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STUDIES

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Editorial

BRICS Policy Agenda, Partnership and Cooperation

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Siphamandla Zondi 🕩, Norman Sempijja ២ & Thulisile Mphambukeli ២ Editors

In 2024, the BRICS diplomacy under the chairship of Russia is focused on partnership and cooperation in three key tracks - politics and security, the economy and finance, and cultural and humanitarian ties. Through some 250 events and meetings culminating in the BRICS Summit in Kazan in 22-24 October, the BRICS hopes to expand the range of activities it must undertake to make advances practically in policy areas in these three tracks. This year also marks the full participation of the five new members of BRICS (Egypt, Ethiopia, Iran, Saudi Arabia and United Arab Emirates) in the whole year of discussion leading the summit and the content of the declaration to be adopted about what steps the BRICS countries agree to undertaken to implement their decisions. The developments of the year can be viewed on the website: https://brics-russia2024.ru/en/.

The complexity of BRICS lies in the fact that it has to deal with many shifting policy areas. It has been hard-pressed to develop over the past decade a policy agenda that should be the basis for intra-BRICS substantive coherence. These substantive policy agendas have not enjoyed a serious research focus though. They continue to be neglected as the focus continues to be on the geopolitics of BRICS.

The questions about how BRICs handle shared challenges and opportunities in education, health, social policy, housing, urban planning, land, agriculture and so forth deserve attention. Both those that deal with the broad discussion of positions prepared by the common platform as well as case studies of individual country positions and how they might explain collective positions.

But it is pleasing that there is an increasing focus in BRICSology on the nature, extent, depth, and breadth of the policy agenda that makes BRICS. In this edition, papers discuss some of these to varying depths. The policy briefs written by emerging scholars as a key new feature of the journal cover the three critical policy issues of STEM education and the digital skills development in BRICS countries showing that there are signs of growth in this area. The second on the blockchain technology demonstrates how the update of this technology require clear delineation of ethical and regulatory mechanisms to harness the potential for development and minimise the risks of cyber violations of various kinds. The third critically reflect on the varied effect of Chinese investment on youth empowerment in South Africa, showing both challenges and prospects in this regard.

The main research papers tackle similar subjects but with greater depth in terms of research data used and the expanse of argumentation presented. For instance, the paper on digital governance



considered a wide spectrum of issues that this idea entails, showing its complexity while suggesting ways in which digital partnerships in practice simplify this into key factors that must be harnessed. Another paper critically reviews how the United States has responded to the emergence and growth of BRICS, showing that some lost opportunities have happened.

On decolonisation and knowledge production in the context of BRICS, the paper explores the opportunities that arise from adopting a decolonial epistemic angle to understand the developments within BRICS. Another paper considers how modern diplomacy is evolving in the context of the shift towards multipolarity and how this explains the agency of BRICS or responses to the emergence of BRICS. The paper on the conflict in Ethiopia showcases how this new BRICS member has mismanaged an internal conflict in a manner that should raise worries for those wondering if Ethiopia will enrich the BRICS or diminish its standing.

We, hereby, celebrate that the journal has successfully been added to the Directory of Open Access Journals, a major milestone for the young journal, committed to open access to knowledge generated principally through public funds.

I would like to express my thanks to the editorial collective made up of Professor Thuli Mphambukeli in urban spatial studies, Professor Norman Sempijja in political science, Dr Rich Mashimbye in international relations, Mr Mika Kubayi in international political economy, and Helen Adogo is political scientist. I would like to also thank the reviewers who offered their critical appraisal of the papers in this collection.

Siphamandla Zondi

Editor-in-Chief 15 June 2024

Leveraging the BRICS Digital Partnership for Collaborative Digital Governance

Odilile Ayodele 🕩

Human Sciences Research Council OAyodele@hsrc.ac.za

Vhonani Petla 问

National Movement for Rural Women vhonanipetla@gmail.com

Abstract

As the global economy becomes increasingly underpinned by the digital economy, developing countries must grapple with the challenge of digitally transforming their economies while ensuring that no one is left behind. The BRICS countries - Brazil, Russia, India, China, and South Africa - are at different stages of digital development and have adopted varying approaches to digital governance. However, the challenges of the 21st century require a joint approach to e-commerce, internet governance, and the challenges of a digitalising global economy. The *BRICS Digital Economy Partnership Framework*, launched in 2022, is a positive step towards a comprehensive digital governance framework. This framework promotes cooperation on various digital issues, including cybersecurity, data protection, and e-commerce. This policy brief examines how the framework can benefit the BRICS countries.

Keywords: Digital Governance, BRICS Digital Economy Framework, BRICS, Digital Economy

Key Challenges in Digital Governance for the BRICS Countries

Formed in June 2009, the BRIC grouping (Brazil, Russia, India and China) signifies an association of four non-western nations notably influential in economic and developmental matters in their respective regions. In September 2010, South Africa was included in the grouping, making it the BRICS. While yet to transcend into a supranational organisation, this collective is designed to intensify collaboration on economic, political, and developmental matters. After South Africa's inclusion in 2010, BRICS began to emphasise political and security issues alongside economic cooperation. The 2012 Delhi Declaration signaled, albeit quietly, security collaboration, but the 2014 Fortaleza Declaration, following the Ukraine crisis, notably prioritised peace and security. Successive summits and declarations have since underscored this focus.

It is against this backdrop that the BRICs, emerging economies at different development phases with large populations and growing digital sectors, that the BRICS are shaping their approach to digital governance, emphasising collective concerns such as digital sovereignty, cyber security and data protection (Belli, 2019; Belli, 2021; Ignatov, 2024). Nevertheless, each member of the BRICS has also adopted a unique approach to digital governance that reflects its specific economic and political priorities. For instance, Brazil has prioritised expanding its digital infrastructure and internet access to foster economic growth and social inclusion. Russia has emphasised the development of its domestic digital economy and protecting its national security interests in cyberspace. India has leveraged digital technologies to enhance public service delivery and stimulate economic growth. China has pursued a strategy of developing indigenous digital platforms. South Africa has focused on addressing the digital divide and promoting social inclusion through digital technologies. Their governance strategies have varying levels of success, complicated by their complex internal



challenges. Two of the most pressing challenges that all the BRICS countries have in common are: closing the digital divide and poor digital literacy.

Additional discourse on digital governance approaches, particularly in the BRICS, centers on the issues of access, affordability and net neutrality. The discourse on ensuring access to underserved populations, with an intersectional lens encompassing gender, disability, age, etc., is gaining momentum (Roberts, Hernandez, and Iff, 2021). As for net neutrality, or the neutrality of the internet, the approaches among BRICS nations differ, mirroring their respective domestic political landscapes (Vipra and Somayajula, 2023).

	Internet Penetrate Rate (in percentages)	Internet Inclusivity Index (points)
Brazil	77,87	79.9
Russia	83.43	30
India	48.7	50
China	75.6 No figures	
South Africa	68.2	73.7

Table 1: Accessibility and Inclusivity in BRICS Countries, 2022

Sources: CETIC,2022; The Economist, 2022; Statista, 2022; CNNIC,2023.

India's rapid growth in internet penetration is a notable achievement, particularly given the country's large population. However, its relatively low ranking in Internet inclusivity suggests that challenges may be overcome in making the Internet more accessible and valuable to all population segments. In contrast, China's high internet penetration rate indicates that most of its population has access to the Internet. This is above the global average internet penetration rate. South Africa's score of 73.7 points in the inclusive internet index suggests that it is performing relatively well in terms of internet inclusivity. Overall, the data indicate that there has been significant progress in terms of expanding internet access and inclusivity within the BRICS countries. However, the overall statistics do not directly represent the urban-rural digital divide within the BRICS countries. However, it is a well-documented phenomenon that there is often a significant gap in internet access to the Internet and rural areas, with urban populations generally having better access to the Internet and higher levels of digital literacy.

The Covid-19 pandemic further underscored the broader implications of digital inequality, where the lack of access to digital technologies hindered children in countries such as South Africa and India from accessing education. It also prevented individuals from participating in economic activities such as employment or banking. In essence, the digital divide makes digitalisation counterproductive. Despite the potential benefits of digital technologies for governments and citizens, the digital divide exacerbates existing inequalities, particularly in developing countries that have been grappling with these issues for years.

Closely linked to the digital divide is the issue of poor digital literacy in the BRICS countries. Digital literacy requires skills essential for citizens to navigate the digital world and access services such as education, banking, healthcare, and media; a lack of digital literacy can exclude individuals from the benefits of the digital world. These skills are essential for individuals to participate fully in the digital world. These skills range from basic tasks, such as using e-mail and social media, to more advanced skills, such as launching an e-commerce site and using technologies like Artificial Intelligence (AI) to improve business operations. Ultimately, it is the responsibility of governments to ensure that they create a policy environment that supports widescale accessibility. Governments in BRICS countries have recognised the importance of promoting digital literacy and providing training opportunities

to equip their workforce with the necessary skills to support the digitalisation of their economies and narrow the digital divide.

Table 2:	Individual BRICS Countries Digital Literacy Programs.
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	Program	Description
Brazil	E- Digital	Stresses the importance of educational and professional skills. Enhances literacy in digital technology, digital culture and computational thinking.
	Brazil Mais Digital	Online education program for capacity building in the information technology sector targeting youth (ages 16-25 years).
	Pronatec	New vocational training opportunities are disseminating digital skills.
Russia	Personnel and Education (2019)	Training is offered to government officials and employees of commercial firms. Students over 14 are trained in computer languages in some regions. A program providing citizens with IT education at a reduced cost. Various vocational trainings related to the digital economy are available to teachers, civil servants, school children and citizens.
India	PMGDISHA (2017)	It aims to bridge the digital divide across rural and urban areas. Seeks to provide digital literacy to 60 million people through 20-hour courses on basic digital services.
	National Digital Literacy Mission	Works to give at least one person per household crucial digital literacy skills. Various governmental departments and corporate partners have trained 110,000 people under this program. The curriculum covers accessing the Internet, using e-mails and social media, and e-commerce.
China	Five-year National Plan	Underscores the importance of boosting digital skills in education and training.
	National Action Plan (2025)	The Cyberspace Administration of China started it to improve digital literacy and skills. Targets 40 million people to get certificates and more than eight million people to receive titles of senior engineers by 2025.
	National Policy	Introduced to reduce the 'elderly digital divide' by helping elderly people develop skills to use information technology.
South Africa	National Digital and Future Skills Strategy (2020).	Seeks to foster digital skills from early childhood to adult training. Policies are in place to provide digital skills to workers in specific sectors, such as schoolteachers and government officials.

Source: Adapted from International Trade Centre (2022: 35-36)

Addressing the challenge of digital literacy requires governments to invest in providing their citizens with the necessary skills. However, many governments are already grappling with high levels of inequality and poor literacy rates, making this challenge more complex. For instance, despite its

relatively high score on the Internet Inclusivity Index and a considerable number of policies, Brazil still struggles with implementing policies that promote digital literacy, indicating that there may be room for improvement in preparing the population to take advantage of the opportunities provided by the Internet fully (OECD, 2020; da Silva, Zitkus and Freire, 2023). The situation is similar around the BRICS, specifically in South Africa (Moonasamy & Naidoo, 2022) and India (Lyons et al., 2020).

Towards a BRICS digital governance framework

The 14th BRICS Beijing Summit Declaration on Digital Governance and the *BRICS Strategy for Economic Partnerships 2025* are pivotal indicators of the evolving BRICS approach to digital governance. Central issues revolve around digital sovereignty, particularly data localisation (Ignatov 2024). Data protection and cybersecurity remain cornerstone issues, with BRICS nations bolstering cooperation to ensure harmonious digital policies (Ibid).

The *Beijing Declaration* underscores several pivotal aspects of digital governance:

The importance of digitalisation in education and development. Moreover, it applauds the Beijing Initiative of the BRICS Business Community and encourages the BRICS Business Council to enhance cooperation in various domains, including the digital economy; it further recognises the efforts and activities of the BRICS Women's Business Alliance (WBA) in intensifying BRICS economic and trade cooperation; and, advocates for strengthening institutional cooperation to facilitate post-pandemic economic recovery and encourages diversified cooperation to foster mutually beneficial economic connectivity. It also endorses digital transition to establish economic development advantages and spearhead green development to construct a sustainable future. The *BRICS Strategy for Economic Partnership 2025* outlines key digital governance initiatives:

- **Digital Transformation**: The strategy underscores the role of digital transformation in spurring economic growth and development, including the need for workforce and business skills development.
- **Digital Infrastructure Development**: The strategy advocates bolstering digital infrastructure and promoting digital technologies across sectors, including healthcare, education, and agriculture.
- **Regulatory Frameworks**: The strategy emphasises the need for harmonised digital policies among BRICS nations to protect personal data and enhance cybersecurity.
- **Digital Sovereignty**: The strategy reaffirms the significance of digital sovereignty, including the ability to process and store data within national jurisdiction.
- **BRICS Business Council**: The strategy encourages the BRICS Business Council to enhance cooperation in the digital economy, including promoting digital literacy among the business community.

While the BRICS countries still need to share a singular digital governance strategy, they are collaborating to address shared digital challenges and promote the responsible use of digital technologies. The BRICS countries face various common digital challenges, including cybersecurity threats, the need for robust data protection measures, the development of e-commerce regulations, and internet governance.

The BRICS countries launched the *BRICS Digital Economy Partnership Framework* in 2022. This strategic initiative acknowledges the transformative potential of the digital economy in driving modernisation, inclusive growth, and sustainable development. By promoting trade facilitation

through digital means and encouraging cooperation in the field of ICT, the framework aims to enhance port management, logistics, supply chain and trade facilitation work. Developing a shared understanding of a BRICS Model E-port Network¹ is one of the key initiatives under this framework. Additionally, the framework seeks to create an enabling business environment for investment in the digital economy and bridge the digital divide through investment in digital infrastructure. These initiatives reflect the commitment of BRICS members to leverage digital opportunities for sustainable development.

Including new members such as Egypt, Iran, Saudi Arabia, the UAE, and Ethiopia in the BRICS group carries several implications for digital governance, mainly due to differing views on critical issues like content regulation and data protection (Ismail, 2023; Ignatov, 2024). On the upside, this expansion allows for a broader range of perspectives, enhanced collaboration, and increased geopolitical sway. It could result in a more diverse and representative alliance, promoting cooperation on digital transformation, addressing the digital divide, and fostering inclusive digital governance policies.

By leveraging their collective expertise and resources, the BRICS countries are advancing their shared interests in the digital realm. Nevertheless, this effort comes to nought without a collective effort at addressing digital literacy and closing the digital divide beyond merely increasing infrastructure.

Conclusion

The BRICS countries must enhance their ability to collect and utilise data effectively and establish robust regulatory frameworks to generate and capture value within the digital economy. The Digital Economy Partnership Framework represents a critical initial step towards harnessing the potential of the digital economy for the benefit of the BRICS countries. However, developing a comprehensive digital governance framework with a primary focus on addressing the digital divide is imperative.

The population's need for more digital literacy is a significant obstacle to achieving digital inclusion. Education is fundamental to achieving inclusive and sustainable growth within society. In today's digital age, providing individuals with the necessary infrastructure and the skills to utilise it effectively is crucial.

The BRICS countries have an opportunity to work towards a shared digital governance framework to address these challenges and ensure that their citizens can fully take advantage of the opportunities provided by the digital world.

Recommendations

- 1. To achieve greater policy coherence and coordination in digital governance, the BRICS nations must **collaborate** and scale up their efforts, particularly around **data flows between their countries.**
- 2. Investing in upskilling rural and marginalised communities within the BRICS nations is crucial. Focusing solely on improving digital skills among urban populations will not suffice to keep pace with the demands of the global digital economy. Peer-to-peer knowledge exchanges and sharing of best practices should be leveraged to achieve this goal.

¹ These ports use advanced technology to make moving goods in and out of the country more accessible and faster. The countries in BRICS are working together to share ideas and learn from each other to make their ports better. This will help improve trade and make it easier for people to do business with BRICS countries.

- 3. In line with Agenda 2030, efforts to bridge the digital divide must be scaled up, including **increased investment in infrastructure development** and financing BRICS digital infrastructure projects.
- 4. The BRICS nations should work towards achieving **interoperability of systems** to facilitate seamless integration and collaboration.

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The Role of the United States in the Formation of BRICS: Exploring Responsibility and Influence

Rodrigo Ruiz 🕩

DIMEC, CTI Renato Archer, Brazilian Ministry of Science and Innovation, Campinas, Brazil rodrigosruiz@outlook.com

Abstract

This article critically examines the formation of the BRICS alliance, comprising Brazil, Russia, India, China, and South Africa, with a specific focus on the pivotal role played by the United States in shaping this strategic partnership. It explores the extent of US influence and the accompanying responsibilities it assumes within the alliance. The article highlights the proactive efforts of Brazil, Russia, and China to expand their global influence while concurrently aiming to reduce US interference. Brazil, in particular, seeks partnerships with Russia and China as a means to attain autonomy and foster development. Simultaneously, Russia and China strive to challenge US global dominance and solidify their own spheres of influence. The article concludes by emphasising the importance of critically evaluating Europe's military support to Ukraine, suggesting that such support may primarily serve US interests. Additionally, it underscores Europe's potential to promote peace and stability by pursuing independent and principled foreign policies.

Keywords: Brazil; United States; BRICS; Europe; Economic Dominance

Introduction

The relationship between Europe, Brazil, and the United States is a complex one, with both regions being influenced by the economic and cultural dominance of the United States. The question of whether Europe and Brazil are examples of subservience to the United States is a matter of debate, and one that has been discussed extensively in the literature (Santos, 2020). On the one hand, both Europe and Brazil have a long history of independent thought and action, while on the other hand, they have been deeply influenced by the United States, both economically and culturally. This article seeks to explore this question in more detail by examining relevant points in relations between Brazil and Europe and the United States, and highlighting the role of the United States in shaping Brazil's position on the world stage, particularly in relation to its membership in the BRICS alliance.

The formation of cultural identity is an aspect of understanding the relationship between Europe, Brazil, and the United States. Europe has a rich cultural heritage that dates back centuries, and this has played a significant role in shaping its identity (Giddens, 2019). Cultural diversity is a prominent aspect of Brazil, a nation that embraces a wealth of ethnic and cultural origins. However, it is necessary to acknowledge that a significant portion of the Brazilian population, particularly in the South and Southeast regions, faces challenges in constructing a cohesive national identity. This scenario can be largely attributed, in great part, to the relatively recent European immigration, which brought with it a strong presence of descendants of immigrants maintaining ties to their respective ethnic heritages. As a result, many people in these regions strongly identify with their European roots, such as Italians, Germans, Poles, and other nationalities, creating barriers to the development of a unified Brazilian national identity.

European immigration to Brazil predominantly occurred in the late 19th and early 20th centuries. Groups of immigrants seeking better opportunities and a new life settled in the country. These



immigrants maintained strong cultural ties to their homelands, transmitting these identities to subsequent generations.

Over the decades, communities formed by European immigrants endeavoured to preserve their traditions, languages, and customs. Social clubs, ethnic schools, and traditional festivities emerged, all aimed at keeping alive the cultural heritage of these groups. This dedication strengthened the European identity within these communities and, consequently, influenced the perception of belonging to the Brazilian nation.

In some regions of the South and Southeast, social segregation occurred, with the formation of neighbourhoods and areas exclusively inhabited by certain ethnic groups. This segregation reinforced ethnic identities, hindering interaction and the sense of belonging among different groups.

The era of globalization and the ease of communication have provided greater access to information about origins and opportunities for connection with ancestral cultures. This allows people to maintain strong ties to their countries of ancestry, including through social media, which reinforces ethnic identification at the expense of national identity.

Given this context of fragmented identity, it is important to highlight that cultural diversity is a fundamental pillar of Brazil, an enriching source for national identity. The existence of multiple ethnic and cultural origins is a unique characteristic that contributes to the country's cultural richness.

To foster a sense of national unity, it is necessary to promote intercultural dialogue and mutual respect, valuing and celebrating both individual ethnic identities and the Brazilian national identity. Building a sense of belonging to the nation requires collective efforts, such as promoting inclusive education, encouraging cultural exchange, and fostering civic participation. These actions aim to bridge the gaps between different ethnic groups, enhance understanding, and create a shared sense of pride and belonging to Brazil as a whole. By embracing and appreciating cultural diversity while promoting a unified national identity, Brazil can create a stronger and more cohesive society that celebrates its rich heritage and collective identity.

Over the decades, especially after World War II and, more significantly, since the 1960s, the cultural influence of the United States has intensified in Brazil. Music, Hollywood cinema, and television productions have played a fundamental role in disseminating this influence. American trends and fads have found a prominent place in Brazilian society, shaping lifestyles, behaviours, and values.

However, this process of cultural influence is not uniform. There is a clear division among different social groups and their political views. While the population and left-leaning politicians strive to maintain the Brazilian state as a protector of the people, following models adopted by countries like Germany or France through institutions such as the Unified Health System (SUS) and protection of workers' rights, the elite and right-leaning politicians look to American liberalism as an inspiration, advocating for labour rights flexibility and a reduced role for the SUS. The role of the state in shaping the society is another significant difference. In Brazil, the government plays a major role in shaping the country's development and promoting social welfare (Furtado, 1959). In contrast, the state has a more limited role in the United States, with a greater emphasis on individualism and self-reliance (Hacker & Pierson, 2010).

This dichotomy reflects different perspectives on the role of the state in society. While some defend a strong and present state capable of guaranteeing rights and social protection, others see economic liberalism as the solution for economic growth and individual freedom.

This political dispute manifests itself in heated debates about public policies, labour reforms, social security, and public healthcare. The polarization between the left and the right has intensified, with both sides defending their ideals and political projects.

It is important to note that this cultural influence and political divergence are not exclusive to Brazil. In many countries around the world, there is a clash of ideologies and government models. Each side presents arguments based on their own convictions and interests.

However, it is crucial to seek a balance between external cultural influences and the preservation of national identity and fundamental values of Brazilian society. Dialogue and the search for solutions that reconcile different perspectives are essential for building a fairer, more balanced country with an efficient state that guarantees the rights and well-being of its population. There are also significant differences between Brazil and Europe and the United States in terms of their political systems, social structures, and cultural values (Câmara, de Castro e Oliveira, 2022). The United States has played a significant role in shaping Brazil's position on the world stage, particularly in relation to its membership in the BRICS alliance. Brazil's membership in the BRICS alliance is seen as a way for the country to assert itself as a major player on the world stage and to challenge the dominance of the United States and other Western powers (Martins, 2018).

Despite the inherent complexities and internal dynamics of Brazilian politics, it is worth acknowledging that external factors, including the involvement of the United States, have been shown to have played a role in certain episodes of instability in Brazil. Historical records have revealed instances of American interference, covert operations, and support for coup attempts in the country. The declassified documents shed light on the U.S. government's interests in shaping the political landscape of Latin America during the Cold War era, often prioritizing its own geopolitical agenda over the principles of democratic governance. While it is essential to recognize and address internal challenges, understanding the broader historical context helps to contextualize the influences and external forces that have shaped Brazil's political trajectory. This article will explore the impact of these events and attitudes on Brazil's position in the global arena.

Understanding the similarities and differences between the cultural identities of Brazil, Europe, and the United States is crucial for understanding the role of culture in shaping societies and promoting cross-cultural understanding. In this article, we cover a series of sessions dedicated to the BRICS (Brazil, Russia, India, China, and South Africa) and their respective regions. The first session will focus on the BRICS group as a whole, exploring its origins, objectives, and joint accomplishments. Next, we will have a session dedicated to Brazil and its neighbours, examining the political, economic, and social relations between Brazil and the countries of Latin America. Following that, we will have separate sessions dedicated to Russia and China, where we will discuss their regional influences and foreign policies. India, South Africa, and the 19 new candidates for BRICS will be addressed in a joint session, exploring their perspectives and contributions to the group. Finally, we will conclude the article by summarizing the key discussions and highlighting the main points covered in each session.

BRICS

The BRICS is a group composed of five emerging economies: Brazil, Russia, India, China, and South Africa. The creation of the BRICS began in 2006 when the leaders of these countries first met at the World Economic Forum. The initial objective was to establish dialogue and cooperation among the emerging economies to promote sustainable development, financial stability, and geopolitical influence. The term "BRICS" was coined by economist Jim O'Neill from Goldman Sachs (CNBC, 2022, September 12) as a way to highlight the potential of these countries on the global stage. Since then, the BRICS have strengthened their ties and collaborated in various areas such as trade, investment,

technological innovation, and global governance. The group aims to expand its influence and defend the common interests of these nations in international issues, playing an increasingly important role in the global arena. The formation of BRICS (Brazil, Russia, India, China, South Africa) as an influential bloc in the global arena has attracted significant attention and analysis. While much has been discussed about the individual contributions of each member country to the establishment of BRICS, it is equally important to examine the role of external actors, particularly the United States, in shaping the dynamics and trajectory of this emerging alliance.

This paper delves into the responsibility and influence of the United States in the formation of BRICS, exploring the multifaceted interactions and implications that have unfolded over the years. By scrutinizing the historical context, geopolitical considerations, and economic dimensions, we aim to shed light on the complex interplay between the United States and BRICS, providing insights into the extent of American involvement and its impact on the group's development.

Trade among BRICS nations without the use of the US dollar has gained momentum in recent years as a means of reducing dependence on the American currency and seeking greater global economic autonomy (Foreign Policy, 2023, April 24). The bloc's countries have already made agreements to facilitate trade transactions and loans in their own currencies, without the intermediary use of the US dollar. For example, Brazil and China announced in 2023 the creation of a clearing house that allows for transactions in yuan and real. Russia has also advocated for the use of national currencies in BRICS' commercial relations.

This initiative has alarmed the US government, which sees the dollar as an instrument of power and influence in the international scene. The dollar is the most used currency in international reserves, world trade, and financial markets. Furthermore, the dollar serves as the benchmark for pricing commodities such as oil and gold. The hegemony of the dollar allows the United States to impose economic sanctions on other countries, control the flow of capital, and benefit from the so-called exorbitant privilege, which is the ability to issue debt in its own currency without the risk of devaluation.

Therefore, the increase in trade among BRICS countries without the use of the dollar poses a challenge to the international monetary order dominated by the United States. The bloc's countries seek greater diversification of their economic relations and greater participation in global decisions. However, there are still obstacles to the consolidation of their currencies, and resistance from other countries and international institutions.

These examples demonstrate how European countries have sometimes suffered negative consequences by supporting the United States without careful consideration. The United States has made mistakes in its foreign policy history, and its interventions have sometimes had adverse effects on European countries need to consider their own interests and exercise caution when providing support to the United States. Blindly following the United States may lead to unintended consequences, and European countries should prioritize their own well-being.

BRICS nations, with \$50 billion in seed money, launched the New Development Bank as an alternative to the World Bank and IMF, and with the bank open to new members, interest in the BRICS group is "huge", with countries such as Saudi Arabia, Egypt, Algeria, and Argentina, as well as Mexico, Nigeria and others expressing interest in joining. (Bloomberg, 2023). The election of Luiz Inácio Lula da Silva as president of Brazil has led to a shift in the country's foreign policy, with a greater focus on cooperation with the BRICS countries and a more critical stance towards the United States.

Currently, there is an ongoing debate about cooperation in the space sector among the BRICS countries. This cooperation involves the possibility of combining Russian rockets, the Brazilian Alcântara base, Sino-Brazilian satellites, and Indo-Brazilian supercomputers. This initiative aims to promote collaboration among the BRICS countries in the field of space exploration, sharing resources and knowledge to drive joint scientific and technological advancements. The resulting synergy from these partnerships has the potential to strengthen the BRICS countries' position in the global space arena and create new opportunities for cooperation and development in the sector.

The BRICS group of nations - Brazil, Russia, India, China, and South Africa - have made significant strides towards establishing themselves as major players in the global geopolitical and economic landscape. With a combined population of over 3 billion people and a combined GDP of \$18.8 trillion, the BRICS countries have the potential to exert significant influence on international affairs (World Bank, 2021).

The BRICS countries and potential new members are actively seeking avenues for conducting trade and commerce that are less reliant on the interference of the United States. They aim to establish alternative channels and mechanisms that promote greater autonomy and independence in their economic relationships. These nations do not necessarily subscribe to the notion that the United States holds a global watchdog role or that it has the authority to dictate international trade policies. Instead, they prioritize the diversification of their partnerships and the strengthening of South-South cooperation, recognizing the importance of a multipolar world order that respects the sovereignty and interests of all nations involved.

Brazil and neighbours

The Monroe Doctrine, articulated by President James Monroe in 1823, stated that the Americas should be free from further European colonization and that any attempt to establish new colonies or extend political influence would be seen as a threat to the United States. While originally focused on preventing European powers from interfering in the affairs of newly independent countries in the Americas, the doctrine had a significant impact on Brazil as well. The United States' adherence to the Monroe Doctrine reinforced its interest in asserting influence and maintaining dominance in the region, often at the expense of other nations' sovereignty. This doctrine influenced the United States' involvement in Latin American affairs, including political interventions, economic interests, and the promotion of democracy in line with its own interpretation.

In Brazil, the Monroe Doctrine indirectly contributed to the perception of American interference in the country's internal affairs, particularly during moments of political instability and periods when U.S. interests aligned with specific factions or regimes. While the doctrine has evolved over time, its historical influence on Brazil underscores the complexities of foreign relations and the long-standing impact of U.S. policies in the region (Sexton, 2012).

However, the United States has not always been supportive of Brazil's efforts to assert its position on the world stage. In the past, the United States has supported dictatorships and coups *d'état* in various countries in the Americas, including Brazil (Agência Brasil, 2014) (Brown University Library, n.d.). More recently, the United States has been accused of spying on the Brazilian government, including on the former President Dilma Rousseff (BBC News, 2013).

Despite their unique cultural identities, both Brazil and Europe share some similarities with the United States, particularly in terms of their economic systems and democratic values. Or is it? The history of coups, uprisings, and impeachments in Brazil raises questions about the stability of democracy in the country.

- Coup of the Republic (1889): The Coup of the Republic marked the end of monarchy in Brazil and the establishment of a republican regime. Military officials and dissatisfied politicians led the overthrow of Emperor Dom Pedro II, resulting in the establishment of a provisional government and later the adoption of a republican constitution.
- 2. 1930 Coup: This coup was led by Getúlio Vargas and marked his rise to power in Brazil. Military and political supporters of Vargas, dissatisfied with the results of the presidential elections, took control of the government, ousting the elected President Washington Luís.
- 3. 1932 Constitutional Revolution (minor coup): The 1932 Constitutional Revolution was an armed uprising led by civilian and military groups in São Paulo against the provisional government of Getúlio Vargas. The people of São Paulo fought for the promulgation of a new constitution and the removal of Vargas from power but were defeated after three months of conflict.
- 4. 1937 Coup (Estado Novo): Getúlio Vargas once again orchestrated a coup, this time establishing the Estado Novo (New State). He dissolved the National Congress, enacted a new Constitution, and consolidated power in his hands. The Estado Novo was a period of authoritarian rule that lasted until 1945.
- 5. 1945 Coup (minor coup): This coup took place at the end of World War II when political and military groups dissatisfied with Getúlio Vargas' government plotted his downfall. Pressured by popular protests and internal pressures, Vargas resigned, leading to the end of the Estado Novo.
- 6. 1954 Coup (minor coup): Following a period of democratic rule, the suicide of Getúlio Vargas in 1954 sparked a political crisis in Brazil. The popular outcry triggered by his death led to protests and political pressures, resulting in the resignation of President Café Filho and the ascension of Carlos Luz, an event known as the 1954 Coup.
- 7. 1961 Coup (Legalistic Chain) (minor coup): Faced with President Jânio Quadros' resignation in 1961, military factions threatened to prevent Vice President João Goulart from assuming office, triggering a political crisis. Through popular mobilization led by Governor Leonel Brizola, the "Legalistic Chain," Goulart managed to assume the presidency and avert a coup.
- 8. 1964 Coup (military dictatorship): One of the most significant coups in Brazilian history, Brazilian military forces, with the support of civilian and international sectors, deposed President João Goulart in 1964, citing a supposed communist threat. This coup marked the beginning of a military regime that governed Brazil for over two decades, suppressing civil liberties and imposing authoritarian rule.
- 9. 1969 Coup (minor coup): In 1969, a group of hardline military officers led by General Emílio Garrastazu Médici overthrew President Artur da Costa e Silva, who was suffering from health issues. This coup resulted in a more repressive phase of the military dictatorship, characterized by increased censorship and human rights violations.
- 10. 1992 Impeachment (Collor Affair): In 1992, President Fernando Collor de Mello faced impeachment proceedings due to corruption allegations. Massive public protests and mounting evidence led to his resignation before the Senate could remove him from office, making it the first successful impeachment process in Brazil's history.
- 11. 2016 Impeachment (Dilma Rousseff): President Dilma Rousseff faced impeachment proceedings in a highly controversial and polarizing political climate. Accused of fiscal mismanagement, she was impeached by the Brazilian Congress, resulting in her removal from office. This impeachment

process highlighted deep divisions within Brazilian society and raised concerns about the strength and legitimacy of democratic institutions in the country.

- 12. 2018 Lava Jato Controversy: The Lava Jato (Car Wash) operation, once hailed as a significant anticorruption effort, faced serious allegations of impropriety and potential bias. The involvement of former Judge Sérgio Moro, who presided over key Lava Jato cases, raised concerns about his impartiality, culminating in a declaration of suspicion against him. Additionally, the participation of prosecutor Deltan Dallagnol, a central figure in the case, who later became a federal deputy, faced repercussions as he was eventually removed from his position. These developments cast doubt on the integrity and fairness of the Lava Jato operation, with implications for its impact on the electoral process. The controversies surrounding Lava Jato raised questions about the extent to which these actions influenced the political landscape, further fuelling debates about the democratic processes in Brazil.
- 13. 2023, On January 8th of this year, Brazil witnessed the invasion and vandalism of the headquarters of the Three Powers in the federal capital. In an attempted coup, disgruntled Bolsonaro supporters, dissatisfied with the outcome of the presidential election, marched from the Army Headquarters in Brasília to the Esplanade of Ministries, where they destroyed buildings housing the National Congress, the Supreme Federal Court (STF), and the Presidential Palace. This shocking event underscored the deep political divisions in the country and raised concerns about the stability of Brazil's democratic institutions. The incident served as a stark reminder of the challenges faced in maintaining a thriving democracy and upholding the rule of law.

Have Brazil demonstrated subservience to the United States in the last 70 years?

After four years under a government that paid homage to the flag of the United States, it is gratifying to see Brazil, under the leadership of Lula, striving to regain its autonomy and the ability to be the master of its own destiny. With a vision focused on national sovereignty and the pursuit of a more equitable social and economic development, Lula's return brings hope for a future where the country can chart its own policies and make decisions that benefit its people and sustainable growth.

The United States has been accused of interventionism in several countries, including Brazil and Germany. In Brazil, the US government supported a military coup in 1964 that led to a 21-year dictatorship (Agência Brasil, 2014) (Brown University Library, n.d.) (Talbot, D., 2015). The US has also been accused of spying on the Brazilian government, including former President Dilma Rousseff (BBC News 2013).

In Germany, the US has been accused of spying on Chancellor Angela Merkel's phone conversations, which strained US-German relations (BBC News 2013). The US has also been accused of conducting espionage on German citizens and businesses ""The representative of the US intelligence services at the embassy of the United States of America has been told to leave Germany," government spokesman Steffen Seibert said" (BBC News., 2014, July 10).

The US has a history of supporting dictators in Latin America. In Chile, the US supported the military coup that overthrew President Salvador Allende in 1973 and installed General Augusto Pinochet (Kornbluh 2003). In Argentina, the US supported the military dictatorship that ruled from 1976 to 1983, during which time tens of thousands of people were killed or disappeared (Andersen, M. E., 2018).

There are arguments suggesting that Brazil has lost strategic importance to the United States since the 1970s when the Americans adopted a protectionist stance towards Brazilian exports. This change

in the United States' posture may have contributed to a decrease in trade relations and strategic partnerships between the two countries. By adopting protectionist measures such as imposing tariffs and trade restrictions, the United States may have diminished its interest in strengthening economic and political ties with Brazil. (Cucolo, E., & Cagliari, A., 2020, November).

China

China has also been a key driver of the BRICS agenda, with its Belt and Road Initiative (BRI) being a major component of the group's economic strategy. The BRI is a massive infrastructure and development project that aims to connect China to Europe and other parts of Asia through a network of roads, railways, ports, and other infrastructure projects. The BRI has been welcomed by many developing countries as a way to improve their infrastructure and promote economic growth (Breslin, S., 2018).

The policy of disengagement implemented by the Trump administration had significant implications for Sino-American relations. However, its effectiveness in achieving its objectives has been questionable. Despite imposing high tariffs on Chinese products, China's exports to the United States rebounded, indicating limited success in reducing trade imbalances. Moreover, the attempt to contain China's high-tech development not only affected Chinese companies but also caused collateral damage to U.S. and global industries. As the Biden administration takes office, it is expected that the policy of disengagement will continue, albeit with a more selective approach, focusing on critical sectors while allowing for greater exchanges in non-critical areas (China Daily, 2021).

However, the BRICS countries face significant challenges in achieving their goals. One of the biggest challenges is the wide range of economic and political systems represented in the group. While China has a state-controlled economy and Russia has a strong central government, Brazil, India, and South Africa all have more market-based economies and more democratic political systems (The World Bank, 2017).

Another challenge is the varying levels of development and economic power among the member nations. China is by far the largest and most powerful of the five nations, with a GDP of \$15.4 trillion in 2020, compared to India's \$2.8 trillion, Brazil's \$1.4 trillion, Russia's \$1.3 trillion, and South Africa's \$283 billion (World Bank, 2021).

Despite these challenges, the BRICS countries have made significant progress in establishing themselves as major players in global affairs. The group has established several institutions, including the New Development Bank and the Contingent Reserve Arrangement, to promote economic cooperation and provide an alternative to the existing global financial system dominated by Western countries (Reuters, 2021).

Moreover, the group has continued to hold regular summits and meetings, demonstrating a commitment to working together to promote their shared interests and goals. As the global balance of power continues to shift away from Western dominance, the BRICS countries are likely to play an increasingly important role in shaping the future of international affairs.

The China-U.S. trade war, initiated by then-President Donald Trump almost five years ago, aimed to pressure China to address unfair trade practices and decouple the U.S. from China's economy. However, the impact of elevated tariffs on U.S. consumers and manufacturing output, without achieving desired leverage over China, has become evident. While there have been some subtle changes in commercial patterns, the long-term effects and the extent of separating the two largest economies remain unclear. The trade war has led to a decline in U.S. imports from China, particularly

in heavily tariffed intermediate and capital goods, while consumer products have been relatively unaffected. The tensions have disproportionately affected industries integrated with the Chinese market, but overall trade continues to rise, suggesting varying effects across sectors. Moreover, despite speculation, surveys indicate mixed sentiments among multinational corporations regarding relocation from China, with many still considering it a top business destination despite supply chain disruptions caused by the trade war and the pandemic (Zeng, K., 2023, February 17).

Russia

One of the key goals of the BRICS countries is to establish a more multipolar world order that is less dominated by Western powers. This goal was clearly stated in the group's first official summit in 2009, where the leaders of the five nations issued a joint statement calling for a "more just and democratic international order" (BRICS, 2009).

Russia has been an important advocate for this goal, with President Vladimir Putin stating that the current world order is "unfair and unipolar" and that the BRICS countries should work together to create a "fairer and more democratic system of international relations" (DW News, 2021).

Since the end of the Cold War, NATO has expanded eastward, bringing new members into the alliance. This expansion has been opposed by Russia, which sees it as a threat to its security. NATO expansion has been a major source of tension between the United States and Russia, culminating in the invasion of Ukraine by Russia in February 2022. The invasion of Ukraine, particularly the annexation of Crimea, has drawn international condemnation and sparked a geopolitical crisis. The parallel between the invasion of Iraq by the United States in 2003 and Russia's actions in Ukraine raises questions about geopolitical double standards and hypocrisy. While the United States criticizes Russia's actions, it is essential to consider the role played by major powers in shaping global conflicts. The United States has been involved in a number of trade disputes with European countries in recent years.

It is important to acknowledge that the United States has a documented history of interfering in the elections of other countries, including nations in Latin America, Africa, and the Middle East. However, there is no concrete evidence to suggest that the US played a direct role in the election of Zelensky in Ukraine. Despite this, it is reasonable to assume that Russia may be sceptical of US involvement in Ukrainian affairs, particularly given the US's history of interference in other nations' internal affairs. It's worth noting that there is a longstanding lack of trust and mutual suspicion between Russia and the United States, particularly concerning foreign policy and security matters, which has been a significant challenge in the relationship between the two nations, especially with regards to Ukraine. In 1991, a referendum in Crimea resulted in overwhelming support for the region's autonomy, but in 1995, Ukraine forcibly abolished Crimea's constitution and annexed the region (Dunford, 2023).

In 2003, the United States invaded Iraq, without the support of the United Nations Security Council (United Nations, 2003). The war was highly controversial, and many European countries opposed it. However, some European countries, such as the United Kingdom, supported the United States. The Iraq War was a major foreign policy blunder for the United States. It destabilized the Middle East, led to the rise of ISIS, and cost the lives of thousands of American and Iraqi soldiers (Chomsky, N. 2013). The war also damaged the reputation of the United States in Europe. The Iraq War also had a negative impact on the European economy. The war led to an increase in oil prices, which hurt European businesses and consumers (The Guardian, 2003, February 28). The Iraq War has been widely regarded as a geopolitical strategy rather than solely based on the presence of weapons of mass destruction. Many believe that the invasion was driven by geopolitical interests, such as gaining control over Iraq's oil resources and establishing a dominant military presence in the region. It is important to highlight that the previous comments regarding China, Russia, India, and

South Africa aim to shed light on the fact that the Western world, particularly the media, often exhibits deliberate blindness towards such geopolitical events. This perspective becomes evident when excessive criticism is directed towards Russia for its actions in Ukraine, while similar actions or motivations by other powerful nations are downplayed or overlooked. It underscores the need for a balanced and comprehensive approach in assessing geopolitical events and their underlying motivations, avoiding selective scrutiny based on geopolitical interests.

According to a publication by the Pew Research Center in 2003 (Pew Research Center, 2003), the United States, North Korea, Iran, and Iraq were among the top five countries perceived as posing a threat to global peace in the eyes of Europeans. This assessment reflected the concerns and perceptions prevalent at that time.

India, South Africa and 19 others that want to join BRICS

The entry of South Africa into the BRICS group (Brazil, Russia, India, China, and South Africa) was motivated by a series of strategic and economic factors. Here are some of the main motivations for South Africa to join BRICS: Economic growth: South Africa sought greater integration with rapidly growing emerging economies like Brazil, Russia, India, and China. By joining BRICS, South Africa hoped to leverage trade, investment, and economic cooperation opportunities with these countries to boost its own economic growth.

Diversification of trading partners: South Africa historically relied heavily on trade ties with developed countries such as the United States and the European Union. By joining BRICS, the country aimed to diversify its trading relationships and reduce its economic dependence on those regions. Collaboration with BRICS provided South Africa with a new range of trade opportunities with emerging economies.

Political cooperation: BRICS membership also allowed South Africa to strengthen its geopolitical position and increase its global influence. By associating with other BRICS countries, South Africa gained a platform to promote its political interests and participate in international debates on global issues such as global governance, reform of international financial institutions, and climate change.

Access to resources and knowledge: BRICS participation enabled South Africa to access financial resources, technology, and specialized knowledge from other group members. This could help the country address internal challenges such as infrastructure, social development, and technical capacity.

South-South cooperation: By joining BRICS, South Africa also aligned itself with a South-South cooperation approach that seeks to strengthen ties among developing countries and promote greater equity in the global order. This reflected South Africa's vision that collaboration with other emerging countries could drive development and global inclusion. Among the BRICS countries (Brazil, Russia, India, China, and South Africa), India has historically maintained a relatively friendly relationship with the United States. Despite differences and challenges in bilateral relations, such as trade and geopolitical issues, the U.S. and India have sought to strengthen economic, strategic, and diplomatic ties over the years. This approach is reflected in dialogues and agreements in areas such as regional security, trade and investment, science and technology, among others. However, it is important to note that relations between countries can be complex and subject to changes based on political, economic, and strategic factors.

Conclusion

In the current global scenario, countries such as Brazil, Russia, and China have actively sought to expand their regional and global influence, driven by the goal of asserting their autonomy and reducing interference from the United States in their internal affairs. These nations perceive the influence of the US as a manifestation of protectionism, control over the global currency, and even illegal interventions in sovereign regimes.

Specifically, Brazil has been dedicated to strengthening its position as a regional leader in South America while simultaneously increasing its global influence. Rather than blindly adhering to US interests, the Brazilian government has pursued partnerships with other emerging nations like Russia and China, aiming to propel its economic and political development and achieve greater autonomy from the US.

Russia and China, on the other hand, share an interest in challenging US global hegemony. Russia aims to reaffirm its influence in the former Soviet republics and safeguard its security and geopolitical interests in the region. Meanwhile, China seeks to consolidate its status as a global power, extending its economic and political influence across different parts of the world without subjugating itself to US interests.

In conclusion, it is crucial to recognize that recent US actions have played a role in Brazil's closer alignment with the BRICS alliance. Brazil's response to US unilateralism and its prioritization of self-interests at the expense of other nations has prompted the diversification of international partnerships and a reduced reliance on the US. After its tenure as temporary president of the United Nations Security Council, Brazil sought peaceful solutions. Its resolution proposal for the Israel-Palestine conflict received significant support. However, once again, the United States demonstrates a lack of concern about having Brazil among its valued and respected allies. Clearly, Brazil is not on Washington's positive agenda. This shift allows Brazil to establish itself as a more independent and influential player on the global stage.

However, it is also important to critically assess Europe's support for Ukraine in its conflict with Russia. Blindly backing a country without a thorough understanding of the facts and consequences can have disastrous outcomes, as seen in the US-led Iraq War. Hence, Europe must exercise caution and deliberate on its stance and actions concerning the Ukraine conflict. To foster cross-cultural understanding and cooperation, it is essential to comprehend the similarities and differences between the cultural identities of Brazil, Europe, and the United States. Each region possesses unique strengths and faces distinct challenges, and collaboration among these regions can yield mutual benefits and contribute to a more peaceful and prosperous world. Europe should assume a central role in its foreign policy, pursuing peace and fostering closer relations with Russia and China to prevent conflicts and establish a more stable and harmonious global order. Europe, having experienced the devastating consequences of its own mistakes turned into a battleground twice, must strive to avoid a repetition due to the power struggle between the United States, Russia, and China.

By pursuing a more independent and cooperative foreign policy, Europe can play a pivotal role in promoting peace and stability on the global stage, contributing to the construction of a world order that values cooperation and dialogue over conflict and confrontation. Indeed, it is important to emphasize that the BRICS countries have their own merit in the creation and consolidation of the bloc. While European protectionism and other factors may have also contributed, the BRICS members have shown initiative and determination in seeking greater autonomy and global influence. Despite the diverse internal interests and specific conflicts among members, the ability to negotiate with a

currency not tied to the dollar is, and will continue to be, one of the greatest advantages of the bloc, and undoubtedly the biggest geopolitical loss for the United States in recent decades. In August, invitations were extended to Saudi Arabia, Iran, the United Arab Emirates, Argentina, Ethiopia, and Egypt to join in 2024. This move highlights the bloc's strategy to expand its influence and strengthen its position in the global economy, despite the inherent challenges of uniting such diverse nations under one economic and geopolitical umbrella.

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Decolonisation and Downshift-Knowledge Reproduction in Africa

Adegbite Simon Aboluwoye 🕩

Margaret Lawrence University adegbiteaboluwoye@yahoo.com

Abstract

Colonialism established a system of racial oppression, both mentally and physically, by impeding pre-colonial African education, which was originally intended to reflect the realities of pre-colonial African societies. Using a descriptive qualitative approach, this paper argues that before the colonial administration, Africans were already developed people with different educations for different age groups, making them functional and inclusive within the larger political sphere. Decolonisation only reflects a shift in political power and the withdrawal of colonialists from African territories, but it has not resulted in any fundamental shift in the mentality of political leaders and nation-building in the decolonised nations. Through the adoption of game theory, this paper argues that the education curriculum left behind by colonial governments was designed to make African nations economically and technologically dependent on developed nations. Such a pattern of education was not geared toward African technological development, but rather conditioned African nations to be consumers rather than producers, with the resulting loss of initiative among the Africans. The curriculum is insidious in terms of principles and implementation across all levels of educational institutions, slowly destroying the economies of African nations that were once ahead of European nations during the pre-colonial epoch. Game theory was adopted for the understanding of the complex dynamics of decolonisation and downshift in knowledge reproduction in Africa. Instead of accelerating the socioeconomic development of decolonised African nations, the curriculum based on Western principles and ideas further subjugates African economies to imperialist influence and hegemony through the instrumentality of international financial institutions, which frequently dictate exploitative asymmetric relationships between the developed and developing African nations. African nations must therefore look inward for an African-oriented and culturally appropriate educational curriculum to meet the demand for socioeconomic advancement and growth.

Keywords: Decolonisation, Colonialism, Curriculum, Indigenous-education, Pedagogy, Africanisation.

Introduction

The decolonisation of Africa in the mid-twentieth century was a turning point in the history of the continent, culminating in a period of political independence and self-determination. Colonialism had caused unprecedented delays in the development of African nations, which were initially experiencing development that was tailored to their needs and cultural values. Africa had seen a prolonged reduction in knowledge throughout the colonial period which countered the native educational advancement. The consequences of have been far-reaching, hindering hindering Africa's progress in various domains. The consequences of colonialism on indigenous education in Africa have had a lasting impact on the continent's educational landscape and its ability to fully actualise its potential. To a greater extent, it undermined the indigenous knowledge systems which subsequently hindered the development and preservation of local knowledge, including traditional farming practices, medicine and environmental management.

African pre-colonial development patterns included not only political and socio-economic development but also educational advancement. Africans were exposed to the level of education that was appropriate for the physical, psychological, and spiritual development of the individual



and age group at each stage of development. The celebrated decolonisation of African nations, as well as the attendant western education legacies, have harmed the socio-economic development of colonised African nations. Decolonisation is viewed as a type of regime shift and a shift in power relationships between colonial powers and colonial nationalist movements seeking self-determination. Using descriptive qualitative approach, this paper reveals the extent to which colonialism had retarded the educational advancement of African indigenous education and the difficulty of attaining full decolonisation of the African educational system. It discusses the ways and manners in which the western powers exercise exploitative hegemony over Africans and thereby undermines the intellectual development of Africans.

Conceptual Clarification

The word 'decolonisation' was first used by Moritz Joseph Brown (1932) in his article "Imperialism" in the Encyclopedia of Social Sciences (Betts, 2012). Decolonisation had been given different meanings but all posited a convergence of political and regime change. Decolonisation has been described as a form of regime shift, a changing relationship between the colonising power and the colony (McLean & McMillan, 2003). Decolonisation is a process by which legally dependent territories obtained constitutional independence (Bismarck, 2012). Decolonisation is the process whereby colonial powers transferred institutional and legal control over their territories to indigenously based nation-states (Duara, 2004). Decolonisation is the process of undoing colonising practices.

Game theory is adopted as the theoretical framework due to its significance in explaining the complex dynamics of decolonisation and downshift-knowledge reproduction in Africa. The theory explains the utilisation game plan or strategy which includes all options for contingencies to achieve a predetermined objective. It entails the analysis of how decisions are made through the interactions of various parties considering the reactions of other parties. It utilises the various contingencies to advance the interest of a party against others to achieve the desired ends in terms of pay-offs. A game is any situation in which the outcomes are determined by the interactions between individuals (Varma, 1975). Game theory explains the exploitative asymmetric interactions that exist between the former colonial powers and their former colonies. The independence of the African nations was granted by the colonial powers reluctantly, but not without contingencies put in place for further colonisation through the unforeseen channels.

The pedagogy of Pre-colonial African Indigenous Education

The environment and social contents shaped African pre-colonial education. This was common practice in most African countries prior to the arrival of colonialism. The realities of pre-colonial African education matched the realities of African nations, resulting in personalities who fit well into society (Osaat & Asomeji, 2017). At the time, the learning process mirrored the pattern of work and activities in African societies (Rodney, 1976). The indigenous education emerged in response to necessities and utilities which are elusive in the pedagogy of western education. Though, there is the problem of uniformity of African pedagogy regarding the form of education that should be given to Africans out of the myriads of African native educations (Matasci, Jeronimo, & Dores, 2017). One outstanding goal of pre-colonial African education was to enhance the total development of the African child's intellect, physical, and morals (Ehindero, 1994).

Pre-colonial African education was designed to introduce the child to the community and instill in the child, certain moral values such as respect for elders and the constituted authorities at all levels(Osaat & Asomeji, 2017). Pre-colonial education also equipped Africans with vocational skills specifically to develop a healthy attitude towards honest labour and dignity (Ehindero, 1994). The indigenous training activities immensely incorporated moral disciplines and thereby drastically reduced social vices which now characterized modern societies in Africa. The pre-colonial educational systems produced well-grounded African children right from childhood to adulthood. The African indigenous education prioritises the functionality of the political and socio-economic activities of the African nations through the transmission of knowledge. African pre-colonial pedagogy was relegated by the colonial masters due to the oral and imitation methods of imparting knowledge to the learners (Osaat & Asomeji, 2017). However, African pre-colonial pedagogy has quality functionalism at the base of its philosophy and of relevance to the society in terms of impartation of knowledge practical skills, values, beliefs, traditions and cultural elements (Osaat & Asomeji, 2017). In this regard, African indigenous education focuses on social responsibility, job orientation, spiritual development, and inculcation of values that promote the functionality and involvement of individual in the socio-economic and political development of the African nations. According Kaya and Seleti (2013) African indigenous education promotes social cohesion by teaching the people the significance of community cooperation. Kaya and Seleti (2013) aver that the indigenous education of Africans incorporates problem-solving skills and creativity. The indigenous education has a pivotal role to play in the future of Africa if unhampered by the colonialism.

Devastating Effect of Colonialism on African Indigenous Education

Colonialism destroyed the indigenous system of education of African societies. It disrupted the full realisation of the African nation's construction in the realm of knowledge and ideas production in Africa at large (Ndlovu-Gatsheni, 2013). Antithetical to African indigenous education, the western education introduced by colonialists, eroded the educational realities of Africans and in place of it imposed a racially, exploitative, oppressive, and patriarchal system. The early forms of western education received by Africans were significantly influenced by European missionaries. The primary intention of the Missionaries was to propagate and Christianise the natives (Fafunwa, 1974). The missionary education and training were limited to a mere servitude learning system. Such forms of education were to make the missionaries effective in their new roles in the colonial administration and were not designed in any way to develop Africans but to subjugate them mentally, physically, and emotionally as puppets to the missionaries and colonial powers.

The colonial education ignited anathema which compromised and truncated African development in terms of socio-economic and political realities (Ndlovu-Gatsheni, 2013). Western education serves as a mechanism for advancing the interests of the colonialists in the areas of economic prosperity and attendant impoverishment of the African nations. Education was seen by the colonial powers as a strategy in the colonisation of vast areas of the world (Enslin, 2021). Western education dismantled the African system of education and in its place, introduced a system that aims at perpetuating exploitation and domination of the colonial nations. Unfortunately, African intellectuals that ought to have rejected such a move, embraced western education and adapted it vaguely to suit themselves and the caprices of the emerged African leaders. Western education alienated the Africans from cultural values on the platter of a highly organized capitalist society under the dead weight of uniformity (Varma, 1975).

The colonial education posited native education as a useless form of education (Matasci, Dores, & Jeronimo, 2020). The native education that was condemned by the colonialists was a matter of necessity and utility for the Africans. Due to the perceived inferiority of the native education and indigenous languages, the indigenous educational system was abandoned because of the methods of its delivery which was informal and replaced with western education which is delivered through the formal school system(Osaat & Asomeji, 2017). This enables the colonial powers to perpetuate their grips on the independent African nations which have mentally refused to be decolonised.

The Concept of Elusive Decolonisation and Downshift Knowledge Reproduction

Decolonisation entails a process of achieving regime change from colonial power to selfgovernment by the indigenous people. It refers to granting of independence to the colonies to enable them to govern themselves in accordance with their beliefs and principles. The waves of independence spread across Africa with the majority of African nations hopeful for development and considered themselves as partners in progress with their former colonial masters. After the independence, the reality, therefore, is that the caliber of indigenous rulers in Africa succeeding the colonial administration has been unable to steer clear of dangers of neocolonialism and sustained imperialism (Alalade, 2003).

The failure of African nations and their universities to promote scientific and technical development based on African orientations further promotes the interests of their former colonial masters. The curriculum of university education bestowed on the Africans as colonial legacy was actually designed to perpetuate the developed nations exploitative activities and hegemony. The curriculum conditioned the African intellectuals to believe that Africans are technologically backward while the Africans were once developed people with advanced technology. According to Rodney (1976), before the advent of colonial rule, Africa was ahead of the European nations. He further postulated that African societies had different education for different age groups which made them functional and inclusive (Rodney, 1976).

The colonial education tactically reduced African intellectuals and academics into mere 'hunters and gatherers' who only assist western scholars in the collection of empirical data that were formulated to theories for the purpose of African development (Ndlovu-Gatsheni, 2013). Decolonisation did not produce a new world dominated by new African and humanist values of liberty, social justice, and equality (Ndlovu-Gatsheni, 2013). It was this apparent situation that made the concept of decolonisation a false experience in Africa and created a flourished ground for neocolonialism and elusive independence. Consequently, knowledge production by the intellectuals and academics in Africa became western dependent and paradoxically, neocolonial Africa inadvertently characterised postcolonial Africa. This militates against the rush for nation-building and knowledge production in the contexts of Africanisation. Once again, Africans and African leaders found themselves entangled and entrapped within the webs of colonial tutelage and academic hegemony.

African nations had continued to be indebted to the Western World due to the asymmetric power imbalances that grew out of the ignorance of African nations. The inability of African nations to insulate themselves and embark on decolonisation mentally and intellectually further aggravated their economic conditions and put them at the mercies of the former colonialists. The fundamental issue is that the structures of inherited colonial education were based on European values which were alien to the African cultural values (Kaya & Seleti, 2013). The lack of relevance of western education has continued to mesmerize African socio-economic and technological advancement. The indigenous knowledge should be granted dominant status while western education to be considered as an alternative.

Conclusion

The western education has been responsible for the retrogradation of African nations. For the Africans to free themselves from the shackles and manacles of western supremacy there should be the construction of African oriented curriculum across all levels of education. African scholars and intellectuals must work towards developing the continent by looking inward to develop an educational pedagogy and framework for knowledge production suitable for the needed development. The African scholars and intellectuals should look inward and develop a curriculum

in the African contexts that promote indigenous education. The African philosophical ideas and knowledge should be widely embraced across African countries due to the propensity of indigenous education to exponentially develop the nations. The attainment of full and real decolonisation is possible if all African intellectuals can devise a means of developing African knowledge and carve it into an academic field utilising the indigenous concepts. The research and intellectual efforts in African institutions support neocolonialism and economic exploitation and condition Africans as mere consumers rather than producers. This is due to the fact that African academic and research institutions have neglected the aspects of African education that can meet African needs.

The findings would be of immense benefit to scholars who are interested in the assessment of African indigenous education and the basis of its philosophy. Besides, the study would be useful in promoting African indigenous education which is more appropriate in African-oriented values and development.

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Modern Diplomacy and the Changing Nature of International Politics in the 21st Century¹

Marc E. Oosthuizen 🕩

University of Johannesburg marcemile77@outlook.com

Abstract

Modern diplomacy in the 21st century has become increasingly complex, requiring a broader scope or the performance of more tasks that extend beyond the traditional high politics of old. This means that current diplomats must deal with more diverse global concerns due to the nature of the post-Cold War era marked by diplomatic inflation, the decline of US hegemony, the rise of China, nuclear proliferation, climate change, globalisation, the Fourth Industrial Revolution (4IR), and the COVID-19 pandemic. Due to this diversification of the diplomatic agendas and the inclusion of a growing number of stakeholders, the diplomatic field is experiencing an amplified array of challenges. Therefore, this article examines these major changes and their impact on modern diplomacy by utilising the theoretical framework of the English School where the emphasis is on a 'society of states' and a world united by common humanity. The research also employs a comprehensive qualitative analysis of the mentioned post-Cold War issues and how diplomacy can contribute to mitigating them. The paper then concludes by recommending the need for a more specialised diplomatic corps who are well-versed in technological advancements and digital platforms. By becoming more specialised, diplomacy can become more effective and thus, remain a vital tool in navigating the intricacies of contemporary international politics while mitigating the major challenges the globe faces.

Keywords: COVID-19; Globalisation; Modern Diplomacy; Post-Cold War International Politics; The Fourth Industrial Revolution (4IR).

Introduction

International politics have become more complex since the end of the Cold War in the late 1980s, and consequently, it confuses traditional diplomats (Haynes et al., 2011, pp. 5–6, 8; Spies, 2019, pp. 42–43; Stern, 2015). The intricacies that modern diplomats have to deal with have arisen because of the post-Cold War global era and its move from being foremost about high politics (such as security, military and geopolitical), to incorporating a wider and growing scope of issues outside a state's national borders. These additions are more complex to deal with and have an increased number of stakeholders such as state decline or rises, power politics, nuclear proliferation, global warming, desertification and diseases (Haynes et al., 2011, p. 8; Sharp, 1999, p. 33; Spies, 2019, pp. 42–43).

To further scrutinise the phenomena driving global change and influencing modern diplomacy, the paper utilises specific and relevant international political issues such as diplomatic inflation, the hegemonic decline of the US, the rise of China, nuclear disarmament, climate change, globalisation, the Fourth Industrial Revolution (4IR) and the COVID-19 pandemic. First, the research examines what exactly the post-Cold War arena is and how current international politics can be described.



¹ Sections in this article were taken from a PhD thesis at the Department of Politics and International Relations, University of Johannesburg.

Post-Cold War International Politics

A particularly relevant change to international politics after the Cold War ended was Russia's diminutive place in the new security arrangements (Kirby, 2022; Sakwa, 2017, pp. 14–16). The US became the dominant global superpower with Eastern Europe's economic systems and trade relations rapidly declining and marked by upheavals (Norwich University, 2024). Furthermore, the Russian government became plagued with increased crime rates and corruption while global competition and rivalry created a real possibility of war. The truth of this statement can be seen in Putin's 2007 address in Munich, where he resolutely rejected the post-Cold War system and accused the US of creating a unipolar world 'in which there is one master, one sovereign...at the end of the day this is pernicious.' (Fried & Volker, 2022). This speech was decidedly a precursor of a modern Russia striving to reassert itself and an apt example of this is Russia's dissatisfaction with the North Atlantic Treaty Organisation's (NATO) expansion and the resulting invasion of Ukraine (Fried & Volker, 2022; Kirby, 2022).

As evident in the war in Ukraine, the post-Cold War era is turbulent and complex. This view is supported by Emel Parlar Dal (2018, pp. 35–37), who emphasises that the end of the Cold War gave rise to geopolitical confusion. This confusion arose because of an apparent cumulative fluidity of alignments and a partial reconfiguration of the world order in international politics. In short, after the Soviet Union collapsed, uncertain regional and global power and authority structures were starting to be shaped and are still ongoing. But how does this impact modern-day diplomacy?

Yolanda Kemp Spies (2019, p. 42) emphasises that diplomacy's predominant focus during the Cold War era was 'high' politics. This means diplomats mostly concentrated on military, security and geopolitical matters exemplified by Cold War politics. However, when the Cold War ended, the diplomatic field diversified immensely. The practice of diplomacy now includes an ever-increasing number of highly complex challenges and new influential actors, which are not confined to national borders (see diplomatic inflation). The changing international politics, diplomatic inflation, intricate security matters and the inclusion of 'low' politics in diplomacy (such as climate change and the recent pandemic) are discussed in the following sections (Spies, 2019, p. 42; Tella, 2018, p. 202).

Diplomatic inflation

The 21st century has highlighted the fact that the activities of non-state actors can no longer be ignored because of the power configuration in the international arena (Tella, 2018, p. 202). States no longer possess a monopoly on power and are being challenged from three different directions: from above by regional and global organisations, from below by militias, and from the side by various non-governmental organisations (NGOs) and corporations. Another new competition for state power also involves including civil society actors, according to Alejo (2019, pp. 106–107). These players seek to influence global agendas within their state or multilateral institutions. This means that multilateralism is being replaced by 'multistakeholderism'. Gleckman (as cited in Alejo, 2019, p. 115) described multistakeholderism:

'In the past 20 years in the intergovernmental arena, multistakeholder consultations have gained wide support as an umbrella framework for bringing together diverse constituencies to develop common approaches to contemporary global challenges and to present challenging development projects.'

These contemporary global challenges Gleckman (as cited in Alejo, 2019, p. 115) mentions are at the centre of this article and are discussed sequentially as stated. This is done to better understand how

the international arena has changed after the end of the Cold War and how it is influencing modern diplomacy today. The first of these major topics is the decline of the US.

US Hegemonic Decline

US hegemonic decline has been debated for decades (Keaney, 2017, pp. 253–254; Wallerstein, 2002, pp. 60–61). Some authors, like Immanuel Wallerstein (2002, p. 60), claim that the US's decline started as early as the 1970s. For him, this decline came about because the same economic, political, and military factors that first contributed to the US becoming a global hegemony are now producing its decline.

Wallerstein (1983, pp. 102–104) describes hegemonic decline as the loss of economic power (first, there is a deterioration of the agro-industrial production edge, then commerce and finally finance), followed by an erosion of political alliances and the rise of two contending powers in a succession battle to replace the current hegemon (see Figure 1).

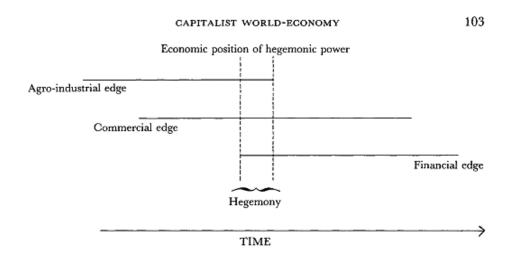


Figure 1:Wallerstein's Simultaneous Advantage in Three Economic Domains for Hegemony.

Source: Wallerstein, 1983, p. 103).

Wallerstein (2002, pp. 60–68) further explains the US's decline in specific terms based on its ideological changes and the political unilateralism/isolationism it exhibited in recent history. This political shift was accompanied by global resistance to US foreign policy as is evident in incidences within the G7. For example, during the political battle before the war on Iraq, considerable divisions emerged between the US and its allies where Great Britain remained a steadfast ally, Italy and Japan only nominally supported the war, and Canada, Germany and France resisted a 'war-based' resolution to the demilitarisation and regime change in Iraq (Volgy et al., 2003, 2004, pp. 191–192, 2005).

Another major influence on the US's hegemonic status was the 2008 global economic crisis. Due to this devastating event, the US has been unable to return the global economy to a healthy state (Dilek, 2010, pp. 159–160, 169–170; Marc Emile Oosthuizen, 2019, pp. 107–108; 157–158). This means the US cannot supply enough global public goods as it did in the past. After all, the economic crisis has weakened the US's credibility, strength, the value of its currency along with its hegemonic status as discussed by Paul Viotti in *The Dollar and National Security* in 2014 (cited in Keaney, 2017, pp. 258–259). Viotti asserts that the US dollar underpins the projection, exercise, and thus the credibility of its hard power but as it has weakened, so too has the country's hard power and soft power potential. The 2008 economic crisis thus seems unmatched in the history of the US and has

concluded in an even greater international economic disorder than first anticipated (Dilek, 2010, pp. 159, 169–170).

Economically, US hegemony is in decline due to its enormous military and defence expenditure and its accompanying military overreach (Wallerstein, 1983, pp. 102–104, 2002, pp. 60–68). This is evident in the country's share of world military expenditure in 2012, which was around 39%, meaning that the government had to appropriate 37% of all US tax to this sector in that year (Oosthuizen, 2019, p. 151). This trend has not dissipated and is accompanied by the US federal government's increased budget deficit to where it is now spending more money than its tax collections and other revenue combined. For example, by the 1st of April 2024, the US national debt was a staggering US\$34.6 trillion in nominal terms and relative to its gross domestic product (GDP). This means that the US exhibits a large debt-to-GDP ratio of 121.62% as of Q4 2023, reliably indicating its weakening ability to service its growing debts (Adkins, 2024; Kenton, 2024).

Politically, the decline of a hegemon as a 'stabiliser' always twists the world into precarious political circumstances, according to Braudel (as cited in Dilek, 2010, p. 159). This is evident when examining the relative decline of the US, bringing about domestic stresses, apparent in the presidential elections of 2016, spilling over into the international arena (where US allies in Europe and Asia could be making their deals with a newly confident Russia and a rising China because of the US's open policy to place their interests first) (Keaney, 2017, pp. 265–266; Layne, 2018, p. 89). The implications are that the US will struggle to enforce outcomes as rival powers gain ground on them which in turn could only weaken their financial position further. As Keaney (2017, p. 266) predicts, the challenges to Washington's legitimacy will consequently only grow, both domestically and abroad.

In terms of diplomacy, this decline has meant the militarisation of its foreign diplomatic affairs (Suri, 2019). As Jeremi Suri (2019) states, the post-Cold War order shows US diplomacy characterised by military power, wishful thinking and ideological self-righteousness, reaching its pinnacle with the Iraq War. Here the US chose to ignore diplomatic options at its disposal, like heightened international sanctions and closer collaboration with allies, when dealing with terrorism and other threats in the Middle East. Instead, the US opted to follow the path of unilateralism, destabilising the region further with lengthy and expensive military occupation. Philip Stephens (2018, p. 9) elaborates on this by stating that President Donald Trump's administration has lost the international community's support, citing that Europeans will defy all US sanction efforts while Russia and China will just ignore them. It seems that the US has isolated itself and provoked both adversaries and allies, convincing both that its moment as a hegemon has passed (Stephens, 2018, p. 9; Suri, 2019).

The Rise of China

After the global economic crisis in 2008, the world has exhibited signs of a shift in power from the global West to the East (Cai, 2018, pp. 831–832; Evans & Newman, 1998, pp. 41–44; Gamble, 2010, p. 18; Punnoose & Vinodan, 2019, p. 7). This change in the balance of power has two sides. First, it has to do with the decline of the US, as discussed, and second, it is about the push for advancement and growth by the Chinese (Punnoose & Vinodan, 2019, pp. 7–8).

Chinese progress can be traced back to the Chinese human capital and social mobilisation efforts of the 1950s, which formed the foundation needed to open up its economy for extensive foreign investments in the 1980s (Punnoose & Vinodan, 2019, pp. 7–8). It also gave foreign firms access to inexpensive labour, and in return, China could get entry into technology and the market. China also followed a privatisation policy, forming a class of billionaires linked to foreign capitalists. These collaborations made China the second largest economy in the world when it moved past Japan in 2011, surpassing the US's GDP by purchasing power parity (PPP) in October 2014 (see Figure 2). As

part of its rise, China also heavily invests in developing nations in Africa, for example (Punnoose & Vinodan, 2019, pp. 7–9, 26).

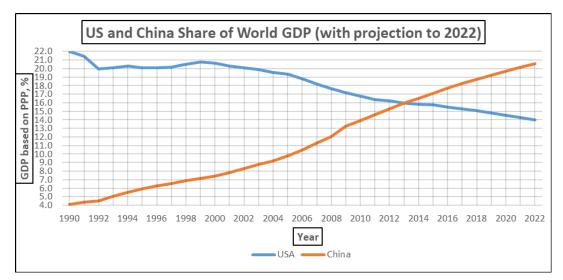


Figure 2: The US and China's Share of World GDP

Source: Marc Emile Oosthuizen, 2019, p. 117.

In recent history, China declared that it is focused on its economic resurgence and expanding its markets by peaceful means (Punnoose & Vinodan, 2019, pp. 7–9, 16–17). Additionally, the country is aiming to modernise through technological advancement, managerial expertise, and financial resources. Although this seems true, China has also invested heavily in their military since 2000. Statistics show that their government's spending on defence has dramatically increased from USD 59.1 billion in 2008 to USD 148.3 billion in 2017. This means that their military budget has increased by around 330% from 2001 (USD 49.9 billion) to 2017 (USD 228 billion). As a percentage of their GDP, the actual spending on defence has remained relatively steady at about 2% (Punnoose & Vinodan, 2019, p. 17).

When it comes to politics, Chinese history is squarely focused on state border management and has witnessed more territorial disputes than any other state in the world (Cai, 2018, pp. 831–832; Punnoose & Vinodan, 2019, pp. 8, 12–13). As a rising power, China's foreign policy has not changed much since the 1990s, remaining conservative and cautious regarding using force and coercion. In 2017, the Chinese government iterated through President Xi Jinping that it was at the beginning of a 'new era' (Punnoose & Vinodan, 2019, p. 8). This novel beginning was described as one where they will follow socialism but with Chinese characteristics. As part of this, China aims to play a larger role in global governance in this epoch of globalisation. It plans on doing this by suggesting and offering suitable and relevant solutions to the world such as One Belt One Road (OBOR) and the Asian Infrastructure Investment Bank (AIIB) (Cai, 2018, pp. 831–832, 837–841). Both the OBOR and AIIB initiatives are meant to improve Beijing's influence over the enormous territory of Eurasia while posing multifaceted challenges to the current way things are, especially the power distribution at the international level (Cai, 2018, pp. 833–839, 846; Punnoose & Vinodan, 2019, p. 27).

Diplomatically, one can see the effectiveness of Chinese 'carrot' diplomacy through the OBOR and AIIB initiatives, helping to ease tension with the Philippines over territorial disputes in the South China Sea. The previous carrot diplomacy is in sharp contrast with the new forceful brand of 'stick' diplomacy China now uses in countries like Sweden. Ambassador Gui Congyou has, for example, clearly stated: 'We treat our friends with fine wine, but for

our enemies, we have shotguns.' (The Economist, 2020). According to Cai (2018, pp. 831–832), this means that Beijing has made significant adjustments to its foreign policy in several areas since 2012. These adjustments include a Chinese government that has started using diplomacy for its benefit (Cai, 2018, pp. 831–832, 837–841). While China stays on traditional diplomatic principles of non-interference and sovereignty, it also launched OBOR and the AIIB) to pursue the country's economic, diplomatic and security objectives in the future.

Nuclear Proliferation and Disarmament

During the Cold War, the US and the Soviet Union spent enormous amounts of money on amassing massive stockpiles of nuclear weapons (Evans & Newman, 1998, pp. 386–393; McGowan & Nel, 2002, pp. 27–28). Today, it seems the world is heading towards another of these nuclear arms races due to the fragmented and rapidly changing international relations we observe in the world (Lüdeking, 2020, pp. 14–15; Plous, 1993, p. 166). This state of flux has resulted in the reappearance of great power politics or a resurgence of nationalism, leading to a greater probability of conflict. Additionally, tensions between the US, Russia and China have escalated in recent years, resulting in renewed nuclear proliferation. To explain this proliferation, the prisoner's dilemma can be used as seen in Table 1.

Table 1:The US-USSR Prisoner's Dilemma

	USSR/Russia	
US	Disarm	Arm
Disarm	US = 3; Russia = 3 Mutual disarmament	US = 1; Russia = 4 Russia arms while the US disarms
Arm	US = 4; Russia = 1 The US arms while Russia disarms	US = 2; Russia = 2 Both the US and Russia arming

Source: Adapted from Heywood, 1997, p. 16; Plous, 1993, p. 164.

Both sides of the matrix in Table 1, representing the US and Russia, would prefer the other side to disarm while they arm, as represented by the 4 to 1 and 1 to 4 desirability scores (Heywood, 1997, p. 16; Plous, 1993, p. 164). A score of 1 indicates that the worst fear of each party is that they will disarm while the other keeps arming themselves. If Russia, for instance, chooses to reduce its nuclear stock while the US keeps arming itself, the US will be assured of the most favourable outcome. On the other hand, if they keep arming themselves, they will both avoid the outcome they most fear, a unilateral reduction of arms. This option is represented by the 2 in the table. The dilemma is that if both sides still choose to arm, they will be worse off than choosing to cooperate and mutually disarm, as represented by the score 3. The complicating factor for states is the belief that war is unavoidable in international politics. This causes countries to distrust each other and to think they are close to the last move in the prisoner's dilemma. Therefore, the suspicion that other states or opponents will defect makes it easier to rely on itself and then, rather than cooperate, states risk defecting (Nye & Welch, 2017, pp. 21–23). Scott Plous (1993, pp. 164–166) calls this the perception that the other side favours unilateral armament. According to the research, the simple answer to overcome this perception is when one side can persuade the other that they truly prefer mutual disarmament, instead of unilaterally arming itself (Heywood, 1997, p. 16; Plous, 1993, p. 166).

To curb the production and stockpiling of nuclear arms, the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) was signed in 1968 and came into effect in March 1970 (Evans & Newman, 1998, p. 386; Lüdeking, 2020, pp. 15–16). However, the NPT is failing, given that the two nuclear superpowers are now pushing to increase their already huge nuclear weapons stockpiles even further. Furthermore, North Korea is going ahead with its ballistic missile tests, regardless of the US pressure on them not to pursue nuclear weapons capabilities. Then there was also the unilateralist move by the US to withdraw from the Iran nuclear deal in 2018, leaving the door open for Iran to produce highly enriched uranium for nuclear weapons without the opposition a nuclear deal could have provided (Lüdeking, 2020, pp. 15–16).

Diplomatically, the discussed prisoner's dilemma is a vital tool for nuclear and other forms of diplomacy (Nah, 2019, pp. 90–91; Nye & Welch, 2017, pp. 141, 148, 210). As certain historical views indicate, the Cold War started because US diplomacy was defensively orientated, while the Soviet stance was more expansive and decidedly more aggressive at the time. A recent example shows that the Hanoi summit failed because neither Washington nor Pyongyang submitted to the denuclearisation negotiations. Both parties rather hardened their stances while insisting that the other side should begin nuclear disarmament and concessions; neither was willing to concede.

While the prisoner's dilemma can be used to explain these diplomatic failures, it can also be used to better negotiate future denuclearisation, according to Nah (2019, pp. 90–92). This is useful because the dilemma clearly shows that self-centred advances only lead to overall losses for both parties, while mutual non-ideal compromises could be the way forward and lead to possible advances for all parties involved. Thus, nuclear diplomacy can be used to convince all parties involved in nuclear weapons escalation of the merits of working together to make the NPT effective (Lüdeking, 2020, pp. 16–17). However, to be successful, highly skilled, and professional diplomats will be needed to bridge these divisions.

Climate Change

Climate change, as per William Nordhaus (2020, pp. 10–12), is the main environmental issue faced by the world today. Due to its progressively worsening outlook, it has also become a principal problem in international relations, especially because states have failed to mitigate this significant problem.

Since climate change's inception in 1992, the world has failed to stabilise greenhouse gasses through the United Nations Framework Convention on Climate Change (UNFCCC) and all the Conference of the Parties (COP) meetings. There have been 25 of these COP meetings in a series of multilateral negotiations since 1995, producing only the failed Kyoto Protocol (which started in 1997 to construct an international framework for harmonising the policies of different states) and the unsteady Paris Accord (started in 2015 to keep the increase of global average temperature far below 2°C). The failure of a binding international agreement on climate change means that greenhouse gasses are becoming progressively more concentrated in the atmosphere, causing dangerous anthropogenic interference with our climate system (Hannah, 2015, pp. 365–367; Nordhaus, 2020, pp. 10–13).

A large part of the problem, as is the case with nuclear disarmament, is the fact that individual states have an enduring desire not to adhere to their commitments to cooperating on climate change (Heywood, 1997, p. 16; Nordhaus, 2020, p. 12). This stems from a state's longing to rather follow its own political or national interests, set against a worldwide and mutually beneficial plan. This means that international cooperation is forfeited, resulting in selfish attitudes and outcomes. Some of the major collaboration obstacles are as follows:

- International climate agreements have too weak an incentive structure to deal with such an important and complex problem as climate change.
- International climate treaties are undermined by myopic or corruptible leaders who do not take the issue seriously and have little or no interest in longstanding global matters.
- The sheer scale, difficulty, and cost of slowing climate change is a significant hurdle.
- States do not understand the challenges associated with global warming as a prisoner's dilemma, one where the negotiated agreements are not, in fact, voluntary or able to tolerate free riding (countries that rely on the emission reduction of others without making costly domestic reductions themselves).
- As per Figure 3, states like the US, with some of the highest emissions of greenhouse gasses, are also the ones that refuse to cooperate in international climate agreements or treaties. An example of this is the voluntary Kyoto Protocol, which ended in December 2012 because, ultimately, no nation wanted to be a part of it (Hannah, 2015, p. 368; Nordhaus, 2020, pp. 12–13).

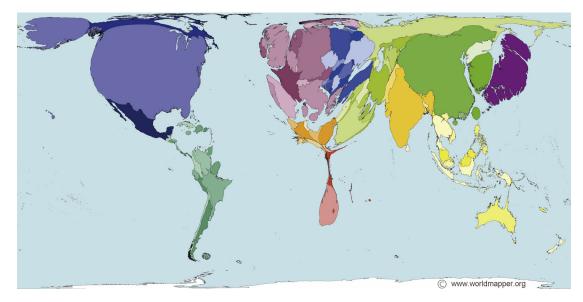


Figure 3: The Area Size of each State corresponds to their Global Greenhouse Gas Emissions

Source: Hannah, 2015, p. 368.

Diplomatically, climate change is one of the biggest challenges the practitioners in the field could face (Hannah, 2015, pp. 365–368, 376; Nordhaus, 2020, p. 10). The reason for this is that in 2020 after the climate change issue was identified in the 1970s and almost three decades after the UNFCCC was initiated, the world is still no closer than it was to any binding international agreement. For Nordhaus (2020, p. 10), the answer lies in stricter measures called the 'Climate Club'. This Climate Club is where nations throughout the world can overcome freeriding behaviour by implementing a penalty or reward system as a club would. The penalties or rewards can be aimed at states that do not participate in climate change initiatives, agreements, or treaties. For any approach, be it a penalty club framework or a more appealing incentive scheme, for mitigation or adaptation to work, proficient diplomatic negotiations would be needed. These negotiations are required to facilitate the buy-in and participation of these actors as well as facilitate the fact that there are clear winners and losers in the steps that need to be taken towards climate change (Hannah, 2015, p. 376).

Thus, while certain parties or states will need to be motivated to work together or even penalised for not doing so, others will need less motivation but the same expertise and professionalism. Also, both the solutions and the science behind climate change are highly complex, leading to delays and even more uncertainty regarding policy responses in the past. This does not allow room for error or diplomatic practitioners not fully versed or capable of dealing with these issues during complex and difficult negotiations (Hannah, 2015, pp. 365–368, 376; Nordhaus, 2020, p. 10).

Globalisation

Globalisation comprises political, economic, environmental, and social-cultural dimensions (see Figure 4) and although it started in the late 1400s, it was not until the Cold War ended that political developments became progressively more intricate (Kazimov, 2020, p. 431; Latifi, 2020, pp. 94–95; Rennen & Martens, 2003, pp. 137–139, 143).

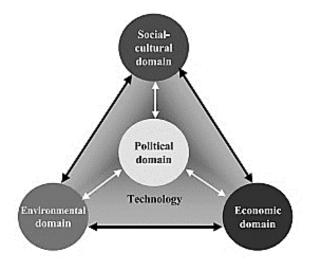


Figure 4: The Dimensions of Globalisation

Source: Rennen & Martens, 2003, p. 143.

It has been nearly impossible since the end of the Cold War to explain politics at the world, national, regional, or local levels without considering the mammoth impact of globalisation (Kazimov, 2020, p. 431; Latifi, 2020, pp. 94–95; Rennen & Martens, 2003, pp. 137–139, 143).

Traditionally, states only operated on a national level, using vertical power, a hierarchical power based on the traditional power structure of a state and its statecraft (Garcia, 2013, p. 910). However, globalisation has introduced the concept of horizontal power, a power structure based on how interconnected a state is in the network or 'web' of the world. This means that the more connected a state is to this international network, the greater its power and ability to exercise horizontal power (Garcia, 2013, p. 910; Kazimov, 2020, p. 433). The decline in the vertical power of states is perhaps one of the main reasons many authors assert states are shrinking, weakening, and losing their influence and sovereignty over time. However, even though the challenges of globalisation are highly problematic for states, they have remained functional and one of the most important actors in the international arena (Ciongaru, 2019, p. 71; Kazimov, 2020, p. 433). What is obvious, however, is the fact that states must modernise to accommodate the effects of globalisation, leaving behind old ways of functioning due to recent advancements.

At the heart of the fast and sometimes uncertain changes in the world lies contemporary globalisation's revolutions in telecommunications, computing, and the internet (Garcia, 2013,

pp. 903–906). Through these revolutions, modernity has virtually eradicated space and time as substantial aspects in numerous areas of social interaction. With these developments, states cannot control the free flow of information, communication, and transnational movements (Latifi, 2020, pp. 94–95). Globalisation has also changed how current-day diplomats function as well.

The globalisation-linked changes in diplomatic practice have occurred due to societies and political systems that no longer function in isolation, being increasingly influenced by their counterparts throughout the rest of the world (Latifi, 2020, p. 96). Furthermore, for diplomats to exert influence, they have to be in the foreground of the new information and technology advances, working effectively and efficiently in a new technological 'battle for ideas' or to enhance their presence and image as Barston (2019, pp. 25–26, 39, 160–162, 169) explains. This differs from previous eras because diplomats now must function in an increasingly integrated world using digital platforms through the Internet as a novel diplomatic instrument. These new practices known as digital diplomacy are now essential if diplomats want to promote diplomatic ideas effectively and advertise certain positions on diverse issues worldwide (Adesina, 2017, p. 5; Sevin & Manor, 2019, p. 325).

The Fourth Industrial Revolution (4IR)

The First, Second and Third industrial revolutions are all part of history now, each one based on some form of energy discovery (Davis, 2016; Sinton, 2019, p. 20). The initial revolution around 1784 was powered by steam, the second one around 1870 by electricity, and the third revolution in approximately 1969 by nuclear power. What is important to realise is that the third revolution is described as a digital revolution, where this first machine age gave rise to automated production, personal computing and new forms of telecommunications, like the internet (Vandenberg, 2020, pp. 194–196). Currently, the world is bracing itself for the advent of smart and autonomous systems that use machine learning and data as their driving force in the second machine age or what is called the Fourth Industrial Revolution (4IR) (Groscurth, 2019, pp. 4–6; Maule, 2019).

In this new machine age, a great convergence between the physical, biological and digital spheres is occurring (Groscurth, 2019, pp. 4–6; Maule, 2019). This conjunction can be illustrated by curing conductive hearing loss by reconstructing the broken bones of the middle ear through 3D printed technology and then surgically replacing the complete middle ear with the printed version (Pace, 2019). Thus, technology is becoming progressively more embedded within societies and even inside the human body. Other examples of this second machine age are genome editing, innovative forms of machine intelligence, breakthrough materials and new approaches to governance that rely on cryptographic methods like blockchain (digital information as a 'block', which is stored in a public database or a 'chain') (Davis, 2016; Hayes, 2023).

At its core, the 4IR is the global penetration of information and communications technologies (ICTs) (Adesina, 2017, p. 2; Groscurth, 2019, pp. 4–6; Maule, 2019; Vandenberg, 2020, pp. 194–196). These new technologies are leading to innovative capabilities that reform communication and the exchange of information between people, even altering the world's social, economic, and political settings. ICTs have also transformed the production of information and how it is consumed (Navarro, 2019, pp. 164–165). The result is that information is now only a keystroke away, making the wealth of information out in the world available to even private consumers. In line with this, international communication has become an instrument to model and shape international information. This means that many different international society stakeholders, whether they are states, International Organisations, NGOs, private companies, or the press, want to control the media and the flow of information as much as possible. For a state, this control of information can, for example, take the form of portraying the correct image of their country while propagating a favourable reputation (Wang, 2011, pp. 1–2).

For diplomacy, the 4IR allows for the possible design and development of better strategies for both propaganda and public relations, not to mention digital diplomacy and its applications (Navarro, 2019, pp. 152, 164–165). These strategies are now possible because of the new global connections that exist between the different actors within international society, even regarding civil society and between individuals (this statement incorporates the world society's view of common humanity where there are areas that unite all people outside of states or any other political entity) (Alejo, 2019, pp. 106–107; Ruacan, 2013, pp. 3–5; Yanovska et al., 2019, p. 1). The result is that international communicators can operate and manipulate the information flows due to this increased global connectivity. However, the increased connectivity also entails the possibility that modern communicators can use technology to influence information toward selfish and perhaps even nefarious ends. To combat these possible bad influencers, states will need superior diplomats to assess, counter and even reject manipulated information or fake news, which can be counterproductive to a country's image, people, and economy. However, these new diplomats will have to be experts at digital diplomacy and using ICT towards furthering their diplomatic goals and functions. If diplomats are unwilling or unable to adapt, like those governments in some African states that are prone to underdevelopment, the 4IR will pass them by and they will face more trials (for example, job losses and an even greater digital divide). It might even result in the 'digital' recolonisation of the African continent, as Onwughalu and Ojakorotu (2020, pp. 81–84, 86–88) suggest.

The Coronavirus Pandemic (COVID-19)

One of the stark reminders of how integrated the world has become, was the spread of the COVID-19 virus into a global pandemic (Onwughalu & Ojakorotu, 2020, pp. 81–84, 86–88). The virus started in Wuhan, China, in late December 2019 and quickly spread. Described as the worst crisis in a century, it is a pandemic that has perplexed political, economic, and diplomatic activity. To cope with the outbreak, states have closed borders, imposed lockdowns or at the very least ordered their citizens to stay at home as far as possible. With these measures, most of the world's economic activity came to a sudden standstill (Cociu, 2020, p. 19; Smith & McClean, 2020, p. 16).

Authors such as Duran (2020, p. 81) affirm that the COVID-19 pandemic was projected to have a more severe economic impact on the world than the 2008 economic/financial crisis or even the Great Depression (Duran, 2020, p. 81; Emmerson, 2020, pp. 107–109; Smith & McClean, 2020, p. 19). This economic effect is because as of June 2020, the pandemic had already killed over a third of a million people, resulting in hundreds of millions of job losses and a further worsening of the plight of the global precariat. For example, in the US alone, the pandemic's effects on their tourism sector will equate to a loss of USD 910 billion in economic output, the equivalent of more than seven times the impact witnessed on 11 September 2001. China, likewise, has witnessed economic strain in the form of a 6.8% shrinkage of its economy by the 1st quarter of 2020, p. 109; Smith & McClean, 2020, p. 19). Outside of the economic sphere, Duran (2020, p. 81) predicts that the pandemic could result in significant political upheavals, the further deepening of human tragedy in zones where there is already conflict, the emergence of new blocs, a new wave of erratic migration, the collapse of fragile states and the rise of populist nationalism and authoritarianism (Duran, 2020, p. 81; Emmerson, 2020, p. 109; Smith & McClean, 2020, p. 19).

Richard Haass (cited in Duran, 2020, pp. 81–82) predicts that the COVID-19 pandemic could signal an epoch of great uncertainty rather than an era of cooperation, as seen after World War II. This means that the world will witness a continued US decline, an additional wavering in international cooperation and a deepening of great powers rivalry (especially between the US and China). Although there might not be a new world order, as some have speculated, the ensuing period after the pandemic seems to be represented by disorder.

The speculations of the severity of COVID-19 and its possible impact on international order have led to two opposing narratives, as discussed by Graziano Palamara (2020, pp. 377–378). First, there is the opinion that radical transformation can take place, strengthening individual states but leading to a rise in world political tensions that can further hamper international cooperation. The second view is that the pandemic could lead be the birth of a global infrastructure aimed at multilateral cooperation. This means that once the closure phase of the world is over, a new kind of internationalism will arise to benefit all (Palamara, 2020, pp. 377–378). The reality is that countries have politically opted for national isolationism, worsening the effects of the pandemic due to insufficient international cooperation. Furthermore, US-China relations have taken a great deal of strain with the Trump administration threatening to impose unparalleled economic sanctions on China. Conversely, China has become more ambitious as a possible world leader, believing its model of state capitalism combined with digital authoritarianism to be the way forward. These issues could have extensive negative implications for the rest of the world in terms of spill-over effects (Duran, 2020, pp. 81–84; Lüdeking, 2020, p. 14; Palamara, 2020, p. 379; Smith & McClean, 2020, p. 22).

Interestingly, the pandemic has also assisted with the further spread of digital technologies (AdGully, 2020, p. 4; Aksoy & Çiçek, 2018, p. 915; Duran, 2020, p. 81). This technological escalation is because communication/actions must be taken online due to the physical isolation effects of the pandemic, for example, in sectors such as healthcare, education, financial actions, and media, where work and contact are needed but people are unable to meet each other face to face or in person. For diplomacy, this has comprehensive consequences as well because now diplomats can stimulate foreign policy interests using the 4IR tools over the internet, ICTs, and other communication technologies as mentioned before. This promotes the new field of digital diplomacy even further, which can henceforth be even more effective in information management, public diplomacy, strategy planning, international negotiations and even crisis and threat management (Aksoy & Çiçek, 2018, p. 915; Barston, 2019, p. 3).

Conclusion

Today's international arena is one permeated by globalisation, the 4IR and heightened complexity due to the decline of US hegemony, the rise of China, nuclear proliferation, climate change and pandemics. It is a modernity almost controlled by economics and technology, which has resulted in forces of change that are mostly outside political leadership and diplomacy's control. This lack of control is perhaps part of the reason why authors like Alejo (2019, pp. 106–107) argue that the rapid changes in international politics have made modern diplomacy ineffective.

Where traditional diplomatic practice focussed on political and government security concerns, the post-Cold War era has saturated the field with many other serious global issues as discussed in this article. This diversification and intensification of global challenges have culminated in a pivotal question: How can 21st-century diplomacy maintain its efficacy within this increasingly complex and expansive context while remaining a viable tool for mitigating these major issues? Henrikson (2005, pp. 2–3) sees this as an opportunity for diplomats to identify and interpret the vital messages of globalisation because of their direct experience with its upheavals and the associated instabilities it can cause. However, to ensure continued effectiveness and relevance, contemporary diplomats will have to specialise. They must employ the most advanced and up-to-date techniques and technologies to address the diverse array of high and low political issues outlined here. Accordingly, the author advocates for a more expert-driven diplomatic corps. These new specialists should be drawn from

a pool of generalists and trained within four streams of specialisation to overcome these modern political trials as discussed in more detail in another article (Oosthuizen, 2024).

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Muauz Gidey Alemu 🕩

Tigray Institute of Policy Studies muauzaga@gmail.com

Mulugeta Gebrehiwet Berhe 🕩

World Peace Foundation, Fletcher School Tufts University Mulugeta.Gebrehiwot@tufts.edu

Abstract

War crimes, crimes against humanity and genocide were committed in the war in Tigray. This article focuses on the use of sexual violence as an instrument of war. It narrates the scale, nature, and intentions of the sexual violence perpetrated on Tigrayan women, girls, men and boys. It showcases the extreme cruelty, dehumanization and intent to sterilize and inflict maximum damage from stories of victims and witnesses. It compares them with the rape crimes committed in other cases and concludes the nature of the crime was genocidal.

Keywords: Tigray Genocide, Reproductive Violence, Genocidal Rape, Ethiopia, Eritrea and Amhara.

Introduction

The war in Tigray has seen a range of atrocity crimes including genocide, crimes against humanity, war crimes, and ethnic cleansing. Over a million citizens killed as a result of direct violence and other war related situations including those over 200,000 citizens that died as a result of hunger and treatable diseases. Over 2.2 million citizens were displaced out of their places of origin and ended in either IDP camps inside Tigray or refugee camps in Sudan. Estimates for reported and unreported numbers of rape victims exceed half a million. Additionally, hundreds of thousands were wounded, and the economy, society, and infrastructure were severely damaged. The totality of these crimes provides reasonable evidence to support the claim that genocide was perpetrated in Tigray. The focus of this article is on the use of rape as a weapon for genocide in the Tigray war.

The UN Convention on the Prevention and Punishment of the Crime of Genocide defines genocide as an attack on a racial, national, ethnic, or religious group with the intent to destroy it in whole or in part. This includes acts such as killing, causing physical and psychological harm, creating conditions for the group's extermination, preventing births, and forcibly transferring children. The crucial element in this definition is the "intent" and the ability to carry out such intent (UNGA, Dec. 9, 1948). However, the scale of harm is also significant in establishing the gravity of the crime. Furthermore, the Rome Statute of the ICC expands the list of actions driven by genocidal intent to include the use of rape as an instrument for genocide. Article 6(d) of the Rome Statute criminalizes reproductive violence as an act of genocide, reflecting the language of Article II(d) of the Genocide Convention in the context of crimes against humanity and war crimes. The convention further explains that the context, perpetrators, and process are essential dimensions in establishing genocidal intent and the impact of rape (Borda, 2022).

The process of genocide involves various stages, including the formation of intent, organization, preparation, execution, and denial. While not all genocides follow these stages sequentially, elements like dehumanization and persecution can persist throughout. The objective manifestation



of the genocidal process is evident in the actual crimes committed, such as the killing of a racial or ethnic group, either in whole or in part (ICC, 2013.). For instance, the Holocaust targeted European Jews and resulted in the extermination of 6 million individuals. Similarly, genocides in the former Yugoslavia and Rwanda utilized methods like killing, torture, displacement, and sexual violence to destroy targeted groups (ICTY, May 25, 1993.; ICTR, Nov. 8, 1994).

This article presents empirical evidence of the rape crimes in Tigray, examining the nature and intent of the rape committed with the aim of demonstrating that the crimes were not simply the use of rape as an instrument of war, but rather with genocidal intent, constituting genocidal rape. The article shares stories of rape victims to illustrate the crime and the intent behind it. While a comprehensive research engagement is necessary to address all elements of the crimes of genocide committed in Tigray, this article contributes by providing empirical evidence linking the rape crimes to the genocidal intent of the perpetrators. It also offers a brief comparative perspective by discussing similar crimes committed in Yugoslavia, Rwanda, and Darfur.

The data for this article was collected through surveys, survival testimonies, and investigative reports from international human rights advocacy groups and media outlets. The dataset, obtained in three phases of the war, involved qualitative surveys of 4,000 households, interviews with key informants, and focus group discussions in all districts of Tigray during the first phase (November 2020 up to June 2021). The survey tools were designed to focus on collecting evidence related to victimization and the coping mechanisms of victims, and the qualitative aspects of this dataset are utilized in this article.

The second phase of data collection occurred after the regional capital was captured by TDF (June 2021 to December 20210), providing access to previously inaccessible areas and allowing for the recording of additional stories from families, victims, survivors, and witnesses. The third phase took place after TDF's return from other regions during the period of siege, blockade, and war (December 2021 to the signing of the Pretoria agreement in November 2022), during which additional data was collected through interviews and FGDs. The authors had exclusive access to media recordings, and primary data was collected across all phases, with detailed data available at public institutions such as The Tigray Institute for Policy Studies (TIPS) and the Commission for Inquiry of genocidal crimes in Tigray, as well as several national and international media outlets and the personal archives of the authors. The lead author was a member of TIPS during the first eight months of the war, leading the research on crimes committed in Tigray. Secondary data from various sources, including government and non-governmental reports, media statements, and social media posts, are used to support victim testimonies, with witness identities kept anonymous for their protection unless they have already made their stories public voluntarily.

The article is organized into five parts including this introduction. Section two provides a brief background to the war in Tigray. Section three examines the analysis of the stories and intents of the rape of Tigray based on evidence from victims, witnesses, responders, and perpetrators. Section four presents the types, nature, manner, consequence, and impact of the rape in Tigray. Section four compares the rape of Tigray with genocidal rapes committed in Yugoslavia, Rwanda, and Darfur. Section five concludes that the rape of Tigray women, girls, boys, and men is genocidal and should be designated as such.

Background to the Tigray war

The Ethiopian People's Revolutionary Democratic Front (EPRDF) failed to address public demands, leading to three years of consecutive riots and the resignation of PM Hailemariam, paving the way for Prime Minister Abiy Ahmed. Abiy's inauguration speech and rhetoric resonated with the public,

including in Tigray, where he promised that "Ethiopia without Tigray is a car without an engine" (Addis Getachew and Seleshi Tessema, 2018).

However, it became evident that Abiy was adaptable in his approach, tailoring his rhetoric to suit his audience. When sensing anti-TPLF and anti-Tigrayan sentiment, such as at the gathering of diaspora Ethiopians in Washington DC, his tone changed. He blamed the TPLF and Tigrayans for the suffering of Ethiopians, portraying the 27 years of EPRDF's rule as an "Era of Darkness" and using terms like *Andinet* (homogenizing unity) and *Ethiopiawinet* (an Imperial Ethiopian notion) to appeal to opposition sentiment against the idea of a multinational Ethiopia. He also utilized the ambiguous term *Medemer* (Synergy) in his rhetoric, which was widely propagated by the media (Atakilt, 2020). Abiy positioned himself as a promoter of the revival of imperial Ethiopia and aligned with political groups opposed to the multinational federal system, while scapegoating the TPLF for the EPRDF's shortcomings.

In his bid to consolidate power, Abiy manage to dissolve the EPRDF and its coalition member parties into a unified Prosperity Party with the exception of the TPLF that declined to liquidate itself and join the Prosperity Party (Aidi, August 2021; Ezega-Staff Reporter, 2019). Seizing this opportunity, he initiated a campaign to vilify the TPLF, commissioning documentaries accusing Tigrayans of corruption and undemocratic practices, which were continuously televised to fuel anti-Tigrayan rhetoric.

Months after coming to power, Abiy formed an alliance with President Isaias Afewerki of Eritrea, the longtime adversary of the Tigrayans and signed a secret peace agreement which was internationally acclaimed and contributed to his Nobel Prize. However, the details of the agreement with Isaias were vague at the time. However, it became clear later of its anti-TPLF and anti-Tigraian alliance following the closure of the border that was only opened for one month and the continued anti-Tigraian rhetoric coming out of Asmara and Addis Ababa. This alliance was expanded later to include the then Somali President, Mohamed Abdullahi (a.k.a. Formajo). This anti-TPLF nature of the alliance was later admitted by Isaias's Special Advisor in his tweet on July 2021.

In pursuit of his objective, Abiy formed an alliance with a segment of the Amhara elite opposed to the multinational federation (Plaut, 2023) and stoked anti-Tigrayan sentiments among Ethiopians dissatisfied with the EPRDF government (Sarah Vaughan and Martin Plaut, 2023). Initially perceived as a reformist by Western interlocutors, he garnered their full support, including a premature Nobel Peace Prize (Harry Verhoeven & Michael Woldemariam, June 2022). Encouraged by the silent backing of Western POWers and his unholy alliance with Isaias Afewerki against the Tigrayans, Abiy initiated the war on Tigray in November 2020 (Harry Verhoeven & Michael Woldemariam, June 2022).

The two-year war in Tigray involved a tripartite alliance comprising the Ethiopian National Defense Force (ENDF), regional special police forces, and the Amhara Special Forces (ASF) and the Fano Militia, alongside the Eritrean National Defense Force (EDF) and soldiers of Somali trained in Eritrea, with arms supply and drone support from the UAE, KSA, Turkey and China, and the passive backing from Western capitals. The war resulted in over a million soldiers and combatants killed or wounded, several hundred thousand Tigrayans killed by systematic war-violence, famine and related diseases due to a blockade, and over 150,000 reported rape victims. This article will focus on investigating the nature of the rape crimes, as detailed in the following sections.

Stories and Analysis of the Rape of Tigray

This section will summarize the nature, scope of the rape crimes and the intent and organization in committing the crimes. The first sub-section describes the nature of the rape and the second analyzes the intent of the rape of Tigray highlighting the genocidal nature.

Summary of the nature of the rape crimes unveiled

This section reveals the reality of the Tigray rape through the testimonies of survivors, eyewitnesses, and responders within their respective categories. These accounts encompass instances of rape and execution, forced sterilization and womb torture, various forms of sexual abuse, sexual torture and mutilation, sexual slavery, forced pregnancy, obstruction of breastfeeding, destruction of fetuses, deliberate transmission of HIV, perpetrated by the ENDF, EDF, ASF, and Fano Militia against civilian Tigrayans during the war.

Rape and Killing: Starvation, Torture and Execution

Based on the testimony of the Tigray Disabled Women Associations (TDWA), rape was systematically employed as a means to cause fatalities in numerous reported cases involving women and girls.

"...Amhara and Eritrean soldiers crowded us together in a warehouse on the outskirts of Humera town. There were 20 of us, including underage girls and women as old as 87. They subjected each of us to hours of gang rape, taking turns and cruelly targeting the virgin and teenage girls. The elderly women were also violated when the soldiers took breaks. We pleaded with them to spare the young and old, but they insisted that <u>all Tigrayans should suffer this fate.</u> After ten days of enduring gang rape, beatings, and being deprived of food and water for the first four days, only five of us managed to survive. We were given a piece of dried bread after ten victims had already passed away" (Humera Rape Victim, 2021).

A social worker narrated a survivor mother's story, revealing how rape was utilized to inflict psychological harm on the women of Tigray and to systematically eliminate males from the community:

"...The woman is a survivor of sexual slavery including gang rape. She was kept for weeks in the military barrack of Eritrean soldiers. She had a <u>mentally ill child</u> with her and she was begging the perpetrators to at least save the life of her son, but to no avail. The soldier told her that they were there to <u>destroy Tigray by killing all men and making the women sick and insane of rape</u> The rapist told her blatantly, '<u>You think you will be sane after this. Never! You will not be the same again!</u>". (FGD-Women CSOs, 2023).

Even disabled women in wheelchairs were subjected to a combination of rape, torture, starvation, and execution resulting in their deaths.

"...In the Shiraro area, Eritrean soldiers gathered twenty disabled women who were supported by the Tigray Disability Women Association. They took their wheelchairs and loaded them onto trucks along with other looted items from Tigray. The soldiers claimed a concern for their safety but they subjected them to gang rape, starvation, torture, and ultimately execution. The soldiers falsely labelled them as TPLF veteran fighters. Similar incidents were reported in the Asgede Tsimbila locality" (Genet-TWDA, 2023).

Sexual torture was a common occurrence in the evenings:

"...Every evening from 6 pm till the morning we hear women crying for help while being gang raped in the streets. The rape included elderly women and married women were dragged outside of their houses and gang raped in the streets. It was like a sex orgy for the soldiers to gang rape in public spaces. Commercial sex workers were taken as their property. They were doing every foul sexual activity they wished accompanied by ethnic slurs which we were listening to from behind closed doors. They were enjoying their conquest in the open air while neighbourhoods are caught in terror of being the next victim" (Residents of 05 and 14 Localities, 2021).

This story evidenced the degree of cruelty and the combination of victims shows the act was indiscriminately performed on women of all kinds: the healthy, sick, young, old etc.

Forced Sterilization, Sexual Mutilation and Torturing the Womb

One aspect of the rape of Tigray rape included the torture and forced sterilization of women's wombs, as depicted in the following accounts.

"A group of Eritrean and Ethiopian soldiers came to my home in Wukro town and subjected me to a prolonged and brutal sexual assault. They also physically attacked my genitals, causing severe injuries. They told me that my ability to bear Tigraway boy posed a threat to them. They repeatedly violated me with chains and rough objects, causing further harm to my reproductive organs, saying, 'Your womb is our enemy that gives birth to Tigraway boy, our enemies. This womb should be dried from giving birth. That is why we are raping you.' Despite my pleas for mercy, they continued their cruel actions, asserting that my Tigrayan womb needed to be punished and prevented from giving birth again. Eventually, I lost consciousness due to the intense pain and excessive bleeding. I was left for dead until my neighbors discovered me after several days and took me to a medical center, where unfortunately, I did not receive any assistance." (Letay, 2021).

The torture of Tigrayan women's wombs was not an isolated incident, as evidenced by similar accounts from various locations documented in the Amnesty International report:

"...We were fleeing from [my hometown of] May Kadra. It happened after we crossed the Tekeze River at a place called Tselim. We were three [women]... It was on 29 December 2020. It was the Shabiya [Eritrean] soldiers. They spoke Tigrigna and had a tattoo [tribal scarring] on their faces... They kept me for 24 hours. They asked for my husband. They kept me at their temporary base; it was fenced in with piled-up stones. Five of them raped me in front of my children. I have three children. One was three months old, and the other two were nine and six years old. After raping me, they used a hot iron rod they use to clean the barrel of a gun and inserted it in my womb. They also inserted pieces of metal in my womb. Then they left me on the street and later found a passerby to help me. My feet were burning, and I couldn't stand, I didn't know what was inside me. The passerby found me lying on the ground and brought me to the main road" (Amnesty International, 2021, p. 16).

The medical director of the hospital where Eyerusalem was treated told Amnesty International that: In February,

"...We also saw one case of a victim with a foreign body inserted into the uterus. We removed four nails from the body that stayed there for more than two months. One of the nails was curved. It was very difficult for her to sleep and walk before we removed the nails. Three weeks after the operation, she was able to move. She stayed in the hospital for months. She is a mother of two. She also had a burn on her upper thigh when she was raped" (Amnesty International, 2021, p. 16).

A doctor working at a medical facility treating survivors of sexual violence in the town of Adigrat told Amnesty International about another such case. He explained:

"...The girl from the town of Edaga Hamus was taken from the public minibus on 6 February 2021. They let her go on 15 February and she arrived during the night and came to us the next day. <u>We</u> took out two nails... tissue paper, gravel, and a piece of plastic packaging measuring 9 cm by 8 cm from her vagina. The plastic looks like the kind you use to pack coffee beans and we found it on the top while the other items were beneath the plastic" (Amnesty International, 2021, p. 12).

International reports and survivor stories confirm the deliberate targeting of women and girls. Perpetrators were heard saying in Tigrigna Language, "እዚ ማህፅን ኻልኣይ ዉላድ ክፈጥር የብሉን፣ ክትጮኽኒ ክትኽእሊ ኣላኪ", which means "your womb shall not give any more! you must be sterilized!" (FGD-Shiraro localities, 2021; IDPS Shire -University Center, 2021). Forces from Amhara and Eritrea used rape as a means of sterilization, inserting objects into the wombs of mothers (TIPS, 2021). Rape was not limited to the battlefield but occurred throughout Tigray, including the capital city of Mekelle. During the curfew, soldiers engaged in a campaign of breaking into homes and raping women and girls. Some incidents even took place in the streets, witnessed by residents (Residents of 05 and 14 Localities, 2021).

The following story of sexual violence was informed by cultural beliefs and utilized by the perpetrators' knowledge of the societal impact and consequences of their actions, as witnessed by responders.

"...During the initial week of the Axum massacre, soldiers from Eritrea and the Amhara security forces went from house to house and raped women. Four Amhara soldiers, identifiable by their military attire, forcibly entered Rosa's home and subjected her to a gang rape, accompanied by the use of ethnic slurs. Initially, she tried to resist but was met with torture, including being tied to a bed and having her legs spread apart, while unknown objects were inserted into her womb. The soldiers cruelly stated, 'Your womb will never forget this day! We have left an Amhara message inside you, and you will never be able to give birth!' They then left her. For several months, Rosa experienced intense pain and bleeding, without knowledge of what had been placed in her womb. Eventually, she sought medical assistance at a hospital in Adigrat, where doctors removed letters wrapped in plastic bags from her womb. One of the letters had strange, illegible writing, while the other was heavily stained with blood and bodily fluids" (Sitel Benat, 2023).

Texts and spells are believed to possess mythical healing and protective powers in Ethiopian Orthodox Tewahido Christian and Muslim societies. They are also seen as tools for curses and dark magic. The Debtera and Islamic healers use texts and numbers to harness magical abilities. Many people carry small amulets containing spells and prayers to ward off evil and attract good fortune. In the Amhara Province of Gojam, which is considered a hub of mythical knowledge and magical practices, it is common for followers of the Ethiopian Orthodox Tewahido Church to use amulets for curses and dark magic (Chernetsov, ND; Malara, 2020; Burtea, 2015; Hernández, 2017). Spells are potent mythical weapons, and culturally informed rapists have been known to send mythical spells to their victims, causing them to believe that even if they recover from the physical trauma of gang rape, they will forever carry an unforgettable spell preventing them from giving birth.

The Destruction of Fetuses

The destruction of fetuses has a historical precedent as a means to express intense hatred and genocidal intentions, even before the term "genocide" was coined by Raphael Lemkin. According to John Docker, Lemkin recognized the destruction of fetuses as one of the biological methods of genocide, along with family separation and sterilization (Docker, 2008, p. 64). In his analysis of

the story "War, Genocide And Female And Child Suffering: The Women Of Troy" in Aeschylus and Euripides' works, Docker, using Lemkin's analytical framework, considers the killing of Astyanax, the infant son of Andromache and Hector, by the victorious Greeks as a genocidal act. Even in ancient times, this act was seen as a barbaric form of genocide through biological means, inflicting immense suffering on the women of Troy (Docker, 2008, pp. 82-83). In Tigray, a similar story of fetal destruction unfolds, where the unborn are killed.

"In Wukro in January 24, 2021, a group of Eritrean soldiers stormed the house of a young pregnant woman and gang-raped her for hours. They ignored the pleas of the 35-week pregnant woman, and one of the soldiers inserted his fist into her womb and pulled out the fetus, telling her 'Even the unborn is our enemy. You think we will show you mercy because you are pregnant.' Then he pulled out his knife and cut her vagina in four directions, mocking the victim by saying, 'Let's see how wide Agame vagina can expand! Now, you will not use it again. It is destroyed!' She was left bleeding and unconscious" (Wukiro Victims of Rape, 2020).

After one week, she was taken to a hospital where she barely survived severe wounds, cuts, and internal injuries that resulted in her loss of control over her bodily functions.

Forced rape by family members

Another disturbing aspect of the crimes in Tigray was forced rape among family members, and some boys and men were also anally raped by Eritrean soldiers (Martin Plaut and Sarah Vaughan (eds.), 2023). Such kind of rape was documented in various parts of Tigray. Family members who resisted these heinous acts were executed, and in rare cases, subjected to torture or mutilation of their limbs, as seen in locations like Hawzen, Wejerat, Sheraro, Guya, and Abiyi Adi. The primary purpose behind these atrocities was to inflict lasting humiliation and break down family bonds, thereby hindering normal social life and causing a form of social death (TIPS, 2021; W/Hawzen, 2020).

Another form of this type of rape was forcing family members to be spectators of the rape of their children and loved ones. The heroic survival story of a teenage girl named Monalisa from Tembien is an example. Despite the torture and intimidation by ENDF soldiers, Monalisa resisted rape, and her grandfather resisted witnessing the assault on his granddaughter, resulting in Monalisa losing her arm and limb, and her grandfather being left with a damaged limb due to bullet injuries inflicted by their torturers, who were members of ENDF. The story of Monalisa stands today as a symbol of the unbreakable will for freedom and dignity of the Tigrayan people, representing the indomitable spirit of humanity in the face of evil (Monalisa, 2021).

Rape Camps and Sexual Enslavement

The coalition of the forces of aggression had sexually enslaved women in their camps for days and weeks. The following are some of the stories of sexual enslavement:

"In Wukro town ten women where the youngest was 16 and the oldest over 70 years, were gang raped. The underage girls were taken to the military camp and kept them for two weeks until the Eritrean and Ethiopian soldiers left to the battlefield" (Wukro-FGD 11, 2021).

An FGD discussant in Shire IDPs camp also witnessed the story of two girls:

"Two teenagers named NT and TGK in Sheraro were raped for about 6 weeks in the military barracks of Eritrean and Ethiopian soldiers. The soldiers finally put bullets in their vaginas. The two unfortunate girls suffered a lot until the bullets were extracted. We were shocked by then; now, similar action prevalent everywhere. They are taking young women from IDPs camps and keeping them for weeks in the camp. Very few are lucky to return alive. There are many whose whereabouts nobody knows" (IDPs-Shire-FGD13, 2021).

Some women also reported that they were forced to move around with the soldiers from camp to camp where they were gang raped, tortured along with continuous insults and humiliation.

One of the victims of this group said:

"... They [Ethiopian soldiers] were raping us three times per day. They considered us like their property. They raped us at any place they want. They were mocking at us and insulting us. They forced us to perform like the sex actors [porno stars] in the sex films they used to see on their smart mobile phones. They were watching the sex films and practicing it on us. They had animalistic behavior. They were highly drug addicted and they stayed on us longer than any human being can expect. When we cry or show lightest resistance they intimidate us with knife, axe and guns. At the last, I become pregnant but I aborted it by the support of the UNICEF. My wombs is wounded, bleeding and bear excruciating pain. The physical pain and sleep deprivation that followed are constant reminders of the crimes committed on me " (W/Shera/KI12, 2021).

In Guroro Tabia, girls were raided like cattle and rapped in the military camps for weeks. They were kept like slaves (KoT/Gur/FGD1, 2021). Another teenager victim of a gang rape and sexual enslavement in Mekoni town also reported that,

"...They kept me for months in the camp like their slave. They would do everything they wish. They showed no mercy or know no qualms whatsoever. They gang raped me until the continuous bleeding that followed discouraged them. Since that time, I stay at home and think everybody in the town knows and talks about my bad luck. I will leave Mekoni if my health conditions are improved soon to minimize shame and stigmatization" (RA/Me/KI5, 2020).

A gang rape victim from Hawzen said,

"...We were fleeing from [my hometown of] May Kadra. It happened after we crossed the Tekeze River at a place called Tselimoy. We were three [women]... It was on 29 December 2020. It was the Shabiya [Eritrean] solders. They spoke Tigrigna and had a facial scarification ... They kept me for 24 hours. They asked for my husband. They kept me at their temporary base; it was fenced in with piled up stones. Five of them raped me in front of my children. I have three children. One was three months old, and the other two are nine and six years old. After raping me, they inserted an iron rod they use to clean the barrel of a gun into my genitals. They also inserted pieces of metal in my womb. Then they left me on the street and later found a passerby to help me. My feet were burning, and I couldn't stand, I didn't know what was inside me. The passerby found me lying on the ground and brought me to the main road" (Amnesty International, 2021, p. 16).

Form the above lived-experiences of victims, survivors and witnesses of sexual enslavement the whole matter was not about sex. It was the intent to destroy Tigray as society physically, mentally and in spirit. This is even further elaborated from the orgy of public gang raping captures by the interviews with victims and survivors, and witnesses.

Public Rape, Spoilage and Humiliation

A survey made by the commission of inquiry set by the regional government of Tigrai indicated that many women and girls were raped in public. Girls and women were herded into rape camps and raped in public in Shire, Shiraro, Guya, Guroro, Axum, Adigrat, Wukiro etc towns. Several incidents

of Gang-raping in front of their husbands were reported in many towns by Eritrean and Ethiopian soldiers and Amhara forces (AG/1. FGD Participant, 2021; W/2. General Interview Respondent, 2021; W/5. General Interview Respondent, 2021; DT/Ay/FGD3. General informants, 2021; AA/FGD5. General informat, 2021; Werkamba and Hagereselam FGD, 2021; Mekelle FGD, 2021). The number of raped women was huge and the humiliating orgy was unforgettably and deliberately made to be embossed in the public space and archival of communal memory of Tigray people. This intent is engraved on rock by the raping and spoilage of virgin monks, wives of priests and Catholic Church nuns in their monasteries, houses and convents respectively (Wukro-FGD 11, 2021).

In a Tabia called Ayinmbirkekin, a priest begged Eritrean soldiers to kill him first before raping his wife but they raped her in front of him. Participants in FGD's indicated that many wives of priests had been raped but unspoken of in fear for stigma. Stories of suicide among victim families of priests who were devastated by the trauma of the experience and its social consequences are prevalent. The soldiers who came to their locality seemed to have never seen a girl. (DT/Ay/FGD3, 2021) In Abiy-Addi nuns and wives of priests were deliberately targeted. (73). Catholic nuns who devoted their life with absolute celibacy were raped in Wukro town. Similar bestial acts of gang rape was committed against 78-year-old Nun from Debre Abay Monastery who disclosed her ordeal crying and appealing for humanity to listen her ordeal on camera and televised on Tigray Television,

'...The soldiers took me and they held me by my limbs opening my leg. I told them I am a Nun ever been touched by a man and begged them to leave me. They raped me and spoiled my virginity. They did many ugly things including urinating in my mouth and insulting me. They destroyed my whole spiritual life with their cruelty. Now, I feel strange pain inside my womb and abdomen I have never felt before" (Tigray TV, 2022).

More harrowing stories of gang-raped elderly, nuns, and children as old as four yours require volumes but are left out on the interest of the limited space for this article.

Rape and Erasing of Identity

The key motivation and intent of the rape of Tigray girls, women and men was not sexual. but designed for the systematic destruction of Tigray. This argument is supported by the testimony of a medical doctor named Tewodros who witnessed the horror and called it an act of genocide.

"...A CNN team in Hamdayet, where refugees from Tigrai gathered in recent months, spoke with several women victims of rape and reported the following. A victim told the team the following. 'He pushed me and said, "Tigrayans have no history and culture and I can do whatever I want on you.' She told CNN she is now pregnant. Dr. Tewodros, serving at the refugee center said the following. "Many say they were raped by Amhara forces who told them they were cleansing them of Tigrayan blood" (CNN, 2021).

Deliberate Transmission of HIV

This biological technique of genocide was systematically applied through rape. Eritrean soldiers were frequently heard saying that they were there to kill all the men and to deliberately spread HIV virus. One dominant story is that they had prepared HIV carrier soldiers to infect the health women and those who tried to escape rape factually telling or faking being people living with HIV. The following story is an example.

"...The Eritrean soldiers were raping every woman they found in Tahtay Quoraro. An Eritrean soldier took a woman to rape and invited an HIV positive guy when she told him that she was HIV/AIDS

positive. The woman thought of protecting herself but ended of being infected with the Virus as a result (Shire-05- GI-13, 2021).

Similar cases were reported in Wukro town and Adi-Keyih of H/Wejerat district where the perpetrators invited their HIV infected compatriots to gang rape women. According to the victim, the soldiers were cheering and giggling about their wit and methodological effectiveness of destroying Tigray (Wukro-Agaezi- GI-5, 2021; H/Wejerat-Adi-Qaih-GI-1, 2021).

Even women living with HIV were not spared from gang rape and abuse. The following story from the key informant interview with victim of rape at Wukro town represents this cruelty.

"...I am a carrier of HIV for several years. I bring up my child as a housemaid. Two Eritrean soldiers (wedi-Keren and wedi-Asmera) stepped into my house at mid-day, dismissed my 7-year-old son, and forced me to put my clothes off; <u>I told them I had HIV but they didn't care at all. They both had abnormal sex with me and took my 6 months Retroviral drug- life-support medicine.</u> After the rape, they poured some substance to my womb that burned my uterus. They said to me 'tekalat' you deserve HIV. After the event, I initially thought of committing suicide but still live traumatized. I fear that most raped women and girls are exposed to HIV. In Mekelle, while I was in Ayder hospital, I met 80 years old woman gang raped by 5 soldiers and got the virus "(Wukro-Dedebit- KI-9, 2021).

We have seen cases where the perpetrators of the crimes took the anti-retroviral drugs of patients, a crime tantamount to killing them. But they were also engaged in direct killing of women the raped when and if they told them they were HIV carriers. Here is an example.

"...The Eritrean forces caught three girls at May- Hanse district, Mentebteb locality while they were fleeing from the massacre by Amhara forces in Humera town. The soldiers gang raped three of them for hours while beating them if and when they resist. One of the three girls beg them saying, "please leave me alone, I am HIV/AIDs positive". Their reaction was instantaneous and cruel, they shot her on the spot leaving the two of them terrified and obedient to their demands for weeks until they were thrown in a forest as dead" (FGD-Shiraro localities, 2021; IDPs Shire -University Center, 2021).

Interview with doctors at Wukro Hospital reiterated the alarming rate of prevalence of the virus following the first month of the war. (Wukro-Dedebit- KI-9, 2021) This was only months after the commencement of the war. After two and half years of the deliberate transmission of the virus, Tigray Health Bureau suspected that the prevalence of HIV might have reached a pandemic level. The report showed that based on the WHO standards more than 1% prevalence of the virus in society is considered a pandemic level. In Tigray before the war, HIV pandemics were less than 1%. After the war, the prevalence has become more than 2% given the destruction of the health system and chronic shortage of drugs, the virus made to expand like wildfire destroying the population of Tigray (Tigray Health Bureau, 2023).

Recently, the president incumbent of Tigray Interim Government Mr Getachew Reda accused of the government of Eritrea for deliberately organizing army division composed of HIV/AIDs carrier soldiers to disseminate the virus and destroy Tigray. According his assessment and report, in effect, they have brought 50 years back in all dimensions and they have planted a time mob that will destroy the people of Tigray for years to come (Getachew, 2023).

Forced Pregnancy

The other biological technique of using rape as a weapon of genocide is the forced pregnancy and implanting of "bad Memory Babies" in Tigray mothers' wombs. After going through the ordeal of

rape, a woman in Mekoni town argued that she was unable to conduct a checkup in the hospitals and clinics because of destruction and blockage by the enemy allied forces. Consequently, she was five months pregnant during the interview in 2021. By then, doctors advised her that abortion could be dangerous for her life that she decided to give birth to the child of rape. As of writing this article, the baby could be two years old (RA/Me/KI4, 2021).

The story of a woman from Mahbere Diego showed similar cases,

"...The unarmed Eritrean soldier raped me while the armed one stands at the gate to protect his friend. <u>I am pregnant now. I want to get rid of this pregnancy. I don't want to be a mother this way.</u> <u>I don't want to raise a kid of some perpetrator who raped me.</u> I live by selling coffee and tea in Mahbere Dego. I have not received any medical help. I hide my pain to myself. I told about the rape only to my best friends. They are offering me emotional help; they advised me not to give up on life" (N/MD/2, 2021).

"...The Eritrean forces caught three girls at May- Hanse district, Mentebteb locality while they were fleeing from the massacre by Amhara forces in Humera town. The soldiers gang raped three of them for hours while beating them if and when they resist. One of the three girls beg them saying, "please leave me alone, I am HIV/AIDs positive". Their reaction was instantaneous and cruel, they shot her on the spot leaving the two of them terrified and obedient to their demands for weeks until they were thrown in a forest as dead" (FGD-Shiraro localities, 2021; IDPs Shire -University Center, 2021).

Rape and the Destruction of Society

According to FGD discussant of women CSOs, the impacts of the war on women and girls are diverse and immense that describing the same is tantamount to the impact of the war on Tigray:

"...Tigray has been devastated by war, causing immense suffering for its people. Our husbands, sons, and daughters have been killed; our way of life has been shattered. The elderly, disabled, and mentally ill under our care have been executed. Our children and babies suffer from starvation and the trauma of witnessing our struggles. Women in Tigray have been blamed for giving birth to and raising Tigrayan men who fight for freedom, justice, and equality. Every aspect of pain and suffering has disproportionately affected women and girls in Tigray. We have endured excessive and exceptionally brutal treatment. Our bodies, minds, and spirits have become battlefields, used as weapons to destroy Tigray. We are left in a constant state of trauma and meaninglessness, akin to death. Rape and sexual violence have been especially devastating, dehumanizing many women and girls, trapping them in a state of living death" (FGD-Women CSOs, 2023).

The war's impact on women and girls is described as "imposing social death" through violence, leaving survivors feeling empty and lifeless. The multidimensional impact of the rape of Tigray women, girls, men, and boys extended beyond the immediate victims and survivors. It affected the entire society, with the techniques and methods of rape aligning with all aspects of genocide: from rape used to kill and inflict severe physical and psychological harm, to creating life-threatening conditions such as starvation and deprivation, terrorizing and subjugating society, separating families, spoiling and forcibly displacing victims and survivors from their communities, and undermining the foundations of society. It also involved sterilization and hindering reproduction, forced impregnation and the birth of children associated with traumatic memories, and the deliberate transmission of infectious diseases like HIV/AIDS. The severe dehumanization and otherization of Tigray identity, along with the constant reminders of shame, trauma, and humiliation, illustrate the pervasive impacts of genocidal rape. In essence, "social death" encapsulates the overall terror and disorder caused by the systematic and deliberate use of rape as a weapon of genocide.

Intentions of the Rape of Tigray

This section will aim to illuminate the declared intents and accompanying sexual violence of the perpetrators against protected Tigrayan civilians. The testimonies of victims, witnesses, and responders, presented at length in the next section, expose the genocidal intent. According to the testimony of a rape survivor from Humera, Amnesty International and Human Rights Watch reports corroborated the same story, revealing the intent to commit ethnic cleansing and crimes against humanity. The intent to cleanse Tigray's identity from the space of Western Tigray and pursue the Amharization of both the territory and the population is evidenced by the glaring evidence documented by these independent organizations. The use of rape as a weapon of starvation, physical damage, sterilization, dehumanization, and humiliation further underscores the intent to destroy Tigray, as widely reported (Amnesty International, 2021; Human Rights Watch, 2022).

ENDF soldiers left graffiti on the walls of the Tigray Martyrs Monument and Museum Hall, damaging and desecrating the remains of the martyrs. The graffiti stated that they had destroyed Tigray and its leaders, leaving nothing for them to rise again. They also mentioned handing Tigray over to the Eritrean army for further harm. According to a survey report from the Health Bureau of Tigray, there have been over 126,000 reported rape cases in the first eight months of the war. Considering that there are three or four unreported cases for each reported case, one would put the estimated number of rape victims well beyond half a million. Later report from the Tigray Genocide Commission actually indicate of higher figure than that of the bureau of health (Tigray Genocide Commissioner, 2023).

Prime Minister Abiy Ahmed initially denied the widespread rape in Tigray but later simplified the crime by comparing it to the attack of soldiers by bayonets. This message encouraged the soldiers to continue their actions (EBC, 2021). The social affairs advisor of Prime Minister Abiy, Daniel Kibret , further legitimized the destruction of Tigray by calling for the extermination of those associated with the Tigray region.

"...Weyane [Tigray] is not something we can understand. We can only erase it. For instance, Australia ... there is an island called Tasmania which is found in southern Australia. <u>They destroyed Tasmanian</u> <u>tribes until only one person remained. There was only one person left for [continuity of] the race.</u> Only one person! They have completely wiped them out. It is only by wiping it out. As I had said before, it is only by wiping out [of existence] the disease called Weyaneness ... Firstly, so that it may not exist physically ... Secondly, the [very] idea. <u>The idea of Weyaneness must never exist</u>. <u>Even</u> in the form of an idea ...There should not be a land that gives birth to such kind of people. When people say "Weyane" one ought to say "in the name of the father"! [a common Ethiopian orthodox reaction uttered against wickedness while crossing oneself]. Everyone [should say that]! [applause]. Never!" (Danial, 24)

As if reading from the book of genocide, Daniel Kibret's message made the Tigray war and its techniques unmistakably genocidal. The official nature of the rape campaign is further established by army commanders' evaluation report and video footage of the reasons for their defeat in Tigray captured from POW. The meeting chaired by General Kindu Yigezu exposed the indiscriminate targeting of civilians and the massive organized rape as a wrong strategy that created a recruitment bonanza for TDF (ENDF-Report, 2021).

Rape camps were established in hospital wards, military barracks, and abandoned construction sites in and around the town of Hawzen and Mekelle including hospital wards of Axum St. Mary hospital and classrooms of schools by the order of high military commanders. Many women were taken for months along with the moving army as sex slaves (Sarah Vaughan and Martin Plaut, 2023). Rape was not exclusively on women and girls only. A few Tigrayan boys and men were held by the ENDF in their camp and subjected to repeated anal rape. Only the stories of those who required serious medical attention are reported. Yet, it is widely known that Tigrayan men and boys were raped by the ENDF (Sarah Vaughan and Martin Plaut, 2023).

The undeclared but inferred intent of rape by the ENDF, the EDF, and ASF and Amhara Fano perpetrators is captured by the following statements they told their victims.

"You Tigrayans make us struggle, you betrayed us, you are traitors"; "You are our prisoners"; "We want to get rid of you here"; and "We don't like you." Some reportedly said, "<u>We are given a directive by the government that we can kill you, we can rape you without accountability</u>," and "<u>We can do to you whatever we like</u>." Others said, "<u>If we get rid of Tigrayans, we can give this land to Eritrea</u>." ... "We want to clean you all, cleanse you of [your] Tigrayan identity," and "<u>We do not want you to perpetuate the life of Tigrayans anymore in Ethiopia</u>" (Sarah Vaughan and Martin Plaut, 2023).

Prisoners of war (POWs) from the ENDF and EDF testified that they were aware of the consequences of their organized crimes including rape and killing, made an oath of confidentiality not to expose the crimes and ranks of their commanders. Many POW senior officers attempted to evade responsibility by falsifying their ranks in the POW camps. However, after rigorous inquiry sessions, the POW testified that rape was perpetrated by the order of senior commanders who claimed to be receiving orders from their superiors. Many POW stated that they were forced to take part in gang rape as part of a strict military order by their superiors and colleagues, and those who resisted faced pressure to collaborate with their fellow soldiers. In a display of defiance, many EDF soldiers showed no remorse about their crimes; instead, they boasted about the number of rapes committed (Dr H.Y, 2021). According to the testimony of a medical doctor at the center, many ENDF soldiers confessed to collaborating with EDF soldiers in the rape campaign following the orders of their superiors (Dr H.Y, 2021).

A report by a team of experts corroborates the testimony of victims and POW, stating that "the ENDF is not a rag-tag, out-of-control fighting force. It has repeatedly demonstrated that its members act under the orders and control of its leadership," as demonstrated in UN missions. The EDF, due to forceful and indefinite conscription, subjection to brutal disciplinary measures, and the extreme hierarchy of control, "carry out orders to the letter. Like the ENDF, the EDF is not a rag-tag, out-of-control force. It is a force that acts according to its leadership's orders" (Dyan Mazurana. Hayelom K. Mekonen, Bridget Conley, Alex de Waal, and Delia Burns, 2021).

The Rape of Tigray vs. Genocidal Rapes

A brief comparison between the rape of Tigray and genocidal rapes in as Rwanda, Bosnia and Darfur are made in this section taking the ten dimensions of rape discussed in the previous section.

Killing, Torture and Sexual Mutilation

In the conflicts of Rwanda and Bosnia, women were subjected to horrific violence including gang rape, starvation, torture, and execution. Many were brutally murdered, with sexual abuse exerting a devastating impact. Forced sterilization, sexual mutilation, and damage to women's reproductive systems were prevalent in Rwanda, where extreme cruelties were witnessed during the genocide. For example, a group of 22 individuals from the Interahamwe used a sharpened end of a hoe to rape a Tutsi girl, penetrating her three times until she bled profusely. Cutting the breasts of Tutsi women was also a common practice (Sharlach, 2000; Jorgensen, 2016).

Tigrayan women, in addition to facing similar kinds of suffering as the victims in Rwanda and Bosnia, also endured the unique torture of their wombs, where papers and nails were inserted to inflict infertility, inferiority, and subjugation. The destruction of fetuses was one of the genocidal acts of cruelty inflicted upon Tigrayan women. In one instance, a woman was forcibly opened up, causing her fetus to fall out, while she screamed until her death. Similar acts of barbarism were also carried out by the Janjaweed militia in the conflict in Darfur, Sudan (Jorgensen, 2016).

Forced Pregnancy and the Birth Mixed Babies

In Bosnia, an estimated 5,000 infants were abandoned or killed in the aftermath of genocidal rape. In Rwanda, 2,500 "bad memory babies" were born (Russell-Brown, 2003). Children born out of rape in former Yugoslavia and post-war Bangladesh had multiple impacts. The children became constant reminders of the horrible experience; their mothers were ostracized from their kin groups. In societies where parentage is determined through the male line, children born out of rape symbolize the elimination of an ethnicity, as they are not born from a father of that particular community, as seen in the cases of the Rwandan genocide and the Sierra Leonean civil war (Reid-Cunningham, December 2008).

Similarly, Amhara militia told the Tigrayan women they raped that they wanted them to give birth to Amhara children, while EDF soldiers told them that they wanted them to have Eritrean babies, with the intention of diluting and eventually eliminating the Tigrayan race over time, as seen exhibited in the previous chapter. The consequences of these rape-born children were similar to what was experienced in Rwanda and Bosnia.

Rape with a family member and Sexual Enslavement

Family members were forced to rape their sisters, daughters, and other relatives in the conflicts of Rwanda and Darfur. Rape among family members was coerced in family houses, camps, hospitals, and other public areas. Rape camps were established for the sexual enslavement of women and girls in Bosnia and Rwanda. Thousands were kept in camps for months until they died or were rendered unworthy of sexual use or reproduction. In both cases, rape victims were considered as sex tools, slaves, and vessels to be used for the reproduction of the conquering genocidal forces (Askin, 2006).

Similar forms of the crime are exhibited in Tigray, as seen in the case of Monalisa and her father. The forces of aggression in Tigray established camps where women and girls were enslaved for sexual use for days and months. The sexual enslavement was not limited to rape camps per se; quite a few women and girls were also kept as sex slaves in their own houses, highlighting the stark similarity of mutual rape and sexual enslavement in Yugoslavia, Rwanda, Darfur, and Tigray.

Public Rape, Spoilage and Humiliation

In both Yugoslavia and Rwanda, girls were raped in public, in front of people they knew or in front of many women crowded into rape camps. This was done to humiliate the victims and make them feel unworthy of any respect from the society forced to witness their suffering. Another aspect of this crime was to force girls to strip in public and stand naked, as exhibited in the crimes in Rwanda. Public nudity is considered shameful and humiliating in Rwandan culture. Akayesu was convicted of genocide not for committing rape directly, but for orchestrating the ritual of humiliation and directing the militia to their broader task of killing (Russell-Brown, 2003). Tigrayan women and girls were similarly raped in public places, rape camps, schools, and hospitals, inflicting not only physical suffering but also shame and humiliation within their own community.

Rape and Identity Erasure

The violation of women's bodies represents the conquest of the group's cultural identity by the enemy. Forced sexual penetration, ejaculation, insemination, and control over women's bodies serve as metaphors for the dominance of the raping culture over the raped culture. Therefore, rape of women is seen as the rape of the entire group, making it genocidal rape. Raping, killing, and torturing women and girls, as seen in Rwanda, Bosnia, and Darfur, have been identified as genocidal acts (Russell-Brown, 2003, pp. 289-293; Wasiak, 2020).

According to the dominant literature on the impact of genocidal rape, it profoundly affects the sexuality of survivors, as it transforms sex into a metaphor for brutal victimization. Many survivors report feeling that sex has become only part of their past. The social alienation and stigma they face often make victims feel emptiness and detachment from their communities. The motivations behind genocidal rape aim to break down the bonds of family and society, which are the foundations of social structure, as witnessed in Yugoslavia and Rwanda (Russell-Brown, 2003, p. 90). Women victims of such a crime often face difficulty in maintaining relationships with men, let alone engaging in marriage. Many victims of such a crime in Tigray no longer consider themselves as worthy members of their society and fail to trust even their family members, let alone distant ones.

Oral Cruelty

Oral cruelty involves the use of ethnic slurs and metaphors to dehumanize and inflict psychological torture on the victims. In Rwanda and Bosnia, victims were dehumanized by equating them with animals, portraying them as evil, sub-human, and as dirt and filth of society that should be cleansed in the interest of society. Derogatory terms such as "cockroaches," "dirty whores," "animals," "Turks," "Ustasha whores," "dogs," "slaves," and other ethnic and racial slurs were used against the victims of genocidal rape in Bosnia, Rwanda, and Darfur (Di Caro, 2005; Flint, J., & de Waal, A., 2005; Marlowe, J., Bain, A., & Shapiro, A. , 2006; Wahyuni, 2020; Jorgensen, 2016; Sustersic, 2014/2015).

The dehumanization and otherization of the victim group, treating them as dangerous animals or worthless creatures, played out in the ritualization and naturalization of cruelty. The level of dehumanization of Tigrayan victims was so immense that all names and demonizing phrases were used, including "filthy whores," "enemies of Ethiopia," "vipers," "rats," "dirty blooded," "sub-humans," "evil creatures," "daylight hyenas," and other cruel metaphors. This dimension of the rape of Tigray is at par with, if not more severe than, other cases of genocide.

Rape and the Destruction of Society

In patriarchal cultures, women are often seen as symbols of men's potency, and rape is viewed as a symbol of the husband's control over his wife's body and sexuality. In several communities, the virginity of girls is considered a crucial requirement for marriage consummation and continuity. In these cultures, girls who have lost their virginity due to rape or any other relationship are deemed unsuitable for marriage. For this reason, perpetrators aim to humiliate a society by using elaborate rituals, cruelty, publicity, and drama when committing such crimes. This has been evident in Darfur, Rwanda, the Democratic Republic of Congo, and Bosnia Herzegovina (Askin, 2006; Di Caro, 2005; Reid-Cunningham, December 2008; Russell-Brown, 2003; Marlowe, J., Bain, A., & Shapiro, A. , 2006; Wasiak, 2020; Wahyuni, 2020).

The collective comparison discussed above indicates that the rape crimes committed in Tigray are strikingly similar, both in content and form, to those perpetrated in the genocidal crimes of Rwanda,

Bosnia, and Darfur. The physical extermination, dispersion, and psychosocial destruction of the Tigrayan identity were organized systematically.

Conclusion

In conclusion, the analysis presented in this article has made a compelling case for categorizing the rape crimes in Tigray as genocidal rape. The empirical evidence, discussions, and comparisons with other instances of genocidal rape provide strong support for treating these crimes as acts of genocide.

The characteristics of the rape crimes in Tigray align with those typically associated with genocidal acts. The victims were primarily civilian Tigrayans in need of protection, rather than combatants engaged in active warfare. Men and boys were also targeted, often accompanied by execution and killing, indicating a deliberate and systematic effort to inflict widespread harm and destruction.

Furthermore, the crimes were clearly aimed at inflicting physical, psychological, cultural, and social harm on the Tigrayan society as a whole, with the intent of destroying the society in whole or in part. The timing of the rapes and sexual violence, coinciding with military incursions, strongly suggests that these acts were part of a broader military strategy and tactics deployed for the destruction of the society.

The systematic nature of the crimes, committed by organized armies rather than uncontrolled rogue elements, further supports the argument for categorizing the rape of Tigray as genocidal. Additionally, the deliberate targeting of the reproductive capabilities of the society, through destruction, forced impregnation, and the deliberate transmission of diseases, underscores the genocidal nature of these acts.

The use of rape in public places and the deliberate humiliation and damage to the social identity and cohesion of the Tigrayan society further reinforces the genocidal intent behind these crimes. Moreover, the forcing of family members to rape each other or witness the rape of loved ones serves as a clear indication of the intention to destroy not only individual families but the society as a whole.

The comparison made with genocidal rape committed in Bosnia and Rwanda highlights the striking similarities between these crimes, further supporting the conclusion that the rape in Tigray is indeed genocidal in nature. As such, it is imperative that these crimes be treated as such in addressing the perpetrators and in addressing the physical, psychological, social, and economic rehabilitation of the Tigrayan society.

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James Maisiri 🕩

Digital Africa Research Unit at Institute for Pan-African Thought and Conversation 221197886@student.uj.ac.za

Takaedza Simbarashe Madzikanda 🕩

University of Johannesburg tsdmadzi@gmail.com

Executive Summary

As BRICS countries strive to build a digital economy, these nations must prepare their populace for the 'future of work.' Digital economies tend to create middle to high-skilled jobs. This is problematic as many workers are trapped in low-skill occupations and lack the expertise to adequately participate in a digital economy. A digital economy requires a population that is literate in Science, Technology, Engineering, and Mathematics (STEM). While BRICS has made progress in educating their populace in these fields, they still have a long way to go. More STEM graduates (especially women) must be produced to maintain and create a digital economy. This policy brief maps out strategies for BRICS countries to increase STEM participation.

Keywords: BRICS, STEM, Education, digital economy

Introduction

The BRICS countries, namely Brazil, Russia, India, China, and South Africa, represent a collective of emerging economies that have identified the potential opportunities brought forth by the digital revolution. In attempts to take advantage of the digital revolution, BRICS countries have made multiple national strategies to develop a digital economy (ITC, 2022). There is no strictly agreed-upon definition of what constitutes a 'digital economy' among these countries, but they all loosely agree that a digital economy pertains to an economic system that primarily uses digital technologies, information technology, big data, e-commerce; internet of things to produce goods and services (ITC, 2022).

BRICS countries have made significant strides towards a digital economy; examples of this can be seen in Brazil, where the digital economy accounted for 22% of their GDP in 2016 (ITC, 2022). In Russia, during the period of 2015-2017, 4% of the GDP arose from the digital economy with potential for exponential growth. While in India and China, the digital economy in 2019 and 2020 stood at 6.9% and 7.8% of the GDP, respectively (ITC, 2022).

The proliferation of a digital economy alters the operations of industries and job profiles within BRICS economies. Countries with a robust digital economy tend to create middle to high-skill job profiles. There is an urgent need for BRICS countries to lay out a unified strategy to upskill their populace to prepare and maintain a vibrant digital economy (ITC, 2022). For a digital economy to thrive, BRICS countries must focus on educating their populace in STEM skills. In India, it is envisaged that its digital core sector will create 60 to 65 million new jobs by 2025, that will require some STEM skills (Gupta et al., 2019). In South Africa, the digital economy is forecasted to create 1.2 million jobs by 2030, that necessitate a certain level of STEM literacy (Chiu et al., 2019).



There is a stark digital divide within each of the BRICS countries, and one of the reasons contributing to this divide is that a notable part of their populace lacks the skills required for the digital age of employment. To bridge this gap, this policy brief aims to lay out a blueprint for increasing STEM literacy in the BRICS populace.

Overview of the current state of STEM education in each BRICS country

Historically, Brazil has faced challenges in STEM education, primarily due to socio-economic disparities and under-resourced public education systems. However, in recent years, the country has shown a commitment to improving STEM education (Horta, 2018). For instance, the Brazilian government has increased investments in education technology and teacher training, especially in the fields of science, mathematics, and ICT (Valente and Almeida, 2020). One of the biggest challenges remains the lack of qualified STEM teachers with inadequate training and excessive workload. There is also a lack of resources and infrastructure for STEM education (Marginson et al., 2013; Valente and Almeida, 2020). The Brazilian workforce only consisted of 2.8% of STEM occupations in 2019, but unfortunately, women are heavily underrepresented, as only 26% of STEM workers in Brazil were women in 2019 (Machado, 2021). In 2022, only 17.5 percent of all graduates in Brazil had completed degrees in STEM fields (Buchholz, 2023; World Economic Forum, 2023). Only 36.64 percent of all STEM degrees being obtained by women, compared to 63.36 percent of all STEM graduates being men in 2022 (Gender Gap Index, 2022).

Moreover, Russia has a strong tradition of scientific research and development, and there are many high-quality STEM schools and universities. Russian students often perform well in international math and science competitions, indicating the effectiveness of their STEM education (Centre for Security and Emerging Technology, 2019). However, there are some challenges to STEM education in Russia. One of the biggest challenges is the lack of qualified STEM teachers. There is also a lack of resources and infrastructure for STEM education (Avdeenko, Sabirova, and Konyushenko, 2021). Despite these challenges, there are some positive signs for STEM education in Russia. The government has increased investment in STEM education, and there is a growing interest in STEM subjects among students. There are also several STEM-focused initiatives and programs being implemented in Russia, such as the Presidential Decree on the Development of Artificial Intelligence (Centre for Security and Emerging Technology, 2019). Only 4% of the Russian workforce was employed in STEM occupations in 2018 (Avdeenko, Sabirova, and Konyushenko 2021). Russia actively encourages women to participate in STEM education, however, they remain underrepresented within these fields (Oblova, Gerasimova, and Sishchuk, 2020).

Furthermore, STEM education in India is highly valued. The government has made STEM education a priority, and there is a strong focus on producing high-quality STEM graduates. There are many high-quality STEM schools and universities in India, and the country has a strong tradition of scientific research and development. The government has made efforts to improve STEM education and introduced policies like the National Education Policy 2020, which focuses on the improvement of education with a large focus on STEM education. However, there are some challenges to STEM education in India. One of the biggest challenges is the large number of students. India has a population of over 1.3 billion people, and the number of students enrolled in STEM programs is growing rapidly (Bhattacharyya, 2020; Buchholz, 2023). This puts a strain on resources and educational infrastructure. Further challenges include outdated curricula, lack of practical application in education system, with a push towards digital learning and updated, more practical STEM curricula (Qureshi and Qureshi, 2021). India produces a large share of STEM graduates, as in 2022, 34 percent of all graduates in India had completed degrees in STEM fields (Buchholz, 2023; World Economic

Forum, 2023). However, women remain underrepresented in many STEM professions in India. For example, the number of workers in the information technology sector stands at 4.4 million; however, less than 10 percent of female employees are in top-level positions (NASSCOM, 2020). Additionally, in full-time employment of science researchers in 2019, women only occupied 16.6 percent of job positions (Amirtham and Kumar, 2023).

Similarly, STEM education in China is highly valued. The government has made STEM education a priority, and there is a strong focus on producing high-quality STEM graduates. There are many high-quality STEM schools and universities in China, and the country has a strong tradition of scientific research and development (Loyalka et al., 2021). In recent years, China has made significant investments in STEM education. The government has built new STEM schools and universities, and it has also provided funding for STEM research and development (Han, Appelbaum, and Rosenbloom, 2018). China's President, Xi Jinping, has set a goal of ensuring China becomes a leading innovator by 2050 and has ensured the government invests heavily in becoming one of the leading countries in STEM education. In 2017, 8 million students graduated in STEM fields from Chinese universities (Han, Appelbaum, and Rosenbloom, 2018). While China has made efforts to close the gender gap in STEM education, they still have a long way to go to close the gender gap within the labour market, as women are underrepresented in plenty of STEM job positions (Lingyu et al., 2022). For example, in 2015, only 26.56 percent of women were accounted for in STEM research and development personnel (Yang and Gao, 2019).

Lastly, South Africa faces significant challenges in STEM education stemming from historical inequalities and resource limitations. STEM education in South Africa is also less developed than in other BRICS countries. Despite these issues, the government has committed to improving education, with a focus on increasing access to and quality of STEM education in the country (Sikhosana, Malatji, and Munyoro, 2023). The government has made some efforts to improve STEM education, but there are still significant challenges. One of the biggest challenges is the lack of qualified STEM teachers. There is also a lack of resources and infrastructure for STEM education. Equal access to education is another issue that continues to plague the education system, as there are large disparities in the quality of education accessed in schools around the country (Mkhize, 2023). Despite these challenges, there are some positive signs for STEM education in South Africa. The government has increased investment in STEM education, and there is a growing interest in STEM subjects among students. There are also a number of STEM-focused initiatives and programs being implemented in South Africa (Sikhosana, Malatji, and Munyoro, 2023). However, despite the efforts, more work needs to be done to improve STEM participation and gender equity in STEM. Only 42.76 percent of all STEM degrees being obtained by women, compared to 57.24 percent of all STEM graduates being men in 2022 (Gender Gap Index 2022).

Unlocking the Future: A Compelling Case for STEM Policy Emphasis

There is a direct positive correlation between a STEM populace and economic development. Countries with STEM-oriented economies are superior to countries with lower STEM-oriented economies (Rothwell, 2013; Costa, 2019). The digital economy depends on innovation, and STEM professions drive technological innovations. STEM markets tend to boost economies' productivity through technological innovation and create new products and industries. Employment opportunities in STEM fields are anticipated to experience fast growth rates relative to non-STEM fields. Professions that require STEM literacy host 75% of the fastest-growing professions globally (Makgato, 2019). Research suggests that to meet the high job demand in these STEM occupations, BRICS countries need to actively educate more of their populace in STEM fields.

BRICS countries are challenged by many social issues, ranging from epidemic prevention and control, climate change, poverty, healthcare, and more. These challenges need technological and scientific expertise to overcome them. By encouraging STEM education in these countries, local skills will be developed to create innovative solutions to solve local problems and thus improve the standard of living for their citizens. An example of locally driven solutions can be seen in China, which has aggressively taken steps towards 'digital health care' with technologies such as health information technologies, artificial intelligence, 3D printing, and Big Data to improve medical services (Odonkor, 2023). However, digital healthcare advancements are not uniform amongst BRICS countries, and one of the reasons for that is due to the disparity of STEM literacy within the populace.

BRICS is a partnership of emerging economies that benefits from mutually beneficial knowledge exchange. Thus, bolstering STEM skills would further create an opportunity for collaboration in research and development among these countries. By leveraging diverse expertise, these emerging economies can tackle complex collaborative projects. An example of this is the BRICS Vaccine Research and Development Centre, which was a platform created to share knowledge and expertise in vaccine research (DHET, 2022). These collaborations would benefit from a larger pool of STEM graduates.

There is an urgent need for BRICS countries to improve the underrepresentation of women in STEM fields. This will reduce the gender gap in these areas and the gender wage gap within the labour market. Women-led businesses have been argued to face more significant challenges adopting technological advancements (UNCTAD, 2021). Women are approximately half the population in these countries and equipping them with technical skills allows these countries to tap into a larger talent pool. Women tend to bring unique perspectives and experiences to problem-solving, thus bringing novel insights and innovative solutions in STEM. More women should be assisted into the digital economy (UNCTAD, 2021).

Lastly, STEM fields often provide technological breakthroughs. A strong STEM populace will increase BRICS countries' self-reliance on technological innovation and reduce reliance on importing technology from Western countries.

Identifying strengths and weaknesses in existing STEM education initiatives

Opportunities

The BRICS countries have several strengths in STEM education and research. These include:

- Large populations: The BRICS countries have a combined population of over 3 billion people. This gives them a large pool of potential STEM students and researchers. This large population base fostered to partake in STEM fields, will lead to greater innovation, technological advancements, and research output.
- A young population: The BRICS countries possess a predominantly young population. A youthful demographic provides these nations with the opportunity to cultivate a new generation of skilled workers in STEM.
- Rapid economic growth: The BRICS countries are some of the fastest-growing economies in the world. This means that they have a lot of resources to invest in STEM education and research.
- Government support: The governments of the BRICS countries are supportive of STEM education and research. They have invested in STEM schools and universities, and they have also provided

funding for STEM research and development. An increase in governmental support in STEM fields will assist in further developing STEM fields.

Challenges

The BRICS countries face several noteworthy challenges. These include:

- Lack of qualified STEM teachers: BRICS countries struggle with a shortage of trained STEM teachers due to inadequate training programs and low salaries. This shortage hampers students' learning experiences and preparedness for STEM careers.
- Poor infrastructure and resources: Many schools in BRICS nations lack essential STEM facilities, such as well-equipped laboratories and modern technology. Rural schools, particularly, face significant challenges due to insufficient funding and neglect, hindering students' access to hands-on learning experiences.
- Low interest in STEM subjects among students: Despite the demand for STEM skills, students in BRICS countries often show limited interest in STEM subjects due to outdated teaching methods and misconceptions about STEM careers. Addressing this challenge requires innovative approaches to engage students and promote the relevance of STEM education.
- Gender disparities in STEM education: Gender disparities persist in STEM education across BRICS countries, with women underrepresented in these fields due to societal norms and biases. Bridging this gap requires efforts to promote inclusivity, provide support for female students, and challenge gender stereotypes.

Policy Recommendation

Given the challenges and opportunities presented above, the BRICS countries have a number of policy considerations to make, in order to enhance their role in advancing STEM. They are as follows:

- 1. BRICS needs to invest more in uniform structures that target training programs that encourage women's participation in STEM. These programs include extracurricular activities, mentorship programs, promoting female STEM role models, and scholarships.
- 2. BRICS countries should form a STEM research and development fund to support collaborative STEM initiatives and bolster knowledge sharing. This fund would support a BRICS STEM education network to share best practices in STEM education. This would assist in unified STEM development.
- 3. BRICS countries must allocate larger budgets to rural schools in impoverished areas and equip them with STEM laboratories and equipment. This policy will close the disparity between the best and worst performing schools in their respective countries.
- 4. BRICS countries need to allow teachers who intend to train in STEM subjects to study for free. This is to encourage more teachers to be trained in STEM fields.

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The Multilateral Integration of Blockchain, Ethical Packet Sniffing and AI for Cybersecurity in BRICS

Blessing Mbalaka (D) Independent Researcher bjmbalaka@gmail.com

Executive Summary

This policy brief proposes that the BRICS (Brazil, Russia, India and South Africa) should plan and coordinate on ways to mitigate cybersecurity risks on a multilateral level. The BRICS countries are ideal for such a meta-governance mechanism which could coordinate toward the circumvention of some cyber risks. This Policy brief proposes that there should be an integration of blockchain technologies, packet sniffing technologies and AI detection tools to help mitigate emerging cybersecurity risks. The policy brief outlines the risks and challenges prevalent in this current climate, whilst also proposing potential remedies sourced from rigorous academic studies. The precise amendments include the synthesised mechanism of blockchain-based internet registries, packet sniffing technologies AI verification tools and capacity building to aid in the mitigation of cybersecurity risks. In 2007, a cyber-attack in Brazil plunged more than 3 million people into darkness.¹ Cyberattacks collectively cost the BRICS countries \$50.3bn in 2013.² These funds could have been reinvested into the economy. BRICS needs the rapid technological integration of cyber-crime mitigation tools, tools which this policy brief will outline.

Introduction

Current Cybersecurity risks and challenges

As the world becomes more digitized, the risks of cyberattacks are becoming an increasing concern for society. Disruptive technologies are being birthed in a digital warzone encompassing of malicious actors looking to capitalise on cyber-security vulnerabilities. Cybercrimes in this emerging and rapidly changing world evolved to encompass new techniques which challenge policymakers. Some instances of cybercrime can be noted from the stolen data saga, in which the data of 1 billion citizens in China was stolen, in 2022.³ This same source states that the Shanghai police department was hacked by a hacker claiming to have attained personal information from the Chinese police department. The perpetrator of the pre-noted hack, 'Chinadan', demanded 10 bitcoins, an amount of \$200000 for the data on the dark web. The dataset included ID records, personal addresses and birth records.⁴ These stolen records can be used to conduct fraudulent activities. The world is in a battle against cybersecurity, and it is important to be cognizant of these risks which include botnets, ransomware, digital extortion, online scams and work email hacks.⁵



¹ Brenner, J.F. 2013. Eyes wide shut: The growing threat of cyber attacks on industrial control systems. *Bulletin of the atomic scientists*, 69(5):15-20.

² Norton. 2013. Norton Report 2013. Accessed at: 2013 Norton Report | NortonLifeLock. Date (Accessed 2023/05/14)

³ The Guardian. 2022. Hacker Claims to Have Obtained Data on 1 Billion Chinese Citizens. <u>4</u> July 2022. [Online]. Available at: https:// www.theguardian.com/technology/2022/jul/04/hacker-claims-access-data-billion-chinese-citizens [Accessed 2023/05/14].

⁴ Business Day. 2022. 'ChinaDan' offers Hacked Police Records on Chinese Citizens for 10 Bitcoin., 6 July 2022. [Online]. Available at: https://www.businesslive.co.za/bd/world/asia/2022-07-06-chinadan-offers-hacked-police-records-on-chinese-citizens-for-10-bitcoin/

⁵ INTERPOL (2021) Interpol. 2021. INTERPOL report identifies top cyberthreats for Africa. Accessed from: https://www.interpol. int/en/News-and-Events/News/2021/INTERPOL-report-identifies-top-cyberthreats-in Africa#:~:text=The%20INTERPOL%20

Raconteur, cited by the world Economic Forum, found that \$6.6 million had been lost from the public sector in 2017 due to cyberattacks. This figure grew by 20% in 2018.⁶ The report cited findings from Raconteur which found that cybercrime had been caused by malicious insiders.

The policy brief aims to frame the numerous cybersecurity risks which are prevalent in the increasing digital landscape. The policy brief explores the geopolitically induced state sponsored cyberattacks. This section looks to emphasize the risks posed by the echoing of geopolitical conflicts on the internet. BRICS countries, as all countries are at risk from pre-existing cyber-attacks and the weaponization of numerous innovations such as AI (artificial intelligence) enhanced cyberattacks.

These concerns were highlighted by a 2013 study by the international antivirus company Norton.⁷ Norton conducted a study into 24 countries, and from that study it found that globally, 61% of adults had experienced a form of cybercrime. This figure was 73% in South Africa, with an average cost of \$233 per victim. The figure below depicts the cost incurred on BRICS countries due to cybercrime.



Figure 1: Cost of Cybercrime in BRICS countries

Adapted by the Author from Norton (2013)

The Impacts of Geopolitical Conflicts and State Sponsored cyber-Attacks

The global interconnectedness of the internet has led to geopolitical conflicts being echoed in the cyber space (online). The global interconnectedness of the internet has been integral to the improvements in global telecommunications. However, Akoto states that there is an infamous aspect from these innovations.⁸ The global geopolitical conflicts prevalent in the quest for hegemonic status are hyper-competitive, which leads to the issue of state-sponsored cyber-attacks.⁹ State-sponsored

report%20identifies%20the%20most%20prominent%20threats,trick%20individuals%20into%20revealing%20personal%20or%20 financial%20information%3B

⁶ World Economic Forum. 2019. This Is the Crippling Cost of Cybercrime on Corporations. Accessed at: <u>This is the true cost of cybercrime, according to experts | World Economic Forum (weforum.org)</u>

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⁸ Albahar, M. 2019. Cyber attacks and terrorism: A twenty-first century conundrum. Science and engineering ethics, (25): 993-1006.

⁹ Nguyen, D. 2015. State sponsored cyber hacking and espionage. *Infosec Writers*.[online] Available at: <u>State Sponsored Cyber Hacking</u> and <u>Espionage (infosecwriters.com)</u>

attacks comprise computational attacks on digitally run infrastructure.¹⁰ These include espionage, financial gain and terrorism. Akoto,¹¹ cited above, expresses these sentiments by highlighting how trade secrets attained through cyber-espionage could lead to economic growth by boosting domestic production.

Risk of AI Weaponization

The recent disruptions in the field of AI with the generative pre-trained AI Chat GPT has opened a pandora's box in which code and the ability to generate programmes can now be generated with a simple text search. This technology, if it is made without safety parameters could lead to the emergence of AI tools for espionage. This risk needs to be closely monitored.

Extortion via deepfakes can be used for ransom attacks, and manipulation of key state actors for critical information.¹² Information coerced from the targeted individuals could jeopardise national security and critical infrastructure. Deepfake (AI generated face-swapping technology) attacks can be embarrassing and humiliating tools for coercing compliance from political elites or individuals. Targeted individuals could be coerced into making decisions which expose security vulnerabilities of the state. This weaponization can be addressed by the mainstreaming of deepfake detection tools. However, once one is exonerated from the published deepfake, humiliation still remains. in the current Indian election season is an event which is warned to contribute to catastrophic implications which challenge the very integrity of the elections through the use of weaponised deepfakes.¹³ The BRICS countries need to share a strong unified front and propose for algorithmic augmentation which incorporates deepfake detection tools. Some detection approaches, which are showing signs of early promise are camera fingerprints and biological signal-based schemes.¹⁴ There is no clear way to directly link deepfakes with election outcomes without calculating precise public sentiments, sentiments which cannot be validated objectively. but this is a correlation worth investigating in future studies. Similar malicious use has been depicted in South Africa by Marwala.¹⁵ These challenges, synonymous to Marwala's earlier accounts has contributed to the unilateral prohibition of deepfake use during the election season.¹⁶

Policy propositions

Cybercrime has nuances which require a multi-pronged approach to mitigate some cybercrime concerns. The following section proposes an integration of Blockchain technology¹⁷, packet sniffing technology and AI technology to aid in the circumvention some cybercrime.

¹⁰ Akoto, W. 2021. International trade and cyber conflict: Decomposing the effect of trade on state-sponsored cyber attacks. *Journal of Peace Research*, 58(5):1083-1097.

¹¹ Norton., 2013. 2013 Norton Report. Accessed at: https://www.nortonlifelock.com/content/dam/nortonlifelock/pdfs/reports/ norton-report-2013-sa.pdf

¹² Zeng, C. and Olivera-Cintrón, R. 2019. Preparing for the world of a perfect deepfake. *Dostopno na*: https://czeng. org/classes/6805/ Final. pdf (18. 6. 2020).

¹³ George, A.S., 2023. Regulating Deepfakes to Protect Indian Elections. *Partners Universal Innovative Research Publication*, 1(2), pp.75-92.

¹⁴ Yu, P., Xia, Z., Fei, J. and Lu, Y., 2021. A survey on deepfake video detection. *let Biometrics*, 10(6), pp.607-624.

¹⁵ Maree, A., 2021. South Africa: Leaks and Deepfakes Shaping the Race for ANC Presidency. The African Report.

¹⁶ Tardáguila, C., 2024. New Analysis Reveals Scope of 'Fake News' Referencing or Produced by AI in Brazil; Little Related to Elections or Democracy, For Now. Tech Policy.

¹⁷ Taylor, P.J., Dargahi, T., Dehghantanha, A., Parizi, R.M. and Choo, K.K.R. 2020. A systematic literature review of blockchain cyber security. *Digital Communications and Networks*, *6*(2):147-156.

^{12.} Yu, P., Xia, Z., Fei, J. and Lu, Y., 2021. A survey on deepfake video detection. *let Biometrics*, *10*(6), pp.607-624.

Multilateral Internet Regulation Agreements and Regulations Across BRICS countries

The BRICS countries could form a centralized BRICS ISP and internet regulatory body which exchanges in skills and innovations surrounding ISP regulation best practices. The body could be a hub for knowledge transfers which helps bolster the cybersecurity readiness across BRICS nations. The body would integrate the various cyber security strategies in the BRICS countries and propose amendments. The committee would strategize on means to mitigate state sponsored approaches. A similar case of national cooperativeness was prevalent between INTERPOL, China, private sector actors, Malaysia, Indonesia, Myanmar, Singapore, Thailand, Vietnam and the Philippines came together to work cooperatively toward addressing and identifying malicious actors and websites containing malware (software designed for malicious intent). A similar public-private partnership could be used in the BRICS countries to collaboratively mitigate cybercrime concerns.

The Multilateral Integration of Blockchain, AI and Packet Sniffing Technologies

Luca Belli, depiction of the emerging need for data-protection infrastructure and digital sovereignty in the data-driven societies 'scramble for data' suggests that there is a need to establish protective digital infrastructure to mitigate unscrupulous cybersecurity risks. Luca Belli further states that the BRICS countries need to improve readiness by ensuring that their laws are well adept to the rapidly evolving technological climate.¹⁸

Currently, there is an array of cybersecurity and data protection laws, however, the malicious use of AI has made it necessary to consider an array of mitigation tools which address the issues associated with the incoming and present cybersecurity risks. These laws include:

- The protection of personal information act in South Africa¹⁹
- The Cybercrimes Act of 2019 in South Africa²⁰
- The Information Technology (IT) Act of 2000²¹
- China's cyber security law²²
- The worrying increase of cybercrime in Russia²³ and the subsequent "Federal Law of 26 July 2017 No. 187-FZ On Security of Critical Informational Infrastructure of the Russian Federation ("the Law")".

These laws are cognizant of the need for data protection measures, however, the issue of AI and cybercrime is a new problem which requires solutions.

AI mainstreaming poses a serious challenge to the limitations of these legislative approaches. These acts are cognizant of conventional cybercrimes such as fraud, denial of service attacks and phishing scams. However, the emergence of AI and deepfake technology poses a serious challenge for regulators. Malicious AI use for cybercrime and hacks is a serious threat to state digital infrastructure

¹⁸ Belli, L. ed., 2021. CyberBRICS: Cybersecurity regulations in the BRICS countries. Springer Nature.

¹⁹ Parliament of South Africa., 2013. Protection of Personal Information Act No. 4 of 2013.

²⁰ Parliament of South Africa., 2019. Cybercrimes Act of 2019.

²¹ PWC.,2024. A comparison of cybersecurity regulations: India. Accessed at: https://www.pwc.com/id/en/pwc-publications/services-publications/legal-publications/a-comparison-of-cybersecurity-regulations/india.html

²² KPMG., 2017. Overview of China's Cybersecurity Law. Accessed at: https://assets.kpmg.com/content/dam/kpmg/cn/pdf/en/2017/02/overview-of-cybersecurity-law.pdf

²³ Ortner, D., 2015. Cybercrime and punishment: The Russian Mafia and Russian responsibility to exercise due diligence to prevent trans-boundary cybercrime. *BYU L. Rev.*, p.177.

and to the people. The states must adopt iterative adoption of strategies to help adapt in this rapidly changing technological landscape.

There is a huge policy gap absent in BRICS countries and this is the multilateral integration of Blockchain, AI and packet sniffing technologies for cybersecurity prevention. China is the only country which incorporated packet sniffing technologies in the "Great Fire Wall of China" whilst also nullifying web activity from numerous dark web websites.²⁴ Ethical Packet sniffing enables the internet service provider a way to scan and identify unscrupulous activity on the dark web. There is a plethora of cybersecurity concerns which require expert consultation from ethical hackers who are well trained on issues such as packet injections, malicious packet sniffing within the intranet, weak encryption on government websites.²⁵ Ethical hackers are well trained in identifying security vulnerabilities on websites.²⁶ These ethical hackers could be tasked with rigorously testing the government infrastructure across the BRICS nations by assessing areas worth strengthening with Blockchain technology, packet sniffing technology and AI tools.

Lesson from the Great Fire Wall of China, Ethical Packet sniffing and AI

The Laws today need to be adjusted to cater for the emerging threats. Implementing harsh policies may lack parliamentary support and may lead to a free internet which is at risk of malicious exploitative uses. China has been subject to public scrutiny following its firm approach to internet regulation.²⁷ However, replicating the gains from the Chinese approach poses a serious challenge in the realm of liberal democratic ideals. The liberal democratic ideals advocate against censorship and promote ideas such as freedom of speech and access to information.²⁸

China has found a way to mitigate tor dark web access and mitigate malicious website entry. The approach of a targeted firewall which mitigates specific malware and screens information on the country's internet is a potential solution to cyber-attacks. The software can be decentralised to a non-state actor that monitors the traffic using packet sniffing technology. Packet sniffing technology could be integrated with a screening AI algorithm to search for malicious websites.

There is a technique which is called 'ARP Cache Poisoning'. This technique enables a middleman, to monitor the internet activity to monitor websites which are not encrypted by security protocols such as SSL. This could help to monitor websites which do not have such protections identify their IP addresses and disconnect them from the internet.

However, the levels of tolerance for censorship vary from state to state. The liberal democratic ideals make compliance with totalitarian policies difficult and may lead to a rejection of extreme censorship approaches. Despite the loosening grip of liberal democracy,²⁹ the ideals may remain determinants of policy directions. South Africa, much like most of BRICS are subject to an array of laws which protect data and govern the proper use of the internet, however, there are always around the law, and these loopholes, such as dark web access pose a serious challenge for policymakers. The

²⁴ Ensafi, R., Fifield, D., Winter, P., Feamster, N., Weaver, N. and Paxson, V. 2015, October. Examining how the great firewall discovers hidden circumvention servers. In *Proceedings of the 2015 Internet Measurement Conference*. (2015): 445-458.

²⁵ Patil, S., Jangra, A., Bhale, M., Raina, A. and Kulkarni, P. 2017, September. Ethical hacking: The need for cyber security. In 2017 IEEE International Conference on Power, Control, Signals and Instrumentation Engineering (ICPCSI):1602-1606.

²⁶ Palmer, C.C. 2001. Ethical hacking. IBM Systems Journal, 40(3):769-780.

²⁷ Zheng, H., 2013. Regulating the internet: China's law and practice. *Beijing L. Rev.*, *4*, p.37.

²⁸ Busch, A., Theiner, P. and Breindl, Y., 2018. Internet censorship in liberal democracies: Learning from autocracies?. *Managing democracy in the digital age: Internet regulation, social media use, and online civic engagement*, pp.11-28.

²⁹ Habets, I., 2015. Liberal democracy: The threat of counter-narratives. European View, 14(2), pp.145-154.

Chinese approach is a firm remedy that can mitigate a lot of problems, but it is a contradiction to the right to the internet which much of BRICS will raise.

Blockchain for Cyber Security

Blockchain technology has the potential to transform cybersecurity by creating securitized state and digital infrastructure which operates on blockchain technology. The technology is beneficial because it is immutable because it can be altered with the 51% node consensus attack.³⁰ The cost, resources and computational power required makes this attack unlikely.³¹ The decentralised network would be difficult for hackers to compromise nor attain the encrypted data. However, blockchain is very energy intensive and this may present unintended environmental impacts. Furthermore, the energy crisis in South Africa may make the processing of blockchain problematic.

ISP (Internet Service provider) Monitoring and Blockchain Integration

The BRICS countries, despite their relations maintain their own internal-state sovereignty. This implies that each of the countries in BRICS have their own guidelines and practices which govern these states respectively. These bodies include Brazil's National Telecommunications Agency; Russia's Federal Service for Supervision of Communication, Information technology; The Indian Telecom Regulatory Authority of India and the Chinese Ministry of Industry and information Technology and the South African Independent Communications Authority of South Africa. These bodies respectively monitor and regulate the practices of ISPs in the countries. These bodies could be bolstered with the capacity to form a blockchain based website registry. The integration of blockchain technology into a website registry, a globally verified website registry that only allows access to websites which look to expose security vulnerabilities. The website would verify the websites, similarly to how websites are verified on the bitcoin transaction ledger. This would help to mitigate fly by night scams such as colleges, and online stores.

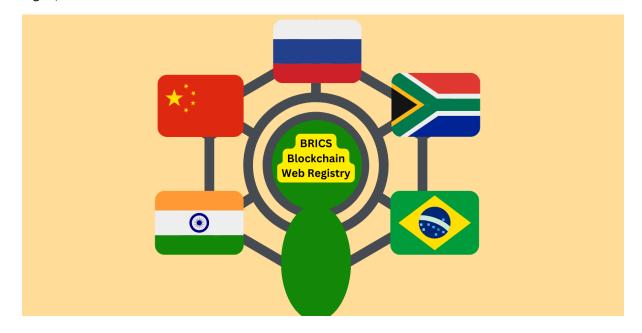


Figure 2: BRICS Blockchain Web Registry, Author (2023).

³⁰ Sayeed, S. and Marco-Gisbert, H. 2019. Assessing blockchain consensus and security mechanisms against the 51% attack. *Applied sciences*, 9(9): 1788.

³¹ Eyal, I. and Sirer, E.G. 2018. Majority is not enough: Bitcoin mining is vulnerable. *Communications of the ACM*, 61(7): 95-102.



Firewall Against Unverified Websites not on the Blockchain Registry

Figure 3: Firewall for BRICS web Registry, Author (2023).

Mandatory Cyber security Training

The training of staff on cyber-security awareness and mitigation needs to be a mandatory practice for all personnel involved in state infrastructure. In some instances, hacking can be done by merely sharing an email with an encrypted virus, and phishing or smishing deception.³² Challenges in coordinating training, financing and adapting the training may need to be addressed.³³

Free AI content screening mechanisms and Free, open-source Anti-virus software

The use of AI website monitoring tools could be made mandatory for all websites registered to the website registry. The AI would be a content-scanning apparatus which monitors websites for cybercrime.³⁴ Although, it is important to be cognizant of the challenge posed by malicious actors who could weaponise AI to beat these safety nets. State-sponsored hacks and other instances of weaponised AI programmes create a dilemma for policymakers who seek to regulate the use of AI online. This contradiction may be a ceaseless dilemma which may require a perpetual dialogue surrounding the implementation of iterative adaptive strategies.³⁵

The utilisation of open-source free anti-virus software could help to mitigate the issue of cost and improve cybersecurity for employees in the office and in their homes. The poverty in South Africa and around the world may make access to such software challenging. A state-sponsored software could help resolve the issue of cost.

³² Yeboah-Boateng, E.O. and Amanor, P.M., 2014. Phishing, SMiShing & Vishing: an assessment of threats against mobile devices. *Journal of Emerging Trends in Computing and Information Sciences*, *5*(4):297-307.

³³ Aldawood, H. and Skinner, G., 2019. Reviewing cyber security social engineering training and awareness programs—Pitfalls and ongoing issues. *Future Internet*, *11*(3):73.

³⁴ Kawaguchi, Y., Yamada, A. and Ozawa, S., 2017. Ai web-contents analyzer for monitoring underground marketplace. In Neural Information Processing: 24th International Conference, ICONIP 2017, Guangzhou, China, November 14–18, 2017, Proceedings, Part V 24 (pp. 888-896). Springer International Publishing.

³⁵ Yamin, M.M., Ullah, M., Ullah, H. and Katt, B., 2021. Weaponized AI for cyber attacks. Journal of Information Security and Applications, 57, p.102722.

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Assessing the Role of China's Investment on Youth Empowerment in South Africa

Kenalemang Mokoena 问

Department of Political Science and International Relations University of Johannesburg kenamokoena881@gmail.com

Abstract

China is indeed the biggest investor in South Africa but it is very important to understand the effects that its investment has on the youth of South Africa. This study aims to analyse whether China's investment empowers the youth of South Africa through entrepreneurial skills, access to advanced technology, and provisions of scholarships. The findings of the study reveal that there is a level of inconsistency when it comes to China empowering the youth of South Africa. The study, therefore, recommends that the government of South Africa should work together with China to empower its youth and be consistent in doing so to contribute to their development as individuals.

Keywords: China, South Africa, youth empowerment, investment, entrepreneurship

Introduction

China's relationship with South Africa is beneficial for both countries because they both help each other to achieve certain goals in their countries. However, the youth of South Africa is neglected by this relationship. They are neglected because they still face challenges that both of these countries haven't solved. Challenges such as unemployment, limited access to quality education, financial instability and uncertainty about the future. China and South Africa tried to implement strategies on how they can empower the youth of South Africa but this year marks 25 years of their relationship but the youth is still facing challenges that existed even way before this relationship started and nothing effective has been done. Both these countries are working well in other aspects but the South African youth is not benefiting from the relationship that South Africa has with China.

According to Alden and Wu (2014), the relationship between China and South Africa dates back to the late 19th century. Due to the fortune seeker that was drawn to the diamonds and gold discovery, the migrants of China decided to settle in the colonies of the British and the Republics of the Boer, (Alden and Wu, 2014). As part of the Allied effort against the Axis powers, China and South Africa decided to cooperate during the time of World War two, (Monyae and Banda, 2018). These two countries were sourced by two major developments after the end of the war, (Monyae and Banda, 2018). In terms of infrastructural projects, South Africa played its role in Africa, especially in East Africa, Southern Africa, and other regions in Africa, (Monyae and Banda, 2018). However, it benefits a lot from the relationship it has with China, both economically and politically on the International stage, (Monyae and Banda, 2018). In 2017, Chinese foreign direct investment (FDI) reached USD 15.2 billion in South Africa, which makes South Africa the second-largest Chinese FDI recipient in Sub-Saharan after Nigeria, (Torrens, 2018).

According to April and Shelton (2014), four pillars that rest based on South Africa's relationship with China. These pillars are; the global issues approach that China and South Africa share, the contribution of China to defeat colonization that happened in the rest of Africa specifically South African apartheid, China's support to the development efforts of Africa, and corresponding with the foreign policy commitment of South Africa to the agenda of Africa, (April and Shelton, 2014). In the



formation of these four pillars, a fundamental role has been played by trade relations, (April and Shelton, 2014). In 2009, China became South Africa's largest trading partner, for example, US\$141,1 billion amounted to the total trade between China and South Africa, (April and Shelton, 2014).

\$5,46 billion was invested to Standard Bank of South Africa and this investment was made by the Industrial and Commercial Bank of China in 2007, (April and Shelton, 2014). Concerning railways, clean energy, and power transmissions, South Africa and China signed a series of memorandums of understanding about investment in 2010, (April and Shelton, 2014). In 2010, South Africa's third largest cell phone operator, Cell C, and the China Development Bank concluded a \$303,6 million loan agreement,-(April and Shelton, 2014).

This paper will argue whether China's investment empowers the youth in South Africa. While there is little knowledge of this study, the author set out to fill in the gap of knowledge to help determine whether China's investment has a positive and sustainable effect on the youth of South Africa.

China's investment on the provision of entrepreneurial skills to the youth of South Africa

Training and skill development program was placed for South African business leaders and government officials by China, (SA News, 2015). The South African National School of Government and the Chinese Academy of Governance have agreed on this program, (SA News, 2015). There was an extension of the terms of the Memorandum of agreement that was made by China and South Africa on the management of the State-Owned Enterprises (SOEs) between the State-owned Assets Supervision and Administration Commission (SASAC) as well as the Department of Public Enterprises, (SA News, 2015). The aim was to unlock private sector investment and enhance the capacity of the state to position State-Owned Enterprises (SOEs) to drive industrialization between China and South Africa, (SA News, 2015).

An expressed interest in expanding and establishing existing operations in South Africa was undertaken when each of the companies of the former Deputy President, Cyril Ramaphosa, met, they even provided training opportunities to the youth of South Africans in China, (SA News, 2015). An opportunity was provided for the former Deputy President, Cyril Ramaphosa, and his delegation was to examine lessons on how South Africa can promote economic development and industrialization through the Chinese model of state-owned enterprises, (SA News, 2015).

The dynamic discussions on youth entrepreneurship and innovation were held on the 1st of July 2018 at Zhejiang Normal University, (University of Johannesburg news, 2018). Such a Forum was uniquely hosted by the Zhejiang Normal University because it was the first University to have a formal African studies program in China, it has held a rich exchange program with many students from African Universities before, (University of Johannesburg news, 2018). This Forum went on to discuss the China-South Africa College Students Entrepreneurship Education Alliance pre-launch. Experience sharing of the new makers from China and South Africa as well as China-South African cooperation and Youth Innovation and Entrepreneurship were discussed the following day of the Forum by a packed agenda composed of keynote speeches, over 22 presentations as well as various VIP speeches, (University of Johannesburg, 2018).

The Professor of the Zhejiang Normal University, Zheng Mengzhaung, was part of the VIP speeches that were made, (University of Johannesburg news, 2018). Professor Edwin Bbenkele also spoke on Innovation and Entrepreneurship Development, and various points were made about the need for students to be entrepreneurs so that they can solve real-world problems while also focusing on their profession, (University of Johannesburg News, 2018). He also highlighted the importance of Chinese and South African youth entrepreneurs cooperating, (University of Johannesburg, 2018).

The contribution of China to entrepreneurial skills among youth in South Africa

China is one of the best places where one can start a business, and this statement was made by a 23-year-old South African, Ramalamula Desire, (Xinhua, 2021). Desire was an International Student who studied at Hunan Agricultural University (HUNAN) as a computer science student and she is also a co-founder of Changsha Jiarong Agriculture and Technology Co.Ltd., (Xinhua, 2021).

There was a China-Africa Youth Innovation Entrepreneurship Forum that Desire was invited to on the 26th of September 2021 which was held in Changsha from the 26th to the 29th of September 2021, (Xinhua, 2021). The theme of this Forum was activity in the second China-Africa Trade and Economic Expo, (Xinhua, 2021). Desire was encouraged by her sister to go study at Hunan Agricultural University, (Xinhua, 2021). Xu Hongzhai had a company in China that had a vision to help students to study abroad and the company also conducted entrepreneurial training for students, (Xinhua, 2021). Desire's interest in starting businesses grew since she came to Hunau in 2018, (Xinhua, 2021). Desire's hard work moved Xu Hongzhai, and they both established a branch in South Africa of Xu's company in 2019 December, (Xinhua, 2021). The main aim of this business was to open Chinese enterprises to import the raw material and necessities from Africa, (Xinhua, 2021). This was how the China-Africa Youth Innovation and Entrepreneurship Forum contributed to Desire's entrepreneurial skills and her career.

The impact of China's investment on technological advancement for the Youth of South Africa.

Below are technological industries that have received substantial investment from China to advance technology among the youth of South Africa

Huawei Innovation Centre

The Huawei Innovation Centre was opened in Woodmead on the 13th of July 2023 by the President of South Africa, Cyril Ramaphosa, (IT-Online, 2023). The wider African continent and South Africa will be enabled to leapfrog into the Fourth Industrial Revolution due to such Innovation Centres along with the adoption of a range of cutting-edge technologies developed by companies such as Huawei, (IT-Online, 2023). The Innovation Centre serves to encourage and foster Joint Innovation with SMMEs in the ICT space, Huawei's South African partners as well as app developers, (IT-Online, 2023). It also showcases the most innovative and latest digital technologies of Huawei and solutions such as Artificial Intelligence, 5G, and Cloud, (IT-Online, 2023). However, this is not a South African company, meaning that China gets to benefit more because it is a Chinese company in South Africa. There aren't many technological industries in South Africa and this is something that South Africa should consider implementing so that its youth can be empowered knowing that the industries are proudly South Africa. This is a partnership, no country should benefit more than the other, therefore, if South Africa wants to benefit mutually with China, it should consider opening its own technological industries to uplift its economy.

It is hoped that this Innovation Centre will create jobs and it will launch new local ICT enterprises, (IT-Online, 2023). It is also hoped that this Centre will bring about support for South African national development goals as well as new business processes that will stimulate growth in the economy of South Africa, (IT-Online, 2023). The role of ICT technologies in helping various industries to embark on digital transformation has been acknowledged by President Ramaphosa, (IT-Online, 2023). This Centre is a signal of confidence in Huawei for the potential of the South African economy, (IT-Online, 2023).

This Innovation Centre according to the expressed hope of the President of South Africa, Cyril Ramaphosa, is that it would focus on skills and knowledge transfer, cultivating local digital talent through its LEAP program, SMME development, Tech4all-DigiSchool Projects as well as ICT academic, (IT-Online, 2023). The launch of this Centre in South Africa according to the Chinese Ambassador, HE Chen Xiadong, shows that Chinese private business players and sectors are ready to embrace the Fourth Industrial Revolution and to stand by South Africa's side to accelerate the application of 5G, (IT-Online, 2023).

China-South Africa Science Park

The China-South Africa Science Park Cooperation was launched in Pretoria on the 24th of April by the Vice Premier of China, Liu Yangdon, and the Minister of Science and Technology, Naledi Pandor, (Department of Science and Innovation, 2017). The three-day mechanism expected to create opportunities for China and South Africa, (Department of Science and Innovation, 2017). It was co-hosted by a high-level Chinese delegation that arrived in South Africa for both countries to benefit from sharing of economic, social, and cultural capital across civil society, business, government, and academia, (Department of Science and Innovation, 2017). Mutual understanding between the peoples of China and South Africa was what the two countries were hoping this mechanism would achieve, (Department of Science and Innovation, 2017).

They also hoped for this mechanism to enhance people-to-people cooperation and exchange in areas of technology, women and youth, tourism, sports, health, communication, education, and culture, (Department of Science and Innovation, 2017). Government collaboration and University-Industry was supported worldwide by Science Parks to promote economic and technological developments as well as advance knowledge, (Department of Science and Innovation, 2017).

South Africa has identified short-term opportunities that offered significant opportunities for China to expand its innovation and Research and Development (R&D) activities in South Africa in parallel to advancing a partnership in long-term high-technology industrial development, (Department of Science and Innovation, 2017). This was to strengthen existing Research and Development (R&D) facilities and to develop new ones as well as strengthen existing Universities and infrastructure, several private sector Research and Development (R&D) efforts, and Science councils, (Department of Science and Innovation, 2017). The establishment of Joint Research Centres and the establishment of a Young Scientist Exchange Program were two other cooperation agreements that China and South Africa signed, (Department of Science and Innovation, 2017). This resulted to an exchange of young scientist from China and South Africa and implementations of innovative projects, (Dlamini, 2024).

The Information and Communication Technology

The Information and Communication Technology (ICT) in China trained one thousand young South Africans until the year 2021 under Huawei's investment, (African News Agency, 2016). An agreement was signed by the Department of Telecommunications and Postal Services as well as the Chinese electronics company, Huawei, which covered Joint innovation on Information and Communication Technology (ICT), capacity building, and ICT talent training in Johannesburg, (Africa News Agency, 2016). The cooperation on capacity building according to the former Minister of Home Affairs of South Africa, Siyabonga Cwele, was aimed at sharing technical assistance, information, experience, and expertise among different structures that are operating in the telecommunication field, (African News Agency, 2016).

New technology would be compromised in other areas of training such as the next generation network construction, big data network construction, satellite navigation, and cloud computing,

(African News Agency, 2016). According to Cwele, this was expected to enhance the strategies of government to lower the cost of communication, to implement programs, and to roll out broadband, (African News Agency, 2016). The youth who participated in training that took place in China were encouraged by Cwele to use the opportunity given wisely, (African News Agency, 2016). They were also encouraged to use the opportunity to find solutions to develop the Information and Communication Technology (ICT) in South Africa and view the opportunity as a window into the future, (African News Agency, 2016). The challenging part about this opportunity is that there were only 10 students who attended this training and that was not enough number because there are many young people in South Africa who would love an opportunity like this and besides that there are many South African young people who are not familiar with the technological industry and this opportunity could've been beneficial to them. It is unfair that only 10 students were given this opportunity and others were left behind.

Huawei's first South African Academy was established in 2015 and it was in partnership with Tshwane University of Technology, which later added the University of Witwatersrand, and the University of Johannesburg, (Khathi, 2020). They were in partnership with these institutions to take part of in the Information and Communication Technology (ICT) talent ecosystem that included more than 1,000 colleges and Universities worldwide, (Khathi, 2020).

Few technological industries mentioned are owned by South Africa. Instead, the industries that were mentioned are Chinese owned, but located in South Africa. How is this going to help the economy of South Africa when a majority of technological industries in South Africa are owned by China? It is easier for China to invest in these industries because they belong to them, meaning that they have nothing to lose. The fact that South Africa needs to advance its technology should not be overlooked but it should rather establish technological industries that China can invest in. This is not a way of developing the country. This another reason why foreign countries develop while developing countries stay the same. The foreign countries aim not to uplift developing countries but rather develop their own countries through taking advantage of developing countries because they view them as vulnerable.

Measures taken to expose the youth in South Africa to technological industries

Free online and onsite training in 5G and Fourth Industrial Revolution (4IR) technologies was launched by Huawei South Africa in partnership with the Department of Communications and Digital Technologies (DCDT), (Mzekandaba, 2019). This training targeted 6000 South Africans who are either ICT postgraduate practitioners or students, (Mzekandaba, 2019). Seeds for the Future was another training program that Huawei implemented which was initiated in South Africa, (Mzekandaba, 2019). South African students are the fourth group of this program to depart on a learning trip to China, (Mzekandaba, 2019). This program is run by Huawei South Africa which is in partnership with the Department of Communications and Digital Technologies (DCDT), (Mzekandaba, 2019). To participate in a study trip to China, 10 University students were selected from various institutions across South Africa, (Mzekandaba, 2019). Seeds for the Future's objective according to Huawei, was to promote knowledge transfer in the telecom industry, cultivate ICT talent, and broaden digital access, (Mzekandaba, 2019). Huawei finalized talent development strategy for 4IR-SA in addition to its Seed for the Future program and free 5G training courses were launched at the University of Johannesburg, Pretoria, and Wits, and there were plans made to take it to other institutions, (Mzekandaba, 2019).

This opportunity was limited because it only accommodated those who studied Information and Communication Technology. How are other young people going to be exposed to the technological industry if they are limited to take part of such opportunities because of the type of field of study they choose? It is going to be difficult for young people to learn more about the industry because they are limited to such opportunities. Technology is taking over the world and most things require one to understand how technology works. There are a lot of websites and apps that students and young people need to familiarize themselves with but because there is a lack of knowledge on how they work, it ends up being a problem for them to adapt. Take for example Chatgpt, this app was introduced to students but there are still students who are unable to use the app.

There are apps like Mendeley, an app that helps students with referencing their work or assignments but most students are not familiar with the app. This is the reason why such opportunities should accommodate the majority of young people in South Africa because there's a lot that students and young people need to learn about this industry due to the world that we live in currently. Unfortunately, the general youth of South Africa is neglected because you have to be a university student to be exposed to technological industries, which is unfair. After all, there are a lot of youth in South Africa who are unable to be in Universities due to some circumstances such as; not being able to afford tuition fees and not qualifying to be accepted at Universities. Therefore they should also be given the chance to learn more and be exposed to the technological industry.

A 4IR and 5G training platform with an accredited certification were delivered for 5000 ICT professionals and students in South Africa, (Mzekandaba, 2019). This training was initiated by Huawei in partnership with the Department of Communication and Digital Technologies (DCDT), (Mzekandaba, 2019). On their on-site program, they aimed to further train 1000 students, (Mzekendaba, 2019). According to the CEO of Huawei, Ren Zhengfei, it is the duty of the government, ICT players, the private sector, and academics, to ensure that all the opportunities that connectivity brings benefit all South Africans, (Mzekendaba, 2019).

According to Khathi (2020), numerous ICT training initiatives have been established by Huawei, to create meaningful employment, furthering the development of the ICT industry in South Africa as well as uplifting the youth of South Africa. Participants such as Leutsoa Moteka and Moses Munyai tried to earn a place in South Africa's nascent Fourth Industrial Revolution by using the initiatives provided to them, (Khathi, 2020). To take chances given to them and letting no opportunity pass by, has always been Tebatso Munyai's philosophy, (Khathi, 2020). Tebatso was one of the students selected to travel to China between 2016 and 2019, and his philosophy has served him well in becoming a successful Huawei Seed for the Future applicant, (Khathi, 2020). He spent two weeks in training at the most advanced laboratories of Huawei, (Khathi, 2020). He was able to learn more about China's ICT technology, Chinese culture, and how China has harnessed and embraced its ICT technology to build the world, starting with safe-city features among others, mobile payments, smart transport systems as well as connected bicycles, (Khathi, 2020).

The Fourth Industrial Revolution is boasted locally due to these initiatives, (Khathi, 2020). These initiatives created jobs for the unemployed people of today and prepared workers for the jobs of the future, (Khathi, 2020). The Huawei team was impressed by the enthusiasm and character of Tebatso, (Khathi, 2020). The Huawei team seeks to promote such individuals as they grow to become professionals of a high caliber of the future, and they are prepared to fast-track and transform South Africa's place in a huge competitive industry, (Khathi, 2020).

The Media, Information and Communication Technologies Sector Education and Training (MICTSETA) is in partnership with Huawei to run an internship that recruits one hundred students annually and the students get recruited by Huawei and its channel partners, after 8-12 months of training, (Khathi, 2020). There are programs implemented by China for the youth of South Africa to advance technology among them, however, these programs are limited to young people who are not doing Information and Communication Technology studies. This is a disadvantage to young people who are

not part of this field because it limits their knowledge about this industry. The technological industry is important because the world is currently revolving around the Fourth Industrial Revolution, where technology is at its peak. Therefore, limiting young people to an important aspect of the world affects them and the economy that they live in. How is the economy going to improve if its people don't have the knowledge about technology and how it works? the economy of South Africa will not grow if its youth is left behind and if they are not equipped with how technology works. Young people are the future of each country, therefore, if they don't know what is happening around the world, they won't be able to lead and develop their own countries.

Scholarships for the Youth of South Africa.

Between 2017 and 2018, scholarships were awarded to 24 South Africans by the People's Republic of China to pursue their studies for undergraduate and postgraduate at China's top Universities (Department of Higher Education and Training, 2019). An agreement was signed by the Chinese and South African governments on the cooperation of higher training and education field, (Department of Higher Education and Training, 2019). The offer of scholarships by the Chinese government was part of the agreement that both countries signed, (Department of Higher Education and Training, 2019). The scholarship provided by the Chinese government covers basic living allowance, tuition fees, medical insurance as well as accommodation, (Department of Higher Education and Training, 2019). Providing support for the students including contribution to living costs, orientation, and international flights, and facilitating the application and the process of nomination for the scholarship was the responsibility of the Department of Higher Education and Training, (Department of Higher Education and Training, 2019). One has to be in the field of Maritime studies, Economics management, Biotechnology, Agricultural economics, Engineering, and Mathematics to qualify for this scholarship, (Department of Higher Education and Training, 2019).

The number of South African students studying in China is more than all African countries students according to the Chinese records, (Department of Higher Education and Training, 2019). This scholarship limited other students in other fields besides Maritime studies, Economics, Mathematics, Biotechnology, agricultural economics, and engineering. Most students need scholarships to study abroad to learn more about the education systems and the Chinese culture. Many students would have benefited a lot from this scholarship if they were not limited to this opportunity.

One of the oldest international scholarship programs that the Department has collaborated on over the years has been the Chinese-DHET scholarship, (Department of Higher Education and Training, 2019). Each year China provides 30 full scholarships under the Chinese government scholarship program for South African University students to study in China, (Maromo, 2022). According to April and Shelton (2014), to increase the number of scholarships offered to the students of South Africa, the China-Africa Development Fund was utilized by China and South Africa in 2007.

There are other Scholarships provided by the Chinese government that accommodated 32 South African students to travel to China to study for Doctors, Masters and Bachelors programs, (Cheng, 2018). Students were urged by Chinese Ambassador, Lin Songtian, to be champions for China-South Africa friendship during the send-off event that was held in Pretoria, (Cheng, 2018).

South Africa has a huge demand for skilled and professional personnel and also faces major opportunities in its economy, (Cheng, 2018). The Chinese Ambassador, Lin Songtian, hoped that the students will return to South Africa upon finishing their studies to serve their people and the country as well as contribute to the development of South Africa, (Cheng, 2018). Lin Songtian, added that an important part of the bilateral comprehensive strategic partnership has to be the people-to-people exchange, (Cheng, 2018). The one thing that continues to expand, prosper and enhance

the friendship and mutual understanding was the cooperation that China had with South Africa in science and technology, education, youth and women as well as culture, (Cheng, 2018).

More than R1 million was injected towards student funding at the University of Witwatersrand (WITS) by the leading Chinese telecommunication company, (Wits University, 2019). The scholarship helped the students pursue their dreams with the donation that was made by a multinational telecommunication equipment solution company with headquarters in Shenzen, China, and by the Zhong Xing Telecommunication Equipment Company Limited (ZTE) South Africa, (Wits University, 2019). Fulfilling corporate social responsibility was part of the ZTE's obligation, (Wits University, 2019).

Support was offered by the Zhong Xing Telecommunication Equipment Company Limited (ZTE) to various sectors such as skills development, education, technology, and health care, (Wits University, 2019). The key focus for Zhong Xing Telecommunication Equipment Company Limited (ZTE) according to Zhou is to empower young people by investing in them, (Wits University, 2019). The University of Witwatersrand (WITS)' students have been sponsored by ZTE since 2017, (Wits University, 2019). ZTE had 15 students as beneficiaries of the funding, (Wits University, 2019). Nontsikelelo Harmse was one of the beneficiaries of the scholarship, she stated that she was honoured to be recognized among several other ICT students in the country and she was also honoured to be offered the scholarship, (Wits University, 2019).

There were about 53 recipients in 2015 who were awarded the scholarship from China to study in the Eastern nation, (SA News, 2015). The students at the pre-departure orientation at the University of South (UNISA) in Pretoria stated that they were very excited about this opportunity that was given to them, (SA News, 2015). Scholarships from China were received by the Department of Higher Education and Training, and these scholarships targeted the youth in South Africa to advance their agenda in skills development, (SA News, 2015).

A 24-year-old, Isasiphinkosi Mdingi, from the Eastern Cape, left for China on the second of September 2018, to pursue her Public Administration MA degree in Beijing, (Cheng, 2018). She stated that she used this opportunity to pursue women to play a meaningful role in the mainstream economy, (Cheng, 2018). The program continued to expose numerous opportunities to many young people according to Wendy Adams from the Higher Education and Training Department, (Cheng, 2019). Adams further added that the students should bring those skills back to South Africa since China is advanced in technology, (Cheng, 2018). She further added that other students who spoke about the business opportunities that they found in China due to the scholarships that they got, (Cheng, 2018).

Conclusion

This paper aimed to discuss whether China's investment in South Africa empowers the youth of South Africa. After thorough analysis, the findings of this study show that they do empower them, however, they are not consistent in doing so. The initiatives that were implemented were also limiting other young people because not even the majority of the youth of South Africa were part of the initiatives implemented by China. Out of the firms mentioned in this paper as contributing to youth empowerment, few are owned by South Africa, but the majority are Chinese firms located in South Africa. How is this going to help the economy of South Africa when majority of technological industries in South Africa are owned by China? It is easier for China to invest in these industries because they belong to them, meaning that they have nothing to lose. The fact that South Africa needs to advance its technology should not be overlooked but it should rather establish their own technological industries that China can invest in. South Africa should therefore establish more of

its technological industries to increase competitiveness and productivity and for its youth to be empowered knowing that the industries are proudly South African.

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The West and the Rest of Us? A Review of The Political Economy of Intra-BRICS Cooperation: Challenges and Prospects

Masilo Lepuru 🕩

Institute for Pan-African Thought and Conversation University of Johannesburg



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A number of the luminaries of the Pan-African movement such as Kwame Nkrumah, George Padmore, W.E.B Dubois, C.L R James and Eric Williams as anti-colonial thinkers and political leaders cherished aspirations of an alternative international order. Their anti-colonial struggle was not just nationalistic and continentalist in outlook but was inspired by visions of "world-making" (Getachew 2019). Their project of African Independence as undergirded by Pan-Africanism sought to challenge the West as the embodiment of slavery and colonialism (Chinweizu 1975) not only on the continent where it created colonies but the post-World War II dispensation. Many of them propagated socialist sentiments and objectives. W. E.B. Dubois was a Marxist until the moment of his transition. It was in this sense that as Marxist in ideological outlook and socialist in political praxis, they were anti-capitalist in orientation. They embraced the Afro-Asian call of cooperation (Bandung spirit) to challenge the world hegemony of the West which characterised "the long twentieth century" (Arrighi 2010). Thus, a foundation of the "global South" as a victim of underdevelopment by the West west.

The book under review is also about the challenge of the "liberal international order" (Zondi et al 2022:3) under the banner of BRICS and South-South cooperation. It comprises a short preface and 13 chapters by different authors from several disciplines. The context of the book was the global epidemic called COVID-19 which is regarded by other anti-capitalist critics as a typical instance of "accumulation by crisis" and "accumulation by dispossession" (Harvey 2011). While the literature on BRICS is not monolithic, it can be argued that there are at least three schools of thought regarding the nature and impact of BRICS on the current neoliberal imperialistic world order. The first school comprises the BRICS optimists. This school of thought is confident about the ultimate success of BRICS in terms of transforming the unequal economic international order through its gradual and strategic interventions. The second one consists of the BRICS sceptics. For this school of thought, BRICS is a welcome intervention to the current exploitative international economic order but given the hegemony of neoliberal capitalism as "the end of history" (Fukuyama 2006), the incremental efforts of BRICS will not radically displace this hegemony in the long run. The last school of thought comprises the BRICS pessimists. According to the pessimists, BRICS is not radical



enough to destroy the entire capitalist international economic order and to replace it with a socialist one. Its arrangement is incongruent as it consists of different countries with different ideological and foreign policy interests which are antagonistic at times. Superpowers such as China and Russia are in the last instance imperialist about countries on the continent of Africa such as South Africa. The imperialist aspirations of China in the form of "reconfiguring racial capitalism" (Huang 20024) and Russia's intervention in West Africa are cited as evidence that BRICS is just a front for these superpowers to gain geopolitical spheres of influence to outcompete and supplant the West. The role of "Russia in Africa" (Ramani 2023) is regarded as one of a "resurgent great power".

While it may be unfair to categorise all the contributors in the book under review as BRICS optimists, a fair number of them exhibit the typical traits of BRICS optimists. The theme and title under the name of "intra-BRICS cooperation" are to a great extent indicative of BRICS optimism. The book has a good structure and the chapters are well-written within the contours of the "missing link" of "intra-BRICS cooperation". While it was written in the context of the scourge of the epidemic it offers information beyond the ravages of the virus. It covers several topics and ideas which include the creation of the BRICS Development Bank, Climate change, Energy production, transnational crimes, the 4th Industrial Revolution and financial inclusion. Readers who are interested in empirical and policy studies will find this book a worthwhile read. It is written in a simple language making it easy to comprehend its arguments and recommendations.

The preface of the book pre-empts one of the critical points associated with the BRICS pessimists by stating that it seeks to focus on the cooperation among BRICS countries as opposed to the view that regards BRICS as a mere an extension of Russia and China (Zondi et all 2022: vi). Chapter One reinforces the need for the focus on the internal cohesion and convergence of interests among the BRICS countries. It even in a typical pre-emptive liberal scholarly posture which seeks to disarm its critics acknowledges the BRICS sceptics such as Patrick Bond. Bond is a BRICS sceptic because while he points out the "sub-imperial role" of countries such as South Africa, he makes a distinction between "BRICS from above" which he dismisses and "BRICS from below" which he prefers (Bond and Garcia 2015:11). The second chapter discusses the importance of the BRICS Development Bank. While it contrasts the BRICS bank with Bretton Woods Institutions in terms of voting powers it still welcomes cooperation with them and even recognises the positive credit score from rating agencies of the West such as Standard & Poor and Fitch. Chapter three is a typical contribution from a BRICS optimist. The concept of "passive revolution" is a case in point. It uses the concept of "structural power" and "war of position" to advance the argument of inclusion as opposed to confrontation with the West. The fourth chapter discusses climate change how BRICS countries emit a lot of CO2 and how they can cooperate to tackle this problem as a collective. Chapter five discusses energy production and points out how many BRICS countries are reliant on hydrocarbons and the need to shift from this to green energy through cooperation. The sixth chapter deals with transnational crimes and how BRICS countries should work together to fight this global problem as a bloc. Chapter seven discusses the 4th industrial revolution and explains the correlation between operationalised 4IR competitiveness markers and new foreign direct investment. The eighth chapter just like chapter seven is written in the spirit of "technological optimism". This chapter discusses the implications of the 4th Industrial Revolution on employment, inequality, and skills development. It recommends the cooperation of BRICS countries to mitigate against the negative implications of the 4th industrial revolution.

Chapter nine provides an overview of the trade relations between BRICS countries. The chapter calls for equality of trade between the countries and concedes that South Africa has been exporting raw materials to BRICS countries. It also recommends the "capitalisation" of the African Continental Free Trade Agreement by BRICS countries. In the spirit of the call for cooperation, there is no critical

analysis of the imperialist and exploitative economic relations but just empirical data. Chapter 10 deals with financial inclusion in the context of India and South Africa. It calls for more financial inclusion of women and other disadvantaged groups in BRICS countries. In the context of South Africa, the chapter fails to provide a solid critique of racial capitalism (Robinson 2000) of both white settlers and the Chinese with their China malls in South Africa (Huang 2024). Which women? What is the point of including African women in a white settler economic system (Magubane 1979) co-owned by white women?

Chapter eleven discusses the counter-cyclical measures used by BRICS countries to deal with the negative impact of COVID on their economies. Premised on BRICS optimism like the abovementioned chapters, it calls for the overcoming of realism among BRICS countries and the alignment of their national interests. The prospects of South Africa re-asserting itself as a vaccine producer are discussed in chapter twelve. Technology transfer, human capital and a suitable policy environment are also discussed. Chapter thirteen which is the last one discusses the issue of accountability framework on sustainable development goals. Apart from a run-of-the-mill disquisition on Millennium development goals and sustainable development goals, this chapter provided a promising but brief critique of the idea of development. It relies on the current intellectual fad of the decolonial school. Given the heavy dose of empirical and policy studies analysis one is subjected to throughout the book the brief section called "Development as a Conundrum" was a breath of freshness which was not enough. It is in this sense that this book is devoid of a solid philosophical and political economy critique reminiscent of the CODESRIA scholars such as Archie Mafeje, Samir Amin, Claude Ake and Wadada Nabudere, to name a few reputed ones.

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About BRICS

Policy brief

The BRICS Summit in 2022: Continuity of Change?

Siphamandla Zondi 🕩

Institute for Global African Affairs &Institute for Pan-African Thought & Conversation University of Johannesburg

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

Aswithallsummits, thissummit 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, solutionoriented 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.