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Thematic Issue

Impact of COVID-19 and the Ukraine War on Foreign Direct Investment Inflows in Eastern European Economies [EEE]

Ismaila A. OKUNOYE & Emeka O. AKPA

FOREIGN DIRECT INVESTMENT IN EUROPEAN AND EASTERN EUROPEAN COUNTRIES IN THE FACE OF COVID-19 AND THE RUSSIAN-UKRAINE WAR

*Sheereen FAUZEL, Jeevita MATADEEN
& Neha Devi TENGUR*

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Kai LIU, Yanshan LIN, Jingyi LI

INFLUENCE AND ESTIMATION OF GEOPOLITICAL RISK ON FDI IN EASTERN EUROPEAN ECONOMIES

*Jacques YANA MBENA,
Georges NGNOUWAL ELOUNDOU*

FOREIGN DIRECT INVESTMENT RESILIENCE DURING TIMES OF CRISIS: A COMPARATIVE ANALYSIS BETWEEN SELECTED EASTERN EUROPEAN AND AFRICAN COUNTRIES

Alena DORAKH

INDUSTRIAL DIGITAL INTERDEPENDENCE AND FDI RESTRICTIVENESS AS DETERMINANTS OF FDI FOREASTERN EUROPEAN ECONOIES

Kálmán KALOTAY

WAR, SANCTIONS, AND FOREIGN DIRECT INVESTMENT TO AND FROM RUSSIA



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Thematic Issue

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Badar Alam IQBAL

Editorial Note

7

Ismaila A. OKUNOYE & Emeka O. AKPA

Foreign direct investment in European
and Eastern European countries in the face of COVID-19
and the Russian-Ukraine War

9

Sheereen FAUZEL, Jeevita MATADEEN & Neha Devi TENGUR

Impact of COVID-19 and the Ukrainian War on FDI
in a Panel of Eastern European Economies

35

Kai LIU, Yanshan LIN, Jingyi LI

Influence and Estimation of Geopolitical Risk on FDI
in Eastern European Economies

59

Jacques YANA MBENA, Georges NGNOUNWAL ELOUNDOU

Foreign Direct Investment Resilience During Times of Crisis:
A Comparative Analysis Between Selected Eastern European
and African Countries

81

Alena DORAKH

Industrial Digital Interdependence and FDI Restrictiveness
as Determinants of FDI for Eastern European Economies

109

<i>Kálmán KALOTAY</i> War, sanctions, and foreign direct investment to and from Russia	133
---	-----

BOOK REVIEW

<i>Mitko ARNAUDOV, Milica ĆURČIĆ</i> The Armed Conflict of the Dniester: Three Decades Later	155
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СПИСАК РЕЦЕНЗЕНАТА	161
--------------------	-----

УРЕЂИВАЧКА ПОЛИТИКА	167
---------------------	-----

УПУТСТВО ЗА АУТОРЕ	177
--------------------	-----

Editorial Note

Even though there are many studies on the determinants of foreign direct investment, empirical research on the drivers of foreign direct investment (or foreign direct investment inflows) in Eastern European countries is limited, especially after the emergence of COVID-19 and the Ukraine War. It is, therefore, imperative to examine the post-COVID-19 and Ukraine War drivers of foreign direct investment [inflows] in Eastern European economies.

In light of the above, this thematic issue examines the determinants of foreign direct investment [inflows] in Eastern European countries. The thematic issue also focuses on the effects of COVID-19 and the Ukraine War on FDI inflows in European economies, with much more emphasis on Eastern European economies. Geopolitical risks and resilience during times of crisis have also found a place in this thematic issue through an analysis of their impact on Eastern European economies, along with a comparison with African countries. Industrial Digital Interdependence and FDI Restrictiveness, as well as the effects of sanctions on foreign direct investment to and from Russia, are also covered.

The investigation is conducted through a review of the theoretical and empirical literature. The papers employ an empirical model to investigate the drivers of foreign direct investment [inflows] in European economies in general and Eastern European economies in particular. The authors also use panel data econometric techniques to estimate the empirical model.

The results of this study will have policy implications for European economies in general and Eastern European economies in particular.

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Ismaila A. OKUNOYE¹ & Emeka O. AKPA²

Foreign direct investment in European and Eastern European countries in the face of COVID-19 and the Russian-Ukraine War

SUMMARY

The global shocks of COVID-19 and the Ukraine war on FDI inflows in European countries, particularly Eastern Europe, have been subjects of a serious debate among EU policymakers. This study assesses the level of impact of the two global shocks on FDI in 39 European countries (ECs) and 20 Eastern European countries (EECs) from 2020 Q1 to 2022 Q4. For the comparative analysis, a static panel regression is used. Our findings demonstrate that variations in the levels of stringency measures related to COVID-19 in individual countries are significantly associated with increased FDI inflows. This suggests that investors will increase investment in countries with stricter measures to limit crises. While variations in COVID-19 total cases are associated with increased FDI inflows in Europe but with decreased FDI inflows in Eastern Europe, we find that the crisis may have created new opportunities or incentives for foreign investors in Europe compared to Eastern Europe.

Keywords: COVID-19, Russia-Ukraine War, FDI Inflows, ECs, EECs.

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Стране директне инвестиције у европским и источноевропским државама у сусрет пандемији COVID-19 и руско-украјинском рату

САЖЕТАК

Глобални шокови пандемије COVID-19 и украјинског рата на прилив страних директних инвестиција (СДИ) у европским земљама, посебно у Источној Европи, представљали су важну дебату међу креаторима политике ЕУ. Ова студија процењује ниво утицаја два глобална шока на СДИ у тридесет девет европских држава и двадесет држава Источне Европе, од првог квартала 2020. до четвртог квартала 2022. године. За упоредну анализу користи се статичка панел регресија. Наши налази показују да су варијације у нивоима строгих COVID-19 мера у појединачним државама значајно повезане са повећаним приливом СДИ. Ово сугерише да ће инвеститори повећати улагања у државе са строжијим мерама за ограничавање криза. Док су варијације у укупном броју случајева COVID-19 повезане са повећаним приливом СДИ у Европи, али смањеним приливом СДИ у Источној Европи. Проналазимо могућност да је криза створила нове прилике и подстицаје за стране инвеститоре у Европи у поређењу са Источном Европом.

Кључне речи: COVID-19, руско-украјински рат, СДИ, прилив, европске државе, источноевропске државе

Introduction

In recent times, ECs and EECs have encountered significant challenges that have shaken their economic stability and geopolitical landscape. The outbreak of the COVID-19 pandemic and the intensifying of the Russian-Ukraine conflict have posed unique and extra hurdles for investment among nations, particularly in attracting and maintaining foreign direct investment (FDI) assets.

FDI plays a crucial role in boosting economic growth, promoting technological advancement, and creating employment opportunities. However, the unprecedented circumstances brought about by the pandemic and the ongoing conflict have raised concerns about the ability of ECs, especially EECs, to attract and retain foreign investment amidst uncertainty and evolving geopolitical dynamics.

The COVID-19 pandemic has had a profound impact on global economies, disrupting supply chains, trade, and investment flows. At the height of the outbreak of the disease, governments worldwide were forced to implement stringent measures to contain the spread of the virus, leading to economic contractions and significant market volatility (in some places, some of those

measures are still in place, while their consequences are still being felt in most places). These factors have influenced investors' sentiment and decision-making processes, affecting FDI inflows across multiple sectors. At the height of the COVID-19 pandemic in 2020, FDI into Central, East, and Southeast Europe (CESEE) fell by 58% in the first half of 2020 compared to the same period in 2019. This was a more dramatic decline than the global average of 49% but less severe than the decline in developed economies (75%).³

Simultaneously, the long-standing Russian-Ukraine conflict has escalated, with ramifications not only for the involved nations but also for neighbouring countries in EECs and the wider European Union (in fact, the war has been projected to slow down the global economy if peace is not brokered between both countries).⁴ Heightened geopolitical tensions and territorial disputes have raised concerns about political stability, security, and the rule of law. These factors contribute to an uncertain investment climate, potentially deterring foreign investors from committing capital to the region. The uncertainty caused by the Russia-Ukraine war has made recovery from the COVID-19-induced decline in FDI more difficult, which is why these two phenomena should be studied together. Russia has been particularly affected, as 1,260 international companies operating in the country (representing 43 of all international companies in the country) have either stopped operating or withdrawn totally. A further 495 companies have halted investment plans in the country. After a 42% year-on-year high increase in FDI inflows in Q1 2022, Central and Eastern European countries (CEE) experienced a decline of 21%. In Belarus, Kazakhstan, Moldova, and Ukraine, the decline in FDI inflows has been sharper, at 31% year-on-year.⁵

Pandemics and wars are sources of uncertainty as they pertain to FDI flows. Studies such as Ho and Gan (2021), Lee et al. (2022), Zhan (2020), and Okunoye et al. (2023) have shown that pandemics and pandemic uncertainties have significant negative effects on FDI flows in different parts of the world, but especially in developing and emerging countries.⁶ In the

³ Amat Adarov & Hunya Gabor, "Foreign Investments Hit by COVID-19 Pandemic. FDI in Central, East and Southeast Europe", Wiener Institut für Internationale Wirtschaftsvergleiche, <https://wiiw.ac.at/foreign-investments-hit-by-covid-19-pandemic-fdi-in-central-east-and-southeast-europe-dlp-5540.pdf>, 06/06/2023, 5.

⁴ Mohamad Ikhwan Syahtaria, "Strategic review of the impact of the Russia-Ukraine war on Indonesian national economy", *Global Journal of Engineering and Technology Advances*, Vol. 12, No. 3, 2022, 1-8.

⁵ Olga Pindyuk, "Russia's war in Ukraine causes a reversal of FDI trends", Wiener Institut für Internationale Wirtschaftsvergleiche, <https://wiiw.ac.at/russia-s-war-in-ukraine-causes-a-reversal-of-fdi-trends-n-585.html>, 06/02/2023.

⁶ Linh Tu Ho & Christopher Gan, "Foreign direct investment and world pandemic uncertainty index: Do health pandemics matter?", *Journal of Risk and Financial Management*, Vol. 14, No. 3, 2021, 107; Lianne MQ. Lee, I-Chieh Michelle Yang & Motoki Watabe, "FDI in the Era of the Pandemic: Public Health as a New Country Risk Measure", In: Andrei

same way, several studies have documented the impact of war on FDI. The results from the studies vary; in Li et al. (2017), while the primary sector FDI of developing countries did not suffer negative consequences due to wars, the secondary and tertiary sectors were significantly weakened by wars.⁷ Other studies, such as Witte et al. (2017), found that investment flows of greenfield FDI to resource-rich sectors were not negatively affected by political violence, unlike the negative effect on nonrecourse sectors.⁸

In this context, it becomes crucial to examine the impact of the COVID-19 pandemic and the Russian-Ukraine conflict on FDI in ECs and EECs. Understanding the challenges faced and identifying potential opportunities can inform policy decisions and strategies aimed at attracting and retaining foreign investment, thereby contributing to economic recovery and stability.

More specifically, this study is crucial for the following reasons:

1. Economic Recovery and Resilience: FDI plays a critical role in economic growth, job creation, and technological advancement. Understanding the impact of the pandemic and the conflict on FDI can help countries identify strategies to attract and retain investment, thereby contributing to their economic recovery and building resilience in the face of external shocks.
2. Investment Climate and Competitiveness: The ability to attract FDI is often seen as a measure of a country's attractiveness as an investment destination. Analysing the challenges and opportunities surrounding FDI in the current circumstances can provide insights into the overall investment climate and the competitiveness of ECs and EECs. This knowledge can inform policy decisions aimed at improving the business environment and enhancing the countries' attractiveness to foreign investors.
3. Geopolitical Implications: The Russian-Ukraine conflict has geopolitical implications beyond the two countries involved. It has the potential to impact neighbouring countries and the wider European Union. Understanding the effects of the conflict on FDI can help assess the

O. J. Kwok, Motoki Watabe, Sharon G.M. Koh (eds), *COVID-19 and the Evolving Business Environment in Asia: The Hidden Impact on the Economy, Business and Society*, Singapore: Springer Nature Singapore, 2022, 77–95; James X. Zhan, "Covid-19 and investment—an UNCTAD research round-up of the international pandemic's effect on FDI flows and policy", *Transnational corporations*, Vol. 27, No. 1, 2020, 1–3; Ismaila Adeleye Okunoye, Emeka O. Akpa, Bamidele Boluwatife & Maxwell Jimmy, "Does Global Economic Uncertainty Affect Foreign Direct Investment? Evidence From Asian Emerging Markets", *Asian Economics Letters*, Vol. 4, 2023.

⁷ Chengchun Li, Syed Mansoob Murshed & Sailesh Tanna, "The impact of civil war on foreign direct investment flows to developing countries", *The Journal of International Trade & Economic Development*, Vol. 26, No. 4, 2017, 488–507.

⁸ Caroline T. Witte, Martijn J. Burger, Elena I. Ianchovichinana & Enrico Pennings. "Dodging bullets: The heterogeneous effect of political violence on greenfield FDI", *Journal of International Business Studies*, Vol. 48, 2017, 862–892.

broader geopolitical landscape and inform strategies to mitigate risks and maintain stability.

4. Policy Formulation: Governments and policymakers need accurate and up-to-date information to formulate effective policies and measures to promote FDI. By studying FDI trends and drivers amidst the pandemic and conflict, policymakers can make informed decisions to attract investment, create a conducive business environment, and address any barriers or challenges faced by investors.
5. Risk Assessment and Mitigation: The COVID-19 pandemic and the Russian-Ukraine conflict have introduced new risks and uncertainties for investors. Analysing FDI in this context can help identify potential risks and vulnerabilities, allowing businesses and investors to make informed decisions and develop risk mitigation strategies.
6. International Collaboration: FDI is often influenced by international cooperation and collaboration. Studying FDI in the face of the pandemic and the conflict can help identify opportunities for collaboration among ECs and EECs, as well as with other global actors. Cooperation in areas such as investment promotion, trade facilitation, and policy coordination can contribute to fostering economic stability and growth.

This paper aims to analyse the trends, drivers, and challenges associated with FDI in ECs and EECs amidst the COVID-19 pandemic and the Russian-Ukraine conflict. By examining the economic and geopolitical factors influencing FDI flows, we can gain valuable insights into the strategies that countries can employ to foster investment resilience, enhance competitiveness, and mitigate risks.

Literature Review

Theory

The study by Denisia (2010) has a comprehensive review of the relevant theories in FDI.⁹ Of most importance to this study is the Eclectic Theory of Foreign Direct Investment (FDI) Determination, also known as the OLI framework, which was proposed by John Dunning (1977, 1979).¹⁰ It seeks to explain why MNEs engage in FDI by considering three main factors:

⁹ Vintila Denisia, "Foreign direct investment theories: An overview of the main FDI theories", *European journal of interdisciplinary studies*, Vol. 2, No. 2, 2010, 104–110.

¹⁰ John H. Dunning, "Trade, location of economic activity and the MNE: A search for an eclectic approach", In: Bertil Ohlin, Per-Ove Hesselborn, Per Magnus Wijkman (eds), *The international allocation of economic activity: proceedings of a Nobel Symposium held at Stockholm*, London: Palgrave Macmillan UK, 1977, 395–418; John H. Dunning, "Explaining changing patterns of international production: in defence of the eclectic theory," *Oxford bulletin of economics and statistics*, Vol. 41, No. 4, 1979, 269–295.

ownership advantages, location advantages, and internalisation advantages. While uncertainties play a crucial role in FDI decisions, they are not explicitly addressed within the Eclectic Theory. However, we can discuss how uncertainties may be relevant to each component of the OLI framework.

1. **Ownership Advantages:** Ownership advantages refer to the unique assets, capabilities, or competitive advantages that a firm possesses. Uncertainties can arise in terms of protecting and exploiting these advantages in foreign markets. For instance, a firm may face uncertainties related to intellectual property protection, legal and regulatory frameworks, and the ability to transfer and utilise their knowledge in a foreign setting.
2. **Location Advantages:** Location advantages consider the benefits of operating in a particular country or region. Uncertainties regarding the host country's political stability, economic conditions, infrastructure, cultural differences, and market demand can influence a firm's decision to undertake FDI. The level of uncertainty may impact the perceived attractiveness and viability of investing in a specific location. The four FDI motives for considering location advantages are: market seeking, resource seeking, efficiency seeking, and strategic asset seeking.
3. **Internalisation Advantages:** Internalisation advantages refer to the benefits a firm can gain by controlling and coordinating its activities within its own organisational boundaries rather than relying on market transactions. Uncertainties arise in terms of the costs and risks associated with alternative modes of market entry, such as licencing, franchising, or joint ventures. Firms may choose FDI as a way to reduce uncertainties related to transaction costs, protect intellectual property, maintain quality control, and safeguard proprietary knowledge.

The knowledge-based capital model of Markusen, which was described in Markusen and Venables (1998) and further developed in Markusen and Maskus (2001 & 2002), explains multinational enterprises' behaviour within a general equilibrium framework and was tested by Stack et al. (2017).¹¹ Stack et al. further explained the model as an FDI country-motive determinant and emphasised the positive relationship between different country

¹¹ James R. Markusen & Anthony J. Venables. "Multinational firms and the new trade theory", *Journal of international economics*, Vol. 46, No. 2, 1998, 183–203; James R. Markusen & Keith E. Maskus, "Multinational firms: reconciling theory and evidence", In: Magnus Blomstrom & Linda S. Goldberg (eds), *Topics in empirical international economics: A festschrift in honor of Robert E. Lipsey*, University of Chicago Press, 2001, 71–98; James R. Markusen & Keith E. Maskus, "Discriminating among alternative theories of the multinational enterprise", *Review of international economics*, Vol. 10, No. 4, 2002, 694–707; Marie M. Stack, Geetha Ravishankar & Eric Pentecost, "Foreign direct investment in the eastern European countries: Determinants and performance", *Structural Change and Economic Dynamics*, Vol. 41, 2017, 86–97.

characteristics that favour different firm types. This model was used to estimate hybrid (vertically and horizontally integrated) firms based on the simulated predictions of Markusen et al. (1996) and Markusen (1997).¹² The relations state criteria for firms' dominance under the three investment decisions: a country endowed with abundant skilled labour and size, mostly large; a country's relative endowments and low trade costs with similar size; and a country with high foreign investment barriers. This has a similar conclusion to Carr et al.'s (2001) presentation of three investment decisions – transport costs, market size, and economies of scale – of multinational enterprises entering the foreign market.¹³ The model proposes that vertical multinational enterprises (MNEs) enter the market and dominate production where there are low trade costs and relatively different factor endowments, even though firms are similar in size. On the other hand, horizontal MNEs enter the market and dominate production where there is a moderately high trade cost and relatively similar factor endowments, even though firms are similar in size.

From the discussion, the OLI framework laid a solid foundation for FDI placement by firms, stating ownership advantage depends on the investor's behaviour and intention, while the Knowledge Capital Framework digs further into the different firms' (especially MNEs) motivations to predict different country characteristics (factor endowments, trade costs, market size, and level of investment barriers) in making investment decisions by investors. The knowledge capital model framework, an improvement model of the OLI framework, has captured the uncertainties (COVID-19 and the Ukraine war) as investment barriers in the foreign country, whether high or low, that may affect the FDI inflow determinants of either vertically or horizontally oriented MNEs towards internationalisation and globalisation. The knowledge capital framework considered the institutional environment, which can be likened to the total COVID-19 test, vaccinations, and level of restriction imposed (stringency index), to reduce the uncertainty spread and investment barriers that can affect FDI. This study assessed the level of uncertainties (COVID-19 cases, deaths, tests, and the level of restrictions) on the FDI inflows (assets transferred by direct investment enterprises and direct investors into the reporting economy for the reporting period).

¹² James R. Markusen, et.al., "A unified treatment of horizontal direct investment, vertical direct investment, and the pattern of trade in goods and services", National Bureau of Economic Research, <https://core.ac.uk/download/pdf/6606194.pdf>, 06/07/2023; James R. Markusen, "Trade versus investment liberalization", National Bureau of Economic Research, https://www.nber.org/system/files/working_papers/w6231/w6231.pdf, 06/07/2023.

¹³ David L. Carr, James R. Markusen & Keith E. Maskus, "Estimating the knowledge-capital model of the multinational enterprise", *American Economic Review*, Vol. 91, No. 3, 2001, 706.

It is important to note that while uncertainties may influence FDI decisions, the Eclectic Theory does not explicitly incorporate them as a separate component. However, firms consider various uncertainties when assessing the advantages and disadvantages of engaging in FDI, particularly in terms of protecting their assets, adapting to foreign market conditions, and mitigating risks.

Empirically, studies on the effect of both the COVID-19 pandemic and the Russia-Ukraine War on FDI flows in ECs and EECs are very few, as the effects of each shock on FDI inflows and the growth of developing and developed economies are documented in the literature. Yet, it is important to consider how these two phenomena, which represent global uncertainties (which are just about a year apart), are affecting the growth pattern of FDI inflows within ECs, particularly EECs, as well as to foreign countries. The study by Charaia et al. (2022) found that the COVID-19 pandemic and the Russia-Ukraine crisis affect FDI flows into the services sector of Georgia.¹⁴ Additionally, Tank and Ospanova (2022) project that the Russia-Ukraine crisis will lead to a reduction in FDI inflows.¹⁵ On the other hand, Ajeigbe (2023) used the generalised method of moments (GMM) estimation technique to find that the Russia-Ukraine war has led to a decline in trade and FDI relations in outward FDI, from Europe to Asia and Africa.¹⁶ Interestingly, a recent report by FDI Intelligence shows that Europe has been able to withstand the Russian-Ukraine crisis in terms of FDI inflows.

The reviewed empirical studies are very sparse on how the COVID-19 pandemic and the Russia-Ukraine crisis combine to affect FDI flows into Europe and Eastern Europe. This study contributes to the existing literature by filling this gap and shedding light on these sources of current FDI uncertainty in Europe, especially in Eastern Europe.

Data and Methodology

Data Sources

The study employs quarterly data spanning 2020Q1 to 2022Q4. The FDI inflow data is sourced from the IMF Balance of Payment Statistics (millions of US dollars), and the COVID-19 data is sourced from Ourworldindata.org.

¹⁴ Vakhtang Charaia, Mariam Lashkhi & Mariam Lashkhi, "Foreign direct investments during the coronomic crisis and armed conflict in the neighbourhood, Case of Georgia", *Globalization & Business*, Vol. 7, No. 13, 2022, 51–56.

¹⁵ Aashish Tank and Al-Farabi Ospanova, "Economic Impact of Russia-Ukraine War", *International Journal of Innovative Research in Science Engineering and Technology*, Vol. 11, No. 4, 2022, 3345–3349.

¹⁶ Oluwaseun Joshua Ajeigbe, "Offshoring/Nearshoring to New Shore: Central and Eastern Europe", University of Debrecen, <https://dea.lib.unideb.hu/items/a9045fb3-42ce-4f47-927d-c33c694388d5>, 06/08/2023.

The study period was chosen due to the availability of data on FDI inflows (Asset Direct Investment).

Methodology

We employ the static panel regression model to estimate the effect of the COVID-19 pandemic and the Russia-Ukraine war on FDI inflows into EECs and ECs.

The model to be estimated is specified, thus:

$$FDI_{it} = \beta_0 + \beta_1 COVID-19_{it} + \beta_2 D2_{it} + \vartheta_{it} + \varphi_{it} \quad (1)$$

Where:

FDI_{it} represents foreign direct inflows into Europe for country i at time t .

$COVID-19_{it}$ represents the various COVID-19 measures employed for this study: total COVID-19 cases (TOT_CASES), total COVID-19 deaths (TOT_DEATH), total COVID-19 tests (TOT_TESTS), total COVID-19 vaccinations (TOT_VACC), COVID-19 stringency index (STR_IN), and hospital beds per thousand (HOSPITAL_BEDS/Th)

$D2_{it}$ represents the dummy variable for the Russia-Ukraine war, where it is 0 before the crisis and 1 thereafter.

ϑ_{it} represents the country-fixed effects, while φ_{it} represents the random effects. The Hausman test is used to choose between the fixed effects and the random effects model. The hypothesis to be tested in the Hausman test is:

H_0 : Random effects model is preferred

H_1 : Fixed effects model is preferred

Results

Statistical Properties of Variables

The estimated result for this study is divided into two categories: (1) the full sample, which includes all the European countries sampled for the study, and (2) a sub-sample of Eastern European countries (EECs) drawn from the larger sample of all the countries.

First, the statistical features of the full sample are described in Table 1.

Table 1: Statistical Features of Variables (Full Sample)

	FDI	TOT_C ASES	TOT_ DEATH	TOT_ TESTS	TOT_ VACC	STR_IN	HOSPITAL _BEDS/
Mean	731668.7	170095.5	1395.175	1306646.	860841.4	38.19109	4.927487
Median	52751.00	23022.00	225.3333	75749.83	0.166667	39.89167	4.500000
Maximum	6836957.	5071464.	33868.33	33844172	20844921	88.73333	11.00000
Minimum	64.82000	0.000000	0.000000	0.000000	0.000000	0.000000	1.400000
Std. Dev.	1456362.	471629.9	3282.373	3930434.	2742746.	24.44535	2.091981
Skewness	2.646964	6.089027	4.809322	5.208273	4.481865	0.067450	0.667017
Kurtosis	9.665604	51.20573	34.09642	34.34570	24.36566	1.833101	3.074931
Jarque-Bera	1400.815	48205.91	20660.36	21275.62	10468.38	26.90708	34.81256
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	0.000000
Observations	464	468	468	468	468	468	468

Source: Authors' Compilation (2023)

The table provides a comprehensive overview of various variables, shedding light on their statistical characteristics and implications. One notable finding is the wide range of values for Foreign Direct Investment (FDI), indicating substantial variation in investment levels across the observed countries. The positive skewness and higher kurtosis of the FDI distribution suggest that while the average FDI is around 731,668.7, there are instances of extremely high investment values. This implies that certain countries may attract significantly more FDI than others, potentially reflecting differing levels of economic development, investment attractiveness, or specific policies that incentivize foreign investment. In the context of the COVID-19 pandemic, the positively skewed distributions, higher kurtosis, and departures from normality observed in total cases, deaths, tests, and vaccinations imply significant heterogeneity across European countries. This suggests varying levels of COVID-19 impact, testing capacity, and vaccination efforts. Additionally, the data highlights the distribution of the stringency index and hospital beds per capita. The

moderate level of stringency, as indicated by a mean of approximately 38.19109 and a median of 39.89167, suggests that countries in Europe have implemented measures to restrict social and economic activities in response to the pandemic. However, the positive skewness of the stringency index distribution indicates that some countries have implemented more stringent measures compared to others. The distribution of hospital beds per capita, with a mean of approximately 4.927487, shows variation in healthcare infrastructure across countries.

Next, the study considers the statistical features of the variables selected for the Eastern European Countries (EECs) sub-sample. The statistical properties of the variables are presented in Table 2.

Table 2: Statistical Features of Variables (Sub-Sample, EECs)

	FDI	TOT_CASES	TOT_DEATH	TOT_TESTS	TOT_VACC	STR_IN	HOSPITAL_BED/th
Mean	58807.71	80117.84	1325.817	479853.7	454706.9	35.32495	6.029350
Median	8216.560	18655.50	216.0000	19675.17	0.000000	38.88833	6.190000
Maximum	487004.0	2447648.	33868.33	14016588	16447007	88.73333	11.00000
Minimum	133.2100	0.000000	0.000000	0.000000	0.000000	0.000000	2.600000
Std. Dev.	132279.3	206503.8	3574.956	1546322.	1765744.	24.99506	1.979541
Skewness	2.571608	7.331004	5.540666	5.418617	7.109038	0.125854	0.380886
Kurtosis	7.919776	76.07963	40.91123	36.86626	60.20972	1.837985	3.223331
Jarque-Bera	504.4579	55556.07	15600.58	12643.69	34751.06	14.13636	6.301733
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000852	0.042815
Observations	239	240	240	240	240	240	240

Source: Authors' Compilation (2023)

The Table shows that the wide range of FDI values, from a minimum of 133.21 to a maximum of 487,004, suggests significant variation in foreign direct investment across the EECs. This indicates that different countries or regions have varying levels of attractiveness for foreign investors. On

COVID-19-related measures, the positive skewness and kurtosis values for variables such as total COVID-19 cases, total COVID-19 deaths, total COVID-19 tests, and total COVID-19 vaccinations suggest that these variables have distributions skewed towards higher values and have heavier tails. This implies that certain countries might have experienced more extreme values in terms of COVID-19 cases, deaths, testing, and vaccination rates. Furthermore, the relatively symmetrical distribution of the stringency index suggests that countries or regions have implemented a range of measures to respond to the COVID-19 pandemic. However, the positive skew indicates that some countries might have the higher stringency measures compared to the majority. Finally, the relatively symmetrical distribution of hospital beds per thousand suggests that there is a more balanced distribution of hospital beds across the countries. This implies that countries or regions have relatively consistent levels of hospital beds. The Jarque-Bera test results indicate departures from normality for several variables.

Correlation Analysis

Tables 3a and 3b contain the correlation analysis to measure the strength of association among the variables with a view to recognising and guarding against potential multicollinearity.

Table 3a: Result of Correlation Analysis (Full Sample [ECs])

Correlation	FDI	TOT_CASE	TOT_DEATH	TOT_TEST	TOT_VAC	STR_IN	HOSPIT_BED
FDI	1.000000						
TOT_CASES	0.194819	1.000000					
TOT_DEATH	0.085890	0.417956	1.000000				
TOT_TESTS	0.157835	0.508157	0.344392	1.000000			
TOT_VACC	0.130908	0.395740	0.516472	0.537849	1.000000		
STR_IN	0.070138	0.007962	0.278740	0.172405	0.167448	1.000000	
HOSPITAL_BEDS/	-0.121254	0.071091	0.182828	-0.119101	0.069663	-0.018899	1.000000

Table 3b: Result of Correlation Analysis (Sub-Sample [EECs])

Correlation	FDI	TOT_ CASE	TOT_ DEATH	TOT_ TEST	TOT_ VAC	STR_ IN	HOSPIT_ BED
FDI	1.000000						
TOT_ CASES	0.423162	1.000000					
TOT_ DEATH	0.483056	0.756198	1.000000				
TOT_ TESTS	0.432617	0.340049	0.414169	1.000000			
TOT_ VACC	0.371833	0.525217	0.838377	0.237011	1.000000		
STR_IN	0.088573	0.155711	0.238598	0.209763	0.162240	1.000000	
HOSPIT_ BED/1000	0.280803	0.225062	0.251954	0.155091	0.168520	0.059133	1.000000

Source: Authors' Compilation (2023)

The results of the correlation analysis suggest that multicollinearity, which is the presence of strong correlations among predictor variables, may not be a significant concern. The weak to moderate correlations observed among the variables indicate that they are not strongly interrelated. This implies that the variables included in the analysis provide unique and independent information, and there is no strong linear relationship or redundancy among them.

Having examined the correlation of the variables in the full sample, the result of the correlation analysis for the sub-sample (EECs) is presented in Table 4. Like the full sample, there is no sufficient evidence to suggest that the correlation among the variables in the sub-sample is strong enough to cause problems of multicollinearity, given their small and moderate correlation coefficient.

Main Results

In this sub-section, Tables 4 and 5 present the results of the analysis of the effects of the COVID-19 pandemic and the Russian-Ukraine crisis on FDI inflows in Europe. The study starts by discussing the results of the estimation

for the full sample; thereafter, discussion is made of the sub-sample. The fixed effects estimator is chosen for all the empirical analyses in this study based on the statistically significant chi-square of the Hausman test presented in the various Hausman test result tables.

The Result for the Full Sample

In Table 5, the results of the effect of COVID-19 total cases and stringent measures on FDI inflows in Europe are presented.

In this model, the result for total cases suggests a very small increase in FDI as a result, and this relationship is not statistically significant (p-value > 0.05). Therefore, as the number of COVID-19 cases increases, there is a positive but insignificant impact on FDI inflows. Similarly, the coefficient for stringent COVID-19 measures indicates that a one-unit increase in the stringency index is associated with a very small percentage increase in FDI, and this relationship is also not statistically significant (p-value > 0.05). Hence, higher levels of stringency in implementing COVID-19 measures are statistically significantly associated with increased FDI inflows.

The estimated coefficients for FDI indicate that the number of COVID-19 cases and the stringency of containment measures have a limited impact on FDI inflows. While higher COVID-19 case numbers and stricter containment measures may have some influence on FDI, the coefficients are statistically insignificant.

For the analysis on ECs with dummy variables, the study controls for the effect of the Russia-Ukraine war (used as dummy variables) on the FDI inflows effects of COVID-19 in Europe. In Table 4, the estimated coefficients for total cases for the full sample are statistically insignificant (p-value = 0.9386), indicating that the number of COVID-19 cases does not have a significant impact on FDI inflows. On the other hand, the coefficient for stringent measures is statistically significant (p-value = 0.0001), suggesting that a one-unit increase in the stringency index is associated with an increase in FDI. Additionally, the coefficient for the dummy variable indicating the time of Russia's invasion of Ukraine is also statistically significant (p-value = 0.0000), indicating that there is a significant difference in FDI patterns between the two periods represented by the dummy variable. Overall, these findings imply that factors other than COVID-19 cases, such as the stringency of containment measures and temporal differences, may have a more pronounced influence on FDI inflows.

Table 4: Fixed Effects and Hausman Test result of COVID-19 measures- total cases & stringent measures- and Ukraine-Russia war on FDI inflows in ECs and EECs

Dep. Variable: LOG(FDI)	FIXED EFFECTS			
Variable	Coefficient (Std err)	Coefficient (Std err)	Coefficient (Std err)	Coefficient (Std err)
	Full Sample (EC)	Full Sample (EC)	Sub-Sample (EEC)	Sub-Sample (EEC)
C	10.81278*** (0.0092)	10.77422*** (0.012891)	8.990540*** (0.015402)	8.918299*** (0.021260)
TOT_CASES	1.44E-08 (1.12E-08)	8.80E-10 (1.14E-08)	8.14E-09 (3.90E-08)	-4.21E-08 (3.86E-08)
STRINGENT_ INDEX	0.000348* (0.000200)	0.000985*** (0.000248)	5.16E-05 (0.000367)	0.001358*** (0.000447)
D2		0.050406*** (0.012024)		0.095654*** (0.020374)
F-statistic	12449.28	12626.79	3719.588	3905.382
Prob(F-statistic)	0.000000	0.000000	0.000000	0.000000
HAUSMAN TEST				
Test Summary	Chi-Sq. Stat [Prob]	Chi-Sq. Stat [Prob]	Chi-Sq. Stat [Prob]	Chi-Sq. Stat [Prob]
Cross-section random	16.927698 [0.0002]	16.597322 [0.0009]	14.251163 [0.0008]	14.267513[0.002 6]

Robustness Checks

Table 5: Fixed Effects and Hausman Test result of COVID-19 measures- total cases, tests, deaths, vaccinations & stringent measures- and Ukraine-Russia war on FDI inflows

Dep. Variable: LOG(FDI)		FIXED EFFECTS				
Variable	Coefficient (Std err)	Coefficient (Std err)	Coefficient (Std err)	Coefficient (Std err)	Coefficient (Std err)	Coefficient (Std err)
	Full Sample (EC)	Full Sample (EC)	Full Sample (EC)	Sub- Sample (EEC)	Sub- Sample (EEC)	Sub- Sample (EEC)
C	10.77189*** (0.012792)	10.77464*** (0.012846)	10.76921*** (0.012749)	8.917826*** (0.021270)	8.918265*** (0.021150)	8.916074*** (0.021304)
TOT_ CASES			-1.98E-08* (1.29E-08)			
TOT_ TESTS	4.18E-09*** (1.47E-09)		3.66E-09** (1.81E-09)	5.74E-09 (4.88E-09)		4.37E-09 (4.96E-09)
TOT_ DEATHS		3.15E-06* (1.80E-06)	2.32E-06 (1.94E-06)		4.72E-06* (2.76E-06)	3.15E-06 (3.74E-06)
TOT_ VACC			4.47E-09** (2.17E-09)			2.45E-09 (5.01E-09)
STRINGENT _INDEX	0.000901*** (0.000246)	0.000866*** (0.000256)	0.000829*** (0.000254)	0.001173*** (0.000439)	0.001086*** (0.000443)	0.001065*** (0.000451)
D2	0.050599*** (0.011420)	0.049668*** (0.011503)	0.057676*** (0.011945)	0.090498*** (0.019585)	0.089466*** (0.019495)	0.091128*** (0.019630)
F-statistic	12875.15	12720.19	12180.06	3909.101	3938.080	3580.909
Prob (F-stat)	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
HAUSMAN TEST						
Test Summary	Chi-Sq. Stat [Prob]	Chi-Sq. Stat [Prob]	Chi-Sq. Stat [Prob]	Chi-Sq. Stat [Prob]		Chi-Sq. Stat [Prob]
Cross-section random	12.801550 [0.0051]	11.111411 [0.0111]	16.918111 [0.0096]	11.063875 [0.0114]	14.285093	
[0.0025]	13.015416 [0.0232]					

Note: Standard errors in bracket and probability values in parenthesis. ***, **, and * indicate significance at 1%, 5% and 10%. EC implies European countries; EEC implies Eastern European countries.

For ECs, the estimated coefficient for total COVID-19 cases is statistically insignificant without controlling for the Russia-Ukraine war. This implies that the number of COVID-19 cases alone may not have a significant impact on FDI inflows in Europe during the studied period unless the war is controlled for. On the other hand, the coefficient, which captures the stringency of containment measures, is statistically significant. This suggests that stricter containment measures may have a positive effect on FDI inflows in Europe. Additionally, the coefficient for the dummy variable indicates that FDI inflows increased during or after the crisis compared to the period before the crisis. This could imply that the crisis created new opportunities or incentives for foreign investors in Europe, such as favourable investment conditions, market realignments, or increased demand for certain goods or services.

Robustness Checks for the Full Sample

For robustness, different COVID-19 measures are adopted in the analysis, apart from total cases (TOT_CASES) and stringent measures (STRINGENT_INDEX). They include total COVID-19 tests (TOT_TESTS), total COVID-19 deaths (TOT_DEATHS), and total COVID-19 vaccination (TOT_VACC).

In Table 5, the results of the effect of total COVID-19 tests, stringent measures, and the Russian-Ukraine war are presented. The estimated model shows that the coefficient for COVID tests is $4.18E-09$. This suggests that there is a positive but very small relationship between the number of COVID-19 tests conducted and FDI. However, the coefficient is also significant (t-Statistic = 2.843185, Prob. = 0.0047), indicating that the relationship is unlikely to be due to chance alone.

The coefficient for stringent COVID-19 measures is 0.000901. This implies that an increase in the stringency index is associated with a positive change in FDI. The coefficient is statistically significant (t-Statistic = 3.656505, Prob. = 0.0003), indicating a meaningful relationship between stringency measures and FDI.

The coefficient for the dummy variable suggests that this condition or event has a positive effect on FDI. The coefficient is statistically significant (t-Statistic = 4.430906, Prob. = 0.0000), indicating that the dummy variable is an important factor in explaining the variation in FDI.

There are implications for these findings. First, the positive and significant coefficient for the stringency index implies that higher levels of stringency measures, possibly related to COVID-19 restrictions, are associated with increased FDI inflows. This suggests that investors may perceive countries with stricter measures as more stable and better equipped to handle crises, making them attractive destinations for foreign investment.

Second, the positive and significant coefficient for the dummy variable indicates (as before) that the FDI into Europe may have arisen during or after the Russia-Ukraine war.

Lastly, the small and positive coefficient for the number of COVID-19 tests conducted suggests a weak association between testing efforts and FDI inflows. While the relationship is statistically significant, the magnitude of the coefficient indicates that the impact of testing on FDI is relatively small in comparison to other factors.

In Table 5, the results of the effect of total COVID-19 deaths, stringent measures, and the Russian-Ukraine war for the full sample are presented. From the result displayed in Table 5, it is observed that the coefficient for total COVID-19 deaths is 3.15E-06 with a standard error of 1.80E-06. The t-statistic of 1.744643 suggests that the coefficient is not statistically significant at conventional levels ($p\text{-value} = 0.0818$). This implies that the number of deaths due to COVID-19 does not have a significant impact on FDI. Additionally, the coefficient for stringent COVID-19 measures is 0.000866, with a standard error of 0.000256. The t-statistic of 3.388413 indicates that the coefficient is statistically significant. This suggests that higher levels of the stringency index, which may reflect stricter regulations or policies, have a positive and significant impact on FDI. This implies that countries with more stringent measures attract higher levels of foreign investment.

Finally, the coefficient for the dummy variable, which measures the effects of the Russian-Ukraine war on FDI flows into Europe, is 0.049668, with a standard error of 0.011503. The t-statistic of 4.317752 indicates that the coefficient is statistically significant. Like previous findings, the war may have affected FDI flows.

This result implies that the coefficient for total deaths, although not statistically significant at conventional levels, suggests a positive relationship between the number of deaths and FDI inflows. One possible explanation behind this finding could be that higher mortality rates, possibly associated with adverse health conditions or crises, may lead to changes in investment patterns. For example, it could be that certain industries or sectors, such as healthcare or pharmaceuticals, experience increased investment due to the demand for medical services or products during periods of high mortality rates occasioned by COVID-19 deaths. Additionally, the significant coefficient for the stringency index suggests that stricter regulations or policies implemented by countries to prevent the spread of the pandemic positively attracted foreign direct investment (FDI) into Europe. Stringency in regulations may signal a stable and conducive business environment, providing confidence to foreign investors. Finally, the significant coefficient for the dummy variable further suggests that the occurrence of the Russian-Ukraine war has attracted increased FDI inflows.

In Table 5, the results of the effect of all the COVID-19-related measures – total cases, total deaths, total tests, total vaccination, stringent measures, and the Russian-Ukraine war – on FDI inflows into Europe (the full sample) are presented. The estimated model in Table 5 shows that the coefficient for total COVID-19 cases exerts a negative but statistically insignificant effect on FDI inflows. This means that an increase in COVID-19 cases is not significantly associated with a decrease in FDI inflows. On the other hand, the coefficient for total COVID-19 deaths indicates a positive but statistically insignificant relationship with FDI inflows, suggesting that the impact of COVID-19 deaths on FDI inflows may be positive but not statistically significant.

Meanwhile, the coefficients for total tests and total vaccinated indicate a positive and statistically significant relationship with FDI inflows. This suggests that higher levels of COVID-19 testing and vaccination efforts are associated with increased FDI inflows into Europe. The coefficient for stringent COVID-19 measures is also positive and statistically significant, indicating that stricter containment measures and restrictions implemented during the COVID-19 pandemic are associated with higher FDI inflows. Finally, the coefficient for the dummy variable representing Russia's invasion of Ukraine is positive and statistically significant, indicating that there is a significant difference in FDI inflows during and after Russia's invasion of Ukraine.

The findings suggest that the number of COVID-19 cases and deaths may not have a significant impact on FDI inflows. This implies that investors may not be significantly deterred by the overall level of COVID-19 cases or deaths when making investment decisions in Europe. On the other hand, the positive and significant relationship between FDI inflows and the number of COVID-19 tests and vaccinations indicates that investors may be more inclined to invest in an environment that has robust testing and vaccination efforts. This suggests that countries with effective public health measures and control of the pandemic may attract higher levels of FDI. Furthermore, the positive and significant coefficient for the stringency index implies that stricter containment measures implemented during the COVID-19 pandemic are associated with higher FDI inflows in Europe. This suggests that countries that effectively manage the spread of the virus and ensure business continuity through well-implemented containment measures may be more attractive to foreign investors. Finally, the invasion of Ukraine by Russia seems not to deter potential investors in Europe.

Results for the Sub-sample

After examining the effect of COVID-19 measures and the Russian-Ukraine crisis on FDI inflows in Europe, the study turns to examine the aforementioned in 19 selected EECs as well. The results of the analysis are presented as follows:

The fixed effects estimator is chosen for all the empirical analyses of the sub-sample based on the statistically significant chi-square of the Hausman tests presented in Tables 4 and 5.

In Table 4, the results of the effect of COVID-19 total cases and stringent measures on FDI inflows in EECs are presented. In this regression analysis, the coefficient for total COVID-19 cases is 8.14E-09. This value is very close to zero, and the coefficient is not statistically significant (t-Statistic = 0.208986, Prob. = 0.8347). This suggests that the total number of COVID-19 cases does not have a significant impact on FDI inflows in this regression model. This is similar to the result found in the full sample. Furthermore, the coefficient for the stringency index is 5.16E-05. Similar to the total COVID-19 cases, this coefficient is very close to zero, and it is not statistically significant (t-Statistic = 0.140538, Prob. = 0.8884). Therefore, the stringency index also does not have a significant impact on FDI inflows in this model.

This result is generally similar to what was obtained in the full sample, although the coefficient for the stringency index is larger in the full sample than in the sub-sample.

The result of the analysis suggests that, in the context of the specified time period and sample, the level of COVID-19 cases does not strongly influence foreign investors' decisions to invest in the EECs. Other factors may play a more significant role in attracting FDI inflows. Similarly, the coefficient for the stringency index is not statistically significant, indicating that the level of stringency in response to the COVID-19 pandemic does not have a significant impact on FDI inflows. This implies that the strictness of COVID-19 containment measures, such as lockdowns or travel restrictions, may not be the primary determinant of foreign investors' decisions to invest in EECs.

For the analysis of EECs with dummy variables, the study controls for the effect of the Russia-Ukraine war on the FDI inflow effects of COVID-19 in EECs. In the estimated model (which controls for the Russia-Ukraine crisis) presented in Table 4, the coefficient for total COVID-19 cases is -4.21E-08. This negative coefficient suggests that an increase in the number of COVID-19 cases is associated with a decrease in FDI inflows, although the coefficient is not statistically significant (t-Statistic = -1.089792, Prob. = 0.2771). This indicates that the number of COVID-19 cases may not have a significant impact on FDI inflows in the specified time period in EECs, despite the negative effect. On the other hand, the coefficient for the stringency index is 0.001358. This positive coefficient suggests that a higher stringency index, representing more stringent COVID-19 containment measures, is associated with increased FDI inflows. The coefficient is statistically significant (t-Statistic = 3.040068, Prob. = 0.0027), indicating that the stringency index has a significant impact on FDI inflows. The value of the coefficient for the stringent index for the EECs is higher than that for all of Europe. Finally, the coefficient for the dummy for the Russia-Ukraine war is 0.095654, and it is statistically

significant (t-Statistic = 4.695021, Prob. = 0.0000). This positive coefficient suggests that the period during the Russian invasion of Ukraine is associated with increased FDI inflows compared to the period before the invasion. It indicates that there is a significant and positive impact of the Russia-Ukraine conflict on FDI inflows during the specified time period and sample.

These findings have several implications. The positive and statistically significant coefficient for the Stringency Index suggests that more stringent COVID-19 containment measures are associated with increased FDI inflows. This implies that investors may perceive EECs with stricter measures as having better control over the pandemic, leading to a more favourable investment environment. Furthermore, the positive and statistically significant coefficient for the dummy variable, which represents the period during the Russian invasion of Ukraine, suggests that this geopolitical event has had a positive impact on FDI inflows. The conflict (the Russia-Ukraine war) may have created new investment opportunities, such as infrastructure rebuilding or market shifts that attract foreign investors. Finally, the coefficient for total COVID-19 cases is not statistically significant, implying that the number of COVID-19 cases does not have a significant impact on FDI inflows in EECs during the specified time period. This suggests that foreign investors may be considering factors other than the number of COVID-19 cases when making investment decisions.

Robustness Checks for the Sub-Sample

For robustness, other COVID-19 measures are adopted in the analysis apart from total cases and stringent measures. They include total COVID-19 tests and total COVID-19 deaths.

In Table 5, the results of the effect of total COVID-19 tests, stringent measures, and the Russian-Ukraine war are presented. From the estimated result, the positive coefficient suggests a positive relationship between the number of COVID-19 tests conducted and FDI inflows, although it is not statistically significant at the conventional significance level ($p > 0.05$). This means that the number of tests conducted does not have a significant impact on FDI inflows in the given sample. This is unlike the full sample, where COVID-19 testing exerted a significant positive effect on FDI inflows. Thus, it suggests that the ability of Europe to attract FDI due to COVID-19 testing is enhanced more by the efforts of countries in Western Europe. Furthermore, the coefficient for the stringency index is 0.001173. This positive and statistically significant coefficient implies that a one-unit increase in the stringency index, which measures the strictness of COVID-19 containment measures, is associated with a 0.001173 unit increase in FDI inflows into EECs. This suggests that stricter containment measures may have a positive impact on attracting foreign investment. Finally, the coefficient for the Russia-Ukraine conflict further suggests that the conflict may have created

new investment opportunities or changed market dynamics, leading to increased FDI inflows.

The coefficient for total COVID-19 tests, although not statistically significant, suggests a positive relationship between the number of COVID-19 tests conducted and FDI inflows into EECs. This implies increased investor confidence and a more stable business environment during the pandemic. The coefficient for stringency indicates that stricter COVID-19 containment measures are associated with higher FDI inflows. This suggests that countries or regions that implemented stricter measures to control the spread of the virus may have been perceived as more attractive investment destinations due to their perceived stability and lower health risks.

Table 5 presents the results of the effect of total COVID-19 deaths, stringent measures, and the Russian-Ukraine war on the sub-sample. The estimated result shows that the coefficient of 4.72E-06 suggests that a one-unit increase in the total number of deaths due to COVID-19 is associated with a 4.72E-06% increase in FDI inflows. However, this coefficient is not statistically significant (p-value of 0.0896), indicating that the relationship between COVID-19 deaths and FDI inflows may not be robust in this model. At the same time, the coefficient of 0.001086 indicates that a one-unit increase in the stringency index is associated with a 0.001086% increase in FDI inflows. This coefficient is statistically significant (p-value of 0.0152), suggesting that ECS with stricter containment measures may attract higher FDI inflows. A positive coefficient for the Russia-Ukraine war dummy suggests that the post-conflict period is associated with higher FDI inflows compared to the pre-conflict period. This coefficient is statistically significant (p-value of 0.0000), indicating that the post-conflict period has a significant impact on FDI inflows.

The coefficient for the total COVID-19 deaths, although not statistically significant, suggests a positive relationship between the number of total deaths due to COVID-19 and FDI inflows. However, since the p-value is relatively high (0.0896), the significance of this relationship is uncertain. It is possible that higher COVID-19 mortality rates may negatively affect investor confidence and create economic uncertainty, leading to lower FDI inflows.

Still in Table 5, the results of the effect of all the COVID-19-related measures—total cases, total deaths, total tests, total vaccination, stringent measures, and the Russian-Ukraine war—on FDI inflows into EECs are presented. From the results, the coefficient of 3.15E-06 suggests that a one-unit increase in the total number of deaths due to COVID-19 is associated with a 3.15E-06% increase in FDI inflows into EECs. However, this coefficient is not statistically significant (p-value of 0.4008), indicating that the relationship between COVID-19 deaths and FDI inflows may not be robust in this model. This is similar to the findings for total deaths that were found earlier.

On the other hand, the coefficient of 4.37E-09 indicates that a one-unit increase in the total number of COVID-19 tests conducted is associated with

a 4.37E-09% increase in FDI inflows into EECS. However, this coefficient is not statistically significant (p-value of 0.3792), suggesting that the number of COVID-19 tests may not have a significant impact on FDI inflows, consistent with previous findings but not consistent with the full sample where a significant positive relationship is found.

Furthermore, the coefficient of 2.45E-09 suggests that a one-unit increase in the total number of COVID-19 vaccinations is associated with a 2.45E-09% increase in FDI inflows. This coefficient is also not statistically significant (p-value of 0.6259), indicating that the number of COVID-19 vaccinations may not significantly affect FDI inflows into EECs. Again, this result is not in line with that of the full sample, where vaccination efforts in Europe as a whole lead to a significant increase in FDI inflows.

The coefficient of 0.001065 indicates that a one-unit increase in the stringency index, which measures the strictness of COVID-19 containment measures, is associated with a 0.001065% increase in FDI inflows into EECs. This coefficient is statistically significant (p-value of 0.0191), suggesting that measures may attract higher FDI inflows.

Again, the coefficient of the Russia-Ukraine dummy further indicates that the post-conflict period has a significant impact on FDI inflows.

Conclusion

This study examined the effects of the COVID-19 pandemic and the Russia-Ukraine war on FDI inflows into ECs and EECs. The study was performed by analysing a full sample of the 39 countries in Europe considered and 19 sub-samples representing countries in Eastern Europe.

The findings from the study suggest, overall, that the COVID-19 pandemic may not have been a major hindrance to FDI inflows into Europe. Furthermore, findings from the study suggest that the Russia-Ukraine war has not stopped FDI inflows into ECs and EECs. This claim was confirmed by FDI Intelligence (2022).

However, it is observed that the EECs did not perform as well as the whole of Europe in some measures of the COVID-19 pandemic. For example, the effect of COVID-19 tests on FDI inflows is more significant in Europe as a whole than in the EECs. Furthermore, it is also observed that in the full sample representing all the ECs in the study, the positive effect on FDI inflows of total COVID-19 vaccinations is more significant than in the EECs sample.

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Appendix

Albania^{EE}, Belarus^{EE}, Belgium, Bulgaria^{EE}, Croatia^{EE}, Cyprus, Czech Republic^{EE}, Denmark, France, Georgia^{EE}, Germany, Greece, Hungary^{EE}, Iceland, Ireland, Italy, Latvia^{EE}, Lithuania^{EE}, Luxembourg, Malta, Moldova^{EE}, Montenegro^{EE}, Netherland, North-Macedonia^{EE}, Norway, Poland^{EE}, Portugal, Romania^{EE}, Russia^{EE}, Slovakia^{EE}, Slovenia^{EE}, Solomon-Island, Sweden, Switzerland, Kazakhstan^{EE}, Turkey, Ukraine^{EE}, UK, Uzbekistan^{EE}.

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Impact of COVID-19 and the Ukrainian War on FDI in a Panel of Eastern European Economies

SUMMARY

The COVID-19 pandemic, coupled with the Russia-Ukraine war, has had disastrous consequences for the global economy. As a result of the crisis, the normal way of conducting business has changed drastically, and, with the ongoing Russian invasion in Ukraine, many governments and companies have taken immediate investment-related measures. Undoubtedly, the majority of Eastern European countries have been severely hit. It is therefore crucial to find out what impact these challenges have on foreign direct investment in these countries. To do so, the paper employs the panel data technique to estimate the impact of COVID-19 and the Ukrainian war on FDI in Eastern European economies from 1995 to 2022. The regression results show that both the pandemic and the war have discouraged foreign investment in the panel of countries considered in the sample. The results further indicate that per capita growth and trade openness are important determinants of FDI.

Keywords: COVID-19, Ukrainian war, Eastern Europe, Fixed effect model.

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Утицај пандемије COVID-19 и украјинског рата на стране директне инвестиције у панелу источноевропских економија

САЖЕТАК

Пандемија COVID-19, заједно са ратом Русије и Украјине, имала је катастрофалне последице на глобалну економију. Као резултат кризе нормалан начин пословања драстично се променио, а с текућом руском инвазијом на Украјину многе владе и компаније предузеле су хитне мере везане за инвестиције. Без сумње, већина источноевропских земаља тешко су погођене. Стога је кључно открити какав утицај ови изазови имају на стране директне инвестиције (СДИ) у овим земљама. Да би се то учинило, рад користи технику панел података за процену утицаја COVID-19 и украјинског рата на СДИ у источноевропским економијама од 1995. до 2022. Резултати регресије показују да су и пандемија и рат обесхрабрили стране инвестиције у панелу разматраних земаља. Резултати даље указују да су раст по глави становника и отвореност трговине важне детерминанте СДИ.

Кључне речи: COVID-19, украјински рат, Источна Европа, модел фиксних ефеката

Introduction

The COVID-19 pandemic and the Ukrainian war are both human tragedies with serious global economic implications. The COVID-19 outbreak, which started in Wuhan in December 2019, has rapidly spread its tentacles across the world, resulting in rapid fatal contagion and a global economic recession. Indeed, by March 2020, most countries were facing an exponential increase in the number of COVID-19-positive cases and an alarming mortality rate. Countries were therefore forced to impose measures such as quarantine, lockdown, social distancing, and bans on foreigners. Such restrictions caused economies to be confronted with major disruptions and uncertainty in the business world, resulting in shocks in the demand and supply of goods and services, which eventually led to a global economic downturn. The negative demand shocks, fall in production, factory closures, and layoffs resulted in a delay in investment decisions and consumer spending. Additionally, the containment measures taken by the governments of several countries also had a direct and indirect impact on foreign direct investment decisions. According to the United Nations Conference on Trade and Development (2021), FDI flows actually fell by 35% to \$1 trillion in 2020 following the outbreak and spread of the

virus.⁴ The investment impact was generally more concentrated in countries that were more severely affected by the pandemic, and these countries were therefore forced to take more drastic measures. Evidently, countries that are closely integrated into the global value chains that revolve around China were not spared either. Interestingly, the global foreign direct investment flows have shot back up by 77% in 2021, with the recovery rates being much higher in developed countries as opposed to developing ones.⁵ However, the global FDI momentum weakened in 2022, and the UNCTAD (2023) predicts a decline for 2023 as well.⁶ This is a contraction that is largely driven by the ongoing war in Ukraine, inflationary energy and food prices, and debt pressures.

Indeed, while the world economy started to recover from the economic disruption due to the COVID-19 pandemic, the Russia-Ukraine war escalated in February 2022. The ongoing war further exacerbated the economic situation, and unfortunately, no solution has been reached. In response to the situation, the US and other Western countries have imposed numerous import and export sanctions on Russia. Additionally, the Russian Federation was banned from SWIFT transactions, and over 750 international businesses implanted in Russia ceased their operations. These measures resulted in an unprecedented trade contraction.⁷ The situation worsened further as the Russian factories also had to close down following the bans on imports and exports, the devaluation of their currency, and the shortage of raw materials. Consequently, foreign direct investment and other capital flows to and from both Ukraine and Russia have been crippled.⁸ Unfortunately, these international responses have had a double-edged effect as they have also disrupted bilateral and multilateral relationships with many countries, supply chains, and trade chains.⁹ Indeed, as many countries are dependent on Russia for oil, gas, and wheat, the trade, investment, and

⁴ "World Investment Report 2021: Investing in Sustainable Recovery Investing, United Nations Conference on Trade and Development", United Nations Publications, https://unctad.org/system/files/official-document/wir2021_en.pdf, 05/28/2023, 10.

⁵ Ibid.

⁶ "World Investment Report 2023", United Nations Publications, <https://unctad.org/publication/world-investment-report-2023>, 05/29/2023.

⁷ Mario Arturo Ruiz Estrada & Evangelos Koutronas, "The Impact of the Russian Aggression against Ukraine on the Russia-EU Trade", *Journal of Policy Modeling*, Vol. 44, No. 3, 2022, 603.

⁸ "OECD Policy Responses on the Impacts of the War in Ukraine", OECD iLibrary, https://www.oecd-ilibrary.org/finance-and-investment/international-investment-implications-of-russia-s-war-against-ukraine-abridged-version_6224dc77-en;jsessionid=2En1_1wx_oIns0dQF_TYXVXg44GbycW1naSu_fwX.ip-10-240-5-16#:~:text=According%20to%20recent%20World%20Bank,pre%20war%20economy%20in%202021,28/05/2023.

⁹ Ajeigbe Kola Benson, "Does the Russia-Ukraine War Affects Trade Relations and Foreign Direct Investment Flows from Europe into Asia and Africa?", *Research in Business & Social Science*, Vol. 12, No. 2, 2023, 288.

economic contraction experienced by Russia eventually cascaded down to several other countries, thereby impeding the post-pandemic economic recovery. The World Bank asserts that due to surging energy, a reduction in energy supply, and disruptions in trade and food, economic activity will remain “deeply depressed” throughout 2023. However, the OECD (2022) and Ruta (2022) believe that the impact on global foreign direct investment will be “limited” or “muted”.¹⁰ Indeed, Russia’s FDI inflows and outflows are believed to be marginal. Along the same vein, Ruta (2022) states that despite the large investments of European countries in the energy sector of Russia and their dependence on Russian oil and gas, the direct impact of Russia and Ukraine on global FDI is limited.¹¹ Nonetheless, the indirect impact could be “profound and far-reaching” due to the loss in investor confidence.¹² The author further maintains that the long-term impact on investment will depend largely on the level of government intervention. Furthermore, Eastern European countries rely heavily on bilateral investments with Russia, especially in the energy sector. Ruta (2022) points out that the FDI into and from Russia consists of only a small share of the total FDI from and in these countries.¹³

The ripple effects of the COVID-19 pandemic and the Ukrainian war cannot be ignored. While the global economic prospects appear bleak, the direct and indirect consequences on foreign direct investment remain uncertain. Notably, foreign direct investment is vulnerable to different shocks. In the past, shocks such as financial crises, natural calamities, and wars have been seen to affect foreign direct investment globally.¹⁴ However, the COVID-19 pandemic differs slightly from the previous shocks as it involved measures such as lockdowns, remote working, and social

¹⁰ Ibid.; Michele Ruta, (ed.), In: *The Impact of the War in Ukraine on Global Trade and Investment*, World Bank Group, Washington, 2022, 1–84.

¹¹ Ibid., 10.

¹² Ibid.,

¹³ Ibid., 62.

¹⁴ Meltem Ucal, et al., “Relationship between Financial Crisis and Foreign Direct Investment in Developing Countries Using Semiparametric Regression Approach”, *Journal of Business Economics and Management*, Vol. 11, No. 1, 2010, 20–33; Adina Dornea, et al., “The Impact of the Recent Global Crisis on Foreign Direct Investment. Evidence from Central and Eastern European Countries”, *Procedia Economics and Finance*, Vol. 12, 2012, 1012–17; Olga Stoddard & Ilan Noy, “Fire-Sale FDI? The Impact of Financial Crises on Foreign Direct Investment”, *Review of Development Economics*, Vol. 19, No. 2, 2015, 387–99; Lochan Kumar Batala, et al., “Natural Disasters’ Influence on Industrial Growth, Foreign Direct Investment, and Export Performance in the South Asian Region of Belt and Road Initiative”, *Natural Hazards*, Vol. 108, 2021, 1853–76; Thomas Neise, et al., “The Effect of Natural Disasters on FDI Attraction: A Sector-based Analysis over Time and Space”, *Natural Hazards*, Vol. 110, No. 2, 2022, 999–1023; Chengchun Li, et al., “The Impact of Civil War on Foreign Direct Investment Flows to Developing Countries”, *The Journal of International Trade & Economic Development*, Vol. 26, No. 4, 2021, 488–507.

distancing, which raised investment costs.¹⁵ Similarly, the Ukrainian war is different from the previous shocks as it began at a time when the economy had just been crippled by the COVID-19 pandemic. The already surging food and commodity prices were further fueled by the war. Additionally, the heavy reliance of many nations on Ukraine and Russia for wheat and energy products, coupled with the massive corporate exodus from Ukraine, further worsened the sustainedly higher prices and global economic impacts. As such, it is crucial to analyse the combined impact of the COVID-19 pandemic and the Russia-Ukraine war on foreign direct investment.

Indeed, a number of studies have mushroomed in the past few years, investigating the impact of the pandemic on foreign direct investment and the impact of the Russia-Ukraine war on foreign direct investment.¹⁶ However, to the best of our knowledge, only a few studies and research articles have delved into the combined impact of the pandemic and the war on foreign direct investment flows.¹⁷ Therefore, this paper attempts to add on to the literature by investigating the detrimental relationship among the COVID-19 pandemic, the Ukrainian war, and foreign direct investment. Additionally, this paper will depart from previous studies by focusing on a sample of Eastern European economies, as they are relatively more vulnerable to these two shocks given their relatively higher dependence on Russia. The study makes use of the panel data technique to investigate the impact of COVID-19 and the Ukrainian war on FDI in Eastern Europe from 1995 to 2022.

A Brief Literature Review

The COVID-19 pandemic and foreign direct investment

The economic impact of different uncertainties resulting from different pandemics has been explored in the past. Indeed, Garrett (2008) mentions the

¹⁵ Kazunobu Hayakawa, Hyun-Hoon Lee & Cyn-Young Park, "The effect of COVID-19 on foreign direct investment", *Asian Development Bank Economics Working Paper Series*, No. 653, 2022, 1.

¹⁶ Jing Fang, Alan Collins & Shujie Yao, "On the global COVID-19 pandemic and China's FDI", *Journal of Asian Economics*, Vol. 74, 2021; Kazunobu Hayakawa, Hyun-Hoon Lee & Cyn-Young Park, "The effect of COVID-19 on foreign direct investment"; Sinem Koçak & Özge Barış-Tüzemen, "Impact of the COVID-19 on foreign direct investment infows in emerging economies: evidence from panel quantile regression", *Future Business Journal*, Vol. 8, No. 1, 2022; Ajeigbe Kola Benson, "Does the Russia-Ukraine War Affects Trade Relations and Foreign Direct Investment Flows from Europe into Asia and Africa?"; Dilip Ratha & Eung Ju Kim, "Russia-Ukraine conflict: implications for remittance flows to Ukraine and Central Asia", *KNOMAD Policy Brief*, No. 17, 2022, 1-8.

¹⁷ Vakhtang Charaia & Mariam Lashkhi, "Foreign direct investments during the coronomic crisis and armed conflict in the neighbourhood, Case of Georgia", *Globalization and Business*, Vol. 7, No. 3, 2022, 51-56.

possibility that the 1918 influenza pandemic could have decreased investment and savings.¹⁸ Similarly, Lee and McKibbin (2004) argue that the Severe Acute Respiratory Syndrome (SARS) caused investment losses.¹⁹ The recent COVID-19 pandemic also entailed several uncertainties and, as such, had severe economic consequences, including drops in foreign direct investments.

As clearly explained by Hayakawa and Park (2022), there are three dimensions through which foreign direct investment flows are damaged by the COVID-19 pandemic.²⁰ The first dimension considers the impact of the pandemic on the host country and the home country. Given the numerous and heightened uncertainties that COVID-19 entails, FDI will be affected. Choi, Furceri, and Yoon (2021) argue that foreign direct investment is subject to higher fixed costs and is more sensitive to the political environment than domestic investment due to the limited information about the host country.²¹ This implies that the host country's attractiveness decreases due to the COVID-19 pandemic, with a much higher decrease in countries that are more severely affected. The decrease in FDI outflows will also move in tandem with the severity of the COVID-19 pandemic in the home country. Indeed, constraints faced by investors decrease their ability to invest abroad.²² Nevertheless, outward FDI can also be triggered by the pandemic, according to Hayakawa and Park (2022).²³ They believe that, depending on the severity of the pandemic, companies might decide to export abroad to sustain the business or even shift to producing and selling abroad due to the mobility restrictions imposed by the pandemic. The second dimension considered by Hayakawa and Park (2022) relates to the fact that, despite the fact that all businesses faced many restrictions during the pandemic, they were not all affected to the same extent.²⁴ For instance, remote working, a restriction for quite a while, was more infeasible for the manufacturing sector as opposed to the services sector. This implies that investments in certain sectors would be more impacted than others. Lastly, Hayakawa and Park (2022) argue that the pandemic will be more detrimental to greenfield FDI as opposed to cross-border mergers and

¹⁸ Garrett A. Thomas, "Pandemic economics: The 1918 influenza and its modern-day implications", *Federal Reserve Bank of St. Louis Review*, Vol. 90, No. 2, 89.

¹⁹ Jong-Wha Lee & Warwick J. McKibbin, "Estimating the global economic costs of SARS", In: Stacey Knobler, Adel Mahmoud & Stanley Lemon (eds), *Learning from SARS: preparing for the next disease outbreak: workshop summary*, National Academies Press, Washington, DC, 2004, 92-109.

²⁰ Kazunobu Hayakawa, Hyun-Hoon Lee & Cyn-Young Park, "The effect of COVID-19 on foreign direct investment", 2.

²¹ Sangyup Choi, Davide Furceri & Chansik Yoon, "Policy uncertainty and foreign direct investment", *Review of International Economics*, Vol. 29, No. 2021, 2.

²² Kazunobu Hayakawa, Hyun-Hoon Lee & Cyn-Young Park, "The effect of COVID-19 on foreign direct investment", 1.

²³ Ibid., 3.

²⁴ Ibid., 16.

acquisitions.²⁵ However, on the other side of the coin, a fall in the value of firms in countries severely affected by the pandemic might boost cross-border mergers and acquisitions as investors would be able to acquire them at a cheaper price.

Fu, Alleyne, and Mu (2021) resort to using panel data across 96 countries from 2019 to 2020 and employ the Heckman selection model to assess the impact of the COVID-19 pandemic on foreign direct investment margins.²⁶ They provide empirical evidence of a negative link between the two variables of interest. They also find that investors were unwilling to invest when the degree of the severity of the pandemic was higher in either the host country or the home country, or both. However, the situation in the host country affects the foreign direct investment flows more than that of the home country. Additionally, they also provide evidence that the service sector's FDI was more affected by the pandemic than other sectors. Hayakawa and Park (2022) conduct a similar study. However, they make use of the Poisson pseudo-maximum-likelihood method to analyse how the COVID-19 pandemic has affected the home and host countries in both the manufacturing and services sectors. We used quarterly data spanning over the period 2019-2021 for a sample of 173 home countries and 192 host countries. They find that for the host country and for the manufacturing sector, both greenfield foreign direct investment and cross-border M&A are negatively affected. On the other hand, for the services sector in the host country, the negative impact is only detected for greenfield foreign direct investment. As for the home country, both greenfield foreign direct investment and cross-border M&A are seen to be positively affected in the manufacturing sector.

Fang, Collins, and Yao (2021) use quarterly data from the OECD countries, the BRICS countries, and Singapore from 2009 to 2020 to verify the impact of COVID-19 on the foreign direct investment inflows of several countries. The empirical results confirm a significant negative impact on foreign direct investment inflows, with elasticities of -6.6%, -7.6%, and -8.9% when the proxy of the pandemic was the number of new cases, new deaths, and cumulative cases, respectively. Interestingly, when the countries are categorised into groups, they find that the impact is more severe in the North and South Americas, followed by Europe. However, the impact in Asia and Oceania is insignificant. A similar result is obtained by Nawo and Njangang (2022), who examine the link between the COVID-19 pandemic and FDI in a sample of 79 developed and developing countries.²⁷ By making use of a

²⁵ Ibid., 2.

²⁶ Yingjie Fu, Antonio Alleyne & Yifei Mu, "Does Lockdown Bring Shutdown? Impact of the COVID-19 Pandemic on Foreign Direct Investment", *Emerging Markets Finance and Trade*, Vol. 57, No. 10, 2021, 2972-2811.

²⁷ Larissa Nawo & Henri Njangang, "The effect of covid-19 outbreak on foreign direct investment: do sovereign wealth funds matter?", *Transnational Corporations Review*, Vol. 14, No. 1, 2022, 1-17.

cross-sectional ordinary least squares method, they confirm the negative correlation between two proxies of the COVID-19 pandemic (number of deaths and total number of cases) and foreign direct investment. Additionally, they find that the impact is significant in countries that have a sovereign welfare fund, as opposed to those without, where the impact is insignificant.

Unlike previous studies, Giofré (2021) investigates the impact of the adoption of government stringency measures to restrain the spread of COVID-19 on foreign investment.²⁸ Applying data from 53 countries to a Robust least squares regression, he finds that the average stringency index has no link with inward investments. However, the author finds that when the country fixed effect is removed and the severity of the pandemic is controlled, the within-country stringency index is positively and significantly correlated with inward portfolio investments at the end of the first quarter of 2020. The latter also argues that this implies investors find prompt interventions demonstrate a higher level of commitment than gradual ones. Along the same vein, Camino-Mogro and Armijos (2020) focus on the impact of one particular stringency measure, the lockdown, and the origin of direct investment inflows in Ecuador.²⁹ They use a regression in discontinuity in time design and real-time data for 2020 and find a decrease of 64% in foreign direct investment inflows, with a higher negative impact detected when the source of investment originates from North and South America.

Another proxy was adopted by Ho and Gan (2021), who focused on the impact of the World Pandemic Uncertainty Index (WPUI) as a measure of the COVID-19 outbreak on foreign direct investment in a sample of 142 economies for the period 1996-2019.³⁰ They resort to a two-step generalized method of moments to show that health pandemics have a negative impact on foreign direct investment inflows. Interestingly, they also find that foreign direct investment is more sensitive to pandemic shocks in emerging economies and the Asia-Pacific region than in other economies. Similarly, Koçak and Barış-Tüzemen (2022) make use of the WPUI to explore the effects of the COVID-19 outbreak on foreign direct investment in 12 emerging countries over the period of 2014Q1–2021Q3.³¹ They show that the impact of

²⁸ Maela Giofré, "COVID-19 stringency measures and foreign investment: an early assessment", *The North American Journal of Economics and Finance*, Vol. 58, 2021.

²⁹ Segundo Camino-Mogro & Mary Armijos, "The effects of COVID-19 lockdown on Foreign Direct Investment: evidence from Ecuadorian firms", *Munich Personal RePEc Archive*, University Library of Munich, Germany, 2022, 1–22.

³⁰ Linh Tu Ho & Christopher Gan, "Foreign Direct Investment and World Pandemic Uncertainty Index: Do Health Pandemics Matter?", *Journal of Risk and Financial Management*, Vol. 14, No. 3, 2021.

³¹ Sinem Koçak & Özge Barış-Tüzemen, "Impact of the COVID-19 on foreign direct investment infows in emerging economies: evidence from panel quantile regression".

the index depends on the levels of foreign direct investment and that the negative impact of the WPUI increases as the quantiles of FDI rise. Furthermore, they argue that the drop in foreign direct investment inflows in emerging economies is due to the fact that the primary and manufacturing sectors constitute a large part of foreign direct investment inflows.

On the other hand, while most studies focused principally on foreign direct investment flows, Ajide and Osinubi (2020) focused on the link between foreign direct investment outflows during the COVID-19 pandemic in 43 countries.³² They make use of ordinary least squares and quantile regression analyses to prove that there exists a positive relationship between the pandemic (as captured by the number of confirmed cases and deaths) and FDI outflows. Likewise, Hysa et al. (2022) also investigate the impact of the pandemic on foreign direct investment outflows in a sample of 22 European Union countries for the first three quarters of 2020.³³ The results show that the pandemic fueled the foreign direct investment outflows. They also detect a higher impact if the proxy for COVID-19 is taken to be the number of cases instead of the number of deaths.

The Ukrainian war and foreign direct investment

The war in Ukraine adds to the uncertainties with respect to foreign direct investment. As a matter of fact, the impact of war and conflict has also been analysed, and there is a general consensus that situations of conflict and war discourage foreign direct investments.³⁴ However, it is important to consider the unique characteristics of the Russia-Ukraine war when considering the potential impact on foreign direct investment. Indeed, the war started at an unfortunate time, when the world was still struggling to overcome the destructive impact of the COVID-19 pandemic, thereby dimming the possibility of a post-pandemic economic recovery. The sanctions and counter-sanctions that have mushroomed as a result of the Ukrainian war are only aggravating the potential impact on foreign direct investment. As pointed out by Kalotay (2022), these sanctions result in higher

³² Tolulope T. Osinubi & Folorunsho M. Ajide, "Covid-19 pandemic and outward foreign direct investment: a preliminary note", *Economics - Časopis za inovacijska i ekonomska istraživanja*, Vol. 8, No. 2, 2020, 79–88.

³³ Eglantina Hysa, et al., "COVID-19 – a black swan for foreign direct investment: Evidence from European countries", *Journal of Risk and Financial Management*, Vol. 15, No. 4, 1–21.

³⁴ Adil H. Suliman & André Varella Mollick, "Human Capital Development, War and Foreign Direct Investment in Sub-Saharan Africa Footnote", *Oxford Development Studies*, Vol. 37, 2009, 47–61; Chengchun Li, Syed Mansoor Murshed & Sailesh Tanna, "The impact of civil war on foreign direct investment flows to developing countries"; Gerald Yong Gao, Danny Tan Wang & Yi Che, "Impact of historical conflict on FDI location and performance: Japanese investment in China", *Journal of International Business Studies*, Vol. 49, 2018, 1060–1080.

costs and lower ease of doing business.³⁵ Nevertheless, competitors benefit from the discontinuation of businesses by Western countries. Kolotay (2022) further stresses that the resulting shock in production due to the war and the difficulty in accessing finance due to the imposed sanctions will be serious disincentives for investments. Indeed, the author identifies three sanctions that result in major blows to foreign direct investments: the freezing of Russian banking assets, their exclusion from SWIFT, and trade and investment bans.³⁶

However, Ruta (2022) stresses that Ukraine and Russia are not “major players in the global FDI network”.³⁷ The latter states that Russia’s inward and outward foreign direct investment stock accounts for only 1% of the global stock. As for Ukraine, it accounts for 0.1% of the global inward foreign direct investment, while the outward foreign direct investment is negligible. Nevertheless, Ruta (2022) does recognise the fact that Eastern European countries and Asian countries have a greater and more significant dependence on Russia for bilateral investments.³⁸ While the destination and source countries of foreign direct investment for Russia include many European countries, the foreign direct investment to and from Russia for these countries accounts for only a small proportion of their total foreign direct investment.³⁹

Charaia, Lashkhi, and Lashkhi (2022) try to analyse the challenges and impact of foreign direct investment on the service sector in Georgia while considering the COVID-19 pandemic.⁴⁰ They argue that there are more challenges than opportunities. Global investors are seen to be more careful with their investment decisions, and consequently, reforms are required to overcome the “coronomic and war challenges” simultaneously. On the other hand, Mbah & Wasum (2022) try to analyse the impact of the war on the economy in the US, the UK, Canada, and Europe.⁴¹ Their review of the literature suggests that the war will cause spikes in inflation, pull consumption down, disrupt supply chains, increase uncertainty, impede economic growth,

³⁵ Kálmán Kalotay, “The war in Ukraine deals a blow to Russia’s foreign direct investment links”, *Challenges*, No. 238, 2022, 6.

³⁶ *Ibid.*, 7.

³⁷ Michele Ruta, (ed.), In: *The Impact of the War in Ukraine on Global Trade and Investment*, 70.

³⁸ *Ibid.*

³⁹ *Ibid.*

⁴⁰ Vakhtang Charaia & Mariam Lashkhi, “Foreign direct investments during the coronomic crisis and armed conflict in the neighbourhood, Case of Georgia”.

⁴¹ Ruth Endam Mbah & Divine Forcha Wasum, “Russian-Ukraine 2022 War: A review of the economic impact of Russian-Ukraine crisis on the USA, UK, Canada, and Europe”, *Advances in Social Sciences Research Journal*, Vol. 9, No. 3, 2022, 144–153.

and reduce investments. They argue that Europe will be the most affected, as both Russia and Ukraine are significant exporters to Europe.

Empirically, several studies revolving around the Russia-Ukraine war have surfaced. These studies have focused on the impact of the Ukrainian war on several factors, including the economy, exchange rates, trade, and commodities.⁴² However, the number of studies investigating the impact of this war on foreign direct investment flows is relatively sparse. Nevertheless, they all detect a detrimental impact on foreign direct investment flows. For instance, Estrada and Koutronas (2022) make use of an Intraregional Trade Disruption from War Simulator (ITDW-Simulator) to estimate the macroeconomic impact of the military conflict between Russia and Ukraine.⁴³ They find that conflict has affected agricultural, industrial, and manufacturing services and foreign direct investment flows. Similarly, Benson (2023) analyses the impact of the Russia-Ukraine war on trade relations and foreign direct investment flows in a sample of 85 countries during the years 2012 and 2021 using the generalised method of moments technique.⁴⁴ Findings show that war has a significant setback to FDI and trade relations due to increased military expenditure.

While empirical studies investigating the impact of the recent pandemic on foreign investment have increased exponentially, studies analysing the impact of the Ukrainian war are relatively scant. In addition, based on the literature on the COVID-19 pandemic and the Ukrainian war, it is clear that there is not enough empirical evidence with regards to their combined

⁴² Iana Liadze, et al., "Economic costs of the Russia-Ukraine war", *The World Economy*, Vol. 46, No. 4, 2023, 874–886; Madina Khudaykulova, He Yuanqiog & Akmal Khudaykulov, "Economic consequences and implications of the Ukraine-Russia war", *International Journal of Management Science and Business Administration*, Vol. 8, No. 4, 44–52; Rajesh Tiwari, et al., "Impact of Russia Ukraine War on Exchange Rate in India", SSRN, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4281532, 30/05/2023; Florin Aliu, Simona Hašková & Ujkan Q. Bajra, "Consequences of Russian invasion on Ukraine: evidence from foreign exchange rates", *The Journal of Risk Finance*, Vol. 24, No. 1, 2023, 40–58; Ebru Orhan, "The effects of the Russia-Ukraine war on global trade", *Journal of International Trade, Logistics and Law*, Vol. 8, No. 1, 2022, 141–146; "Russia-Ukraine war will disrupt global wheat trade", Oxford Analytica, <https://www.emerald.com/insight/content/doi/10.1108/OXAN-DB268182/full/html>, 30/05/2023; Ben T. Hassen & El H. Bilali, "Impacts of the Russia-Ukraine war on global food security: towards more sustainable and resilient food systems?", *Foods*, Vol. 11, No. 15, 2023, 99–114; Channing Arndt, et al., "The Ukraine war and rising commodity prices: Implications for developing countries", *Global Food Security*, Vol. 36, 2023; Adam Rose, Zhenhua Chen & Dan Wei, "The economic impacts of Russia-Ukraine War export disruptions of grain commodities", *Applied Economic Perspectives and Policy*, Vol. 45, 2023, 645–665.

⁴³ Mario Arturo Ruiz Estrada & Evangelos Koutronas, "The Impact of the Russian Aggression against Ukraine on the Russia-EU Trade", 600.

⁴⁴ Ajeigbe Kola Benson, "Does the Russia-Ukraine War Affects Trade Relations and Foreign Direct Investment Flows from Europe into Asia and Africa?", 288.

impact on foreign direct investment. This is particularly important given that foreign direct investment flows have already been hit by a global slump after the COVID-19 pandemic. Moreover, as explained above, this analysis is even more important in the context of the Eastern European countries, which rely relatively more on Russia and Ukraine.

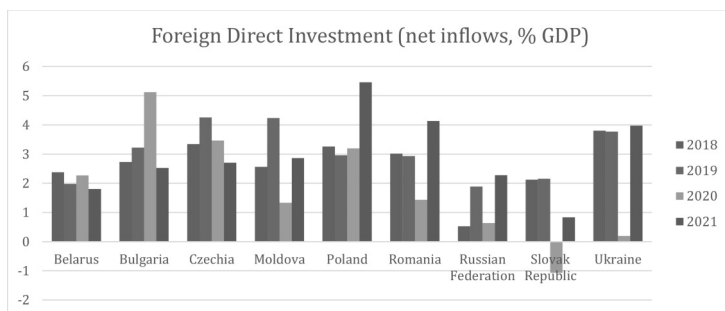
A Brief Overview

The COVID-19 outbreak, which started in December 2019, had an immediate detrimental impact on foreign direct investments in 2020 for Ukraine, the Slovak Republic, the Russian Federation, Romania, Moldova, and the Czech Republic. As reported in the figure below, the highest blow was felt by Ukraine, closely followed by the Slovak Republic and Moldova, which recorded decreases of 3.57%, 3.22%, and 2.91%, respectively, in the net inflows of FDI. Interestingly, the net inflows for Belarus, Bulgaria, and Poland went up post-pandemic. Indeed, inflows grew in Belarus (by 0.29%). The UNCTAD (2021) states that the country adopted anti-pandemic restrictions later than most of the world, and these measures were relatively less restrictive.⁴⁵ In fact, large inflows were registered in the first quarter of the year, after which the next three quarters had practically no net inward FDI. As for Bulgaria, the growth in net inflows for the year 2020 was probably due to the fact that investments in the country were relatively easier and more attractive than in other Eastern European countries. Generally, there are no limits on foreign ownership or firm control, and investments are not screened or restricted in Bulgaria. On the other hand, Poland witnessed prompt policy actions, including fiscal and monetary support, which cushioned the blow of the pandemic and maintained its attractiveness as a foreign investment destination. The Polish development had introduced a “financial Shield” that not only mitigated the impact of the pandemic but also stimulated investment. Additionally, the well-diversified nature of Poland helped to reduce its vulnerability to external shocks. Moreover, Hungary also recorded a massive spike, with its net inflow of 60% in 2019 rising to 106.6% in 2020⁴⁶. As a matter of fact, the Hungarian Investment Promotion Agency helped implement 907 projects in 2020 (97 of which were large FDI projects), thereby realising an investment worth EUR 4,078 million.

⁴⁵ “World Investment Report 2021: Investing in Sustainable Recovery Investing, United Nations Conference on Trade and Development”, 11.

⁴⁶ Note that the data for Hungary is not reported in the chart as the values are much higher relative to those of the other Eastern European Countries.

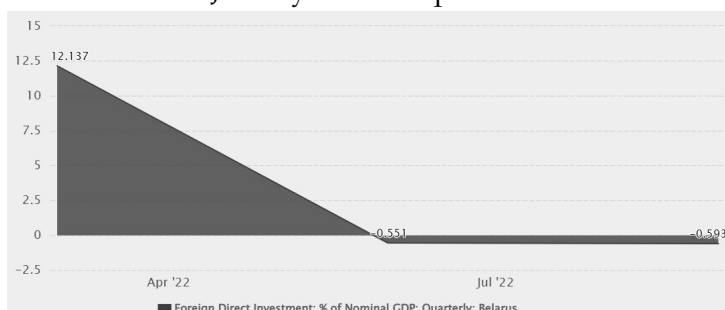
Figure 1: Foreign Direct Investment (Net Inflows, % GDP)



Source: World Development Indicators

As for the impact of the Ukrainian war, it is clear from the graphs below⁴⁷, which depict the quarterly foreign direct investment (% GDP) from January 2022, that the foreign direct investment has been knocked down for the Eastern European countries. However, there is a variation in the way the countries are responding to the war in terms of the foreign direct investment dynamics. In most countries (Bulgaria, Moldova, Poland, Romania, Slovakia, and Hungary), foreign direct investment levels have experienced steep downward trends before moving back up in June, only to fall back down in September. It appears that the war is having a fragmentary impact on foreign direct investment in these countries, mostly depending on the sanctions and counter-sanction measures imposed. However, Belarus has failed to show any signs of recovery after foreign direct investment (%GDP) fell to a low of -0.551 in June. As for the Czech Republic, the impact of the war was initially muted. In fact, the foreign direct investment (%GDP) rose to 3.489 in June 2022, after which it started to gradually fall to 2.384 in September.

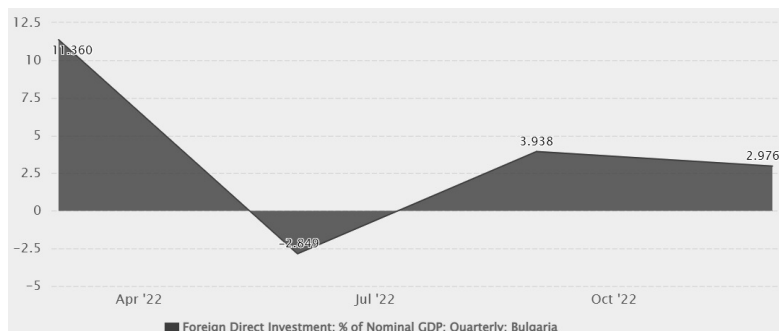
Figure 2: Foreign Direct Investment (%GDP) for Belarus from January 2022 to September 2022



Source: www.ceicdata.com

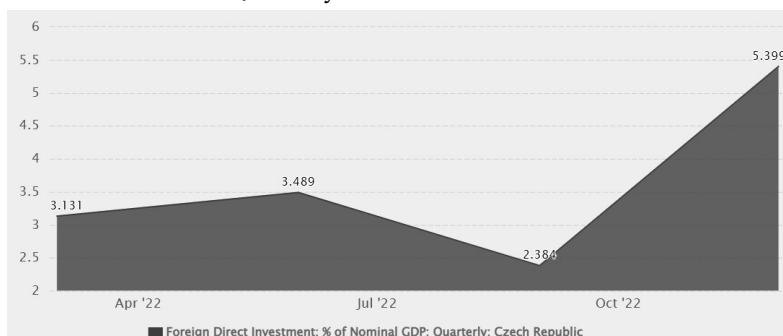
⁴⁷ Note that no data was available for Ukraine for the period under consideration.

Figure 3: Foreign Direct Investment (%GDP) for Bulgaria from January 2022 to December 2022



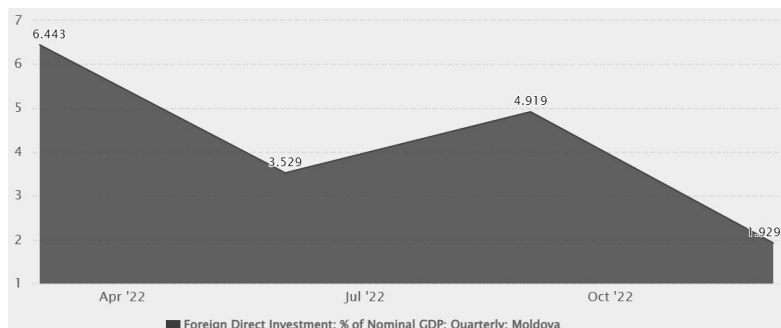
Source: www.ceicdata.com

Figure 4: Foreign Direct Investment (%GDP) for Czech Republic from January 2022 to December 2022



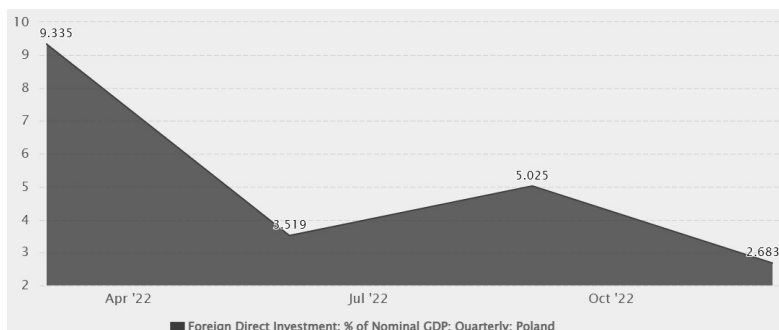
Source: www.ceicdata.com

Figure 5: Foreign Direct Investment (%GDP) for Moldova from January 2022 to December 2022



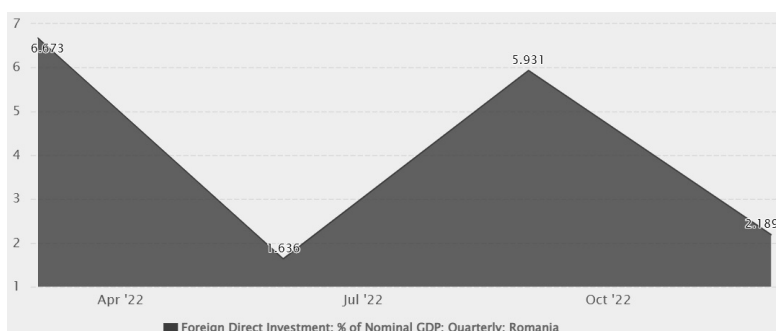
Source: www.ceicdata.com

Figure 6: Foreign Direct Investment (%GDP) for Poland from January 2022 to December 2022



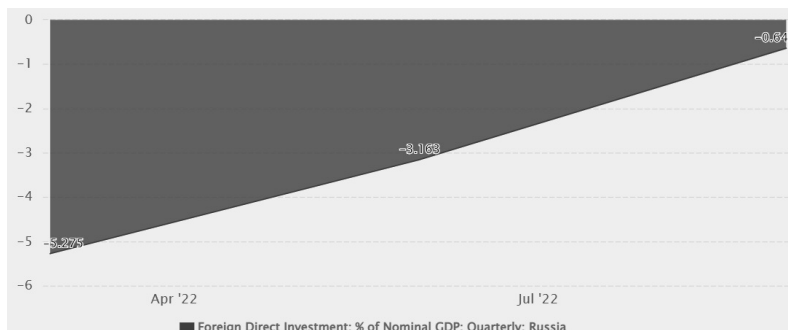
Source: www.ceicdata.com

Figure 7: Foreign Direct Investment (%GDP) for Romania from January 2022 to December 2022



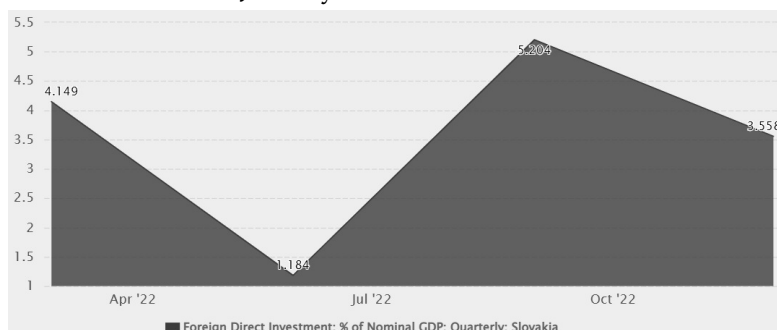
Source: www.ceicdata.com

Figure 8: Foreign Direct Investment (%GDP) for Russia from January 2022 to September 2022



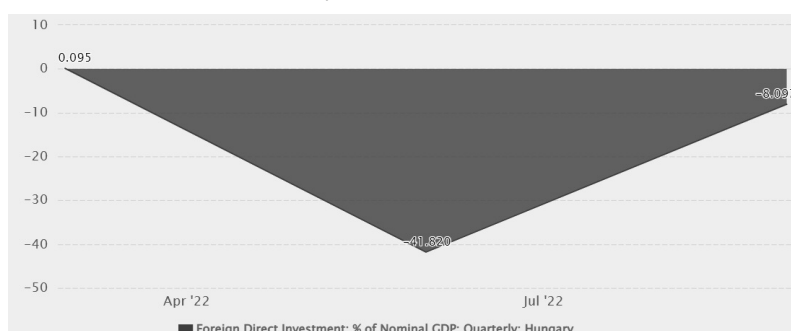
Source: www.ceicdata.com

Figure 9: Foreign Direct Investment (%GDP) for Slovakia from January 2022 to December 2022



Source: www.ceicdata.com

Figure 10: Foreign Direct Investment (%GDP) for Hungary from January 2022 to September 2022



Source: www.ceicdata.com

Clearly, the war in Ukraine has interrupted the post-COVID-19 recovery of foreign direct investment. Given the diverse impact of the global COVID-19 pandemic and the Ukrainian war on the foreign direct investment inflows of Eastern European countries, it is important to empirically investigate their combined effect on foreign direct investment in the region. The close proximity of the Eastern European countries in terms of their dependence and bilateral trade links with Russia and Ukraine makes this study even more meaningful. It is indeed important to gauge the real impact of the proper short-term and long-term policy measures to be adopted.

Methodology and empirical findings

To carry out the empirical test of the impact of the Ukraine war and COVID-19 on FDI for a panel of the nine Eastern European countries over the 1995-2022 period, the following equations are estimated:

$$\ln FDI_{it} = \alpha \text{ war}_{i,t} + \beta \ln \text{ real GDP}_{it} + \gamma \ln \text{ trade openness}_{it} + \delta \ln \text{ corruption index}_{it} + \eta \ln \text{ violence index}_{it} + \mu_i + u_{i,t}, \quad (1)$$

$$\ln FDI_{it} = \alpha \text{ covid}_{i,t} + \beta \ln \text{ real GDP}_{it} + \gamma \ln \text{ trade openness}_{it} + \delta \ln \text{ corruption index}_{it} + \eta \ln \text{ violence index}_{it} + \mu_i + u_{i,t}, \quad (2)$$

where i and t are the nine countries and year indicators, respectively, and μ_i is the constant term and $u_{i,t}$ is the error term. The dummy variable $\text{covid}_{i,t}$, which is set to one for the period 2019-2021 and zero otherwise, captures the impact of COVID-19 on FDI. The dummy variable $\text{war}_{i,t}$, which is set to one for the period 2014-2021 and zero otherwise, captures the impact of the Ukraine war on FDI. Apart from the dummy variables, $\text{war}_{i,t}$ and $\text{covid}_{i,t}$, the variables of the regression equation are given in terms of the natural logarithm (ln). The dependent variable is Foreign Direct Investment (FDI), and the set of control variables consists of real GDP, the level of trade openness, the corruption perception index, and a violence index. Data on the dependent and control variables have been obtained from the World Bank Indicators.

The correlation index in Table 1 (see annex) shows no problem of serial correlation. The estimation technique used for Equations (1) and (2) is a linear estimation. Although the OLS estimator can be used, the assumption that the unobserved country-specific effects are the same across countries does not hold in a panel of countries. The unobserved country-specific effects are likely to be different across countries.⁴⁸ Given that this study looks at the various factors impacting FDI across countries and across time, the occurrence of heterogeneity is likely, and the OLS estimator is not consistent. As such, the panel regression analysis is used to capture the heterogeneity by allowing for country-specific variations over time. Equations (1) and (2) are therefore estimated using the random effect and fixed effect techniques. The fixed effect technique indicates that the error term and the individual-specific effect should not be correlated, while, according to Greene (2011), the individual impact is a random variable and does not have a correlation with the independent variables under the random effect technique.⁴⁹ The Hausman Specification test is then used for the selection between the random effect model and the fixed effect model.

The results are shown in the table below:

⁴⁸ Ruth A. Judson & Ann L. Owen, "Estimating dynamic panel data models: a guide for macroeconomists," *Economics Letter*, Vol. 65, No. 1, 1999, 123-47.

⁴⁹ William H. Greene, *Econometric analysis*, 5th edition, 2011, Prentice-Hall, New Jersey.

Table 1: Regression Results; Dependent variable: Ln FDI

	MODEL 1		MODEL 2	
Variables	FEE	REE	FEE	REE
C	-9.453902***	-5.474878***	-5.076626	-2.731073
WAR	-0.637378***	-0.485376***	-	-
COVID	-	-	-0.437557**	-0.344877**
LRGDP	0.297896***	0.135158***	0.154177***	0.056393
LTO	0.412002**	0.536906***	0.224024**	0.332558
LCI	1.650412**	1.039305**	1.124226	0.741456
LVIO	-0.265747	-0.179906	0.155016	0.138683
Hausman Test	P<10%- FEE Chosen			

*** represent significance at 1%, ** represent significance at 5%

To start with the empirical analysis, Equation (1) is estimated using the fixed effect model. Many countries, including Ukraine and Russia, are involved in trade relations and FDI, which enhance globalisation. Ukraine and Russia have trade relations with each other as well as with many other countries, including the countries of the European Union. Indeed, the findings of this study indicate that the Ukraine war has a significant negative effect on the level of FDI. The war has significantly affected relations among these countries, thus affecting investment flow and economic activities in the nine Eastern European countries too. The significant negative effect of the war is plausible given the various sanctions levied by the UN and EU nations on imports and exports. The sanctions have disrupted supply chains and trade relations, impacting the global economy as well as Ukraine and Russia's bilateral and multilateral trade relations.⁵⁰

With regards to the other explanatory variables, real GDP has a positive effect on FDI at a significant level of 1%. This is in line with Dunning's (1993) eclectic paradigm, which suggests that one of the main reasons firms invest abroad is to have access to the host's market as well as the nearby countries.⁵¹

⁵⁰ Muhammad Eid Balbaa, et al., "The Impacts of Russian-Ukrainian War on the Global Economy", https://www.researchgate.net/profile/Muhammad-Balbaa/publication/360074361_The_Impacts_of_Russian-Ukrainian_War_on_the_Global_Economy/links/6260411cbca601538b5a325f/The-Impacts-of-Russian-Ukrainian-War-on-the-Global-Economy.pdf, 06/15/2023, 1-21;

⁵¹ John H. Dunning, *Multinational Enterprises and the Global Economy*, 1993, Workingham, Addison-Wesley.

In the same way that a higher level of GDP implies better market opportunities and greater attractiveness, a higher real GDP also reflects the dynamism of the host country. The findings also indicate that there is a positive effect of trade openness on the level of FDI. Policies on trade openness have a positive impact on attracting FDI.⁵² The effect of trade openness on FDI is, however, not statistically significant.

There is also evidence that the corruption index has a positive and significant effect on FDI (an increase in the corruption perception index indicates that corruption has decreased). It is observed that corruption is acting as a barrier to FDI inflow within the countries, as it can be noticed that a 1% increase in corruption will decrease FDI inflow by 1.65%. The results are consistent with studies conducted by Epaphra and Massawe (2017), who showcased that corruption acts as a “grabbing hand” by reducing FDI.⁵³ In addition, Egger, P., and Winner, H. (2006) also found a negative relationship between FDI and corruption.⁵⁴

As expected, the violence index has a negative effect on FDI, although the effect is not statistically significant. As mentioned previously, there is the issue of whether to use the random effect of the fixed effect model with panel data. As a start, both models have been used, and when estimating the effect of the Ukraine war on FDI using the random effect model, the results do not differ much from the fixed effect model. The Hausman specification test is further used to choose between the two techniques, and in this case, the Hausman test favours the fixed effect model.

The objective of this study is to also examine the effect of COVID-19 on FDI in the nine Eastern European countries over the 1995-2022 period. Since the Hausman test results favour the fixed effect model, the latter is used for the empirical analysis, and the findings are shown in Table 2. The findings show that COVID-19 has a negative effect on the level of FDI, and it is statistically significant. The pandemic crisis generated by COVID-19 has had a dramatic impact on the global economy itself since countries had to enforce lockdowns and social distancing measures. These measures had a negative impact on supply chains, thus unbalancing economies across the world. COVID-19 has thus created uncertainty in global capital flows, along with a negative effect on investment prospects due to the lockdown measures. In fact, any form of crisis can be detrimental to FDI. In their study, Dornean and

⁵² Avik Chakrabarti, “The determinants of foreign direct investment: Sensitivity analyses of cross-country regressions”, *KYKLOS*, Vol. 54, 2001, 90.

⁵³ Manamba Epaphra & John Massawe, “The Effect of Corruption on Foreign Direct Investment: A Panel Data Study”, *Turkish Economic Review*, Vol. 4, No. 1, 2017, 54.

⁵⁴ Peter Egger & Hannes Winner, “How corruption influences foreign direct investment: A panel data study”, *Economic Development and Cultural Change*, Vol. 54, No. 2, 2006, 459–486.

Oanea (2015) conclude that the economic crisis has an adverse effect on FDI in Central and Eastern European countries.⁵⁵

The findings are similar to the empirical analysis of Equation (1) for the remaining explanatory variables. More specifically, there is evidence that an increase in real GDP leads to an increase in the level of FDI in the nine Eastern European countries. Similarly, the findings also show that trade openness and the corruption index have a positive effect on FDI, although the effects are not statistically significant. As compared to the findings of Equation (1), where the violence index has a negative effect on FDI, the effect is now positive for Equation (2); however, the coefficient is not statistically significant.

Conclusion

Both the pandemic and the Ukrainian War are likely to compel policymakers to rethink how to attract investors to boost economic and social welfare. The present study focuses on a sample of eastern European countries to investigate the impact of the pandemic and the war on FDI. The fixed effect model confirms that both the pandemic and the war have discouraged foreign investment in Eastern Europe. It can be argued that uncertainties have a negative impact on international investors' attitudes. Eastern European countries are relatively weaker and more vulnerable as compared to more advanced countries. Hence, policies to enhance the business environment in these countries are important, and they will make the countries more resilient to shocks like the pandemic and the war. Importantly, reformed tax policies and incentives to encourage foreign investors, as well as new trade agreements, will help these countries attract FDI. Retraining the workforce and implementing better governance will also help attract FDI. It is also important to restore peace in Ukraine, as it is becoming more and more injurious to the global market and investment, negatively affecting economic growth and social welfare. Policymakers need to develop better crisis management skills in order to reunite nations and help eliminate conflicts.

Also, post-COVID-19 recovery is expected to see an improvement in FDI. However, if governments and policymakers focus more on regionalization and ownership restrictions, then FDI may decline. A reduction in bureaucracy and regulatory environments will be attractive to foreign firms. More so, the governments of the host countries should reassure businesses that the local operating conditions are stable, transparent, and unlikely to change. Such political stability will encourage FDI.

⁵⁵ Adina Dornea, et al., "The Impact of the Recent Global Crisis on Foreign Direct Investment. Evidence from Central and Eastern European Countries", 1017.

Table 2: Correlation matrix

	FDI	WAR	COV	RGDP	TO	CI	VIO
FDI	1	-0.2144	-0.1201	-0.1511	0.1069	0.1286	0.1515
WAR	-0.2144	1	0.5448	0.1611	0.1792	0.0915	-0.1185
COV	-0.1201	0.5448	1	0.1103	0.0699	0.0821	-0.0437
RGDP	-0.1511	0.16113	0.1103	1	-0.4418	-0.1945	-0.3147
TO	0.1069	0.1792	0.0699	-0.4418	1	0.2790	0.4124
CI	0.1286	0.0915	0.0821	-0.1945	0.2790	1	0.7966
VIO	0.1515	-0.1185	-0.0437	-0.3147	0.4124	0.7966	1

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Influence and Estimation of Geopolitical Risk on FDI in Eastern European Economies²

SUMMARY

In the current complex international situation, especially under the influence of the Russian-Ukrainian conflict, the inflow of FDI in Eastern European countries is seriously affected by geopolitical risks. However, there is a lack of research on this subject in Eastern Europe. Based on FDI inflow data in Eastern European countries and the political risk ratings of the ICRG from 2009 to 2020, this paper investigates the effect of geopolitical risks on FDI inflow to Eastern Europe using simple linear regression. It has been found that geopolitical risks have a significant negative impact on FDI inflows in Eastern European countries. However, further studies have found that signing RTAs can help alleviate this negative effect; actively carrying out bilateral trade or investment agreements is conducive to the development of FDI in host countries.

Keywords: geopolitical risks, FDI, Eastern Europe.

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Утицај и процена геополитичког ризика на стране директне инвестиције у источноевропским економијама

САЖЕТАК

У тренутној сложеној међународној ситуацији, посебно под утицајем руско-украјинског сукоба, на прилив страних директних инвестиција (СДИ) у источноевропским државама озбиљно утичу геополитички ризици. Међутим увиђа се недостатак истраживања ове теме у Источној Европи. На основу података о приливу СДИ у источноевропским државама и нивоа политичког ризика Међународног водича државних ризика (*International Country Risk Guide*) од 2009. до 2020. године, овај рад истражује утицај геополитичких ризика на прилив СДИ у Источној Европи коришћењем једноставне линеарне регресије. Утврђено је да геополитички ризици имају значајан негативан утицај на прилив СДИ у источноевропске државе. Ипак, даље студије откриле су да потписивање регионалних трговинских споразума може помоћи у ублажавању овог негативног ефекта; активно спровођење билатералних трговинских или инвестиционих споразума погодује развоју СДИ у државама домаћинима.

Кључне речи: геополитички ризици, стране директне инвестиције, Источна Европа.

Introduction

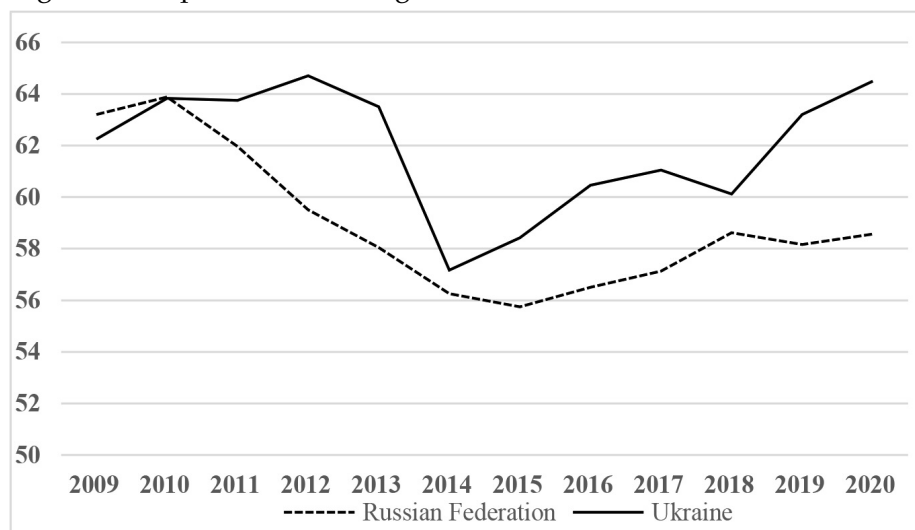
At present, the complexity of the international landscape has resulted in an unprecedented intensity of geopolitical conflicts, with an escalation in the game among major powers. The factors responsible for the current scenario, such as the novel coronavirus pneumonia epidemic and the Ukraine war, are intertwined, and global uncertainty has reached a new height. In the face of multiple risks and challenges, the pan-politicisation tendency of economic activities has begun to expand from the national level to the micro level. Motivated by risk aversion, transnational corporations and other micro-subjects have shown a growing interest in ensuring the stability of the supply chain and the security of economic investments in their decision-making processes, due to which international investment activities have been greatly affected. According to the 2021 World Investment Report released by the United Nations Conference on Trade and Development (UNCTAD), the COVID-19 epidemic has had a significant impact on global foreign direct investment. In 2020, global foreign direct investment declined by 35% year-on-year, reaching its lowest point since 2005. In particular, the total foreign direct investment flowing into Europe was only USD 73 billion, which was a sharp decline of 80%. The 2022 World Investment Report revealed that global foreign direct investment rebounded in 2021, experiencing an increase of 64% when compared with that in 2020; however, many countries around the world

were facing multiple threats related to the economy, food, and energy due to the continuous impact of the outbreak of the Ukraine conflict and the new coronavirus epidemic. The resulting investment uncertainty is likely to result in increased pressure on the growth of global foreign direct investment.

Specifically, the fallout of the Ukrainian crisis that began in 2014 has been challenging for European countries, especially those in Eastern Europe, with economic and geopolitical conflicts steadily intensifying. Since 2022, the continuous escalation of the situation between Russia and Ukraine has further complicated the global political landscape and accelerated the differentiation and reorganisation of global geopolitical forces. In addition to military conflicts, Western countries have put pressure on Russia in terms of economy, trade, finance, and diplomacy, which have a profound impact on international trade activities. Consequently, global multinational companies will undoubtedly pay greater attention to political risk factors in their investment decisions.

An analysis of the political risk indices of Eastern European countries published in the International Country Risk Guide (ICRG) from 2009 to 2020, as well as data on countries' outward foreign direct investment inflows obtained from the UNCTAD database, reveals that Russia and Ukraine, which were both at the centre of contradiction, attained the lowest value of the index around 2014; this was when the Ukraine crisis first broke out (see Fig. 1). At the same time, their foreign direct investment inflows also reached a trough (see Fig. 2). From the perspective of Eastern European countries as a whole, the situation has been rather similar (see Fig. 3).

Figure 1: The political risk ratings of Russia and Ukraine from 2009 to 2020



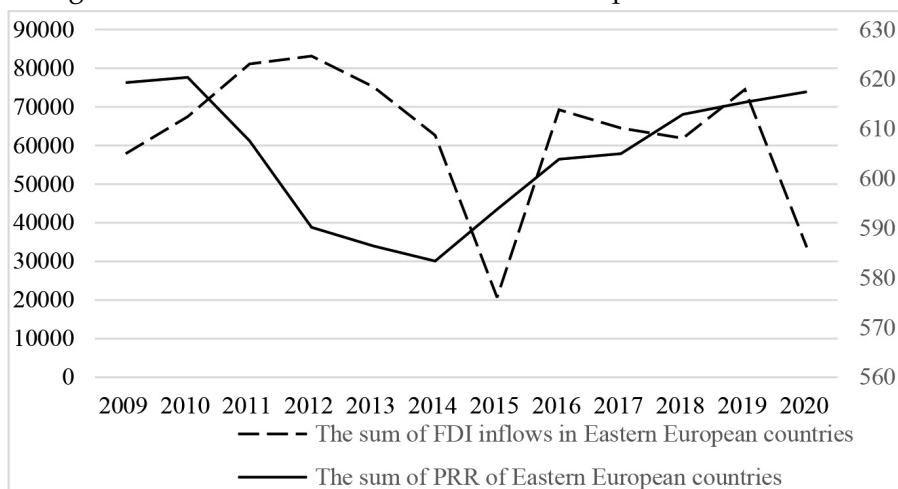
Source: ICRG

Figure 2: FDI inflows in Russia and Ukraine from 2009 to 2020



Source: UNCTAD

Figure 3: PRR and FDI inflows in Eastern Europe from 2009 to 2020



Source: UNCTAD and ICRG

Consequently, it is evident that the occurrence of political conflict is likely to have a significant negative impact on the ability of the affected countries to attract foreign direct investment.

Expanding foreign direct investment is an important step for promoting global economic prosperity as well as global economic and cultural

exchanges. However, amidst the current landscape of frequent geopolitical conflicts, enterprises are reluctant to engage in foreign direct investment; global foreign direct investment, particularly in Europe, is likely to encounter increasingly complex circumstances and challenges. However, there remains a lack of research on this subject in Eastern Europe.

Therefore, this paper uses the example of Eastern European countries to explore whether geopolitical risks can affect the inflow of foreign direct investment. If the results can help establish the fact that political risk inhibits foreign direct investment inflows in Eastern European countries, we will further explore ways to alleviate this negative effect. This will allow us to propose coping strategies for these countries and enable them to either attract foreign investment effectively or avoid the reduction of FDI inflows as much as possible in the face of political conflicts.

The key marginal contributions of this paper are varied. First, based on the example of Eastern Europe, this paper explores the impact of political risk on FDI inflows in Eastern Europe and supplements the existing research in the context of the countries in this region. Second, this paper adopts the perspective of a mechanism, introducing the moderating effect of regional trade agreements (RTAs) between political risks and OFDI inflows in Eastern European countries and testing their role. This is of great significance for policymakers in these countries and can help stabilise foreign investment in a complex international environment.

The structure of the remainder of this article is as follows: The second section presents the literature review, the third section describes the theoretical analyses and research hypotheses, the fourth part introduces the selection of variables and the settings of the model, the fifth part discusses the empirical analyses, and the sixth part presents the conclusions drawn from the research and the corresponding policy recommendations.

Literature review

Factors affecting FDI location choice

In general, the location choice of foreign direct investment has largely been the focus of research in the field of international investment. In addition to monopoly advantage theory, comparative advantage theory, internalisation theory, international production eclectic theory, and other general theoretical research, various econometric models have been extensively used to empirically analyse the determinants of foreign direct investment location choice. Based on the existing literature, the key determinants of foreign direct investment location selection can be identified. These include the following:

(1) The size of the host country's market: The majority of scholars believe that FDI inflows are closely related to the size of the host country's market.³ In the existing empirical research, the host country's GDP and GDP growth rate are typically used as important control variables or explanatory variables.

(2) Resource endowments and infrastructure: The abundance of natural resources and the degree of infrastructure construction are important determinants of foreign direct investment, which has become a generally accepted conclusion by scholars.⁴ Moreover, in the context of productivity factor endowments, the research suggests that labour costs are among the important factors affecting FDI inflows.⁵

(3) Tax burden level of the host country: Several studies on the location choice of foreign direct investment also focus on tax-related factors in the host country. It is widely believed that while a high tax rate in the host country leads to an increase in foreign direct investment, countries with low tax rates have a higher probability of foreign direct investment inflow.⁶

(4) Political factors: Political stability is the basis for market participants to carry out economic activities safely and in a stable manner. Theoretically, political risks increase the risk of investment in the host country, thus inhibiting the inflow of foreign direct investment. At present, scholars have considered various aspects of political risk, such as violent conflict, institutional factors, governmental efficiency, corruption, and the level of the rule of law.

The geopolitical risk of the host country and FDI

(1) Measurement of geopolitical risks

The measurement methods for a country's geopolitical risk level are relatively diverse. Among the most commonly used methods is the construction of an index evaluation system through qualitative analysis,

³ Chien-Hsun Chen, "Regional determinants of foreign direct investment in mainland China", *Journal of Economic Studies*, Vol. 23, No. 2, 1996, 24; Cui Xinjian, "Empirical Analysis of Determinants of Foreign Direct Investment in China", *Contemporary Economic Sciences*, Vol. 4, 2000, 1–6.

⁴ Peter J. Buckley, Jeremy L. Clegg, Adam R. Cross, Xin Liu, Hinrich Voss & Ping Zheng, "The determinants of Chinese outward foreign direct investment", *Journal of International Business Studies*, Vol. 38, No. 4, 2007, 503; Aleksynska Mariya & Olena Havrylchyk, "FDI from the south: The role of institutional distance and natural resources", *European Journal of Political Economy*, Vol. 29, 2013, 41.

⁵ Yongqin Wang, Du Julian & Wang Kai. "Determinants of China's OFDI location choice: system, tax burden and resource endowment", *Economic Research*, Vol. 49, No. 12, 2014, 126–142.

⁶ Richard E. Caves, *Multinational enterprise and economic analysis*, Cambridge University Press, 1996, 193; Roger H. Goron & James R. Hines Jr., "International taxation", *Handbook of Public Economics*, Vol. 4, 2002, 1965.

using principal component analysis or factor analysis for measurement. The majority of these studies on the evaluation of national political risks involve the construction of an index evaluation system from multiple perspectives, including economic, financial, political, cultural, and social risks.⁷ With attention being increasingly paid to the transnational investment of enterprises, numerous rating agencies have begun to emerge. They primarily use qualitative analysis combined with quantitative methods to generate scores or rankings of national risks. For example, Caldara and Lacoviello (2022) calculated the GPR index, which can objectively and comprehensively reflect the dynamism of geopolitical risks in a country based on the frequency of geopolitical events reported in international mainstream newspapers.⁸ However, when calculating this index, Eastern European countries typically have missing data. Some professional risk assessment agencies have performed detailed calculations on political risks in a country. These include the BERI political risk index released by the US Business Assessment Environmental Assessment Agency for analysing the country's operating environment, the ICRG political risk index compiled by the Political Risk Group Services (PRS) that incorporates 12 determinants of political risk, and the World Bank Institute's WGI Global Governance Index, which measures political risk based on six dimensions.

(2) *The impact of the host country's geopolitical risk on FDI*

Geopolitical risk involves various aspects, including military, cultural, and religious factors, natural disasters, terrorism, and violent conflicts, and is an important consideration for enterprises choosing to make foreign direct investments. Prior research has found that foreign direct investors tend to pay greater attention to international and domestic political conflicts.⁹ However, some contradictions remain in the existing research in terms of the impact of political risk in the host country on foreign direct investment.

The largely prevailing perspective is that wars, violent conflicts, and the deterioration of diplomatic relations caused by political risks in host countries have an inhibitory effect on FDI.¹⁰ For instance, Asiedu (2006)

⁷ Richard E. Cantor & Packer Frank, "Determinants and Impact of Sovereign Credit Ratings", *Economic Policy Review*, Vol. 2, No. 2, 1996, 37; Wei Zhou, Chen Zhao & Wu Xianming, "Research on the National Risk of China's OFDI in the 'Belt and Road': Based on the Quantitative Evaluation of 39 Host Countries Along the Route", *World Economic Research*, Vol. 282, No. 8, 2017, 15–25.

⁸ Dario Caldara & Matteo Iacoviello, "Measuring Geopolitical Risk", *American Economic Review*, Vol. 112, No. 4, 2022, 1194.

⁹ Douglas Nigh, "Political events and the foreign direct investment decision: An empirical examination", *Managerial and Decision Economics*, Vol. 7, No. 2, 1986, 99–106.

¹⁰ Matthias Busse & Carsten Hefeker, "Political risk, institutions and foreign direct investment", *European Journal of Political Economy*, Vol. 23, No. 2, 2007, 398; Nathan Jensen,

conducted an empirical analysis of African countries and observed that political violence has a negative impact on outward foreign direct investment in Africa.¹¹ Later, Biglaiser and DeRouen (2007) found that political conflicts have an overall inhibitory effect on global outward foreign direct investment. In general, the negative impact of political risk on FDI is primarily due to the increase in investment costs and decrease in returns foreseen by investors.¹² Vadlamannati (2012) analysed data on US investments in developing countries and found that the higher the political risk, the less the share of equity that investors are willing to hold, the higher the proportion of fixed assets, and the lower the return on investment.¹³

However, these findings have been contradicted by other scholars, who observed that the impact of host country political risk on foreign direct investment may vary in countries with different levels of development and different types of investment; in other words, the impact of political risk on FDI is heterogeneous. In some developing countries, a positive correlation has been reported between FDI inflows and political conflicts.¹⁴ For example, according to some studies, there is the relationship between political conflicts and foreign direct investment in Latin American countries, revealing that political conflicts may attract FDI.¹⁵ A potential reason for this is that Latin American countries have rich natural resources. Similarly, Wang and Sun (2018), as well as Wang and Zu (2021), suggested that China's OFDI is biased towards countries with high political risk, especially those investing in large-scale energy projects.¹⁶ In general, the trend of research indicates that energy is an important factor for multinational corporations to consider

"Political Risk, Democratic Institutions, and Foreign Direct Investment", *The Journal of Politics*, Vol. 70, No. 4, 2008, 1041; Quintin Beazer H. & Blake J. Daniel, "The Conditional Nature of Political Risk: How Home Institutions Influence the Location of Foreign Direct Investment", *American Journal of Political Science*, Vol. 62, No. 2, 2018, 473.

¹¹ Elizabeth Asiedu, "Foreign Direct Investment in Africa: The Role of Natural Resources, Market Size, Government Policy, Institutions and Political Instability", *World Economy*, Vol. 29, No. 1, 2006, 65.

¹² Glen Biglaiser & Karl Jr. DeRouen, "Following the Flag: Troop Deployment and US Foreign Direct Investment", *International Studies Quarterly*, Vol. 51, No. 4, 2007, 838.

¹³ Krishna Chaitanya Vadlamannat, "Impact of Political Risk on FDI Revisited: An Aggregate Firm-level Analysis", *International Interactions*, Vol. 38, No. 1, 2012, 116.

¹⁴ Elizabeth Asiedu & Donald Lien, "Democracy, foreign direct investment and natural resources", *Journal of International Economics*, Vol. 84, No. 1, 2011, 107.

¹⁵ Biglaiser Glen & Karl Jr. DeRouen, "Following the Flag: Troop Deployment and US Foreign Direct Investment", 841.

¹⁶ Hao Wang & Qian Sun, "How Does Overseas Political Uncertainty Affect China's Foreign Direct Investment?", *Shanghai Economic Research*, Vol. 6, 2018, 68–78; Yurui Wang & Zu Yuan, "Host country political risk and China's large-scale energy project investment-based on the investigation of countries along the Belt and Road", *Research on financial issues*, Vol. 7, 2021, 110–119.

investment activities, which can greatly reduce investors' consideration of political risks in host countries. For example, Witte et al. (2017) reported that although political conflicts have an inhibitory effect on non-resource greenfield investments, the impact on resource-based greenfield investment is not significant; this can be attributed to the fact that natural resources are not easily destroyed in political conflicts.¹⁷

In addition, the existing research on the impact of corruption and institutional factors on FDI in the host country also draws differing conclusions. For example, Zheng et al. (2017) used China's provincial panel data to conduct empirical research and found that corruption in the host country has a friction effect on FDI inflows; that is, corruption in the host country tends to inhibit FDI inflows.¹⁸ However, some scholars have reached the contradictory conclusion that enterprises are prone to rent-seeking behaviour when investing in countries that have high levels of corruption; this is conducive to the avoidance of regulatory and administrative restrictions, thus promoting foreign capital inflows.¹⁹ In general, although institutional risk is a factor that investors need to consider, some research indicates that investors in some countries tend to enter countries with higher institutional risk, primarily because the system of the target country may be more similar to that of the home country.²⁰

Overall, the findings of the existing research on the relationship between political risk and foreign direct investment in the host country are not consistent. This is largely due to the heterogeneity of the impact of political risk on FDI inflows, which may be affected by varying factors, such as the natural resource endowment of the host country and the investment preference of multinational enterprises in the home country. Moreover, the current literature focuses predominantly on global foreign direct investment. Although there has been extensive research on foreign direct investment in developed countries, the determinants of FDI inflows in Eastern Europe remain relatively unexplored.

¹⁷ Caroline T. Witte, Martijn J. Burger, Elena I. Ianchovichina & Enrico Pennings, "Dodging bullets: The heterogeneous effect of political violence on greenfield FDI", *Journal of International Business Studies*, Vol. 48, No. 7, 2017, 862–892, Skovoroda Rodion, Shaun Goldfinch, Karl DeRouen Jr. & Trevor Buck, "The Attraction of FDI to Conflicted States: The Counter-Intuitive Case of US Oil and Gas", *Management International Review*, Vol. 5, No. 2, 2019, 234.

¹⁸ Lei Zheng & Chen Kezheng, "Will Corruption in the Host Country Hinder Foreign Direct Investment Inflows", *Research on Financial Issues*, Vol. 10, 2017, 102–109.

¹⁹ Egger Peter & Hannes Winner, "Evidence on corruption as an incentive for foreign direct investment", *European Journal of Political Economy*, Vol. 21, No. 4, 2005, 932.

²⁰ Zhen Pan & Zhongkun Jin "Bilateral Political Relations, Host Country Institutional Risks and China's Foreign Direct Investment", *Financial and Trade Economy*, Vol. 6, 2015, 85–97.

Theoretical analysis and hypothesis

The impact of the host country's geopolitical risk on FDI inflows in Eastern European countries

The geopolitical risk of the host country may depend on various aspects, including war, violent conflict, diplomatic relations, and international public opinion. Theoretically, this refers to a systemic risk that can determine the stability of the capital market. Armed conflicts are likely to directly lead to the loss of assets and personnel, as well as the destruction of local infrastructure, which could seriously affect the business activities of enterprises. The deterioration of diplomatic relations between countries may also cause the host government to take mandatory intervention measures against multinational enterprises and increase the business risks of multinational enterprises, which would have a negative impact on investment activities. Therefore, this paper suggests that, in general, political risks inhibit the inflow of foreign direct investment into Eastern European countries. Based on this analysis, the following research hypothesis is proposed:

H1: The host country's geopolitical risk has a negative impact on the overall inflow of FDI in Eastern European countries. In other words, as the level of geopolitical risk in the host country increases, the amount of FDI attracted by these countries decreases.

Can regional trade agreements alleviate the negative impact of the host country's geopolitical risks on attracting foreign investment?

A regional trade agreement (RTA) typically refers to an international treaty approved by two or more countries or tariff areas to promote mutual trade activities, eliminate trade barriers, and regulate trade cooperation among members. In recent years, the coverage of RTAs has expanded significantly and is rapidly extending to multiple fields, such as trade, the economy, and society. Therefore, its potentially dynamic effects have increasingly attracted the attention of various countries. The standard RTA contains certain investment liberalisation clauses, such as removing restrictions on the participation of foreign investors in domestic economic activities, reducing barriers to capital flows, and increasing service liberalisation. These commitments can decrease investment costs and, consequently, enhance the appeal of contracting countries for foreign direct investment. In recent years, the investment liberalisation rules in RTAs have gradually surpassed those in bilateral investment agreements, reflecting a new trend in the development of international investment treaties.

According to the "signalling mechanism" proposed by Neumayer and Spess (2005), the signing of a trade or investment agreement can send a positive signal to the contracting parties to protect the rights and interests of

investors.²¹ At the same time, the signing of an RTA provides an institutional guarantee for the investors, which can reduce investment barriers and enable foreign investors to enter the market legally.²² Moreover, the signing of RTAs can also bring about the rapid development of regional integration and promote the unity and stability of the market, thus attracting more foreign direct investment.²³ Therefore, in theory, the signing of an RTA can provide protection for foreign investors to a certain extent and alleviate the impact of geopolitical risks on foreign direct investment.

However, in reality, the impact of RTAs on foreign direct investment can be influenced by various factors, such as the institutional, political, and economic conditions of the contracting states, their commitment to implementing the agreement, and the scope and depth of the RTA agreement itself.²⁴ In general, countries with poor political relations tend to pay greater attention to reducing the risks caused by mutual distrust when signing RTAs. In contrast, when countries with friendly political relations sign RTAs, the depth of the agreement may be negatively affected. Therefore, further discussion on whether the signing of an RTA can alleviate the impact of political risks on foreign direct investment is required, together with national heterogeneity.

Therefore, the following hypotheses are put forth:

H2a: RTAs can alleviate the negative impact of geopolitical risks on FDI inflows in Eastern European countries.

H2b: RTAs cannot alleviate the negative impact of geopolitical risks on FDI inflows in Eastern European countries.

²¹ Eric Neumayer & Laura Spess, "Do bilateral investment treaties increase foreign direct investment to developing countries", *World Development*, Vol. 33, No. 10, 2005, 1573–1574.

²² Allee Todd & Clint Peinhardt, "Contingent credibility: The impact of investment treaty violations on foreign direct investment", *International Organization*, 2011, Vol. 65, No. 3, 414.

²³ Raff Horst, "Preferential trade agreements and tax competition for foreign direct investment", *Journal of Public Economics*, Vol. 88, No. 12, 2004, 274; Egger Peter & Valeria Merlo, "BITs bite: an Anatomy of the Impact of Bilateral Investment Treaties on Multinational Firms", *The Scandinavian Journal of Economics*, Vol. 114, No. 4, 2012, 1242–1243; Zhongyuan Zhang & Minghui Shen, "The impact of sustainable development clauses in international investment agreements on bilateral investment", *World Economic Research*, Vol. 3, 2018, 95–108.

²⁴ Cardamone Paola & Margherita Scoppola, "The Impact of EU Preferential Trade Agreements on Foreign Direct Investment", *World Economy*, Vol. 35, No. 11, 2012, 1475–1476; Youde Dong & Xingxing Zhao, "Can Free Trade Agreements Promote the Outward Foreign Direct Investment of Chinese Enterprises? An Empirical Study Based on the Knowledge-Capital Model of Multinational Corporations", *International Economic and Trade Exploration*, Vol. 3, 44–61.

Variables and the Model

Model setting

To verify the impact of geopolitical risk on the inflow of foreign direct investment in Eastern European countries, this paper sets the following econometric model for research:

$$\ln fdi_{it} = \alpha + \beta \cdot prr_{it} + \beta_2 \cdot contrl_{it} + \mu_i + \varepsilon_{it} \quad (1)$$

where fdi_{it} represents the level of foreign direct investment received by country i in year t , prr_{it} represents the level of political risk in country i in year t , $contrl_{it}$ represents the control variables, μ_i represents the country fixed effects, and ε_{it} represents the random perturbation term.

Definition of variables

(1) Explained variables

In this paper, the logarithm of the net inflow of foreign direct investment (FDI) in the host country was used as an explanatory variable, which is expected to reflect the level of foreign direct investment activities in a country or region. The data was obtained from the UNCTAD database.

(2) Core explanatory variables

As there are several missing geopolitical risk indices (GPR) in Eastern European countries, this paper primarily implements the Political Risk Ratings (PRR) of the host country in the ICRG, published by the Political Risk Services (PRS), to measure the level of foreign direct investment activities in the host country. This paper mainly adopts the Political Risk Ratings (PRR) of the ICRG published by the Political Risk Services (PRS) to measure the level of geopolitical risk in host countries. The maximum value of the index is 100; countries with a value of 0-49.9 are extremely high-risk. Overall, the higher the score, the lower the level of geopolitical risk. Conversely, the lower the score, the higher the level of geopolitical risk. Therefore, according to hypothesis H1, we expect the regression coefficient of this variable to be positive.

(3) Control variables

The control variables selected in this paper include the host country's GDP (GDP), GDP per capita (GDP PC), GDP growth rate (GDP growth), inflation rate (Inflation), trade dependence (FDI OPEN), natural resource rent level (Resource), total railway mileage (Infrastructure), and total population (Population). The data were mainly obtained from the World Bank database. The variables and their definitions are shown in Table 1.

Table 1: Variables and their definitions

	Variable symbol	Variable name	Definition
Explained variables	LN FDI	Inflow of foreign direct investment	Net inflow of host country OFDI
Core explanatory variables	PRR	Political risk ratings	The level of political risk in the host country
	LN GDP	GDP	The GDP of the host country
	GDP PC	GDP per capita	The per capita GDP of the host country
	GDP GROWTH	GDP growth rate	The GDP growth rate of the host country
Controlled variables	Inflation	Inflation rate	The host country's inflation rate, as measured by the GDP deflator
	FDI OPEN	Dependence on foreign trade	The sum of host country goods exports and imports is divided by the value of the GDP
	Resource	Rental level of natural resources	The total rent of the host country for natural resources as a percentage of GDP
	Ln infrastructure	Total railway mileage	The logarithm of the total mileage of the host country's railway system
	Ln population	Total population	The log value of the total population of the host country

(4) Data description

The core explanatory variables in this paper were derived from the PRR compiled by the ICRG, which incorporates 12 weighted variables such as government stability, social environment, corruption, etc. It can better reflect the political stability and predictability of a country or region, and it is a

relatively more authoritative political risk rating, widely used by academics and international organisations. Since the index is calculated on a monthly basis, the annual indicator was derived for the period 2009–2020 by calculating the arithmetic mean. In addition, based on the availability of data, a sample of 10 countries or regions in Eastern Europe was selected based on the United Nations Statistics Division's classification. The selected countries were Belarus, Bulgaria, the Czech Republic, Hungary, Poland, Moldova, Romania, Slovakia, Ukraine, and Russia.

Empirical results

Descriptive statistics

The descriptive statistics of the variables in this paper are shown in Table 2. The logarithmic mean of the net FDI inflow (LN FDI) during the sample period was 8.0641, with a maximum value of 10.8855 and a minimum value of 4.0214. This indicates a large difference in the net FDI inflow between countries. The logarithmic mean and standard deviation of the political risk level (LNPRR) were 4.2263 and 0.1167, respectively, which were consistent with the results of existing studies.

Table 2: Descriptive statistics

Variable name	Symbol	Observed value	Mean	Standard error	Minimum value	Maximum value
FDI, net inflow	LN FDI	120	8.0641	1.4060	4.0214	10.8855
Political risk level	LN PRR	120	4.2263	0.1167	3.9913	4.4021
GDP	LN GDP	120	25.6835	1.3100	22.4169	28.4607
GDP per capita	GDP PC	120	9.1238	0.6510	7.5493	10.0718
GDP rate of rise	GDP GROWTH	120	1.3894	4.0159	-15.1365	9.0439
Rate of inflation	Inflation	120	5.5061	8.8130	-1.5448	59.2197
Dependence on foreign trade	FDI OPEN	120	4.5543	0.4128	3.6392	5.1736
Natural resources rent	Resource	120	2.3861	3.6431	0.1325	16.2676
Total railway, total mileage	Ln Infrastructure	120	9.0746	1.1161	7.0493	11.3578
Total population	Ln Population	120	16.51	1.108	14.78	18.79

Benchmark results

This section discusses the impact of geopolitical risks on foreign direct investment (FDI) inflows in Eastern European countries. The model used in this study is referred to as Model (1), and the baseline regression results are shown in the first column of Table 3. To avoid the issue of perfect collinearity, the model controlled for country-fixed effects individually instead of incorporating the fixed effect of time, considering that variables such as the GDP and total railway mileage of the host countries are highly correlated with time.

Based on the regression results, the coefficient of prr was found to be 3.7049, which is significant at the 5% level. This indicates that as the political risk ratings increases, indicating a lower level of geopolitical risk, Eastern European countries attract higher levels of FDI. Thus, geopolitical risk has a significant negative impact on FDI inflows in Eastern European countries. This finding is consistent with theoretical expectations.

Table 3: Impact of geopolitical risks on FDI in Eastern European countries

Variable	(1) LNFDI	(2) LN FDI STOCK
LNPRR	3.3669*** (1.2904)	0.9279*** (0.3353)
LN GDP	0.4443 (0.3411)	-1.2524*** (0.1502)
GDP PC	-0.1586 (0.4646)	2.1097*** (0.1743)
GDP GROWTH	0.0298* (0.0156)	-0.0147** (0.0058)
Inflation	0.0184*** (0.0057)	-0.0055 (0.0038)
FDI OPEN	-0.2478 (0.3814)	0.1958 (0.1652)
Resource	0.0152 (0.0172)	-0.0094 (0.0129)
Ln infrastructure	0.9483** (0.4341)	0.5556** (0.2396)
Ln population	-0.4590 (0.7111)	1.5953*** (0.3192)
State fixed effect	control	control
_cons	-16.2167*** (3.6671)	-12.2157*** (2.3701)
N	112	120
adj.R ²	0.8015	0.9738

Note: ***, **, and * indicate significant at the 1 per cent, 5 per cent, and 10 per cent significance levels, respectively, and robust standard errors are in parentheses.

Robustness test

(1) Replacement of explanatory variables

The explanatory variable used in the primary regression model was the net inflow of FDI in the host country. To enhance the reliability of the findings of this research, a different method was adopted to measure the level of FDI for robustness testing. Specifically, the explanatory variables were replaced with the natural logarithm of the stock of FDI in the host country (FDISTOCK). The results of this regression model are shown in column (2) of Table 3. The regression coefficient of PRR was 0.9279, which is significantly positive at least at the 1% level, further establishing the robustness of the results of this research.

(2) Endogeneity test

Due to the potential bidirectional causality between geopolitical risk in the host country and FDI inflows, endogeneity issues may lead to biased estimation results. Therefore, to examine potential endogeneity problems, lagged variables of the political risk variable were incorporated, and the regression model was re-estimated. The first column in Table 4 presents the regression results of the lagged political risk ratings on FDI inflows. The coefficient of prr was significant at least at the 10% level, which is consistent with the baseline regression results and further demonstrates the robustness of the regression results.

(3) Robust standard error test

To verify the inhibitory effect of geopolitical risk on foreign direct investment and enhance the credibility of the data analysis, robust standard errors were employed to conduct a robustness test. In multiple linear regression, standard errors are statistical indicators used to measure the precision of the estimated regression coefficients. Lower values of standard errors indicate more precise estimates of the regression coefficients. However, in real-world applications, the presence of outliers and leverage points in the data may have a significant impact on the estimated regression coefficients, leading to inaccurate standard errors and affecting the accuracy and reliability of regression analysis. To address this issue, robust standard errors can be used to mitigate the influence of these outliers and leverage points on the estimated regression coefficients. In this study, robust standard errors were employed to conduct a robustness test, aiming to better assess the accuracy and predictive ability of the regression model. The results of the regression analysis, shown in the second column of Table 4, indicate that after incorporating the robust standard errors, the regression coefficients and significance levels of the key variables in this study did not undergo any significant changes.

Table 4: Endogeneity test and standard error robustness test

Variable	(1) LN FDI	(2) LN FDI
L_LNPRR	1.9648* (1.7716)	
LN PRR		5.4415** (2.2412)
LN GDP	0.3660 (1.2655)	-0.4306 (-0.3700)
GDP PC	0.0677 (0.1657)	1.5889 (1.4690)
GDPGROWTH	0.0506 (1.5569)	0.0245 (1.1453)
Inflation	0.0103* (1.7260)	0.0175* (1.9107)
FDI OPEN	-0.0621 (-0.1698)	0.1876 (0.2291)
Resource	-0.0098 (-0.6072)	-0.0314 (-0.6126)
Ln infrastructure	0.9345** (2.0230)	3.8044 (0.7666)
Ln population	-0.2790 (-0.4216)	12.7032** (2.5069)
State fixed effect	control	control
_cons	1.9648* (1.7716)	-250*** (-2.8499)
N	103	112
adj.R ²	0.8146	0.8041

Note: ***, **, and * indicate significant at the 1 per cent, 5 per cent, and 10 per cent significance levels, respectively, and robust standard errors are in parentheses.

(4) Mechanism test

To verify whether the signing of RTAs can mitigate the negative impacts of geopolitical risk on FDI inflows in Eastern European countries, we chose the number of RTAs signed by a country as a measure, sourced from the World Development Indicators (WDI) database. Based on the quartiles of the host country's RTA count, a dummy variable called "agreement" (which takes values of 1, 2, 3, or 4, representing samples where the RTA count is in the [0,25%), [25%,50%), [50%,75%), and [75%,100%] quartile intervals, respectively) was defined. To present the regression results more intuitively,

we transformed the variable “pr” as follows, where a higher value of “pr2” indicates a higher level of political risk in the host country:

$$\text{pr2} = 100 - \text{pr}$$

Subsequently, the variable “agreement” was incorporated into the model as an interaction term, resulting in Model (2), as follows:

$$\ln fdi_{it} = \alpha + \beta_1 \cdot \ln \text{pr2}_{it} + \beta_2 \text{agreement} + \beta_3 \ln \text{pr2}_{it} * \text{agreement} + \beta_4 \text{contrl}_{it} + \mu_i + \varepsilon_{it} \quad (2)$$

We focused on the coefficient of the interaction term to assess whether the signing of RTAs can mitigate the inhibitory effect of geopolitical risk on FDI inflows in Eastern European countries. According to the model specifications, a negative coefficient of the interaction term indicates support for Hypothesis H2a. As shown in the regression results in Table 5, the interaction term was consistently significant and negative, either through direct regression or by lagging the dependent variable by one or two periods before performing the regression. This suggests that the signing of RTAs can mitigate the impact of geopolitical risk on FDI inflows, and this mitigation effect has a long-term impact.

Table 5: Mechanism tests

Variable	(1) LNFDI	(2) L1.N FDI	(3) L2.LN FDI
ln prr 2	-2.8793** (1.1240)	-0.3640 (1.3094)	0.3829 (1.2326)
Agreement	0.2330** (0.1161)	0.1565 (0.1103)	0.4660*** (0.1743)
Ln prr*agreement	-1.1996* (0.6634)	-1.4335* (0.7851)	-2.8996** (1.2565)
LN GDP	0.8984** (0.4117)	0.4024 (0.4215)	0.7356 (0.5621)
GDP PC	-0.7874 (0.5686)	0.0875 (0.6004)	-0.3743 (0.9095)
GDP GROWTH	0.0324** (0.0149)	-0.0018 (0.0179)	-0.0429** (0.0200)
Inflation	0.0149** (0.0062)	-0.0091 (0.0214)	-0.0070 (0.0055)
FDIOPEN	-0.3789 (0.3772)	0.0660 (0.5246)	0.0956 (0.6875)
Resource	0.0411** (0.0207)	0.0053 (0.0216)	0.0592** (0.0270)
Ln infrastructure	1.0886** (0.4302)	0.4567 (0.5699)	0.2193 (0.8875)

Variable	(1) LNFDI	(2) I.LN FDI	(3) L2.LN FDI
Ln population	-1.1244 (0.8195)	0.1463 (0.8558)	-0.0712 (1.3999)
State fixed effect	control	control	control
_cons	277.2491** (112.2076)	24.3236 (131.3974)	-47.1765 (130.0150)
N	112	104	94
adj.R ²	0.8198	0.8058	0.8099

Note: ***, **, and * indicate significant at the 1 per cent, 5 per cent, and 10 per cent significance levels, respectively, and robust standard errors are in parentheses.

Conclusion and Policy Recommendations

In this paper, an empirical study was conducted on the impact of geopolitical risk in host countries on FDI inflows to Eastern European countries. The study used the political risk ratings from ICRG for the period 2009–2020, as well as data from the UNCTAD database and the World Bank. The findings of the study can be summarised as follows: (1) Geopolitical risk plays a crucial role in inhibiting FDI inflows to Eastern European countries. (2) The signing of RTAs has a long-term mitigating effect on the negative impact of geopolitical risks on FDI inflows to Eastern European countries.

Bilateral trade or investment agreements effectively compensate for deficiencies in the institutional, economic, and political environments of the host country. Consequently, they contribute to the reduction of political risks faced by foreign investors and provide a certain level of business security. Given the ongoing impact of events like the Russia-Ukraine situation and the long-term effects of the COVID-19 pandemic, Eastern European countries should prioritise efforts to enhance free trade, reduce barriers to cross-border capital flows, and create favourable conditions for attracting investment by improving the business environment. To achieve these goals, effectively utilising bilateral trade or investment agreements and leveraging their provisions to enhance stability in the local business environment is crucial. Actively engaging in bilateral free trade negotiations with other economies and promoting the signing and upgrading of trade or investment agreements with economic and trade partners can yield positive outcomes. By fully harnessing the mitigating effect of bilateral RTAs on political risks, Eastern European countries can amplify the policy impact of these agreements. Strengthening the effectiveness of signed agreements and establishing specific provisions, including mechanisms for dispute settlement, negative

lists, and policy transparency, will also contribute to increasing the attractiveness of these agreements for foreign investment. The government should actively pursue these goals, ensuring that the depth and scope of specific clauses in the agreements are reasonable. This will help enhance the country's appeal to foreign investors by concluding sufficiently comprehensive trade agreements.

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Foreign Direct Investment Resilience During Times of Crisis: A Comparative Analysis Between Selected Eastern European and African Countries

SUMMARY

Times of crisis provide the opportunity to question the behaviour of socioeconomic agents and specific phenomena around economic growth's resilience. Hence, this paper relies on econometrics to analyse the data compiled from secondary sources mainly available within the World Development Indicators to comparatively examine foreign investors' behavioural shifts in Eastern Europe and Africa during significant crises that the world faced during the last two decades. The aim is to identify, through their impacts, the above behavioural shifts and thereby assist policymakers in advancing policies strengthening and nurturing foreign direct investments' "FDI" resilience and maintenance during and post-crises.

It was uncovered that foreign investors appear to reduce their exposure during crises in Eastern Europe and Africa. The decrease in inflows seems to be higher in Eastern Europe than in Africa. However, the change in net FDI effects on infrastructure, trade openness, and economic growth is more significant in African economies. It is therefore believed that, to nurture FDI

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resilience or maintenance post-crisis, lawmakers should infer policies supporting the reduction of FDI outflows, the development of infrastructure, the improvement of trade openness, and ultimately advancing a sustainable FDI agenda.

Through an empirical analysis of the effects that crisis periods have on FDI in Eastern Europe and Africa, the paper gives suggestions regarding policies that encourage fostering FDI resilience and maintenance in these regions. However, while future research may build on the above, there is a need to particularly investigate how sustainable instruments may support FDI resilience during crises.

Keywords: FDI, resilience, crisis, economic growth, Eastern Europe, Africa.

Отпорност страних директних улагања у кризним временима: компаративна анализа између одабраних источноевропских и афричких држава

САЖЕТАК

Кризна времена пружају прилику проблематизовања социоекономских агенаса и специфичних феномена отпорности економског раста. Овај рад ослања се на економетрију у анализи података прикупљених из секундарних извора, углавном доступних у Индикаторима светског развоја (*World Development Indicators*), како би се компаративно испитале промене понашања страних инвеститора у Источној Европи и Африци током значајих криза с којима се свет суочио у протекле две деценије. Кроз њихове утицаје циљ је да се идентификују горе наведене промене у понашању, и да се на тај начин помогне креаторима политике у унапређењу политике јачања и неговања отпорности и одржавања страних директних инвестиција (СДИ) током и након кризе. Откривено је да страни инвеститори умањују своју изложеност током криза у Источној Европи и Африци. Чини се да је пад прилива већи у Источној Европи него у Африци. Међутим, промена у нето ефектима СДИ на инфраструктуру, отвореност трговине и економски раст значајнија је за афричке економије. Стога се верује да би, за неговање отпорности СДИ или њихово одржавања након кризе, законодавци требало да спроводе политике које подржавају смањење одлива СДИ, развој инфраструктуре, побољшање трговинске отворености и, коначно, унапређење одрживе агенде СДИ.

Емпиријском анализом о ефектима које кризни периоди имају на СДИ у Источној Европи и Африци, овај рад пружа сугестије о политикама које подстичу отпорност и одржавање СДИ у овим регионима. Међутим, иако се будућа истраживања могу надовезати на горе

наведено, постоји потреба да се посебно истражи како одрживи инструменти могу подржати отпорност СДИ током криза.

Кључне речи: стране директне инвестиције, отпорност, криза, економски раст, Источна Европа, Африка

Introduction

The observed fluctuations of foreign direct investment (FDI) flows that the last 30 years' continuous reports of the United Nations Conference on Trade and Development (UNCTAD) display allow us to presume specific behavioural patterns of foreign investors during a particular period. Indeed, despite showing net growth of FDI flows during the last three decades, e.g., FDI data from 1990 [\$204 K. million] until 2022 [\$1,294 K. million], a detailed investigation of the last twenty years yearly flows during the same period allows presuming that in times of crisis, foreign investors focus on save-heavens and attempt to reduce business exposures in regions they perceive as riskier or unstable.³

The above conclusion is confirmed by the observed decreasing trends of FDI in times of crisis, e.g., during the time of the Argentine economic crisis [\$1,356K million to \$549K million]; in the time of the global financial crisis [\$1,906K million to \$1,173K million]; during the first Russian-Ukrainian crisis [\$2,056K million to \$1,375K million]; and during the pandemic of COVID-19, from 2019-2020 [\$1,707K million to \$961K million].⁴ Although during crises, foreign investors display abnormal trading behaviour and seem to mainly disinvest, researchers argue that new opportunities may also arise during such periods.⁵ There is a need to go beyond the FDI perspective of risk and explore the factors that may support FDI's maintenance even during

³ "World Investment Report 2023", United Nations Publications, <https://unctad.org/publication/world-investment-report-2023>, 05/10/2023.

⁴ Ibid.

⁵ Anya Khanthavit, "Foreign Investors' Abnormal Trading Behavior in the Time of COVID-19", *The Journal of Asian Finance, Economics and Business*, Vol. 7, No. 9, 2020, 63; Emad Alchikh Saleh, "The effects of economic and financial crises on FDI: A literature review", *Journal of Business Research*, Vol. 161, 2023; World Investment Report 2023"; "World Investment Report 2021: Investing in Sustainable Recovery Investing, United Nations Conference on Trade and Development", United Nations Publications, https://unctad.org/system/files/official-document/wir2021_en.pdf, 06/28/2023; Imad A. Moosa, & Ebrahim Merza, "The effect of COVID-19 on foreign direct investment infows: stylised facts and some explanations", *Future Business Journal*, Vol. 8, No. 20, 2022, 3; Megan Tobias Neely & Donna Carmichael, "Profiting on Crisis: How Predatory Financial Investors Have Worsened Inequality in the Coronavirus Crisis", *American Behavioral Scientist*, Vol. 65, No. 12, 2021, 1655; Jacques Yana Mbena, "The Status Quo of Research in Sustainable FDI: exploring the theoretical agenda and policy inferences in West and Central Africa", *Future Business Journal*, Vol. 8, No. 46, 2022, 7.

crises.⁶ The authors believe that focusing on regions that have faced multiple crises, such as Europe and Africa, provides the best opportunity to examine the behaviour of foreign economic agents during crises.

Compared to Africa, which remains at the bottom of FDI reports, Europe as a marketplace has been perceived for a decade as a relative safe-heaven for foreign investors.⁷ Interestingly, while Africa remains a region facing multiple crises, few crises resulting from political instabilities or war have been observed in Eastern Europe in the last decades. Examples are the Serbian-Kosovo crisis, the Crimea crisis, and the latest Russian-Ukrainian crisis. Examining FDI development between these regions during global and regional crises may add value to the academic discussion around FDI resilience.

This paper focuses on Eastern European FDI's change during crises and compares its regional FDI settings against those of African economies from an outcomes perspective. The aim is to capture the behavioural differences of foreign investors during crises and start a discussion on which specific areas lawmakers shall focus while inferring policy aiming at supporting regional FDI resilience and maintenance during and after times of crisis.

Ahrend and Schwellnus (2013) found that investors disproportionately shed assets of distant countries during global financial crises as distance appears to influence investors' perceived uncertainty.⁸ From a regional and risk perspective, compared to Africa, Eastern Europe seems closer to the leading global investors headquartered in Western countries.⁹ Consequently, the authors advance the following assumptions: (A1) There are more variations in FDI flows in Africa compared to Eastern Europe during global crises; (A2) Crises have significant negative direct impacts on FDI in Africa compared to Eastern Europe. Therefore, (A3) African economies display less FDI resilience during crises.

In order to achieve the above endeavour and verify the advanced assumptions, the paper revisits past research on regional FDI and foreign investors' perspectives on risk during crises. It analyses available data compiled by international organisations to capture the effect of the change

⁶ Barbara Abou Tanos & Sonia Jimenez-Garcès, "Foreign investments during financial crises: Institutional investors' informational skills create value when familiarity does not", *Journal of International Financial Markets, Institutions and Money*, Vol. 79, 2022.

⁷ "World Investment Report 2023".

⁸ Rudiger Ahrend & Cyrille Schwellnus, "Do investors disproportionately shed assets of distant countries during global financial crises? The role of increased uncertainty", *OECD Journal: Economic Studies*, Vol. 2012, No. 1, 2012, 178.

⁹ "World Investment Report 2021: Investing in Sustainable Recovery Investing, United Nations Conference on Trade and Development"; Jacques Yana Mbena, Susanne Durst, Sascha Kraus & Céline Viala, "Investigating the impact of the dynamics of entrepreneurial intentions on ventures' formalization. Journal of Entrepreneurship in Emerging Economies", *Journal of Entrepreneurship in Emerging Economies*, 2023, 1–28.

in FDI behaviour during crises and to explore which dimensions policymakers can rely upon for inferring supportive policies that may help the maintenance of FDI flows even in times of crisis and alleviate the indirect effects of crises on regional FDI settings.

Existing research and stylized facts

Foreign investors' investment risk policies are believed to fluctuate when socioeconomic, political, sanitary, or business conditions change over time within their operating markets. This behaviour may be linked to the underlying rationales they may have relied upon while deciding to move abroad in the first place. Scholars argue that the decision to purchase foreign ventures' assets appears to be mainly based on perceived business opportunities or the need to address home market imbalances.¹⁰ Such imbalances and, in some cases, abnormal decision-making are also observed in crisis periods and may foster the reduction of FDI inflows and an increase of FDI outflows.¹¹ However, crises may also provide few opportunities to invest in specific sectors or develop international entrepreneurial projects. There is a need to explore within the paper's select regions the perspective that past research uncovered on FDI phenomena during crises and the picture that existing data enable us to draw in such circumstances.

Research on Foreign Investors' Behaviour During Crises

Crises create uncertainty for decision-makers at home and abroad. The multiplicity of causes or origins that crises may have, e.g., war, climate change, health, financial mismanagement, regional or global challenges, etc., does not make it easy for economic agents to cultivate resilient behaviour, while it also leads to diversified effects on economic settings.¹² Especially

¹⁰ Charles P. Kindleberger, "The Theory of Direct Investment", In: *American Business Abroad*, Charles P. Kindleberger (ed.), Yale University Press, New Haven, 1969.

¹¹ Anya Khanthavit, "Foreign Investors' Abnormal Trading Behavior in the Time of COVID-19".

¹² Cesar Calderon & Tatiana Didier, "Will FDI be Resilient in this Crisis?", Latin America and the Caribbean Region (LCR) Crisis Briefs, <https://openknowledge.worldbank.org/server/api/core/bitstreams/258f30af-e6e4-53ef-a968-a67cc9ac9745/content>, 06/25/2023, 3; Sergey Filippov & Kalman Kalotay, "Foreign Direct Investment in Times of Global Economic Crisis: Spotlight on New Europe", *MERIT Working Papers* 2009-021, 2009, 9–17; Meltem Ucal, Kivilcim Metin Özcan, Mehmet Huseyin Bilgin & Julius Mungo, "Relationship between financial crisis and foreign direct investment in developing countries using semiparametric regression approach", *Journal of Business Economics and Management*, Vol. 11, No. 1, 2010, 26–28; Jacques Yana Mbena, "The Status Quo of Research in Sustainable FDI: exploring the theoretical agenda and policy inferences in West and Central Africa", 8.

foreign investors whose decisions seem sensible to shockwaves and market imbalances may, in such circumstances, take mitigated decisions.¹³

How foreign investors react to regional and global crises has been well documented in past research. While analysing the *macro/direct and micro/indirect level* effects that crises have on FDI, Saleh (2023) found that foreign investors either escape, defend, or engage in risky behaviour.¹⁴ In a more microeconomic perspective, Alfaro and Chen (2012) observed a “heterogeneity” role of FDI during crises through multinational constructs that, through inflows, may enhance performance or ventures’ economic outcomes compared to local venture settings.¹⁵ Arundale and Mason (2020), on the other side, detected that investors appear to cancel or postpone ongoing deals, extend due diligence, and, in some cases, stricter rules are advanced on foreign acquisitions in specific industries.¹⁶ As for Bernstein et al. (2019), during the financial crisis, “PE [Private Equity]-backed companies decreased investments less than did their peers and experienced greater equity and debt inflows, higher asset growth, and increased market share”.¹⁷ It is believed that all these specific behaviours can be well aggregated and observed throughout the change in FDI flows and the main macroeconomic rationales.

Figure 1 and Figure 2 show the evolution of economic growth and foreign direct investment (inflows and outflows) in developing and developed countries. Over the last two decades, both developing and developed economies have experienced three periods of significant crises. In particular, the internet bubble bursting from 1999 to 2001, the sub-prime financial crisis (2007-2009), and, finally, the COVID-19 health crisis from 2019 to 2021.

¹³ Charles P. Kindleberger, “The Theory of Direct Investment”.

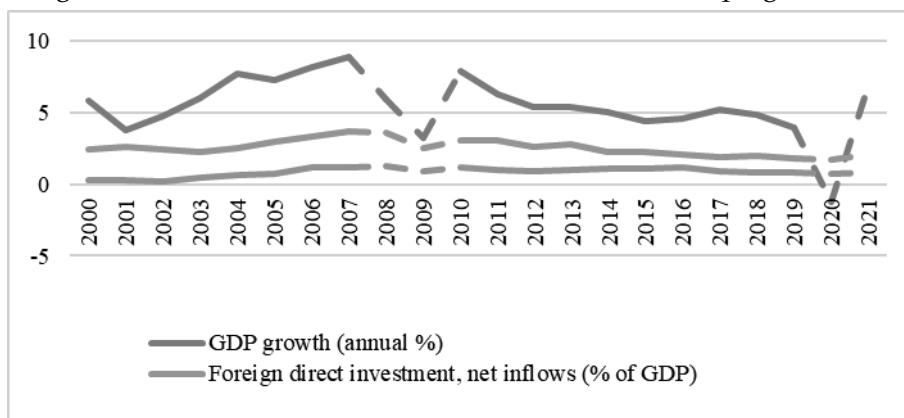
¹⁴ Emad Alchikh Saleh, “The effects of economic and financial crises on FDI: A literature review”.

¹⁵ Laura Alfaro & Maggie Xiaoyang Chen, “Surviving the global financial crisis: Foreign direct investment and establishment performance”, *American Economic Journal: Economic Policy*, Vol. 4 No. 3, 2012, 35.

¹⁶ Keith Arundale & Colin Mason, Private Equity & Venture Capital Riding the COVID-19 Crisis, In: M. Billio, S. Varotto (eds), *A new world post COVID-19: Lessons for business, the finance industry and policy makers*, Venezia Edizioni Ca’ Foscari – Digital Publishing, 2020, 196.

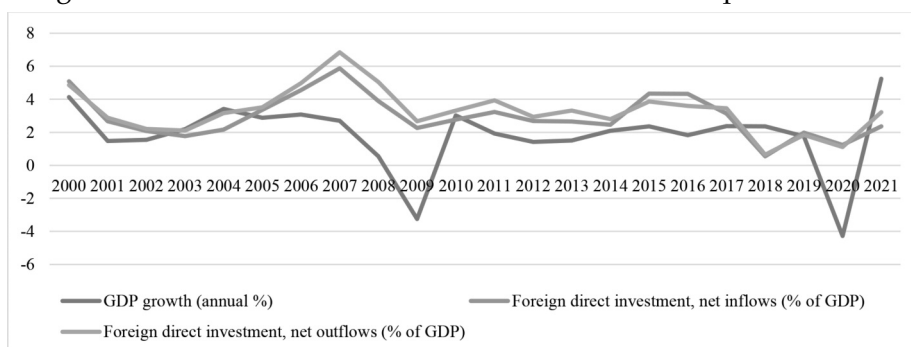
¹⁷ Shai Bernstein, Josh Lerner & Filippo Mezzanotti, “Private Equity and Financial Fragility during the Crisis”, *Review of Financial Studies*, Vol. 32, No. 4, 2018, 1309.

Figure 1: Trends in FDI and Economic Growth in Developing countries



Source: The authors. Based on the data of the World Development Indicators “WDI” 2023.

Figure 2: Trends in FDI and Economic Growth in Developed Countries



Source: The authors. Based on the data of the WDI 2023.

The review of the literature provides the opportunity to distinguish two main avenues wherein scholars navigate while investigating foreign investors' behavioural change during crises. While academia has mainly observed the tendencies of foreign investors to disinvest during crises, few argue that there are nevertheless some foreign investors investing in the hope of exploiting some opportunities that such periods may offer.¹⁸ Both avenues

¹⁸ Adina Dornean, Vasile Işan & Dumitru-Cristian Oanea, “The impact of the recent global crisis on foreign direct investment. Evidence from central and eastern European countries”, *Procedia Economics and Finance*, Vol. 3, 2012, 1014–1016; Emad Alchikh Saleh, “The effects of economic and financial crises on FDI: A literature review”; Charles P.

were observed during the global financial crisis, the Eurozone crisis, the Brexit crisis, the Argentine economic crisis, the COVID-19 pandemic, the Russian-Ukrainian crisis, and the US-China trade war of 2018.¹⁹ However, as shown in Figures 1 and 2, while similar patterns were observed during crises regarding FDI inflows and outflows for developed and developing countries, apparent differences in the effects on GDP growth can be distinguished. There is a need to explore if regional economic differences can help understand this development.

Regional FDI Changes in Times of Crisis

1) On Selected Countries

The Organisation for Economic Co-operation and Development (OECD) and the European Union (EU) define Central and Eastern European Countries (CEECs) as groups of countries including Albania, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic, and Slovenia. The analysis goes beyond the economic or organisational criteria that the organisation follows to consider geostrategic factors and, therefore, includes the far-east countries of Serbia and Ukraine. Due to the need to limit and delimit the paper's scope, the authors discretely selected the following four Eastern European panel countries: (1) the two new and relatively stable [in terms of war, but market-driven by a few internal political crises] EU countries of Romania and Bulgaria (Anton, 2017);²⁰ and (2) the two countries that have recently experienced crises: Serbia and Ukraine.

Regarding African countries, the authors apply a similar perspective and consider mixed macroeconomy, geography, and stability criteria. Hence, the paper will examine the FDI data of Nigeria [the most robust regional economy, facing few crises in West Africa]; Cameroon [the most robust Central Africa economy, facing few internal crises]; Kenya [a stable East African economy with few internal crises]; and South Africa [the strongest South African economy, experiencing few internal crises].

Figure 3 shows the level of FDI in African and Eastern European countries. It can be seen that FDI remains low, mainly in African countries

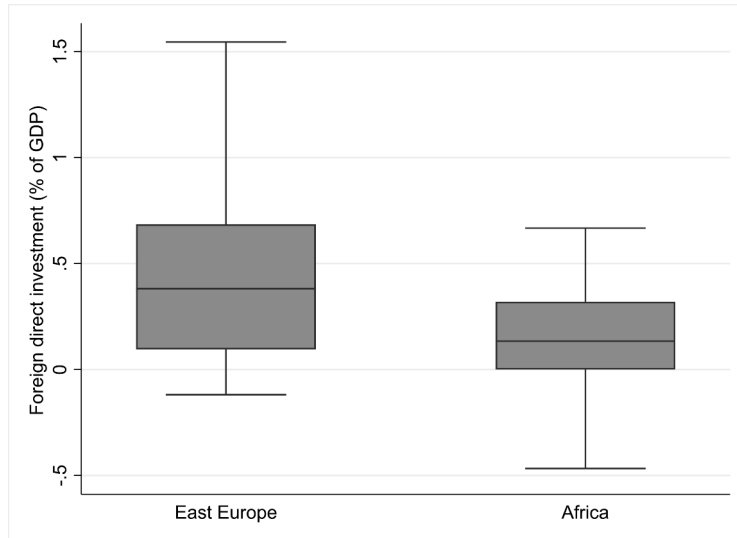
Kindleberger, "The Theory of Direct Investment"; Jacques Yana Mbena, "The Status Quo of Research in Sustainable FDI: exploring the theoretical agenda and policy inferences in West and Central Africa".

¹⁹ "World Investment Report 2023"; Badar Alam Iqbal, Nida Rahmanb & Jonathan Elimimian, "The future of global trade in the presence of the Sino-US trade war", *Economic and Political Studies*, Vol. 7, No. 2, 2019, 217–231.

²⁰ Sorin Anton, "Competitiveness and Investment Promotion in Bulgaria and Romania", In: Balázs Szent-Iványi (ed.), *Foreign Direct Investment in Central and Eastern Europe*, Palgrave Macmillan, Cham, 2017, 219–240.

compared with Eastern Europe. The average level of FDI in Eastern Europe is less than 1% of their GDP, while African countries have a level of FDI of less than 0.5% of their GDP. There is a need to explore further intra- and inter-regional FDI settings and crisis impacts.

Figure 3: Comparative FDI levels in Africa and Eastern Europe



Source: Authors. The calculation was based on the data of the WDI (2023).

2) FDI in Eastern Europe during and post-Crises

Several studies have addressed FDI in Eastern Europe in general and during or after crises.²¹ All these works informed on a disinvestment trend in the region during crises and even "...a shift towards higher value-added

²¹ Joel I. Deichmann (ed.), *Foreign Direct Investment in the Successor States of Yugoslavia: A Comparative Economic Geography 25 Years Later*, Springer International Publishing, New York, 2021; Gheorghe H. Popescu, "FDI and Economic Growth in Central and Eastern Europe", *Sustainability*, Vol. 6, No. 11, 2014, 8149–8163; Marco Schito, "The effects of state aid policy trade-offs on FDI openness in Central and Eastern European Countries", *International Review of Public Policy*, Vol. 4, No. 2, 191–218; Marie M. Stack, Geetha Ravishankar & Eric Pentecost, "Foreign direct investment in the eastern European countries: Determinants and performance", *Structural Change and Economic Dynamics*, Vol. 41, 2017, 86–97; Amat Adarov & Gábor Hunya, "Foreign Investments Hit by COVID-19 Pandemic", The Vienna Institute for International Economic Studies, <https://wiiw.ac.at/foreign-investments-hit-by-covid-19-pandemic-fdi-in-central-east-and-southeast-europe-dlp-5540.pdf>, 07/04/2023, 3–62; Adina Dornean, Vasile Işan & Dumitru-Cristian Oanea, "The impact of the recent global crisis on foreign direct investment. Evidence from central and eastern European countries"; Balázs Szent-Iványi (ed.), *Foreign Direct Investment in Central and Eastern Europe*, Cham: Palgrave Macmillan, 2017.

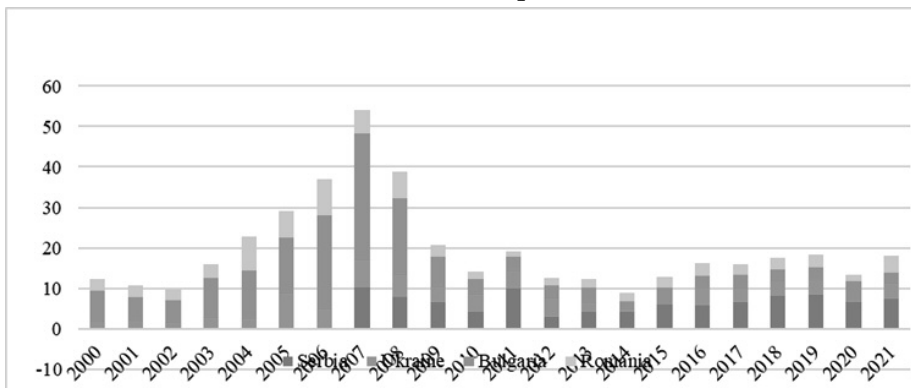
activities and non-financial services...".²² Figures 4 and 5 show that the available data of the panel countries during crises supports the above observations on macroeconomic rationales.²³ However, few noteworthy notes can be made on FDI and GDP developments during the global financial crisis (2008), the EU debt crisis (2012), the Crimea crisis (2014), and the COVID-19 crisis (2019; 2020) between the selected Eastern European economies.

(1) Serbia appears to have developed resilient FDI inflow settings as their variations during the selected crisis periods (even during the pandemic) are stable, and that is also reflected in the country's GDP change.

(2) The global crisis and the EU debt crisis have influenced EU countries. These influences are also reflected in their change in GDP.

(3) The Ukrainian economy seems to be very dependent on FDI, which is substantially impacted by all crises (global and regional) and especially during the Crimea crisis and the pandemic, whose effects are disproportionally reflected within its FDI changes.

Figure 4: Percentage of Change in FDI
in Selected Eastern European Countries

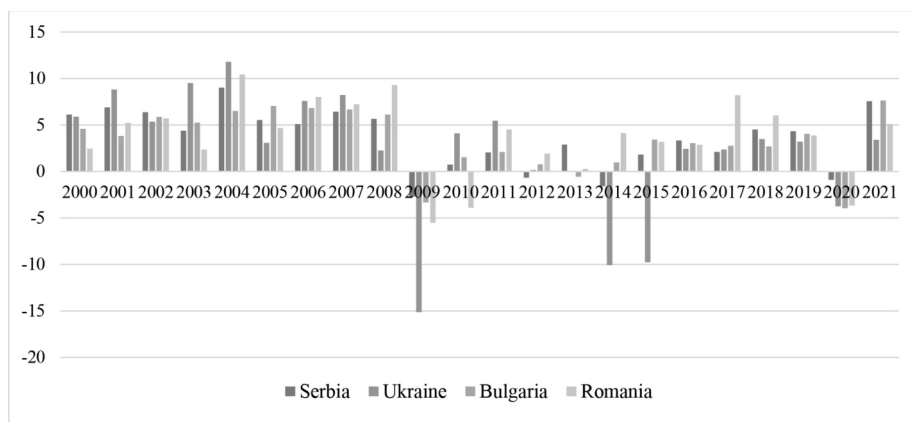


Source: The authors. Based on the data of the WDI (2023).

²² Kalman Kalotay, "Post-crisis crossroads for FDI in CEE", In: Balázs Szent-Ianyi (ed.), *Foreign Direct Investment in Central and Eastern Europe*, Cham: Palgrave Macmillan, 2017, 23.

²³ "World Investment Report 2023".

Figure 5: Percentage of Change in GDP Growth
in Selected Eastern European Countries



Source: The authors. Based on the data of the WDI (2023).

3) African FDI Flows During Crises

Yana Mbeni (2022) hypothesised that failing to sustain the continent's FDI may lead to a "sustainable development tragedy".²⁴ His conclusion follows the observation that, despite captivating the attention of academia, whose thoughts are to help address the continent's development challenges, Africa appears to have secured its place at the bottom of FDI flows for decades.²⁵ Scholars found multiple arguments explaining this situation, e.g., macroeconomic, governance, fragility, and non-economic arguments such as culture, the image ascribed to the continent, or the perceptions that potential foreign investors have about the continent. The authors believed that times of crisis provide the opportunity to fairly assess the perception of risk by exploring the effects of FDI behavioural changes on the observed economies and also by comparing such phenomena with extra-regional similar experiences to arrive at advancing a few policy avenues.

In times of crisis, the behaviour of foreign investors who went beyond the above-quoted barriers to take their chance by doing business within the

²⁴ Jacques Yana Mbeni, "The Status Quo of Research in Sustainable FDI: exploring the theoretical agenda and policy inferences in West and Central Africa", 7.

²⁵ Oliver E. Ogbonna, Jonathan E Ogbuabor, Charles O. Manasseh & Davidmac O. Ekeocha, "Global uncertainty, economic governance institutions and foreign direct investment inflow in Africa", *Economic Change and Restructuring*, Vol. 55, 2022, 2118; Bruno Emmanuel Ongo Nkoa & Jacques Simon Song, "Does the quality of institutions reduce the volatility of foreign direct investment in Africa?", *Mondes en développement*, Vol. 183, No. 3, 2018, 113-131; Moses Muse Sichei & Godbertha Kinyondo, "Determinants of foreign direct investment in Africa: A panel data analysis", *Global Journal of Management and Business Research*, Vol. 12, No. 18, 2012, 85-97.

African continent has captivated the interest of academia.²⁶ Although interregional comprehensive comparative study seems still lacking, stylized facts can be well used to portray these experiences. Despite its comparatively low volume of FDI flows, Africa appears to benefit from resilient FDI settings. This conclusion was already advanced by Tar et al. (2016), who observed that the continent's FDI was less affected by the financial crisis compared to other regions.²⁷ Yana Mbeni (2022) observed similar patterns during the pandemic of COVID-19.²⁸ There is a need to analyse intracontinental FDI behaviour before investigating inter-regional differences.

As Figures 6 and 7 show, the selected African panel countries display a diversified picture of FDI flows and GDP changes during crises. The following main observations can be highlighted:

(1) The economy receiving FDI the most [South Africa] is more impacted by FDI variations during crises, and its GDP change is equally disproportionately variable.

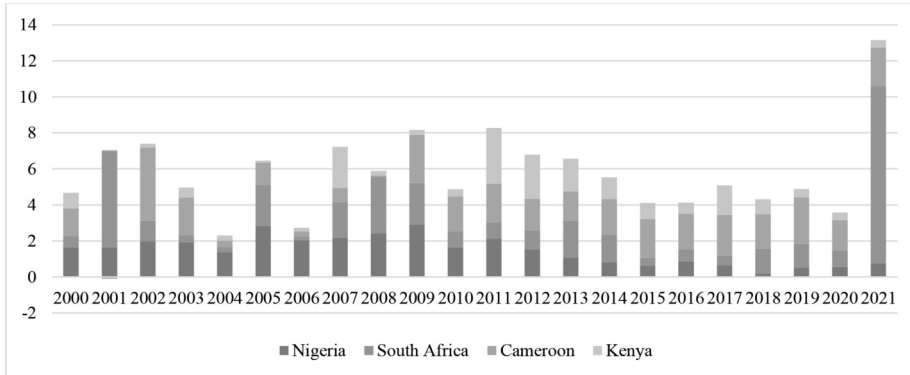
(2) Except for the distinguishing crisis that resulted from the COVID-19 pandemic, the variation in FDI appears to have fair [Kenya] to minor impacts [Cameroon] in the change of GDP for other countries. Cameroon, in particular, displays resilient FDI during all crises post-2008. There is a need to understand the rationales explaining these phenomena.

²⁶ Arup Kumar Chattopadhyay, Debdas Rakshit, Payel Chatterjee & Ananya Paul, "Trends and Determinants of FDI with Implications of COVID-19 in BRICS", *Global Journal of Emerging Market Economies*, Vol. 14, No. 1, 43–59; Linh Tu Ho & Christopher Gan, "Foreign direct investment and world pandemic uncertainty index: Do health pandemics matter?" *Journal of Risk and Financial Management*, Vol. 14, No. 107, 1–15; Usman A. Tar Etham B. Mijah, Moses E. U. Tedheke (eds), *Globalization in Africa: Perspectives on Development, Security, and the Environment*, Lexington Books, Lanham, 2016.

²⁷ Ibid.

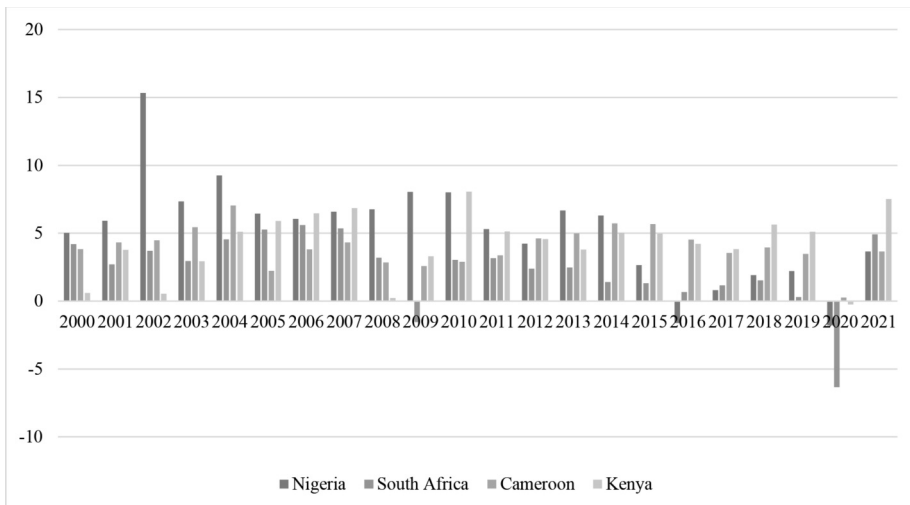
²⁸ Jacques Yana Mbeni, "The Status Quo of Research in Sustainable FDI: exploring the theoretical agenda and policy inferences in West and Central Africa"; "World Investment Report 2021: Investing in Sustainable Recovery Investing, United Nations Conference on Trade and Development".

Figure 6: Percentage of Change in FDI in Selected African Countries



Source: The authors. Based on the data of the WDI (2023).

Figure 7: Percentage of Change in GDP Growth in Selected African Countries



Source: The authors. Based on the data of the WDI (2023).

While the review of existing research and the stylized facts enable us to draw few conclusions on the behaviour of foreign investors within Eastern Europe and Africa during the main crisis that the world experienced in the last two decades, the authors believe in the need to go beyond single country experiences to investigate, at a regional level, the aggregated effects that crises may have had on FDI and GDP change more accurately. Uncovering which factors comparatively explain FDI attractiveness during or post-crisis in the respective regions may be especially of interest.

Methodological Strategy

This section presents the data, the empirical model, the estimation technique, and the strategy upon which the paper shall endeavour to learn from and determine probable data limits.²⁹

The Data

As presented in the above-stylized facts, the data for this study come from four Eastern European and four sub-Saharan African countries and cover the period 2000-2021. The sample of countries and the periodicity of variables were limited by data availability. The data come from secondary sources. The variables of interest and control are taken from the World Development Indicators (2023) of the World Bank and are later computed using the software programme Stata17.³⁰

With respect to the conclusion of Moosa and Merza (2022), the FDI effects during crises will be verified against a few macroeconomic rationales.³¹ These effects can be captured through the following indicators:

(1) A country's *economic growth* leads to an increase in foreign investment. In the literature, the relationship between real GDP per capita and FDI is far from unanimous (Asiedu, 2002).³² The argument is that a higher GDP per capita implies better prospects for FDI in the host country.

(2) A *good infrastructure* increases the productivity of investment and, therefore, stimulates FDI flows. As is customary in the literature, the authors use the number of telephones per 100 inhabitants to measure infrastructure development. A good measure of infrastructure development should consider both the availability and reliability of infrastructure. So, the measure the paper uses is outside the study because it only considers the availability aspect of the infrastructure. Infrastructure is of little use if it is unreliable. The authors might, therefore, expect infrastructure reliability (for example, the frequency of telephone cuts) to be more important to foreign investors than infrastructure availability (the number of telephones in a country). As the authors need data on the reliability of telecommunications, the paper utilises

²⁹ Clifford C. Clogg & Gerhard Arminger, "On Strategy For Methodological Analysis", *Sociological Methodology*, Vol. 23, 1993, 57-74.

³⁰ "World Development Indicators (WDI)", Database of indicators of development of World Bank, Available at: <https://databank.worldbank.org/source/world-development-indicators#>, 05/15/2023.

³¹ Imad A. Moosa, & Ebrahim Merza, "The effect of COVID-19 on foreign direct investment infows: stylised facts and some explanations".

³² Elizabeth Asiedu, "On the determinants of foreign direct investment to developing countries: is Africa different?", *World development*, Vol. 30, No, 1, 2002, 107-119.

the number of telephones per 100 inhabitants to measure infrastructure development, albeit imperfectly.

(3) *Trade openness* is often interpreted as a measure of trade restrictions. The impact of openness on FDI depends on the type of investment. When investments are market-seeking, trade restrictions (and therefore less openness) can positively affect FDI. The reason for this stems from the “tariff jumping” hypothesis, according to which foreign companies seeking to serve local markets may decide to set up subsidiaries in the host country if it is difficult to import their products. On the other hand, multinational companies engaged in export-oriented investment may prefer to locate in a more open economy, as the increased imperfections accompanying trade protection generally imply higher transaction costs associated with exporting goods or services.

The summary of the descriptions of the variables and data sources is provided in Table I below.

Table I: Variable description

Variable	Definition	Source
FDI	Foreign direct investment, net outflows (% of GDP)	WDI (2023)
Infrastructure	Mobile cellular subscriptions (per 100 people)	
Trade	Trade (% of GDP)	
Ln(GDPPC)	The logarithm of GDP per capita (constant 2015 US\$)	
East Europe	Bulgaria, Romania, Serbia, and Ukraine	Authors' calculations are based on WDI (2023)
Africa	Cameroon, Kenya, Nigeria, and South Africa	
Main Observed Crisis	2001, 2009 and 2020	

Source: The authors.

Table II presents descriptive statistics between the variables used in this study. To capture regional specificities, the authors created dummy variables. There is little dispersion between the variables used. This is because the values of the standard deviations are below the mean. They take the value 1 for crises and 0 for no crises.

Table II: Descriptive Statistics on the Variables of FDI Effects

Variable	Obs	Mean	Std. Dev.	Min	Max
FDI	169	.341	.584	-2.595	2.188
Infrastructure	172	14.325	13.463	.05	42.666
Trade	176	67.918	28.333	16.352	130.287
Ln(GDPPC)	176	8.081	.694	7.037	9.354
East Europe	176			0	1
Africa	176			0	1
Crisis	176			0	1

Source: The authors. The calculation was based on the data of the WDI (2023).

The Empirical Model

The empirical model is derived from Canh et al. (2020) and Dornean et al. (2012), who adopted specifications that consider foreign direct investment (FDI). In this study, the paper will extend the model, as the authors want to capture the effect of contemporary crises on FDI, and the basic model will therefore be given by the equation (1) below:

$$FDI_{i,t} = \alpha + \beta_1 Crisis_{i,t-1} + \lambda X_{i,t} + \mu_i + v_t + \varepsilon_{it} \quad (1)$$

Wherein FDI represents Foreign Direct Investment for country i at time t , approximated by FDI outflows as a percentage of GDP; $Crisis_{i,t}$ denotes the dummy variable taking 1 for the years 2001, 2009, 2020 and 0 otherwise. α , β , λ are the parameters of the model to be estimated, μ_i and v_t respectively indicate the unobserved individual and temporal effects, and ε_{it} is the error term. In addition, X represents the vector of control variables considering GDP per capita growth, trade openness, and infrastructure.

Estimation Technique

In order to determine the effects of crises on FDI in the panel regions and countries, the paper uses a static model estimated by ordinary least squares (OLS) and applies it as an initial framework in the analyses to give the general trend of the results.³³ This technique, which was developed by

³³ Jacques Simon Song, Georges Ngnouwal Eloundou, Fabrice Bitoto Ewolo & Blaise Ondoua Beyene, "Does Social Media Contribute to Economic Growth?", *Journal of the Knowledge Economy*, 2023, 1–41.

Legendre (1805) and Gauss (1809), allows regressions to be run on cross-sectional data and highlights the effects of crises on FDI.³⁴ However, it minimises the impact of measurement errors by not considering the heterogeneity problem and assuming that the countries in the sample are perfectly homogeneous.

In contrast to previous work analysing the determinants of FDI, which postulates either a static or dynamic analysis, this paper uses ordinary least squares in cross-section to make a significant contribution by considering not only the form of the link but also, and, above all, the efficiency of the estimators selected. Based on a cross-sectional perspective, preliminary results for the coefficient of interest γ are obtained with the OLS estimator. The authors also introduce some control variables into the regression to limit the omitted variables' bias. Subsequently, the robustness of the results is assessed by including control variables.

Results and Discussion

The paper presents and discusses, within this section, the results of the basic model and its robustness.

Basic Findings

Table III shows the direct and indirect role that crises played on FDI. The authors note that the crisis periods appear to have reduced factors for FDI in Eastern European countries. Column 1 shows the marginal effect of crises on FDI. Column 2 takes into account a more complete version of the model. Columns 3 to 5 show the effect of the interaction between the factors explaining FDI and major contemporary crises. It can be posited that the overall significance of the paper-applied model is excellent, as it explains the evolution of FDI in Eastern European countries at a level above 0.4.

³⁴ Adrien-Marie Legendre, "On Least Squares" (Translated from the French by Professor Henry A Ruger and Professor Helen M Walker, Teachers College, Columbia University, New York City), <https://www.york.ac.uk/depts/maths/histstat/legendre.pdf>, 06/10/2023, 1-4; Carl Friedrich Gauss, "Theoria motus corporum coelestium in sectionibus conicis solem ambientium", Perthes and Besser, (Translated by C. H. Davis as Theory of the Motion of the Heavenly Bodies Moving about the Sun in Conic Sections), (Reprinted by Dover), 06/10/2023.

Table III: Basic Results in Eastern European Countries

Variables	Dependent variable: Foreign Direct Investment outflows				
	Technical estimate: Robust OLS				
	(1)	(2)	(3)	(4)	(5)
Infrastructure		0.00179**	0.00222***	0.00177**	0.00191***
		(0.000729)	(0.000826)	(0.000754)	(0.000692)
Trade openness		0.0106***	0.0104***	0.0109***	0.0105***
		(0.00276)	(0.00279)	(0.00308)	(0.00276)
ln (GDPPC)		0.284***	0.285***	0.284***	0.319***
		(0.0647)	(0.0654)	(0.0651)	(0.0702)
Crisis	-0.327***	-0.167**	-0.190*	-0.172**	-0.162**
	(0.0943)	(0.0779)	(0.0798)	(0.0784)	(0.0755)
Infra*Crisis			-0.00195*		
			(0.00108)		
Trade*Crisis				-0.00219**	
				(0.00418)	
ln(GDPPC) *Crisis					-0.245***
					(0.0924)
Constant	0.521***	-3.083***	-3.112***	-3.103***	-3.383***
	(0.0622)	(0.662)	(0.667)	(0.683)	(0.701)
Observations	81	81	81	81	81
R-squared	0.050	0.406	0.410	0.407	0.415
F-stat	12.00	16.31	17.18	14.24	13.95

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Source: The authors. The calculation was based on the data of the WDI (2023)

The results show that crises have significantly negatively impacted FDI outflows in Eastern European countries. In other words, the occurrence of a crisis reduces outward FDI from Eastern European countries by between 0.162 and 0.190 points. This is because, during a crisis, foreign companies may be less inclined to invest in countries with economic instability or cancel or delay their investment projects because of economic uncertainty and reduced domestic demand during the crisis. In addition, during economic crises, currencies can depreciate rapidly. This can make investments more expensive for foreign investors, as they must spend more in the local currency to obtain

the same returns. This can lead to a reduction in FDI flows to Eastern European countries. This result is supported by Dornean et al. (2012).³⁵

Concerning the control variables, infrastructure, trade openness, and economic growth, these seem to increase the productivity of investments and, therefore, stimulate FDI flows in Eastern European countries. In other words, a 1-point increase in infrastructure increases FDI by 0.001 to 0.002 points. Improving infrastructure boosts economic productivity and increases the capital available to residents to invest abroad. When trade openness increases by 1 point, it leads to a 0.01-point increase in foreign direct investment. Trade openness creates opportunities for residents to invest abroad. Economic growth increases FDI in Eastern European countries by 0.02 to 0.03 points when economic growth increases by one unit. The interaction between the crisis and the control variables has a negative impact on FDI in Eastern European countries.

Table IV shows the specific features of each crisis, and in particular, the results show that the effect remains the same regardless of the crisis. However, it can be seen that the 2001 crisis had a more significant negative effect on Eastern European economies than the 2020 COVID-19 crisis. This points to the negative importance of crises in the constitution of FDI in Eastern European countries.

Table IV: Considering the Effects of Different Crises

VARIABLES	Dep var: FDI		
	Robust OLS		
	(1)	(2)	(3)
Crisis_2001	-0.465***		
	(0.064)		
Crisis_2009		-0.264*	
		(0.150)	
Crisis_2020			-0.198*
			(0.118)
Constant	0.494***	0.489***	0.486***
	(0.057)	(0.058)	(0.059)
Observations	81	81	81
R-squared	0.031	0.013	0.007
F-stat	52.43	3.097	2.831

Notes: Robust standard errors are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Source: The authors. The calculation was based on the data of the WDI (2023).

³⁵ Adina Dornean, Vasile Işan & Dumitru-Cristian Oanea, "The impact of the recent global crisis on foreign direct investment. Evidence from central and eastern European countries".

Table V shows the effects of crises on foreign direct investment in the economies of Eastern Europe and Africa. The results remain robust when other regional specificities are considered. Most of the selected explanatory variables have a more significant effect in African countries than in Eastern Europe.

Table V: Robustness and regional specificities of crises

Variables	Dependent variable: FDI					
	Ln(gdppc)		Trade		Infrastructure	
	East Europe	Africa	East Europe	Africa	East Europe	Africa
Infrastructure	0.00822	-0.0355	0.00817	-0.0380	0.0107*	-0.00927
	(0.00511)	(0.0329)	(0.00520)	(0.0364)	(0.00606)	(0.0290)
Trade	0.0119***	0.00417	0.0123***	0.0102	0.0119***	0.00420
	(0.00251)	(0.00510)	(0.00278)	(0.00653)	(0.00252)	(0.00502)
ln(gdppc)	0.359***	0.601***	0.325***	0.479***	0.326***	0.470***
	(0.0677)	(0.192)	(0.0616)	(0.172)	(0.0613)	(0.168)
Crisis	-0.659*	-0.649*	-0.0695	-0.903*	-0.188	-0.104
	(0.681)	(0.689)	(0.351)	(0.527)	(0.223)	(0.185)
ln(gdppc)*Crisis	-0.215*	-0.926*				
	(0.116)	(0.504)				
Trade*Crisis			-0.00269	-0.0311*		
			(0.00422)	(0.0163)		
Infrastructure*Crisis					-0.0138	-0.188*
					(0.00885)	(0.106)
Constant	-3.872***	-4.433***	-3.610***	-3.763**	-3.657***	-3.502**
	(0.682)	(1.549)	(0.650)	(1.450)	(0.638)	(1.401)
Observations	81	88	81	88	81	88
R-squared	0.418	0.283	0.412	0.226	0.420	0.313
F	9.639	3.984	10.45	3.203	10.26	4.335

Notes: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: The authors. The calculation was based on the data of the WDI (2023).

Table VI shows that the effects of the selected control variables are reduced within African economies and amplified within Eastern European economies. This leads to the conclusion that, compared to African economies, Eastern European economies have specificities that favour the effects of the different mobilised variables.

Table VI: Considering Geographical Specificity

Variables	Dependent variable: Foreign Direct Investment						
	Total	East Europe	Africa	East Europe	Africa	East Europe	Africa
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Infras- tructure	-0.00698 (0.00495)	0.00479 (0.00546)	0.00479 (0.00546)	0.00572 (0.00556)	0.00572 (0.00556)	-0.0334 (0.0305)	0.00843 (0.00529)
Trade	0.00622*** (0.00203)	0.0104*** (0.00221)	0.0104*** (0.00221)	0.00227 (0.00446)	0.0125*** (0.00242)	0.0114*** (0.00224)	0.0114*** (0.00224)
ln(gdppc)	0.282*** (0.0796)	0.295** (0.142)	0.326*** (0.0595)	0.322*** (0.0806)	0.322*** (0.0806)	0.401*** (0.0743)	0.401*** (0.0743)
East Europe		-0.840 (1.149)		-1.186*** (0.277)		-0.918*** (0.201)	
Africa			0.840 (1.149)		1.186*** (0.277)		0.918*** (0.201)
ln(gdppc)* East Europe		0.0309 (0.153)					
ln(gdppc)* Africa			-0.0309 (0.153)				
Trade*East Europe				0.0102** (0.00499)			
Trade* Africa					-0.0102** (0.00499)		

Variables	Dependent variable: Foreign Direct Investment						
	Total	East Europe	Africa	East Europe	Africa	East Europe	Africa
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Infra*East Europe						0.0418	
						(0.0308)	
Infra* Africa							-0.0418
							(0.0308)
Constant	-2.264***	-2.539**	-3.379***	-2.382***	-3.567***	-3.287***	-4.205***
	(0.578)	(1.074)	(0.587)	(0.711)	(0.775)	(0.594)	(0.739)
Observations	169	169	169	169	169	169	169
R-squared	0.200	0.243	0.243	0.256	0.256	0.261	0.261
F	17.68	12.18	12.18	12.40	12.40	11.93	11.93

Note: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Source: The authors. The calculation was based on the data of the WDI (2023).

Limitations

Despite its endeavour to present an investigation out of critiques, this work, like most academic discussions, has a few limitations. The authors would like to emphasise three main aspects that may dilute the value of the paper's findings.

(1) *The selected panel countries*: Despite providing few criteria that have driven the authors' discretionary selection of panel countries, it is believed that if future research explores different intra-regional panel countries and even a more extensive selection, their results may lead to different conclusions;

(2) *The selected instruments*: As discussed above, due to the paper's need for delimitation and data availability, the instrument used for measuring the indicator of FDI's effect on infrastructure that the paper selected [the number of telephones per 100 inhabitants] may lead to less accurate results than other instruments [e.g., infrastructure reliability such as the frequency of telephone cuts];

(3) *The level of analysis*: The paper relies on macroeconomic data and rationales to draw its conclusions; however, academia argues that micro-

level analysis of FDI is also relevant to economic growth; the hope is that future research will take over such investigations.

In a broader perspective, the authors hope that future research may help address the above-acknowledged limits through more resources and fewer delimitations.

Conclusions and Implications

The paper confirms that, like in other regions of the world, foreign investors appear to reduce their exposure during crises in Eastern Europe and Africa. Observations of the stylized facts on the selected countries contradict the paper-defined assumption (A1) for the panel countries as the reduction of inflows is higher in Eastern Europe than in Africa, and inverted, *but not equal in volume*, are observed as far as the outflows are concerned. Moreover, despite the major impacts that were observed on GDP rationales against FDI due to crises in a few countries, (A2) appears to be confirmed. This is due to the apparent observation that, compared to Eastern European economies, the variations in net FDI's effects on infrastructure, trade openness, and economic growth are more significant in selected African economies. Also, the continent seems to be more impacted by crises despite its apparent FDI inflow resilience. The findings related to (A3) are, however, mitigated, as FDI resilience during a crisis seems to depend on the country's specific economic settings.

It was remarkably perceived that a few selected Eastern European and African countries [e.g., Serbia; Cameroon] display resilient capabilities with respect to FDI flows and change in GDP while suffering less from behavioural change during major economic meltdowns.

Furthermore, the following observations are of interest: (1) Independent of the region, some selected economies appear to attract FDI post-crisis more than others; (2) Few economies [Ukraine and South Africa] show a clear dependence on FDI whose outflows during crises are very high and reflected in change in GDP; and (3) The assumption that distance affects foreign investors' behaviour during crises cannot be verified for a few countries that displayed stable and resilient FDI settings even during crises [Cameroon and Serbia].

These findings support the argument for the need to pursue the theoretical discussion on ways to nurture resilience and FDI continuity post-crisis. The conclusions also advocate for policymakers to infer policies supporting the reduction of FDI outflows, the development of infrastructure, the improvement of trade openness, and ultimately, advancing sustainable FDI. In addition, it may be worthwhile for academia to investigate the FDI and GDP settings of Serbia and Cameroon since both economies present

resilient and fair variations of the FDI and the change in GDP rationales during crises.

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Industrial Digital Interdependence and FDI Restrictiveness as Determinants of FDI for Eastern European Economies

SUMMARY

In the time of industrial supply chain redesign due to COVID-19 and geopolitical risks, Eastern European Economies (EEE) can benefit from their strategic location and interdependent and interconnected manufactured structure to attract foreign direct investment (FDI), particularly in the semiconductor industry. As EEE emerges in the global semiconductor supply chain, they must balance FDI attraction with enhanced national security restrictions. By analysing the patterns of FDI inflows for 20 EEE over 2003–2022, developing interdependence industrial indices, and assessing FDI restrictiveness, we find that the combination of higher trade interdependence in electronics industries, European integration, and more favourable FDI restrictiveness leads to higher FDI inflows to Eastern European Economies. The findings reveal that a higher level of semiconductor interdependence between Asian countries and EEE will positively correlate with an increase in FDI inflows to EEE. However, it has been verified that there is a weak negative correlation between the FDI in EEE and the OECD FDI restrictiveness index. Conversely, in prospects for strategic investment for the ICT, electric vehicle (EV) battery manufacturing, and automobile sectors in EEE, the concentration of FDI in the Western Balkans and other non-EU candidates may further increase, indicating the need to participate in the common FDI restrictions process to balance interests with core European values. At the same time, there is no evidence of a positive impact of increasing Chinese

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outbound FDI on FDI in EEE, indicating the Chinese preference for developed EU countries, while Germany serves as the main FDI origin in EEE.

Keywords: COVID-19, FDI Restrictiveness Index, Semiconductors, Export Control, FDI Screening Mechanism, Chinese Investment, Electric Vehicle (EV) JEL Classification: F15, F21, F23, O52.

Индустријска дигитална међузависност и рестриктивност као детерминанте страних директних инвестиција у источноевропским економијама

САЖЕТАК

У времену редизајнирања индустријског ланца снабдевања услед пандемије COVID-19 и геополитичких ризика, источноевропске економије могу имати користи од своје стратешке локације, међузависне и међусобно повезане производне структуре у привлачењу страних директних инвестиција (СДИ), посебно у индустрији полупроводника. Како се ове економије појављују у глобалном ланцу снабдевања полупроводницима, оне морају уравнотежити привлачење СДИ са појачаним националним безбедносним ограничењима. Анализом образаца прилива СДИ за двадесет источноевропских економија између 2003. и 2022. године, развојем међузависних индустријских индекса и проценом рестриктивности СДИ, налазимо да комбинација веће међузависности трговине у електронској индустрији, европских интеграција и повољније рестриктивности СДИ доводи до већих СДИ у овим економијама. Налази откривају да ће виши ниво међузависности полупроводника између азијских земаља и источноевропских економија позитивно корелирати са повећањем прилива СДИ у другим економијама. Међутим, потврђена је слаба негативна корелација између СДИ у источноевропским економијама и индекса рестриктивности СДИ ОЕCD. Насупрот томе, изгледи за стратешка улагања у информационим технологијама, производњи батерија за електрична возила и аутомобилским секторима у источноевропским економијама, концентрацијом СДИ на Западном Балкану и другим кандидатима који нису чланице ЕУ могли би се даље повећати, указујући на потребу учешћа у заједничком процесу ограничења СДИ и уравнотежавања интереса са основним европским вредностима. Истовремено, нема доказа о позитивном утицају повећања кинеских инвестиција на СДИ у источноевропским економијама, што указује на кинеску преференцију према развијеним земљама ЕУ, док Немачка служи као главни извор СДИ у поменутим економијама.

Кључне речи: пандемија COVID-19, индекс рестриктивности страних директних инвестиција, полупроводници, контрола извоза, стране директне инвестиције, *Screening* механизам, кинеске инвестиције, електрична возила, ЈЕЛ класификација: Ф15, Ф21, Ф23, О52

Introduction

In the early post-COVID recovery phase of 2020-2021, Eastern European Economies (EEE) attracted significant foreign direct investment (FDI) inflows driven by their export-oriented manufacturing, particularly machinery and motor vehicles, and a less restrictive FDI regime. Indeed, in recent years, the average share of manufactured goods in EEE's total exports has steadily been growing, reaching 64% in 2022. Moreover, in Hungary, the Czech Republic, Slovenia, and Slovakia, this share is approximately 85%, which is higher than the EU average of 74%.²

However, today, geopolitical tensions and technological interdependence and interconnectivity are driving supply chain redesign, especially in the advancements in the Information and Communication Technology (ICT) industry and related semiconductor sector, which are core to electronics and EV battery production. This has led to a delicate balancing act for EEE as they navigate between national securities concerns, applying foreign investment screening mechanisms, and active participation in global supply chains. In 2022, the share of manufacturing in EEE's total exports has shown either stagnant growth or slower expansion compared to the share of services in the region's total exports. Specifically, Lithuania, Serbia, and Montenegro rank as leaders in terms of the percentage change in exports of knowledge-intensive services.³

During the pandemic, semiconductors became a critical commodity for trade, as they are essential components of industrial automation and data processing, as well as modern electronics and information technology; they are widely used in the automobile industry, computers, smartphones, tablets, and other consumer electronics. The European Economic Security Strategy of 2023 and the European Chips Act of 2023 underscore the importance of the semiconductor industry for economic growth in Europe.

The countries in the region of EEE are also focused on enhancing their ICT, electronic, and automobile sectors to ensure their national economic security and competitiveness. As part of this effort, we aim to gain a deeper understanding of how industrial development, primarily in the semiconductor and ICT sectors, along with macroeconomic factors and regulations governing FDI, can influence FDI inflows, especially during the post-COVID recovery phase.

Our primary concern is that the EEE region is underestimated in terms of its potential for digital transitions and as a significant resource for economic

² "World Development Indicators DataBank", World Bank, <https://databank.worldbank.org/source/world-development-indicators#>, 06/25/2023.

³ Angelo Legrande, "The Export of High Knowledge Intensity Services of European Countries", *MPRA Paper*, No. 112795, 2022, 1.

growth within Europe. The research idea stems from the unique position of EEE, which has access to the EU's Single Market, ICT infrastructure, and favoured FDI regulation. FDI can help build and develop semiconductor industries and IT hubs in the region to diversify supply chains for all countries in Europe, focusing on current interdependence and influential factors such as the degree of European integration and investment restrictions.

For the purposes of our study, which mostly focuses on the impact of industrial development on FDI, we focus on the trade in semiconductors, impose FDI regulation, and categorise countries into the Eastern Europe region based on the United Nations definition, including Kosovo and excluding the Russian Federation, Belarus, Armenia, and Azerbaijan.

We aim to fill this gap by conducting a comprehensive analysis that specifically focuses on the correlation between FDI inflows into Eastern European countries, trade interdependence with Asian nations, and FDI restrictions in the region. Additionally, we verify the relationship between Chinese investment in Europe and the trade dynamics between European and Asian economies.

Our research will encompass various aspects, including the examination of key trade patterns, bilateral investment flows, and economic convergence. We will also consider the role of government policies, trade agreements, and regional economic integration in influencing FDI patterns.

This study assesses the industrial digital interdependence and restrictiveness as determinants of FDI to 20 Eastern European Economies over 2003-2022. More precisely, we investigate the relationship between FDI inflows as a percentage of GDP and two critical factors: semiconductor interdependence between China, Taiwan, and EEE, as well as FDI restrictiveness imposed by the EU and other Eastern European countries. We pay particular attention to FDI in EEE that originates from the EU (Germany) as well as FDI from China in order to evaluate whether their effects are different from the effects of FDI from other places of origin. Additionally, we examine whether there are differences in the impacts of different periods of European integration, before and after becoming an EU member or candidate, as well as focusing on trade and FDI that go to different sectors of the economy, such as the electronics and information technology sectors.

The remainder of this paper is organised as follows: Section 2 reviews the literature on the effects of economic, political, and institutional factors on FDI and describes the methodology for measuring trade interdependence and FDI restrictions. Section 3 provides an overview of FDI trends reflected in the dynamics of trade semiconductors and FDI restrictions in Europe. Section 4 applies the empirical analysis and results of the FDI determinants in the region. Section 5 contains the findings and policy implications.

Review of FDI Determinants Studies and the Methodology of Trade Interdependence

While the literature provides a wide range of FDI determinants, such as economic size and growth, openness to trade, infrastructure development, and institutional quality, trade interdependence in the progressive industrial sectors, as well as investment regulatory barriers, are not practically examined.⁴ Some studies have pointed out that FDI attractiveness and trade activity are heavily influenced by geopolitics and regional prospects but do not take into account the country's ability to connect with partners, particularly in cutting-edge industries such as semiconductors.⁵ A focus on only the traditional factors of FDI and trade in Eastern European countries often misses some of the wider effects.

Eastern European countries remain collectively largely open to FDI and trade. Although European trade interdependence in the progressive industrial sectors and FDI restrictions might determine trade, investment, and European integration, quantitative estimates of such factors have been lacking. Based on the applied international trade and FDI literature, we measure interdependence in the electrical machinery and optical equipment sector by developing the Interdependence Index and measure restrictions by the OECD FDI Regulatory Restrictiveness Index (FDI Index).

Some authors performed an empirical model to assess the effect of restrictive policies on cross-border investment in the EU over 2011-2018 but did not explicitly consider the role that FDI restrictions and

⁴ Alan Bevan, Saul Estrin, Klaus & Meyer Beva, "Foreign Investment Location and Institutional Development in Transition Economies", *International Business Review*, Vol. 13, No. 1, 2004, 43–64; Bruce A. Blonigen & Jeremy Piger, "Determinants of Foreign Direct Investment", *Canadian Journal of Economics*, Vol. 47, No. 3, 2014, 775–812; Elizabeth Asiedu, "On the Determinants of Foreign Direct Investment to Developing Countries: Is Africa Different?", *World Development*, Vol. 30, No. 1, 2002, 107–119; Elizabeth Asiedu, "Foreign Direct Investment in Africa: The Role of Natural Resources, Market Size, Government Policy, Institutions, and Political Instability", *The World Economy*, Vol. 29, No. 1, 2006, 63–77; Nguyen Phuc Canh, Nguyen Thanh Binh, Su Dinh Thanh & Christophe Schinckus, "Determinants of Foreign Direct Investment Inflows: The Role of Economic Policy Uncertainty", *International Economics*, Vol. 161, No. C, 2020, 159–172; Leena Ajit Kaushal, "Impact of Institutional and Regulatory Quality on FDI Inflow: Case of a Developing Indian Economy", *Cogent Economics & Finance*, Vol. 9, No. 1985201, 2021.

⁵ Nor'Aznin Abu Bakar, Siti Hadijah Che Mat & Mukaramah Harun, "The Impact of Infrastructure on Foreign Direct Investment: The Case of Malaysia", *Procedia Social and Behavioral Sciences*, Vol. 65, 2012, 205–211; Nicholas Bailey, "Exploring the Relationship between Institutional Factors and FDI Attractiveness: A Meta-Analytic Review", *International Business Review*, Vol. 27, No. 1, 2018, 139–148; Amitendu Palit, "Trade and Economic Connectivity in an Age of Uncertainty: South Asia and Indo-Pacific", Konrad Adenauer Stiftung, https://www.kas.de/documents/288143/6741384/panorama_trade_Amitendu_Palit_TradeandEconomicConnectivityinanAgeofUncertainty_SouthAsiaandIndo-Pacific.pdf/48620d6c-c9dc-8090-9393-e37e429e29e7?t=1564644887447, 06/27/2023, 113-121.

interdependence might simultaneously play.⁶ In line with researchers, we estimate that even partial FDI restrictions can have a strong impact on FDI in Europe.⁷ Some studies investigate the link between interdependence and aggregate trade flows; the relationship between trade interdependence in the electrical machinery and optical equipment sector and national FDI has not been covered.⁸

To determine whether the process of economic convergence with the European Union influences FDI inflows in EEE, some authors analysed five EU countries (Bulgaria, the Czech Republic, Poland, Romania, and Hungary) during the period from 2001 to 2010, all of which are now members of the EU. In our study, we investigate the relationship between FDI and economic convergence, considering trade interdependence in the electrical machinery and equipment sector and FDI regulations for all countries undergoing the process of becoming EU member states, including the Western Balkans, Ukraine, Moldova, and Georgia.

Some recent papers verify the relationship between trade position, inflation rate, and FDI in the EU and the Western Balkans or investigate the impact of European integration on capital flows to prospective EU member states.⁹ However, we estimate the impact on FDI for a much wider range of countries and over a longer time period than in previous studies.

While scholars have explored the potential of value chain resilience between the EU and Asian countries and have analysed Chinese investment in Europe, far fewer have examined their interdependence in semiconductor trade and the impact of the EU's FDI screening on FDI.¹⁰ Filling this research

⁶ Wildmer Gregori & Michaela Nardo, "The Effect of Restrictive Measures on Cross-Border Investment in the European Union", *World Economy*, Vol. 44, 2021, 1914-1943.

⁷ Fernando Mistura & Caroline Roule, "The Determinants of Foreign Direct Investment: Do Statutory Restrictions Matter?", OECD Working Papers on International Investment, <https://www.oecd-ilibrary.org/docserver/641507ce-en.pdf?expires=1697549994&id=id&accname=guest&checksum=EFDD2CA20EFB5DE7145B0488DC28FF97>, 06/28/2023, 4-57.

⁸ C. T. Vidya, K. P. Prabheesh & Saahil Sirowa, "Is Trade Integration Leading to Regionalization? Evidence from Cross-Country Network Analysis", *Journal of Economic Integration*, Vol. 35, No. 1, 2020, 10-38; C.T. Vidya & Farhad Taghizadeh-Hesary, "Does Infrastructure Facilitate Trade Connectivity? Evidence from the ASEAN", *Asia Europe Journal*, Springer, Vol. 19, No. 1, 2021, 51-75.

⁹ Dajana Ercegovac & Emilija Pucar, "The Nexus Between FDI and External Balance in Selected Emerging European Economies – A Panel Data Approach", *The Annals of the Faculty of Economics in Subotica*, Vol. 58, No. 47, 2022, 147-164; Ljuben Jirasavetakul & Johanna L. Y. Rahman, "Foreign Direct Investment in New Member States of the EU and Western Balkans: Taking Stock and Assessing Prospects", IMF Working Papers, No. 187, 2018, 1-37.

¹⁰ Akhil Thadani & Gregory C. Allen, "Mapping the Semiconductor Supply Chain: The Critical Role of the Indo-Pacific Region", Center for Strategic and International Studies, <https://www.csis.org/analysis/mapping-semiconductor-supply-chain-critical-role-indo-pacific-region>, 06/28/2023.

gap can provide valuable insights and contribute to the existing body of knowledge. Research in this area can inform policymakers about the consequences of their decisions regarding trade and investment regulations. It can help them make more informed choices to support economic growth, innovation, and national security.

To analyse the complexity of trade interdependence in high-tech industries with global significance between EEE and its partners, we adopt the OECD practice and focus on semiconductor production within the middle segment of the supply chain.¹¹ We collected trade data for products HS 8541 and HS 8542 specifically for all Eastern European countries and major trade partners, including the EU, US, China, and Taiwan, spanning from 2003 to 2022.

The product categories 8541 and 8542 correspond to the electrical machinery and equipment sector in the classification of the Harmonised Commodity Description and Coding System (HS codes) by the World Customs Organisation. We also conducted an analysis of the trade patterns and dynamics of semiconductors, providing a comprehensive understanding of the interactions between these key partners.

The EEE Interdependence Index in the semiconductor industry focuses on the overall trade flows between EEE, Germany, and Asian countries. It calculates the ratio of imports from Germany or Asian countries to EEE to the total EEE imports and the ratio of exports from EEE to Germany or Asian countries to the total EEE exports (Formula 1). By analysing the EEE Interdependence Index, we can also assess the level of significance of the semiconductor industry in facilitating interdependence in the region.

EEE Interdependence Index

$$= \left(\frac{\text{Imports of semiconductor goods from Germany (China or Taiwan) to EEE}}{\text{Total EEE imports}} \right) / \left(\frac{\text{Exports of semiconductor goods from EEE to Germany (China or Taiwan)}}{\text{Total EEE exports}} \right) \quad (1)$$

The index value ranges from 0 to 1, where 0 represents no interdependence and 1 represents complete interdependence. A higher index value indicates a higher level of interdependence between EEE, the EU, and Asian countries in semiconductor trade. We suggest that as the

¹¹ "Measuring distortions in international markets: The semiconductor value chain", OECD Trade Policy Papers, No. 234, <https://www.oecd-ilibrary.org/docserver/8fe4491d-en.pdf?expires=1697547407&id=id&accname=guest&checksum=881161462BFEAD39FE39C882F6591EBE, 06/29/2023, 1-111>.

semiconductor industry becomes increasingly crucial in the global economy, deeper interdependence in this sector between EEE, the EU, China, and Taiwan will drive more investment and foster greater economic connectivity with EEE.

Conversely, growing scrutiny of foreign investment in Europe will negatively impact FDI inflows to the region. To verify if a more restrictive policy deters FDI in Europe, first we observe FDI restrictions for the sample countries measured by the OECD FDI Regulatory Restrictiveness Index (FDI Index). Then, we demonstrate the distribution of the FDI Index across European countries and compare how various levels of FDI restrictions relate to foreign investment flows.

Four types of measures are covered by the FDI Index: foreign equity restrictions, screening and prior approval requirements, rules for key personnel, and other restrictions on the operation.¹² It makes possible the use of the FDI Index to track regulation over time and provide a perspective on recent trends in FDI activity in European countries. Finally, we determine if countries where this measure is less restrictive systematically attract more FDI.

Dynamics of Trade Interdependence and FDI Restrictions

Global cross-border investment activities declined in 2022 after the strong recovery of FDI observed in 2021. With extensive global and regional connectivity links and trade interdependence, Europe is the largest destination of FDI stocks in the world, accounting for more than one-third (35%) of all inward investment positions over the period 2010-2022. However, European investment was no exception to the trend, falling in 2022.

Despite the decrease in FDI to the developed EU countries, FDI to EEE regularly increases, driven by the FDI growth in the Western Balkans and other EU candidates. Between 2003 and 2022, the world as a whole has been receiving FDI inflows of around 2.5% of global GDP, while foreign investment in EEE has averaged 6% of GDP. Most of these inflows into EEE, around 70% of the total, have come from the nearby EU15 countries. Moreover, the EU is the largest trade and FDI partner for the new EU candidates and applicants (Ukraine, Moldova, and Georgia), accounting for 52% of the total trade in Moldova, 39% in Ukraine, and 22% in Georgia in 2022.

Despite the US remaining the top EU foreign ultimate investment partner, in this paper we focus on the Asian partners among non-European

¹² Blanka Kalinova, Angel Palmeri & Stephen Thomsen, "OECD's FDI Restrictiveness Index: 2010 Update", OECD Working Papers on International Investment, <https://www.oecd-ilibrary.org/docserver/5km91p02zj7g-en.pdf?expires=1697549906&id=id&accname=guest&checksum=A798C04B283EBE20BCB585CEF004608A,07/01/2023,1-27>.

FDI since the trade and FDI relations between Asian partners and European countries are undergoing the most pronounced changes.

The new phase of Europe-China trade and FDI connectivity over 2019-2021, in turn, has reduced Chinese FDI in the EU to its lowest value since 2010. However, China is still one of the largest investment sources for most European countries. In 2022, there was an increase in investment in the Eastern European automotive sector from Chinese battery giants, including CATL in Hungary. Between 2017 and 2021, the country received less than 1% of all Chinese investment in Europe. In 2022, by contrast, Chinese investment in Hungary was almost entirely driven by CATL's new gigafactory, with an announced total value of 7.6 billion EUR, making Hungary the electric vehicle (EV) battery hub for Europe.¹³

In addition, Chinese FDI covers all regions in Europe: EU countries, the Western Balkans, and Central European countries. Indeed, many Eastern European countries, such as Poland, the Czech Republic, Slovakia, Hungary, Romania, Bulgaria, Slovenia, Croatia, and others, are actively involved in the automobile and IT industries. The automobile industry in Europe relies on a complex global semiconductor supply chain where components are sourced from Asian countries. In recent times, the global semiconductor shortage has affected the automotive sector, leading to production delays and disruptions in EEE that illustrate the importance of interdependence in semiconductors for the automobile industry.

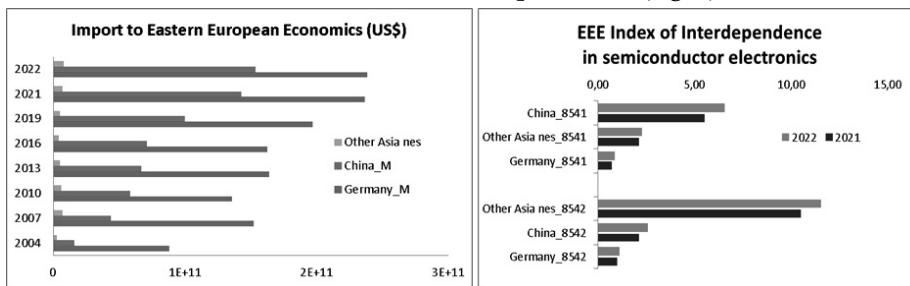
Besides this, the ICT industry in EEE is rapidly growing, with many countries, such as Poland, Romania, Serbia, Ukraine, and others, becoming hubs for software development, ICT services, and technology startups. Similar to the automotive industry, the ICT sector is highly dependent on semiconductors sourced from Asian suppliers, mainly Taiwan and China. Therefore, fostering interdependence in semiconductors can yield positive effects on FDI attraction in Eastern European countries by enticing high-tech companies, fostering innovation in the automobile and ICT sectors, enhancing national economic security, and bolstering the global competitiveness of EEE as a whole.

In terms of sectoral focus, there is a clear shift in Europe from infrastructure and finance FDI towards the automotive and ICT sectors with the required semiconductor devices. The importance of semiconductors in various industries, including automotive and ICT, has grown significantly, and interdependence in semiconductor trade has indeed become a significant determinant for FDI inflows to Europe.

¹³ Agatha Kratz, Max J. Zenglein, Gregor Sebastian & Mark Witzke, "EV Battery Investments Cushion Drop to Decade Low - Chinese FDI in Europe: 2022 Update. Rhodium Group & Mercator Institute for China Studies", MERICS, <https://merics.org/en/report/ev-battery-investments-cushion-drop-decade-low-chinese-fdi-europe-2022-update>, 07/02/2023.

Zooming in on the trends among the main partners of EEE, China and Taiwan have demonstrated a more pronounced growth in semiconductor exports (Figure 1, left), since most of the world's fabs are located in the Indo-Pacific region.

Figure 1. EEE Import of Semiconductors (left) and EEE Index of Interdependence (right)



Sources: International trade statistics of the United Nations (COMTRADE) and own calculations.

Notes: The trade data for Taiwan, Province of China, is categorised under "Other Asia, nes".

As seen from Figure 1 (left), despite Germany being the main trade partner for Eastern European countries, especially in the semiconductor sector, trade with China and Taiwan has increased more than threefold since 2004. While China focuses on the production of battery modules and less advanced chips, it also exhibits the highest degree of total interdependence and external orientation in the semiconductor industry with Europe. Moreover, the value of Chinese imports of semiconductors is growing at a faster rate compared to that of Germany or Taiwan. At the same time, Taiwan is becoming the world leader in advanced chip production, which drives its export growth. Subsequently, European countries increased their reliance on foreign suppliers from Asian countries, and the EEE's imports of semiconductor goods have grown by approximately 120% from 2016 to 2022.¹⁴

Indeed, as seen from Figure 1 (right), in the sector of diodes, transistors, and similar semiconductor devices (HS code 8541), China has a dominant position, while Taiwan has an advantage in exporting to the EU goods in the most advanced chips (HS code 8542).

Figure 1 (right) also illustrates the application of the EEE Index of Interdependence between the EEE, Germany (EU), and Asian countries in semiconductor devices. The Interdependence Index between EEE and Asian

¹⁴ "UN Comtrade Database", <https://comtrade.un.org/data>, 07/02/2023.

countries in the semiconductor sector has a higher level than with Germany. This suggests that Germany (EU) demonstrates a greater degree of self-sufficiency and export competitiveness in the semiconductor industry.

The EEE Interdependence Index value in semiconductor devices (HS code 8541) exceeds 1, indicating a higher dependency on semiconductor imports from China, and a similar pattern is observed in the EU's dependency on advanced chips (HS code 8542) imports from Taiwan compared to its own semiconductor exports. This suggests that the EU relies more on foreign sources for semiconductor goods to meet its domestic demand. For Asian countries, this is evidence of their moving into the Eastern European market. Moreover, Asian countries will start producing semiconductors in Europe, providing an opportunity for Chinese EV makers. Investing in Eastern Europe would help them save on tariffs and production costs and also encourage EEE to participate in the global supply chain and increase their competitiveness.

Taken together, these factors suggest that countries with trade interdependence could provide FDI inflows to Eastern European countries. By examining the values of Interdependence Indices, it is possible to assess that deeper interdependence in this sector between Asian countries and EEE determines more investment and fosters economic integration.

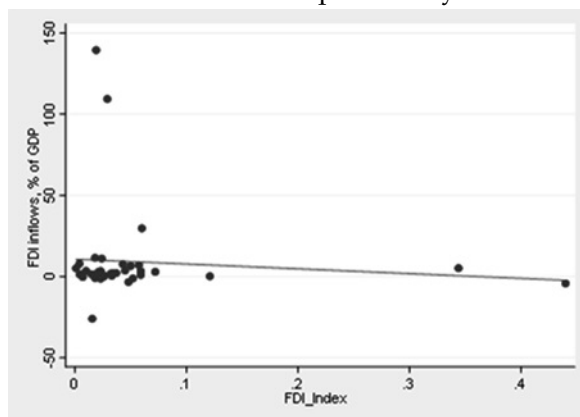
On the other hand, recent concerns among European countries regarding Chinese investment have led to the strengthening of FDI screening regulations and trade restrictions, which could impact FDI and trade in the region. The possible links between regulatory restrictions on foreign investment and FDI inflows across Europe through a descriptive analysis are explored in Figure 2. Based on the data from 2020, we have extrapolated the figures for 2022. The highest FDI Index score of 1 indicates that a country has a fully restrictive regime for FDI, and the lowest is 0, indicating that there are no regulatory impediments to FDI.

Although the patterns of FDI are broadly comparable for all European countries, the gap between EU members and EU candidates or applicants is high and quite marked. In total, about 97% of the countries in the database are open to FDI since the score of their FDI indices is between 0.0 and 0.05, compared to the average level of 0.06 in the OECD.¹⁵ The indices also indicate that the Western Balkan countries have considerably open regulatory FDI frameworks. Specifically, in 2020, Kosovo had a minimal index level of 0.001, Montenegro had 0.024, while France had 0.045, Sweden had 0.059, and Austria had 0.106. Indeed, the growth rate of FDI in the EU was less than that in the Western Balkans and the new EU candidates over the period 2014-

¹⁵ "FDI Regulatory Restrictiveness Index. OECD Statistics", OECD, <https://stats.oecd.org/Index.aspx?datasetcode=FDIINDEX#>, 07/03/2023.

2022.¹⁶ It is probably one of the reasons why the growth of inward FDI in the Western Balkans exceeds the average in Europe.

Figure 2. FDI Inflows (% of GDP) and FDI Index in Europe for the year 2022



Source: Own elaborations on data: growth rates of FDI and FDI inflows as % of GDP calculated based on the World investment report (2023); FDI Regulatory Restrictiveness Index is from <https://stats.oecd.org/Index.aspx?datasetcode=FDIINDEX#>

Note: Restrictions are evaluated on a 0 (open) to 1 (closed) scale.

Figure 2 provides a complementary view of the trends of FDI regulatory restrictions embedded in changes in FDI inflows to European countries in recent years. This could be evidence of our suggestion of FDI attractiveness for the target countries: less restrictive countries tend to receive more FDI relative to the size of their economies. On the other hand, concerns about technological national security have led to increased FDI restrictiveness in European countries, especially as industrial interdependence and ICT have advanced.

Although the evidence in this sample seems limited, it suggests that changes in a country's FDI regulatory regime indeed influence changes in FDI flows to Eastern European countries. This is especially the case for the Western Balkans, where FDI accounts for a higher share of gross domestic product (GDP), indicating that the Western Balkans have considerably open regulatory FDI frameworks, especially when compared to the EU members and candidates. At the same time, not only the higher growth but also the stable FDI flows into the developed European countries may reflect the

¹⁶ "World Investment Report 2023", United Nations Conference on Trade and Development (UNCTAD), <https://unctad.org/publication/world-investment-report-2023>, 07/05/2023.

strength of favourable FDI regimes and other locational factors, namely the larger market size within the Single Market of the EU.

More generally, non-European investors have a preference to invest in countries with more established regulatory frameworks and market environments, and EU investors are more likely to invest in a similar market and regulatory regime.

For example, Chinese FDI has traditionally been more significant in developed EU countries. Nevertheless, there are a growing number of prohibitions on investments in the EU originating from China. Notably, one-third of the screenings involved proposed acquisitions of semiconductor firms, a sector that both the Chinese and European governments consider highly strategic.¹⁷ Consequently, Chinese companies may also choose to invest in less restrictive Balkan countries, either to gain access to the larger European Union market or for infrastructural reasons.

Empirical Analysis and Findings of FDI Determinants in Eastern European Economies

Data and Model specification

Our study primarily aims to investigate the impact of industrial development and FDI restrictiveness on FDI's post-COVID recovery in EEE. We specifically categorise countries within the Eastern Europe region based on the United Nations definition. We analysed 20 countries from the region over the period 2003-2022, including Kosovo, while excluding the Russian Federation, Belarus, Armenia, and Azerbaijan. The complete list is presented in Appendix A.

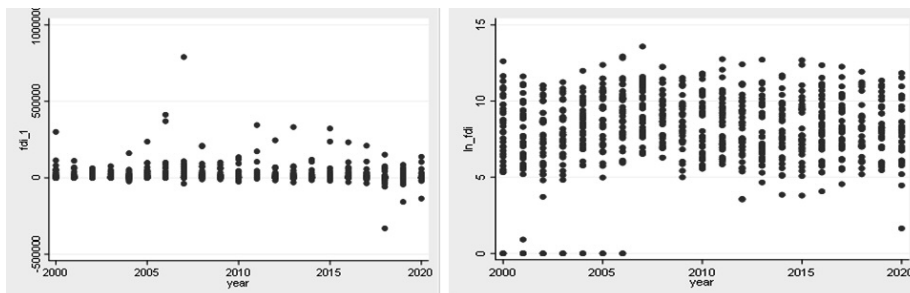
The study uses "FDI as % of GDP" as a dependent variable that represents FDI relative to the size of the country's economy (GDP). This allows for comparisons between countries of different sizes and economic strengths, providing a more standardised assessment. It is because larger economies tend to attract higher FDI inflows in absolute US dollars terms. By using "FDI as % of GDP," the analysis considers the significance of FDI in relation to the country's economic size. Additionally, "% of GDP" reduces the impact of currency fluctuations on FDI data, which can distort trends when using "FDI inflows in US\$.

We take the dependent variable in a natural logarithmic form for two main reasons. The first is to respond to skewness towards large values of

¹⁷ Agatha Kratz, Max J. Zenglein, Gregor Sebastian & Mark Witzke, "EV Battery Investments Cushion Drop to Decade Low - Chinese FDI in Europe: 2022 Update. Rhodium Group & Mercator Institute for China Studies".

FDI when one or a few points are much larger than the rest of the data. The second is to show percent change or multiplicative factors. Figure 3 shows how a log transformation can make patterns of FDI in EEE more visible. As seen, it is hard to distinguish a pattern of FDI in the left panel, whereas the strong relationship is shown clearly in the right panel.

Figure 3. Scatter Plots of FDI Inflows:
Level Data (left) and Log-Transformed Data (right)



Source: Own elaborations on data

As discussed in Section 2 of the analysis of FDI trends in Europe and the preceding literature review, this study employs a set of potential independent variables that might influence FDI flows in the sample countries. Namely, the paper focuses on the Interdependence Index, European integration, FDI restrictiveness, and the degree of ICT development. FDI restrictions are measured by the OECD FDI Regulatory Restrictiveness Index. The time horizon is 2003–2022 ($T=20$), the number of countries is 20 ($N=20$) and it changes according to the year (making an unbalanced panel) because some observations are missing.

Based on the literature, we suggest the following baseline model:

$$\ln_FDI_{it} = \beta_1 II_{it} + \beta_2 EU_{it} + \beta_3 \ln_CH_t + \beta_4 \ln_Gmn_t + \beta_5 FDI_R_Index_{it} + \beta_5 \ln_ICT_{it} + u_{it} \quad (2)$$

where $\ln_FDI_{it}$ is a logarithm of FDI inflows (% of GDP) to country i at time t , $\ln_ICT$, $\ln_CH$, $\ln_Gmn$, EU , $\ln_II$, FDI_R_Index are the explanatory variables, and u_{it} is the composite error term consisting of fixed effects and the idiosyncratic error term. The variables of main interest, $\ln_II$ and FDI_R_Index , are described in Section 2. Namely, the OECD FDI Regulatory Restrictiveness Index (FDI_R_Index) measures statutory restrictions on foreign direct investment in 22 economic sectors across countries and influences investors' choices for investment locations, clarifying the observed

correlation between positive FDI policy changes in one country and similar changes elsewhere. The degree of investment regulation openness plays a pivotal role in attracting investments.

As a consequence, European integration forms and treaties (such as the EU) that are associated with higher FDI restrictions might lead to a reduction in non-European FDI growth within the EU while potentially increasing FDI in the Balkan countries, Ukraine, Georgia, and Moldova.

Definitions, methods of calculation, and sources of the independent variables are presented in Table 1.

Table 1. Definition of the Independent Variables

Independent variables	Name	Description	Unit	Source
Interdependence Index	ln_II	A measure of the level of interdependence in the semiconductor trade between Eastern European Economies (EEE) and Asian countries.	Index	Own calculation based on the COMTRADE database
European Integration	EU	A categorical variable indicating the degree of integration of the country within the European Union (EU membership).	0,1	European Commission website https://ec.europa.eu/info/policies/eu-enlargement_en
FDI Regulatory restrictiveness index	FDI Index	FDI Regulatory Restrictiveness Index, including foreign equity restrictions, screening and prior approval requirements, rules for key personnel, and other restrictions on the operation of foreign investors.	between 0 (open) to 1 (closed) scale	OECD database

Independent variables	Name	Description	Unit	Source
German FDI Outflows	ln_Gmn	The natural logarithm of German foreign direct investment (FDI) outflows	% of GDP	World Development Indicators
China's FDI Outflows	ln_CH	Chinese foreign direct investment, net outflows (in logarithmic form).	% of GDP	
Information and Communications Technology (ICT)	ln_ICT	A measure of the ICT development level in the country. The calculated sum of information and communication technology goods and services is exported (in logarithmic form).	% of total goods and service exports	World Bank Data

Source: Authors' elaboration.

For the robustness of our results in terms of alternative explanations, we include in the equation more control variables, namely interaction terms. So, an augmented equation (3) is:

$$\ln_FDI_{it} = \beta_1 I_{it} + \beta_2 EU_{it} + \beta_3 \ln_CH_t + \beta_4 FDI_R_Index_{it} + \beta_5 \ln_ICT_{it} + \beta_6 \ln_Gmn_t + \beta_7 FDI_R_Index * EU_{it} + \beta_8 \ln_CH * EU_{it} + u_{it} \quad (3)$$

where variables are the same as in equation 2, and additionally, to differentiate between various groups of countries, we estimate the data with interaction terms. Specifically, we consider the $FDI_R_Index*EU$, which represents the FDI Regulatory Restrictiveness Index for EU members, and $CH*EU$, which signifies Chinese FDI in the EU. It allows us to test if the relationship between FDI attractiveness (as measured by the FDI index) as well as non-European FDI (as measured by Chinese FDI outflows) and FDI in EEE is influenced by EEE's EU membership. We explore how the effect of FDI restrictiveness on EU members and Chinese outflows within the EU might differ compared to other countries in the sample. Based on the equations, we propose the following hypotheses:

Hypothesis 1:

It is hypothesised that a higher level of semiconductor interdependence between Asian countries and the EU will positively correlate with an increase in FDI inflows as a percentage of GDP in the region. As the semiconductor industry becomes more crucial to the global economy, deeper interdependence in this sector between China, Taiwan, and EEE is expected to attract more investment in the region and foster economic connectivity.

Hypothesis 2:

An improved regulatory environment (positive *FDI_R_Index* coefficient) leads to increased FDI in EEE. Concurrently, higher FDI restrictiveness in European countries reduces FDI for EU members in EEE with stricter regulations. This suggests that non-European partners are expected to be less likely to invest in countries with fewer regulatory FDI regimes, while EU investors are more inclined to invest in similar regulatory environments.

Hypothesis 3:

EEE countries with lower levels of ICT exports may be less attractive to foreign investors in technology-intensive sectors compared to EU countries with stricter FDI regulations and a guaranteed investment climate. Consequently, we expect that higher outbound FDI from China will be negatively correlated with FDI inflows to EEE, as it is more likely to be directed towards the developed EU countries, and higher FDI from Germany will be positively associated with higher FDI in EEE.

To test and support the hypotheses, we applied various empirical estimators and methods.

Empirical Methods and Results

Starting with the pooled OLS (*POLS*) model allows us to observe the relationships between variables in a straightforward manner. However, given the significant differences between countries in our sample, such as varying levels of economic development, trade patterns, and policy stability, there may be heterogeneity in the effects of FDI determinants in Eastern European countries, even after scaling variables with GDP. To address these issues and account for potential heteroskedasticity and autocorrelation, we implemented *xtpcse* (*PCSE*) (Heteroskedasticity and Autocorrelation Consistent Covariance Matrix) estimation in our analysis. This approach helps to improve the efficiency of estimates and provides more robust results when dealing with panel data that exhibit diverse economic conditions and FDI regulation across countries.

However, PCSE does not control for time-invariant, unobserved individual characteristics of Eastern European countries that may be correlated with our independent variables. To address this concern, we

proceeded to conduct a static panel data analysis. Based on the test results, we conclude that the fixed effects (FE) estimator is more efficient for our sample. We also extend the same methodology used for Equation 3 to include interaction variables. The empirical results are presented in Table 2.

Table 2. The Estimated Effects on FDI in EEE

Model	(1)	(2)	(3)	(4)	(5)	(6)
Estimator	POLS1	PCSE1	FE1	POLS2	PCSE2	FE2
Dependent variable	ln_FDI					
ln_II	0.1573 (0.0844)*	0.1573 (0.0826)**	-0.2116 (0.1302)	0.1548 (0.0834)*	0.1548 (0.0887)*	-0.3046 (0.1327)*
EU	-0.3594 (0.1368)**	-0.3594 (0.1194)**	-0.3779 (0.2049)+	-0.4636 (0.1285)**	-0.4636 (0.1522)**	-0.5183 (0.2162)*
ln_CH	-0.2906 (0.2345)	-0.2906 (0.1528)+	-0.1968 (0.1506)	-0.0771 (0.1947)	-0.0771 (0.2438)	0.1823 (0.1969)
ln_Gmn	0.1741 (0.1457)	0.1741 (0.0951)+	0.2245 (0.0910)*	0.1579 (0.0952)+	0.1579 (0.1416)	0.2136 (0.0902)*
ln_ICT	-0.1264 (0.0664)+	-0.1264 (0.0616)*	0.0522 (0.0746)	-0.1266 (0.0619)*	-0.1266 (0.0689)+	0.0899 (0.0749)
FDI_R_Ind ex	0.0029 (0.0025)	0.0029 (0.0030)	0.0010 (0.0030)*	0.0026 (0.0030)	0.0026 (0.0025)	-0.0007 (0.0029)
FDI_R_ Index*EU				0.9692 (0.6731)	-0.9692 (0.5506)	-0.5320 (0.7954) +
ln_CH*EU				-0.4146 (0.2550)	-0.4146 (0.3495)	-0.7377 (0.2459)**
_cons	1.4349 (0.2196)**	1.4349 (0.1657)**	1.3200 (0.1815)**	1.4926 (0.1672)**	1.4926 (0.2121)**	1.4284 (0.1838)**
N	400	400	400	400	400	400
r2	0.0499	0.0499	0.0345	0.0626	0.0626	0.0575

Source: Authors' elaboration.

Note: Standard errors in parentheses + p < 0.10, * p < .05, ** p < .01

As seen from Table 2, overall, both models show highly significant results. The R-squared coefficient, consistent with similar studies in this field, confirms the presence of unobserved country-specific factors, which encompass political, institutional, and legislative barriers.¹⁸ These factors might potentially undermine the conducive conditions required for attracting inward FDI.

Our findings provide support for most of the hypotheses being tested. Namely, the Interdependence Index between Eastern European Economies and Asian countries indeed positively impacts FDI in the region (Hypothesis 1). This indicates that deeper interdependence in the semiconductor trade between EEE and Asian countries contributes to increased FDI inflows in Eastern European Economies. Consequently, with the recent US export controls on semiconductor devices and equipment, China may be even more inclined to invest in, rather than export, semiconductors to EEE.

Hypothesis 2 is only partially supported by the analysis. Namely, the positive coefficient of the FDI Regulatory Index (*FDI_R_Index*) in Model 3 indicates that, overall, an improvement in the regulatory environment fosters higher FDI inflows in EEE. This aligns with the concept that investor-friendly policies attract non-EU investors in the region (Hypothesis 2). At the same time, there is a weak negative correlation between the FDI in EU-member EEE countries and their OECD FDI restrictiveness index (*FDI_R_Index*EU*) in Model 6, which means the investors view EU membership as a sign of high regulatory restrictions for FDI, making them less inclined to invest in EEE countries that are EU members. The negative coefficient of the EU membership dummy variable (*EU*) further supports this suggestion, indicating that EU member countries in EEE might experience lower FDI inflows. On the other hand, EEE countries with lower levels of ICT exports may be less attractive to foreign investors in technology-intensive sectors compared to EU countries with stricter FDI regulations and a guaranteed investment climate.

A negative relationship between the developed technology sector ICT (*ln_ICT*) in EEE and FDI inflows to EEE supports Hypothesis 3. Consequently, there is a positive relationship between the level of FDI from Germany (*ln_Gmn*) and FDI inflows to EEE, while there is a negative relationship between outbound FDI from China (*ln_CH*) and FDI inflows to EEE, as it is more likely to be directed towards the developed EU countries. Indeed, the effect of outflow Chinese FDI (*ln_CH*) on FDI in Eastern European Economies (EEE) is negative, with a coefficient of -0.2906 (standard

¹⁸ Andrzej Cieřlik & Oleg Gurshev, "Determinants of inward FDI in Ukraine: Does political stability matter?", *International Journal of Management and Economics*, Vol. 56, No. 3, 2020, 243–254.

error: 0.2345). This could indicate that Chinese investments are directed elsewhere rather than into EEE.

Policymakers in EEE with less developed technology sectors and lower ICT exports may increasingly consider implementing FDI screening mechanisms. These mechanisms can help safeguard national interests, especially in sectors vital to national security.

Our empirical results support most of our hypotheses. The study's results provide strong evidence that the variables related to semiconductor trade interdependence, FDI restrictiveness, European integration, ICT development, and German and Chinese investment patterns play significant roles in influencing FDI inflows in the post-COVID recovery phase in Eastern European Economies.

Conclusions and Policy Implications

Trade disruptions resulting from the pandemic and geopolitical tensions have emerged as significant factors driving reshaping the FDI and global industrial supply chain landscape. The study examines the factors influencing FDI inflows to Eastern European Economies (EEE) from 2003 to 2022, providing valuable insights into the dynamics of FDI in the region.

In the initial post-COVID recovery phase of 2020-2021, EEE attracted substantial FDI inflows due to their export-oriented manufacturing, notably in machinery and vehicles, alongside a less restrictive FDI environment. Nevertheless, current geopolitical tensions and technological shifts, particularly in the ICT and semiconductor sectors crucial for electronics and EV battery production, are reshaping the FDI landscape and global supply chain in electronics. To compete with developed EU countries, Eastern European Economies (EEE) need to implement FDI screening mechanisms to enhance the investment climate and attract non-EU investors.

The EEE Interdependence Index value in the semiconductor sector indicates a higher dependency on semiconductor imports by EEE from China and Taiwan. This suggests that the EU relies more on foreign sources for semiconductor goods to meet its domestic demand. At the same time, when Asian countries start producing semiconductors in Europe, they will provide an opportunity for Chinese EV makers. Investing in Eastern Europe would help them save on tariffs and production costs, and it would enable EEE to participate in the global supply chain and enhance their competitiveness.

The empirical analysis showed that the Interdependence Index between EEE and Asian countries positively influences FDI inflows to the region. This indicates that stronger trade ties and connectivity in the semiconductor industry between EEE and Asian countries attract foreign investment to EEE. Therefore, fostering interdependence in semiconductors can yield positive effects on FDI attraction in Eastern European countries by enticing high-tech

companies from China and Taiwan, promoting innovation in the automobile, EV battery, and ICT sectors, enhancing national economic security, and bolstering the global competitiveness of EEE as a whole. Governments should explore trade agreements and partnerships to facilitate cross-border investment.

Changes in a country's FDI regulatory regime have an impact on FDI flows to Eastern European countries. This is especially the case for the Western Balkans with a less restrictive FDI regime, where FDI accounts for a higher share of gross domestic product (GDP), indicating that the Western Balkans have considerably open regulatory FDI frameworks, especially when compared to the EU members and candidates. At the same time, EEE countries with lower levels of ICT exports may be less attractive to foreign investors in technology-intensive sectors compared to EU countries with stricter FDI regulations and a guaranteed investment climate. Strengthening investment screening mechanisms across European countries may have positive implications for FDI flows in EEE.

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Appendix A

Table A1. Sample of Countries

Albania	Hungary	Republic of Moldova
Bosnia and Herzegovina	Kosovo	Romania
Bulgaria	Latvia	Serbia
Croatia	Lithuania	Slovakia
Czechia	Montenegro	Slovenia
Estonia	North Macedonia	Ukraine
Georgia	Poland	

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War, sanctions, and foreign direct investment to and from Russia

SUMMARY

Russia's full-fledged war on Ukraine, which started in February 2022, added major uncertainties to foreign direct investment (FDI) to and from Russia and affected it negatively in the short, medium, and long run. The degree of the hit would depend on the exact contents of sanctions and countersanctions in constant development. However, the severe consequences of some of them were already visible early on, adding to the financial strain caused by the war. FDI to and from Russia fell drastically in 2022 and, depending on the length and depth of the conflict, would remain sluggish in the subsequent years if no exit strategy is found to stop the conflict and its eventual escalation. This article concludes that the fall in FDI would, in the end, hurt the economic capacities of Russia, already affected by a previous round of sanctions imposed in 2014. If it works, decoupling the Russian economy from FDI partners by applying sanctions would be effective only partially and at a relatively high cost. That, in turn, could thwart the very economic fundamentals of the war effort.

Keywords: FDI, Russia, sanctions, Russia-Ukraine War.

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Рат, санкције и стране директне инвестиције у и из Русије

САЖЕТАК

Свеобухватни рат Русије против Украјине, који је почео у фебруару 2022, створио је велике неизвесности за директне стране инвестиције (СДИ) у и из Русије и негативно утицао на њих у кратком, средњем и дугорочном периоду. Степен утицаја зависиће од тачног садржаја санкција и контрасанкција, које се стално развијају. Међутим, озбиљне последице неких од њих биле су видљиве рано, што је додатно повећало финансијски притисак изазван ратом. СДИ у и из Русије су драматично опале 2022. и, у зависности од дужине и интензитета сукоба, остаће споре у наредним годинама осим ако се не пронађе излазна стратегија за заустављање сукоба и његову евентуалну ескалацију. У овом чланку се закључује да би пад СДИ штетио економским капацитетима Русије, на које је већ утицала претходна рунда санкција које су уведене 2014. Ако успе, одвајање руске привреде од СДИ партнера применом санкција било би ефикасно само делимично и уз релативно високе трошкове. Ово би, заузврат, могло осујетити саме економске основе ратних напора.

Кључне речи: стране директне инвестиције, Русија, санкције, руско-украјински рат.

Background

On the morning of February 22, 2022, the Russian Armed Forces launched a large-scale invasion of Ukraine with the apparent aim of removing the Ukrainian government and replacing it with another one friendlier towards the policies of President Putin. With these steps, hostilities in Eastern Ukraine, which originated in March 2014, reached a new level, and death and devastation reached unprecedented levels not just for Ukraine but for the whole European continent since 1945. At the moment of writing these lines, it is unclear how the conflict would evolve, how long it would last, and how it would end. We do not even know if it would spill over to other countries or not.

On the first days of the conflict, the initial response of the international community was relatively limited, mostly a continuation of the countermeasures adopted in 2014 when Russia annexed Crimea. After the large-scale invasion, the reaction became more robust. At this point in time, new sanctions are adopted against Russia and Russian interests every day, and more and more countries join them. The list includes mostly the countries that are members of, or are linked to, the North Atlantic Treaty Organisation (NATO) and the European Union (EU), covering most of the European continent, North America, parts of Latin America, Australia, and

New Zealand. African and Asian countries and territories seem to have taken a more neutral stance so far, with some exceptions (e.g., the Republic of Korea, Singapore, and the Taiwan Province of China). The list of countries applying sanctions includes surprises such as traditionally neutral Switzerland, which aligned itself with EU policy, minus the one on supplying arms to Ukraine.

At the Security Council of the United Nations, binding action was blocked by a Russian veto. As a result, the case was referred to the Eleventh Emergency Special Session of the United Nations General Assembly, which adopted a new Resolution on the "Aggression against Ukraine" that reinforced Resolution 68/262 on the "Territorial Integrity of Ukraine" (March 2014) and went further by demanding an immediate halt to Russia's use of force and the immediate, complete, and unconditional withdrawal of all Russian forces from Ukraine's internationally recognised borders. The new Resolution was adopted by a large majority – the vote of 141 of the 181 countries present – reinforcing Russia's isolation on the scene of world politics (the 2014 Resolution had been adopted by 100 votes in favour). Of the 35 countries that abstained, there were some emerging powers such as China, India, and South Africa that did so as a "matter of principle" (not to position themselves in a dispute opposing the United States and Russia), although these countries, too, agreed with the need to respect the territorial integrity of Ukraine. The "no" vote of the Russian Federation was supported by only four more countries: Belarus, the Democratic People's Republic of Korea, Eritrea, and Syria.

General considerations on the effects of the war and sanctions

There is no war without death and destruction. The invasion of Ukraine is no exception to that rule. The blunt of that blow is falling on Ukraine, where the fighting goes on. It also has collateral negative effects on Russia, and not only in terms of dead soldiers, whose real number was made a top secret on the first days of the conflict. War is extremely costly for the state budget. It has been speculated that each day of war could cost various billions of dollars (a much more limited intervention in Syria had allegedly cost about 4 billion dollars per day). The reserves built up before the war can evaporate quickly, especially if some of the resources parked outside Russia become non-accessible due to their freezing (see also below).

Due to the status of Russia as a nuclear superpower, the sending of troops to Ukraine is excluded for third countries. Their reaction is limited to financial assistance, the sending of military assistance, and sanctions against Russian interests. From the point of view of the economic consequences of the war for Russia, sanctions deserve particular attention. It is to be stressed that the ones that would bind all United Nations members are excluded as Russia holds veto power in the Security Council, where they should be

adopted. As a “second-best” choice, the “Western powers” mentioned above started their own systems, trying to coordinate between themselves and convincing others to adhere to their own free will. However, no third country would be obliged to join them, and Russia adopted its own countermeasures to counterbalance them (e.g., exchange controls on export proceeds, but also mandatory surrender of assets in case of divestment from Russia).

This analysis attempts to ask what the potential impact of sanctions and countersanctions on foreign direct investment (FDI) inflows to and outflows from the Russian Federation would be, taking into consideration the limitations and inconveniences. Sanctions do not fully stop economic links; rather, they result in higher costs and less ease in doing business. It is also evident from the lessons of the ones imposed after the annexation of Crimea in 2014 that they have hurt not only Russia but also the issuing countries. Paradoxically, the winners have been the “free rider” countries. It is also to be noted that Russia has managed to somewhat increase its economic independence and diversification since 2014. As a result, the new wave of sanctions had to be much more severe to bite.

This, however, does not mean that the impact of past sanctions would be fully negligible. It is quite likely that they have contributed to the growing lag of Russian GDP growth vis-à-vis the rest of the world. In the period 2009–2013, that difference was 1.1 percent. In the period 2014–2018, it more than doubled to 2.4 percent (Table 1). Sanctions and countersanctions also resulted in a declining share of Russia in world inward FDI from 2.5 percent in the period 2009–2013 to 1.4 percent in the period 2014–2018, and also in world outward FDI from 3.2 percent to 2.8 percent (Table 2). It is to be added that Russia cannot fully replace its FDI links with the West by FDI links in the emerging countries as the technological content and the value chain configurations of the two are different.

Table 1. Annual average growth rate of the real gross domestic product in Russia and in the world, 2009–2018 (in percent)

Source: the author’s calculations, based on UNCTAD data

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Russia	-7.8	4.5	4.3	3.7	1.8	0.7	-2.0	0.3	1.8	2.5
World	-1.3	4.4	3.3	2.8	2.8	3.0	3.1	2.7	3.4	3.1
Difference	-6.6	+0.1	+1.0	+0.9	-1.0	-2.3	-5.1	-2.4	-1.6	-0.6

Source: the author’s calculations, based on United Nations data.

Table 2. Share of Russia in global FDI inflows and outflows, 2009–2018 (in percent)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Share in inflows	2.2	2.3	2.3	2.0	3.7	2.1	0.6	1.8	1.6	0.9
Share in outflows	2.9	3.0	3.0	2.2	5.0	4.7	1.6	1.7	2.1	4.1

The effects of sanctions and countersanctions add to the effects of the war. In general, war situations do dissuade FDI. In general, war is a blow to economic growth due to its shock to production, even in countries where the economic effects have been ‘planned’ meticulously and preventive measures have been taken to protect the treasury of all firms, especially the multinational enterprises that have to operate across borders (in this case, the Russian multinational enterprises). If the conflict goes on or if too many assets are lost both at home and abroad, even the best-prepared firms can run out of money. As for firms investing in Russia, sanctions creating obstacles to accessing finance may be the most severe disincentives.

In the Russian case, the minimum effect was a drop in GDP in 2022 (materialised at 2.1%), which further accentuated the effect of falling behind other leading countries in the world. The IMF estimated that the Russian GDP in 2021 was about \$1.7 trillion, which was 14 times less than the GDP of the United States and 10 times less than the Chinese one. The Russian Federation was a nuclear superpower, but with a middle-sized economy, it was 11th in the world ranking, behind the Republic of Korea. And if the slowdown continues beyond 2023, it will soon fall behind that of other nations, namely Brazil, Australia, Spain, and Mexico, in that order. In other terms, the war accentuates the gulf between the political and military aspirations of the Russian leadership and the economic means to achieve them. As for inward and outward FDI, which is a powerful tool for augmenting a country’s productive capacities, as discovered by politicians in various emerging powers, such as China, they risked drying up for the Russian leadership in the worst moment.

Types of sanctions and their potential impact on FDI: the hypothesis

This study has only one hypothesis: that sanctions have a negative impact on both inward and outward FDI in Russia. Within that single hypothesis, we can formulate subsidiary hypotheses related to the different types of sanctions, knowing that the attribution of effects to individual sanctions is not necessarily available.

Prohibition of trade and establishment of new investment links with the Donbas region (announced by the United States). At first sight, this measure has a limited impact, as it applies to American firms only, not if they do business in Russia but in the separatist Ukrainian zones only. However, past experience shows that “American firm” may mean any company with a substantial presence in the United States independently of its ownership structure, to prevent the discrimination of corporations that are domiciled in the country and to preclude the temptation for re-domiciliation to escape the constraints. It is also unclear in the rules if only direct trade and investment relations count or also indirect links via value chains. If the rules are extended to both, non-negligible parts of the global economy are to be affected. It may, for example, be a major issue for firms from “neutral” countries (such as China) that do not wish to lose their access to the large United States market. To be kept in mind, too, is that the exposure of Russian or other international business to the Donbas region may be larger than one would think at first sight. The Donbas is a major producer of coal, iron and steel, machinery, and equipment, which can be inputs for production in Russia and in the value chains of other countries. These sanctions may hurt these business links when the region probably needs an increase in economic activities to satisfy the local population after the evaporation of the initial euphoria of recognition by Russia. *Subsidiary Hypothesis 1*: For all these reasons, the prohibition to do business with the Donbas is expected to have a negative impact on both Russian FDI inflows and outflows.

Stopping or rolling back business projects in and/or with the Russian Federation by governments applying the sanctions. The first and best-known case is that of the Nord Stream 2 gas pipeline, which was suspended by the German authorities.² Although in each case, the economies of the partner countries may be hurt as much as those of Russia, other projects may suffer the same fate. *Subsidiary Hypothesis 2*: Stopping or rolling back projects in Russia has a major negative impact on inward FDI flows.

Export ban on or control of strategic inputs. Such measures are currently under consideration. The United States wishes to negotiate such measures with the Asian exporters of semiconductors/microchips. It is unclear at this stage if they would be accepted by the partners and what the real impact on the Russian economy would be. It should be noted that Ukraine is a key supplier of semiconductor-grade neon. If the Russian Armed Forces occupy the country and manage to control the Ukrainian suppliers, Russia can try to use them to develop its own semiconductor industry (Russia produces another raw material, palladium). The problem is that such capacity building requires lots of time and know-how. In the meantime, stopping supplies from Asia may affect the business links of those Russian firms that use those

² “Nord Stream 2 pipeline firm gets 6-month stay of bankruptcy”, *AP*, 12/28/2022.

semiconductors/microchips. It should be noted that such a measure would prompt the Russian authorities to seek local solutions (import substitution) to replace them. Subsidiary Hypothesis 3: The impact of the export ban is negative on both inflows and outflows; its extent is uncertain.

Sanctions against Russian (and Belarusian) individuals linked with the recognition of the breakaway “republics” and the war, mostly in the form of freezing their assets possessed in their personal capacity or in their firms. This is more than a symbolic list. Its effect naturally depends on how long the list is and how many people with business interests figure on it. Already, the first lists included persons linked with Promsvyazbank, VTB Bank, and the VKontakte media group. As the list lengthens, the effect of the measure may increase. Subsidiary Hypothesis 3: The impact of sanctions against Russian individuals has a negative impact on outward FDI.

Freezing of Russian banking assets abroad. This is a very severe measure, affecting both inward and outward FDI. It should be noted that the group of the largest Russian banks includes various state-owned entities (such as Sberbank, VTB Bank, Gazprombank, Promsvyazbank, the State Development Corporation Vneshekonombank or VEB, the Otkritie Financial Corporation, the Russian Agricultural Bank, and Novikombank, to mention the largest), so sanctions are straightforward to justify due to their direct links with the power centre. There are also entities that are on paper privately owned but are so close to the government that, already in 2014, they were put on the sanctions list, such as the Rossiya Bank. The freezing of the assets of these financial institutions (it has already happened to most of the listed; others may be added later on) has a double negative effect on FDI. On the one hand, it results in the stopping or bankruptcy of the affiliates of these banks operating abroad, as it happened very early on with the Vienna-based Sberbank Europe AG, with affiliates also in seven other markets (Bosnia and Herzegovina, Croatia, Czechia, Germany, Hungary, Slovenia, and Serbia).³ It should be noted that already in November 2021, the bank had initiated the sale of its affiliates in other countries except in Czechia and Germany. With that transaction not yet fully completed, the bankruptcy of the Vienna-based parent may affect the whole network. Other Russian banks may face the same fate if sanctions last for a long time. On the other hand, this freezing of assets means the impossibility of financing the transactions of Russian multinationals abroad. It also has an impact on access to finance for foreign investors located in Russia. The country may be prompted to apply restrictive measures to stop the outflow of resources, including an obligation to surrender export receipts or a prohibition on the repatriation of profits. These circumstances could make the lives of foreign investors close to

³ Tom Sims, Alexandra Schwarz-Goerlich & Daria Sito-Sucic, “Russia’s Sberbank in Europe faces closure after savers demand money”, *Reuters*, 02/28/2022.

impossible. *Subsidiary Hypothesis 4:* The freezing of Russian banking assets abroad has a major negative effect on both inward and outward FDI.

The exclusion of Russian (state-owned) banks from the SWIFT payment system. The decision has been taken by the EU to exclude seven large Russian banks, with the exception of Sberbank and Gazprombank, so far. This measure makes all business transactions involving the Russian and foreign clients of these banks costlier and more cumbersome. Alternatives do exist on paper, such as using China's Cross-Border Interbank Payment System (CIPS). However, developing this alternative may not be so easy and would not prevent the problem of increasing the cost of doing business. Moreover, the use of that system may result in "side effects" such as the need to rely heavily on the Chinese yuan as the currency of payment/clearing, which may not be desirable for some businesses. As another alternative, within Russia, the Financial Message Transfer System of the Bank of Russia (SPFS) has been launched with about 400 users, which may be a solution for purely domestic payments. However, this system is not yet linked with other systems abroad; therefore, it does not attenuate the obstacles to international payments, which is a major problem for both foreign investors in Russia and Russian firms abroad. *Subsidiary Hypothesis 5:* The exclusion from SWIFT creates major inconveniences, hurting both inward and outward FDI significantly.

Sectoral sanctions. Sanctions affecting different sectors of economic and social activities may have very different impacts on FDI. Two of them, banning Russian vessels from foreign ports and Russian aircraft from foreign airspace, can seriously hamper business transactions between Russia and the rest of the world and can act as a major disincentive to FDI. It should be noted that these sanctions are not fully "waterproof". Trade with the outside world can be switched to foreign carriers, but naturally at the expense of an increase in shipping costs and a decline in the Russian freight and shipping sector. Measures affecting cooperation on the Space Station can also have some negative consequences for supplying firms. While the limitations imposed on scientific cooperation may seem more symbolic, so could the measures affecting arts, culture, and sports. In those areas, it is mostly the international reputation of Russia that is hit, though one should not underestimate the business side of these activities either. *Subsidiary Hypothesis 6:* Sectoral sanctions can have a major impact on FDI in the target activities.

In sum, certain measures may have a major impact on FDI; others would be more limited (Table 3).

Source: the author's collection of information

Table 3. Potential impact of sanctions on inward and outward FDI of Russia, 2022 and beyond

Measure	Expected impact on FDI
Trade and investment ban on Donbas	Major
Stopping/rolling back business projects with Russia	Depends on the size of the project stopped
Export ban on or control of strategic inputs	Uncertain extent
Sanctions against Russian individuals linked with the recognition of the breakaway “republics” and the movement / deployment of Russian troops	Major at the level of the firms that they are linked with
Freezing of Russian banking assets and exclusion from SWIFT	Very major
Sectoral sanctions	The ban on Russian vessels and aircraft may have major impact

The situation at the war and the Western sanctions all indicate that Russia is probably heading towards one of the most severe crises in its history, destabilising the war effort itself. Such a crisis could also hamper the attempts by Russian businesses to build local capacities to counteract the sanctions. It is also to be noted that relying on foreign partners such as China and India to mitigate or avoid the effects of the sanctions can also have side effects. These countries cooperate with the Russian Federation under sanctions out of self-interest. Their governments made it clear that cooperating with Russia does not mean recognising the separatist republics of the Donbas or accepting the Russian invasion. There may also be points in the chain of events when the Chinese and Indian governments and the firms of these countries have to choose between keeping Western and Russian business links, and they choose the former. Moreover, with the loss of Western partners, the dependence of the Russian economy on these partners may increase. It is also to be taken into consideration that this type of cooperation with China and India can also have geopolitical consequences. If Russian firms fall into deep crisis, they may be replaced by Chinese and/or Indian companies in countries that Russia perceived as its zone of influence in the past (e.g., in Central Asia).

The “haemorrhage” started almost instantly. FDI was reacting immediately. As mentioned above, Sberbank Europe was the early bird in a potentially long flow of Russian bankruptcies abroad.⁴ Another case of instant bankruptcy was that of the Switzerland-based Nord Stream 2 holding

⁴ “Russia’s Sberbank in Europe faces closure after savers demand money”.

company, which was expected to manage the construction of the gas pipeline but was stopped by the German authorities.⁵

*Selected lessons from past sanctions applied against Russia*⁶

As a consequence of the 2022 war in Ukraine, Russia has become the target of the largest number of sanctions in the world: nearly 12,000 measures were in place in early August 2022.⁷ Many of these measures directly restrict the scope for reciprocal direct investment, particularly in the financial and technology sectors. The Russian authorities have responded to these sanctions with countermeasures. For firms that carry out activities on both sides of the division line, it has become arduous to comply with the contradictory requirements of the two parties. Many of them have responded by reducing, suspending, or eliminating their business deals on the other side.⁸

The sanctions applied against Russia in 2022 are partly the continuation of the measures applied against Russian firms and individuals after the annexation of Crimea in 2014. This way, lessons can be drawn from the past, too.

In the most recent study prepared before the outbreak of the 2022 war, an analysis of the impact of political factors on Russian MNEs' strategic choices to divest their foreign operations found that firms operating in countries that did not join the economic sanctions against Russia were less inclined to divest their subsidiaries than those in countries that supported sanctions.⁹ The article emphasised the political dimension of the foreign market exit, a factor largely confirmed by the events after February 24, 2022.

The first studies on the post-February-2022 situation indicate that Russian businesses react to this new situation by using defensive strategies to minimise their losses, mostly through reverse internationalisation.¹⁰ They are in line with the most recent international business literature on sanctions.¹¹

⁵ "Nord Stream 2 pipeline firm gets 6-month stay of bankruptcy".

⁶ This section sums up the main findings of Kálmán Kalotay & Csaba Weiner, "The Impact of Sanctions on Russian Business Abroad and Hungarian Business in Russia: Parallel Stories of Adjustment", In: Lourdes Casanova & Anne Miroux (eds), *Emerging Market Multinationals Report 2022: Reinventing Global Value Chains*, Cornell SC Johnson College of Business, Ithaca, NY, 2022, 92–100, on past experience with sanctions in Russia.

⁷ "Russia sanctions dashboard", Castellum.AI, <https://www.castellum.ai/russia-sanctions-dashboard>, 08/09/2023.

⁸ Kalman Kalotay, "The War in Ukraine Deals a Blow to Russia's Foreign Direct Investment Links", *Challenges*, No. 238, 2022, 1–17.

⁹ Andrey Panibratov & Ajai Gaur, "Political drivers of international divestments of Russian MNEs", *BRICS Journal of Economics*, Vol. 3, No. 1, 2022, 5–25

¹⁰ Kálmán Kalotay & Csaba Weiner, "The Impact of Sanctions on Russian Business Abroad and Hungarian Business in Russia: Parallel Stories of Adjustment".

As non-military coercive measures (coined as “jus ad vim”, i.e., the right to use force short of war), they have the potential to disrupt the international business environment, especially the institutional environment, and change the rules of the game.¹² From the point of view of internationalisation theories, sanctions challenge the assumptions about international business, including the institution-, resource-, and knowledge-based view, the resource dependency theory, and the behavioural theories of the firm.

Literature on the choices of Russian businesses facing sanctions from Western governments usually highlights four main options: (1) withdraw, which means losing a strategic market, probably without having a chance to return but retaining strong ties at home; (2) distancing from Russian government policy, which may reduce exposure to sanctions but risks retaliation from the home government; (3) maintaining course while retaining strong ties to Russia, which likely results in challenges to the legitimacy of the firm; and (4) transferring the business to a friendly partner not targeted by sanctions, which creates opportunities to reduce the cost of exit.¹³ In the case of Russian business abroad, they have attempted, with varying success, most of these options.

The impact of sanctions on large Russian MNEs and their adjustment¹⁴

The bulk of Russia’s outward FDI is carried out by a handful of large MNEs. Almost all of these firms and/or their executives and owners fell under sanctions, with an immediate negative impact not only on MNEs’ operations but also on Russia’s foreign economic links. The total foreign assets of the 20 largest MNEs were valued at US\$ 108 billion at the end of 2019 (Table 4), compared with a total outward FDI stock of US\$ 407 billion in the same year.¹⁵ The majority of these MNEs are natural-resource-based firms, with oil and gas companies occupying the top three posts. Their strategies are related

¹¹ Klaus E. Meyer, Tony Fang, Andrei Y. Panibratov, Mike W. Peng & Ajai Gaur, “International business under sanctions”, *Journal of World Business*, Vol. 58, No. 2, 2023, 101426.

¹² “Jus ad vim” is to be contrasted with two basic concepts of just wars: “jus ad bellum” (the right to wage a war) and “jus in bello” (regulating) the conduct of parties engaged in an armed conflict. Michael Walzer, *Just and Unjust Wars*, Basic Books, New York, 1977: Klaus E. Meyer, Tony Fang, Andrei Y. Panibratov, Mike W. Peng & Ajai Gaur, “International business under sanctions”.

¹³ Ibid.

¹⁴ This section is adapted partly from: Kálmán Kalotay & Csaba Weiner, “The Impact of Sanctions on Russian Business Abroad and Hungarian Business in Russia: Parallel Stories of Adjustment”.

¹⁵ “Balance of payments of the Russian Federation (standard components)”, Central Bank of Russia (CBR), https://www.cbr.ru/vfs/eng/statistics/credit_statistics/bop/bal_of_payments_standart_e.xlsx, 10/07/2023. Year 2019 is the latest year for which the list of the largest

to the control of their value chains, typically upstream at home and in developing countries and downstream in developed countries. Certain firms are actively involved in FDI transiting through other countries or leaving the country and coming back (called “round-tripping”). Some (e.g., VEON, NLMK, and Evraz) have undertaken “corporate inversion”, and now have their official headquarters registered abroad, while Russian individuals remain the main shareholders. State-owned MNEs make up more than one-third of the list.¹⁶ Together, these firms account for almost half of the assets of the top 20 group. However, the impact of the Russian government does not stop there. The privately owned MNEs are also under state influence; the government has an informal say in their major strategic decisions.¹⁷

Table 4. Most of the 20 largest Russian non-financial MNEs are affected by sanctions (Firms ranked by foreign assets at the end of 2019, US\$ billion and percent)

Note: Firms shown in bold are under sanctions.

Rank	Company	Industry	Long-term foreign assets (US\$ billion)		Total foreign assets (US\$ billion)		Share of foreign assets in total assets (%)	
			2018	2019	2018	2019	2018	2019
1	Lukoil	Oil and gas	18.4	21.3	24.8	28.8	30	30
2	Gazprom	Oil and gas	14.8	15.6	18.5	18.9	6	5
3	Rosneft	Oil and gas	8.3	11.1	10.8	13.6	6	7
4	VEON	Telecom	6.2	6.8	8.0	8.0	56	50
5	Rusal	Metallurgy	3.7	4.2	5.4	6.5	34	36
6	Sovcomflot	Transport	5.6	5.5	6.0	6.1	84	83
7	Atomenergoprom	Nuclear energy	3.8	4.1	5.7	5.5	12	10
8	Russian Railways	Transport	1.7	2.0	3.1	3.3	4	4

MNEs is available. In principle, it would have been desirable to get data for a more recent year. However, data collection during the war is close to impossible. Nevertheless, as this is information about assets, it shows stability over time.

¹⁶ Atomenergoprom, Gazprom, Rosneft, Russian Railways, Sovcomflot, VSMPO-Avisma (with only a minority blocking share of the state), and Zarubezhneft.

¹⁷ Andrei Panibratov, “The influence of the state on expanding Russian MNEs: Advantage or handicap?”, Russia/NIS Center, <https://www.ifri.org/sites/default/files/atoms/files/ifriandreypanibratovrussiancompagniesengdecember2013.pdf>, 03/22/2023.

Rank	Company	Industry	Long-term foreign assets (US\$ billion)		Total foreign assets (US\$ billion)		Share of foreign assets in total assets (%)	
			2018	2019	2018	2019	2018	2019
9	Evraz	Metallurgy	2.1	1.9	3.7	3.2	40	32
10	NLMK	Metallurgy	1.4	1.3	2.9	2.5	29	24
11	EuroChem	Chemicals	1.4	1.4	1.7	1.8	18	15
12	NordGold	Metallurgy	1.3	1.3	1.6	1.7	64	61
13	Russneft	Oil and gas	1.2	1.6	1.4	1.7	37	36
14	VSMPO-Avisma	Metallurgy	0.1	0.2	1.2	1.4	25	25
15	Zarubezhneft	Oil and gas	0.5	0.6	1.0	1.2	37	35
16	MegaFon	Telecom.	0.2	0.5	0.2	1.0	3	9
17	TMK	Metallurgy	0.9	0.3	1.9	0.8	38	15
18	Norilsk Nickel	Mining	0.5	0.4	0.7	0.7	4	3
19	MMK	Metallurgy	0.3	0.3	0.5	0.5	7	6
20	AFK Sistema	Holding	0.9	0.3	1.6	0.5	8	2
Total of the top 20			73.1	80.7	100.8	107.6		

Source: the authors' compilation.¹⁸

At the level of individual firms, the haemorrhage started early. As mentioned above, Sberbank Europe was the first in a potentially long flow of Russian bankruptcies abroad. Another case of instant bankruptcy was that of the Switzerland-based Nord Stream 2 holding company, which was in charge of a trans-Baltic Sea gas pipeline between Russia and Germany, mentioned above.

Some Russian MNEs also face difficulties in financing their overseas operations. In the first half of 2022, Severstal and Evraz, two large Russian integrated iron and steel producers, defaulted on their international bond payments, despite the availability of sufficient funds to pay them. The reason for this paradox was that these MNEs' foreign bankers refused to process the payments on the grounds that the principal owners were oligarchs put

¹⁸ Based on: Alexey V. Kuznetsov, "Direct Investment from Russia Abroad: Changes since 2018", *Herald of the Russian Academy of Sciences*, Vol. 91, 700–707.

on the sanctions list. In March 2022, Severstal, owned by the Russian oligarch Alexei Mordashov's Severgroup, failed to make a US\$ 12.6 million interest disbursement to holders of bonds worth US\$ 800 million after its banker, Citigroup, froze those payments.¹⁹ Also in March 2022, Evraz, partly owned by another Russian oligarch, Roman Abramovich, was blocked by its banker, the New York affiliate of Société Générale, from paying the US\$ 18.9 million coupons on its US\$ 700 million bond, partly due to UK sanctions against the oligarch.²⁰ The UK justified its sanctions by the fact that Evraz produces 28% of all Russian railway wheels and 97% of the country's rail tracks, which were "of vital significance as Russia uses rail to move key military supplies and troops to the frontline in Ukraine".²¹ As a side effect, the financial difficulties of Evraz affected its North American operations. The first layoffs were reported in Canada in May and June 2022, though this scaling back did not apparently affect the firm's large plant in Pueblo, Colorado.²²

Some Russian firms have designed strategies to bypass sanctions, with varying success. The state-owned shipping company Sovcomflot avoided the seizure of its assets by selling off at least a dozen tankers (of a fleet of 121 vessels). Some transactions took place "through a web of shell companies, shielding the vessels' ultimate owners from the risk of penalties".²³ Another part of the strategy consisted of transferring selected corporate headquarter functions to Dubai in the United Arab Emirates. This partial "corporate inversion", following the footsteps of other firms (see the discussion on Table 4), allowed Sovcomflot to obtain safety certification from India for over 80 vessels managed from its Dubai centre.²⁴ In another case, in March 2022, the Russian gas giant Gazprom terminated its participation in the Germany-based Gazprom Germania and transferred its shares and company assets held in Europe to a former Gazprom unit controlled, through voting rights, by a hitherto unknown Russian firm – to no avail.²⁵ In April 2022, Gazprom Germania was brought under the control of the German energy regulator,

¹⁹ Alistair MacDonald, "How a Russian Steel Giant Was Unplugged From the Western Economy", *Wall Street Journal*, 03/25/2022.

²⁰ "Evraz says bond payment blocked over Abramovich sanctions", *Financial Times*, 03/21/2022.

²¹ Jacqueline Holman & Ekaterina Bouckley, "UK sanctions Russian steelmaker Evraz", *Commodity Insights*, 05/05/2022.

²² Daniella Ponticelli, "170 Regina Evraz steel mill workers laid off since May, company says more expected", *CBC News*, 06/18/2022; Casey Tolan & Audrey Ash, "This Colorado steel mill 'built the American west,' but its ownership has ties to Russia", *CNN*, 04/04/2022.

²³ "Russia's Sovcomflot sells tankers as sanctions loom – WSJ", *The Moscow Times*, 05/13/2022.

²⁴ "Russia's Oil Tankers Receive Safety Cover From India Via Dubai Firm", *Marine Insight*, 06/24/2022.

²⁵ Gazprom Germania was renamed SEFE Securing Energy for Europe in June 2022.

Bundesnetzagentur. In retaliation, in May 2022, Russia imposed sanctions against the former Gazprom Germania units.²⁶

Another response of Russian firms to sanctions has consisted of the use of the Swiss trading platform, which traditionally manages the bulk of Russian commodity transactions. Though Switzerland decided to apply the same sanctions as the EU, Switzerland-based MNEs continued some deals in Russian coal, and so did some large Russian coal producers maintaining subsidiaries in the country (including SUEK and Evraz; Atkins, 2022). There were also questions raised about the eventual indirect imports of Russian gold via the U.K. and Dubai, though the adoption of the EU's July 2022 ban on both direct and indirect imports of gold closed, in principle, this loophole on sanctions.²⁷

Corporate exodus from Russia

In Russia, one of the mainstays of inward FDI, the oil and gas sector already experienced the first attempts to leave the country some days after the outbreak of the war. First, BP announced on February 27, 2022, that it would sell its 20 percent stake in Russian state-owned oil giant Rosneft. The next day, Shell expressed its wish to exit its joint ventures with state-owned Gazprom, and the day after, Exxon announced its exit from the Sakhalin oil and gas project in the Russian Far East.

Beyond the oil and gas industry, some Western firms started leaving Russia or stopping sales to the Russian market. To some degree, this was a change in corporate philosophies. In the past, business kept more distance from politics, only complying with the sanctions dictated by public authorities. Let us highlight some examples drawn from a collection of information by Yale University, confirmed by corporate and press reports:²⁸

- the *transportation industry* (Maersk and MSC halting container shipping to and from Russia, Hapag Lloyd and container carrier Ocean Network Express of Japan suspending reservations to Russia, and DHL suspending services to and from Russia),²⁹

²⁶ In September 2022, Germany also placed the local units of Russian state-owned oil firm Rosneft under fiduciary management.

²⁷ Dominique Soguel, "Swiss gold imports come under scrutiny as G7 targets Russia", *SWI swissinfo.ch*, 06/27/2022.

²⁸ The usual disclaimer applies to the eventual inaccuracies of corporate and press reports. "Over 1,000 Companies Have Curtailed Operations in Russia – But Some Remain", Chief Executive Leadership Institute, <https://som.yale.edu/story/2022/over-1000-companies-have-curtailed-operations-russia-some-remain>, 08/17/2023.

²⁹ Gregor Gowans, "Daimler ends Kamaz cooperation as Volvo Trucks halts production in Russia", *Trans.Info*, 02/28/2022; "Msc Temporarily Halts Bookings to/from Russia", MSC, <https://www.msc.com/en/newsroom/customer-advisories/2022/march/msc->

- *major aircraft manufacturers* (Boeing suspending the supply of parts, maintenance, and technical support to Russian airlines and the operation of its training centre in Moscow; Airbus stopping the sending of parts to Russia),³⁰
- *vehicle producers* (Ford suspending its participation in its joint venture in Russia, Daimler Truck suspending cooperation with its Russian joint venture partner Kamaz, automotive supplier ZF Friedrichshafen stopping deliveries to Russia, Harley-Davidson stopping sales to Russia, Volvo and General Motors stopping exporting to Russia),³¹
- *financial services* (HSBC, Société Générale, and Shinhan Bank of the Republic of Korea severing ties with Russian banks; Visa and Mastercard excluding Russian financial institutions from their networks),³²
- *the entertainment industry* (Spotify with its closure of its Moscow office, Stonemaier Games with its exclusion of Russian partners, Disney, Warner Bros., Sony Music, Netflix).³³

In most cases, the severing of these links affects trade, with the possibility of a reversal of decisions if the situation changes. However, the suspension of participation in joint ventures can also lead to divestments. Moreover, the exit of transportation services and the suspension of supplies are hurting the participation of Russian units in global value chains, and the decisions of financial institutions further exacerbate the financial obstacles to doing business in and with Russia.

In response to the exodus, the Russian authorities attempted to declare a ban on departures. The problem was the effectiveness of such measures if companies prefer leaving behind their assets while still stopping operations. Moreover, such a ban could risk prompting a series of investor–state disputes by foreign companies. The Russian authorities, if condemned, may risk being ordered extremely high amounts of damages, further reducing the country's financial resources.

temporarily-halts-bookings-to-from-russia, 06/18/2023; "Ocean Network Express halts Russia bookings; Maersk may follow", Ship Technology, <https://www.ship-technology.com/news/ocean-network-express-russia-bookings/>, 08/18/2023.

³⁰ Sarah Butler, "Disney suspends Russian operations in response to Ukraine invasion", *The Guardian*, 03/10/2022.

³¹ "Ford Issues Statement On Suspension of Russian Joint Venture and Assistance for Ukrainian Refugees", Ford, <https://media.ford.com/content/fordmedia/fna/us/en/news/2022/03/01/ford-russia-ukraine-statement.html>, 08/19/2023; Gabrielle Coppola & David Welch, "GM, Harley-Davidson Halt Shipments to Russia as Sanctions Bite", *Bloomberg*, 03/01/2022.

³² "MasterCard statement on suspension of Russian operations", MasterCard, <https://www.mastercard.com/news/press/2022/march/mastercard-statement-on-suspension-of-russian-operations>, 08/20/2023.

³³ "Spotify closes its office in Russia in response to attack on Ukraine", *Reuters*, 03/02/2022.

It is also to be stressed that announcements about departure from Russia do not necessarily mean abandoning that market. For example, in the case of Apple, it was reported that, despite its official announcement of stopping selling its products there, the parallel imports of iPhones (via intermediaries) jumped to 1.1 million devices (+15 percent) in the first half of 2023 year-on-year. Parallel imports are also common in the case of consumer goods, such as Zara dresses and Nike sneakers, though they do not re-establish the FDI links that were broken with the abandonment of direct selling.³⁴

As for Raiffeisen Bank Austria, in 2023 it successfully delayed quitting Russia despite pressures. There may be other corporate players who try to postpone their departure for as long as possible.³⁵

A plunge in Russia's FDI inflows and outflows as a consequence

As a result of the above-mentioned trends, the 2022 war in Ukraine increased uncertainties about FDI to and from Russia and was expected to affect it negatively in the short, medium, and long run. In 2022, both inflows and outflows declined sharply and turned largely negative due to divestments (Figure 1). Both dropped more than in the year of the COVID-19 pandemic (2020), though in that year, during weeks, the country came to a complete halt. It should be noted that, via the above-mentioned phenomenon of round-tripping, outflows usually move together with inflows and vice versa. It should be highlighted here, too, that inflows reacted more sharply than outflows, with Russian MNEs attempting to keep some operations at least in “neutral” countries without applying sanctions against them (such as China and India).

A projection for 2023 is based on data available for January, while June indicates that FDI inflows are foreseen to remain largely negative over the year and outflows could become slightly positive, though of this value (around US\$ 8 billion). These data confirm largely our hypothesis about the decline of inward FDI, at least in the short and medium run, due to the war and the sanctions. It seems that the replacement of the lost FDI links with the “West” by FDI links with neutral countries, such as other BRICs, especially China and India, would be an arduous and very time-consuming process, if it works at all. One should not lose sight of the fact that the sectoral composition and technology content of these new links are very different from those registered in FDI with the EU or the United States. In this respect, the efforts of the Russian government in those frameworks that are still

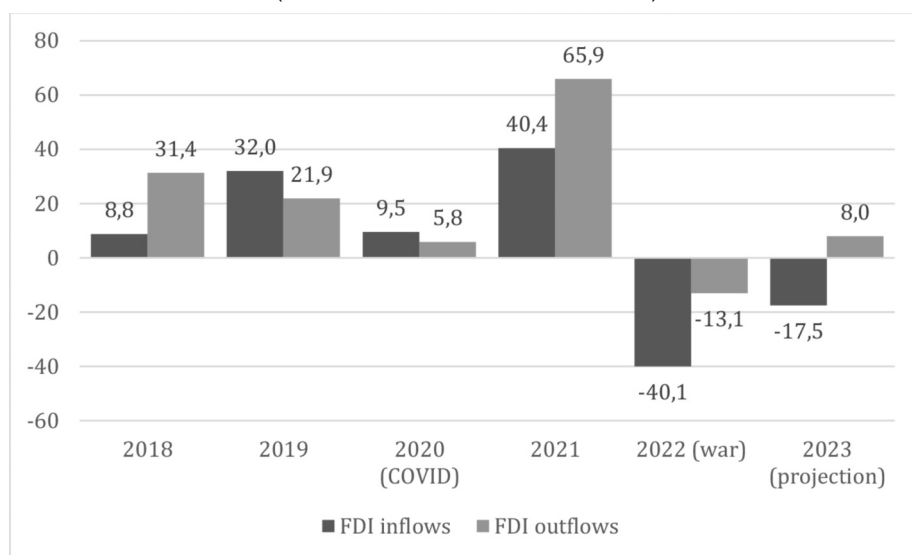
³⁴ Nicolas Camut, “Russians Can Buy Zara Dresses and Nike Sneakers Again”, *Politico*, 11/29/2022.

³⁵ John O'Donnell & Alexandra Schwarz-Goerlich, “Exclusive: Raiffeisen delays quitting Russia as Austria defends ties”, *Reuters*, 08/13/2023.

available may not suffice to cover the losses in FDI, a phenomenon in which there is much less room for domestic alternatives than in measures towards self-sufficiency.

As highlighted at the outset, there is a need now to attribute the effects to different types of sanctions that this article could not fully address. Such an exercise could help us solidify the subsidiary hypotheses that we have raised, which can, for the moment, be confirmed only indirectly. That may be the task of additional studies that will pick up the analysis from this article.

Figure 1. The drop of Russia's FDI inflows and outflows in 2022
(2018–2023 flows in US\$ billion)



Note: Projections for 2023 are based on data available for January till June.

Source: Authors' compilation based on data from CBR (2023).³⁶

Conclusion

In conclusion, the war in Ukraine adds major uncertainties to FDI to and from Russia and affects it negatively in the short, medium, and long run. The degree of hit depends on the exact contents of sanctions and countersanctions, which are in constant evolution and not fixed yet. The paradox of this war is that, if the intention of the planners was to make Russia more powerful, the effect was already opposite and was (and is) worsening over time. Observers may wonder what went wrong with the planning of

³⁶ "Balance of payments of the Russian Federation (standard components)".

the economic consequences. The inputs used did not reflect the realities of the outside world correctly. Perhaps realities had been replaced by a wishful image of a weak, divided, and paralysed international community. Sadly enough, one cannot avoid a feeling of déjà vu, as the lessons of European history more than eight decades ago seemed to be by and large forgotten or ignored by today's planners of the economic consequences of war.

Right now, the biggest question for the Russian authorities would be how to get out of an impasse that hurts all people in the world, in Ukraine, Russia, and other countries alike. It would require extreme courage to apply the right solution, namely the implementation of the United Nations Resolution on the immediate cessation of hostilities and the unconditional withdrawal of troops from Ukraine.

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The Armed Conflict of the Dniester: Three Decades Later

Eugen Străuțiu, Steven D. Roper, William E. Crowther, Dareg Zabarah-Chulak, Victor Juc, and Robert E. Hamilton (eds.), *The Armed Conflict of the Dniester: Three Decades Later*, Peter Lang Publishing Inc., New York, USA, 2023, p. 251.

The book “*The Armed Conflict of the Dniester: Three Decades Later*”, edited by Eugen Străuțiu, Steven D. Roper, William E. Crowther, Dareg Zabarah-Chulak, Victor Juc, and Robert E. Hamilton, consists of nine logically connected papers that reconstruct and interpret the causes, essence, and consequences of the war of the Dniester over a time distance of three decades. Authors from diverse scientific disciplines, including international law, history, geopolitics, strategic studies, security studies, and economic analysis, collectively strive to address a common question: why does the path to a political resolution for this conflict remain elusive? Once researched only in the context of the frozen conflict, the Dniester conflict returned to the focus of research efforts after the outbreak of the Russian-Ukrainian conflict in 2014. This book stands as a remarkable illustration of impartial research. It diligently explores substantial historical and current data while also introducing fresh interpretive frameworks. Through these efforts, it offers a holistic comprehension of the dynamics at play in modern conflicts.¹

The first paper in this book, “*The 1992 Dniester Armed Conflict: An Analytical Approach to the Politico-Military Events from the Perspective of the Involved Parties*,” written by Mihai Melintei, proposes an analytical study of the armed conflict in the Dniester since 1992 using Galtung’s triangle method. The author presents the utilisation of Galtung’s method, which offers an objective analysis and a factual, chronological reconstruction of various stages in political and military confrontations. Galtung’s triangle, composed of the context of contradictions, the attitudes and relationships

¹ Eugen Străuțiu, Steven D. Roper, William E. Crowther, Dareg Zabarah-Chulak, Victor Juc, and Robert E. Hamilton (eds.), *The Armed Conflict of the Dniester: Three Decades Later*, Peter Lang Publishing Inc., New York, USA, 2023, 1-20.

of the involved parties, and the behaviour of the conflicting parties, furnishes a comprehensive and unbiased depiction of the armed conflict in the Dniester region. The book chapter emphasises the role of Soviet nomenclature forces as a catalyst for the division between the two banks of the Dniester and the involvement of third parties, both from a military and political-diplomatic standpoint.²

In the second paper, “*Support for Moldova’s Territorial Integrity in the Transnistrian Region from 1989 to 1992*”, Keith Harrington examines individuals within the Transnistrian region who advocated for Moldova’s territorial integrity. Additionally, the paper explores the government reforms initiated in Chisinau during that period. Local opposition groups openly endorsed the controversial 1989 language laws, displayed the Tricolour flag (which separatists pejoratively labelled a “fascist symbol”), and boycotted separatist elections and referendums. The analysed archival documents reveal that the separatist authorities harboured serious concerns about these pro-Moldovan individuals and that their attempts to suppress these people violently contributed directly to the intensification of hostilities. The author concludes that the violent suppression of these pro-Moldovan actors’ activities directly contributed to the escalating violence that unfolded from the late 1990s onwards.³

In the third paper, “*Armed Stage in the Moldovan-Pridnestrovian Conflict: Causes and Political Consequences*,” Anatoliy Dirunthe presents a thorough examination of the domestic political factors that influenced the Moldovan leadership’s decision to employ their armed forces in the conflict with Pridnestrovie. The research is guided by two pivotal questions: How likely was the scenario of deploying the Moldovan army in the conflict with Pridnestrovie? What level of confidence did the Moldovan leadership have in the non-interference of the Russian Federation and its armed forces in this conflict? The author’s conclusion highlights the transformative impact of the Moldovan military’s defeat, which rendered the armed approach untenable for resolving the conflict. This shift in the socio-political landscape necessitated the inclusion of the Pridnestrovian side as an official participant in the negotiation process.⁴

“*Fighting for What and Whom? The Non-Resident Volunteers During the Armed Conflict in Pridnestrovie*” is the title of the fourth paper written by

² Mihai Melintei, “The 1992 Dniester Armed Conflict: An Analytical Approach to the Politico-Military Events from the Perspective of the Involved Parties,” in: *The Armed Conflict of the Dniester: Three Decades Later*, op. cit. 21-40..

³ Keith Harrington, “Support for Moldova’s Territorial Integrity in the Transnistrian Region from 1989 to 1992”, in: *The Armed Conflict of the Dniester: Three Decades Later*, op. cit. 41-68.

⁴ Anatoliy Dirunthe, “Armed Stage in the Moldovan-Pridnestrovian Conflict: Causes and Political Consequences,” in: *The Armed Conflict of the Dniester: Three Decades Later*, op. cit. 69-88.

Dareg Zabarah-Chulakthat, which delves into the motivations and organisational structures of non-resident fighters in Pridnestrovie. Using specific examples involving prominent individuals or organisations, it seeks to map out their networks, delve into their ideological stances, and explore their connections with political supporters in their home countries and the separatist leadership. This analysis is placed within a broader political context to comprehend the paradoxical support these non-resident fighters received from their home countries' political forces. It delves into the degree of official and unofficial backing the conflict parties received from Romania, Ukraine, and Russia. The author highlights how the ideological vacuum created by the disintegration of parts of the Soviet worldview was rapidly filled with substitute ideologies within the framework of Soviet perspectives on nationhood and statehood. It is worth noting that some of these organisations established robust and enduring networks that persist to this day.⁵

In the fifth paper, *“War Memorials Published in Chisinau: Between Documentary Value and Patriotic Manifesto”*, Nicoleta Annemarie Munteanu emphasises the lack of a systematic investigation of the memorials of the Dniester War printed in Chisinau. The initial books published immediately after the cessation of military operations primarily conveyed patriotic messages and featured a strong mobilisation theme, distinguishing them from later publications. The frequency of memorial works gradually decreased over the years, correlating with the diminishing creative capacity of the participants involved in the events and their natural passage. Through this research, the author established that the selective nature of traumatic memory has the potential to perpetuate recurring memories across generations, making them susceptible to manipulation and misuse. In the context of the Dniester War, this analysis reveals a distinct characteristic concerning memorials. It is marked by the crystallisation of communities on both banks with competing memories, giving rise to the formation of political mythologies and the cultivation of stereotyped attitudes.⁶

The sixth paper in this book, *The Russian Federation's Approach to the Unresolved Dniester Conflict and Its Implications for the Security and Foreign Policy of the Republic of Moldova*, written by Ana Jović-Lazić, delves into Russia's role in the Dniester conflict by emphasising their near-abroad policy, security interests, and approach to other unresolved conflicts in

⁵ Dareg Zabarah-Chulakthat, “Fighting for What and Whom? The Non-Resident Volunteers During the Armed Conflict in Pridnestrovie”, in: *The Armed Conflict of the Dniester: Three Decades Later*, op. cit. 89-113.

⁶ Nicoleta Annemarie Munteanu, “War Memorials Published in Chisinau: Between Documentary Value and Patriotic Manifesto”, in: *The Armed Conflict of the Dniester: Three Decades Later*, op. cit. 115-141.

post-Soviet space. This paper provides a comprehensive analysis that delves into the intricacies of Russia's engagement with the Dniester region both prior to and following the Ukrainian crisis. This analysis is approached through the lens of examining the identity of major powers and their strategic geopolitical interests in the region, and it is noticed that Russia has consistently adopted a distinct approach when dealing with post-Soviet nations in its "Near Abroad". This study underscores Moscow's view of the post-Soviet space as a crucial area for its national security as it seeks to both maintain and expand its influence. Russia's role in unresolved regional conflicts primarily serves to mitigate the influence of other geopolitical actors. The author concluded that given the deteriorating relations between Russia and Western powers, it is reasonable to speculate that even in what seems to be a relatively stable security situation, there exists the potential for heightened tensions or the emergence of a new conflict that could have direct repercussions across the broader region.⁷

Maximilian Ohle, the author of the seventh paper, *"Moldova and Transnistria's Bargaining Strategies Towards Russia: Deciphering Bargaining Codes in Asymmetric Relationships,"* introduces the concept of bargaining codes within asymmetric arrangements to redirect the discussion towards how Russia, Moldova, and Transnistria engage in negotiations regarding their respective preferences for settling the territorial dispute. It examines how their stated intentions align with their bargaining practices and actions during the negotiation process. By looking at the behavioural patterns and bargaining strategies of Moscow, Chisinau, and Tiraspol, it is possible to gain a deeper understanding of the conditions under which they navigate each other's intentions and actively work to achieve the most advantageous bargaining outcomes, even if it comes at the expense of the others under specific circumstances. Although successful bargaining typically relies on the assumption of shared interests within a favourable range of potential outcomes, the Russian-Moldovan-Transnistrian triangular relationship demonstrates that the negotiated agreements were fundamentally incompatible throughout all stages of bargaining. In this manner, the author introduced a novel and innovative approach that provided a more insightful understanding than conventional conceptual debates.⁸

The eighth paper, *"Russian Involvement in the Transnistrian War: A Prototype of Russian Modern 'Hybrid Warfare'?"*, which is written by Tarik

⁷ Ana Jović-Lazić, *The Russian Federation's Approach to the Unresolved Dniester Conflict and Its Implications for the Security and Foreign Policy of the Republic of Moldova*, in: *The Armed Conflict of the Dniester: Three Decades Later*, op. cit. 143-167.

⁸ Maximilian Ohle, *"Moldova and Transnistria's Bargaining Strategies Towards Russia: Deciphering Bargaining Codes in Asymmetric Relationships,"* in: *The Armed Conflict of the Dniester: Three Decades Later*, op. cit. 169-193.

Solmaz, provides a comprehensive response to whether “hybrid warfare” constitutes a new form of warfare. It does so by conducting two case studies: the covert Russian intervention in Ukraine from February 2014 to February 2022 and the Soviet/Russian involvement in the 1990–92 Transnistria War. This article also argues that it is crucial to understand the circumstances under which Russia is inclined to employ “hybrid warfare” methods since Russia does not exclusively rely on these methods in all its operations. The author concludes that there are at least four different situations in which Russia resorts to using “hybrid warfare”: when it perceives the interests at stake as “important” but not necessarily “survival” or “vital”; when it needs to maintain plausible deniability; when it is not fully prepared for a large-scale military intervention; and when the operational environment lends itself to the use of indirect methods of attack. While this study may not provide definitive conclusions, it is an exceptional exploratory research design, primarily used to clarify concepts, identify variables, and generate hypotheses that can be tested in future research.⁹

The last, ninth paper in this book, written by Kamala Valiyeva, “*Revisiting Moldova’s Transnistria Dispute Amid Severing EU-Russia Ties*”, offers a comprehensive examination of Moldova’s Transnistria dilemma, with a specific emphasis on the internationalisation of the conflict within the context of heightened competition over post-Soviet Eastern Europe. The author delves into the current impasse in resolving the territorial dispute, highlighting the growing misalignment of interests among major geopolitical actors. The ongoing geopolitical power struggle among these significant players has unfortunate repercussions for countries caught in the middle, such as Moldova. It is crucial to note that the EU and Russia hold conflicting visions of the European security order and distinct approaches to integration in the shared neighbourhood. These differences in vision and strategy substantially impact the situation in and around Transnistria. Moreover, the absence of a mutually agreed-upon regional security framework remains unresolved, contributing to heightened insecurity. This situation has led to a significant East-West confrontation, with Western countries severing their ties with Russia, further complicating the scenario.¹⁰

The book “*The Armed Conflict of the Dniester: Three Decades Later*” presents an original approach to the Dniester conflict by impartially analysing existing data and situating this information within a contemporary security and geopolitical context. The distinct value of this

⁹ Tarik Solmaz, “Russian Involvement in the Transnistrian War: A Prototype of Russian Modern ‘Hybrid Warfare’?”, in: *The Armed Conflict of the Dniester: Three Decades Later*, op. cit. 195–213.

¹⁰ Kamala Valiyeva, “Revisiting Moldova’s Transnistria Dispute Amid Severing EU-Russia Ties”, in: *The Armed Conflict of the Dniester: Three Decades Later*, op. cit. 215–243.

book is its innovative approach to analysing pertinent information, which is presented in a clear and accessible manner. This approach enhances the understanding of the subject matter and facilitates the verification of the research itself. As a result, the book merits attention within the scope of researching this particular conflict and understanding broader modern security phenomena.

This book also provides an interdisciplinary presentation of research findings from renowned scholars. This makes it an excellent foundation for future research in this field, providing a comprehensive and accessible resource for scholars and researchers to build upon.

Mitko ARNAUDOV and Milica ĆURČIĆ

Међународна политика

Рецензенти

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Др Милорад Стаменовић, научни сарадник, Inventis, Universite Cote'D Azur, Француска

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УРЕЂИВАЧКА ПОЛИТИКА

ОПИС ЧАСОПИСА, ЦИЉЕВИ И ОПСЕГ

Међународна политика је рецензирани научни часопис отвореног приступа који издаје Институт за међународну политику, водећа научна институција у региону посвећена истраживању међународних односа. Више од 70 година овај интердисциплинарни часопис објављује оригиналне, аналитичке, теоријске, прегледне и стручне радове о широком спектру савремених међународних политичких, економских и правних односа. У своја три годишња издања часопис *Међународна политика* има за циљ да објављује високо квалитетна истраживања оријентисана на разматрање широког спектра међународних и спољнополитичких питања. У том контексту часопис се интересује за политике најважнијих актера који обликују савремене међународне односе. Релевантне су и теме посвећене различитим територијалним и етничким сукобима и споровима, од међудржавних до унутардржавних, као и њиховим ширим регионалним и глобалним политичким, економским и правним импликацијама. За часопис су значајне и друга питања која утичу на савремене међународне односе, као што су глобална трговина, економски и енергетски односи, међународне и регионалне интеграција, различити облици тероризма и фундаментализма, као и изазови које представљају мигрантска криза, глобално ширење заразних болести и нуклеарних капацитета у свету. Дакле, овај научни часопис је заснован на отвореном и широком приступу предметној области, дајући првенство прилозима који нуде отворена, теоријски и практично утемељена гледишта актуелних међународних процеса. На тај начин часопис настоји да на што кредибилнији начин објасни разнолике и недовољно истражене нове феномене на међународној сцени.

ОБАВЕЗЕ ИЗДАВАЧКОГ САВЕТА, УРЕДНИКА И УРЕЂИВАЧКОГ ОДБОРА

Издавачки савет је саветодавно тело које активно доприноси развоју часописа. Задачи и дужности чланова Савета су: подршка развоју часописа, промоција часописа, подстицање стручњака у научном истраживању политичких, безбедносних, економских и правних аспеката међународних односа да се укључе у рад часописа као аутори и/или рецензенти, писање уводника, рецензија и коментара о радовима.

Главни и одговорни уредник *Међународне политике* доноси коначну одлуку о томе који ће се рукописи објавити. Приликом доношења одлуке главни и одговорни уредник руководи се уређивачком политиком водећи рачуна о законским прописима који се односе на клевету, кршења ауторских права и плагирање.

Главни и одговорни уредник и његов заменик задржавају дискреционо право да примљене рукописе процене и одбију без рецензирања, уколико утврде да не одговарају садржинским и формалним стандардима писања научноистраживачког рада и тематским захтевима уређивачке политике. Радови који не задовољавају техничке стандарде прописане Упутством за ауторе, чак и у случају да је садржај коректан, биће враћени ауторима на усклађивање. У редовним околностима, редакција обавештава аутора о томе да ли је прихватила текст и покренула поступак рецензирања у року од седам дана од датума пријема рукописа.

Главни и одговорни уредник, његов заменик и чланови Уређивачког одбора не смеју да буду у било каквом сукобу интереса у вези са рукописима које разматрају. Из поступка избора рецензената и одлучивања о судбини рукописа искључују се чланови Уређивачког одбора код којих постоји сукоб интереса. Ако такав сукоб интереса постоји, о избору рецензената и судбини рукописа одлучује главни и одговорни уредник. Главни и одговорни уредник, његов заменик и чланови Уређивачког одбора су дужни да благовремено пријаве постојање сукоба интереса.

Главни и одговорни уредник, његов заменик и Уређивачки одбор дужни су да суд о рукопису донесу на основу његовог садржаја, без расних, полних/родних, верских, етничких или политичких предрасуда.

Уредници и чланови Уређивачког одбора не смеју да користе необјављен материјал из предатих рукописа за своја истраживања без изричите писане дозволе аутора, а информације и идеје изнете у предатим рукописима морају се чувати као поверљиве и не смеју да се користе за стицање личне користи.

Уредници и чланови редакције дужни су да предузму све разумне мере како би идентитет рецензената остао непознат ауторима пре, током и након поступка рецензије и како би идентитет аутора остао непознат рецензентима.

ОБАВЕЗЕ АУТОРА

Аутори гарантују да рукопис представља њихов оригиналан допринос, да није објављен раније и да се не разматра за објављивање на другом месту. Истовремено предавање истог рукописа у више часописа представља кршење етичких стандарда. Такав рукопис се моментално искључује из даљег разматрања. Аутори такође гарантују да након објављивања у часопису Међународна политика рукопис неће бити објављен у другој публикацији на било ком језику без сагласности носиоца ауторских права.

У случају да је послати рукопис резултат научноистраживачког пројекта или да је, у претходној верзији, био изложен на скупу у виду усменог саопштења (под истим или сличним насловом), детаљнији подаци о пројекту, конференцији и слично, наводе се у фусноти на самом почетку

текста. Рад који је већ објављен у неком часопису не може бити прештампан у *Међународној политици*.

Аутори су дужни да се придржавају етичких стандарда који се односе на научноистраживачки рад. Аутори гарантују да рукопис не садржи неосноване или незаконите тврдње и не крши права других. Издавач неће сносити никакву одговорност у случају испостављања било каквих захтева за накнаду штете.

Садржај рада

Рад треба да садржи довољно детаља и референци како би се рецензентима, а потом и читаоцима омогућило да провере тврдње које су у њему изнесене. Намерно изношење нетачних тврдњи представља кршење етичких стандарда. Прикази скупова и књига морају да буду прецизни и објективни.

Аутори сnose сву одговорност за садржај предатих рукописа и дужни су да, ако је то потребно, пре њиховог објављивања прибаве сагласност свих лица или институција које су непосредно учествовале у истраживању које је у рукопису представљено.

Аутори који желе да у рад укључе илустрације, табеле или друге материјале који су већ негде објављени обавезни су да за то прибаве сагласност носилаца ауторских права. Материјал за који такви докази нису достављени сматраће се оригиналним делом аутора.

Ауторство

Аутори су дужни да као ауторе наведу само она лица која су значајно допринела садржају рукописа, односно дужни су да сва лица која су значајно допринела садржају рукописа наведукao ауторе. Ако су у битним аспектима истраживачког пројекта и припреме рукописа учествовала и друга лица која нису аутори, њихов допринос треба поменути у напомени или захвалници.

Навођење извора

Аутори су дужни да исправно цитирају изворе који су битно утицали на садржај истраживања и рукописа. Информације које су добили у приватном разговору или кореспонденцији са трећим лицима, приликом рецензирања пријава пројеката или рукописа и слично, не смеју се користити без изричите писане дозволе извора.

Сукоб интереса

Аутори су дужни да у раду укажу на финансијске или било које друге сукобе интереса који би могли да утичу на изнесене резултате и интерпретације.

Грешке у објављеним радовима

У случају да аутори открију важну грешку у свом раду након његовог објављивања, дужни су да моментално о томе обавесте уредника или издавача и да са њима сарађују како би се рад повукао или исправио.

Предавањем рукописа редакцији *Међународне политике* аутори се обавезују на поштовање наведених обавеза.

ПЛАГИЈАРИЗАМ

Плагирање, односно преузимање туђих идеја, речи или других облика креативног израза и представљање као својих, представља грубо кршење научне и издавачке етике. Плагирање може да укључује и кршење ауторских права, што је законом кажњиво. Плагијат обухвата следеће:

- Дословно или готово дословно преузимање или смишљено парафразирање (у циљу прикривања плагијата) делова текстова других аутора без јасног указивања на извор или обележавање копираних фрагмената (на пример, коришћењем наводника);
- Копирање слика или табела из туђих радова без правилног навођења извора и/или без дозволе аутора или носилаца ауторских права.

Рукописи код којих постоје јасне индикације да се ради о плагијату биће аутоматски одбијени и ауторима ће бити трајно забрањено да објављују у часопису.

Ако се установи да је рад који је објављен у часопису плагијат, исти ће бити повучен у складу са процедуром описаном под *Повлачење већ објављених радова*, а ауторима ће бити трајно забрањено да објављују у часопису.

ОБАВЕЗЕ РЕЦЕНЗЕНАТА

Рецензенти су дужни да стручно, аргументовано, непристрасно и у задатим роковима доставе уреднику оцену научне вредности рукописа.

Рецензенти евалуирају радове у односу на усклађеност теме рада са профилем часописа, релевантност истраживане области и примењених метода, оригиналност и научну релевантност података изнесених у рукопису, стил научног излагања и опремљеност текста научним апаратом.

Рецензент који има основане сумње или сазнања о кршењу етичких стандарда од стране аутора дужан је да о томе обавести уредника. Рецензент треба да препозна важне објављене радове које аутори нису цитирали. Он треба да упозори уредника и на битне сличности и подударности између рукописа који се разматра и било којег другог објављеног рада или рукописа који је у поступку рецензије у неком другом часопису, ако о томе има лична

сазнања. Ако има сазнања да је исти рукопис разматра у више часописа у исто време, рецензент је дужан да о томе обавести уредника.

Рецензент не сме да буде у сукобу интереса са ауторима или финансијером истраживања. Уколико постоји сукоб интереса, рецензент је дужан да о томе моментално обавести уредника.

Рецензент који себе сматра некомпетентним за тему или област којом се рукопис бави дужан је да о томе обавести уредника.

Рецензија мора бити објективна. Суд рецензената мора бити јасан и поткрепљен аргументима.

Рукописи који су послати рецензенту сматрају се поверљивим документима. Рецензенти не смеју да користе необјављен материјал из предатих рукописа за своја истраживања без изричите писане дозволе аутора, а информације и идеје изнесене у предатим рукописима морају се чувати као поверљиве и не смеју се користити за стицање личне користи.

ПОСТУПАК РЕЦЕНЗИЈЕ

Примљени радови подлежу рецензији. Циљ рецензије је да главном и одговорном уреднику помогне у доношењу одлуке о томе да ли рад треба прихватити или одбити и да кроз процес комуникације са ауторима побољша квалитет рукописа.

Рецензије су двоструко анонимне – идентитет аутора је непознат рецензентима и обрнуто. Идентитет рецензената остаје непознат ауторима и обрнуто пре, током и након поступка рецензије. Уредници гарантују да ће пре слања рукописа на рецензију из њега бити уклоњени лични подаци аутора (пре свега, име и афилијација) и да ће се предузети све разумне мере како би идентитет аутора остао непознат рецензентима. Током читавог процеса, рецензенти делују независно једни од других. Рецензентима није познат идентитет других рецензената. Ако одлуке рецензената нису исте, уредници могу да траже мишљење других рецензената.

Рок за окончање поступка рецензирања је 30 дана од датума када рецензенти приме рукопис.

Избор рецензената спада у дискрециона права главног и одговорног уредника и његовог заменика. Рецензенти морају да располажу релевантним знањима у вези са облашћу којом се рукопис бави и не смеју бити из исте институције као аутор, нити то смеју бити аутори који су у скорије време објављивали публикације заједно (као коаутори) са са било којим од аутора поднесеног рада.

Уредници шаљу поднети рукопис са обрасцем рецензије двојици рецензената који су стручњаци за научну област којом се рад бави. Образац рецензије садржи низ питања на која треба одговорити, а која рецензентима указују који су то аспекти које треба обухватити како би се донела одлука о

судбини једног рукописа. У завршном делу обрасца, рецензенти морају да наведу своја запажања и предлоге како да се поднесу рукопис побољша.

Током поступка рецензије уредници могу да захтевају од аутора да доставе додатне информације (укључујући и примарне податке), ако су оне потребне за доношење суда о научном доприносу рукописа. Уредници и рецензенти морају да чувају такве информације као поверљиве и не смеју их користити за стицање личне користи.

У случају да аутори имају озбиљне и основане замерке на рачун рецензије, уредници ће проверити да ли је рецензија објективна и да ли задовољава академске стандарде. Ако се појави сумња у објективност или квалитет рецензије, уредници ће тражити мишљење других рецензента.

РАЗРЕШАВАЊЕ СПОРНИХ СИТУАЦИЈА

Сваки појединац или институција могу у било ком тренутку да уредницима и/или Уређивачком одбору пријаве сазнања о кршењу етичких стандарда и другим неправилностима и да о томе доставе неопходне информације и доказе.

Провера изнетих навода и доказа

- Главни и одговорни уредник ће у договору са Уређивачким одбором одлучити о покретању поступка који има за циљ проверу изнесених навода и доказа;
- Током тог поступка сви изнесени докази сматраће се поверљивим материјалом и биће предочени само оним лицима која су директно укључена у поступак;
- Лицима за која се сумња да су прекршила етичке стандарде биће дата могућност да одговоре на изнете оптужбе.

Одлуке у вези са утврђеним кршењем етичких стандарда доноси главни и одговорни уредник у сарадњи са Уређивачким одбором и, ако је то потребно, групом стручњака. Предвиђене су следеће мере, а могу се примењивати појединачно или истовремено:

- Објављивање саопштења или уводника у ком се описује случај кршења етичких стандарда;
- Слање службеног обавештења руководиоцима или послодавцима аутора/рецензента;
- Безусловно одбијање рукописа или повлачење већ објављеног рада у складу са процедуром описаном под *Повлачење већ објављених радова*;
- Аутору се трајно забрањује да објављује у часопису *Међународна политика*;

- Упознавање релевантних стручних организација или надлежних органа са случајем како би могли да предузму одговарајуће мере.

Приликом решавања спорних ситуација Уређивачки одбор се руководи смерницама и препорукама Одбора за етику у издаваштву (*Committee on Publication Ethics – COPE*, <http://publicationethics.org/resources/>).

ПОВЛАЧЕЊЕ ВЕЋ ОБЈАВЉЕНИХ РАДОВА

У случају кршења права издавача, носилаца ауторских права или аутора, повреде професионалних етичких кодекса, тј. у случају слања истог рукописа у више часописа у исто време, лажне тврдње о ауторству, плагијата, манипулације подацима у циљу преваре, као и у свим другим случајевима грубог кршења етичких стандарда, објављени рад се мора повући. У неким случајевима већ објављени рад се може повући и како би се исправиле накнадно уочене грешке.

Стандарди за разрешавање ситуација када мора доћи до повлачења рада дефинисани су смерницама Одбора за етику у издаваштву (*Committee on Publication Ethics – COPE*, <http://publicationethics.org/resources/>), а иста пракса је усвојена и од стране часописа *Међународна политика*.

ПОЛИТИКА ОТВОРЕНОГ ПРИСТУПА

Часопис *Међународна политика* је доступан у складу с принципима отвореног приступа. Објављује се и у папирном и у дигиталном облику. Чланци могу да буду преузети бесплатно са сајта и дистрибуирани за академске и друге сврхе. Часопис се руководи *Будимпештанском декларацијом о отвореном приступу* у којој се наводи:

Под „отвореним приступом” [рецензираној научној литератури] подразумева се њена слободна расположивост на јавном интернету, која дозвољава било ком кориснику да чита, преузме, копира, дистрибуира, штампа, претражује или усмери путем линка ка пуном тексту чланка, пописује за потребе индексирања, прослеђује у виду податка ка софтверу, и користи их за било коју закониту сврху, без финансијских, правних или техничких препрека осим оних које су неодвојиве од самог приступа интернету. Једино ограничење у погледу репродукције и дистрибуције, и једина улога ауторских права у овом домену, требало би да буде давање ауторима контроле у погледу интегритета њиховог рада и права да буду правилно препознати и цитирани.

Часопис омогућује бесплатан приступ свим својим чланцима, без претплате и без икаквих повезаних трошкова. Садржај часописа објављује се без одлагања (без тзв. периода ембарга) и материјали могу бити коришћени без тражења посебне дозволе под условом да се наводи референца ка оригиналном документу.

АУТОРСКА ПРАВА И ЛИЦЕНЦА

Чланци објављени у *Међународној политици* биће дисеминовани у складу с дозволом Creative Commons Attribution ShareAlike 4.0 International license (CC BY-SA) (*Делити под истим условима 4.0 Међународна*), која дозвољава дељење – копирање и поновну дистрибуцију у било ком облику или медију – и прилагођавање – прерађивање, мењање или надградњу за било коју сврху, чак и комерцијалну, под условима: да је оригинално ауторство адекватно наведено, да је пружен линк ка дозволи, да је наведено да ли су извршене измене и уколико се нови рад дисеминује под идентичном дозволом као и оригинални рад. Корисници морају да наведу детаљне информације о оригиналном раду, укључујући име(на) аутора, наслов објављеног истраживања, пуно име Часописа, том, издање, опсег страна и DOI. У електронском објављивању, од корисника се захтева да наведу линк-ове ка садржају оригиналног рада у Часопису, као и дозволи под којом је објављен. Аутор(и) могу да предузимају засебне додатне уговорне аранжмане за неексклузивну дистрибуцију рада објављеног у Часопису (нпр. постављање у институционални репозиторијум или објављивање у књизи), уз адекватно навођење да је рад иницијално објављен у часопису *Међународна политика*.

Аутор(и) потписују *Уговор о лиценци*.

Аутор(и) гарантују да рукопис представља њихово оригинално дело које није раније објављивано; да није у процесу разматрања за објављивање негде другде; да је објављивање одобрено од стране свих (ко)аутора, као и имплицитно или експлицитно од стране установе где је истраживачки рад спроведен.

Аутор(и) потврђују да чланак не садржи неосноване или незаконите изјаве и не крши права других. Аутор(и) такође потврђују да нису у сукобу интереса који може да утиче на интегритет Рукописа и на валидност закључака који су у њему представљени. У случају укључивања радова који подлежу ауторским правима, одговорност је аутора да добију писану дозволу од стране власника ауторских права. Одговорни аутор (потписник) јемчи да има пуна овлашћења за ту сврху у име других аутора. Уколико аутор(и) користе било какве личне податке истраживаних субјеката или других појединаца, потврђују да су за ту сврху добили сва законска одобрења и да су сагласни са политикама Часописа која се тиче употребе таквих приказа, личних информација и сл.

Часопис дозвољава аутор(има) да похране одштампану верзију (прихваћену верзију) Рукописа у институционални репозиторијум и друге репозиторијуме, као и да је објаве на ауторовом личном сајту или профилима попут нпр. ResearchGate, Academia.edu и других, у било ком тренутку након објављивања, уз навођење извора, линка ка DOI чланка и поштовање претходно наведених ставки.

По добијању лекторисане верзије рукописа, аутор(и) се слажу да је у најкраћем року пажљиво прочитају, скрену пажњу Часопису на било какву типографску грешку и одобре објављивање кориговане лекторисане верзије. Одговорни аутор се слаже да информише друге (ко)ауторе о горе наведеним условима.

УГОВОР О ЛИЦЕНЦИ

Долепотписани аутор(и) овим путем дају своју правну сагласност да *Међународна политика*, ISSN 0513-3657 eISSN 2787-0618

објави чланак: _____,

од аутора: _____,

укључујући и било коју табелу, илустрацију или други материјал који је послат за објављивање као део рукописа, да буде наведен као првобитни издавач у случају поновне употребе, и да га дистрибуира у свим облицима и медијима.

Права академске издавачке комуникације

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Права корисника

Издавач ће применити лиценцу CC BY-SA 4.0 на чланак објављен у *Међународној политици* на његовој интернет платформи у складу с принципима отвореног приступа.

Потпис(и) аутора

Датум

ОДРИЦАЊЕ ОДГОВОРНОСТИ

Ставови изнети у објављеним радовима не изражавају ставове уредништва и Уређивачког одбора. Аутори преузимају правну и моралну одговорност за идеје изнете у својим радовима. Издавач неће сносити никакву одговорност у случају испостављања било каквих захтева за накнаду штете.

УПУТСТВО ЗА АУТОРЕ

Међународна политика је четворомесечник који излази у априлу, септембру и децембру сваке године. Часопис објављује чланке на српском и на енглеском језику.

Часопис објављује рецензиране оригиналне и прегледне чланке и приказе књига из области међународних односа, спољне политике, међународног јавног права и међународне економије.

Оригинални истраживачки чланак представља резултате истраживања са јасним доприносом проширењу и/или продубљивању постојећег знања. Треба га поставити тако да има следеће делове: контекст и циљ истраживања; јасно објашњење теоријске основе (преглед литературе) у уводу; хипотеза или истраживачко питање; примењене методе; презентацију и објашњење резултата; и закључак који говори о главним налазима истраживања, хипотези или истраживачком питању.

Прегледни чланак пружа свеобухватан резиме истраживања о одређеној теми или перспективу о стању на терену описујући тренутне области договора, као и контроверзе и дебате. Прегледни чланак идентификује празнине у знању и најкритичнија истраживачка питања на која још увек није одговорено. Такође сугерише правце за будућа истраживања.

Рецензија књиге је систематски опис и/или критичка анализа квалитета и значаја књиге, уређеног тома или уџбеника. Рецензија књиге треба да садржи општи опис теме или проблема о коме се књига бави, резиме главног аргумента књиге, основне информације о аутору, преглед садржаја књиге, предности и слабости, и сажетак мишљења рецензента о књизи.

Услов за узимање у разматрање прилога је да буду припремљени у складу са следећим упутствима.

I – Упутство за писање чланака

1. Чланци треба да садрже од 5.000 до 8.000 речи.
2. Чланке писати ћирилицом, коришћењем фонта *Times New Roman*, величине 12, са бројевима страница у доњем десном углу.
3. Изнад наслова чланка треба написати име и презиме аутора чланка.

4. Име и презиме аутора/а чланка (и евентуално звање), назив установе у којој је запослен и њено седиште, као и адреса аутора за контакт (поштанска, институционална или електронска), и ORCID ID треба написати у првој фусноти.
5. Апстракт се прилаже и на српском и на енглеском језику и у њему аутор треба да укаже на истраживачко питање, најбитније хипотезе, контекст и закључке истраживања. Апстракт треба да садржи до 200 речи, а испод њега аутор наводи до 10 кључних речи.
6. Латинске, старогрчке и друге не-енглеске речи и изрази у тексту наводе се у *italic*-у (нпр. *status quo*, *a priori*, *de facto*, *acquis communautaire*, итд.).
7. У тексту морају бити дата пуна имена, никако иницијали. Страно име и презиме треба писати у српској транскрипцији, с тим што се приликом првог помињања у тексту мора навести како гласе у оригиналу, и то у загради после српске транскрипције.
8. Фусноте је неопходно писати на дну стране (опција *Footnote*), а ознаке за фусноте стављати искључиво на крају реченице.

Податке о наведеној библиографској јединици у фуснотама треба навести у складу са следећим сугестијама:

а) Монографије

Пуно име и презиме аутора, наслов монографије (у *Italic*-у), назив издавача, место издавања, година издања, уколико се цитира једна страна извора наводи се број стране, уколико се наводи више страница користи се средња црта без размака пре и после (нпр. 123; 22–50).

Када се наводи зборник радова на српском језику који је приредила једна особа, ставља се (ур.) или (прир.) са тачком у оба случаја. Са друге стране, када се ради о више уредника монографије на српском језику ставља се (урс), без тачке.

Када се наводи приређени зборник радова на енглеском језику који је приредило више приређивача, иза имена приређивача се у заградама ставља (eds), без тачке. Ако се ради о једном приређивачу, ставља се (ed.), са тачком.

Примери:

Богдан Стојановић, *Теорија денуклеаризације: зашто државе прекидају програме нуклеарног наоружања?*, Институт за међународну политику и привреду, Београд, 2021, 205.

Džon Rols, *Pravo naroda*, Alexandria Press i Nova srpska politička misao, Beograd, 2003, 107.

John Gillingham, *European Integration 1950–2003*, Cambridge University Press, Cambridge, 2003, 221.

Duško Lopandić (ed.), *Regional initiatives in Southeast Europe: multilateral cooperation programs in the Balkans*, Institute of International Politics and Economics, Belgrade, 2001, 24–32.

Theodor Winkler, Brana Marković, Predrag Simić & Ognjen Pribićević (eds), *European Integration and the Balkans*, Center for South Eastern European Studies, Belgrade & Geneva Centre for the Democratic Control of the Armed Forces, Geneva, 2002, 234–7.

б) Чланци у научним часописима

Пуно име и презиме аутора, наслов текста (под знацима навода), назив часописа (*Italic*), број тома, број издања, стр. од-до. Бројеви страница се одвајају средњом цртицом (–), без размака. Уколико су неки подаци непотпуни неопходно је то и нагласити.

Примери:

Michael Levi, “The Organisation of Serious Crimes”, in: Mike Maguire, Rod Morgan & Robert Reiner (eds), *The Oxford Handbook of Criminology*, Oxford University Press, Oxford, 2003, 878–84. (878–9 или 878).

Robert J. Bunker & John. R. Sullivan, “Cartel Evolution: Potentials and Consequences”, *Transnational Organized Crime*, vol. 4, no. 2, Summer 1998, 55–76.

в) Чланци у дневним новинама и часописима

Навести име аутора (или иницијале уколико су само они наведени), наслов чланка — под знацима навода, име новине или часописа (*Italic*) датум — написан арапским бројевима, број стране/страница.

Пример:

John Gapper, “Investor votes should count”, *The Financial Times*, 17 April 2006, 9.

г) Навођење докумената

Навести назив документа (под знацима навода), члан, тачку или став на који се аутор позива, часопис или службено гласило у коме је документ објављен (*Italic*, број тома, број издања, место и годину издања).

Примери:

“Resolution 1244 (1999)”, Security Council of the United Nations, 10 June 1999.

“Statut Autonomne Pokrajine Vojvodine”, *Službeni list APV*, 17/91, Novi Sad, 18. jun 1991, 1–14.

д) Навођење извора са Интернета

Име аутора, назив дела или чланка, пуна Интернет адреса која омогућава да се до наведеног извора дође укупцавањем наведене адресе, датум приступања страници на Интернету, број стране (уколико постоји и ако је прилог објављен у PDF-у).

Пример:

Maureen Lewis, *Who is Paying for Health Care in Eastern Europe and Central Asia?*, IBRD & World Bank, Washington D.C, 2000, [http://Inweb18.worldbank.org/eca/eca.nsf/Attachments/Who+is+Paying+for+Health+Care+in+Eastern+Europe+and+Central+Asia/\\$File/Who+is+Paying+text.pdf](http://Inweb18.worldbank.org/eca/eca.nsf/Attachments/Who+is+Paying+for+Health+Care+in+Eastern+Europe+and+Central+Asia/$File/Who+is+Paying+text.pdf), 14/09/2004, 3.

ђ) Понављање раније наведених извора

Када се позивамо на извор који је већ раније навођен у тексту после других фуснота, обавезно треба ставити име и презиме аутора, наслов извора, затим *op. cit.* И на крају број стране (нпр. Michael Levi, “The Organisation of Serious Crimes”, *op. cit.*, 879). *Ibid.* или *ibidem* користити искључиво при навођењу извора наведеног у претходној фусноти, уз назнаку броја стране/страница, уколико је нови навод из тог извора (нпр. *Ibid.*, 11).

9. На крају чланка прилаже се библиографија која треба да садржи све изворе и литературу навођене у тексту, а у форми каква је наведена у упутству за фусноте. Једина разлика је што се у библиографији обавезно наводи прво презиме па име аутора цитираног рада, и целокупна библиографија се организује према абecedном редоследу почетног имена навођених аутора (или назива коришћених докумената).

II – Упутство за писање приказа књига

1. Прикази скупова и књига не смеју бити дужи од две и по странице Word формата (проред *single*), односно не смеју садржати више од 1.200 речи (8.800 знакова са размацима).

2. На почетку приказа наводе се библиографске одреднице књиге у складу са правилима која су наведена за навођење монографија у фуснотама, с тим што на крају треба навести укупан број страница (нпр. 345 стр. р. 345).

3. Прикази књига и скупова морају садржати фусноте.

4. Аутор може навести и наднаслов приказа књиге или скупа великим словима — величина слова 14, што је подложно изменама од стране редакције часописа.

5. Величина слова, фонт и поравнање текста треба да буду у складу са раније наведеним сугестијама за писање чланака.

6. На крају приказа наводи се пуно име и презиме аутора у *Italic*-у, с тим што се презиме у целини пише великим словима (нпр. *Жаклина НОВИЧИЋ*).

* * *

Сви прилози достављају се на е-mail *Међународне политике*: mp@diplomacy.bg.ac.rs или др Ани Јовић-Лазих, главном и одговорном уреднику на е-mail: anajovic@diplomacy.bg.ac.rs.

Уредништво

EDITORIAL POLICY

JOURNAL DESCRIPTION, OBJECTIVES, AND SCOPE

International Politics is a peer-reviewed, open-access scientific journal published by the Institute of International Politics, a leading scientific institution in the region dedicated to the research of international relations. This interdisciplinary journal has been publishing original, analytical, theoretical, review, and expert papers on a wide range of topics in contemporary international political, economic, and legal relations for more than 70 years. The journal *International Politics* aims to publish high-quality research on a wide range of international and foreign policy issues in its three yearly issues. In that context, the journal investigates the policies of the most important actors who shape contemporary international relations. Topics dedicated to various territorial and ethnic conflicts and disputes, from interstate to intrastate, as well as their wider regional and global political, economic, and legal implications, are also relevant. Other issues affecting contemporary international relations are also significant for the journal, such as global trade, economic and energy relations, international and regional integration, various forms of terrorism and fundamentalism, as well as the challenges posed by the migrant crisis, the global spread of infectious diseases, and nuclear capacity in the world. Therefore, this scientific journal is based on an open and broad approach to the subject area, giving priority to contributions that offer open and theoretically and practically grounded points of view on current international processes. In this way, the journal tries to explain diverse and insufficiently researched phenomena on the international stage.

RESPONSIBILITIES OF THE PUBLISHING COUNCIL, EDITORS, AND EDITORIAL BOARD

The Publishing Council is an advisory body that actively contributes to the development of the journal. Members of the Council are responsible for helping the journal grow and promoting it. They are also supposed to encourage experts in the field of scientific research on the political, security, economic, and legal aspects of international relations to write for or review the journal, as well as write editorials, reviews, and comments on works.

The Editor-in-Chief of *International Politics* makes the final decision on which manuscripts will be published. When making a decision, the Editor-in-

Chief is guided by the editorial policy, taking into account legal regulations related to defamation, copyright infringement, and plagiarism.

The Editor-in-Chief and Deputy Editor-in-Chief retain the discretionary right to evaluate and reject received manuscripts without peer review if they determine that manuscripts do not correspond to the content and formal standards for writing scientific research articles and the thematic requirements of editorial policy. Articles that do not meet the technical standards prescribed in the *Instructions to Authors*, even if the content is correct, will be returned to the authors for alignment. In regular circumstances, the editorial office will inform authors whether their articles are accepted or not and if the review procedure is initiated within seven days from the date of manuscript receipt.

The Editor-in-Chief, the Deputy Editor-in-Chief, and the members of the Editorial Board must not have any conflict of interest related to manuscripts they consider. Any member of the Editorial Board with a conflict of interest will be excluded from the procedure of selecting reviewers and deciding the fate of manuscripts. If such a conflict of interest exists, the Editor-in-Chief determines the reviewers and the future of manuscripts. The Editor-in-Chief, the Deputy Editor-in-Chief, and the members of the Editorial Board are obliged to report the conflicts of interest promptly.

The Editor-in-Chief, the Deputy Editor-in-Chief, and the Editorial Board are obliged to evaluate manuscripts based on their content, without any racial, sexual/gender, religious, ethnic, or political prejudices.

The editors and members of the Editorial Board must not use unpublished material from submitted manuscripts for their own research without express written permission from the authors. The information and ideas presented in submitted manuscripts must be kept confidential. They must not be used for gaining personal benefit.

The editors and members of the editorial office are obliged to take all reasonable measures so that the identities of reviewers remain unknown to authors before, during, and after the review process and to keep authors' identities anonymous to reviewers.

AUTHORS' OBLIGATIONS

Authors warrant that manuscripts represent their original contributions, which have not been published before and are not being considered for publication elsewhere. Simultaneous enrollment of the same manuscript in several journals represents a violation of ethical standards. Such a manuscript is immediately excluded from further consideration. The authors also guarantee that after the manuscript is published in the journal *International Politics*, it will not be published in any other publication or journal without the permission of the copyright holder.

In the case that the submitted manuscript is the result of a scientific research project or that, in the previous version, it was presented at a conference in the form of an oral presentation (under the same or similar title), more detailed information about projects, conferences, and the like should be listed in the footnote at the very beginning of the manuscript. An article published in another journal cannot be reprinted in *International Politics*.

Authors must adhere to the applicable ethical standards related to scientific research work. Authors guarantee that their manuscripts do not contain unfounded or illegal claims and do not violate the rights of others. The publisher will not bear responsibility in the case of any requests for damages.

Content of articles

An article should contain enough details and references to allow reviewers and readers to verify the claims presented. Intentionally making false claims is a violation of ethical standards. Conferences and book reviews must be accurate and objective.

Authors bear all responsibility for the content of submitted manuscripts. They are obliged, if necessary, to obtain the consent of all persons or institutions that directly participated in the research presented in the manuscript before its publication.

Authors who wish to include illustrations, tables, or other materials that have already been published elsewhere are obliged to obtain consent from copyright holders. Material for which no such proof has been submitted will be considered the author's original work.

Authorship

Authors are obliged to list as authors only those persons who have significantly contributed to the content of the manuscript, i.e., all persons who have contributed considerably to the content of the manuscript must be cited as authors. If other persons who are not authors have participated in essential aspects of the research project and the manuscript preparation, their contributions should be mentioned in a note or acknowledgment.

Citation of sources

Authors are obliged to correctly cite sources that have significantly influenced research and manuscript content. The information obtained in private conversations or correspondence with third parties may not be used without the express written permission of the source.

Conflicts of interest

Authors are obliged to indicate financial or any other conflicts of interest that could affect the presented results and interpretations.

Errors in published articles

If an author finds an important error in their article after it has been published, they are required to notify the editor or publisher immediately and cooperate with them to withdraw the article or correct the article.

By submitting the manuscript to the editorial office of *International Politics*, the authors commit to complying with the stated obligations.

PLAGIARISM

Plagiarism, i.e., taking other people's ideas, words, or other forms of creative expression and presenting them as one's own, is a gross violation of scientific and publishing ethics. Plagiarism can also include copyright infringement, which is punishable by law. Plagiarism includes the following:

- Verbatim or nearly verbatim copying or intentional paraphrasing (to hide plagiarism) of parts of other authors' works without clearly indicating the source or labeling the copied fragments (for example, by using quotation marks);
- Copying pictures or tables from other people's work without proper attribution of the source and/or without the permission of the author or copyright holders.

Manuscripts, where there is a clear indication of plagiarism, will be automatically rejected and their authors will be permanently banned from publishing in the journal.

If it is found that the article published in the journal is plagiarized, the article will be withdrawn in accordance with the procedure described under *Withdrawal of already published articles*, and the authors will be permanently prohibited from publishing in the journal.

REVIEWERS' OBLIGATIONS

Reviewers are obliged to provide the editor with a professional, well-argued, impartial assessment of the scientific value of articles within the given deadlines.

Reviewers evaluate articles in relation to the compliance of the articles' topic with the journal's profile, the relevance of the researched area and applied methods, the originality and scientific relevance of the data presented in

manuscripts, the style of scientific presentation, and the use of scientific apparatus in the text.

A reviewer who has well-founded suspicions or knowledge of ethical standards' violations by an author is obliged to inform the editor about it. A reviewer should recognize important published works not cited by their authors. He should also alert the editor to important similarities and coincidences between manuscripts under consideration or of any other published articles or manuscripts that are in the review process in another journal, if he/she has personal knowledge of this fact. If a reviewer has knowledge that the same manuscript is being considered in several journals at the same time, the reviewer is obliged to inform the editor about it.

A reviewer must not have a conflict of interest with authors or a research financier. If there is a conflict of interest, a reviewer is obliged to inform the editor about it immediately.

If a reviewer believes he or she is incompetent for the topic or area of the manuscript, the editor must be notified immediately.

Reviews must be objective. The judgment of reviewers must be clear and supported by arguments.

Manuscripts sent to reviewers are considered confidential documents. Reviewers may not use unpublished material from submitted manuscripts for their research without the express written permission of the authors, and information and ideas expressed in submitted manuscripts must be preserved as confidential and may not be used for personal gain.

Received articles are subject to peer review. The review aims to help the Editor-in-Chief decide whether the article should be accepted or rejected and, through the process of communication with the authors, improve the manuscript's quality.

Reviews are doubly anonymous: authors' identities are unknown to reviewers, and vice versa. The identity of reviewers remains unknown to authors and vice versa before, during, and after the review process. Editors guarantee that the personal data of authors (primarily, name and affiliation) will be removed from manuscripts before they are sent for review and that all reasonable measures will be taken so that the identities of authors remain unknown to reviewers. Throughout the process, reviewers act independently of each other. Reviewers do not know the identities of other reviewers. If the decisions of reviewers are not the same, editors may seek the opinion of other reviewers.

The deadline for completing the review process is 30 days from the date when reviewers receive the manuscript.

The choice of reviewers falls within the discretionary rights of the Editor-in-Chief and the Deputy Editor-in-Chief. Reviewers must have relevant knowledge related to the field that manuscripts deal with. Reviewers cannot be authors who

have recently co-authored publications with any of the authors of submitted articles, nor can they be from the same field institutions as authors.

Editors send submitted manuscripts with a peer review form to two reviewers who are experts in the scientific field the articles deal with. The review form contains a series of questions that need to be answered and which indicate to reviewers which aspects should be covered in order to make a decision about the fate of a manuscript. In the final part of the form, reviewers must provide their observations and suggestions on how to improve the submitted manuscript.

During the review process, editors may require authors to provide additional information (including primary data) if it is needed to make a judgment about the scientific contribution of the manuscript. Editors and reviewers must keep such information confidential and must not use it for personal gain.

In cases where authors have serious and well-founded objections to reviews, editors will check whether the review is objective and whether it meets academic standards. If there is doubt about the objectivity or quality of the review, editors will seek the opinion of other reviewers.

DISPUTE RESOLUTION

Any individual or institution can report violations of ethical standards or other irregularities at any time and provide the necessary information and evidence to editors and/or the Editorial Board.

Verification of the allegations and evidence presented

- The Editor-in-Chief, in agreement with the Editorial Board, will decide on the initiation of the procedure aimed at checking the presented allegations and evidence;
- During that procedure, all presented evidence will be considered confidential and will be presented only to the persons directly involved in the procedure;
- Persons suspected of violating ethical standards will be given the opportunity to respond to the accusations.

Decisions regarding the established violations of ethical standards are made by the Editor-in-Chief in cooperation with the Editorial Board and, if necessary, with a group of experts. The following measures are planned and can be applied individually or simultaneously:

- Publishing a press release or an editorial describing the breach of ethical standards;
- Sending official notice to managers or employers of an author/reviewer;
- Unconditional rejection of manuscripts or withdrawal of already published articles in accordance with the procedure described under *Withdrawal of already published articles*;

- The author is permanently prohibited from publishing in *International Politics*;
- Informing the relevant professional organizations or authorities about the case so that they can take appropriate measures.

When resolving disputed situations, the Editorial Board is guided by the guidelines and recommendations of the Committee on Publication Ethics (Committee on Publication Ethics - COPE, <http://publicationethics.org/resources/>).

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The journal publishes peer-reviewed original and reviewed articles and book reviews in the fields of international relations, foreign policy, international public law, and international economics.

The original research article presents the research results with a clear contribution to expanding and/or deepening existing knowledge. It should be set up so that it has the following parts: an overview of the situation and the goal of the research; a clear explanation of the theoretical background (review of literature) in the introduction; a hypothesis or research question; applied methods; a presentation and explanation of the results; and a conclusion that talks about the main research findings, hypothesis, or research question.

A review article provides a comprehensive summary of research on a certain topic or a perspective on the state of the field by describing current areas of agreement as well as controversies and debates. The review article identifies gaps in knowledge and the most critical research questions that still haven't been answered. It also suggests directions for future research.

A book review is a systematic description and/or critical analysis of the quality and significance of a book, edited volume, or textbook. A book review should include a general description of the topic or problem the book is about, a summary of the book's main argument, basic information about the author, an overview of the book's contents, strengths, and weaknesses, and a summary of the reviewer's opinion of the book.

For contributions to be considered, they must be prepared according to the instructions below:

I – Instructions for Writing Articles

1. Articles should contain 5,000 to 8,000 words.
2. Articles should be written in English or Serbian, using Times New Roman font size 12, with page numbers in the lower right corner.
3. The name and surname of the article's author should be written above the article's title.
4. The name and surname of the author/s of the article (and eventual title), the name of the institution where he/she is employed and its headquarters, as well as the author's address for correspondence (postal, institutional, or electronic), and ORCID ID should be written in the first footnote.
5. If the author wants to let readers know that some of the views in the article are his or her own and not those of the institution where he or she works,

he or she must add a special footnote with the symbol * to the end of the title of the article, where it will be specifically mentioned.

6. The abstract is attached in both Serbian and English, and the author should indicate the research question, the most essential hypotheses, context, and research conclusions. The abstract should contain up to 200 words, and below that, the author should list up to 10 keywords.
7. Latin, ancient Greek, and other non-English words and phrases (like status quo, a priori, de facto, acquis communautaire, etc.) should be written in italics in the text.
8. Footnotes must be written at the bottom of the page (Footnote option), and footnotes' labels should be exclusively put at the end of the sentence.

Following these suggestions, the footnotes should include information about the specified bibliographic unit:

a) Monographs

The full name of the author, the title of the monograph (in italics), the name of the publisher, the place of publication, and the year of publication. If only one page of the source is cited, the page number should be indicated; if more than one page is mentioned, the middle line is used without a space (for example, 123; 22–50).

When a collection of papers, which one person has edited, is cited, it should be written (ed.) with a period. On the other hand, when there are more editors, it should be written (eds) without a period.

Examples:

Džon Rols, *Pravo naroda*, Alexandria Press i Nova srpska politička misao, Beograd, 2003, 107.

John Gillingham, *European Integration 1950–2003*, Cambridge University Press, Cambridge, 2003, 221.

Duško Lopandić (ed.), *Regional initiatives in Southeast Europe: multilateral cooperation programs in the Balkans*, Institute of International Politics and Economics, Belgrade, 2001, 24–32.

Theodor Winkler, Brana Marković, Predrag Simić & Ognjen Pribićević (eds), *European Integration and the Balkans*, Center for South Eastern European Studies, Belgrade & Geneva Center for the Democratic Control of the Armed Forces, Geneva, 2002, 234–7.

b) Articles in scientific journals

The full name and surname of the author, the article's title (in quotation marks), the journal's name (italic), the volume number, issue number, and page

number from- to. The page numbers are separated by a dash (-) without a space. If some data are incomplete, it is necessary to emphasize that.

Examples:

Michael Levi, "The Organization of Serious Crimes," in: Mike Maguire, Rod Morgan & Robert Reiner (eds), *The Oxford Handbook of Criminology*, Oxford University Press, Oxford, 2003, 878–84. (878–9 or 878).

Robert J. Bunker & John R. Sullivan, "Cartel Evolution: Potentials and Consequences", *Transnational Organized Crime*, Vol. 4, No. 2, Summer 1998, 55–76.

c) Articles in daily newspapers and magazines

Specify the author's name (or initials if only those are given), the article's title in quotation marks, the name of the newspaper or magazine in italics, the date in Arabic numerals, and the page number(s).

Example:

John Gapper, "Investor votes should count", *The Financial Times*, 17 April 2006, 9.

g) Citing documents

Specify the name of the document (in quotation marks), the article, point, or paragraph to which the author is referring, and the name of the journal or official journal where the document was published (in italics), with the volume number, issue number, place, and year of publication.

Examples:

"Resolution 1244 (1999)", Security Council of the United Nations, 10 June 1999.

"Statut Autonomne Pokrajine Vojvodine", *Službeni list APV*, 17 /91, Novi Sad, 18. jun 1991, 1–14.

d) Citing internet sources

The name of the author, the title of the work or article, the full Internet address, which allows the specified source to be reached by typing the specified address, the date of accessing the page on the Internet, the page number (if any), and if the attachment is published in PDF.

Example:

Maureen Lewis, *Who is Paying for Health Care in Eastern Europe and Central Asia?*, IBRD & World Bank, Washington D.C, 2000, <http://Inweb18.worldbank.org/eca/eca.nsf/Attachments/Who+is+Paying+for+Health+Care>

+in+Eastern+Europe+and+Central+Asia/\$File/Who+is+Paying+text.pdf, 14/09/2004, 3.

f) Repetition of previously mentioned sources

When we refer to a source that has already been cited in the text, after other footnotes, the author's name and surname, the title of the source, then op. cit., and finally the page number must be written (e.g., Michael Levi, "The Organization of Serious Crimes", op. cit., 879). Ibid. or Ibidem is to be used exclusively when citing the source mentioned in the previous footnote, with an indication of the number of the page/pages if the new statement is from that source (e.g., Ibid., 11).

At the end of the article, a bibliography is attached, which should contain all the sources and literature cited in the text in the form stated in the footnotes guide. The only difference is that in a bibliography, it is mandatory to put the author's last name first and then their first name, and the entire bibliography is organized in alphabetical order by the first names of the authors cited (or the names of the documents used).

II – Instructions for Writing Book Review

1. Book Review shouldn't be longer than two and a half pages in Word format (single spacing), or more than 1,200 words (8,800 characters with spaces).

2. At the beginning of the review, the bibliographic references of the book are cited according to the rules for listing monographs in footnotes. In the end, the total number of pages should be listed (for example, p. 345).

3. Book Review must contain footnotes.

4. The author can specify the title of the review of the book or collection in capital letters — font size 14, which is subject to change by the editorial office of the journal.

5. The font size, font, and alignment of the text should be in accordance with the previously mentioned suggestions for writing articles.

6. At the end of the review, the author's full name and surname are stated in italic, with the entire surname written in capital letters (e.g., Žaklina NOVIČIĆ).

All contributions should be sent to the official e-mail of International Politics, mp@diplomacy.bg.ac.rs, or anajovic@diplomacy.bg.ac.rs, the official e-mail of Dr. Ana Jović-Lazić, Editor-in-Chief.

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327

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ИНСТИТУТА ЗА МЕЂУНАРОДНУ ПОЛИТИКУ И ПРИВРЕДУ

ЧАСОПИСИ:

Мађународна политика

Научни часопис на српском
и енглеском језику

The Review of International Affairs

Научни часопис на енглеском језику

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Научни часопис на српском
и енглеском језику

Европско законодавство

Научно-стручни часопис
за право Европске уније

КЊИГЕ:

Митко Арнаудов, *Отворени Балкан – економска интеграција између политичких и безбедносних размимоилажења*, броширано, 2023, 170 стр.

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Слободан Комазец, Рајко Буквић, Бојан Димитријевић, Драган Петровић, *Србија у савременим геоекономским процесима*, тврд повез, 2022, 424 стр.

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