

# UNIVERSIDAD DE OVIEDO

Facultad de Comercio, Turismo y Ciencias Sociales Jovellanos

## TRABAJO FIN DE GRADO GRADO EN COMERCIO Y MARKETING

BRICS in the World Economy:  
An analysis of their Growth, their role and their relations with G7.

**AUTOR:** Julio Menéndez Caro

Gijón, 29 de Junio de 2024

## **DECLARACIÓN DE AUTORÍA Y ORIGINALIDAD DEL TRABAJO FIN DE GRADO**

(de acuerdo con lo establecido en el artículo 8.3 del Acuerdo de 5 de marzo de 2020, del Consejo de Gobierno de la Universidad de Oviedo, por el que se aprueba el Reglamento sobre la asignatura Trabajo Fin de Grado de la Universidad de Oviedo)

D./D.<sup>a</sup> Julio Menéndez Caro, con DNI

### **DECLARO QUE:**

El Trabajo Fin de Grado titulado "BRICS in the World Economy: An analysis of their Growth, their role and their relations with G7"., que presento para su exposición y defensa, es original y he citado debidamente todas las fuentes de información utilizadas, tanto en el cuerpo del texto como en la bibliografía.

En Gijón, a 29 de Junio de 2024

Firmado: Julio Menéndez Caro

## **Abstract:**

In the last decades several economic and political earthquakes have taken place. Consequently, the balance of power in the world economy has partially shifted from a clear hegemony of Western countries to a more balanced scenario, characterised by the rise of some developing countries and the stagnation of some of the former world economic powerhouses.

Within that context, this thesis develops an analysis of the evolution of BRICS countries role in world economy, and compares it with that of the G7 nations. The analysis covers their weight on world's GDP, trade and financial flows, their weight on certain "Strategic Industries" and their initiatives to create alternative International Institutions to those currently governing over International Financial, Economic and Trade Relations.

In that regard, the main findings are that BRICS countries relevance on the World economy has significantly increased, surpassing the G7 in terms their combined GDP (mainly fuelled by the growth of China and India). Nonetheless, G7 countries still dominate International trade and financial flows, despite the noticeable evolution of BRICS in those areas.

Additionally, G7 nations have more developed financial systems, best trained labor forces and are able to produce more complex products, whereas the role of Russia and China in the supply chain of certain "Strategic Industries" confers them an essential role in World's economy. Lastly, economic and political confrontation among both groups is on the rise, with the potential to negatively impact World's economy and overall welfare.

## **Keywords:**

BRICS, G7, economic growth, globalization, slowbalization, International Institutions.

# INDEX

<b>List of acronyms and abbreviations:</b> .....	<b>5</b>
<b>List of Tables, Graphs and Maps :</b> .....	<b>6</b>
<b>1.INTRODUCTION</b> .....	<b>7</b>
<b>2.THE ORIGIN OF BRIC´S</b> .....	<b>7</b>
2.1 WHY WAS THE GROUP CREATED?.....	11
2.1.1 The Bretton Woods Institutions: origin and purposes.....	11
2.1.2 The Bretton Woods Institutions decision-making, the clash between G7 and BRICS.....	13
<b>3. BRICS GROWTH IN A GLOBALIZED WORLD</b> .....	<b>17</b>
3.1 GLOBALIZATION.....	17
3.2 BRICS AND G7 EVOLUTION 1995-2022. COMPARATIVE ANALISIS.....	22
3.3 INSTITUTIONAL EFFORTS AND STRATEGIC INDUSTRIES BRICS.....	32
3.3.1 BRICS Institutional Efforts.....	32
3.3.1.1 Asian Infrastructure Investment Bank.....	32
3.3.1.2 The New Development Bank.....	33
3.3.1.3 Contingency Reserve Arrangement.....	34
3.3.2 Strategic Industries.....	35
<b>4. SLOWBALIZATION? BRICS AND G7</b> .....	<b>37</b>
4.1 SLOWBALIZATION CAUSES AND CONSEQUENCES:.....	38
4.2 BRICS AND G7: INCREASING CONFRONTATION.....	42
<b>5. CONCLUSION</b> .....	<b>45</b>

## **List of acronyms and abbreviations:**

ADB: Asian Development Bank  
AIIB: Asia Infrastructure Investment Bank  
BRIC: Brazil, Russia, India and China  
BRICS: Brazil, Russia, India, China and South Africa  
BRICS+: BRICS plus Egypt, Ethiopia, Iran and the United Arab Emirates  
CAGR: Compound Annual Growth Rate  
CRA: Contingency Reserve Arrangement  
ECI: Economic Complexity Index  
EMDCs: Emerging Markets and Developing Countries  
EU: European Union  
EV: Electric Vehicle  
FDI: Foreign Direct Investment  
G7: Group of 7: United States, United Kingdom, France, Germany, Japan, Italy and Canada  
G8: G7 plus Russia.  
GATT: General Agreement on Tariffs and Trade  
GCI: General Capital Increase  
GDP: Gross Domestic Product  
GFC: Global Financial Crisis  
GPR: Geopolitical Risk Index  
GVC's: Global Value Chains  
GWEC: Global Wind Energy Council  
IBRD: International Bank for Reconstruction and Development  
IDA: International Development Association  
IEA: International Energy Agency  
IFC: International Finance Corporation  
IMF: International Monetary Fund  
MIGA: Multilateral Investment Guarantee Agency  
NAFTA: North American Free Trade Agreement  
OECD: Organisation for Economic Cooperation and Development  
PPP: Purchasing Power Parity  
RTA's: Regional Trade Agreements  
SCI: Special Capital Increase  
SDR: Special Drawing Rights  
SWIFT: Society for Worldwide Interbank Financial Telecommunications  
TPU: Trade Policy Uncertainty Index  
UAE: United Arab Emirates  
UK: United Kingdom  
UN: United Nations  
UNCTAD: United Nations Conference on Trade and Development  
UNGA: United Nations General Assembly  
US: United States  
WDI: World Development Indicators  
WITS: World Integrated Trade Solution  
WTO: World Trade Organization  
WWII: World War II

## **List of Tables, Graphs and Maps :**

### **TABLES:**

Table 2.1: Share of World's GDP per country and scenario 2002-2011.

Table 2.2: BRIC and G7 countries and their relative weight on World Economy 2011.

Table 2.3: World Bank Group Organizations and their role.

Table 3.1: Membership of International Institutions 1945-2023.

### **GRAPHS:**

Graph 2.1: BRICS and G7 relative weight on World's GDP ( at current prices and PPP);

BRICS and G7 relative voting power over total (IMF and IBRD).

Graph 3.1: Weight of Trade as percentage of World's GDP 1970-2023.

Graph 3.2: Global external financial assets (as percentage of World's GDP) 1974-2022.

Graph 3.3: BRICS and G7 imports as percentage of World's total 1995-2022.

Graph 3.4: BRICS and G7 exports as percentage of World's total 1995-2022.

Graph 3.5: FDI Inward (left) and Outward (right) stocks of BRICS and G7 as a percentage of World's total.

Graph 3.6: FDI inflows (left) and outflows (right) of BRICS and G7 as a percentage of World's total.

Graph 3.7: Evolution of ECI index per country 1995-2022.

Graph 3.8: Evolution of Financial Development index per country 1995-2021.

Graph 3.9: Evolution of Education index per country 1995-2021.

Graph 4.1: Number of State Interventions worldwide affecting Trade, Investment and Migration Flows per year and impact on flows 2009-2023.

### **MAPS:**

Map 2.1: BRICS Expansion 2009-2024.

# 1.INTRODUCTION

The world has experienced several economical and political earthquakes in the last decades. The biggest financial crisis since the great depression, the rise of new economic powers and the stagnation of others, a decrease in the momentum of globalization, a global pandemic, the return of war to Europe, the rise of populism and the subsequent protectionist policies further threatening to halt the globalizer and free trade rationale in which the international economic order is based. Within that context, a group of developing countries has emerged, with the aim of providing an alternative to that order that they regard as unfair and based on past distributions of power, rather than current realities. That has created an underlying friction, in which two groups are vying for control of international institutions, in order to be able to settle the rules of international relations in the most beneficial terms for themselves. Those groups, broadly speaking, could be divided into the Group of 7 (G7) and the BRICS+ (BRICS). The former representing the existing order formulated by the United States and its allies after the end of World War II, the later a group of developing countries from the “global south” and led by China that has seen its weight on world's economy soar, while its say in the current International Institutions remains underrepresented in comparison to their increasing economic might and populations.

The main aim of this thesis is to describe the evolution of the relevance of BRICS countries in the World economy in the period 1995-2022. In order to do so, the first section will analyze the origin of the group, since the coining of the term “Bric’s” and the reasons that lead to its inception, to the current expansion that it is experiencing. The second section (section 3) will delve into the phenomenon of globalization and how BRICS grew within that context (comparatively to the G7). Moreover, some insights into BRICS’s efforts to build alternative international institutions and their relevance in some “strategic industries” are included to better represent their influence in the global economy. The third and last section, will address the current state of affairs of globalization and the alleged “slowbalization” phenomenon. The causes and consequences of slowbalization are analyzed as well as the latest events related to the increasing friction and turmoil that is characterizing current economic and political relations between both groups.

## 2.THE ORIGIN OF BRICS

The origin of the term BRICS (formerly BRIC) dates back to a paper written by the former Goldman Sachs chief economist Jim O’Neill (2001). The paper called “Building better economic BRIC’s” examined the growth perspectives of some emerging markets and

compared them with G7<sup>1</sup> economies. BRIC was an acronym for Brazil<sup>2</sup>, Russia<sup>3</sup>, India<sup>4</sup> and China<sup>5</sup> and was coined to reflect the investment potential of those emerging markets that were outgrowing the G7. To illustrate the position of BRIC in the 2001 global economy, O'Neill proposed 4 different scenarios for the growth of BRIC and G7 members for the decade (2002-2011). Those 4 scenarios are reflected in Table 2.1

Table 2.1: Share of World's GDP<sup>6</sup> per country and scenario 2002-2011.

Country	GDP (nominal)	GDP PPP	Scenario A	Scenario B	Scenario C	Scenario D
USA	33.1%	24.0%	34.2%	32.5%	31.5%	34.2%
Japan	15.8%	8.0%	11.0%	10.5%	9.7%	11.0%
Germany	6.3%	5.0%	6.1%	7.7%	6.6%	6.1%
UK	4.7%	3.4%	4.6%	4.8%	5.2%	4.6%
France	4.3%	3.5%	4.2%	5.3%	4.5%	4.2%
China	3.6%	12.6%	5.6%	4.8%	6.6%	5.6%
Italy	3.6%	3.4%	3.5%	4.4%	3.8%	3.5%
Canada	2.3%	2.2%	2.4%	2.3%	2.1%	2.4%
Brazil	2.0%	2.9%	2.5%	2.5%	3.0%	2.5%
India	1.6%	5.1%	2.6%	1.2%	3.0%	2.6%
Russia	0.8%	2.7%	1.3%	0.6%	1.6%	1.3%

Source: Own elaboration with data retrieved from (O'Neill 2001).

Scenario A is estimated using nominal GDP (GDP at current prices) projections using exchange rates at 2000 year end.

Scenario B follows the same projections. Nonetheless, unlike scenario A estimates GDP using an special exchange rate calculated following the Goldman Sachs "GSDEEMER" and "GSDEER" exchange rate methodologies<sup>7</sup>.

Scenario C calculates nominal GDP using exchange rates at 2000 year end but applying 2001 and 2002 nominal GDP growth rates to the whole period.

<sup>1</sup> G7 is the acronym for the "Group of Seven" composed by ( the United States of America (US), the United Kingdom of Great Britain and Northern Ireland (UK), the French Republic (France), the Italian Republic (Italy), the Federal Republic of Germany (Germany), Japan and Canada.

<sup>2</sup> The Federative Republic of Brazil, henceforth "Brazil"

<sup>3</sup> The Russian Federation, henceforth "Russia"

<sup>4</sup> The Republic of India, henceforth "India"

<sup>5</sup> The People's Republic of China, henceforth "China"

<sup>6</sup> Nominal GDP at current 2001 \$ and PPP at constant 2001\$

<sup>7</sup> For an in depth explanation of the methodology (O'Neill et al. 2001)



Scenario D uses GDP growth projections applying GDP PPP (Purchasing Power Parity) conversions.

Upon verifying the accuracy of those scenarios, BRIC countries ( with the exception of India in nominal GDP) outperformed even the most optimistic one, whereas G7 countries showed lower growth than expected in all scenarios. For a better representation of those results, check table 2.2.

Table 2.2: BRIC and G7 countries and their relative weight on World Economy 2011.

Country	GDP PPP 2011	Nominal GDP 2011
United States	16.32%	21.10%
Japan	4.52%	8.43%
Germany	4.00%	5.07%
United Kingdom	2.67%	3.60%
France	2.90%	3.87%
China	13.00%	10.21%
Italy	2.58%	3.10%
Canada	1.56%	2.43%
Brazil	3.10%	3.54%
India	5.72%	2.47%
Russia	4.28%	2.77%

Source: Own elaboration with data from World Development Indicators Database.

Nonetheless, BRIC’s countries not only shared their status as emerging markets or developing countries. As Duggan (2015) points out, despite the vast political, social and demographic differences among them, they shared an aspiration of being “rule makers” instead of “rule takers” in the international arena.

With this in mind, in 2006 in the margins of the 61st United Nations General Assembly, their foreign ministers met to discuss the possibility of expanding multilateral cooperation. From 2008 onwards, various BRIC ministerial meetings took place. In July 2008, on the margins of the G8 summit in Tokyo, the first BRIC head of states meeting took place. In November 2008 their finance ministers had their first joint meeting. Finally, the first BRIC summit was hosted in 2009 in Yekaterinburg, Russia representing the official creation of the group (Official Website of Russia’s Presidency in BRICS, 2015).

In 2010 South Africa<sup>8</sup> was invited to join the group, thus creating BRICS.

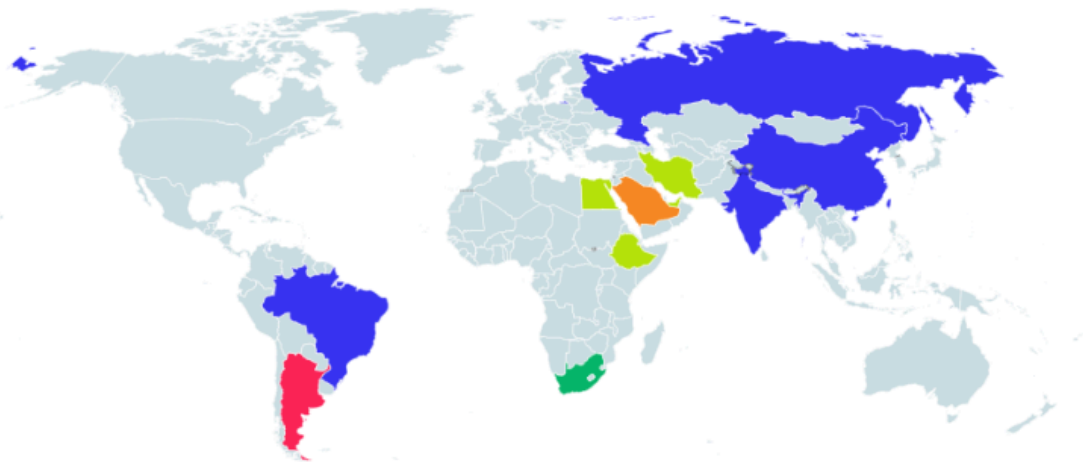
<sup>8</sup> The Federal Republic of South Africa, henceforth South Africa.

Since its creation the group has constantly expanded its scope of actions cooperating in a wide variety of topics and creating structures such as working groups, research groups, ministers meetings and even new institutions such as the New Development Bank. Most recently, in January 2024 the group experienced its last expansion welcoming Iran<sup>9</sup>, Ethiopia<sup>10</sup>, Egypt<sup>11</sup> and the United Arab Emirates (UAE) (therefore becoming BRICS+). Those countries were accepted in the 15th BRICS summit hosted in South Africa in August 2023 along with Argentina<sup>12</sup> (applied to entry and was accepted, but finally decided not to join) and Saudi Arabia<sup>13</sup> (applied to join and was accepted, although it has not yet taken the decision to formally join) This has been the biggest expansion of the group so far, depicting the increasing interest the group generates in the developing world. As a matter of fact, as Reuters (2023) reported prior to the 2023 summit, more than 40 countries showed interest in joining BRICS, although only 23 filled the official application letter.

The expansion process of BRICS is represented in Map 2.1 for a clearer understanding of the process and the countries involved.

Map 2.1: BRICS Expansion 2009-2024.

■ Not a member 
 ■ Declined to Join 
 ■ Accepted but not yet decided whether to Join  
■ 2024 
 ■ 2011 
 ■ 2009



Source: Own elaboration with Data from the World Bank Official Boundaries, India's Ministry of External Affairs and BRICS 15th Summit Declaration.

Having Briefly introduced the origin of both the term BRICS and the origin of the group, the scope of their initial growth and the increasing interest the group is attracting, the next

<sup>9</sup> The Islamic Republic of Iran, henceforth Iran.

<sup>10</sup> The Federal Democratic Republic of Ethiopia, henceforth Ethiopia.

<sup>11</sup> The Arab Republic of Egypt, henceforth Egypt.

<sup>12</sup> The Republic of Argentina, henceforth Argentina.

<sup>13</sup> The Kingdom of Saudi Arabia, henceforth Saudi Arabia.

section will analyze the relevance of BRICS (Brazil, Russia, India, China and South Africa) in the global economy and how they have benefited from the process of globalization.

## **2.1 WHY WAS THE GROUP CREATED?**

As for the reasons that drove BRIC's into creating a group we might go back to the International System in which they operated when this idea first came into consideration. In that regard, we will start by explaining its origin and main purposes. Later on, their decision making procedures are explained to illustrate the origin of BRICS discontent with those institutions. Afterwards, some academic references are added to depict the potential biases present in the aforementioned Institutions. Lastly the current voting power of BRICS and G7 member countries are compared to their economic might (measured by their GDP).

### **2.1.1 The Bretton Woods Institutions: origin and purposes**

During the month of July 1944, just one year before the end of World War II, delegates from 44 different allied countries met in Bretton Woods. Their goal was to model the future international monetary system that would be responsible for securing exchange rate stability, preventing competitive devaluations, and promoting economic growth (Ghizoni, 2013).

The outcome of that conference was the reestablishment of the Gold Standard and the creation of two new institutions: the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (IBRD).

The Gold Standard was abandoned in 1971, when the US President Richard Nixon ended dollar convertibility into gold.

Unlike the Gold Standard, both the IMF and the IBRD have survived to the present day.

The IMF main purposes are: "furthering international monetary cooperation, encouraging the expansion of trade and economic growth, and discouraging policies that would harm prosperity" (IMF, 2024a). In order to do so, the IMF's most important tools are its lending programs. These programs, are aimed at restoring economic stability and growth in countries suffering from balance of payments problems (inability to pay for their essential imports or service their external debts), financial crisis (illiquid or insolvent financial institutions), fiscal crisis (excessive budget deficits and debt) or a combination of them.

There are several different types of such programs, depending on their duration and the conditionality level to which they might be bound. However, in most programs, funds are disbursed in different installments and linked to the fulfilment of certain conditions.

Conditionality levels, vary significantly on every agreement signed between the IMF and the borrowing country, nonetheless they could be classified in:

Ex-ante conditions: prior actions that the borrowing government must carry out before having access to the funds.

Ex-post conditions: macroeconomic targets that the government of that country has committed to fulfill and will be monitored for, and structural reforms in its economy aimed at achieving the aim of the lending program (IMF, 2022; IMF, 2023b)

The World Bank's purpose is to “reduce poverty by lending money to the governments of its poorer members to improve their economies and to improve the standard of living of their people” (World Bank, 2012). The World Bank Group is composed by 5 different organizations each one having an specific role as depicted in Table 2.3:

Table 2.3 World Bank Group Organizations and their role.

<b>Organization</b>	<b>Role</b>
IBRD	Provides lending to low and middle income countries
International Development Association (IDA)	Provides lending to low-income countries
International Finance Corporation (IFC)	Provides Finance to the private sector
Multilateral Investment Guarantee Agency (MIGA)	Encourages private companies to invest in foreign countries
International Centre for Settlement of Investment Disputes (ICSID)	Help private investors and foreign countries settle disputes

Source: Own Elaboration using data from the World Bank.

As in the case of the IMF, the most powerful tool the World Bank has is its lending capacity. The loans are paid in different installments and always linked to projects aimed at developing transport, energy and telecommunication infrastructures, investing in healthcare and education, providing safe water and sanitation, protecting and managing natural resources and the environment or modernizing the economy (World Bank, 2012). Projects are turned into plans, which the borrowing countries should study with the World Bank experts after requesting a loan. The economic viability, the economic impact and the environmental impact of the plan are studied. Afterwards, the implementation strategy is debated and an agreement between the Bank and the Government of the borrowing country is reached (the agreement is subject to a monitoring process upon which the payments of future installments are linked) (World Bank, 2012).

## 2.1.2 The Bretton Woods Institutions decision-making, the clash between G7 and BRICS

As the origin and main purposes of the IMF and the World Bank have already been described, now we must focus on their decision making organs and processes.

The IMF makes decisions based on “simple majorities” (50% votes) or “supermajorities” (70% or 85% depending on the specific topic) (Congressional Research Service, 2022).

The voting power of each member depends on 2 components: A fixed component known as “basic votes” accounting for 250 votes for each member and a quota based component. Quotas are the reflection of the countries relative position in the global economy and are calculated following a formula that was coined in 2008 and has been target of severe criticism by the academia and most developing countries. The formula’s components are: A weighted average of nominal and real GDP for the last 3 years, a measure of the openness of its economy, a measure of the variability of certain financial flows and a twelve-month average of a country’s official reserves (IMF,2008; European Parliament, 2019).

The unit of account of Quotas are the Special Drawing Rights (SDRs). SDRs are international reserve assets created by the IMF. SDRs are currency baskets currently taking the following composition: 1 SDR = 0.57813 \$ + 0.37379€ + 1.0993RMB<sup>14</sup>+ 13.452 JPY<sup>15</sup> + 0.08087£. (IMF, 2024b)

One additional consideration of paramount importance, is that the quotas should be revised every 5 years, but the formula already cited only works as an guidance. In practise, every change in quotas distributions is to be approved with an 85% majority and the approval of the members affected (European Parliament, 2019). As we will see later on, this has massive implications on BRICS underrepresentation.

After analyzing how quotas are set, we will finally examine the purpose of quotas:

Quotas determine the maximum amount of financing every member is obliged to provide to the IMF(IMF,2023b). Most importantly, they are the main determinant of a country's voting power as every 100,000 SDR’s a country is assigned, they are granted 1 vote. Finally, quotas determine the maximum amount of financial resources a country can have access through the IMF normal access programs ( unlike in certain circumstances of urgent balance of payment needs). That amount accounts for an 135% annual cap of their quota and up to 435% cumulatively (through borrowing in consecutive or different periods) of their quota. (European Parliament, 2019).

---

<sup>14</sup> Chinese Renminbi (this notation is used to avoid confusions as both currencies have the same symbol “¥”)

<sup>15</sup> Japanese Yen (this notation is used to avoid confusions as both currencies have the same symbol “¥”)

In the case of the World Bank, every different organization has its own voting system. Nonetheless, for the purpose of this thesis, we will focus solely on the IBRD, because it is the one with the highest lending capacity and it shares the same executive directors in its board of directors with IDA, IFC AND MIGA (World Bank, 2021; World Bank Annual Report 2023)

IBRD decisions require different levels of the total voting share depending on the relevance and the scope of the decision (akin to the IMF). Consequently, major policy changes, approval of funding increases or modifications of the Articles of Agreement, that constitute the backbone of the organization, require up to 85% percent of total votes.

On the contrary, other decisions such as the approval of funding for certain projects only require 50% of the votes ( Congressional Research Service, 2024 ; Nelson, 2024).

Voting rights in the IBRD work similarly to those of the IMF. A fixed amount of 5.55% of total votes is allocated equally between all the 189 member countries. Additionally, every share of the bank a member holds will grant it an additional vote (World Bank, n.d.).

Member states can only acquire new shares when a General Capital Increase (GCI) is approved or when a Selective Capital Increase (SCI) takes place. GCIs purpose is to expand the funding of the bank, without altering its voting structure originally designed in 1944 after the Bretton Woods Conference. Conversely, SCIs are designed to allocate more shares to countries that have acquired more weight in the world economy (Moss et al., 2011).

Owing to the existence of SCIs, even if they rarely occur, the voting rights within the IBRD are more equitably distributed than in the IMF.

Having explained in detail the voting system of the aforementioned institutions, we can analyze and better comprehend the origin of BRICS's grievances:

This process will consist of 3 steps: First citing some biases in their decision making processes reported by researchers. Secondly, gathering official declarations in which BRICS express their discontent with the current status-quo. Finally, representing the power imbalance in those institutions BRICS have against G7, measured in the voting rights they can exercise.

IMF lending decision making has attracted substantial attention in academia. More precisely, there is a plethora of research on the US influence over the fund. In that regard, we should highlight the findings of Thacker (1999), Stone (2008) and Nelson (2014).

Thacker (1999) finds that aligning with the US (measured as a coincidence of voting patterns in the UNGA) significantly affects a country's chances of receiving a loan from the IMF. In a

similar vein, he finds evidence of the US instrumentalization of the IMF after the end of the cold war, as a method to “reward friends and punish defectors”.

Stone (2008) argues that the conditionality extension and conditions of IMF lending programs is affected by the US economic relations with the borrowing country. More precisely, US aid recipients are 39% more likely to be offered IMF programs. Additionally, they are more likely to be subject to fewer categories of conditions.

Nelson (2014) Points out that the IMF lending decisions are “systematically biased” and, as the argument goes, the ideological preferences of the policy makers in the borrowing country significantly affect the conditions and the enforcement of the loans.

Those potential biases and the influence of G7 countries on the IMF and the World Bank had not remained unnoticed by BRICS government officials and representatives, who had consistently raised their concerns over those issues. In order to illustrate the paramount importance placed on reforming these institutions by the group, a summary of some references made in the BRICS summits declarations is included:

BRIC 1st Summit declaration (2009) “We are committed to advance the reform of international financial institutions, so as to reflect changes in the world economy. The emerging and developing economies must have greater voice and representation in international financial institutions, and their heads and senior leadership should be appointed through an open, transparent, and merit-based selection process”. (Kremlin, 2009).

BRICS 5th Summit Declaration (2013) “We call for the reform of International Financial Institutions to make them more representative and to reflect the growing weight of BRICS and other developing countries. We remain concerned with the slow pace of the reform of the IMF. We see an urgent need to implement, as agreed, the 2010 International Monetary Fund (IMF) Governance and Quota Reform.”(Ministry of External Affairs, 2013).

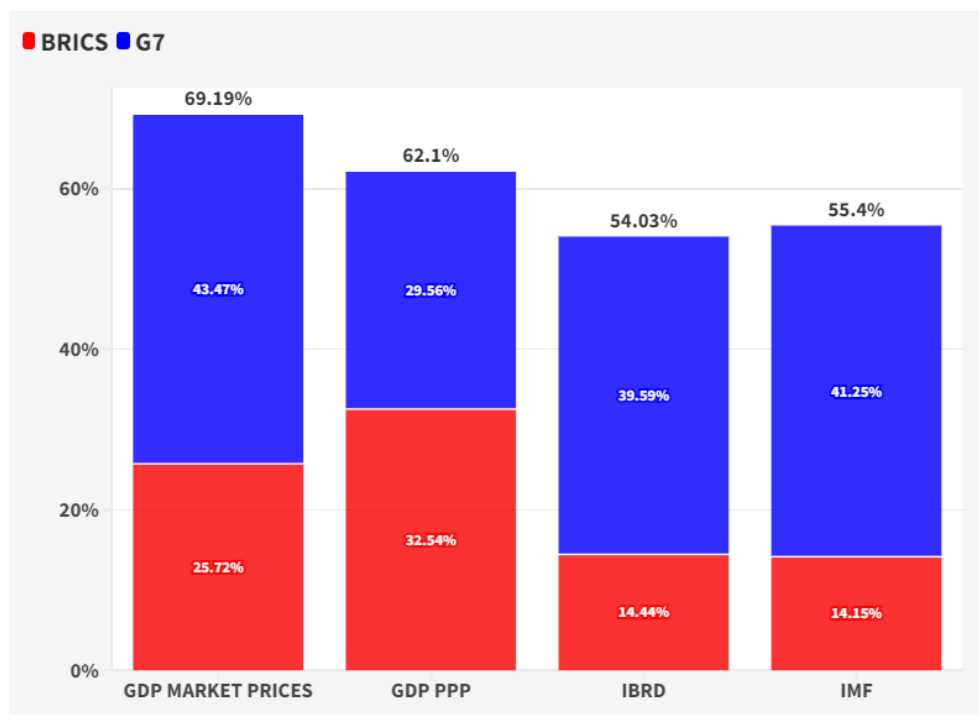
BRICS 11th summit declaration (2019) “We reiterate the urgent need to strengthen and reform the multilateral system, including the UN, the WTO, the IMF and other international organizations, which we will continue working to make more inclusive, democratic and representative, including through greater participation of emerging markets and developing countries in international decision-making” (Ministry of External Affairs, 2019).

BRICS 15th summit declaration (2023) “We call for reform of the Bretton Woods institutions, including for a greater role for emerging markets and developing countries, including in leadership positions in the Bretton Woods institutions, that reflect the role of EMDCs in the world economy” (BRICS, 2023).

The last part of this section will compare the current voting rights of BRICS and G7 members in both the IMF and the IBRD with their respective weight on World’s GDP using PPP and market prices methodologies.

Firstly, the extent to which BRICS as a group is underrepresented in both institutions is depicted in Graph 2.1:

Graph 2.1: BRICS and G7 relative weight on World’s GDP ( at current prices and PPP); BRICS and G7 relative voting power over total (IMF and IBRD)



Source: Own elaboration with data from WDI<sup>1617</sup>, World Bank and IMF<sup>18</sup>.

With the aggregate data from graph 2.1 we have a better insight on BRICS perspective on the issue. Regardless of the methodology used in order to measure GDP, BRICS account for less than 15% of votes, (less than the US alone) therefore being unable to exercise any veto power on the most important decisions, a privilege that both the US alone and the G7 combined have. It is especially prominent the gap between their voting power and their

<sup>16</sup> Data for GDP for 2022 (most recent data available).

<sup>17</sup> GDP PPP ( constant 2021 international \$)

<sup>18</sup> Data for both IBRD and IMF voting rights for 2024 (most recent data available)



combined GDP at PPP. Using that methodology, not only do BRICS account for a bigger proportion of World's GDP than G7, but their combined voting rights account for only 44.37% (IBRD) and 43.48%(IMF) of their GDP, a significant difference with the respective ratios for the G7 133.93% (IBRD) and 139.54% (IMF).

A more detailed view is available in Anex 1, which breaks down the data per country. Data at country level reveals the size of this problem is some paradigmatic cases: Japanese voting power in the IBRD is higher than that of Brazil, India and South Africa combined. On the other hand, China's voting rights on both Institutions account for 5.91% (IBRD) and 6.08% (IMF), a fraction of their weight on World's GDP (17.81% at current prices and 18.53% at GDP PPP).

The situation is clear, as it has been since BRICS countries started to seek for a more equitable distribution of power within the International system, a quest for power that helped to create the group itself 15 years ago.

Having analyzed the origin of both the term BRICS and the origin of the group, the scope of their initial growth, the increasing interest the group is attracting, and the causes of their discontent with the current International Institutions, the next section will analyze the relevance of BRICS (Brazil, Russia, India, China and South Africa) in the global economy and how they have benefited from the process of globalization.

### **3. BRICS GROWTH IN A GLOBALIZED WORLD**

This section 3 is divided into three main parts. First an introduction to the phenomenon of globalization, its scope and dimensions. Secondly, a thorough comparative analysis of the weight of BRICS and G7 countries in that "globalized economy" and the evolution they have experienced in the period 1995-2022. Ultimately, as a means of providing a wider picture of the role of BRICS countries in the global economy, two additional aspects are included. Their efforts for creating new institutions (akin to those analyzed previously that were originated after WWII) and the weight of some of their members in certain industries, described as strategic and essential for most countries and pivotal for the energy transition.

#### **3.1 GLOBALIZATION**

Since the end of World War II the World experienced an unprecedented growth of trade and investment flows, fuelled by lower tariffs and barriers to trade and foreign investments, the improvement of communication technologies and the expansion and evolution of more efficient and faster transportation methods. This process, often called globalization, has its roots in trade theory.

In that regard, the comparative advantage theory developed by David Ricardo provided a first insight into the benefits of trade even when one country had an absolute advantage on two goods over another one. According to this model, countries will specialize in the production of the goods in which they have comparative advantage over their trading partner, rather than following the absolute advantage logic earlier proposed by Adam Smith. It is worth mentioning, that the Ricardian Model has several assumptions that limit its practical application, although its underlying logic even if slightly modified still holds. As the 20th century evolved, more complex and detailed theories explaining the rationale of international trade appeared, such as the Heckscher-Ohlin theory (also based in the comparative advantage, but building up on relative factor abundance and the importance of country specific factor endowments). Other theories include the Gravity model theory that states that trade between countries depends on the size of their economies (bigger economies will trade more among themselves) and the geographic distance among them (the closer two countries are, the lower the transportation cost are assumed, so higher trade levels would be expected) and the New Trade Theory developed by Paul Krugman, which placed increasing economies of scale and imperfect competition as drivers for trade. Nonetheless, regardless of the theory, there is consensus that international trade helps the aggregate world output to be increased, therefore increasing the overall wellbeing. In a nutshell, more efficient distribution of production factors has caused “positive growth effects” on the economies of countries involved. Furthermore, its citizens benefit from a wider range of consumer goods and lower prices. On the contrary, variations on the scarcity conditions of those factors of production within individual economies, had produced their relative prices to be altered, thus creating winners and losers in every country (Collegio Carlo Alberto, 2017).

The world economy has experienced a process of economic integration and increasing interconnectedness, following a liberalizing rationale with the aim of dismantling the man-made barriers to trade imposed in the early 20th century (Antràs, 2020).

Consequently, according to the World Bank Development Indicators database (WDI), GDP and GDP per capita<sup>19</sup> have grown at an annual average of 3.39% and 1.82% in the period 1960-2022, making World’s GDP multiply by a factor of 8.16 and per capita GDP to be multiplied by 3.11 in that period.

Within this context, 4 dimensions (or flows) can be highlighted: the international flows of merchandise, investment, information and people, although it is worth noting that they are extremely intertwined.

---

<sup>19</sup> Data for GDP and GDP per capita constant 2015 \$ available at <https://databank.worldbank.org/source/world-development-indicators#>

The international trade flows were significantly expanded throughout the second half of the 20th century for an assortment of reasons. Nonetheless, we will only mention some of them. The creation of GATT (General Agreement on Tariffs and Trade) in 1947 and its later evolution into the WTO (World Trade Organization) in 1995 fuelled a reduction in tariff and non tariff barriers.

In a similar vein, the expansion of Regional trade agreements (RTAs) has been significant during the last decades of the 20th century, and has continued its trend until recently. Regional Trade Agreements are treaties between two or more countries that define the rules of trade between all signatories and aim at promoting trade of goods and services among them. The number of RTAs in force have constantly increased, totalling 42 in 1980, 100 by 1995, 165 by 2000 and up to 369 as of 2024 (WTO, 2024).

As a consequence, average tariffs have been markedly reduced. The estimation carried out by Bown and Irwin (2015), notes that the average tariff of the biggest economies when the GATT came into being, was about 22%, whereas current available data, as per the WITS database, (World Integrated Trade Solution) shows that the Effectively Applied Weighted Average tariff for the world (AHS Weighted average), which is the average of tariffs weighted by their corresponding trade value, is set at 3.77% as of 2021 (WITS, 2022). In order to better illustrate the expansion of those institutions, as well as the previously mentioned IMF and IBRD, (those related to the financial integration) Table 3.1 shows the evolution of its memberships since their foundation, although a more detailed graph is included in Anex 2.

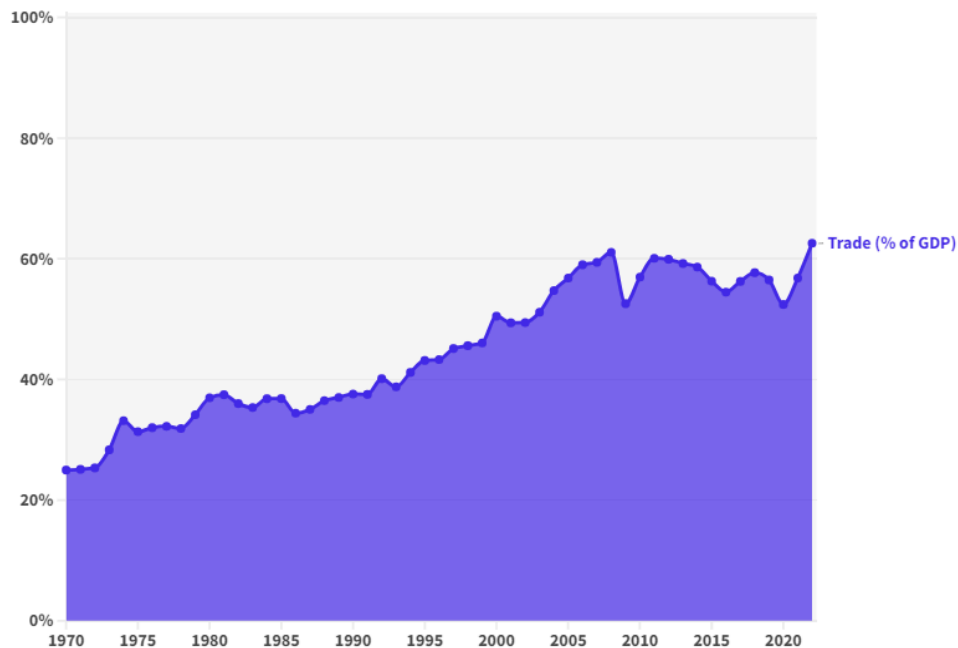
Table 3.1 Membership of International Institutions 1945-2023.

YEAR	1945	1955	1965	1975	1985	1995	2005	2015	2023
IMF	30	58	103	128	149	182	184	188	190
IBRD	26	54	102	125	147	181	184	188	189
GATT/WTO	0	34	65	82	89	98	149	164	164

Sources: Own elaboration with data from WTO for GATT and WTO, IMF for IMF and The World Bank for IBRD.

Moving on to the extension of trade flows expansion, graph 3.1 represents the percentage of trade value (imports+exports) to World's gdp ratio (also known as trade openness index)

Graph 3.1: Weight of Trade as percentage of World's GDP 1970-2023.



Source: Own elaboration with data from World Development Indicators, available at: <https://databank.worldbank.org/>

Although the expansion is significant, it is worth noting, as Antràs (2020) did, that almost 80% of that growth occurred in the period 1986- 2008, therefore raising the question of the current state of the globalization process (will be addressed in section 4).

Nevertheless, in the period represented in the graph (1970-2022), the CAGR (compound annual growth rate) still accounts for 1.78%.

In the same line, as WTO reports, world trade volume is today 45 times higher than it was in 1950, whilst world trade value has surged by 400 times since 1950. (WTO, 2023)

Additionally, and as the last consideration regarding the expansion of trade, the development of Global Supply Chains is addressed.

As transportation and communication technologies evolved, the cost of shipping intermediate inputs, raw materials and finished products diminished, together with the cost of coordination and organizational resources (mainly through software), thus facilitating the transmission of ideas, instructions and information (Baldwin, 2012).

Together with the previously mentioned institutional expansion and a political climate mostly oriented towards free market policies, the man-made barriers to trade were significantly reduced. Relatedly, a huge proportion of new countries with massive populations started to take part in the globalization process, providing a noticeable supply of relatively cheap labor (Antràs, 2020). On that account, Global Value Chains have expanded and dispersed dramatically, in a quest for the most efficient and profitable way of producing in every stage of the value chain. Nowadays, as reported by OECD (2024) 70% of international trade

involves GVCs, including services, raw materials, intermediate inputs and final products that cross borders in different stages of the value chain.

Following a similar trend, global financial flows have also increased since the mid 20th century, although significantly less than the trade ones, despite facing similar reductions on the barriers they faced. As Stulz (Stulz, 2005, pg 1595) notices: “Despite the dramatic reduction in explicit barriers to international investment activity over the last 60 years, the impact of financial globalization has been remarkably limited”. Additionally, unlike with trade integration, wide consensus regarding the positive impact on economic growth stemming from financial integration is lacking (Rodrik, 2017).

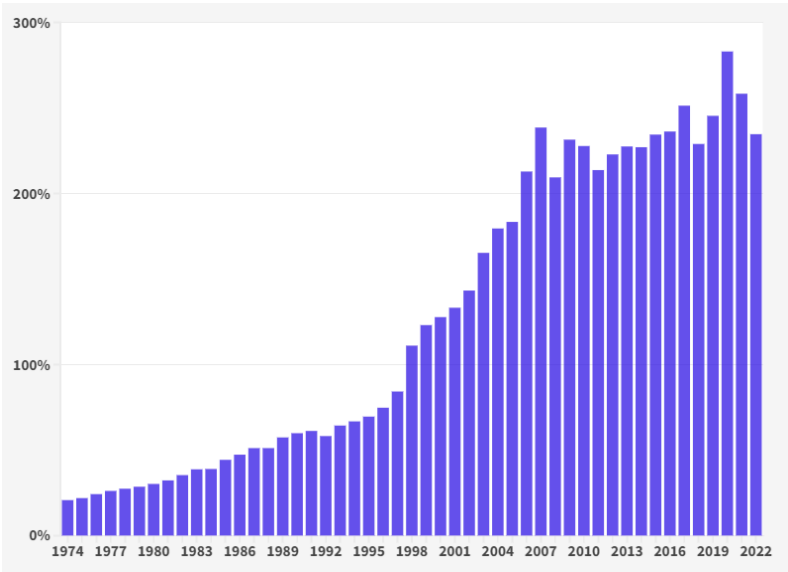
Indeed, as stated by James (2018), finance constitutes the most volatile of the international linkages and is prone to sudden stops.

Nonetheless, before looking at the data, it is worth examining some of the theoretical benefits of the international integration of capital.

The addition of new markets for capital brings benefits for the investors that now have access to new markets which generally offer higher returns, due to the scarcity of local capital. Consequently, the cost of financing new projects is reduced in the host country, as there is an increase in the supply of capital. Those foreign loans can now be used to invest in new technologies, infrastructure development and production facilities, therefore increasing productivity in the host country. As a consequence, to access those new technologies imports are needed and, as productivity grows, exports will follow a similar trend, thus making the country even more integrated in the global economy. Finally, as the entrance of new foreign competitors is now possible due to the liberalization of inflows of foreign capital, the levels of competition in the local market, other things being equal, should increase, thereby pushing prices down and increasing the purchasing power in the local market.

Once its theoretical benefits have been explained, let's examine the evolution of international capital integration.

Graph 3.2: Global external financial assets<sup>20</sup> (as percentage of world’s GDP) 1974-2022.



Source: EWN database build by (Lane & Milesi-Ferretti, 2018) available at <https://www.brookings.edu> and WDI database (The World Bank, 2024) available at <https://databank.worldbank.org> . GDP data is reported at current USD.

As graph 3.2 depicts, from the mid 1970s until the Global Financial Crisis, the expansion of international capital has been extraordinary. Total assets owned by non-residents have increased both its relative weight on GDP (from 20.7% in 1974 to 234.5% in 2022) and their absolute value, being 214 times bigger in 2022 compared to 1974. Nonetheless, it is worth highlighting its stagnation since 2007, when they represented 238.5% of GDP.

Apart from capital and trade flows, the globalization process is also characterized by the increasing movement of information and people.

In that regard, data from the World Bank Development Indicators and the World Migration Report (2024) shows that the international movement of people is the flow that has grown the least, with migrant population accounting for 3.59% of world’s population as of 2020 (last available data) against the 2.37% that they represented in 1960.

With regards to information, both the increasing rate of access to internet and the technological advances that have enabled information to be made available worldwide have been significant. More precisely, according to data from the World Bank Development Indicators and International Telecommunication Union (2024), the percentage of world’s population with access to internet have skyrocketed from 0.04% in 1990 to 67% in 2023. Lastly, for the evolution of information technology, the evolution of the number of transistors in each microprocessor is often used to portray the astonishing evolution in that industry, as

<sup>20</sup> Aggregate of financial claims of non-residents excluding gold. As per (Lane & Milesi-Ferretti, 2018).

it illustrates the amount of information it can process. According to Our World In Data (2024) as of 2021, the most advanced microprocessor include up to 58.2 billion transistors, 25,216 times more than in 1971, illustrating how much information is possible to share nowadays.

### **3.2 BRICS AND G7 EVOLUTION 1995-2022. COMPARATIVE ANALISIS**

This section will address the economic growth of BRICS countries in terms of their GDP, their share of world's exports and imports, their trends in terms of Foreign Direct Investment and some additional metrics such as their economic complexity or their financial development. All of this will be done in comparison to the G7, as has extensively been done in previous literature and to quantify and depict the relative importance of both groups as their tensions and conflicting interests have already been explained in section 2.

Additionally, to better illustrate their growth, a set of studies analyzing the economic growth of BRICS are cited and their main findings summarized.

As of 2022, BRICS countries made up to 40.86%<sup>21</sup> of World's population, totalling 3.24 billion inhabitants, which represents their numerous labour forces and their vast internal markets. Conversely, G7 countries account for 9.75% of World's population, with a combined population of 775 million. Similarly, BRICS account for 29.52%<sup>22</sup> of world's surface, which sheds light on the sheer amount of natural resources they possess. In that respect, the G7 accounts for almost half of that of BRICS with 15.21% of world's surface. Prior to start analyzing their respective sizes over global GDP, it is worth explaining the methodology that it is to be used and why. O'neill (2001), explained that in order to measure the GDP of those countries, significant differences were found depending on the technique used. Nominal GDP, also referred to as GDP at current prices, tended to show higher figures for G7 countries, whereas real GDP or GDP PPP (Puchasing Power Parity) tended to represent BRIC's as more relevant players in the world economy. This is because Purchasing Power Parities represent the rate at which one currency should be converted into another to be able buy the same amount goods in both countries, therefore, when factored in, the results are much more tight among both groups. Additionally, he added that GDP PPP was the methodology recommended by Goldman Sachs and the IMF, so for GDP and GDP per capita data gathering and related calculations<sup>23</sup>, it will be used. Nonetheless, for exports, imports and investment flows, GDP at current prices is used, in line with the recommendations from the IMF to use it in aggregates included in the current account balance (Callem, n.d.).

---

<sup>21</sup> Data for population retrieved from The World Bank WDI database

<sup>22</sup> Data for land area retrieved from The World Bank WDI database

<sup>23</sup> Data for GDP and GDP per capita retrieved from The World Bank WDI database, further calculations done by the authorto estimate growth levels in the period of study.

At the start of the period of analysis, BRICS countries accounted for a 17.02% of World's GDP<sup>24</sup>, while G7 nations dominated world economy with a combined GDP equivalent to 45.21% of World's economy. Nonetheless, thanks to higher growth rates averaging 5.67% yearly compared to 1.69% of G7, as of 2022 BRICS economies combined accounted for 32.55% of World's GDP, surpassing the 29.56% of G7.

However, it is worth noting the unequal growth performances that BRICS countries have experienced: Brazil's GDP grew at an average of 2.09%, Russia at 2.58%, India at a 5.89%, China at 8.13% and South Africa at 2.26%, manifesting the role of India and China as the engines of the group's growth. This is specially true if we dug deeper and analyze their growth after the aftermath of the Global Financial Crisis of 2008.

In the Period 2008-2022 Brazil's GDP grew at an average of 1.22%, Russia's growth dropped to an average of 0.84% and South Africa grew at a average of 1.08%. All of them showing similar results to what G7 members experienced, with an average growth of 1.17%, and specific cases like Italy(-0.04%), Japan (0.35%) and France (0.8%) performing specially poorly. Conversely, once again, India with an average annual growth rate of 5.58% and China (6.62%) consolidated their status as the most dynamic economies within the group (growing way beyond the average of the World for that period, 2.74%).

In terms of GDP per capita, the pattern is similar with BRICS countries having an average GDP per capita of 9,486.85\$ in 1995, 16.98% lower than world's average (11,426.66\$), whereas G7 average GDP per capita accounted for 42,468.35 \$ (271.66% higher than the average in the world). As of 2022, owing to its higher growth over the period, BRICS average GDP per capita reached 19,982.67\$, (0.79% lower than the world's average that stayed at 20,142.40 \$), whilst the average for G7 was 56,808.23 \$ (182.03% higher than the world's average). The average annual growth per country both in the whole period and after the GFC is as follows:

Brazil 1.09% (0.47% after GFC) ; Russia 2.62% (0.66% after GFC); India 4.45% both in the whole period and in 2008-2022; China 7.51% (6.17% after GFC); South Africa 1.13% (-0.06% after GFC); France 0.96% (0.44% after GFC); United States 1.46% (1.03% after GFC); United Kingdom 1.34% (0.56% after GFC); Germany 1.13% (0.83% after GFC); Japan 0.65% (0.51% after GFC); Italy 0.46% (-0.05% after GFC) and Canada 1.18% (0.49% after GFC). With all of them but Russia, India and China growing below the average in the world for the whole period (2.05%) and all of them but China and India growing below the world's average for the post crisis period at 1.67%.

Graphs to represent GDP and GDP per capita growth are included in Anexes 3 and 4.

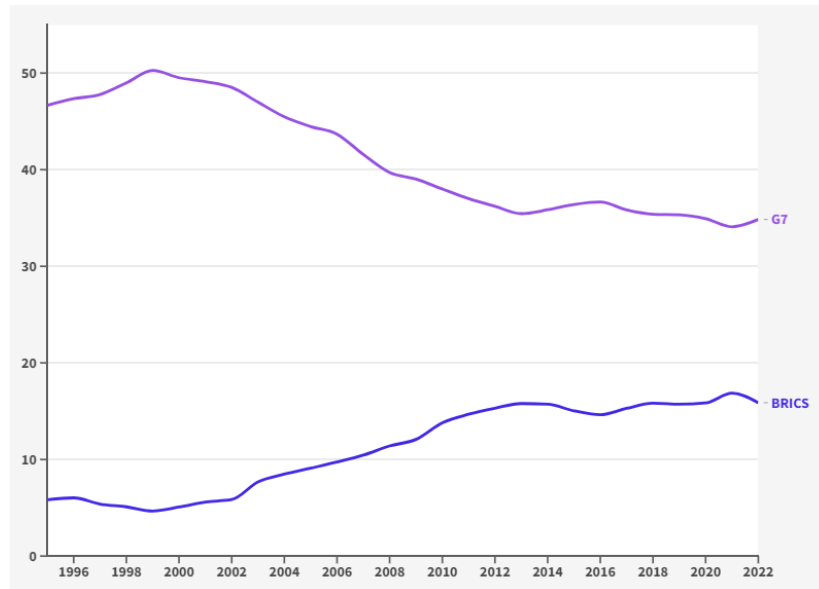
---

<sup>24</sup> Measured at PPP in constant 2021 US\$



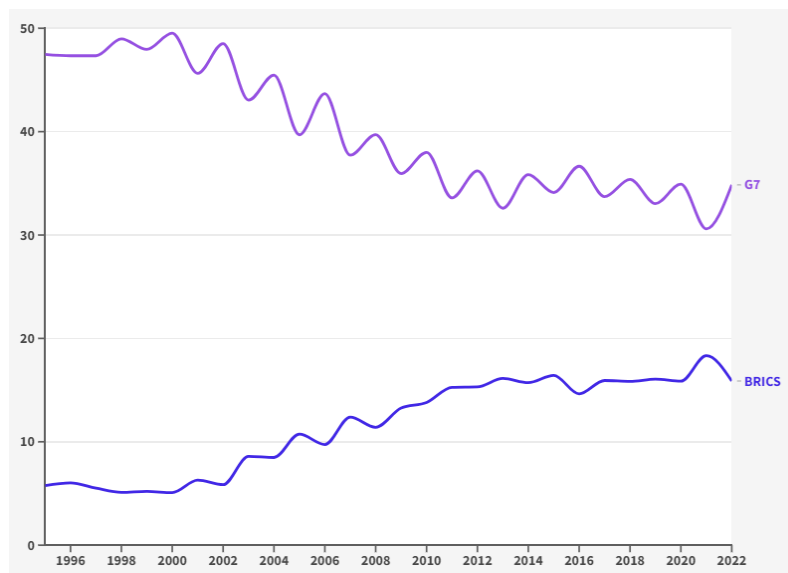
Moving on to the weight of BRICS and G7 in world's trade, it has also evolved significantly. Graphs 3.3 and 3.4 show the evolution of BRICS and G7 weight on world's total imports and exports.

Graph 3.3 BRICS and G7 imports as percentage of World's total 1995-2022.



Source: Own elaboration with data from WDI database (except for imports of Japan for 1995, retrieved from WITS database) available at: <https://databank.worldbank.org> and <https://wits.worldbank.org/>

Graph 3.4 BRICS and G7 exports as percentage of World's total 1995-2022.



Source: Own elaboration with data from WDI database (except for exports of Japan for 1995, retrieved from WITS database) available at: <https://databank.worldbank.org> and <https://wits.worldbank.org/>

Data from graphs 3.3 and 3.4 shows a clear trend, BRICS weight on world's trade has increased significantly, while that of G7 has notably decreased. In 1995, BRICS represented 5.83% and 5.76% of world's imports and exports, while G7 totalled 46.67% and 47.48% respectively. However, as of 2022, BRICS exported 17.84% of world's total and imported 15.88%, in contrast with G7 that was responsible for 34.85% of World's imports and 30.07% of its exports.

This shift has been possible thanks to a higher average annual growth on both BRICS imports and exports: 10.28% in the case of exports and 9.75% in the case of imports. It is worth highlighting, that those growth rates are higher than the ones registered for GDP and GDP per capita growth. As for the growth rates for G7, they have been lower: 4.21% for exports and 4.8% for imports. These figures reflect the same trend that trade openness has increased more than GDP growth, as in the case of BRICS.

Nonetheless, one additional aspect, derived from the rate at which both imports and exports have grown is relevant. At the start of the period, in 1995, both BRICS and G7 were running trade surpluses of 2.7 billion \$ in the case of BRICS and 109.3 billion \$ for G7 however, since 1999, G7 has been experiencing trade deficits, reaching -1,226.6 billion \$ in 2022 (that same year BRICS runned a trade surplus of 748 billion \$).

This trend is consistent with the data at a country level, where we find that among BRICS only India is consistently running trade deficits, while the UK and the US have experienced trade deficits for the whole period and Canada and France had been running trade deficits since 2009 and 2005 respectively.

To finish the comparison of their weight on trade, an additional phenomena will be mentioned, the growth of both Intra-BRICS trade in goods and trade in goods flows between both groups<sup>25</sup>.

Between 2000 and 2022 (first and latest year that data is available for all countries), we can track 4 different trends:

BRICS tended to trade more among themselves, with imports from other BRICS representing only 6.71% on their total imports in 2000 and growing up to 17.61% in 2022. In a similar way, in 2000 BRICS exported 3.72% of their goods to other BRICS countries, while as of 2022 that figure has risen to 9.65%.

BRICS tended to trade less with G7 countries, with imports from G7 representing 38.27% on their total imports in 2000 and dropping to 21.42% in 2022. In a similar way, in 2000 BRICS

---

<sup>25</sup> Data from UNComtrade database, available at: <https://comtradeplus.un.org/>

exported 42.57% of their goods to G7 countries, whereas as of 2022 that figure has fallen to 29.73%.

G7 tended to trade more with BRICS. As of 2000, 9.84% of their total imports of goods came from BRICS, rising up to 19.08% in 2022. Regarding exports, in 2000 BRICS were the destination for only 4.61% of their goods, while in 2022 that figure had risen to 11.02%

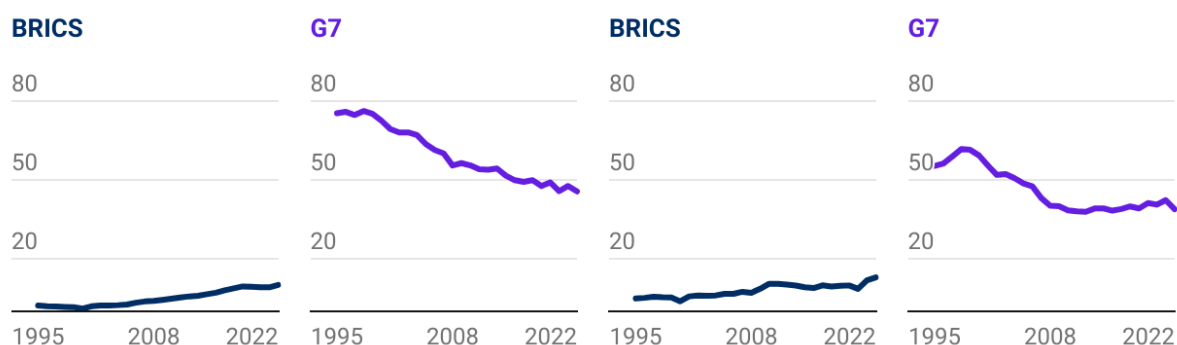
G7 tended to trade less among themselves, with imports from other G7 countries representing 44.16% on their total imports in 2000 and totalling 28.59% in 2022. In a similar vein, in 2000 G7 exported 48.12% of their goods to other G7 members, while as of 2022 that figure has fallen to 36.28%.

The last section of this 3.2 subheading will delve into the weight of BRICS and G7 on international flows and stock of FDI.

As for GDP growth and trade flows, the role of BRICS countries in international financial investments has increased in the period studied, both in terms of flows (inflows of foreign direct investments into them, and outflows of their foreign direct investments into other countries) and stock quantities ( the total amount of FDI in BRICS and the total amount of FDI BRICS countries have invested abroad).

That information is reflected on graphs 3.5 and 3.6.

Graph 3.5: FDI Inward (left) and Outward (right) stocks of BRICS and G7 as a percentage of World's total.



Source: Own elaboration with data retrieved from the UNCTAD FDI database, available at:

<https://unctadstat.unctad.org>

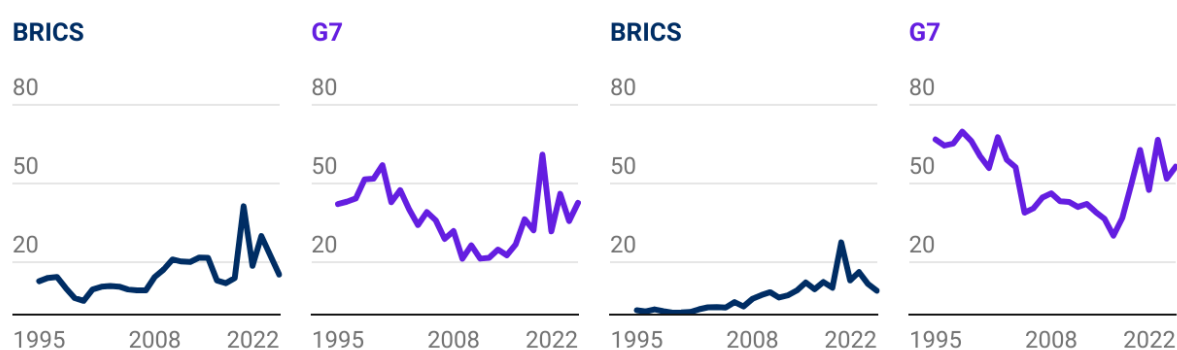
At the beginning of the period studied, in 1995, BRICS countries were the host of 4.92% of world's FDI inward stock, an insignificant amount compared to the 55.36% that was stocked

in G7 countries. However, thanks to an annual average growth rate of 13.13%, as of 2022, BRICS countries combined were hosting 12.9% of world's FDI stock (of which 8.65% was in China). In that same year, the weight of G7 as recipients of world's FDI stock had decreased to 38.88% of world's total (with the US alone accounting for 23.68%).

Looking at the opposite direction, in 1995, BRICS were the origin of 2.24% of world's FDI outward stock, once again extremely lower than the 75.38% that had its origin in G7.

As of 2022, despite having grown at an average annual rate of 14.54%, BRICS countries were the origin of 10.03% of world's FDI stock (with China once again accounting for most of it, being the origin of 7.36% of world's total stock). As for G7's ownership of global FDI, by 2022 it's weight on world's total had decreased markedly, totalling 45.63% (with the US alone being responsible for 20.19% of world's total)

Graph 3.6: FDI inflows (left) and outflows (right) of BRICS and G7 as a percentage of World's total



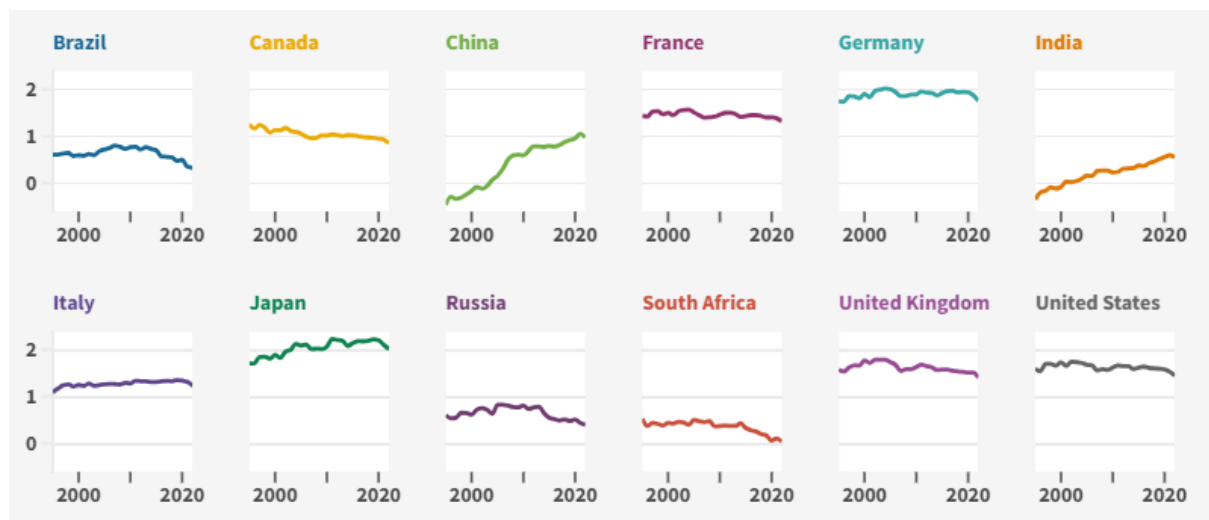
Source: Own elaboration with data retrieved from WDI database, available at: <https://databank.worldbank.org>

Moving on to the flows dimension, in 1995, BRICS received 12.75% of world's total FDI inflows and were the origin of 1.65% of them (with China accounting for 9.9% of world's total inflows). In comparison, that year G7 received 42.14% of FDI flows and were the origin of 66.75% of world's total outflows (with the UK and the US being the origin of 14.09% and 27.44% respectively). In 2022, BRICS received 15.31% of world's FDI flows, being the lowest in the previous 5 years in which they reached 41.34% of world's total flows in 2018. Additionally, in 2022 they were the origin of 9.11% of FDI flows (with China accounting for 7.31% of world's total). Regarding the G7, in 2022 they received 42.63% of world's FDI flows and were the origin of 56.4% (once again, with the US receiving and sending a sizeable portion of world's FDI flows, 21.68% and 20.8% respectively).

Having analyzed the data for GDP growth, trade growth and investment growth, a pattern stands out, BRICS countries have growth more than G7 countries, mainly fuelled by China

and India in terms of trade and GDP growth and China alone in terms of Investment. With regards to G7, they have performed poorly compared to the average of BRICS, but the US has been the main engine of growth. All in all, despite BRICS growth in terms of production (GDP PPP) and trade, G7 still represents a higher portion in World's trade and Investment flows, which could represent their most developed financial markets and their ability to produce more complex products. In order to measure those and some additional metrics, an assortment of different indexes is analyzed:

Graph 3.7 Evolution of ECI index per country 1995-2022.

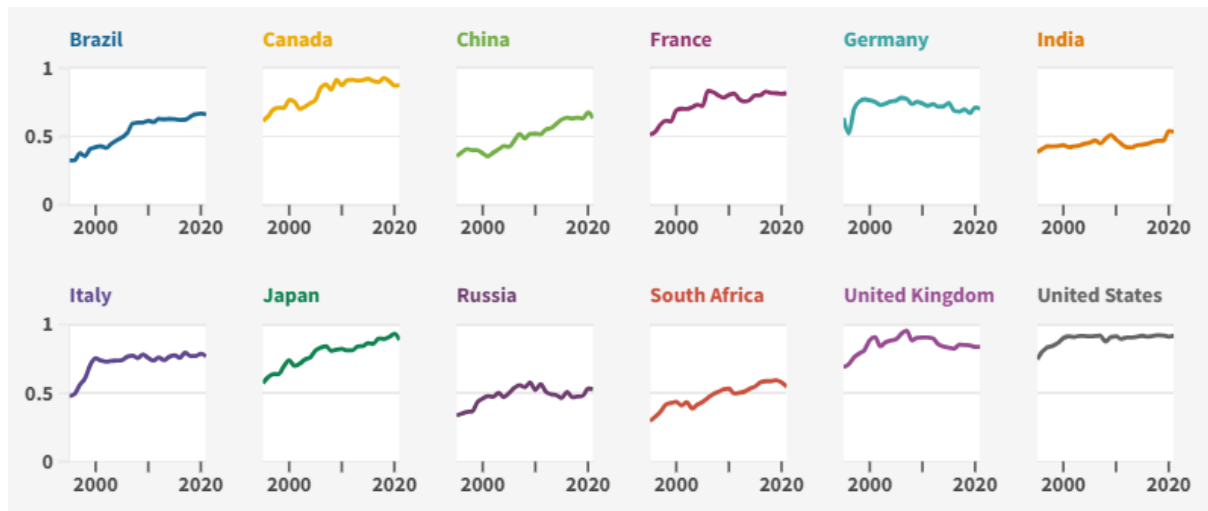


Source: Own elaboration with data from the Observatory of Economic Complexity International Datasets, available at: <https://oec.world/en/resources/bulk-download/international>

The economic complexity of a country is a measure of the knowledge in its society, expressed through the products it produces. Economic complexity for a given country is calculated based on the diversity of products it exports and their “ubiquity” (the number of countries able to produce them, which is used as a proxy of its complexity) (Harvard Kennedy School, 2024). Graph 3.7 shows how BRICS and G7 member countries have evolved in terms of the range and complexity of products they produce. The general trend, points at an stagnation of G7 countries and mixed results for BRICS. In that sense, BRICS are fuelled by the surge of India and China (the former evolving from the 54th more complex in the world to the 41st and the later doing so from the 60th to the 26th) and dragged down by the marked downfall of Brazil (falling 22 positions in that period), Russia (falling 21) and South Africa (falling 32). Regarding the G7, most of its members record lower economic complexities than at the start of the period. Consequently, everyone but Japan (which climbed to the 1st place from the 4th) and Germany (which maintained its initial 3rd place) have lost positions in the global ranking, with Canada, the United Kingdom and France experiencing the steepest

declines ( from the 10th to the 30th, the 6th to the 11th and from the 9th to the 14th respectively). Nonetheless, as of 2022 G7 countries still ranked higher on average than BRICS, therefore they are producing more complex products.

Graph 3.8 Evolution of Financial Development index per country 1995-2021.

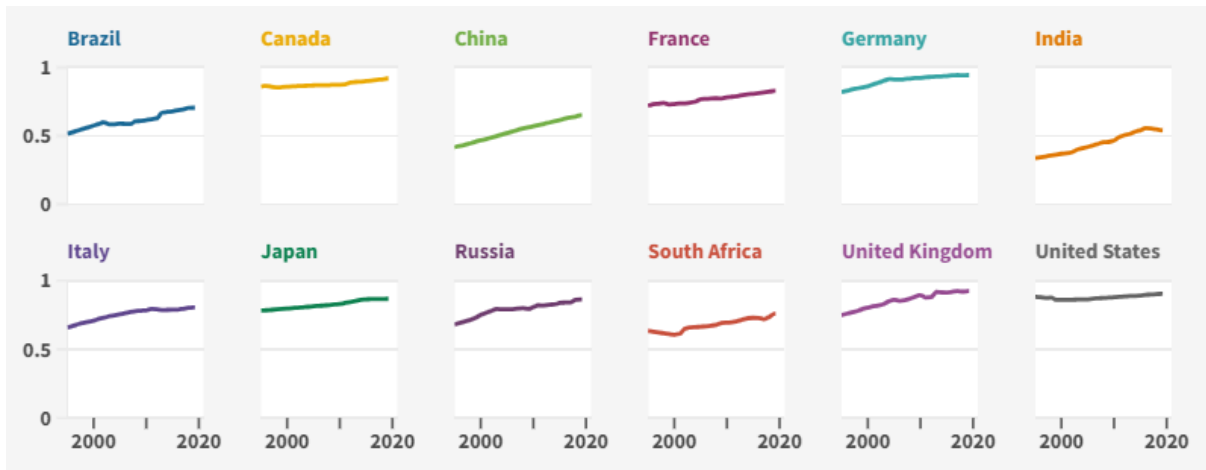


Source: Own elaboration with data from The World Bank Prosperity Data360 database, available at: <https://prosperitydata360.worldbank.org/>

Financial Development Index was developed by the IMF to measure the extent to which financial institutions and financial markets are developed in terms of their depth (size and liquidity), access (ability of individuals and companies to access financial services) and efficiency (1. The capacity of institutions to provide financial services at low cost and generate sustained revenues, and 2. The level of activity in capital markets) in each country (IMF, 2023a).

Therefore, the data from graph 3.8 suggests that BRICS countries have experienced a higher financial development on average in the period 1995-2021, with an average growth of 71.88% in this metric against the 36.67% experienced on average by G7 members. Nonetheless, all G7 countries record higher financial developments than BRICS members, therefore presenting more developed financial markets.

Graph 3.9 Evolution of Education index per country 1995-2021.



Source: Own elaboration with data from UNDP’s database “ Human Development Data” available at: <https://hdr.undp.org>

The education Index is a component of the Human Development Index and it was developed by the UN to measure the level of access to knowledge within a country. It is calculated by measuring the expected years of schooling (for children of school entering age) and average years of schooling (for adults aged 25 and older), therefore including current and past access to knowledge. Data from graph 3.9 shows that BRICS countries have experienced a significant increase in the extent to which their vast populations access education. On average, BRICS countries have experienced a 36.7% growth from 1995 to 2021 against the 13.25% average increase experienced by G7 members. Nevertheless, once again, it is important to notice that this higher growth is, at least, partly due to the considerably lower scores that BRICS countries had in 1995. Finally, except for the case of Russia that outperforms Italy and France, all BRICS countries report lower education indexes that G7 members, thus having provided fewer education to its adult population and providing fewer education to its children of school age.

### 3.2.1 Previous Studies

This section provides a brief summary of some of the previous studies that investigate the relationship between certain variables such as exports, imports and economic growth in BRICS to illustrate certain patterns that have propelled the growth of these countries.

Raghutla and Chittedi (2020), applied cointegration methodology and causality tests to study the relation between imports and exports of goods and services and economic growth in BRICS countries in the period 1979-2018 for South Africa, Brazil, India and China and

1989-2018 for Russia. They found that exports and imports have a considerable positive impact on economic growth in the five economies. More precisely, economic growth leads to more exports in India, South Africa, and China, whereas exports led to economic growth in Brazil and Russia. Moreover, economic growth leads to more imports in Brazil, India, China and South Africa, whilst the opposite relation stands in the case of Russia.

Bhattacharya and Nath Bhattacharya (2016), use econometrics to study the relationship between export and import of goods and services and economic growth per capita for the BRICS as a whole, for the period 1991-2013. They found a long run and significant relationship among export of goods and services, import of goods and services and economic growth for BRICS. More accurately, they found that a 1% increase in exports of BRICS will result in an increase of 0.19% to 0.28% of BRICS GDP per capita, whereas a 1% increase in imports to BRICS increases GDP per capita by 0.19% to 0.26%. Consequently, they assert that the openness of BRICS economies affects economic growth positively.

Rani and Kumar (2019), study the long-run association and direction of causality among economic growth, trade openness and gross capital formation in BRICS for the period 1966-2015 for Brazil, India and South Africa, 1982-2015 China and 1989-2015 for Russia. They found a significant and positive relationship between trade openness and economic growth in the long run for BRICS. Most remarkably, their results state that a “1 per cent increase in trade openness will increase the GDP per capita by 0.09 per cent in Brazil, 0.22 per cent in Russia, 0.10 per cent in India, 0.08 per cent in China and 0.04 per cent in South Africa”. Furthermore, they infer that trade openness leads to economic growth through capital formation in BRICS economies.

Additionally, according to Bertelsmann-Stiftung’s Globalization Report (2020, pg 18) BRICS countries have seen their per capita income grow significantly due to globalization. In the period 1990-2018, the “income growth per capita due to globalization” accounted for 618% in the case of China (the highest among all countries studied), 200% for India, 162% for South Africa, 114% for Russia and 103% in the case of Brazil. Those figures are higher than the ones experienced by G7 members with Germany accounting for a 142% increase, Japan 133%, Italy 112%, Canada 97%, France 85%, United Kingdom 68% and the United States with a 40% increase.



## 3.3 INSTITUTIONAL EFFORTS AND STRATEGIC INDUSTRIES BRICS

### 3.3.1 BRICS Institutional Efforts

As has been discussed in Section 1, BRICS countries have in common their ambitions of being “rule makers” rather than “rule takers” in the international context. On top of that, their discontent with the current voting rights and decision making procedures in the IMF and the IBRD has been discussed too. This section seems to analyze their joint efforts to create new Institutions and mechanisms to complement or rival the existing Institutions and the extent to which those have been successful.

#### 3.3.1.1 *Asian Infrastructure Investment Bank*

The AIIB is a Multilateral Development Fund created by China in 2016.

It has a callable capital of 100 billion \$, of which 20% is paid in capital (funds disbursed by the members) (Congressional Research Service, 2023). As of June 2024, it has approved 52.67 \$ billion financing to 271 projects in 38 different countries (AIIB, 2024d).

Its main areas of operations are: energy, power, transportation and telecommunications, environmental protection, water supply and sanitation, rural infrastructure and agriculture development and urban development and logistics (AIIB, 2024c).

At the time of writing, it has 109 members, among which, all BRICS countries are included (although Brazil and South Africa with a minor role as the bank focuses mainly on Asia) as well as 5 of the G7 members (all but Japan and the US, the two largest economies) (AIIB, 2024a). Its governance structure, decision making processes and financing practices are similar to those of the IMF and the IBRD and it actively engages with other Multilateral Development Banks to undertake shared projects (Zhu, 2019). The biggest difference in that regard is the most powerful members, being in this case China (26.54%), India (7.58%) and Russia (5.96%) (AIIB, 2024a). Consequently, China is the only country able to exercise veto power over those major decisions that require a “supermajority” of 75% of votes, the same status the US benefits from in the IMF and the IBRD (Congressional Research Service, 2023).

Lastly, to put the dimension of the AIIB into perspective, its relative financial capacity is measured (by comparing it with other Multilateral Development Funds).

In 2022, AIIB approved 42 projects with a total value of 6.81 billion \$ whilst in 2023 that number increased to 50 projects valued 11.41 billion \$ (AIIB, 2023; AIIB, 2024b)

Compared with the IBRD (which addresses similar subjects, although at a global scale), the IBRD mobilises more funds and approves more projects: 136 in 2022, totalling 33.1 billion \$ and 136 projects totalling 38.3 billion \$ in 2023 (The World Bank Group, 2023; The

World Bank Group, 2024). When compared with the Asian Development Bank, another multilateral development fund with similar scope and objectives founded in 1966 and having in its ranks 68 members, including the US and Japan, the fund also falls short. ADB approved projects totalling 20.5 Billion\$ in 2022 and 23.6 billion \$in 2023 (ADB, 2023; ADB, 2024).

### *3.3.1.2 The New Development Bank*

Founded in 2015 after “the agreement on the New Development Bank” was signed during the sixth BRICS summit in 2014. The New Development Bank was created as the Development Bank of BRICS. The NDB was the first multilateral development bank of global scope founded exclusively by developing countries, without participation of “advanced countries” in the initial stage (Zhu, 2019, pg 141).

Upon its foundation it had 5 member countries(the BRICS), an authorized capital of 100\$ billion of which 50\$ billion was subscribed. The subscribed capital was equally divided between the 5 members (10\$billion each) and divided into paid-in capital (funds actually disbursed into the bank) accounting for 10\$ billion, and the remaining 40\$ billion constituted by callable shares (New Development Bank, 2014).

The membership of the bank is open to any United Nations member and countries can join with a borrower or non-borrower status .Its membership was expanded with 4 more members in 2021: Uruguay, Egypt, the UAE and Bangladesh (although Uruguay is not yet a full fledged member as it has not deposited its instrument of accession) (New Development Bank, 2024c).

The bank offers its resources to governments and the private sector of its members and other developing and emerging market economies.

Its main areas of focus, are infrastructure and sustainable development, more precisely: Clean energy and energy efficiency, water and sanitization, transport infrastructure, social infrastructure, digital infrastructure and environmental protection (New Development Bank, 2024b).

Its decision making process and voting rights are notably different from those of the IMF and the IBRD. Decisions require different levels of support depending on their scope and relevance, varying from simple majorities (more votes in favor than against), qualified majorities (affirmative vote of two thirds of total votes) and special majorities ( affirmative vote of two thirds of total votes plus affirmative vote of at least 4 of the 5 founding members) (New Development Bank, 2014).

This structure confers founding members exceptional power over decision making. To further secure that power, and according to the articles of agreement of the bank, founding members cannot have less than 55% of voting power, non-borrowing members voting power

is restricted to a maximum of 20% and non-founding individual members voting power is also restricted to a maximum of 7% (New Development Bank, 2014).

Votes are distributed as the percentage of total shares of the bank held by a member (each share is valued 100,000\$). In that regard, the current voting rights are 18.98% for each of their founding members, 2.27% for Egypt, 1.79% for Bangladesh and 1.06% for the UAE (New Development Bank, 2024).

Once its origin, structure, capital and decision making processes have been described a brief look at its ability to attract new members and mobilize capital for projects is included as a tool for analyzing its relevance.

Contrary to the case of AIIB, the New Development Bank has not experienced a significant expansion of its membership. In terms of its ability to mobilize resources, in 2022 it approved 14 projects, totalling 2.7 billion \$ and 9 projects in 2023 totalling 2 billion \$<sup>26</sup> (New Development Bank, 2023). Consequently, and compared with the development banks already analyzed, it does not constitute a relevant alternative for other Development Banks, at least at the time of writing.

### *3.3.1.3 Contingency Reserve Arrangement*

If the New Development Bank is modeled as a multilateral development fund, similar to the IBRD and IDA in purposes, the Contingency Reserve Arrangement aims at providing liquidity through currency swaps between central banks, to ease short term balance of payments pressures, being in that sense, similar to the IMF (although with 8 times less resources). Like the New Development Bank, the Contingency Reserve Arrangement was also signed during the sixth BRICS summit in 2014 (European Parliamentary Research Service, 2014).

It is composed of 5 members, the BRICS. Its initial committed resources total 100 billion \$ divided in the following way: 41\$ billion by China, 18\$ billion each by Brazil, India and Russia and 5\$ Billion by South Africa. In effect, the CRA is a commitment of mutual assistance in times of crisis rather than a true fund. As the amounts committed should not be disbursed, and will only be made available upon approval of a borrowing country request (University of Toronto, 2014).

In the event of a balance of payments crisis, in which a country's central bank may need foreign exchange in order to support the value of the home currency, a member could turn to its partners for resources. Another scenario for its use, would be a short-term liquidity

---

<sup>26</sup> Estimate from data available at <https://www.ndb.int/projects/all-projects/>

problem, in which a government temporarily runs out of the foreign exchange resources it needs to meet its obligations (European Parliamentary Research Service, 2014).

The maximum funds a member can access is determined by a ratio of its committed resources. In that regard, China's limit is half of its committed resources, India, Russia and Brazil can access up to all their committed resources and South Africa could receive twice of its 5 billion \$ committed (University of Toronto, 2014). Nonetheless, in the event of a request of more than 30% of one's country limit, the CRA will only provide those funds after requesting the IMF to implement a programme for monitoring the borrowing country's economic performance (European Parliamentary Research Service, 2014).

Decision making, as the case of the New Development Bank, is focused on a balance between its members. Every member has a 1% of the votes (totalling 5% equally distributed) + its relative share of total capital committed. As decisions require either simple majority or total consensus, no country has a veto power, although China has more influence than any other member (University of Toronto, 2014).

In conclusion, CRA aimed at providing a complementary financial safety net for its members, without the alleged shortcomings of the IMF conditionality. Nonetheless, according to the funds available and the conditionality clauses that in a last resort also rely on the IMF for up to 70% of its potential, it might have obtained the first goal, but the second seems far from being fulfilled.

### **3.3.2 Strategic Industries**

One additional aspect about BRICS confers them paramount importance for today's and future global economy. Their control over energy sources widely used nowadays, that power the manufacturing and transportation sectors and provide electricity for public services and private consumption. That control extends over oil, natural gas and nuclear energy, reaching more than 50% of global supply in certain cases. Additionally, some recently labelled as "critical minerals" and rare earths, which are tantamount for the energy transition promoted by the United Nations as part of the 2030 agenda and also widely coveted by the EU and other western countries, have all or at least some of their stages of their value chains extremely concentrated in BRICS countries (mainly China).

Consequently, with the aim of depicting BRICS global importance in those sectors a brief summary of their stake in those industries is included. The summary is divided into two sections: Conventional energy sources and related, and Energy sources of the energy transition and related.

### **Conventional energy sources:**

Within the “conventional energy sources” we will focus on Oil, Natural gas and Uranium and nuclear power industry.

Oil: Hitting a record demand in 2022, oil accounts for 31.56% of global energy consumption, being the primary energy source in terms of energy generation and consumption (Energy Institute, 2023). In that regard, Russia has a relevant stake within that industry, being the second biggest crude oil producer with 11,87% of global supply. (IEA, 2024)

Natural Gas: Being the third most relevant energy source in terms of energy production behind oil and coal, natural gas accounted for 23,49% of global energy production. In this Industry Russia is once again the most relevant actor within BRICS, producing 15.29% of world’s supply in 2022 (Energy Institute, 2023).

Uranium: Nuclear energy is responsible for 9.37% of world's electricity production as of 2022 and is expected to dominate the new capacity development together with renewable energies in the medium term (IEA, 2023c). It is in this industry where we find a higher concentration on certain stages of the supply chain. Russia controls 35% of global uranium enrichment services (needed to convert the uranium into nuclear fuel) and 44% of global enrichment capacity (Royal United Services Institute, 2024) . Finally, the highest concentration within this Industry is found in the exports of nuclear reactors, according to the International Trade Centre database, Russia accounts for 56.52% of global exports of nuclear reactors and up to 51.21% of the global exports of “parts of nuclear reactors” (International Trade Centre, n.d.).

### **Energy sources of the energy transition:**

As agreed in the Paris agreement, and as a direct consequence of the otherwise unrelenting global warming, more than 140 countries committed themselves to become carbon neutral by 2050. In the same line, specific targets were determined nationally to reach that goal.

As stated in the agreement, by 2030 the 2010 carbon dioxide emissions should be reduced by 45% in order to be on track of achieving the 2050 target.

For that purpose, some technologies and minerals needed to produce them have been regarded as the cornerstone of that transition. Some of the most representative examples of those technologies are renewable energies and electric vehicles. It is in those industries and their respective supply chains, in which a brief analysis will be carried out to outline the astonishing control China has over them.

Additionally, solar panels, electric vehicles (EV) and wind farms tend to require more of these critical minerals than the fossil fuel alternatives, for instance an EV requires 6 times

more minerals than a conventional car, thus emphasizing even more the relevance of these materials (IEA, 2023a). The summary is divided into 3 sections: Critical minerals and Rare Earths, Solar panels and Wind Turbines and Batteries and Electric Vehicles:

**Critical minerals and Rare earths:** China mines 81.63% of natural graphite and refines 90.91% of world's battery grade supply of graphite as of 2023. It Refines 76.78% of world's cobalt, 64.77% of lithium chemicals and 43.84% of copper (IEA, 2024b) China also takes the lead in Silicon metal and Zinc production with 78.94% and 33.33% respectively of global supply. (US Geological Survey, 2024). Nonetheless, the biggest concentration is found in the refining of rare earths where China is responsible for 92.37% of the global refining ( also totalling 61.18% of its mining) (IEA,2024a)

**Solar panels and Wind Supply Chain:** Solar panel supply chain is also extremely concentrated in China. More precisely, more than 80% of all the stages in the supply chain (from mineral extraction to manufacturing) are concentrated in that country. Consequently, the 10 biggest suppliers of solar panels equipment are chinese (IEA, 2022). Regarding the "wind supply chain", China leads the global market for material refining (steel, aluminum, rare earth materials), and manufacturing of key wind components like gearboxes (80%), converters (82%) generators (73%) and castings (82%) (GWEC, 2024). In short, Chinese producers manufacture between 60 and 80% of all the main elements in the supply chain (IEA, 2023b).

**Batteries and EVs:** China holds 85% of battery cell production capacity, 90% of cathode and 98% of anode material production capacity globally (two necessary intermediate inputs in battery cell production). China also produces two-thirds of the world's EVs (IEA, 2024b)

#### **4. SLOWBALIZATION? BRICS AND G7**

The last section of this thesis will examine the theoretical findings pointing at a change of paradigm regarding globalization, especially after the 2008 Global financial crisis.

Afterwards, the main consequences of such a phenomena are described as well as some calculations estimating the costs of it are cited. Later on, some indexes are included to depict the current state of affairs of trade and investment regulations worldwide and the geopolitical uncertainty dominating the current international context.

Finally, to represent the current and potential impact on BRICS and G7 members of those trends, some of the most relevant and recent restricting regulations affecting trade or financial flows between members of both groups are briefly mentioned and described.

#### 4.1 SLOWBALIZATION CAUSES AND CONSEQUENCES:

Previous financial crises, like the Great depression, ignited calls for deglobalization, protectionism and focus on national economies. Consequently, given the sheer size of the 2008 global financial crisis, a cornucopia of parallelisms have been drawn between both scenarios (James, 2018; PIIE, 2020)

After the aftermath of the Great Recession of 2008, the rate at which globalization was taking place slowed, or even stagnated in some cases. Global trade openness peaked in 2008 and cross-border investments did so in 2007. The current state of globalization is being widely debated, nonetheless data points at a rise in the regionalisation of trade rather than globalization, a slowdown in GVCs expansion and a reduction in the weight of trade in goods over global GDP. However, the expansion of trade in services, provides a call for optimism and points at a plausible change in the nature of globalization, rather than at a slowbalization (Baldwin et al., 2023; European Central Bank, 2023).

As we have seen in section 3, the economic effects of such a crisis impacted specially advanced western economies, therefore paving the way for the rise of populism as a response for the economic stagnation and the widespread mistrust on the benefits of globalization. In that sense, political polarization, social unrest and within-country wealth inequality, set the stage for policies and measures encouraging the local sourcing of supplies to protect their local industries and jobs (Fide Foundation, 2023; Zahoor et al., 2023).

Most recently, a set of events like the increasing threat and number of cyberattacks, the US-China trade war, the Covid-19 pandemic and the war in Ukraine have exacerbated the tension on GVCs and created narratives and cases for arguments in favor of “friendshoring”, “reshoring”, “resilience” and “strategic autonomy” (Javorcik et al., 2023)

Supply chain resilience could be achieved by further supply chain diversification, keeping current ties alive while adding more links globally. However, public debate and political discourse have focused not only on securing access to inputs, but also on the potential for trade being weaponized by non-friendly countries (Javorcik et al., 2023)

As a consequence, the aforementioned concepts of “friendshoring” (trading with countries seen as allies or trustworthy partners) and “near-shoring” (pivoting towards regionalized supply chains, rather than internationalized) have gained traction. Nevertheless, even if these policies are motivated by desires to protect supply chains, they might potentially be counterproductive. Diversified global supply chains are a source of resilience more than vulnerability. Moreover, in the long run, efforts to restrict GVCs are likely to have a detrimental impact on growth and living standards, by limiting technology diffusion and

access to skilled and unskilled labor, reducing efficiency, productivity and raising costs (Aiyar et al., 2023; World Bank,2024).

Those policies have also expanded to global investment flows and their related regulations, with a special trend: “developed countries” are introducing more protectionist regulations than “developing countries” who, generally speaking, are striving to facilitate and promote investment. The most recent data, highlights that 86% of developing countries investment policy measures enacted in 2023 were more favourable to investors, whereas 57% of developed countries investment policy measures implemented in that period, were less favourable to investors (setting different barriers to invest) (UNCTAD, 2024).

Finally, as noted by Goes & Bekkers (Goes & Bekkers, 2022, pg 2 ) the war in Ukraine and the subsequent retaliatory measures imposed by the European Union, the United States, and their allies against Russia suggests that “the international economic order based on openmarkets and expanded globalization could be replaced by a more fragmented international economic system”.

In a similar vein, Youvan (2024) indicates that the risk of similar sanctions being imposed against other “non-Western countries” is a significant source of concern for them. The possibility of G7 countries and their allies taking similar measures against “any country that falls out of favor with Western powers” could lead to a fracturing of the global financial system. Countries with substantial assets in Western financial institutions, like China, Saudi Arabia and other emerging economies, may hasten their initiatives to reduce their exposure to Western financial systems by diverting investments and capital to “neutral countries” and developing their own financial infrastructures (Youvan, 2024).

In fact, recent studios have quantified the potential costs of such phenomena:

The IMF, in its october 2022 Regional economic outlook for Asia and the Pacific (2022a), looks at the effect of a total suspension of trade in high-tech (electrical machinery, electrical equipment and transport equipment) and energy (fossil fuels) sectors among “rival blocs”. Rival blocs are defined as groups of countries depending on their vote on the United Nations General Assembly (UNGA) motion “to condemn Russia’s invasion of Ukraine”. One bloc is composed by those who vote in favour, the other, of those who either abstained or voted negative. Scenario A reflects a total elimination of inter-blocs trade in those industries, resulting in permanent total annual losses of 1.2% of world's GDP. Scenario B adds non-tariff barriers in other sectors in trade between groups, causing the world's GDP to decline up to 1.5% annually.



Bolhuis et al. (2023), develop several scenarios for the effect of current tensions. Most remarkably, under the Geo-economic fragmentation scenario (the most extreme) they found a long run reduction of world's real GDP of 2.3%. This scenario assumes no trade between two blocs of countries, one led by the US and the European Union and the other led by China and Russia (the rest of the countries are assigned to either group depending on the bloc with which they trade the most). When changing the composition of blocs by their historical political ties, (measured in patterns of vote in UNGA) global real output falls 3.2% in the long run.

Goes & Bekkers (2022) focus on technological and knowledge diffusion across countries. They divide countries in two blocs (Western and Eastern) depending on their voting patterns on the UNGA. Two scenarios are developed: "Tariff decouple" and "full decouple". Tariff decouple, increases tariffs between groups by 32% resulting in 1% decrease of Western bloc GDP and 8% of Eastern bloc GDP. Full decouple, assumes a trade cost hike of 160%, resulting in Western's bloc GDP falling by 8% and Eastern's bloc GDP declining up to 12%. The higher fall in the eastern bloc is partially explained by a bigger decrease in productivity as a consequence of swifiting from western technologies to those of their own.

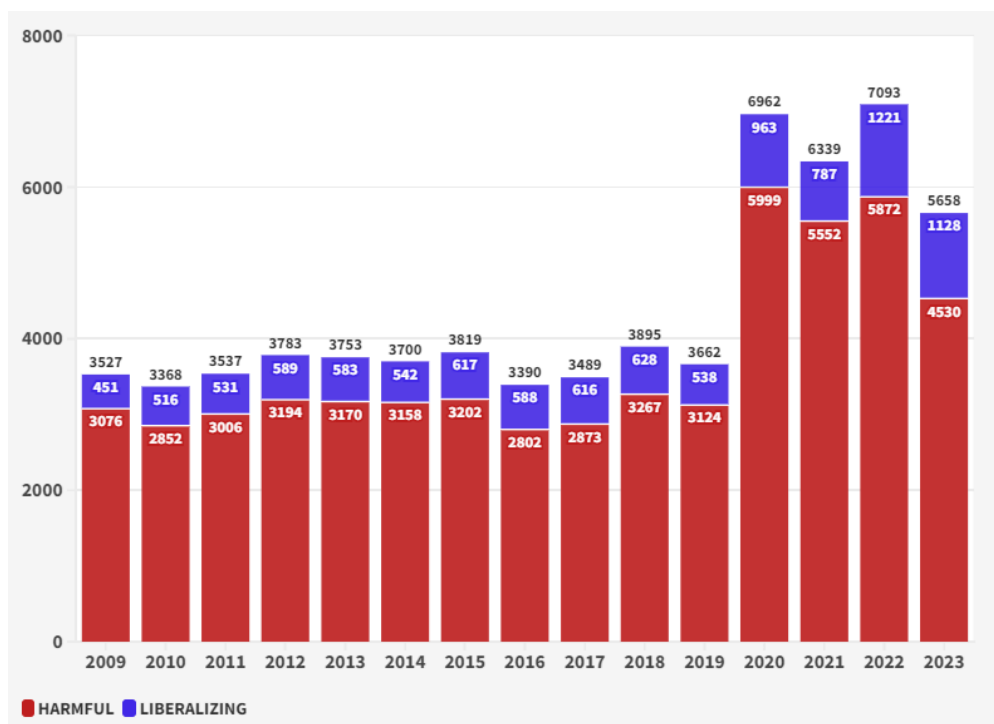
In that regard, some indexes have been developed in order to track the state of affairs of trends in trade and investment regulations, geopolitical risks, and trade policy uncertainty. In order to provide a better insight of the current situation, two of them are mentioned and their respective graphs included in Anex 5, the other one is represented in graph 4.1.

Trade Policy Uncertainty Index (TPU) is a monthly index based on automated text searches of the electronic archives of seven american newspapers, and of quarterly earnings call transcripts of US-listed companies. The more keywords like "risk", "threat" or "uncertainty" appear in the same article or transcript, at the same time as other keywords related to trade policy like "tariff", "import duty", "import barrier", and "anti-dumping", the higher the index would be (Caldara et al., 2019). The index has proven to be positively correlated with major events affecting trade policy like NAFTA negotiations in the 1990s and the trade tensions between the US and two of its main trade partners (Mexico and China) during Donald Trump's presidency, among others. Additionally, higher TPU has been proven to reduce investment and activity (Caldara et al., 2020) Finally, recent events had propelled TPU to 94.7, a 149.04% higher than its average (period 1960-2024) although significantly less than its peak of 266 for June 2019, in the midst of the US-China trade war.

Geopolitical Uncertainty Index (GPR) developed by Dario Caldara and Matteo Iacoviello (2022) is also a monthly index that follows the same methodology of TPU in terms of the newspapers search, although for topic-specific keywords. It measures adverse geopolitical events and their associated risks. GPR has also proven to reflect events accurately, spiking with events like the 9/11, the Iraq war and the war in Ukraine. Additionally, Higher GPR is found to lower investment, stock prices, and employment while been positively associated with “higher probability of economic disasters” (Caldara & Iacoviello, n.d.).

Finally, the recent events made the GPR skyrocket in March 2022 to an 19 year-old high reaching 318.95 (214.37% higher than the average of 101.45 for the period 1985-2024). More recently, as of May 2024, GPR had decreased and reached 123.49 (21.72% higher than the average) As already stated, graphs for GPR and TPU are included in Anex 5.

Graph 4.1: Number of State Interventions worldwide affecting Trade, Investment and Migration Flows per year and impact on flows 2009-2023.



Source: Own elaboration with data from Global Trade Alert as of June 22, 2024 available at : <https://www.globaltradealert.org>

Global trade alert (2024) is a database aimed at tracking State interventions affecting trade in goods and services, foreign investment and labour force migration. As per data in graph 4.1, we can see how “harmful” interventions have represented at least 80% of total interventions in all the time span, how state interventions increased drastically in 2020

(90.11% with respect to 2019) and how even if those trends appear to have come to halt, harmful interventions in 2023 were still 22.04% higher than the average of 3711.

#### **4.2 BRICS AND G7: INCREASING CONFRONTATION**

The last subsection within this Slowbalization section deals with the most recent trade or investment regulations enacted by either G7 or BRICS member countries themselves or any supranational organization they are individually members of (i.e: Italy, France and Germany are part of the EU) that specifically target one or more countries of the other group.

In that regard we should not fail to realize that this may just be part of a bigger phenomena, the aforementioned Slowbalization. Nonetheless, it is worth highlighting the sheer amount of recent laws restricting trade and investment flows between some G7 members and BRICS countries. Generally speaking, those laws could also be framed as part and parcel of the confrontation between the most prominent members of both groups, the US and China, and the European and American response to the war in Ukraine.

Having provided a brief introduction to the matter, the most relevant events are summarized in chronological order:

##### **US-China Trade war (2018-2020):**

Between January 2018 and January 2020, the US and China entered a trade war caused by an assortment of investigations conducted by the US International Trade Commission and the Commerce Department. Those investigations were fuelled by claims of chinese “unfair trade practises” and “trade- distorting policies” ranging from subsidies to state-owned companies, intellectual property rights violations and forced transfer of technology to chinese firms. The escalation process of US tariffs rounds and Chinese retaliatory responses ended with the Phase One Deal, signed in January 2020.

The trade war is estimated to have affected 3.6% of US GDP (2017) and 5.5% of Chinese GDP (2017).(Fajgelbaum & Khandelwal, 2022; Bown & Kolb, 2023)

##### **EU sanctions on Russia (2022-2024)**

Following the start of the war in Ukraine in February 2022, the EU has imposed 13 packages of sanctions on Russia as of June 2024. Those sanctions affect 61% of pre-war imports from Russia and 58% of pre-war exports to Russia (measured in 2021 terms). Import restricting measures target industries considered as “high revenue areas” for the Russian government, being mainly fossil fuels and derivatives, diamonds, wood, steel and processed metals. On the export side, the focus has been placed on restricting the Russian access to technology

and goods that enhance their industrial capabilities and especially their “military-industrial complex”. In that regard, export bans and restrictions have mostly targeted aviation, maritime, energy and space sectors. To put into perspective the scope of those sanctions, imports from Russia have dropped from 164 billion € in 2021 to 51 billion € in 2023 (a 69% percent decrease) whereas exports account for 38 billion € in 2023, 57% less than the 89 billion € exported in 2021 (Publications Office of the European Union, 2024).

### **US trade war with China reignites 2022-2024**

From October 2022 until October 2023, the United States has imposed severe export controls and restricted outbound investment in the semiconductor, quantum information and AI sectors in “foreign countries of concern”, a list of more than 40 countries including China. These set of policies, implemented arguing national security threats, aim at limiting China's access to the most advanced chips and the technologies and machinery to produce them, which is mainly of western origin (Shivakumar et al., 2024). In that regard, in January 2024 the US struck an agreement with the Netherlands and Japan (the only three countries producing the cutting edge machinery to print the most advanced microchips) to introduce export restrictions to China, further straining Chinese access to those technologies which are deemed as vital for most industries (Politico, 2024). Those export restrictions are relevant not only because of its technological repercussions but also because China is the biggest importer of semiconductors even after the initial export bans, importing 350\$ billion in 2023, accounting for almost 32% of global imports (International Trade Centre, 2024b). A similar scenario is found when assessing Chinese imports of the machinery for manufacturing semiconductors, totalling 27.3\$ billion, representing 34.75% of world's imports in 2023 (International Trade Centre, 2024a) . Consequently, China retaliated by imposing export restrictions on gallium and germanium, two critical minerals widely used in the production of semiconductors and extremely important in the production of solar cells, electronic devices, electric vehicles and fiber optics. As with the critical minerals studied in section 2, China is the primary global producer of these minerals, accounting for 60 % of germanium production and 90% of gallium's (Blackwood & DeFilippo, 2024).

In May 2024, the Biden administration announced new tariff hikes on Chinese products. Those new imports restrictions include doubling tariffs on semiconductors from 25% to 50%, quadrupling those imposed on EV from 25% to 100%, doubling those imposed on solar cells from 25% to 50% and significantly increasing those on lithium-ion EV and non EV batteries from 7.5% to 25%, the same fate battery parts imports will suffer. Additionally, some critical minerals (as exposed in section 2) will also be affected, such as natural graphite seeing its tariff rate go from 0 to 25% (The White House, 2024).

As we have seen in section 3 when analyzing BRICS relevance in critical mineral extraction and refinement and China's supremacy in the EV, solar panels and batteries sectors, these tariff hikes affect a significant trade flow.

Additionally, it is worth mentioning that the EU is moving towards increasing its tariffs on electric vehicles from China, after an investigation conducted by the European Commission found that Chinese producers were benefiting from "unfair subsidization" and, therefore "causing a threat of economic injury to EU producers" (European Commission, 2024).

### **G7 sanctions on Russia (2022-2024)**

Lastly, we will address the common efforts of the G7 (and joined by the EU) to sanction Russia following the aforementioned war in Ukraine. Those common efforts could be classified in 2 main categories: Financial related policies and trade related policies:

Financial related policies include the exclusion of Russian Banks from the SWIFT financial messaging system, the immobilization of Russian Central Bank assets held in G7 member financial institutions (totalling 280\$ billion), and the use of the interest generated by those assets to provide up to 50\$ billion financial support for Ukraine (The White House, 2024b)

Trade measures include:

The G7 and EU ban on direct and indirect imports of Russian mined, processed or produced non-industrial diamonds, either rough (natural state) or polished. Russia is the biggest producer and exporter of natural diamonds (US Geological Survey, 2024), and before the latest modifications of these sanctions it was exporting its diamonds to countries like India, which processes 90% of natural diamonds, to bypass the sanctions (Federal Public Service, 2024; The Economist, 2024).

The G7 and EU price cap on Russian oil: on top of the EU imposed import ban on Russian oil (as part of the sanctions already mentioned) G7 members, Australia and the EU agreed on December 2022 on establishing a "price cap on Russian oil and oil products". That price cap was set at 60\$ for oil. This mechanism aimed at taking advantage of the preponderant role of G7 and EU countries on the ownership, transport, flagging and insurance services related to the international oil tanker fleet. Basically, any company from one of this "price cap coalition" is forbidden to provide some or more of the aforementioned services to any vessel transporting Russian oil sold at a higher price than 60\$ per barrel (Reuters, 2024). The outcomes of this policy have been substantial. On one hand, Russian revenue from oil exports dropped by 14% in 2023 compared to 2022 accounting for a reduction of 34\$ billion (CREA, 2023). On the other hand, Russia has carried out a marked diversification not only in terms of customers, but also in terms of the transportation and insurance contracts securing its oil exports. Russian crude oil exports have shifted to China and India. Since the imposition of these sanctions, China has bought 48% of Russian crude oil exports, with India

following suit with 35%. Regarding transportation and insurance, when the sanctions were imposed, 62% of Russian crude oil exports relied on “price cap coalition” members for transportation and insurance services, whilst as of June 2024 that figure has dropped to 21% (CREA, 2024).

## 5. CONCLUSION

Upon thoroughly examining the origin of BRICS, their expansion, the evolution of their relevance on the World Economy, their Institutional initiatives and the international context in which the group came into being, grew, and is now immersed, we can conclude that:

BRICS countries' relevance on the global economy has significantly increased in the last decades, mainly fuelled by the growth of China and India. BRICS countries have surpassed G7 in output as of 2022, but they are still behind in a wide variety of metrics, ranging from their GDP per capita, their weight on world's trade and specially their weight on international investment. Additionally, their huge populations confer them big internal markets and abundant labor supply, although their internal consumption, the productivity of their labor and their economic complexity are still behind those of G7. Moreover, BRICS citizens have benefited more from globalization than those of G7.

In the current international context, economic, political and trade tensions have increased among both groups with a noticeable amount of recent regulations hindering trade and investment flows between them. Were such a trend to be sustained or even worsened, we have evidence that global output will fall, with BRICS suffering more than G7.

Nonetheless, given the high concentration of certain strategic industries in BRICS countries, G7 members might see their supply of key raw materials, intermediate inputs and certain products severed by a potential escalation on the current trade restrictions.

Lastly, BRICS countries keep attracting substantial interest among other developing nations, which may propel their Institutional initiatives that, as the time of writing, do not constitute a substantial or reliable alternative to those currently dominating International financial and trade relations.

## Bibliography:

### Journal Articles and Reports:

AIIB. (2023). "AIIB ANNUAL REPORT 2022". In aiib.org. Retrieved June 18, 2024, from [https://www.aiib.org/en/news-events/annual-report/2022/common/pdf/2022-AIIB-Annual-Report\\_final-proof\\_single-page.pdf](https://www.aiib.org/en/news-events/annual-report/2022/common/pdf/2022-AIIB-Annual-Report_final-proof_single-page.pdf)

AIYAR, S.; CHEN, J., EBEKE, C.; GARCIA-SALTOS, R.; GUDMUNDSSON, T.; ILYNA, A.; KANGUR, A.; KUNARATSKUL, T.; RODRIGUEZ, S., RUTA, M.; SCHULZE, T.; SODERBERG, G. & Trevino, J. P. (2023). "Goeconomic Fragmentation and the Future of Multilateralism". In imf.org (SDN/2023/001). International Monetary Fund Staff Discussion Notes. Retrieved June 21, 2024, from <https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2023/01/11/Geo-Economic-Fragmentation-and-the-Future-of-Multilateralism-527266>

ANTRÁS, P. (2020). "De-Globalisation? Global Value chains in the Post-COVID-19 age". National Bureau of Economic Research.(Working Paper 28115). <https://doi.org/10.3386/w28115>

BALDWIN, R. E. (2012). "Global Supply Chains: Why They Emerged, Why They Matter, and Where They are Going". Social Science Research Network. (Discussion Paper No. DP9103) <https://papers.ssrn.com/sol3/Delivery.cfm/DP9103.pdf?abstractid=2153484&mirid=1>

BALDWIN, R.; FREEMAN, R. & THEODORAKOPOULOS, A.(2023). "Deconstructing Deglobalization: The Future of Trade is in Intermediate Services". Asian Economic Policy Review, 19(1), 18–37. <https://doi.org/10.1111/aepr.12440>

BERTELSMANN STIFTUNG. (2020). "Globalization Report 2020: Who benefits the most from globalization?" In bertelsmann-stiftung.de. Retrieved June 23, 2024, from [https://www.bertelsmann-stiftung.de/fileadmin/files/user\\_upload/GlobalizationReport2020\\_2\\_final\\_en.pdf](https://www.bertelsmann-stiftung.de/fileadmin/files/user_upload/GlobalizationReport2020_2_final_en.pdf)

BHATTACHARYA, M. & BHATTACHARYA, S. N. (2016). "International Trade and Economic Growth: Evidences From The Brics". Journal of Applied Economics and Business Research, 6–150–160(2). <http://www.aebrjournal.org/volume-6-issue-2.html>

BLACKWOOD, M. & DEFILIPPO, C. (2024). "Germanium and Gallium: U.S. Trade and Chinese Export Controls". In usitc.gov. U.S. International Trade Commission. Retrieved June 19, 2024, from [https://www.usitc.gov/publications/332/executive\\_briefings/ebot\\_germanium\\_and\\_gallium.pdf](https://www.usitc.gov/publications/332/executive_briefings/ebot_germanium_and_gallium.pdf)

BOLHUIS, M. A.; CHEN, J. & KETT, B. R. (2023). "Fragmentation in Global Trade: Accounting for Commodities". In imf.org (Working Paper No. 2023/073). International Monetary Fund. Retrieved June 21, 2024, from <https://www.imf.org/en/Publications/WP/Issues/2023/03/24/Fragmentation-in-Global-Trade-Accounting-for-Commodities-531327>

BOWN, C. P. & KOLB, M. (2023). "Trump's Trade War Timeline: An Up-to-Date Guide". In Peterson Institute for International Economics. Peterson Institute for International Economics. Retrieved June 14, 2024, from <https://www.piie.com/sites/default/files/documents/trump-trade-war-timeline.pdf>

BOWN, C. P & IRWIN, D. A. (2015). "The GATT's Starting Point: Tariff levels Circa 1947". In National Bureau of Economic Research. (Working Paper 21782). Retrieved June 11, 2024 from <https://www.nber.org/papers/w21782> . doi 10.3386/w21782

BRICS. (2023). "XV BRICS Summit Johannesburg II Declaration". In gov.za. Retrieved June 14, 2024, from [https://www.gov.za/sites/default/files/speech\\_docs/Jhb%20II%20Declaration%2024%20August%202023.pdf](https://www.gov.za/sites/default/files/speech_docs/Jhb%20II%20Declaration%2024%20August%202023.pdf)

CALDARA, D.; IACOVIELLO, M.; MOLLIGO, P.; PRESTIPINO, A. & RAFFO, A. (2019). "Does Trade Policy Uncertainty Affect Global Economic Activity?," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, September 4, 2019, <https://doi.org/10.17016/2380-7172.2445>

CALDARA, D.; IACOVIELLO, M.; MOLLIGO, P.; PRESTIPINO, A. & RAFFO, A. (2020), "The Economic Effects of Trade Policy Uncertainty," Journal of Monetary Economics, 109, pp.38-59

CALDARA, D. & IACOVIELLO, M. (2022), "Measuring Geopolitical Risk," American Economic Review, April, 112(4), pp.1194-1225. doi:10.1257/aer.20191823

COLLEGIO CARLO ALBERTO. (2017). "Winners and losers of globalisation". In Vision Europe Summit. Retrieved June 18, 2024, from <https://institutdelors.eu/wp-content/uploads/2017/11/ves-publications-2017.pdf>

CONGRESSIONAL RESEARCH SERVICE. (2022). "The International Monetary Fund". In Congressional Research Service (No. IF10676). Retrieved June 6, 2024, from <https://sgp.fas.org/crs/misc/IF10676.pdf>

CONGRESSIONAL RESEARCH SERVICE. (2023). "Asian Infrastructure Investment Bank". In crsreports.congress.gov (No. IF10154). Retrieved June 18, 2024, from <https://crsreports.congress.gov/product/pdf/IF/IF10154>

CONGRESSIONAL RESEARCH SERVICE.(2024). "The World Bank". In crsreports.congress.gov (No. IF11361). Retrieved June 18, 2024, from <https://crsreports.congress.gov/product/pdf/IF/IF1136>

CREA. (2023). "One year of sanctions: Russia's oil export revenues cut by EUR 34 bn". In energyandcleanair.com. Centre for Research on Energy and Clean Air. Retrieved June 19, 2024, from [https://energyandcleanair.org/wp/wp-content/uploads/2023/12/CREA\\_One-year-of-sanctions\\_5.12.2023.pdf](https://energyandcleanair.org/wp/wp-content/uploads/2023/12/CREA_One-year-of-sanctions_5.12.2023.pdf)

ENERGY INSTITUTE. (2023). "2023 Statistical Review of World Energy". Retrieved June 16, 2024, from <https://www.energyinst.org/statistical-review>

EUROPEAN PARLIAMENT. (2019). "The International Monetary Fund: 15th General Review of Quotas". In europarl.europa.eu. (PE 631.059) Retrieved June 14, 2024, from [https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/631059/IPOL\\_BRI\(2019\)631059\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/631059/IPOL_BRI(2019)631059_EN.pdf)

EUROPEAN PARLIAMENTARY RESEARCH SERVICE. (2014). "The BRICS Bank and Reserve Arrangement: towards a new global financial framework?" In europarl.europa.eu.(PE 542.178) Retrieved June 19, 2024, from



[https://www.europarl.europa.eu/RegData/etudes/ATAG/2014/542178/EPRS\\_ATA\(2014\)542178\\_REV1\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/ATAG/2014/542178/EPRS_ATA(2014)542178_REV1_EN.pdf)

FAJGELBAUM, P. D. & KHANDELWAL, A. K. (2022). “The economic impacts of the US–China trade war”. *Annual Review of Economics*, 14(1), 205–228.  
<https://doi.org/10.1146/annurev-economics-051420-110410>

FIDE FOUNDATION. (2023). “Populism, inequality and economic growth”. In thinkfide.com. Retrieved June 20, 2024, from  
<https://thinkfide.com/wp-content/uploads/2023/04/POPULISM-INEQUALITY-AND-ECONOMIC-GROWTH-paper-fide-foundation-Vfinal.pdf>

GOES, C. & BEKKERS, E. (2022). “The Impact of Geopolitical Conflicts on Trade, Growth, and Innovation”. In wto.org (Staff Working Paper ERSD-2022-09). World Trade Organization Economic Research and Statistics Division. Retrieved June 21, 2024, from  
[https://www.wto.org/english/res\\_e/reser\\_e/ersd202209\\_e.pdf](https://www.wto.org/english/res_e/reser_e/ersd202209_e.pdf)

GWEC. (2024). “GLOBAL WIND REPORT 2024”. In gwec.net (Global Wind Energy Council). Retrieved June 19, 2024, from  
[https://gwec.net/wp-content/uploads/2024/04/GWR-2024\\_digital-version\\_final.pdf](https://gwec.net/wp-content/uploads/2024/04/GWR-2024_digital-version_final.pdf)

IEA. (2022). “Special Report on Solar PV Global Supply Chains”. In International Energy Agency. Retrieved June 17, 2024, from  
<https://www.iea.org/reports/solar-pv-global-supply-chains/executive-summary>

IEA. (2023c). “Electricity Market Report 2023”. International Energy Agency. Retrieved June 16, 2024, from <https://www.iea.org/reports/electricity-market-report-2023>

IEA. (2024b). “Oil 2024 Analysis and forecast to 2030”. International Energy Agency. Retrieved June 16, 2024, from <https://www.iea.org/reports/oil-2024>

IMF. (2008). “Reform of quota and voice in the International Monetary Fund-Draft report of the Executive Board to the Board of Governors”. In elibrary.imf.org.  
<https://doi.org/10.5089/9781498334792.007>

IMF. (2022a). “Regional Economic Outlook: Asia and the Pacific October 2022: Sailing into headwinds”. In imf.org. International Monetary Fund. Retrieved June 21, 2024, from  
<https://www.imf.org/en/Publications/REO/APAC/Issues/2022/10/13/regional-economic-outlook-for-asia-and-pacific-october-2022>

JAMES, H. (2018). “Deglobalization: the rise of disembodied unilateralism”. *Annual Review of Financial Economics*, 10(1), 219–237.  
<https://doi.org/10.1146/annurev-financial-110217-022625>

JAVORCIK SMARZYNSKA, B.; KITZMUELLER, L.; SCHWEIGER, H. & YILDRIM, A. (2023). “Economic costs of Friend-Shoring”. Social Science Research Network.(EBRD Working Paper No. 274). <https://doi.org/10.2139/ssrn.4327056>

LANE, P. R. & MILESI-FERRETTI, G. M. (2018). “The external wealth of nations revisited: International financial integration in the aftermath of the global financial crisis”. *IMF Economic Review*, 66(1), 189–222. <https://doi.org/10.1057/s41308-017-0048-y>

MOSS, T.; STAATS, S.J. & BARMEIR, J. (2011). “The ABCs of the General Capital Increase”. In Center for Global Development. Center for Global Development.  
[https://www.cgdev.org/sites/default/files/1425485\\_file\\_IFI\\_Briefs\\_GCI\\_FINAL\\_0.pdf](https://www.cgdev.org/sites/default/files/1425485_file_IFI_Briefs_GCI_FINAL_0.pdf)

NELSON, R. M. (2024). "The World Bank". In Congressional Research Service (No. IF11361). Congressional Research Service.  
<https://crsreports.congress.gov/product/pdf/IF/IF11361>

NELSON, S. C. (2014): "Playing favorites: How shared beliefs shape the IMF's lending decisions". International Organization, 68(2), 297–328.  
<https://doi.org/10.1017/s0020818313000477>

NEW DEVELOPMENT BANK. (2023). "New Development Bank Annual Report 2022". In ndb.int. Retrieved June 18, 2024, from <https://www.ndb.int/annual-report-2022/>

O'NEILL, J. (2001). "Building Better global Economic BRIC's". Goldman Sachs. (Global Economics Paper No: 66). Retrieved June 6, 2024, from  
<https://www.goldmansachs.com/intelligence/archive/archive-pdfs/build-better-brics.pdf>

O'NEILL, J.. (2001). "The foreign exchange market". In Goldman Sachs. Goldman Sachs Economic Research Group. Retrieved June 11, 2024, from  
<https://www.gspublishing.com/content/research/en/reports/2001/09/06/4b4d3c72-7071-11da-8e03-a672def47012.pdf>

PUBLICATIONS OFFICE OF THE EUROPEAN UNION. (2024). "EU sanctions putting a price on Russia's war of aggression". In ec.europa.eu. European Union. Retrieved June 15, 2024, from [https://ec.europa.eu/commission/presscorner/detail/en/fs\\_24\\_1021](https://ec.europa.eu/commission/presscorner/detail/en/fs_24_1021)

RAGUTHLA, C. & CHITTEDI REDDY, K. (2020): "Is there an export- or import-led growth in emerging countries? A case of BRICS countries". Journal of Public Affairs. 2020;e2074. Retrieved June 18, 2024, from  
[https://www.researchgate.net/publication/338794002\\_Is\\_there\\_an\\_export-\\_or\\_import-led\\_growth\\_in\\_emerging\\_countries\\_A\\_case\\_of\\_BRICS\\_countries](https://www.researchgate.net/publication/338794002_Is_there_an_export-_or_import-led_growth_in_emerging_countries_A_case_of_BRICS_countries)  
<https://doi.org/10.1002/pa.2074>

RANI, R. & KUMAR, N. (2019): "On the Causal Dynamics Between Economic Growth, Trade Openness and Gross Capital Formation: Evidence from BRICS Countries". Global Business Review, 20(3). 795–812. <https://doi.org/10.1177/0972150919837079>

RODRIK, D. (2017): "Populism and the economics of globalization". National Bureau of Economic Research. (Working Paper 23559). Retrieved June 18, 2024, from  
[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2992819](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2992819)  
<https://doi.org/10.2139/ssrn.2992819>

ROYAL UNITED SERVICES INSTITUTE. (2024): "Power Plays Developments in Russian Enriched Uranium Trade". In rusi.org. Retrieved June 21, 2024, from  
<https://static.rusi.org/SR-power-plays-web-final.pdf>

SHIVAKUMAR, S.; WESSNER, C. & HOWELL, T. (2024): "Balancing the Ledger Export Controls on U.S. Chip Technology to China". In csis.org. Center for Strategic and International Studies. Retrieved June 19, 2024, from  
[https://csis-website-prod.s3.amazonaws.com/s3fs-public/2024-02/240221\\_Shivakumar\\_Balancing\\_Ledger.pdf?VersionId=5juRJmop6MEsOnR.skVAafg5RGRDsVJz](https://csis-website-prod.s3.amazonaws.com/s3fs-public/2024-02/240221_Shivakumar_Balancing_Ledger.pdf?VersionId=5juRJmop6MEsOnR.skVAafg5RGRDsVJz)

STONE, R. W. (2008): "The scope of IMF conditionality". International Organization, 62(4), 589–620. <https://doi.org/10.1017/s0020818308080211>

STULZ, R.M. (2005): "The Limits of Financial Globalization". *The Journal of Finance*, 60: 1595-1638. <https://doi.org/10.1111/j.1540-6261.2005.00775.x>

THACKER, S.C. (1999). "The High Politics of IMF Lending". *World Politics* 52(1), 38-75. <https://doi.org/10.1017/s0043887100020025>.

THE WORLD BANK GROUP. (2023). "Annual Report 2022 World Bank Lending". In [wordlbank.org](http://wordlbank.org). World Bank Group. Retrieved June 18, 2024, from <https://thedocs.worldbank.org/en/doc/cd9fa1e2938c3eb6483e9e2fc0aed728-0090012022/original/WBAR22-App-FY22-Lending-Presentation.pdf>

THE WORLD BANK GROUP. (2024). "Annual Report 2023 World Bank Lending". In [worldbank.org](http://worldbank.org). The World Bank Group. Retrieved June 18, 2024, from <https://thedocs.worldbank.org/en/doc/a60d0e2b975a3b94bc5cfbaa8e1cb269-0090012023/related/WBAR23-App-FY23-Lending-Presentation.pdf>

UNCTAD. (2024). "WORLD INVESTMENT REPORT 2024". In [unctad.org](http://unctad.org) (ISBN 978-92-1-358973-1). United Nations Conference on Trade and Development. Retrieved June 21, 2024, from [https://unctad.org/system/files/official-document/wir2024\\_en.pdf](https://unctad.org/system/files/official-document/wir2024_en.pdf)

US GEOLOGICAL SURVEY. (2024). "Mineral commodity summaries 2024". <https://doi.org/10.3133/mcs2024>

WORLD BANK. 2023. "World Bank Annual Report 2023". Washington, DC: World Bank. doi:10.1596/AR2023EN

YOUVAN, D. C. (2024). "The Geopolitical Shift: How G7 Asset Seizures Drive Nations Towards BRICS". In [researchgate.net](http://researchgate.net). <https://doi.org/10.13140/RG.2.2.23872.75525>

ZAHOR, N.; WU, J.; KHAN, H. & KHAN, Z. (2023). "De globalization, International Trade Protectionism, and the Reconfigurations of Global Value Chains". In *Management International Review: Vol. Volume 63* (pp. 823–859). *Journal of International Business*. <https://doi.org/10.1007/s11575-023-00522-4>

ZHU, J. (2019). "Borrowing Country-Oriented or donor Country Oriented? Comparing the BRICS New Development Bank and the Asian Infrastructure Investment Bank". *Vestnik Meždunarodnyh Organizacij: Obrazovanie, Nauka, Novaâ Ėkonomika*, 14(2), 128–146. <https://doi.org/10.17323/1996-7845-2019-02-06>

#### **Book chapters:**

DUGGAN, N. (2015): "BRICS and the evolution of a new agenda within global governance". In REWIZORSKI, M.(eds) *The European Union and the BRICS*. Kolobrzeg: Springer International Publishing Switzerland

#### **Websites:**

ADB. (2023). "ADB Operations Reach \$20.5 Billion in 2022, Addressing Crises, Building Resilience". Available at <https://www.adb.org/news/adb-operations-2022-addressing-crises-building-resilience> [Retrieved June 18, 2024]

ADB. (2024a). “ADB Operations Reach \$23.6 Billion in 2023, Achieve Record Climate Finance”. Available at <https://www.adb.org/news/adb-operations-reach-23-6-billion-2023-achieve-record-climate-finance> [Retrieved June 18, 2024]

AIIB. (2024a). “MEMBERS AND PROSPECTIVE MEMBERS OF THE BANK”. Available at <https://www.aiib.org/en/about-aiib/governance/members-of-bank/index.html>. [Retrieved June 18, 2024]

AIIB. (2024b). “Our Projects”. Available at [https://www.aiib.org/en/projects/list/year/2023/member/All/sector/All/financing\\_type/All/status/All](https://www.aiib.org/en/projects/list/year/2023/member/All/sector/All/financing_type/All/status/All) [Retrieved June 18, 2024]

AIIB. (2024c). “Our Work”. Available at <https://www.aiib.org/en/about-aiib/who-we-are/our-work/index.html#:~:text=AIIB%20offers%20sovereign%20and%20non.and%20urban%20development%20and%20logistics> [Retrieved June 18, 2024]

AIIB. (2024d). “Projects”. Available at <https://www.aiib.org/en/projects/summary/index.html> [Retrieved June 18, 2024]

CALDARA, D. & IACOVIELLO, M. (n.d.). “Geopolitical Risk (GPR) Index”. Available at <https://www.matteoiacoviello.com/gpr.htm> [Retrieved June 23, 2024]

CALLEM, T. (n.d.). “PURCHASING POWER PARITY: WEIGHTS MATTER”. Available at <https://www.imf.org/en/Publications/fandd/issues/Series/Back-to-Basics/Purchasing-Power-Parity-PPP> [Retrieved June 23, 2024]

CREA. (2024). “Tracking the impacts of G7 & EU’s sanctions on Russian oil”. Available at <https://energyandcleanair.org/russia-sanction-tracker/> [Retrieved June 19, 2024]

EUROPEAN COMMISSION. (2024, June 12). “Commission investigation provisionally concludes that electric vehicle value chains in China benefit from unfair subsidies”. Available at [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_24\\_3231](https://ec.europa.eu/commission/presscorner/detail/en/ip_24_3231) [Retrieved June 15, 2024]

FEDERAL PUBLIC SERVICE. (2024, March). “New step in the implementation of G7 restrictive measures against Russian diamonds”. Available at <https://diplomatie.belgium.be/en/news/sanctions-new-step-implementation-g7-restrictive-measures-against-russian-diamonds> [Retrieved June 19, 2024]

GHIZONI KOLLEN, S. (2013). “Creation of the Bretton Woods system”. Available at <https://www.federalreservehistory.org/essays/bretton-woods-created> [Retrieved June 11, 2024]

GLOBAL TRADE ALERT. (2024). “Global Trade Alert”. Available at <https://www.globaltradealert.org/> [Retrieved June 23, 2024]

HARVARD KENNEDY SCHOOL. (2024). “Glossary Atlas of Economic Complexity”. Available at <https://atlas.cid.harvard.edu/glossary> [Retrieved June 22, 2024]

IEA. (2023a). “Critical minerals”. Available at <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions/executive-summary> [Retrieved June 17, 2024]

- IEA. (2023b). “Renewables, wind”. Available at <https://www.iea.org/energy-system/renewables/wind> [Retrieved June 17, 2024]
- IEA. (2024a). “Critical Minerals Data Explorer”. Available at <https://www.iea.org/data-and-statistics/data-tools/critical-minerals-data-explorer> [Retrieved June 17, 2024]
- IMF. (2022, December 5). “Lending”. Available at <https://www.imf.org/en/About/Factsheets/IMF-Lending> [Retrieved June 14, 2024]
- IMF. (2023a). “Financial Development Index Database”. Available at <https://data.imf.org/?sk=f8032e80-b36c-43b1-ac26-493c5b1cd33b> [Retrieved June 22, 2024]
- IMF. (2023b, March 7). “Conditionality”. Available at <https://www.imf.org/en/About/Factsheets/Sheets/2023/IMF-Conditionality> [Retrieved June 14, 2024]
- IMF. (2023c, December). “IMF quotas”. Available at <https://www.imf.org/en/About/Factsheets/Sheets/2022/IMF-Quotas> [Retrieved June 14, 2024]
- IMF. (2024a, April 25). “What’s the IMF?” Available at <https://www.imf.org/en/About/Factsheets/IMF-at-a-Glance> [Retrieved June 14, 2024]
- IMF. (2024b, April 29). “Special drawing rights”. Available at <https://www.imf.org/en/Topics/special-drawing-right> [Retrieved June 14, 2024]
- INTERNATIONAL TELECOMMUNICATION UNION. (2024). “Individuals using the Internet”. Available at <https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx> [Retrieved June 16, 2024]
- INTERNATIONAL TRADE CENTRE. (2024a). “ITC Trade map”. Available at [https://www.trademap.org/Country\\_SelProduct\\_TS.aspx?nvpm=1%7c%7c%7c%7c%7c848620%7c%7c%7c6%7c1%7c1%7c1%7c2%7c1%7c2%7c1%7c1%7c1](https://www.trademap.org/Country_SelProduct_TS.aspx?nvpm=1%7c%7c%7c%7c%7c848620%7c%7c%7c6%7c1%7c1%7c1%7c2%7c1%7c2%7c1%7c1%7c1) [Retrieved June 19, 2024]
- INTERNATIONAL TRADE CENTRE. (2024b). “ITC trade map”. Available at [https://www.trademap.org/Country\\_SelProduct\\_TS.aspx?nvpm=1%7c%7c%7c%7c%7c8542%7c%7c%7c4%7c1%7c1%7c1%7c2%7c1%7c2%7c1%7c1%7c1](https://www.trademap.org/Country_SelProduct_TS.aspx?nvpm=1%7c%7c%7c%7c%7c8542%7c%7c%7c4%7c1%7c1%7c1%7c2%7c1%7c2%7c1%7c1%7c1) [Retrieved June 19, 2024]
- INTERNATIONAL TRADE CENTRE. (n.d.). “International Trade Centre Trade Map”. Available at [https://www.trademap.org/Product\\_SelCountry\\_TS.aspx?nvpm=1%7c643%7c%7c%7c%7c840110%7c%7c%7c6%7c1%7c1%7c2%7c2%7c1%7c1%7c1%7c1](https://www.trademap.org/Product_SelCountry_TS.aspx?nvpm=1%7c643%7c%7c%7c%7c840110%7c%7c%7c6%7c1%7c1%7c2%7c2%7c1%7c1%7c1%7c1) [Retrieved June 16, 2024]
- PIIE (2020, April 23). “The pandemic adds momentum to the deglobalization trend”. Available at <https://www.piie.com/blogs/realtime-economics/pandemic-adds-momentum-deglobalization-trend> [Retrieved June 22, 2024]
- KREMLIN. (2009, January 16). “Joint Statement of the BRIC Countries’ Leaders”. Available at <http://en.kremlin.ru/supplement/209> [Retrieved June 14, 2024]

MINISTRY OF EXTERNAL AFFAIRS. (2013, March 27). "5th BRICS Summit". Available at <https://www.mea.gov.in/bilateral-documents.htm?dtl/21482> [Retrieved June 14, 2024]

MINISTRY OF EXTERNAL AFFAIRS. (2019, November 14). "Brasilia Declaration during 11th BRICS Summit". Available at <https://www.mea.gov.in/bilateral-documents.htm?dtl/32042/Brasilia+Declaration+during+11th+BRICS+Summit> [Retrieved June 14, 2024]

NEW DEVELOPMENT BANK. (2024a). "Capital structure & subscription". Available at <https://www.ndb.int/about-ndb/shareholding/> [Retrieved June 18, 2024]

NEW DEVELOPMENT BANK. (2024b). "Focus areas". Available at <https://www.ndb.int/about-ndb/focus-areas/> [Retrieved June 18, 2024]

NEW DEVELOPMENT BANK. (2024c). "Members". Available at <https://www.ndb.int/about-ndb/members/> [Retrieved June 18, 2024]

OECD. (2024). "Global value chains and trade". Available at <https://www.oecd.org/trade/topics/global-value-chains-and-trade/> [Retrieved June 17, 2024]

OFFICIAL WEBSITE OF RUSSIA'S PRESIDENCY IN BRICS. (2015). Available at [http://en.brics2015.ru/russia\\_and\\_brics/20150301/19523.htm](http://en.brics2015.ru/russia_and_brics/20150301/19523.htm) [Retrieved June 15, 2024]

OUR WORLD IN DATA. (2024). "Moore's law: The number of transistors per microprocessor". Available at <https://ourworldindata.org/grapher/transistors-per-microprocessor> [Retrieved June 21, 2024]

POLITICO. (2024, March 8). "The Netherlands to block export of advanced chips printers to China". Available at <https://www.politico.eu/article/netherlands-impose-restrictions-chips-export-to-china-asml/> [Retrieved June 19, 2024]

REUTERS. (2023, July 20). "More than 40 nations interested in joining BRICS, South Africa says". Available at <https://www.reuters.com/world/more-than-40-nations-interested-joining-brics-south-africa-2023-07-20/> [Retrieved July 11, 2024]

REUTERS. (2024, January). "Enforcement of G7 price cap hitting Russian oil- US treasury official". Available at <https://www.reuters.com/markets/commodities/enforcement-g7-price-cap-hitting-russian-oil-prices-us-treasury-official-2024-01-11/> [Retrieved June 19, 2024]

THE ECONOMIST. (2024). "How sanctions on Russia will change the diamond trade". Available at <https://www.economist.com/the-economist-explains/2024/01/04/how-sanctions-on-russia-will-change-the-diamond-trade> [Retrieved June 19, 2024]

THE WHITE HOUSE. (2024, May 14). "FACT SHEET: President Biden takes action to protect American workers and businesses from China's unfair trade practices". Available at <https://www.whitehouse.gov/briefing-room/statements-releases/2024/05/14/fact-sheet-president-biden-takes-action-to-protect-american-workers-and-businesses-from-chinas-unfair-trade-practices/> [Retrieved June 15, 2024]

THE WHITE HOUSE. (2024b, June 13). "Remarks by President Biden and President Volodymyr Zelenskyy of Ukraine in joint press conference". Available at

<https://www.whitehouse.gov/briefing-room/speeches-remarks/2024/06/13/remarks-by-president-biden-and-president-volodymyr-zelenskyy-of-ukraine-in-joint-press-conference-fasano-italy/#:~:text=I'm%20very%20pleased%20to,together%20against%20this%20illegal%20aggression> [Retrieved June 15, 2024]

THE WORLD BANK. (2024). "World Development Indicators". Available at <https://databank.worldbank.org/source/world-development-indicators#> [Retrieved June 22, 2024]

UNDP. (n.d.). "EXPLORE AND DOWNLOAD HUMAN DEVELOPMENT DATA". Available at <https://hdr.undp.org/data-center/documentation-and-downloads> [Retrieved June 22, 2024]

UNIVERSITY OF TORONTO. (2014). "Treaty for the establishment of a BRICS Contingent Reserve Arrangement". Available at <http://www.brics.utoronto.ca/docs/140715-treaty.html> [Retrieved June 19, 2024]

WITS. (2022). "Country Profile by Region". Available at <https://wits.worldbank.org/CountryProfile/en/Country/BY-REGION/StartYear/1988/EndYear/2021/TradeFlow/Import/Indicator/AHS-WGHTD-AVRG/Partner/WLD/Product/Total> [Retrieved June 18, 2024]

WORLD BANK. (2012, July 16). "Getting to know the World Bank". Available at [https://www.worldbank.org/en/news/feature/2012/07/26/getting\\_to\\_know\\_theworldbank](https://www.worldbank.org/en/news/feature/2012/07/26/getting_to_know_theworldbank) [Retrieved June 14, 2024 ]

WORLD BANK. (2021, March 25). "Board Facts". Available at <https://www.worldbank.org/en/about/leadership/directors/board-facts> [Retrieved June 14, 2024]

WORLD BANK. (2024, February 22). "Global trade has nearly flatlined. Populism is taking a toll on growth". Available at <https://blogs.worldbank.org/en/voices/global-trade-has-nearly-flatlined-populism-taking-toll-growth> [Retrieved June 20, 2024]

WORLD BANK. (n.d.). "Voting Powers". Available at <https://www.worldbank.org/en/about/leadership/votingpowers> [Retrieved June 14, 2024]

WORLD MIGRATION REPORT (2024). "World Migration Report 2024". Available at <https://worldmigrationreport.iom.int/msite/wmr-2024-interactive/> [Retrieved June 11, 2024]

WTO. (2023). "Evolution of trade under the WTO: handy statistics". Available at [https://www.wto.org/english/res\\_e/statis\\_e/trade\\_evolution\\_e/evolution\\_trade\\_wto\\_e.htm](https://www.wto.org/english/res_e/statis_e/trade_evolution_e/evolution_trade_wto_e.htm) [Retrieved June 18, 2024]

WTO. (2024). "Regional Trade Agreements Database". Available at <http://en.kremlin.ru/supplement/209> [Retrieved June 18, 2024]

### Anex 1:

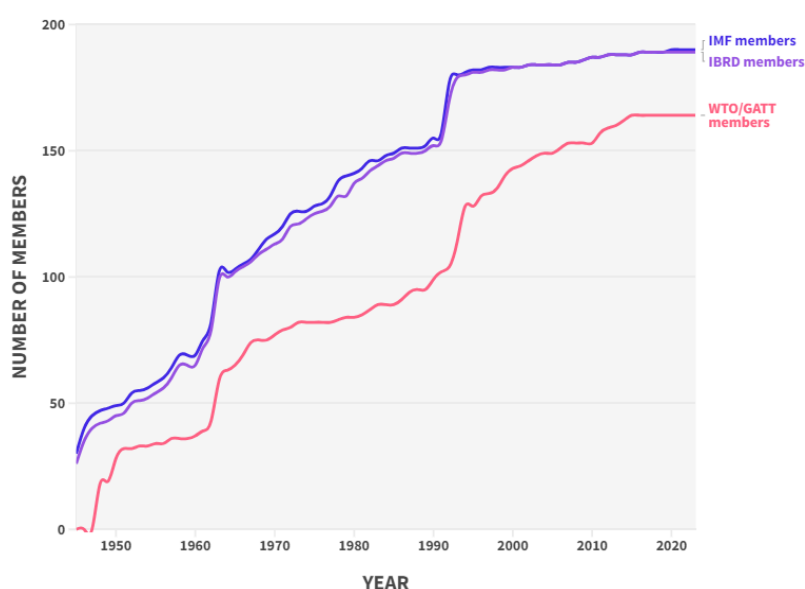
BRICS and G7 member countries relative weight on world's GDP ( at market prices or nominal and at PPP); BRICS and G7 member countries voting power over total (IMF and IBRD)

Country	IMF	IBRD	GDP PPP	GDP (nominal)
US	16.50%	15.49%	14.84%	25.22%
Japan	6.14%	7.08%	3.51%	4.22%
Germany	5.31%	4.21%	3.28%	4.05%
France	4.03%	3.86%	2.33%	2.75%
UK	4.03%	3.86%	2.31%	3.06%
Italy	3.02%	2.58%	1.91%	2.03%
Canada	2.22%	2.51%	1.38%	2.14%
China	6.08%	5.91%	18.53%	17.81%
India	2.63%	3.03%	7.58%	3.39%
Russia	2.59%	2.82%	3.49%	2.22%
Brazil	2.22%	1.92%	2.40%	1.90%
South Africa	0.63%	0.76%	0.54%	0.40%

Source: Own elaboration with data from WDI, World Bank and IMF, available at: <https://databank.worldbank.org>; <https://www.imf.org/en> and <https://thedocs.worldbank.org/en>

### Anex 2:

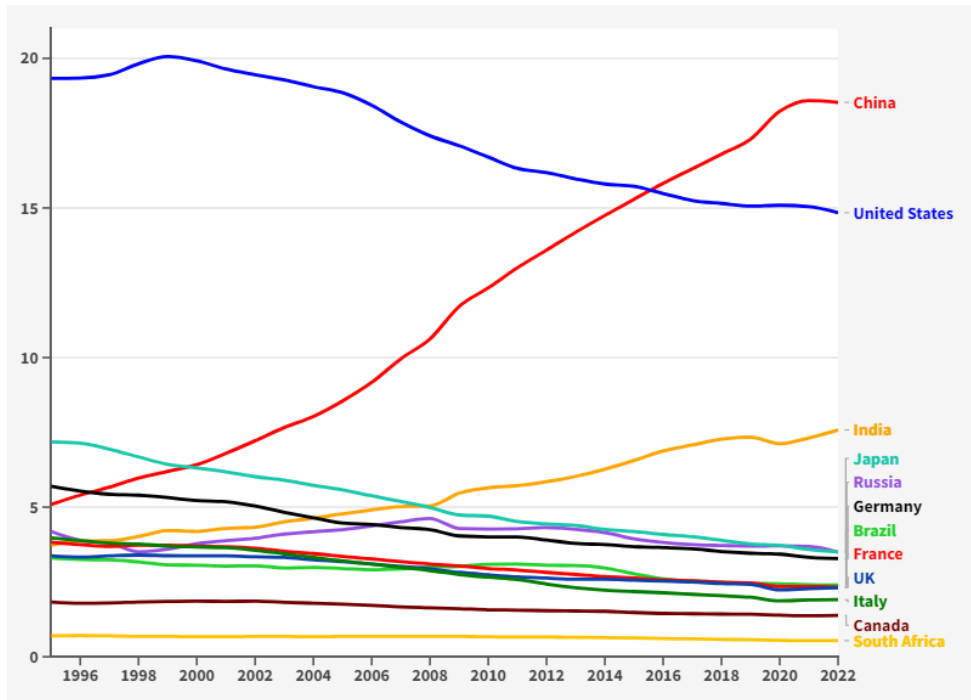
Evolution of membership of International Institutions 1945-2023



Sources: Own elaboration with data from WTO for GATT and WTO, IMF for IMF and the World Bank for IBRD. Available at: <https://www.wto.org/gattmem>; <https://www.wto.org/wtomem>; <https://www.imf.org/memdate> and <https://www.worldbank.org/members>

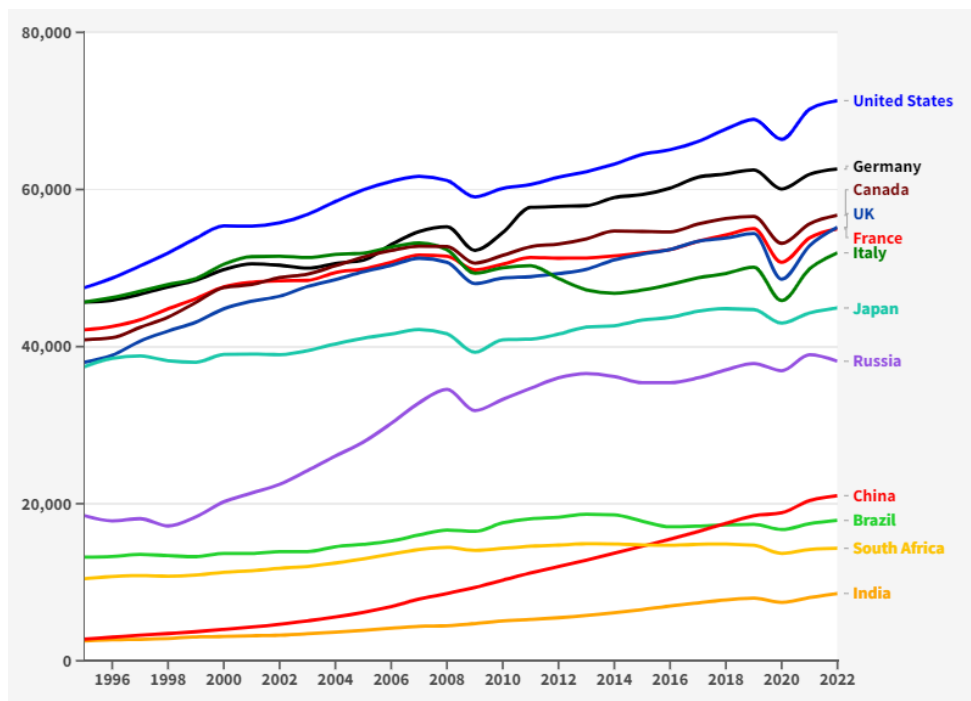


Anex 3: GDP PPP of BRICS and G7 members as percentage of World's 1995-2022.



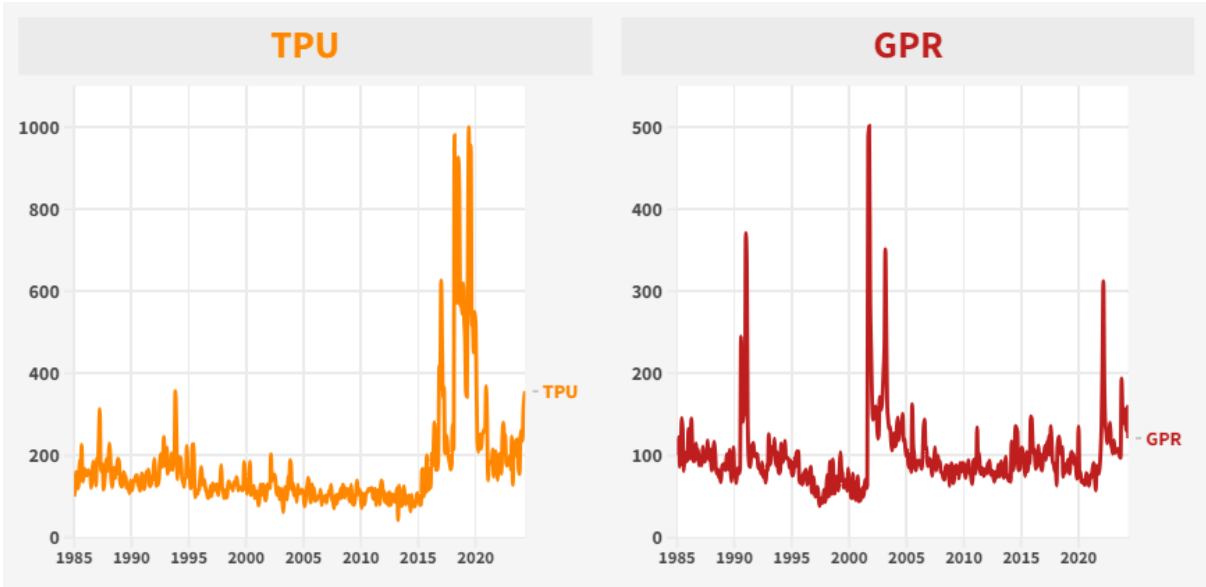
Source: Own elaboration with data from WDI database, available at: <https://databank.worldbank.org>

Anex 4: GDP PPP per capita of BRICS and G7 members 1995-2022.



Source: Own elaboration with data from WDI database, available at: <https://databank.worldbank.org>

Anex 5: TPU and GPR Indexes 1985-2024. 1985=100.



Source: Own Elaboration with data from: Geopolitical Risk Index and Trade Policy Uncertainty Index (as of June 22, 2024) available at :<https://www.matteoiacoviello.com> and <https://www.policyuncertainty.com>