Global dominants of Chinese trade policy development: Opportunities and threats for cooperation with Ukraine

Agota Giedrė Raišienė

Lithuanian Institute of Agrarian Economics,
Vilnius Lithuania
agota.raisiene@laei.lt
ORCID: 0000-0002-4641-7616

Olha Yatsenko

Kyiv National Economic University named after Vadym Hetman,
Kyiv, Ukraine
yacenko_olga@ukr.net
ORCID: 0000-0003-4399-2217

Vitalii Nitsenko

Odessa I.I. Mechnikov National University,
Odessa, Ukraine
vitaliinitsenko@gmail.com
ORCID: 0000-0002-2185-0341

Nataliia Karasova

Kyiv National University of Culture and Arts,
Kyiv, Ukraine
karasyova.natasha@gmail.com
ORCID:0000-0002-8471-3870

Anna Vojtovicova

Platin Telekom, s.r.o., Slovakia
anka.vojtovicova@gmail.com

Abstract. Growth of PRC's influence as a leading trade country has consequences for its trading partners; at the same time, over the past years China has become one of Ukraine's major trading partners. Studying current specificities of the countries' bilateral trade, opportunities and threats relating to it, developmental perspectives of trade-economic cooperation between Ukraine and PRC therefore certainly warrents further research. This article's aim is to study specificities of trade-economic cooperation between Ukraine and PRC; to ascertain dependence between national economic growth and the export to China; and to define

strategic tasks of the countries' cooperation for the time period until 2030. The main factors which influence strategic development of partner economic relations between Ukraine and China are determined on the basis of SWOT-analysis. A significance of China as a trade partner of Ukraine is defined and institutional basis for their trade relations is described. Direct dependence between trade turnover and gross domestic product of the countries is determined on the basis of modeled data using empiric gravitation model tools. Prospective directions of trade-economic relations are defined.

Keywords: China, Ukraine, trade-economic cooperation, trade policy, international trade.

JEL Classification: F14, O53

1. INTRODUCTION

Global status quo of the world's economy is gradually changing. Countries are trying to not only find optimal directions for bi- and multi-lateral interaction on the world market, but they also strive to maximize the competitiveness of national economies. People's Republic of China (PRC) is a vivid example of such development. "Made in China" is a saying of the past. The next great change is moving from "made in China" to "designed in China" (Mueller, 2017). People's Republic of China (PRC) boasts an immense economic, investment, scientific and technical potential, which it managed to accumulate though effective implementation of economic reforms, vital part of which covered China's trade policy and the sector of innovation development.

Nowadays, the importance of PRC as Ukraine's trade partner is growing as is apparent from the fact that in 2017 China placed second among Ukraine's most important import partners and seventh among Ukraine's major export destinations.

Considering steadily growing significance of PRC as one of Ukraine's major trade partners, it is necessary to study current specificities of these countries' bilateral trade, opportunities and threats relating to it, and developmental prospects of trade-economic cooperation of Ukraine and PRC A further research on determining sector priorities of the bilateral trade-economic cooperation and ascertaining connection and dependence between national economic growth and export to China is also necessary. The problematic aspect of Ukraine-China trade relations becomes apparent when taking into consideration the asymmetry in the countries' use of their economic potential and imbalance in Ukrainian foreign trade structure with PRC.

2. LITERATURE REVIEW

The strategic importance of this issue is determined by constantly growing bilateral economic relations, both when it comes to their scope and depth, which is why this issue has become a topic of a number of scientific studies. Tarasova V. (2015) states that 2015 was a turning point in the development of political dialogue, and also the year when trade-economic and investment cooperation between Ukraine and China truly started to intensify. Antoniuk L. and Khomenko O. (2017), Jun Ch. (2016), when studying trends in trade cooperation, define PRC as a leading partner in foreign trade which exports highly technological goods into Ukraine, while Ukraine has mostly been exporting mid-technological goods to China since 2013. Halperina L. and Shapoval A. (2013) defined strategic directions for bilateral trade-economic cooperation as follows: obtaining large-scale Chinese investments for implementing infrastructure projects and projects

on energy saving, as well as development of cooperation among banks with the aim to ensure additional investment guarantees. Vlasiuk T. (2016) considers cooperation on a regional level to be a vital component of international relations. According to him, development of efficient, especially economic connections between regions of Ukraine and the provinces of PRC is a strategic opportunity for bilateral cooperation in the 21st century.

Budkin V. (2011) draws attention to the importance of Protocol signing between Ministry of Economic Development and Trade of Ukraine and Ministry of Commerce of PRC, which ensured a regular exchange of an approximate list of export-import goods in order to overcome existing trade imbalance He is also of an opinion that an agreement on the Chinese side to let competitive Ukrainian goods to enter Chinese domestic market would facilitate reaching balanced trade relations. With a prospect of signing the Protocol on development of bilateral trade in a near future, the partners will try to bring the value of annual exchange of goods up to $10 bil., which will help to fully exploit the existing potential of the national economies. Considering growing competitive advantages of Chinese producers, Levchenko M. and Levchenko A. (2015) point out the necessity of introducing a legislative support of national export as is common in the WTO countries, and of providing privileged interest rates for domestic producers by the National Bank of Ukraine. The researches Melnyk T. and Vyshynska T. (2014) focus on studying volume and structure of illegal international trade between Ukraine and China and its negative consequences for the country's economy.

Cherniavska T. (2015) considers transport infrastructure development to be especially significant for the trade cooperation between Ukraine and PRC. Within the same context, Povoroznyk V., Perebyinis V. (2015), Onwuegbuchunam et al. (2018), Kaszmarski M. (2015) and Karpenko, O., Horbenko, A., Vovk, Y., & Tson, O. (2017) emphasize that the renewal of Silk Road isn't only a transit-transport project but a complex plan of economic development of a number of countries, which includes numerous projects covering infrastructure, industry, trade and service sector development. They also argue that cooperation between Ukraine and EU countries within European Union Association Agreement provides necessary political and economic conditions for it to join the project as a fully valued member. Baronin A. and Kolpakov A. (2013) state that dynamically increasing trade cooperation between Ukraine and the EU could prompt China to create a production base in Ukraine for further export to the European market.

Chinese researchers Ying Wang, Ze Tian, Shenyue Xia (2018) analyzed the index of domestic industry trade and its comparative advantages, and came to a conclusion that mutual benefits of trade between the two countries are prevailing. Thus, it is advised to widen the scope of trade between China and Ukraine, in particular to strengthen the cooperation in agriculture and to encourage direct investments in Ukrainian companies. Hong, Zh. (2017) also defines risks present in the process of implementing economic cooperation projects and determines measures necessary to counteract them.

Pochtovyuk, A., Semenikhina, V. (2017) focus on studying the current state of business relations between Ukraine and China and suggest changing the goods flow structure as a result of maximization of export of domestic highly technological goods. Zakharin S. (2016) sees the possibility of Ukrainian-Chinese cooperation becoming more intensive especially in the investment-innovation sphere, while identifying both sides' interests. Kiktenko O. (2013) considers agro-industrial and metallurgical sectors, tourism and culture sectors to be promising for trade cooperation development.

Despite significant attention being given to Ukraine-China bilateral relations by researchers, following topics remain to be fully analyzed both on a theoretical and empirical level: PRC trade policy dominants; opportunities and threats of bilateral cooperation; potential connection and dependence between economic growth of Ukraine and export to China under conditions of technological disproportion of foreign-trade turnover structure; forecasts of bilateral trade and determining prospective sectors for trade-economic cooperation; and strategic tasks of the countries' collaboration.

The paper's goal is to define a dominants of China's trade policy development; to study the specificities of trade-economic collaboration between Ukraine and China; to determine opportunities and threats relating to the countries' cooperation; to determine the dependence between Ukrainian economic growth and its exports to China; and to define strategic tasks for the countries' successful cooperation for the time period until 2030.

3. METHODOLOGY

In order to reach the goals specified above, following sources of information and data were used: WTO Statistics Database, The Global Competitiveness Reports (2018), the official website of State Statistics Committee of Ukraine, and the official website of Embassy of Ukraine to China. Data from these sources were also used to analyze goods flow dynamics between Ukraine and China along with the trends of trade-economic cooperation in the last years.

Defining the main factors which influence strategic development of economic relations between Ukraine and China was done using SWOT analysis. Correlation-regressive analysis was used to determine the dependence level of Ukrainian goods export to China on gross domestic product index change

A gravitation model was used to ascertain key factors, to identify strategic tasks of cooperation and to forecast the volume of bilateral trade ; the model is based on Newton's law of universal gravitation, and thus the trade between two countries depends on the size of their economies and the distance between them. The gravitation model was introduced for the first time in a paper by Tinbergen J. in 1962 (Zakharova, 2014) and worked with the following formula (1):

$$F_{ig} = G \frac{m_i^a m_i^\beta}{d_{ij}^\delta} \varepsilon_{ij} \qquad (1)$$

where, – goods flow between the countries i and j,

Mi and Mj – gross domestic product of the countries i and j,

 – trade expenses that are connected to export, including logistics,

 – the rest of factors which influence export but are not a part of the equation,

 – constants (the model parameters).

The logarithmic interpretation of the gravity model equation is as follows (2):

$$\ln(F_{ij}) = \beta_0 + \beta_1 \ln(M_i) + \beta_2 \ln(M_j) + \beta_3 \ln(D_{ij}) + \varepsilon_{ij} \qquad (2)$$

The model works with the premise that β1 and β2 are positive while β3 is negative. The gravity model also presupposes influence of other variables which may be added to the main equation depending on modeling aim. The chosen methods of modeling allow us to reflect on the functional dependence among the factors in mathematical form on the basis of multifactor model. In international practice, the way in which processes actually proceed depends on several variables x1, x2, …xk (Kostenko, 2012).

In order to calculate the parameters of the model, the statistical data from 2002-2016 were used, with M_i and M_j representing GDP of China and Ukraine. When it comes to measuring the distance between the countries for the model's purposes, different indexes can be chosen depending on the aims and factual basis of the research, such as geographical distance, shipping expenses or the extent to which domestic markets use protectionist tools against import of goods. In our case, D_ij index reflects world's average annual oil prices, since their fluctuations influence shipping cost.

4. EMPIRICAL RESULTS AND DISCUSSION

Over the past years, PRC has not only been modernizing its trade policy but it has been transforming innovation policy which provides synergetic effect and further contributes to the industrialization of the

country's economy on the whole and its economic agents on the innovative-informational platform in particular. China is accelerating the development scientifically advanced inductries and is permanently rising in international ratings. All subindexes in the international ratings The Global Competitiveness Index and The Global Innovation Index demonstrate China's dynamic progress over the last five years (2013-2017), when China managed to rise by seven positions – from 35. place to 22. in The Global Innovation Index. Over the past two years, the volume of innovative production failed to exceed the volume innovative investments, however, this only points out the long term investment perspective (Cornell …, 2017). China has risen by 3 positions in the index of competitiveness in the past ten years – from 30. to 27. place in the rating. As for the index itself, its growth is obvious – from 4.7 to 5.0. It is worth mentioning that the country's improved position in 2018 when compared with 2008 is predominantly because of advances in technological development, higher education and professional training, and financial market development (The Global…, 2018).

The theoretical research presented in the first two chapters of the article allows us to identify key dominants of China's trade policy:

- Regulatory transformation in the trade-economic sphere on account of the country's economy industrialization;
- Complex and systematic modernization of the trade policy of PRC on the basis of improving its consistency with foreign political and economic interests and aims of the country, as well as escalation and renewal of trade actions for the protection of national markets;
- Economic liberalization of foreign trade policy with simultaneous intensification of protectionist tendencies and strengthening politicization of two- and multisided negotiations.

PRC's growing role as a leading trading nation has direct consequences for production and profit of its trade partners. The legal framework of trade relations between Ukraine and China currently comprises 328 documents (The contractual framework…, 2018). Relations between Ukraine and PRC are regulated by the Agreement between the Government of Ukraine and the Government of China on trade and economic cooperation (1992), which established regulations for the most favorable regime of collection of tariffs, duties, taxes and other fees stemming from import and export of goods The development of economic relations between the two countries peaked in 2013, when the Treaty on Friendship and Partnership was signed. However, political changes in 2014, ambivalent reaction of China towards annexation of Crimea by Russia and war aggression in the Eastern part of Ukraine caused temporary abatement in the two-sided relations.

Economic relations improved again in 2017 when a multitude of bilateral documents were signed, such as the Protocol of the Third Meeting of Commission on Cooperation between the Government of Ukraine and the Government of China, an action plan on joint cooperation on the Silk Road Economic Belt and the 21st Century Maritime Silk Road as well as protocols allowing export of made-in-Ukraine goods to China, a program on Ukrainian-Chinese partnership in scientific-technical sphere, cultural partnership, and investment partnership in agricultural sector (Embassy…, 2018).

According to the data from General Administration of Customs of PRC, trade turnover between Ukraine and PRC amounted to $6.5 bil. in 2016. Chinese export to Ukraine ($1,8 bill.) decreased by 23,6%, and Chinese import from Ukraine ($4,7 bill.) increased by 24,3%. Balance of bilateral trade in favor of PRC was $2,9 bil. (table 1) (Embassy…, 2016). This can be explained by several factors, but we are of the opinion that the deciding ones were, firstly, devaluation of Ukrainian hryvnia which led to the growth of Ukraine's export; and secondly, decrease in paying capacity of business agents and population as the whole, which caused decreased import from China.

Table 1

Trade turnover dynamics between Ukraine and China in
2010-2016, $ mln.

Index	Year						
	2010	2011	2012	2013	2014	2015	2016
Foreign-trade turnover	6016.8	8448.3	9676.7	10627.3	8085	6169.9	6520.9
Export	1316.5	2180.0	1777.1	2726.6	2674.1	2399.0	1832.5
Import	4700.3	6268.3	7899.6	7900.7	5410.9	3770.9	4688.4
Balance	−3383.8	−4088.2	−6122.4	−5174.0	−2736.8	−1371.9	−2855.9

Source: Authors' own calculations using data from The State Committee of Statistics of Ukraine, (2018).

It has been established that in 2016 Ukrainian exports to China comprised mainly ores, slags and ashes – 32.5%; crops – 29.9 %; fats and oils of animal and vegetable origin – 26%; wood and wooden goods – 2.6%; nuclear reactors, boilers, machinery – 2.5%. The imports from China comprised electronics – 22.5%; nuclear reactors, boilers, machines – 17.1%; plastic and polymeric materials – 6.1%; black metals – 4.4%; organic chemical compositions – 3.7%; various chemical goods – 3.7%; footwear – 3.5%; black metals goods – 3%.

Positive dynamics in bilateral trade between the countries was observed in 2017, when according to Ukrainian statistical data, goods turnover increased and amounted to $7.69 bil., Chinese exports to Ukraine added up to $5.65 bil. (increase by 20.5%), imports to China made $2.04 bil. (increase by 11.3%). The balance in favor of PRC was $3.61 bil. In 2017, following goods groups were prevalent in the structure of Chinese goods export to Ukraine: machinery and mechanical devices, electric equipment (35.53%); textile and textile goods (11.38%); nonferrous metals and goods made of nonferrous metals (10.90%); plastic materials and goods made of them (7.93%); chemical goods (7.33%); various industrial goods (7.13%); footwear, hats, umbrellas (4.86%). Exports of Ukrainian goods to PRC were represented by such groups as mineral products (42.57%); products of vegetable origin (23.76%); animal and vegetable fats and oils and their processed products (23.49%) (The State …, 2018; World …, 2018).

Bilateral investment partnership currently does not meet the abilities of China and the needs of Ukraine. Growing volume of imports from PRC is not accompanied by a corresponding growth of investments (0.48 % out of the total volume of FDI), Ukrainian investments into PRC are as wellalmost absent (Embassy…, 2018). Ukrainian economy received $17.8 mil. in Chinese investments, which were mostly directed to companies in agriculture, forest and fish industries – 39.6%, industry – 19.4%, wholesale trade and retail, maintenance of motor vehicles and motorcycles – 11.2%, transport, warehousing, mail and delivery services – 11%.

While some revival in investment partnership of the countries took place in 2017, the overall situation changed only minimally. According to Ukrainian statistics, as of December 31st, 2017, $18.2 mil. of Chinese investment has been injected into Ukrainian economy. The biggest part of the investment went to companies in agriculture, forest and fish industries, industry, wholesale trade and retail; maintenance of motor vehicles and motorcycles. The investments from Ukraine to China amounted to $1.5 mil, with a major part of it being directed to industrial companies (Embassy…, 2018).

Based on the previous analysis, we have determined the opportunities and threats relating to the strategic partnership between the studied countries, in addition to identifying countries' strong and weak points (Table 2).

To sum up, it is possible to define opportunities and threats of the bilateral partnership. Firstly, the opportunities comprise growing of investment volumes from China to Ukraine, especially into infrastructure projects, if state guarantees for them are given.

Secondly, it is Ukraine taking part in the project "New Silk Road". China has created fund Sino-CEEF for financing economic partnership among the countries of Central and Eastern Asia comprising €10 bil. for development of combined infrastructure projects, highly technological production, and mass consumption industry (Ukrainian…, 2016). As estimated by the experts, inclusion of Ukraine into this project will shorten goods transit between two world's biggest markets – Asian and European– from 42 days to 14 days. At the same time, creating a production and trade-logistics hub on the way between Asia and Europe becomes even more significant if there is FTZ between Ukraine and the EU, since it meets modern trends of PRC concerning capital expansion, in particular placing industrial facilities abroad (Kyiv…, 2017). It has also been established that directing $10 bil. of PRC's investment capital into Ukraine for building trade-logistics infrastructure and equipment for deployment of new production in Ukraine will boost output of sophisticated industrial goods by 23.1%, two-sided goods turnover – by 30.6%; goods and services export to other countries' markets – by 12.4%, and will lead to a reduction of unemployment by 1.28%. Experts claim that the indexes might be much higher if state production stimulation is established, free economic zones created, and export supported on the state level in the country.

Table 2

SWOT-analysis of trade-economic partnership between Ukraine and China

	Opportunities (O)	Threats (T)
FOREIGN FACTORS (China) ⟍ **DOMESTIC FACTORS** (Ukraine)	1. The countries' cooperation expanding within the Initiative "16+1" and the project "One Zone – One Road". 2. Coming to an agreement and creating a free trade zone between Ukraine and China. 3. Entering the market and determining sector priorities of trade-economic partnership.	1. Technological asymmetry in the countries' trade: raw material exports from Ukraine and highly technological export of PRC. 2. Limited access of domestic business to the China's market. 3. Persisting negative balance in foreign trade for the majority of goods groups. 4. High level of tariff protection, especially for agricultural produce.
Strong sides (S) 1. Ukraine's advantageous geographical location and close proximity to European market. 2. Rich in natural resources. 3. High level of educational potential. 4. Availability of scientific-technological potential.	*Expectations (S+O):* Full liberalization of trade regulations, strengthening of trade and economic relations, opportunity to create a free trade zone, improving efficiency in trade and economic relations in order to establish relations of relatively symmetric economic interdependence between both sides.	*Expectations (S+T):* Increasing disparity in production and technological opportunities of the countries, growing demand for imported goods on domestic market, growing dependence in sector of raw material export to China, absence of goods diversification and presence of geographical diversification of Ukrainian export.
Weak sides (W) 1. Ongoing armed conflict in the country. 2. Energy dependence of the country. 3. Low indexes in social, political, and economic ratings. 4. Low competitiveness of domestic goods and services. 5. Instability of national currency rate. 6. Cheap labor.	*Expectations (W+O):* Intensive renewal of development of Chinese-Ukrainian relations and giving them more active political character, widening trade-economic partnership of the countries in order to protect and promote national interests.	*Expectations (W+T):* Destabilization of bilateral relations; demotivation of entrepreneurial business as a result of considerable number of trade obstacles, mutual perception of the countries focusing on threats, and lessening the attractiveness of the countries for investors.

Thirdly, it is the potential signing and implementation of the agreement on FTZ between Ukraine and China. China demonstrated its willingness to initiate this process in 2015, which lead to deepening of economic relations in various sectors.. However, there is a number of opportunities and threats present in bilateral partnership within the potential Free Trade Zone. Opportunities include enlargement of sales markets and transit area between Asia and the EU; setting up common scientific research projects; deepening cooperation in education; modernization of energy production and electric supply lines.

Fourthly, Ukraine needs to join the project "16+1", which is China's regional initiative aiming to intensify its partnership with 11 EU countries and five Balkan countries in priority economic domains (for potential partnership): infrastructure, high tech and green technologies. Ukraine as a transit country "with good potential opportunities" in the center of Europe has much to offer and can participate in these new structures. Diplomatic intervention concerning this initiative which would point out and focus on the necessity of transforming "16+1" into "17+1" is needed. There is no doubt that model "17+1" will boost Ukraine's national interests and foster the realization of strategic plans and goals, such as infrastructure development, creating new and modernizing old logistical facilities, deepening of bilateral and multilateral partnerships, especially with Central and Eastern European countries. Transformation of the project "16+1" into "17+1" is a multifaceted and prospective target for Ukraine, and achieving it may have strategic geopolitical and geo-economic significance as well as providing additional point of economic and geopolitical support (Center…, 2016).

On the other hand, there are threats of the two-sided partnership as well. First of all, it is growth of raw material export to China and consequent deindustrialization of Ukrainian economy, as is proven by the current exports structure, which predominantly consists of commodities with low added value, and the imports, which on the contrary consist mostly of high-tech products with high added value.

The second threat is consolidating the status of "a connecting link" between the EU and China for Ukraine, which corresponds with trade expansion strategy of the latter. Within the context, it is reasonable to state that other countries perceive China seeking to "colonize" more than 60 countries as a threat (Center…, 2016). Thus, the USA and many other major European and Asian allies displayed careful attitude towards the project "One Belt, One Road", unwilling to support Chinese strategic plans and goals. Some countries, such as Australia, rejected Beijing's invitation to join the plan. India is also not particularly supportive of the fact that Chinese trade ways will cross the disputed territory in Kashmir (Behind…, 2017). One more threat is aggravation of competition between home and foreign producers on domestic and foreign markets as a result of growing imports of Chinese cheap produce. It is also worth mentioning that further trade-economic partnership between the countries has risks for China as well, first and foremost social-political, financial and economic instability of Ukraine, absence of real state guarantees of investment protection and opportunities for business extension.

In order to ascertain the dependence of Ukrainian goods export to China on the GDP index change, we have conducted a correlation-regressive analysis with the following initial data (table 3).

Table 3

Initial data on Ukrainian export to China and GDP during 2002-2016, $mil.

	2002	2003	2004	2005	2006	2007	2008
Export	699.9	1003.2	831.4	735.2	569.4	470	611.2
GDP	42393	50133	64883	86142	107753	142719	179992
2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
1509	1390.4	2255.2	1858.4	2803	2719.5	2439.7	1892.6
117228	136419	163160	175781	183310	131805	90615	93270

Source: formed according to (Dynamics…, 2017; Perlez, 2017)

Calculated correlation coefficient (r) equals 0.376362422. Correlation coefficient is more than 0, thus the connection between the two indexes is direct. i.e. rising export volumes to China will lead to GDP rise. As long as the correlation coefficient's value is between $0.3 \leq r \geq 0.5$, the connection is defined as a moderate one. which is explained by the fact that Asian direction of trade partnership is in a developing stage. The regressive equation looks as follows: $y = 21.199x+86914$ (Fig.1), and if we take export volume as x and GDP volume as y, it shows by how much GDP volume grows if export from Ukraine to China grows by $1 mil.
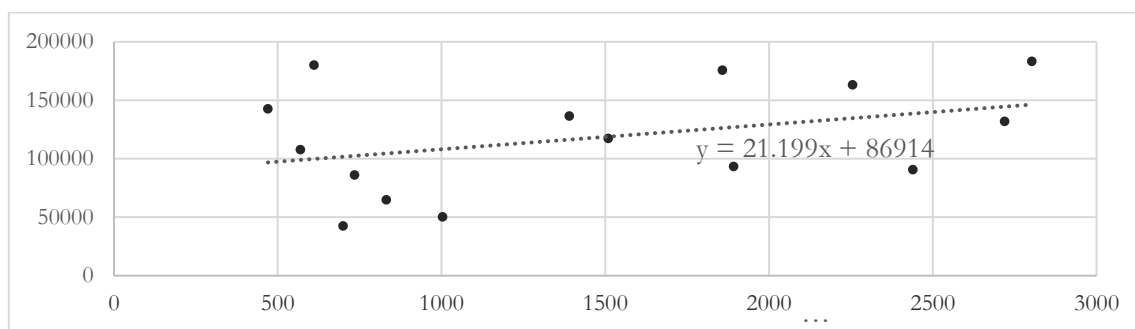

Figure 1. Regressive model of dependence of Ukrainian GDP growth on export to China
Source: Calculated according to the data from The State Committee of Statistics of Ukraine (2018).

In Ukraine, as is the case of the majority of market economies, dependence of economic growth on export has greatly risen over the past years and still continues to rise. Within the context, we have chosen to use a gravitation model. Based on the official Chinese and Ukrainian statistical data from 2002-2016, one can estimate the influence of crisis phenomena in economy of one of the partnering countries on the other, and also on the bilateral trade as such (Table 4).

Table 4

Main entry data for a gravitation model

Year	FTZ of Ukraine and China. $ mil.	GDP of Ukraine, $ mil.	GDP of China, $ mil.	Oil price, $ /barrel
2002	959.60	42392.90	1470550.02	25.01
2003	1522.20	50132.95	1660287.97	28.83
2004	1564.68	64883.06	1955347.00	38.10
2005	2521.65	86142.02	2285965.89	54.38
2006	2854.87	107753.07	2752131.77	65.14
2007	3738.71	142719.01	3552182.31	72.52
2008	6149.07	179992.41	4598206.09	96.99
2009	4168.66	117227.77	5109953.61	61.51
2010	6016.94	136013.16	6100620.49	79.47
2011	8448.37	163159.67	7572553.84	111.27
2012	9676.82	175781.38	8560547.31	111.63
2013	10627.43	183310.15	9607224.48	108.56
2014	8085.08	133503.41	10482372.11	99.03
2015	6170.07	91030.96	11064666.28	52.35
2016	6520.22	93270.48	11199145.16	43.55

Source: Calculations based on the data from The State Committee of Statistics of Ukraine (2018), World Trade Organization (2018)

As a result of the conducted calculations, we were able to formulate an equation model describing dynamics of foreign trade turnover of Ukraine with China during 2002-2016:

$$\ln(F_{ij}) = -7.425 + 0.404\ln(M_i) + 0.637\ln(M_j) + 0.315\ln(D_{ij}).$$

The weighed determination coefficient index of the model equals 0.986, meaning that the model is highly accurate and explains 98% of dependant factor variation in the independent variable combination received. In order to check statistical significance of multiple regression, we have used Fisher's criterion with 95% confidence level. Results of the Fisher test indicate that the model is relevant and there is a strong connection between the studied variables.

Approximating the results of the empiric gravitation model based on the statistical sample lead to a conclusion that when GDP of Ukraine is increased by 1%, bilateral goods turnover grows by 0.404%, and if China's GDP is increased by 1%, bilateral goods turnover grows by 0.637%, therefore there is a direct dependence between goods turnover growth and the countries' GDPs.

Comparison of factual and modeled indexes of FTZ of Ukraine and China during 2002-2016 is given in Fig. 2. The picture shows that factual and modeled indexes of foreign trade goods turnover almost exactly coincide with each other, thus proving the relevance of the model again.
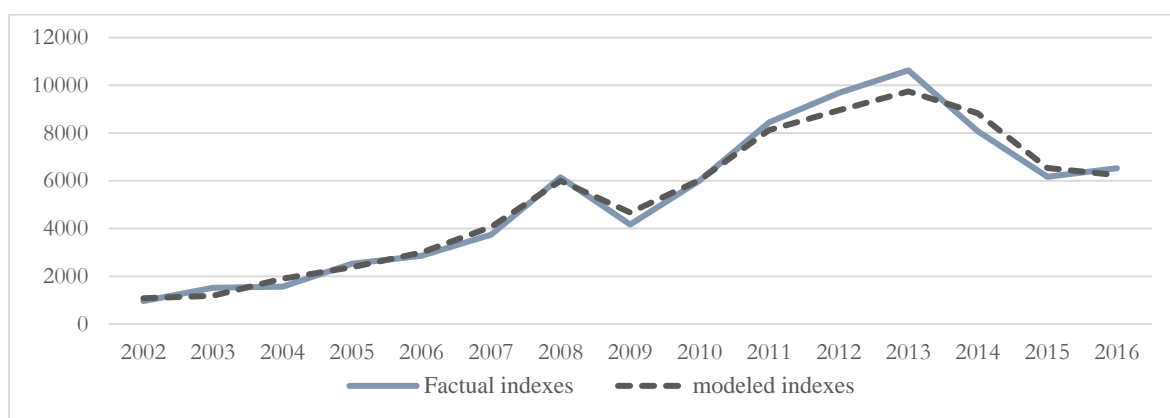

Figure 2. Factual and modeled indexes of foreign trade goods turnover of Ukraine and China, $ mil.

Apart from the analysis of the current state of trade between the two studied countries the gravitation model also allows us to predict volume of bilateral trade for the following years (Fig. 3). In order to do so, we have used the predicted indexes of International Monetary Fund concerning GDP of Ukraine and China for 2017-2022. It is expected that GDP of both countries will annually grow on average by 8% in Ukraine and by 6% in China. The results of the gravitation model along with experts' and authors' forecasts allow us to predict that by 2022 the volume of foreign trade goods turnover will have reached 1.5 times its value from 2016 and will amount to $10735.79 mil. At the same time, the indexes of foreign trade turnover between China and Ukraine for 2013 will only be available in 2019.
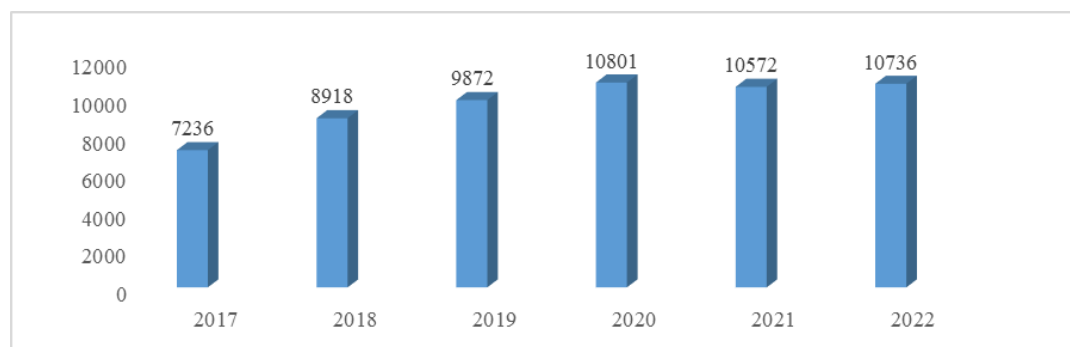
Figure 3. Forecast foreign trade goods turnover between Ukraine and China

To sum up, two-sided goods turnover between Ukraine and China is more elastic because of China's GDP growth dynamics, with the second position belonging to Ukraine. The adequacy of the gravitation model was confirmed on major criteria, and thus it can be used as a basis for a more broadened research on forecasting two-sided trade development.

When defining prospective directions for trade-economic partnership of Ukraine and China, first and foremost it is necessary to state that the leaders of PRC greeted signing of Ukraine-European Union Association Agreement by Ukraine and that they are considering including Ukraine into "New Economic Belt – Silk Road" initiative. China's interest in partnership with Ukraine is also connected to Ukraine's considerable natural resources and developed agrarian sector which may boost creating "foreign food base", i.e. using agrarian possibilities of Ukraine together with the investment and technological production facilities of PRC.

One more relevant factor of bilateral trade-economic relations may be military and technical cooperation and partnership in space industry, in particular launch industry. PRC is interested in scientific-technical base of Ukrainian defense industrial complex. Aircraft and engine building may become a real basis for Ukrainian-Chinese partnership.

Strengthening of bilateral cooperation in service industry, especially IT, is also worth focusing on. Ukraine has one of the best software developers in the world and has a great potential of selling IT services to China. Combining the efforts of both countries in this direction (software on Ukrainian side, hardware on Chinese side) might result in developing a high quality and competitive products (Mykolska, 2018).

Trade-economic partnership is also considered prospective in the following areas: scientific-technical sphere, particularly aerospace research, developing aircraft industry, forming transborder electronic business platforms, realization of common infrastructure projects. As Kiktenko V. states, in order to develop partnership with foreign countries, Beijing actively uses geo-economic tools such as trade, investment, development aid, money credit policy, infrastructure projects, etc. Chinese international economic and infrastructure projects are supported by New Development Bank BRICS, South-South Partnership Assistance Fund, AIIB, and Silk Road Fund, which allows China to avoid existing mechanisms of global economy where leading Western countries still dominate; the country's efforts to turn Yuan into an international reserve currency are based on the same motive (Kiktenko, 2017). In addition, unlike American and Japanese investors that are focused on production, a significant number of Chinese investments are aimed at electric power engineering, raw materials extracting, and infrastructure. Since FDI directly creates opportunities for economic growth (Pietrasieński & Ślusarczyk, 2015), employment and national profit, growing volume of Chinese FDI also contributes to increasing its geo-economic power. Chinese economy has become a barometer not only for Asian but also for the world economy. He states that there is a Chinese model of economic development ("Beijing consensus") which competes with Western approaches ("Washington consensus"). Within this context one has to consider the issue of institutionalizing the

relations, particularly a regulatory system of bilateral trade aiming at improvement and simplification of trade procedures between Ukraine and China.

Based on the conducted analysis (including SWOT analysis), strategic development of economic partnership between Ukraine and China for the time period until 2030 must be based on three following principles:

1)   activation and strengthening of a dialogue concerning deepening of trade-economic partnership through a system of trade policy tools, first of all cutback of tariff and non-tariff protection of Chinese market;

2)   optimization of trade, economic and investment partnership, so that Ukraine, as a country that is a part of Western Europe, is motivated to cooperate with China within the initiative "16+1" and the project "One Belt, One Road" with the intention of getting influence levers on global and European economic infrastructure build-up, as well as to look into the opportunities and threats of FTZ creation between the countries;

3)   developing a long-term strategy of trade-economic partnership between Ukraine and China with defined sector priorities.

It is apparent that Ukraine is more interested in the partnership than China at this point. But Ukraine is a prospective Western European country and has a considerable deferred purchasing capacity potential which will grow if political and economic situation in the country stabilizes.

5. CONCLUSION

1.   The major dominants of Chinese trade policy are defined to be, firstly, regulatory transformation in trade-economic sphere at the expense of the country's economy's industrialization; secondly, complex and systematic modernization of PRC's trade policy based on the strengthening of its coordination with foreign political and economic interests and the country's aims, as well as a renewed implementation of protectionist trade measures; thirdly, economic liberalization of foreign trade policy with simultaneous intensification of protectionist tendencies and strengthening politicization of two- and multisided negotiation.

2.   Currently, China is one of Ukraine's most important trade partners, specifically, China is second biggest import partner and seventh biggest export destination. Present-day export and import structure shows dangerous technological disproportion for Ukraine: raw materials export from Ukraine and highly technological export of PRC; keeping negative balance in foreign trade in majority of goods groups; limited number of domestic businesses entering Chinese market as a result of a high level of tariff protection, especially when it comes to agricultural produce.

3.   Trade-economic relations present opportunities and threats for the countries' cooperation. Among the opportunities, there are prospects of increasing investments from China to Ukraine, mainly into infrastructure projects; Ukraine participating in project "New Silk Road" and a chance to widen countries' partnership within the initiative "16+1"; signing an agreement of FTZ between Ukraine and China, which will boost trade-economic relations in different economy sectors. FTZ realization itself also brings a number of opportunities and threats within the two-sided partnership. Among the threats one can count intensified export of raw materials to China and potential subsequent deindustrialization of Ukrainian economy; Ukraine playing a role of a "connecting link" between the EU and China, thus merely submitting to PRC's trade expansion strategy; increased import of cheap produce from China and thus aggravating domestic subjects bearing the brunt of an undue competition. On the other hand, bilateral partnership contains threats for China as well.

4. For Ukraine, similarly as for the majority of developing countries, dependence of economic growth on export has considerably increased during the studied time period and it still continues increasing. The prospective directions of trade-economic partnership between Ukraine and China are agrarian sector, military and technical cooperation and partnership in aerospace research and launch industry, aircraft industry and engine building, and IT services.

5. Direct dependence between goods turnover and GDP of the studied countries was ascertained based on the modeled data using the empiric gravitation model. We have established that when GDP of Ukraine is increased by 1%, bilateral goods turnover grows by 0.404%, and if China's GDP is increased by 1%, bilateral goods turnover grows by 0.637%. Foreign trade goods turnover volume in 2022 will reach 1.5 times its value from 2016 and will amount to $10735.79 mil. At the same time, the indexes of foreign trade turnover between China and Ukraine for 2013 will only be available in 2019. Bilateral goods turnover between Ukraine and China is more elastic because of China's GDP economic growth dynamics, the second position belongs to Ukraine.

6. Cutback of tariff and non-tariff protection of Chinese market; optimization of trade, economic and investment partnership within the initiative "16+1" and the project "One Belt – One Road" aiming to gain influence within the global and European economic infrastructure build-up; ascertaining suitability, advantages, and threats of creating FTZ between Ukraine and China must be considered to be strategic tasks for the time period until 2030.

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