Byelongo Elisée Isheloke
Editor

Brics and Economic Development: A Multidisciplinary Perspective

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Byelongo Elisée Isheloke

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Byelongo was once employed as an Operations Co-supervisor and Health & Safety Officer at the then Eurotrade Metals Africa for three years. He has delivered important (keynote) speeches at political gathering of the Union for Democracy and Social Progress (UDPS in French acronym) and on Africa Day celebrations organised by the DUT. He also participated in international summits such as the World Conference Against Racism and the World Conference for Sustainable Development. With over 14 years of experience as an educator, he worked as a web journalist for the MiningIR during the 2019 Mining Indaba the outcome of which gave birth to +- 10 eNews articles. He has two books under his name and a variety of other publications.

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Shamila is involved in academic and research work for Unisa, MANCOSA, Open University, UNISA School of Business Leadership, Regent Business School, Durban University of Technology, University of KwaZulu-Natal and the Institute of Marketing Management. Her research has been published and presented at conferences nationally and internationally. She is also a business and executive coach, mediator, Masters HR Practioner and HR Lead Auditor.

In her previous role at SABPP she was the Head of the Audit Division and now is Head of HR Standards Division. As a Master HR Practitioner she focuses on HR strategy, research, HR Quality, and capacity development. She is the managing director of Unique Consulting Services that specialises in leadership development, OD, HR specialist advisory services and coaching.

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Shamila's corporate career started in retail sector in several HR related positions and then she held a senior management position in the not-for-profit sector. She is accredited by numerous professional bodies, namely, SA Board for People Practices, Health Professional Council of SA, Board Health Funders, Center for Effective Dispute Resolution (UK) and as an assessor\moderator with a number of SETAs.

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Dieudonné Nyandu Kabongo is a shipping professional with a vast experience in global logistics and maritime industry. For 13 years, he worked for the French Ocean Carrier CMA CGM South Africa in his Durban office as Documentation Manager and Later as Cost Control Manager.

In 2013, he became the Country Manager working as Managing Director of CMA CGM Zambia in Lusaka, with the main task to lead and develop CMA CGM business in this land-linked country of Southern Africa. He left this post to start up his private practice in Durban as a Consultant in Shipping and International trade in 2017. He had served as Treasurer at the Institute of Chartered Shipbrokers, South Africa Branch, between 2009 and 2013.

Dieudonné graduated at the Catholic University of Kinshasa in 1997 in Development Studies before moving to Durban, South Africa. While working, he trained with the Institute of Chartered Shipbrokers, in order to obtain a professional certificate in the shipping industry. Subsequently, he enrolled with the University of KwaZulu-Natal in Durban and completed a Master’s degree in Maritime Studies. He has extensively travelled across Africa, visiting most of the major ports. His research interests include port economics, harbour tariffs, liner trades and multimodalism. He is fluent in English and French and enjoys reading philosophy, history and politics.

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Tiema Muhindi holds a BTech Journalism degree (cum laude) and a Masters of Journalism degree (cum laude) which are supported with an elaborate industry experience having worked as a weekly columnist for daily newspapers i.e. THE WITNESS, THE NEWAGE and as Chief Editor for Politics Update magazine. All these are South Africa's publications. He is currently lecturing journalism and media studies. The year 2016 saw the publication of his poetry anthology book titled ***Under the same sky.*** In the year 2018 he presented a research paper during the annual ***Interdisciplinary Research and Innovation Conference*** organised by Durban University of Technology. This resulted in the publication of of his research paper, ***the impact of television soap operas on Zulu traditional marriages***, in Interdisciplinary Journal of Economics and Business Law (IJEBL) and also a book by the same title His research areas of interest include the relationship between media and indigenous languages, media and cultural studies, media and politics, politics of ethnicity. He is currently a PhD candidate.

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Executive Summary

BRICS shall die, metamorphose and thrive. It's a way of rethinking the socio-economic fabric before, amid and beyond the COVID-19 crisis. BRICS as a partnership was not static from its inception by Jim O'Neil to date. Starting as BRIC (Brazil, Russia, India, China) the partnership incorporated South Africa in 2010 to form the BRICS. As the partnership it was mainly a political initiative that had little if any economic developmental project but it didn't take long before the organisation metamorphosed into a relatively robust and ambitious economic challenger of the current world order, symbolised by the "competition" with the Breton wood institutions *inter alia* the World Bank and the International Monetary Funds (IMF). Just like a grain planted into the soil that needs to die and come out as a crop before growing to become a plant or a tree, BRICS must face it. The study predicts the death of BRICS and explains that it will either evolve into BRICS Plus or a totally different but more effective global organisation overpowering once for all the Breton wood institutions and ultimately changing the world order – could the COVID-19 crisis accelerate that process? Could the current health pandemic and global economic crisis that goes with it trigger the metamorphosis of the BRICS as we know it today? What if that becomes one of the effects of the much-anticipated new world order? Let's wait and see. Using a variety of research conducted separately, this e-book discusses matters of economic substance from African perspective. it identifies the negative scores of the BRICS as a partnership as it is confronted with death and seeks to understand its rebirth, restructuring or re-engineering in the aftermath. The study further assesses the strengths of BRICS and advices how to capitalise on these for a steady economic growth going forward. It looks at economic issues affecting the BRICS or its member countries with focus on South Africa.

By **Dr Byelongo Elisée Isheloke**

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Editorial
BRICS and Economic Development: A multidisciplinary perspective the impact of Coronavirus on the BRICS and beyond

Byelongo Elisée Isheloke [1]

[1] University of Cape Town, Department of Chemical Engineering, Minerals to Metals Initiative.

1. Introduction

The Brazil, Russia, India, China and South Africa (BRICS) is an established socio-economic and political partnership among major emerging economies which originated from a top-down cooperation and moved towards one which recognises a bottom-up participation (of the grassroot) through developmental projects of potential positive economic impact. Amid the 2008/2009 global economic crisis the BRICS outperformed the leading economies thus giving hope to the populace of those member countries. China as the leading economy of the BRICS also played a major role in the financing and supporting of the National Development Bank (also known as the BRICS Bank) the aim of which is to fund capital intensive developmental projects in regions surrounding the BRICS (as opposed to only helping BRICS partners) [1]. So far, the BRICS have been doing well on trade and cooperation as they coped with the many challenges in and among them. However, the novel Coronavirus 2019 (COVID-19) adds to the challenges that were yet to be overcome in and among the BRICS countries, namely poverty, unemployment, human rights abuses (including environmental and linguistic rights infringements) and corruption. This editorial seeks to also bridge the gap created by papers barely addressing the impact of COVID-19 to the BRICS economy (of which Africa is concerned through South Africa, as a gateway to the continent). COVID-19 causes the BRICS States to discontinue efforts that meant regional integration. This could be accelerated as visa constraints are added and several travel restrictions beyond the partnership are imposed. The health crisis will slow the progress of seeing the BRICS projects realised in time and this is a matter of concern.

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2. Tackling the Covid-19 Health and Economic Crisis[1]

One of the limitations to this SI could be the fact that COVID-19 economic impact was barely addressed in these papers merely because the studies were conducted prior to the epidemy outbreak. The aim of this editorial is thus to bridge that gap. There is no way one can talk of BRICS economy today without alluding to the catastrophic situation the partnership is facing due to the COVID-19 pandemic. The impact of coronavirus on daily life is multidimensional. The transport industry has been affected together with almost all sectors of life including, Hotel, Tourism, Education (Schools Colleges and Universities) to name but a few. Petrol traded 19c/l (cents a litter) and petrol price went down on 2nd March 2020 because people are now travelling less. Diesel went down 54c/l (cents a litter) for the same reason as reported in South Africa. Usually in March, petrol price would increase but the current situation is unprecedented, and predictions point to a possible recession if the situation is not reversed soon. The tourism industry in South Africa realised an income of R120 billion in 2018 but due to COVID-19 the impact is already negative not only in South Africa but in the rest of the BRICS as well.

Economists predict that a 130 billion US$ in loss would hit the aviation industry because of the pandemic. The health crisis will have far-reaching effects on the auto-manufacturing industry (one of the biggest in the BRICS) with 92% of car sales dropped in China upon announcement of the novel coronavirus disease in late 2019 – in fact it is still too early to project thoroughly the impact of COVID-19 to the economy. The above depicts a picture of a situation which affects South Africa as an open economy depending on many players in and outside the BRICS. To mitigate the impact on the economy and life in general, the BRICS try to put in place containment measures gradually – with China declaring the state of emergency and South Africa declaring the state of disaster. The situation in the BRICS Countries is therefore worrisome to say the least. South Africa, a country which already had a zero-growth, or less than 1% growth economy could suffer the most because of its persisting fiscal crisis according to [2]. By 8 March, the Indian Bollywood was cancelling ceremonies as the number of infections in that country rose (to 30 people on that date). Brazilians think their government was not taking the Coronavirus threat seriously and thousands of people called for the resignation of the current president. Russia closed its borders to China (quasi) claiming the Chinese case to be the most desperate.

Sectors that employ more people in South Africa are yet to see the worse impact, but the future isn’t bright at all. The mining and manufacturing sectors are reportedly expected to show weaknesses due to the COVID-19 as the days go on. As the rand value increases there are reports of a 30% drop in oil price due to the crisis in the world. The situation is worse since the second world war aftermath crisis. The stock markets are also affected badly.

Because of the Corona virus pandemic the fuel went down, flights booking

[1] SABC News (Broadcast). 2020. & BBC News (Broadcast). 2020

were cancelled as the aeroplanes were stopped, tourism takes the hit, people lose jobs as there is simply not enough revenue in the country, consumers also have reportedly insufficient money to buy certain goods and services like never before in modern history.

In general, the Corona mortality rate is only 1-3%, with Italy known to have around 5% mortality rate a few weeks ago, reportedly surpassing China in numbers of deaths caused by the deadly disease. The entire Lombardy region in Italy was quarantined by 9 March 2020, leading to the whole country declared lockdown (with huge impact on the economy). Predictions show that the Italian economy could shrink by 3% subsequent to the crisis.

The economic effects are predicted to be worse because of poverty and restrictions due to the virus [3]. The COVID-19 will test the democratic institutions in the BRICS countries and beyond as states seek to introduce stringent (or autocratic) measures (like in China) to fight the pandemic. Reliable statistics, transparent data and breakthrough research leading to a vaccine are a prerequisite in finding practical solutions to the pandemic. The death toll in countries like Iran, Spain, Italy and now the USA is catastrophic, thus global solidarity and human rights should be another reason why countries in despair should be assisted.

More than 100 countries have reported cases of COVID-19 with 850-billion-dollar negative global impact on the economy. Measures similar to the quantitative easing adopted to curb the 2008/2009 global economic crisis are now adopted in countries such as America, Italy and France to safeguard/protect the economy. Central banks, Federal reserves are now appealed to help preserve the economy. Interests are dropped in the banking sector and each country introduces new regulations suitable to their context. A total of 26 EU countries were banned from entering USA, and the UK is also now targeted as the European continent is declared the new epicentre of the virus. Religious organisations should now become more cooperating to play an active role at the forefront of fighting the virus – instead the Vatican City, churches and mosques are closed down to the public while more should be done to stop the pandemic. The socio-economic situation inside the BRICS is not homogenous but analysts agree that to overcome challenges the umbrella organisation must put in place a job-creation strategy to support countries such as India, South Africa and Brazil where joblessness (and as is the case for South Africa, a zero-growth' economy) persists.

If any, the positive impact of the COVID-19 has been the quality of air experienced in China (and the less carbon emission in industrialised countries such as Italy) during the challenging period of lockdown and anti-Coronavirus War which the populace equally experience. This could lead to nations revisiting or introducing carbon emission tax regulations in the aftermath of the pandemic.

Sooner than later, the overall economic impact of the COVID-19 threat will be known within the BRICS and beyond – but for now analysts put sound estimates based on medical facts, observation and success or failure stories with regard to how

COVID-19 pandemic unfolds. Corporate Social Responsibilities have been demonstrated at a greater extent as multinational corporations, companies and faith-based organisations closed down their activities helping to fight the worse pandemic since the 1918 post-war threat. Apart from the airlines industry, the maritime and tourism are among the most hit sectors by the health crisis – a different trade war altogether.

The war against the COVID-19 and its associated economic impact within the BRICS can only be won when all sectors give their best in cooperation with the World Health Organisation (WHO) – hence a multidisciplinary approach undertaken in this SI. What has appeared to be a nationalistic move towards fighting the pandemic has the potential of bringing countries together to fight the threat – and the fear of globalisation would actually bring birth to a rather different and more responsible internationalisation of approaches. Having said that, the COVID-19 will have lasting and devastating effects on our behavioural changes for a foreseeable future.

The BRICS had been relatively good at embracing the fourth industrial revolution to some extent, again with China taking the lead [2]. With the advent of a threat of the magnitude of COVID-19 many activities have gone virtual or online. This appears to boost the rethinking of digital economy or the digitalisation of everything we do going forward. If there are lessons one can learn from the novel Coronavirus pandemic, a few stand out: as people, we need to rethink what we do in respect of handling the environment around us; nations need to work together to be effective in fighting and planning against global threats [4] [5] of this magnitude; and perhaps science and technology should accommodate indigenous knowledge (or traditional/herbal medicine) in addressing mega-problems that appear beyond what we can bear thus limiting the exposure to chemical with unknown side-effects. The cooperation of spiritual bodies (faith-based organisations) to fight stress and trauma complications of those people hit by the Corona health disaster is something psychologists alone cannot manage. Social scientists (including theologians) and scientists ought to work together to thrive. All the sectors need to come together to solve problems like the COVID-19 pandemic that we are facing today.

3. About the Special Issue

As a team, we are grateful for the opportunity given to us (the editor and the reviewers) to work on this a tough and rewarding project. To start a project of this magnitude and to lead it to fruition isn’t easy. It took efforts to work together as an interdisciplinary group of researchers, academics, professionals and even practitioners. The result is a great research product presented in this special issue (SI). We believe this special issue answers both theoretical and empirical questions around the importance of BRICS in economic development in addition to contributing to the current discourse on Business Ethics, Economics, Knowledge Management, Sustainability Development, Health crisis, International trade and co-operation (with sub-themes ranging from Regional integration, BRICS Plus, BRICS economies, Prospects for a low-carbon economy, Corporate Social Responsibility in BRICS, Maritime economics, BRICS Policy issues, Multinational Corporations and more).

Of the 10 papers that were sent to us, only 6 met the requirements of inclusion in this special issue and were thus subjected to a thorough blind review after an initial proofreading of all papers by the editor. Reviewers included academics, researchers, practitioners, business economists, economists and engineers. The limited number of submissions could be explained by the time span associated with this special issue from the date the first Call for Papers was issued to the public. There is no doubt many submissions could have been received should we prolonged/extended the deadline. Both quantitative and qualitative methodologies were used by the authors, owing to the fact that this issue invited multidisciplinary experts and professionals to contribute. Authors were either Professors, Postdoctoral Research Fellows, PhD holders, Doctorate researchers, master's or honours graduates amongst the other qualifications.

4. ABOUT THE RESEARCH PAPERS

Reviewers had an opportunity to reflect on the review process and present a brief report thereof. Part of the report included a rate of the paper on a scale of 1 to 10 and saying in which way the paper contributes to research in the field of study. The sequence of papers in this special issue does not represent the gravity of papers but an attempt to mixt papers that represent the core of the issue under study and those which are generalist rather than specialist in nature. The idea was also to have rich and informative papers both at the beginning, in the middle and towards the end of the SI.

Dr Gustave Kansinkingi and Dr Byelongo Elisée Isheloke wrote about "A Trajectory of Innovation Outputs among the BRICS Countries: Critical Perspectives of Brazil, Russia, India, China, and South Africa" (BRICS), used a quantitative methodology (statistics) to derive meaning of presented data. The article examines important aspects of the knowledge economy as it applies towards BRICS countries using critical perspectives.

Dr Byelongo Elisée Isheloke's article on the challenges and opportunities for BRICS is a case study of the South African mining sector. The paper identifies a myriad of challenges the organisation is facing and presents opportunities for socio-economic development.

Mr Dieudonné Kabongo Nyandu authored "A comparative study of selected African ports and ports within a BRICS-specific Country (South Africa), maritime economics compared to two other sub-Saharan ports (Matadi and Douala). A hard but interesting task to accomplish. Using hermeneutics in the comparison as a methodology, the paper presents an impactful analysis of maritime economics relevant to selected countries.

Ms Kresenta Moodley, Prof Shamila Singh and Dr Byelongo Elisée

Isheloke authored a paper on the banking sector's regulations in KwaZulu-Natal, a province of South Africa – the one and only BRICS country in Africa. The paper titled: "The impact of Basel III regulations on bank's lending and growth rates in Kwa-Zulu Natal" tackles the issue, role and need of Basel III Accords in enabling the banking sector to remain on top of things in times of a quagmire such as the world economic crises. Based on a master's research conducted in selected KwaZulu-Natal banking organisations the study paves the way to similar investigation in other provinces or even countries.

Mr Mulongetsha Basele and Dr Byelongo Elisée Isheloke wrote an article titled: investigation of the impact of the economic ties between South Africa and Russia: an overview.

Mr Tiema Muindi and Dr Byelongo Elisée Isheloke discussed the role of multilingualism in economic development of the BRICS countries. The policy of language planning is looked into from economic point of view.

Dr Byelongo Elisée Isheloke[2] concludes with a summary titled "Concluding remarks: BRICS Plus and Economic growth: what if Africa becomes an option? "Africa has a shape of a revolver of which the trigger is in the Congo-Kinshasa" (Franz Fanon) provided. Enjoy!

Acknowledgments

Without the participation of the following people the accomplishment of this project would not have been possible. I am grateful to Prof Iqbal for his initial stimulation. It takes motivation like that to produce established researchers in literature, business, and economic studies.

We hope the Special issue provides answers to many research questions raised in the papers and in life, and as the special issue editor in chief, I would like to extend my gratitude to other editors, proof-readers, reviewers and corresponding authors and co-authors of articles herein published. Academic institutions or Universities represented in this SI include the University of Cape Town, the Durban University of Technology, the University of KwaZulu-Natal, University of Mpumalanga, and the University of the Western Cape, colleges such as the Management College of Southern Africa and the Damelin/Educor private institutions.

Many authors and other volunteers also reviewed papers, and all are hereby thanked for their voluntary and expert contributions. Other reviewers include Prof. Shepherd Dhliwayo, Prof. Shamila Singh, Dr. Shame Mugova, Dr. Ogujiuba Kanayo, Dr. Byelongo Elisée Isheloke, Dr. Gustave Kasinkingi, Dr. Rufus Adebayo, Eng. Temitope Oladele, Eng. Gabriel Bikombo, Mr. Tiema Muindi and Mr. Dieudonné

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Nyandu Kabongo. Your assistance was very much appreciated!

Dr Byelongo Elisée Isheloke

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Dedication

To peace

To peacemakers in the world

To the survivors of Covid-19

To the memories of those who succumbed untimely

BRICS WITH BROKEN BRIKS

By Byelongo Elisée Isheloke

You're not perfect oh BRICS
With those neglected broken BRIKS
BRICS with Border-related conflicts
BRICS with currency-related defects
Trade war
Corruption
When no cold war
Pollution
Dictatorship
Economic crisis
When no partnership
Corona crisis
You're not perfect oh BRICS
With those neglected broken BRIKS
If only you could improve co-operation
If only you could approve BRICS Plus
Value bottom-up operation
Value-addition be a plus
It would be perfect oh BRICS
And there would be no more broken BRIKS
You're not perfect oh BRICS
With those neglected broken BRIKS.

BRICS POEMS

ALL-EMBRACING HOUSE OF BRICS

Tiema Haji Muindi[3]

As regions and nations bled

Blood of poverty, hunger and disease

As the domination of the West

Continues skimming them dry

From the rubbles and debris of world crisis

A maverick had to emerge

And create a new vision for the world

A vision where all who are in it

Could see a bowel of economic prosperity

Not from the pages of a Wall Street Journal

Could see a dove of peaceful existence

Not as a mirage in the books of diplomacy

And nations could reach their potential

Not at the expense of mortgaging their country

But from BRICS, a just and fair forum

As the maverick BRICS present them with hope

As the maverick BRICS present them an option

Where Brazil, Russia, India, China

And the Rainbow nation of South Africa

Give new meaning to peace through diplomacy

And not war

Give new meaning to economic prosperity

[3] Tiema Muhindi is affiliated to the Durban University of Technology and Damelin

And not the capture of nations' resources

Where, though borders are apart

Where, though languages are day and night

Where, though social-political settings

Divide BRICS much further

But the clear vision and mission

Of their leaders

And the zeal of their citizens

Has shown the world

That BRICS have built a home

Of social-economic prosperity

An alternative center of global power

Where all nations have a home

In the global house made of BRICS

By Tiema Haji Muindi

BRICS, THE BEACON OF HOPE

Tiema Haji Muindi

I could hear the cry of orphans

I could hear cry of families

I hear cry from nations

Where COVID19 has shown its ugly face

Where COVID19 has built its abode

As businesses collapses

As poverty bites the poor

As nations grapples with dilemma

Of saving lives or the economy

We look upon BRICS with hope

A powerful house made of BRICS

With enormous resources at its disposal

Let each of its FIVE powerful nations stand out

And support the other member of BRICS

Such that COVID19 should not be a focus

Such that COVID19 shouldn't be a menace

But a shadow of our dark past

But a memory in the pages of global history

As BRICS emerges a global voice of reason

As BRICS emerges a new center of global power

Where lives are not lost by bullets,

But saved

Where hopes of nations ae not killed

But revived

And we shall salute the heroes of BRICS

For having shown the rest where hope lies

By Tiema Haji Muindi

Chapter 1
A Trajectory of Innovation Outputs among the BRICS Countries: Critical Perspectives of Brazil, Russia, India, China, and South Africa

Gustave Mungeni Kankisingi [1], Byelongo Elisée Isheloke [2]

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Abstract

Brazil, Russia, India, China, and South Africa (BRICS) are the important players of the emerging markets in the global economy and their innovation profiles matter for the economic growth of individual countries and the block. The purpose of this paper is to critically analyse and compare the international rankings in innovation outputs in terms of knowledge and technology outputs among the BRICS-countries in relation to their economic growth in the last two years. A systematic review methodology was used, the innovation topic was investigated from the practice-based problem. Secondary data is collected from sources and institutions that use statistical data to build country rankings produced by the world intellectual property organisation (WIPO) and the World Bank. The findings show China is well-positioned in innovation ranking followed by Russia. Similarities in innovation evolution are observed among the other three BRICS- countries. Although these similarities exist, India portrays a slightly high prospect in innovation because of its information communication technology success, followed by Brazil and South Africa. The findings also show that their GDPs improve with the innovation ranking of the countries. This study recommends the member countries to strengthen their innovation cooperation and to revisit and adapt the education systems to their innovation aspirations through the production of relevant knowledge.

Keywords: BRICS, innovation outputs, GDP, knowledge economy, cooperation.

Gustave Mungeni Kankisingi and Byelongo Elisée Isheloke, *Brics and Economic Development: A Multidisciplinary Perspective*,
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1. Introduction

The transition from industrial economy to the innovation economy requires countries to adopt an innovative approach Ehlers and Lazenby [1]. To develop innovative approach, countries formulate policies that focus on knowledge and technological production in order to advance their economies. This paper looks into BRICS from the lenses of knowledge and technology innovation outputs in relation to the economic growth. It discusses the matters pertaining to critical perspectives on cooperation as far as the BRICS is concerned in the context of promoting economic development of its members. It also elucidates how innovation matters and affects the countries' economic development. Using a comparison, the authors analyse the trajectory of knowledge and technology innovation within the BRICS in relation to the economic growth.

Nel [2] states that innovation is in effect the application of knowledge, its effective acquisition, its impact and its application. In this context, BRICS countries commitment to innovation is likely to be observed through the ability for the block to create and diffuse knowledge. Furthermore, meaningful innovation effort should be translated into an improved GDP growth.

Based on the reviewed literature and using the systematic review design as a methodology, it tackles the issue of knowledge creation, impact, and diffusion and how these factors relate to the economic growth of BRICS countries. A selection of cases to be studied allows the information to be synthesised, evaluated and presented for decision-making purposes. The most relevant findings are presented before managerial and industry implications are presented.

2. Literature Review

This sectionreviews the literature on international innovation rankings and the economic growth of BRICS with regard to innovation. It will briefly look into the innovation trend of the three countries in relation to economic growth. Simpeh [3] reiterated that critical and dominant studies of entrepreneurship and innovation in the early 20th century such as [4], [5] and [6] emphasised on the role that knowledge production to support innovation played in the economic development of countries.

Potts [7] indicated that in a cooperative model of innovation, cooperation appeared essential to improve innovation performance. It was therefore critical to find out whether BRICS countries adopt a cooperative path in addressing and improving the innovation posture in terms of knowledge and technology outputs of the member countries. The question is whether innovation trends of BRICS-countries reflects their economic growth. To this note, it is paramount to compare and analyse the innovation outputs of BRICs countries in relation to their economic performance.

This paper aims to compare and critically analyse the trajectory of knowledge and technology innovation outputs of BRICS-countries in relation to economic growth for 2018 and 2019. The aim of the study will be achieved through comparing innovation outputs of the BRICS-countries in terms of knowledge creation, knowledge impact and knowledge diffusion; and in addressing the implications of global innovation ranking and innovation cooperation in the economic growth trajectory of BRICS-countries.

Several studies acknowledged that knowledge was practised to support innovation [8]; [9]. Innovation was viewed by economists as an economic factor. To this note, innovation performance became a major policy focused on the cooperation of many economic blocks in the international sphere such as European Union, BRICS, SADC. Although BRICS-countries showed the determination to improve their innovation positions at the beginning of the decade, from 2013, China showed the highest rank among the BRICs countries on the 35th place globally, there are no large differences in terms of global ranking between the rest of BRICs countries, South Africa stood on the 58th place followed by Russia on 62nd, Brazil on place 64 and India on the 66th place [10]. At the end of the decade, in 2018 and 2019, China and Russia showed a great improvement in their innovation standing with China occupying 17th and 14th positions in 2018 and 2019 respectively. In the same context, Russia kept the same 46th position in 2018 and 2019 [10]. On the other hand, Brazil, India and South Africa share similar characteristics in their economies that were likely to impact their innovation outputs. For instance, domestic economic and political uncertainty in South Africa and Brazil presented a challenge for innovation activities. With a focus on knowledge and technology as innovation outputs, individual countries of the block were likely to prioritise cooperation to achieve sustainable economic development goals. In this context, systematic and well-managed innovation became a core focus area for high performing economic development. The fact that BRICS-countries were still categorised as an efficiency-driven economies rather than an innovation-driven economies [10] might hinder the achievement of their innovation goals. An innovation-driven economy was regarded as focusing on innovation, with most organisations producing their products with well-designed processes and launching them as new to the market and within their respective industries. Consequently, economies of innovation-driven countries were likely to improve their gross domestic product (GDP). This means that BRICS' countries would therefore not be expected to improve their GDP. The next section evaluates the innovation profile of BRICS-countries.

2.1 BRICS Innovation Profiles

The Global Innovation Index [10] showed that the beginning of the decade portrayed a bleak innovation trend as Brazil, Russia, India, China and South Africa (BRICS) became a lot less innovative dropping the ranking positions of previous years. With more focus on South Africa, Brazil and India, the following situation may be observed in the last two years in terms of knowledge and technology.

2.2 South Africa, Brazil and India

Although South Africa focused on the collaboration between universities and industry, the country appeared to create many powerful innovation linkages, which revealed that the higher education was weak, just as the ecological sustainability of its economy [10]. Brazil also had a lot of high-tech manufactures and a quite strong R&D environment overall, but its higher education sector was still ranked lower in comparison to other innovative countries, this was the weak point in innovation improvement of the country [11].

India presented a very efficient innovation sector, but that in most cases could not result in a high ranking. India’s education sector needed to catch up with the top 100 instutitions in the world. India’s environmental performance and economic goals constituted another dilemma in the country's innovation strategy [10].

2.3 Knowledge and Technology as Innovation Outputs

Fu, Li, and Johnson [12] pointed out that experience and learning mattered for knowledge to generate innovation. Laudon and Laudon [13] clarified that knowledge needed to be actionable and shared. Based on the theory of knowledge creation, the spiral process of socialisation, externalisation, combination and internalisation (SECI) could be used to connect and arrange new and existing knowledge [14]; [15]. This section analyses knowledge and technology as innovation outputs pillar with regards to international ranking of innovation. Reviewing the global ranking of the three factors that include knowledge creation, knowledge impact, and knowledge diffusion are regarded as the measurement of knowledge and technology innovation outputs. Gackstatter, Kotzemir, and Meissner [16] reiterated that powerful knowledge base, often centred on technology and innovation, as an important precondition to build and develop an innovation-based economy. To this note, knowledge creation and its impact and diffusion become critical to the innovation performance of BRICS countries.

However, maintaining the process of knowledge creation might result in improvement in innovation [17]. Knowledge creation factors included variables that were traditionally thought to be the fruits of inventions and/or innovations. The five indicators that covered were the result of inventive and innovative activities such as patent applications filed by residents both at the national patent office and at the international level through the PCT; utility model applications filed by residents at the national office; scientific and technical published articles in peer-reviewed journals; and an economy’s number of articles received and citable documents [18].

Furthermore, global Innovation Index referred to Knowledge impact as a representation of the impact of innovation activities at the micro- and macro-economic level or related proxies and measured by the increases in labour productivity, the entry density of new firms, spending on computer software, the number of certificates of conformity with standard ISO 9001 on quality management systems issued, and the measure of high- and medium-high-tech industrial output over total manufactures output.

Lastly, knowledge diffusion was key to innovation such as intellectual property receipts measured by percentage of total trade; high-tech net exports as a percentage of total exports; exports of ICT services as a percentage of total trade; and net outflows of foreign direct investment (FDI) as a percentage of [18].

2.4 China and Russia in Knowledge Management

Ramesh [19] studied knowledge generation and systems put in place innovatively to address the phenomenon in China, in comparison to what happens in India. Research and development (R & D) play a vital role in generating and distributing knowledge in China. China had a particularity of disparity between the City and the rural areas when it came to knowledge creation, impact, and diffusion. Burrows, Drummond, and Martinsons [20] profoundly assessed knowledge management in China and confirms Ramesh [19] on the fact that China approaches knowledge production, management, and output informally, personally and with limiting technological creativity and business excellence. Since the cultural revolution of the Mao Zedong era, culture and social tradition influence the thinking around knowledge systems in this country.

Table 1. Three views of knowledge

Characteristic	Context	Description
Knowledge viewed as an object	The primary aim of the Chinese partner in a Sino-foreign a joint venture is to receive both technical knowledge and business knowledge (technology transfer)	Knowledge viewed as explicit, codifiable, and replicable; joint venture contracts are structured to extract maximum knowledge from foreign partners
Knowledge viewed as a process, albeit a top-down process (one-way information flow)	Chinese firms with complex manufacturing operations must manage and continually upgrade their technical knowledge	Knowledge creation is viewed as the purview of senior management and of trusted, long-serving supervisory staff in whom tacit knowledge resides
Knowledge viewed as a valuable asset forgoing global but locked in the minds of foreigners	Chinese firms seeking to gain access to foreign markets, expanding beyond mainland China, must access international business knowledge	Knowledge, specifically market knowledge viewed as a function of language and cultural understanding; boundary-spanning Chinese recruited to act as a cultural/linguistic bridge

Source: Adapted [21]

China used more personal interactions for knowledge transfer than technology. State-owned firms were not doing better on the aspect of organisational learning. It was known that IT often provided a platform for Knowledge production and management-knowledge managed in context and not according to rules [20].

The characteristics of knowledge are threefold depending on the context or the situation as shown in Table 1, as far as the Chinese knowledge hub is concerned. This synoptic table presents how knowledge is viewed and how to transfer could be done in manufacturing and the operations in mainland China and abroad. In this context, China's innovation success is based on the early efforts and commitment in terms of knowledge creation and diffusion. This has also been translated into many years of China's economic growth. Table 1 should, therefore, serve of a standard for other BRICS-countries especially Brazil, India and South Africa.

Husted and Michailova [21] looked into the issue of knowledge distribution in Russia. In the same context, Mingaleva and Mirskikh [22] analysed the issue of creation of knowledge and related innovation and how knowledge and skills could be transferred throughout Russia. These studies concluded that innovation in Russian economy was lagging behind despite showing an improvement among the BRICS countries. However, Russia integration into BRICS was emphasising on participation in order to facilitate the innovation development and improve its competitiveness. Maslova and Popova [23] stated that Russia national innovation strategy should be based on current situation in the world in terms of technological leadership and the socio-political context.

3. Research Methodology

This study used the systematic review design to synthesise information on the question of innovation in BRICS-countries. As noted by Briner and Denyer [24], a systematic review as a particular methodology aimed at identifying existing studies about a well-defined topic of investigation as derived from practice-based problems. The design entails selecting and critically evaluating the contributions of different identified studies, analysing and carefully synthesizing the data, and reporting the evidence in a way that facilitates clear conclusions about what is and is not known. A systematic review is considered different from a traditional literature review because it appears as a self-contained research project that explores a clearly defined research problem using existing studies [25].

Being categorised as emerging countries, it is imperative for BRICS members to catch up with other economic blocks such as European Union and North America. The secondary data was used according to the procedure and standards of international datasets used. This systematic review aims to formulate evidence-based perspectives of the innovation ecosystem of BRICs countries.

Purchasing Power Parity (PPP) was used to standardise data. Regarded as an economic theory, the purchasing power parity approach served to compare different countries' currencies through a "basket of goods" [26].

However, data-based evidence and innovation metrics were increasingly at the centre of formulating, deploying, and evaluating innovation policies of countries and their economies. The countries and relevant economies were classified according to the World Bank Income Group. Furthermore, data for GDP and GDP per capita were collected by the global innovation Index from the International Monetary Fund World Economic Outlook 2018 database.

In this context, data stringency requirements were used in the attribution of strengths and weaknesses at the sub-pillar level of innovation outputs. These levels were revised in 2019. When economies did not meet a data minimum coverage (DMC) requirement at the sub-pillar level (for sub-pillars with two indicators, the DMC is 2; for three it is 2; for four it is 3, and for five it is 4), they were not attributed a strength or weakness at the sub-pillar either. Furthermore, if the economy in question did not meet the DMC requirements at the sub-pillar level, but it could still obtain a ranking higher than or equal to 10 or a ranking equal to or lower than 100 at the sub-pillar level, for caution this rank was put in brackets. This procedure use by Global Innovation Index was to ensure that incomplete data coverage did not lead to erroneous conclusions about strengths or weaknesses, or particularly about strong or weak sub-pillar rankings. The analysis was based on existing results, review of trends allowed to achieve the objectives of this study.

4. Results and Discussion

It is important to point that Brazil and South Africa are classified as upper-middle-income countries, in contrast, India is regarded as lower-middle-income country. Although the size of the population can justify this classification, it is relevant to indicate that this aspect falls outside the scope of this study.

4.1 Knowledge and Technology Outputs

This section will critically evaluate strengths and weaknesses in terms of indicators that are used to measure the innovation profile of BRICS-countries. The innovation outputs are grouped into two pillars: knowledge and technology outputs, and creative outputs [10]. The first justifies the purpose of this study.

Knowledge creation could be seen as a cornerstone to innovation improvement of any country's economy, Table 2 shows the scores of each measurement variable of innovation outputs and the overall ranking of each country under study. To this note, the scores, and ranking of Brazil, India, Russia, China, and South Africa in terms of knowledge creation. Knowledge creation includes the patents produced and patents in application, utility models, scientific and technical articles published, and citable documents index.

The table 2 further shows that China dominates this category of innovation outputs and similarities are observed in knowledge creation among Brazil, India, and South Africa. The results portray that Brazil produces a high number of patents in comparison with India and South Africa. However, the patents produced are not necessarily used for economic benefits as there are less patents in application compared to the two countries. Furthermore, South Africa shows a positive posture and leads the two countries in numbers of scientific and technical articles produced.

Table 2. Knowledge Creation

	Brazil		**India**		**South Africa**		**Russia**		**China**	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
Knowledge Creation	**19.8**	**47**	**20.9**	**42**	**19.3**	**48**	**29.9**	**30**	**68.1**	**4**
Patents by origin/bn PPP$ GDP	1.7	50	16	52	0.9	63	5.8	20	53.7	1
PCT patent applications/bn PPP$ GDP	0.2	53	0.2	51	0.3	44	0.2	47	2.1	17
Utility models by origin/bn PPP$ GDP	0.9	25	N/A	N/A	N/A	N/A	2.5	8	72.4	1
Scientific & technical articles/bn. PPP$ GDP	9.7	50	5.3	77	10.3	45	6.9	63	11.9	42
Citable documents H index*	36.3	24	38.9	21	28.4	32	37.4	22	54.2	13

Source: Global Innovation Index [10]

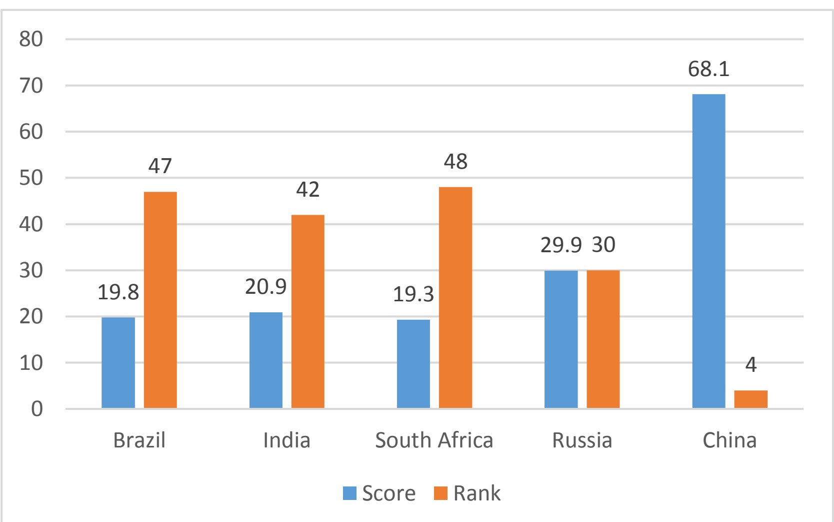

Figure 1. Knowledge creation (Innovation output)

In contrast, India leads articles citations, followed by Brazil and South Africa. In this context, it can be argued that India articles produced have a high impact in the economic advancement of the country. The Figure 1 depicts that China followed by Russia has an improved aggregate ranking among the BRICS countries. The next section will critically analyse knowledge impact.

Table 3. Knowledge Impact

	Brazil		**India**		**South Africa**		**Russia**		**China**	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
Knowledge Impact	**31.9**	**86**	**43.4**	**35**	**37.9**	**58**	**33.9**	**77**	**66.6**	**1**
Growth rate of PPP$ GDP/worker, %	-0.3	96	5.9	4	-0.4	97	10	63	7.1	1
New businesses/pop.	0.1	98	0.1	100	10.2	12	4.3	29	N/A	N/A
Computer software spending, % GDP.	0.2	74	0.2	65	0.3	48	0.2	63	0.4	24
ISO 9001 quality certificates/bn PPP$ GDP	5.4	58	3.8	65	5.5	56	0.9	111	16.9	20
High- & medium-high-tech manufactures, %	0.6	32	0.3	33	0.3	40	0.3	43	0.5	12

Source: Global Innovation Index [10]

Table 3 shows the knowledge impact in terms of innovation activities and the manpower involved. This affects economic variables such as growth rate of GDP per worker, new business created per population, computer software spending as a percentage of GDP, ISO 9001 quality certificate produced, and high-tech manufactured. Based on the results provided in Table 3, China is ranked number one, India shows a more improved position with regard to knowledge impact compared to the other two countries, followed by Brazil and South Africa. China and India seem to increase its GDP growth rate in relation to its manpower or worker as they rank number 1 and 4 globally in terms of GDP/worker as depicted in Table 2. Brazil and South Africa show disparities between their GDP growth rate and the quality of human capital. It seems that economic growth is challenged by labour productivity. In addition, South Africa is ranked high with regards to new business creation occupying the 12th position as compared to Brazil 98th and India 100th. In contrast, the failure rate of small and medium enterprises (SMEs) created is over 70% [27]. The findings support the Organization for Economic Co-operation and Development (OECD) [28] that generating employment, contributing to innovation and promoting inclusive growth vary widely across firms and across countries and sectors.

As shown in Figure 2, China ranked number in the world. This is aligned with higher Chinese GDP. The Figure 2 also shows that India is improving its ranking in terms of knowledge impact.

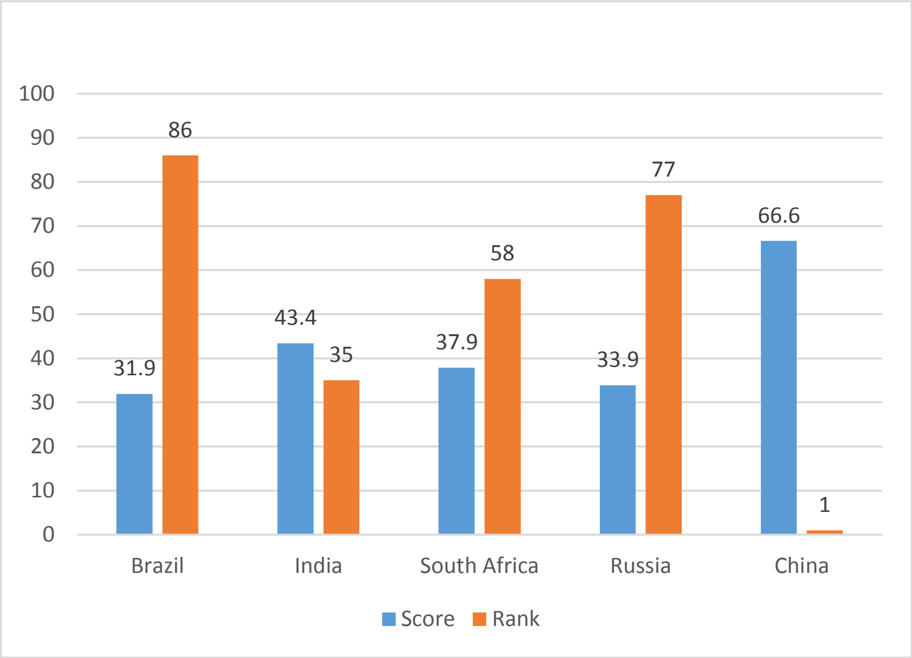

Figure 2. Knowledge Impact (Innovation output)

The results in Table 4 show that to the exception of China, India is leading Russia, Brazil, and South Africa in terms of knowledge diffusion. India ranked high in BRICS and in the world in terms of information and communication Technology (ICT) services exports. It is recognized as one of the leading countries in the world in information and communication Technology. This position provides a big boost to the economic growth of the country. In the same context, South Africa has shown great strength in terms of foreign direct investment (FDI) net outflows in relation to GDP. Although China does more business on the African continent, South Africa remains one of the biggest economies on the African continent. The results in Table 4, show that according to global innovation ranking, South Africa occupies the lowest position in terms of knowledge diffusion in comparison to other BRICS members. This can also be observed in Table 4 in terms of low percentage in total trade. Any attempt of South Africa and other members of BRICS to enter the African and international markets in order to benefit from international trade must revisit the ability to diffuse knowledge and improve the GDP.

The Figure 3 proves that China and India have strong position in terms of knowledge diffusion in comparison with the rest of BRICS counterparts.

Table 4. Knowledge Diffusion

	Brazil		**India**		**South Africa**		**Russia**		**China**	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
Knowledge Diffusion	**17.4**	**66**	**36.1**	**23**	**14.4**	**80**	**17.6**	**63**	**37.0**	**22**
Intellectual property receipts, % total trade	0.3	31	0.1	50	0.1	49	0.2	39	0.1	56
High-tech exports less re-exports, % total trade	4.5	32	2.8	46	2.0	55	2.6	49	27.9	1
ICT services exports, % total trade	0.9	84	10.4	1	0.7	91	1.3	71	1.2	75
FDI net outflows, % GDP	0.6	63	0.3	76	18	32	1.9	30	1.4	42

Source: Global Innovation Index [10]

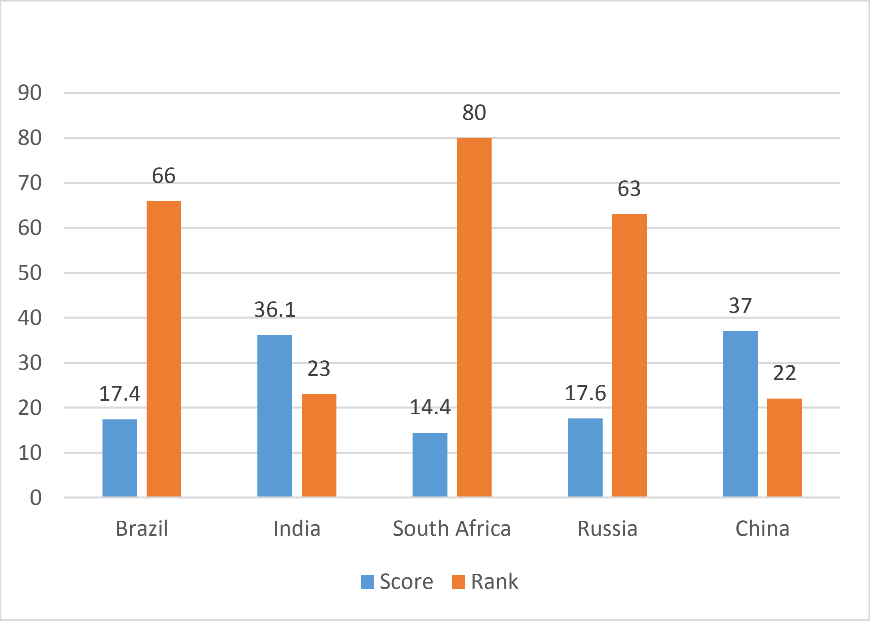

Figure 3. Knowledge diffusion (Innovation output)

Table 5. Economic Profile and Innovation international Rankings for BRICS countries

	Brazil Upper middle Income	**India** Lower middle Income	**South Africa** Upper middle Income	**Russia** Upper middle Income	**China** Upper middle Income
Global innovation ranking 2018	64	57	58	46	17
Global innovation ranking 2019	66	52	63	46	14
GDP (Bn)	3,370.6	10,401.4	790.9	4,179.6	25,313.3
GDP per capita	16,154.3	7,873.7	13,675.3	29,266.9	18,109.8
Population (Mn.)	210.9	1,354.1	57.4	144.0	1,415.0

Source: Global Innovation Index 2019 [10]

Brazil and South Africa innovation positions have dropped two and five places respectively, as shown in Table 5. In contrast, India has shown a great improvement from 57 in 2018 to 52 in 2019. Furthermore, India shows that the improvement of innovation ranking has translated into a greater GDP, but poor GDP per capita is likely the evidence of the large size of the population. However, it is observed that South Africa's serious drop in innovation ranking has a negative impact on its GDP as depicted in Table 5. Russia also shows a greater GDP per capita because of its lower population size in comparison with China, India, and Brazil. In summary of the findings above, China dominates the block in terms of knowledge and technology outputs. More about the knowledge generation and management is discussed in the table below.

5. Conclusion and Managerial Implications

The study compared and critically analysed the international rankings in innovation outputs in terms of knowledge and technology outputs measured by factors such as knowledge creation, knowledge impact, and knowledge diffusion among the three BRICS-countries with regards to their economic growth in the last two years. India performs better in knowledge diffusion with its dominance with ICT export. In terms of knowledge creation, we observe a similar position, though South Africa shows a slightly improved posture. Furthermore, South Africa seems to innovate better with regards to new business created in the economy, but the failure and death rate of SMEs overshadowed the prospect to focus on innovation [29]. Cincalova [30] pointed that any economic policy of the state should be designed to support innovation through sharing knowledge and know-how, as well as activities that promote intensive knowledge, high skills and adaptability of the workforce. South Africa's innovation policy success lies in how it incorporates both the economic and social environment of innovation [31].

One of the key sectors for a country's innovation strength is higher education. In contrast, the three BRICS countries have their higher education as a shared weakness. South Africa needs the utilisation of efficient local and global knowledge networks in order to deliver the required innovations and to sustain their businesses, improve global ranking scale and to boost economic development [32]. Knowledge was viewed from different perspectives and a variety of ways to produce and disseminate it was discussed. The country innovation policy success lies in how it incorporates both the economic and social environment of innovation [33]. South Africa is in the 141st position in the world and it is found to be the lowest in the regions of this ranking on education system among the BRICS-countries. Mobility among the BRICS countries is to be improved urgently to boost these higher education sectors [10]. Holistically, a knowledge-based growth strategy for innovation should be an important integral part of economic cooperation. A strategy has to be framed to redesign alternative ways to improve innovation through the improvement of input and the appreciation of output dimensions. To this note, Smith [34] asserts that the process of innovation is directly linked to innovation policy. BRICS being a new organisation, Chan and Daim (2012) [35] technology realisation and the selection of appropriate technology from a local perspective; and the support of more elaborated innovation strategies may pose a challenge. As emerging countries, the differences in their aspirations concerning their future role in the global economy, political will, availability of economic resources, technological positions, and social conditions should be considered.

In this context, different strategic orientations of BRICS-countries may hinder innovation. The extent of innovation improvement attracts individual countries of the block is to improve BRICS countries' innovations through a well-defined innovation path embraced by all members.

This study recommends the member countries or the economic leadership to strengthen their innovation cooperation.

It further recommends to revisit and adapt education systems to innovation aspirations of member countries in order to produce knowledge that is relevant to innovations and economic development.

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Chapter 2
BRICS challenges and opportunities: management's perceptions in South Africa's mining sector

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Abstract

Using managerial tools such as the Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis as well as the Political, Economic, Social, Technological, Ecological and Legal (PESTEL) framework, the paper presents an outlook of what transpires about the Brazil, Russia, India, China and South Africa (BRICS)'s partnership and looks into its prospects through the lenses of management's expertise. It is an attempt to make sense of the BRICS challenges and opportunities in order to eradicate poverty and other socio-economic ills. Among other things, the positive aspects of the BRICS include but are not limited to being an alternative to the World Bank and the IMF as far as capital-intensive projects financing is concerned. The negative aspect hitting the BRICS are no other than trade (tariff) war against the US, the Russia-China attempt to proximity with EU as well as inherent socio-economic problems within each of the member countries. Using mixed methods and a predominantly qualitative design, the study presents ways to avoid threat and embrace developmental opportunities in South Africa. Last but not least, senior management and directors' perceptions were taken into account in rethinking the current BRICS role in multilateralism. Through data-turned information from the South African mining sector, the study found possible ways to improve BRICS multilateral relations through synergy and continuous engagements.

Keywords: BRICS, PESTEL framework, SWOT-analysis, Mining Industry, International trade and cooperation

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Introduction

With the threat posed by the COVID-19 pandemic and the financial burden that it will have to the global economic fabric, the BRICS foresees as an organisation, numerous challenges. However, the (quasi-) successful curbing of the health crisis in Wuhan, China, and the potential restructuring, rethinking and innovation of international trade and cooperation means better prospects are a possibility. Decisions to restructure and re-engineer the mining business mainly stems from production and trade difficulties that they encounter on daily basis in their operations. To do this, mining companies have a number of tools at their disposal including the Strengths, Weaknesses, Opportunities and Threat (SWOT-analysis) as well as the Political, Economic, Social, Technological, Environmental, and Legal (PESTEL) framework. This paper examines the situation in BRICS, and South Africa's case study is hereby presented. These valuable management instruments allowed to get relevant insights from experts, engineers and professionals working at top management levels. The paper is structured in five parts, namely, the introduction, literature review, research methodology, data analysis, and conclusion.

Literature Review: Theories of International Trade and Cooperation

Applicable to the BRICS are the theories of trade and cooperation which for the partnership are among the cornerstone. Ranzau [1] studied international trade theories and provided an interesting analysis of what it entails through commerce. Nafzinger [2] examined international trade theories and linked them to liberalisation of commerce. Parikh [2] states that trade liberalisation develops economic growth.

Trade is made of imports and exports amongst other things. In the second semester of 2013, South Africa had a 3.2% increase in export volumes and R3.6 billion was received for value-added exports and jobs creation activities in poor locations. South Africa also allocated R35 billion for industrial development in order to boost the economy, accelerate transformation and generate more jobs. It was reported that R844 billion were allocated for infrastructural development and maintenance over the three years in 2014 [3]. International trade is known to have both advantages and disadvantages. The positive aspects include more economic use of natural resources; diversified commodities; availability of scarce commodities; the rise of competition; speedy industrialization; a more competitive price; transport means development and interdependence between countries. The negative aspects are on the other side including speedy exhaustion of resources, negative effects on domestic industries, imports harming domestic markets (consumption), and in case of the state of emergency, it becomes problematic or difficult to intervene abroad [4]. In parallel to Muthumani [5], Pandare [4] does not focus on the effects of globalization instead this author discusses the pros and cons of international trade and co-operation. The two concepts at times overlap in theory and practice. In other words, they share the following benefits: more economic use of resources, speedy industrialisation, development of transport and the inter-dependence between partners. Johnson, Scholes and Whittington [6] state that, the strengths, weaknesses, opportunities and threats (SWOT) analysis provides a summary of major issues from a company's environment as well as threshold capabilities impacting on the business. In order to comprehend holistically how trade and cooperation affects the BRICS, a situational analysis was conducted as per below.

Mazenda [7] gives a number of recommendations for BRICS policy consideration with the aim to boosting Foreign Direct Investment (FDI) in and out flows. Government policies aim at redressing the imbalances of the past and alleviating poverty in South Africa are a prerequisite. This move as essential as an impetus for common socio-economic, security and political development [8]. Political problems often affect developmental initiatives and investors are discouraged in the long run.

The BRICS States represent 40% of the world's population and their economy is rapidly growing" ([9]. Mazenda [7] states that the newly formed (BRICS') New Development Bank must invest more on infrastructure development, but this is not news at all as it's a known factor.

Amid and post the novel Coronavirus disease these prospects will change dramatically for the worse. The NDP was established in an attempt to reverse the national non-growth economy [10]– a situation which will be exacerbated owing to the current global health and economic crisis.

Beyene [11] examines the possibility of economic integration of BRICS member states especially within their own region via trade. Resemblance includes the economic structures that allow less value addition and beneficiation in such a way that intra-BRICS transactions are diminishing with the impact of failing FDI [7]. The current COVID-19 threat only adds to the existing difficulties.

Global Economic Slowdown

Financial recession was an issue in 2010 in spite of efforts to alleviate its effects [12]; [5]. There has been a drop-in people's consumption owing to the increase of tax [13] and today COVID-related lockdowns (although necessary) equally affect the economy in the negative way. Joyce *et al.* [14] explain the use and abuse of quantitative easing (QE) in times of crises. In Africa, the refinancing of external debt is still a stumbling block for emerging nations where monetary policies failed to be as accommodating as in developed countries. Joyce *et al*. [14] agree on the impact of unconventional interventions on the economy. With the threat that the COVID-19 poses, many countries including South Africa, have introduced incentives to sustain the economy – mechanisms to curb corrupt practices have also been notably put in place.

Tong and Wei [15] found that the companies which depend more on external finance were severely affected by the liquidity crisis. This finding supports the view that FDI plays a crucial role in alleviating economic crises. Whereas the 2008-2010 global economic crisis had been caused by decrease in growth; institutional failure; exposure to numerous risks; and epidemics could happen by the human factor possibility [16] [17].

It is worth noting that FDI plays a crucial role in reducing unemployment. Local productivity is enhanced by the action of multinationals [18], although it is argued that multinationals are also a factor to under-employment of national human resources especially in Africa. Motsepe [19] stated that governments are being encouraged in Africa to conduct reforms on fiscal, legal, anti-corruption and good governance.

The BRICS bank had a charter capital of $50 billion USA (32.5 billion pounds; 45.5 billion euros) in 2015 with prospects of reaching $100 billion USA once increased by members' contributions [20]. The author agrees with [20] on the capital allocated to the BRICS bank as a good start. Sridharan [20] conducted research that talk to this study. it is further noted that BRICS plays an influential role both in politics and economics. An open policy to incorporate other emerging economies into BRICS, is in line with BRICS Plus model being proposed by some [22].

It was recently announced that South Africa has the most sophisticated banking systems and capital market credentials than any of the BRIC countries [23].

Research Methodology

Using a predominantly qualitative methodology, the study presents ways to avoid threat and embrace developmental opportunities thrown to the BRICS. Using a SPSS Version 24, a survey questionnaire output was analysed of which the results were compared to information collected through in-depth semi-structured interviews. The study allowed to garner management's perceptions and factual information resulting in this article. This study, therefore, made use of mixed methods in making sense of the voluminous data collected during the investigation. Both quantitative and qualitative methods were used namely a survey questionnaire and an interview schedule, as collection instruments.

Findings and Discussions

Quantitative findings

On international trade, cooperation and economic impact the following were found:

Increased international trade cooperation (.642*) in correlation with better regional integration

Increased capital inflow (.544*) in correlation with technological innovation

Economic growth (-.497*) in negative correlation with exploitation of miners.

This paper presents the econometric model developed as a result of this research. A linear formula better explains the relationship between the variables.

$Y= f (x_1, x_2, x_3, x_4)$

In the formula above, the Dependent Variable (DV) is mineral beneficiation and the Independent Variables (IV) include more sustainable operations, global economic crisis and so forth. A summary of the multivariate linear regression follows:

Table 1. Multivariate Linear Regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.698[a]	.487	.351	.78875

a. Predictors: (Constant), More sustainable operations, Global economic crisis effects, Involved with BRICS, Project ownership

Table 1 indicates that there is a strong positive correlation between the predictors and the dependent variable: (Constant), More sustainable operations, global economic crisis effects, involved with BRICS, and project ownership. Nearly 49% of the variation (dependent variables) can be explained by variations in the predictors. The next section presents the Anova.

Table 2. Anova

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	**Regression**	8.868	4	2.217	3.564	.031[b]
	Residual	9.332	15	.622		
	Total	18.200	19			

a. Dependent Variable: Upstream
b. Predictors: (Constant), More sustainable operations, Global economic crisis effects, Involved with BRICS, Project ownership

Table 2 indicates that the overall model is a good estimate of the dependent variable (since $p < 0.05$, that is $p = 0.031$).

Table 3. Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.976	.753		1.297	.214
	Involved with BRICS	.279	.187	.305	1.497	.155
	Project ownership	-.467	.183	-.555	-2.557	.022
	Global economic crisis effects	.516	.200	.521	2.581	.021

More sustainable operations	.376	.185	.384	2.037	.060

a. Dependent Variable: Upstream

Table 3 tests the null hypothesis that the coefficients of the variables in the equation are zero. P-values less than 0.05 imply that there is a significant difference. It implies that the (shaded) variables do have an impact on the dependent variable.

Qualitative Findings

In general, it was established that the current beneficiation policies are not very effective in South Africa. A number of reasons could explicate this, of which the major one is international and national (external and internal) interference to discourage mineral beneficiation practices (Interviewee no.5). This is consistent with what 25% of the respondents explained. On the other hand, all the respondents were of the view that mineral beneficiation is needed (100%), except one thought it must be approached cautiously.

Table 4. BRICS SWOT-Analysis

Strengths	**Weaknesses**
- Huge human resources/popularity **- Emerging economies** **- Huge mineral/natural resources** **- Cross-continental positioning** **- E-business/IT** **- Import-Export/trade exchanges** **- Huge think tank** **- Fast growing economy** **- Strong/stable institutions** **- BRICS Bank/liquidity**	- Top-down initiatives/partnership - Relatively new/ inexperienced deployed workers - Insufficient emancipation of women - Not enough funding compared to FMI/WB - Limitations to entry into the partnership - Distance between partners - Lack of a democratic common language - Lack of independent/external audit - Limited resources or depletion
Opportunities	**Threats**
- Bottom-up approach going forward **- Alternative to IMF/WB as a possibility** **- BRICS PLUS opportunity** **- Economic development** **- Mineral beneficiation initiatives**	Negative competition with FM/WB - Disunity at UNSC over Libya… - Excessive nationalism/selfishness - Economic recession/aftermath - Ageing population – China

- Lobby for climate change MDG/SDV **- Research/Development** **- Military cooperation** **- Globalisation/global initiatives** **- Triggering world reforms - Citizens' solidarity and social diversities**	- Insufficient democracy in China Uncertainty about the future - Unequal financial capabilities - Unemployment - War from non-members: physical/ideological/economic - Neo-colonialism/dominance

Source: Consulted [40]; [41] and others.

In Table 4, the BRICS strengths appear to be that they are all emerging economies with strong and stable institutions. In addition, the BRICS members are rich in minerals and have the manpower to their credit. Overwhelmingly, one of the biggest threats for BRICS is now the COVID-19 saga in addition to the lack of beneficiation policy breakthroughs in many African countries.

This study makes use of another important management instrument: the political, economic, social, ecological, technological and legal (PESTEL) framework below.

Table 5. PESTEL Framework

Political Factors	Economic Factors	Social Factors
- Different political regimes **- Conflict of interests at UNSC** **- The burden of historical heritage: Apartheid for SA, communism for Russia and China, cast system in India, issue of cultural diversity in Brazil** **- Military joint-venture for peace-building/conflict resolution** **- Democratic institutions**	- Recession - Investors' friendly regulations in SA -BRICS bank liquidity - Mining dependent economy (SA) - Search for natural resources/raw materials (Russia, India, China) - Dynamics of newly established pro-free-market system in China and Russia	- Unemployment in BRICS countries - Inequality in SA, poverty in BRICS - Ageing societies – China -The communication/language challenge
Technological Factors	**Ecological Factors**	**Legal Factors**
- Technical Factors **- The mechanisation of mining jobs** **- IT infrastructure in mining/RFID** **- Beneficiation infrastructure** **- BRICS think tank/Knowledge hub**	- Climate change issues - Effects of mining on the environment - The danger/benefit of nuclear technology - COVID-19 threat - The impact of the green economy	- Human rights violations in BRICS - Lawyers in Brazil not allowed to team up with external legal agents for action in Brazil - Legal matters

	- Depletion of geo-resources - Conspiracy theories on COVID-19	

Source: [12]; [42] and others.

Any government's action that takes into account all the PESTEL factors as in Table 5 is to be commended. It is the responsibility of public officials to put in place policies, although a third party could also influence policy formation or implementation thereof. Anderson [24] stresses out the role of the government in putting in place sound policies to cater for the need of the business environment in which the mining company operates.

Table 6. Participants' Biographical Data for Interviews

Qualitative Sample size	Gender	Participants or non-participants	Percentage	Number of organisations represented	Longest employment
N=10 n=8	**Absentees**	2	25%	3	30 years
	Male	6	75%		
	Female	2	25%		
	Response rate	8	80%		

It emerged that 75% percent of interviewees were males, that is six out of eight participants (Table 6). N=10 stands for the sample size and n=8 is the successful interviews. Interviewees were blacks and whites and were all adults. There was no indication suggesting that gender, race or age influenced the manner in which participants responded.

Biographical information: The following table presents demographics:

Table 7. Positions Held by Respondents

	Frequency	Percent
Admin Controller	1	4.8
Delegated Worker	1	4.8
Director	1	4.8
Engineer	1	4.8
Finance Officer	1	4.8
General Manager	2	9.5
Legal Advisor	1	4.8
Manager	3	14.3

Manager Stakeholder Relations	1	4.8
Mine Manager	1	4.8
Mine Superintendent	1	4.8
Process Engineer	2	9.5
Project coordinator	1	4.8
Project Manager	2	9.5
Senior Process Engineer	1	4.8
Site Manager	1	4.8
Total	21	100.0

As indicated in the table 7, senior, middle and lower management were interviewed. It was found that, 52% of the respondents were employed at senior or middle management position. Moreover, 14.3% of the respondents were either directors or senior leaders. Some senior managers were reluctant to participating in the research conducted by a non-member of their company. This corroborates with other sources [25]. A total of 33% of the participants were mining engineers or had a tertiary qualification. The number of years of professional experience is presented below.

Table 8. Number of Years of Experience

Mean	12.57
Median	10.00
Mode	10
Std. Deviation	8.582
Minimum	1
Maximum	30

Table 9. BRICS Competitive Advantages

		Brazil		Russia		India		China		SA	
		Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Q2.1.1	Democratic institutions	5	23.8	3	14.3	7	33.3	3	14.3	14	66.7
Q2.1.2	Information Technology	4	19.0	5	23.8	12	57.1	9	42.9	9	42.9
Q2.1.3	Natural resources	7	33.3	11	52.4	7	33.3	6	28.6	14	66.7
Q2.1.4	Manpower	6	28.6	5	23.8	8	38.1	9	42.9	11	52.4
Q2.1.5	Industrial development	10	47.6	6	28.6	10	47.6	12	57.1	12	57.1
Q2.1.6	Support of the market economy	4	19.0	4	19.0	8	38.1	8	38.1	10	47.6

Table 8 shows that the most experienced manager had worked for 30 years in the organisation and the least one year. Experienced managers passed their expertise through this investigation to potential readers. Of importance to this study is the competitive advantage of each BRICS country.

For Brazil, the competitive advantage is found to be "industrial development" and "natural resources" in line with the previous findings [26] with respectively 47.6% and 33.3% of scores (See Table 9). The instability and the allegation of corruption (about the leftist popular leader Lula da Silva) that shook this country recently [27] also saw the country's involvement in BRICS affairs weakened; raising concern about the sustainability of the partnership. Persisting instability in Brazil and negative perception in the public opinion (if unresolved) is a danger to BRICS [28] as it may trigger actions similar to Brexit.

For Russia, the competitive advantage that scored more is "natural resources" with 52.4%; followed by "industrial development" with 28.6%. The lowest competitive advantage for Russia was "democratic institutions" with only 14.3% of scores.

Table 10. Downstream Mineral Beneficiation

	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
Gainsharing	7	36.8%	1	5.3%	8	42.1%	1	5.3%	2	10.5%
Distributing monetary incentives	6	30.0%	7	35.0%	4	20.0%	2	10.0%	1	5.0%
Organising mining skills training	10	50.0%	8	40.0%	1	5.0%	0	0.0%	1	5.0%

Doing beneficiation by hydration	2	10.0%	7	35.0%	5	25.0%	4	20.0%	2	10.0%
In-country cutting and polishing of mineral	1	5.3%	3	15.8%	4	21.1%	6	31.6%	5	26.3%
Promoting better waste management	11	55.0%	5	25.0%	4	20.0%	0	0.0%	0	0.0%
Local grading of mineral	5	26.3%	4	21.1%	3	15.8%	6	31.6%	1	5.3%
Smelting locally	8	40.0%	2	10.0%	3	15.0%	4	20.0%	3	15.0%
Refining plant	5	25.0%	6	30.0%	2	10.0%	4	20.0%	3	15.0%
Making craft jewellery or ceramic pottery	1	5.0%	2	10.0%	7	35.0%	5	25.0%	5	25.0%
Investing in metal fabrication	4	21.1%	2	10.5%	2	10.5%	7	36.8%	4	21.1%
Protecting the physical environment	12	60.0%	6	30.0%	2	10.0%	0	0.0%	0	0.0%

India is identified as having IT as its biggest competitive advantage with 57.1% of scores. It is strange though that only 38.1% of the respondents found "manpower" to be another competitive advantage for India, although it is the second most popular country in the world after China. The biggest competitive advantage for China has been found to be industrial development [12] [29] with 57.1% of scores, followed by "manpower" and IT scoring 42.9% each. The highest competitive advantage for SA was found to be "democratic institutions" with 66.7%; equally so, "natural resources" scored the same. As SA seeks to prioritise infrastructure, mining and mineral beneficiation [30], IT infrastructure will be crucial going forward. More on mineral beneficiation is presented in the following section.

Table 10 above shows output that address beneficiation of minerals in South Africa.: organising mining skills training (90%); protecting the physical environment (90%); and promoting better waste management (80%) are among options needed in the mining sector. These outputs are found by combining scores. The literature shows that mining companies are compelled to comply with the laws of South Africa with regard to skills transfer, environmental protection and safe disposal of waste [31]; The Mineral and Petroleum Resources Development Act 28 of 2002) [32].

Information Technology

Emerged themes covered a variety of issues including the cutting-edge technology and the fourth industrial revolution. Information Technology was perceived to be the way to go and was one of the key issues in the last BRICS summit

(Interviewee no. 4 and Interviewee no.7). It is important to note that the government seeks to develop the infrastructure [30]. Pickering and Porter [29] agree with the interviewee no.4 on the need to promote ITC.

Socio-Economic Impact of BRICS and Mineral Beneficiation

It was felt by a few that the influence of China is too much. Xi [34] elaborates on how influential China has become. Furthermore, the burning issue in South Africa is that of economic transformation. All the participants agree on transformation (Interviewee no. 1 to Interviewee no. 8). There was a feeling that the country needs to do more beneficiation gradually and responsibly (Interviewee no. 4 and Interviewee no.5).

Preventative measures are in order and more Health Excellence Centres are needed to counteract such pandemics should there occur, or in the future to help countries in need (Interviewee no.5). The advent of Coronavirus disease in 2019 (COVID-19) is novel and requires the attention of all stakeholders.

Politicians are not immune to corruption [36]; [37]. Therefore, an integrated approach should be the way forward. A total of 50% of the respondents were employed at directorship position (Director or Deputy Director). Suffice it to say that participants were South African both black and white.

Mining Policy

A total of 66.7% of the respondents were involved with mining policy at one stage or another. Of the respondents, 37.5% of the interviewees worked for an organization concerned with mining policy implementation. It was held that there is no common policy for BRICS partners even on mineral beneficiation issues (Interviewee no.1 and Interviewee no.3). They represented 62.5% of the respondents. BRICS is relatively new, and that is why each and every member country operates according to the laws and regulations specific to its jurisdiction, and more so according to own national mining policies. Participants stated:

- We are the custodians of SA foreign policy implementing, communicating and coordinating; or
- As custodians, we inform the policy making or policy formulation (Interviewee no.1 and Interviewee no.8).

BRICS, Globalisation and Beneficiation

Minerals such as uranium, coal, oil and gas had a low frequency score. It was noted with regret that although the BRICS seeks to innovate, certain companies are frustrated in the process. Minerals in the BRICS countries were extensively reviewed [26]; [51]; [38].

As a striking part, a respondent stated: "Global political environment is not good for beneficiation. This summarises the effects of globalization on mineral beneficiation. Our minerals are not only geared towards the BRICS countries" (Interviewee no.5). The Brics strategy [39] presents another story. Other commentators would disagree with this finding favouring instead globalised deals, and states that there is nothing wrong with globalisation.

Consumer Versus Producer Countries

The following issues were raised:

- BRICS strategy preparation is important (Interviewee no.1, Interviewee no.2 and Interviewee no.3);
- The Republic of SA is number one in mineral processing;
- We would like to benefit more from our minerals;
- Raw materials don't add value if not processed nationally (Interviewee no.4 and Interviewee no.8);
- Mineral mapping by individual states; and
- Consumer countries are Japan, South Korea, the EU, USA and they have their own mining policies (Interviewee no.5).

Bilateral versus multilateral agreements

The outputs below depict what had happened in the past:

- A MoU Russia-South Africa on PGM & Palladium was signed;
- In 1977 India-South Africa signed a MoU;
- The EU has gotten in place on emission Euro-standards whereby cars are to be adapted to those standards; and China & South Africa diamonds works happen to be a reality now (Interviewee no.5).

In addition, capacity building came to the fore as a need: "What they know we should also know in order to move together" (Interviewee no.8). The SWOT-analysis and the PESTEL-framework developed with BRICS in mind identified areas where training would be necessary [12].

It was established by all (100% of respondents) that cutting-edge technology is technically the future, Interviewee no.7 added that it is the way to go and nothing can help the country compete internationally more than embracing IT or Information, Communication and Technology (ICT).

Policy and Competition

Other statements were uttered including:

- We need policies that prevent the exploitation of one country by another; and
- The balance thread will lead to better partnership (Interviewee no.4 and Interviewee no.8).

Multilateralism is being advocated for by China [41]. Corradi and Verzelloni [21]; [34]; [43], [7] are a testimony to the need to synergise for policy coordination.

Challenges in South Africa Include

Rich-poor disparity; BBBEE; Beneficiation; Marikana massacre effects; Mining safety; The mining industry legacy (Apartheid). Threat of disease**;** Helping the people who are already affected by the virus (Interviewee no.1, Interviewee no.2, Interviewee no.3, and Interviewee no.4).

The challenges above and suggestions on how to deal with them are consistent with many authors' views [37]; [36]; 44]; [12]; [45]; [46]; [47].

For example, the gradual mechanisation of mines, advocated by some industrialists, implies that workers are going to be laid off in the future (Interviewee no.5 and Interviewee no.7). The reviewed literature supports to some extent this view [4]; [5]). One then is led to ask: do mining companies try to escape their social responsibilities?

Commodity Markets

South African platinum is being sold to foreign countries and this impacts negatively on beneficiation activities. It was in addition argued that, the fact that the producers of minerals do not set the commodity price, economic logic is being defied, and the impact of price abuse prompts the demand in favour of beneficiation in SA (Interviewee no.5). This is in contrast to the assumption that exports lead to economic growth [48].

A different approach to work is needed, as a participant summarised it:

> *We need to actually start to work toward implementing what is required so that the people can benefit. The emphasis should be on infrastructure development and mineral beneficiation; and for that there is a high expectation. Even the NDB projects should focus on beneficiation and skills transfer. Beneficiation is important because it prioritises own operations (Interviewee no.7).*

The finding above is consistent with the benefits of beneficiation as studied in this research [49]; [50]. Hereafter, the matching findings are grouped in categories before discussion.

Biographically Common Issues and Policy Formulation

Managers or decision-makers formed the largest grouping of participants for both the survey and the interviews. All participants were intellectuals with tertiary qualifications, and to a greater extent they were expert in their fields.

Gender-wise, the study was male-dominated, although there was no indication as to whether or not gender played a role in the manner they responded. The policy of the government of SA is gender equality or 50-50% gender parity. Similar situation as it unfolds in the Russians industrialisation is also studied [51]. Of the BRICS countries, SA outruns the rest in terms of women's emancipation although SA ranks 15th globally and fourth in Africa [52]. 25-30 years of employment at maximum could be reached.

The BRICS operations are based on existing country trade and economic policies rather than on a common partnership policy. There is not an agreed upon mineral beneficiation policy of the BRICS [7] currently.

Common Findings on Challenges and Proposed Solutions to The Challenges

These include the following: global economic effects; labour unrests; shortage of electricity; and lack of sufficient gainsharing. Disparities between quantitative and qualitative data findings were also challenging albeit slightly. The similarities outweighed the differences in the given responses.

The following were suggested by both the surveyed respondents and the interviewees: BRICS activities can be improved through collaborative synergies; gradual and responsible mineral beneficiation; capacity-building; mining skills training; and gainsharing.

Quantitative data was analysed with SPSS version 24.0. Descriptive statistics in the form of graphs cross tabulations and other figures were presented for the purpose of analysis. Inferential statistics were also derived, and this allowed correlations and chi-square test values to be interpreted using p-values. The highest levels of disagreement were found on secondary mineral recycling; mining projects; and mining exchange programme. Thematic discussions of qualitative data followed and were aimed at reducing the amount of data. Based on the findings, there is a significant correlation between the findings obtained through the survey questionnaire and the responses obtained via the interviews.

Conclusion

This study explored the effects of BRICS partnership on mineral beneficiation in South Africa. It looked into the issue of mineral beneficiation in the context of BRICS and addressed relevant theories to the study including international trade and co-operation theories. Using mixed methods, the investigation into the perceptions of mining companies' management and government officials who deal with BRICS and/or mineral beneficiation yielded the results herein presented. It was established that mineral beneficiation becomes successful when both downstream and upstream beneficiations are the focus of public-private engagement, and when the beneficiation infrastructures are in place and user friendly. Data mining shows that a mathematical model was possible and is herein presented. The main finding was that gradual mineral beneficiation should be the way to go for the BRICS engagement in South Africa.

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Chapter 3

A comparative study of selected African ports and Ports within a BRICS-specific Port (Durban, South Africa)

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Abstract

At its simplest, this article addresses issues associated with the economic role and functions of seaports. A seaport may be seen primarily as an interface between sea and land-based modes of transport; it is mostly a firm on its own, created to facilitate trade and economic activity by keeping at minimal level the cost of transport services. Last, as an economic actor, a seaport can induce the economic activity within the city as well as within the region where it is located.

To fulfill its economic role, a seaport must provide marine and cargo-related infrastructure to allow ships to load, discharge, distribute, store and add value to transported cargo. As any other economic actor, a seaport sells its service to the users to whom a price is charged for the benefit of using its infrastructure and/or services. Setting a tariff or fixing the price for the facilities and services provided by a seaport is a complex and challenging exercise. There are principles and rules to be observed if one has to present a tariff for a given port.

A detailed interrogation of the principles and rules to be observed in setting a rational basis for efficient port pricing lies at the heart of this paper. An acceptable port tariff structure is understood in this context to be one that takes into account the actual cost of providing port facilities and service; one that treats equitably the various parties benefiting from such facilities or service; and one that contributes to trade facilitation. The particular context in which the present study is conducted and where this conceptual framework is applied, is the ports of Douala and Matadi in Central Africa.

Keywords: Maritime management, economics, Douala, Matadi, infrastructure development

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Interest on The Port of Douala and Matadi

The focus on these ports is motivated by two reasons: theoretical and practical.

Theoretically, the intention of the research is to understand the basis for any significant difference in the tariff regimes for these two ports, which otherwise present some physical similarity – both ports are found in developing economies, and both ports are upriver ports linked to the sea via an access channel - in the light of sound marine pricing theories. In fact, there exist very few studies conducted and papers written on African ports; it is the intention of this dissertation to make an analytical contribution on the way some African ports are actually facing the new challenges of global trade.

From the practical stand point, in the wake of the construction of a deep-sea port at Banana in DRC, there is a pressing need to reform the port sector in the DRC as it has also become imperative to restructure all the public enterprises in that country; this study may be a contribution to present efforts aiming at transforming Congolese ports into modern economic entities. In this context, the port policies, management type and tariff structure associated with the port of Douala may in some respects be presented as a model to be followed in the DRC, while some of the overarching dimensions of port governance and port pricing in South Africa and other BRICS countries may also be advanced as a possible benchmark for the Central African ports in question.

1. Seaport Basics

This section deals with fundamentals regarding seaports: definition, functions, types and status of a seaport; in the last part, general principles and practice of port pricing are discussed. Even if Douala and Matadi are ports located on the bank of fresh water rivers, they still qualify to be called seaports in the sense that they handle ocean-going vessels engaged in mainstream seaborne trade.

In general terms, a seaport is a place where people and merchandise can leave or enter a country by sea. According to Haralambides and Veenstra [1], there is nothing that can be rightly qualified as port and there is nowhere to find two or more identical ports: a protected patch of sea on which a fisherman stands to cast his nets, a single jetty alongside which a vessel moors to load or offload cargo and a huge industrial complex connecting the sea to railway lines and roads can all rightfully be described as a port.

For the purpose of this paper, a port is an interface between land and sea transport; it is also an important element of the supply chain. In order to better understand the reality described by the word port or seaport in economic terms, it is appropriate to look at what are the functions fulfilled by seaports.

1.1. The Economic Functions of a Seaport

To allow a seamless transfer of goods and people from one mode of transport to the other, a seaport requires a piece of land, marine infrastructure, cargo-handling equipment and labour. In an attempt to establish the real economic function of a seaport, port economists have also helped clarify the role played by seaports in today world. They have identified three economic functions for seaports [2] [3]:

1. A seaport is a provider of increments to producers' and consumers' surplus;
2. A seaport is a generator of employment in its locality;
3. A seaport is a firm like any other aiming at minimizing costs and maximizing profits.

In simple words, the primary function of a port is to facilitate the transfer of goods and people from the sea-based mode of transport to the shore and vice versa. If a seaport efficiently fulfills this role, producers of goods exported will benefit from the income derived from the sale of their goods; likewise, consumers of goods imported will have their needs satisfied. As rightly put by Goss, "a measure of the economic efficiency of a port is the aggregate cost of passing cargo through it". In other words, the basic function of a seaport is to minimize the generalized costs of transport and promote trade. An expensive port induces high costs for goods transiting through it and therefore it contributes to diminishing producers' and consumers' surplus. The high costs can be quantified in terms of time, money and risk.

The second function of a seaport is to energize economic activities in its immediate and wider port hinterland via the provision of employment for people living in its locality and around it. This employment can be directly linked to the port activity itself (cargo handling, service to ship, cargo storage, cargo packing, etc.) or to the activity of producers' and consumers' benefitting from the vicinity of the port installations.

The last function of a port is to minimize the aggregate cost of transport and to maximize profit as a self-standing firm. As such, a port offers a service to its customers and is expected to optimize the profit for the benefit of its owners.

1.2 Typology of Seaports

Seaports are classified following two perspectives: a static perspective and a dynamic perspective. The static perspective categorizes ports according to the nature of cargo handled, depth of water, port ownership and the relationship between the port and its catchment. The dynamic perspective takes into account the evolution of the port-related activities and the behavior of port users over time.

From the static perspective, following types of ports can be found: industrial port, common-user bulk port, liner ports, transshipment or hub ports and main ports. [4]

An industrial port is one that is bulk commodity oriented, generally owned by private interests and located close to the source of the product to be transported. It enjoys deep-water draught and handles big volume of cargo. It is generally an extension of mining industries.

A common-user bulk port is also a commodity-oriented gateway but serves for the handling of one or many bulk commodities as well as general cargo; it is generally managed by a port authority or by a partnership between public and private sectors. Like the industrial port, it also enjoys water depth and handles big volume of cargo; it is located close to sites where the commodity transported is extracted or produced.

A liner port has a more diversified traffic base and multiple quays and terminals. It is a general cargo port, necessitating substantial cargo-handling and cargo-storing facilities. It may be owned by public powers or by private interests or by both; it is strongly linked to the local host economy; such a port is generally labor-intensive operation.

A transshipment or hub port is an extension of the seaborne activity in the sense that the main focus is placed on container operations; this is in opposition to the industrial port, which can be considered as the extension of land-based activity. A transshipment port is more related to major carriers rather than to the host economy; it is usually located at crossroads of major trade routes and serves as a focal point for 'hub and spoke' liner operations.

A main port has a diversity of bulk and liner activities. It offers advanced cargo-handling and cargo-storing facilities; it can play the role of a hub, as it is linked to the economy of cities and localities surrounding it via an integral logistic support. It enjoys deep-water draught and can be managed by a strong port authority, supported by a mix of public private partnerships in terminals and other facilities management. As it stands, the main port is in competition with other ports of the region for the hinterland cargo.

For the dynamic perspective, following types of ports are listed: port city, port area, port region and port network. This approach of port classification was devised by the United Nations Conference on trade and Development Report [5], and further elaborated by van Klink. In fact, this typology is history oriented; it provides a picture of how most ports of the world have evolved over the time.

According to van Klink [6], the port city is the heart of trade and small-sized industry. The flow of international trade is very limited and concerns only general cargo (food and energy commodities). It is a shallow port, placed under the supervision of a port authority whose main task is to provide nautical services. The UNCTAD report 1992, with its concept of port generation, locates this type of ports on the period before 1950.

The port area functions as an industrial complex, with an increased international trade of raw materials. The port is surrounded by industries, which are the prime users of its services. The port authority provides capital-intensive equipment for cargo handling, as well as port grounds and infrastructure. This is the second generation of ports, situated by the UNCTAD afore-mentioned report during the period between 1950 and 1980.

The port region is a commercial and industrial center, further characterized by an increased cargo unitization and by the container revolution. The port operates in a wider and more diffuse hinterland in which it must compete with other ports for the cargo; as the latter is transported in containers, port ancillary activities such as consolidation and distribution of goods are located farther from the quays. It offers an integrated system of data collection and procession. The main task of the port authority is marketing: in a context of increased competition with other ports of the region, the survival of the port depends on the quality of services it may offer to its customers. This is the third generation of ports from 1980.

The port network is the fourth generation of seaports since 2000. It is an advanced and dominant main port in a borderless and globalized economy, supported by technology innovation, the logistic integration, the removal of trade barriers, the individualization of demand and the rise of information technology. The port network faces demand from society in terms of environmental issues and greater concern of quality of life. Within a network port, physically separated terminals form a network and are linked through common operators or through a common administration. Port-related activities relocate from the port, under the influence of attraction and repulsion forces (push and pull factors): congestion, environment issues, labor practices, low property costs, quality of life and market access.

1.3 Management of Seaports

After discussing different types of seaports on previous section, it is important at this stage to look at how seaports are managed. We will consider the management type of a common-user port, not that of an industrial port.

Microeconomic theory and commonsense dictate that there should be some sort of public involvement in the management of seaports. Goss has identified 5 reasons has to why the Public powers should be involved in seaports management [7]: Property rights; Planning needs; Provision of public goods; Externalities; Economic efficiency.

Given the specific nature of a seaport to be dealing with land-based and sea-based modes of transport, the question of who has legal title to “areas of water, the vertical column beneath it, the seabed or anything beneath it” arises. The solution can only come from the existence of a body, instituted by legislation and bestowed with property rights on the land and sea areas devoted to port activity, to build port structure.

The second reason for having a port authority is the need to plan the construction of port infrastructure, the road or rail access to port premises by cargo and port-users and mostly the planning at national level, of transport corridors and regional development requirements.

Since port structure requires massive investments, unlikely to be provided sufficiently and satisfactorily by private interests, it follows that seaports present a strong case of a public good and therefore to be provided by the public power. The main characteristics of public goods is that there may be used jointly and in a non-rivalrous way by many consumers at the same time; there is no way to exclude from consumption those who refuse to pay. Seaports present these characteristics and should therefore be provided by a public body.

Dealing with side effects resulting from the seaport activities - that is, economic externalities – also establishes a reason to institute a port authority. Positive or negative externalities of the port’s activities (e.g. congestion, safety, security of goods and people), must be dealt with a body vested with enough powers in this respect.

Last, the port authority is rendered necessary by the need to regulate potential monopolist behavior for some port-users. In a monopolistic situation, there exists an inefficient allocation of resources, with the result that the monopolist maximizes his profits to the expense of the consumers. A port authority is required to protect the interests of all port users. However, where authorities find themselves operating as monopolistic actors, the need arises to create a port regulator as a body to oversee the practices of the port authority itself.

The question at this stage is not of whether a port authority is necessary – preceding paragraphs have clearly exposed arguments as to the importance of a port authority – but under what format such a body should exist.

A port authority can be controlled at three different levels of public governance: at local or municipal level, at provincial or regional level or at national level. In reality, there are no watertight categories of control exercised on port authority as there is a great diversity within and across countries.

A local or municipal port authority is controlled by local decision-makers body such as a city council; the main decision regarding port investment, capacity development or planning are articulated with the basic needs of the local community.

A provincial or regional port authority is controlled by the decision-maker of the province or state concerned.

A national port authority is controlled at the national government level, which exercises a strong control over the transport system: roads, rails, pipelines and airports. This category of port authority presents the advantage of ensuring a better planning of transport infrastructure nationwide and prevents from the risks of overcapacity or duplication of investment.

Besides the nature of control exercised on port authority, it is important to look at the functions of port authorities. According to the main tasks fulfilled by a port authority, the latter may be a landlord, a tool port or an operating port.

A landlord port authority is responsible for the provision of port infrastructure only. A tool port authority provides the port infrastructure and superstructure. An operating or comprehensive port authority also provides cargo-handling services, on top of the provision of infrastructure and superstructure. In reality, there exist hybrid arrangements, where public and private sectors work in partnership for the supply of port services.

1.4 Port Pricing

Port pricing is the mechanism through which port managers determine the price for the selling of their services. This price is commonly reflected in a set of port tariffs or tariff "book". To understand this mechanism, we will discuss the general principles for port pricing as they exist in the literature; thereafter, we will look at the tariffs themselves in practice.

General Principles

In a paper outlining pricing practices in USA and Canadian ports, Dowd & Fleming [8], have argued that port pricing does not exist as an isolated item; port pricing is "*a major factor in the implementation of a port's strategic plan and an element of the port management concept*" [8]. It interacts and supports two other elements of port management, which are:

- Port's planning, development philosophy, goals and objectives;
- Port's investment criteria and policies.

Put differently, port pricing is the reflection of port's goals and objectives and an expression of its investment policies. This means that for a better understanding of pricing practice at any given port, it is important to look at that port's planning and investment policies. According to this paper, there are three approaches to port pricing: economic, financial and public enterprise approaches.

The economic approach is based on marginal cost. This is the economically efficient approach. The financial approach is used by port aiming mainly at profit maximization; it sets the price at level allowing the recovery of fixed and variable costs. The public enterprise approach "argues for prices to be set to recognize the need for the port to be a means to foster local development and existing local, regional and/or national economic activities". This approach aims at throughput maximization and can call for subsides on certain operations or port function to attract cargo.

On their part, Haralambides & Veenstra [9] explain the importance of port pricing in maritime economics: price can make or break a port; high tariffs will chase potential clients away, while low prices may not allow return on investment. Since a port is an oligopolistic firm, port pricing is a strategic pricing, in the sense that it is fixed in order to achieve certain objectives: profit maximization, throughput maximization, generation of employment and economic activity, regional development, minimization of ship time in port, promotion of trade.

However, due to the globalization process and to the trade liberalization, the value and the volume of goods exchanged have drastically increased and the demand for port capacity has also accrued; this has brought competition among ports. Therefore, competitive ports will be those pricing their infrastructure and service in a cost-based approach (short-run and long run marginal cost); in the long run, efficiently run ports should allow for cost recovery. For ports facing little competition or those serving local industry as an important center of regional development, the need to recover infrastructure development costs is not stressed out; these ports are simply considered as public goods, generating major economic activity in the area (trade, employment).

Cost-relatedness and full cost recovery are easier said than done. A port is a multi-product firm and prices for many of its services are often bundled in port dues. It is therefore difficult to apportion such costs to port services. The difficulty is aggravated by the inability to measure port costs, especially the marginal cost: absence of reliable statistics, diverging accounting systems, lack of transparency on financial flows between the port and its institutional owner.

Haralambides and Veenstra consider that the consistent application of marginal cost pricing in ports could eliminate deficit and the need for public funding; this could lead to an efficient allocation of scarce resources and achieve a level playing field for competing ports. They demonstrate this by presenting a detailed analysis on port excess capacity, short and long run marginal costs, increased returns to scale, costs recovery through marginal cost pricing, before concluding that today, measuring long-run average or marginal cost is equal to forecasting a port throughput. Further, they explain that there is no need to endorse marginal cost pricing if the rest of the infrastructure (roads, railways) does not follow; efficient port pricing cannot be seen in isolation, but only through a general equilibrium approach.

In substance, Haralambides and Veenstra argue that "*cost recovery and pricing of port services are complex and controversial issues, both technically and conceptually*"; they are at cross-roads of development and provision of infrastructure, economic development, public investment, fiscal policy, role of the State in the economic activity [10].

The last study worth considering when discussing general principles on port pricing is that of Khalid Bichou in his extensive analysis of Port operations, planning and logistics.

Bichou [11] indicates that there are three approaches to port pricing: cost-based pricing, congestion pricing and strategic pricing.

The cost-pricing approach sets port tariff based on marginal or average costs;

Ramsey pricing and multi-part tariff is also a variant of the cost-based pricing.

Congestion pricing consists in levying a congestion surcharge to reduce port congestion.

Strategic pricing is based on the premise that pricing can be used as a tool to promote port competition; this approach involves a certain degree of price discrimination, for instance by shipping service, by type of traffic or by cargo value.

Port Pricing in Practice

According to Bichou, "ports and terminal operators are hard-pressed to negotiate port dues tariffs charges with shipping Lines and other port customers and users in today's highly competitive and commercial market places, as ports become more aware of the structure and evolution of their cost base, modern approach for tariff setting rely on management accounting data, rather than on traditional pricing by historical accident" [12].

In this context of fierce competition between ports, port tariffs are generally negotiated with major global carriers and service contracts are put in place for this category of port users, by contrast with the general tariff applicable to any user.

When it comes to the structure of port charges, Bichou makes a distinction between user charges and service charges. User charges "*are directly related to the port user or customer and to the nature and objectives of the utilization of a port's infrastructure*".

On the other hand, "*services charges refer to the charges relative to the use of different port resources, facilities and services*". Channel and port dues payable by a calling ship may be regarded as user charges, while pilotage and towage charges can be classified as services charges.

As an illustration of port pricing in practice, Bichou gives an example of Salalah Container Terminal Tariffs 2008, where a single charge named consolidated marine charge is levied per ship length overall on any vessel calling at the container terminal. This consolidated charge is deemed to include pilotage, tug, berthing and unberthing charges, port dues and daily sanitary charge.

In the course material of Applied Port Economics [4], Professor Jones asks two fundamental questions:

- What are the principal facilities and services a modern port provides for its users?
- What are the costs associated with these facilities and services?

In response to the first question, we note that a modern port provides a marine infrastructure and marine services to its users; the marine infrastructure consists of approach channels, water depth, breakwaters, turning basins, quay walls, berths an sometimes locks. The marine services are pilotage, towage and mooring.

The costs associated with these facilities and services are listed hereafter:

- Port dues: charges billed to cover the costs resulting from the provision and use of approach channels, water depth, breakwaters, turning basins, quay walls;
- Berth dues: charges billed to cover to costs resulting from the use of quay walls and berths;
- Pilotage charge: charges associated with the pilot service
- Towage charge: charge associated with use of tugs;
- Mooring charge: charge associated with the mooring/unmooring service.

In other words, Professor Jones states that in practice, port pricing proceeds per specific port function. For instance, port dues are charged in order to finance the marine infrastructure; berth dues are billed as a price for the use of the quay space; wharfage or cargo dues are charged in order to finance the use of cargo-working infrastructure. Other marine charges such as pilotage, towage, are usually non-controversial and are in the hands of private operators [13].

The question on what is the right basis to charge port dues, berth dues and other port charges remains open: what feature of the ship characteristics has to be used as the basis of the charge: the ship gross or net tonnage, draft, volume, time spent at quay?

Here again, the answer lies within the port philosophy and objectives, which can be expressed in terms of efficiency, strategy or equity.

A port authority concerned with cost-relatedness (efficiency) for instance will base the port dues on the vessel draft; the idea behind this is to say that the vessel benefiting from considerable water depth should be paying more. However, a port authority concerned with the strategy to attract larger vessels at his port will not make them pay more, if they have a considerable draft; the cost of an additional vessel passing through port channel with a set water depth is close to zero. Last, a port authority promoting equity through its tariffs will attach an importance to the principle of benefit (those benefiting from facility should pay and not all the users) and to the principle of the ability to pay (a user is charged according to what he is able to pay).

An overview of port pricing general principles and practice has led us to consider that, when evoking this topic, one has to bear in mind that the following items are determinant to port pricing:

- Port nature (industrial, common-user port) ;
- Its ownership (public or private) and its role in a particular national context;
- Its philosophy, objectives and goals;

- The facilities and services that it offers;
- The way in which it associates cost to these facilities and services.

We will keep in mind those principles and practice when perusing Douala and Matadi port tariffs. Mostly, we will try to find out if there is any similarity in the guidelines, layout and contents of these port tariffs

2. Comparison of Tariff Base and Port Charges on the Two Ports

Using the vessel *Stadt Dusserdorf* as a tool to measure the level of port charges in Douala and Matadi, we have noted that overall, calling at Matadi is six times more expensive than calling at Douala. Where the ship owner is expected to pay 6 464 euro as port charges in Douala, in Matadi the charges are estimated at 42 610 euro. Why is it so? Why is the port of Matadi so expensive? Is there a cost element not taken into account in Douala tariff? Is the difference in the tariff structure due to the nature of strategies and objectives set by respective port authorities? What are these strategies and objectives?

In an attempt to respond to these questions, we have identified hereafter the components of ports charges that present remarkable differences:

- ✓ Pilot charges: 1 180 euro in Douala, as opposed to 5 652 euro in Matadi (Matadi is 4 times more expensive than Douala);
- ✓ Harbor dues: 291 euro in Douala against 2 763 euro in Matadi (Matadi is 9 times more expensive than Douala);
- ✓ Channel dues: 2 402 euro in Douala as opposed to 36 778 euro in Matadi (Matadi is 15 times more expensive than Douala)
- ✓ Towage charges: 1 087 euro in Douala against zero charge in Matadi.

Other moderate differences concern mooring, security and cargo dues.

2.1 Difference on Pilot Charges

Pilot service costs four times more in Matadi than in Douala. In Douala, pilot charge is based on the ship's cubic capacity and is made of two components: pilot charge for day or night time and pilot bonus. This is straight forward. In Matadi, pilot service is based on ship gross tonnage and has four cost elements: basic pilot charge, pilot charge per number of days spent on board the ship, pilot charge for embarking and disembarking the pilot and the unofficial pilot bonus.

In Douala, the pilot boards the vessel from the entrance of the channel and guides the ship captain until the ship berths. The channel is 50 km long and can be covered in few hours. However, the distance between the mouth of Congo River and Matadi is 133 km; with the heavy current downstream, a ship may require many hours to reach the port of Matadi under pilot supervision.

The tariff base used in Douala and Matadi is another parameter that may explain the difference on the level of charge paid: a rate per ship's cubic capacity in Douala as opposed to a lump sum in Matadi. The apparent reason to fix the lump sum on pilot charge at the level it is in Matadi is to collect more payments from the callers, in order to optimize CVM (La Congolaise des Voies Maritimes) revenue. In basing the pilot charge on the ship's cubic capacity, the PAD (Port Autonome de Douala) seems to be aware of the principles of efficiency and equity: pilot charge paid by ship owner varies with the physical characteristics of the ship; bigger vessels will pay more pilotage charges than smaller ones. Moreover, a night time, weekend or public holiday pilot service attracts a 50% additional surcharge; this makes a lot of sense as working outside normal hours (08h00 to 16h30), on weekend or during public holiday requires additional remuneration for the staff involved in most labor legislations. The lump sum charge levied by CVM in Matadi for pilot service ignores the necessity to take into account the size of the ship and the time of the day when a pilot service is required. Port user ends up paying more in Matadi than in Douala in terms of pilot service.

2.2 Difference on Harbour Dues

Harbor dues are nine times more expensive in Matadi than in Douala. Both port tariffs use the ship gross tonnage as the basis for the calculation of the harbor dues. The rate per unit is the reason for this difference: 0.29 euro per gross tonnage in Matadi against 0.030 euro per gross tonnage in Douala. Harbor dues are collected by port authorities to finance the port infrastructure that serves to accommodate the ship during her call: approach channel, water depth, turning basins. In the case of Matadi, harbor dues also cater for the use of berth during discharging and loading operations. Berth dues were previously levied per ship gross tonnage (not per ship LOA and per day of berth occupancy) according to Onatra tariff; they have since been cancelled from the tariff during the 2010 revision. In Douala, harbor and berth dues are two separate items of the port charges; put together, they cost 777 euro to *Stadt Dusseldorf* in respect of the port call in Douala, whereas the harbour dues paid in Matadi represent 2 763 euro. As for the pilot charges, the objective of collecting the maximum revenue from the callers seems to be the main drive for CVM tariff. This clearly contrasts with the absence of investments in recent years to maintain or upgrade the marine infrastructure.

2.3 Difference on Channel Dues

PAD tariff levies a charge especially dedicated to finance the dredging of 50km long channel leading to the port of Douala. The tariff basis is the ship's volume; frequent callers of more than 50 000 cubic meters qualify for an annual rebate. CVM tariff, on the other hand, levies a general tax destined to cover dredging costs and beaconing fees. This general tax is based on ship gross tonnage and provides no rebate to frequent callers. A reduced tariff applies for ships at anchorage for bunkering or for loading or discharging crude oil and for ships loading or discharging cargo, the tonnage of which is equivalent to not more than one quarter of her GRT (Gross Registered Tonnage).

For the vessel under consideration, the channel dues are 15 times more expensive in Matadi than in Douala. For a vessel operator, this charge is the most important item of port charges in Matadi. Dredging and maintaining water depth on the 133 km leading to the port of Matadi is indeed a very challenging and resource consuming task.

However, it would make more sense to base this charge on ship's characteristic such as her draught or cubic capacity instead of calculating it on the basis on her gross tonnage. A ship draught is one of the determinants of her cubic capacity; the two other being her LOA (Length Overall) and her beam. The gross tonnage is the "internal measurement of ship's open space" [14]. The internal and open space in a ship has no direct relationship with the use of water depth; it therefore makes no sense to base channel or beaconing dues on ship's gross tonnage. Further, it would even be better if dredging and beaconing costs were known and the channel dues level directly related to these costs.

As things stand, the rationale for setting the general tax in Matadi at its actual level is to collect as much funds as possible from ship owners; however, in spite of collecting so much general tax from ship owners, there is no clear plan for maintenance dredging on the Congo River [15]. Moreover, CVM has no dredger of its own and always struggles to find funds necessary to pay contractors engaged in Congo River dredging activities [16]. On the other hand, PAD collect so little channel dues per caller, but has been able to buy and operate a dredger of a capacity 630 cubic meters; it has even signed a five-year contract with Jan de Nul for maintenance and deepening dredging.

2.4 Difference on Towage Charges

Despite a heavy current downstream on the Congo River, vessels dock and undock without towage assistance. The ship's captain maneuvers under the supervision of the port pilot. This may be seen as a cost-saving from the ship owner view. In the port of Douala, towage service is offered and is based on ship's gross tonnage and per hour. Towage is a compulsory service in this port; all container ships of over 180 m LOA and not equipped with a bow thruster must be escorted by 2 tugs. Towage service offered during night time, weekend and public holiday is 50% more expensive than the one offered during normal week hours. A tug line is also to be hired each time a ship is being towed.

In Douala, the towage service is performed by a private operator named Boluda. This activity has been privatized in December 2003 in application of a public-private partnership agreement, for a period of 10 years. Provision of towage service is subjected to VAT charge of 19.25%. Boluda is also offering mooring service.

2.5 Difference on Mooring Charges

Mooring is one of the services for which the port of Matadi is less expensive than the port of Douala: 116 euro in Matadi against 249 euro in Douala for the ship under examination. Here this service is offered by the private operator, Boluda as part of a PPP agreement. In Matadi, mooring is offered by seamen operating under the umbrella of Congolese Seamen Club, Pool des Marins Congolais. The latter was created in 1993 by a Government decree as a specialized service within The National Agency for Employment, which reports to the Ministry of Labour and Social Security, to take care of seamen's welfare and protect their interests.

In Matadi, all vessels, irrespective of their nature and size, are billed a lump sum of 77 euro for attaching and securing them against the wharves, plus another 39 euro for detaching them. There is no reference to cost incurred to provide this service during day or night time, on weekend or during public holiday. In Douala, mooring charges are levied on the basis of ship gross tonnage. Service rendered during night time, weekend and public holiday attracts an increase of 50% on top of the charge billed during normal hours. As for the tug service, mooring attracts VAT in Douala.

2.6 Difference on Ship Security Charges

The security of the ship while on port premises is also part of port tariff. In Douala, the security of the ship is provided by PAD and is billed as a lump sum per day, irrespective of ship nature and size. In Matadi, the security of the ship is provided by the Seaman's club. This organization posts as many watchmen as required and bills a lump sum of 8 euro per watchman per day. For the sake of illustration on vessel under study, we have considered a gang of eight watchmen working for two days in two shifts. This service is also cheaper in Matadi than in Douala: *Stadt Dusseldorf* ends up paying 64 euro in Matadi and 152 euro in Douala.

2.7 Difference on Cargo Dues

Cargo dues are normally designed to finance cargo-working infrastructure such as road and rail access, landfill, cargo aprons. Cargo owners are the ones benefiting from the cargo-working infrastructure and therefore, should be the one paying these dues. In Matadi, a ship owner pays no cargo dues on merchandise discharged or loaded. This charge is directly billed to merchants by SCTP (Société Commerciale des Transports et des Ports). In Douala, this is not the case. The port authority includes on its bill of port charges to ship owners a charge on cargo discharged or loaded. This charge is based on cargo weight, not on cargo value. For a vessel discharging 2 500 tons and loading 2 000 tons of cargoes, the charge payable is

617 euro.

3. Conclusion

Section 2 has put an emphasis on differences noted when comparing the price of marine infrastructure and harbor services in the ports of Douala and Matadi. The extent of the difference is such that we are given to believe that none of the parties responsible for the determination of tariff levels takes into account the principles of efficiency, cost-relatedness, transparency and competitiveness. In our view, PAD and CVM are two public organisms, controlled at national level and tasked by the Public Powers to manage the respective ports following the public enterprise approach. As stated on Section 1, the public enterprise approach “argues for prices to be set to recognize the need for the port to be a means to foster local development and existing local, regional and/or national economic activities” [17]. It aims at throughput maximization and can call for subsides on certain operations or port functions to attract cargo. In this regard, port tariffs have intentionally remained low in Douala and have not been modified over the last 20 years in order to attract more calls; the increasing cost of operating the port infrastructure and harbour services is not transferred to port-users. Likewise, in Matadi, the huge revenue collected as general taxes is used as a means to cross-subsidize other port functions such as berth dues, cargo dues and real estate, which should be generating revenue on their own merit. In both ports, the income generated by port activity is regarded as tax or duty, therefore part of public treasury. When necessary, Government officials may draw funds from the port to fulfill other general expenditure needs, or provide subsidies to the port if and when the need arises. Although PAD is an autonomous public enterprise, expected to operate as a private firm, it cannot affect its annual profit to capital investment in port infrastructure without the authorization from the National Port Authority or the National Government. This is clearly stipulation on Decree N° 99/130 of 1999 creating the PAD [18]. Where marine infrastructure and harbor services are priced without consideration of the costs incurred to deliver such a service or where port are subsidized, it becomes difficult to fix the right price and to effectively contribute to reducing the generalized costs of transport.

Decision makers at PAD, CVM and at all other African ports are reminded that it is necessary to respect the principles of efficiency, cost-relatedness, transparency and competitiveness when devising port tariffs. If they fail to do so, they impose additional burden of ship and cargo owners, thus contributing to increase levels of poverty across Africa.

3 A Benchmark for Douala and Matadi Port: Transnet National Port Authority Proposal (Tnpa)

The exercise of comparing port tariffs in Douala and Matadi has put in evidence noticeable difference on the level of charges levied for marine infrastructure and harbour services. There seems to be no clarity and transparency as to rules and principles, policies and strategies justifying the actual level of these charges. This is the case in Cameroon and DRC, but this is also the case in South Africa. In South Africa, the ports system has a long history setting prices below costs for all of the port functions [19]. In spite of efforts to reform port tariff in 2002, TNPA has failed to provide adequate ground to the Port Regulator for the increase of port tariffs over the last few years. This situation has prompted TNPA to devise a proposal on pricing strategy, which takes into account the national policies related to transport and port matters and sets clear principles for a new port tariff.

The TNPA Proposal is discussed in the present section and is proposed as a benchmark that can be used for the ports of Douala and Matadi.

The proposal by Transnet National Ports Authority to revise its port tariff, although inspired by the National Commercial Ports Policy, has been triggered directly by a growing pressure and scrutiny from stakeholders, and from the Ports Regulator in particular, to revise its pricing strategy. It is vital to note that the Ports Regulator is an independent body established by Section 29 of the National Ports Act 2005; its main function is threefold [20]:

- Exercise economic regulation of the ports system in line with Government strategic objectives;
- Promote equity of access to ports and to facilities and services provided in ports;
- Monitor the activities of TNPA to ensure that it performs its functions in accordance with the National Ports Act 2005.

The weaknesses of the present tariff structure are identified and listed in the TNPA Proposal in these exact terms [21]:

- Lack of a clear set of principles and rules to be applied in determining the individual tariffs for the various services and facilities;
- Lack of clarity and transparency regarding all operating costs, expenses and revenues incurred or generated from a specific service or facility, as well as the value of the capital stock related to such services or facilities;
- Lack of explanation for differential tariffs for different commodities using the same handling classification;
- Lack of information detail with respect to services or facilities pricing and cost relationships, making it impossible to determine where and in which direction subsidisation takes place or if it does not;
- Lack of information on how the tariff structure promotes access to ports and efficient and effective management and operation of ports;
- High transportation costs in South Africa that negatively impact the country’s

trade competitiveness;

- Increased regulatory pressure for TNPA to fully comply with legislation, including demonstration of transparency and fairness of tariffs and equal treatment of all customers;

- Regulatory pressure on price increase applications by TNPA:

– In 2011/12, TNPA requested a price increase of 11.91% but received a 4.49% increase;

– In 2012/13, TNPA requested a price increase of 18.06% but received a 2.76% increase.

•Increased competition from capital investment in regional ports such as Maputo and Walvis Bay.

To remedy these weaknesses and to enable stakeholders to have a comprehensive understanding of its tariffs, TNPA has embraced four core principles as the foundation for the proposed pricing strategy. These principles are:

✓ *Cost recovery*: port prices to be set at levels allowing recovery of the costs of providing infrastructure or services;

✓ *User pays*: each port user to support the cost of providing the facility or service he uses;

✓ *Required revenue*: tariff level for marine infrastructure and service should contribute to cover the operating costs, depreciation, taxation and generate a margin for TNPA. Since South African ports are self-funded, the margin expected must be proportional to the risk of owning, managing, controlling and administering ports and of providing facilities and services [22].

✓ *Competitiveness*: consider market expectation in setting tariff to allow competition among port users and competition with foreign ports.

Full details provided in the Proposal regarding the methodology used to determine the overall revenue requirement supported by the tariff will not be considered here; this study will concern itself only with dimensions that concern the marine infrastructure and the provision of marine services. Other admittedly important parts of the proposal dealing with cargo dues for cargo owners and the rental of the port real estate for terminal operators are not considered here either. TNPA proposed tariff structure is based on the following allocation of assets:

- Wet infrastructure (fairways, turning basin and seawalls) and marine service (towage, pilotage, mooring): the cost of maintaining the wet infrastructure and of providing marine services is charged to shipping lines via the port dues and respective charge; it is to be noted that the cost of maintenance as opposed to the cost of ownership the basic marine infrastructure is the only charge proposed to be for the account of ship owners. This is a major departure from previous practice in South Africa and is at odds with most other Authorities' practices.

- Common infrastructure (channel, breakwaters, roads, bridges, etc): the cost of owning and maintaining the common infrastructure is recovered via the cargo dues and billed to cargo owners. This is also another radical change.
- Quay walls and land: the cost of owning and maintaining quay walls and the land is recovered from the tenants via the rental or concession charge.

In conclusion, it is not our intention to recommend that relevant Authorities in Cameroon and DRC adopt the tariff structure proposed by TNPA as it is. Instead, our point is to say that port users in Douala, Matadi and South Africa are facing the same kind of problems when it comes to port tariffs: there are no clear principles and rules in place in determining individual tariff, no clarity on costs involved to provide service and facilities, high cost of transport, inefficient provision of port facilities and services, etc.

South Africa provides a benchmark in respect on the institutional context and legal frameworks put in place to address this situation.

In terms of institutional context, South African Government has designed reconstruction and development plans and programmes addressing the socio-economic needs of the country through global and specific policies. These policies give priority to employment, growth, infrastructure development and trade facilitation. On the specific matters relating to ports, the policies formulated affirm in unequivocal terms that these are strategic nodes for trade facilitation and should be efficiently managed to become competitive with the ports of the world.

The principles envisioned by these policies are given effect through the National Ports Act, which establishes the Ports Authority and provides mechanics for the control of its activities and the way its sets port tariffs: this is the legal framework.

In the case on Cameroon, the existence of two presidential decrees creating respectively the National Port Authority and the PAD have been noted; these decrees are said to be made in accordance with the Constitution and the National Ports Act. However, there is no independent mechanism in place to control the activities of the Port Authority or the PAD in so far as the pricing strategy is concerned. The principles of port efficiency, cost reduction, promotion of competition among port-users are well stated in these decrees and remain on paper. There is no entity to guarantee their application on the daily management of ports activities. For example, the PAD tariff provides that a vessel of 17 700 GRT or 50 000 CBM qualifies for a discount on channel dues depending on the frequency of her calls. For the last three years, PAD refuses to grant this discount to shipping lines and there is no mechanism at the disposal of port users, such as the port regulator, to force PAD to respect its own tariff. Another example concerns the number of tugs used. When a vessel qualifies to use two tugs, she is billed for two tugs even if in reality she only used one; there is no recourse for the vessel operator.

In the case of DRC, the institutional context and the legal framework are not contributing to ensure efficient management of transport and shipping activities; the focus is on the efforts to reform public enterprises and the necessity to attract direct foreign investment. If the Government does not articulate clear policies on transport and port sectors, the effectiveness of the current reforms, on the national economy in general and on port users in particular, will be mitigated. For instance, the committee piloting the reform of public enterprises has proposed to maintain the existing dual structure of SCTP and CVM as public bodies in charge of Congolese ports affairs; SCTP will remain an assets management company leasing its assets to private interests, while CVM will enter in PPP agreement with potential investors for the maintenance of the channel. Why not starting by formulating clear global policies and specific policies in respect of national transport system and the ports system? Why not establishing a National Port Authority of the like of TNPA? A few years ago, the port of Matadi was the main gateway for the export of the Congolese mineral production sourced from the Katanga province. Today, Congolese mineral production is exported via the ports of Dar Es Salaam, Beira, Durban, Walvis Bay and very soon Lobito; these ports also serve for imports bound to eastern and southern parts of DRC. The port of Pointe Noire is expanding its facilities and reviewing its accessibility, in order to gain a direct access to the city of Kinshasa via a railway to be renovated between Pointe Noire and Brazzaville and via a bridge on the Congo River. If there is no planning and defining of policies at national level regarding transport and port sectors, hence the contemplated reforms may be vain. If planning and definition of policies are not properly translated into correct port tariffs, the port of Matadi will continue to be managed in the way it is, heading slowly but surely to its extinction. This extinction will be a direct consequence of falling to compete with other ports of the region. It is in this sense that we recommend the institutional context and legal framework that have given rise to the TNPA proposal for a new tariff structure, as the way to go.

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Chapter 4
The Impact of Basel III Regulations on Bank's Lending and Growth Rates in Kwa-Zulu Natal

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Abstract

The purpose of this study is to evaluate the impact of new capital requirements introduced under the Basel III regulations on banks' lending rates and loan growth. The research also explores if the Basel III Accord results in a substantial decrease in the loan growth of the banking sector. Little research, if any, has been done on the new capital requirements.

A qualitative approach was followed, and 10 semi-structured interviews were conducted with credit managers and analyst using open ended questions to gather data on credit, interest rates and the cost of credit within the banking industry. Major findings of the research were that banks have become stricter with credit lending and the consequence was that the loan growth decreased over the past five years. The corresponding strategy for banks was to focus on the promotion of non-credit products to increase profitability.

Keywords: Basil I Accord, Basil II Accord, Basil III Accord, Credit Act, BRICS

Background

Proper assessment of risk is vital for a strong financial market, financial markets that can make capital available to the private sector and investments from sources of loans. Business investment is also crucial to productivity, venture capital,

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well-regulated securities exchanges, and many other financial products. To achieve these above-mentioned functions, banks need to be transparent and trustworthy. Hence, financial markets need the appropriate regulations to protect investors, capital and the economy. A weakness of the National Credit Act was identified in 2004 raise concern on the inadequate rules for the disclosure on the cost of credit. This included the charges and fees involved when taking up credit from financial institutions [1].

Literature [2]; Drumond [4] states that there are insufficient studies on regulatory capital requirements and its effect on the banks' interest rates and the growth of loans. This study makes a benefaction to the extant literature in understanding the impact of the cost of capital on lending behaviour. This study will be beneficial to banks as it provides insight into the problems that are and will be faced with. By identifying the problems, they would be able to strategise and work at ways to mitigate future risk.

Research Problem

It is critical to mitigate risk to create a stable and strong financial market. In 2004 a weakness was identified in the National Credit Act that there are inadequate rules for the disclosure on the cost of credit. For fees and charges to take up credit from financial institutions [1].

Although the effects of bank capital and lending behaviour have been debated with the introduction to Basel I the macroeconomic consequences of capital requirements have not been analysed deeply [2]. In more recent studies, it was argued that banks' capital can affect the lending behaviour and future loan growth [5]; [6]. The amount of loans granted is contingent on the regulatory requirements [2]. It roughly implies that every 1 percent increase in the monetary policy indicator leads to a decline in lending of around 1.2 percent of the average bank [2].

Within the South African context lending institutions there are constraints to granting consumers credit facilities regulated by the Credit Act as well as the Basel III regulation. The recent economic crisis caused South African banks to hold a higher amount of capital/equity which affects cost of credit, improves liquidity, increases interest rates and decreases bank profitability [7]. This study will be beneficial to banks as it will provide insight into the problems experienced and that they may face.

Literature Review

Introduction

Proper assessment of risk is vital for a strong financial market, financial markets that can make capital available to the private sector and investments from sources of loans. Business investment is also crucial to productivity, venture capital, well-regulated securities exchanges and many other financial products. To achieve these above-mentioned functions, banks need to be transparent and trustworthy. Hence, financial markets need the appropriate regulations to protect investors, capital and the economy. A weakness of the National Credit Act was identified in 2004 raise concern on the inadequate rules for the disclosure on the cost of credit. This included the charges and fees involved when taking up credit from financial institutions [1]).

Basel Codes

The Basel Codes was developed by Basel Committee on Bank Supervision (BCBS), for regulating international banking, Basel I in 1988 and Basel II in 2004) and Basel III in 2010. The Basil Code is used to standardise banking practices, minimise credit risks and determine the minimum capital requirements for financial institutions [42]. The limitation of Basil I was that is only focussed on credit risk to the exclusion of other types of risks.

In 2009, Basel III expanded to 27 jurisdictions including Belgium. Indonesia, Unit Kingdom, United States, South Africa, Sweden, Switzerland, Turkey, Luxembourg, Spain, Singapore, Mexico, Korea, Italy, Japan, Hong Kong, Russia, Netherlands, Saudi Arabia, India, France, China, Argentina, Australia, Germany, Canada, and Brazil. The objectives of Basel III were to minimise risk and damage to the economy, handle volatility and improve transparency and disclosure [9];[10].

Impact of Basel III

It is indicated that most banks worldwide will be able to adhere to the capital requirements of Basel III of 7% and 8% in 2013 and 2014 respectively but towards 2019 banks may fail to meet the requirements.

The consequence of Basel III was that bank became less profitable because of lower number of loans issued. The effect of Basel III on GDP would be -0.05% to -0.15% annually [11]. To mitigate the negative effects on GDP banks may be forced to increase lending to pass the costs to the customers [19]. The higher amount of capital and equity which is a cost factor, this would ultimately impact on the increase of the interest rates to consumers and the increased required amount of the cost of credit [12]. This requires banks to retain larger amounts of liquid assets. Due to the increase of interest rates the loan growth would be on a decrease as clients are unable to repay their loans due to affordability [9].

The implementation of the Basel III Accord, slowed down the economic growth due to higher credit costs and reduced availability [13]. The consequence is that larger economies shrunk by 3 per cent as a result of Basel III than they otherwise would be five years into the future. French Banks calculated a 6 per cent impact on the economy.

Legislation

The South African consumer credit legislation had previously consisted of the Usury Act; the credit Agreements Act 74 of 1980 (hereafter "the Credit Agreements Act") and the Exemption Notices, 1992 and 1999. There are various factors that have influenced the consumer credit market since 1968 namely the social, political and economic changes. The credit markets were criticised for out-dated legislation, inadequate consumer protection, specifically with clients in the lower-income brackets, lack of access to credit, the high cost of credit, increasing levels of consumer indebtedness, reckless lending by credit providers especially micro-lenders, intermediaries and debt collectors.

Legislative Framework

The South African Constitution

Banks must comply and adhere to rules and regulations set out and enforced by the government. The financial regulations placed by the South African Reserve Bank (SARB) have a direct impact on how financial institutions are run and governed. The South African banks must adhere to the regulatory requirements set out by the South African Reserve Bank (SARB). The Basel I, II, and III Accord is a legal framework set at the global level (by the BCBS) and most governments around the world, including those in Africa which have all incorporated it into their own banking regulation [6].

The National Credit Act provided protection for consumers that prohibits reckless credit, alleviate over-indebtedness, reduce information asymmetry, and reduce reckless credit risk extensions [43]. The Act also tackles predatory lending practices, prohibits misleading and unfair marketing and selling practices and negative option marketing. Furthermore, it also prohibits harassment of consumers at their homes to induce them into credit agreements.

Interactional Legislations on Finance

Government bonds

The Government of South Africa has to raise funds via the National Treasury in the financial market to finance the total Budget deficit during a fiscal year. Government funds are frequently raised through the taxation system. However, to raise as much funds it would require to finance the entire expenditure of the government, the percentage of taxation would be greater than what is politically and or economically tolerable. To finance any deficit (budget shortage) the government may borrow funds by issuing bonds. These bonds are issued in the domestic currency and are deemed to be the securest form of investment in that currency.

South African Reserve Bank

The SARB is the central bank of the republic and is regulated in terms of the act. The primary object of the South African Reserve Bank is to protect the value of the currency in the interest of the balanced and sustainable economic growth in the Republic. The South African Reserve Bank, in pursuit of its primary objective, must perform its functions independently and without fear, favour or prejudice, but there must be regular consultation between the Bank and the Cabinet member responsible for national financial matters.

The primary objective of the South African Reserve Bank is to protect the value of the currency in the interest of the balanced and sustainable economic growth in the Republic. All banking procedures and processes have to be in line with the regulation of the South African Constitution. All South African banks and financial institutions are government regulated and have to conform to regulatory acts that are imposed by the government. The South African Reserve Bank (SARB) is an independent body that sets the repo-rate to financial institutions.

Legislation and policies

A policy sets out the goals and planned activities of a ministry and department but it may be necessary to pass a law to enable the government to put in place the necessary institutional and legal frameworks to achieve their aims. Laws must be guided by current government policy.

The Financial Sector Regulation Act 9 of 2017

The Financial Sector Regulation Act No. 9 of 2017 was published in Government Gazette No. 41060 on 22 August 2017. "It wants to achieve this by establishing, together with the specific financial sector laws, a regulatory and supervisory framework that promotes certain principles and objectives".

Financial Crisis

The financial crisis had originated in the US and had affected the world. In 2002, six million lower-income households were given mortgages with high-interest rates and longer repayment periods. The interest rates were initially very low to attract more households. These sub primes were converted into securities which were traded on the financial markets around the world. The problem had arisen when many of these households failed over years to make repayment to these mortgage bonds. Because of the way global markets were intertwined, this has affected the entire international market. In early 2007, British clients had lost confidence and were afraid of losing their savings which had resulted in many clients withdrawing all their savings and investments from the bank. This had led to the world financial crisis, the reduction and job losses in and around the world as well as South Africa [14].

The Banking Sector in South Africa is well regulated. The execution of the Second Basel Accord regulation was in January 2008. The South African Reserve Bank (SARB) started to publish benchmark overnight with the banks' interest rates in 2001. South African Reserve is independent and operates in much the same way as the Western central banks influencing interest rates and controlling liquidity through those interest rates. However, the spread of South African bonds contributed to the financial market crisis and risk aversion had been on the rise [15].

Factors that Influenced the Consumer Credit Market

Consumer credit behaviour transformed significantly and in recent years is the rise of the use of credit to finance their day to day expenses. Lower-income markets are restricted due to affordability related to socio-economic limitations [16]. Therefore, consumers with different demographics and economic backgrounds may have different perceptions towards debt. Technology has also contributed to the increased use of credit as financial institutions have made it very easy with a "click of a button" to attain credit through digital platforms [16].

Loan growth in Sub- Saharan Africa

The loan growth in Sub-Saharan Africa was fast growing in Nigeria, Ghana and Kenya in 2012. However, South Africa was still undergoing recovery. In 2002, credit developments across Sub-Saharan African countries started to experienced swift growth of credit in banks in the private sector [17]. Excessive booms of credit growth tend to have a direct relationship and appear to be driven by large rises and ebbs of global financial flows and debt crisis [18].

Liquidity of banks

According to [19] and [20] strong liquidity is as important as strong capital requirements which were highlighted in the recent financial crisis. Banks that possessed adequate capital still experienced difficulties due to lack of liquidity.

Further Changes to the Basel III Win Liquidity Ratio

The Net Stable Ratio had been designed to ensure that banks became more liquid and resistant to liquidity risk by avoiding or minimising them from wholesale funding sources [23] & [21]. The Net Stable Ratio is calculated by dividing a banks available stable funding. As per regulatory requirements (The Basel III Accord) banks must maintain a ratio of at least 100 % [23].

The Liquidity coverage ratio (LCR) was also introduced under the Basel III Accord for any liquidity issues that may arise. The purpose of the liquidity ratio is to ensure that assets of superior quality so that it can be converted to cash easily (to meet the cash requirements of 30 days. The LCR must not be less than 10 percent [22].

However, the liquidity coverage ratio (LCR) (Which requires banks to hold a buffer of liquid assets) to combat short-term liquidity issues [23]. These strict requirements placed on banks made it difficult to comply. In South Africa specifically, it is a problem as our retail deposit market is small which places a problem for banks to source funding that has a high ASF factor [23]. In South Africa, wholesale funding makes up around 40% of banks funding, the initial version of the NSFR, published in 2010. It was argued that banks would not reach this requirement of 100% but would manage to reach 80% - 90% hence, SA will face multiple challenges trying to reach 100% liquidity ratio [23].

The Fourth Industrial Revolution

In the era of the 4th industrial revolution banks too must restructure their operations to maximise new technologies. According to Ohene-Afoakwa & Nyanhongo [24] banks too must adopt technological strategies and systems to be scalable, agile and be responsive in real time. Even in the granting of loans banks systems must be integrated to allow for data driven decisions.

Overview of the banking regulations in the BRICS member countries

The Bank for International Settlements [25] reveals that banks are required to conduct sufficient due diligence…when dealing with financial and monetary operations. In the BRIC, the state has a majority stake in the banking sector (75% in India, 69% or more China, 45% in Brazil and 60% in Russia).

BRICS Banks are cognisant that the impairment of credit worthiness caused the global financial crisis. An analysis of the financial crisis demonstrates that operational risk framework was inadequate, and losses occurred due to misconduct and inadequate systems and control. Hossain [26] proposed that BRICS partnership adopts the Basel III Accord for macro-economic reasons, to become more resilient and positively contribute to GDP albeit some of the limitations.

The implications of the Basel III accord could slow down the economy, increase capital adequacy, and comprehensively manage risk. Another insight is that the implementation of Basel III accord is country and context specific.

Research Methodology

An exploratory qualitative research design was chosen to study the impact of Basel III regulations on bank's lending and growth rates. The research setting was the eThekwini Municipality. Purposive sampling to specifically target 10 credit managers that assess credit. The inclusion criteria were that the credit managers have accreditation and have three years' continuous technical experience in credit assessment. The data collection instrument that was used was an interview guide, 10-indepth interviews were conducted and the data was analysed used thematic analysis. The data was coded, extract the themes, review of the themes, and name the themes.

Discussion of the Research Findings

Ten participants were interviewed for this study. The ten banking professionals had more than ten years banking experience and at least five years in a credit/business manager's role. From these managers, 5 or (50%) were females and 5 or (50%) were males, 6 or (60%) were senior credit managers and 4 or (40%) were senior business managers. Those participants with over 30 years of experience represent 40% of the sample size. Those participants with 20-25 years of experience represented 30% of the sample size each, with the group having 30% representing 10 years' experience. All ten participants or 100% of the sample size were employed in the banking sector in the credit division.

Main Themes, Sub-Themes and Synopsis

Three themes emerged from the study, namely, difficulties experienced, the Basel III Accord Regulation requirements and bad debts. **Theme one** generated sub-themes, namely credit criteria, lack of financial information, credit regulation, affordability and collateral. **Theme two** generated a number of sub-themes, namely, increased interest rates, increased cost of capital affecting consumers and businesses, stringent on lending, increased cost of capital affecting banks and bank regulation affecting the industry. **Theme three** generated two sub-themes, namely, provision for bad debt and profitability of bad debt.

Theme One: Lessons in implementing Basel III

Under these theme research participants shared their experience in assessing short and long-term credit facilities and alluded to some of the difficulties in this regard.

Credit Criteria

Credit regulations has ushered in tighter control for granting credit and a list of credit criteria is used to assess the granting of credit facilities. **Research participant 1** stated, "The economic downturn has affected clients' disposable income adversely" In addition, another issue is that "Many new start-up businesses that require credit facilities do not have credit history of no credit profile with the bank or any other financial institution and therefore find it challenging to obtain a credit facility".

Credit applications are scored using a scoring model and a benchmark of 60. An applicant scoring below 60 requires further information to motivate the application. Another requirement is that client's applying for a credit facility must provide liquid security in addition to the financial statement, personal balance sheets and cash flow statements. Participant 2 claimed that "the system does not specify the reason for rejection of a credibility facility and this requires an improvement of the system"

Lack of Financial Information

According to participant 3 "there must be adequate information from the client on how the business operates and the cash flow that is required". Participant 1 too agreed, ä lack of financial information and background makes it difficult for the credit manager to fully assess the credit application". Participant 3 also lamented that, "credit managers have different levels of mandate and therefore the credit manager would have to motivate the application to the next level for approval with a motivation for supporting the application for credit". Similarly, Rozbach [27] argued that are varying degrees of sophistication across banks that is used to evaluate the credit application. Furthermore, Rozbach [27] claimed that some banks have a subjective evaluation process whilst others have a statistical credit scoring model.

Participant 9 said "Clients do not have the knowledge and financial background to understand how the credit process works which makes it difficult for credit managers to obtain the correct information to proceed with a credit application. "Clients are unable to provide basic financial statements, income statements and also do not understand the requirements of the National Credit Act" (Participant 9). Participant 7 claimed that "Clients often used a facility for the incorrect purpose and do not specify what the facility is needed for so they can be directed to the correct product"

Credit Regulation

"The National Credit Act regulations play a big factor" as clients request more credit than they can actually afford, and their expenses are not in line with their income. Their expenses exceed their income, making this a factor when trying to assist to attain a credit facility" (Participant 8).

Affordability of Attaining New Credit

In order to attain a credit facility, a client's affordability to repay a facility must be assessed. When credit managers were asked about the difficulties experienced with attaining new credit facilities for clients, there was an overwhelming response on the reason why credit is difficult to attain.

Participant 4 highlighted multiple reasons why clients do not attain a facility. "Clients lack the affordability and collateral in order to obtain the credit facility that they require. Financial statement, income statements and balance sheets are required by the bank. Overall, the client has to have a very good business case and present in extreme detail his projections in order to attain a facility" (Participant 4).

Participant 1 had raised the issue about following credit regulations, clients not having credit history as well as the economic downturn verse disposable income. Participant 2 described "the scoring model described to have "many glitches" when trying to score for a credit facility. Clients are also unable to provide security. Participant 3 explained that financial information is needed. Participant 8 and 5 and 1 explained the difficulties experienced which was lack of banking and financial knowledge by clients which, clients also wanting more credit that they can afford. Client's expenses exceed their income.

These are two critical areas, affordability and collateral normally gives clients problems (Participant 8).

Participant 4 also expressed the importance of collateral required to attain a credit facility: "In most cases for overdrafts and loans collateral is needed. So you want to see the financials so we can see the track record to see that the client actually needs to funds and it is repayable" (Participant 4).

Participant 9 explained the negatives that would affect the granting of credit adversely:

"Clients are over indebted; most of them have ITC listings which causes blockages" (Participant 9).

The above findings are supported by the above statement in literature "The National Credit Act was amended in 2004 to correctly assess a client's capacity to pay back credit, ensure all costs of credit is disclosed to the client when taking up credit and interest rates and within the requirements of the National Credit Act" [28].

The following participants explain their difficulties to approve a credit facility to a client:

"In many instances overdrafts when clients come for overdraft facilities and they have arrears with other service providers. We have to ensure those are paid up before we lend. That is where the difficulties lie in order to lend you again" (Participant 5).

"It is not difficult because we approve our facilities in three minutes provided the client has good turnover, no ITC and no dishonors" (Participant 10).

The scoring model on the banking system is purely behavior driven. If there is adequate turnover on the clients account (Participant 6).

Another participant stressed the importance of financial information in order to grant the correct credit facility. This participant explained that when granting a facility the bank has to be able to recoup funds in event of the client defaultin

"In the case of the client defaulting in repayment of the property the bank needs to be able to recoup the funds that were lent to a client on credit to fund the property. It is dependent on the market at the time of selling the property" (Participant 3). "The biggest difficulty in that would be your debt service cover. Clients are unable to prove affordability in terms of debt service cover and long-term ability to afford to repay and sustain" (Participant 6).

Participant 1, 5, 8 and 9 explained that due to the clients' lack of knowledge in banking, they are unable to produce financial statements. Participant 4 discussed the difficulty when clients' request incorrect credit facilities like a personal loan or overdraft to finance a vehicle, yet the bank offers asset based finance.

Collateral Required for Banks to Grant Credit

When credit analysts and managers score for a facility such as equipment (equipment is different from land and buildings), the customer can have assets of consequence. "A client can have a house worth R10m and can be bond free but if the financials of his business do not show a good credit turnover and does not show capability of servicing the new debt then the bank would not finance this debt'' (Participant 2). The approval of a credit facility is based entirely on affordability. This is a great problem faced by business managers. In the past (25 years ago) credit managers used to lend without collateral. With regard to long term loans, if the banking system approves the loan then in this case the bank would not as for security. However, for judgmental credit, the loan guide stipulates collateral of 50% if it is over a judgmental credit (fixed property/cash). Many clients do not have collateral and the turnover to attain a credit facility as a result the facility will be declined.

Business Loans - If it does not score on the scoring system (if the FRD is too low) then 50% collateral is required. The question is if the client had 50% collateral then why would he want to borrow from the bank? With the collateral there are many other requirements. The bank would require balance sheets, income statements and other financial documentation. All these documents need to be in order to satisfy the credit department in order to approve the facility needed (Participant 2). Often, if the turnover or the conduct of account does not look good, the bank requires securities.

The following participant explains the resistance of collateral by clients:

"Most of the time the client does not want to give securities even though the business is conducted correctly and the business is growing we can give back the security. The client can then use the security given back to invest or use it at a later stage. So attaining security from the client is a problem" (Participant 7). "The hardest thing is collateral, clients do not have collateral. Whether it is an investment or policy there is nothing to offer" (Participant 9).

Theme 2: The Basel III Accord Regulatory Requirements

In this section the rising interest rates, the increased cost of credit affecting businesses and consumers and banks will be discussed. Also, the banking regulation and its stringent lending criteria is affecting the financial industry is also covered.

Increased Interest Rates

Interest rates are normally based on risk and as risk has changed substantially, the prime rate has increased. Previously, a client could get a home loan at prime -2. The situation is not easy anymore as there is more risk involved in credit lending and as a result client would not get a rate below prime. Banks are adding on to their margins in terms of the interest rates so one of the key reasons for this is that in a way client have to be wary when taking up credit facilities. The type of clientele would determine the interest rate. If the customer is at a high risk the interest rate would ultimately be higher. If there is a client who has good credit history by looking at the way they manage their accounts and financials then the risk and interest rate would be much lower (Participant 1).

The South African Reserve Bank (SARB) wants to stimulate growth by maintaining low interest rates. When times are good and people spend lavishly, interest rates increase in an attempt to curb the spending. Currently the interest rates have not increased for a reason. Besides the rating industry that is looming and things could change for the worse the reserve banks are trying to stimulate the economy. In the interest of stimulating the economy they either decrease or increase the rates to curb spending (Participant 3). If they are borrowers it is undoubtedly going to affect them from a cost perspective.

Even though interest rates are on the rise, consumers need their houses and cars hence, they will settle for the high interest rates as they have no other option. "It will affect the banks positively because banks would gain more from every client than we did in the past. Banks would gain fees, monthly account fees, NCA fees as well as facility fees on the type of lending (Participant 9)."

Increased Cost of Credit Affecting Consumers and Businesses

Participants were probed on interest rate increases and how it has affected consumers and businesses that require credit facilities. Their responses were as follows:

The bank will always lend on the basis of affordability. Its fine to ask for an increase but in doing so the impact of the repayment of the interest and to pay back suppliers (will the business be able to pay back?) (Participant 3).

Lending rates have been on the upward trend. In line with inflation and other factors credit has become expensive, although interest rates have fluctuated with the repo-rate over the past year. "Five years ago, the bank had been very moderate with interest rates but now it moved upward which has started to drill a hole in the pocket of the client, credit has become more expensive. When a client comes in with a pre-approved credit facility and goes to another bank for a better interest rate because of the upward trends, disposable income that remains with clients has been reduced" (Participant 4).

The above findings are supported by literature. "The Basel III requires banks to hold an amount of capital and liquidity when credit is disbursed to a consumer [33]. "Due to the recent financial crisis the lack of liquidity and insufficient capital during the recent financial crisis hence the introduction of the Basel III had been implemented to rectify the short coming of the Basel II Accord which requires banks to hold higher capital and therefore causing the cost of credit to become higher" [29].

The banks lend against risk verse return so when the interest rate goes up our client's interest rates increase but are lending and lend above prime rate so the bank also makes profit. Consumers are paying a higher rate and in desperate times they are willing to pay the high interest rate. With businesses it is also costing them more to finance the debt (Participant 5). Businesses - this would affect their cash flow and the daily running. Some businesses close down as interest rates have increased (Participant 7).

This would also affect the JSE because investors will only put money into a country that interest rates are high. Interest rates affects the country, the client and the bank. In the past five years banks have lowered their targets because they have realised that interest rates are high, borrowing power has lessened and clients demand for credit have decreased (Participant 10).

Increased Cost of Credit Affecting Banks

The participants were probed on how increased cost of credit has affected banks. Their responses were as follows:

"The clients complain about the current interest rates as interest rates are changing all the time. Clients expect interest rates to remain the same. The bank has to change the rating. The interest rates given to the client is determined by the financials produced and most importantly the way the account is conducted. Most clients do not like to accept credit facilities with increased interest rates as they are unable to afford the repayment and are reluctant to agree to a loan with a high interest rate. With the way the economy is going it is a problem with small businesses as they cannot pay back facilities with high interest rates" (Participant 7).

"It still comes down to regulation, we are guided by regulation so if the government comes down and says that we need to tighten our step with lending, it is unfortunate that consumers are going to feel that they are at a disadvantage but it is to build the economy up and consumers to be sustainable over the next few years" (Participant 8).

The above findings are supported by Keefe & Pfleiderer [30] who maintains that "the Basel III introduced several standards designed to reduce the probability of systematic crisis caused by liquidity distress at individual financial institutions. Basel III was introduced in response to the financial crisis of 2007/2008" [31].

Banks Stringent on Lending

The participants were probed on the banks policies and regulations and how it has affected the credit lending process. Most of the responses leaned towards banking regulation such as the National Credit Act (NCA) and the Basel III Accord as well as securities needed in order to grant a credit facility. The responses are as follow:

The following participant explained that the prime lending rate changes due to external factors and currently scoring for credit is used by a scoring model on the banking system. The participant also explained that credit is priced to risk and credit regulation and has reduced reckless lending, making it difficult to attain a credit facility.

"It is also factored into the ratio to price higher. Consumer side of things to a much greater degree I would say because I think in terms of the consumer market prior the National Credit Act (NCA) all banks and all lending institutions went on a drive to grant credit facilities and sometimes with a certain amount of recklessness" (Participant 6).

The next participant discussed securities required for credit lending, credit regulation is also highlighted by this participant and due to this an increased amount of loans are being declined. Clients have investments that help them as security in terms of lending. The banks benefit in terms of growing assets (Participant 9). Decline in the amount consumers can afford credit and to also be wary of the interest rate. Banks have to set aside more funds for liquidity purpose in terms of the Basel III Accord. They have to take into account: liquidity, operational risk, and lending risk hence, it has become stricter. Interest rates are higher. Loans have declined over the past couple of years (Participant 1).

Participant 3 and 2 explain that regardless of increased interest rates, clients who are in need of credit will still take the credit facility. Credit regulation is also highlighted by these participants.

"From the early 2000's household debt accumulated in South Africa, the debt has far exceeded the growth in the household disposable income. This led to concerns regarding the sustainability of household debt". The above statement supports the argument that consumers cannot afford to service their debt as the debt is much higher than their disposable income. The increase of interest has adversely affected the cost of lending which consumers have to ultimately pay for.

Banks Regulation Affecting the Industry

Banks in many countries can only lend to a certain degree due to government legislation. The legislation that has been implemented in the past three to five years has affected banks across South Africa. South Africa has eighteen biggest banks namely: Standard Bank, FirstRand Bank, Absa, Nedbank, Investec, Capitec, African Bank, Grinrod Bank, Mercantile Bank, Bidvest Bank, Sasfin, Albaraka Bank, Ubank, HBZ Bank, South African Bank of Athens, Tyme Digital, Habib overseas Bank and Discovery Bank. The South African Reserve Bank (SARB) has set a required minimum reserve ratio of 2.5 per cent [32].

The following participant highlighted that consumers are at a great disadvantage due to increased interest rates which is governed by government regulation to banks. Banks are guided by certain regulations that are put into place. Banks are guided by regulation and if the government requires banks to tighten on their lending, it is unfortunate that consumers are going to feel that they are at a disadvantage, however, this is the banks strategy to strengthen the economy to maintain sustainability over the next few years" (Participant 8).

"It is all about being competitiveness and how things are sold to the client. Right now the client has the monopoly, he can dictate and shop around so they can get the best offering. "You have your big four banks that are constantly negotiating rates (Win and lose some)" (Participant 4).

The interest rates have fluctuated over the past years and it is due to the volatility of the South African market. It is influenced by the government; politically if the country is stable the rates will remain constant. If there is a slight change in the political environment (referring to the changes of finance ministers), it would result in a ripple effect which also includes the Global markets. The rates have changed and are also linked to inflation so this has contributed to the interest rates not decreasing. Remember, higher interest rates affect inflation directly (Participant 2).

At the middle credit lending level, the policies implement and capital adequacy has been determined at higher levels in the bank. It does affect the bank - for any money that they lend out they must reserve money so that when the client needs money down the line or depositors need their funds, this makes it difficult for the bank. "In our space we are not limited by that" (Participant 4). "When we are lending credit, capital is very important in the balance sheet. So, we need to lend capital as well which is a facility to equity. The capital should be more than we are lending" (Participant 5).

There will always be a demand for credit and although the markets are under pressure they tend to get increased business. With credit being as expensive as it is, it is something that all businesses need and have to factor into their expenditure. They have been able to do that. The banks' profits are governed by the difference between the borrowing rate and lending rate which is a fixed rate. The difference between the two is how banks make their money. Higher interest rates or lower interest rate does not deter most clients as they in need of credit facilities (Participant 6).

"Interest rates have been impacted on credit negatively because banks are at the point where clients are paying to have a facility, for e.g.; Banks are charging 1% for initiation fee on an overdraft facility, clients are not very pleased with that. It also places us in a situation because we are offering the client a facility but we are asking them to pay for it so in that sense it is quite negative to the bank" (Participant 9).

The abovementioned findings are supported by [34] who maintain "The cost of credit and the National Credit Act, the total cost of credit (TCOC) depends on the ruling repurchase rate of the SA Reserve Bank (i.e. 2.2 times this rate, plus 20%) as well as the maximum initial and service fees. The total cost of credit is determined by the repo rate, initial fees as well as a percentage that was set in line with the National Credit Act. Initiation fees are capped at 15% of the loan amount. The service fees for these loans are capped at a fixed amount of R50.00 per a month for the full loan period.

Participant 2 explained that the cost of credit is expensive. Participant 4 stated that banks are becoming less profitable with credit and are looking for other avenues to generate revenue whilst Participant 5 explained that banks have increased interest rates to increase profits. Participant 7 and 8 explained that banks are governed by legislation and government has tightened on reckless lending, hence, interest rates are affected by legislation.

Participants 1, 7 and 8 have said that clients lack affordability due to increased cost of credit. The cost of credit is on the increase due to the constant regulatory change and requirements [3]. Participant 1, 2 and 4 stated that clients are reluctant to borrow due to increased interest rates. The findings from literature indicates that household debt has been on the increase where consumers were unable to pay existing debt with their current disposable income, consumers cannot afford to take up further credit [17].

The banks do make more revenue when interest rates are higher. Participant 6 states that interest rates have not deterred the client from borrowing as they need credit, however, Participant 5 and 7 and 9 said it is difficult to get clients to borrow as interest rates have increased, which also affects their disposable income for new and existing credit as well as service fees. Contributing factors which have caused a decline in personal credit is due to household constraints like finances, increased unemployment and slow income growth. Due to this, many consumers have become credit adverse, hence, were reluctant to take on new debt.

Participant 1 and 8 maintained that banks have become stricter with lending requirements and banks have targets to meet, however, lending has become tighter. Participant 1 and 2 explained that the Basel III Accord ensures that banks lend funds correctly and that the amount of risk taken by the bank in terms of credit lending requests that they keep aside more liquid funds in line with the regulation. Liquidity, operational and lending risk has become stricter. Participant 4 also affirmed that for the amount of funds lent out to a client, an amount has to be reserved by the bank as the capital requirement, whilst Participant 5 said that the retained amount needs to be higher. The Basel III Accord was designed and implemented to improve the capital and liquidity requirements in event of banks facing financial crisis [22]. Capital conversion buffers were introduced in the Basel III Accord, the required percentage benchmark for the capital conversion buffer was 2.5 per cent which had been an additional reserve to facilitate banks in stressful situations [22].

External Factors Affecting Banks Interest Rates

Banks need to make money in order to make a profit. For example, Wesbank, "When we try to get a better interest rate for the customer the bank prefers to back out the deal as the bank would incur a loss (Participant 2)." It is obviously affected by supply and demand in the market and who the key players are when it comes to certain commodities so something like fuel that is volatile affects the fuel industry. All the companies that transport food would affect the increase in the prices of food as the cost of transportation has increased resulting in a snowball effect.

Theme Three: Bad Debt

Bad debt is when credit is granted to a consumer by the bank but when the consumer is unable to repay their debt it is considered as "bad debt" to the bank because they cannot recoup these funds from the client which becomes a loss and has to be written off their books.

Provision for Bad Debt

This bank in particular, about eight years ago the scored model was introduced for both consumer and business. The system was still in its infancy and also up for abuse in that staff and consumers knew how to manipulate the system. As a result, banks have made more provision for bad debt; they have set aside funds in an event a client defaults on payment. This has impacted on profitability. (If the bank does not lend more funds, there is no interest in return). Being an institution that lends money (key function) apart from investments, the banks' loan book is not good and this will affect profitability (Participant 1).

"Bad debt affects the balance sheet of the region then it affects the balance sheet of the entire country as it has a ripple effect, if one region performs badly it affects other regions adversely as its profitability is counted for holistically" (Participant 2). In this particular case, bad debt has been written off but banks have also become harder on debt. They have decreased the room for the writing off of bad debts by taking precautions to mitigate risk. If there is not enough turnover shown on a client's account it goes straight to the credit department in Johannesburg.

Profitability of Data

In terms of profitability and making the business profitable it has obviously seen a decrease. In some divisions in the bank it has cost staff members or staffs their jobs. So, it has also come down to tightening the expenses to try to generate additional income that has been lost (Participant 8). Profitability on the side of the bank when they lend funds the objective is to make profit, so by charging more there is higher profit made. In most cases because of the repo-rate being on an upward trend even if the bank charges more they also pay more.

"Our lending system is quite good. Our bad debt book is on an increase but we would like to think the systems that are in place has decreased the bad debt" Participant 8. "Not really that much, we do have a good credit/recoveries department. We sign letters of surety ship so we do try and get as much as we can from clients that fall into our bad debt book but it has been maintained. FNB is very conservative when it comes to lending so when we do lend, we have all our ducks in a row. So when it comes to bad debt we obviously pricing for debt and we know how to recover" Participant 9. Participant 1 maintained that banks are making more provision for bad debt when clients default. Participant 2 stated that bad debt has been written off but banks have made it harder to attain credit and more procedures have been put in place to recover bad debt and Participant 9 has explained that bad debt recoveries has been on the increase, banks have also become more conservative with their lending. Participant 4, 5, 6 and 8 all agreed that bad debt has been on the increase in the past five years whereas Participant 3 and 7 said that bad debt has decreased and Participant 9 said that banks are managing their books well and are more conscious and conservative when lending credit. Bad debt recoveries have been on the increase as well.

Conclusions

Challenges with Credit Facility

The findings reveal that there is strict credit criterion that is applied in evaluating an application for a credit facility. Banks have become very conservative with their lending to align with the Basel III requirements.

Stricter credit criteria mitigate the risk of the bank becoming insolvent due to the writing off of bad debts. The higher capital requirement serves as a buffer for instances when the client is unable to repay the debt owed to the bank. Overall, the capital retained needs to be higher than the capital lending. The law protects and safeguards both the financial institution and the consumer from risks. Credit has also become expensive as it is priced to risk. Bank aply higher interest rates for clients with impaired credit ratings and the bank is then able to recoup funds sooner.

The difficulties have been discussed and outlined in the above paragraph. Due to the Basel III Accord, banks have become stricter with credit lending. If a client does not qualify for a credit facility, he/she will not be granted the facility. The Basel

III Accord however safeguards the client and the financial institution because if the client lacks affordability then they would not be granted the facility. The banks are safeguarded in the sense that the loss of repayment is mitigated due to the stringent measures of the Accord.

Basel III Affected Loan Growth

Although there is a need for credit facilities by businesses and consumers the findings reveal that the loan growth rate has decreased in the past five years. The Basel III regulation has caused an increase in interest rates due to more stringent credit measures and the consequence is a decrease in the loan growth. Banks have to hold higher funds in alignment with the Basel III requirements.

In assessing credit applications and credit worthiness and this is risk to

payback the bank may require that a 50% collateral is provided to align with the Basel III liquidity ratio.

The National Credit Act provided safeguards for consumers not to be overexposed and indebted. There is a decrease in risk for banks falling over reckless lending.

Hence the Basel III Accord capital requirements provides banks with higher capital buffers. Due to this, interest rates have increased substantially. Collateral is also required when granting of credit facilities so if a client does not have funds, he/she will not be able to attain a credit facility.

Increased Cost of Credit

The Basel III regulation affects the cost of credit because there are less loans approved because of the stringent credit criteria. Interest rates on credit facilities are influenced by stringent legislation and lower loan growth. Client and businesses seeking credit are forced to pay higher interest rates increasing the cost of credit (interest rates and facility charges).

The South African Reserve Bank (SARB) plays a significant role in interest rates. Interest rates are controlled by the South African Reserve Bank (SARB). When consumers overspend then the South African Reserve Bank (SARB) increases interest rates to reduce consumer spending and debt and reduce interest rates to stimulate and encourage consumer spending.

Interest rates have increased the cost of credit and this ultimately affects banks negatively Interest rate is linked to prime and fluctuates. South African banks are priced to risk because of the bad debt. Priced to risk to gain earlier recovery in event of a client being unable to pay their debt. This safeguards the bank as their bad debt book would be on the decrease. Clients can always shop around for better interest rates at other banks and banks are constantly negotiating

Recommendations to the Banking Sector

The Basel III Accord is a framework set by the government and cannot be altered. It is there to safeguard the banks and its capital as the National Credit Act is there to protect consumers. Banks need to comply with the conservative nature of credit lending to avoid jeopardising the financial system that may lead to another global economic crisis. Banks need to adhere to all risk weighted ratios and constantly keep within those parameters in order to maintain a financially sound business.

The banking scoring models to score a client for a credit facility across the banking system must be updated and aligned across the Basel III regulation. In addition, banks must ensure that all employees responsible for credit assessment must have updated knowledge on Basel III Accord Regulations.

Conclusion

Basel III Accord has placed high demands on financial institutions. The key consideration is to find a solution that allows these banks to comply Basel III and streamline their systems and processes to reduce capital requirements and improve operational effectiveness. This study indicated that among the signatories of the Basel Accords are some of the BRICS countries. South Africa being a member country, and as a leading partner on the banking sector performance could influence positively the other countries in complying with and implementing the BASEL III rules and regulations. This will help a great deal in effective and efficient banking operations in the studied organisation going forward.

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Chapter 5
An Investigation into the Impact of the Economic Ties Between South Africa and Russia as BRICS Countries

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Abstract

It is a known fact that the BRICS started as a political agreement that brought together selected emerging economies to address their challenges. BRIC became BRICS in 2010 as South Africa joined the organisation. Of importance to the newly enlarged BRICS was the focus to economic development and diplomacy that the partnership embraced as opposed to the political approach that the founders had initially. The economic approach to BRICS saw the organisation prioritising developmental projects, Foreign direct investment (FDI) as well as sustainable job opportunities among member countries. The formation of the BRICS Business Council and the collaboration with the department of trade and industry allowing the bread and butter issues to be addressed at the grassroot level through service delivery, skills transfer, international trade and cooperation. BRICS used to follow the winner takes all approach as the organisation promoted a top down way of dealing with problems rather than the current bottom up approach. Before the financial turmoil, South Africa had a challenge vis-à-vis addressing poverty, unemployment and violent crimes (also known as the triple challenge). The civil society and other human rights groups came up with the idea to involve the community at the grassroot level in solving whatever difficulties. The paper is based on a study on the impact of economic ties between the BRICS countries with focus on South Africa and Russia. It is hoped that some of the recommendations applicable to the studied countries could shed light on what is needed for policy interventions going forward.

Keywords: BRICS, Russia, South Africa, Multilateralism, Economic Growth

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Introduction and Context

The BRIC Forum was founded in Yekaterinburg, Russia in June 2009 as a platform to share views on how to respond to the challenges and opportunities presented by globalisation. South Africa then was not happy with the fact that it was not invited in the BRIC deliberations given its political clout in the global governance processes and the fact that it is a vocal champion of the interests of developing countries. South Africa has since sought to gain recognition as part of the BRIC formation [1].

Finally, in March 2012, South Africa appeared to join BRIC, which thus became BRICS. At that time, Brazil, Russia, India, China and South Africa met in India to discuss the formation of a development bank to pool resources. At that point, the BRIC countries were responsible for about 18% of the world's Gross Domestic Product and were home to 40% of the earth’s population [2].

Brazil, Russia, India, and China, according to Jim O'Neill, the head of global economic research for Goldman Sachs, by 2050 the combined economies of these four countries would overtake the current richest countries of the world. The countries hold 40% of the world's population and make up 25% of the world's land mass. Brazil for instance is the world's 5th most populated country and has the 9th largest GDP in the world, while Russia has the 7th biggest GDP. India is the second most populated nation in the world with the 4th biggest GDP, while China of course is the most populated country in the world and is second in GDP only to the United States [17].

Addressing BRICS Business Breakfast in India in March 2012 President Zuma said, “Our participation in BRICS is designed to help us achieve inclusive growth, sustainable development and a prosperous South Africa”. This will add value to the country’s economic growth initiatives. For instance, the New Growth Path framework is designed to assist in developing the country’s economy in relation to inclusive growth and create jobs. Six jobs drivers are identified as: (i) infrastructure development, (ii) agriculture, (iii) mining and beneficiation, (iv) manufacturing, (v) the green economy and (vi) tourism.

Presidential visit in South Africa

For the first time in the history of South Africa, a Russian President, Vladimir Putin, came to visit South Africa. President Putin arrived on the 5th September 2006 in Cape Town and stayed until 7th September 2006. Central to his visit was the desire to strengthen cooperation and establish investment links.

Russia has played a significant role in the liberation of South Africa. She supported the liberation movement (African National Congress and *Umkhonto WeSizwe*) during the long period of exile from the 1960s to the 1990s. Russia is vast and diverse nation that after several decades of communism continues to evolve politically and economically. She is with the world’s largest resource of raw materials, oil and gas revenues which heavily support Russia's economy. Recently, within the big cities, a consumer economy has been established. This, along with an improvement in the country's financial position has raised business and investor confidence in Russia's economic prospects [3].

The study investigates the impact of the international diplomatic and economic ties that exist between South Africa and Russia. The idea is to get an insight on the consequences of the established relationship between the two countries in the context of global economic climate.

In the context of global economic climate countries find it difficult to maintain their diplomatic relations and the citizens are sometimes not informed about the nature, value and impact of those diplomatic ties. The impact of Russia-South Africa economic relationship has been made a private matter for the bureaucrats and business owners. This paper seeks to bridge that gap.

The historical links between South Africa and the Russian Federation are strong. Direct contact between the former USSR and the ANC were established on a regular basis during 1963. In the era of the USSR, the latter was one of the key supporters of the struggle for liberation in South Africa. With the dissolution of the USSR, South Africa became the first African state to recognise the independence of the Russian Federation. Moreover, full diplomatic relations were established between South Africa and Russian Federation on 28 February 1992.

Moscow was a leading supporter of the long battle against white minority rule, which ended in 1994. Many of South African's leaders, including Mbeki, received military training in Russia. Both states have evolved along parallel lines since the end of apartheid and the fall of Communism, as democracies struggling with Africa forge closer ties.

Russian President Vladimir Putin and his South African counterpart, former president Thabo Mbeki, signed on the 5th September 2006 a treat on friendship and cooperation and agreed to boost bilateral relations. The visit to South Africa for the Russian leader was his first sub-Saharan visit as head of state. Several ministers and a delegation of top Russian businessmen were accompanying President Putin on his two-day visit.

According to the signed business and political treaty, Russia and South Africa are allowed to maintain bilateral dialogue at a high political level, and to hold regular consultations at various levels. The sides regard each other as friendly states and will develop partnership relations on the basis of common national interest, ideals of freedom, democracy, equality, commonly accepted principles and norms of international law, and in accordance with the goals and principles of the UN Charter.

The sides confirmed their obligations on the most important multilateral disarmament and non-proliferation agreements, and reasserted their readiness to strengthen the US's peacekeeping potential. The sides will support mutual efforts aimed at developing cooperation with leading regional organisations, including the commonwealth of independent State the Southern African Development Community.

“With Russia's now buoyant economy and its desire for minerals and raw materials and Africa's need for foreign investment, politicians and analysts alike see the timing as appropriate”. Russia, as the Group of Eight industrialised nations’ was current chair nation, highlighted African development in 2006. Both South Africa and Russia also emphasised the need to maximize bilateral trade possibilities.

It is often said that South Africa is, first and foremost, part of the African continent and that developments in Africa should hence form the context within which South Africa should locate itself. This country’s long isolation from participation in international policy-making organs in general and Africa ones in particular have left many individuals largely uninformed of development on this continent. This section offers thumbnail sketch of developments in Africa over the past 30 years or more.

Ever since the independence of the former African colonies gained momentum, S&T has figured prominently on the development list of priorities at least as far as political declarations were concerned. In August 1979, The United Nations World Conference on Science and Technology for Development was held in Vienna to map out the place and direction of S&T in developing countries. African members, however, did not fully accept the outcome of this conference [5].

Development of Africa was also very central to the discussions between President Mbeki and President Putin. Development is a concept that different meanings for different people, its meaning being informed by contextual issues such as past and present experiences, circumstances, values perceptions and beliefs. It is an economic indicator such as income, expenditure, consumer partners, savings, investment, production, foreign trade, imports and exports.

Development is a social indicator, such as health, nutrition patterns, education, employment, conditions of services, housing, social security, welfare services, recreation, freedom, clothing, transport, communications and professional structure. On other hand, it is institutional indicators such a political attitudes and behaviour, economic relations (e.g. patterns of the land tenure), organisational change, production patterns (e.g. industrialisation), social structures, and patterns of distribution.

Those less attuned to the contextual reality of the so-called world generally conceptualise development as change, growth, advancement, progress or improvement as its development always relates to something good or something better than people’s current reality. People-centred development incorporates aspects of both the modernisation and dependency theories. Korten, an advocate of people-centred development, defines it as a process by which the members of a society increase their personal and institutional capacities to mobilize and manage resources to produce sustainable and justly distributed improvements in their quality of life consistent with their aspirations.

President Putin, at a joint press conference with the former President Thabo

Mbeki in Cape Town stated that one Russian company intends to invest more than $1 billion in South Africa's economy. Putin also indicated another company was ready to help South Africa to develop electricity and build an aluminium plant. Although South African companies, such as fruit producers and brewer SAB/Miller, which produces several popular brands of beer at a plant in central Russia, have made inroads into the Russian market, the Kremlin believes trade could be significantly increased from the 2005 figure of $171 million.

Russia and South Africa agreed to develop cooperation in the energy and transportation sectors, the defence and aerospace industry, the fishing industry, healthcare, culture, sports and tourism. Speaking about cooperation in the energy sector, President Putin suggested that Russia "will supply South Africa with nuclear fuel". An agreement was signed on supplying Russian nuclear power plant until 2010 [6].

Three other documents were signed in the presence of the two presidents after their talks in Cape Town. The head of the Russian Space Agency and the South African minister of science and technology signed an intergovernmental agreement on cooperation in civilian space. President Mbeki told the press conference that a South African micro-satellite would be launched.

Officials from the Russian and South African health minister signed a bilateral agreement on cooperation in healthcare and the medical sciences. The Russian justice minister and the South African defence minister signed an intergovernmental agreement on the protection of intellectual property rights in military-technical cooperation. Furthermore, the group of businessmen accompanying Putin included Viktor Vekselberg, the head of the Renova Group and one of Russia's richest men, Alexander Nichiporuk, the president of diamond giant Alrosa, as well as Igor Makarov, the head of the Russia's largest independent natural gas producer, Novatek.

Materials and Methods

This study uses mixed methods namely a survey and interviews in establishing what is going on between South Africa and Russia in the BRICS. Twenty people participated in the survey and the interviews altogether. They were selected purposively as the study is designed predominantly as a qualitative research. The survey was just another mean of getting some additional information whereas the profound interviews were in depth and open-ended in many instances. They were semi structured, and allowed dichotomous, biographical, and other types of questions to be asked to participants. Questionnaires were administered to a selected citizen of South Africa to determine their views about the effects of diplomatic ties between South Africa and Russia as BRICS member countries. Both men and women took part in the survey and the interviews. All participants were conversant in English. Prior to the main study, a pilot study was conducted to allow the rewording of questions.

Literature Review

South Africa, Russia And Diplomatic Ties

Diplomacy is the art or practice of conducting international relations, as in negotiating alliances, treaties, and agreements [7]. Diplomacy is presented as one of the ‘’ lesser tools of foreign policy’’ a medium for Diplomacy is the art or practice of conducting international relations, as in negotiating alliances, treaties, and agreements [7]. Diplomacy is presented as one of the ‘’ lesser tools of foreign policy’’ a medium for communicating the use of the other tools, it is also presented as an instrument in its own right. International diplomacy is an important political activity or expertise employed in managing international relations. It is crucial that country's representatives learn to deal with the people of other countries in a sensitive and effective way in order to maximise chances for friendship, harmony, peace, stability and investment.

In the 1960s, after the apartheid government banned the ANC and PAC, the leadership of these liberation organisations or their representatives embarked on a diplomatic relation. They made ties within Africa, in Eastern Europe and with Asia. Friends of Africa were engaged in supporting and accommodating others. Oliver Tambo, former president of the ANC, was mandated to establish underground political and military machinery outside South Africa for many cadres who were running away from torture, imprisonment and execution by the security forces to go to exile and forge new relationships to support the struggle for liberation.

Tanzania, Zambia, Botswana, Swaziland, Nigeria, Lesotho, Angola, Algeria, Egypt, Zimbabwe and many other Africa countries played a significant role in harbouring the South African freedom fighters. Tambo’s work of diplomacy was not limited in the African continent: he continued to engage with many countries in Europe, Eastern Europe, Asia as well as United States of America. In turn, the ANC had established an office in London, Stockholm, Ireland and other places. Russia in particular shouldered a huge part of the responsibility due to the fact that she had many communist organisations in Africa including the South African Communist Party.

Generally, international diplomacy is important for the following reasons: (i) bilateral trade, peace and stability, investment, social security, and research and development. Sometimes,

domestic politics and international relations are often somehow entangled. Sometimes, this can be a complicated puzzle, especially in relation to what theoretical approaches need to be followed. It is fruitless to debate whether domestic politics really determine international relations or not. The answer to that question is clearly "Both, sometimes." The more interesting questions are “When?’’ and “How’’ [8].

Foundation of Cultural ties with Russia

Russia is the largest country in the world, which has a rich cultural identity that has been shaped and moulded by its distinguished history and vast geography. She covers an area of about 17,075,400 square kilometers. Russia has a population of 143 million people, with 160 ethnic groups speaking some 100 languages.

The Russian culture is defined by three dimensions, namely: collectivism, egalitarianism and Dusha. Throughout its notable history, Russia has assumed a strong communal spirit (collectivism) that is still reflected in Russian business practices today. Russia's severe climatic conditions have also meant that co-operation and collaboration, rather than competition, has been vital for the survival. This sense of togetherness is one of the traits that distinguish Russians from many Westerners [9]. An important aspect of Russian culture is Russian collectivism, egalitarianism and status consciousness.

Russian collectivism dates back to the peasant farmers, who lived in agricultural villages known as 'mirs' or 'obschina' and worked together in an organised and self-managed community. Egalitarianism is an important concept related to the village milieu, the social philosophy that supports the removal of inequity, and promotes an equal distribution of benefits. In Russian business terms, this equates to important strategies of equality, reciprocity and mutual advantage. Russians are very status conscious and believed in co-equals. A "deal" is often thought of from the perspective of equally shared benefits [9]. This will perhaps lead to a fair deal in the context of BRICS, when Russians stick to their culture and tolerate that of others.

The famous and enigmatic Russian 'dusha' or 'soul' remains central to everyday Russian behaviour, and as a result when building successful business relationships with Russians one would find that mutual liking and emotion will is emphasised. However, in order to conduct business successfully in Russia, there are a number of important issues to take into consideration. These are:

- The Russians attitude to time means that a few minutes delay on their part is of little importance. However, they will expect you to be punctual.
- Faxes and emails are the best way to communicate in Russia, as the post can often be unreliable. It is customary before making a trip to Russia to inform the prospective company of your intended business proposals and objectives.
- Paperwork and putting pen to paper is an essential part of all working practices in Russia. In general, they have little faith in unsigned documents.
- The hierarchical structure in Russian business practices means that the decision makers higher up have authority over their subordinates. However, the nature of collective goods often encourages a flexible and democratic work ethos.
- Showing respect for seniority and recognising the hieratical structure is vital for establishing and maintaining strong business relationships [9].

For those organisations wishing to develop a successful penetration strategy for the Russian business market or employees tasked with working in Russia, an understanding of Russian social and business culture is key to your success. Personal and informal contact is a central part in doing business in Russia. Physical contact during business meetings, for example, a simple hand on the arm or even embracing is a positive sign. In times of COVID-19, the protocols have changed as Russians are among those who considered the pandemic in China to be a threat.

There is word for 'privacy' in Russia; therefore, the nation of social space is much closer in Russia. In situations of conflict one should try to avoid taking an official stance and remember that Russians are 'people orientated' and will respond to a more personal approach. Presentations should be straightforward and comprehensible. Although many principal concerns are discussed in an informal environment final negotiation are conducted in the office. Generally, when beginning a meeting, the head of the organisation will open the discussion and introductions should then be made in order of importance [3].

Russian Culture in the Global Economy

The Federation of Russia has returned to its position as a major international player in the diplomatic, cultural and business world. While recent financial crises are in everyone's memory, the economy of the country is growing and is benefiting from some foreign investments. More and more western companies are opening offices in the country and Russian investors have, in return, begun to invest abroad [3].

However, the cultural identity of Russia is far from being either deciphered or absolute. If its relation to the west and its expansion to the East influenced imperial Russia, the USSR was in turn greatly influenced by the tsarist culture. Naturally, today's Russia is the outcome of various layers of the true "Rus" identity. Each foreign businessperson in Russia faces, at some point, misunderstandings and pitfalls. Businesspersons planning ahead a trip to Russia with a tight schedule may come back home with feeling that while much talking took place, very little was accomplished [9].

South Africa: History at A Glance

South Africa has a rich history. As a country she knew three centuries of colonialism and four decades of apartheid. The country was a British colony and today she is a member of the Commonwealth like many other SADC countries. The Dutch came to Cape Town and they remained just as other whites. The ties and interactions with local communities led to the birth of one of the languages of the country – the Afrikaans. All the African languages are official languages of the Republic just like the (British) English is in South Africa.

In the past, the country had a Bantustan and white minority rule. Politicians who opposed that were arrested and jailed including Nelson Rohlihlahla Mandela (who was incarcerated in Robben Island for 27 years for political reasons. Mandela sought to liberate both white and blacks and advocated for a South Africa which belongs to all who live in it black and white.

To fight the Apartheid system the blacks organised in liberation movements and political parties were created. The African National Congress (ANC) become the first political party to be created in Sub-Saharan Africa in 1910 – a party which also gave Africa one of the prominent and first Nobel Peace Prize Laureate, Inkhosi Albert Luthuli.

There were contacts between Africa and Asia since those days. In fact, it's the Chinese who produced the first map ever of Africa. A map which was far from being similar to the one we know today but nevertheless a map which situated what we know as Cape Town and the other parts of the Southern African region of Africa – albeit imperfectly.

Politicians from South Africa were helped by other freedom fighters like Mwalimu Julius Nyerere of Tanzania, Kenneth Kaunda of Zambia, Samora Machel of Mozambique and Sam Mujoma of Namibia to name but a few. Africa was on top of the game of helping their brothers and sisters of South Africa. In fact, not only did the Mkhondo we Sizwe (a military organisation of the ANC) had camps in countries such as Tanzania and Zambia, they also receive support in strategy and materials. This was perceived and inspired by the spirit of Nkwameh Nkrumah who taught others that Ghana will be free only when all other countries are free. It was the spirit of Ubuntu in action. Our leaders understood they needed to support each other's, and they did all they could with the support of the international community to fight and win over apartheid.

Oliva Thambo was in Zambia with Thabo Mbeki while Mandela and Cery Ramaphosa and many others were in South Africa, either in jail or free. Ultimately, they led the country in negotiations and in 1990 Nelson Mandela was free again. In 1994 the old dispensation of apartheid led by Frederick Declerc came to an end. In the first democratic elections Nelson Rohlihlahla Mandela became the first president of South Africa democratically elected. It was the beginning of a new dispensation, and after only one term he stepped down, Thabo Mbeki was elected, then Jacob Zuma, and then came the time of the current president Ceryl Ramaphosa.

Russia: History at A Glance

The history of Russia begins with that of the Eastern Slavs and the Finno-Ugric peoples. The state of Garðaríki ("the realm of towns"), which was centred in Novgorod and included the entire areas inhabited by Ilmen Slavs, Veps and Votes, was established by the Varangian chieftain Rurik in 862 (the traditional beginning of Russian history). Kievan Rus', the first united East Slavic state, was founded by Rurik's successor Oleg of Novgorod in 882.

The state adopted Christianity from the Byzantine Empire in 988, beginning the synthesis of Byzantine and Slavic cultures that defined Russian culture for the next millennium. Kievan Rus' ultimately disintegrated as a state because of the Mongol invasion of Rus' in 1237–1240. During that time a number of regional magnates, in particular Novgorod and Pskov, fought to inherit the cultural and political legacy of Kievan Rus'.

After the 13th century, Moscow came to dominate the former cultural center. By the 18th century, the Tsardom of Russia had become the huge Russian Empire, stretching from the Polish–Lithuanian Commonwealth eastward to the Pacific Ocean. Expansion in the western direction sharpened Russia's awareness of its separation from much of the rest of Europe and shattered the isolation in which the initial stages of expansion had occurred.

Successive regimes of the 19th century responded to such pressures with a combination of half-hearted reform and repression. Russian serfdom was abolished in 1861, but its abolition was achieved on terms unfavourable to the peasants and served to increase revolutionary pressures. Between the abolition of serfdom and the beginning of World War I in 1914, the Stolypin reforms, the constitution of 1906 and State Duma introduced notable changes to the economy and politics of Russia, but the tsars were still not willing to relinquish autocratic rule or share their power.

The Russian Revolution in 1917 was triggered by a combination of economic breakdown, war weariness, and discontent with the autocratic system of government, and it first brought a coalition of liberals and moderate socialists to power, but their failed policies led to seizure of power by the Communist Bolsheviks on 25 October. Between 1922 and 1991, the history of Russia is essentially the history of the Soviet Union, effectively an ideologically based state which was roughly conterminous with the Russian Empire before the Treaty of Brest-Litovsk.

The approach to the building of socialism, however, varied over different periods in Soviet history, from the mixed economy and diverse society and culture of the 1920s to the command economy and repressions of the Joseph Stalin era to the "era of stagnation" in the 1980s. From its first years, government in the Soviet Union was based on the one-party rule of the Communists, as the Bolsheviks called themselves, beginning in March 1918. However, by the late 1980s, with the weaknesses of its economic and political structures becoming acute, the Communist leaders embarked on major reforms, which led to the fall of the Soviet Union.

The history of the Russian Federation officially starts in January 1992. The Russian Federation was recognized as the legal successor to the Soviet Union on the international stage. However, Russia has lost its superpower status as it faced serious challenges in its efforts to forge a new post-Soviet political and economic system. Scrapping the socialist central planning and state ownership of property of the Soviet era, Russia attempted to build an economy based on market capitalism, with often painful results. Even today Russia shares many continuities of political culture and social structure with its tsarist and Soviet past.

The Struggle of Proletariat in Russia

The proletariat struggle is a class conflict between the rich and the poor class in Russia. This conflict represents a process whereby change comes about through the opposition of social classes as they pursue what they see to be their (different and opposed) collective interests in society. Capitalist class appropriates these goods for its private profit. Fundamentally, there are considered to be two great classes in Capitalist society (the Bourgeoisie and the Proletariat). Capitalist society, where technological development (machinery etc.) has allowed a bourgeois class to exploit factory forms of production for their private gain.

The main relations of production in this epoch are between employers and employees (those who own and use capital and those who exchange their labour power for a wage). An employer does not own his / her employee in this society and various political freedoms and equalities are able to develop. A member of the working class is falsely conscious of their true class position when they fail to see themselves as a member of an exploited, oppressed, class).

The concept of alienation is used to refer to the way in which Capitalist society degrades both the Bourgeoisie and the Proletariat. The Proletariat are alienated from society because although they are responsible for producing goods co-operatively (for the potential benefit of society as a whole), the fruits of their labour are appropriated by the Bourgeoisie (in the form of profit) for their private use.

The seizure of political power by the proletariat on a world scale, the precondition for and the first stage in the revolutionary transformation of capitalist society, means in the first place the total destruction of the apparatus of the bourgeois state. Since it is through its state that the bourgeoisie maintains its domination over society, its privileges, its exploitation of other classes and of the working class in particular, this organ is necessarily adapted to this function and cannot be used by the working class which has no privileges or exploitation to defend.

Global Economic Climate

Global economy refers to the expansion of economies beyond national borders, in particular, the expansion of production by transnational corporations to many countries around the world. The global economy includes the globalization of production, markets, finance, communications, and the labour force. This has led to competition at the international level. This has affected companies in the United States of America hence US is a superpower of the world’s economy.

Many of American companies have moved to China because of cheap labour and more profit. As a result, people living in America are losing jobs and prices are going up. Today, the global economic crisis experienced generally by the countries of the world, and specifically in Europe can be characterised by:

- Transition to polycivilizations being sociocultural globalization basis;

- Weakling of the role of the USA as the key financial centre (the stock exchanges of London and Frankfurt jointly generate more revenue than NYSE, NASDAQ). Not so long ago the national financial institutes of the USA (primarily investment banks) solely formed institutional patterns all over the world;
- Emergence of new regional centres of forces (e.g., Iraq) military suppression of which is impossible without a serious damage to the USA themselves.

There are four major weaknesses that continue to conspire against robust economic recovery in developed economies. These weaknesses are creating a vicious cycle, namely: (i) deleveraging by banks, firms and households continues to restrain normal credit flows and consumer and investment demand; (ii) unemployment remains high, a condition that is both cause and effect in preventing economic recovery; (iii) fiscal austerity responses to rising public debts deter economic growth and make a return to debt sustainability all the more difficult; and (iv) bank exposures to sovereign debt perpetuate fragility in the financial sector, which in turn spurs continued deleveraging [10].

According to Dutta [18] the formation of BRIC by the four fastest growing economies of the world has created a storm in international politics and strategic relationships. However, a big question remains on the viability of this alternative and how far it can challenge the existing Unipolar world order controlled and dominated by US. BRIC is an acronym that refers to the economies of Brazil, Russia, India, and China, which are seen as major developing economies in the world.

The South African government adopted a minerals beneficiation strategy in 2011, and the implementation plans are being finalised for key value chains, including steel, energy, jewellery and platinum group metals. In addition, according to the Presidency, Russia has expressed interest in co-operating with South Africa in the construction of nuclear power plants. South Africa's Integrated Resource Plan indicates that nuclear power should form an important part of the country's energy mix by 2030, with the first plant to come online as early as 2023.

Many people around the world have asked a critical question about the future of BRICS. They need to know whether BRICS will pose a real challenge to the existing world order, both in terms of political hegemony and economic supremacy. It is something that the people of the world need to examine and determine. But With an excellent bilateral and multilateral relationship between the BRIC nations, it is strongly believed that the West has a challenger with respect to important economic and political issues.

Diskin, I. 2010. Role of BRIC in forming a new economic order and efficient global management mechanisms creation evolution of the priority tasks of the member states: Report for the second joint round-table discussion of the economic and social. Development Council of Brazil and the Public Chamber of the Russian Federation.

This research aims to study the diplomatic and economic relationship between South Africa and Russian based on the development in order to join the BRIC regarding the visit of Russia president in South Africa few years ago. A quantitative approach shall be employed in this study. Questionnaires will be distributed amongst the South Africa citizens to find out about their views regarding the impact of the diplomatic ties between South Africa and Russia in their lives.

Black & Champion [11]; Education.com [12]; Sibanda, 2009 [13]; [14] Thomas, 2003; [12] Free dictionary, 2012) informed the methodology of this study.

Results and Discussion

Relationship between South Africa and Russia

78% of the respondents are South African citizens while 22% are immigrants. Regarding the relationship that exist between South Africa and Russia 90% indicated that there are aware about it whereas 10% indicated that they are not. It is the immigrants are not aware.

Russia has had relationship with South African citizens before 1994. 70% of the respondents attributed that relationship to political support whilst 30% is divided equally among military support, sports and recreation and investment.

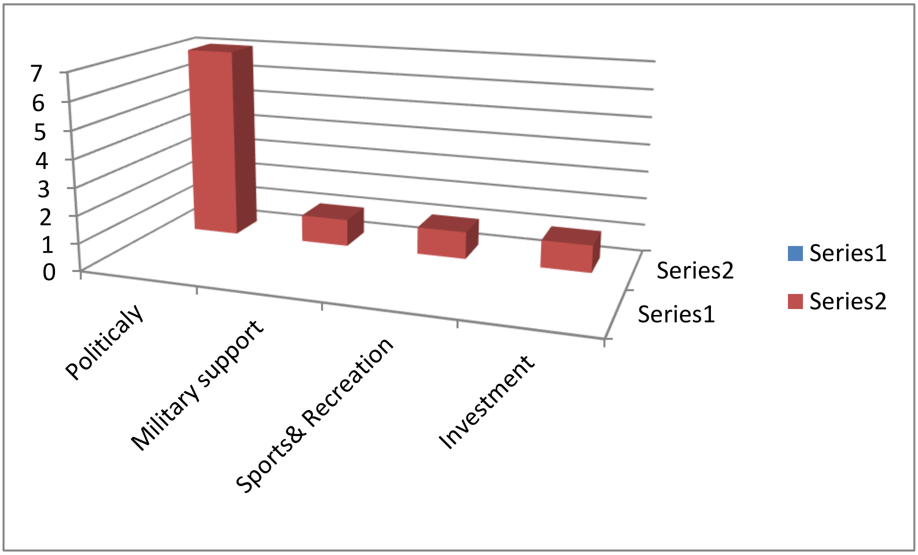

Figure 1. Past Relationship Between Russia and South Africa

Protection of the South African Economy

Since South Africa has joined the BRIC (Brasil, Russia, India and China), the respondents provided their views about whether the South African economy will be insulated global economic meltdown. The results show that 60% indicated they strongly agree; 20% agree; 10% disagree; and 10% strongly disagree that South African economy will be protected. See figure 1 below.

The following reasons were provided to support South Africa's joining of BRIC to protect its economy from global economic meltdown:

- "The possibilities are many for emerging economies in order to join the group (BRIC) and this shall contribute value to the country's economy."
- "Merging with other countries is always a good idea as we get resources from them that will help our economy grow."
- "BRICS is a trading block of new emerging economies."
- "This is a way of developing our economy."

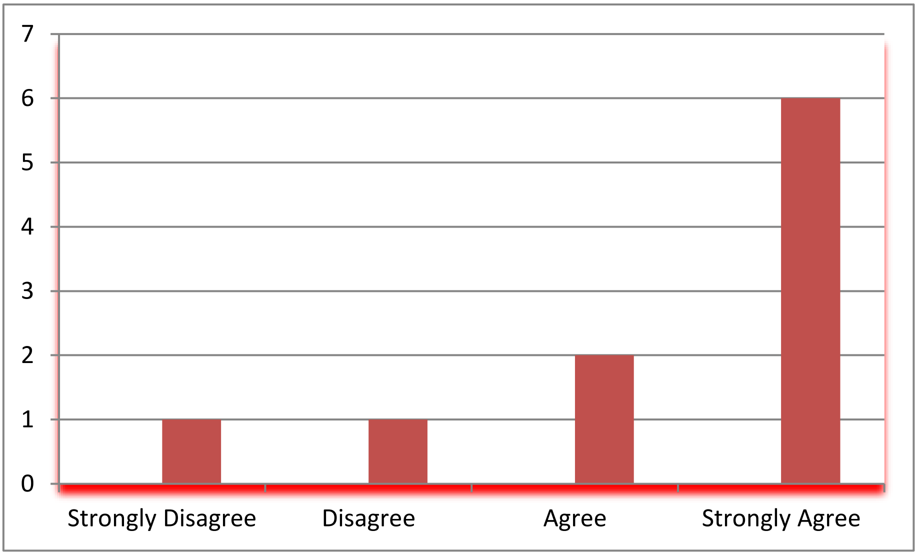

Figure 2. Protection of South African Economy

There were those respondents who indicated that South African economy is not going to be protected form economic meltdown. They supplied the following reasons:

Participant # 1 was as positive as the survey result above:

"He was of the view that the BRICS will help South Africa with infrastructure development through financing of capital-intensive projects. The BRICS bank in China is there for that. If it was not for the Corona virus, I am sure the organisation was going to deliver to its promises by now".

Informing Citizens about Economic and Diplomatic Relations

In many cases, economic and diplomatic relations between two or more countries are only known to the elites, private businesses and bureaucrats: the ordinary citizens are left in the dark. Therefore, a question was posed as to whether the ordinary citizens are informed about the economic benefits, they can generate out of the economic relationship established by South Africa and Russia. According to 60% of the respondents said citizens are informed about the benefits that can be generated. 40% said the ordinary citizens are not informed.

Participant # 9 corroborated the sentiment of those who were negative as they feared for South Africa to some extent:

"South Africa is not that strong economically; it can be easily swallowed if the economy does not recover. I see that some countries in the BRICS do not relate well, India and China seem to have border conflicts and unresolved issues over competition. How will South Africa be assisted with all that? We should rather turn to African solutions. Sorry, I have to be pessimistic about it".

On whether the South African government is doing enough to inform the ordinary citizens about the value of the economic relations the country enters with other countries 40% of the respondents indicated that they strongly agree; 20% agree; 30% strongly disagree; and 10% disagree.

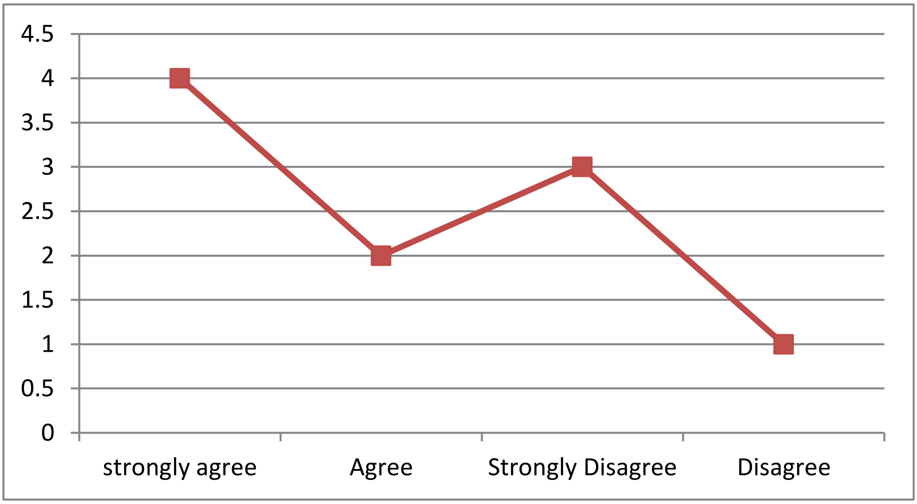

Figure 3. Informing the Citizens about Economic Benefits for Citizens

According to Participant # 7, many people in South Africa do not know about the BRICS still, let alone about Russia. Only those who are socialists or were in the struggle were trained in Russia. The others their open to the capitalist business. More awareness is needed.

The General Impact of South Africa-Russia Economic Relations

On the general impact of the economic relationship between Russia and South Africa to the ordinary citizens of the country, the respondents expressed concurring views, namely:

- "Russia-South Africa agreement will help to shape the future of the country's economy."
- "The relationship is solely based on commercial diplomacy rather than being fundamentally driven by political and social relations."
- "It will put the greater impact on development in several ways."
- "According to my understanding this can affect bilaterally all citizens to ensure the power of the country."
- "This relationship should help the ordinary people to get jobs to eradicate poverty."
- "It is because also the new development of the country can make proudly the image of the country."

On how South Africa can use the economic and diplomatic relations with Russia to protect the South African citizens from the global economic meltdown, the respondents said:

- "Trades must be used a new system of economy in order to promote the new vision of the global economic instead of losing focus to benefit only the few elites."
- "If trade is on the ascendancy business booms … the growth and expansion of the economy."
- "I mean this part consists of protecting all the South African citizens. In another level of life and create another awareness."
- "This is the way of developing the country economically."

Participants #2, #3, #4, #5, #6, #10 all agreed on trade as the stimulus of good relations. They view that as a way of bringing the two countries together. Trade and cooperation, not only on commodities but on other products, exchange of information and expertise is another area where the anonymous participants agree upon. This agrees with the findings of Isheloke [15]. Other researches have proven that FDI contribute to economic growth [16].

With the theory of international diplomacy in mind, it is important to note that the challenges and opportunities for effective international diplomacy was somewhat figured out in the context of creating a proper bilateral relationship in order to boost up the global economy. The study indicated that though the people are aware of the existing relationship between South Africa and Russia it is difficult to pinpoint opportunities the ordinary South Africans.

However, one should remember this about Russia. The Federation of Russia has returned to its position as a major international player in the diplomatic, cultural and business world. While recent financial crises are in everyone's memory, the economy of the country is growing and is benefiting from some foreign investments. More and more western companies are opening offices in the country and Russian investors have, in return, begun to invest abroad [3]. Therefore, South Africa should build on that possibility and ensure that her citizens are benefitting.

Most importantly, one can generate some optimism from the responses given in relation to the nature and impact of the relationship. South Africa was not happy with the fact that it was not invited in the BRIC deliberations given its political clout in the global governance processes and the fact that it is a vocal champion of the interests of developing countries. South Africa has since sought to gain recognition as part of the BRIC formation [1]. Everyone is hoping that the relationship South Africa has with the BRIC countries should really be used to protect the country from the global economic meltdown and should be used to promote trade for all the citizens, not just the elites, bureaucrats and private businesses.

The fact that the majority of respondents said that past relationship between South African and Russia was largely political with little investment and culture is an indication for a need for more investment in the current era. Two important elements from the Russian culture can be borrowed to promote sustainable and unified development. These are: egalitarianism and collectivism. Peasants worked together in the farms in an organised and self-managed community. Egalitarianism is an important concept related to the village milieu, the social philosophy that supports the removal of inequity, and promotes an equal distribution of benefits [9].

Russia has now a buoyant economy and desires more minerals and raw materials from elsewhere. Africa's need for foreign investment, as politicians and analysts alike see it, augurs well with the timing. Russia stands a chance to benefit and expand its acquisition of minerals from South Africa. There could be mutual agreement that will see South Africa benefit from power as some respondents have suggested on the general impact of the Russia-South Africa agreement.

Two important statements about how can South Africa use this relationship to protect the citizens from global economic meltdown, have been made by the respondents, "It will put the greater impact on development in several ways"; "This relationship should help the ordinary people to get jobs to eradicate poverty." This brings about an important dimension to development as advocated by Korten - the people-centred development. The idea is to ensure that "the members of a society increase their personal and institutional capacities to mobilize and manage resources to produce sustainable and justly distributed improvements in their quality of life consistent with their aspirations" [19]. The main disagreement with came from Participants # 8:

"BRICS is not winning on anything as far as the grassroots are concerned. The people do not see themselves in what the partnership does. I think they are after our raw materials. It is another form of colonialism or if you want it is called neo-colonialism. Look at the multinational's corporations in Africa, they behave as if they rule this continent. They want the lion's share. They are like the ones who make the law. This is not acceptable. Maybe it is time we think again about this BRICS before it is too late".

Conclusion and Recommendations

Both Russia and South Africa have an important role to play in world political, cultural and economic development. Cultural exchange, not political and economic exchanges will significantly enhance their place in the current world affairs. Russia has had its fair share in helping South Africans get rid of apartheid. The future shines brightly for both because there are now focused on economic development of the country with some strategic areas of interest being spelt out in the research.

The formation of BRIC and later BRICS after South Africa joined the member states (Brazil, Russia, India and China) poses a real challenge to the existing world order, both in terms of political hegemony and economic supremacy. Whether the future will tilt the balance of power in the developed nations in favour the emerging economies remains to be seen. Developing the economy of South Africa based on joining BRICS it is a key success in the future the country and it will create another angle of a new consideration in the world.

The study indicated that South Africans are positive about the relationship though they are not exactly sure how it can benefit the ordinary citizens. They have indicated that the relationship should be used to protect the country's economy form the global financial crisis or meltdown. Issues such as poverty alleviation, power or energy, cultural exchange and social unity based on the principle of egalitarianism and collectivism can be borrowed from Russia that this relationship needs to cultivate have been raised by the respondents.

Though this study is not comprehensive in terms of economic and political development, but it has highlighted important issues about promoting international diplomacy and keeping citizens informed about the relationship the country establishes with other countries. This is a legacy of Oliver Tambo, former President of the ANC left which. Should be promoted, deepened and sustained so that the ordinary citizens can benefit to address social challenges. In addition, the government should raise an awareness about the possible avenue the ordinary citizens can exploit to benefit from the bilateral and diplomatic ties forged even in the Africa continent.

South Africa is a successfully progressing country in terms of relations with the outside well along that it could make one of the major economic players. In order for that to happen South Africa needs:

- Utilise and invest more in the relationship established with Russia.

As South Africa is poised to be a stronger nation in Africa the relationship its has with other emerging economics in the BRIC block could harness:

- To ensure sustainable development of the continent in order to advance the two important Russian philosophies in business (egalitarianism and collectivism).

After 1994 South Africa established some wonderful relationships opening itself up too many potential investors in the global arena. There is a need to:

- Strengthen its international diplomacy and advance the bilateral relationships it has with many countries so that many opportunities could be open for the ordinary citizens to exploit.

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Chapter 6
The Role of Multilingualism as a tool in Spurting Trade among the BRICS: An Economic Perspective

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Abstract

As the use of languages play a critical role in economic activities within the globalized countries' economies, there are growing perspectives and interests in the relationship between languages and the volume of trade among trading partners. This study looks at one such perspective in the lenses of gravity model, a theory of international trade, that measures the impact of language on trade or Foreign Direct Investment (FDI). The study explores challenges facing Brazil, Russia, India, China and South Africa (BRICS) in respect to the impact of language diversity in their trading matters, and the potential of multilingualism in spurting trade within this trading bloc.

The study employs a qualitative approach with the use of exploratory design. The data is based on secondary sources stemming from reports, research, books to policy papers. This study findings show that various trading blocs such as European Union (EU), the Common Market for Eastern and Southern Africa (COMESA), the West Africa's Economic Community of West African States (ECOWAS), with some members of BRICS such as South Africa and China as having adopted multilingualism as a strategy of addressing the language factor in their bilateral trading matters. This study proposes the promotion of multilingualism as a way of mitigating the impact of language barrier in international trade among the BRICS and beyond.

Keywords: *Economics of language, Gravity model, Bilateral-trade, Economic development, BRICS.*

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Introduction

BRICS is an informal grouping of states which are playing pivotal roles in the economies and politics within their regions and also globally. The members states aim at promoting economies, boosting of trade and enhancing the manner in which emerging economies are represented in the world [1]. As Sajal and Meghna [2]explain, the trade between BRICS is highly complementary, as each of the member state is equally robust in the production and supply of commodities, while having vibrant natural resources industries. A reflection of this context is China and India. While these two countries have cheap cost of labour, China's domination is in manufacturing, with India's focus and dominance being in the pharmaceuticals and development of softwares, together with outsourcing. In such some increasingly networked economies, member states of BRICS need to overcome glaring challenges so as to fully exploit and benefit from the wider market and trade opportunities at their disposal. Some of such challenges, as Maria and Sandra [3] posit, are barriers brought about by geographical distance, cultural and language diversity, contrasting socio-political settings, and economic policies.

Based on gravity model, a trade theory focusing on international trade, and credited to Tinbergen [4] and Poyhonen [5], the theory measures patterns of trade flows among trading countries, language distance is one of the major push-pull factors influencing international trade relationship. Considering that BRICS has no official language, neither a language policy, the variety of official languages spoken within each member state, such as Portuguese in Brazil, China having Mandaring, and Russian for Russia, English and Hindu in India, with South Africa having a plethora of official languages – 11 to be exact, the enormous challenge facing BRICS is in overcoming language distance. A study such as this one, on the critical role that a common language or multilingualism policy could play in boosting trade flows among BRICS members states could provide an insight into multilateral trade integration between trading partners.

The views of Brannen, Piekkari and Tietze [6] on the role of languages in a trading bloc such as BRICS is that of facilitating processes of decision making and the allocation of resources that characterize daily operations of business matters. It also makes it possible the interaction of intermediaries from different continents, institutions and agencies found within countries with different languages. Recent studies Recent studies [7]; [8] point out that among important determinants to trade are ease of communication, and proficiency in a foreign language, and not necessarily language(s) of the trading partners.

Such views are also supported by Maria and Sandra [3] on the critical role of language in trade among countries or economic blocs such as BRICS, positing that, being an as an interaction that involves diffident individuals, the success of any trade engagement relies heavily on the language being used in their communication. Having a common language, or the use of multilingualism then becomes more essential, especially where language distance exists. This is also reflected when decisions or choices of a trading partner, in the international level, has to be made. The issue of language distance could present a barrier in communication, while proficiency in a trading partners language could prove to be the determinant factor, especially in situations where costs involved in communication are significant. For example, one saves time when communication is effective and timely. The company is able to sell abroad to a market community who can negotiate its price and use bargaining power in the process. This translates in economic gains as errors brought about by communication barriers, such as incorrect translations or bad interpretations, are avoided or diminished. This allows attention to details in trade dealings among trading partners such as BRICS members states.

However, in circumstances where trading parties do not have any language in common that is spoken or understood by trading partners, bi-lateral engagements become a challenge, and this has the potential of having some member states of a trading bloc forming trading relationship with other states, which have no challenges such as language distance. This is a glaring possibility which BRICS member states could find itself in, losing on trade opportunities provided by its members, if a solution on language distance is not addressed. There are numerous studies highlighting the critical position that languages play in bilateral and global trade. An example of such studies [9]; [3]; [18] ; [11] indicate that foreign trade volumes for United States of America (USA) companies, closely correlate with the positioning of language in the trade transactions – whereby increase in trade revenues from foreign trade partners is closely linked to the multilingualism versions of the merchandise that have been sold. This indicates that an investment in a language, brings in huge revenue for businesses. Therefore, engagement in foreign trade, according to Hans and Andrew [12], requiring knowledge of foreign market, cannot be acquired without taking into consideration the role of languages, since it is essential in getting insightful information on opportunities and challenges commonly experienced when dealing with foreign markets.

The challenges facing BRICS trading partnership is the uniqueness of its composition, with member states being geographically distant, with trade barriers ranging from their diverse political positions in the global space, social-cultural barriers, different economic strength, and language problem making communication a stumbling block in the integration of BRICS member states on trading matters. However, the language barrier seems to be common among global trading countries, with an example of Southern African Development Community (SADC), with a membership of fourteen countries, and with ECOWAS having fifteen member states, all having adopted multilingualism, with English, French and Portuguese as the official languages. Lately, SADC added Swahili in the list of their official languages, while the European Union (EU) has twenty-three official languages [13]; [14].

While surmounting the challenges brought about by language barriers, the costs involved in such an undertaking is quite significant. However, as [15] posited, there are benefits to be realised from that could spurt enormous trade opportunities.

Literature Review

Language, Society and Social-Economic Development

The role and place of language in our societies is articulated by Anthony [16], positing that it is the granary of a society's ideals and aspirations, while taking the role of a socio-economic construction. Individuals and corporates, develop socially and economically when the they communicate in languages best understood by both parties. This suggests being skilful in a language shared by both parties for any effective communication. In the absence of this, Agwu [17] warns that the challenges engulfing the ever changing global trading environment, brings with it difficulties in interpersonal interaction between trading parties, as a result of language barrier, and this has the potential of trading partners losing on trade opportunities and economic partnership.

In the current global community that we live in, one of the many factors in determining trading partners, besides social-political, geographical distance, or common land border, is language, which Metulini *et al.* [18] point out as one of the major variants in the gravity model of bilateral-trade. In an international trading bloc such as BRICS, where Brazil, which has Portuguese as its official language, India having Hindi and English, South Africa having eleven official languages, with English being one of them and the other ten being ethnic languages, China using Mandarin and Russia having its official language as Russian, overcoming the barrier created by such diversity in language is an important factor that could further boost trade volume amongst BRICS member states.

However, in this context, the challenge is on the choice of an official language or languages that could be used in BRICS, or the way forward on overcoming the language distance among member states. Even in multilingual countries such as South Africa which has thirty-five indigenous languages, the country had to set for eleven of them as official languages. The problem, of course, become determining the criteria for adopting one over the others, or finding a way that languages could facilitate the absence of cultural and communication barriers associated with any global trading block such as BRICS.

According to Agwu [17] , a possible rationale in having several official or national languages, is to avoid a situation where the choice of a specific ethnic language could be used as a weapon for marginalization and or exclusion of other communities. Language and ethnic historical factors could also make it difficult to adopt any local language as the country's official language. A possible solution, according to Isheloke [19], would be to introduce Esperanto (a semi-artificial language and yet a living one) as an experiment in addition to promoting a multilingual culture within the BRICS. Such a language, Esperanto, has the potential of enabling a conducive environment since it is devoid of any ethnic, colonial or negative historical connotations, unlike languages such as Afrikaans in South Africa, French in Algeria and Democratic Republic of Congo – albeit to some extent.

Challenges Of BRICS, Interaction of Trade and The Role of Language

The potential nature of BRICS is seen from it representing 43% of global population; while its labour force stands at 46% of the global labour supply, and its Gross Domestic Product (GDP) positioning itself at 25% of the global GDP total. With such a strong social-economic growth, BRICS is gradually shifting the economic power bases from European economies and the USA [20]. The canvas of the BRICS agenda gives priority to the interests of the member states economies, while offering support and complimenting many sectors of their economies [14]. However, one of the challenges facing BRICS, according to [20] and [14], the challenge facing BRICS is that, its member states have diverse social-political and cultural similarities, apart from the glaring barrier of language, these countries have very little cultural or political similarity, geographical distance. They also have different social-economic policies, with their standards of development differing widely.

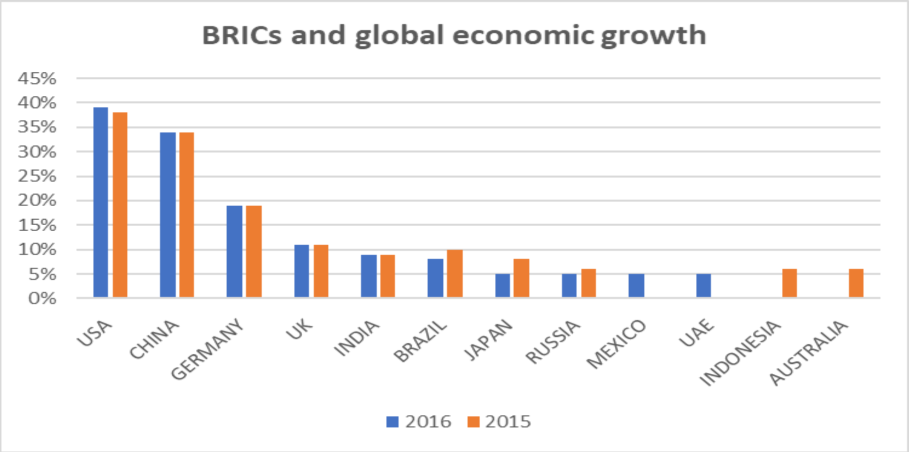

Figure 1. BRICs and Global Economic Growth [21].

As shown in Figure 1, China outperformed other BRICS countries with 38% and 39% respectively in 2015 and 2016, with regard to its performance vis-à-vis the global economic growth, with Russia scoring the least (5%). South Africa, which is not pictured, remains a zero-growth economy to date – a situation which could be exacerbated by the coronavirus 2019 (COVID-19) crisis.

In addition to the above, Sandra and Maria [48] point out the language barrier which, as they argue, is a significant player in global trade, and although trade among partners who are in different geographical spaces is now easier, the challenge still lies in getting through other barriers that are contributing to the cost of doing trade, with communication being a major one due to the diversity of languages among trading partners. This comes about when doing business with a foreign national, and where there is no commonality in language, and in such a situation, there will be an increase in the cost of doing business due to hiring of translators or the use of technology so as to facilitate communication. Although not indispensable, the views of Arvis *et al.*

[22] is that a common language between trading partners, or the easier it is for them to communicate contributes is a stimuli to an increase in trading activities between them [19] supports [22] on the issue of common language as a necessity and a possibility of economic gain.

The case for multilingualism

The globalized economies that we are is making communication to be paramount, more specifically language(s). Languages that are commonly used, and especially in the international level, play key role in facilitating communication and trading activities [23].

Overcoming this barrier has seen countries promoting multilingual skills which [24] argues that it provides a key in the opening up of global market opportunities, which have the potential of increasing the volume of export revenues for a country. However, the domination of English has created a fallacy that it is the official global language when it comes to doing businesses with a foreign trading partner. This has undermined the use of local languages in global trading arena, yet the ability to conduct global trade in an indigenous language, comes with the understanding of the social-cultural settings, and such knowledge could build a lasting bond.

The role of language in the global economic activities, has created interest in the understanding of how language impacts on the trade volume. This has also seen the introduction of terminologies such as "economics of language" by Marschak [25], which looks into exploring language and economics, with a view of optimizing language while focusing on economic concepts that include utility, value and also benefits. Maria and Sandra [3] and Melitz and Toubal [7] therefore stress the importance of increasing investment in the use of multilingualism, while ensuring that there are clear policies guiding such a move in the education sector, and this will ensure that countries are well placed in taking the enormous global market opportunities facilitated by such a move, especially an economic block such as BRICS. Therefore, as Maria and Sandra [3] add, being proficient in the language being used by your trading host country increases the chances of having a long lasting trade partnership, and it also helps in reducing costs associated with foreign trade, with one of them linked to communication, while influencing the ease of interaction between individuals from different countries. According to Ika [26] solving language barrier problem, and especially by having a language in common is a key factor for any Foreign Direct Investment (FDI) to take place.

There are also alternatives that could be used by trading individuals or member states of a trading bloc that have language barrier, as proposed by [26];

(i) sharing of a common language that could be used in their communication;

(ii) making use of intercommunication, where each one of them speaks own language, and still understanding one another. This happens in situations where languages are interrelated;

(iii) choosing a language spoken by one of them and understood by the other counterpart;

(iv) the use of any foreign language being used by both of them; through hiring translators or employing the use of technology I facilitating their communication. However, the cost-benefit analysis of such an option needs to be taken into consideration.

Isheloke [27] indicated that Africa needs a common working language just as the rest of the world - the BRICS included. Studies on international trade and based on gravity model, such as one by Jan, Victor and Shlomo [28] indicate that multilingualism is a key element of social and economic integration, and a success story is the European Union (EU), where language policy played a major role in its formation, while also contributing on its economic integration. In the case of EU, diversity of languages among member states is seen not as a barrier but an opportunity in the EU's market to be exploited. In the context of EU, the use of multilingualism has reduced the cost of doing business, and also promote trade expansion across border [2] ; [7] ; [26]). Jan, Victor and Shlomo (2011) [28] further explored the inter-language effects, by testing the impact on trade volume based on any language distance from English-speaking trading partners. The findings indicate that language distance has a negative impact on the trade volume. The study analysis also indicates that trading partners whose language is not English, but they have languages linguistically closer to English, have more trading activities between them, a further reinforcement on the importance of having a common language, especially local languages that are widely used in economic activities by the host countries.

Chhaya [11] explains that understanding of local languages is critical aspect in bilateral-trade. This kind of diversity supports sustainable development. Common symbols or codes are required for cross cultural exchange of thoughts. This, multilingualism, also helps in language development besides fostering social-cultural integration of trading nations. As in the case of EU that has a plethora of official languages, the institution has supported and developed language policies that promoting the development of plurilingualism which has fostered intercultural exchange programmes – a key factor in learning and understanding foreign languages.

There are also examples of multinational corporations such as Samsung and Renault, as Kathleen [30] posits. They have "an official company language" to be used by the employees, while making use of the dominant language when engaging with global economic activities. Those two companies have chosen English as their lingua franca in the business engagements with the outside world. The role of language, specifically multilingualism, is also shown in a study titled Trading with language barriers: a case of COMESA Market in Zambia. The results of the study by Gerald and Regina [31] show that even though Zambian traders face communication challenges, they are able to overcome them by mixing languages, pointing or showing pictures or finding someone who knows how to speak the language the customer is using at no cost.

Methodology and Theoretical Framework

The study employed a qualitative approach whose focus is on lived experiences, opinions and views of the study population within its natural settings. According to Creswell [33], the suitability of this approach is also in studies where the focus is on the exploration and getting an understanding that people have regarding a specific issue of the study, and as Kothari [34] posits, its ability at providing insightful data. The study was guided by gravity model framework which [9] and [35] describe as an international trade theory, and commonly used in measuring the impact of language on trade or Foreign Direct Investment (FDI). Its assumption and principle tenet are that a language shared by trading partners has a potential in stimulating trade activities among countries, while a distance created by language impacts negatively the trade flows between the trading partners.

Data collection

The study was based on a review of literature related to the impact of language on bilateral-trade, and within the context of gravity model theory. This entailed the collection of secondary data ranging from previous studies, academic articles, media and institutions' reports to books relevant to the study context. Literature from institutions came from EU, COMESA, BRICS and other related global trade organisations' reports and studies. Additional studies on language and bilateral trade between countries such as Portugal, Malawi and Zambia are part of the complimentary literature aimed at enhancing the quality of this study's findings.

Data Analysis and Interpretation

Data analysis is a process of resolving data into its constituent components to reveal its characteristic elements and structure. It also the process of analysing data is about organising it into relevant components with a view of revealing its major elements. It also aims at bringing meaning to a situation or phenomenon to which the data refers to [36]. The process of analysing data, a qualitative study, was focused on getting an insight of the subject of the study. The approach employed in the analysis and interpretation of the data for this research study a thematic approach, and as Green *et al.* [37] explain, it aims at giving an insight and meaning to the data, while Braun and Clarke [38] view of thematic analysis as being concerned with the identification, analysis and the reporting of emerging patterns (themes).

The data analysis approach followed the steps listed below [39];

- Organisation of the collected data, through reading them

- Reducing the data and attributing codes
- Identifying patterns that are emerging and how they are interconnected
- Compiling themes that are emerging
- Using the emerged themes in coming up with a theory, and
- Drawing the study findings.

Results Discussion

The study results indicate the dominance effects of language in relation to foreign trade activities, besides strong indications of the role of a common language in the volume of trade between trade partners. The results also provide an insightful look on the dominance of certain foreign languages in the foreign trade space, with an example being English as it is widely dominant in many countries as either an official language or a national language. This highlights the gravity pull factor of language in a foreign business environment.

This has also seen it being widely used by some of BRICS member states, India and South in their international trade relations – an indication of the critical role language plays in international trade. This findings reflects the results of a study by Crystal [40] using gravity model. Using the trade data of United States of America with other 33 trading partner countries, his results indicate that the higher the number of people in a country who are proficient in English, the higher the trade volume such a country has with the USA. However, the regression analysis has not included a situation where there is a language commonality between the parties. Such study results suggest that the absence of a shared language, or the application of multilingualism trading activities can result in increased cost of doing business with foreign nationals, and this has the potential of impacting, negatively, on trade volume or economic activities, and that multilingualism has proved as one of the many ways of spurting bilateral trade.

The study findings by Ingel [23] on Belgium, give examples of companies that have employed the use of multilingualism, with languages such as German, English and Dutch as being among those are in use. The findings also show that countries such as Bulgaria, Spain and Italy, as examples, are using foreign languages as a way of bridging the communication gap, between them and their trading partners. Bulgarians are using Russian language, while French language is used by the Spanish and Italians – when conducting bilateral trade [41.

While India and South Africa, despite having their own local official languages, English is being used as their official language in their international trade engagements. Such are efforts made in overcoming language barrier in trading partners, which also helps in boosting trade between such countries. In the context of the BRICS, the umbrella organisation has also been relying on translations and technology to allow understanding during summits and other multilateral meetings. However, this study has also not found any evidence or any empirical studies on the efforts or any official policy by BRICS aiming at addressing the issue of "language distance" among member states.

Many of the empirical studies on BRICS, have mainly cantered on issues ranging from [42]; [43] economic growth, [42] infrastructural and institutional developments, [43] ; [44] integration of economic growth and trade integration to [45] diverse nature of institutional and economic characteristics.

The importance of effective communication in international trade has been emphasised by Melitz [46] , positing that direct communication, where trade partners use a common language, such as English, between India and South Africa, or Swahili between Kenya, Tanzania and DRC, is three times more effective in promoting trade, than in indirect communication, such as the use translations or interpreters, as it is mostly the case with BRICS summits.

Themes that have emerged from this study are as follows;

- Language distance, which denotes the artificial barrier that prevents trading partners from having direct communication, without the use of translators or technology.
- Trade flow/volume of trade, implying that language influences, to a certain extent, the volume of trade or the nature of partnership among trading partners.
- Multilingualism, which has emerged as the best way of mitigating the negative impact of language distance in international trade relationships.
- Gravity model of international trade showing how push=pull factors specifically language, influence volume of trade among trading partners.

The Study Implications

The study implications are that, BRICS has yet to exploit fully the trade opportunities within its bloc. This is due to not having fully integrated as a trading bloc, specifically by overcoming challenges posed by language distance among member states. This gap has the potential of having some or all member states of BRICS doing more business or looking for other trading partners who share with them or enjoy language proximity with them. This could also see a slow disintegration of BRICS as an emerging powerful trading institution.

Recommendations

In order to address the "language distance" among BRICS member states, respective member states should employ resources at their disposal in the promotion of multilingualism through the introduction of language policies that will see foreign languages being part of their school curriculum, as South Africa did in 2015 by introducing the teaching of a Chinese language, Mandarin in South African schools, as a way of promoting multilingualism. This has been proved to have the potential to boost socio-economic development in the BRICS member states, as it is happening in EU. South Africa is also getting ready to introduce Swahili in the curriculum and to actually teach this language in all public schools in the near future. this is likely to have a positive impact to trade and economic development between South Africa and the other 12 Swahili speaking nations, and ultimately with all the African Union member countries that aim at Swahili as a language of African diplomacy in decades to come - in accordance with the desiderata of the Pan African Parliament.

Conclusion

In a highly globalized economy, states, corporates or individuals, will find it easier dealing with trading partners who share a common language with them, or understand their languages. Most trading blocs, cited in this study, such as ECOWAS, COMESA or EU, have strong language policies that promote taking advantage of language diversity among them through the adoption of multilingualism. This has made their trade engagements easier and also increasing trade among member states.

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Chapter 7
BRICS Plus and Economic growth: what if Africa becomes an option?
"Africa has a shape of a revolver of which the trigger is in the Congo-Kinshasa" (Franz Fanon)

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Concluding Remarks

in these concluding remarks, I would like to share a few thoughts about the topic "BRICS and Economic Development" and to suggest where to from now. please allow me to indulge in the liberty of giving a slightly different title to this conclusion: BRICS Plus and economic growth - what if Africa is the option.

This e-book addressed the BRICS phenomenon from different perpectives.

As a high-level academic task, the project brought together academics, policymakers, researchers, business economists and industry players, either directly or indirectly through research – this is the known side of the coin.

It was discussed that, the BRICS has several issues to grapple with in order to revamp the economy in the time of Covid-19, how to accelerate cooperation among the partners is another issue that was raised. Within the BRICS the societies are unequal, and the disparity is so huge that stringent measures must be taken to redress the situation amid and beyond the pandemic.

South Africa has currently the most unequal society in the world (unemployment, poverty, health crisis, poor education…and landlessness). There are at least 2700 informal settlements in South Africa. Top 10% people control 70% of SA's assets in 2015, other 60% who are blacks (Africans, coloureds and Indians) own only 7% of SA's net wealth. 50% of the population in SA live with less than $5 a day [1].

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A pro-employment development path that needs to be taken into account should help countries such as India, South Africa and Brazil where joblessness (and as is the case for South Africa, a zero-growth economy and 27% unemployment in 2016 persists [2]. The papers should also look at how the influence of BRICS member countries could be in favour of offering the partnership better chances for regional integration through trade and cooperation. The future research should focus on the regional integration plans and could add value to the discourse in that aspect.

Could the issue of BRICS plus be one way of addressing developmental needs of the Global South? There were suggestions that the Asian tigers, namely, (Taiwan, South Corea, Singapore…) are the leading emerging economies [3] and as such should be considered into the BRICS. While the suggestion could be plausible for Thailand and Singapore, it would be provocative and dangerous to treat Taiwan as a separate country from China in an attempt to introduce it into the BRICS – China would simply oppose that with a "veto" at the UN Security Council (UNSC). This is not to say that claims of the Taiwanese should be disregarded all together but that a different platform could be more effective in addressing such claims - not the BRICS.

Africa has always been lagging behind in such important debates (BRICS Plus), but her time has now come. Change is inevitable in the context of BRICS and Africa, like it is elsewhere. If one doesn't see it coming, it simply means one hasn't checked it out properly. If one does not see it coming one must cause it. One must cause the change to happen. The BRICS as an organisation needs change and a good one. Change that will sustain it, help it keep momentum in the concert of the nations. One such changes could be the advent of BRICS Plus in general and as this book advocates, an African friendly BRICS Plus change is needed - as opposed to just having the so-called tigers (for example Singapore, Thailand and Taiwan).

So, again a particularity of this book is that it also advocates for BRICS Plus and call for would be African (countries) candidates to be considered going forward. Countries such as Egypt, Nigeria, Kenya, Ethiopia and the Democratic Republic of the Congo (DRC) would be great candidates to observe the functioning of the BRICS countries and ultimately in the future to be given an opportunity to join the partnership. The idea that a country must be an emerging economy to join the BRICS doesn't hold. It doesn't hold the test of time as the economic situation is everchanging, and all the time other emerging economies would ultimately emerge. I think the criteria should be the potential of a country in addition to other criteria.

A single African country in the BRICS does not weigh much and is not capable of counterbalancing the power of her counterparts (especially China, Brazil and Russia, countries that are like half a continent). These are countries with huge potentials, numerous populace and who appear to be great representatives of their respective regions. India is equally important and culturally rich as an ancient civilisation just like China.

Egypt would ensure that cooperation between the BRICS and the Arab becomes smoother and anchored on economic development of northern Africa;

Nigeria as the first robust economy of Africa would be a game changer. As a petrol economy devoured by inequality, and Boko Haram terrorism in addition to the Anglo-crisis or the Igbo region instability, relationship of socio-economic nature would also prioritise anti-terror attacks – a major hindrance to economic growth in Nigeria. China has been effective in suppressing terrorist activities in the mainland, and therefore trade cooperation and exchange of expertise would benefit Africa and the BRICS. Without security and peace in Africa, there would be no sustainable development. Without bread and water, there wouldn't be peace!

Kenya is the biggest economy in the east of Africa and Ethiopia is a force to be reckoned with as the capital of the African Union, thus in a way the capital of the motherland Africa. The geostrategic position of Kenya at the port of Mombasa would work at the advantage of the BRICS countries and facilitate import and export of commodities. A win-win relationship of cooperation and trade between countries should be the way forward. More than Three to four decades ago Ethiopia was a country of hunger (1984-1985) [4], but the miracle is that the relatively modern economy that it has become impresses many.

China is already doing business with almost all African countries, and the formalisation of partnership in the context of BRICS Plus would just enhance existing ties between the two blocks (Africa and BRIC[S]). Critics have been vocal in pointing out that single countries are small and economically insignificant that they wouldn't weigh anything before the BRICs countries, thus the need of summit, trade and cooperation between the BRICS and African states (put together). There are those who also oppose summits between Africa and single European or Asiatic countries or between regional organisations and a single African state. Perhaps they are so strict, but countries need flexibility, and should be allowed to manoeuvre as they wish. In this way they will eke out their own path to economic and sustainable development.

The Democratic Republic of Congo with its 34 trillion USD (previous estimates were 24 trillion dollars [5], worth of minerals deposit has a great potential and is of geostrategic importance to the economy of the world. Since the end of the cold war, and the failure of perestroika envisaged by Michael Gorbatchev, Congo has been enjoying an apparent break from imperialistic and sovietic disputes. However, another player of huge impact has invited herself in the game as if to replace the colonial master of Congo (Belgium) who stopped for a while only to invite herself again in the DRC. The DRC in the BRICS would ease the burden places onto South Africa which at times must behave like a big brother to other African countries, trying to be the gateway to Africa, while a plethora of problems in her midst are just unbearable to say the least. Almost 13 times richer than South Africa (which has +-2.5 trillion USD worth of minerals deposits [5], the DRC could be the real force to be reckoned with in global economics.

Already the coltan and cobalt, two strategic minerals associated with the DRC, are dominating industrial activities and are sought after commodities in the 21st century. The country possesses 80% and 70% of respectively coltan and cobalt [6]. Botswana, a country that outperformed all in Africa on diamond beneficiation [7], which coupled with good governance and political stability remains a model of what countries could achieve in a clean manner (rather than promoting development with blood-dirt hands like it is the case of the post-genocide Rwanda).

There has been some negative environmental impact in Africa in the past, namely *El nino*, Tsunami (Kenya, Somalia) and recently inundation and flood in Mozambique and South Africa. The BRICS bank's branch in Johannesburg could look at how effective it would be to finance capital intensive projects that aims at infrastructure development including sustainable housing facilities. in my views I would say that, the impact of the COVID-19 on both humans and the environment needs research (and that also means it needs financing).

While China is deemed a champion in environmentally friendly policies and has redressed the CO_2 levels as well as the pollution effects in the sky [8], in Africa the ordinary citizens think the continent suffers the most despite the fact that it hardly pollutes the atmosphere (unlike developed and emerging economies which do).

Economic development within the BRICS can only be achieved to a greater extent when all sectors give their best in ensuring policy implementation and resolutions from summits materialise.

Shock waves that travelled throughout the BRICS countries have come from the transition towards the double-paced or double speed fourth industrial revolution. This revolution that anchors in digital activities, internet, Cell phone technology and ITC is more real in the developed economy. The situation affecting the BRICS is more of a complexity that it will take a world order change to also change the global economy for the better. Some of the above aspects have been covered in this e-book but a lot requires further research. In this way, we could understand better the other side of the coin.

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