

Marcin Grabowski

Jagiellonian University (Poland)
ORCID: 0000-0003-1447-1818
e-mail: marcin.grabowski@uj.edu.pl

Viktoriya Voytsekhovska

Lviv Polytechnic National University (Ukraine)
ORCID: 0000-0001-8976-8021
e-mail: viktorii.v.voytsekhovska@lpnu.ua

Implications of the War in Ukraine in Terms of Inequalities in BRICS Countries: A Complexity Approach¹

Abstract: The study attempts to analyze the implications of the war in Ukraine for the issues of development and inequalities in the BRICS block. The so-called “emerging economies” play an essential role in the global system, both in economic and political terms. The article compares the political and economic backgrounds of Brazil, Russia, India, China, and South Africa, their development, the “status quo” and their future aspirations, and analyses how the war in Ukraine may change the global development scenario. It is essential after the BRICS summit in South Africa invited six new members to the group. The article is rooted in complexity theory, supported by a mixed methodology approach. We show how the given research methodology, informed by complexity theory, can furnish new insights into global sustainability. The statistical method was used to gauge the correlation-regression impact of inequalities in BRICS countries on their sustainable development. The analysis allows several conclusions to be ventured: sustainable development is closely linked to inequalities and vice versa; the war has had a significant, multidimensional impact on the development paths and inequalities in the BRICS countries, which potentially could worsen, and the war is a major shocking event that can lead to global system changes and implications which are broader than merely for the subregion.

Keywords: *war in Ukraine, sustainable development, Inequalities, BRICS, complexity theory*

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Introduction

The article's primary goal is to analyze the Ukrainian war's implications for inequalities and development within the BRICS countries. Due to the role of those countries in the global economy and their influence on global development, including sustainable development goals, it may also be necessary for the global system. It is even more visible after the August 2023 summit in Johannesburg (South Africa), when an invitation to six prospective members was invited to join, including Argentina, Egypt, Ethiopia, Iran, Saudi Arabia, and the United Arab Emirates. The ramifications of the war need to be considered, bearing in mind the issue of contagion in a complex global system with all of its subsystems. This is also because of the vital role of Brazil, Russia, India, China, and South Africa in shaping the global system. Thus, the ramifications of the war are of particular importance for the whole world. As war disrupts all social, political, and economic systems, it may be perceived as an asymmetric shock, a sudden, unexpected event significantly changing the system. Therefore, this text analyzes the influence of the war on a complex global system, with a particular focus on selected dimensions (inequality). A major war in Europe has not been an issue since World War II ended in 1945 (Parsi, 2022). The war has had implications in different dimensions, with lives lost and social, economic, and political distortions. The war in Ukraine is an enormous humanitarian catastrophe, leading to increased poverty, demographic and well-being disparities, and broadening inequalities. The majority of those who have left Ukraine are women and children, with close to 12 million displaced and currently living abroad. At the same time, it is a stumbling block to democracy and sustainable development globally. Therefore, through the contagion mechanism, the ramifications of the Russian aggression in Ukraine for developed and developing countries vary from food, fuel, poverty, and fertilizer prices to increased distress in financial markets, leading to further problems. The UNDP and the World Bank estimated that the war could cut global economic growth by 1.5 percent in 2022, which turned out to be 1,7% despite projecting 3% annual growth, resulting in steeper economic decline in developing countries, as well as undermining the development aid to the world's most vulnerable and import-dependent countries, primarily African continent as well as emerging economies. According to the estimations of the World Bank, the significant slowdown in economic growth and development will affect to a large extent the emerging markets and developing economies due to heavy governmental debt and lack of investments, with GDP annual growth lower than the 2010-2019 average (UNDP, 2022; World Bank, 2022; 2023; OECD, 2022). Hence, not only the political-security dimension of complexity that is affected but also global development cooperation issues leading to rising inequalities. Various types of inequalities need to be addressed at different levels, from policies to managerial solutions to the micro level. According to Ian Goldin, several types of inequality were accentuated by the COVID-19 crisis (itself another asymmetric shock): higher-paid workers worked from home, unlike lower-paid workers; a larger share of low-paid workers worked in essential services, so had greater chances of coming into contact with infected

people; the activities of lower paid workers were suspended more frequently, so they were more prone to poverty since they work in the service sector; developing countries were not always able to provide social security benefits for their workers, so inequalities between developed and developing nations grew (WEF, 2020).

The main hypothesis driving this article is that the war in Ukraine has harmed global growth and increased inequality within the BRICS countries. The article is rooted in a complexity approach, with the complex adaptive systems being affected and self-adapting to the asymmetric shock of the war in Ukraine. The complexity approach has been selected, as it has a high explanatory potential and is helpful for economics and political science (and has been adapted from natural sciences). The degree of complexity has been increasing due to the increasing number, intensity, variability, and dynamics of relations within social systems. At the same time, complex systems are prone to contagion, hence a capacity to impose their influence mechanisms on affected entities with immediacy and rapidity due to numerous links and replication capacity in numerous situations (Grabowski & Wyciślak, 2015). The contagion effect is crucial for the ramifications of war on the BRICS countries and their rising levels of inequality.

The article's structure includes a brief introduction to the BRICS' history, a discussion of the problem of development and inequalities, and the relevance of the war to global inequalities. It then analyzes the Sustainable Society Index's relationship with Gini to measure inequality in the BRICS countries.

A History of the BRICS Block and Recent Developments

BRIC was created in 2001 by the economist Jim O'Neill as an acronym for Brazil, Russia, India, and China as a possible antidote to Western hegemony (O'Neill, 2001; Stuenkel, 2015). The initial idea behind the BRIC alliance was the establishment of a multipolar world based on equality and democratic principles, with a rapidly growing middle class that would assure the economic growth and prosperity of those countries. On the invitation of China in 2009, South Africa joined the alliance a year later, changing the acronym to BRICS, which was debatable due to its population of 50 million and history of inequalities (Smith, 2011). BRICS statistically represents over 40% of the global population and over $\frac{1}{4}$ of the global GDP. Recent data confirms that the GDP of the BRICS block is more significant than that of the G7: 31,5% compared to 30% (World Bank, 2023). BRICS countries are committed to achieving the Sustainable Development Agenda 2030 of the UN, which has five critical dimensions at its core: people, planet, prosperity, partnership, and peace (UN, 2015). One of the mainstream theses of the BRICS alliance is development, mainly sustainable development. Will they indeed lead the global agenda towards a more sustainable path? It has some contraindications: countries differ in population structure, GDP per capita, and CO₂-related strategies (Basile & Checchi, 2018; Caglar et al., 2022). Despite the unequal and asymmetric growth of the BRICS' block economies, China and India had much more rapid development

over the past decades; there are several tangible political advantages: supporting domestic regime stability, helping in the establishment of the regional authority, allowing to follow multiple alignment strategy (Brosig, 2021).

The New Development Bank, or the BRICS Bank, was created by BRICS members in 2013, and it is a multilateral institution, like the IMF and World Bank, that finances development projects globally. The initial capital was 100 billion USD, and it is proliferating. On March 3, 2022, in response to the Russia-Ukraine War, the New Development Bank announced that it was putting new transactions with Russia on hold. Even though the NDB quickly cut ties with Russia, Fitch Ratings still downgraded the NDB from stable to negative on its Long-Term Issuer Default scale (NDB, 2022). Its key priorities are to promote infrastructural projects that aim at its members' sustainable development and economic growth, establish an extensive network of global partnerships for development, and build a balanced project portfolio, giving proper respect to their geographic position, financing needs, and other factors. In 2021, the United Arab Emirates, Uruguay, Bangladesh, and Egypt joined the bank (NDB, 2021). Such developments are connected with new international arrangements, frequently guided by China due to its economic and international position.

COVID-19, representing an asymmetric shock, profoundly affected the whole global system, revealing financial vulnerabilities in emerging economies, of which a good example would be the BRICS countries. Daily new COVID-19 cases were affected by socio-economic and demographic status, health issues, resources, and policy response. It is essential to reduce socioeconomic inequalities and strengthen the resilience of health systems to better respond to public health emergencies (Jiao et al. et al., 2022). With the emergence of the pandemic, there were differences in response policies and effectiveness among BRICS countries. As a reaction to this global emergency, China adopted a containment strategy, and India and South Africa adopted intermediate policies that took different strategies at different epidemic stages. Brazil and Russia took mild mitigation strategies to ease pressure on their healthcare systems. (Jiao, Shi, Zhang, et al., 2022).

The war in Ukraine did not start in 2022 but in 2014 of the annexation of Crimea, Russian military troops' involvement in the Donbas region, and the attempt to be justified by Putin's historical reasons (Kuzio, 2022; McGlynn, 2021). The study performed by Yale University in 2022 shows that since the outbreak of the war, the most prominent companies from China, India, Brazil, and South Africa have not reduced their operationalization in Russia, unlike the USA, Canada, and EU+UK (Yale, 2022). For now, China is the largest Russian trade partner, the strategic exporter of Russian oil and gas, and an importer of technical goods. India sees Russia as a strategic partner for importing energy resources and exporting medicaments. Brazil's share of Russian commerce is unimportant, but its agricultural-oriented economy depends on Russian fertilizers. South Africa has a minor engagement with the Russian economy related to mines and energy resources (OEC, 2023). While it is still too soon to make definite conclusions about whether emerging economies of the BRICS block that did not join the sanctions imposed on Russia by the West are going to benefit from the

intensification of trade with Russia, they indeed demonstrate the willingness to explore new economic opportunities (Apolinario, 2022).

Economists and political experts for decades been interested in studies of how war impacts the development of civil-military and socio-economic relations (P. Collier, 1999, 2002; Stewart, 2003; Thies & Sobek, 2010; Gates, 2012; Betz, 2022; Kuzio, 2022; Parsi, 2022; Pizzolo, 2023; Costa, 2022; Pereira, 2022). However, there is still a vivid need for a better understanding of the war in Ukraine and its possible implications on a global scale.

War, Development, and Inequalities

The relationship between development and war has already been studied for many years. According to Collier, the implications of the war for a country's economic performance are significant: resource destruction, social order disruption, "dis-saving", diversion of public expenditures, and shifting assets out of the country (Collier, 1999). Later works quantify the relationship in so-called "development in reverse", which worsens the more prolonged and intense conflict, is devastating, and goes beyond the conflict. As well as a thesis that war retards development and development retards war (Collier, 2003).

Gates and others present evidence of war effects on development through the prism of MDGs (Gates et al., 2012). In particular, the effects of war are usually long-lasting and difficult to estimate in the form of economic indicators. The damaging consequences of wars are on poverty, life expectancy, and GDP; on education, prolonged conflicts significantly reduce education enrollment; child and maternal mortality; environmental sustainability: access to water and sanitation; and environmental degradation. With an extensive sample of evidence, armed conflicts endangered the achievement of MDGs, especially in terms of human costs, health, nutrition, and education (Stewart, 2003; Gates et al. 1, 2012). Later research from the Peace Research Institute in Oslo proves that armed conflicts compromise the achievement of SDGs 3 (good health and wellbeing) and SDG 16 (peace and strong institutions) and call for joint efforts from government, civil society, and academia to tackle these risks before and after conflict (Druce, 2019). There has been an extensive international debate about inequality and civil wars and their negative impact on economic and social development, which exceeds the conflict itself (Ghobarah, 2003; Cederman, 2013). The war in Ukraine is not Civil due to many factors, according to Kuzio: ignoring or downplaying the Russian military engagement in Ukraine before the Euromaidan and after, especially its presence in the East; Ukrainian public opinion, only 13,6% believe it is a civil war and so on (Kuzio, 2022), nevertheless, as every war it puts at risk the achievement of SDGs not only in the region.

Recent studies by *Pereira et al.* prove the negative impact of armed conflicts on SDGs in Ukraine, Europe, and globally. The studies about the implications of war in Ukraine to achieve the UN 2030 Agenda "The Future We Want" are ongoing. However, peace is the most critical condition to continue universal development (Pereira et al., 2022).

The inequalities and socio-economic issues enhanced by COVID-19 and the war in Ukraine are becoming a global threat. It is possible to assume that more sustainable societies respond better to crises and are more resistant to conflict recovery. Inequalities are closely linked to sustainability and vice versa, and they can be one of the measurements of economic development. One of the aims of the United Nations 2030 Agenda is to reduce inequalities, Goal 10 (UN, 2015).

The international debate on inequalities, growth, and sustainable development began in the 19th century. In 1817, David Ricardo stated, “To determine the laws which regulate distribution is the principal problem in Political Economy” (Ricardo, 1817). However, in the twentieth century, inequalities were not as evident as today, especially in emerging economies. Later on, Domar and Harrod deepened the concept of development in their work (1939; 1946), attempting to find relationships between the growth of capital and the rate of increase of economic growth. The “Harrod-Domar growth Model” demonstrated that a capital increase contributes to economic growth. In 1953, Champernowne performed the approximate observance of Pareto’s law and analyzed “the development through time of the distribution of incomes” as “a stochastic process” (Champernowne, 1953). He found that “the approximate observance of the Pareto’s law (...) has its explanation in a similarity at a different high of income levels of the prospects of given proportionate changes of incomes” (Champernowne, 1953). It should be noted that no relationship in the analysis mentioned above highlights inequality and economic growth. The equilibrium distribution appears asymptotic to a straight line in all the cases studied. In his work entitled “Economic Growth and Income Distribution”, Kuznets (1955) investigated income distribution among classes and stated that the Gini index would move at the pace of economic development. It would also increase during the early stages of industrialization and decrease after that.

According to García-Peñalosa (2006), the economy’s growth rate and income distribution are subject to transversal influences regarding structural changes and macroeconomic policies. Income-driven sustainable growth has been confirmed by numerous reports from various international organizations (United Nations, 2017; UNESCO, 2016; IMF, 2020; IMF, 2021). Inequalities in Europe have attracted attention from both the social and the political perspectives (Heidenreich, 2007; Giovannoni, 2010; Atkinson, 2015; Costanza et al., 2020) as well as a dynamic point of view that reflect some societal changes for some EU Countries, e.g., Poland and France (Voytsekhovska & Butzbach, 2019; Garbinti et al., 2021). The concept of development has also been evolving, starting from purely economic approaches to multidimensional, including the functioning of the society, the political system, the quality of economic actors, public services (education, health), the rule of law, etc., making it an extremely complex phenomenon (Grabowski & Laidler, 2018).

Some publications have linked inequalities and health for many years (Wilkinson, 1994; Coovadia & Friedman, 2015; Mouncey & Savage, 2016). The UNESCO World Social Science Report (2016), which analyzes many countries and states, highlighted that unequal countries underperform globally in the social area. The British economist Mike Savage

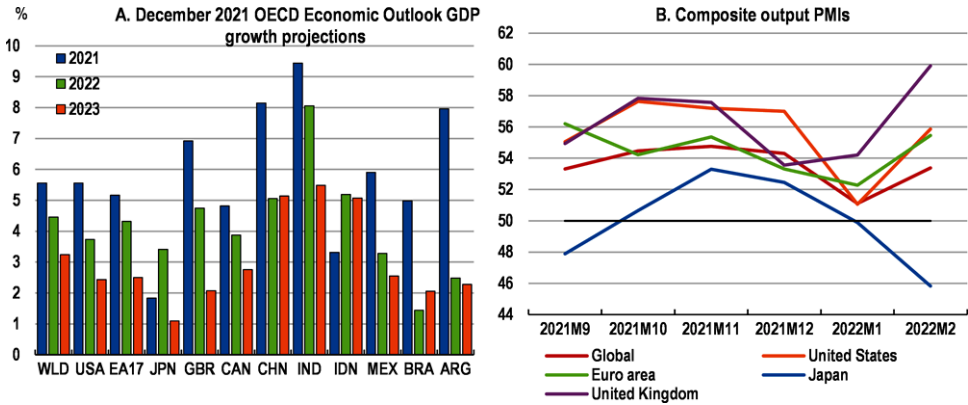
(2021) refers to inequality as the leading cause of social, environmental, and even security issues since inequalities draw us to the past and limit development. The environment and income inequalities are also directly connected, especially in Asia and the Pacific (ESCAP, 2020). The degradation of the environment, which manifests itself in the reckless use of natural resources and pollution, impacts poorer populations more negatively and, therefore, leads to inequality of opportunity. This trend is dominant in countries still on their path to sustainable development. The literature review shows that a promising angle would be to study the relationships between inequality and areas of sustainable development in emerging economies, based on the example of BRICS countries, to make proper evidence-based policies.

Relevance of the War to Global Inequalities

The BRICS Summit Declaration from 26th of June 2022 stated its concern about the war in Ukraine, COVID-19 recovery, sustainable finance, and others that undeniably limit economic progress in the economies of the block (BRICS, 2022). They condemned the war but, unlike the G7 countries, did not have a unitary response or sanctions against Russia. Moreover, Russia counts on BRICS as an alternative large market for its oil and gas. Before the war in Ukraine began, there were expectations that a global recovery from the pandemic would be possible from 2022 through 2023 with the support of global vaccination efforts, economic incentives, and macroeconomic policies in the major economies that, in turn, would lead to more favorable financial conditions. In December 2021, the *OECD Economic Outlook* predicted global GDP growth of 4.5% in 2022 and 3.2% in 2023 (Figure 1, part A). Fig 1, part B shows the indicators at the beginning of 2022. At the same time, higher food and energy prices, supply constraints associated with the pandemic, sanctions on Russia, and a rapid recovery in demand from mid-2020 resulted in a speed-up of inflation in most OECD economies, especially in the United States, Latin America, and many Central and Eastern European economies. It was stated in the United Nations SDGs Report 2022 that the COVID-19-related crisis and the war in Ukraine jeopardized the achievement of the ambitious UN 2030 Agenda on many levels (UN, 2022).

The December 2021 Global Outlook Projections were quite optimistic compared to current affairs. Ukraine and Russia account for about 30% of global wheat exports and 20% of corn, mineral fertilizers, and natural gas (OECD, 2022). The commodity and refugee crisis hit Europe hard, but the long-term consequences will also reach emerging economies. The economies of the BRICS countries are already very vulnerable due to their socioeconomic conditions, with some of them, like Brazil, India, and South Africa, having a mixed-income–developing economies (UN, 2022).

Figure 1. Before the war in Ukraine began, there were good perspectives for a global economic recovery after COVID-19 (OECD, 2022)



Source: Economic Outlook 110 database; and OECD calculations.

Several months after the war in Ukraine began, unlike that of the G7, the position of the BRICS block was unclear, with no united front in their standard foreign policy. While all of the BRICS countries agreed that the UN Charter assures respect for security concerns for all countries, there was little to no willingness for negotiations from Russia or Ukraine. One country from the block, Brazil, voted to condemn Russia on the UN Security Council, while the others abstained (Kugiel, 2022). The BRICS countries expressed their concerns about the negative impact of war in Ukraine, its consequences for the post-COVID-19 global recovery, the stability of food and energy supplies, and the more difficulties it posed in terms of the achievement of the Sustainable Development UN 2030 Agenda (BRICS Sherpas’ Meeting 2022).

On 21–23 March 2023, the President of China, Xi Jinping, visited Moscow and Vladimir Putin, showing Chinese support for Russia and offering its own so-called “peace plan” for the war in Ukraine. It came right after the International Criminal Court issued arrest warrants for V. V. Putin and M. A. Lvov-Belov on the 17th of March, 2023 (ICC, 2023). Xi Jinping could not simply cancel his visit, as the Indian Prime Minister Modi had done, as it would be a clear sign of weakness towards Western pressure in foreign policy. However, despite its apparent support of Russia and increasing electronics and other commodities exports, China is not hurrying to re-orient its gas supply. They have not sought to finalize talks on the construction of ‘Siberian Force 2’, a second gas pipeline linking the PRC to the Russian deposits that have hitherto supplied Europe; this pipeline would run through the territory of Mongolia and be of considerable economic importance to Russia (Bogusz & Nieczypor, 2023).

The progressively globalized international political and economic balance after the Cold War was possible due to the collaboration and interlinkages of the leading economies: the United States, the European Union, China, Brazil, and India. However, when international

security is in danger, as in the case of the Russian invasion of Ukraine, global leaders are willing to sacrifice their direct market interests. The situation of Brazil differs somewhat due to its deep economic ties with the West and Asia. While no Brazilian government could avoid relations with Moscow or Beijing, the European Union and the USA represent the most significant contributors to the Brazilian economy (Stuenkel, 2022). For the time being, Brazil is not in a hurry to become a part of the BRI initiative and increase the Chinese presence in the country, even if it has a good relationship with that country and its economy would benefit significantly from the project as it is still lagging in the area of industrialization (Guimarães, 2023). This is particularly discernible in light of Lula's 3rd presidency and the almost immediate announcement that he would be visiting China promptly.

Inequalities in BRICS Data

As measured by the Gini Index, many inequalities are present in BRICS countries, which differ by development and income inequality. As the largest country in South America, Brazil has suffered from poverty and inequalities for decades. According to Oxfam (2022), 63 million people are below the World Bank poverty threshold of 1.90 USD per person per day (Oxfam, 2022). Brazil's inequalities are complex and multidimensional, with many of them intersecting. Brazil seems to have experienced a "moment of equality" during the last decade (Costa, 2015), with income inequality reduced from 0.60 to 0.53 between 2000 and 2012. Several changes also transpired in the mid-2000s, altering deeply historically rooted inequalities related to race, gender, and education (Kabeer & Santos, 2017). Those changes were an important milestone for Brazil on the way to achieving its Sustainable Development 2030 Agenda. When the Chinese economy started to open up in 1978, it grew at a pace of 9% on average annually (Garnaut et al., 2018). China had huge Gini fluctuations from 32.7% to 47.8% in the same time interval. Among the critical success factors for China's rapid growth is free trade, which China has benefited from its opening in the 1970s; energy and food security, therefore the interrupted supply chains between Europe and China (especially important after the COVID-19 outbreak) along with other negative consequences from the war in Ukraine can jeopardize the success of its economic development (Mendez et al., 2022). The Russian Gini Index changed from 25.9% to 42.2% from the 1990s to the 2000s, showing a significant inequality increase, reflecting its political and economic transformation from communism to capitalism. However, the shadow economy in Russia is close to 45% of its GDP, meaning it is challenging to estimate or predict actual figures (Putniņš & Sauka, 2020). The economic impact of 10 packages of sanctions is already disastrous for Russia and will have long-running effects for decades: data show that the GDP decline started in 2022 amounts to 2,5% and is estimated to continue to decrease even more rapidly through 2023. The export of energy resources dramatically decreased in 2023 and was cut by 40%. Russian trade is also declining significantly, as are imports and exports. Huge Russian reserves – 300 billion USD – were frozen by sanctions. To summarise, the perspectives on the Russian

economy are quite pessimistic (EU, 2023). It should be noted that the country with the most considerable inequalities in the BRICS block is South Africa. Along with Brazil, it has been the most inequitable country among the BRICS for several decades. Several bibliographical sources highlight innovation as the leading driver of unlocking the economic development of the BRICS (Soares et al., 2013; Phiri et al., 2015).

Sustainable Society Index as Measurement of Sustainability

As a complex, multidimensional phenomenon, sustainable development is considered the greatest challenge of our generation. It was described for the first time in 1987 by the UN Bruntland Commission as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (UN, 1987).

Interest in understanding and assessing the phenomenon has emerged in numerous research works and publications (Neumayer, 2004; Sachs, 2012). It is recognized that the assessment of sustainable development goals is somehow problematic due to its complicated nature (Spaiser et al., 2017). Current research has several monitoring tools at its disposal in sustainable development. Several indexes capture the phenomenon of sustainable development:

Change in Wealth Index (CWI); Ecological Footprint (EF); Environmental Performance Index (EPI); Environmental Sustainability Index (ESI); **Genuine Savings Index (GSI)**; Global Well-Being Index (GWI); Happy Planet Index (HPI); Human Development Index (HDI); **Sustainable Society Index (SSI)**; **SDG Index**.

Only the indexes highlighted in bold reflect all three dimensions of sustainable development: economic well-being, human well-being, and environmental well-being (SSE, 2013; Sachs et al., 2021). The SDG Index and Dashboard provide a country’s progress on a scale of 1-100 towards achieving the SDGs. BRICS countries score much lower than EU countries or the USA. However, numerous times, it was stated that the number of socio-economic indicators in these countries is similar (UNSD, 2021).

Each country in the BRICS group faces different challenges on achieving Sustainable Development Goals (United Nations, 2015). The United Nations Sustainable Development Report (UNSD, 2021) ranks countries by their overall score. The overall score measures a country’s progress towards achieving all 17 SDGs. The score can be interpreted as a percentage of SDG achievement. A score of 100 indicates that all SDGs have been achieved. For BRICS countries, the scores are respectively: Brazil – 71.34; Russia – 73.5; India – 60.07; China – 72.06; South Africa – 63.74 (UNSD, 2021).

Numerous research items capture sustainable development progress in BRICS countries (Ali et al., 2018; Basile & Checchi, 2018). Taking into account the interlinked nature of SDGs and the complexity of its phenomena (Spaiser, 2017; Cling & Delecourt, 2020) and the first

leading economic indicators of development, it is possible to assume that war in Ukraine will negatively affect the achievement of Sustainable Development 2030 Agenda globally across most of SDGs, but especially SDG.1. Increase of poverty due to unemployment and inflation, state protection reduction; SDG.2. Challenge food security due to supply chain disruptions; SDG.8. Decline in economic growth and recession, tourism reduction, human trafficking risk; SDG. 9. Economic crisis reduces industry development, sanctions reduce industry capability; SDG.10. Reduced economic growth; financial crisis enhancing inequalities: increasing the difference between the poor and the rich, evidence of forced children and adults mobilization to Russia. SDG.12. Increase the demand for fossil fuels; economic crisis may reduce sustainable practices. SDG.17. Economic crises can reduce aid flows for developing countries, war disrupts trading environments and macroeconomic stability, and war breaks the global partnership between countries (Pereira et al., 2022).

Monitoring progress towards the SDGs by 2030 in BRICS countries requires the global community to disaggregate targets along socio-environmental lines. However, little has been published critically analyzing the appropriateness of wealth indices to measure progress in low – and middle-income countries – BRICS (Poirier et al., 2020).

Methodology and Data Sources

The current research aims to investigate the relationships between income inequality, measured by Gini Index empirical data, on the example of BRICS countries and each area of the Sustainable Society Index (SSI). The latter includes three areas for development: human well-being, environmental well-being, and economic well-being, which are based on the Triple Bottom Principle (Veit & Kowalski, 2020). The Sustainable Society Index (SSI) shows the level of sustainability of 154 countries worldwide in three dimensions on a scale from 0 (low sustainability) to 10 (full sustainability).

The Gini Index is a measure of differences in income and can be obtained by formula:

$$G = \frac{\sum_{i=1}^n \sum_{j=1}^n |y_i - y_j|}{2n^2 \bar{y}} = \frac{\Delta}{2\bar{y}}, \quad (1)$$

Where

G is the Gini coefficient;

\bar{y} is the arithmetic mean of y in all population;

n is the number of people;

Δ is the Gini mean difference.

BRICS countries are characterized by high levels of income inequality (measured from 0 – absolute equality to 100 – absolute inequality).

Inequalities on a Global Scale, Example in BRICS Countries Data

To verify the relevant relationships between sustainability (measured by the Sustainable Society Index) and Gini and, consequently, to make evidence-based recommendations, we use correlation-regression analysis, respectively for Human Well-Being (Factor X1), Environmental Well-Being (X2), and Economic Well-Being (X3). The empirical data from the World Bank and Sustainable Society Index are listed below in Table 1.

Table 1. Data for regression analysis towards the Gini and Sustainable Society Index relationships with South Africa dimensions (HUW, ENW, ECW), 2021

Country	HUW (X ₁)	ENW (X ₂)	ECW (X ₃)	Gini (Y)
Brazil	6,2	3,6	3,6	48,9
Russia	7,6	2,1	4,9	36
India	6,8	2,7	4,8	35,7
China	7,6	2,6	5,3	38,2
South Africa	7,1	2,8	2,3	63

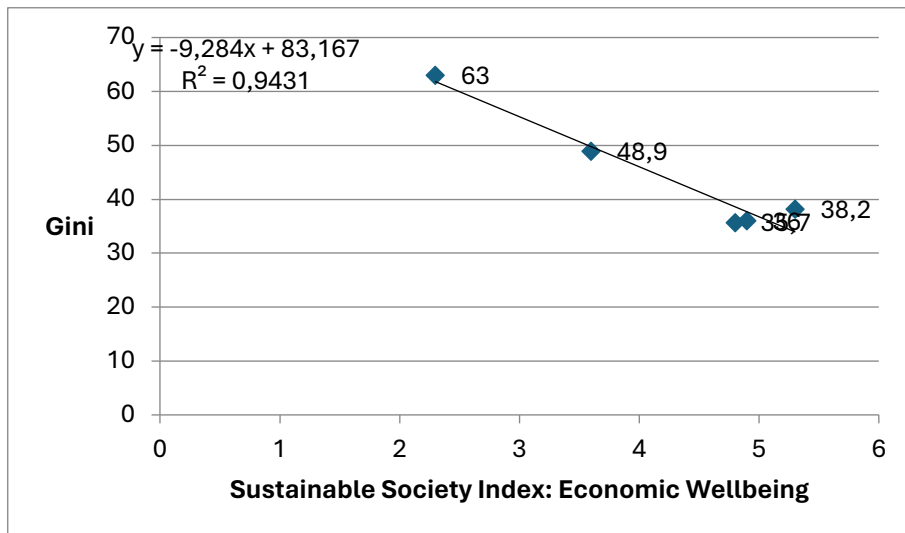
Source: TH Koeln: Sustainable Society Index, 2021.
World Bank database for Gini, 2019.

The table data shows that South Africa is the most unequal country among the BRICS and globally, with a Gini of 63. Meanwhile, Russia and India had relatively low numbers (35.7 and 36, according to World Bank 2019 data), assuming the deviation is minimal as of 2022.

It should be noted that South Africa is the most unequal country in the world with Gini, which fluctuated over decades but currently equals 63. It means that 10% of the South African population owns 80% of the wealth, according to a World Bank report from 2022. Those inequalities are present in all areas of society and profoundly impact South Africa's performance – in terms of achieving the UN Sustainable Development Agenda, it is currently in place 108 out of 163 (SDGs Dashboard Index, 2022).

Among all three dimensions of Sustainability, the strongest inverse correlation of $R=0,96$ ($R^2=0,94$) is shown by the Economic well-being area, consisting of 5 elementary indicators: GDP, genuine savings, organic farming, employment, and public debt. This confirms logical reasoning: A higher Sustainable Society Index means a lower Gini and vice versa; the inverse is true for BRICS countries.

Figure. 2. The relationships between Gini and Sustainable Society Index, dimension of Economic Wellbeing (ECW)



Source: author's elaborations based on Table 1.

The correlation coefficient shows the most robust relationship between Gini and the Sustainable Society Index with a dimension of Economic well-being $R=0.96$, meaning an inverse solid dependence between Gini and the Sustainable Society Index Economic well-being. It thus strongly links economic growth and inequalities, showing how one influences the other and how the BRICS block can be characterized by several similarities in its socio-economic development, as stated before in the previous parts.

Conclusions

Of all three dimensions of the Sustainable Society Index, the highest coefficient of correlation $R^2 = 0.96$ relates to economic well-being area (ECW) for the BRICS block, which means that economic well-being and growth are closely linked to inequalities and vice versa. This is an important finding for policymakers since influencing one indicator would lead to the betterment of another. These elementary indicators contribute to overall country performance in sustainable development and can be significantly improved by governmental initiatives and policies. It will undoubtedly facilitate BRICS' transition to a more sustainable future and the better overall well-being of its citizens. Economic well-being is closely linked to two other areas of sustainable development: human and environmental dimensions, as economic resources, employment, organic farming, and green investments are needed for the overall well-being of the economy.

The economic growth, well-being, and future of the BRICS block are conditioned politically and by its socio-economic development. A lot will depend on the most prominent countries of the block in terms of economic and political power: China, India, and, of course, Russia, as the potential second military power globally. India and Brazil have not joined the BRI since both fear the growing dominant Chinese role in their regions: South Asia and Latin America.

Putin's Russia is seeking alliances and new markets for its oil and gas resources due to heavy sanctions from the EU and the United States. To date, the European Union has experienced the heaviest burden from the war in Ukraine in terms of economic consequences and migrants. To some extent, the BRICS block is using the war in Ukraine to its economic advantage, continuing to position itself as a protagonist for multilateralism while putting the advancements towards the Sustainable Development 2030 Agenda at risk, which has been declared a priority on various occasions. BRICS' position on the Russian war in Ukraine, despite the call from several Western countries to condemn aggression, can potentially endanger its relationships with the European Union and the UK, Canada, and the United States, so both socioeconomic as well as political consequences of BRICS supporting Russia's could be very damaging for the economies of those countries. As the smallest country in the alliance, South Africa and its ruling ANC party have had strong ties with Russia dating back to the USSR period when Western countries did not support its democratic aspirations. Thus, even if it is neutral, South Africa will likely take the Russian side soon (BRICS summit in Johannesburg in August 2023). With a perspective on BRICS' future enlargement and aspirations for new development projects, new perspectives can emerge for the block.

As it is evidenced both from theoretical and empirical parts of the research, elaborated as well by previous studies in the context of MDGs, sustainable economic development as multidimensional phenomenon is closely linked to inequalities, so the Russian military aggression will undoubtedly result in development problems in number of ways from poverty increase due to inflation and GDP loss, global food supply disruption, migration and risk of human trafficking, inequalities, trade disruption to rising refinancing risks for emerging economies and lack of investments for sustainable practices far beyond the conflict zone. There will be an expected economic slowdown in Ukraine, Russia, and neighboring countries, as well as globally.

BRICS countries aspire to lead globally regarding sustainability, reform the UN, and change the global order so that it is less dependent on the West. However, the BRICS alliance is not homogenous and does not have a united foreign policy as the Western countries do. More often than not, as with BRICS initiatives, member countries prioritize their national interest. As the unofficial BRICS leader, China is interested in developing relationships with all BRICS countries and beyond across its BRI initiative. China could help rebuild Ukraine, especially since it is a strategic area for the BRI initiative, and, in such a way, strengthen its relationship with Europe and the USA.

The war in Ukraine has significantly affected the global system and BRICS countries. Due to the complexity of the global system and especially the contagion mechanism, we have observed a significant, multidimensional influence of the war's ramifications on the development paths and inequalities in BRICS countries, which harms the organization.

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