this means that our country is slowly integrating into the global economy; however, on the other hand, it proves gradual exhaustion of this source of economic growth.

Ways to Improve the Cooperation Between Ukraine and North America Countries

As noted above, a computable general equilibrium model known as GTAP Model (Global Trade Analysis Project) is one of the most effective tools to assess the trade and economic cooperation (Global Trade Analysis…, 2017) which allows to assess the consequences of multilateral and bilateral trade negotiations. Being a universal tool to analyze the changes in the international economic activity in a medium-term perspective (3-5 years), this model was used by many foreign scientists to assess the consequences of the Uruguay and Doha Rounds of trade negotiations within the WTO.

In the process of economic and mathematical modeling of GTAP, we studied and assessed the effect of cooperation on such macroeconomic indicators of Ukraine and North America (the USA and Canada) as GDP, export, import, price level, and

production rates in fifteen economic sectors. The following scenarios were taken into account to assess the trade and economic cooperation between Ukraine and North America. Scenario 1: complete trade liberalization for agricultural and industrial products and services (reduction of import and export duties to 0%). Scenario 2: simplification of international trade procedures between Ukraine and North America countries, in particular, due to its effect on cargo traffic to the North America countries with the reduction of transportation costs by 5%. During the modeling, we applied the Gragg method, which may be more accurate in case of the predetermined number of steps than the Euler method, Johansen method, or an extrapolation method with the number of steps equal to three. At that, the method allows getting the data as accurate as 4 to 8 digits following the decimal point.

Based on the results of modeling, we assessed the effect upon the first indicator – the GDP of regions based on the first and second scenario, considering the fact that these changes will have minor negative effect upon the GDP of the EU countries, Oceania, East and South Asia, Latin America and Africa (Table 3).

Table 3. Breakdown of Changes in GDP Volumes by Region, Based on GTAP Model Results, %

Condition	Ukraine	North America
Scenario 1	0.03594	–0.00015
Scenario 2	0.78420	0.17060

The calculations show that Scenario 1 will not have a significant effect upon the GDP volume of Ukraine (will increase by 0.04%) and North America countries (will decrease by 0.0002%). As both these values are almost equal to zero, we can come to the conclusion that the full liberalization of tariffs will result in quite minor changes in the GDP volumes (Figure 3).

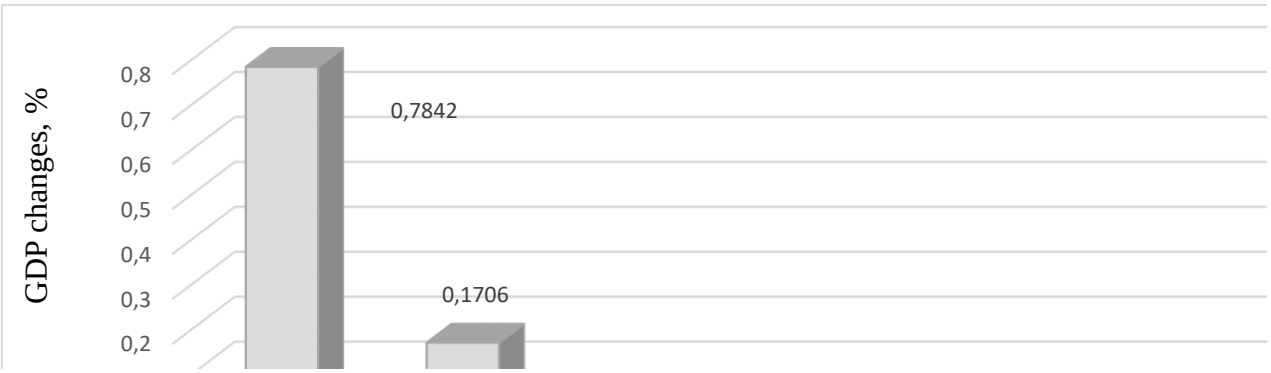

Fig. 3. Change of GDP Volumes by Regions of the World Based on Scenario 2

According to Scenario 2, the simplification of international trade procedures shall have a positive effect upon the Ukraine's GDP (growth by 0.78%) and North America countries (by 0.17%). However, it should be noted that Ukraine will gain more as the index will increase by almost 1%. Therefore we can make the conclusion that Scenario 2 will be more beneficial for both cooperative parties, compared to Scenario 1.

Management Theory and Studies for Rural Business and Infrastructure Development
eISSN 2345-0355. 2018. Vol. 40. No. 1: 103–117.
Article DOI: https://doi.org/10.15544/mts.2018.10

Table 4. Changes in Foreign Trade between Ukraine and North America Countries by Industries, Based on GTAP Model Results

Sectors	Scenario 1				Scenario 2			
	Ukraine		North America		Ukraine		North America	
	Export	Import	Export	Import	Export	Import	Export	Import
Grain crops	–0.255	0.467	0.0029	0.0015	–0.8905	1.446	0.5285	1.0474
Meat products	–0.023	1.898	0.0938	0.0062	–1.,75	1.644	0.5416	0.7527
Dairy products	11.036	2.96	0.1269	0.9911	–2.3416	2.1497	0.6657	0.8505
Fats and oils	–0.093	0.57	0.028	0.0068	–0.5604	1.1683	1.6456	1.0307
Other agricultural products	0.45	0.354	0.0149	0.0036	0.2673	0.682	1.8011	0.6662
Finished food products	–0.087	0.093	0.0004	–0.0001	–0.3954	0.949	0.6622	0.4197
Mining	–0.079	–0.008	0.0001	0	1.4193	0.9175	1.6693	0.6193
Light industry	–0.08	0.01	–0.0003	0	–1.0456	0.4453	0.8002	0.4579
Timber	–0.124	0.03	–0.0002	–0.0002	0.5954	0.8091	1.6204	0.8899
Chemical industry	–0.096	0.003	0.0002	–0.0001	1.1378	0.3944	0.5054	0.5349
Metallurgical industry	–0.126	–0.048	0.0012	–0.0001	–0.425	0.4422	0.0546	0.4063
Heavy industry	–0.152	0.089	0.0001	–0.0001	–0.7514	2.1698	–0.1967	0.4638
Construction services	–0.139	0.178	0.0004	–0.0002	–2.7927	3.7123	–0.7511	0.3357
Transport and communication	–0.081	0,059	0.0004	–0.0004	–1.8316	1.3643	–0.6781	0.3411
Other services	–0.139	0.068	0.0004	–0.0002	–2.7207	1.4456	–0.6537	0.3333

In the conditions of customs duties liberalization, there will be growth of Ukraine's export (Table 4) in such sectors as dairy products, including dry milk, cheese and butter (11%), and other agricultural products (fruit, vegetables and their products (mostly juices), nuts and honey) (0.45%), as opposed to the decrease in grain crops (–0.25%), heavy industry products (–0.15%) and construction services (–0.14%). There will be growth in Ukraine's import in grain crops (0.5%), meat products (1.9%) and dairy products (2.9%). Scenario 1 is inefficient for optimizing the structure of trade turnover as it leads to the change in the number of goods protected by technical barriers. Therefore, even full liberalization of customs duties will not simplify the entry onto the foreign markets (Figure 4).

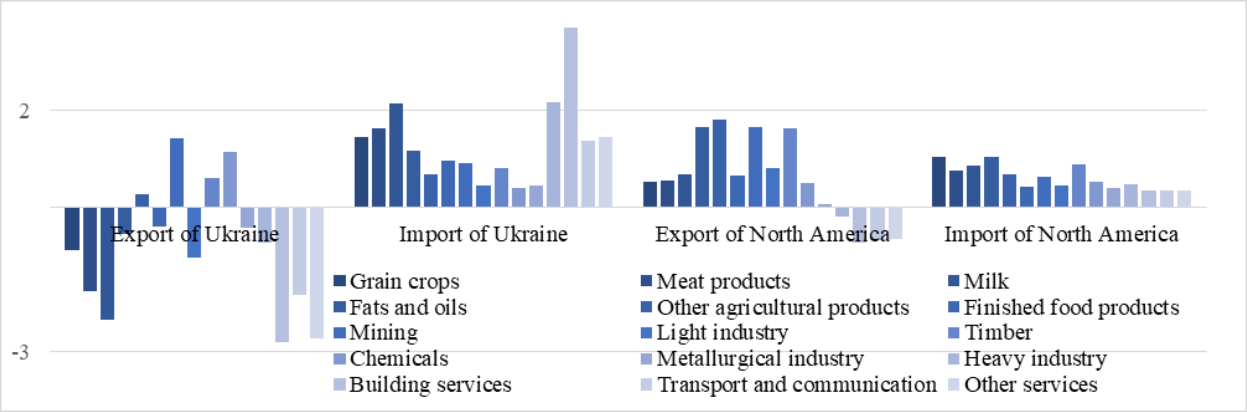

Fig. 4. Changes in Foreign Trade of Countries by Industries Based on Scenario 2 of GTAP Model

As a result of simplification of trade procedures, the export of Ukrainian products will decrease in meat (–1.75%) and dairy products (–2.3%), construction (–2.8%) and other services (–2.7%), with the growth of product volumes in mining (1.4%) and chemical industry (1.1%) compared to the growing import of Ukraine and North America countries (Figure 6). The interpretation of modeling results allows to conclude that Scenario 2 is more optimistic, yet it will lead to a negative trade balance of Ukraine.

As for the changes in Ukraine's production rates by sectors, it was found that there will be decrease in both cases (Figure 5).

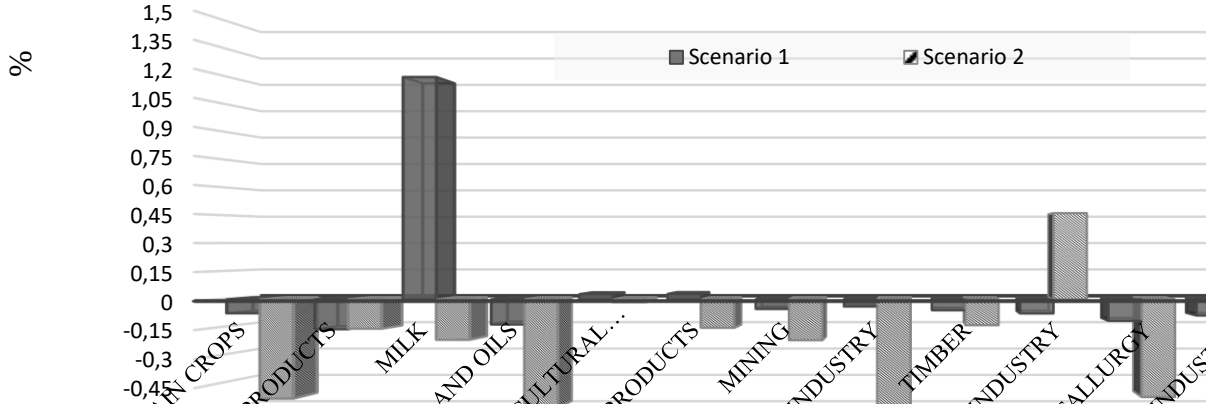

Fig. 5. Changes in Ukraine's Production Rates Based on GTAP Model

In case of tariff liberalization in Ukraine, the most affected sector will be the production of meat (reduction by –0.16%), fats and oils (–0.13%) and metallurgy products (–0.11%). According to Scenario 2, gross investments will increase significantly (by 3%) whereas there will be the decrease in the most production industries. Thus, when choosing the more efficient of two scenarios, it should be noted that the first scenario is more beneficial for Ukraine, as it will lead to a minor drop in production rates. At the same time, both scenarios are neutral for the countries of North America.

Thus, taking the results obtained from GTAP model, we can make the conclusion that the second scenario is more optimistic. However, when considering the effect on the export and import indicators, which are important for trade and economic cooperation, it becomes obvious that this scenario is more beneficial for the countries of North America as in Ukraine it will result only in the growth of import. As a result, we can say that there is no optimal model for Ukraine that would include the need to change just one parameter in order to increase the efficiency of trade and economic cooperation. Yet it becomes clear that the changes must be made in the direction of simplifying the trading procedures.

In the context of implementing the second scenario (the optimistic one for Ukraine) by applying tools to simplify the international trade procedures, such as facilitating access to the North American markets, it is important to justify the cooperation in the most promising economic sectors in order to materialize mutual national economic interests (Table 5).

eISSN 2345-0355. 2018. Vol. 40. No. 1: 103–117.
Article DOI: https://doi.org/10.15544/mts.2018.10

Table 5. Promising Sectors of Cooperation between Ukraine, the USA and Canada

Sector	Prospects	Companies cooperating within the sector
Air and space	Supply of PW150A engines for new Ukrainian transport aircraft AN-132. Creation of a rocket launch site in Nova Scotia (Canadian province). Engineering and manufacturing of a carrier rocket that may be used by Orbital ATK to implement projects for an Antares carrier rocket	Antonov State Company with Pratt & Whitney, Esterline, CMC Electronics, IMP Aerospace, L3 Wescam; Maritime Launch Service with Yuzhnoe State Designe Office
Energy	Construction of a Central Storage Facility for Spent Nuclear Fuel based on Holtec technologies. Introducing best practices in licensing nuclear industry, exploration and mining of uranium and decommissioning of uranium mines.	Energoatom and Westinghouse, TVEL JSC; Centrenergo PJSC Xcoal Energy & RESOURCES, Merill Lynch, Pierce, Fenner & Smith Incorporated.
Machine-building	Construction of a grain terminal at the Yuzhny Sea Commercial Port. Large-scale investment project in Ukraine for the manufacturing of rail carriages. Construction of a production and handling terminal in the Mykolaiv Region.	General Electric with Ukrzaliznytsia PJSC and Antonov SC; Cargill; The Greenbrier Companies, Bunge.
IT	Investments of Western NIS Enterprise Fund in the amount of 5 to 10 million US dollars into Ukrainian IT startups. Legalization of software use for governmental agencies.	Hire Ukrainians Software, WebPaxGroup, Waverlay, ZOIZ, Hideez, Petcube, Sixa, eTachki, Rallyware.
Agriculture	Export of organic products with the constantly growing demand on the American market. Promotion of Ukrainian trademark products to major retail chains: ShopRite, Walmart, Whole Foods.	Chumak, Ichnia, Veres, Torchyn Product, Svitoch, Ecorod, T-Prestige

While defining promising export markets and sectors of cooperation with the North America countries, one must take into account the trade and economy opportunities and threats. In order to resolve current problems and increase the efficiency of trade and economic cooperation between Ukraine and the countries of North America, it would be expedient to consider a number of tools to improve such cooperation (Table 6).

To sum up and form a complete picture of the trade cooperation prospects, we made a forecast of Ukraine's export to the countries of North America for two years using the method of time series analysis and considering the ascending line of the export trend, despite the fluctuations in 2004, rapid drop of the indicator in 2008 due to the global financial crisis and in 2014 due to domestic political turmoil.

Table 6. The matrix of Tools to Improve Trade and Economic Cooperation between Ukraine and North America Countries

Vectors	Tools	
	Focus areas	Implementation examples
Foreign trade	Expansion of export ranges	At the expense of organic products
		Chocolate and confectionery products
		Aircraft maintenance and repair centers
	Diversification of mechanisms of domestic export support	Preparation of trade mission activities
		B2B events for representatives of Ukrainian and American businesses
		Creation of Export and Credit Agencies (ECA) and trade houses
Legal	Legislative regulation of trade mode in services	Supplementing the Free Trade Agreement between Ukraine and Canada with a section on the regulation of trade in services
	Harmonization of international legislation on standardization and certification	The conclusion of a cooperation agreement in standardization between the Ukrainian Scientific-Research and Training Center of Standardization, Certification and Quality Problems and the American National Standards Institute
		Partial harmonization with European standards identical to international and partially commonly accepted ones
	Introduction of a Supreme Court for Intellectual Property Matters	Consideration of matters of intellectual property based on the new Economic Procedural Code
Institutional	Export Promotion Office	Creation of a B2G platform and a web portal for exporters
	Establishment of a coordination agency to simplify trading procedures	Creation of a working group for notifications of the WTO on obligations within the B and C categories.
	Commissioning of the National Intellectual Property Agency	It will provide the uniform window for protection documents issue and simplify issue procedures for applicants
Technological	Informatisation of customs system	Improvement of INSPECTOR National System
		Promotion of Uniform Window use
	Digitalization of fiscal system	Electronic administration of VAT and a VAT debt register
	Acceleration of privatization course	Carrying out privatization at electronic platforms with the usage of ProZorro system

eISSN 2345-0355. 2018. Vol. 40. No. 1: 103–117.
Article DOI: https://doi.org/10.15544/mts.2018.10

The forecast for Ukraine's export to the countries of North America for the year 2018 is 1.7 billion US dollars, for 2019 – 1.75 billion US dollars (see Table 7). This forecast is realistic as the deviation is 3% (19546.5-19546.47)*100).

Table 7. Forecast of Ukraine's Export to North America Countries for 2018–2019, USD million

2011	2012	2013	2014	2015	2016	2017	2018	2019
2097	1990.8	1782.9	1516.2	1249.4	1190.2			
10	11	12	13	14	15	16	17	18
1393.3	1438.4	1483.5	1528.7	1573.8	1618.9	1664.1	1709.2	1754.3

It is quite possible that the real values of export will exceed the forecast due to the introduction of the free trade zone between Ukraine and Canada; however, it is still difficult to assess the effect and how long it will continue.

4. Conclusions

1. The North American vector of trade cooperation is not of top priority for Ukraine now, yet its prospects are becoming more attractive with the implementation of the Free Trade Agreement between Ukraine and Canada, as well as the development of Ukrainian and American trade cooperation within the framework of the updated Priorities for U.S.-Ukraine Cooperation (Road Map).

2. The structure of Ukraine's export to the countries of North America is not diversified enough and consists mostly of metallurgical, machine-building and agricultural products. There is a notable dependence of the Ukraine's economic growth on export. Import includes fuel resources, machine-building and pharmaceutical products.

3. The modern trade policy of Ukraine with the countries of North America is characterized by liberalization of customs tariffs in accordance with the US Generalized System of Preferences (GSP), which expired at the end of 2017, and the Free Trade Agreement between Ukraine and Canada. The main problem is insufficient harmonization of international quality and safety standards of products, weak protection of intellectual property rights and application of a significant number of non-tariff methods (high technical standards, phytosanitary measures, export subsidizing) by the partners.

4. Sectoral priorities of trade and economic cooperation between Ukraine and North America countries are focused on the aviation, space, machine building and IT sectors, which are highly technological and able to create high added value products.

5. The results of GTAP modeling of two scenarios of cooperation between the countries - complete liberalization of customs tariffs and simplification of the international trade procedures, showed that Scenario 2 looks more optimistic, with a complex effect on the GDP, export, import and the production rates. However, if we con-

sider the effect on the main export and import indicators which are important for the trade and economic cooperation, it is obvious that this Scenario is more beneficial for North America than Ukraine where it will result only in the growth of import. As a result, it become obvious that there is no optimal model for Ukraine that would include the need to change just one parameter in order to increase the efficiency of trade and economic cooperation. Yet we believe that the changes must be made in the direction of simplifying the trading procedures.

6. The authors provide justification for the several ways to improve the trade and economic cooperation between Ukraine, Canada, and the USA, namely: commodity diversification of export at the expense of organic products, provision of aircraft and helicopter repair and maintenance services, etc.; increasing the number of support mechanisms and tools of domestic export by establishing export credit agencies and trade houses; informatisation and digitalization of international trade in the customs sphere, protection of intellectual property rights and privatization.

References

Francois, J. F., McDonald, B., Nordstrom, H. (1996). The Uruguay Round: A Numerically-based Qualitative Assessment. – New York: Cambridge University Press. 433 p.

Francois, J., van Meijl H. and van Tongeren F. (2003). Trade Liberalization and Developing Countries under the Doha Round. – New York: Cambridge University Press. 51 p.

Free Trade Agreement between Ukraine and Canada. – http://sfs.gov.ua/data/material/000/227/303513/Ugoda_pro_v_lnu_torg_vlyu_m_zh_Ukra_noyu_ta_Kanadoyu.pdf [14 03 2017].

Free Trade Agreement between Ukraine and Canada: New Horizons for Ukrainian Business. – http://mfa.gov.ua/mediafiles/sites/canada/files/Canada_Brochure2015_v5.pdf [6 11 2017].

Generalized System of Preferences (GSP). – https://ustr.gov/issue-areas/trade-development/preference-programs/generalized-system-preference-gsp [7 11 2017].

Global Trade Alert (GTA). – http://www.globaltradealert.org [4 10 2017].

Guzhva, I. (2009). International scientific and technical cooperation: methods, forms and strategies // Bulletin of Donetsk National University, Ser. Q: economy and law. No. 2: 85–89.

Halperina, L., Zhevago, A., Martyniuk, A. (2014). International economic activity of Ukraine. – Kyiv: KNEU. 330 p.

Hertel, T., Martin W., Yanagishima K., Dimanaran, B. (1996). Liberalizing Manufactures in a Changing World Economy. – New York: Cambridge University Press. 87 p.

Priorities of Ukrainian-American Cooperation (Road Map). – http://zakon2.rada.gov.ua/laws/show/840_132 [01 04 2016].

Review of the IMF's Trade Restrictiveness Index. – http://www.imf.org/en/Publications/Policy-Papers/Issues/2016/12/31/Review-of-the-IMF-s-Trade-Restrictiveness-Index-PP392 [02 10 2017].

Solodkovsky, Yu., Solodkovskaya, G. (2012). Current experience of using mathematical modeling methods in the formation of international trade policy // *International economic policy*. Special Issue: Part. 1: 205–214.

State Statistics Service of Ukraine. – http://www.ukrstat.gov.ua [06 11 2017].

The Global Enabling Trade Report 2016. – http://reports.weforum.org/global-enabling-trade-report-2016 [23 12 2016].

Trade policy review – Report by the Secretariat – Canada – Revision. – https://www.wto.org/english/tratop_e/tpr_e/tp414_e.htm [30 09 2017].

World Trade Indicators by The World Bank. – http://wits.worldbank.org/CountryProfile/en/Country/UKR/Year/2015 [04 10 2017].

Yatsenko, O., Nitsenko, V., Karasova, N., James, H. S. Jr., Parcell, J. L. (2017). Realization of the potential of the Ukraine–EU free trade area in agriculture // *Journal of International Studies*. No. 10(2): 258–277. – https://doi.org/10.14254/2071-8330.2017/10-2/18.

Yülek, M., Yatsenko, O. (2015). Globalization, Crises and Policy Reform: Lessons from the Turkish Experience // *The Journal of International Economic Policy*. No. 2: 73–101.

PREKYBA IR EKONOMINĖ PLĖTRA: UKRAINOS IR ŠIAURĖS AMERIKOS ŠALIŲ BENDRADARBIAVIMAS

Yatsenko Olha [1], Kenneth C. Schneeberger [2], Tetiana Tananaiko [3]
[1,3] Vadimo Hetmano Kyivo nacionalinis ekonomikos universitetas,
[2] Misūrio-Columbijos universitetas, Columbia, JAV

Straipsnyje įrodomas prekybos tarp Ukrainos ir Šiaurės Amerikos šalių tvarkos supaprastinimo tikslingumas. Ši problema aktuali Ukrainai, nes ji susiduria su geopolitine rizika. Vienas iš sprendimų, reikalingų įgyvendinti nacionalinius ekonominius interesus ir palaikyti valstybės suverenumą, yra stiprinti partnerystę su Šiaurės Amerikos šalimis kaip pripažintomis pasaulio ekonomikos lyderiais. Straipsnio tikslas – pagrįsti rekomendacijas dėl Ukrainos ir Šiaurės Amerikos šalių prekybos ekonominio bendradarbiavimo. Naudojant GTAP sistemą, straipsnyje modeliuojamos kelios prekybos ir ekonominio bendradarbiavimo galimybės, siekiant pasirinkti optimaliausią. Siūlomos kryptys ir priemonės prekybos santykiams tarp šalių tobulinti.

Raktiniai žodžiai: tarptautinė prekyba, netarifiniai metodai, tarifų reguliavimas, prekybos politika, prekybos ir ekonominis bendradarbiavimas, GTAP, Ukraina, JAV, Kanada, Šiaurės Amerikos šalys.

JEL kodai: F10, F13, F17.