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INTERNATIONAL TRADE AS IMPORTANT ELEMENT OF BILATERAL COOPERATION BETWEEN UKRAINE AND CHINA

This article aims to delve into the theoretical foundations and practical aspects of bilateral cooperation between nations, using the China-Ukraine international trade relationship. The study deals with the intricate relations between Ukraine and People's Republic of China, and identifies the conditions of their cooperation. The comprehensive analysis spans the period from 2000 to 2021, scrutinising the factors influencing the growth of international trade volumes between the two nations. The research employs a comprehensive methodology involving a thorough literature review, a comparative analysis of economic and trade dynamics between Ukraine and China alongside those of other relevant countries (Romania, Moldova, Poland, Slovakia, Hungary), and the application of the trade integration index and gravity model with lag of research from 2012 to 2022. The tasks of the study encompass identifying patterns and differences in economic and trade dynamics, evaluating the indexes and models to gain insights into the complexities of international trade relationships. To construct the model, statistical data from various sources were utilized. Population and GDP data were obtained from the World Bank WDI Database, while distance data between the capitals of countries and China were sourced from the CEPII Database. Additionally, bilateral trade volume data with China were retrieved from the United Nations UN Comrade database. The analysis focuses on statistical information and model construction to propose recommendations for further development of international trade between Ukraine and China, considering the interests of both nations and addressing national security concerns.

***Keywords**: bilateral cooperation, gravity model, International trade, International cooperation, trade integration index.*

Problem statement. In the current context, the escalation of globalisation and inter-country competition imposes limitations on autonomous economic and social progress. Consequently, there is a global trend toward reforming bilateral and multilateral cooperation. A comprehensive examination of the intricacies of bilateral cooperation in international trade is of interest, offering a holistic approach to understanding the nuances of the Ukraine-China economic relationship.

Analysis of recent publications. A plethora of scientific works, spanning various disciplines, delve into the multifaceted analysis of the challenges, opportunities, and risks inherent in the realm of international trade, as an integral component of bilateral cooperation between nations. These comprehensive studies explore the intricate dynamics, economic implications, and geopolitical considerations associated with fostering collaborative economic relationships. Since the beginning of the 21st century, driven by the continuous deepening of China-Ukraine economic and trade cooperation, many Ukrainian and Chinese scholars have conducted in-depth research on the development of Ukraine-China bilateral trade. The research focus is mainly on the current situation, characteristics and development trade potential between two countries.

Fei examined the state of foreign direct investment in Ukraine and highlighted the sluggish development of the Ukrainian capital market since 1991, with a relatively small scale leading to a shortage of domestic capital resources, hindering social and economic development. Consequently, he emphasised that enhancing the capacity to attract foreign investment is imperative for promoting international trade and overall economic development [1]. Jiang asserted that over the more than ten years following the establishment of diplomatic relations between Ukraine and China in 1992, the economic and trade cooperation between the two nations underwent distinct developmental stages, encompassing highs, lows, and periods of prosperity. He systematically analyzed the macroeconomic landscape and the features of economic and trade relations between China and Ukraine, highlighting opportunities for the bilateral trade development [2].

Qingping & Tiejian advocate prioritising the quantity and structure of China-Ukraine economic and trade cooperation, emphasising active participation of Chinese enterprises and establishing micro-level foundational conditions. Despite existing shortcomings such as a small scale and low-level investments, the authors foresee potential for increased mutual direct investment, contingent upon optimising production factor allocation and addressing differences in policy systems and economic environments between the two countries [3]. Yunfei examined the economic development status of Ukraine and identified a bottleneck attributed to an irrational economic structure and policy system defects. He underscored the imperative for Ukraine to attract external funds to expedite economic transformation [4].

Linshi & Fomichova pointed out that more and more Chinese funds are now entering Ukraine to invest and set up factories, which shows that the economic and trade cooperation between the two countries is deepening and the confidence of Chinese companies in investing in Ukraine has increased significantly [5]. Pobochenko notes that

unlike Ukrainian medium- and low-tech exports, imports from China are mainly high-tech, about 50% of the total volume [6]. Antonyuk also notes that according to the technological component of trade with China, Ukraine remains an exporter of mainly raw materials with low added value and an importer of technological finished products with a relatively higher added value, mainly consumer goods [7].

Unresolved parts of the problem. However, despite the significance, the nuanced issues surrounding the challenges, opportunities, and risks within the domain of international trade, as an integral element of bilateral cooperation among Ukraine and China, remain inadequately explored. The intricate dynamics of economic interdependence, regulatory frameworks, and geopolitical factors contributing to the effectiveness or hindrance of such cooperation warrant more in-depth scrutiny.

The purpose of the article is to analyse the theoretical foundations and practical approach concerning bilateral cooperation between countries as an example of China-Ukraine international trade.

Research methodology. The following methods were applied to explore the complexities of bilateral cooperation in international trade between Ukraine and China: comprehensive review of existing literature, comparison of the economic and trade dynamics between Ukraine and China with those of other relevant countries to identify patterns and differences. The analysis employs trade integration index and gravity model to provide insights into the dynamics of international trade relationships. Following an analysis of statistical information and model construction we proposed recommendations to improve the international trade between Ukraine and China in the context of both countries' interests and accounting for national security concerns.

Research findings. Ukraine’s geographical location creates a unique business, transportation and logistics bridge between Europe and Asia. China and Ukraine have broad prospects for developing modern transportation corridors. The corridor passes through Ukraine and connects Germany, Austria, the Czech Republic, Slovakia, Hungary, Poland, and China. It is also the shortest of all routes, reducing the cost and transportation of products from producing countries to demand countries. time, including the EU. The opening of such routes will not only benefit Ukraine and China, but also Asian countries. In recent years, Ukraine-China trade and investment have achieved constructive results. According to the review of relevant Ukrainian customs data, since 2013, Ukraine's second largest export market and import source has become China. The global financial crisis that broke out in 2009 also had an impact on bilateral trade. However, excluding 2009, 2002, 2003, etc. to 2018, bilateral trade has grown at an average annual rate of 28.2% in the past ten years. Since 2019, China has become Ukraine's largest trading partner. Further deepening bilateral trade between China and Ukraine has practical and theoretical significance.

The Deputy minister of Economy of Ukraine emphasised that deepening the strategic partnership with China had been one of the priorities of Ukraine's foreign economic policy. With agricultural products constituting over 50% of Ukraine's total exports to China, the nation had emerged as China's primary supplier of corn and sunflower oil, accounting for 60-80% of China's imports in recent years. In 2021 the Ukrainian government with the goal

of further enhancing trade and diversifying exports to China, had maintained a focus on expanding economic collaboration between the two nations [8]. Since the beginning of the war, the volume of trade with China has declined, and China has fallen from the first place in 2021 to the fourth (5.3% of Ukraine's total exports). However, China remained at the top of the list of exporting countries for Ukraine. In 2023 the volume of imports to Ukraine from China amounted to 15% ($6.5 billion) [9]. The structural characteristics of Ukraine's exports of goods include a significant drop in exports of metal products, an increase in exports of mineral products, cyclical changes in exports of chemical products, and a rise in export demand for other goods.

To enhance the comprehension of bilateral relations between countries, we propose in this article to analyze the economic and trade potential of the Ukraine-China bilateral relationship using indices and models.

1. Trade integration index. This indicator is usually used to evaluate the closeness of trade relations between two countries and calculates the ratio between two proportions. The first proportion is the export of one country to another, the second ratio is the ratio of its imports from another country to the world's total imports. The smaller the value representing the degree of trade integration, the less close the trade relationship between two countries. The article will explore the scale of trade between the two countries through the degree of trade integration between the two sides. The calculated value of the degree of trade integration can reflect the closeness of trade between China and Ukraine in recent years. The specific calculation formula [10; 11] is as follows:

$$TCDab = (Xab/\ Xa)/(Mb/\ Mw) \qquad (1)$$

In the above formula, TCDab illustrates the degree of integration of country a with country b's trade, Xab illustrates the export volume of country a to country b, Xa refers to the export volume of country a, Mb refers to the import volume of country b, MW represents world imports. Assuming that TCDab is greater than 1, it means that there is a close trade relationship between country a and country b; otherwise, TCDab is less than 1 it means that the trade ties between country a and b are not close enough. The results of the calculation, according to the formula,- trade integration index, are shown in Fig. 1.

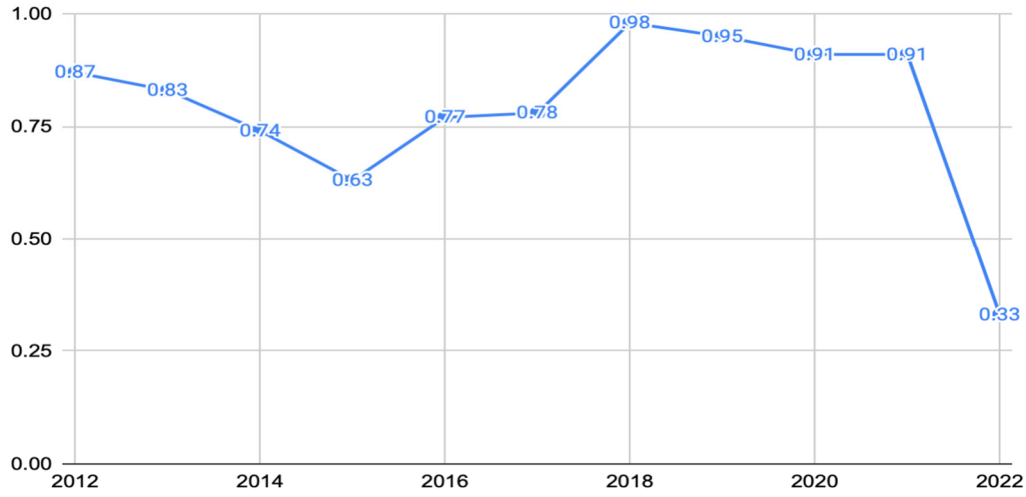


Fig. 1. Trend of Trade integration index between China and Ukraine

Source: Created by the authors based on Macro Trends data [12]

2. *Construction of gravity model*. Tinbergen (1962), Pöyhönen (1963) and Linneman (1966) integrated Newton's gravity with the trade flow between the two countries, and compared the relationship between the attraction, mass, and distance between two different objects to the relationship between the two countries [13]. The relationship between trade flows and distance and economic scale. It can be concluded that for two countries, there is always a close relationship between trade flows as well as distance and economic size. The economic scale of both partners can promote trade between the two countries to a certain extent. The nature of distance and transportation costs are similar. When the distance is long and transportation costs are high, it will create certain obstacles to the trade between the two countries. In explaining the occurrence of bilateral trades. To sum up, the following factors are summarised, including population size, trade fortress, and social geographical location. Therefore, we use GDP, population, and geographical location as the three main factors to evaluate the factors affecting bilateral trade cooperation. The model is follows:

$$LnY_{ij} = \alpha_j + \beta_1 Ln(POP_i + POP_j) + \beta_2 Ln(GDP_i + GDP_j) + \beta_3 LnDIST_{ij} + \varepsilon_{ij} \quad (2),$$

where Y - represents the bilateral trade volume with China; POP - represents the population; DIST - represents the distance between the capital of each country and the capital of China; GDP - represents the gross national product; i - represents the year and j - represents the country. β1, β2, β3 - is a pending index. It should be noted that Ukraine's 2014 export strategy was based on this model.

In order to better analyse the bilateral trade situation between Ukraine and China, we selected Slovakia, Hungary, Poland, Romania and Moldova, five countries adjacent to Ukraine and China for comparison (Table 1). We have used the World Bank WDI Database (population and GDP data) [14] in Table 1, 2, CEPII Database (distance data between the countries` capitals and the capital of China) [15] and United Nations UN Comtrade database (bilateral trade volume data with China) [16] for the estimation in Table 3.

Table 1

Population data (millions of people)

	China	Slovakia	Hungary	Poland	Moldova	Romania	Ukraine
2012	1350.7	5.40008	9.97369	38.06316	2.86032	20.0580	45.5906
2013	1357.38	5.40737	9.92178	38.0402	2.85956	19.9837	45.4927
2014	1364.27	5.41409	9.89595	38.01174	2.85782	19.909	45.2752
2015	1371.22	5.41996	9.86767	37.98641	2.83598	19.8156	45.1517
2016	1378.67	5.42466	9.84366	37.97009	2.80319	19.7023	45.0022
2017	1386.4	5.42829	9.81732	37.97483	2.75519	19.5887	44.8332
2018	1392.73	5.43796	9.77374	37.97475	2.70720	19.474	44.624
2019	1408.45	5.45482	9.77128	37.96548	2.66422	19.3717	44.3913
2020	1411.67	5.45938	9.75574	37.89907	2.63513	19.2653	44.1398
2021	1412.87	5.44728	9.71351	37.74712	2.6152	19.1199	43.7919
2022	1411.75	5.43175	9.60472	37.5616	2.59248	18.9567	38.0000

Source: World Bank WDI database [14].

The distances (in kilometres) between the countries` capitals and the capital of China, such as Slovakia (7422), Hungary (6948), Poland (6640), Moldova (6177), Romania (6476), and Ukraine (10050), are essential indicators for measuring international trade efficiency in the Gravity model [15].

Table 2

GDP data (Unit: 100 million U.S. dollars)

	China	Slovakia	Hungary	Poland	Moldova	Romania	Ukraine
2012	85300	944	1280	4952	87	1791	1760
2013	95700	987	1350	5157	94	1897	1830
2014	104000	1010	1410	5390	93	1997	1340
2015	110000	885	1250	4771	77	1778	910
2016	111000	896	1270	4700	79	1852	934
2017	121000	953	1420	5246	95	2101	1120
2018	136000	1060	1580	5887	112	2433	1310
2019	142800	1057	1640	5960	117	2510	1539
2020	146900	1067	1572	5994	115	2513	1566
2021	177300	1186	1818	6794	136	2854	1997
2022	181000	1154	1786	6881	144	3012	1605

Source: World Bank WDI database [14].

Table 3

Bilateral trade volume data with China (Unit: 100 million U.S. dollars)

	Slovakia	Hungary	Poland	moldova	Romania	Ukraine
2012	42.5478	61.8825	117.8909	1.4256	37.77	96.78
2013	46.7558	68.0028	148.1322	1.3122	40.3	106.3
2014	51.3821	74.7283	172.3631	1.4008	47.44	80.81
2015	56.4616	82.1191	170.943	1.2144	44.5728	75.21
2016	62.0457	90.2407	174.7154	1.0109	49.0427	64.19
2017	50.3178	80.7312	208.0682	1.3225	56.0221	75.59
2018	52.83369	84.7665	236.8116	1.4078	66.7579	79.56
2019	88.9112	74.1311	259.5617	1.7594	69.0023	127.59
2020	94.6263	116.8662	310.5118	2.0627	77.6481	148.79
2021	120.9254	157.1198	421.1970	2.8350	102.1575	189.7
2022	121.4547	155.2141	432.2276	2.9151	104.7184	76.56

Source: United Nations UN Comtrade database [16].

Using these data, we can calculate several results and present them in Figure 2.

Regression Analysis via Eviews 12. On this basis, a trade gravity model is constructed through the following three important gravity models. In order to examine the impact of population, geography, economy and other factors on bilateral trade between China and six countries, the following gravity model was constructed as model (2). In this (model 2), *i*=1 represents China; j=1, 2, 3, 4, 5, and 6 represent six countries respectively. The dependent variable represents the bilateral trade volume between China and these six

countries (unit: 100 million US dollars); the independent variables GDPi and GDPj represent GDP. The independent variables POPi and POPj represent the population size respectively; the independent variable DISTij represents the distance, and εij is the random disturbance term. αj is a constant term.

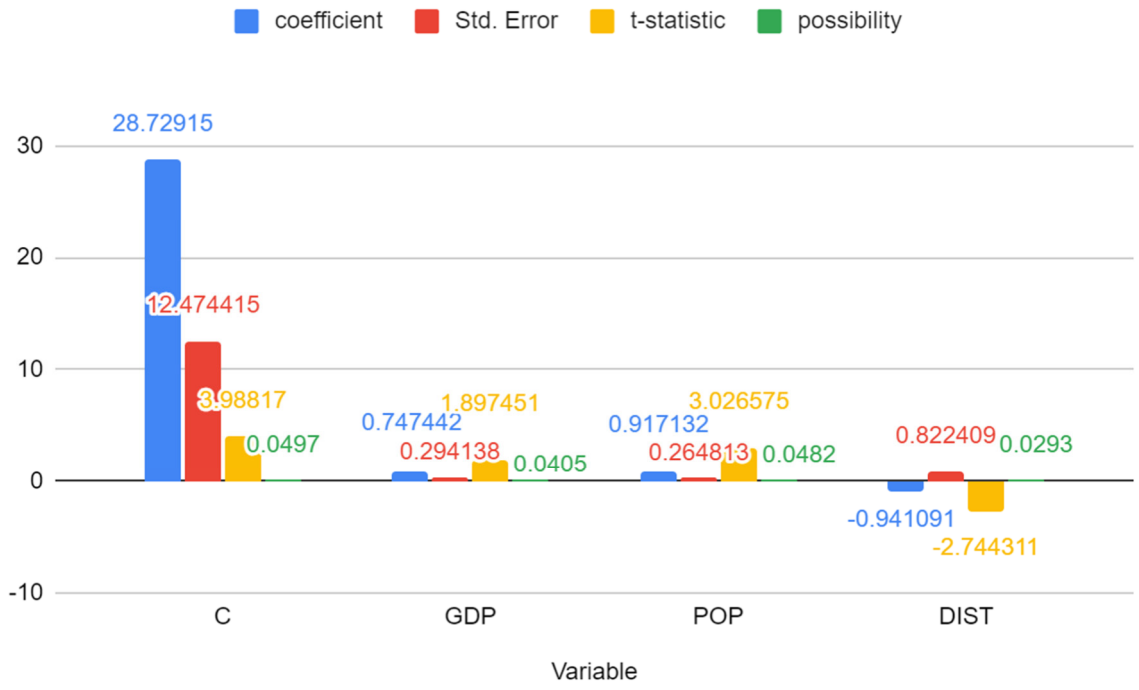


Fig. 2. Regression results

Source: Created by the authors via Eviews 12

The regression equation of the gravity model is used to calculate the simulated trade volume between China and these six countries in 2021, and then compare this data with the actual value. If the actual value is higher than the simulated value, it means that there are certain problems in the trade process between the two parties. This is the phenomenon of over-trade. Otherwise, there will be a lack of trade. The Table 4 below shows the test results.

Table 4

Estimated bilateral trade potential between China and six countries in 2021 and 2022

Country	Actual value		Simulation		Actual value/Simulation	
	2021	2022	2021	2022	2021	2022
Ukraine	1897687	765612	1675473	961837	1.13	0.79
Hungary	1571198	1552768	1128437	1492384	1.37	1.04
Slovakia	1209254	1215635	981378	1209782	1.23	1.00
Poland	4211970	4322276	4305178	4319799	0.97	1.00
Moldova	28350	29151	29365	27832	0.96	1.04
Romania	1021575	1047184	963281	976384	1.06	1.07

Source: United Nations UN Comtrade database [16]

For 2021 calculated by using 0.8 and 1.20 as data boundary calculations, it is estimated that the actual value and scale value of China, as a potential country, with these six countries are greater than 0.8. Countries with development potential have ratios between 1.0 and 1.20, while countries with ultimate reinvention potential have ratios ≥1.20. As seen at Table 4, in 2021, the estimated bilateral trade potential between China and Ukraine was the highest among the six countries. Both sides actively developed mutually beneficial bilateral trade and economic cooperation, with China expanding its import of high-quality products from Ukraine and Ukraine expanding its export of agricultural products to China.

In 2022, the bilateral trade potential between China and Ukraine was expected to continue growing, with efforts made to promote sustainable development of economic and trade relations between the two sides. However, the state of martial law in Ukraine has changed the situation significantly.

The estimated bilateral trade potential between China and the other five countries (Hungary, Slovakia, Poland, Moldova, and Romania) in 2021 and 2022 varied based on their individual trade relations with China. However, in 2021 and 2022, Ukraine remained the most attractive of these six countries for China in terms of bilateral trade potential.

For 2022 calculated by using 0.8 and 1.20 as data boundaries, the actual value and scale of China's trade with the six potential countries is 0.8, that is, less than 0.8. Countries with development potential have a ratio between 0.8 and 1.20, while countries with ultimate reinvention potential have a ratio ≥1.20. Since 2019, China has been Ukraine's largest trading partner. There are close economic exchanges between the governments of China and Ukraine.

In 2021, Ukraine was the most attractive of these six countries for China. Both sides actively developed mutually beneficial bilateral trade and economic cooperation. China expanded its import of high-quality products from Ukraine and contributed to trade liberalisation. Ukraine expanded its export of agricultural products to China and strengthened the protection of Chinese companies in Ukraine. By 2022, there was an improvement in the business environment, and efforts were made to promote sustainable development of economic and trade relations between the two sides. However, after February 24, 2022, the situation changed due to the state of martial law in Ukraine, logistical problems arose, and there was an occupation of southern Ukrainian territories that provided agricultural exports to China.

Conclusions. As we can see, international trade is an important element of bilateral cooperation between the countries under study. As a consequence of the applied methodology, encompassing the utilisation of the Trade Integration Index and the application of the Gravity Model of International Trade, an investigation involving six countries was undertaken. Based on the analysis, the following conclusions can be drawn. The Chinese market continues to open to the outside world and has entered the global development speed. Ukraine has gradually become a gateway for China to enter the European market. Now, owing to objective factors, sustaining Ukraine's bilateral trade with China at pre-war levels poses challenges. Nonetheless, export-import relations persist, accompanied by an influx of investments. Ukraine aspires to enhance agricultural product

exports to China. Both nations are committed to fostering sustainable economic and trade relations, accounting of national security considerations.

Prospects for further research. There is an open opportunity for further research to explore additional areas of bilateral cooperation, models of interaction, and influencing factors that would establish reliable methods of bilateral cooperation between Ukraine and China, particularly in the context of national security.

References:

1. Wang QingpiRen Fei. Ukrainian History and Contemporary Political Economy [M] // Economic Science Press. – 2017. Available at: https://xueshu.baidu.com/usercenter/paper/show?paperid=1b3v0x10991s0v600t7d04807h232363&site=xueshu_se&hitarticle=1 ISBN: 9787514178562
2. Zhu Jiang. Analysis on the Prospects of Economic and Trade Relations between China and Ukraine [J] // Foreign Economic and Trade Practice. – 2005. – №2. – P. 54-56.
3. Qingping, Hou Tiejian. Prospects for economic and trade cooperation between China and Ukraine [J] // Business Research. – 2011. – №4. – P. 167-172. DOI: 10.13902/j.cnki.syyj.2011.04.036
4. Long Yunfei. Analysis of the reasons for Ukraine's economic difficulties and future trends [J] // Russian Central Asian and Eastern European Studies. – 2012. – №6. – P. 50-56.
5. Xu Linshi, Famicova N.B. Analysis of the strategic cooperative partnership between China and Ukraine and its economic and trade complementarity [J] // Journal of Harbin University of Commerce (Social Science Edition), – 2013. – №5. – P. 91-95. DOI:10.3969/j.issn.1671-7112.2013.05.012.
6. Pobochenko L. M. Dominantni chynnyky ta tendentsii rozvytku ukrainsko-kytaiskykh torhovelnykh vidnosyn // Stratehiia rozvytku Ukrainy. – 2019. – №1. – P. 81-87. Available at: https://jrnl.nau.edu.ua/index.php/SR/article/view/14180
7. Antoniuk L. L., Halperina L. P. Innovatsiino-tekhnolohichni vymiry stratehichnoho partnerstva Ukrainy ta Kytaiu // Ukraina-Kytai. – K.: «MyCityPrint», - 2018. - №13. – P. 46-53
8. Taras Kachka: Nemaie pidstav vvodyty obmezhennia eksportu zernovykh [Elektronnyi resurs]. – Rezhym dostupu: https://agropolit.com/interview/856-taras-kachka-nemaye-pidstav-vvoditi-obmejennya-eksportu-zernovih
9. Komanda YC.Market.Yak viina vplynula na mizhnarodnu torhivliu Ukrainy. [Elektronnyi resurs]. – Rezhym dostupu: https://blog.youcontrol.market/iak-viina-vplinula-na-mizhnarodnu-torghivliu-ukrayini/
10. Lv H., Qian C. A Study on Economy and Trade Competition between China and Brazil // Technology for Education and Learning. Advances in Intelligent Systems and Computing. – 2012. – Vol. 136. – Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-27711-5_22
11. Zou Q. An Empirical Study on the Influence of the Economic Cooperation between Chinese Mainland and Hong Kong on Economic Growth and Industrial Development of HK since the Return to China // ModernEconomy. – 2016. – 7. – P. 92-101 DOI: 10.4236/me.2016.71011
12. Macrotrends - The Premier Research Platform for Long Term Investors [Elektronnyi resurs]. – Rezhym dostupu: https://www.macrotrends.net/
13. Estimation of the gravity equation in the presence of zero flows. Gert-Jan M. Lindersa, and Henri L.F. de Grootb // TI 2006-072/3 Tinbergen Institute Discussion Paper. Faculty of Economics and Business Administration, Vrije Universiteit Amsterdam. Tinbergen Institute. [Elektronnyi resurs]. – Rezhym dostupu: https://papers.tinbergen.nl/06072.pdf
14. The official site of the World Bank WDI database. [Elektronnyi resurs]. – Rezhym dostupu: https://databank.worldbank.org/source/world-development-indicators.
15. The official site of the CEPII database. [Elektronnyi resurs]. – Rezhym dostupu: http://www.cepii.fr/CEPII/en/welcome.asp.
16. The official site of the United Nations UN Comtrade database. [Elektronnyi resurs]. – Rezhym dostupu: https://comtradeplus.un.org/

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МІЖНАРОДНА ТОРГІВЛЯ ЯК ВАЖЛИВИЙ ЕЛЕМЕНТ ДВОСТОРОННЬОГО СПІВРОБІТНИЦТВА МІЖ УКРАЇНОЮ ТА КИТАЄМ

Метою статті є дослідження теоретичних основ та практичних нюансів двостороннього співробітництва між державами на прикладі міжнародної торгівлі між Китаєм та Україною. У дослідженні розглядаються складні відносини між Україною та Китайською Народною Республікою, визначаються умови їхнього співробітництва. Комплексний аналіз охоплює період з 2000 по 2021 роки та детально розглядає фактори, які впливають на зростання обсягів міжнародної торгівлі між цими двома країнами. Дослідження використовує комплексну методологію, що включає ретельний огляд літератури, порівняльний аналіз динаміки економіки та торгівлі між Україною та Китаєм поряд з іншими країнами (Румунія, Молдова, Польща, Словаччина, Угорщина), а також застосування індексу торговельної інтеграції та гравітаційної моделі з лагом дослідження з 2012 по 2022 рік. Завдання дослідження включають виявлення відмінностей у економічній та торговельній динаміці, оцінку індексів та моделей для отримання уявлення про стан сучасних міжнародних торговельних відносин. Для побудови моделі були використані статистичні дані з різних джерел. Дані про населення та ВВП були отримані з бази даних WDI Світового банку, дані про відстань між столицями досліджуваних країн і Китаєм – з бази даних CEPII, дані про обсяг двосторонньої торгівлі з Китаєм – з бази даних UN Comtrade ООН. Результати аналізу статистичної інформації втілено у побудові моделі, після цього надано рекомендації щодо подальшого розвитку міжнародної торгівлі між Україною та Китаєм, враховуючи інтереси обох країн та вирішуючи проблеми національної безпеки.

Ключові слова: *двостороннє співробітництво, гравітаційна модель, міжнародна торгівля, міжнародне співробітництво, індекс торговельної інтеграції.*