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Modeling of development processes of bilateral trade and economic integration between countries

Abstract
The article dwells upon the main stages of analyzing economic effects of the free trade area between countries, while reviewing features of bilateral trade and economic cooperation between Ukraine and Canada in terms of global transformations. The article identifies opportunities and threats as well as strengths and weaknesses of bilateral relations under contemporary integration processes, while also providing substantiation of the promising areas of bilateral trade and economic cooperation between countries.
The article comprises a gravity model and a forecast of quantitative indicators related to bilateral trade between Ukraine and Canada for the period of up to 2021 developed by the authors based on this model. Using the gravity modeling method, the impact of economic crisis manifestations in Ukraine and Canada on trade turnover between them has been assessed, while a conclusion has been drawn that the greatest impact on bilateral trade is produced by Canada's GDP, whereas the change in price of logistical costs produces little effect on the turnover. The quantitative indicators of foreign trade between the two countries have been forecast under two scenarios: without the free trade area and with the latter created in 2017. Under the first scenario, a slight increase in trade turnover is expected due to the slow growth of GDP values both in Canada and Ukraine. Under the second scenario, by 2021 the trade turnover between the countries will increase twice and amount to USD 411 million.
Keywords: Canada; Ukraine; Trade; Bilateral Relations; Trade and Economic Cooperation; Free Trade Area (FTA); Agreement; Gravity Model; Integration
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Моделювання процесів розвитку двосторонньої торговельно-економічної інтеграції країн

Анотація
У статті розглянуто основні етапи аналізу економічних ефектів зони вільної торгівлі між країнами. Оцінено особливості двостороннього торговельно-економічного співробітництва України та Канади в умовах глобальних трансформацій. Визначено можливості, загрози, а також сильні й слабкі сторони двосторонніх відносин в умовах сучасних інтеграційних процесів. Побудовано гравітаційну модель і розроблено на її основі прогноз кількісних показників двосторонньої торгівлі України й Канади до 2021 р. Обґрунтовано перспективні напрями двостороннього торговельно-економічного співробітництва країн.
Ключові слова: Канада; Україна; торгівля; двосторонні відносини; торговельно-економічне співробітництво; угода про зону вільної торгівлі; гравітаційна модель; інтеграція.

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Моделирование процессов развития двусторонней торгово-экономической интеграции стран

Аннотация
В статье рассмотрены основные этапы анализа экономических эффектов зоны свободной торговли между странами. Оценены особенности двустороннего торгово-экономического сотрудничества Украины и Канады в условиях глобальных трансформаций. Определены возможности, угрозы, а также сильные и слабые стороны двусторонних отношений в условиях современных интеграционных процессов. Построена гравитационная модель и на ее основе дан прогноз количественных показателей двусторонней торговли Украины и Канады до 2021 г. Обоснованы перспективные направления двустороннего торгово-экономического сотрудничества стран.
Ключевые слова: Канада; Украина; торговля; двусторонние отношения; торгово-экономическое сотрудничество; соглашение о зоне свободной торговли; гравитационная модель; интеграция.

1. Introduction

Globalization processes transform the global economy into an environment of constant interaction between national economies, where the main trend implies liberalization of international trade relations. Under contemporary conditions, Ukraine should see its main task as solving the problem of trade dependence on Russia by means of diversifying EU partners. Therefore, the main focus of the foreign trade policy is the search for new partners not only in the European market but also beyond. Trade and economic cooperation between Ukraine and Canada proves to be insufficiently researched, since in the retrospective context the basis for cooperation was formed by cultural relations.

2. Brief Literature Review

The issue of international economic integration was studied in the works by such national scientists: D. Lukianenko [1], O. Bulatova [2] and foreign ones: A. Marshall (1954) [3], W. Ropke (1957) [4], M. Alle (1959) [5], B. Balassa (1961) [6], P. Streeten (1964) [7], J. Tinbergen (1962) [8], J. Anderson (1979) [9] an others. Various aspects of bilateral relations between Ukraine and Canada were researched in the works by scientists such as Y. Balytska [10], E. Baran [11], N. Horbatiuk [12], M. Doichyk [13], I. Kobuta [14], V. Muzyka [15], N. Ostash [16], S. Feduniak [17], P. Chernyk [18] and Y. Shcherbak [19]. Their works are based on studying Ukrainian community in Canada and political relations between the countries. However, the subject of formation and development of bilateral trade and economic relations between Ukraine and Canada seems to be currently ignored by domestic researchers.

3. The purpose

of the research implies systematic study of prerequisites, basic problems and the current state of trade and economic cooperation between Ukraine and Canada in terms of global transformations.

4. Research methods

Theoretical and methodological basis of the research comprises provisions of economic theory, particularly those of the theory of international economic relations in the context of the contemporary economic development paradigm. The study of theoretical principles of international trade and economic integration uses the historical and logical method to assess retrospective effect of bilateral relations between Ukraine and Canada; the analysis and synthesis method in determining characteristic features of liberalization and economic benefits of the free trade area; the statistical and factorial analysis method to analyse major trends in the trade and economic cooperation between the countries; the SWOT-analysis matrix technique in the study of varied scenarios of Ukrainian and Canadian cooperation development in terms of the free trade area; the method of economic and mathematical modeling in development of the gravity model of foreign trade turnover between the two countries; and the extrapolation method to calculate and substantiate forecast indices of external trade for future periods.

Taken as a whole, gravity models are one of the methods to identify and assess key factors influencing development of international trade. The models are based on Newton's law of gravitation: trade scope between two countries depends on the scope of their economies and distance between them [20, 145-151]. For the first time a gravity model was suggested in works by Tinbergen and Anderson. Although, gravity models have been used in empirical studies since 1960s, theoretical substantiation of the models has a relatively short history [8-9].

The equation suggested by Tinbergen is as follows (see formula (1) [21]:

$$F_{ig} = G \frac{M_i^{\alpha} M_j^{\beta}}{d_{ij}^{\delta}} \varepsilon_{ij},$$ (1)

where F_{ig} - trade turnover between countries i and j,
M_i and M_j - gross domestic product of countries i and j,
d_{ij} - factor of trading costs associated with exports, including logistical costs,
ε_{ij} - all other factors affecting the export but not forming a part of the equation,
α, β, δ - constants (model parameters).

At present, there are numerous interpretations of this model depending on the purpose of modeling. Thus, in a logarithmic form, the gravity equation is expressed by the following formula (2):

$$\ln(F_{ij}) = \gamma_0 + \gamma_1 \ln(M_i) + \gamma_2 \ln(M_j) + \gamma_3 \ln(D_{ij}) + \varepsilon_{ij},$$ (2)

where F_{ij} - trade turnover between countries i and j,
M_i and M_j - gross domestic product of countries i and j,
D_{ij} - factor of trading costs associated with exports, including logistical costs,
$\gamma_0, \gamma_1, \gamma_2, \gamma_3$ - model parameters,
ε_{ij} - all other factors affecting the export but not forming a part of the equation.

The model assumes that γ_1 and γ_2 are positive values, while γ_3 is a negative one. The gravity model also envisages influence by of other variables that can be added to the basic equation depending on the purpose of modeling.

Among econometric methods, gravity models are the main tool of modelling trade flows of countries. In view of the above, based on a detailed analysis of application scopes, capacities and restrictions of such models it is suggested to apply gravity models for assessing effectiveness of trade cooperation between Ukraine and Canada.

5. Results

Under conditions of a globalized world economy, international economic integration and increased interdependence of states, an important role is vested in the international trade and economic relations between countries. Foreign trade of a country is an important prerequisite for its economic growth, as it promotes openness of the economy, entering global market by the country and expansion of the international trade and economic cooperation. Strengthening of integration ties is clearly reflected by both resolving of global challenges to mankind, reducing and canceling reciprocal restrictions aimed at improving economic efficiency, maintaining and enforcing peace. The purpose of trade integration, in turn, implies creating conditions for free trade and promoting international specialization of states.

Analysis of the economic effects from the free trade area is carried out in 3 stages: *ex-ante* analysis (preliminary stage), operational analysis (current stage) and *ex-post* analysis. The first two stages imply assessment of prerequisites, problems and the actual state of trade and economic cooperation. The third stage implies modeling and forecasting scenarios of bilateral cooperation development along with identifying strategic and tactical objectives. One of the methods applied to assess effectiveness of bilateral trade flows, as well as economic effects of the free trade area and possible consequences of further developing integrational cooperation, is the gravity model method.

At the present stage, cooperation between Ukraine and Canada is characterized by the high level of political dialogue, as evidenced by signing the Road Map of Priorities for Canada-Ukraine Relations on 24 September 2009 [22]. Intensive development of cooperation is also indicated by signing a document on completion of negotiations on creating a free trade area between Ukraine and Canada on 14 July 2015 in Ottawa [23]. In all the jointly signed documents the parties emphasize mutual striving to expand cooperation in economic, political, humanitarian, cultural and security fields.

In this context, the research of economic status, special aspects of trade profile and cooperation between Ukraine and Canada is rather interesting. First of all, we need to consider the macroeconomic profile of these countries (Table 1).

The country's position in the world plays an important role, and we can assess it with the help of the world rankings. Leading international institutions annually conduct an analysis and assessment of the main indicators of the country, including macroeconomic stability, health care, education, level of development and market transparency, etc. These studies allow us to rank countries according to their economic indexes in different categories (Table 2).

The FTA agreement often proves to be one of the first steps to expanding trade and economic cooperation, as it helps avoid trade barriers between countries. However, removal of trade barriers is not the main objective of the FTA creating. The FTA agreement establishes a strong foundation for expanding economic and trade cooperation between the two countries as well as in terms of future cooperation in other high priority fields.

Ukraine has always regarded Canada as an important trading partner, but only on the long term. Bilateral cooperation has changed dramatically during 2014-2015. The main reason was the political situation in Ukraine and cutting exports to Russia. Therefore, the main task for Ukraine was search for new sales markets, new partners and new opportunities for implementing its national interests. Creating a free trade area between Ukraine and Canada is Ukraine's first step in building intercontinental preferential relations (creating a free trade area with a country of another continent). The FTA agreement will take effect immediately after settling certain legal formalities and ratification thereof by both countries' governments. Its significant characteristic feature implies different levels of economic development of the partner countries, which produces significant influence on establishing cooperation between the states and its consequences in general.

Aimed at determining the main factors influencing strategic development of Ukraine's cooperation with Canada for the period of up to 2021, a SWOT-analysis was conducted (Table 3). Based on the analysis results, the external opportunities and threats as well as internal strengths and weaknesses have been identified. The analysis results indicate presence of both positive and negative impacts on trade and economic cooperation between Ukraine and Canada. Accordingly, four possible scenarios with appropriate substantiation of strategies for cooperation development between the two countries have been determined [35].

When combining internal strengths and external opportunities (S+O), one should expect the best possible scenario from Ukraine's cooperation with Canada. Such a scenario would imply forming a favorable business climate for trade and investment, creation of new jobs, modernizing domestic enterprises, diversification of trade flows and an economic growth in general.

Tab. 1: **Macroeconomic profile of Ukraine and Canada, 2015**

Indicator	Unit	Country	
		Ukraine	Canada
Attainment of independence	year	1991	1982
Total area	*thousand km²*	603.6	9984.7
Population	mln.	45363	35540
Ethnic groups	%	Ukrainians (77.8%), Russians (17.3%) Other (4.9%)	European (77%), Asian (14%), Aboriginal (4%), Black (3%), Latin American (1%), and Multi-racial (0.5%)
Official languages	%	Ukrainian (67.5%)	English (58.7%), French (22%)
Government	–	Unitary semi-presidential constitutional republic	Federal parliamentary representative democracy under constitutional monarchy
GDP	billion USD	90.52	1,552
GDP by industry	%	agriculture – 14.1%; industry – 26.4%; services – 60%	agriculture – 1.6%; industry – 28.2%; services – 70.3%
World GDP ranking	–	50th place	16th place
GDP per capita	USD	7,500	45,600
Export	billion USD	35.5	411
Main import partners	%	Russian Federation (12.7%), Turkey (7.3%), China (6.3%)	USA (76.7%), EU (7.4%), China (3.7%)
Import	billion USD	38.94	428.7
Main export partners	%	Russian Federation (20%), China (10.4%), Germany (10.1%)	USA (53.1%), China (12.2%), EU (11.3%)
Labor force	million USD	18.1	19.28
Unemployment rate	%	9.1	6.9
Inflation rate	%	48.7	1.1
WTO accession	Year	May 16th, 2008	January 1st, 1995

Source: Compiled by the authors based on [24-27]

Tab. 2: **Ukraine's and Canada's ranking in the world, 2014-2016**

	Ease of doing business index		Global Competitiveness Index		Corruption Perceptions Index		Human Development Index		Index of Economic Freedom		Social Progress Index	
	U.	C.	U.	C.	U.	C.	U.	C.	U.	C.	U.	C.
2014	112	19	76	14	142	10	84	8	155	6	62	7
2015	96	16	79	13	130	9	83	8	162	6	62	6
2016	83	14	85	15	131	9	81	9	162	6	63	2

Note: U. - Ukraine, C. - Canada
Source: Compiled by the authors based on [28-34]

Tab. 3: **SWOT-analysis of Ukraine's cooperation with Canada**

EXTERNAL FACTORS / INTERNAL FACTORS	Opportunities (O) 1. Expanding cooperation in the environmental, technological, trade, investment, scientific and other fields. 2. Creating a free trade area for services between Canada and Ukraine. 3. Entering the North American market.	Threats (T) 1. Reducing revenues to the state budget. 2. Restricted entering Canadian market by domestic businesses. 3. Increased competition in the domestic market.
Strengths (S) 1. Advantageous geographical location. 2. Rich natural resources. 3. High level educational potential. 4. Availability of scientific and technological potential.	Expectations (S+O): A favorable trade and investment business climate, economic growth, liberalization of foreign trade relations, trade flows diversification and modernization of Ukrainian enterprises, job creation. Strategy: *PROFOUND TRADE INTEGRATION*	Expectations (S+T): Growing demand for imported products in the domestic market, insignificant commodity and geographic diversification of the country's exports. Strategy: *INNOVATION BREAKTHROUGH (POLICY)*
Weaknesses (W) 1. The armed conflict in the country. 2. Social and political instability. 3. Energy dependence of the state. 4. Low performance in social, political and economic rankings. 5. Low competitiveness of domestic goods and services. 6. National currency instability.	Expectations (W+O): Export growth by expanding the existing distribution channels and export deliveries; banning a more profound cooperation due to the unstable political and economic situation. Strategy: *GEOGRAPHICAL DIVERSIFICATION*	Expectations (W+T): Reduction of trade turnover between the countries, slight increase of imports to Ukraine, takeovers of Ukrainian companies by the Canadian, destabilization in the political and economic fields, increased competition in the domestic market between foreign and national producers Strategy: *MARKET DEVELOPMENT (SEARCH FOR NEW MARKETS)*

Source: Compiled by the authors based on own previous research [35]

To implement the above scenario, it is recommended to choose a strategy of profound trade integration, which involves active development of Ukrainian businesses and entering the Canadian market with a wide range of products.

A significant advantage of the free trade area is also attracting of Canadian investments to Ukraine. Canada has always actively supported Ukraine in all projects and reforms; however investments have been fluctuating between 0.1-0.2% of the total. In view of the current situation in the country, attracting investment is one of the priorities for Ukraine. At the domestic level, areas for investments that create jobs and areas where Ukraine has competitive advantages have been defined (Table 4).

Security area was one of the first areas where Ukraine began to increase cooperation with Canada. Canada has supported the police reform in Ukraine. Canada also plans to allocate USD 8.1 million to Ukrainian law enforcement officers' professional development and to modern technical equipment in 2017, where USD 6.6 million will be used for Ukrainian law enforcement officers' professional development with the help of Canadian police trainers [37].

In addition, the technical assistance project has been registered for a period from 2016 to 2019, with a total of more than CAD 21 million. Under this program, 20 Canadian police officers will conduct training according to a special program in Kyiv. In addition, the Ministry of Internal Affairs of Ukraine has developed a plan of possible cooperation with Canada in the area of fight against cyber terrorism.

Promising directions of cooperation in this sphere are noted below:
• detection of offences and disclosure of crimes which were committed with the use of high information technologies (including international and transnational technologies);
• computer crime prevention.

It is also planned to consider the allocation of foreign aid for the purchase of advanced hardware systems and software for the Cyber Police Department of the National Police of Ukraine [38].

Another important aspect for Ukraine is implementing the Canada-Ukraine Trade and Investment Support (CUTIS), which started in February 2016 and covers a five-year period until November 2020. The project is implemented by The Conference Board of Canada together with the Canada-Ukraine Chamber of Commerce. The project is funded through the Government of Canada with the help of the Ministry of Foreign Affairs of Canada. The total budget of the project is CAD 13.82 million. The main purpose of the CUTIS project is to reduce poverty in

Tab. 4: **Areas for investment that create jobs and areas where Ukraine has competitive advantages**

Areas for investments that create jobs	Areas where Ukraine has competitive advantages
- Energy - Gas production - Gas transportation system - Agricultural sector - Ukrainian railways («*Ukrzaliznytsia*») - Road infrastructure	- Military-industrial complex - Aerospace industry - IT - Chemical and pharmaceutical industries - Tourism

Source: Compiled by the authors based on [36]

Ukraine and enhance sustainable economic development by increasing Ukrainian exports to Canada and by encouraging investment from Canada to Ukraine.

One of the main purposes of the project is to encourage Ukrainian small and medium-sized enterprises (SMEs) to export its products to Canada and to encourage Canadian companies to invest in Ukraine. Particular priority is given to SME business, which is managed by women. The project is aimed at technical support in five priority areas of trade and investment, development of business relations between Canada and Ukraine and support of the Free Trade Agreement between Canada and Ukraine. The project also plans to cooperate with the central and local governments and the private sector to improve their ability to use the methods of market analysis in determining promising export industries and target markets, and to prepare an effective and reasonable trading and investment strategies.

Canada-Ukraine Business Forum was convened on the 20-21st of June as part of the project. The four main subjects of the Forum were: energy, infrastructure, agriculture and IT. Special attention was given to alternative energy, namely solar electric plants and biofuel plants in the Chernobyl's exclusion zone. Considering the fact that the cost of land is the main part of the net cost of this type of industry, and the price of rent in the exclusion zone will be much lower, Canadian investors became interested in incomplete networks in this area and also in a possibility of implementing renewable energy projects [39-40].

The Forum is the second bilateral business forum conducted by Canada and Ukraine to support SME business in Ukraine. The importance of it cannot be overstated, because the meeting of Canadian investors and Ukrainian businessmen promotes a lot of opportunities for cooperation and the development of Ukrainian business in accordance with high standards of the Western world.

Researchers have proved that the position of a state in the globalized economy is determined by its comparative advantages, whereas export competitiveness of goods and services demonstrates the level of production efficiency in terms

of international comparison. Thus, strategic goals of domestic economic sectors should imply focus on export-oriented activity through development of promising sectors ensuring competitiveness of producers both in the domestic and world markets.

To determine impacts of an economic crisis in one of the partner countries on the other and on bilateral trade in general, it is advisable to apply the gravity model. To estimate parameters of the model, we used statistical data relevant to Canada and Ukraine for the period 1999-2015. According with formula (1.2), as M_i and M_j the GDP values of Canada and Ukraine were used respectively. To measure the distance between the countries in this model, different parameters can be chosen depending on the tasks and the factual basis of the study. This could be geographical distance, costs of cargo transportation or the degree of domestic markets closure by means of protectionist instruments to imports of goods from the other country. In this case, the indicator D_{ij} implies the average world prices on oil, since their fluctuations change the costs of transportation, or logistical costs (Table 5).

As a result, we obtained the Tinbergen gravity model equation describing the dynamics of foreign trade turnover between Ukraine and Canada for the period of 1999-2015 (Table 6):

$$\ln(F_{ij}) = -20.842 + 0.953 \ln(M_i) + 0.533 \ln(M_j) - 0.051 \ln(D_{ij}).$$

The regression analysis results confirmed the hypothesis that increase in the GDP of partner countries positively influences the volume of foreign trade between them, whereas an increase in oil prices directly affecting transport costs produces a negative impact on the trade volume. The model verification by Fisher criterion showed that the model is statistically significant. The significance of the model was also confirmed by comparing the actual and modeled values of the foreign trade volume between Ukraine and Canada for the period 1999-2015 (Figure 1).
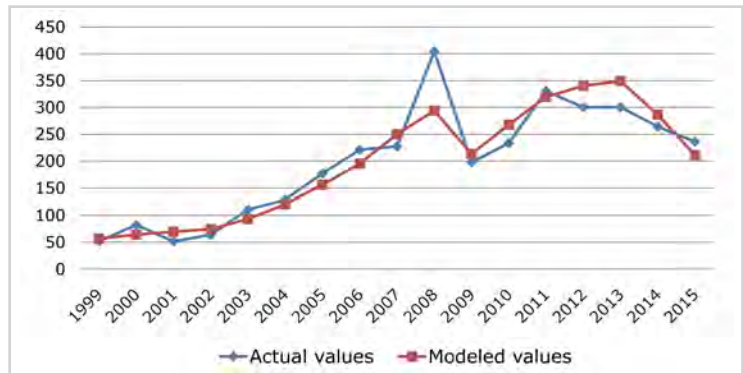

Fig. 1: **Actual and modeled values of the foreign trade volume between Ukraine and Canada, USD million**
Source: Calculated by the authors

An economic interpretation allows stating that an increase of Canada's GDP by 1% causes a mutual trade turnover increase by 1.4%; whereas a 1% increase in Ukraine's GDP causes foreign trade turnover of the countries increase by 0.71%; while a 1% increase in oil prices, in turn, causes a turnover decrease by 0.01%.

The gravity model allows forecasting the volume of mutual trade for the coming years (Figure 2). Since this model has been designed based on indicators without taking into consideration the free trade area, it is clearly seen that the increase is not significant. This can be explained by the World Bank forecasting Ukraine's GDP in 2016 increase only by 2%, which will certainly affect the foreign trade volume with Canada; Canada's GDP, in turn, will increase only by 1.3%; while oil price will fall to USD 45 per barrel, with such a significant decrease positively impacting the foreign trade volume (FTV). Yet, according to the model, the impact will prove negligible as compared to that caused by GDP values [24; 41-42]. The results obtained due to the gravity model, as combined with expert and authors' forecasts, allow predicting that by 2021 the volume of foreign trade turnover will increase twice as compared to 2016, mounting to USD 411 million.

Thus, modeling the degree of economic crisis manifestations in Ukraine or Canada affecting bilateral trade and economic relations has proved the importance of each of the events. In our case, it was determined that mutual trade turnover between Canada and Ukraine is more flexible due to the dynamics of Canada's GDP economic growth, while the second important factor is Ukraine's GDP; the oil price produces only a negligible impact. The adequacy of the gravity model has been confirmed by the main criteria; therefore it can be used as a basis for a more advanced research on forecasting development of bilateral trade. It should be also noted that this model can be extended by adding not only quantitative but also qualitative indices, enabling to predict an impact of the free trade area on the volume of mutual trade.

6. Conclusion

Thus, international trade and economic cooperation between countries in terms of global transformation implies creating conditions for free trade, enabling to ensure profitability of the entities engaged in the international economic relations, as well as their economic growth and social welfare. Trade and economic cooperation research methodology comprises three stages: ex-ante (preliminary), operational (current) and ex-post analysis while applying the gravity model.

At the current stage, mutual relations between Ukraine and Canada are characterized by a high level political dialogue, which

Tab. 5: **Key source data for building the gravity model**

	Foreign trade volume, Ukraine-Canada, USD	GDP of Canada, USD	GDP of Ukraine, USD	Oil price, USD/barrel
1999	51,600,000.00	674,325,233,896.00	31,580,639,053.00	25.00
2000	82,200,000.00	739,455,928,894.00	31,261,527,363.00	11.00
2001	51,600,000.00	732716942149.00	38,009,344,577.00	15.00
2002	63,643,860.00	752,531,702,033.00	42,392,896,031.00	19.50
2003	110,663,440.00	887,751,766,469.00	50,132,953,288.00	31.00
2004	128,760,470.00	1,018,401,229,823.00	64,883,060,726.00	37.90
2005	177,134,860.00	1,164,144,248,000.00	86,141,530,000.00	55.10
2006	221,172,200.00	1,310,752,820,000.00	107,753,069,000.00	66.00
2007	227,565,000.00	1,457,871,706,000.00	142,719,009,000.00	72.70
2008	404,327,200.00	1,542,618,556,000.00	179,992,405,000.00	98.40
2009	197,820,900.00	1,370,839,821,000.00	117,227,769,000.00	62.80
2010	233,473,500.00	1,614,013,783,000.00	136,419,300,000.00	80.20
2011	330,426,900.00	1,788,796,361,000.00	163,159,671,000.00	110.90
2012	300,290,600.00	1,832,715,597,000.00	175,781,379,000.00	109.50
2013	300,513,400.00	1,838,964,175,000.00	183,310,146,000.00	108.80
2014	264,098,400.00	1,786,655,064,000.00	131,805,126,000.00	97.64
2015	236,449,200.00	1,550,536,520,000.00	90,615,020,000.00	53.41

Source: Compiled by the authors based on [24; 41]

Tab. 6: **The basic results of the Tinbergen gravity model for Ukraine and Canada, 1999-2015**

Indicator	Value
γ_0	-20.842
γ_1	0.953
γ_2	0.533
γ_3	-0.051
R^2	0.937
R	0.968
Fact.	64.466
Fcrit. (0.05)	3.41

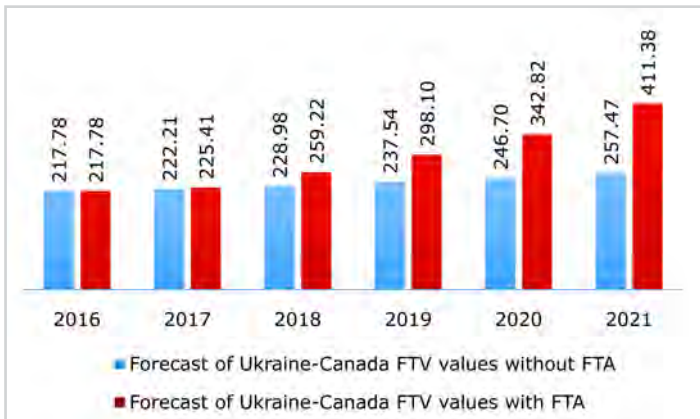Source: Calculated by the authors

Fig. 2: **Forecast of Ukraine-Canada trade turnover during 2016-2021, USD million**
Source: Calculated by the authors

resulted in signing of the free trade agreement between the two states. Based on the above, the priority areas of trade and economic cooperation between Ukraine and Canada have been identified with Ukraine's internal strengths and weak-nesses as well as external opportunities and threats taken into account. Expediency of cooperation development has been substantiated and a short-term strategy of profound trade integration has been suggested with the said strategy providing for an opportunity of creating a favorable business climate for trade and investment, job creation, modernization of Ukrainian enterprises, diversification of trade flows and economic growth in general.

Using the gravity modeling method, the impact of economic crisis manifestations in Ukraine and Canada on trade turnover between them has been assessed, while a conclusion has been drawn that the greatest impact on bilateral trade is produced by Canada's GDP, whereas the change in price of logistical costs produces little effect on the turnover. Also, the quantitative indicators of foreign trade between the two countries for the period up to 2021 have been predicted under two scenarios: without the free trade area and with the latter created in 2017. Under the first scenario, a slight increase in trade turnover is expected due to the slow growth of GDP values both in Canada and Ukraine. Under the second scenario, by 2021 the trade turnover between the countries will increase twice and amount to USD 411 million.

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