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Shaping the Course of Humanity

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Editors

Opening the 14th summit of the BRICS, the Chinese president, Xi Jinping, said the BRICS had demonstrated resilience and vitality, that they together faced many shared challenges and opportunities. They practically coordinated their efforts, enhanced cooperation and used solidarity to confront shared difficulties. Held under the 2022 theme -Fostering High-quality Partnership and Embarking on a New Journey of BRICS Cooperation- the BRICS theme hoped to "shape the course of humanity", Jinping reminded his peers.

This suggested that the BRICS platform was not about the narrow interests of the five states, but a broader common good including the interests of the developing world and emerging countries. Therefore, the platform measured its utility in relation to what it did in response to geopolitical, geo-economic and geo-social exigences of the world.

The Covid-19 pandemic, the Ukraine war, conflict in the middle east, climate change and natural disasters, global poverty and inequality, weakening multilateralism, industrialisation, digitalization, trade and investment and other developments that affect global development pre-occupied BRICS' attention. The implication of this is to position the BRICS as a force for the global common good, if it did what it planned.

This edition is the second of the first volume of the *Journal of BRICS Studies* dedicated to promoting the study of the BRICS, emerging powers, and developing countries and their agency. In this edition, we begin with an article problemmatising the challenge of child labour in Brazil amid Covid-19, followed by a discussion on vaccine diplomacy, both of which demonstrate how domestic issues in BRICS are actually global issues in need of concerted international solutions. The article on the ideological underpinnings of South Africa's response to Covid closely correlates with the article further below on how South Africa and Africa's use of lockdown presented many political and practical challenges. The paper on how the Covid stimulated new research forays is positive, just as does the article on women's economic empowerment during the pandemic. The impact of Brexit on Africa, which is an active member of the BRICS outreach, has lessons in building interdependence according to one article. We end with an article that makes the case for strengthening intra-BRICS bilaterals as the basis for strengthening the BRICS agency.

The work on this edition would have been arduous without the cooperation of the editors including Profs Norman Sempijja and Thuli Mphambukeli (who moved from the University of Free State to the

University of Johannesburg while working on this edition); associate editors in Drs Tinuade Ojo, Rich Mashimbye, Hlengiwe Phetha, Moorosi Leshoele and Odilile Ayodele. Ms. Kamogelo Segone was a dependable editorial assistant. We appreciate the sterling work of peer reviewers. The errors that remain are solely ours as editors.

Siphamandla Zondi December 2022
Editor-in-Chief

Prof Norman Sempijja, Mohammed VI Polytechnic University. Morocco
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The role of foreign direct investment by multinational corporations in Africa: An exploratory discussion

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Abstract

Foreign direct investment in conflict-affected areas is a subject of debate within the realms of economic development and international human rights research. There exists a cohort of analysts that exhibit enthusiasm towards FDI in areas affected by security crisis, asserting that it serves as a catalyst for economic development and contributes positively to peace-building endeavours. Conversely, immense corpus of scholarships posits that FDI in regions affected by war has the potential to intensify instability and negatively impact economic growth.

The aim of this article is to investigate if foreign direct investment by multinational corporations and security dynamics in Africa have correlation. To this end, two multinational firms with Swedish and Chinese roots were examined, along with their respective investments in South Sudan and Democratic Republic of the Congo. By using exploratory research method, the analysis highlights that these companies have been the subject of allegations from local communities, international human rights organizations, and academic circles regarding their extractive operations, involvement in human rights violations, and establishment of informal relationships with local authorities.

The article suggests that to circumvent the "resource curse," greater emphasis should be placed on the macro-level establishment of democratic maturation and political stability by non-state and state actors. Furthermore, it contends that in addressing challenges such as resource exploitation, human rights violations, and the promotion of corporate engagement in Africa's economic progress, a comprehensive approach is more effective and functional than a fragmented emphasis on smaller-scale policy initiatives (micro).

Introduction

Foreign direct investment in fragile and conflict-affected states is one of the most complex and contentious issues in the analysis of the relationship between economic growth, security crisis, and peace-building efforts in developing countries. Since the early 1980s, researchers have attempted to investigate the investment motivations of multinational enterprises (MNEs) in conflicted affected areas, their relationships with the community and political actors, and the impact they have on the society in which they operate to fully understand this contentious issue in various geographical contexts though their findings have been incongruent (Udofia 1984; Gissinger and Gleditsch 1999; Nelson 2000; Patey 2006; Kolk & Lenfant 2012; Campbell 2015; Amusan 2018, Idemudia et al, 2022).

When it comes to the impact, there are two types of paradigms. The first one is that multinational companies have a role in promoting peace and fostering reconciliation in states impacted by war by fulfilling their corporate social responsibilities (CSR). Moreover, there is an argument that MNEs could play a crucial role in bolstering both local and national economies through the creation of job opportunities, infusion of foreign cash into national economies, mitigation of negative effects arising from wars, such as hunger and other sufferings. (Gissinger and Gleditsch 1999; Nelson 2000; Cambell 2015). Conversely, there is a line of argument that with in nations experiencing conflict,

MNEs have the potential to exploit natural resources, intensify conflict, and present a substantial risk to the security of both the host nations and neighbouring states. This is primarily the case when there is no a functioning government and other influential non-state actors who can enforce accountability and transparency in investment areas (Udofia 1984; Patey 2006; Kolk and Lenfant 2012; Chuhan-Pole et al.2017; Amusan, 2018).

The purpose of this article is not to render a definitive conclusion or answer the question of whether FDI by MNEs in states affected by war and other security crises has a beneficial or detrimental impact on those nations. Rather, the article examines the investment experiences of two multinational corporations, focusing on their investment areas, rationales for investment, interactions with local political actors, resulting impacts, and potential disparities in investment patterns between conflict-affected and non-conflict-affected regions. To achieve its aim, this article adopts an exploratory research methodology and applies the Eclectic Paradigm, also known as the ownership, location, internalization (OLI) paradigm, as its theoretical underpinning. By utilizing this trio -tiered evaluation framework, businesses can effectively gauge the potential benefits of engaging with foreign direct investment (FDI) outside their home nations. Before delving into these issues, however, it is crucial to get a comprehensive understanding of multinational organizations, their investing objectives, and the factors that shape their investment decisions from a theoretical point of view.

Multinational Enterprises and their investment: Theoretical perspectives

Franklin Root, a pioneer of international business in the early 2000s, provided a comprehensive conception of multinational enterprise. He defined the term as

> ''a headquarters or parent company that engages in foreign production and other activities through its own affiliates located in several different countries, exercises direct control over the policies of those affiliates, strives to design and implement business strategies in production, marketing, finance, and other functions that transcend national boundaries, becoming thereby progressively more geocentric in outlook'' (Root 1990, 583).

Dunning and Lundan's (2008, p. 3) on their part define multinational enterprise as "an enterprise that engages in foreign direct investment (FDI) and owns or controls value-added activities in more than one country". This, according to them, is the operational definition of MNE on which numerous scholarly works concur. Similarly, Richard Caves defines Multinational Enterprise (MNE) as ''an enterprise that controls and manages production establishments – plants - located in at least two countries'' (Caves 2015, p.1). Cavas also explains the reason why 'enterprise' rather than 'company' is used as a feasible definition of the term MNE. According to him, the term "enterprise" is used ''to direct attention to the top level of coordination in the hierarchy of business decisions'' between various subsidiaries of a firm (Ibid). That is why he referred multinational enterprise as a 'multiplant firm'.

While there may be subtle variations in the formulations of these definitions, they all have fundamental elements that define a multinational corporation. These elements include factors such as geographical presence, production activities, ownership structure, and managerial control. First and foremost, multinational MNEs engage in operations that span numerous geographic regions and transcend national borders. Additionally, these companies engage in the production of commodities and provision of services inside both their domestic and foreign markets. Thirdly, transnational management structures are established between parent firms and their affiliates in the host country. Lastly, these corporations are subject to oversight by both public and private entities. Similarly, the authors provided descriptions of the elements that determine the transnational nature

of multinational businesses. Consequently, several factors such as the size, geographical location, management structures, global capital allocation, and non-business-related influences including research and development initiatives and social responsibility endeavours, together influence the internationalization of MNEs.

Nothing that, the next question that must be addressed in this context pertains to the factors that drive multinational enterprises to engage in foreign investments. A considerable body of scholarly work has been devoted to investigate this inquiry through the identification of individual factors or multiple variables that influence the participation of multinational corporations in foreign investment. A classical but very impactful piece of literature that explores the motivations behind multinational corporations and their investments in developing nations is written by Ravi Kalia (1982), an academic in the field of History at the City College of New York. Kalia's analysis depicted the relationship between multinational corporations and developing countries as one marked by a mutual lack of trust. The underlying justification for his theory is that developing nations see multinational companies (MNEs) as organizations that meddle into the internal affairs of nations, disregarding the political and economic benefits of the host country, while prioritizing their pursuit of profit maximization. On the other hand, the reasons behind foreign direct investment by 206 Chinese multinational businesses operating in industrialized countries were investigated in recent research done by Park and Roh (2018). Their findings suggest that Chinese multinational corporations often pursue entrance into developed nations with the aim of acquiring sophisticated knowledge from the foreign host that is not readily available inside China. Corporations often use Investment Management Agreement (IMA) techniques to effectively incorporate emerging technology in developed economies and leverage the benefits of heterogeneity, including 'inter-industry mergers and acquisitions'. According to these authors, MNEs may be motivated to invest outside of their home country due to the pursuit of profit maximization through resource extraction and the acquisition of foreign expert knowledge.

Dunning and Lundan (2008) on their part provide a comprehensive analysis of the fundamental factors that incentivize global multinational corporations to engage in foreign direct investment in both developing and industrialized nations. MNEs investments in foreign nations may be classified into four separate categories, according to them. The first categories are the 'natural resource seekers.' These types of MNEs invest in foreign countries to gain access to and exploit natural resources at a lesser cost than in their home country. The second groups are 'market seekers,' that intended to invest in a foreign country to distribute their goods and services at a greater price than in their native states. The third groups are 'efficiency seekers,' that invest in a foreign country to benefit from factors such as resources, cultures, policy instruments, and economic systems, among others, that allow them to compete in global markets. The final groups are known as 'strategic asset or capability seekers.' These are multinational enterprises that are driven to invest in acquiring strategic assets of foreign firms, such as trademarks, human resources, marketing channels, and so on, to have a global outreach. In addition to these primary groups, Dunning and Lundan (2008) suggested other sorts of firms that could not fit into these groupings. These include escape investment (which seeks to circumvent restrictive legislation and other economic hurdles in their home country), support investment (which serves as a supplementary branch to the main firm), and passive investment (that engage in purchasing and selling of other firms as well as companies that invest in real estate sectors for long term profits.)

When analysing the operations of multinational enterprises (MNEs), it is also crucial to consider the factors that influence their decision to invest in a foreign country. Classical international business theories claim that multinational enterprises (MNEs) primarily base their choices on foreign investments on the trade-offs between risk and return. Nevertheless, this approach has undergone

changes throughout the course of time due to a multitude of factors that have an impact on the dynamics of international trade. The eclectic paradigm, which was developed in the 1980s by John Dunning, a prominent British economist recognized as the "father of international business," is widely regarded as a prominent theoretical framework for analysing the decision-making process of firms in relation to their foreign direct investment. This framework encompasses three key dimensions: ownership, location, and internalization, forming a comprehensive economic and business model. Based on Dunning's work, Agrawal and Ramaswami (1992) provided an insightful description of this model. According to them, "entry mode selection" is a crucial strategic decision in any foreign investment. Thus, the decision of an ''entry mode for a target market is influenced by three types of determinant factors: ownership advantages of a firm, location advantages of a market, and internalization advantages of integrating transactions within the firm'' (Ibid, p. 2).

Ownership advantage refers to the possession of "superior assets and skills" that cannot be easily acquired by local or other potential multinational enterprises in the host country. This advantage provides a foreign firm with a competitive edge over other firms because of its "size and multinational experience, and skills by its ability to develop differentiated products" according to them (p. 4). Having "superior assets and skills" however, provides a competitive advantage rather than an absolute advantage in dominating foreign markets. Language barriers, lack of familiarity with local corporate networks, and micro-level obstacles, including supply and demand trends in the host country, remain factors that may confer a competitive edge to domestic enterprises over their foreign counterparts. Notwithstanding these cultural and institutional limitations, Agrawal and Ramaswami (2008) contend that firms possessing ownership advantages may still surpass their competitors on account of the magnitude of their enterprises, which amass valuable resources, their worldwide expertise, and their prowess in creating unique products.

Location advantage refers to the spatial settings of the host country in which MNEs invest. Agrawal and Ramaswami described such markets as "attractive," implying that they "provide greater long-term profitability to a firm' (Ibid, p. 5). Some of the 'location advantage' factors that influence MNE investment include the availability of easily accessible ports, the presence of low-cost raw materials and labour, as well as lower taxes and tariffs.

Internalization advantage, on the other hand, refers to a multinational corporate decision over whether to manufacture a certain product within the firm or contract it with a third party to avoid market transaction costs and maintain profit. According to Agrawal and Ramaswami, outsourcing of value chain activity to local firms may allow foreign firms to "benefit from the scale economics of the marketplace" while avoiding "bureaucratic disadvantages" that the firm may face upon market entry. However, if there is an external uncertainty that could obstruct outsourcing ''sole venture modes provide better control due to retaining of the assets and skills within the firm'' (Ibid, p. 6).

Among the three tiers, the analytical approach used to examine the investment activities of two multinational corporations originating from Sweden and China in South Sudan and the Democratic Republic of Congo, respectively, is centred on the theoretical framework of location advantage (L), with a special focus on the location bound effect. As previously stated, the notion of location advantage refers to the geographical positioning of the host nation, which enables quick access to cost-efficient natural resources, ample labour supply, and accessible connectivity to ports and other global trade networks. However, this does not imply that ownership advantage and internalization advantage do not play a role in the decision-making process of the two multinational corporations' investment in the two African nations. The rationale for choosing the location-bound effect lies in Africa's geographical positioning, which grants it abundant and untapped natural resources. Additionally, the presence of inexpensive labour, combined with the political and security instability

of African states, weakens their governing bodies and creates opportunities for the exploitation of their resources by large multinational corporations.

Research Approach

Research methodology

An exploratory research methodology has been used to investigate the investment activities of the Swedish and Chinese multinational corporations in South Sudan and the Democratic Republic of Congo, as well as their implications for security and issues related to human rights violations. A book by Elman, Gerring, and Mahoney (2020), distinguished scholars in the realm of research techniques, presents a compelling analysis of exploratory research and its potential use in social science investigations, if it is conducted with due diligence. Exploratory research is aptly characterized by the authors as "the soul of good research," a reference to its methodological intent and potential to uncover new and captivating findings (p.17).

The authors divided the various styles of exploratory research methodology investigation into two distinct forms. According to them, one approach focuses on investigating issues that have not been extensively examined before or topics that are completely new. In contrast, the second strategy places emphasis on the production of new discoveries and ideas pertaining to a well-established topic, without necessarily providing empirical evidence to support the underlying facts, as other research methodologies would subsequently do after an initial breakthrough. Based on the comprehensive institutional coverage of the two Chinese and Swedish companies in the Democratic Republic of Congo and South Sudan by numerous human rights organizations, multilateral institutions, and government-sponsored institutions (albeit in a distinct fashion), this article adopts a methodological inclination towards the second approach. By employing an exploratory research approach, the article attempts to examine the reports of multiple institutions and derive logical conclusions concerning the relationship between FDI by multinational enterprises MNEs and the subsequent human rights repercussions, with a particular emphasis on the African context.

Data sources

Due to the significant financial and temporal commitments required to collect primary data in the Democratic Republic of the Congo and South Sudan, however, this study solely depends on secondary data sources. However, the article endeavours to analyse the abundance of reports from academic institutions, government-sponsored organizations, human rights organizations, and independent human rights organizations regarding the consequences of the investments made by two multinational corporations in those African nations. To ensure the reliability of the secondary data sources, a comprehensive compilation and comparative analysis of institutional reports derived from significant field research have also been conducted.

Data analysis

While exploratory studies predominantly depend on qualitative analyses of unprocessed data and facts, augmenting them with quantitative data would enhance their credibility and precision, as exemplified in this article. Therefore, in conjunction with the comprehensive qualitative analysis (particularly for the Democratic Republic of the Congo through the risk = impact x probability approach), a substantial amount of quantitative data (particularly from South Sudan's perspective through graphical analysis) has been presented to demonstrate the extent of the damage inflicted by Chinese and Swedish multinational corporations in relation to their involvement in security crises and subsequent human rights abuses. By integrating qualitative and quantitative data analysis, a

valuable understanding of FDI by multinational corporations and their repercussions in Africa has been achieved in a modest but nonetheless insightful manner.

Multinational Enterprises in Africa: foreign investment, resources and security issues

In this article, two case studies have been chosen to better understand the connection between multinational firms, their investments, and security concerns in the African context. The first case study is Lundin Energy, a Swedish oil and gas exploration and production company, and its oil exploration history in South Sudan. The second one is the Chinese high-tech company Huayou Cobalt, which is engaged in cobalt mining in the Democratic Republic of Congo. The rationale for selecting the two case studies is based on three major factors. To begin with, both South Sudan and Democratic Republic of Congo are African countries with abundant natural resources. In their 2018 detailed report to the World Bank, Brooking members Ivailo Izvorski, Souleymane Coulibaly, and Djeneba Doumbia placed Sudan and the Democratic Republic of Congo among the top 10 Sub-Saharan African countries with aggregate natural resources endowment. Second, both countries had been ravaged by civil war and political instability during the past two or three decades. Even though the active wars appear to be coming to an end especially in South Sudan, there is still political instability, insurgent movements, and displacement of people. Because of their political instability and security crisis, the 2021 Fragile States Index ranks South Sudan and Democratic Republic of Congo fourth and fifth, respectively, behind Yemen, Somalia, and Syria. Finally, global resource extraction corporations are actively engaged in foreign direct investment in both nations due to their abundant natural resources.

Lundin Energy

From 1983 until 2005, Sudan was torn apart by a civil war and political instability between the then-Sudanese central government and the Sudan People's Liberation Movement (SPLM). Numerous scholarly studies have shown a correlation between the beginning of the conflict and the presence of oil and petroleum reserves. Arbetman-Rabinowitz & Johnson (2008) attribute the conflict related to oil in Sudan to the allocation of power among various groups. In a similar manner, Basedau and Wegenast (2009) established a connection between the matter of wealth distribution resulting from natural resources and the occurrence of intercommunal conflicts in regions where these resources are extracted. Patey (2010) asserts that the discovery of oil reserves in the former Sudan has been widely seen as a detrimental factor, attributing its adverse effects on peace and stability. In a similar vein, Paine (2016) conducted a study which revealed that the presence of oil revenue did not serve as a deterrent against the occurrence of civil war in Sudan, a finding consistent with observations made in several African nations.

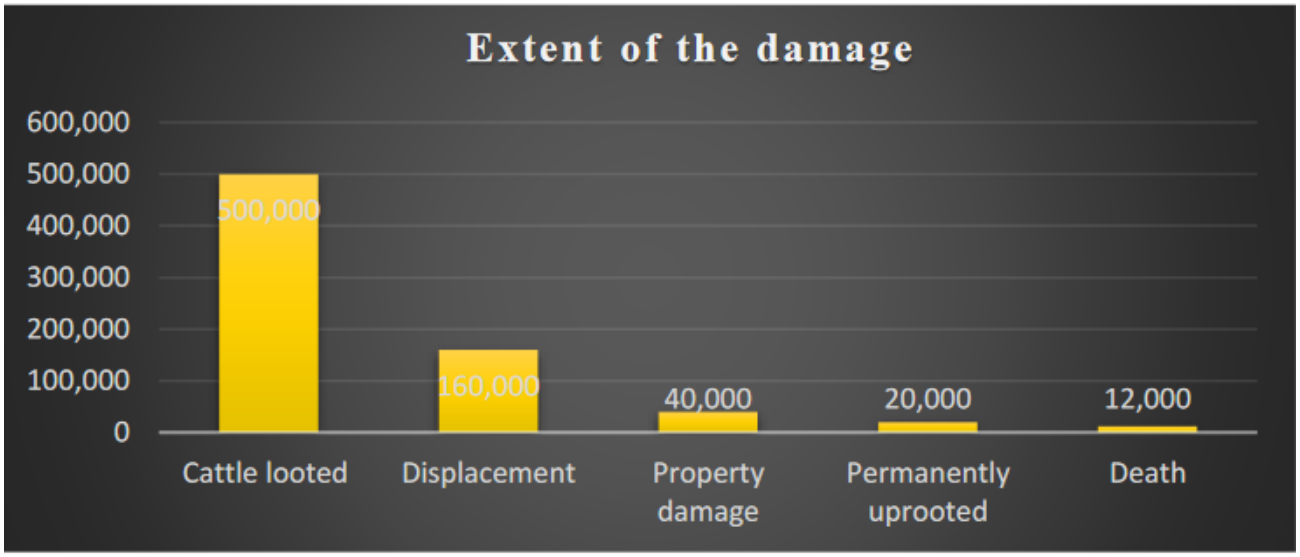
Following the discovery of oil and petroleum reserves in 1970s, global companies from all over the world raced to the east African nation and started producing oil in areas that straddled in today's Southern and Northern Sudanese border lines. Companies such as AGIP even began exploring in the 1960s. In the 1970s, companies like Union Texas, Texas Eastern, and Chevron began exploration and production. Chevron Overseas Petroleum, based in California, was the first to be granted a license for onshore oil exploration in Sudan in 1974, and it operated extensively until 1984, before it left and other Canadian, Indian, Malaysian and Chinese oil production companies such as Arakis Energy Corporation, China National Petroleum Corporation, Petroliam Nasional Berhad (Petronas) Oil and National Gas Corporation Limited took over the production share.

Lundin Energy, a Swedish oil and petroleum production corporation, is one of the many global companies that made investments in Sudanese oil exploration. According to a report by the European Coalition on Oil in Sudan (ECOS, 2010), the company formed a consortium with Malaysian Petronas,

Austrian OMV and Sudanese state-owned oil company Sudapet Ltd. to enter the Sudanese oil market in 1997 and operated until 2003. In February 1997, the Lundin Consortium inked an agreement with the Sudanese government to explore crude oil in a relatively peaceful region known as Block 5A, which is now located in the independent South Sudan. During those six years of exploration and production in this area, the company is alleged to be part of the serious human rights violations in the country in collaboration with warring parties in the Sudanese civil war (HRW 2003; ECOS 2010; Swedish Prosecution Authority 2021). All the three investigations claimed that Block 5A was not under complete government control and was not a war zone when Lundin consortium signed the agreement. However, when the company began oil production, the comparatively tranquil area and strategic significance location became the centre of brutal civil war between 1998 and end of 2005 as Sudanese central government and Sudan People Liberation Army backed armed groups were engaged in bloody conflict for control of the oil fields.

The chart below depicts the extent of the damage wrought by the civil war in the area, as well as the suffering that resulted between 1997-2003.

Figure 1: Extent of Damage



Source: Adopted from European Coalition on Oil in Sudan, 2010 report

According to the chart, ECOS discovered that there were 12 000 fatalities due to hunger, exhaustion, and conflict-related diseases. The number of people who were displaced from their original locations totalled 160,000, while those who were permanently uprooted and never returned to their villages numbered 20,000. On the other hand, 40,000 homes and livestock shelters were demolished, while 500,000 cattle were looted. Churches, schools, marketplaces, and medical institutions were also damaged. The psychological trauma and squandered possibilities in education, employment, and social benefits are also included in the report, which reveals the extent of the devastation caused by the war in that oil-rich region between 1997-2003.

What was the role of Lundin Consortium in the alleged war crimes in the former Sudan?

In November 2003, Human Rights Watch published a comprehensive 581-page report titled "Sudan, Oil, and Human Rights." The report extensively examined how the race for oil resource control fuelled the Sudanese civil conflict and turned it into a source of major international human rights violations such as war crimes, crimes against humanity, and genocide in the east African nation. The investigation delved deeper into Lundin's investment and its role in the deadly conflict. Similarly, in

2010, the European Coalition on Oil in Sudan (ECOS) published a detailed account of oil exploitation in Sudan and South Sudan since the 1980s. The report, titled "Unpaid Debt," goes into extensive detail about Lundin energy's involvement in the devastating conflict, as well as the need for retribution and restitution for those who were "complicity" in war crimes during the conflict. Based on the two extensive reports and its own investigations, the Swedish Prosecution Authority, for its part, issued an 80,000-page report in 2021, charging the company with "complicity in grave war crimes". The proceeding, which is currently ongoing in Stockholm, accuses the consortium's chairman, Ian Lundin, and director, Alex Schneiter, of being ''suspected of having been complicit in war crimes committed by the then Sudanese regime with the purpose of securing the company's oil operations in southern Sudan'' (SPA 2021).

The prosecutor stated that until 1997 the ''area had been relatively spared from the effects of the civil war, which had been going on for several years, but until 2003 it became one of the worst affected areas''. (Ibid). According to the trial, the Khartoum Peace Agreement was signed in April 1997 between the Sudanese government and SPLA-backed militant groups from the southern states, stipulating that the responsibility for maintaining peace in Block 5A was exclusively assigned to the SPLA - backed military forces rather than the Sudanese military. However, after Lundin Oil discovered the oil in the area in 1999, the Sudanese military launched a series of aggressive military operations to seize control of the area and lay the groundwork for Lundin Oil's oil exploration. According to the trial, after the Sudanese military took Block 5A in violation of the KPA agreement between the two warring parties, the consortium "changed its view of who should be responsible for the security around the company's operations. The company then requested from the Sudanese government that the military should now be made responsible for the security''. As per Chief Public Prosecutor Krister Petersson, the company's request necessitated a military occupation of Block 5A through the use of military force. Complicity in this context is then defined as the act of making these demands while either recognizing or remaining indifferent to the military and militia operations of the conflict in a manner that violated international humanitarian law (SPA, 2021).

It may be deceptive to consider the detailed study by the Swedish Prosecution Authority as a conclusive statement about the involvement of Lundin Energy in perpetrating human rights crimes in South Sudan. Nevertheless, by incorporating the report into a broader academic context and using it as a basis for theoretical analysis, the trial would become more coherent. To conceptualize the correlation between natural resources and civil conflicts, Ross (2004), a professor of political science at the University of California, put forward a compelling elucidation of this phenomenon. After conducting a comprehensive analysis of 14 cross-national econometric research, the professor has derived four distinct results on the link between natural resources and civil wars. Notably, one of these conclusions asserts that the presence of oil significantly augments the probability of conflict, particularly in the context of separatist conflicts. He asserted that ''both quantitative and qualitative studies suggest that the production of oil is associated with the onset of conflict, particularly separatist conflict'' (Ross, 2004, p. 342).

European Coalition on Oil in Sudan also conducted similar investigations to determine how the consortium was complicit in war crimes. According to the research group ''in February 1999, Dr. Riek Machar met with Sudan's Minister of Defence, who insisted that the Sudan Armed Forces had to guard the oilfields, including Block 5A, from any threat. Dr. Riek Machar disagreed, insisting that his forces had guarded the Lundin Consortium since 1997 and should continue to do so''. (ECOS 2003, 32). Following the disagreement, ECOS (2003) claimed that Sudan government ''moved a convoy of 15 trucks with almost 400 troops and heavy weapons south from Bentiu into the Ryer/ Thar Jath areas and on to the Ler (Payak) garrison, flanked by over 1,000 of Maj. Gen. Paulino Matiep's troops. Dr. Riek Machar's SSDF were ineffective in protecting their territory in Block 5A from attacks

by Paulino Matiep's militia''. Human Rights Watch (2003) also affirmed these reports stating that Paulino Matiep forces (backed by the Sudanese military) ''looted most larger villages and towns and burned down the main structures, including clinics run by NGOs. Residents, unused to any fighting in their area, fled to the toic during the wet season to wait out the fighting; many died of malaria there'' (p. 137-138).

In 2014, Penelope Simons and Audrey Macklin, two Canadian law professors, published an intriguing book titled *'The Governance Gap: Extractive Industries, Human Rights, and the Home State Advantage.'* Simons and Macklin were part of the Canadian Assessment Mission to Sudan, which was established in 1999 by the Canadian Minister of Foreign Affairs and International Trade to investigate human rights allegations made by Talisman Energy, another Canadian global corporation producing oil in South Sudan. According to them

> ''following a three- week investigation in both Khartoum and the Upper Western Nile region, we were able to substantiate many of these allegations and we concluded that oil extraction and development was, in fact, fuelling the war and, further, that the infrastructure of the GNPOC was being used for offensive bombing and gunship raids against civilian populations. We also found that these raids, conducted with Antonov bombers and helicopter gunships, were followed up by ground troops consisting of government-sponsored Arab militia. The militia would enter villages on horseback with the aim of inciting terror. They murdered, raped, abducted women and children, looted possessions including livestock, and then set the villages alight, burning them to the ground (Simons & Macklin, 2014, p. 1).

Thus, Human Rights Watch (2003), ECOS (2010), Simons & Macklin (2014), and the Swedish Prosecution Authority (2021) all draw similar findings about how oil companies were engaged in human rights violations throughout Sudan's deadly civil war. However, it is equally critical to examine how the firm responds to those allegations. After the Swedish Prosecution Authority filed the indictment against the company, its management rejected all the allegations in a press released on November 11, 2021. The company said that ''none of Lundin's representatives committed or were complicit in any violations of international humanitarian law by the Government of Sudan or associated militia and we know that Lundin did nothing wrong.'' (Lundin 2021). The company has also accused international NGOs such as Human Rights Watch and ECOS that have investigated on the allegations of lacking the "fairness, reliability, and legal basis of the investigation." Furthermore, the company's chairman Ian H. Lundin denied the accusation stating that "this is an incomprehensible decision by the Swedish Prosecution Authority since it is not supported by any evidence in the investigation, a situation that has not changed for the last eleven years'' and emphasized ''I know that we have done no wrong and that we will ultimately prove this in court". (Ibid).

As stated above, this article presents both the allegations of war crimes levelled against Lundin Energy and the company's denial of the accusations. Since the trial is still proceeding in Stockholm, it is beyond the scope of this article to certainly pronounce that the company was complicit in the war crimes. However, the history of multinational corporations investing on the African continent, particularly in war-affected and fragile states like Sudan, backs up the allegations and can demonstrate that the company was indeed involved in Sudan's conflict. This assertion is supported by an investigative report by Luke Patey of the Danish Institute of International Studies. The expert concluded that ''oil companies engaged in exploratory and production activities in the Southern Sudan have long been connected to the recently ended North-South civil war between the Government of Sudan (GoS) and the Sudanese People's Liberation Army/Movement (SPLA/M)'' (Patey 2006, 2). He also furtherly noted that ''the presence of oil companies in the country prompted several high-profile NGO reports implicating these MNCs as further deterrents to peace in the long-standing and devastating civil war'' (Ibid).

Such kind of empirical conclusions are also supported by a plethora of theoretical frameworks generated by various scholars. In his influential article regarding ''corporate complicity'', Wettstein (2010) for instance, pointed out that while multinational corporations may not be directly involved in host countries' conflicts and strife, they may be complicit in the conflicts through various "kinds of support, participation, or assistance in the human rights violation" (34). Furthermore, he noted that '' a large part of human rights violations with business involvement is not committed by the corporation itself, but by a third party which relies on or benefits from the direct or indirect support of the company'' (34). According to him, 'corporate complicity' in human rights violations can take multiple forms such as direct, indirect, beneficial, or silent and have varying degrees of intensity depending on the situation in the host country. In a similar vein, Vadlamannati, Janz & de Soysa (2020) also state that ''if firms decide to invest in—or remain in—repressive host countries, they may become complicit in wrongdoings because they provide revenue to such governments'' (4). Based on these and other theoretical and empirical insights, it is reasonable to conclude that Lundin Energy was complicit in war crimes in Sudan; nevertheless, waiting for the final judgement of the Swedish Prosecution Authority may be necessary to reach a conclusive judgment.

Huayou Cobalt

Democratic Republic of Congo (DRC) is the world's largest cobalt producer, accounting for 60% of global cobalt output, followed by Russia and Australia (Nkulu et al. 2019). Despite having the world's largest cobalt deposits as well as other mineral resources, the country is however, still plagued by civil war, intercommunal conflict, unemployment, and corruption. Scholarly works, institutional reports, and independent researchers correlate Congo's brutal civil wars and recurring inter - communal conflicts to the country's abundant natural resources. Competition over resource, ownership among Congo's indigenes, mineral exploitation by armed groups affiliated to neighbouring nations such as Rwanda and Uganda, as well as multinational corporations, are thought to have fuelled the conflict.

For instance, in 2001, a UN panel of experts investigated the link between illegal exploitation of resources and conflict in DRC. The panel concluded that "the role of the private sector in the exploitation of natural resources and the continuation of the war has been vital. Several companies have been involved and have fuelled the war directly, trading arms for natural resources. Others have facilitated access to financial resources, which are used to purchase weapons'' (UN 2001). Ayo Wheto (2014) on his part, classified multinational corporations operating in Congo into two groups in his extensive analysis on the relationship between multinational corporations and conflict transformation in the country. The first group consists of resource extraction companies [engaged in the exploration and exploitation of natural resources through mining concessions acquired either through joint ventures or subsidies with Congolese companies]. The second group are resource trading companies, which do not engage in direct mineral exploration and exploitation in but acquire resources from other corporations or intermediaries. Wheto revealed that more than 85 multinational corporations were actively engaged in mineral exploration, production, and trading in the country during his study in 2014. And, according to him, these firms were either involved in or encouraged violence in the country in one way or another. He stated that "corporate actions in the DRC highlighted the intricate links between natural resources and conflict in a manner that generated international concern and response." (2014, 204).

Huayou Cobalt is just one of several global mining corporations that have been operating in the DRC since 2006 and have been accused of participating in human rights violations. Zhejiang Huayou Cobalt, or simply Huayou Cobalt, is a Chinese high-tech corporation that is headquartered in Tongxiang, Zhejiang province of China. The company is one of the world's top suppliers of cobalt products, including but not limited to cobalt tetroxide, cobalt carbonate, cobalt hydroxide, cobalt sulphate

and cobalt monoxide. These minerals are used in the high-tech industries to produce rechargeable batteries that power mobile phones, tablets, laptop computers, and even automobiles. Huayou Cobalt supplies cobalt products to the global market by acquiring semi-processed cobalt from its Congolese subsidiary, Congo DongFang International Mining (CDM).

CDM was founded in 2004 and began mining operations in the south-eastern DRC in 2006. The company mostly acquires cobalt products from small traders who buy directly from miners, the majority of whom are artisans. ''CDM then smelts the ore at its plant in the DRC before exporting it to China. There, Huayou Cobalt further smelts and sells the processed cobalt to battery component manufacturers in China and South Korea. In turn, these companies sell to battery manufacturers, which then sell on to well-known consumer brands'' (Amnesty International 2016, 8). The brands include giant electronic and vehicle corporations such as ''Apple, Dell, HP, Huawei, Lenovo, LG, Microsoft Corporation, Samsung, Sony and Vodafone, as well as vehicle manufacturers like Daimler AG, Volkswagen and Chinese firm BYD'' (Ibid).

By investigating its investment profile, Amnesty International produced an extensive report in 2016 about how the company and its subsidiary CDM engaged in human rights violations in Democratic Republic of Congo. A similar report by the South Korean based auditing firm, DNV GL, was also released in 2018 ''to assess the extent of implementation of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (hereinafter addressed as 'OECD Due Diligence Guidance').'' Both findings are quite alarming. The table below shows DNV GL's auditing report on two cobalt supply chains in south-eastern DRC.

Table 1: DNV GL's auditing report on two cobalt supply chains in south-eastern DRC

Risk rank	Risks	LSM Supply Chain (Unlikely X Due Diligence Risk Level)	ASM Supply Chain (Unlikely X Due Diligence Risk Level)
1	Worst forms of child labour	5(1x5)	25(5x5)
2	Systematic or widespread human rights abuse associated with the extraction, transport or trade of cobalt	8(2x4)	12(3x4)
3	Direct or indirect support to non-state armed groups or public or private security forces	8(2x4)	8(2x4)
4	Bribery and fraudulent misrepresentation of the origin of cobalt	4(1x4)	16(4x4)

Source: DNV GL Business Assurance Korea (2018)

The first groups are the supply chains for large-scale mining (LSM) carried out by the Congo's Minière de Kasombo (Mikas) and PE527 (CDM), both of which are subsidiaries of Zhejiang Huayou Cobalt. The second categories include supply chains in the Kasulo, Twiluzembe, and Shabara mining sites that are controlled by Chinese traders, who obtain cobalt from artisanal and small-scale mining (ASM) operators, the majority of whom are local Congolese. According to Verzuh, Eric, and American Psychological Association (2017) companies commonly used **Risk = Impact x Probability** equation to assess and estimate risks. Thus, risk is calculated by multiplying the impact by the probability. The intensity of the damage that could result if the risk happens is referred to as the **Impact** in this scenario. **Probability**, on the other hand, is the possibility that a given risk will arise in a business. As a result, the larger the aggregate ratings, the higher the score and, hence, the risk level. The scale

may differ depending on the auditing firm, but the 1-5 scale is the most common, as seen above. 1 denotes a low level of risk, whereas 5 denotes a high level of risk.

According to this model and the audit report, the artisanal and small-scale mining (ASM) supply channel contains the 'worst forms of child labour,' which is one of an international human rights violation, with a probability of (5) and an impact of (5) and a score of 25. The level of due diligence risk in large scale mining (LSM) is also considerable. The systematic or widespread human rights abuse associated with cobalt extraction, transport, or trade' is likewise higher in ASM with a score of 3x4=12, whereas it is relatively low in LSM. Companies' participation in 'direct or indirect support to non-state armed groups or public or private security forces' is the same in both LSM and ASM, but the due diligence risk levels are higher than the unlikely of the infractions. 'Bribery and fraudulent misrepresentation of the origin of cobalt' are two further human rights violations that, according to the auditors, are common in the ASM with a score of 4x4=16 and, to a lesser extent, in the LSM. When comparing the results, the greatest value is 25 and the lowest is 4. The highest figure, 5x5, indicates the most heinous kind of child labour in artisanal and small-scale mining, which is dominated by Chinese traders and Congolese miners. The lowest figure, 1x4=4, shows bribery and fraudulent misrepresentation of cobalt origin, which is evident at large-scale mining areas, as would be expected given the level of accountability in a corporate facility.

Similarly, in 2016, Amnesty International and African Resources Watch (Afrewatch) published a comprehensive investigation titled "This is What We Die For" to expose the connection between resource extraction, human rights violations, and profit-seeking behaviour by global corporations in the DRC's cobalt mining industry. According to the joint report, ''chronic exposure to dust containing cobalt can result in a potentially fatal lung disease. Inhalation of cobalt particles can also cause "respiratory sensitization, asthma, shortness of breath, and decreased pulmonary function", and sustained skin contact with cobalt can lead to dermatitis. Yet researchers found that most miners, who spend long hours every day working with cobalt, do not have the most basic of protective equipment, such as gloves, work clothes or facemasks (Amnesty International & African Resource Watch 2016, 5). The investigation also revealed that ''several children said that they had been beaten, or seen other children beaten, by security guards employed by mining companies when they trespassed on those companies' mining concessions. Security guards also demanded money from them.'' (6). The combined investigation uncovered a variety of child labour violations, including low salaries, hazardous working conditions such as heavy rain and extreme temperatures, accidents, and forceful bribes.

Another troubling aspect of Huayou Cobalt's investment in the Democratic Republic of the Congo is the involvement of local officials, networked with the company, in human rights violations. Instead of promoting accountability and transparency investment in DRC, investigative studies show that officials at all levels are both part of the problem and beneficiaries of the extractive industry. Amnesty International's direct observation of the interaction between officials and the mining sector backs up this assertion. Their criminal activities vary from taking kickbacks to owning illegal mine fields and attacking miners to create a favourable environment for CDM and other firms. According to the institute, "officials from a range of different government and security agencies control access to unauthorized mining sites and demand illegal payments from artisanal miners." (2016).

When it comes to human rights violations in the DRC's extractive industries, Huayou Cobalt isn't the only culprit. Other companies that explore and produce various minerals face the same accusations. An OECD (2014) investigation on gold mining in Mukungwe, South Kivu province, for example, reached a similar conclusion against the Canadian mining companies Banro, Leda, and Anvil, as well as the British gold exploration company Casa Mining. According to the investigation, the ''FARDC [Armed Forces of the Democratic Republic of the Congo] and non-state armed groups have principally

profited from artisanal gold mining by taxing diggers, traders and transporters. FARDC commanders have also made money by 'owning' specific pits in mines. Non-state armed groups and the FARDC have in addition generated income by selling goods and services to artisanal mining communities, and more generally by imposing taxes on local economies in which artisanal gold mining plays a role'' (OECD 2014, 22).

'Resource curse' and the broader context: What do the findings suggest?

As stated in the introduction, the purpose of this article is to examine at multinational corporations' investments in conflict-affected and fragile states, particularly in South Sudan and Democratic Republic of Congo and the alleged involvement of the companies on human rights violations. The article is based on Lundin Energy of Sweden, which was actively exploring and producing oil during the Sudanese civil war from 1997 to 2003, and Huayou Cobalt of China, which has been trading cobalt products in the Democratic Republic of Congo since 2006. As previously stated, Dunning and Lundan (2008) classified multinational corporations' investment motivations outside their homes into four categories using Jack Behrman's (1972) classical classification of MNE activities. One of them are a natural resource seeker that are ''prompted to invest abroad to acquire particular and specific resources of a higher quality at a lower real cost than could be obtained in their home country'' (p,68). Based on this perspective, it can be stated that both Lundin Energy and Huayou Cobalt are natural resource seekers since they invested in South Sudan and Democratic Republic of Congo to acquire oil and cobalt minerals, respectively.

Another resemblance between the two multinational corporations is the allegation of human rights violations in the areas of their investment. The article combines Human Rights Watch (2003), the European Coalition on Oil in Sudan (2010), and the Swedish Prosecution Authority (2021) investigations to demonstrate Lundin Energy's involvement in human rights violations during the Sudan's civil war between 1997 and 2003. Similarly, the article examines Amnesty International and African Resources Watch's joint investigation with the South Korean auditing firm DNV GL to explore Huayou Cobalt's involvement in human rights violations in Democratic Republic of Congo.

As indicated previously in the discussion regarding Lundin Energy, this inquiry is not an endorsement of the claims made by these numerous human rights organisations and state institutions, as the firm is currently on trial in Stockholm and waiting for the court's final verdict is more plausible. However, based on the evidence presented against Huayou Cobalt and the fact that the company has not acknowledged or denied the charges, it is possible to conclude that the company is indeed playing a negative role in human rights violations in Congo's extractive mining industry. It is also worth noting that human rights breaches are frequent in the extractive sectors and Huayou Cobalt can't be exceptional. The transgressions could range from child labour abuse to resource exploitation, environmental degradation to excessive pollution, or direct and indirect participation in armed conflicts.

By using the ''location-bound effect'' paradigm of foreign direct investment, Vadlamannati, Janz and de Soysa (2020:23) concluded that ''extractive FDI is associated with more human rights abuse''. They further emphasis that this problem is particularly prevalent among ''extractive firms in the oil and mining industries where the resources are located and are bound to such investment, which creates a status quo bias among them when it comes to supporting repressive rulers'' (ibid.). This has been the tendency not only in Sudan and DRC, but throughout Africa.

A comprehensive investigative report on extractive industries and their impact on human rights violations in Africa was just released by the African Commission at the end of 2019. The study is based on field trips taken across the continent between 2013 and 2019. The findings illustrate the

negative consequences of extractive industries in Africa. The findings of the paper were based on several case studies. The first case study is the investments of western oil companies such as Mobil, Texaco, Agip, Chevron, Exxon, and Royal Dutch/Shell in Nigeria's Niger Delta and its environmental impact on the life of Ogoniland people. Their ecology and land have been damaged, their fisheries have been harmed, and their water resources have been contaminated, according to the finding. The second case study covered by the report is the uranium contamination caused by AREVA, the French multinational company specializing in nuclear power, in Niger and Gabon. The report accused the company of ''negligently exposing its employees and other populations living in the mining areas to a very high radioactivity rates through a lack of due care.'' (African Commission 2019, 20). Other case studies examined extensively in the report include Ghana arsenic pollution, South Africa's Blyvooruitzicht mine environmental impacts, the DRC Kilwa case (violations included arbitrary arrests, looting, massacres, summary executions, and bombings), and worker discrimination in Sierra Leone's extractive industries (p. 25-29).

These and other case studies show that the problem is widespread, leading us to the conclusion that extractive industries, particularly in Africa's weaker states, contribute to human rights violations on the continent. Thus, Human Rights Watch and ECOS reports on the relationship between Lundin Energy's chief executives and the then Sudanese politicians regarding the protection of their refinery fields, as well as Amnesty International and African Resources Watch's accusation of "state officials extorting illegal payments from artisanal miners" and their huge influence in securing the mining fields in DRC should not be dismissed lightly.

In terms of corporate behaviour in relation to the countries of origin of the two firms, Sweden is clearly a welfare state, whereas China is an autocratic regime with an emerging economy. However, their multinational firms' behaviour, particularly their investment portfolios in Africa and other developing regions, differs little. This is not simply a problem for Chinese or Swedish multinational enterprises; it is an issue for most western and non-western companies in extractive situations. Accusations levied against Canadian, Dutch, French, Australian, and other companies and their investments in Africa have the same outcome as it is discussed previously. As a result, their countries of origin of the two companies have no significant impact on corporate decisions to invest in Sudan and DRC. Minor disparities may be attributable to their governments' reactions to allegations of human rights violations rather than the investment itself. Whereas there is no attempt to address the allegations of human rights violations by Chinese corporations by Chinese government, governments in Sweden, Canada, and other welfare states, even if they lack the ability or are reluctant to influence their corporations' investments in Africa, at least strive to hold those accused accountable. The Swedish Prosecution Authority's trial of Lundin Energy and Ottowa's case against Talisman Energy could be taken as examples here, despite their final verdicts.

Another issue that should be addressed here is whether the two companies' investments in conflict-affected areas differ from those in non-affected areas. Looking at the company's portfolio, Lundin Energy's previous investment in South Sudan and currently in Norway are similar i.e., resource extraction. According to the company's website, Lundin Energy is ''an experienced Nordic oil and gas company that explores for, develops and produces resources economically, efficiently and responsibly.'' (Lundin Energy 2021). The company's track record in Libya, Russia, and Scandinavian countries demonstrates that it is completely focused on oil and petroleum exploration. When it comes to Huayou Cobalt, the corporation is divided into three business divisions. The resource development division is primarily concerned with research and development, as well as the "manufacturing and marketing of ternary precursor products for lithium battery cathode materials." The new material manufacturing sector, on the other hand, is mainly engaged in ''the deep processing business of cobalt and nickel new material goods." The third division is the new energy manufacturing, which

is operating "primarily in the mining, selection, and primary processing of nonferrous metals such as cobalt, nickel, and copper." (Huayou Cobalt 2021). While the new energy manufacturing division invests in resource extraction such as in Democratic Republic of Congo, the rest of them operate in China and distribute their products to global firms in the United States, Europe, and Asia.

There is also a difference between the two companies regarding ownership of their investment in Sudan and DRC. According to the eclectic paradigm of international business theory, ownership of FDI is a crucial determinant in MNE entry decisions. Lundin Energy's investment in Sudan was primarily a consortium with other global firms from China, Indonesia, Austria and Sudan, with a 40 percent stake. As a result, its investment focused on direct resource extraction through offshore oil concessions. Huayou Cobalt, on the other hand, invested in DRC through its subsidiary firm, CDM. As a result, it can be categorized as a resource trading corporation, acquiring resources not directly from the mining fields but via an affiliate company. Regarding CDM, as a subsidiary of Huayou Cobalt, its executive board is made up of members from China and Congo. While the Chinese national Zai Yang and Chen Hongliang are chief executive officer and manager respectively, the Congolese nationals Crispin Kakunda and N Ning are personnel director and director of the firm respectively (DNV GL, 2018). This joint ownership can be regarded as one aspect of the problem since the members of the management whose nationality is DRC, have no significant freedom to prevent the company from being implicated in the allegation crimes.

Conclusions and policy recommendations

In summary, this article conducts an analysis of the relationship between extractive foreign direct investment (FDI) and the patterns of violence in Africa. This analysis incorporates theoretical frameworks and empirical evidence, using two case studies. Drawing upon an examination of the extractive industries in Africa from a macro perspective, as well as the comprehensive inquiries conducted by various institutions pertaining to the investments made by two multinational corporations, namely Lundin Energy and Huayou Cobalt, it is reasonable to assert that these companies may have been implicated in human rights transgressions in South Sudan and the Democratic Republic of Congo, respectively. Nevertheless, given the current allegations against Lundin Energy, a conclusive response may only be ascertained by patiently awaiting the ultimate judgment.

Furthermore, although an in-depth and comprehensive study is required to fully understand the subject matter, the author anticipates that this article will provide insight into areas including the nature of foreign direct investment, allegations regarding MNEs and human rights, and ownership concerns in fragile and conflict-affected areas such as Africa. As such, it will serve as a foundation for future scholarly works that explore these and other associated topics. In light of the research article's emphasis on policy issues, it is also equally imperative to consider the potential solutions that may be adopted by both governmental and non-governmental entities in South Sudan, the Democratic Republic of Congo, and the broader African context. This is essential to ensure that the continent's resources are utilized as drivers for hope and development, rather than perpetuating conflict, warfare, hunger, displacement, and intercommunal violence on the continent.

As demonstrated in the discussion section, the prevailing academic discourse predominantly presents a pessimistic perspective on the correlation between foreign direct investment carried out by multinational corporations and the challenges faced by African nations in managing their natural resources and utilizing them for the welfare of their populations. As such numerous policy recommendations have been proposed by both academic and non-academic research groups regarding the subject matter. These recommendations encompass a range of areas, such as transparency of investment policies in host countries (Ayadi et al., 2014), institutional accountability (Yeboua, 2021), prevention of corruption (Egger &Winner, 2006; Reiter & Steensma, 2010), enhancing

community participation and civil society organizations (Mate, 2002), and the establishment of clear land ownership policies (Idemudia et al, 2022). This paper does not intend to refute these policy proposals that prioritize solutions at the micro level. However, it diverges from previous studies by firmly believing that the foundation of all institutional strengths, which would alleviate the adverse consequences of foreign direct investment by multinational enterprises, is rooted in the fundamental concepts of political stability and democratic maturity in Africa at a macro level.

Political stability and the establishment of a democratic system are fundamental requirements for the formation of a functioning government. These factors are crucial in addressing issues such as corruption in investment, fostering community participation, implementing sustainable land ownership policies, ensuring accountability and transparency, and developing a robust investment strategy across the continent. African countries that exhibit better levels of political stability, such as South Africa, Ghana, Botswana, Namibia, Mauritius, Seychelles, among others, demonstrate a more pronounced capacity to address the challenges associated with the resource curse phenomenon. In contrast, nations experiencing political instability, such as the Democratic Republic of Congo, Nigeria, Niger, South Sudan, Libya, and others, face greater difficulties in mitigating these challenges.

Conflict of interest

The author declares that he has no conflict of interest regarding this article.

References

African Commission. (2019). Background Study on the Operations of the Extractive Industries Sector in Africa and its Impacts on the Realisation of Human and Peoples' Rights under the African Charter on Human and Peoples' Rights. Retrieved from https://achpr.au.int/en/intersession-activity-reports/working group-extractive-industries-environment-and-human-rights-3

Agarwal, S., & Ramaswami, S. N. (1992). Choice of foreign market entry mode: Impact of ownership, location and internalization factors. *Journal of International Business Studies*, *23*(1), 1–27. https://doi.org/10.1057/palgrave.jibs.8490257

Amusan, L. (2018). Multinational Corporations' (MNCs) Engagement in Africa: Messiahs or Hypocrites? *Journal of African Foreign Affairs*, *5*(1), 41–62. https://doi.org/10.31920/2056-5658/2018/v5n1a3

Arbetman-Rabinowitz, M., & Johnson, K. (2008). Power distribution and oil in the Sudan: Will the comprehensive peace agreement turn the oil curse into a blessing? *International Interactions*, *34*(4), 382–401. https://doi.org/10.1080/03050620802574911

Banza Lubaba Nkulu, C., Casas, L., Haufroid, V., De Putter, T., Saenen, N. D., Kayembe-Kitenge, T., (2018). Sustainability of artisanal mining of cobalt in DR Congo. Nature Sustainability, 1(9), 495–504. https://doi.org/10.1038/s41893-018-0139-4

Basedau, M., & Wegenast, T. C. (2009). Oil and diamonds as causes of Civil War in Sub-Saharan Africa. *Colombia Internacional*, (70), 35–59. https://doi.org/10.7440/colombiaint70.2009.02

Campbell, A. (2015, August 27). *Fuelling conflict or financing peace and development?* Country Indicators for Foreign Policy (Carlton University)**.** Retrieved from https://carleton.ca/cifp/wp-content/uploads/1050-1.pdf

Caves, R. E. (2015). *Multinational Enterprise and economic analysis*. Cambridge University Press.

Chuhan-Pole, P., Dabalen, A., Land, B. C., Lewin, M., Sanoh, A., Smith, G., & Tolonen, A. (2017). *Mining in Africa are local communities better off?* World Bank. https://doi.org/10.1596/978-1-4648-0819-7

Coulibaly, S., & Doumbia, D., Izvorski , I. (2018). *Reinvigorating Growth in Resource-Rich Sub-Saharan Africa*. World Bank. Retrieved from https://documents.worldbank.org/curated/en/617451536237967588/pdf/5-9-2018-17-9-2-SSAGrowthforweb.pdf

DNV GL Business Assurance Korea (2018, May 23). *Audit report on Congo Dongfang International Mining Sarl*. (LG Chem). Retrieved January 21, 2022, from https://www.lgchem.com/asset/doc/Audit_Report_CDM_2018.pdf

Dunning, J. H., & Lundan, S. M. (2008). *Multinational Enterprises and the global economy*. Edward Elgar. *Multinational Enterprises in Africa: Resources, Security issues and foreign investment*

Egger, P., & Winner, H. (2006). How corruption influences foreign direct investment: A panel data study. *Economic Development and Cultural Change, 54(2), 459-486*. https://doi.org/10.1086/497010

Elman, C., Gerring, J., & Mahoney, J. (Eds.). (2020). *The production of knowledge: Enhancing progress in social science*. Cambridge University Press. https://doi.org/10.1017/9781108762519

European Coalition on Oil in Sudan (2010). Unpaid Debt: The Legacy of Lundin, Petronas and OMV in Block 5A, Sudan 1997 – 2003. Retrieved from https://www.ecosonline.org/reports/2010/UNPAID_DEBT_fullreportweb.pdf Felix Ayadi, O., Ajibolade, S., Williams, J., & M. Hyman, L. (2014). Transparency and foreign direct investment into Sub-Saharan Africa: An econometric investigation. *African Journal of Economic and Management Studies*, *5*(2), 146-159. https://doi.org/10.1108/AJEMS-09-2012-0058

Fund for Peace (2021). *Fragile States Index*. Washington, D.C. The Fund for Peace. Accessed from https://fragilestatesindex.org/country-data/

Gissinger, R., & Gleditsch, N. P. (1999). Globalization and Conflict: Welfare, Distribution, and Political Unrest. *Journal of World-Systems Research*, 325–365. https://doi.org/10.5195/jwsr.1999.136

Huayou Cobalt (2021). About us: Create customer value, lead industrial development. Retrieved from http://en.huayou.com/about.html?introId=29

Human Rights Watch. (2003, November 24). *Sudan, oil, and human rights*. Retrieved January 19, 2022, from https://www.hrw.org/report/2003/11/24/sudan-oil-and-human-rights

Idemudia, U., Tuokuu, F. X. D., & Essah, M. (2022). The extractive industry and human rights in Africa: Lessons from the past and future directions. *Resources Policy*, *78*, 102838. https://doi.org/10.1016/j.resourpol.2022.102838

Kalia, R. (1982). Multinational Corporations and the Third World. *India Quarterly*, *38*(3-4), 357-365. https://doi.org/10.1177/097492848203800307

Kolk, A., & Lenfant, F. (2012). Multinationals, CSR and partnerships in Central African conflict countries. *Corporate Social Responsibility and Environmental Management*, *20*(1), 43–54. https://doi.org/10.1002/csr.1277

Lundin Energy Inc. (2021). *Fuelling the energy transition*. Retrieved from https://www.lundin-energy.com/

Lundin Energy Inc. (2021, November 11). *Swedish Prosecution Authority brings charges in relation to Company's past operations in Sudan*. [Press Release]. Retrieved from https://www.lundinsudanlegalcase.com/swedish-prosecution-authority-brings-charges-in-relation-to-companys-past-operations-in-sudan/

Mate, K. (2002). Communities, Civil Society Organisations and the management of mineral wealth. *London: International Institute for Environment and Development (IIED) No*, *16*.

Nelson, J. (2000). *The Business of Peace: The private sector as a partner in conflict prevention and Resolution*. Prince of Wales Business Leaders Forum.

OECD (2014, November). Baseline study two: Mukungwe artisanal mine, South Kivu, Democratic Republic of Congo. Retrieved from https://www.oecd.org/daf/inv/mne/Gold-Baseline-Study-2.pdf

Paine, J. (2016). Rethinking the conflict "resource curse": How oil wealth prevents center-seeking civil wars. *International Organization*, *70*(4), 727–761. https://doi.org/10.1017/S0020818316000205

Park, B. I., & Roh, T. (2019). Chinese multinationals' FDI motivations: suggestion for a new theory. *International Journal of Emerging Markets*, *14*(1), 70-90. https://doi.org/10.1108/IJoEM-03-2017-0104

Patey , L. A. (2006, April). *Understanding Multinational Corporations in War-torn Societies: Sudan in Focus*. [Policy Brief]. Danish Institute for International Studies. Retrieved from https://www.diis.dk/en/research/understanding-multinational-corporations-in-war-torn-societies

Patey, L. A. (2010). Crude days ahead? oil and the resource curse in Sudan. *African Affairs*, *109*(437), 617–636. https://doi.org/10.1093/afraf/adq043

Project Management Institute. (2017). A guide to the Project Management Body of Knowledge: Pmbok guide. *Multinational Enterprises in Africa: Resources, security issues and foreign investment*

Reiter, S. L., & Steensma, H. K. (2010). *Human development and foreign direct investment in developing countries: the influence of FDI policy and corruption*. World development, 38(12), 1678-1691. https://doi.org/10.1016/j.worlddev.2010.04.005

Root, F. R. (1990). The Nature and Scope of Multinational Enterprise. In *International Trade and Investment*. essay, South-Western Publishing.

Ross, M. L. (2004). What do we know about natural resources and civil war?. *Journal of peace research*, *41*(3), 337-356. https://doi.org/10.1177/0022343304043773

Simons, P., & Macklin, A. [V. N. V. (2014). *The governance gap: Extractive Industries, human rights, and the home state advantage*. Routledge.

Swedish Prosecution Authority. (2021, November 11). *Prosecution for complicity in Grave War Crimes in Sudan*. Åklagarmyndigheten. Retrieved January 19, 2022, from https://www.aklagare.se/en/media/press-releases/2021/november/prosecution-for- complicity-in-grave-war-crimes-in-sudan/

Udofia, O. E. (1984). Imperialism in Africa: A Case of Multinational Corporations. *Journal of Black Studies*, *14*(3), 353–368. https://doi.org/10.1177/002193478401400305

UN (2001, April 12). Report of the Panel of Experts on the Illegal Exploitation of Natural Resources and Other Forms of Wealth of DR Congo. Retried from https://reliefweb.int/report/democratic-republic-congo/report-panel-experts-illegal- exploitation-natural-resources-and

Vadlamannati, K. C., Janz, N., & de Soysa, I. (2020). U.S. multinationals and human rights: A theoretical and empirical assessment of extractive versus nonextractive sectors. *Business & Society*, *60*(8), 2136–2174. https://doi.org/10.1177/0007650320928972

Wettstein, F. (2010). The duty to protect: Corporate complicity, political responsibility, and Human Rights Advocacy. *Journal of Business Ethics*, *96*(1), 33–47. https://doi.org/10.1007/s10551-010-0447-8

Whetho, A. (2014). *Natural Resources, profit and peace: Multinational corporations and conflict transformation in the Democratic Republic of Congo* (dissertation). University of Kwazulu-Natal.

Yeboua, K. (2021). Foreign direct investment and economic growth in Africa: New empirical approach on the role of institutional development. *Journal of African Business*, *22*(3), 361-378. https://doi.org/10.1080/15228916.2020.1770040

Technological entrepreneurship readiness: An analysis across BRICS countries

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Abstract

Technological entrepreneurship presents opportunities for accelerated growth during the Fourth Industrial Revolution and assessing the readiness for such entrepreneurship would be important to investors (interested in profit) and governments (interested in economic growth). The aim of the study was to assess and rank the BRICS (Brazil, Russia, India, China, and South Africa) countries on their level of technological entrepreneurship readiness, so as to direct investor funding or, alternatively, guide government initiatives. Data that was collected in Brazil, Russia, India, China, and South Africa, for the World Values Survey, was used in the study (N=13 895). Mean and composite scores linked to entrepreneurship, as well as the embracement of technology, were compared across countries. These were combined to generate a score used to rank the countries. With each of the individual as well as the composite variables, significant differences were found across the BRICS countries. China was rated the highest on attitudes towards science, while South Africa was rated highest on the openness to entrepreneurship. On the composite score, technology entrepreneurship readiness, China scored the highest. China was ranked as the BRICS country that is most viable for technology entrepreneurship. Technology investors should, thus, consider directing their venture capital eastward. The governments of the other countries should take note of their shortcomings and the results could inform policies to enhance their readiness. The results, at a theoretical level, provided some insights into the conceptualisation of technology-related entrepreneurship.

Keywords: technology, entrepreneurship, readiness, BRICS, investments.

Introduction

Technological entrepreneurship is changing the world's economy and is playing a leading role in several markets. Recent developments in the global economy, in which fourth industrial revolution technologies have disrupted old business models and introduced new ones (Chalmers, Mckenzie, & Carter, 2021; Kruger & Steyn, 2020), have increased the need for more technology-driven entrepreneurship in emerging economies to stay relevant and competitive (Chalmers et al., 2021; Kruger & Steyn, 2020). Venkataraman (2004) posits that technological entrepreneurship could transform a region's economic competitiveness and wealth generation capacity. However, a region's capability to extract such benefits is largely determined by the robustness of its entrepreneurship support environment, which serves as an indicator of its appetite for entrepreneurship in general (Elia, Margherita & Passiante, 2020), as well as the population's readiness for new scientific knowledge and technology (Schwab & Zahidi, 2020).

Technological entrepreneurship is a broad concept and a unique form of entrepreneurship. According to Hemphill (2005), technology entrepreneurship is a sub-dimension of entrepreneurial economic activity. It covers "finding high-value possibilities, assembling the necessary resources to exploit the

opportunities, assuming/managing high risks, and rapid growth utilising principled decision-making" for both start-up and established organisations (Venter & Urban, 2015, p.12-13). Its distinctiveness stems from its dependence on scientific ideas and the identification of high-potential, technology-intensive business possibilities for creating and capturing value. Technology entrepreneurs are influential in a wide range of areas in the Unites States of America's economy and they presently drive the United States economy, with companies such as Tesla, Facebook and Amazon investing billions of dollars in artificial intelligence, biotechnology, software and communications (Fukuda, 2020; Knuth, 2018; Rimmer, 2018; Rikap, 2020). Technological entrepreneurs contribute immensely to an economy's international competitiveness through the innovations they generate (Abbas, 2018).

A key factor in the development of technology-driven entrepreneurship is the Fourth Industrial Revolution (4IR), which can be described as a marked technological shift that has transformed how people live, work and interact with each other (Naudé, 2018). Its impact on technological entrepreneurship has been widely discussed in the literature. While some researchers argue that 4IR technologies have the potential to create new business models and entrepreneurial opportunities (Kruger & Steyn, 2020), others suggest that the fast-paced nature of the technological changes associated with the 4IR may also pose significant challenges for entrepreneurs. For instance, in a recent study, Abdullahi, bin Jabor, and Akor (2020) highlight the importance of adaptive entrepreneurial skills and the ability to quickly adjust to changing market conditions, to successfully navigate the complexities of the 4IR landscape. Similarly, Mpofu and Nicolaides (2019) underscore the need to be aware of the ethical implications of emerging technologies and the potential impact of these technologies on society. Overall, the 4IR is reshaping the entrepreneurial landscape, and creating both opportunities and challenges for aspiring entrepreneurs.

The technological revolution driven by technology entrepreneurs, which has resulted in novel technologies such as 3D printing, 5G, nanotechnology, robotics, drones, renewable energy, artificial intelligence, virtual reality, the internet of things, blockchain technology, big data analytics and e-commerce, provides business with opportunities to improve productivity, efficiency, and better ways to compete and create value in markets (Kruger & Steyn, 2020; Schwab & Zahidi, 2020). Firms' performance results over the last two decades suggest that technology-driven entities perform impressively on the NASDAQ and NYSE (Jashari & Jusufi, 2020; Hansda & Ray, 2002). Such firms typically do well because of their capacity to produce fast returns in markets (Zhou, 2007). The success of technology-driven entrepreneurship, as exemplified by the Silicon Valley model, has increased venture capitalists' interests in investing in technology entrepreneurship projects over the years, due to the high potential for economic yields (Audretsch, 2021; Fairlie & Chatterji, 2013; Ibrahim, 2009). According to the United Nation's Conference on Trade and Development (UNCTAD) (2020) Technology and Innovation Report, the disruptive technologies arena "represent a $350-billion market, and one that by 2025 could grow to over $3.2 trillion" (p. 18) and, therefore, presents lucrative opportunities for growth-oriented economies such as those of the BRICS (Brazil, Russia, India, China and South Africa) countries.

Technological entrepreneurship, however, is less common in the less economically developed nations and such communities have not profited greatly from it (Ignatov, 2020; Irene, 2019). Thus, some BRICS countries perform better than others in entrepreneurship. According to the Global Entrepreneurship Development Institute (GEDI) (2022), which measures the quality and dynamics of entrepreneurship across 137 countries based on 14 pillars, China ranked the highest among the BRICS countries in 31st place, followed by Russia in 41st, South Africa in 49th, Brazil in 59th, and India in 63rd place. There is a perception that support for start-up technopreneurs, from the different entrepreneurial ecosystem actors (government, venture capitalists and support services providers, among others), in emerging countries is insufficient, which is used as an explanation

for slow growth (Lowe, 2016; Shabrina, Santoso & Alfanisa, 2019). According to UNCTAD (2020), the potential for frontier technology-related economic activity, in less developed countries, is limited by lower technology and innovation capacities, weak research and development financing mechanisms, and strict intellectual property rights and technology transfer restrictions imposed by developed countries.

With BRICS countries mainly having developing economies, citizens and countries must show that they are receptive to technology-driven entrepreneurship to potential funders. Unlike in industrialised economies where empirical data on technological entrepreneurship preparedness is readily available (Yeganegi, Laplume & Dass, 2021), it is less so in emerging economies. As a result, only a limited understanding of how much technology entrepreneurship is practised or anticipated in BRICS is available. This leaves a hole in the knowledge base, which this study tries to fill. The study results will afford researchers, governments and other interested economic actors the opportunity to gain a more nuanced understanding of the scope and readiness of different geographical areas for technology-related entrepreneurship. Considering this background, the primary purpose of the present study is to evaluate the extent of technological entrepreneurship readiness in BRICS countries and how it varies across the bloc's members, using the World Values Survey (Wave 6) data.

BRICS countries were selected over other emerging countries as they are aligned by treaties (Garcia, 2017), their comparable development trends and they have the potential to become a major economic bloc outside of the G7 countries (Canada, France, Germany, Italy, Japan, the United Kingdom and the United States). It is forecasted that by 2050, the economies of these nations are predicted to outperform those of the G7 countries (Kwenda, 2018).

The remainder of this paper is divided into four sections. First, the existing literature on the subject is examined. This is followed by a description of the study's research design and methods. The study's results are then presented and analysed. Thereafter, the paper concludes with a discussion of the theoretical and practical implications, as well as future research areas.

Literature review

An overview of the BRICS

The BRICS (Brazil, Russia, India, China and South Africa) are a collection of countries that span three continents. The group was founded in 2009 as BRIC, but was renamed BRICS in 2011 after the addition of South Africa (Cooper, 2016). The bloc came together because of several factors, including economic liberalisation and the need to protect countries' sovereign rights around the world (Prabhakar, 2011). Goldman Sachs originated the term after predicting that by 2050, these countries' economies would jointly beat the G7. The G7 countries have a total population of about 0.8 billion and the countries have controlled 27% of global GDP and 15% of global GDP growth between 2012 and 2022 (World Economics, 2023). The BRICS countries hoped to use their large population (43% of the global population) and economic clout (controlling 18% of global trade and 20% of global gross domestic income, 55% in purchasing power; treble growth in foreign direct investment in the countries) as a delicate defensive shield against US geopolitical hegemony, while also ensuring multipolarity (Makin & Arora, 2014). The remarkable growth of the Chinese economy has made it a significant player in global politics and soft power, challenging the traditional dominance of the G7 countries in the global order.

According to Laidi (2012), despite this, the bloc has remained relatively weak as its members have been overly focused on narrow national interests and a general climate of suspicion exists between some members (China against Russia) due to historical reasons. China has also emerged as the

grouping's single most prominent partner due to its population size, military force, economic weight, international influence, worldwide presence and involvement. According to Thakur (2014), the bloc's goals are complicated by the members' diverse interests, values and policy preferences. Moreover, concerns have been raised about the group's ability to simultaneously promote its own economic interests and those of developing countries. Despite the challenges that the BRICS countries face, and the fact that economic dominance is not guaranteed for them unless they implement drastic economic policies (Cheng, Gutierrez, Mahajan, Shachmurove & Shahrokhi, 2007), their current and future impacts on the global economy cannot be overlooked. This necessitates a further study of socio-economic activity in the bloc to reach a better understanding. Table 1 provides an overview of some key statistics relating to the BRICS countries' economic, social, science and technological situation. Further details are provided in the subsequent sections.

Table 1: BRICS countries compared on population size, GDP, R&D spend and ratings on ease of doing business and technology readiness

Country	% of world population[a]	GDP per capita[b]	% R&D spend per GDP[c]	Ease of doing business global ranking[d]	Frontier technologies readiness index[e] (and ranking [f]
Brazil	2.7%	8 754	1.3%	124	0.65 (41)
Russia	1.9%	11 584	1.0%	29	0.75 (27)
India	17.3%	2 054	0.7%	62	0.62 (43)
China	18.3%	10 276	2.2%	32	0.88 (15)
South Africa	0.8%	5 979	0.8%	84	0.55 (54)

a. Share of world population in 2019 (BRICS Region statistics booklet, 2020)
b. Per capita Gross Domestic Product in US dollar terms in 2019 (BRICS Region statistics booklet, 2020)
c. Research and development spend to GDP in 2019 (BRICS Region statistics booklet, 2020)
d. Ease of doing business global ranking in 2018 (The World Bank, 2018)
e. Frontier technologies readiness index (where 1 is the highest score) in 2020 (UNCTAD technology report, 2020)
f. Country ranking on frontier technologies readiness in 2020 (UNCTAD technology report, 2020)

The present literature, thus, suggests that the BRICS configuration is skewed in terms of population, with India and China being much more populated than any of the other countries. GDP per capita is skewed towards China and Russia. When considering the size of the economies (based on the product of population proportion and GDP per capita), the Chinese economy is the largest. Given this crude measure, the score for China is 188 050.8 (18.3 x 10 276), followed by India 35 534.2 (17.3 x 2 054), then Brazil 23635.8, Russia 22009.6 (1.9 x 11584) and South Africa 4783.2 (0.8 x 5979). In terms of R&D spend per GDP and technologies readiness, China outperforms all the other BRICS countries. Russia scores best on ease of doing business, with China in the second place, and South Africa and Brazil taking up fourth and fifth places, respectively.

Technology entrepreneurship (technopreneurship) and its practice in the BRICS

Understanding technology entrepreneurship (technopreneurship)

In the literature, the terms "technology entrepreneurship", "technopreneurship", "digital entrepreneurship" and "digital technology entrepreneurship" have all been used interchangeably. There are terminologies used to characterise entrepreneurship that are tied to scientific and technological innovations. Beckman, Eisenhardt, Kotha, Meyer and Rajagopalan (2012), for example, distinguish technological entrepreneurship from conventional entrepreneurship by underlining its emphasis on the development, discovery and pursuit of economic opportunities, made feasible by

scientific and technology advances. Likewise, Bailetti (2012) defines technology entrepreneurship as "an investment in a project that assembles and deploys specialised individuals and heterogeneous assets for the purpose of creating value for a firm that is intricately related to advances in scientific and technological knowledge for the purpose of creating value for a firm that is intricately related to advances in scientific and technological knowledge" (p. 9). Lastly, Mosey, Guerrero and Greenman (2017) characterise technology entrepreneurship as individuals or organisations identifying and chasing technological opportunities through the establishment of new companies. For the present study, technology entrepreneurship is described as the creation, discovery and exploitation of a market opportunity whose end-product is the development of a business, market or industry, with scientific and technological know-how supporting it.

There are contrasting perspectives on technological entrepreneurship, with some researchers arguing that it is a critical driver of economic growth and innovation, while others suggest that it may contribute to social and economic inequality. Proponents of technological entrepreneurship argue that it creates new business opportunities, fosters innovation and improves productivity. According to this perspective, technological entrepreneurship helps to develop new products and services, increases efficiency and creates new job opportunities, leading to economic growth and development (Evers et al., 2020; Jafari-Sadeghi et al., 2021; Urbano et al., 2019).

On the other hand, critics argue that technological entrepreneurship can lead to the concentration of wealth and power in the hands of a few, contributing to social and economic inequality (Kuschel et al., 2020; Broockman et al., 2019). According to this perspective, technological entrepreneurship may result in the displacement of workers, the erosion of job security and the exploitation of consumers, leading to negative social and economic outcomes (Arocena & Senker, 2003; Bruton et al., 2021). Furthermore, some researchers argue that technological entrepreneurship may also have negative environmental impacts. For example, the increasing use of technology may lead to higher energy consumption and increased carbon emissions, contributing to climate change (Cohen & Winn, 2007; Dean & McMullen, 2007). Although technological entrepreneurship has the potential to drive economic growth and innovation, it is important to consider its potential social, economic and environmental impacts. Policymakers and entrepreneurs need to carefully consider the potential consequences of technological entrepreneurship and take steps to mitigate negative impacts, while promoting the positive ones.

Technopreneurship is credited with boosting economic activity in industrialised nations and comparable evidence has been found in some of the BRICS countries (Ignatov, 2020; Lazanyuk & Revinova, 2019; Popkova, Inshakova & Sergi, 2021). Considering this, it has become increasingly difficult to underestimate the importance of technology entrepreneurship as a source of economic growth, and its ability to effect deep and long-term societal changes (Beckman et al., 2012). In the next subsections, an outline of technopreneurship in the BRICS economic group is provided.

Technology entrepreneurship in Brazil

The importance of technology entrepreneurship in the Brazilian economy is demonstrated by scholarly literature on the subject. For example, Marques, de Oliviera, Andrade and Zambalde (2019) explain how all federal institutions in the state of Minas Gerais have invested in technological innovation centres to help the commercialisation of ideas. Moreover, given the high degree of internet connectivity and big number of tech-savvy customers in the country, the country is an essential investment location for high-tech enterprises (Stanford University, n.d.). Siluk, Garlet, Marcuzzo, Michelin and Minello (2018), on the other hand, suggest that technology-based investments in Brazil are unrelated to the country's GDP and Human Development Index. According to the researchers, the country's technopreneurs move into areas where both local and international demand is very

low, and their approaches are built on copying worldwide success stories without paying enough attention to local market quirks. Furthermore, the country's technological enterprises are hampered by a lack of resources and a high level of informality.

Technology entrepreneurship in Russia

Russia is a central player on the global arena with the country having one of the world's biggest economies (after USA and China) and a GDP (current US$) of $1.687 trillion in 2019 (World Bank, 2021). Its transition from a centrally planned economy, since 1989, saw an increase in the number of technology-based entrepreneurial firms in the country (Bruton & Rubanik, 1997). These ventures rode on the country's strength as a historical source technological innovation. Its path towards technology was reinforced by the country's then Prime Minister's "Go Russia" programme, which outlined Russia's national technopreneurship agenda (OC&C Strategy Consultants, 2018). Despite the country's lofty goal of modernising its economy, foreign investments in the country's technology sector have been hampered by the country's historical culture of over-regulation and secrecy (e.g., IBM's abandonment of manufacturing in Russia) (Banerjee, 1996). As a result, investors are wary of the country's risk and technology entrepreneurs' access to capital is restricted. According to OC&C Strategy Consultants (2018), Russia's technology entrepreneurship ecosystem is behind that of advanced European economies, with room for improvement in "start-up density, entrepreneurial growth aspirations, job creation expectations, and contribution of the knowledge sectors to the economy" (p. 20).

Technology entrepreneurship in India

India is ranked 77th out 190 countries on the Ease of Doing Business Index in 2019 (World Bank, 2022). Although the Global Entrepreneurship Monitor (2021) reports that India's total early-stage entrepreneurial activity (TEA) declined drastically from 15% in 2019 to 5.3% in 2020 for an unknown reason, the country's largely entrepreneurial economy is technologically strong and well-connected to the global economy, making it a conducive destination for technology entrepreneurs. In 2015, its IT industry accrued revenues of US $145 billion, the IT services sector accumulated US $40 billion, and engineering, research and development services exported US $10 billion worth of services in the same year (Meil & Salzman, 2017). Khan and Khumar (2019) contend that India's automotive sector is suitable to technopreneurship because of growing demand for technology products, strong legislative support, a conducive infrastructure and considerable investments in the country. Moreover, India's ambitious science, technology and innovation agenda also fosters technology entrepreneurship by aiming to increase the country's knowledge networks, infrastructure and commercial investment (Tripathi & Brahma, 2018).

Technology entrepreneurship in China

China is the most powerful actor in the global economy among the BRICS countries. In 2021, the country accounted for 18% of world GDP (National Bureau of Statistics, 2021), closing the gap on the United States. Despite the country's central planning economy, entrepreneurship is a popular career choice among the country's young and educated, particularly with entrepreneurs returning from economically advanced countries to start technological businesses (Ahlstrom & Ding, 2014). Entrepreneurship gained popularity in the country from 1978, following the adaptation of the "Reform and Opening-Up" policies in 1978 (He, Lu & Qian, 2019). Technology entrepreneurship in China is spurred by the country's policy to incentivise the establishment of technology-oriented enterprises in specified sites, such as research parks and technology business incubators (Yu, Stough & Nijkamp, 2009). Notably, foreign investors are funding scientific parks and technological incubators

(Chien & Gordon, 2008). Such businesses, through producing export-oriented commodities, drive China's competitiveness in the global economy. According to Zhang, Peng and Li (2008), there are regional variances in technological entrepreneurial activity across the country, which they attribute to various economic policies in different provinces.

Technology entrepreneurship in South Africa

According to the World Bank (2021), South Africa's economy ranks third on the African continent, behind Nigeria and Egypt, with a nominal GDP of US $329.6 billion. However, its GDP per capita is 77% lower than that of the Organisation for Economic Cooperation and Development (OECD)'s top performers (OECD, 2021). The country has the most advanced economy on the African continent, with several high-tech firms controlled by both domestic and foreign investors. Historically, however, rates of technological entrepreneurship in South Africa have varied, reflecting the uneven distribution of technology (Koekemoer & Kachieng'a, 2002). Cities and industrialised areas have a high concentration of technological entrepreneurship, with some of these cities having world-class technology and innovation clusters. The drive for technological entrepreneurship is part of the country's National Development Plan, which aims to raise the living conditions of ordinary people (OC&C Strategy Consultants, 2018). According to OC&C Strategy Consultants, South Africa's technological entrepreneurship environment is robust and superior to that of many other emerging economies, due to significant government support and several initiatives aimed at encouraging technology entrepreneurship.

South Africa's entrepreneurship development strategy is focused on creating an enabling environment for entrepreneurship through policy and institutional support, funding programmes and incentives, and incubation and acceleration programmes. One of the key strategies is the National Development Plan (NDP), which identifies entrepreneurship as a critical driver of economic growth and job creation. The NDP outlines specific goals and targets for promoting entrepreneurship, including increasing the number of new business start-ups and reducing the failure rate of new businesses. In addition to the NDP, the South African government has established various institutions and initiatives to support entrepreneurship. For example, the Small Enterprise Development Agency (SEDA) provides business development services and support to small and medium-sized enterprises (SMEs), while the National Youth Development Agency (NYDA) focuses on supporting youth entrepreneurship. The government has also implemented various funding programmes and incentives to support entrepreneurial activity, including tax incentives for small businesses, funding for research and development, and grants and loans for SMEs. Lastly, South Africa has established various incubation and acceleration programmes to support the growth and development of start-ups. For example, the Technology Innovation Agency (TIA) provides funding and support to technology start-ups, while the Innovation Hub is a science and technology park that provides incubation and acceleration services to innovative start-ups. While there have been some successes, challenges, such as access to funding, lack of skills and limited access to markets, still remain and require continuous effort and improvement.

Contribution of attitude to science and technology/technology readiness

The target population's attitude towards science and technology to technology readiness were linked in this study. The term "technology readiness" is used in the literature to characterise a person's willingness to adopt new science and technology (Blut & Wung, 2018). It is the culmination of a series of mental processes that result in the establishment of negative or positive attitudes about science and technology matters (Parasuraman & Colby, 2015). Overall, technological readiness is a changing

trait-like feature shaped by a scenario that separates people, depending on their predisposition to engage with science and technology.

Although the term "technology readiness" is extensively used, researchers dispute over its dimensionality, with some claiming it is a unidimensional factor and others suggesting it is multidimensional. Some researchers have employed numerous indicators to create a single technological readiness index that disregards the proportionate contributions of the many components to the whole (Vize, Coughlan, Kennedy & Ellis-Chadwick, 2013).

Alternatively, Parasuraman and Colby (2015) regard technological readiness as comprising four components, namely, optimism (a positive attitude towards technology and benefits), innovativeness (an inclination to initiate and adopt new technology), discomfort (sense of uneasiness and anxiety with using technology) and insecurity (lack of trust in technology, often emanating from fear of potentially negative consequences, which may result from using technology). Blut and Wang (2018) elect to reduce the dimensions identified by Parasuraman and Colby into two dimensions i.e., enablers (innovativeness and optimism) and inhibitors (discomfort and insecurity).

Technology readiness is economically significant since it indicates a society's potential as an investment destination for technology-driven ventures, as well as a prospective market for cutting-edge technology products (Kayalvizhi & Thenmozhi, 2018; Popovici & Călin, 2015). The World Economic Forum considers the technology readiness index to be a key factor in assessing a country's or regions national competitiveness. The aim of the study was to contribute to the literature by examining the condition of technological readiness from a values standpoint. The uniqueness of this approach is that a value systems-driven analysis of society's attitudes towards science and technology provides insightful information into what motivates various feelings towards technology-related issues, such as technopreneurship and artificial intelligence. Furthermore, such research yields insights that can be used to segment consumers of science and technology-related products into sub-markets based on common values. According to Cormick and Romanach (2014), such a customer categorisation provides more nuanced insight into forecasts of different people's attitudes towards economic activities related to frontier technologies than other socio-economic indices provided by government departments, economic think-tanks or global bodies.

Openness to entrepreneurship

The importance of greater entrepreneurial activity in any region cannot be overstated. Entrepreneurs have long been recognised as economic change agents capable of introducing innovations that drive economic growth and social development in an area through creative destruction (Spencer & Kirchhoff, 2006). The openness to entrepreneurship factor is an important component in the development of entrepreneurial activity in an area, since it increases their ability to see possibilities (Antoncic, Antoncic, Grum & Ruzzier, 2018). In this study, the term referred to the receptivity of a nation's inhabitants to enterprise issues. Numerous earlier studies, from a psychological standpoint, have verified the favourable relationship between having an openness to change attribute and being responsive to entrepreneurship (Santoro, Quaglia, Pellicelli & De Bernardi, 2020; Hachana, Berraies & Ftiti, 2018; Dai, Li & Zhang, 2019; Wood, 2012). Other scholars have also provided evidence on how the openness trait in individuals factor has influenced regional variations in entrepreneurship rates (Obschonka, Lee, Rodríguez-Pose, Eichstaedt & Ebert, 2020). From a values perspective, Liñán, Moriano and Jaén (2016) postulate that openness to change values are integral to entrepreneurial activity. Although the link between the openness factor and entrepreneurship activity is acknowledged in the literature, this body of scholarly work is still emerging and has unexplored areas. In this study, a methodological contribution is provided by investigating this link using a values-based dataset from the World Values Survey on the BRICS countries. According to

preliminary information, the five countries differ in their desire for entrepreneurship as well as their entrepreneurial performance. For example, the entrepreneurship development rankings in the five nations based on the 2018 global entrepreneurship index are as follows: China=43, South Africa=58, India=68, Russia=78 and Brazil=98 (Global Entrepreneurship Development Institute, 2022), where a lower value suggests a better performance.

Method

In this section, the study's design, procedure, measurement instruments used, appropriate statistical techniques and ethical considerations are all explained.

Design

This study is based on data obtained from the interviews conducted by the World Values Survey (WVS) Wave 6 in Brazil, Russia, India, China and South Africa (BRICS). The data used was cross-sectional data. Only numerical information was examined. The study's main goal of the analysis was to perform an inter-country comparison of the respondents' openness to entrepreneurship and the respondents' attitudes to science and technology, which when combined, could act as a proxy for technological entrepreneurship readiness in the respective countries.

Measurement

a) *Openness to entrepreneurship (OtE)*: Items V96, V98 and V99 on the WVS (6th Wave) were used to measure the variable. Participants were requested to respond to three ipsative questions. The preamble to the questions read as follows: "How would you place your views on this scale? 1 means you agree completely with the statement on the left; 10 means you agree completely with the statement on the right; and if your views fall somewhere in between, you can choose any number in between". Presented below, are the three competing questions:

- V96: Incomes should be made more equal – we need larger income differences as incentives for individual effort.
- V98: The government should take more responsibility to ensure that everyone is provided for – people should take more responsibility to provide for themselves.
- V99: Competition is good. It stimulates people to work hard and develop new ideas – competition is harmful. It brings out the worst in people.

It can be observed, from the above, that for each indicator item, respondents had to make forced choices or show a preference for one of two seemingly desirable options. V99 was recoded, as a higher score there represented an un-entrepreneurial attitude. A composite score was calculated to capture this concept, with the process as discussed in the procedure section, and this composite variable was called "Openness to entrepreneurship".

b) *Attitude towards science and technology (AtST)*: This variable was measured using items V192, V193 and V197, which were presented in Likert scale form. Respondents were required to indicate how much they agreed or disagreed with the list of statements. For these questions, as per the WVS code book, 1 means that you completely disagree and 10 means you completely agree with the statement.

- V192: Science and technology are making our lives healthier, easier and more comfortable.
- V193: Because of science and technology, there will more opportunities for the next generation.

- V197: The world is better off or worse off, because of science and technology.

From the above, it is clear if the latent variable measured by the items above is a positive attitude towards science and technology. A composite score was calculated to capture attitude towards science and technology, as discussed in the procedure section, and this variable was called "Attitude towards science and technology".

Procedure

Since the aim of the study was to conduct an inter-country comparison on the BRICS countries data, mean scores on the different variables were presented, as well as tests of the difference of means, viz analysis of variance (ANOVA) and post-hoc tests. Questionnaire items V192, V193 and V197 were combined to create a composite score for attitude to science and technology; V96, V98 and V99 (reverse coded) were combined to create the composite score for openness to entrepreneurship. It was argued, from wording of the items, that the composite scores would be a more comprehensive representation of the constructs than the individual items. Composite scores were created by weighting all items with 1, which was acceptable given that the range of all items was between 1 and 10. This composite score, where items are weighted by 1, was proven as an extremely effective strategy across contexts (Bobco, Roth & Buster, 2007), and endorsed by the respectable authors, Cascio and Aguinis (2011).

Apart from the two composites scores created for openness to entrepreneurship and attitude towards science and technology, a grand score was also calculated, again following the example of Bobco et al. (2007), where openness to entrepreneurship and attitude towards science and technology were combined to create a "technological entrepreneurship readiness" (TER) variable.

All analyses were performed in Statistical Package for the Social Sciences (SPSS) 28 (IBM Corp, 2021). As the sample size is relatively large (N=13895), statistical significance was assumed when p-values were smaller than .001. Practical significances were also determined following the eta-squared effect size criteria. The rule-of-thumb for interpreting eta-squared is 0.01=small effect size; 0.06=medium effect size and 0.14=large effect size.

Results

The results from the study are presented as follows. First, the demographic details of the respondents are presented. The descriptive statistics for the individual items as well as the composite scores, openness to entrepreneurship, attitudes to science and technology, and technological entrepreneurship readiness then follow. The section closes with the results pertaining to cross-country differences on the composite scores (ANOVA's) and post-hoc tests.

Demographics

In total, 12656 responses were collected. The numbers of respondents per country are presented in the second row of Table 2.

In Table 2, the samples size as well as the sex and age of the respondents are presented. In terms of gender, women comprised most respondents for Brazil, Russia, China and South Africa, while men were the majority for India. The mean ages of the respondents ranged from 36 years to 46 years, with South Africa having the youngest set of respondents and Russia, the oldest.

Table 2: Sex and age across BRICS, express as percentage of the sample

	Brazil	Russia	India	China	South Africa
N	1486	2500	4075	2300	3531
Sex (% men)	37.6	44.6	56.2	49	49.96
Sex (% women)	62.4	55.4	43.8	51	50.04
Age (mean) in years	42.82	46.06	41.24	43.92	36.67
Age std deviation	16.37	17.42	14.53	14.95	14.14

Source: Author's own work

A wide variety of ethnic groups are reported across the BRICS countries and, for this reason, only the major groups will be mentioned here. In Brazil, 47.2% identified as "White/Caucasian White", 39.8% as "Mixed race" and 12.3% as "Black". In Russia, all participants identified as "White/Caucasian White". With India, 19.7% of the respondents identified "Indian - Scheduled Castes", 6.6% as "Indian - Scheduled Tribus", with the largest group being identified as "Indian - Other Backward Castes" (39.9%). The "Other" group in India was relatively large (32.1%), which suggests large diversity in the Indian sample. In China, all respondents identified as "Asian - East (Chinese, Japanese)". In South Africa, the dominant groups were "Black" at 76.5%, followed by "White" at 12.1% and "Coloured" with 8.7%.

These results suggest homogeneity across Russia and China, and much larger levels of diversity in Brazil, India and South Africa. It is well known that Russia and China are both ethnically diverse, maybe even more so than the other countries on this list; this data will not be interpreted, but is rather presented here as an interesting feature of the WVS.

In Table 3, the highest level of education obtained, across BRICS countries, is presented.

Table 3: Highest level of formal education in BRICS, express as percentage of the sample

Level of schooling	Brazil	Russia	India	China	South Africa
None	.6%	.1%	24.9%	7.6%	2.4%
Incomplete primary schooling	31.8%	.3%	9.4%	-	4.4%
Complete primary schooling	12.2%	1.4%	11.8%	23.2%	6.1%
Incomplete secondary schooling	9.9%	12.9%	16.1%	-	44.3%
Complete secondary schooling	28.5%	54.1%	24.4%	52.3%	30.5%
University education without degree	6.5%	5.3%	2.7%	-	4.8%
University education with degree	10.1%	26%	10.6%	16.9%	4.2%

Source: Author's own work

From Table 3, it can be observed that for all the five countries, most respondents completed primary schooling and can be inferred to have had reasonable levels of literacy.

Mean scores and standard deviations for the different items, as well as the three composite scores are presented below.

Table 4: Mean scores, and the standard deviations for OtE, AtST and TER

		Brazil N=1388	Russia N=2188	India N=3435	China N=2114	South Africa N=3392
V96	Mean	5.07	3.35	2.92	4.45	6.05
	SD	3.40	2.57	2.44	2.74	2.74
V98	Mean	4.01	3.11	3.36	4.65	5.77
	SD	3.17	2.61	2.80	2.65	2.69
V99	Mean	3.74	4.36	2.73	3.67	5.21
	SD	2.96	2.68	2.43	2.09	2.72
OtE	Mean	15.33	12.12	13.58	15.44	16.6
	SD	5.38	4.82	12.12	4.76	4.95
V192	Mean	7.01	7.77	7.46	8.33	7.39
	SD	2.838	2.212	2.10	1.69	1.97
V193	Mean	7.58	8.18	7.49	8.16	7.29
	SD	2.63	2.06	2.13	1.80	2.01
V197	Mean	6.31	7.75	6.90	8.33	7.08
	SD	3.028	2.049	2.29	1.410	2.09
AtST	Mean	20.81	23.88	21.85	24.82	21.84
	SD	6.47	5.32	5.49	4.22	4.70
TER	Mean	36.15	36.20	35.67	40.34	38.44
	SD	8.90	7.01	6.970	6.80	7.03

Note: OtE = Openness to entrepreneurship; AtST = Attitude towards science and technology; TER = Technological entrepreneurship readiness

Source: Author's own work

Inspection of Table 4 reveals that differences between mean scores across countries are likely. A one-way ANOVA between subjects' tests was conducted to compare the three composite scores. The results are summarised in Table 5.

Table 5: ANOVA test results (Composite scores only)

		Sum of Squares	df	Mean Square	F	Sig.
OtE	Between Groups	33151.65	4	8 287.91	379.22	<.000
	Within Groups	273446.52	12 512	21.85	-	-
	Total	306598.18	12 516	-	-	-
AtST	Between Groups	20861.58	4	5 215.39	191.19	<.001
	Within Groups	346571.86	12 705	27.27	-	-
	Total	367433.45	12 709	-	-	-
TER	Between Groups	33576.72	4	8 394.18	161.03	<.001
	Within Groups	609423.11	11 691	52.12	-	-
	Total	642999.84	11 695	-	-	-

Note: OtE = Openness to entrepreneurship; AtST = Attitude towards science and technology; TER = Technological entrepreneurship readiness

Source: Author's own work

Differences occur across mean scores, on all three composite scores, as per the ANOVA results. While assumptions on where these differences may occur can be made from Table 3, this could be tested statistically and, as such, post-hoc comparisons using the Tukey HSD test were applied. These results are not presented here but may be obtained from the first author. In sum, the Tukey HSD test revealed that on openness to entrepreneurship, the scores were different across the countries, except for Brazil and China, where the openness to entrepreneurship scores were very similar, with a mean difference -.109 (p-value .961). The result of the post-hoc test for attitude towards science and technology revealed that differences among countries were across the board. Lastly, Table 4 also shows that the technological entrepreneurship readiness scores were also significantly different. An eta-squared effect size value of .052 was derived for this difference, suggesting a moderate effect size for the relationship between the variables. The post-hoc comparisons using the Tukey HSD test demonstrates that the mean score differences were not significant between the following countries: Brazil and India, as well as India and Russia.

The homogeneous subsets statistics are very useful from the SPSS outputs, which orders mean scores according to levels of similarity. These results for the technological entrepreneurship readiness variable are summarised in Table 6. From Table 5, India, Brazil and Russia fall in the same and lowest score category of technology entrepreneurship readiness based on mean scores. China is ranked with the highest score on this variable, followed by South Africa.

Table 6: Mean scores homogeneous subsets for technological entrepreneurship readiness

Country	Group 1	Group 2	Group 3
India (N=3 386)	35.67	-	-
Brazil (N=1 329)	36.15	-	-
Russia (N=1 971)	36.20	-	-
South Africa (N=3 263)	-	38.44	-
China (N=1 747)	-	-	40.34
Sig.	.125	1.000	1.000

Note: Means for groups in homogeneous subsets are displayed. The group sizes are unequal. The harmonic mean of the group sizes is used. The harmonic mean sample size = 2 054.22. Type I error levels are not guaranteed.

Source: Author's own work

Discussion of results

The high expectations for BRICS countries' future contributions to the global economy have prompted academics and other stakeholders to focus on the probable causes of this economic rise. Rather than relying just on statistics from economic development organisations to judge these countries' economic prospects, more nuanced information can be acquired by using values-based empirical data on people's attitudes toward and impressions of economic realities. This study examines the five countries' openness to entrepreneurship, and attitudes towards science and technology using WVS data to highlight the BRICS region's potential as a potential investment destination for technopreneurs and providers of technology entrepreneurship venture capital. The total score for openness to entrepreneurship, as well as attitudes towards science and technology, was used to rank the five countries on their technological entrepreneurship readiness.

All the countries had significantly different mean scores for attitudes towards science and technology, with China ranked first, followed by Russia, India, South Africa and then Brazil. This result supports the BRICS body's 2020 estimates, which show China and Russia as the BRICS bloc's leading countries

in terms of frontier technology readiness. While the BRICS data ranks Brazil just behind China and Russia on frontier technologies readiness, the WVS data suggests that it is the country with the worst attitude towards science and technology in the BRICS bloc. However, all the countries studied scored higher than the average, indicating that their populations had generally positive attitudes about science and technology. This illustrates that, despite some countries being more friendly than others, societal values in all BRICS countries are amenable to science and technology-related economic development. This analysis backs up prior observations that demonstrate a high degree of interest in science and technology issues among most of the BRICS countries (Tripathi & Brahma, 2018; Marques et al., 2019; Yu et al., 2009). Given that more than half of the Brazilian respondents did not complete their secondary education, the positive result for that country is somewhat reassuring for supporters of technology-based progress. If one assumes that a higher degree of education equates to greater exposure to scientific and technology concerns, more positive attitudes about science and technology would be expected in countries with better educated respondents and *vice versa*.

In terms of entrepreneurship openness, the pattern of mean scores showed that South Africa was ranked first, followed by China, Brazil, India and Russia. The mean scores for the variable differed significantly between countries. Surprisingly, just three nations (South Africa, China and Brazil) scored higher than the median in terms of their citizens' openness to enterprise issues. Thus, based on the values reflected in the WVS data, Russia and India can be characterised as the least supportive investment destinations for general entrepreneurship. This result was unexpected and perhaps contradicts the World Bank's 2018 Ease of Doing Business rating, which ranks Russia second only to China among the BRICS countries, in terms of having a business-friendly climate. In terms of ease of doing business, India ranks higher than South Africa and Brazil, according to the World Bank. It is possible that, while policymakers in Russia and India are devoted to establishing a favourable climate for investors, the local people's values are incompatible with an entrepreneurial way of life.

Over and above the rankings for openness to entrepreneurship, and attitude towards science and technology, all five countries indicated above-average readiness for technological entrepreneurship. China, however, displayed the most preparedness, followed by South Africa. The remaining countries examined fell into the same homogeneous subset, even though Russia was the most prepared in that group, followed by Brazil and then India. The study's results support prior research that accentuates China's leading position as a favourable destination for technological entrepreneurship. China's domination over all other countries was expected given that, according to the BRICS (2020), the country has invested far more in research and development than any other BRICS country. Furthermore, data in the literature suggests that China has a stronger technological entrepreneurship ecosystem than the other countries (He, 2019; Yu, 2009). South Africa's strong result was somewhat surprising, given that the country trails some BRICS countries on ease of doing business, frontier technological capabilities and competitiveness. One probable explanation could be that the government's entrepreneurial strategy resonates with the majority of the unemployed and/or self-employed population throughout the years, hence the positive result.

Conclusion and implications

The BRICS bloc is predicted to be a major economic force on the global scene by 2050. Arguably, an integral driver of this rapid economic expansion in the individual countries in the group is the nature and extent of entrepreneurial activity. Considering this, the economies with the most intense entrepreneurial activity are expected to emerge as key players in the economic development of this grouping. The outcome of the present study suggests that the BRICS countries have different degrees of technological entrepreneurship readiness. However, all the BRICS countries had a

reasonable level of readiness for technological entrepreneurship. China stood out as having the most favourable social values for technology entrepreneurship, making it a potentially receptive investment destination for technopreneurs.

The study's observations guide policymakers in the various BRICS countries in the right direction, in terms of where they should focus their efforts to instill a culture of openness to technology entrepreneurship among their citizens. Additionally, potential investors and technopreneurs looking to invest in the BRICS region can utilise the results of this research to determine which investment destinations are most likely to succeed. Finally, the results add to the literature on technological entrepreneurship by giving empirical information on the status of readiness for technopreneurship in the BRICS countries from a values perspective.

Although this study produced some useful conclusions for many stakeholders, it does have a key limitation. The three primary factors, attitude towards science and technology, openness to entrepreneurship and technological entrepreneurship readiness, were assessed using proxy measures that were not intended particularly to assess the variables. To improve the credibility of future studies on the same topic and context, specific and validated measurement scales should be used.

References

Abbas, A. A. (2018). The bright future of Technopreneurship. *International Journal of Scientific & Engineering Research*, *9*(12), 563-566.

Abdullahi, I. M., bin Jabor, M. K., & Akorabdula, T. S. (2020). Developing 4IR engineering entrepreneurial skills in polytechnic students: a conceptual framework. *International Journal of Innovative Technology and Exploring Engineering*, *9*(3), 2636-2642. https://doi.org/10.35940/ijitee.C8754.019320

Ahlstrom, D., & Ding, Z. (2014). Entrepreneurship in China: An overview. *International Small Business Journal*, *32*(6), 610-618. https://doi.org/10.1177/0266242613517913

Antoncic, J. A., Antoncic, B., Grum, D. K., & Ruzzier, M. (2018). The big five personality of the SME manager and their company's performance. *Journal of Developmental Entrepreneurship*, *23*(04), 1850021. https://doi.org/10.1142/S1084946718500218

Arocena, R., & Senker, P. (2003). Technology, inequality, and underdevelopment: The case of Latin America. *Science, Technology, & Human Values*, *28*(1), 15-33. https://doi.org/10.1177/0162243902238493

Audretsch, D. B. (2021). Have we oversold the Silicon Valley model of entrepreneurship? *Small Business Economics*, *56*(2), 849-856. https://doi.org/10.1007/s11187-019-00272-4

Bailetti, T. (2012). Technology entrepreneurship: Overview, definition, and distinctive aspects. *Technology Innovation Management Review*, *2*(2), 5-12. https://doi.org/10.22215/timreview/520

Banerjee, N. (1996). IBM to close two year old venture in Russia, citing onerous taxes for step. *Wall Street Journal*, February 29. p. A14.

Beckman, C., Eisenhardt, K., Kotha, S., Meyer, A., & Rajagopalan, N. (2012). Technology entrepreneurship. *Strategic Entrepreneurship Journal*, *6*(2), 89-93. https://doi.org/10.1002/sej.1134

Blut, M., & Wang, C. (2020). Technology readiness: a meta-analysis of conceptualizations of the construct and its impact on technology usage. *Journal of the Academy of Marketing Science*, *48*, 649-669. https://doi.org/10.1007/s11747-019-00680-8

Bobco, P., Roth, P. L., & Buster, M. A. (2007). The usefulness of unit weights in creating composite scores: A literature review, application to content validity, and meta-analysis. *Organizational Research Methods, 10*(4), 689-709. https://doi.org/10.1177/1094428106294734

BRICS (2020). *BRICS Joint Statistical Publication 2020*. Retrieved 8 March 2022, from https://eng.brics-russia2020.ru/images/132/34/1323459.pdf

Broockman, D. E., Ferenstein, G., & Malhotra, N. (2019). Predispositions and the political behavior of American economic elites: Evidence from technology entrepreneurs. *American Journal of Political Science*, *63*(1), 212-233. https://doi.org/10.1111/ajps.12408

Bruton, G. D., & Rubanik, Y. (1997). High technology entrepreneurship in transitional economies: The Russian experience. *The Journal of High Technology Management Research*, *8*(2), 213-223. https://doi.org/10.1016/S1047-8310(97)90003-1

Bruton, G., Sutter, C., & Lenz, A. K. (2021). Economic inequality – Is entrepreneurship the cause or the solution? A review and research agenda for emerging economies. *Journal of Business Venturing*, *36*(3), 106095. https://doi.org/10.1016/j.jbusvent.2021.106095

Cascio, W. F., & Aguinis, H. (2011*). Applied psychology in human resource management. Talent management*. Boston, MA: Pearson.

Chalmers, D., MacKenzie, N. G., & Carter, S. (2021). Artificial Intelligence and Entrepreneurship: Implications for Venture Creation in the Fourth Industrial Revolution. *Entrepreneurship Theory and Practice*, *45*(5), 1028–1053. https://doi.org/10.1177/1042258720934581.

Cheng, H. F., Gutierrez, M., Mahajan, A., Shachmurove, Y., & Shahrokhi, M. (2007). A future global economy to be built by BRICs. *Global Finance Journal*, *18*(2), 143-156. https://doi.org/10.1016/j.gfj.2006.04.003

Chien, S. S., & Gordon, I. (2008). Territorial competition in China and the West. *Regional Studies*, *42*(1), 31-49. https://doi.org/10.1080/00343400701543249

Cohen, B., & Winn, M. I. (2007). Market imperfections, opportunity and sustainable entrepreneurship. *Journal of Business Venturing*, *22*(1), 29-49. https://doi.org/10.1016/j.jbusvent.2004.12.001

Cooper, A. F. (2016). *The BRICS: a very short introduction*. Oxford University Press. https://doi.org/10.1093/actrade/9780198723394.001.0001

Cormick, C., & Romanach, L. M. (2014). Segmentation studies provide insights to better understanding attitudes towards science and technology. *Trends in Biotechnology*, *32*(3), 114-116. https://doi.org/10.1016/j.tibtech.2013.12.005

Dai, S., Li, Y., & Zhang, W. (2019). Personality traits of entrepreneurial top management team members and new venture performance. *Social Behavior and Personality: An International Journal*, *47*(7), 1-15. https://doi.org/10.2224/sbp.8107

Dean, T. J., & McMullen, J. S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of Business Venturing*, *22*(1), 50-76. https://doi.org/10.1016/j.jbusvent.2005.09.003

Elia, G., Margherita, A., & Passiante, G. (2020). Digital entrepreneurship ecosystem: How digital technologies and collective intelligence are reshaping the entrepreneurial process. *Technological Forecasting and Social Change*, *150*, 119791. https://doi.org/10.1016/j.techfore.2019.119791

Evers, N., Cunningham, J., & Hoholm, T. (2020). *Technology entrepreneurship: bringing innovation to the marketplace*. Bloomsbury Publishing.

Fairlie, R. W., & Chatterji, A. K. (2013). High-technology entrepreneurship in Silicon Valley. *Journal of Economics & Management Strategy*, *22*(2), 365-389. https://doi.org/10.1111/jems.12015

Friederici, N. (2018). *Hope and hype in Africa's digital economy: the rise of innovation hubs*. Boston, MA: MIT Press. https://doi.org/10.7551/mitpress/10890.003.0019

Fukuda, K. (2020). Science, technology and innovation ecosystem transformation toward society 5.0. *International Journal of Production Economics*, *220*, 107460. https://doi.org/10.1016/j.ijpe.2019.07.033

Garcia, A. (2017). BRICS investment agreements in Africa: More of the same? *Studies in Political Economy*, *98*(1), 24-47. https://doi.org/10.1080/07078552.2017.1297018

Global Entrepreneurship Development Institute (2022*). Entrepreneurship & Business Statistics*. Retrieved 8 May 2023, from http://thegedi.org/global-entrepreneurship-and-development-index/

Global Entrepreneurship Monitor, (2021). Global Entrepreneurship Monitor 2020/2021. Retrieved 8 March 2022, from https://www.gemconsortium.org/report/gem-2019-2020-global-report

Hachana, R., Berraies, S., & Ftiti, Z. (2018). Identifying personality traits associated with entrepreneurial success: Does gender matter? *Journal of Innovation Economics Management, 3*, 169-193. https://doi.org/10.3917/jie.027.0169

Hansda, S. K., & Ray, P. (2002). BSE and Nasdaq: Globalisation, information technology and stock prices. *Economic and Political Weekly*, 459-468.

He, C., Lu, J., & Qian, H. (2019). Entrepreneurship in China. *Small Business Economics*, *52*(3), 563-572. https://doi.org/10.1007/s11187-017-9972-5

Hemphill, T. A. (2005). National technology entrepreneurship policy: foundation of a network economy. *Science and Public Policy*, *32*(6), 469-478. https://doi.org/10.3152/147154305781779254

Ibrahim, D. M. (2009). Financing the Next Silicon Valley. *Washington University Law Review, 87*, 717.

Ignatov, A. (2020). The digital economy of BRICS: Prospects for multilateral cooperation. *International Organisations Research Journal*, *15*(1), 31-62. https://doi.org/10.17323/1996-7845-2020-01-02

Irene, B. N. O. (2019). Technopreneurship: A discursive analysis of the impact of technology on the success of women entrepreneurs in South Africa. In N. Taura, E. Bolat, & N. Madichie N. (Eds.). *Digital entrepreneurship in Sub-Saharan Africa. Palgrave studies of entrepreneurship in Africa*. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-04924-9_7

Jafari-Sadeghi, V., Garcia-Perez, A., Candelo, E., & Couturier, J. (2021). Exploring the impact of digital transformation on technology entrepreneurship and technological market expansion: The role of technology readiness, exploration and exploitation. *Journal of Business Research*, *124*, 100-111. https://doi.org/10.1016/j.jbusres.2020.11.020

Jashari, B., & Jusufi, B. I. (2020). Analysis of investments in financial markets. UBT International Conference. 489. https://knowledgecenter.ubt-uni.net/conference/2020/all_events/489

Kayalvizhi, P. N., & Thenmozhi, M. (2018). Does quality of innovation, culture and governance drive FDI? Evidence from emerging markets. *Emerging Markets Review*, *34*, 175-191. https://doi.org/10.1016/j.ememar.2017.11.007

Khan, M. T., & Kumar, N. (2019). Technology entrepreneurship capability development in Indian automotive industry. In M. Kumar, R. K. Pandey, & V. Kumar (Eds.). *Advances in interdisciplinary engineering* (pp. 561-567). Springer, Singapore. https://doi.org/10.1007/978-981-13-6577-5_53

Knuth, S. (2018). "Breakthroughs" for a green economy? Financialization and clean energy transition. *Energy Research & Social Science*, *41*, 220-229. https://doi.org/10.1016/j.erss.2018.04.024

Koekemoer, D. J., & Kachieng'a, M. O. (2002, August). Technological entrepreneurship: financing new technology-based enterprises in South Africa. In A. Nazarov (Ed.), *IEEE International Engineering Management Conference Proceedings*, 437-442.

Kruger, S., & Steyn, A. A. (2020). Enhancing technology transfer through entrepreneurial development: practices from innovation spaces. *The Journal of Technology Transfer*, *45*(6), 1655-1689. https://doi.org/10.1007/s10961-019-09769-2

Kuschel, K., Ettl, K., Díaz-García, C., & Alsos, G. A. (2020). Stemming the gender gap in STEM entrepreneurship–insights into women's entrepreneurship in science, technology, engineering and mathematics. *International Entrepreneurship and Management Journal*, *16*(1), 1-15. https://doi.org/10.1007/s11365-020-00642-5

Kwenda, F. (2018). A panel VECM analysis of competition, access to finance and economic growth in BRICS. *Acta Universitatis Danubius. Œconomica*, *14*(1), 138-154.

Laidi, Z. (2012). BRICS: Sovereignty power and weakness. *International Politics*, *49*(5), 614-632. https://doi.org/10.1057/ip.2012.17

Lazanyuk, I., & Revinova, S. (2019). Digital economy in the BRICS countries: Myth or reality. In *International scientific and practical conference on digital economy (ISCDE 2019)* (pp. 1-20). https://doi.org/10.2991/iscde-19.2019.97

Liñán, F., Moriano, J. A., & Jaén, I. (2016). Individualism and entrepreneurship: Does the pattern depend on the social context? *International Small Business Journal*, *34*(6), 760-776. https://doi.org/10.1177/0266242615584646

Lowe, P. (2016). The rise of the BRICS in the global economy. *Teaching Geography*, *41*(2), 50-53.

Makin, A. J., & Arora, R. U. (2014). How solid are the BRICS? An economic overview. In *The rise of the BRICS in the global political economy*. Edward Elgar Publishing. https://doi.org/10.4337/9781782545477.00009

Marques, H. R., de Oliveira, T. A., Andrade, D. M., & Zambalde, A. L. (2019). University entrepreneurship in Brazil: Panorama of the technological innovation centers of universities. *World Journal of Entrepreneurship, Management and Sustainable Development*, *15*(2), 149-158. https://doi.org/10.1108/WJEMSD-10-2018-0091

Meil, P., & Salzman, H. (2017). Technological entrepreneurship in India. *Journal of Entrepreneurship in Emerging Economies*, (1), pp. 65-84. https://doi.org/10.1108/JEEE-08-2015-0044

Mosey, S., Guerrero, M., & Greenman, A. (2017). Technology entrepreneurship research opportunities: Insights from across Europe. *The Journal of Technology Transfer*, *42*(1), 1-9. https://doi.org/10.1007/s10961-015-9462-3

Mpofu, R., & Nicolaides, A. (2019). Frankenstein and the fourth industrial revolution (4IR): ethics and human rights considerations. *African Journal of Hospitality, Tourism and Leisure*, *8*(5), 1-25.

National Bureau of Statistics of China. (2021). *Statistical Communiqué of the People's Republic of China on the 2021 National Economic and Social Development*. Retrieved 8 March 2022, from http://www.stats.gov.cn/english/

Naudé, W. (2018). Brilliant technologies and brave entrepreneurs. *Journal of International Affairs, 72*(1), 143-158.

Obschonka, M., Lee, N., Rodríguez-Pose, A., Eichstaedt, J. C., & Ebert, T. (2020). Big data methods, social media, and the psychology of entrepreneurial regions: capturing cross-county personality traits and their impact on entrepreneurship in the USA. *Small Business Economics*, *55*(3), 567-588. https://doi.org/10.1007/s11187-019-00204-2

OC&C Strategy Consultants (2018). Tech entrepreneurship in Russia. Retrieved 8 March 2022, from https://www.occstrategy.com/media/1295/tech-entrepreneurship-ecosystem-in-Russia.pdf

OC&C Strategy Consultants (2018). Tech entrepreneurship in South Africa. Retrieved 8 March 2022, from https://www.occstrategy.com/media/1295/tech-entrepreneurship-ecosystem-in-South-Africa.pdf

OECD (2021). South Africa - OECD Data. Retrieved 8 March 2022, from https://data.oecd.org/south-africa.htm

Parasuraman, A., & Colby, C. L. (2015). An updated and streamlined technology readiness index: TRI 2.0. *Journal of service research*, *18*(1), 59-74. https://doi.org/10.1177/1094670514539730

Popkova, E. G., Inshakova, A. O., & Sergi, B. S. (2021). Venture capital and Industry 4.0: The G7's versus BRICS' experience. *Thunderbird International Business Review*, *63*(6), 765-777. https://doi.org/10.1002/tie.22235

Popovici, O. C., & Călin, A. C. (2015). The effects of enhancing competitiveness on FDI inflows in CEE countries. *European Journal of Interdisciplinary Studies*, *7*(1), 55-65.

Prabhakar, A. C. (2011). An overview of the new emerging balance of forces 'the BRICS, G 20 and G 7' response to the global financial crisis. *Dynamics of Public Administration*, *28*(1), 10-32.

Rikap, C. (2020). Amazon: A story of accumulation through intellectual rentiership and predation. *Competition & Change*, 1024529420932418. https://doi.org/10.1177/1024529420932418

Rimmer, M. (2018). Elon Musk's open innovation: Tesla, intellectual property, and climate change. In M. Remmer (Ed.), *Intellectual property and clean energy: the Paris agreement and climate justice* (pp. 515-551). Springer, Singapore. https://doi.org/10.1007/978-981-13-2155-9_19

Santoro, G., Quaglia, R., Pellicelli, A. C., & De Bernardi, P. (2020). The interplay among entrepreneur, employees, and firm level factors in explaining SMEs openness: A qualitative micro-foundational approach. *Technological Forecasting and Social Change*, *151*, 119820. https://doi.org/10.1016/j.techfore.2019.119820

Schwab, K., & Zahidi, S. (2020, December). Global competitiveness report: special edition 2020. World Economic Forum.

Shabrina, F., Santoso, A. D., & Alfanisa, E. W. (2019). Are we ready for technopreneurship? *International Journal of Smart Technology and Learning*, *1*(2), 188-202. https://doi.org/10.1504/IJSMARTTL.2019.097969

Siluk, J. C. M., Garlet, T. B., Marcuzzo, R., Michelin, C. D. F., & Minello, I. F. (2018). Technology-based entrepreneurship in South Brazil. *Revista de Administração da Universidade Federal de Santa Maria , 11*(2), 471-488. https://doi.org/10.5902/1983465929118

Spencer, A. S., & Kirchhoff, B. A. (2006). Schumpeter and new technology-based firms: Towards a framework for how NTBFs cause creative destruction. *International Entrepreneurship and Management Journal*, *2*(2), 145-156. https://doi.org/10.1007/s11365-006-8681-3

Stanford University. (n.d.). *Technology trends in Latin America and their social and economic impact*. Retrieved February 19, 2022, from https://cs.stanford.edu/people/eroberts/cs181/projects/2010-11/TechnologyTrendsLatinAmerica/brazil.html

Thakur, R. (2014). How representative are BRICS? *Third World Quarterly*, *35*(10), 1791-1808. https://doi.org/10.1080/01436597.2014.971594

Tripathi, S. S., & Brahma, M. (2018). Technology entrepreneurship in emerging markets: An exploration of entrepreneurial models prevalent in India. *Technology Innovation Management Review*, *8*(1), 24-32. https://doi.org/10.22215/timreview/1131

United Nations Conference on Trade and Development (2020). *Technology and Innovation Report*. Retrieved 8 March 2022, from https://unctad.org/system/files/official-document/tir2020_en.pdf

Urbano, D., Guerrero, M., Ferreira, J. J., & Fernandes, C. I. (2019). New technology entrepreneurship initiatives: Which strategic orientations and environmental conditions matter in the new socio-economic landscape? *The Journal of Technology Transfer*, *44*, 1577-1602. https://doi.org/10.1007/s10961-018-9675-3

Venkataraman, S. (2004). Regional transformation through technological entrepreneurship. *Journal of Business Venturing*, *19*(1), 153-167. https://doi.org/10.1016/j.jbusvent.2003.04.001

Venter, R., Urban, B., Beder, L., Oosthuizen, C., Reddy, C., & Venter, E. (2015). *Entrepreneurship: theory in practice*. Oxford University Press Southern Africa.

Vize, R., Coughlan, J., Kennedy, A., & Ellis-Chadwick, F. (2013). Technology readiness in a B2B online retail context: An examination of antecedents and outcomes. *Industrial Marketing Management*, *42*(6), 909-918. https://doi.org/10.1016/j.indmarman.2013.05.020

Wood, S. (2012). Prone to progress: Using personality to identify supporters of innovative social entrepreneurship. *Journal of Public Policy & Marketing*, *31*(1), 129-141. https://doi.org/10.1509/jppm.11.060

World Bank (2018). *GDP growth (annual %) Data*. Retrieved 8 March 2022, from https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG

World Bank (2021). *GDP growth (annual %) Data*. Retrieved 8 March 2022, from https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG

World Economics (2023). *G7 Economic Data*. Retrieved 12 May 2023, from https://www.worldeconomics.com/Regions/G7/

Yeganegi, S., Laplume, A. O., & Dass, P. (2021). The role of information availability: A longitudinal analysis of technology entrepreneurship. *Technological Forecasting and Social Change*, *170*, 120910. https://doi.org/10.1016/j.techfore.2021.120910

Yu, J., Stough, R. R., & Nijkamp, P. (2009). Governing technological entrepreneurship in China and the West. *Public Administration Review*, *69*, S95-S100. https://doi.org/10.1111/j.1540-6210.2009.02095.x

Zhang, G., Peng, X., & Li, J. (2008). Technological entrepreneurship and policy environment: A case of China. *Journal of Small Business and Enterprise Development*, *15*(4), 733-751. https://doi.org/10.1108/14626000810917834

Zhou, H. (2007). Increasing returns, the choice of technology, and the gains from trade. *Southern Economic Journal*, *74*(2), 581-600. https://doi.org/10.1002/j.2325-8012.2007.tb00854.x

The BRICS in Southern Africa: A Foreign Policy Analysis in Historical Perspective

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Abstract[1]

The BRICS were created at the beginning of the 21st century to reorganize the international world order to represent their weight in international politics, economics, and geopolitics. Although they are entirely different, the BRICS saw a strategic space to reach these goals in the African continent. Thus, these countries started to broaden their presence in the African continent. As a result, BRICs started their relations with Africa differently, but they acted in similar sectors. The fellow paper pursues to analyze the Brazilian, Russian, Indian and Chinese (called here as BRICs) insertion in Southern Africa, highlighting the main convergence sectors and divergences between them. The methodology will be based on historical analyses, connecting their historical insertion in Southern Africa in a broad perspective of foreign policy objectives in the 21 st century. In the first session, we will approach the economic presence of BRIC in Southern Africa in 21 st century. Latter, we will abstract each one's foreign policy for the region (highlighting the main economic sectors and diplomatic presence).

Moreover, it will be possible to compare their presences, highlighting the convergence and divergence between them. The Chinese and Indian weight in Africa's economy is more perceptive than Brazilian's and Russian's. Nonetheless, all BRICs have been widening their trade and diplomatic relations with Southern Africa in the 21st century due to their perspective of the importance of Africa in international world politics.

Introduction

Frequently BRICs are considered the "new actors in Africa" that are competing for new markets. Although when we analyze the BRICs individual relations with African countries is possible to noticed that these relations have been long-lived. Each one have established different kinds of diplomatic, political, and economic relations with the African continent. That is why BRICs have different ways of acting in Africa, with some moments of complementarities and conflicts of interest.

This paper has the objective to do an outlook of the strategic insertion of Brazil, Russia, India, and China (BRICs) in Southern Africa in the 21st century. It will adopt the qualitative methodology of a case study of Brazil, Russia, India, and China, highlighting the similarities and differences, identifying possible points of convergence and divergence between them. In this way, it will be adopted as criteria of analyses the historical relations between BRICs and Southern Africa, diplomatic relations (as high level of diplomatic visits), and trade relations.

The paper is divided into three sections beyond this introduction. In the first session, we will approach the economic presence of BRIC in Southern Africa in 21 st century. Latter, we will abstract

1 This research is part of a broad investigation about BRICS in Africa developed within the project "A agenda externa do Brasil para a África: avaliações e propostas" realized at IPEA. Nevertheless, all the opinions presented here are of the author's responsibility and not of this institution.

each one's foreign policy for the region (highlighting the main economic sectors and diplomatic presence). Moreover, in conclusion, it will be possible to compare their presences, highlighting the convergence and divergence between them.

Africa in the 21st Century and The BRICS' Presence

The international scenario in the 21st century was optimistic for some developing countries, including the African continent, especially Southern Africa. The end of apartheid in South Africa, the independence of Namibia, and the end of civil conflicts in the 1990's impulsed an optimistic perspective for the new century, expressed by Africa renascence thinkers, like South Africa's ex-president, Thabo Mbeki. Moreover, the development of globalization and the straightened of trade relations made multilateral institutions more critical for the maintenance of the international order. United Nations broadened its participants and its institutions. Also, many new groups of multilateral ties were created, like G20, which gained more visibility at the end of the Cold War. In this context, even inside the capitalist system, the political supremacy of developed countries became challenged and reflected in Africa's relations (Batista Junior: 2021; Saraiva: 2015).

The economic growth of the "emerging countries" makes them slowly dispute internationally for more space in international markets and more power in international institutions. BRICs countries are considered the leading group in these initiatives. They grew strongly and sustainably for many years at the beginning of the century. Likewise, they strengthened their political relations with many multilateral groups. In this context, they started to put the screws on international organizations' reform proposals to be more represented in their power structure (Batista Junior: 2021; Merwe, Taylor e Arkhangelskaya: 2016; Saraiva: 2015).

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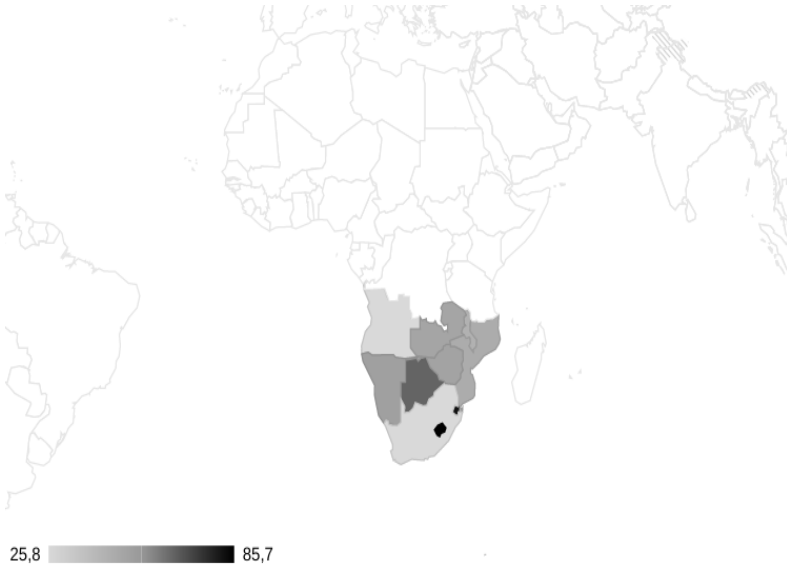
At the same time, the African continent turned to be an investment space for these new actors, and African vote and political recognition became a relevant *soft power* in the multilateral forum that the emerging countries needed. BRICs presence in Africa became gradually more evident and caught the attention of international organizations (Saraiva: 2015). This reality became reflected in the Foreign Direct Investment (FDI) in Africa. In the 21st century, the FDI has been growing in the continent, peaking at US$ 50 bilhões in 2009. The UNCTAD (2013) observes that between 2000 and 2008, the average investment in Africa by the developed countries fell almost 7%. Although, in the same period, the developing countries – especially China and India - increased their investment by 8.5%. Besides the growth of BRICS's FDI in Africa, the developed countries still are the most prominent investors. This shows that the presence of BRICs is far away from substitute developed countries as prominent investors in Africa but represent an alternative and a bargaining tool for African countries. So, the leading investors in Africa still are France, Netherlands, United States, and the United Kingdom, but China is becoming more relevant, and the other BRICs are too (UNCTAD: 2013).

The presence of emerging countries also is expressed in trade. BRICS in this context needs to be highlighted. From a global perspective, between 2001 and 2017, BRICS average growth was 7.1%. Also, they represented 23% of global GDP, 16% of international trade, and 12% of global FDI (except South Africa) (Zhongxiu e Qingxin: 2020). So, BRICS represents an essential slice of the international economy. This growth is reflected in BRICS's presence in Southern Africa, like the maps below can

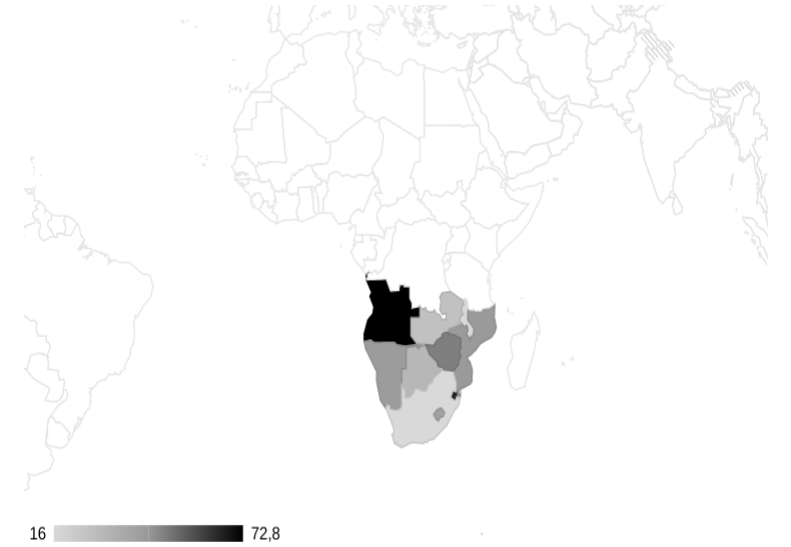
show. In 2019, BRICS was the destination of an average of 40% of Southern Africa's exportation and represented 52% of Southern Africa's importation (ITC: 2021). In 2015, Africa as a hole represented just 3% of world international trade, but 46% of its trade have emerging countries as partners (Merwe, Taylor e Arkhangelskaya: 2016).

Figure 1: BRICS participation on Southern Africa's importation, in 2019 (%)



Source: ITC 2020

Figure 2: BRICS participation on Southern Africa's exportation, in 2019 (%)



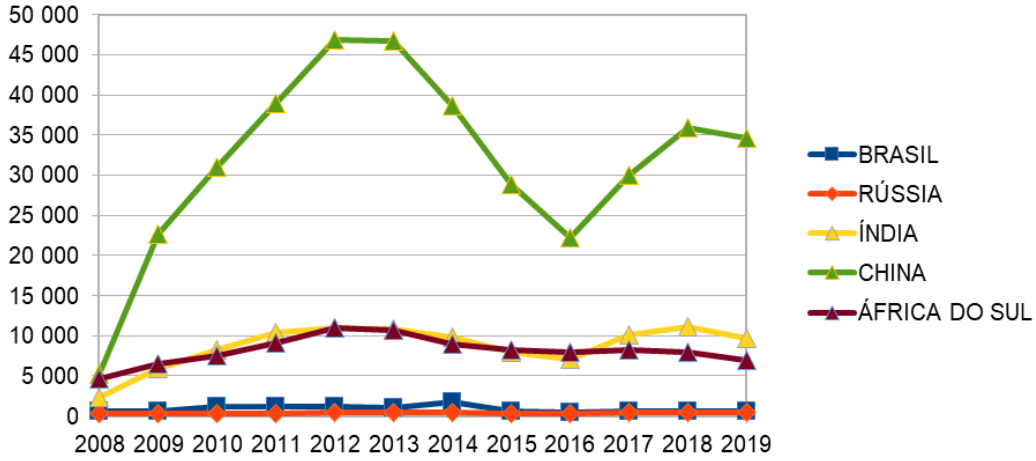
Source: ITC 2020

Despite the increasing investment and the importance of Africa in international politics, Africa's status of *commodity* dependency did not change so much. Even by BRICs side (taking out South Africa), the investments and trade realized with Africa are focused on natural resources. When looked specifically to the subregions, like Southern Africa, it is evident that almost all countries produce mineral resources (except Malawi and Eswatini), essential for the technological industry. Although, practically all countries in the region are commodity-dependent (except South Africa). The most relevant product varies between coal, diamonds, emeralds, oil, gas, and copper. And this

dependency did not change so much in 21st century, maintaining Southern Africa dependency on *commodities* rating (UNCTAD: 2013).

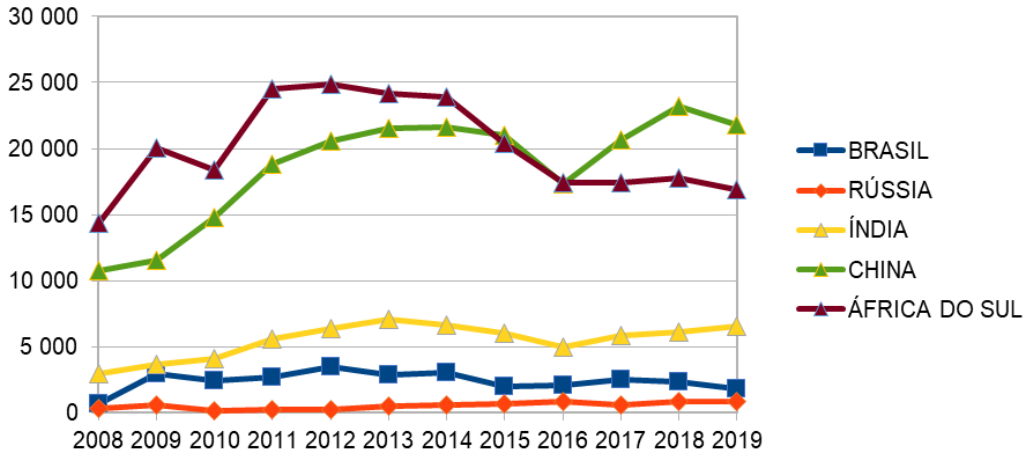
So, in the first part of the century, developing countries have increased participation in international investment and commerce and these are reflected in their African relations. However, this did not represent a revolutionary change for African countries. But, these new partners, who needed political support, gave Africans a little bit of political freedom once its partnership did not require policy conditionalities. After the first decade, though, the subprime crisis affected developing countries. The situation quickly became reflected in the decline of investment of these actors and the slowdown of commerce. These can be seen in the movement of BRICS's investment in Africa. In 2000, the BRICS's investment in Africa was US$ 10 billion, it got the highest point in 2008, of US$ 72 billion after that, it decays abruptly, and until today it did not recover, reaching just US$ 45 billion in 2020 (UNCTAD: 2013, 2020). Also, it is reflected in trade between BRICS and Southern Africa, like the graphics shows, BRICS's importation from Southern Africa counties increased exponentially until 2012. Still, after 2013 it just decreased until 2016 and did not recover until nowadays. Exportation to Southern Africa is more stable, but it also was affected between 2014 and 2016.

Figure 3: BRICS' importation from Southern Africa (US$ million)



Source: ITC 2020

Figure 4: BRICS' export to Southern Africa (US$ million)



Source: ITC 2020

Most developing countries, including African countries, are commodities dependent, so this vulnerability on commodities prices is a bottleneck for its relations with each other. So the fall down of *commodities* prices after 2014 affected these South-South relations. This conjunction of facts slowed down the Southern African countries' GDP and generated an economic crisis reflected in the region's political instabilities. Until 2015 African countries had an average growth higher than the average growth of the world. However, after 2015 most countries were affected by this fall and could not recover since then. Many economic problems started to affect African countries, like increasing public debt and external debt (UNCTAD: 2019). Brazil, for example, also *a commodity* dependent country, fell significantly in its trade relations with Africa and did not recover since. To better understand BRICs relation with Southern Africa, the following sections will be dedicated to discussing the presence of BRICs individually in Southern Africa, their history in the region, primary interests, diplomatic relations, and trade.

Brazil

Brazil has a particular relation with Africa. These political and trade relations were not stable all the time, and there were moments of more approximation and moments of withdrawal. We identify four times of intensification of these relations from the 16th century until the 21st century. In the 21st century, there is a new boost of these relations because of Africa's perception of the importance of Brazilian internal political ties and its position in the international order. Thus, Brazil amplifies its diplomacy structure in Africa, intensifies its trade relations, and boosts its presence in the continent.

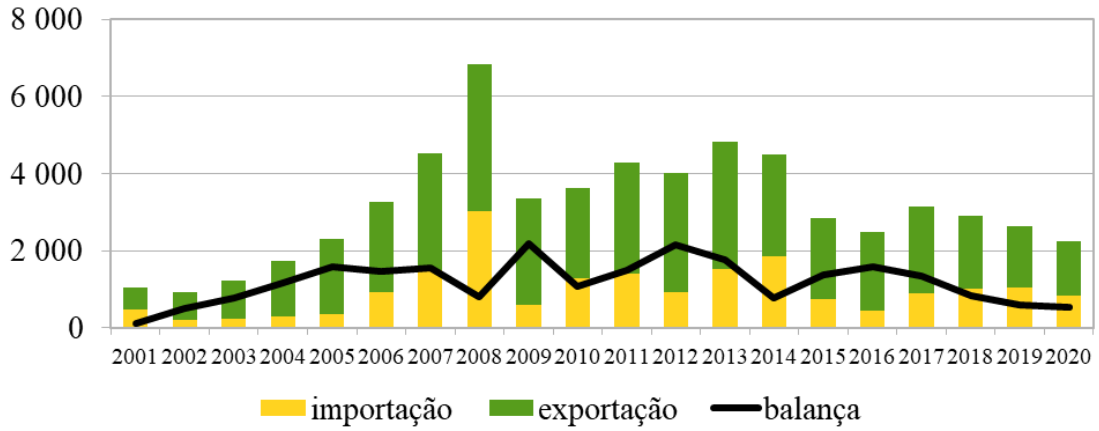
The first contact with Africans was with the slavery period in the 16th century, when Africans migrated to Brazil and straightened the political relations between regional chefs. Brazil maintained contact with some autonomous African regions after independence until the commercial interference of the United Kingdom. This commercial pressure resulted in a distance of Brazil-Africa relations. Then, in the 20th century, there are two moments of rapprochement between Brasil and Africa. In the 1960s with the non-alignment movement and after, in the 1970s with the international oil shocks and the Brazilian necessity of oil importation. Most Brazilian relations focused on African countries Portuguese speakers (PALOP), oil producers (like Nigeria), and South Africa.

After the end of the Cold War and the conquer of independence of most African countries (also the end of *apartheid* in South Africa), it was possible to intensify these political relations. Brazil amplifies its peacekeeping operations and diversifies its diplomatic presence in the continent. When Lula da Silva became president in Brazil, in 2003, the country focused on getting more equivalent power in the international organizations and reduce inequality inside. For both objectives, the presidency policy showed its Africa relations as essential. For one side, African countries are the majority in important international organizations, like United Nations. On the other side, black people are the majority inside Brazil, and a relevant social group who fights for equality. So, rescue the cultural relations with the black continent was a relevant movement for many social groups for historical compensation. The fight against inequality inside and outside became substantial twig in Brazilian foreign policy. To do that, trade relations became more focus in developing countries, so Africa became a relevant partner. After 2010 Dilma continues Lula's policy and also promotes BRICS. Although Brazilian social and economical conjucture was different, so her focus became trade results.

The Brazilian presence in Africa was expressed by three mechanisms coordinated mainly by the Ministry of Foreign Relations. The first was the expansion of the institutional apparatus. Brazilian embassies broadened from 18, in 2002, to 37 in 2016. The African countries amplified their presence in Brazil, too, achieving 35 embassies in 2015. Also, Brazil increases high-level visits. Lula visited 37 African countries (he went to the African continent 67 times in 8 years), Dilma visited 6 African countries (Brasil: 2016 ; Brasil: 2021; Jorge: 2018). Another mechanism was spreading

multilateral cooperation programs (like education programs PEC-G and PEC-PG) and multilateral organizations and strengthening those already existed, like CPLP, ZOPACAS, IBAS, and ASA. Also, the third mechanism was Brazilian impulse companies to expand to Africa mainly through credit concession by the national bank BNDES. In this context many of them have invested in the continent mainly the infraestructure sector, lead by companies like Construções e Comércio Camargo Corrêa S/A, Construtora Andrade Gutierrez S/A, Construtora Norberto Odebrecht S/A, Construtora Queiroz Galvão S/A, and others. Brazil also beneficiate African countries with external debt excuse of almost US$ 1 billion from 42 countries (Visentini: 2013).

Figure 5: Brazil's commerce with Southern Africa (US$ million)



Source: ITC, 2020

The trade reflects the political importance of the African continent. African countries got relevant in the Brazilian trade agenda. Nevertheless, the country still is not so significant player to African countries. Until 2011 trade between Brazil and Africa has been growing significantly, but after 2014 it fell and did not recover until nowadays. The Brazilian exportation to Africa increased from US$ 2 billion in 2001 to US$ 12.2 billion in 2011, and after falling to US$ 7.5 billion in 2019. The exportation agenda is focused on sugar, meat, and grain. With the Southern region, the most important partners of Brazil are South Africa and Angola. The Brazilian importation is more stable than exportation; they passed from US$ 3.3 billion in 2001 to US$ 17.4 billion in 2013 after it decreased, and in 2019, it was just US$ 5.5 billion. The importation agenda is centered on oil (and its derivates), fertilizers, and precious stores. The most important partners are South Africa, Angola, Moçambique, and Namibia.

ALike said before, Brazil's foreign policy to Africa at the beginning of 21st century was connected to internal policy groups in power. After Dilma's impeachment, these groups were strongly criticized, and it affected Brazilian foreign policy to Africa. With Michel Temer the government's focus on international trade with developed countries and Africa lost relevance. With Bolsonaro rising to power, Bralizian foreign policy focused on ideological partners, especially developed countries. After 2014 Brazil fell into an economic and political crisis that until today reflects in its foreign policy. It reflects in the closure of 3 embassies in Africa, Liberia, Ghana, and Sierra Leone (Estado de Minas, 2020). Brazilian relations with Africa have been directed to strengthen ties with conservative African leaders like Bissau Guinea's president, Umaro Sissoco Embaló (Rfi, 2021) and to protect conservative leaders' interests that are the social basis of the government, for example, religious churches that act in Angola (Metropoles, undated).

Russia

Nowadays, Russia is the country within the BRICS, which has fewer commercial relations with Africa. Although, this country has especial importance for the independence of African countries. Nonetheless, after the fall of the Soviet Union, the country started to withdraw from the relations with Africa that dropped fast until Putin's rise to the presidency. In power, Putin turns the attention to the Third World, including Africa. Slowly, Russia reinforces its presence in the continent. The causes for this comeback are complex, involving mainly geostrategy, mineral prices control, get new political partners, and amplify its consumer market.

The first time Russia went to Africa was in the 15th century when orthodox missionaries went to Etiopia. The Russian Empire tried to establish African colonies but could not do that, so it just set official diplomatic relations with Etiopia and South Africa. With the Soviet Union, the country helped with troops and technical cooperation with African countries' independence (Besenyő, 2019). But, the fall of the Soviet Union represented a wastage of the presence of Russia in Africa. Russia retired from relevant cooperation agreements with 37 African countries and trade agreements with 42 countries. Also, Russia got next to European colonizers, which made Africans uncomfortable (Besenyő, 2019; Gerőcs, 2019). So, in the first moment, Russia turned to its problems and cultivated a negative image with African leaders. It just changed in the 21st century (Visentini, 2013).

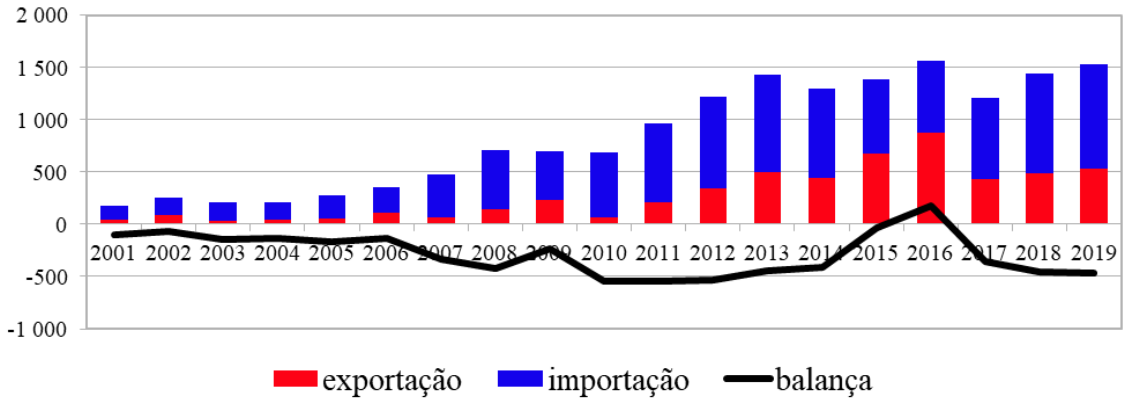
Geopolitically, Russia realized that the end of the Soviet Union did not result in peace with Europe and start to carry about the need to diversify its partnerships with suppliers and consumers. Some elements slowly make Russia change this detachment. On one side, some products became not profitable to produce internally in Russia, so diversify suppliers became relevant. On the other side, Russia is a massive oil and gas producer and has Europe as its primary consumer market. So, it was interesting to be next to other oil and gas producers to control these commodities prices. Also, after the economic embargos in this century (especially after the Crimea crisis in 2014), Russia needs to diversify its consumers. These embargos showed the importance of building new political partnerships in multilateral institutions (Gerőcs, 2019; Merwe, Taylor e Arkhangelskaya, 2016).

In this context, Africa gradually caught Russia's attention and started an expansion of its presence in the black continent once again. In 2016 Russia had 40 embassies in Africa, and Moscow harbored 35 African embassies (Gerőcs, 2019). Russia inserted itself by different mechanisms like Russia-Africa Economic Forum, Russia-African Partnership Forum, and straightening cooperation (mainly in military and educational sectors). Also, Russia forgave two shipments, first in 2006 of US$ 16 billion, and the second in 2012 of US$ 20 billion, which opened space for new contracts in infrastructure, army, and mining sectors with Africans.

This Russian back in Africa is reflected in some embassies and cultural centers' reopening between 2001 and 2005. At the end of 2016, Russia had 40 embassies in Africa and received 35 African embassies in Moscow. Prime Ministers also visited Africa, Vladimir Putin visited five African countries, and Dimitri Medvedev visited four African countries (Gerőcs: 2019).

Trade does not reflect the political importance of Africa in Russian foreign policy. Until 2013 the commerce has been growing slowly, and after 2014 has been a slight variation—Russia exports to Southern Africa cereals, fertilizers, and railways. On the side of importation, Russia imports Southern Africa fruits, minerals, and tobacco. The main partners are South Africa, Zimbabwe, Angola, and Mozambique.

Figure 6: Russia's commerce with Southern Africa (US$ million)



Source: ITC, 2020

The tiny trade between Africa and Russia is growing slowly. Between 2008 and 2013 its variated within US$ 500 million and US$ 900 million, and between 2014 and 2019, its variate within US$ 1 billion and US$1.4 billion. Besides the commodities crisis, these trade relations did not variate significantly, showing sustainable growth, but it still does not get its potential. In 2015 trade between Russia and all of Africa was US$ 11.1 billion, which is just 2.2% of Russia's trade (Fituni e Abramova, 2017). Russia has four commercial offices in Africa (specifically in Algeria, Marocco, Egypt, and South Africa), which is coordinated by AFROCOM (Coordination Committee on Economical Cooperation with African Countries) formed by the Vnesheconombank (Foreign Economical Relations Bank) and the Russia Federation Chamber for Industry and Trade. AFROCOM coordinates as public companies and ministries as private sector for Africa (Besenyő, 2019; Gerőcs, 2019). Foreign Direct Investment is evident the leading sector for Russia. Between 2003 and 2015, about 1.5% of Russia's investment went straight to Africa, totalizing US$ 15 billion, of which around 60 and 70% were destined for exploitation of oil, gas, uranium, bauxite, and iron. About 30 Russian companies are in Africa in these sectors (Fituni e Abramova, 2017). These thirty Russian companies act mainly in Uganda, Zimbabwe, South Africa, Nigeria, Ivory Coast, Ghana, and Equatorial Guinea. Southern Africa is essential to highlight. Zimbabwe is where Russia has invested US$ 3 billion in the platinum sector. In South Africa, Russian companies like Renova Group, OJSCMMC Norilsk Nickel, EVRAZ Group S.A, and OAO Severstal operate. and Angola (Merwe, Taylor e Arkhangelskaya, 2016).

Another relevant sector is the military sector. Russia is one of the leading military producers in the world. In 2018 its exported US$ 16 billion military products to the world and already has US$ 54 billion in its agreements portfolio (IISS, 2020). Between 2018 and 2019, Russia exports about US$ 3.1 billion in weapons to Africa, being their main partners: Egypt, Algerie, Angola, Etiopia, Nigeria, Burkina Faso, Equatorial Guinea, and Mozambique (SIPRI, 2020). Also, between 2014 and 2018, Russia agreed to 19 military cooperation programs with Subsaarian countries. In 2019 happened the first Russia-Africa Summit about security and defense. An example of this partnership in military relations is the satellite agreement with South Africa in 2014, valued at R 1.2 billion (about US$ 80 million) (Merwe, Taylor e Arkhangelskaya, 2016). In Southern Africa, Angola is a relevant importer of the Russian army, with US$ 314 million invested in military importation (Russia is responsible for 44% of Angolan military importations) (ITC, 2021).

India

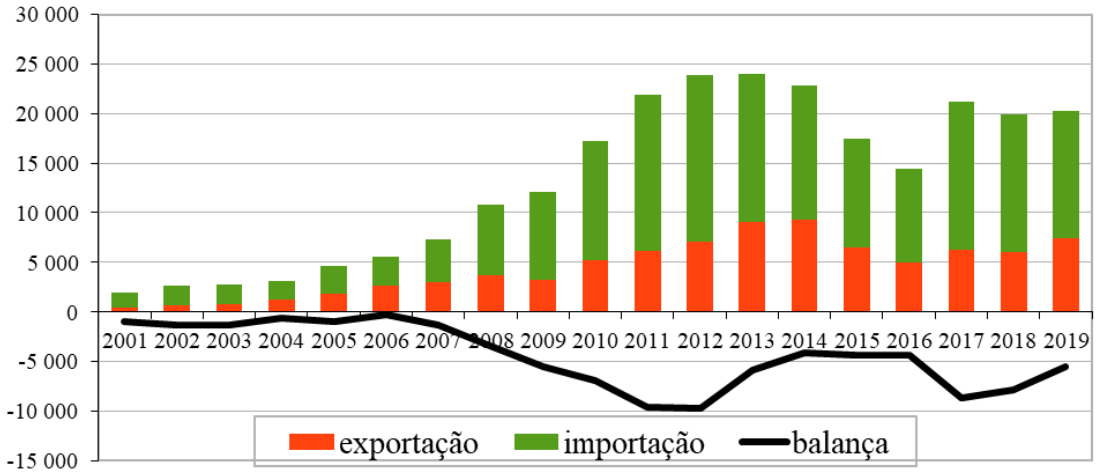
India has the most long-lived relations with Africa within the BRICs countries. Historical research has discovered that navigation started in India in the Sindh river more than 6000 years ago. It is believed

that the first contact with Africa happened about 4000 and 5000 years ago. Unlike the other BRICs, these relations did not cool down from time to time, and they have been maintained mainly with countries connected to the Indian Ocean. Also, India and African countries established intense migratory flows while establishing a relevant Indian community in Africa (Malone, Mohan e Raghavan, 2015; Visentini, 2013). Researchers point out that around 1.5 million Indians migrated to Africa to work in British plantations during colonial times. A small group of these migrants stayed in Africa for life. After that, a few merchants migrated to Africa, attracted by the consumer perspective, and creating an Indian community in Africa Continent (Visentini, 2013). The result is seen nowadays when looked at the social constitution. It is noted that Indian descendants are a relevant part of many countries, for example, South Africa, which 2.5% of the population are in this category (CIA, 2020a); Mauritius also is estimated that around a third of the population has a relation with Indian descendants (CIA, 2020b). Nowadays, about 3 million people living in Africa are Indian-originated (Índia, 2020a).

With India and Africa's independence, these political and social relationships went deep but focused on political support between States. In the middle 1960s, Indira Gandhi assumed power in India and turned the support to Africa independence more materialized. After the Soviet Union fall, thought India's Foreign Policy became progressively more related to the private sector and associated with trade interest (Visentini, 2013). Nowadays, the relationship with Africa is focused on agriculture, power source, irrigation, pharmacy, Informational Technology, and health sectors (Índia, 2020b). India does not have a prime minister's policy of travel, so Manmohan Singh (who was the Prime Minister from 2004 to 2014) visited five African countries (South Africa, Mauritus, Uganda, Nigeria, Tanzania, and Ethiopia), and Narendra Modi (in power since 2014) visited seven African countries (Ruanda, Uganda, South Africa, Mozambique, Tanzania, Kenya, and Maricius). India has just 32 diplomatic missions in Africa.

IIn the 21st century, the energetical difficulties in India make the relations with Africa critical for India's foreign policy. With the wars in the Middle East, India needed to diversify its partners' hydrocarbons to maintain its growth rate. So Africa turned into a relevant region for that (especially Lybia, Sudan, Nigeria, Egypt, and Gabon) (ÍNDIA: 2020i). India's importation of oil from Africa tripled between 2002 and 2012 (mainly from Nigeria, Angola, Egypt, and Algerie). It is estimated that until 2030 the country will need 3 to 4 times more of its energetical capacity (Merwe, Taylor e Arkhangelskaya, 2016).

Figure 7: India's commerce with Southern Africa (US$ million)



Source: ITC, 2020

Trade has been increasing gradually. Exportation from Índia to Africa passed from US$ 15 billion, in 2008, to US$ 29 billion in 2019 (the highest point was in 2014 with US$ 34 billion). India's importation from Africa is more relevant than its exportation. The country has been increasing from US$ 26 billion in 2008 to US$ 43 billion in 2012, and in 2019 decreased to US$ 38 billion (ITC, 2020). Southern Africa trade also increased straight until 2012 and after had a decrease until 2016 witch they still could not be recovered until 2019. In 2019, South Africa, Eswatini, Lesotho, Malawi, Namibia, Zambia, and Zimbabwe had a commercial deficit with India. This year, Angola, Botswana, and Mozambique had a commercial surplus with India, mainly exporting oil, gas, and precious stones. The main products imported by them are vehicles, hydrocarbons, pharmacies, electric equipment, and plastic (ITC, 2020).

So Indian presence in Southern Africa, especially with the Eastside countries wet by the Indian Ocean, is related to a strategic perspective of survival in the international system. In this context, its presence in the military sector is also relevant to be highlighted. Since 2008 India has done a Naval Indian Ocean Symposium with 35 countries, 13 of them African countries (Constantino Xavier apud MALONE, MOHAN e RAGHAVAN, 2015). Also, India is the most significant contributor with troops for United Nations missions since 1950's India contributed with nearly 253.000 troops in 49 tasks, many of them in the African continent (like Onuc, Unomoz, Unitaf, Unosom, Unamir, Unavem, Unamsil, Unmee, Unoci, Unimil, Monuc/Monusco, And Unmis/Unmiss).[2]

China

China realizes that Africa is an essential region in its foreign policy. The first contact between China and Africa continent was in the 15th century with the Zheng He journey, but little later, it cooled off because of the Chinese idea to be a middle kingdom (Menezes, 2013). Nonetheless, after the Chinese Revolution in 1949, the Chinese Popular Republic (CPR) realized the importance of international diplomatic recognition, making China renew its relations with Africa. During Cold War, China thought it was relevant to build the Third Way. Zhou Enlai, Chinese Foreign Relations Minister, created "Five Principles of Pacific Coexistence," which influenced this movement and inspired the Bandung Conference in 1955, giving the first step to Non-Alignment Movement. In 1956, China materialized its diplomatic relations with Egypt, officially reopening its African ties (China, 2020a; Visentini, 2013).

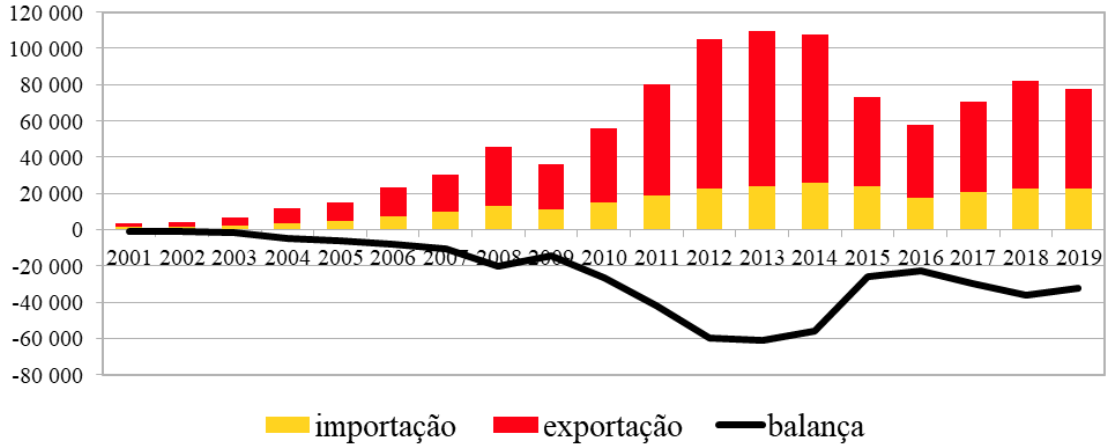
Since then, China has kept expanding its presence in Africa, but its strategy and interests have changed over time. Initially, it planned to get to countries by the ideology preferences and pressure Taiwan for diplomatic recognition. With the breaking relations with the Soviet Union in the 1960s, it became more pragmatic. But it was just after the 1980s that internal changes in China made its cooperation with Africa more directed to Chinese trade interests. It was from then that China started to establish joint ventures straightening the cooperation relations to enterprise investment (Brautigam, 2009). Between 1989 and 1997, the trade between China and Africa grew by 431%. In 1996 China installed the first Chinese bank on Africa soil in Zâmbia (Taylor, 1998). With the new century, China set new objectives associated with the "Pacific Rise," which determine an intensification of multilateral relations, mainly conducted by FOCAC (China-Africa Cooperation Forum) and the OBOR ("One Belt One Road"). Between the BRICs, China is, so far, the most relevant African partner. In 2018 China was the fifth most relevant investor in Africa, after Netherlands, France, United Kingdom, and the United States. Still, it is necessary to highlight that France, United Kingdom, and the United States decreased their investment in Africa, and China increased its investment (UNCTAD, 2020)

2 INDIA. Permanent Mission of India to the UN. Source: <https://www.pminewyork.gov.in/pdf/menu/submenu__1260383365.pdf> . Accessed in August 2021.

It is necessary to highlight that the trade relations between China and Africa have increased significantly, and it recognized that its commercial relations influenced Chinese cooperation. The political ties maintained their importance during the time. For China, recognizing the Popular Republic of China as the official diplomatic representative is significant until nowadays (Brautigam: 2009). So, China maintained 40 embassies in Africa, and the Prime Minister, Xi Jinping has been in the continent five times since 2013, visiting all African countries (CHINA, 2020c).

Since 1994 the most significant partnerships with Africa have been head by three Chinese banks (China Export-Import Bank - or Chinese EximBank-, China Development Bank, and China Agricultural Development Bank) each one in a different sector but all interconnected (Brautigam, 2009). In 2019 the CAD Fund (China-Africa Development Fund, created by FOCAC in 2007) invested US$ 5.4 billion in 37 African countries focused on the sectors: agriculture, living, industry, power, and mining (CHINA, 2019).

FIgure 8: China's commerce with Southern Africa (US$ million)



Source: ITC, 2020

Chinese importation from Africa increased from US$ 4.8 billion in 2001 to US$ 95 billion in 2019, which represents 2 and 4.6% of total Chinese importation. Last year, the main partners were South Africa, Angola, Congo, Líbia, and Gabon. Chinese exportation to Africa increased from US$ 5.9 billion, in 2001, to US$ 113 billion, in 2019, which represents 2.2 and 4.5% of total Chinese exportation. Last year, the main partners were Nigeria, South Africa, Egypt, Algeria, and Kenya (ITC, 2020). Southern Africa portrays a relevant subregion in this context. Importation increased from US$ 2 billion, in 2001, to US$ 54 billion, in 2019 (peaking at US$ 85 billion in 2013). The main products for importation are oil (and its derivatives), ores, and precious stones. Also, the exportation increased from US$ 1.2 billion, in 2001, to US$ 22.7 billion in 2019 (peaking at US$ 25 billion in 2014). The main products are electronics and machinery. So, there is a deficit in the Chinese trade relationship with Southern Africa (ITC, 2021).

Due to the vast Chinese investment after the 2000s, China became gradually more active with peacekeeping missions troops supply in the African continent (been UNAMID of Sudan an example) and more interested in strategic partnerships. In 2017 China established its first military basis in Africa in Djibouti and also became part of weapons modernization plans with some countries (mainly in Angola and Mozambique in the Southern region) (IISS:2020). In 2018, China created the I Defence and Security China-Africa Forum, resulting in many cooperation agreements (IISS:2020).

Conclusion

BRICS have a long live relation with Africa commonly shadowed by political analysts. However, these relations were not a priority until the 21st century when developed countries stepped aside in their investment and trade relations in African countries. This opened space for BRICs increases their participation in African countries. In the present paper, we tried to identify the points of similarity and divergence between the insertion of these actors in the African continent. We analyze the historical relations between BRICs and Africa, highlighting how and why BRICs get next to this continent and Africa's importance in its foreign relations in the 21st century. After, we focus on the Southern Africa region, looking at diplomatic ties at the high level and then their commercial relations (identifying the leading partners in the region and their main products of importation and exportation).

In this paper, we argued that besides the relations between BRICs and Southern Africa seems to be recent, they have many centuries and have been increasing slowly. But their kind of insertion is different. Brazil started its relations with Africa during the colonization period, and the importation of African slaves characterized most of it. It gives Brazil a significant cultural link with Africa, and its relations are really connected to internal debates. On the other hand, Russia started its relations during the Russian Empire and tried to establish colonies that were frustrated. So it just intensified its ties after the Russian Revolution when the revolutionaries identified an opportunity to amplify its influence abroad, helping the Africans with their independence. India is one of the firsts countries to have contact with Africa, but differently from the others, they maintained contacts even during colonial times. Many Indians migrated to Africa and had a strong community there, maintaining their social and political relations. China was probably the first of the BRICs to contact Africa. Still, these ties became relevant after the 20th century when the Chinese Revolutionaries saw an opportunity to help independence in Africa.

At the beginning of the 21st century, developed countries decreased their investment in Africa and became involved in their problems. So, BRICs saw it as an opportunity to amplify their influence in international politics and trade. Trade relations nowadays are based on energy exportation and industrialized importation by African countries. But, at the same time, BRICs carried forward much investment on infrastructure without imposing politics on Africa. Unfortunately, most of the Southern African countries and also BRICs are vulnerable to commodity price variation. So, after the abrupt variation in international prices in 2014, BRICs and Southern Africa's trade relations were affected and decreased. In some countries, like Brazil, it is reflected in the decrease of political presence.

Also is relevant to note that some conjunctures put BRICs in interest conflict in Africa. An example of that is the military sector. Russia was the most crucial military source for African countries during the independence period, but after its withdrawal in the 1990s, China spread its presence in this sector. Nowadays, with Russia coming back, maybe it can be a point of interest conflict between them. But, it is relevant to underline that Africa is a vast continent that needs investment in many sectors. It may take too long for these market conflicts to effectively be a reality.

Meanwhile, the political pressure of BRICs on developed countries may be the most relevant result for African countries. BRICs can be an alternative for investment in the continent when developed countries do not prioritize Africa or when they impose policy determination. The BRICs approach, despite that, is not altruistic. They want more political power in international relations and also consumer markets for their products. These interests are different; for example, India and Brazil want a permanent seat in the United Nations Security Council. China and Russia, who already have their seats in the UN, want to diversify their political partners to shield themselves from developed countries' embargos. So, it's a relevant initiative to maintain these studies to identify political convergence between them.

References

Batista Junior, P. N. 2021. *O Brasil não cabe no quintal de ninguém*. 2. ed. Sao Paulo: Leya.

Besenyő, J. 2019. The africa policy of Russia. *Terrorism and Political Violence*, 31 (1), pp. 132–153,. https://doi.org/10.1080/09546553.2018.1555976

BNDES. 2021. Consulta a financiamentos à exportação brasileira para obras no exterior.. Disponível em: https://www.bndes.gov.br/wps/portal/site/home/transparencia/consulta-operacoes-bndes/consulta-a-financiamentos-de-exportacao-pos-embarque. Acesso em: 10 jan 2021.

Brasil. 2016. Agência Brasileira de Cooperação. Ministério das Relações Exteriores. África – Execução Financeira (2000 - 2014). Brasília,. Disponível em: <http://www.abc.gov.br/Gestao/AfricaExecucaoFinanceira>

Brasil. 2021. Agência Brasileira de Cooperação. Cooperação Técnica Brasileira: Zona de Paz e Cooperação do Atlântico Sul.. Disponível em:<http://www.abc.gov.br/zopacas/default.aspx> Acesso em 06 jan 2021

Brasil. 2021. Presidência da República . Viagens internacionais.. Disponível em:<http://www.biblioteca.presidencia.gov.br/presidencia/ex-presidentes> Acesso em: 05 jan 2021

Brasil. Ministério das Relações Exteriores. Visita do Ministro Aloysio Nunes Ferreira a Gana, Nigéria, Côte d'Ivoire e Benin – 11 a 16 de outubro de 2017. 2017 b. Disponível em:<https://www.gov.br/mre/pt-br/canais_atendimento/imprensa/notas-a-imprensa/visita-do-ministro-aloysio-nunes-ferreira-a-gana-nigeria-cote-d-ivoire-e-benin-11-a-16-de-outubro-de-2017> Acesso em 05 jan 2021.

Brasil. Ministério das Relações Exteriores. Visita do Ministro das Relações Exteriores, Aloysio Nunes Ferreira, à Namíbia, Botsuana, Malawi, Moçambique e África do Sul – 8 a 15 de maio de 2017. 2017 a. Disponível em: <https://www.gov.br/mre/pt-br/canais_atendimento/imprensa/notas-a-imprensa/visita-do-ministro-das-relacoes-exteriores-aloysio-nunes-ferreira-a-namibia-botsuana-malawi-mocambique-e-africa-do-sul-8-a-15-de-maio-de-2017> Acesso em: 05 jan 2021

Brautigam, D. 2009. *The Dragon's Gift: the real story of China in Africa*. New York: Oxford University Press.

Brautigam, D. 2009. *The Dragon's Gift: the real story of China in Africa*. New York: Oxford university press.

Brautigam, D..2015. *Will Africa feed China?* New York: Oxford university press,.

China. 2019. China Develpment Bank. 2019 Annual Reports. Disponível em:<http://www.cdb.com.cn/English/gykh_512/ndbg_jx/2019_jx/>

China. 2020a . Ministério das Relações Exteriores da República Popular da China. China's Initiation of the Five Principles of Peaceful Co-Existence.. Disponível em: <https://www.fmprc.gov.cn/mfa_eng/ziliao_665539/3602_665543/3604_665547/t18053.shtml#:~:text=Premier%20Zhou%20Enlai%20met%20with,for%20each%20other's%20sovereignty%20and>

China. 2020b. Ministério das Relações Exteriores. China Embassies in Africa.. Disponível em:<https://www.fmprc.gov.cn/mfa_eng/wjb_663304/zwjg_665342/2490_665344/2493_665350/>

China. 2020c . Ministério das Relações Exteriores. Two Decades of A Shared Journey toward New Heights in the New Era - Commemorating the 20th Anniversary of The Forum on China-Africa Cooperation. 16 out 2020.. Disponível em: <https://www.fmprc.gov.cn/mfa_eng/wjb_663304/wjbz_663308/2461_663310/t1824471.shtml>

CIA 2020a. The World Factbook: South Africa. Atualizado em: 24 nov 2020. Disponível em: <https://www.cia.gov/library/publications/the-world-factbook/geos/sf.html>. Acesso em: 25 nov 2020.

CIA 2020b. The World Factbook: Mauritius. Atualizado em: 24 nov. Disponível em: <https://www.cia.gov/library/publications/the-world-factbook/geos/mp.html>. Acesso em: 25 nov 2020.

Estado de Minas. 2020. Governo Bolsonaro fecha 7 embaixadas na África e no Caribe. <https://www.em.com.br/app/noticia/internacional/2020/05/14/interna_internacional,1147291/governo-bolsonaro-fecha-7-embaixadas-na-africa-e-no-caribe.shtml>. Accessed in August.

Fituni, L.; Abramova, I. (Eds.). *African Studies: Works of the Institute for African Studies of the Russian Academy of Sciences*. Moscow: Institute for African Studies RAS, 2017.

Gerőcs, T. The transformation of African–Russian economic relations in the multipolar world-system. *Review of African Political Economy*, 46 (160), pp. 317–335, 2019. https://doi.org/10.1080/03056244.2019.1635442

IISS. *The Military Balance: the annual assessment of global military capabilities and defense economics*. [s.l.] Routledge, 2020.

Índia 2009b. Ministry of External Affairs. Speech by EAM at the Special Plenary of 5th India-Africa Conclave. 23 mar 2009. Disponível em: <https://mea.gov.in/Speeches-Statements.htm?dtl/984/Speech_by_EAM_at_the_Special_Plenary_of_5th_IndiaAfrica_Conclave>. Acesso em: 17 nov 2020.

Índia 2020i. Ministry of Externa Affais. Inaugural address by Shri Pranab Mukherjee, Hon'ble Minister for Externa Affairs at the 1st India-Africa Hydrocarbon Conference. Disponível em: <https://mea.gov.in/Speeches-Statements.htm?dtl/2023/Inaugural_address_by_Shri_Pranab_Mukherjee_Honble_Minister_for_External_Affairs_at_the_1st_IndiaAfrica_Hydrocarbon_Conference>. Acesso em 25 nov 2020.

Índia. 2020a. Ministry of External Affairs. Foreign Secretary's speech at the valedictory session of the conference "Unverstanding Africa: Continuity and Change" at the India International Centre on 12 February 2020. Atualizado em: 12 fev 2020. Disponível em: <https://mea.gov.in/Speeches-Statements.htm?dtl/32390/Foreign_Secretarys_speech_at_the_valedictory_session_of_the_conference_quotUnderstanding_Africa_Continuity_and_Changequot_at_the_India_International_C>. Acesso em: 15 nov 2020.

Índia. 2020c. Ministry of Externa Affais. Organogram of the Ministry of External Affairs. Disponível em: <https://www.mea.gov.in/Images/amb1/MeA_organograms_NW.pdf>. Acesso em: 28 nov 2020.

ITC. 2021. *Trade Map*. Disponível em: <https://www.trademap.org/>. Acesso em: 30 jul. 2021.

Jorge, N. (Organizador). *História da África e Relações com o Brasil*. 1. ed. Brasilia: Funag/Mre, 2018.

Malone, D. M.; Mohan, C. R.; Raghavan, S. (Eds.). 2015. *The Oxford Handbook Of Indian Foreign Policy*. Oxford: Oxford University Press.

Menezes, G. R. DE. 2013. *As novas relações sino-africanas : desenvolvimento e implicações para o Brasil*. Brasilia: FUNAG/MRE.

Merwe, J. Van Der; Taylor, I.; Arkhangelskaya, A. (Eds.). 2016. *Emerging Powers in Africa : a New Wave in the Relationship?* Cham: Palgrave Macmillan.

Metropoles. Undated. Em Angola, Mourão focou negociação em 300 templos da Igreja Universal. <https://www.metropoles.com/colunas/igor-gadelha/em-angola-mourao-focou-negociacao-em-300-templos-da-universal>. Accessed in August 2021.

Rfi. 2021. Presidente da Guiné-Bissau em visita oficial de 4 dias ao Brasil. <https://www.rfi.fr/pt/brasil/20210825-presidente-da-guin%C3%A9-bissau-em-visita-oficial-de-4-dias-ao-brasil> . Accessed in August.

Saraiva, J. F. S. 2015. *A África no século XXI: um ensaio acadêmico*. Brasilia: FUNAG/MRe.

SIPRI. 2020. *Importer/Exporter Tiv Tables*. Disponível em: <https://armstrade.sipri.org/armstrade/html/export_values.php>. Acesso em: 10 jan. 2020.

Taylor, I. 1998. China's Foreign Policy towards Africa in the 1990s. *The Journal of Modern African Studies*, v. 36, n. 3, pp. 443–460. https://doi.org/10.1017/S0022278X98002857

UNCTAD. 2010. *World Investment Report 2010: Investing in a Low-Carbon Economy*. [s.l: s.n.]. v. 53

UNCTAD. 2019. *Global investment trends and prospects. In*: [s.l.] UNCTAD.

UNCTAD. 2020. *World Investment Report 2020: International Production beyond the Pandemic*. New York: [s.n.].

Visentini, P. 2013.*A África e as Potências Emergentes: Nova Partilha ou Cooperação Sul-Sul?* Porto Alegre: Leitura XXI. https://doi.org/10.22456/2238-6912.45812

Zhongxiu, Z.; Qingxin, L. 2020. Promoting Brics Cooperation For Economic Growth And Development. *Revista Tempo do Mundo - IPEA*, 1 (22), pp. 12-18.

Disease and Dis-Ease amid Covid-19: Public Policy Measures by BRICS Countries

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Abstract

Since the emergence of COVID-19 in Wuhan China in early 2019, the global spread of this virus has impacted markets, health systems and general households across the world. Even with draconian containment measures, such as monitored movement restrictions, closed borders and various lockdowns, the disease has appeared highly difficult to contain. Within a few months, it reached all BRICS countries, affecting more than 39.7 million people, which accounts for 26.3 per cent of global infections, declaring it a global pandemic by the WHO. Unfortunately, the rapid spread and imposing nature of this virus have not provided countries with enough time and space to reflect on the far-reaching consequences that arise from poor public policy measures as well as disease control measures by their respective health systems. As a result, a lot of dis-ease amongst the public, government policy implementers and health care providers have been raised. This has negatively impacted people's day-to-day activities and lives. Increased mortality rates amongst the elderly have been a growing concern as well as the increasing effects on all other age groups across BRICS countries. Using a comparative study approach, this paper seeks to analyse the effects of Covid-19 and the dis-ease that arises from its proximity in BRICS countries. Additionally, the paper will provide a qualitative overview of public policy approaches comparing the member countries and addressing the effects of this pandemic and the dis-ease it has caused amongst BRICS countries.

Keywords: BRICS, Public Policy, Health system, COVID-19, government, Disease and Dis-ease World Health Organization, Dis-ease

Introduction

The COVID-19 pandemic has brought about significant changes in societies worldwide, causing tremendous human suffering and disrupting the foundations that uphold societal well-being (WHO 2020). Currently, there are close to 233,297,307 confirmed cases worldwide, with the scale of contagion continuing to rise in BRICS countries. As a result, the pandemic has had severe impacts on income, employment, and health, causing increased anxiety and negatively affecting people's living arrangements and livelihoods. These changes have also led to social and governmental trust issues and affected personal security, calling for immediate government intervention to alleviate the disease caused by the pandemic. The pandemic has resulted in dis-ease, characterized by the inability to control emotions and physical shock, as people struggle to adapt to the new age brought about by COVID-19. For instance, home schooling will have long-term impacts on children and youth, which will largely depend on their socio-economic background and the support provided by decision-makers and communities (French and Monahan 2020:1-4).

The COVID-19 pandemic has posed several challenges, including disrupting the immunization efforts aimed at saving the lives of infants and children globally. This has put millions of children, both in developed and developing countries, at a heightened risk of contracting diseases. The World Health Organization (WHO) has been documenting charts since May 2020, providing an overview of the prevention and treatment services for non-communicable diseases (NCDs) since the pandemic began. To mitigate the risks posed by the pandemic, countries must evaluate the impacts of the disease and develop balanced countermeasures that address all aspects of people's lives, particularly the most

vulnerable populations. Moreover, it is essential to integrate the distributional impacts effectively to respond efficiently to the pandemic's challenges. All of these efforts must be accomplished while racing against the clock in a highly challenging and uncertain environment.

BRICS is a group of countries that have emerged as global superpowers alongside the United States since 2001. These countries are recognized as the five largest economies in the world in the 21st century. The term "BRICS" was coined by Goldman Sachs in 2001, advocating that these countries should focus on establishing a fair international governance system that aligns with their interests. Despite the challenges posed by the COVID-19 pandemic, the BRICS countries have shown resilience and commendable vitality in maintaining their momentum towards effective cooperation. They have worked together to combat the coronavirus and are gradually rebuilding their economies.

The aim of BRICS countries during this pandemic is to secure new prospects and maintain a responsible role in addressing existing government deficits and common challenges. They aim to create new global supranational governance structures to counter Western hegemony within the UN. The paper aims to outline the comparative measures taken by each country in achieving this goal. These measures include protecting people's health, practicing multilateralism to maintain international order, and improving global economic recovery. It is important to note that overcoming the pandemic is a marathon, and no country should slack in their efforts to balance routine COVID protocols with emergency measures. The paper will use a qualitative approach to compare the methods taken by each government. The structure of the paper will begin with an in-depth understanding of COVID-19, BRICS countries, and the policy measures taken by their governments. It will also provide an understanding of the concept of dis-ease used in the study. The paper will then examine the critical observations of the pandemic and the methods used to deal with it, such as lockdown, economic, and health measures. Sustainable measures that BRICS countries can take will be outlined as recommendations, followed by a conclusion of the study.

Background

The COVID-19 pandemic has caused widespread devastation to global economies and healthcare systems, threatening to undo years of progress made since the Great Recession. Governments worldwide have implemented various measures to contain the spread of the virus, which has left a trail of destruction in its wake. This pandemic is the latest addition to a growing list of novel diseases that have emerged in recent times, posing a significant challenge to global health. The World Health Organisation has declared COVID-19 a public health emergency, prompting international concern and response. Unfortunately, the pandemic has been more severe in southern regions, while some developed countries have restricted vaccine exports, resulting in vaccine hoarding. In contrast, BRICS countries have attempted to vaccinate their own populations while also assisting other countries in curbing the spread of the virus. In response to the unjust hoarding of vaccines, the World Trade Organisation has made early decisions to waive intellectual property rights for the COVID-19 vaccine.

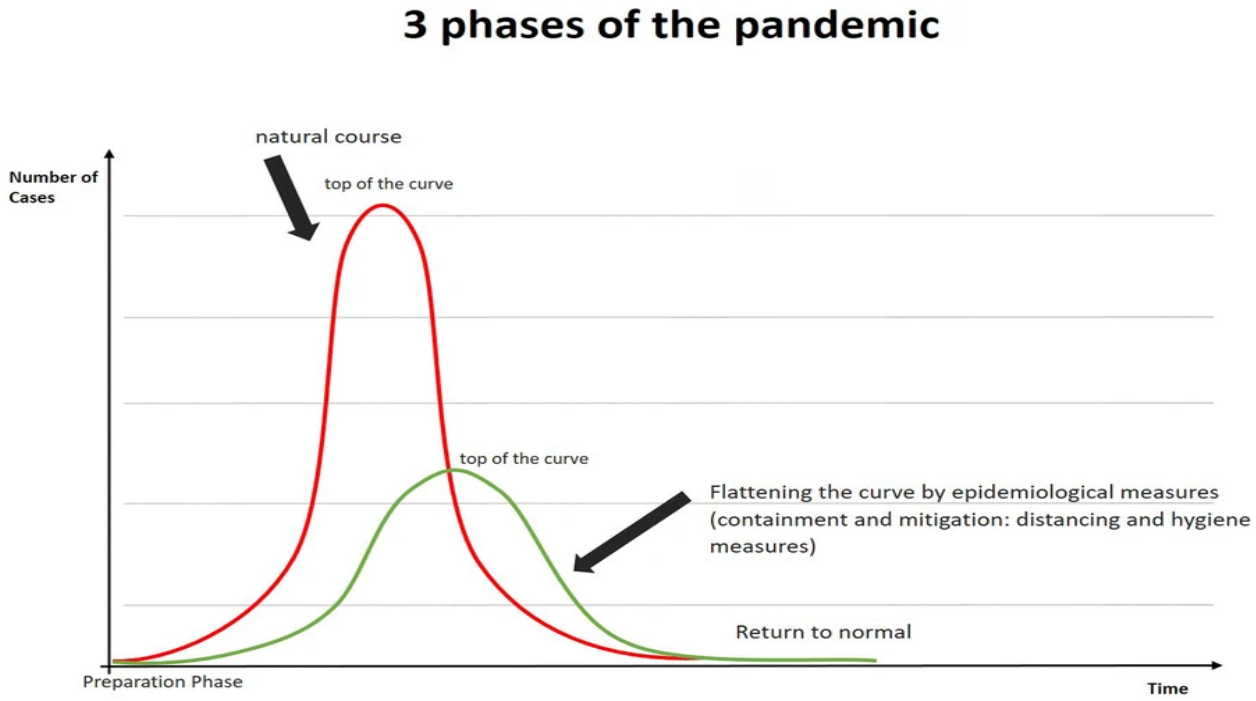
To give a statistical overview, COVID-19 presents with a range of clinical severity, with 80% of cases being mild to moderate, 15% being severe, and 5% being critical. The overall fatality rate is estimated to be between 0.5% to 2.8%, but this rate is higher for individuals in their 80s, with a range of 3.7% to 14.8%. These severe cases have put a significant strain on healthcare systems worldwide (Dash D, Sethi and Dash 2021:101).

The pandemic has created a multitude of challenges, such as restricted contact and reduced interactions in day-to-day life, isolation, and economic and health issues. These challenges have caused an increase in anxiety levels due to the lack of peer contact and fewer opportunities for stress regulation, which is a major concern for social activities. Furthermore, there are elevated

risks of parental mental illnesses, domestic violence, and child maltreatment. Leisure time activities have been limited, which has resulted in reduced social interactions for children on school premises, playgrounds, and sports clubs. According to Abdullah A. Balkhair (2020:33), limited social relations have led to structural and dimensional issues, and people no longer have social support from their respective groups, thereby increasing the social strains that existed prior to the pandemic. Social isolation has increased the risks of inflammation to the same degree as physical inactivity during adolescence, and it has also contributed to hypertension levels exceeding those caused by clinical risk factors such as diabetes in the elderly.

The graph below provides a brief description of the mental health challenges faced by children and adolescent teenagers during the covid-19 pandemic.

Figure 1: Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: a narrative review to highlight clinical and research needs in the acute phase and the long return to normality | Child and Adolescent Psychiatry and Mental Health.



Source: Fegert, J.M., Vitiello, B., Plener, P.L. and Clemens, V., 2020.

The pandemic has severely restricted social interaction, with contacts limited to only immediate family members. This has negatively impacted children and adolescents, as peer contact is important for their well-being. Educational systems globally have resorted to alternative measures, such as online learning, with traditional education systems being locked down. Closing of schools negatively impacts school curriculum and structure, with multidimensional assessments of social relationships being impacted for a substantial amount of time. More than 160 countries have used social distancing measures, impacting close to 87% of students across the world. Reduced levels of interaction could increase mortality rate by 91% amongst severely isolated individuals, exceeding the effects of many other risk factors of mortality such as obesity and physical inactivity, and being immediately comparable to that of smoking.

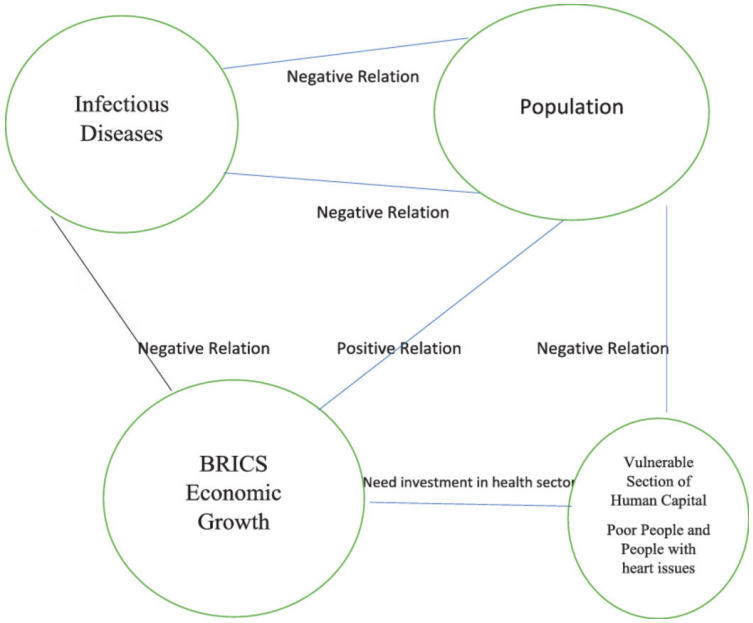
The pandemic has caused economic shutdowns, which have led to significant changes in the psychosocial environment of affected countries. International travel has become a rare event, even though in 2018, over 4 billion people, or roughly 60% of the world population, travelled

internationally via commercial flights. The emergence of local pathogens has become a significant threat to public health, as they can spread across borders at an alarming rate. A prime example is the COVID-19 pandemic, which started with a seemingly small number of pneumonia cases connected to seafood markets in Wuhan, China but quickly became one of the worst pandemics in human history. As of 9 April 2020, an estimated 1.4 million infants in 177 countries have been affected, with more than 85,000 deaths worldwide.Primarily, the mandate of BRICS countries is one that contributes significantly to the development of humanity and establishing a more equitable and fairer world. As of 30 April 2020, BRICS countries were estimated to have 39.77 million people infected with COVID-19, meaning that more than a quarter of the world, which is 26.3% of the global total, had been impacted and suffering from grave human loss, economic and social challenges. COVID-19 has contributed to the gradual economic meltdown in the emerging economies such as Brazil, Russia, India, China and South Africa - which have been acknowledged as the engine of global economic growth for the past two decades (BRICS Report 2020). These emerging economies have experienced grave financial vulnerability due to the fall in primary exports resulting from the drastic decline in global demand.

Russia, the host country of the 2020 BRICS summit, has the third highest number of reported COVID-19 cases (around 370,000) after Brazil (around 440,000). Despite this, the core objective of the BRICS countries during the pandemic is to work collectively to overcome it. China, which has been praised for its response to the pandemic, has become a leading country in the fight against COVID-19, providing over 350 million doses of vaccine to the international community and proposing a forum for vaccine cooperation. BRICS members and other organizations, such as the HKEX, have joined forces in a unified effort to combat the pandemic. The interconnectedness of BRICS countries and their vulnerable populations is shown in a graph that depicts the rate of infectious disease and its impact on human capital. The graph also illustrates the relationship between epidemic infections, population health, investment in the health sector, and economic growth, highlighting how economic growth can help mitigate health issues and benefit the population and their respective health systems.

Lastly, multilateralism is an essential foundation for a functioning international system. However, this principle is being undermined by practices that are masked as multilateral but prioritize one's interests over the international system. Therefore, it is crucial to uphold the true essence and philosophy of multilateralism. The role of BRICS countries is to propose the UN Charter and reject any form of exceptionalism and double standards that may arise. By doing so, BRICS countries can safeguard the international order within the framework of international law. This approach allows for extensive consultation and joint contributions to combat any form of hegemony that may emerge during this crisis.As a result of the COVID-19 pandemic, critical observations have been made on the various policy measures of BRICS countries, including health, education, and economic measures. These observations highlight the challenges that have emerged within BRICS countries and their impact on policy measures. These issues will be further explored in the following section. (French and Monahan 2020:5).

Figure 2: BRICS Countries interconnectedness: population, infectious diseases and Vulnerable sections of human capital

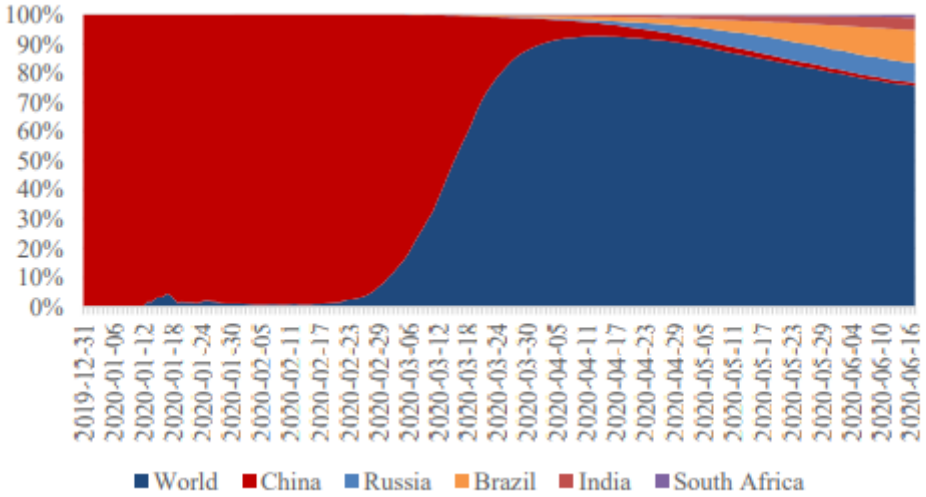


Source: Dash,D. Dash, A. and Sethi,N. 2021.

Critical Observation of the COVID-19 Pandemic

The COVID-19 pandemic has had several negative impacts on society, including psychological effects of social distancing and quarantine measures, which have drastically affected household and individual circumstances. These effects are seen in increasing rates of job loss, decreased housing quality, deteriorating mental health, personal safety concerns, family separation, and illness. Additionally, the sudden loss of loved ones has played a significant role in changes in people's behaviour and negative contributions to overall productivity (Abebe 2020:22). The diagram below illustrates the total number of COVID-19 reported cases in all BRICS countries between December 2019 and June 2021 (Dash, Sethi, and Dash 2021: 101-202).

Figure 3: Total number of COVID-19 cases reported per country 31 December 2019 and 17 June 2021



Source: Fonseca, P., et al. 2020.

What is dis-ease in the context of this paper?

The COVID-19 pandemic has caused widespread negative impacts on society, including not only the disease itself but also the dis-ease that comes with it. The loss of many lives across the world has led to increased anxiety and fear in people, with many seeking information but struggling to take appropriate steps to protect themselves. The constant stream of news reports about the outbreak can cause overwhelming pressure in the workplace, leading to negative reflections and constant uneasiness. People in rural areas have struggled to provide support to those infected with COVID-19, exacerbating urgent mental health and neurological issues. Many have felt displaced and alone, battling anxiety and uneasiness. The concept of dis-ease arises from these circumstances, referring to the occurrence of displacement, lonesomeness, and anxiousness during the pandemic. Therefore, it is important to evaluate the resilience of the economies of Brazil, India, China, and South Africa in the presence of COVID-19.

Collective Methods to Contain the COVID-19 Pandemic

To understand the policies adopted by BRICS countries in their fight against the pandemic and the underlying socio-political issues, it is important to first have a brief overview of the current national situations and infection rates. As of early June 2020, Brazil and Russia were witnessing a sharp increase in the number of infected individuals. Meanwhile, India had climbed up to the ninth position in terms of the global number of infections, with 180,621 cases reported in June 2021. China and South Africa followed with 84,126 and 29,240 cases respectively (Fonseca et al., 2020:191). This surge in cases raised concerns, prompting China to call for a Cooperation Action Plan aimed at tackling the pandemic through a scientific and technological approach.

Despite the severity of the economic impact of the COVID-19 pandemic on BRICS countries, various measures have been explored and implemented to mitigate its effects. The World Health Organization (WHO) launched the Solidarity trial, an international clinical trial seeking to establish clinical treatments for COVID-19 on a multinational basis. This trial is a significant effort towards changing the speed at which the virus is claiming lives. The pandemic has negatively impacted the manufacturing and services sectors, including the education, hospitality, health, travel, banking, and media industries. Travelling statistics in South Africa indicate a 71.0% decrease between 2019 and 2020, with an overall decrease of 50.7% over a 15-year period. To address these challenges, BRICS countries have established macroeconomic policies aimed at gradually implementing economic partnership for 2025. These policies will contribute to trade investments and investment liberalization, highlighting the early realization of all Agenda 2030 sustainable development goals.

The COVID-19 pandemic has been rapidly increasing, affecting world energy markets and impeding global oil prices, oil and natural gas demand across the world, according to the Organisation for Economic Co-operation and Development (OECD) (2020:1). BRICS countries have established methods to promote "BRICS Plus" cooperation format, which enhances the act of solidarity and effective coordination among countries. The New Development Bank membership expansion should continue to be encouraged to increase wider coverage and benefit more countries during this time (Isheloke 2020:22). The following section will examine the various approaches taken by BRICS countries in response to the COVID-19 pandemic, focusing on whether their measures are clear, coherent, and coordinated. Lockdown measures, health measures, and economic measures will be compared across these countries in order to gain an understanding of how they have managed to contain the disease and handle the dis-ease experienced by their people.

Brazil

Brazil, being one of the BRICS countries, has faced challenges in the healthcare system due to its devastating loss of life and a shortage of healthcare resources. (Armijo 2007:17-23). Brazil, despite being one of the leading pillars in multilateral negotiations, faced a severe crisis during the pandemic. The country struggled to control the virus's spread, leading to a massive loss of life and a healthcare system that was overburdened. The pandemic's economic impact was also severe, affecting industries such as tourism and hospitality, which are vital to the Brazilian economy.

Lockdown Measures

In terms of similarities, all BRICS countries attempted to implement strict lockdown measures as a means to slowly contain the spreading virus and to protect the most vulnerable. As such, these governments also encouraged the use of masks and social distancing to prevent the spread of the virus. In Brazil, there was a focus on clear and concise evidence-based communication to the public, while in Russia, the government introduced a digital pass system and QR codes to ensure compliance with lockdown measures. However, there were also differences in their approaches, Brazil placed more emphasis on primary care response and surveillance strategies in certain areas, Brazil also faced challenges in maintaining social distancing due to a high number of people unable to work from home. This is because many Brazilians work in jobs that require physical presence, such as informal labour and service industries. These jobs often pay low wages and do not offer the option of remote work. As a result, many workers continued to go to work during the pandemic, increasing their risk of exposure to the virus. Additionally, some Brazilians rely on public transportation to get to work, which also increases the risk of exposure to the virus.

Economic measures

Brazil focused on supporting vulnerable populations by allocating a large amount of funding from public and central banks, loosening fiscal targets, and simplifying custom clearance for imported goods. Additionally, the Brazilian government loosened labour laws, reduced taxes and contributions, and provided financial support to the airline industry (Cotta, Naveira-Cotta and Magal 2020:220). This was done to help mitigate the economic impact of the pandemic on workers and businesses. These measures were aimed at supporting the most vulnerable populations, including informal and self-employed workers, and preventing widespread unemployment. The financial support provided to the airline industry was necessary to help prevent the collapse of the industry, which could have further negative economic impacts on the country. Additionally, the government aimed to maintain the fast flow of goods, commodities, and raw materials by simplifying and accelerating customs clearance of various imported goods to combat the pandemic. Moreover, Brazil focused on supporting vulnerable populations and maintaining jobs.

Health measures

The government of Brazil maintained the following health measures at the beginning of the outbreak, routine hand washing and sanitizing, the use of facemasks and social distancing in order to prevent close contact and virus transmission. Non-pharmaceutical interventions need to be looked at across the states, and the social assistance programs need a better target approach in order to meet the various needs of the vulnerable populations (Moodley, Obasa and London 2020:1-2). Brazil maintained these measures from the beginning of the outbreak, while Russia only implemented them during the first and second waves of the pandemic. Brazil recognized the need for a better-targeted approach to social assistance programs to meet the needs of vulnerable populations as such many people would be easily infected which was a slight oversite issue on the country's health

measures. The health system in Brazil took measures to increase testing in order to ensure the progressive monitoring of the epidemic spread. Contact tracing was also implemented to isolate patients with COVID-19 in designated health facilities or within their home space.(Cotta, Naveira-Cotta and Magal 2020:220)

Russia

In contrast, Russia has established a unified federal headquarters to monitor and prevent the disease's spread, which is responsible for coordinating work that would help the government. (Konarasinghe 2020:13). Russia, on the other hand, established a unified federal headquarters to prevent the spread of the virus, which has been successful in monitoring the situation and providing recommendations to state bodies. The country also closed down travel channels from foreign nations, including China, to prevent the virus's spread. The political sensitivity of the constitutional referendum in Russia also posed challenges for the government to contain the virus.

Lockdown measures

On March 10th, Moscow's mayor, Sergei Sobyanin signed a decree, which banned the people of Russia from participating in events with a maximum capacity of 500 participants. This decree also suggested the sort of management that will be undertaken in the quest to encourage social distancing. The Russian government introduced a digital pass system and QR codes to ensure compliance with lockdown measures. Russia, there was a focus on a centralized federal headquarters to coordinate efforts across the country. Moreover, Russia, the government faced backlash over its handling of the pandemic and the distribution of vaccines. Despite Russia being one of the first countries to develop a COVID-19 vaccine, Sputnik V, the distribution of the vaccine was slow, with reports of shortages and delays in delivery (KPMG 2020). Moreover, there were concerns about the transparency of data related to COVID-19 cases and deaths in Russia, with some experts suggesting that the official numbers may be lower than the actual figures.

Economic measures

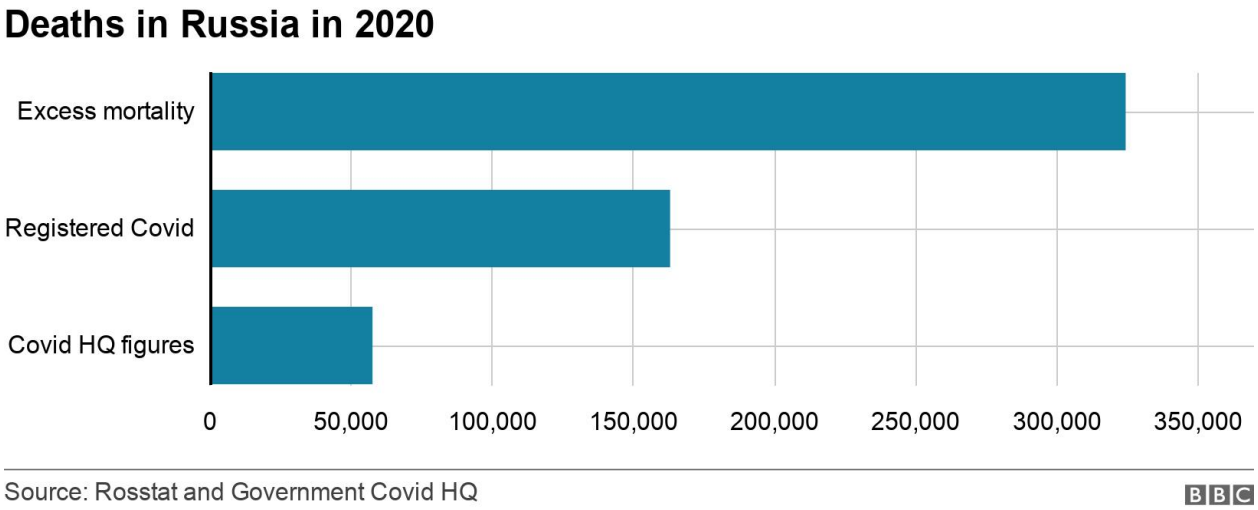
In contrast, Russia's economy was destabilized by the significant drop in global hydrocarbon demand and the price war between Saudi Arabia and Russia. To address this, the Russian government implemented macro-fiscal stabilization efforts, banking sector clean-up, enhanced regulation and supervision, and promoted economic diversification. The Russian government also sought to level the playing field for different private sector organizations to boost potential growth. to boost potential growth as part of their efforts to promote economic diversification. Russia's heavy reliance on the energy sector makes its economy vulnerable to fluctuations in global oil prices, which can have a significant impact on its overall economic stability. To mitigate this vulnerability, the Russian government has been working to diversify the economy and create opportunities for growth in other sectors. By levelling the playing field for different private sector organizations, the government aims to create a more competitive business environment, which can encourage innovation and investment in new areas, ultimately leading to increased economic growth and stability (Aslund 2020:536). Moreover, Russia undertook significant macro-fiscal stabilization efforts to improve its fiscal position and promote economic diversification.

Health measures

Russia emphasized routine hand washing and sanitizing, the use of facemasks, and social distancing in order to prevent close contact and virus transmission. Russia increased testing to 2200 per day, implemented contact tracing to isolate patients with COVID-19, and distributed PPE equipment

and ventilators for intensive care units. he health system also took measures to strengthen disease surveillance systems and increased testing to ensure progressive monitoring of the epidemic spread. Contact tracing was used to isolate patients with COVID-19 in designated health facilities or within their homes. The government distributed personal protective equipment (PPE) and ventilators for intensive care units. These measures aimed to control the spread of the virus and prevent large death tolls.

Figure 4: Death rates in Russia



Source: BBC 2021

India

Compared to other BRICS countries, India faced a significant challenge in reporting and managing the COVID-19 pandemic. The first case of COVID-19 was reported in India on 30 January 2020, and the number of cases continued to increase during the second wave of the pandemic. However, official statistics in India have been a challenge for doctors due to political pressure to downplay the severity of the pandemic. This made it difficult for healthcare workers to accurately report and manage the pandemic in the country.

Lockdown measures

India has reported 16 million COVID-19 infections, though the actual number of cases is likely much higher due to challenges in accurately reporting cases. India implemented a strict national lockdown in March 2020 to curb the spread of the virus, but this had significant economic impacts, particularly on migrant workers and the unorganised sector. Job losses were concentrated mainly in the agricultural and construction sectors, affecting those who rely on daily wages. The government outlined economic packages for the unorganised sector, but with few benefits and several conditionalities. (Sridhar 2020). According to the 2018 Periodical Labour Force Survey, compared to other BRICS countries, India's measures to combat COVID-19, such as social distancing and effective hygiene practices, aimed to flatten the curve and reduce the number of infected individuals. However, this approach may prolong the time it takes to return to normalcy. The challenges in accurately reporting cases and the economic impacts of the lockdown have been major issues in India's response to the pandemic. Temporary measures used to limit and delay COVID-19 infection rates through confinement and social distancing measures may have immediate health benefits, but also have various effects on health (Thiagarajan 2021:20).

Economic measures

According to the International Monetary Fund the Indian government implemented several measures to curb the spread of COVID-19, including a ban on selected food products like betel leaf and betel nut. In addition, imports of luxury vehicles and motorbikes were suspended. As economic activities gradually resumed, the government announced relaxation measures for non-hotspot areas, with nodal authorities managing migrant workers. Some geographic areas were designated as orange zones, indicating a reduced severity of the virus, and allowing for graded relaxations in economic activities (IMF Policy Response Report 2020:5-6). However, entertainment areas like cinemas, theaters, and festivals remained closed for eight months and were only allowed to operate at 50 percent of their seating capacity. While these measures helped to control the spread of the virus, they had unintended consequences, both positive and negative, such as increased pollution, more time spent with family, and income and job losses. The long-lasting effects on the economy and the well-being of the people will likely be felt for a long time and pose indirect risks to health systems (Worldometer 2020). Compared to other BRICS countries, India's economic measures included both specific bans on certain products and targeted relaxation measures for non-hotspot areas, while entertainment areas remained closed for an extended period (BBC 2020).

Health measures

In comparison to other BRICS countries, India implemented routine health measures such as hand washing, sanitizing, and the use of facemasks to prevent the transmission of the virus. However, testing was limited, and a significant number of people who were tested were admitted to hospitals, which contributed to the surge in cases. While the first lockdown helped to reduce transmission rates, it was only a temporary measure, according to a report by the International Justice of Infectious Diseases. The authors recommended ramping up testing and self-isolation to prevent secondary infections (Chaudhary, Sodani and Das 2020: 169-172). India has the largest pharmaceutical manufacturing capacities in the world and has contributed to vaccinating one billion people in 278 days, according to the BBC. The Serum Institute of India launched a vaccination campaign in March 2021, beginning with essential workers and leading political members before expanding to the general elderly population. However, the healthcare system in India, which is largely privatized, has struggled to provide adequate support for its people, contributing to the drastic spiral of COVID-19 cases in the country.

In contrast, other BRICS countries have implemented various health measures to manage the pandemic (BBC, 2020). Brazil, for instance, provided free healthcare services and conducted a significant number of tests to detect the virus. Russia has developed a vaccine and implemented strict measures such as mandatory mask-wearing, while China, which was the first country to be hit by the virus, implemented strict lockdowns and mass testing. South Africa has ramped up testing, implemented strict lockdown measures, and provided healthcare services to those in need (Thiagarajan 2021:22).

China

China was the first country to experience the COVID-19 pandemic, and the government took immediate and strict measures to control its spread. The Chinese government implemented a quick quarantine in Wuhan, which was the epicentre of the pandemic. Hubei, the province in which Wuhan is located, was put under strict lockdown to prevent the spread of the disease across the mainland and beyond. China mobilized its resources to strengthen the support to the people affected by the pandemic (Sokhey 2021:2).

Lockdown measures

The Chinese people showed great support towards the government, following the guidance and restrictions that were outlined. Communication was one of many string suites highlighted by the Chinese government. People were well informed every day on the life changing dynamics of this pandemic and the different efforts taken by the government to resolve this crisis. With the government's efforts yielding great response, the people's confidence in the government anchored the government exceptionally well. (Thiagarajan 2021:24). China isolated people by closing off cities and regions, while maintaining the free and essential flow of medical supplies. Moreover, Hubei province, the epicentre of the outbreak, boosted its treatment capacity by receiving 346 medical teams and 42,000 medical staff from other provinces. China implemented lockdown measures in response to the COVID-19 pandemic, China's measures were more successful in controlling the spread of the virus. South Africa faced challenges with enforcing the restrictions and addressing socio-economic factors that hindered compliance, and the vaccine rollout has been slower than desired (Biswas, Majumder and Dawn 2021:279). China's counter-epidemic approaches and measures have proven to be successful measure. This is because the rates of infections only peaked early during the rise of this pandemic, but later subsided. By 23 March 2020, the domestic transmission of this deadly virus had been blocked, this was noted by a statement released written by Premier Li Keqiang. To date, China has begun an orderly resumption of the working environment, as well as the production section, while establishing measures that can prevent a domestic rebound in the number of infections as well as imported cases.

Economic measures

In China, government-led investments and global demand for Chinese goods were the contributing factors to economic restoration. The government also allocated close to $99.5 billion for epidemic prevention and subsidy control, which helped in maintaining economic recovery. However, the hospitality and transportation sector experienced critical restrictions and productivity levels. The government-maintained efforts to keep consumption levels below pre-pandemic levels (Ayonumbi 2021). China focused on the importance of investments in their respective economies. China concentrated on maintaining economic recovery through government-led investments and global demand for goods. However, the hospitality and transportation sector has experienced critical restrictions and productivity levels. On 23 February 2021, the Ministry of Finance in Yuan allocated close US$99.5 billion for epidemic prevention and subsidy control. These economic approaches have assisted in maintaining economic recovery in China to date (Ayonumbi 2021).

Health measures

China's response to the COVID-19 pandemic was characterized by its speed and efficiency in implementing various measures to prevent and control the spread of the virus. One of the measures implemented was temperature screening at public places such as airports, train stations, and other transportation hubs, which helped to detect individuals with fever, a common symptom of COVID-19. The Chinese government established specialized hospitals with advanced medical facilities and also carried out large-scale screening and testing efforts in a bid to identify all those affected. The government's structures maintained solidarity and transparency, enabling the effective implementation of anti-epidemic measures and the availability of essential items. China has also vaccinated a significantly larger proportion of its population, with 700 million people already vaccinated, as part of its quest to prevent further infections. As a result of these efforts, China emerged as a leader in controlling the growing number of COVID-19 cases during the first few months of the outbreak. After six months, the country had registered 83,221 reports of COVID-19 cases, ranking 19th globally. Additionally, close to 78,377 recoveries were recorded, which translates

to a recovery rate of 94 percent (Worldometer, 2020). The Wuhan Houshen Mountain Hospital was one of two hospitals that received a 300 million allocation to treat patients with COVID-19, and hospitals also used the funds to purchase essential medical equipment and provide facilities for centralized treatments (Ayonumbi 2021).

South Africa

South Africa, one of Africa's leading markets, responded swiftly and aggressively to the crisis. Since March 2020, the South African government has introduced unprecedented measures that may encourage effective measures to assist South Africa in the quest to improve COVID-19 circumstances. This includes the implementation of a nationwide lockdown, precocious safety measures, and emancipation from various physical economic activities. Additionally, South Africa has spearheaded an international alliance for the effective distribution of vaccines across Africa (Popkova, DeLo and Sergi 2021:104).

Lockdown measures

South Africa implemented a nationwide lockdown on March 27, 2020, which was one of the strictest in the world. The lockdown consisted of five levels, with level five being the most restrictive and level one being the least. During level five, only essential workers were allowed to leave their homes, and all non-essential businesses and activities were closed. The government also implemented a curfew from 9 pm to 5 am, and all gatherings, including religious gatherings, were banned. As the number of cases began to decrease, the government gradually lifted the restrictions and moved to lower levels. However, the lockdown measures in South Africa were not as successful as those in Russia and China. Moreover, there were also challenges enforcing the lockdown measures and addressing socio-economic factors that made it difficult for people to comply with the restrictions. Additionally, there were reports of corruption and mismanagement of funds allocated for COVID-19 relief efforts, which further hindered the country's response. (BBC 2020). South Africa has been working to secure vaccines and has spearheaded an international alliance for the effective distribution of vaccines across Africa. The country has administered over 5 million vaccine doses as of April 2021, but the rollout has been slower than desired due to supply constraints and logistical challenges (BBC 2020).

Economic measures

On the other hand, in South Africa, the government implemented a recovery plan that focuses on employment-oriented strategic localization, reindustrialization and export promotion, energy security, reduce youth unemployment, and green economy interventions. The government provided loans at 0.2 percent to assist firms and organizations that were starting new businesses. This benefited the introduction of SMMEs in the South African value chain economy. The government established an Agricultural Disaster Support Fund for smallholder and communal farmers, which aimed to prevent any cases of food insecurity (Kanu 2020:27). South Africa prioritized infrastructure led economic reconstruction and recovery with investment in infrastructure that would stimulate various sectors of the economy. (Sarkodie and Adams 2020:100-105). The South African government established an Agricultural Disaster Support Fund for smallholder and communal farmers. This fund sought to assist farmers who had already been farming for at least 12 months, farming on Vegetation, livestock or poultry were amongst the many funded projects in order to prevent any cases of food insecurity. Support for the local beneficiation of minerals, the building of minerals value chains and strengthening broad-based industrialization is one of the key measures taken by the government (Kanu 2020:28).

Health measures

When examining the impact of various intervention measures on the outbreak dynamics in South Africa, it becomes clear that the country experienced the highest number of cases in sub-Saharan Africa both before and after the national lockdown was implemented. Similar health measures were implemented in South Africa to prevent the spread of COVID-19, including routine hand washing and sanitizing, the use of facemasks, and social distancing. The country's medical industry established specialized medical facilities to treat infected individuals and provided a comparatively high capacity of intensive care units to respond to the outbreak. The government also distributed large amounts of personal protective equipment to healthcare workers and scaled up the testing process, while also launching awareness campaigns and implementing infection prevention and control measures. Decontamination and disinfection of contaminated areas were also made top priorities during the pandemic(Kanu 2020:33). Despite these efforts, South Africa faced challenges related to its healthcare infrastructure and limited resources. The shortage of healthcare workers and personal protective equipment proved to be a significant challenge, despite efforts to scale up testing and establish additional medical facilities. Nevertheless, the country did provide a high capacity of intensive care units and embarked on awareness campaigns and infection prevention and control measures.

Conclusion

This cooperative effort between all BRICS countries has respected the use of bilateral and multilateral discussions. The current COVID-19 pandemic and the global impacts that arise from its proximity, are ones that can remain a reminder of the potential determinants of various emerging infectious diseases. Fortunately, the world today (governments and health institutions) has gradually equipped itself to confront the pandemic, which has infiltrated health systems and communities across the world. COVID-19 is undoubtedly a pandemic; humans are currently living in an era that poses immense uncertainty and an unprecedented global health crisis. BRICS countries have attempted to secure new prospects amidst change, they've done so by collective research and maintaining global solidarity in addressing existing government deficits. Moreover, they seek to tackle the existing common challenges: health, economic, unemployment, and negative variations of GDP. The paper used a comparative methodology in order to understand the different efforts taken by the different countries in order to curb this crisis. Additionally, the paper effectively outlined the background of the crisis and who the BRICS member states are and what their roles in their respective countries are and as a unit. The paper has applied the term dis-ease as an approach to understand the uneasiness experienced by people across the world, more specifically those in BRICS countries. The recommendations that follow, simply acknowledge that which has already been used or done in order to better the pandemic and provide further measures and approaches to add on to existing frameworks and approaches. Although it remains a challenge to foresee the final outcomes of this pandemic, a new chapter in the history of infectious diseases has been established and continues to write itself until the vision of conquering this pandemic becomes a reality.

BRICS countries have actively worked towards sustainable methods to improve how they assist their people. While it is commendable that BRICS countries have prioritized positive mental health, education, economic expansion, and political integration during the pandemic, it is important to critically examine the effectiveness of their efforts. As such one can deduct that these countries were ready for health and economic change but lacked in most lock down measures. Some scholars would even suggest improvement for BRICS governments to provide online resources that allow for engagement with active advice and general practitioners. This can aid frontline workers in identifying individual risks, including mental and physical health issues such as loneliness, and provide different options for treatment and referrals.

In response to the COVID-19 pandemic, BRICS countries have been focused on improving their public service delivery measures. To achieve positive mental health, education, economic expansion, and political integration, each government should prioritize the following recommendations:

- BRICS countries should provide online resources that offer active advice and engagement with general practitioners. This will help frontline workers to identify people's individual risks and provide appropriate treatment and referrals for issues arising from loneliness or mental health concerns other measures, such as renewing prescriptions, offering telemedicine consultations, and establishing continuity of psychological and psychiatric treatment measures where applicable, should also be considered. (Dash D, Sethi and Dash 2021:101).

- BRICS Governments should have implemented a short and effective quarantine measure that does not impose undue economic strain. This is particularly important for underdeveloped countries, as economic growth and prosperity are closely linked to education and production industries (Chaudhary, Sodani and Das 2020: 172).

- It is essential to provide people with as much information as possible about COVID-19. Governments should dominate media and social conversations with accurate and up-to-date information. Effective communication strategies are critical for preparing and responding to the pandemic.

- Government departments that oversee Adequate supplies of medical materials should be provided to support healthcare workers and their essential services. Special attention should be paid to the psychological well-being of healthcare workers.

- When possible, rely on approaches that encourage altruism rather than compulsion. This will help to create a more cooperative and supportive environment for public service delivery during the pandemic.

References

Abebe, G.M., 2020. Emerging and Re-Emerging Viral Diseases: The Case of Coronavirus Dis-ease-19 (COVID-19). *Int J Virol AIDS*, *7*, p.67. https://doi.org/10.23937/2469-567X/1510067

Åslund, A., 2020. Responses to the COVID-19 crisis in Russia, Ukraine, and Belarus. *Eurasian Geography and Economics*, *61*(4-5), pp.532-545. https://doi.org/10.1080/15387216.2020.1778499

BBC, 2020. Coronavirus was declared a global health emergency by WHO. London: BBC News. Available at: . Accessed: June 16, 2020

Biswas, S., Majumder, S. and Dawn, S.K., 2021. Comparing the Socioeconomic Development of G7 and BRICS Countries and Resilience to COVID-19: An Entropy–MARCOS Framework. *Business Perspectives and Research*, p.227. https://doi.org/10.1177/22785337211015406

Chaudhary, M., Sodani, P.R. and Das, S., 2020. Effect of COVID-19 on economy in India: Some reflections for policy and programme. *Journal of Health Management*, *22*(2), pp.169-180. https://doi.org/10.1177/0972063420935541

Cotta, R.M., Naveira-Cotta, C.P. and Magal, P., 2020. Mathematical parameters of the COVID-19 epidemic in Brazil and evaluation of the impact of different public health measures. *Biology*, *9*(8), p.220. https://doi.org/10.3390/biology9080220

Dash, D.P., Sethi, N. and Dash, A.K., 2021. Infectious disease, human capital, and the BRICS economy in the time of COVID-19. *MethodsX*, *8*, p.101202. https://doi.org/10.1016/j.mex.2020.101202

Ferraz, O.L.M., 2021. Covid-19 and inequality: the importance of social rights. *King's Law Journal*, *32*(1), pp.109-121. https://doi.org/10.1080/09615768.2021.1885329

Fifi, J.T. and Mocco, J., 2020. COVID-19 related stroke in young individuals. *The Lancet Neurology*, *19*(9), pp.713-715. https://doi.org/10.1016/S1474-4422(20)30272-6

Fonseca, P., Spellmann, S., do Nascimento, L. G., Bastrykina, E., & Das, A. 2020. The BRICS response to COVID-19. HAPSc Policy Briefs Series, 1(1), 190-200. doi:https://doi.org/10.12681/hapscpbs.24966

French, M. and Monahan, T., 2020. Dis-ease surveillance: How might surveillance studies address COVID-19?. *Surveillance & Society*, *18*(1), pp.1-11. https://doi.org/10.24908/ss.v18i1.13985

Ghosh, A., Nundy, S. and Mallick, T.K., 2020. How India is dealing with COVID-19 pandemic. *Sensors International*, *1*, p.100021. https://doi.org/10.1016/j.sintl.2020.100021

Grincheva, N. and Lu, J., 2016. BRICS summit diplomacy: Constructing national identities through Russian and Chinese media coverage of the fifth BRICS summit in Durban, South Africa. *Global Media and Communication*, *12*(1), pp.25-47. https://doi.org/10.1177/1742766515626827

Isheloke, B.E., 2020. BRICS and economic development: a multidisciplinary perspective on the impact of Coronavirus on the BRICS and beyond. *BRICS and Economic Development: A Multidisciplinary Perspective*, *1*. https://doi.org/10.34256/iorip20280

Kanu, I.A., 2020. COVID-19 and the economy: an African perspective. *Journal of African Studies and Sustainable Development*, *3*(2).

Konarasinghe, K.M.U.B., 2020. Modeling COVID-19 Epidemic of USA, UK and Russia. *Journal of New Frontiers in Healthcare and Biological Sciences*, *1*(1), pp.1-14.

Lancet, T., 2020. India under COVID-19 lockdown. *Lancet (London, England)*, *395*(10233), p.1315. https://doi.org/10.1016/S0140-6736(20)30938-7

Mbunge, E., 2020. Effects of COVID-19 in the South African health system and society: An explanatory study. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, *14*(6), pp.1809-1814. https://doi.org/10.1016/j.dsx.2020.09.016

Moodley, K., Obasa, A.E. and London, L., 2020. Isolation and quarantine in South Africa during COVID-19: Draconian measures or proportional response?. *SAMJ: South African Medical Journal*, *110*(6), pp.1-2. https://doi.org/10.7196/SAMJ.2020v110i6.14842

Nhamo, G., 2021. COVID-19 Vaccines Development Discord: A Focus on the BRICS and Implications for Africa's Access and Affordability Matters. *Politikon*, *48*(2), pp.278-296. https://doi.org/10.1080/02589346.2021.1913797

Popkova, E., DeLo, P. and Sergi, B.S., 2021. Corporate social responsibility amid social distancing during the COVID-19 crisis: BRICS vs. OECD countries. *Research in International Business and Finance*, *55*, p.101315. https://doi.org/10.1016/j.ribaf.2020.101315

Reddy, B.V. and Gupta, A., 2020. Importance of effective communication during COVID-19 infodemic. *Journal of Family Medicine and Primary Care*, *9*(8), p.3793. https://doi.org/10.4103/jfmpc.jfmpc_719_20

Thiagarajan, K., 2021. Why is India having a COVID-19 surge?. Accessed: Why is India having a covid-19 surge? (researchgate.net). https://doi.org/10.1136/bmj.n1124

The South African Government. The fifth BRICS Summit - general background. www.gov.za

Singh, N., Tang, Y., Zhang, Z. and Zheng, C., 2020. COVID-19 waste management: effective and successful measures in Wuhan, China. *Resources, Conservation, and Recycling*, *163*, p.105071. https://doi.org/10.1016/j.resconrec.2020.105071

World Health Organization, 2020. Coronavirus disease (COVID-19). Accessed: nCoV-weekly-sitrep11Oct20-eng.pdf (who.int)

World Health Organization, 2020. Coronavirus disease (COVID-19): weekly epidemiological update.

Worldometer, 2020b. Total Coronavirus cases in Russia. Worldometer. Available at: Accessed: June 12, 2020.

Zhu, J., Yan, W. and Liu, J., 2021. COVID-19 pandemic in BRICS countries and its association with socio-economic and demographic characteristics, health vulnerability, resources, and policy response. *Infectious Diseases of Poverty*, *10*(1), pp.1-8. https://doi.org/10.1186/s40249-021-00881-w

Asia and its various growing dimensions of globalisation for economic integration

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Abstract

The paper would try to look at the India-China relations of cooperation within BRICS framework. A comparison of this stance with India and China in power struggle Asia would form another part of the paper. India has opened up new platforms on either side of the subcontinent such as Bay of Bengal Initiative for Multi Sectoral Technical Cooperation, Chabahar port project as well as joined Shanghai Cooperation Organization as its means of outreach. This has all been a part of India's changing role in Asia. However, it must be also kept in mind that there is a China-Pakistan angle to it. A battle for power and influence has been there in the region of South Asia even before the pandemic. Now post covid19 scenario as the western world shrinks and the power fulcrum shifting towards Asia with USA pivot to Asia program as well as the geo-political tensions between USA and China coming up there is a new role for South Asia right now. The paper would like to understand these scenarios with an eye on India-China relations in a cooperative competition relationship scenario. On one side of the paper the joint role of India-China in BRICS framework would be looked at against the Indo-Pacific Asian power struggle.

Keywords: Asia, Asian Century, India, China, Russia, Indo-Pacific, Power Struggle.

Introduction

The idea of a time being divided into two-time era in the form of B.C. and A.D. had been prevalent based on the life of Jesus Christ. An iconic messiah which had divided the global history into two different precincts. One before the birth of Christ and the other after his demise. Now the global covid19 pandemic could be also exactly looked at the same way. One where we could look at the similar way is world which existed before covd19 pandemic and the other which is now while we are still in the process and looking for a time ,which may be considered as something post-Covid-19 (Yunling, 2015). This is where the idea of the global politics, economy as well as society has been transforming in the process of the pandemic of Covid-19. In a world where there has been a slew of integration and the globalisation has picked up pace there were big loopholes probably left behind. Today in the times of this unforeseen pandemic the world politics as well as the economics, trade and the society associated with it has also been changing. It may be argued that the world faced epidemics which could have been termed as pandemic had the World Health Organization existed since the times of *Black Death* in 15th century to even *Spanish Flu* of the 20th century. However, as the world of today is not only more populated but most importantly more connected the implications will be far reaching without exaggeration.

Global North vs Global South

The Covid-19 crisis was born in the times of the already crumbling times of the globalisation if not completely shattered (Steven A. Altman, 2020) [1]. There have been times of the way that the world has faced multiple challenges and all the same time. The world wars or the epidemics coupled with economic recessions, social tension have been there spread across the history of the world. However

1 (Steven A. Altman, 2020) "Will Covid-19 have a lasting impact on globalization?

there comes a question on how the world in the times of contrasts where, on one hand, globalisation is reaching a certain limit and, on the other, decoupling based on mistrust and suspicions if not unprecedented is definitely a new in the contemporary times. The Covid-19 is one of those times of breaking barriers and creating new chapters in the world divided between geo-politics of "Global North versus Global South development agenda" and/or the "Socio-economic and cultural clash of the Eastern part of the world against the West". In between all this, there is an important question to be asked that whether the onus of not just leading the world by a sole hegemonic power but a collection of powers in a collective position (Chee, 2015). There is also an extension of this idea as to if the dynamics are being revisited or revision happening in the global quadrant divided globally in the North vs South and the East vs West. It is a challenge which may not be met by the arrogance and the vanity of the west but maybe looking towards a new global order.

Economic Integration

Now the most important question is about the economic and the political way of global integration. The idea is about the way that the current global pandemic has created a new wave of socio-economic upheavals and its fallout. Now if we narrow down the approach of this global system then let us narrow it down to the continent which is in the middle of this global situation over change. The continent which is in the middle of the storm of the change in the wave of pandemic would be Asia (Zhao, 2020). The continent of Asia has had a rich history and had been at the forefront of the global cultural and political narratives for a very long time. If we look back at the history of global human civilization then be it the old civilizations of *Indus, Mesopotamian, Sumerian, Chinese and even Egyptian civilization* considering Egypt an extension of the west Asia it would be clear that there has been the continent of Asia as a luminary of the global civilization progress. Only Greek and Roman civilization can be seen to have been born from the western world. Even in terms of the cultural spheres be it *Japanese, Chinese, Indian, Persian, Arabic, Turkish and even Russian* which acts as the crossing bridge into the west from the eastern part or Asia proves the fact that the continent of Asia has been one of the key drivers of the cultural epitome of human civilization. Asia therefore has a distinct importance of own.

Now speaking of Asia, the region of *West Asia* which has been colonially termed as *Middle East* has a very important dimension to play. It is one of those most important strategic regions in the world and of course in Asia where the western powers are still embroiled. The fight for the justice, democracy, and the improvement of the lives of the people there is their own fight. In the times of the pandemic there has been unrest in Lebanon, concerns over Palestine and the economic threat looming with concerns and delays over the delay of the *Dubai World Expo 2020* now postponed to 2021 and even the *Qatar 2022 football world cup*. Therefore, the western part of Asia which connects to Europe, Africa and Asia has a very important supply chain role too. Sanctions on Iran or the internal politics of Saudi Arabia especially in the current times can be of catastrophic proportion. The tensions over the Israel-Palestine issues, fragile economics of Jordan apart from Lebanon and of course the devastated Iraq-Syria on an unknown path of reconstruction are some of the most pressing issues that has no long-term solution and only to make matters worse the global pandemic is here. Speaking of the catastrophe and the global pandemic the worst humanitarian crisis is Yemen as of now and yet the challenge of the middle east is yet to be over. This is the time for the world to take a new look towards this part of world (Navdeep Suri and Kabir Taneja, 2020).

Now the question is before the paper tries to look more into Asia and going in depth on west Asia and other parts of Asia it would be imperative to understand Asia and why it's important. Asian politics and the world of today is probably more connected than other continents of the world. If we look at other continents from Europe where the European Union in itself is a union that is

closing in the general terms. Not to mention Brexit which is now a done process. Further down the Atlantic there lies the America's. On the northern front you have the USA which had been impacted by the Covid-19 crisis by numbers. USA had been ranked as the best country in terms of pandemic preparedness and yet here in the real world the supposed defender of the free world had been struggling to contain Covid-19. On the other hand, there is Canada which was never really a global player but in terms of the domestic quality of life standards they have maintained their position. Even during the Covid-19 pandemic despite Canada suffering initially has managed to get back on track thanks to their lower population numbers and other measures (Raluca Bejan and Kristina Nikolova, 2020). Last but not the least on the mainland of North America there is Mexico which has remained an emerging economy but surrounded and enclosed by prosperous and powerful Canada and USA respectively. Not to mention its role in global politics has been severely affected because of mentioned two countries (Velasco, 2018).

At the end of north America and before the beginning of South America is the small part of central America. A region like the Indian subcontinent but much smaller divided between the poverty stricken "Banana Republics" and an exception in the form of Panama which had grown due to US money. On spreading out there is the Caribbean where some of the islands are stuck in a rut such as Haiti or astray Cuba and on the other some are prospering although threatened due to the pandemic such as Dominican Republic, Bahamas etc. The question may be out forward as to why and how these are important in the global context. That will be answered later. Now moving on south there is the southern part of America which used to be seen some time back as the new hope for socialism and an egalitarian society in an emerging part of the world. A society where the old wounds of colonialism and even older civilization and their ideas can be juxtaposed for a great role of south America. However, starting from Argentine currency crisis to the destitution and the wandering off Brazil to the greater lengths of decadence has failed South America. The expectation on the two big countries in the form of Argentina and Brazil despite their rivalry has been a sort of downfall. Although countries like Peru, Chile despite the problems has grown economically but their prosperity hardly matters in terms of the trickle effect it could on Latin America.

The idea of the north and southern part of America's as well as the central and the Caribbean criss-crosses a lot of countries and their individual roles, aspirations, success, and failures. Now if we come back into Asia and most importantly in the western part of Asia also called the Middle East since the colonial times (Ramadhan, 2018). However as like the article here looked around America's although in brief the main point of context was to bring into attention as to how and why Asia has one of the most important roles in the world. Now coming back to the Middle East, the region has an important role to play as it is the main point of contact which still binds the region of Asia in terms of security with the west primarily. West Asia has seen upheavals in terms of the countries with artificial borders more complicated with the colonial regimes. Then comes the important aspect of governance and democracy. A region which is important not only for Asia but also for the entire world in terms of the relevance it holds. Therefore, west Asia has always been an important region of the world and its tumultuous nature has driven then world in terms of geo-politics as well. Now the question remains that how can the region which has been at the epicentre of turbulence since historic times march ahead with peace and prosperity together. There is no one simple answer to this question where conflict has reigned in historically.

West Asia has the historical conflicts which had been compounded by the energy politics, colonial overtures. European powers which had come in and dominated the countries today have become independent and proud countries in their own right. However, the middle eastern world has been divided along the lines of sectarianism, religious divide which has always pushed the voices of the people behind. The situation had been controlled by the dictatorships which had managed the

people across the lines of religion, political opinions etc. These are the attributes which have always allowed for the outside intervention especially in the form of the world's two powers in the form of USA and Russia. The century which is being touted as an Asian century and in the two decades Asia has definitely gone on in the way to make it true as well however needs to look at west Asia as the first step for an Asian solidarity. The region of west Asia with war ravaged countries and the battlefield for proxy war between two Islamic powers in Asia does not bode well for the continent. The energy routes and the importance of the region just not for Asia and the world is there (F. Rizvi, 2011). The region which has got some of the richest countries in the world has also become one of the most human refugees contributing region especially to Europe. These are some of the biggest questions which needs to be looked at and sorted although it would require amount of time.

The Asian Axis

Now if we move into the other parts of Asia then it could be central Asia as it also bridges Europe with Asia and not to mention it's the backyard of Russia. Central Asia has been calmer despite being rich in energy. It is not to mention that there have been political scuffles or rather show of military strength but the political balance there is so much in favour of Russia that it hardly makes any difference to the world. In terms of its importance for Asia the region of central Asia was once a major centre of silk trade and then post USSR regime became the hotbed of energy politics. Russia tries to keep the region in control and even aggressively. In 2008 Georgia was attacked by Russia but the world kept quiet as did the neighbours of Georgia. Now in the current times of crisis of Covid-19 central Asia has been relatively less affected and countries like Turkmenistan are already in the normal scenario mode. Now the question arises that has central Asia become more important than ever post USSR regime. The answer would be yes but nevertheless under Russia influence. That had made this part of Asia a very important player in the global politics (Foreign Policy, 2020). The idea for the region in central Asia is to keep on development of their respective regions while also balancing Russia. This could be attributed to certain countries such as Azerbaijan whereas countries like Kazakhstan, Uzbekistan have still been holding back sovereignty.

Now the question is what makes the region of central Asia so important and what steps it can take forth for a greater prosperity and cooperation within Asia. That would require these central Asian countries to come together. Although they are a part of the Eurasian union and the Shanghai Cooperation Organisation both these organizations show a very different proposition altogether. The former is more like a union designed to keep Russia in charge. Whereas the latter is more multilateral and has multiple players which includes China, India, Pakistan and of course Russia as well. Therefore, this is the platform which could be looked into using central Asia to build on energy infrastructure projects as the first step. That could be seen as the first platform, and this is from where the shared prosperity of Asia especially when it comes to energy security despite playing the game of real politik could be worked out. Most of the central Asian countries does not function on democracy or are pseudo democracy however to keep the unrest away it all depends on keeping the development work going. In terms of prosperity there are a few countries which are ahead but some of the bunch of the countries in central Asia have still low human development where countries like India despite its own human development challenges can come in. Not to mention China has already been investing in their neighbourhood but may not want to irk Russia which considers it their exclusive backyard.

The idea of energy corridor in Asia and most importantly the dynamics of energy trade is where the region of central Asia has a prime importance. If we look at the countries of central Asia which also includes countries mostly ending with *"stan"* such as Tajikistan, Turkmenistan, Kazakhstan, Uzbekistan out of which Kazakh is also a big country there is a lot more to play for this region. Their

trading partners can be more of Asian countries. China already has invested a lot in these countries not to mention that India too looks at the region in terms of the energy and the security policy pre covid19 pandemic. However, post this pandemic the equation of all the countries would have changed and Asian countries especially who can play a more bridging role and take forward the "Asian Energy Sphere" (Ramadhan, 2018). The whole idea of the Asian energy producing countries from the west such as Saudi Arabia, Qatar & Iran to central Asian countries of Uzbekistan, Kazakhstan and even up to South and Southeast Asia may seem far-fetched but it is possible. In fact, much like the cargo trains which operate between Asia and Europe by China and India could also be a reality in the form of energy pipelines. The investment has happened in some of the areas but there is a lot more which could be expected. Iran with its Chabahar port has emerged as a new energy and trade route overcoming the sanctions of the west pragmatically.

The whole region of central Asia once it starts building infrastructure albeit not just projects dreamt of by China in the form of "One Belt, One Road" initiative but similar on those lines and more inclusive as well. Central Asia could become the platform from where Asia can dream of securing energy, infrastructure development and most importantly developing prosperity for the lives of the people. Some countries have been able to do or are in the process while there are others which seems to be still grasping their own identity as a country and there could be more time needed for them to find that direction (Narins & Agnew, 2020). However, one thing which is important is to note that infrastructure coupled with energy trading and a balanced geo-political view can bring in prosperity in the region ((Eleanor Albert, 2019). Asia which has a huge economic development road ahead despite doing well in the last 40 years or so in terms of the economic growth and reducing poverty needs to take it a notch further. This is where the role of central Asia would come in. Europe is dependent on Russia for energy but also trades with other central Asian countries. However, when it comes to Asia the central Asian countries have a lot of markets to look at and also potential for cooperation as mentioned earlier to build this region as the place where all parts of the Asia can connect. The connect that can happen over the shared vision of economic prosperity for continental development.

If we move around from Central Asia while continuing on the context of economic development and prosperity, then one would have to look towards the region of East Asia. In terms of per capita income as well as development even if it still marginally behind the per capita income of western Europe, USA, Canada, Australia however there is no iota of doubt that this part of Asia has truly leapfrogged the Asian dream. The part of Asia which industrialized in the very early stages aside from Europe and USA had been at the pinnacle of the Asian success through East Asian miracle ((Birdsall, Nancy M. Campos et al. 1993). Once one looks at the region of East Asia one can find the smaller countries like European continent but heavily industrialized or business hubs such as Japan, South Korea, Taiwan, Hong Kong, Macau etc. The eastern part of Asia has the only Asian country that has been able to ward off western powers and in fact as an imperial power itself in the form of Japan. The country which has been devastated during World War 2 in the infamous incident of nuclear catastrophe but came up as one of the major manufacturing hubs in Asia. Today Japan is struggling with covid19 pandemic and has the added anxiety of whether the Tokyo Olympics will take place or not. Already the Olympics has been postponed to next year and the new Abenomics of rejuvenated Japan going back to manufacturing as well as service economy bolstering has challenges facing ahead.

Now the most important question is whether East Asia can lead Asia and the world into the next phase. That is where the role of "China" steps in. From the historic times to the modern days except for the colonial subduing this country has always been a major and important part of the world. Boasting of an ancient civilization and a rich cultural sphere China has had a long past of innovation history and today in the modern times China has been able to take on the mantle of "Manufacturer"

of the world (Minghao, 2016). Quantum leaping time frame and moving past industrialized western European countries today China is that country of the world that has been able to take forward Asia apart itself with its grand scale of business and trade and shifting the power balance from the west right to the "Pivot of Asia"((Premesha Saha, 2020). There have been issues raised on China be it geo-political, human rights violation or importantly their internal political mechanism however there is no doubt that China today is the centre of the Asian politics and also the only power emerging to challenge the western military might as well. However, the question which is more important that has the rise of China been peaceful where the other Asian countries can also come up to support China. The answer although is very generalized but it may still be seen as the answer from a lot of Asian quarters hampering "Asian Pax Lens" (Lu et al.2018).

East Asian miracle has been that miracle that has pushed countries like South Korea, Japan and China off late from the ranks of poverty into some of the most important economic powerhouses of the world today. This is where the role of east Asia becomes very important for the current times amidst Covid-19 pandemic and post pandemic to lead Asia. Already South Korea has emerged as a successful case study. Similarly, China although being criticized for its initial secrecy in letting the world know of virus and its allowance for the virus to spread still has managed to hold the virus infections at bay as per their records. Although at the same time China has been embroiled in diplomatic and geo-political tensions near and far it still has a role that is far from over. China has tried to safeguard their reputation by giving out masks and other equipment needed for covid19 fighting however there has been certain damaged done to the reputation of China as a nation brand. There is a very important context here for China rather than being assertive in their so called "Wolf Warrior" diplomacy (CNN.com). A diplomacy backed by aggression, but China may have an opportunity which is losing on the time to bring the Asian countries closer. China has lost the initiative that was once seen from them and now the continent is looking to move away from their influence (Liang 2020). This may stay for a long time but the work for China begins right now.

The cooperation of the Asian countries with China can only begin with genuine cooperation. Here the word "genuine" may seem utopian or non-realistic in the world of international relations. However, this is possible if China can build the confidence of the Asian countries and go soft on their territorial aspirations. On the other hand, Japan, South Korea have been trying to resolve their own differences although South Korea also needs to keep alert over its northern neighbour in the form of Democratic People's Republic of Korea (North Korea). The incidents of unrest in Hong Kong and the recent passing of Chinese law over Hong Kong subduing their autonomous status. The overtures of China towards Taiwan have also been on the same lines. These irritants which China has been at the centre of is also driving the Asian politics. A major policy shift for Asia can come up only when the other Asian countries can come together as an alternative to Chinese assertion else if China changes their way as mentioned in the above paragraph. The second alternative is definitely a far-fetched one and more on the utopian lines considering Chinese version of "Real Politik" (Johnston, 2019). However, going back to the first narrative it is possible if the idea of the Asian unity is considered in the world of post pandemic where investment, trade and economics would need to be looked at more than profits. The cooperative axis of east Asian neighbourhood can have a spill over on the entire continent.

The parts of Asia which are yet to be discussed are Southeast and South Asia. If we look at this region the geo-politics of Asia and world are centred around these two important regions in the current times. If one starts to look at Southeast Asia it is that region which has been able to form their sub-regional grouping in the form of ASEAN that has worked well. The region can be divided into three category of countries some of which are highly developed, developing and least developed. The most developed would-be Singapore, Malaysia, and Brunei. Whereas Indonesia, Vietnam and

Thailand, Philippines are developing and have already an important footprint in Asia and growing global economy too. Last but not the least are Cambodia, Laos and Myanmar are the least developed ones. Now this important region of Asia can be dubbed as the new "economic bubble of Asia". Places like Singapore and even Malaysia have already established themselves as service and banking central points. They have their own internal ethnic divisions which is more pronounced in Malaysia which has been going through political upheavals just before the pandemic struck and still going on. Brunei on the other hand is an oil rich nation and have a very Islamic oriented society. Brunei in Southeast Asia is like a reflection of the west Asian countries. Therefore, these rich economies of Southeast Asia have an important role in terms of investment and trade in Asian continent (Huang, 2016).

On the other hand, if we look at the developing nations of Thailand, Indonesia, Vietnam, and Philippines all of them have not only an economic imperative but also a security responsibility. Unfortunately, it is related to an Asian country in the form of China. The region of South China sea which has China again as a common factor related to the control over south China and its supposed resources ((Rahul Mishra, 2020). The four countries mentioned above have a very important context in terms of the politics of geo-security where US, India, Japan, South Korea and even Australian equation comes in. The economic growth of Vietnam has definitely been the new talk of Asia and similarly Philippines despite its poverty, irascible president and societal problems not to mention impending ISIS threat has still been trying to grow although there is much work to do. Then comes Thailand which has been investing in infrastructure projects in Asian countries despite having its own economic challenges and political upheavals. Thailand has been an important trade related country and holds an important position in terms of trade transit of Asia. This is where the importance of Thailand is and has been apart from its tourism-based economy. Last but not the least is Indonesia which has been touted as the next big economy of Asia apart from India. It has suffered from colonial problems including poverty and economic issues but Indonesia off late is starting to emerge as an important and cooperative player in Asia over the times.

Then comes next in line the least developed countries such as Cambodia, Laos and Myanmar which are important. They have an important role of their own as not only they have a role of development for themselves and in turn for the continent but also, they have an important security dimension related to the economic aspects too. China has been harnessing these countries for infrastructure development which on paper may seem fine but there is also the tendency of intervening in the internal affairs as reports emerge from Myanmar in recent times (Hillman, 2018). The government of Myanmar has complained that China is inciting terror groups in Myanmar. In the country that is at crossroads of Southeast and South Asia, India too has also been keenly investing and also has maintained a steady relation. In fact, India had been able to conduct surgical strikes against insurgents of North-eastern India in collusion with government of Myanmar. That shows India knows that Myanmar is an important country nevertheless less developed but has immense potential in holding some of the important resources in the form of minerals as well from its strategic location from a security point of view. This is one country which India considers as a part of the extended neighbourhood in the eastern part although China has been investing heavily in Myanmar and that has an important security perspective in the form for India. China has been also trying to do "Mask Diplomacy" with Myanmar during the Covid-19 crisis (Alicia Chen, Vanessa Molter 2020).

The question however is how Myanmar government has been evolving and is going to in the near future. Myanmar is one of the ethnically divided countries in Asia and not to mention the Rohingya crisis which had plunged Myanmar into global news. This crisis also meant a dent for "Aung Sa Suu Kyi" who had been seen as the defender of democracy in Myanmar. However, her role in dealing with the Rohingya crisis had not been viewed well by the west. She was stripped of not only many western recognitions for her fight for peace and democracy, but this also meant that there was a

change in the political dynamics of Myanmar which had now taken a hardliner Buddhist approach. A religion-based nation to unite the divide country of ethnicities and religion for a long period of time. Myanmar's importance will remain as a strategic threshold country and will keep growing. Last but not the least comes Cambodia and Laos which have been trying to regain the economic impetus and to be on the growth engine of Asian story however it is still dependent on primarily Chinese investments (Chee Meng Tan, 2015). Not only that its political structure of communism has also been leveraged by Chinese for a long time. It is important to utilize the current pandemic as a watershed moment and the other countries like India, Japan, South Korea to invest in these countries for realizing the dream of fulfilling "Lens of Asian Pax" which only will enable realizing the Asian bloom.

Now comes the region of South Asia at the centre of which lies a very complex neighbourhood and a power struggle. A struggle for power which is like a triangular love story. A love for the quest and control of one of the most underdeveloped regions of Asia but the one which holds the most amount of potential and growth not only in the current times but also in the foreseeable future. The quest for power between the age old geo-political rivals India and Pakistan and not to mention to make things spicy in this triangular power quest the equation of China (Guo et al 2019). An idea for the prosperous and growing Asia united in its quest is the most challenged in this region. The region has the most important context for India. In the current context of the challenges of covid19 pandemic still going on India had a clash with China at the Galwan valley in a long list of conflicts between them. The conflict between China and India had been overshadowed by India and Pakistan for a time of at least 7 decades. However, the current context of the political game in Asia has a lot of importance on the context of the evolving relationship. Relationship between China and India the two age old civilizations turned into modern nation state has picked on a new age rivalry (Hillman, 2018). The relation between these two age old civilizations from cultural contacts and scholarly visits has turned a new leaf as of today's times.

India and China are at the heart of not only the politics in South Asia but also in the global sphere (Ayush Jain, 2020). Though in terms of the amount China has spent more money in terms of their investment or supposed assistance to the countries not only in Asia but also Africa as well as Latin America. However, coming back to Asia there is a very strange and complicated rivalry that has been brewing under the India-Pakistan heat or for China with its own internal political problems as well as its neighbours and not to forget also a geo-political rivalry with Japan and South Korea as well as ASEAN countries who are egged on by USA in all probability. The idea of the South Asian politics is generally limited to India-Pakistan and occasional reference to Srilanka, Bangladesh and off late Nepal and Bhutan. However how all of this region becomes significant and never been talked about that much. The reason is because the region had been looked on as just an extension of India in the form of Indian subcontinent with no offense meant to all the other rightfully proud sovereign neighbouring countries of India. Speaking of viewing the region unfortunately this myopic vision of not only the west but also the region of Asia as well. South Asia in many parameters especially on health, education as well as quality of life can be compared to Sub-Saharan Africa with utmost consideration for both the regions as well as the challenges facing them.

The region of South Asia and the role of India has now metamorphized from just an aid provider into a leader and the one who can guide the entire region. India has been slowly and steadily taking on that role. A role which is important for not only the region of South Asia but also for the entire continent. India has already taken on the role of that in terms of launching the South Asia climate satellite, infrastructure build-up and opening new trade routes as well as health, science and technology cooperation. However, amidst all this India has been very careful and subtle to side-track Pakistan. This is precisely the reason why India has opened up new platforms on either side of

the subcontinent such as BIMSTEC, Chabahar port project as well as joined Shanghai Cooperation Organization. This has all been a part of India's changing role in Asia. However, it must be also kept in mind that there is a China-Pakistan angle to it. The angle which also involve other players in Asia much beyond the subcontinent such as Iran, West as well as Central Asia. A battle for power and influence has been there in the region of South Asia even before the pandemic. Now post Covid-19 scenario as the western world sinks and the power fulcrum shifting towards Asia with USA pivot to Asia program as well as the geo-political tensions between USA and China coming up there is a new role for South Asia right now.

A region which has a lot of history and some of the world's oldest civilization and their influence etched in the minds of human civilizations have now regained their prominence. Prominence in the form of the clash, collaboration and mostly a mixture of both in the form of India-China relations ((Antara Ghoshal Singh, 2020). However, one must not forget that in the region of South Asia surrounded by West, Central, East and Southeast Asia the region has a very important place of its own. Truly if the Asian century must come full circle this region of South Asia and especially India and its neighbours have a role to play. During the pandemic there has been increased pharmaceutical export from India apart from the medicine diplomacy not to mention that China has been doing that too despite the allegations against them. Also, the growth of trade, energy corridor and the quality-of-life improvement are the most important factors that drives not only the domestic politics but also the international politics. A region which is critical to China's new silk road project apart from India's energy pipelines projects to counter China's so-called encircling of India through String of Pearl's investment in important infrastructure projects across India's neighbouring countries surely has enough reasons to look at South Asia which simply cannot be ignored further (G.S. Khurana, 2008). The time has come for the region of South Asia to move ahead, and no be encircled by petty politics of older big powers as new order in Asia emerges.

Moving ahead from the regional aspirations of the Asian subregions there is a greater role of Asia and Asia alone in this world of today. The continent which is the biggest inhabited landmass in the world has challenges and problems of its own. Some of the world's most complex historical problems lies in the continent of Asia (Fan, 2007). The geo-political rivalry between North and South Korean peninsula, the religious rivalry between Israel and Palestine and also Israel with other Arab states and Iran too not to forget the nuclear-powered scary enmity between India and Pakistan with a China angle and last but not the least a proxy war-based rivalry between the Islamic world of Shia Iran vs Sunni Saudi Arabia also including other players as well. The problems which are mentioned here are of magnificent proportions. The fallen countries of Iraq and Syria which had become a playground for power players such as Russia, USA, Western Europe and Iran and Saudi-Arabia needs to be looked at with very serious consideration. The west Asia is one of the most volatile regions in Asia that has a lot of stakes for the build-up of future prosperity and cooperation within Asia and also its impact on the greater world. Asia needs to come together and try to keep insulated from the other powers especially from the west to build and Asian centred world and to stop the leverage of these powers in Asia and it is what will drive Asian dream ahead (P. Duara 2001).

The idea of solving these problems especially in the Korean peninsula has moved beyond the powers which are beyond that region. The issue has lingered long enough and yet there has been no solution. Similarly, for Israel and Palestine the western backing of Israel as well as its newfound friends against the Arab world backed Palestine can have a solution through two state solution which has not happened. As for India and Pakistan several wars later and terrorism backed by Pakistan to trouble India the uneasiness lies between these two neighbours with its spill over on the entire Indian subcontinent or South Asia. As also mentioned, there is an angle of China. Amidst all of these the rivalry between Iran and Saudi-Arabia which spreads across the west Asia and North

African region through their proxy wars in Yemen, Syria, Iraq, Libya and even Egypt apart from the other powers at play is important in the context of stabilising the region of Asia. Not to forget that there are other fracture lines in west Asia between Qatar and UAE in terms of their rivalry for being the fashionable opulence iconic country in the region. The problem between them is supposedly diplomatic with the allegation against Qatar of supporting *ISIS/Daesh* but there are other angles too. Like Saudi-Arabia who are themselves in the mix of things. Not to mention relations between Israel-Iran are murky and Jordan, Lebanon has their own creeping socio-economic problems apart from a risky neighbourhood in west Asia.

Conclusion

The idea of Asia being involved in most of the newly emerging major trade blocks such as APEC (Asia-Pacific Economic Cooperation) or the US sponsored Transpacific Partnership as well as China backed RCEP (Regional Comprehensive Economic Program) shows that Asia is at the centre of the global trade. Not to forget that across the pacific from Asia lies two well established economies in the form of Australia and New Zealand. Australia is a big continent country and has lot of mineral resources and has an important role for Asian mainland continent in terms of trade. As for New Zealand it is much smaller but developed economy and has an important connection with Asian mainland countries in terms of the trade. The region of South China Sea is not the only place rich in mineral resources and one of the major trade routes of the world. The small island countries in the pacific are also mostly untapped and opens up new maritime based trade routes for Asia-Pacific. As for investment and the role of Asia in global trade China and India are two of the biggest investors in Africa. Also, the imprint of China and India following has been increasing to build free trade agreement not only with European after Japan and South Korea have already achieved that but also in the Latin American countries further from Asia right in the backyard of the still world's largest economy by GDP, USA. Therefore, Asia is already playing globally through trade.

The post-pandemic the world order has changed as we know it. The power structure, geo-political theatre all would be based on Asia (Du & Zhang, 2018). The rise of the science, technology, human capital all has been based on the Asian continent mainly. Just to put forward a fact that Asia is now at the epicentre of technology we can look at two examples. Pre pandemic the idea of quality semiconductors and that too in terms of the volume lay in Asian countries such as Taiwan, Japan, South Korea, and China. Similarly, as the world and the human civilization approaches a new watershed moment amidst the talk of game changing technology 5G the one which has been pioneered in China. To overcome the Chinese threat advanced countries of the west including United Kingdom, France are looking towards Japan to counter China. Even in aspects of defence, automobile technology etc. the Asian countries are moving further ahead with not just countries such as Japan, South Korea, China etc but bolstered by newer ranks in form of India, Vietnam, Malaysia, Singapore, Philippines, Thailand, UAE etc. Possibilities are endless for Asia the largest continent to be the greatest and the best as it was for millennia before the advent of the western traders and their imperialistic tendencies. As already mentioned in the article throughout that Asia has seen its rise and fall and rising again despite the huge challenges it faces but its fundamentals are strong, and rise is inevitable (Kersten, 2007).

References

Albert Eleanor, 2019, 'Russia, China's neighbourhood energy alternative, accessed from Thediplomat.com.

Alicia Chen, Vanessa Molter 2020, 'Mask Diplomacy: Chinese Narratives in the COVID era', accessed from fsi.stanford.edu

Altman A. Steven, 2020, 'Will Covid19 have a lasting impact on globalization?', accessed from Harvardbusinessreview.org.

Antara Ghoshal Singh, 2020, 'The standoff and China's Indian policy dilemma', accessed from Thehindu.com.

Birdsall, Campos M. Nancy, Edgardo L Kim Jose, Corden Chang- Shik, MacDonald W. Max, Pack Lawrence, Page Howard, Sabor John, Stiglitz Richard, E. Joseph (1993), 'The East Asian Miracle: Economic Growth and Public Policy', accessed from documents.worldbank.org.

Bishara Marwan, 2020. 'Beware of the looming chaos in the Middle East',

Bogardus, E. 1927. *Immigration and Race Attitudes*. New York: DC Heath Publication.

Bose, S. and Jalal, A. 2009. *Nationalism, Democracy and Development*. New Delhi: Oxford Univ. Press.

Bosworth, B. and Collins, S. 2008. Accounting for Growth: Comparing China and India. *Journal of Economic Perspectives*, 22(1), 45-66. https://doi.org/10.1257/jep.22.1.45

Brass, P. 2004. Elite interests, popular passions, and social power in the language politics of India. *Ethnic and Racial Studies*, 27(3), 353-375. https://doi.org/10.1080/0141987042000189187

Callahan, A. W. 2016. China's "Asia Dream" the belt road initiative and the new regional order. *Asian Journal of Comparative Politics* 1(3), 226-243. https://doi.org/10.1177/2057891116647806

Chee Meng Tan, 2015, 'Infrastructure investment and China's image problem in Southeast Asia', accessed from theasiadialogue.com

Chen Alicia, Molter Vanessa (2020), 'Mask Diplomacy: Chinese Narratives in the COVID era', accessed from fsi.stanford.edu.

Cheng, K.L. 2016. Three Questions on China's "Belt and Road Initiative". *China Economic Review* 40, 309-313. https://doi.org/10.1016/j.chieco.2016.07.008

China's New Diplomacy and Its Impact on the World. 2007. *Brown Journal of World Affairs*, [online] 14(1), 221-232.

Deepta Chopra, 2014. Development and Welfare Policy in South Asia. Own version of the paper

Demetriades, P. and Luintel, K. 1996. Financial Development, Economic Growth and Banking Sector Controls: Evidence from India. *The Economic Journal*, 106(435), p.359. https://doi.org/10.2307/2235252

Du J. & Zhang, Y. 2018. Does one Belt One Road Initiative Promote Chinese Overseas Direct Investment? *China Economic Review* 47, 189-205. https://doi.org/10.1016/j.chieco.2017.05.010

Duara P. 2001, 'The discourse of civilization and Pan Asianism', accessed from jstor.org. https://doi.org/10.1353/jwh.2001.0009

Fan, Y. 2007. Soft power: Power of Attraction or Confusion? *Palgrave Macmillan*, [online] 4(2), 147-158. https://doi.org/10.1057/pb.2008.4

Ferdinand, P. 2016. Westward ho- the China dream and 'one belt, one road': Chinese Foreign Policy under Xi Jingping. *International* Affairs 92(4), 941-957. https://doi.org/10.1111/1468-2346.12660

G.S. Khurana, 2008, 'China's String of Pearls in the Indian ocean and its security implications', accessed from tandfonline.com. https://doi.org/10.1080/09700160801886314

G.S. Khurana, 2008, China's String of Pearls in the Indian ocean and its security implications', accessed from tandfonline.com. https://doi.org/10.1080/09700160801886314

Ghoshal Singh Antara, 2020, The standoff and China's Indian policy dilemma', accessed from Thehindu.com.

Guo, C., Lu, C., Denis, D. A. & Jielin, Z. 2019. 'Implications of "One Belt, One Road" Strategy for China and Eurasia'. Own version ofcConference paper.

Hillman, J. 2018. 'China's Belt and Road is Full of Holes'. Center for Strategic and International Studies.

Huang, Y. 2016. Understanding China Belt & Road Initiative: Motivation, Framework, and Assessment. *China Economic Review* 40, 314-321. https://doi.org/10.1016/j.chieco.2016.07.007

Islam, N.M. 2019. *Silk Road to Belt Road*. New Delhi: Springer. https://doi.org/10.1007/978-981-13-2998-2

Jain Ayush, 2020, 'After Galwan, Himachal could be next bi issue in India-China border dispute', accessed from eurasiantimes.com

Jinchen, T. 2016. One belt and one road: connecting China and the world. *Global Infrastructure Initiative website*.

Johnston, A. L. 2019. The Belt and road initiative: what is in it for China? *Asia & the Pacific Policy Studies* 6(1), 40-58. https://doi.org/10.1002/app5.265

Liang, Y. 2020. RMB internationalization and financing belt-road initiative: An MMT perspective. *The Chinese Economy* 53(4), 317-328. https://doi.org/10.1080/10971475.2020.1728478

Lu, H, R. Charlene, R., Hafner, M. & Knack, M. 2018. China Belt and Road Initiative. RAND Europe.

Minghao, Z. 2016. The Belt and Road Initiative its implications for China-Europe relations. *The International Spectator* 51(4). 109-118. https://doi.org/10.1080/03932729.2016.1235819

Mishra Rahul, 2020, 'China's Self-Inflicted wounds in the South China Sea', accessed from Thediplomat.com.

Mishra, Rahul, 2020, 'China's self-Inflicted wounds in the South China Sea', accessed from Thediplomat.com

Mitchell, D. 2020. Making or Breaking Regions: China's Belt Road Initiative and the Meaning for Regional Dynamics. *Geopolitics*, 32 (3), 127-132.

Mooij, J. 1998. Food policy and politics: The political economy of the public distribution system in India. *The Journal of Peasant Studies*, 25(2), 77-101. https://doi.org/10.1080/03066159808438667

Narins, P.T. & Agnew, J. 2020. Missing from the map: Chinese exceptionalism, sovereignty regimes and the belt road initiative. *Geopolitics* 25(4), 216-225. https://doi.org/10.1080/14650045.2019.1601082

Nordin, H.M.A. & Weissmann, M. 2018. Will Trump make China great again? The belt and road initiative and international order. *International Affairs*, 48 (2), 23-31. https://doi.org/10.1093/ia/iix242

P. Duara 2001, 'The discourse of civilization and Pan Asianism', accessed from jstor.org. https://doi.org/10.1353/jwh.2001.0009

Ramadhan, I. 2018. China's Belt Road Initiative. *Intermestic: Journal of International Studies,* 12 (4), 21-34.

Rizvi, F. 2011. 'Beyond the social imaginary of clash of civilizations', accessed from onlinelibrary.wiley.com. https://doi.org/10.1111/j.1469-5812.2009.00593.x

Saha Premesha, (2020), 'From 'Pivot to Asia' to Trump's ARIA: What drives the US current Asia Policy?, accessed from orfonline.org.

Schmidt, J. (2008). China's Soft Power Diplomacy in Southeast Asia. *The Copenhagen Journal of Asian Studies*, [online] (26), pp.22-46. https://doi.org/10.22439/cjas.v26i1.1231

Scobell, A., Lin, B., Howard, J.S., Hanauer, L., Johnson, M. & Michake, S. 2018. At the dawn of Belt and Road: China in the developing world. *Rand Corporation.* https://doi.org/10.7249/RR2273

Shariar, S. (2019). The Belt and Road initiative: what will china offer the world in its rise. *Asian Journal of Political Science* 27(1), 152-156. https://doi.org/10.1080/02185377.2019.1594324

Suri Navdeep and Taneja Kabir, (2020), 'In pandemic crisis bridging the gulf with west Asia', accessed from TheHindu.com.

Sylvia Martha, 2020. 'The Global war for 5G heats up', Accessed from Thediplomat.com

Tan Meng Chee, 2015. 'Infrastructure investment and China's image problem in Southeast Asia', accessed from theasiadialogue.com

Ye, M. 2020. The Bet Road and Beyond: State-Mobilized Globalisation in China. Cambridge: Cambridge University Press. https://doi.org/10.1017/9781108855389

Yunling, Z. 2015. One Belt, One Road: A Chinese View. *Global Asia* 10(3), 8-12.

Zhao, S. 2020. China's Belt Road Initiative as the signature of President Xi Jingping diplomacy: Easier said than done. *Journal of Contemporary China* 29(123), 319-335. https://doi.org/10.1080/10670564.2019.1645483

About BRICS

Policy brief

The BRICS Summit in 2022: Continuity of Change?

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2022 marks the real begin of the post-Covid era with the pandemic having subsided significantly and the ramifications of the past two years becoming ever more gruesome. It also marks a period where to Covid and the global financial crisis before it is added the war in Ukraine among challenges deepening age-old problems of global poverty, socio-economic inequality, the global divide between the north and the south, the rendering ineffective of the UN by this divide and geopolitical contestations, and others. The BRICS are looked upon to contribute to arresting these problems and accelerate the reforms towards an inclusive world development. The BRICS, aware of this, has tended to be big on dreams and plans, but short of what has been done so far to get to the targets. The BRICS still does not have a mutual accountability mechanism by which they could hold each other to account for the implementation of decisions made. This piece seeks to show that the BRICS is born in change, and they embody this, but it is long on plans and visions, no report back on what has been achieved.

What is in the history?

The BRICS was established as a mechanism for cooperation at the meeting of foreign ministers from Brazil, Russia, India and China in 2006. South Africa joined in 2009 when the BRIC became BRICS, when it upgraded into a summit level. In 2022, BRICS leaders gathered at the 14th summit in Beijing, China, on 23-24 June 2022 to make decisions under the theme: 'Foster High-Quality BRICS Partnership, Usher in a New Era for Global Development'.

2022 Summit

As with all summits, this summit was a culmination of a series of meetings from which recommendations are escalated to heads of states to make final determination on. About 26 meetings were part of this build up. Many of these are by senior government officials in various sectors of public policy, including national security, health, education, agriculture, industry, investment, space, science and technology. There is a lot of negotiation and horse trading. Some of these meetings are consultative in nature, involving state agencies that are semi-autonomous like central banks, competition authorities, audit institutions, development banks and so forth. Some involve non-state actors like business associations, experts, political parties, trade unions and NGOs that seek to feed into the chain of decision-making. It is a long and protracted process of making the BRICS agenda often running into months ahead of each summit.

BRICS on values and principles

The summit theme in 2022 is meant to discipline all this hive of activity towards a coherent set of decisions at the summit. In this case, the theme straddled the need to strengthen partnerships with the BRICS, which was the theme in India in 2021, with the intention of the BRICS to participate in fashioning the new post-Covid and post-financial crisis global development agenda. The first theme is out realization that without internal cohesion BRICS may not be able to deliver on their promises. The second is in recognition of opportunities that come with the universal sense that something needs to change in global affairs.

As usual, the BRICS reaffirmed its principles, values and objectives because these define who they are together in a changing work. These include the values of mutual respect and understanding, equality, solidarity, openness, inclusiveness, and consensus. The principles lifted up this time include "mutual trust, deepened intra-BRICS mutually beneficial cooperation, and closer people-to-people exchanges". The shared objectives emphasised are to improve "BRICS solidarity and cooperation based on our common interests and key priorities, and to further strengthen our strategic partnership".

Seven strategic priorities were emphasised, most of them as a build up from decisions of the past four years. First among this as usual is to strengthen and reform global governance. It is standing position of the BRICS to reaffirm their strong commitment to global governance and multilateralism first and then indicate the need to reform it in order to make it more inclusive, representative, participatory, responsive, effective, transparent, democratic, objective, action-oriented, solution-oriented and credible. It is hope shared with the developing world that these reforms would make the achievement of global development more feasible.

BRICS Priorities

The second being 'Working in Solidarity to Combat COVID-19' is advancing solidarity and multilateral cooperation witnessed during the height of the pandemic. The idea is that there should be no reversals, but consolidation. They want World Health Organisation-guided international cooperation on prevention and treatment strengthened. This support of the WHO is critical at the time when there is attack on the body from right wing.

On 'Safeguarding Peace and Security', as usual they commit to the principle of respect for national sovereignty and territorial integrity of nations, in a manner that suggests non-approval of Russia's invasion of Ukraine. They actually discussed the war in Ukraine and decided to respect national positions as already vocalised in the UN General Assembly and UN Security Council. Of course, the positions of four BRICS not involved in the war emphasised peace, calling for an end to war, and recommended negotiations to give effect to this call. The call for peace through negotiated settlements is reiterated in reference to other conflict situations also. BRICS leaders also committed to disarmament, peaceful use of outer space, and peaceful ICT-environment. International cooperation in response to all security issues is stressed.

On 'Promoting Economic Recovery', the BRICS had an extensive list of decisions and commitments as usual. These include the continued implementation of the Strategy for BRICS Economic Partnership 2025; the BRICS Digital Economy Partnership Framework, the BRICS Initiative on Trade and Investment for Sustainable Development, the BRICS Initiative on Enhancing Cooperation on Supply Chains, the BRICS Framework for Consumer Protection in E-commerce, and the BRICS Framework for Cooperation on Trade in Services. They stressed infrastructure development as a catalyst for economic recovery. BRICS leaders committed their countries to work together to strengthen the

Contingent Reserve Arrangement (CRA) mechanism as a contribution to strengthening the global financial safety net. They want the new Agreement Between the Governments of BRICS Countries on Cooperation and Mutual Administrative Assistance in Customs Matters enforced.

'Expediting the implementation of the 2030 Agenda for Sustainable Development' has become an apex priority for BRICS since 2016. They think global partnership as envisaged in SDG 17 is crucial to this end, so developed countries have to honour their pledge to contribute (finances, capacity and technologies) to SDGs implementation in poor countries. They called for stronger and demonstrable commitment to a shared climate change agenda by improving implementation of the Paris Agreement and the adherence to the principle of common but differentiated responsibilities and respective capabilities. They think breakthrough in big data and artificial intelligence hold promise for the development agenda and therefore BRICS countries have set up platforms to enhance cooperation in digital technologies.

With regard to 'Deepening People-to-People Exchanges', what is new is the adoption of an Action Plan for the Implementation of the Agreement between the Governments of the BRICS States on cooperation in the Field of Culture (2022-2026). The BRICS want to improve digitalization in the fields of culture, heritage and arts in the hope that this will enhance mutual learning and appreciation. Educational exchanges are to be expanded. The intention is to also strengthen third-track diplomacy in the form of forums for universities, think tanks, youth, political parties and civil society formation.

It has become ever more urgent for the BRICS to look at how it is organised and institutionalised. In this regard, under institutional development, the BRICS countries committed to a structured process to discuss possible expansion of BRICS. It will continue to expand its cooperation with other emerging and developing countries as part of its BRICS Plus Cooperation strategy.

In all this, there are opportunities to grow intra-BRICS research collaboration to better understand what the BRICS are doing, how its actions might impact other processes by which the global agenda after Covid is being shaped and what might lead to meaningful benefits for the peoples of BRICS? The BRICS has not failed to inspire with its commitments and declarations of intents. All of them are in keeping with the latest thinking in the developing world. They all are commitments that if they were to be achieved would change much of the world for better. But the BRICS continues to report on intentions and not on what has been done, or what impacts have been realised. This is BRICS' next challenge, the proof that it can do what it envisions.

We, therefore, recommend that the BRICS should set up a monitoring and evaluation mechanism, a statistical platform to collect data on actions made, and mutual accountability mechanism. The Institute for Global African Affairs is developing a project to study ways in which this accountability in BRICS and related countries (BRICS Plus) may be enhanced.