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ENGINEERING of the BRICS ENGAGEMENT

An MVIRDC World Trade Centre Mumbai Research Initiative

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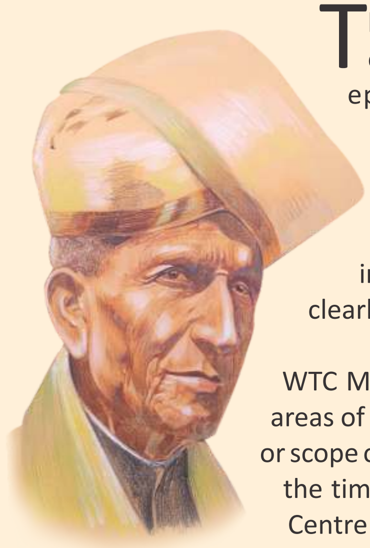

The concept of a World Trade Centre in Mumbai was born of a vision of Sir M. Visvesvaraya, on June 26, 1970, epitomizing a strong conviction that India's future prosperity lay in trade, industrial research and development. He anticipated the need for India's industrial development through research and development in the fields of education, trade, investment and the economy as a whole, with the motto clearly being, 'Prosperity through trade'.

WTC Mumbai serves as a corollary to India's challenges in the areas of economy and trade, virtually growing beyond the ambit or scope of the government and trade promotion organizations. At the time, there was felt the need of a concept of World Trade Centre at a global level which could create the necessary linkages in various sectors of the economy across countries of the world.

The World Trade Centre addresses the key issues of International Development through educational programmes, research & publications, tenant facilities and an array of trade activities.

The promoters of WTC Mumbai developed the idea and concept of the Centre in a unique tripartite partnership of state, government and the private sector. In due course, WTC Mumbai was registered under the Indian Companies Act, 1956 as a Section 25 not-for-profit company named M. Visvesvarya Industrial Research and Development Centre (MVIRDC). MVIRDC's prime objective is to conduct research and development and its ancillary objective is establishment of WTCs in India and abroad.

From there on WTC Mumbai continues to be a living testimony with a promise to excel and go beyond in every field and to take on the challenges of the future.

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Foreword

From the first Summit in Yekaterinburg in 2009 to the Goa Summit in 2016, BRICS has come a long way. What was conceived as a list of four (BRIC) good investment destinations has grown into a five country (BRICS) grouping whose agenda is continually expanding. In this short span, BRICS has brought to the table new ideas on global governance issues. The establishments of the New Development Bank (NDB) and the Contingency Reserve Arrangement (CRA) are impressive achievements. However, BRICS also faces many challenges, some of them being the slowing down of economic growth in the five countries and the worrying trend on the global scene of a move against globalization and free trade. The best way to judge BRICS would be to treat it as a work in progress and not as a finished product.

This publication "Engineering of the BRICS Engagement" is a valuable addition to the growing literature on the various issues critical to the BRICS. This short research work comprehensively covers all relevant issues – current economic difficulties of BRICS, Intra BRICS cooperation in a variety of sectors, reforms of the global financial institutions and the pressing questions on global governance. A lot of research has gone into the work.

Over the last few years, BRICS has been trying out-reach activities as a way of South-South cooperation. This has become an important activity of BRICS even though it was not in the original agenda. This study identifies some areas where this kind of cooperation could prove productive.

Employment generation is an area of crucial importance to all the five countries. That is where the significance of MSMEs (Micro, Small and Medium Enterprises) lies. The study has addressed in detail the constraints that the five countries face in expanding MSME activities. The possibilities of cooperation in this sector for mutual benefit should be explored. The question of inclusive growth is another issue which preoccupies the five countries. In the last two decades, the gap between the rich and the poor in the five countries has widened. How can they address this issue without affecting the continued economic growth? This study has some interesting suggestions.

The five pillars proposed by India at the Goa Summit have been explored in depth. India is very keen to lay stress on these pillars. The most significant parts of the study are the Conclusion and Recommendations which are practical and could yield quick results. Some recommendations like having a BRICS Secretariat may not be feasible immediately but those on BRICS Stock Exchange, Urban Development Portal and Trade Facilitation Panel have great promise.

On the whole, this study will not only help scholars doing research on BRICS but also contribute to policy formulation by the five governments. I congratulate the World Trade Centre, Mumbai for their efforts in bringing out this publication.

Mr. H. H. S. Viswanathan
Distinguished Fellow, Observer Research Foundation, New Delhi

Preface

In 2001, Jim O'Neill, British Economist and former chairman of Goldman Sachs Asset Management Company, coined the term BRIC to denote a bloc comprising Brazil, Russia, India and China and how they would emerge as the world's most dominant economies by 2050. This implied a landmark shift in the global economic power balance, as no one until then could assume that established nations could lose their pre-eminent position in a not-so-distant future. However, Jim's reasoning was strong enough to make the skeptics sit up and take a careful note of the rapidly changing dynamic of the world economy. A decade and half later in 2016, WTC Mumbai has taken up this ambitious study to gauge the importance and examine how the alignment of BRICS nations has helped them achieve economic growth and development. The comprehensive study peers into the institutional mechanism for cooperation in trade, investment and sustainable development goals among member nations. The study has collected, collated and studied views of diplomats, government functionaries, businessmen, financial institutions, trade and industry bodies, economists, academicians and other stakeholders to ascertain where the idea of BRICS stands at the beginning of 2017.

Somewhat coincidentally, the world economy has been on a roller coaster ride since the first publication of O'Neill's BRIC research note. However, the BRIC nations (with South Africa making a cut in 2010 to help expand the acronym to BRICS) have registered a fairly higher rate of growth than the average growth rate of the world economy. And in spite of some slowdown in four of the five BRICS economies in the last three years, the general sentiment is that the group's true potential is yet to be realized and is worth all the time and effort.

Some key achievements of the BRICS nations, as noted below, bear a testimony to this belief:

1) Cooperation: The grouping together of such disparate nations such as China, India, Russia, Brazil and South Africa has had enormous influence on how nations perceive themselves and how other nations have come to view the bloc. The group has conducted eight summits till 2016 to develop cooperation across a swathe of areas, ranging from economic and financial domains to anti-terrorism measures.

2) Sustainable Development: Accounting for 40% of the world's population and slightly more than a quarter of the world's land mass, the impact of climate change and global warming has had a direct bearing on BRICS nations. In the recently concluded Paris Talks on capping carbon emissions, India and China have committed huge sums to develop renewable energy. As generous tax breaks and financial assistance make possible the infrastructure for new solar parks and wind energy, these initiatives have the potential to bring cutting-edge technology to poorer nations all around the world.

3) Financial Institutions: The need for financial independence, against having to depend on restrictive, West-led financial bodies, has led to the creation of the New Development Bank (earlier termed as the BRICS Bank). With a capitalization of $100 billion, NDB supports infrastructure and sustainable development projects in member nations. NDB is also establishing a wide-ranging network of global partnerships with other financial institutions, expanding its scope of operation.

4) Arbitration: Realizing the importance of inter-state arbitration, the BRICS nations are striving to develop their own arbitration centers to mediate in cases of disputes using mutually acceptable business and commerce principles. In October 2015, the BRICS Dispute Resolution Center Shanghai was set up with the support of China Law Society and other members of BRICS legal community to accept arbitration cases from commercial parties of the member countries.

5) Visa Regulations: BRICS nations are also working on visa liberalization, to enhance exchange of students, artists, tourists, business professionals and so on. Seamless movement of people across borders would benefit skill development initiatives across nations through exchange of students / professionals.

Through a meticulous analysis of the strengths, weakness, opportunity and threat of the individual economies by gathering primary and secondary data and views from experts, the study has presented how appropriate engineering of the BRICS alliance can be mutually beneficial for all the member countries.

Mr. Kamal Morarka
Chairman, MVIRDC WTC Mumbai

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Executive Summary

The research study, **Engineering of the BRICS Engagement, was initiated** as a preset to the BRICS Summit 2016 held in Goa under the Chairmanship of India.

The theme of India's BRICS Chairmanship is Building Responsive, Inclusive and Collective Solutions. During India's BRICS Chairmanship, it was proposed to adopt a five-pronged approach:

(I) Institution building to further deepen, sustain and institutionalize BRICS cooperation;
(ii) Implementation of the decisions from previous Summits;
(iii) Integrating the existing cooperation mechanisms;
(iv) Innovation, i.e., new cooperation mechanisms; and
(v) Continuity, i.e., continuation of mutually agreed existing BRICS cooperation mechanisms.

High returns on investment acted as a motivation for money managers to search newer markets. Developing countries attracted capital from investors in developed countries because of the formers' high growth rates and high interest rates relative to the latter. The per capita income in the developed countries was rising and needed to be invested to grow rapidly. The emerging markets provided the right opportunity to fit the gear. The economies of Brazil and China followed by India in the short run, provided the best respite to the investment thirsty bankers and entrepreneurs. Several types of investment products in form of bonds were designed to suit the investment opportunities. The emerging markets of China and Brazil in particular had large scope for development which would be yielding high returns on investment. In course of their search for high yield business avenues Brazil, Russia, India and China became the desired destinations. The emerging markets by forecasters were principally India, China, Russia and Brazil vouched for their economic development led to the coining of the word BRIC nations. The BRIC concept was thus born as investment destination by the developed counterparts leading to the engagement of BRICS. The investment attractiveness of these five countries (including South Africa, which joined the block in 2010), inspired them to form a bloc and work collectively to strengthen their economies. Thus, the BRICS engagement is more oriented towards economic development and it is an economic block rather than just a political block. The BRICS engagement has gained as a multilateral engagement in force to enable economic development of this region. Each constituent country of this block is making huge steps towards development using the high-carbon economic model. China being the most dominant one in this context.

India and South Africa had a historic British colonial past, whereas Russia a world war veteran was victim of country divide and Brazil had a Portuguese colonial past. At the same time China was a developing economy with high population and poverty dominated by communist influences. Almost all the BRICS countries suffer from regional disparities, in terms of the level of economic development. Income inequality level in India and Russia is comparable with a number of industrially developed countries, but the GDP per capita value is much lower. Significantly higher inequality rates are typical for South Africa and Brazil.

The economic performance of the BRICS countries has, however, varied widely as China has maintained its position as the fastest growing economy worldwide. India has also grown significantly and regularly. Brazil has had an irregular performance, well below its potential, but showed an enhancement in the second half of the 2000s. Russia, after the severe 1990s crisis that resulted in a decline of 40 per cent in its real GDP, has recovered and South Africa has had a small improvement in its economic performance that remains below its potential.

China surpassed the US as the main trade partner of Brazil and also emerged as the second main trade partner of India and Russia. China exports to Brazil, India, Russia, and South Africa at a more intense pace than it imports from them. In addition, the latter are concentrated on a few primary goods intensive in natural resources while China's exports are much more diversified manufactured goods. Though the intra-BRICS trade has shown growth in recent years, the flows are still restricted and unbalanced in size of the BRICS bilateral commercial transactions. The BRICS economies have significantly increased their openness to international trade in the last decades. They have raised their exports and imports both in volume terms as a share of GDP, but the level of trade openness has varied quite a lot. Currently, China, South Africa, and Russia are the BRICS economies with the higher levels of openness. The Brazilian and Indian economy remains the most closed amongst the BRICS countries. China has acted as an important trade pole for the other four countries. Brazil has also emerged as the second main trade partner of India and Russia.

In this study, we try to understand how far this decade old engagement has achieved success as an association coming together for mutual development. The engineering of the BRICS engagement has been studied considering the commonness between these countries. Each BRICS country has been reviewed for strengths and weaknesses and probable opportunity to engage with each other under a common banner. At the same time, the BRICS engagement in terms of opportunities to India to engage in trade and FDI with the other BRICS countries has been studied upon in context to the present projects and scope for further engagement.

Though the BRICS as an association has not developed any BRICS specific strategy for trade, there is enough engagement in terms of country to country trade. The trend of Intra-BRICS Trade viz a viz other trade blocks has been analyzed. The contribution of the BRICS block with reference to Global Value Chains has been understood to a certain extent. BRICS countries would be able to exploit their mutual complementarities in an optimal way once they sign free trade agreement among them. The sustainability linked climate change agenda has been studied. SMEs play an important role in the nation's development and the same has been studied in context to BRICS. The BRICS agenda for development in the developing countries has also been studied to a certain extent.

The study has tried to understand the most common pitches in the BRICS engagement which have been collectively supported by the BRICS banner. The study consists of two sections 1. Overview and 2. Data Analysis. Both the sections consist of four chapters each. Following is the summary of the chapters included in this study.

Section 1- Overview

1. Institutional Mechanisms in BRICS

This chapter gives account of the institutional mechanisms set up as a part of the BRICS agenda. The BRICS, as an association, has established several institutional mechanisms such as the New Development Bank (NDB), BRICS Contingent Reserve Arrangement, BRICS Cable Project, among others. Some of the institutional mechanisms that are in the pipeline include BRICS Network University, Sustainable Agricultural Development Projects, BRICS Economic Forum and BRICS Wellness Forum.

2. Financial Integration and Investments: Context to India

This chapter describes the trading and investment patterns between India and the other BRICS countries. India is a major trading partner with China. However, India has weak trade links with other BRICS countries such as South Africa, Brazil and Russia. On the investment front, Indian companies have been investing in South Africa, Brazil and Russia in sectors such as telecom, oil and gas, mining and so on. However, we are yet to see considerable investment from these countries into India because government policies in India are considered to be conservative.

3. BRICS and Major Country Exchanges

This chapter discusses the role of BRICS countries in the economic development of Low Income Countries (LICs). Countries such as China, Russia and India have invested in projects across mining, manufacturing, farming and other sectors in low income countries of the African continent. However, these investments have been looked at as a land grabbing event by the world members. It is pertinent to note that these investments have provided jobs to local people and enhanced their standard of living. In future, BRICS countries must invest in projects such as skill development, health and sanitation, rural infrastructure, and other areas that contribute to the sustainable development of the LICs.

4. SME Scenario intra BRICS

Small and Medium Enterprises (SMEs) play an important role in generating employment opportunities and enhancing exports of any country. This chapter discusses the profile of the SME sector in the BRICS countries and the scope for intra-BRICS co-operation in improving the competitiveness of these enterprises.

Section 2- Data Analysis

1. Economic Potential and Scope for Expansion

This chapter discusses the SWOT analysis of the BRICS countries projected in terms of macro and micro view. This discussion is carried out on the basis of detailed analysis of economic parameters.

2. Trade Dynamics in BRICS Countries

This chapter makes an in depth analysis of trade existing between the BRICS countries. The volatility of this trade has been analyzed and the prospective and existing Global Value Chains find a mention in this chapter.

3. Global Social Responsibility inter BRICS

This chapter analyses the contribution of the BRICS countries to global emission of the greenhouse gases. The chapter also evaluates the policy measures taken by the BRICS countries to adhere to the global conventions on climate change and thereby reduce their carbon footprint.

4. Finding Primary Facts

Current growth trajectory among BRICS portrays growing inequality, increasing environmental impacts, as well as regional and other imbalances. A harmonious growth aims at reducing the growing social and environmental imbalances. BRICS countries must contribute to the building of transnational solidarity to defend the interests of people, especially the marginalized sections of the population, environment and sovereignty.

5. Conclusions and Recommendation

This chapter consists of a consolidated conclusion from the included chapters and recommendations for effective performance of the BRICS alliance.

Section 1
Overview
1. Institutional Mechanisms: BRICS

1.
Institutional Mechanisms in BRICS

The first Summit of BRICS in 2009 initiated the dialogue for association and the member countries started the practice of institution building in every sector of mutual co-operation. The BRIC term was coined to depict and identify the emerging markets of Brazil, Russia, India and China by an investment banking firm as the BRICS markets displayed exemplary potential in terms of investments and returns. However, to churn out better returns the BRICS countries felt an urgent need to be financed at an affordable rate to push growth further. Financial institutions like the IMF or World Bank still were unable to provide cheaper assistance in the developing country framework. Thus, a concept of a bank which could facilitate funding of projects was much desirable. The BRICS alliance initiated with a development agenda especially financing of development projects. The foremost institution of this alliance is the New Development Bank which started as a BRICS Bank and the Contingent Reserve Fund or the CRF. Upon setting up of the financing function credit rating agency became a need of the hour to rate projects as per the prevalent economic culture in the countries where these development projects existed. Thus, came into existence the concept of a common rating agency. BRICS arbitration center is the other common BRICS institution which has recently emerged and deals with dispute resolution first in the case of joint projects and secondly in case of trade which is subject to rise with BRICS intra country exchanges. Further, as a part of this effort, the five member economies have set up various technical groups, working groups, inter-ministerial meetings to explore co-operation in social, economic, governance and other areas of mutual interest. Some of these engagements meet regularly and host service and events to promote the purpose while some are still at a conceptual stage.

The prescribed agenda for BRICS since its inception has been two main streams of work: (i) coordination in meetings and international organizations; and (ii) the development of an agenda for multisectorial cooperation among its members. In relation to the BRICS coordination in international fora and organizations, the mechanism focuses on the economic-financial and political governance spheres. In reference to the first, the BRICS agenda prioritized G-20 cooperation, including the IMF reform. In the political realm, the BRICS advocate the reform of the United Nations and of its Security Council, aiming for more inclusive representation and more democratic international governance. Moreover, the BRICS maintain a constant dialogue on the main issues related to the international agenda.

The BRICS engagement has been working on many other fronts under this flagship association. These are BRICS Economic Forum, BRICS Parliamentary Forum, BRICS Civil Forum, BRICS Wellness Forum, BRICS Academic Forum, BRICS Young Scientist Forum, BRICS Network University, BRICS Cable Project etc.

This chapter drives through some of the important engagements which have been put on path of action.

The New Development Bank

The economic-financial sphere stands out as one of the most promising areas of activity for the BRICS. Two instruments of special importance were signed at the sixth BRICS Summit at Fortaleza, on July 2014, the constituent agreements of the New Development Bank (NDB) aimed at the financing of infrastructure projects and sustainable development in emerging economies and developing countries and the Contingent Reserves Arrangement (CRA) which has the goal of promoting mutual support amongst the BRICS members in situations of instability in the balance of payments. The initial capital allocated to the NBD was \$50 billion and the authorized capital was \$100 billion. The capital allocated to the CRA was to the tune of \$100 billion. The founders established the Bank with a purpose of mobilizing resources for infrastructure and sustainable development projects in BRICS and other emerging economies and developing countries, complementing the existing efforts of multilateral and regional financial institutions for global growth and development. To fulfill its purpose, the Bank was envisaged to support public or private projects through loans, guarantees, equity participation and other financial instruments. It is scheduled to cooperate with international organizations and other financial entities, and provide technical assistance for projects to be supported by the Bank. The meeting of the first Board of Governors of the Bank was held at Moscow, Russia in July 2015 where the Bank formally came into existence as a legal entity. Mr. K.V. Kamath was elected the first President of the Bank from the Indian side and the Vice-Presidents were appointed by the Governors. The Bank is based in Shanghai in the People's Republic of China and the President is appointed on a rotational basis. Infrastructure development is the key driver of economic and social growth. In the context of developing nations, infrastructural deficiencies are a matter of concern and NDB plays a unique role at this juncture. It strives to identify the gaps between needs and funding and bridges these gaps by partnering with these developing nations thus bringing about truly holistic development. The 21st century has brought with it tremendous development however, this progress has been skewed, insufficient & often harmful to the environment. Thus the NDB is committed to be a partner in bringing about sustainable development by partnering with initiatives that drive growth and employment while ensuring environmental protection.

The demerits of the Bretton Woods institutions were that of dollar and gold dominance. This made mandatory investment of country currency in these two commodities. Though, initially the dollar was proposed to be stable, the changing economic landscapes infused the unwanted instability. The International Monetary Fund (IMF) and the World Bank were established out of the 1944 Bretton Woods Agreement and they were sole agents available who facilitated global banking and credit needs. American leaders assured to the rest of the world that the dollar is a dependable currency by linking the US dollar to gold Consequently, as many as 44 countries agreed to fix their exchange rates by tying their currencies to the US dollar. Nations also agreed to buy and sell US dollars to keep their currencies within 1 percent of the fixed rate. However, such an arrangement led to destabilization of the local currencies as Dollar and gold prices turned around country economics as per their price trend. The emerging economies are mostly net creditors to developed nations, as they account for 75 percent of the world's total currency reserves. Hence there arose an urgent need to set up a global banking institution which would be more in sync with the needs of the developing countries and help them diversify this economic instability. Thus, the leaders of Brazil, Russia, India, China and South Africa (BRICS) worked towards setting up a common development bank so as to reshape the global financial architecture. The main USP of the NDB is that home country currency can be used to repay debt or avail credit for funding projects, this provides an ease of netting demand and time liabilities. Even when the Bretton Wood institutions were the precursor to the formation of NDB , the NDB is purely in a non conflicting position with the IMF or the World Bank and was set up as an alternate means of financing.

Box 1: BRICS Future Global Governance – Economy & Finance

Dr. Francesco Petrone, Visiting Fellow at BRICS Policy Center in Rio de Janeiro and Lecturer at Geneva Business School in Barcelona, Spain.

In coming years, world economy will go through uncertain paths. The recent crisis in Europe has created an unpredictable scenario. In this sense, the role of Global Governance Institutions could be upset: the rules created by the Bretton Woods system, are proving to be inadequate to address the future global challenges. As, for example, austerity programs or cut in public spending have done nothing but aggravate the situation.

In this uncertain scenario, BRICS countries are playing an important role to give different shape to the financial and economic future of the planet. Despite the recent crisis in Brazil, the sanctions against Russia, or the slowing down of the Chinese economy, BRICS represent a viable example for Global Governance system that so far has been created. In fact, in addition to having a large population cover a vast territory, BRICS have created the New Development Bank representing innovative idea in development cooperation. This bank has as its purpose to develop sustainable projects, supporting economies in trouble, giving rise to new challenges in the Global South countries. The way in which NDB will work, will decisively determine Global Governance structures.

To start, the very fact that the BRICS have an equal share of economic participation (US $ 10 billion, 20% for each country, for a total of 50 billion) in NDB, and consequently a power of fair vote, makes this ambitious project definitely antagonistic to the system used by the IMF (where still worrying disparities in decision-making rule). At the same time, however, the projects that come out may have that kind of ambition that can give shape to a "more democratic" Global Governance. To understand what is happening, we can have a look at the projects developed in India or in China, especially in infrastructure and engineering. Giving rise to sustainable projects that work, and backed by a system that holds, the BRICS are holding a good chance to give an imprint to the new economic environment and global finance. In particular, it is of significant interest to continue investing in sustainable development projects, also linked to renewable energies, and aimed to give support and economic exchange to other emerging economies too. The way in which BRICS countries will shape the future of Global Governance depends on how they will keep continuing on these paths.

The New Development Bank is mandated by its very objective to fund infrastructure projects in the developing countries and meets the aspirations of millions through sustainable development. Its fundamentals are based on providing tailor made services to the beneficiaries. A significant aspect of this framework would be to establish global, regional and local partnership with the new as well as established Multilateral Development Banks (MDBs) and with market participants.

Current financing and investment patterns by IMF and the World Bank are inadequate in meeting investment needs of developing economies and at the same time they have a high interest rate structure unaffordable especially to the Least Developed Economies (LDEs). Private international capital flows are volatile and are also insufficient in volume and maturity to fund sustainable development, which typically requires long-term investment. MDBs can play a pivotal role in meeting these requirements with the annual resource commitment from MDBs going up from USD 45 billion to over USD 100 billion over a 10 year period, it is still insufficient to meet the infrastructure development investment of over USD 1 trillion a year. There is therefore a need for MDBs to reinvent themselves and introduce innovative instruments. The New Development Bank vision is not restricted to funding infrastructure requirements but envisages building a knowledge sharing platform among the developing countries and promote sustainable development.

The New Development Bank is key milestone of cooperation among emerging economies and developing countries. It is a testament of coming of age of these countries in the world of development finance.

BRICS Contingent Reserve Arrangement (CRA)

The BRICS Contingent Reserve Arrangement (CRA) is a framework for the provision of support through liquidity and precautionary instruments in response to actual or potential short-term balance of payments pressures. It was established in 2015 by the BRICS countries Brazil, Russia, India, China and South Africa. The legal basis is formed by the Treaty for the Establishment of a BRICS Contingent Reserve Arrangement, signed at Fortaleza, Brazil on July 15, 2014. It entered into force upon ratification by all BRICS states, announced at the 7th BRICS summit in July 2015.

The objective of this reserve is to provide protection against global liquidity pressures. This includes currency issues where members' national currencies are being adversely affected by global financial pressures. The CRA is generally seen as a competitor to the International Monetary Fund (IMF) and along with the New Development Bank is viewed as an example of increasing South-South Cooperation.

Box 2: BRICS Inter-Bank Co-operation Agreement

Mr. Prahalathan Iyer, Chief General Manager, Export-Import Bank of India

One of the notable achievements of the BRICS Alliance is the setting up of the New Development Bank (NDB) in July 2015 to provide financial assistance for infrastructure and sustainable development projects in BRICS countries and also in other developing countries. At the BRICS Summit in Ufa, Russia, during the same month, EXIM Bank of India signed a multilateral cooperation agreement, along with other member development banks of BRICS countries, to cooperate with the NDB. This agreement envisages sharing of information, knowledge and experiences, extending guarantees and counter guarantees, co-financing, issuance of bonds etc among the signatories.The other member development banks, who signed this agreement, include Banco Nacional de Desenvolvimento Economico e Social (BNDES), Brazil, State Corporation Bank for Development and Foreign Economic Affairs(Vnesheconombank), Russia, China Development Bank Corporation, and Development Bank of Southern Africa.It is also pertinent to note that the aforementioned development finance institutions of the BRICS countries formed the BRICS interbank cooperation mechanism to promote economic cooperation among them in 2010. In 2012, these five financial institutions, including EXIM Bank of India, signed the "BRICS Multilateral Letter Of Credit Confirmation Facility Agreement" to provide credit in local currencies for boosting intra-BRICS trade volume.Besides efforts to boost trade, the BRICS interbank cooperation mechanism is creating arrangement for settling payments and financing investment projects in local currencies.At the 6th BRICS Summit in 2014, the member banks of this interbank cooperation mechanism signed an Agreement on Cooperation in innovations to promote sustainable economic growth, encourage funding for energy efficient and high technology manufacturing sectors.In future, I expect the BRICS countries to develop more institutional mechanism for co-operation in trade, investment, sustainable development projects and multilateral governance issues.

The capital of $100 billion is distributed as follows: The maximum access states can request from the Arrangement is half (China) to twice (South Africa) the amount of capital contributed.

Table 1: BRICS Contingent Reserve Arrangement

Country	Capital contribution (billion USD)	Access to Funds (billion USD)	Voting Rights (%)
Brazil	18	18	18.10
China	41	21	39.95
India	18	18	18.10
Russia	18	18	18.10
South Africa	5	10	5.75
Grand Total	**100**	**85**	**100.00**

Source: Treaty for the Establishment of a BRICS Contingent Reserve Arrangement Fortaleza, July 2015

Critics of the BRICS alliance like to say corruption is widespread in India, China and Russia, however , even if they are right the fact cannot be denied that despite such corruption in these countries , they are collectively lifting at least a hundred million people out of poverty and moving them into the middle class each year.

Projects Funded by the NDB

The BRICS New Development Bank (NDB) has issued its first bonds to raise funds internationally for clean energy projects in member states. The bank sold three billion in yuan-denominated green bonds ($449 million) on China's interbank market on Monday. The five-year green bonds have attracted more than 40 domestic and overseas institutional investors. The issuing of bonds may help boost sustainable development and act as a support signal for capital markets in BRICS countries. The issuance of yuan-denominated bonds shows the confidence of international financial institutions that have the Chinese currency and could promote the internationalization of the yuan. The NDB plans to issue another 10 billion yuan in green bonds in China in the next six months and also the bank is planning to sell bonds in Russia and India to fund green projects there.

The UNIDO Interregional Project Partnership between Russia and Brazil in technology and innovation for development of SMEs and Motivation of the Project Extension to BRICS Countries, Strategy of The Project Prolongation for 2015 – 2018 has been deployed. This project aims for motivation of Conception UNIDO/BRICS Project prolongation with extended interregional tasks for 2015 — 2018 and adjusting to Sustainable Development Goals of UN Summit, September 25, 2015 and BRICS Economic Strategy for 2015-2020 in accordance with UNIDO Mandate for promotion of inclusive and sustainable development. Among BRICS international initiatives the initiative of two BRICS countries Brazil and Russia for UNIDO pilot project, "Partnership between Russia and Brazil in technology and innovation for development of SMEs" is of key importance. The aim of the project is to promote business partnership between Russia and Brazil in selected areas of innovation and new technologies by creating a technology platform and business associations, which are supported by UNIDO. It is also presumed in the Project to present the platform and related achievements of pilot projects to participating and other BRICS countries and the extension of the platform and innovation alliances model to other BRICS countries. The project is being implemented in support of BRICS Summit Declaration 2011 on cooperation in science, technology and innovation and funded by a voluntary contribution of Russia in the UNIDO Industrial

Development Fund. As results of the activities undertaken to achieve three main tasks of the project, the following bases for technology transfer partnership were built up:

1. Further sustainable development of partnership between Russia and Brazil in technology and innovation, development of methodology and adaptation of the best technology transfer practices based on the lessons learned within implementation of two pilot projects of technology transfer between two countries.
2. Development of technology transfer networking platform as a basic operating tool for sustainable bilateral partnership between Brazil and Russia.
3. Effective extension of the project involving all other BRICS countries in project activities, it's adaptation to new economic conditions.

The NDB further needs to be strengthened in its operations. Hence, another proposal is being taken up during India's presidency at the BRICS to set up a research institute in India to research on and identify viable projects inter BRICS for utilizing the $100 billion which the NDB has at its disposal.

BRICS Credit Rating agency

The BRICS Engagement has grown stronger with the introduction of the New Development Bank. However, a lot needs to be evolved in the financial services space. The NDB receives project proposals for financing purpose and rating is a mandatory criterion for proposals for credit disbursement. Presently, all proposals are rated by US based agencies which have not modified their criteria for the Asian and African projects which thus suffer from low ratings. There is hence an urgent need to develop a rating agency which would have a framework for credit rating, keeping the Asian and African criteria in mind.

Also, the big three global agencies S&P, Fitch and Moody's all based in the US control working of the rating market and account for 90% of the global ratings market together. The criteria used by them for rating emerging economies has often come under critical evaluation as the emerging countries are being rated below their expectations in spite of unfaltered performance for last 2-3 decades. Emerging economies hence have concerns over methodologies used by the western ratings firms which rate them with reference to developed economies thus having a biased rating , thus constraining growth in emerging nations. Despite having deep capital buffers multilateral banks such as BRICS-promoted NDB is unable to extend credit as its own ratings are affected due to the parent countries' sovereign ratings. The NDB is planning to get itself rated for the purpose of bond-raising in many countries and is being affected because the promoter countries are not AAA-rated thus limiting its ability to do business.

Box 3: Pathways to Collaboration among BRICS

Ms. Ashu Suyash, MD & CEO, CRISIL

Over the past two decades, BRICS nations have played a significant role in global growth. So much so, these economies today account for 32% of world GDP and are home to about 45% of humanity. However, in terms of socio-economic development, much needs to be done by each of them. For example, their investment requirement, especially for building out infrastructure, is immense.

In an effort to diversify funding sources and meet their growing investment needs, BRICS nations have increasingly targeted off-shore markets, especially in developed economies. However, it is pertinent to note that BRICS is currently the largest economic block within emerging markets. Given the cooperation mechanism that exists within the BRICS nations for financing development, these countries can attempt to meet much of their investment requirements by establishing avenues to collaborate with one another in the financial sector.

Establishment of a bond market platform that facilitates cross-border issuances is among the most critical of these pathways. This can be facilitated by developing commonality in bond issuance procedures, valuation norms, listing requirements and taxation norms across BRICS nations. Such an initiative will benefit all member countries by augmenting existing funding avenues for corporates and deepening their existing corporate bond markets.

Secondly, recently established collaborative institutions such as the NDB could be leveraged to introduce innovative instruments in the financial market. Instruments such as credit guarantees by the NDB to project bonds could be explored to enhance corporates' access to bond markets. In addition, creation of a market intermediary in the form of a Credit Rating Agency focused on BRICS nations and emerging markets will enable investors to form deeper and granular insights and have more confidence on making cross-border investments. This would also allow these investors to allocate their capital more efficiently. Through these initiatives, the BRICS countries could mutually collaborate to develop their financial markets and foster a stronger growth path.

Provisioning of financial services inter BRICS through institution-building is critical to the shared vision of transforming the global financial and governance architecture based on the principles of fairness and equality. The BRICS Rating Agency was thus proposed in the eighth BRICS Summit held at Goa in October 2016.

Box 4: Rationale for BRICS Credit Rating Agency

Mr. Sankar Chakraborti, Chief Executive Officer, SMERA Ratings Limited.

The economic co-operation of the BRICS Alliance has been gaining traction in recent years as is visible from the setting up of the New Development Bank (NDB), bilateral currency swap arrangement, contingent reserve arrangement and so on.

In future, all the five member countries can gain substantially by setting up a common ratings agency to issue credit scores on the financial position of governments, public sector undertakings, private sector companies and, more importantly, the small and medium enterprises in the BRICS countries.

Today, well-established rating agencies from the western countries are continuing with the same rating methodologies that they adopted when they started operations several decades ago. They have not changed their rating methodologies to reflect the structural changes that happened in the global economy during this period, especially the emergence of developing countries as engine of global economic growth.

The sovereign rating assigned to a particular country must largely reflect the real financial strength of that country, instead of the financial strength of the larger group, of which it is a part. For instance, some of the developing countries in European Union enjoy high credit rating just because they are part of this union.

The proposed credit rating agency of the BRICS countries must address these anomalies of the existing rating system. SMERA, being a public sector rating agency, is uniquely positioned to partner with the rating agencies of other BRICS countries to set up a common rating agency.

The proposed rating agency is supposed to be one having no bias from the BRICS countries itself and have independent operational structure with no influence, whatsoever, from the western rating agencies.

Box 5: ARC Ratings – A Model for BRICS Credit Rating Agency

Mr. Rajesh Mokashi, Managing Director & CEO, CARE Ratings

Ever since the global financial crisis of 2008, which exposed the drawbacks of the existing global rating industry and their functioning, economists and policy makers have been discussing to improve the effectiveness of the industry. Experts have been discussing the need to set up a global rating agency that is not aligned to any of the three leading rating agencies from western countries. Countries from across the world must collectively own this global rating agency so that the ratings issued by this agency eliminates any bias against or in favour of one country. In order to eliminate conflict of interest while issuing sovereign ratings, the ownership of this global rating agency should be private in character and hence governments should not have stake in such an entity. However, governments of different countries can play a facilitating role in bring together the rating agencies of different countries to own the global rating agency.

The Lisbon-based ARC Ratings has headquarters in London, is a living model of such a global rating agency which is collectively owned by rating agencies of Africa, Malaysia, Portugal, Brazil, UK and CARE Ratings from India.

This rating agency, which was set up in 2013, is emerging as an effective alternative to the existing three rating agencies of the western countries. The unique feature of this agency is that none of its stakeholders has any affiliation to established agencies such as S&P, Moodys' or Fitch Ratings. According to the shareholder agreement of ARC Ratings, if any of these established rating agencies picks up stake in any of the existing shareholders of ARC Ratings, then the shareholder must sell its entire stake in the latter.

Among the BRICS countries, Brazil, South Africa and India have stake in ARC Ratings, while Russia and China are yet to own stake in this organisation. BRICS countries would benefit from owning a stake in ARC Ratings because they would get adequate representation in the rating committee of the organization and this would ensure an unbiased rating outcome for their countries.

The agency should be indigenous to the BRICS block and there should not be any scope for non-BRICS countries to hold stake in this agency. In the ongoing BRICS meetings it was also proposed that a BRICS Credit Rating Agency should be established in India and in this research study we approached two rating agencies meeting the above criteria.

BRICS Arbitration Centre

Inter BRICS country trade is on rise and expected to increase hundred fold in the coming decade. Though this trade is one and is not under formal BRICS banner.However, the trading parties are keen to have a common BRICS Arbitration platform for easier and faster dispute resolution.

In October 2015, BRICS countries established the BRICS Dispute Resolution Center in Shanghai on the sidelines of the second BRICS Legal Forum. This centre would be jointly run by East China University of Political Science and Law and Shanghai International Arbitration Center. The centre would serve as an alternative mechanism for resolving trade and investment disputes among parties in BRICS countries.

Box 6: Indo Chinese Trade: Setting up of a Tribunal is need of the hour

Dr . Sanjay Koyande, MD, CCRT Laboratories Ltd.

Import of non registered goods happens in India due to major loop holes in custom's monitoring. India exports to China in very small amount as compared to Chinese import to India, thus Indian businessmen face high registration costs. In case of small businessman who import in small quantities are often subject to grievances such as frauds, wrong shipments etc. Thus, the small businessmen have to put up an office on the Chinese side to ensure the receipt of the proper import which incurs additional cost..

Col. N.S. Rawat, Executive Director Indo China Chamber of Commerce

Trade between India and China is increasing everyday with the fall in import prices and UAE coming to no 2 position for China as a trade partner. However , with increase in trade activity there is a dumping of goods from the Chinese side leading to rise in disputes and thus there is dire need for setting up of a Dispute Resolution tribunal in each of the Chinese provinces.

In order to make this dispute resolution mechanism effective, member countries must adopt certain measures. One such measure is to ensure that the local laws of BRICS countries governing international arbitration align with those of other member countries. It must also be ensured that the arbitral awards of the BRICS Dispute Resolution Center can be easily enforced in member countries. Another pre-requisite for the success of the BRICS Arbitration Center is the empanelment of sufficient legal professionals with sound international arbitration track record. The BRICS countries must set up a task force to devise these future plans of action and make the dispute resolution centre effective.

Box 7: International Arbitration among BRICS Nations: Step in the Right Direction, But Much Ground to be Covered

Ms. Jyoti Singh (Disputes and Insolvency Partner, Mumbai) and Mr. Vishnu Shriram (Associate, Mumbai), PHOENIX LEGAL

The need for capacity building in international arbitration frameworks in the BRICS nations cannot be overstated. Predominantly, the BRICS nations have been perceived as "arbitration-unfriendly" jurisdictions, and India in particular has been viewed unfavourably as a seat of international arbitration owing to excessive interference by Indian courts in the international arbitration process. In 2015, India amended its laws to restrict the interference of Indian courts in the international arbitration process and also to provide for faster enforcement of arbitral awards. However, there still remain pertinent gaps in the law such as the fact that till date, arbitral awards that are passed in two of the BRICS nations - Brazil and South Africa are not recognised by India as territories to which the New York Convention applies, and hence such awards cannot be enforced under Indian law.

On October 14, 2015, the BRICS nations took a landmark step by establishing the BRICS Dispute Resolution Centre (BDRC) at Shanghai, China to cater to the growing demand for a BRICS-exclusive arbitration mechanism. While the establishment of the BDRC is a valuable step in the right direction, each of the BRICS nations has plenty of ground to cover in achieving the vision of the Indian Finance Minister (in his speech at the recent conference on "International arbitration in BRICS" held on August 27, 2016) of transforming the BRICS nations to not only be self-sufficient in handling their own international arbitrations, but also act as vibrant arbitration centres for the world at large. The changes must begin with synchronising each of their internal arbitration laws with internationally accepted best practices and to ensure compatibility with those of other BRICS nations. Although there is a long way to go, the steady commitment of the governments of the BRICS nations is a positive sign by which one would expect a robust BRICS arbitration framework to materialise into reality sooner than later.

Box 8: A Framework for BRICS Arbitration

Mr. Vyapak Desai, Nishith Desai and Ms. Durga Priya Manda, Nishith Desai Associates

It is very imperative to set up the administrative infrastructure of BRICS arbitration center so as to cater to the forecasted growth in trade due to the BRICS alliance. The BRICS arbitration center is supposed to focus on rules on SHIAC guidelines. 50% of the world population resides in BRICS countries and this means interdependencies on each other will increase through trade leading to rise in dispute resolution issues .The International arbitration courts are presently insensitive to the political and civil culture prevailing in the BRICS countries especially Russia and China due to their communist background. The BRICS countries though are one of the major development blocks, have huge cultural issues with the western jurisdictions, thus, leading to unbalanced arbitration awards in case of dispute resolutions . One example of such an award is the case of Russia EUFORS case. BRICS countries coming together will give balanced arbitration for people and their governments.At the same time, cost of arbitration is very high elsewhere and more disputes foreseen as trade increases. Judiciary in the BRICS countries are prone to complicated local legal issues leading to businesses having more trust in arbitration centers. Legal processes are weak in China and Russia where property rights are not developed and judiciary is biased to the government. On the other hand India has old British laws and is in need of rampant reforms so as to cater to ease of doing business. The arbitration center framework will be conducted as per the country's governing law and the procedural rules or adjudication will match that of international arbitration centers. Common theme between the governing laws will be understood to make them more suitable to dispute resolution. Ease of doing business, access to fair dispute resolution increases business cooperation and a common platform for dispute resolution. India's expertise in judiciary is substantial and very strong .The BRICS countries have a lot of synergy due to different competencies even though complementary to each other. In spite of the cultural differences this will undoubtedly provide economies of scale and scope due to these diverse inputs . For India the BRICS alliance will prove as a support to Indo China relation, as India and China are having a roller coaster relation due to border issues. China's sovereign fund and India's management skills brought together can change the world economic order.

In future, the credibility of the BRICS Dispute Resolution Center should be enhanced in the global market so that it becomes a preferred arbitration centre for emerging countries outside the BRICS group as well. This would reduce the dominance of some arbitration centers in the developed countries which are accused of passing awards that are biased against emerging countries.

BRICS Economic Forum

BRICS countries have launched an Economic Forum to develop co-operation on sound macroeconomic management, ring-fencing member economies from global financial and currency crises, co-ordination in macro-prudential regulations and so on. The US Financial Crisis in 2008 had far reaching impact on world economy and consequently the G20 countries had to come together to devise co-ordinated monetary and fiscal policy response to counter economic downturn. However, the G20 grouping is so diverse that the policy response agreed in this forum may not be suitable to address local economic issues in BRICS countries. Therefore, the proposed Economic Forum of the BRICS countries must evolve co-ordinated policy response that addresses the local challenges in member countries.

Box 9: Challenges for BRICS Engagement

Mr. Georgy Toloraya, Executive Director of Russian National Committee on BRICS Research, Russkiy Mir Foundation

One of the main challenges for BRICS engagement is harmonization of partnership, which is focused on reaching mutual strategic goals of:
- becoming the hub of in and out-coming financial and technological flows;
- attracting investments for structural changes and sustainable growth;
- developing non-resource extractive industries and long value added chains in resource-extractive industries;
- solving the microeconomic problems, such as the increase of entrepreneurial potential of population.

Prerequisite for the goals achievement is the experience of entrepreneurs and public support.
At the same time the main tactical objectives are: development of the national financial and economic systems, capitalization of stock exchanges, strengthening of arbitration courts, optimization of banks and non-financial intermediaries participation in national and international markets, harmonization of regulation, minimization of the securities operations income taxes, introduction new financial instruments to the BRICS markets, etc. The above-mentioned activity is backed by BRICS natural resources, unique geographical location, connecting South and North, West and East, attracting institutional and private investors.

Several mutual efforts are to be taken to meet BRICS financial and technological challenges. Such as promotion of cooperation, extension of private and public entities cooperation, resources increase of key financial intermediaries, expansion of the national currencies usage in serving economic and financial needs of the countries. In the essence of cooperation - entrepreneurial spirit, backed by public support, exclusion of bureaucratic delays, simplification and transparency of financial and fiscal relation scheme, demonstration by BRICS mass media successful business examples.
BRICS possess all necessary factors for sustainable growth: big territories with free movement of working power, huge consumer markets, developed industrial structures and education systems, natural resources, including regions with good soil. It is necessity to develop industrial communication and adjust mechanisms of cooperation to the effective business encouragement. Harmonization of rules and regulations within BRICS partnership is the engine of the vehicle.

To ensure BRICS international cooperation it is important to harmonize main principles of intergovernmental supervision and support of financial and economic activity, setting up not only the main spheres and goals of financial relations, but also privileges for BRICS market participants. A set of principles ensures protection of market participants and corresponds to the international principles of transparency.Setting up intergovernmental approaches to the implementation of efficient fiscal policy, initiating the economic growth, including increase of public support for social programs and development, as well as taxation can fasten international cooperation.The efficient economic development of any country depends on the level of participation of the secure credit institutions in financing consumers with the required funds and services. It is important to facilitate the implementation of the BRICS projects. In this respect, banking, backed by harmonized principles of financial activity is to be open for economic entities, regardless of their location. The main challenge in this respect is: all types of BRICS entities meet mutual requirements and observe mutual rules and regulations. Under these circumstances, equal treatment of BRICS market participants and determination of main principles of correlation in financial sphere can push forward the production and supply chain. At the same time, the efficient banking depends on adequate estimation of economic peculiarity of clients and partners. Effective risk management backs sustainable development.

Mutual principles of financial and functional risk – management are worthwhile developing for BRICS.Efficient international financial cooperation is connected with the unanimous approach to the financial support of economic entities, implementing projects of a mutual strategic interest. Main principles of BRICS strategy are to be based on a complex analysis of economic demands and challenges for the market participants. Absence of thorough estimation of international cooperation leads to harmful consequences. Based on mutual principles BRICS legal protection of investors' property, can also force financial and economic ties. Fruitful international cooperation are to be built on the basis of mutual interests and reasonable public support.

To move forward successfully it is important to set up within a common BRICS secretariat a specialized Committee to promote institutional foundation development as well as harmonization of BRICS partnership based on mutual principles of cooperation.

Besides sound macroeconomic management, the Economic Forum focuses on developmental challenges such as innovation, competitiveness, funding development projects, creation of regional value chains among BRICS, inequality and so on. The forum should also be a platform for shaping policies of member countries on foreign direct investment, international trade, intellectual property rights, international taxation and so on.

BRICS Parliamentary Forum

The first BRICS Parliamentary Forum, which is a dialogue mechanism for law makers, political parties and public organizations of member countries, took place in Russia in June 2015. The forum is a consultative mechanism to evolve common strategies on issues of global polity and economy, which requires a concerted effort from policy makers and civil society. BRICS countries would contribute to international peace, security, democracy and fairness in global trade and investment regime through joint actions based on strategies evolved in this forum.

Besides focusing on international issues, the Parliamentary Forum would also deal with common policy issues facing the BRICS economies such as poverty, inequality, women empowerment, conservation of natural resources, unemployment and so on.

In August 2016, women Parliamentarians from BRICS nations held a consultative meeting on how to promote economic and social growth while also protecting environment. Some of the topics discussed in the forum are Sustainable Development Goals, role of women in economy and society, and climate change.

In future, this forum should be a key decision making body to drive joint actions among BRICS countries. Especially, the forum should give shape to the institutional mechanism for co-operation by setting up data sharing networks, new technical groups, working groups and inter-ministerial meetings to promote mutual co-operation.

BRICS Civil Forum

Collaboration among BRICS countries would be effective only if the alliance can mobilize grassroots community organizations in one forum to address some of the common challenges in healthcare, culture and education. BRICS Civil Forum was organized for the first time alongside the 7th BRICS Summit in 2015 under the Presidency of Russia. Involving grassroot organizations ensures that the policy making at the government level reflects the aspirations and needs of the people. Thus, BRICS Civil Forum serves as a platform to bring together people and the policy makers.

Box 10: BRICS Collaboration in Exchange of Culture

Mr. Sergey Lunve, Head of Mumbai Branch, The Trade Representation of the Russian Federation in the Republic of India

The agenda of the BRICS alliance is to work together in trade, investment, development issues, political and diplomatic affairs for the mutual benefit of the member countries. The co-operation among BRICS countries would get a major fillip when there is cross-border exchange of each other's culture. In order to promote exchange of culture between India and Russia, the Russian consulate office in India has set up the Russian Centre For Science and Culture in different cities of

India.People of different countries can work together effectively if they understand each other's culture. Cultural co-operation among BRICS countries can be developed through exchange of tourists, artists, literary scholars, film personalities, students and others.

In order to strengthen partnership in cultural exchange, member countries signed an agreement to develop and promote cooperation in the field of culture at the 7th BRICS Summit in 2015. The agreement envisages cultural exchange through co-operation in various art forms including circus, fine, decorative and applied arts, audio-visual works, maintaining archives, museums, cultural heritage, libraries, and engaging in other creative activities. In September 2016, the member countries participated at the first BRICS Film Festival in New Delhi ahead of the 8th BRICS Summit under the chairmanship of India. The festival served as a platform for people of the member countries to know the culture, films, songs, dance forms and cuisine of each other.

In future, BRICS countries must set up a secretariat for taking key policy decisions and also steering further co-operation in the areas of economy, finance, sustainable development, arts and culture, international diplomacy and so on.

Besides health and education, the forum also focuses on science, culture and inter-civilizational dialogue, sustainable development, peace and security, economics and trade, harmonization of inter-ethnic affairs and so on. A unique feature of this forum is that its participation is not restricted only to the member countries of BRICS and civil societies from the neighboring least developed countries are also engaged in this dialogue process.

In order to ensure that the BRICS Civil Forum represents the interests of common man, all the BRICS countries must establish a coordinating mechanism to mobilize civic groups from different sections of the society.

The dialogues in the forum should not only include the current challenges, but also emerging issues and concerns facing the global community, especially the developing countries. In future, this forum must evolve strategies on how citizens of the BRICS countries can be involved in addressing emerging challenges such as terrorism, cyber security, global warming and so on.

BRICS Wellness Forum

The Eighth BRICS Summit 2016, under the Chairmanship of India, would launch the BRICS Wellness Forum to discuss policy priorities for the overall wellbeing of human beings. Human wellbeing is multi-dimensional and economic prosperity is only a narrow measure of this. The overall well being of people is determined by standard of living, access to affordable healthcare, air and water quality, social security, work-life balance and so on.

The future agenda of this forum is to evolve a BRICS Wellness Index that would serve as a broad indicator of wellbeing of citizens in BRICS countries. This index must take into consideration factors such as personal safety, access to water and sanitation, education, quality of environment, access to quality healthcare, corruption, personal freedom and choice and so on. BRICS countries must take cues from the past initiatives of countries or country groups to define a wellness or happiness index.

One of the pioneers of index for holistic development is the South Asian country Bhutan, which measures the overall wellbeing of its citizens based on Gross National Happiness Index. Similarly, the European Union developed 'Beyond GDP programme' to capture factors other than national income that affect well being of the people. The 35-member OECD introduced the Better Lives Compendium of Indicators that act as guide for policy makers to provide thrust on key factors affecting human wellbeing and progress.

While BRICS countries score high in terms of GDP growth and their share in world GDP, many of them suffer from inequality, high incidence of poverty, lack of access to education and healthcare, environmental degradation and so on. This calls for the introduction of an index that shows the position of these countries in overall wellbeing of their citizens. The BRICS Wellness Forum would also serve as an effective institutional mechanism for driving BRICS' progress towards Sustainable Development Goals (SDGs).

BRICS Network University

In March 2015, the Second Meeting of BRICS Education Ministers adopted Brasilia Declaration, which contained provisions for setting up a BRICS Network University. Currently, the five member countries are discussing the modalities of the proposed network university.

The Brasilia Declaration envisages the proposed university as a network project without any rigid organizational forms such as rector's office and secretariat. The network university would operate on the principles of openness, which means any university from member countries is free to join the network. The network university would design curriculum for masters and Ph.D programmes in energy, computer science, BRICS studies, ecology and climate change, economics, water resources and pollution treatment etc.

Besides educational programmes, the proposed institution would also focus on network research and innovation projects. The network university would enable mobility of professors, researchers and students across BRICS countries to create an integrated education and research space.

Currently, hardly a few universities from the BRICS countries feature in the top 100 universities of the world. The proposed BRICS Network University must strive to upgrade quality of education and research in member countries' universities and thereby elevate their functioning to world class standards.

BRICS Network University can draw from the best practices of Russia and China, which have prior experience in setting up network universities. Russia is part of the University of Shanghai Cooperation Organization, which is a network university for Kazakhstan, China, Kyrgyzstan and Tajikistan. Similarly, China's Beijing Normal University is the leading institution behind the BRICS Universities League, which was set up in October 2015. BRICS Universities League, which is a network of around 40 outstanding universities from the five BRICS countries, aims to strengthen co-operation in education and research among these countries.

Sustainable Agricultural Development

Contribution of agriculture to the overall economic activity in the BRICS countries may be less compared to the contribution of services and industry. However, agriculture provides livelihood to majority of population in rural areas in these countries.

Therefore, sustainable agriculture development is a critical policy tool to address rural distress and attain inclusive economic growth in developing countries such as BRICS. Sustainable agriculture is also a long term strategy to maintain food security among BRICS countries. Therefore, BRICS countries must organize an institutional mechanism to drive co-operation among member countries on critical challenges such as natural disasters induced by climate change, building sustainable farm value chain, conservation of soil and water and so on. Member countries are planning to launch a BRICS Agricultural Research Centre to operationalise co-operation in this sector.

Box 11: Baramati Agricultural Development Trust partners with Federal University of Lavras, Brazil

Dr. Indulkar takes initiative: Professors-Students and Farmers exchange many ideas and practices A Memorandum of Understanding (MoU) was signed between Agricultural Development Trust, Baramati and the world famous Federal University of Lavras, Brazil on Monday 22nd August, 2016. The agreement will focus on some important aspects like Combined research on Technological factors related to farming, exchange of technology and exchange of ideas and best practices between Student/Professors and the Farmers. The agreement also covers some very important topics like the kind of technology that is available and how it can be fully utilized for farming to sustain in the International markets. For this Memorandum of Understanding (MoU) to be signed, many important people including Brazilian High Commissioner from the Consulate of Brazil in Mumbai Ms.Rosimar Suzano, Senior Officer from the Consulate MS.Lizann Lobo, Chief Executive Officer from the Indo Brazil Chamber of Commerce Dr.Gulab Mewani, Coordinator of the project Mr.Vikrant Indulkar were present. Ms.Suzano personally visited each and every facility/project in the campus. During this meeting, she interacted with the students of Animal husbandry section and General farming business section on some important topic like the use of technology related to Animal husbandry and farming business. Later, the Chief of the Agricultural Development Trust Mr.Rajendra Pawar and Ms.Suzano signed the MoU. Dr.Rajani Indulkar, trustee of the Agricultural Development Trust, showed great interest and took the initiative to carry out proceedings further. Mr. Nilesh Nalawade, the Chief Executive Officer of the Trust and Mr.Pralhad Jadhav, Coordinator, were also present. later, MS.Suzano added that the agreement would help to focus on the exchange of Research and technology, combined research on important projects, development of high quality milk producing cows in the animal husbandry sector and the current changes that are taking place in the farming sector globally would enable the two countries to understand, implement and make use of the technology to the fullest.

Brazilian Companies in the Agricultural sector: Primarily, Animal husbandry focused Brazil is successful in evelopment of high quality cows, yielding high income from the local cows by developing and increasing the milk yielding capacity from them etc. Many Brazilian companies would participate in the Exhibition which is going to be held in Baramati in the month of January 2017. Due to globalization and the growing demands of the business worldwide, there is a need of stable farming processes to be implemented. For this very reason, the two countries have decided to come together.

In future, this centre must promote exchange of latest farm technologies, joint research projects in farm sector, training of farmers, exchange of students in agriculture universities, co-operation in developing advanced weather forecasting technologies and so on. the centre must also provide policy advisory services to governments of member countries for adoption of suitable agricultural policies.

One more focus area of this initiative is to protect the BRICS countries from volatility in the international price of food commodities. This can be achieved through joint co-operation of the member countries in building buffer stocks, supply of farm commodities from surplus countries to deficit countries in times of emergencies, joint efforts to develop food price monitoring mechanism and so on.

BRICS Academic Forum

Every year, before the annual BRICS Summit, academic experts from BRICS countries come together to exchange ideas on the role of this alliance in promoting mutual interests of the member countries. So far, seven academic forums have taken place alongside the seven BRICS Summits. This forum serves as a platform for scholars of the academic communities of the BRICS countries to conduct joint research on areas of mutual interest and publish research papers.

Some of the focus areas of research are inclusive and sustainable development, addressing challenges of urbanization, mutual co-operation in currency crisis, BRICS' position on multilateral issues. The ideas generated in this forum serve as useful policy guides for the governments of the member countries. The forum also deliberates on the role of civil society including non government organizations, industry associations, farmers' organizations and so on in promoting economic development. Thus, BRICS Academic Forum promotes joint research, strengthen dialogue with civil society and offers policy prescription.

In future, the BRICS desk in the governments of member countries must periodically assess the policy recommendations of the previous BRICS Academic Summits and ensure that they are implemented by policy makers in a time bound manner. In order to generate ideas from a wide range of academic community, more and more academic institutions from the BRICS countries should be encouraged to participate in this forum.

BRICS Young Scientist Forum

Science and Technology ministers of the BRICS countries approved the BRICS Young Scientist Forum at their second meeting in Brasilia in March 2015. The BRICS Memorandum of Understanding for Science, Technology and Innovation signed at this meeting would serve as an institutional framework for this forum.

This forum mobilizes youth of the BRICS countries and harnesses their potential to evolve innovative solutions for common problems faced by the member countries. Specifically, the forum brings together young scientists, engineers, technologists, technology-based start-up entrepreneurs from BRICS countries to create an effective network for exchange of ideas on innovative solutions for social challenges.

The forum would also evaluate the science, technology and innovation policies of the BRICS countries and propose suitable reforms in the same. The forum would promote skill development and entrepreneurship in technology sectors as part of its overall mandate to support innovation in member countries.

BRICS Cable Project

The BRICS Cable is a planned optical fiber submarine communications cable system that carries telecommunications between the BRICS countries, specifically Brazil, Russia, India, China and South Africa. The cable was announced in 2012 but is still under construction as of 2015. The project aims to provide bandwidth around the Southern Hemisphere of the globe to ensure that developing nations' communications are not all in the hands of the nations of the North.

The cable is approximately 34,000 kilometers long, and contains a 2 fiber pair with a 12.8 Tbit/s capacity. The cable will be the third-longest cable in the world by the time of its completion. It will interconnect with the WACS cable on the West coast of Africa, and the EASSy and SEACOM cables on the East coast of the continent. There is a growing wariness among the BRICS countries that when their data traffic goes through hubs in Europe or the United States, it is incurring a greater risk of potential interception of critical financial and security information by non-BRICS entities.

Since the first Summit of BRICS in 2009, the member countries have gradually developed institutional mechanism for mutual co-operation. As part of this effort, the five member economies have set up various technical groups, working groups, inter-ministerial meetings to explore co-operation in social, economic, governance and other areas of mutual interest. For instance, the BRICS Working Group on Energy Saving & Energy Efficiency is devising strategies towards energy saving and energy efficiency within BRICS. The BRICS Youth Summit aims to empower youth through skill development, entrepreneurship training and so on. BRICS Employment Working Group is evolving solutions to labour and employment issues such as lack of social security particularly in the informal labour market, networking of labour institutes of BRICS countries and so on.

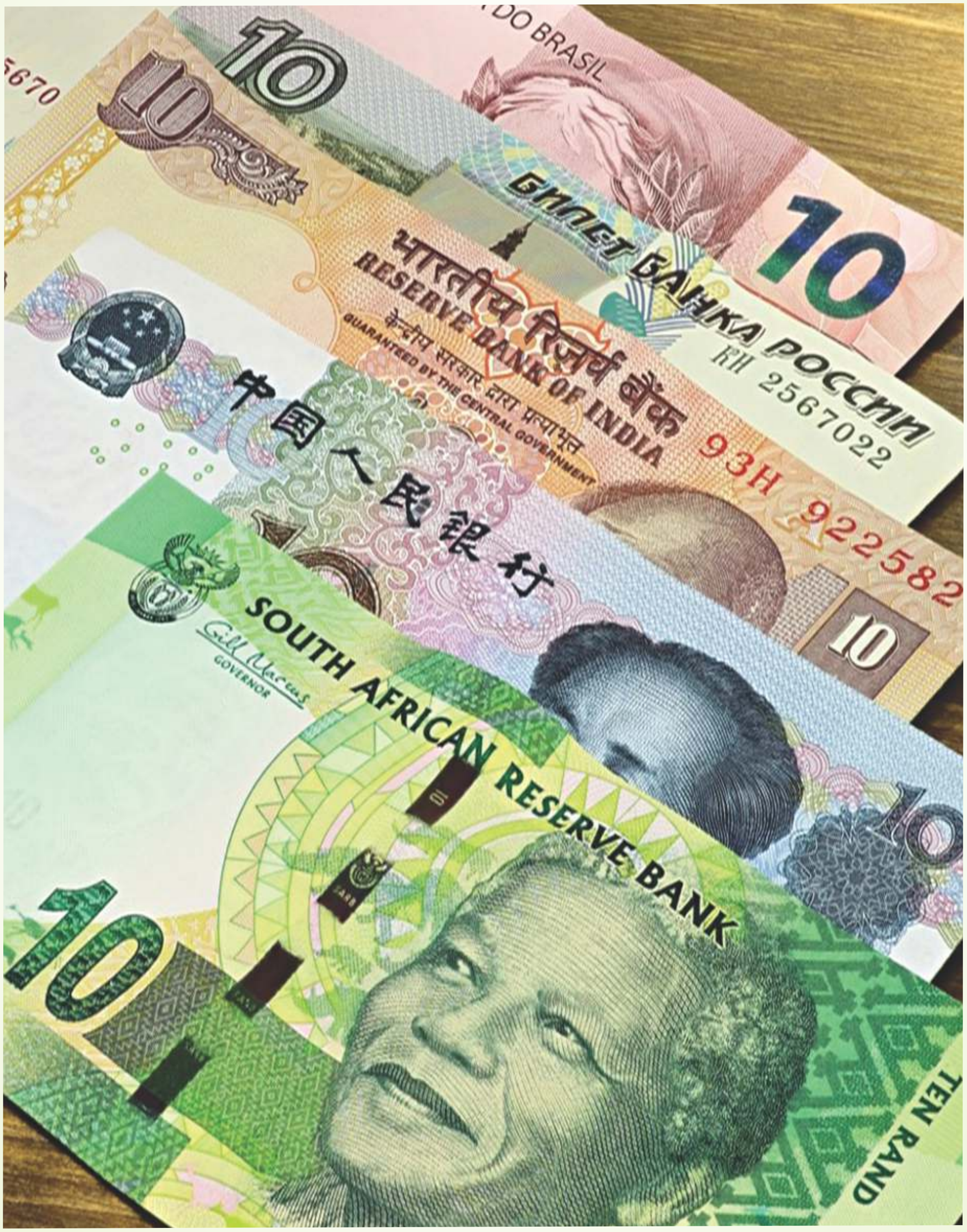
Other institutional mechanisms among BRICS countries include BRICS Working Group Meeting on Geospatial Technology and Application, Technical Group Meeting of BRICS Development Banks, BRICS Young Scientists Forum and so on.

Apart from the above institutions, the BRICS Working Group on Energy Saving & Energy Efficiency is devising strategies towards energy saving and energy efficiency within BRICS. The BRICS Youth Summit aims to empower youth through skill development, entrepreneurship training and so on. BRICS Employment Working Group is evolving solutions to labour and employment issues such as lack of social security particularly in the informal labour market, networking of labour institutes of BRICS countries and so on. Other institutional mechanisms among BRICS countries include BRICS Working Group Meeting on Geospatial Technology and Application, Technical Group Meeting of BRICS Development Banks etc.

Conclusion

A common administrative framework needs to be in place for proper communication within BRICS countries. The BRICS institutions will no doubt pave a way for regional cooperation in all types of exchanges like culture, health and education, financial services, financial inclusion etc.

2.
Financial Integration and Investments: Context to India



2. Financial Integration and Investments: Context to India

Developed, developing or least developed economies optimally function only in the scenario of mutual economic exchanges. These economic exchanges are either foreign direct investments or multilateral trade engagements between the countries. In course of times, these exchanges have not remained restricted only to economic exchanges but have further accommodated global issues like climate change, integrated regional development etc. through sustainable practices and cultural exchanges. However, as growth in terms of economic strength of a country remains measured by the ability to attract trade and direct investment, India story viz-a- viz the BRICS association needs to be understood in context to the same. Bilateral relations work on two aspects one being trade and the other being foreign direct investment in between the two countries. Trade enhances economies of scope between the trading countries and counters demand deficits. At the same time, the traded commodity also gives dimensions of the nature of trade happening between the countries. Trade of value added products on one hand does not only realize export benefit, but also increases countries employment index and helps in evolving and enhancing the country's manufacturing capacity. Trade in raw material commodities on other hand not only involves depletion of country resources but also is marred by environmental storms and is fragile in nature. Value added commodity trade is a preferred engagement as it draws higher revenue and boost economic value of a country by boosting job growth . However, generation of value added commodity trade requires large scale infrastructure and market demand.

The BRICS engagement has seen growth in intra country trade surge in spite of certain bottlenecks. Trade amongst BRICS countries has grown 200%. We need to understand how India has benefited from the BRICS Engagement. In this section we will understand the India perspective of the sectors for trade investment presently dealt with and the scope for other sectors to capitalize on this potential.

India Brazil Bilateral Trade & Investment

Trade

Brazil is the third largest trading partner of India after China and South Africa in the BRICS group of countries. India's bilateral trade volume with Brazil stood at USD 6,690 million in 2015-16, which is a 41% decline from the previous year's level of USD 11,364 million.

India mainly exports petroleum, organic and inorganic chemicals, pharmaceutical products, machinery, mechanical appliances and other industrial products.

Table 2: Share (in %) of Products in India's Total Export to Brazil

Product Categories	2014-15	2015-16
Organic and Inorganic Chemicals	6.2%	12.4%
Pharmaceutical Products	3.8%	7.6%
Other Chemical and Allied Industries	5.1%	10.2%
Machinery and mechanical appliances, nuclear reactors and boilers	3.8%	6.9%

Source: Source: Export Import Databank, Ministry of Commerce and Industry, Government of India

India's import basket from Brazil is dominated by crude oil, distillation and bituminous substances and allied products, which together contribute around 30% to India's total import. India imports crude oil from Brazil and exports refined petroleum products to the country. Other chief imports of India from Brazil are soybean, iron ore, finished iron and steel and other metal products, precious stones, animal and vegetable fats and so on. As can be seen from the following table, India is the 8th largest importer of Brazilian goods with a share of 2.1% in Brazil's total exports.

Table 3: Brazil's Export to Major Countries (in USD million)

Rank	Country	Total import	% share in total import
1	China	40616	18.0%
2	USA	27028	12.0%
3	Argentina	14282	6.3%
4	Netherlands	13036	5.8%
5	Japan	6719	3.0%
6	Germany	6633	2.9%
7	Chile	4984	2.2%
8	India	4789	2.1%
	Total Export	**225101**	**100.0%**

Source: BRICS Statistical Publication 2015; Data pertains to 2014

Foreign Direct Investment

Bilateral investment between India and Brazil has been very low and there is scope for improvement in future. Between April 2016-March 2016, Brazilian companies made USD 24.6 million investment in India and Brazil ranks 62 among 150 countries that invested in India. Some of the sectors that attracted Brazilian companies are automobiles, information technology, mining, energy, biofuels, and footwear.

According to the joint statistical publication of the BRICS countries, Indian companies invested USD 16 million in Brazil during 2014. India's investment in Brazil is higher than that of South Africa and Russia, while it is far lower than that of Chinese investment in the Latin American country (see the table below).

Indian companies have invested in information technology, pharmaceutical, energy, agri-business, mining, engineering and automotive sectors.

Table 4: FDI into Brazil - by Countries (in million US$) in 2014

Countries	FDI
Netherlands	8791
United States	8537
Luxembourg	6659
Spain	5958
China	840
India	16
South Africa	9
Russia	4

Source: BRICS Statistical Publication 2015

Table 5: Indian Companies in Brazil and Brazilian Companies in India

Indian Companies in Brazil	Brazilian Companies in India
TCS (information technology)	Marco Polo (automobile)
Wipro(information technology)	Vale (mining)
Cadilla (pharmaceuticals)	Stefanini (information technology)
Mahindra & Mahindra (automotive)	Gerdau (steel)
Larsen & Toubro (engineering and construction)	
Renuka Sugars (sugar)	
United Phosphorus (fertilizers)	
Polaris (software)	

Source: Ministry of External Affairs, Government of India

Institutional Mechanism to promote economic partnership
Interaction at the levels of people to people and business to business has limited effect on promoting bilateral economic relationship. In order to provide stimulus to large scale partnership between the two countries, there is a need to set up institutional mechanism by the governments of both the countries. Such an institutional mechanism identifies mutual complementarities between both the countries and proposes scope for investment and trade linkages in different sectors.

India and Brazil have a robust institutional mechanism to exploit synergies of joint co-operation. One such mechanism is the high level dialogue of the ministries of both the countries at the Joint-Commission meeting. So far, seven Joint Commission Meetings have been held between the two sides. The outcome of the 6th meeting is noteworthy in this regard. During this meeting, both sides discussed extensively the scope for co-operation in agriculture, hydrocarbon, science and technology, defence and so on.

Table 6: Institutional Mechanism to promote India-Brazil Economic Partnership

1. India-Brazil elevated their relationship to strategic partnership in 2006
2. The governments of both the countries set up 14 Joint Working Groups to explore co-operation in economic, social and administrative areas
3. Trade ministers of both the countries conducted 7 Joint-Commission Meetings to promote bilateral trade and investment
4. Government officials of both the countries discuss areas of co-operation in trade under the Trade Monitoring Mechanism (TMM). Four meetings are over so far under this mechanism.
5. Both the countries have been holding Economic and Financial dialogue periodically since 2011 for greater co-operation in the field of macroeconomy and financial system

Source: Ministry of External Affairs, Government of India

In order to identify complementarities in different economic, social and administrative sectors, both the governments formed 14 Joint Working Groups. Each of these groups focus on different sectors, which include transport, health, education, defense, science & technology, agriculture, energy and so on.

Considering that India and Brazil are leading sugar producers, there is a strong case for collaboration in production of ethanol (cellulosic ethanol), which is a bi-product of sugarcane and which serves as a biofuel. Indian government has mandated retailers of petroleum products to mix ethanol in petrol in order to reduce the consumption of the latter which has high carbon footprint.

Besides bilateral institutional mechanism, India and Brazil have explored commercial co-operation through various multilateral platforms in the last decade. Brazil is part of the Latin American free trade bloc of MERCOSUR, which includes Argentina, Uruguay and Venezuela. India entered into a preferential trade agreement with MERCOSUR countries which came into effect in 2009. Under this agreement, member countries provide preferential tariff treatment to trade in around 450 commodities. India and Brazil are taking efforts to enhance the coverage of the number of items under this agreement to 2000 items.

In another multilateral initiative, Brazil, India, and South Africa set up the IBSA Forum in 2003. Since then, the three countries have agreed on various forms of co-operation in trade and investment. Significantly, in 2010, the three countries agreed to streamline taxation and customs procedures to promote mutual trade and investment.

Agreements signed between both the countries

In July 2014, governments of Brazil and India agreed to set up a consultation mechanism on consular and mobility issues.

This mechanism is a step to improve visa and other consular services that affect movement of people between both the countries. Such a mechanism would examine and forward issues on movement of people to the competent national authorities. The mechanism would also consider possibilities of joint actions in projects of mutual interest or in situations of consular emergency in third countries for the benefit of each country's community. Further, the mechanism would exchange information on the experience of both countries with their overseas nationals, as well as on current initiatives to support their respective expatriate communities. Both the countries would set up a Working Group to operationalise this consultation mechanism and ensure that dialogue and regular exchange of information are held between the Parties.

In the same year, another agreement was signed between both the countries on cooperation in the field of environment. This agreement envisages investment in collaborative projects in the field of waste management including agricultural waste and electronic waste, waste water management and re-use of treated effluents, bio-fuels, medicinal plant products and so on. Both the governments would set up a Joint Working Group on Environment for coordination and implementation of this agreement.

In March 2012, both the countries signed an agreement to develop co-operation in the biotechnology sector. Under this agreement, both the countries would exchange information and extend co-operation through relevant institutions in the field of industrial research and development in Biotechnology. This agreement was included under the umbrella agreement on Science and Technology signed in 2006.

Bottlenecks in India-Brazil Trade and Investment

Brazil and India have tremendous scope to enhance their economic relationship. However, this is possible only if they address some of the constraints that impede bilateral trade and investment. One of the bottlenecks in increasing India's investment in Brazil is the contraction in the latter's economy. The real GDP of Brazil contracted 3.8% in 2015 owing to a combination of factors including slowdown in private investment and fall in export revenues on the back of decline in commodity prices. At the same time India's over protective policies have hampered Brazilian Investments.

Strategies for Further Development

Better Visa facilitation will help boost exchange trade missions. Sponsored travel for universities hel[p more collaboration between Brazilian and Indian universities.

India Russia Bilateral Trade & Investment

Trade

Bilateral trade between both countries is concentrated in key value chain sectors. These sectors include highly diversified segments such as machinery, electronics, aerospace, automobile, commercial shipping, chemicals, pharmaceuticals, fertilisers, apparels, precious stones, industrial metals, petroleum products, coal, high-end tea and coffee products. Bilateral trade in 2002 stood at $1.5 billion and increased by over 7 times to $11 billion in 2012 with both governments setting a bilateral trade target of $30 billion by 2025. Bilateral bodies that conduct economic relations between the two countries include IRIGC, the Indo-Russian Forum on Trade and Investment, the India-Russia Business Council, the India-Russia Trade, Investment and Technology Promotion Council, the India-Russia CEOs' Council and the India-Russia Chamber of Commerce.

Table 7 A: Indian Commodities Exports to Russia (2014)

Product category	Quantity ($ million)
Pharmaceuticals	$819.1
Electronic equipment	$382.3
Machines, engines, pumps	$159.4
Iron and steel	$149.1
Clothing (not knit or crochet)	$135.7
Coffee, tea and spices	$131.7
Tobacco	$113.9
Vehicles	$111.1
Knit or crochet clothing	$97.9
Other food preparations	$77.7

Source: Ministry of External Affairs, Government of India

Table 7 B: Russian Commodities Exports to India (2014)

Product category	Quantity ($ million)
Gems, precious metals, coins	$1100.0
Machines, engines, pumps	$707.4
Electronic equipment	$472.7
Fertilizers	$366.8
Medical, technical equipment	$302.7
Oil	$223.8
Iron and steel	$167.4
Paper	$136.8
Inorganic chemicals	$127.4
Salt, sulphur, stone, cement	$105.1

Source: Ministry of External Affairs, Government of India

Table 8: Major Investments by Indian Companies in Russia are:

- ONGC Videsh Ltd. in Sakhalin-I Project
- Imperial Energy
- Commercial Bank of India Ltd. (JV of SBI and Canara Bank)
- ICICI Bank for opening subsidiary ICICI Bank Eurasia
- TATA Motors: • SUN Group- Energy
- Carborandum Universal Ltd. – Production of Abrasives
- Tata Tea • De Core • Choron Diamonds
- L&T
- Universal Food Technologies (J.V. Gokul)
- Dr. Reddy's Laboratories Ltd.
- Cadila Pharmaceuticals Ltd.
- Unique Pharmaceutical Laboratories
- Torrent Pharmaceuticals • Sun Pharmaceuticals
- Wockhardt

Major **Russia investments from Russia in India**

- AFK Sistema in Sistema Shyam Telelink Services
- Branches by VTB , Sber bank etc.
- JV between Russian Kamaz Inc. and India's Vectra Group

Foreign Direct Investment

Indian investment in Russia is estimated to be about US$ 8 billion which include Imperial Energy Tomsk, Sakhalin I, Volzhsky Abrasive Works Volgograd and Commercial Indo bank. Russian investments in India total about US$ 3 billion, including Kamaz Vectra in Hosur, Shyam Sistema Telecom Ltd, Sberbank and VTB. Inter- Governmental Commission on Trade. Bilateral trade figures for last ten years are given below: (amt in US $ billion).

Institutional Mechanism to promote economic partnership

Food security

Given the fact that the agricultural yields are reducing every year in India and a monsoon failure can have a serious impact on the country's food security, the Indian Government has actively encouraged Indian companies to lease agricultural land in sparsely populated countries. More than a hundred Indian companies have entered the agricultural sectors in East Africa and South America. While countries in those regions can help India a lot in guaranteeing its growing food requirements, there is always a danger that some relatively unstable nations pose. Unscrupulous politicians often vent their ire on outsiders "taking land" and a regime change in many of these countries could mean that populist governments may nationalize the land and assets. Such a scenario is next to impossible in the Russian Far East, where India enjoys the same kind of goodwill it did at the peak of Indo-Soviet ties.

India-Russia Nuclear Venture for the Farming Sector

Russian state nuclear corporation Rosatom and Hindustan Agro have established a joint enterprise for the production and storage of agricultural products irradiated by isotopes: vegetables, fruits, cereals, and legumes. Radiation technologies will help save crops even during periods of drought. The two sides have invested around Rs. 40-45 billion rupees (approximately $700 million) in this joint venture. The companies plan to open 25 factories for the irradiation of food products with low doses of cobalt-60 over the next five years. It is planned to locate refrigeration capacity in India, Mauritius, the Near East, and Malaysia. Isotope production essentially increases the shelf life of perishable food products, which makes it possible for farmers to enhance their presence in the market and balance out prices. Such technologies are especially needed in Indian horticulture where there are serious price spikes. Experts have found out that the isotope processing of agricultural produce significantly increases yields and protects it from destruction. Isotope sterilization technology has been used all over the world for dozens of years. Irradiated objects, including produce, do not become radioactive and they can be used immediately after the process. Usually, products that are grown are irradiated by isotope sources; for example, grains, spices, dried herbs, potatoes, and other root vegetables. After such treatment, the products can be stored for a very long time and do not spoil. This technology is absolutely safe, as it is approved by the World Health Organisation, the International Atomic energy Agency, and the UNFAO.

Indian Investment Territories of Accelerated Development

For years, Indian strategic analysts and thinkers have been talking about the opportunities offered by a large area in Russia that stretches from Siberia to the country's Pacific Coast. Eyeing both expansion of cultural contacts and economic opportunities, India was one of the first countries to open a consulate in the city of Vladivostok. Yet, over the last two decades, little groundwork has been done to tap into the vast economic potential of the region. Now, as Russia's trade and economic activities with the West slows down on account of political tensions, the country is opening up its Far East in an almost unprecedented scale. Plans were announced earlier this year to make Vladivostok a free port. In addition to this, the Russian Government officially launched special economic zones that offer major incentives and tax breaks called territories of accelerated development (TAD). Several companies from Australia, South Korea and Singapore have expressed interest in investing in these zones. Indian companies should follow suit and set up operations in these TADs. The proximity of these zones to the markets of North Asia give Indian companies even better access to China, Japan and South Korea (a country with which India has a comprehensive economic cooperation agreement). Investing in these special zones will also help increase trade turnover with Russia and create jobs for both locals as well as Indian specialists. A strong Indian business presence in the region may also help companies like ONGC to sign more lucrative oil and gas exploration projects. The world's fastest growing major economy imports close to 80 % of its energy requirements, and a large part of this comes from the Persian Gulf region. Given the volatility of the Middle East, there is an increasing urgency for India to look at Russia to increasingly meet its growing energy demand. There are going to be projects that fail to meet initial expectations like ONGC's Imperial Energy, but this is a risk that is a part and parcel of the industry.

Russia Consolidating in the Indian Oil Market

Dutch oil trader Trafigura, one of the largest sellers of Rosneft crude, could become a partner in Essar Oil, which owns the second largest refinery in India. Rosneft plans to buy 49% of Essar shares. Trafigura is closely working with Rosneft. It became the second largest foreign buyer of Rosneft oil in 2015, (after the Chinese CNPC). If negotiations with Essar Oil are successful, Trafigura could become a partner in the Indian market. Rosneft signed a non-binding agreement in July 2015 to purchase 49% of Essar Oil and, in March 2016, during working visit of the Rosneft President Igor Sechin to Mumbai, "full understanding" about the conditions, the timing and the structure of the transaction was reached. It was then planned that the transaction would be completed before the end of June, "subject to the receipt of all the necessary corporate and regulatory approvals. The company was looking for investment opportunities in oil refining in India, primarily to ensure the synergy of supply and refining.

Russia India Cinema sector Collaboration

There is an ongoing process to prepare an intergovernmental agreement in the field of cinema, which will facilitate joint cinema production, and a mutual film distribution. The agreement will comprise components such as taxation, exchanging Russian and Indian cinema weeks. It is about creating conditions for fruitful bilateral cooperation in the field of cinema. Such documents are already in force with China and other countries. A regional film commission will be created which will compensate filmmakers from different countries for a part of the costs spent on shooting in a particular region. This will be a lever to activate the joint cinema production. An Eurasian Academy, which would be similar to the 'Oscars'; with the participation of Russia, India and China will be created to award a prize every year from this Cinema Academy. Proposals are expected from India and China, to be the co-founders. In Russia, it is the National Academy of Motion Picture Arts and Sciences as the co founder. Since 2014, state supported contracts have included a compulsory item on submission of motion pictures with English subtitles. In context to this program, events have been planned to establish 400 theatres in small Russian cities with a population of 100,000 people, which will be funded by the state and the Ministry of Culture. Further plans of modernization of existing halls and equipping existing premises, re-opening theatres where at least 50% Russian films will be screened, are scheduled at the end of 2016 . It is also planned to open a new site for the "Soyuzmultfilm" studio which will be moving to new premises, and will invest in its refurbishment and modernization. A new "Lenfilm" studio workshop will also be opened. Among the other events is the Russian young filmmakers Congress, presumably to be held at the end of August in Yakutia. Also, there is a plan to hold the 'Russian Film Days,' on August 27, and hold a "Night at the Movies" promotion, this is supposed to be a large-scale nationwide event.

A Dedicated Trade Mission

The Indian consulate in Vladivostok and its services, are one of the friendliest Indian missions anywhere in the world. It, however, has a very narrow scope of activity. Given the increasing economic importance of the Russian Far East for India, a dedicated Indian trade mission in Vladivostok is the need of the hour. India needs to hire professionals on a contract basis with set economic and trade targets to operate such a mission. In this way India can tap the economic opportunities available in the Russian Far East by having a team of young and motivated professionals with proper performance-based financial incentives living in the region. In a matter of time when Russia is expanding its Asian outreach, it is necessary for India to move in before its competitors with geographical advantages do so. If a proper strategy is developed, the Russian Far East can become one of the main drivers of India's 'Act East' policy.

India has become the 35th country to be admitted to the Missile Technology Control Regime (MTCR), a major international anti-proliferation group of which Russia is a key member. This should enable easier space and missile collaboration with Russia, which earlier could not supply cryogenic engines and other dual use technology missiles to India, because it was bound by MTCR norms. It will also enable India and Russia to sell the supersonic 'BrahMos' missile, which has a range of 290 kilometres, to third world countries. India and Russia co-produce the Brahmos, in a joint venture. Such a development would raise India's profile as an arms exporter. Vietnam is supposed to seek benefit from such a sale. The MTCR is an informal and voluntary partnership among member countries to prevent proliferation of missile and unmanned aerial vehicle (UAV) technology which can carry a 500 kg payload up to 300 kilometres. Admission to the MTCR would open the way for India to buy high-end missile technology, and state-of-the-art surveillance drones, which it seeks for border security. Membership of the MTCR would also require India to comply with rules to prevent developing of arms races. Russia has also backed India's bid to become an NSG member, and has said it is ready to assist in arriving at a "positive decision" for India to join the elite nuclear commerce club. Russia has also offered to build over 20 nuclear power units in India, up from the 12 offered earlier.

Russian micro-circuit chips for India's space programme

"Angstrem," the Russian company which manufactures micro-electronics and is in discussion to finalize the supply of around 10,000 pieces of radiation-hard chips for the Indian aerospace industry. The contract could be worth $ 200,000. Angstrem has, at the moment, manufactured and sent for testing several products for spacecraft control systems and launch vehicles. The company hopes that serial deliveries will begin as early as September this year. Izvestia was informed by Angstrem that the company itself came up with the proposal to an Indian private company, contacted by the Indian Space Research Organisation (ISRO) Space Agency. According to Svetlana Apollonova, Chairman of the Association Board of manufacturers of electronic equipment and appliances, the conclusion of this contract demonstrates the rapid development in the Russian production of micro-electronics.

Free Trade Agreement between India and the Eurasian Economic Union

An agreement has been signed for setting up a Joint Study Group on a Free Trade Agreement between India and the Eurasian Economic Union and a meet to decide upon the scope and timelines for the Study has been carved out. There have been increased exchanges of business visitors, namely a large number of Indian companies interested in business, including joint ventures, with Russian companies in both the civilian and defense sectors between the two countries for the MAKS Air Show.

Make in India initiative

Russian companies have shown considerable interest in the 'Make in India' initiative. The joint manufacture of Ka-226 helicopters in India is mentioned as the first India-Russia Make in India project. Meanwhile, a number of other project proposals are under discussion at various levels.

India may take part in Russian lunar program

Russia is ready to discuss India's participation in the Russian lunar program. There are talks about placing adjusting GLONASS stations in India. The BRICS countries are currently developing a data exchange project with remote sensing satellites.

North South Corridor

Russia has decided to bypass sanctions on Iran and signed a MoU to intensify economic cooperation. India along with the two countries can push for marked progress on the North-

South Transport corridor. The corridor project envisages a ship, rail and road route that connects ports on India's west coast to Bandar Abbas in Iran, then overland to Bandar Anzali port on the Caspian Sea and through former Soviet republics right up to Russia. The route could be either via Armenia and Georgia or the more practical option of Azerbaijan and Kazakhstan. An inter-governmental agreement on the corridor was signed between Russia, Iran, India and Oman, back in 2001, but there has been very little progress in making it functional. Now more than ever, Russia needs to push for all the railway connections to be built at a rapid rate to make the corridor functional. This functioning of the corridor would also open Russia and many former Soviet states to India's fruit and vegetable exporters in years when India has a bumper crop. Russian and Indian businesses are keen in the establishment of the North-South Transport Corridor, which will significantly fasten the transportation of goods from South Asia to the Russian Federation, CIS and Europe. It is not clear how long Russia's impasse with the West will last, but this is as good a time as any for Indian businesses to rediscover a country that was one of India's biggest trade partners in the 1970s and 80s.

Agreement to set up diamond sector JVs in India by Russia

Agreements between Alrosa, the Russian Diamond Company and Indian companies will witness more trade regarding cutting and processing diamonds in India. There are natural complementarities between India and Russia in the area of trade in rough diamonds. Russia as a major producer of rough diamonds and India as the leading processing center. In order to encourage more direct trade between Alrosa and Indian diamond traders, Alrosa is planning to open an office in the newly established Special Notified Zone (SNZ) in Mumbai. As a first step, Alrosa has carried out the first display of diamonds at the SNZ in December 2015.

Investments in IT and IT Start-up Sector

The potential for cooperation between India and Russia in the IT sector has been recognized by the leadership of both the countries. Russia is one of the fast growing IT markets in the world. In October 2015, the first India-Russia Roundtable on Information and Communication Technology was held in Moscow with participation of business representatives from both the countries. The discussion centred on various ways of further intensifying cooperation in the field of cyber security, e-governance and other IT related issues.

In the IT start-up sector, Yuri Milner, the Russian billionaire investor has taken a small stake in Practo, a rapidly expanding start-up based here that helps patients and doctors digitise their engagements.

The money was from his personal account. But, with a war chest of $1.7 billion (Rs 10,831 crore), Milner, who rose to fame as a deft investor in information technology (he'd invested in high-growth global entities such as Facebook and Airbnb), is keen to expand in India.

In India, he has already made investments in both his personal capacity and through DST Global, his venture firm. These have been in online marketplace Flipkart, cab aggregator Ola, real estate discovery platform Housing.com, and Swiggy, a food delivery start-up.

Pharma 2020 programme

In the pharmaceuticals sector, where India has emerged as a reliable supplier of quality generic drugs to Russia, potential for further cooperation is promising. Under Pharma 2020 programme of the Russian Government which aims at developing domestic production base, leading Indian Pharma companies have started engaging with Russian partners to consider possibilities of joint investments. Several B2B agreements have been concluded and a Memorandum of Understanding between the Central Drug Standard Control Organization of India and the Federal Service on Surveillance in Healthcare and Social Development of the Russian Federation on assurance of quality, safety and efficacy of medicines has been concluded for facilitating future cooperation in this sector.

Investment through Rupee Debt owed by India to Russia

Russia will utilize the rupee debt owed by India to finance its joint venture (JV) projects in aviation. These investments will have a lock-in period of five years. The money (from the rupee-rouble trade days) is at present parked in a rupee account with the Reserve Bank of India (RBI), and can only be used by the Russian firms for buying goods from India. Russia estimates the rupee debt to be close to $1 billion (around Rs. 4,500 crore). The investments will be used by Russia to set up a titanium dioxide project in the country. Titanium dioxide is a light metal compound used in aircraft industry. India has the raw material, while Russia has the advanced technology to utilize it. Officials said Russia was also keen to invest in light multi-purpose aircraft sector. Russia has been wanting to use the rupee debt for making investments in India. New Delhi was, however, keen on a lock-in period for allowing these investments. Officials said India is also keen to settle the debt as payments to several Indian exporters were held up in Russia in lieu of the country's outstanding debt. India has been repaying by transferring rupees to Russian Vnesheconombank account with RBI. The repayment period is till 2037, and is on a reducing scale. It will drop from the current level of Rs. 1,000 crore to R. s400 crore per year by 2010.

Bottlenecks in India-Russia Trade & Investment

India and Russia need to revamp economic relations and clear bottlenecks through good will and mutual trust. It has been observed that Indo Russia trade has not been a blockbuster as is the case of Russia China trade. This has happened due to economic and trade policy blocks which India has not taken note of and has not sped its global relations in context to the same. The global trade is largely governed by trade agreements between various trading countries and India has been late in realizing the importance of these issues. Though India and Russia share excellent mutual friendship, India has not been able to seal these relations in terms of required diplomatic relations agreements capitalizing the same. Another major drawback responsible for low level of economic ties between the two countries is the lack of a contiguous border and therefore the logistics of connectivity. The development with respect to the International North South Transport Corridor and the sea route from the Russia Far East have not received required attention from India and Russia. India's domestic history of inflation has been another issue which has prevented India from deriving major trade benefits from this mutual friendship.

Apart from these major criteria, we need to understand the ground level issues which have been hindering trade for a long time now between the two countries.

1. Indian companies are tough and difficult negotiators in terms of business. Most of them have not realized the importance of flexibility in dealing with crucial issues related to supply and price deviation and how to devise strategies to handle these issues.

2. Both the countries need to synergize their policy tools and make their 'institutional dialogue architecture more result-oriented and forward-looking. Removal of obstacles and speedy implementation of policies is of prime concern. Some of the bureaucrats are caught up in a time-wrap and suffer from a biased approach, red-tapism being a big problem in both the countries. It is quite in the range of possibility as the leaders of both the countries are dynamic and capable of taking quick decisions. The cooperation not only at the country level but also at city level and province to province level is also likely to be encouraged.

3. Misunderstandings arising due to political alliances such as Russia's large trade with China or supply of defense equipment to Pakistan and India's alliances with US in the defense sector need to be considered as country strategic moves beneficial to each of them and the same should be kept aside. It should be appreciated that India's expanding ties with USA are neither at the expense of Russia nor are they in any way directed against Russia or detrimental to its interests.

4. Visa rules between the two countries are causing problems which need to be facilitated to help boost easy entry and exit to the frequently travelling passenger traffic.

5. Some of the challenges are within the bilateral framework such as the one related Bilateral Investment Promotion and Protection Agreement (BIPPA), and some others emanating from outside the bilateral framework such as religious extremism and terrorism.

6. Indian exporters have to deal with sanitary norm compliances as well as competition from those countries that had been already trading with Russia successfully being an issue which blocks trade from Indian side.

7. Though development of banking links between India and Russia has witnessed some concrete progress, Indian banks are reluctant to finance the export of Indian goods to Russia, also in Russia they have more confidence in western firms even though they are expensive they are considered to be reliable.

Strategies for Further Development

1. Both countries need to evolve a framework to trade in rupee and rouble as the economic sanctions have impacted the trade, and also goaded Russia to explore other alternatives away from a dollar dominated economy. Russia is also exploring a similar arrangement with China, and this drive may lead the RIC countries, and possibly BRICS countries, to have an economic arrangement to tame the economic crisis arising out of the conflict in Russia's east. If India were a member of the Eurasian Economic Union and if operations between the two are conducted in roubles and rupees, it would give a major fillip to Indo Russia trade cooperation. Though Russia would gain politically, financially India would benefit more.

2. One way to be part of global value chain is attracting export oriented FDI on which government is taking steps, but the success depends on improving ease of doing business. Government also should try to conclude a few FTAs such the India-EU FTA, which has been on the anvil for a long time. These agreements would also give a major boost to India's textile exports. However, during this phase, it is high time that government, particularly Ministry of Commerce, do their homework properly before signing any FTA or comprehensive agreements. India has had unfavorable trade with trading partners, with whom it has signed trade

agreements, during post-agreement period, particularly with big economies in Asia like Korea and Japan. In recent months, exports contraction is mainly because India finds it difficult to penetrate Asian markets such as China, Korea, Japan and Indonesia. So it is time to negotiate with these countries for market access and address tariff and most importantly non-tariff barriers that Indian exports are facing in these countries

3. Rusprodsoyuz has recently signed an agreement with China Trade Chamber, with the help from Economy Ministry of Russia and a similar deal can be reached with Indian industrial bodies. Market rules, regulation, exchange of customs codes for about 50 commodities, information about the availability of tradable commodities and helping with certification procedures are part of the agenda for such a cooperation which can be extended with Indian entities.

4. Exchange of visits and collaboration between educational institutions also needs to be promoted as there is an urgent need to train and raise a new generation of Indologists in Russia. Scholars and academics have always played a critical role in promoting cooperation between the two countries.

5. India's anticipated membership in the Shanghai Cooperation Organisation (SCO) at the Summit held in June 2016 in Tashkent, Uzbekistan, provided a valuable opportunity for the two countries to strengthen their partnership. India's potential participation in the Eurasian Economic Union will be a win-win proposition for all members of the grouping.

6. Construction of the Chabahar seaport, associated rail-road linkages and development of the International North-South Transport Corridor will spur ties between India and Russia as well as with Central Asia and Afghanistan.

7. There should be efforts to boost the aviation cargo sector to transport Indian exports to Russia which would be majorly for the fast consuming retail sector.

8. Trade can be further extended by having Russian and Indian stocks listed on the country exchanges.

9. The creation of dedicated investment funds on both sides, both debt and equity would allow industrial linkages to occur.

10. A strong focus needs to be initiated on the "Make in India", plan for core industries in Russia where it can enter the Indian market with a strong domestic presence and use production in India to support global supply chain.

India and Russia will benefit from key sectors in which they are deficient so as to perfectly fit the gear and boost economic cooperation. Russia's expertise in defense equipments, space technology, building of smart cities, nuclear energy, and its natural resources of oil and gas are certainly elements of attraction for India. Indian consumer goods, pharmaceuticals, diamond processing, information and communication technology complete each other's requirement. This can be achieved when India extends its membership to regional congregation like the SCO or signs the required FTA with Eurasia group. Russia has been part of these congregations and trades based on their norms. The recent membership of India for eg. in the MTCR has helped India and Russia to work more prominently on the Brahmos project.

India-China Bilateral Trade & Investment

Trade

The India-China trade has seen trade deficit on the Indian side since recent times due to the many inflationary pressures on the Indian economy. India's exports have been amounting to $9.5 billion or 3.6% of its overall exports. China as India's top trading partner is an example of 'south to south' trade in the south eastern region. China where ICTC plays an important facilitating role. Trade deficit between India and China increased about 34 per cent to USD 48.43 billion in 2014-15 from USD 36.21 billion in the previous fiscal, Parliament was told on Wednesday. India's concern on the rising deficit has been discussed with China at various fora, including the highest level of leadership of the two countries. There are numerous business opportunities for India and China, in sectors such as agriculture and food processing, asset management, construction and infrastructure, pharmaceuticals, electronics and information technology, and transport and logistics. India is a potential market for agricultural inputs like fertilizers and processed chemicals. In turn, Indian firms can focus on Chinese markets in processed and frozen foods and dairy products.

The pharmaceutical sector has huge business potential for both countries. India is a large importer of pharmaceuticals ingredients and intermediates (worth $3-4 billion annually) from China. Indian firms specialize in formulations development and finished dosages.

Table 9: Key Commodities Exported by India to China

Commodities	Value
1. Cotton	$2 billion
2. Copper	$1.3 billion
3. Organic chemicals	$858.3 million
4. Oil	$585.1 million
5. Salt, sulphur, stone, cement	$564.4 million
6. Machinery	$474.7 million
7. Ores, slag, ash	$435.4 million
8. Plastics	$318.5 million
9. Animal/vegetable fats and oils	$280.7 million
10. Electronic equipment	$246.9 million

Source: Ministry of External Affairs, Government of India

China's exports to India amounted to $61.5 billion or 15.8% of its overall imports. The top 10 Indian Imports from China are,

Table 10: Top 10 Indian Imports from China

Commodities	Value
1. Electronic equipment	$19.3 billion
2. Machinery	$10.6 billion
3. Organic chemicals	$6.2 billion
4. Fertilizers	$3.5 billion
5. Iron and steel	$2.4 billion
6. Plastics	$1.6 billion
7. Medical, technical equipment	$1.3 billion
8. Iron or steel products	$1.2 billion
9. Vehicles	$1.1 billion
10. Furniture, lighting, signs	$912.1 million

Source: Ministry of External Affairs, Government of India

The Economic ties between China and India will play a large role in one of the most important bilateral relationships in the world by 2020.

Table 11: India-China Bilateral Trade Volume

Year	Export from India to China	Import from China to India	Total trade
	Billion US$	Billion US$	Billion US$
2009-2010	11.61	30.82	42.43
2010-2011	15.48	43.47	58.95
2011-2012	18.07	55.31	73.38
2012-2013	13.53	52.24	65.77
2013-2014	14.82	51.04	65.86

Source: Ministry of External Affairs, Government of India

Inspite of the brief border war in 1962, we have seen a transformation in the economic relationship between China and India in the last 10 years. Since the 1990s, both countries have become increasingly outward-looking in their economic policies and have embraced deeper economic integration with the rest of the world. The reduction and elimination of trade barriers has helped to stimulate economic exchange. In 2008, China surpassed the United States to become India's largest trade partner. Last year, India was China's tenth-largest export market. However, the major drawback of this trade between China and India is that India exports raw material commodities to China which China value adds and makes higher profits and the same value added commodities are imported by India thus reducing a potential advantage. China's large manufacturing capacity has helped the country bring about an economic revolution with the generation of jobs, thus lifting itself from extreme poverty conditions. China has made to its advantage some of the world's largest reserves present in India of iron ore, bauxite, and manganese, which feed China's expanding steel and automotive sectors. Services trade between China and India remains small. Though India has emerged as a global powerhouse in information technology (IT) and IT-enabled services, language differences create natural barriers to the export of these services from India to China. Thus, many of India's larger IT companies invest directly in local operations within China.

Till India's manufacturing revolution gets under way it can import lower-priced capital goods from China, such as turbines for electric utilities which can help India address the infrastructure bottlenecks especially in roads, highways, ports, and electric power as Chinese capital goods are often much cheaper than those from Western or Japanese manufacturers, easily affordable to India to modernize and upgrade its infrastructure more quickly.

Foreign Direct Investment

Apart from trade, India and China also have attracted some FDI from across the borders which is still very low, cumulative bilateral FDI being less than $500 million. This is because Chinese and Indian companies are still in the early stages of learning how to operate and succeed in each other's economies. Though an estimated 100 companies from each country have offices in the other, cross-border investment remains low because FDI requires greater knowledge and commitment to the host economy. In recent times higher FDI presence is speculated as the corporate leaders from each country have realized that a leading market position in the neighbouring economy is critical to pursuing global ambitions. Investment is rapidly entering a broader range of sectors, encompassing high-tech and low-tech industries, and leading companies in both countries have their sights set on global expansion. Some of the recent FDI projects are,

- In January 2009, Sembawang Engineers and Constructors, a subsidiary of India-based Punj Lloyd Ltd., signed a memorandum of understanding with Sino-Singapore Tianjin Eco-City to study the feasibility of building a $1 billion solar polysilicon production plant in Tianjin.
- Huawei's single largest market outside China is India. Huawei's largest research-and-development center abroad, with more than 1,000 employees, is located in Bangalore. The company also runs a manufacturing facility there.
- Mahindra & Mahindra (M&M) Ltd., India's leading agricultural equipment company and the world's third-largest tractor manufacturer, entered into its second majority-owned joint venture (JV) in China in August 2008. M&M has a 51 percent stake, while its partner, Yancheng Tractor Factory, China's third-largest tractor manufacturer, holds the remainder. M&M owns 80 percent of its first JV in China, which was with Jiangling Motors Corp., Ltd.
- Chinese companies—Xingxing Group Co., Ltd. and China Minmetals Corp.—and two Indian companies—Kelachandra Group and Sigma Minmet Ltd.—formed a JV, Xindia Steel Ltd., to invest $2 billion in an iron ore pellet plant in India.
- India's largest IT services company, Tata Consultancy Services Ltd. (TCS), established a JV in China in 2006. TCS owns 65 percent, three Chinese companies 25 percent, and Microsoft 10 percent of the JV. Among other goals, TCS China aims to provide core banking solutions in China.

These developments could lead to even greater momentum for Sino-Indian economic integration. Larger companies in both countries are increasingly acquiring third world country companies that already have a presence in China and India. For example, Tata Steel Ltd. in 2004 acquired NatSteel Holdings Pte Ltd., a Singapore-based steel manufacturer that already had two steel mills in China; Beijing-based Lenovo Group Ltd.'s acquisition of IBM Corp.'s personal computer business in 2005 gave it access to the Indian market; and Tata Motors Ltd.'s acquisition of Jaguar and Land Rover in 2007 gave it a nearly $1 billion revenue business in China. As more third-country acquisitions materialize, investment linkages between India and China will deepen.

Table 12: Information on Chinese FDI into India

Total FDI equity inflows from China	$410.14 million
Rank of China in FDI into India	28
Percentage share of China in total FDI inflows into India	0.18%
Source DIPP, Ministry of Commerce & Industry, GOI	

Sector-wise FDI Inflows from China into India

Sector	Share (in %) in total FDI inflows from China
Automobile Industry	40%
Metallurgical Industries	17%
Power	7%
Construction Activities	5%
Services Sector	4%

Source DIPP, Ministry of Commerce & Industry, GOI

Table 13: Major Indian Companies in China and Chinese Companies in India

Major Indian Companies in China	Major Chinese Companies in India
Adani Global	Sinosteel
Air India	Shougang International
Apollo Tyres	Baoshan Iron & Steel Ltd
Aptech Worldwide Inc.	Sany Heavy Industry Ltd
Aurobindo (Datong) Bio-Pharma Co. Ltd	Chongqing Lifan Industry Ltd
Bank of Baroda	China Dongfang International
Bank of India	Sino Hydro Corporation
Bharat Forge (Changchun) Co. Ltd	Huawei Technologies
Canara Bank	ZTE
Dr. Reddy's Laboratories	TCL
Essar	Haier
ICICI Bank	Shanghai Electric
iGate Global Solutions Limited India	Harbin Electric
Grasim Industries Ltd	Dongfang Electric
Infosys Technologies Ltd	Shenyang Electric
Jindal Steel and Power Limited	Beijing Automotive Industry Corporation (BAIC)
JSW Steel Limited	ZTE Kangun Telecom Company (I) P. Ltd
Jubilant Organosis Ltd	ESSEL Ahmedabad Godhra Toll Roads Ltd
Larsen & Toubro Limited	Shanghai Electric India Pvt Ltd
Mahindra (China) Tractor Co. Ltd	TBEA Energy (India) Ltd
Punjab National Bank	CHENGUANG Bio-Tech(India) Pvt Ltd
Reliance Industries Limited	Ecolutions Green Energy (India) Pvt Ltd
Shipping Corporation of India	YAPP India Automotive Systems Pvt Ltd
State Bank of India	XINDIA Steels Ltd
Steel Authority of India Limited	Nippon Paint (India) Pvt Ltd
Suzlon Energy (Tianjin) Limited	XINDIA STEELS LTD
TATA Autocomp Systems Limited (TACO)	Cheetah Multitrade P. Ltd
TATA Sons Limited	Jushi India FRP Accessories Pvt Ltd
TVS Motors Co. Ltd	WISCO (I) P. Ltd
Wipro (Shanghai) Limited	

Source: Ministry of External Affairs, Government of India

Foreign direct investment inflows provide capital and at the same time add to resources that can be invested to bridge the gap between domestic savings and investments, generate employment and contribute to the exchequer in the form of taxes. Importantly by attracting top companies via the FDI route, one can adopt technology and best management practices thereby increasing productivity and output. In the Indian engineering context, it is seen that sectors which have attracted FDI have performed better than average.

Bottlenecks in India-China Trade & Investment

The recent global economic crisis, which has slowed economic growth in China and India, appears to have exacerbated the severity of these concerns. Slowing down of China's manufacturing output due to global recession has brought down import of raw material from India by China however at the same time India's consumption has been steady inspite of global slowdown. Thus, resulting in trade deficit on the Indian shores.

India has issued several antidumping measures against products such as yarns and fabrics, nylon tyre cords, and aluminum products from China. Both governments appear keen to resolve these issues through mutual discussions rather than taking them to the WTO.

There is no progress towards the signing of a FTA between India and China. In fact, India's domestic industry has sounded notes of caution on several occasions over a possible FTA with China. There is an urgent need to identify the specific areas wherein, a reduction of trade barriers could result in mutual benefit.

The South China Sea conflict has led to the damage of the Indian Container and Shipping Industry, which in turn is destroying India's trade with the south eastern countries.

A major obstacle to bilateral investment that needs to be bridged is one of lingering distrust stemming from the brief war of 1962 and unresolved border disputes. In an example of this distrust, in July 2008, the Indian government prevented companies from China and two other countries from investing in port infrastructure projects in the country for security reasons. Non support of China to India in the case of the NSG bid has further deepened the crisis, with restricted media entry to the Indian shores. India's non support to silk route due to the impending issue of China's purchase of Aksai Chin which was Indo Pak disputed area is also an issue which hampers Indo China relations.

In order to boost exports and address the widening trade deficit with China, the Indian government has taken a number of initiatives to identify specific product lines with export potential, actively taking up issues relating to tariff and non-tariff barriers in bilateral meetings and institutional dialogues. The two countries are considered political rivals but there have been some significant developments. In October 2013, for instance, China and India signed the Border Defence Cooperation Agreement (BDCA). The Agreement acknowledged the need to continue to maintain peace, stability and tranquility along the line of actual control in the India-China border areas and to continue implementing confidence building measures in the military field along the line of actual control. Both the countries have signed a five year development program for economic trade and cooperation to lay down a medium term roadmap for promoting balanced and sustainable development of economic and trade relations. India and China while encouraging bilateral trade and investment relations and will work jointly to establish common negotiating strategies in the international forum.

India-South Africa Bilateral Trade & Investment

India and South Africa have been on par due to their colonial past. South Africa supported India's bid for membership of Nuclear Suppliers Group which has further strengthened this relationship. Bilateral trade between the two countries has always been an important agenda. India is also a strong supporter of the New Partnership for Africa's Development, which is headquartered in South Africa. Since the establishment of diplomatic relations in 1993, commercial relations have also flourished. South Africa has promoted signing a free trade agreement with India and the Southern Africa Customs Union (SACU), which includes Botswana, Lesotho, Namibia and Swaziland along with South Africa. The India-Southern Africa Customs Union Preferential Trade Agreement will help the countries sign the pact by reducing tariffs for certain products. Bilateral trade grew exponentially from USD 3 million in 1992-93 to USD 4 billion in 2005-06, and the two governments have targeted increasing bilateral trade to USD 20 billion by 2018. Gold, bullion and diamonds constitute one-third of India's imports from South Africa while India polishes and processes diamonds from South African mines and exports the same. India and South Africa also share an extensive energy partnership since a long time and India is the largest importer of coal from South Africa which is to the tune of 1.4 million tonne. Apart from this, India imports from South Africa gold, aluminium, phosphoric acid, coal, pulp and waste paper, and precious stones, including diamonds. India's exports to South Africa currently comprise mineral fuels, automobiles, iron, steel, chemicals, pharmaceuticals, cotton yarn and fabrics. A major growth area for South African imports is pharmaceuticals as the country has share of 3.5% as an export destination for pharmaceuticals, apart from this South Africa can also be explored by India to be major exporter of skills in mining industry to India. Though mineral commodities have been the South Africa's major strength it has been exporting to India mining machinery to a smaller extent. However, extraction of gold and diamonds is a niche mining area where expertise is required.

Indian companies are currently executing projects worth over US$ 2 billion in South Africa. Major investors include Tatas (vehicles, IT, ferrochrome plant), the UB Group (beer manufacture, hotels), Mahindras (utility vehicles) and a number of pharmaceutical companies, including Ranbaxy, CIPLA, etc.

South African investment in India has also increased. Major companies include SAB Miller (breweries), ACSA (upgrading of Mumbai airport), SANLAM and Old Mutual (insurance), ALTECH (set top boxes), Adcock Ingram (pharmaceuticals), Rand Merchant Bank and Standard Bank (banking).

Showcasing India as an attractive destination for defense production, a deeper collaboration in this sector has been sought with South Africa.

Bottlenecks for Trade & Investment

Though India–South Africa private-sector relations are positive, there has been less investment by South African businesses in India. Other factors that hinder Indian investment in South Africa are inadequate and inefficient infrastructural services, low levels of human-capital development and a lack of capacity. Difficulty in obtaining business visas to South Africa is an important issue that has hindered business, and the idea of introducing a BRICS business visa has been proposed to overcome this obstacle. Generally, because South Africa is seen as more developed than a number of other African countries, it is perceived as a sound choice for Indian businesses wishing to operate or invest in Africa. At the same time, Indian businesses have also increasingly become engaged in enhancing South African development. For example, in South Africa a project funded by development agency USAID on HIV/AIDS made use of Indian private-sector technologies. The South African government could also help identify the challenges that businesses face. Civil society could therefore help by playing a role in conducting research and giving policy advice on these matters. Though Indian businesses find presence in South Africa the same is not observed about South African businesses in India and the major hurdle being stringent Indian tax and Investment policies which are of protective nature. Though trade survives well between the two countries FDI among the two is mostly one way traffic. The Make in India initiative which implies tying up with a local business to start operations in India is seen as more of a hurdle than a positive outcome for congenial relations between the two. India, at the same time has not taken a view of the opportunities of scale which it can have tying up for joint projects especially in case of financial services and has remained concentrated in certain countries but not South Africa.

Strategies for Further Development

Other examples of South African efforts have included the Investment and Trade Initiative, the Mining Indaba and the WINDABA. In 2002 the Indian government launched its Focus Africa Programme, which engages with 24 African countries using Indian business structures. As part of the programme, the Indian government facilitates visits to Africa, participation in trade expos and exhibitions, and follow-up business-tobusiness meetings.The India-South Africa CEO Forum, initially led by Ratan Tata (chairman of the Tata Group) and Patrice Motsepe (chairman of African Rainbow Minerals), was also relaunched in 2010 after being largely dormant for several years. Four sectoral working groups have been established in the areas of energy, financial services, mining and infrastructure. India recently signed a deal with South African companies in the defence sector worth around US$80 million in an effort to improve its defence capabilities. The South African government can therefore inform the South African private sector and civil society of developments in the Indian government's approach to economic diplomacy, determining if there are ways to engage in areas of mutual benefit. The trade sector between India and South Africa needs to be broadened and diversified, with small and medium-sized enterprises playing a greater role.

Civil society could also play a proactive role here in policy dialogue by ensuring that these engagements contribute to sustainable development and benefit the population as a whole, rather than a small number of individuals, and by advising government and business on how certain projects may have an impact on local communities. Civil society and business can also work together to ensure greater monitoring, transparency and risk reduction.

It is observed that India's duty-free, quota-free system, for example, allows 90% of goods to be exported duty-free and quota-free however, not many African countries take advantage of this exemption. An awareness needs to be created about the opportunities in the Indian private sector by facilitating an economic study of the Indian market and by improving knowledge networks. The South African and Indian governments must also consider how to use their embassies to enhance their economic diplomacy. One area of stronger focus might be enhanced engagement with diasporas in India and South Africa to gain a better understanding of the challenges and opportunities for the private sector. Enhancing economic diplomacy requires a close partnership between all relevant stakeholders. Each of these stakeholders plays an important role in ensuring that the impact of relations is maximised.

Milestones in BRICS Trade

Table 14: Bilateral Trade Among BRICS Countries in 2015 in USD Million

Countries	India	Brazil	Russia	China	South Africa	Total Trade
India	NA	7905.25	6124.51	70074.97	10087.89	94192.62
Brazil	7905.25	NA	4683.48	66295.58	1992.38	80876.68
Russia	6124.51	4683.48	NA	63461.13	859.28	75128.39
China	70074.97	66295.58	63461.13	NA	31192.66	231024.33
South Africa	10087.89	1992.38	859.28	31192.66	NA	44132.22
Total trade	94192.62	80876.68	75128.39	231024.33	44132.22	525354.25

Source: World Integrated Trade Solution (WITS)

Table 15: Bilateral Trade Balance (Exports - Imports) in 2015 in USD Million

Countries	India	Brazil	Russia	China	South Africa	Aggregate trade balance with BRICS countries
India	NA	-1025.64	-2904.07	-50943.48	-2463.10	-57336.28
Brazil	1025.64	NA	241.70	4872.31	703.22	6842.87
Russia	2904.07	-241.70	NA	1602.80	-310.66	3954.52
China	50943.48	-4872.31	-1602.80	NA	510.95	44979.31
South Africa	2463.10	-703.22	310.66	-510.95	NA	1559.58

Source World Integrated Trade Solution (WITS)

Table 16: Trading Across Borders

Indicator	China	India	Brazil	South Africa	Indonesia	Pakistan	Sri Lanka
Trading Across Borders (rank)	50	100	114	149	47	81	72
Documents to export (no.)	7	8	8	8	5	9	8
Time to export (days)	21	17	13	30	20	21	21
Cost to export (US$ per container)	500	1,055	1790	1531	704	611	715
Documents to import (no.)	5	9	7	9	6	8	6
Time to import (days)	24	20	17	35	27	18	19
Cost to import (US $ per container)	545	1,025	1730	1807	660	680	745

Source: Logistical Bottlenecks in India: Government Interventions & Policy Initiatives, By Dr. Ram Singh, Assistant Professor, International Trade Operations & Logistics, Indian Institute of Foreign Trade New Delhi

Box 12: BRICS A Roadmap for Cooperation in Services

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The BRICS is an increasingly important group in the world economy, in terms of its contribution to global trade, investment, market size, and labour force. There is potential for deeper commercial and cooperative engagement among these countries in the service sector, both traditional services such as travel, transport, tourism and in emerging services such as ICT, business, and construction services.

The most important mode for cooperative engagement in services would be through FDI, in light of liberalization and regulatory reform measures undertaken across a wide range of services (albeit to different degrees) in all the BRICS. Given the growing importance of the BRICS as both recipients and sources of FDI flows and the emergence of transnationals from BRICS countries, FDI can play an important role in fostering greater engagement among these countries. At present, intra-BRICS FDI is very limited, primarily focusing on extractive and natural resource based industries and IT services. However, analysis of outward FDI from some of the BRICS suggests that although there is some degree of competition among them in attracting FDI into areas such as energy, transport, and financial services, there is also complementarity among them in some of these same areas as well as otheremerging areas such as business services. The emergence of Chinese transnationals in various infrastructure services, Indian multinationals in IT services, South Africa in financial services and the focus on diversification of export markets and increasing South-South cooperation creates opportunitiesfor intra BRICS trade through commercial presence in the form of joint ventures, greenfield investments, and mergers and acquisitions as the transnational data for these countries confirms. Greater engagement among theBRICS through the presence of their transnationals in each other's markets could also foster trade in supporting services through other modes of supply.

However, the extent to which FDI can be one of the main modalities for fostering cooperation in services among the BRICS, would be shaped by their regulatory frameworks and the extent of market access granted as well as the post entry operating environment in the service sector of these countries. An overview of their regulatory regimes and liberalization trends indicates that there is considerable variation across these countries and across different services in terms of their market access and national treatment regulations, notwithstanding a general trend towards opening up more services, removing government monopoly and promoting domestic and foreign competition, and institution of independent regulators.

Hence, greater cooperation through commercial presence in each other's markets would necessarily require further investment liberalization in many services, possibly enabled by preferential arrangements and bilateral investment treaties which cover services, and other complementary liberalization such as for movement of professionals and cross border services exports that are needed to support transnational activities.

Apart from commercial engagement, the experience with reforms and development of the service sector in different BRICS suggests that there is also potential for cross-country learning from each other's experiences. Successful services in these countries have involved pro-active government policies, including support through financing and subsidies, export promotion schemes, R&D, supporting infrastructure, capacity building, human resources, government procurement, streamlining of administrative and regulatory frameworks, liberalization of FDI, and a cross-cutting approach to the development of the sector in terms of recognizing synergies with other parts of the economy, including other services. A supportive relationship with industry bodies also characterizes successful services.

Looking ahead

There are three broad elements that should be part of such a pro-active strategy to enhance greater cooperation among the BRICS in services. These elements relate to establishing or expanding trade agreements to include services; enhancing investment flows in services by addressing investment barriers and through bilateral investment agreements; and cooperating in skill and human resource development to make the service sector competitive. The thrust of the strategy in each of these areas is outlined here.

Trade Agreements

The starting point for increasing cooperation could be to widen the provisions of existing trade or other agreements among some of the BRICS to cover the service sector. Hence, arrangements such as the India Mercosur FTA, the India-SACU FTA, other prospective FTAs involving one or more BRICS could be widened to include services. In addition, the possibility of extending the ambit of initiatives such as IBSA to cover services or related cross-cutting issues can also provide an impetus to service sector cooperation among these countries. A further step in this regard would be to ensure that services that are of interest are committed and enhanced market access opportunities are realized under these agreements. It would also be important to recognize the synergies between goods trade and services and to explore the scope for using the provisions covering goods under these agreements to create opportunities for trade in related services.

Investment promotion

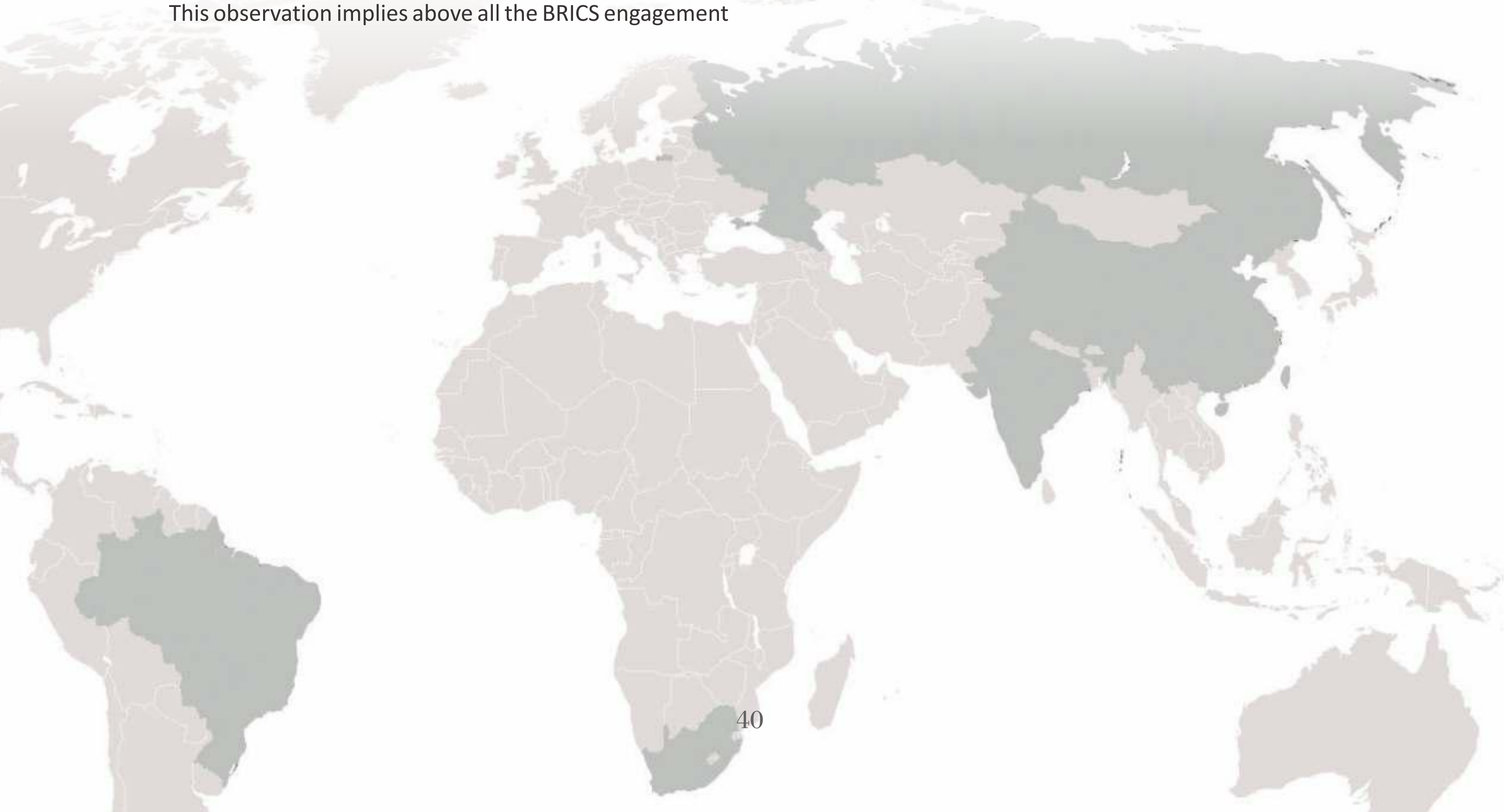
A second step would be to encourage cross-border FDI in services through bilateral investment treaties, preferential access under agreements, and through information dissemination about market opportunities in other BRICS. Both industry and government can play an important role by organizing visits of delegations to each other's countries, feasibility studies regarding each other's markets and business opportunities, identifying specific sectors or niche areas for engagement, and through administrative cooperation in terms of creating points of contact and enquiry and streamlining approval and clearance processes. To some extent, the limited extent of intra-BRICS engagement today is a reflection of the lack of information and understanding about each other's services markets and both industry and government have to participate to address this problem. The involvement of both industry associations (overarching bodies representing industry interests) as well as service industry specific associations (such as for the IT industry) in different BRICS countries would be required. It is important to note, however, that cooperation through investment flows would require cooperation on a variety of other cross-cutting issues, in particular, those of taxation, movement of persons, and possibly also subsidies and government procurement policies.

Skill and capacity building

Given the importance of skill and capacity building for developing competitiveness in services, another useful and less contentious area for cooperation would be through training and skill development programmes and even joint research and development activities. In areas such as IT services, project management, engineering, and various professional and technical services, there is scope among the countries to conduct joint studies and training programmes, to foster tie-ups between industry and educational institutions across the countries and to develop pilot programmes in niche areas. Such initiatives would need the financial and administrative support of concerned government ministries and logistical, financial, and other support from concerned industry bodies for developing such partnership schemes and pilot initiatives.

Conclusion

We can fairly conclude that India's engagement with China in terms of trade is highest followed by South Africa, Brazil and Russia. All the other trading partners Russia, Brazil and South Africa also report a higher trade numbers with China. This verifies that China has been a beneficiary of this engagement and leads the BRICS engagement as a larger trade partner. At the same time, Brazil and Russia have been in trade surplus with China. This observation implies above all the BRICS engagement has mutually benefitted the BRICS countries with no concentration of benefit within any one country. We have also observed that the share and prominence of FDI from India and China has been the major one even amongst the BRICS countries. There have been bottlenecks for the FDI investment of other BRICS countries into India majorly due to Indian policies being a hindrance to the same . However, there are major policy reforms in queue to open the Indian side for the necessary international interventions on basis of mutual cooperation.



3.
BRICS and Major Country Exchanges

3.
BRICS and Major Country Exchanges

The African block has immense potential for food commodity export. There is a large amount of investment in agriculture , mining etc in this block by the BRICS countries. The agricultural yield from 16% of this African land masses which has soil of high quality will be a source of raw materials for the manufacturing capacities in these countries. This 9 million km2 of land in Africa currently supports about 400 million or about 45% of the people. South Africa already is a strategic partner for investment in Africa linking the African continent to the rest of the world and facilitating the flow of investments from the BRIC countries into the rest of Africa. South Africa's joining of the BRIC shows its strategic importance in the south-south BRIC configuration. The role of some of these emerging economies within the so-called South-South alliances can be viewed as an opportunity to enhance cooperation with other developing countries, playing a significant role in the economic and social development of the region. Furthermore, the increased bargaining power of developing countries in multilateral negotiations, as reflected in the current Doha negotiations of the World Trade Organisation, has been cited as another reason for cooperation with emerging markets such as Brazil, Russia, India, China and South Africa. However , the African continent is marred by critical issues such a lack of basic infrastructure, poverty, food insecurity, lack of productive capacity and the transfer of technology which remain as major challenge for development in this region. Lack of finance to back infrastructure development with a very low score in credibility is also a major drawback in case of Africa. Though investments have already been made in land masses by China and India for growing agriculture based products returns are yet to see face due to undeveloped infrastructure. Setting up of the NDB whose main objective is sustainable and developmental funding implied South Africa's entry into BRICS. The setting up of the Africa Regional Center will be NDB's face for the African continent. BRICS alliance has its roots firmly gripped on the development agenda could leverage the collective capacity of the BRICS in coordination with other emerging countries to assist in the transformation of these LDC economies.

While international trade has a profound impact on LDCs' economies, LDCs' export structure is mainly concentrated in a narrow range of commodities and low-skill labour-intensive manufacturing sectors. The commodity price boom during the 2000s ended in 2008 and exports declined sharply in 2009 as global demand fell, mainly due to the global economic crisis. Higher commodity prices led to a recovery in 2011, but exports of commodities have not reached 2008 levels. An increasing number of emerging economies, including LDCs' main trade partners, such as Brazil, China and India, have provided improved market access schemes for commodities originating from LDCs. Around 15 per cent of LDCs' total commodity exports go to emerging economies, rising to over half of fuel and mineral exports. Moreover, 68 per cent of LDCs' agricultural raw materials are exported to emerging economies, while manufactured imports, particularly from China, India and South Africa, dominate the composition of imports to LDCs. The BRICS and other emerging countries show the central role of industrialization for economic development. It should be noted that three of the five BRICS countries have experienced a degree of de-industrialization during phases of their development, sometimes associated with structural change (as in the case of the Russian Federation). Industrial development accelerates production, productivity growth, and linkages with other economic sectors. Lessons learnt from the development of these countries provide the strategic contributions needed to achieve the development objectives of LDCs.

Recent initiatives, such as the expected establishment of the BRICS development bank, could leverage the collective capacity of the BRICS in coordination with other emerging countries to assist in the transformation of LDCs' economies.

Addressing economic vulnerability in LDCs is a priority. Many LDC economies rely on the primary sector and are affected by volatile commodity prices in international markets. Structural problems limiting the development of LDCs' export capacities need to be addressed to avoid a reliance on primary commodities, rather than diversification and expansion into global value chains. Cooperation between the LDCs and the emerging economies could help these countries to develop and implement the necessary policies.

The BRICS engagement in terms of trade and investment has been prominent among the Low-Income Countries (LICs) and the South-South Cooperation (SSC). This feature is mainly due to their very own experience of growing out of poverty and rapidly transforming into global super-powers, as is particularly the case of China. This engagement is based on mutual benefits and learning, rather than expert knowledge transfer more traditionally associated with western donors. The BRICS Business Forum's joint statement called on the respective governments to deepen economic engagement of which trade and investment were identified as the pillars of such an initiative. The LIC trade and investment has been beneficial especially to China which outsources raw materials from these countries. The Sub-Saharan African (SSA) block is another such engagement which comprises primarily of the African countries for the concerns of China and South Africa and the South American countries for Brazil. This engagement of BRICS has not only played a major role in uplifting the economies of these countries but has also made them players in the global market. Earlier EU was the only engagement for these countries and now with the emergence of BRICS, these countries have sought an alternate player.

Box 13: Role of BRICS Export Credit Insurance Agencies (ECA) in Promoting Trade

ECGC Ltd. is a government of India enterprise functioning under the administrative control of the Ministry of Commerce & Industry. It was set up with the objective of promoting exports from India. ECGC helps encourage, facilitate and develop trade between India and other countries by providing export credit insurance to Indian exporters and banks.

The state Export Credit Insurance Agencies (ECA) of the BRICS countries signed a Memorandum of Understanding (MOU) on Co-operation at the BRICS Summit in Brazil in the year 2014.The framework of co-operation aims to support and encourage international trade between the BRICS countries, and where appropriate, to facilitate the supply of goods and services from their respective countries as part of a project in any of the BRICS countries.

The objective is to facilitate co-operation among the ECAs by (i) Promoting a non-exclusive framework for the development of cooperative efforts between the participants which will support and encourage trade and investment within the BRICS countries; (ii) promoting a non-exclusive framework of cooperation of joint projects envisaging the supply of goods and services from their respective countries as part of joint projects in third countries, which will internationally promote products and services of BRICS countries;(iii) exchanging experience in export credit and investment insurance; and (iv) exchanging their positions towards international guidelines and regulations on export credits and investment insurance.

The BRICS countries agreed to the establishment of an annual BRICS ECA meeting with the purpose and focus on trade cooperation in order to promote joint trade, support of exports to respective countries and that of overcoming existing obstacles. The first inaugural meeting took place in St. Petersburg prior to the UFA Summit where the BRICS ECA Forum was formally launched.

The Forum will serve as a platform for exchange of joint projects, share information about bad debt, bad buyers and claims repayment, possibility of co-operation at operational level and co-operation with an external agency, wherever possible, for the purpose of support and expansion of trade and investment within the BRICS Countries.

ECGC India has held the 2nd BRICS Heads of ECAs meeting to discuss further co-operation among the forum. ECGC India is also organizing workshops for the ECAs and the Development banks. The forum aims at regular exchange of experience in export credit and investment insurance, and exchange of positions towards international regulations on export credit and investment insurance. This may further accelerated by the exchange of information, assistance, expertise and advice in relation both to commercial and political risks involved in export credit insurance. This can also be leverage to exchange member positions towards international guidelines and regulations on export credits and investment insurance.

BRICS and the LIC Engagement

LICs, most of which have weak governments and are most often susceptible to internal problems, are weak contenders for credit. LICs are also, very fragile in terms of external shocks, volatility in commodity prices and rising food costs. The International Monetary Fund (IMF) estimates that more than 23 million people could fall below poverty line in the case of no recovery in the world economy. The global recession has hit the might of LICs making them vulnerable to further crisis falling into vicious debt cycle which further worsens the scenario for repayment. Therefore, it will be of utmost importance to find tools to prevent LICs from suffering an increase in poverty and food shortage in case of on-going global economic recession.

The emergence of BRICS engagement has brought about a significant redirection of LIC trade and financial ties towards these emerging markets. Bilateral trade between LICs and BRICS has grown exponentially in recent years, making BRICS collectively a trade partner that is comparable to the United States. BRIC FDI and development assistance, though smaller relative to ODA from traditional donors, has improved over the point of time and is making a significant impact on certain key sectors (e.g., infrastructure and resource extraction) of LIC economies. In addition, the rise of BRICS in the global economy could exert significant indirect effects on LIC economies via global goods and financial markets. In particular, rising global demand for commodities as a result of strong economic growth in BRICS and their rapid reserve accumulation could alter the terms of trade and the cost of financing for LICs in the global market. The relatively mild deceleration of LIC economic growth during the global financial crisis points to the potential benefits of their growing ties with BRICS. Most LICs were hit hard by the crisis, but growth often slowed less and recovered faster than anticipated. The Sub-Saharan African region is more resilient to the global financial crisis because of the region's strong trade ties with BRICS, particularly China.

BRICS leaders have expressed support for infrastructure development in Africa and its industrialisation within the framework of New Partnership for Africa's Development (NEPAD), first at the Sanya Summit in 2011. In the joint declaration of Sanya (2011), BRICS claim to represent common goals of all LICs and MICs and emphasize the necessity to fight poverty and to achieve the MDGs (Millienium Development Goals) addressing poverty in particular. Eradication of extreme poverty and hunger is a moral, social, political and economic imperative of humankind and one of the greatest global challenges facing the world today, particularly in Least Developed Countries in Africa and elsewhere. BRIC leaders have taken efforts to push their cooperation forward to support Africa's efforts to accelerate the diversification and modernisation of its economies, through infrastructure development, knowledge exchange and support for increased access to technology, enhanced capacity-building and investment in human capital, included within the framework of NEPAD. Along with NEPAD, the other related and new initiative is the Southern African Development Community (SADC), Regional Infrastructure Master Plan (RIMP), which could involve cross-border projects with a combined investment worth up to $500 billion.

Box 14: India-South Africa Relations

Mr. Deepak Premnarayen, Non-Executive Director, FirstRand Ltd. (South Africa) Main Board and Chairman – India Advisory Board.

BRICS alliance is relatively a recent one and co-operation among the member countries has progressed faster in a short span of time as compared to alliance such as NAFTA which are decades old.

Specifically, the setting up of the New Development Bank (NDB) is a rising horizon for future development of the alliance. NDB offers a credible alternative to the existing institutions such as World Bank and International Monetary Fund which are operated by western countries. Setting up of NEPAD which is head quartered in South Africa has played a vital role in the NDB development project financing among the constituent countries of this union. Already, the bank has offered $250 million loan to Canara Bank for financing renewable energy projects in India. This is part of the $811 million financial assistance offered by the bank to Brazil, China, South Africa and India in early 2016.

South Africa, the smallest country among BRICS countries, can benefit by actively participating in the BRICS alliance. It can strengthen its historical ties with India through this platform. Recently, South Africa has changed its stance on India's entry into the Nuclear Suppliers Group (NSG) from neutral to supportive. This is a sign that both the countries intend to strengthen their co-operation in political and economic spheres. Both the countries have huge potential for development in sectors such as mining, financial services, skill development and so on.

The plan proposes the development of regional power, transport, water, communications, tourism and metrology infrastructure over the 15-year period, from 2012 to 2027. The intention is to align the implementation of the plan with the establishment of a SADC development fund, or bank, with an initial capitalisation between $600 million and $1 billion. At present, intraregional trade comprises less than 20 % of total trade and the bulk of that trade takes place between South Africa and the other 14 SADC member states. Once the plan has been officially endorsed, the SADC Secretariat will conduct road shows in BRICS and other countries, targeting Brazil, China, Europe, India, Japan, the United Kingdom and the USA to expose potential investors to the opportunities available within the RIMP. The Project Preparation Development Facility was established at the Development Bank of Southern Africa. South Africa's participation in BRICS was designed to help it achieve inclusive growth, sustainable development and a prosperous South Africa.

While the rapidly growing LIC-BRICS ties have benefited from great economic complementarities, two of the BRICS, China and India, are in great need of natural resources that many LICs are abundantly endowed with and can supply in exchange for competitively priced manufactures. The growing weight of the BRICS in the world economy has been the fundamental force driving LIC-BRICS economic relations.

Growing economic relations between BRICS and LICs have influenced Asian and African LICs the most. The BRICS-group is showing some remarkable trends in its foreign trade figures: The growth rate of exports was 13.3% in the mid-1990s and 49.8% ten years later, growth of imports was 13.2% and 47.7%, respectively. With these remarkable growth rates, large parts of the GDP growth of these countries were induced by trade. The export share of GDP was 9.2% in 1980 and 26.6% in 2009, while the import share increased from 11.3% to 20.4% in the same period. LIC export to BRIC grew from USD 15 billion in 2000 to USD 61 billion in 2009, pushing back the EU and the USA to receive less than 45% of LIC exports. Among all BRICS, China and India are the main consumers of LIC exports, followed by Brazil. In 2010, China and India accounted for more than 90% of LIC exports of agricultural raw materials and for almost 85% of fuels exports to BRICS. 52% of exports of manufactured goods went to China, followed by Brazil (14%), Russia, India and South Africa (10% each). Crops, minerals and other raw materials, especially fuels and metals, are the main component of LIC export to BRICS. One reason for the increase in LIC-BRICS trade figures are complementary trade structures providing overlap between BRICS demand and LIC supply. Bilateral Trade is considered to be “the backbone of LIC-BRICS relations.”

Box 15: BRICS and Africa

Mr. Syamal Gupta, Honorary Consul of Namibia in Mumbai

India has around 17% of world population, around 2.4% of world land area and 4% of world fresh water resource. On the other hand, Africa has roughly about the same amount of population as India, but it is 10 times as large as India in terms of land area and it has 9% of global freshwater resource. Africa is rich in mineral resources such as iron ore, bauxite, copper, gold and so on. Africa is rich in resources, while India has huge consumer market. There is huge potential for collaboration between India and Africa, especially in sectors such as pharmaceuticals, mining, steel, automobiles, education, information technology, agriculture and food processing etc. Among the BRICS countries, China has invested considerably in Africa. Even, Brazil and Russia have invested in some of the African countries. The investment by BRICS countries has helped create jobs in Africa. The investment has also led to considerable development among the masses in terms of urban and rural infrastructure.

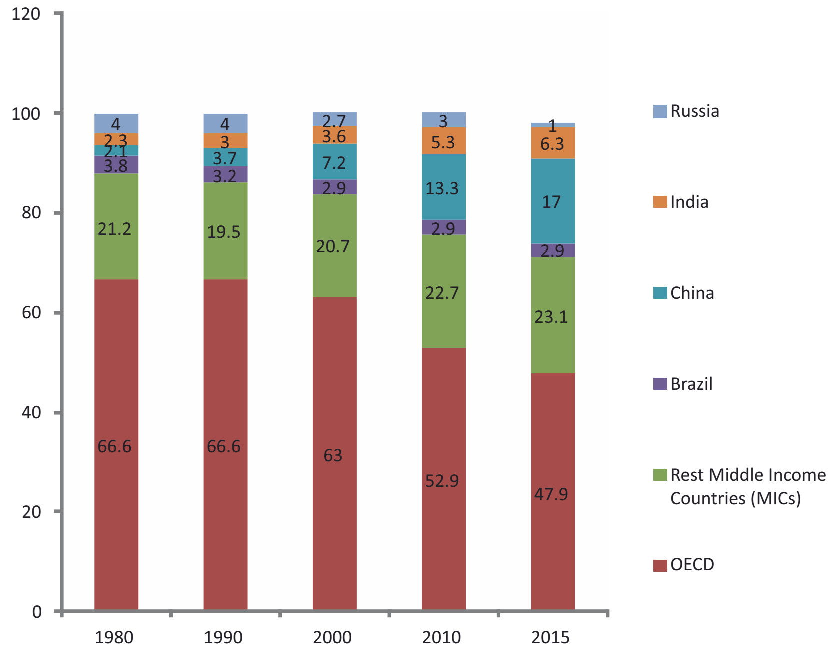
India must also enhance its engagement with the African continent and explore fruitful partnership in the above sectors. In recent years, the Indian government has been taking steps to bolster co-operation with African continent. At the 3rd India-Africa Forum Summit, held at New Delhi in October 2015, India offered Line of Credit worth USD 10 billion in concessional credit to Africa. Besides this, India extended an additional grant assistance of USD 600 million, including an India-Africa Development Fund of $100 million and an India-Africa Health Fund of $10 million.

In the last five years ending 2014-2015, India's bilateral trade with Africa doubled to nearly US$ 72 billion. I expect further growth in trade between both the countries in future.

The emergence of manufacturing industries is critical for sustainable growth and economic development of LICs. Transfer of know-how and technology are important measures to prevent LICs from being constrained to the role as suppliers of raw materials. BRICS trade preferences in favour of LICs can help to establish diversified economies.

BRICS are causing changes in the architecture of international development cooperation, not only with investments and trade and financial flows but also as emerging donors. Trade-oriented financial aid is also helpful to initiate positive growth impulses in LICs.

Chart 1: Share (in %) in Global Gross National Income in PPP



Source: Orgaz et al. 2011: 19 (citing IMF and World Bank data)

Figure above features BRIC's participation in global Gross National Income (GNI – in Purchasing Power Parity / PPP) and shows that not only China but also India and other MICs are and further will be expanding their share at the expense of OECD (Organization for Economic Cooperation and Development) countries. Brazil remains stable whereas Russia's share is supposed to decline in the future. By 2015, Middle-Income Countries (MICs) and BRICS are expected to produce more than 50% of global income. During their rise, BRICS remained stable and intensified economic cooperation linkages with other development countries. Among the group of emerging economies, BRICS are playing a crucial, if not systemic, role in global economy.

BRICS and the SSC Engagement

South-South-Cooperation is the main focus of the BRICS in international relations targeting low income countries. The idea of South-South-Cooperation is based on solidarity, shared experiences and self-reliance of the South. Trade, investments and economic growth are perceived to be the main vehicle for improvement and development. Non-interference and sovereignty are guiding principles, whereas social standards and governance issues are not the main concern. Soft diplomacy, mutual respect and "untied" development assistance is the approach to bilateral and trilateral relations. This is contrasting to the development assistance scenario of the traditionally western sources. Hence, at the same time, other emerging economies are implementing SSC according to BRICS patterns. BRICS are not among the most prosperous countries according to per capita income. The fruitless 2006 WTO-Doha round in Geneva, failed to reach an agreement concerning agricultural subsidies and import taxes, the reputation of multilateral consultations was damaged and especially the BRICS turned towards SSC at the bilateral and regional level giving rise to BRICS and SSC cooperation .In case of Brazil's engagement with SSA, Brazil's head international development institution is the "Agência Brasileira de Cooperação" (ABC), which is subordinated to the Ministry of Foreign Relations and divided into several units which are responsible for carrying out activities under this banner. The

Agency was established in 1987 and is supposed to organize international cooperation as well as to coordinate internal development with foreign policy approaches. The main part of bilateral development assistance is going to neighbouring countries, especially Paraguay, Bolivia, and the Andean region. Brazil is also playing a crucial role in post earthquake cooperation in Haiti and the Caribbean region, where programmes in education, health (HIV/AIDS) and social development are supported. One third of bilateral ODA is concentrated on lusophone African countries.

Debt flows from BRICS to SSA, for instance, have risen dramatically: Total loan disbursements from BRICS to SSA grew by an average of 60 % annually over the period 2000-10, reaching over USD 6 billion in 2010 . China accounts for 13.5 % of total debt stocks of all developing countries, the Russian Federation for 9.4 %, Brazil 8.5 % and India 7.1 % (while South Africa only accounts for 1.1 %).

Foreign Direct Investment (FDI) in context to BRICS Engagement

FDI plays a major role in country economics. Steady FDI flows have been reported to create a stable economic environment. The BRICS engagement is not only carrying out trade with the LICs and SSA but also a major contributor of FDI in these countries, with the FDI flows from BRICS having increased incredibly during the last decade. Starting from less than USD 10 billion until 2002 they amount to USD 146 billion in 2010. South Africa's share in total numbers is rather negligible, Brazil and India account for about 10 % each while China and Russia claim more than 75 % of total BRICS' FDI in 2010.Russian flows sum up to USD 265 billion on an average, putting China in second place with USD 251 billion. However, the total FDI proportion going to LICs is rather small.

Box 16: Strengthening Intra-BRICS Trade

Dr. Frederico Gil Sander, Senior Country Economist, Macroeconomics & Fiscal Management for India, The World Bank

BRICS countries face the similar challenge of emerging as high-income economies within a generation. The BRICS group can contribute to conquering this challenge in three main ways, all related to diffusion of practices, ideas, goods and services: first, trade needs to be increased. Not trade among the BRICS at the expense of trade with the rest of the world, but each BRICS country should commit to increase its trade/GDP share. Part of that increase can certainly be achieved among BRICS countries themselves. The BRICS all have large domestic economies, so why is trade important? Unlike small economies like Thailand or Malaysia, for example, BRICS by and large do not need trade as a way to create economies of scale (i.e. ensure that demand is large enough to justify the presence of certain industries). However, trade helps firms learn from competition, and is a critical ingredient for productivity growth. Consider China – surely a large domestic market, but one which gained enormously from its openness to trade. Second, ideas need to be exchanged. How did Brazil become an agricultural powerhouse despite having a population that is largely urban? How did Russia achieve a high level of scientific achievement? BRICS countries have much to learn from each other so that good ideas from the public and private sector in these countries can be diffused across the group. Finally, countries need to be more open to each other services. India already benefits greatly from higher trade in services, but it has more room to open its domestic markets to foreign service providers, which will raise the game of Indian companies and provide higher quality inputs to domestic manufacturing and services firms.

In case of the BRICS engagement, some FDI has been coming in the form of land acquisitions aiming to satisfy commercial or strategic interests. The pace and scope of these deals having risen in recent years with China and India being regularly involved in largescale land acquisitions. Development financing from most BRICS, and particularly from China and India, very often comes within a larger package, where grants, concessional and non-concessional loans are a complement to trade and investment arrangements. These packages can sometimes be very complex and even include natural resources of the recipient country as collateral. This notion of an equal economic partnership and mutual benefit of the cooperation constitutes the principle of non-interference in internal affairs of the recipient country and usually no political conditionality attached to the assistance as against the donor recipient model of assistance.

The overlapping structure of trade, FDI, grants and development financing put forth a positive impact of BRICS which becomes more visible especially in the African countries who show substantial improvement in electricity supply, railway and road infrastructure as well as communication structures. Service security and lower transport and communication expenditures are enabling further economic development thus creating higher productivity, higher export rates, diversification of industries, and intensifying of regional trade linkages.

The impact of BRICS on the economic development of LICs has increased due to the business model based on mutual benefit. China is an important trade partner of many LICs and is influencing growth dynamics through demand of raw materials as well as manufacturing exports.

At the same time, trade, FDI, and development financing of the other four countries can be regarded as growth drivers for LICs, though trade is considered to be the most important link. EU and BRICS are most likely to occur in issues of international trade. However, conflicting interests should not be carried out at the expense of LICs. BRICS demand for resources has been increasing in the past decade due to strong growth of Chinese and Indian manufacturing industries. Brazil and Russia were able to benefit from high raw material prices in the past and their expertise can thus be useful to help LICs escape the commodity trap. The EU could give support for the transfer of know-how and technology to prevent LICs from being constrained to the role as a supplier of raw materials and to help establishing diversified economies.

BRICS contribution to international development financing has increased substantially over the past decade, with China playing the predominant role. But again, BRICS' share in ODA flows in comparison to OECD-countries is still rather small. Development financing usually comes within a larger package of grants, concessional and non-concessional loans and trade and investment arrangements. BRICS pursue SSC in distinct opposition to traditional donor-recipient-relationships. Thereby, financing is mainly bilateral regarding China and India, whereas Brazil and South Africa are using multilateral channels, especially for regional institutions. BRICS need to be included in aid effectiveness and development strategy dialogues by other partnerships. The EU should include BRICS and other emerging donors in an exchange of ideas on basic principles and effectiveness of development cooperation. Thereby, a certain amount of flexibility and openness is needed. Individual ideas of BRICS can be included in a constructive way although the risk remains that some BRICS might use their SSC-strategy to undermine EU policies. Human rights, democracy and social cohesion are crucial principles of European development cooperation and these core values cannot be relinquished in the dialogue with BRICS.

However, among MICs, BRICS are at the forefront of actually using their economic weight to induce change in the global governance architecture, which directly and indirectly is affecting the development agenda of the EU. This holds true in particular for the link between good governance, democracy and human rights on the one side and development financing, aid effectiveness and trade ties to the developing world on the other side.

As an economic bloc the BRICS countries are quite heterogeneous in terms of their economic and foreign policies. BRICS countries belong to different sub-groupings such as IBSA (India, Brazil and South Africa); BASIC (Brazil, Angola, South Africa, India and China); CIVIETS (Columbia, India, Vietnam, Indonesia, Ethiopia, Turkey South Africa). The question is whether these additional blocks are complementary to the ideals and objectives of the BRICS or not.

The BRICS countries are also different in terms of size, key areas of interest and institutional framework. Their collective economic weight is yet to translate into political weight in global governance, striving to be recognized as a new donor block. In certain quarters such as the OECDP-DAC, BRICS countries are largely categorized as recipients of aid and not donors.

One also has to keep in mind, that BRICS are actually winners of the globalisation process of the last decade (on average GDP) and are opting for participation and influence rather than opposition to multilateral economic and political institutions. There are mutual economic interests and interdependencies among BRICS, the US and the EU. Thus, their political strategy is targeting multilateral negotiation and cooperation rather than confrontation and power politics. Nonetheless, representing the biggest emerging economies, BRICS are bound to take a stand on the subject of global development politics.

Conclusions

BRICS association with LICs and MICs is based on the foundation of mutual benefit. Development of this region and tracking the same being one of the major objectives. Another interesting part of this association is that there is absolutely zero interference in the political affairs of the LIC or MIC.

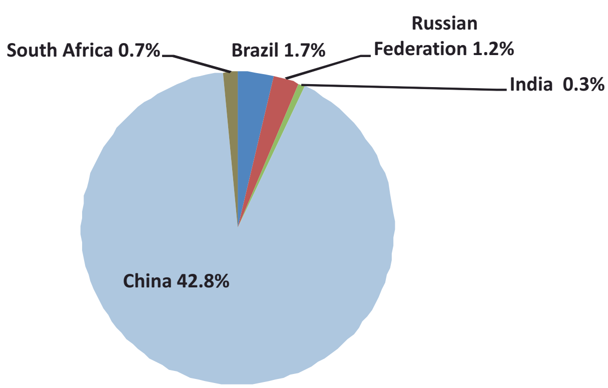
4.
SME Scenario Inter BRICS

4.
SME Scenario Inter BRICS

Today the world is evolving with innovations due to the spread and distribution of knowledge across communities. This event has promoted the growth of entrepreneurship among individuals and thus led to growth in small enterprises manufacturing specialized and innovative products. In Brazil improvements in education helped foment small businesses. A survey conducted revealed around 60 percent of new enterprises opened in 2012 were headed by people who finished high school. Another reason for growth in small enterprises is the fact that it becomes easier for large enterprises to outsource a product from more than one smaller enterprises which ensures unrestricted supply of that specific product which can be part of the larger machinery but may have a cost benefit by outsourcing the same. This is the very reason SME sector is playing an important role in the country's development process. In India 40% of the GDP is contributed by SMEs and a similar case exists in the other BRICS nations too. Even the developed world today stresses on the development of their SME sector and a fine example of the same is UK which has stressed upon this context in forthcoming FTA development between India and UK. Forecasts predict SMEs to be a major thrust to push bilateral trade to higher levels of engagement.

The BRICS countries too have a significant SME sector with Brazil and India having a larger chunk of SMEs.The graph below displays the share of BRICS SMEs as a percentage of world.

Chart 2: Share (in %) of BRICS Counries in total number of SMEs in the World



Source: International Finance Corporation

India is working on a mechanism to boost cooperation amongst small and medium enterprises in the five-nation BRICS to promote joint ventures and share expertise on strengthening the sector. In course of the Presidency of the BRICS being held by India is drafting a framework for a joint growth strategy for micro, small and medium enterprises (MSMEs) in the region. A framework for joint working for the SMEs in the BRICS countries has been proposed. In the SME export sector a web portal has been proposed by MSMEs in each of the BRICS countries. Exporters' body FIEO is one of the industry bodies giving inputs for the proposed portal from the Indian side.

Box 17: Towards a Common Portal for SMEs in BRICS

Web Portal by FIEO: Some Important Features

All the five BRICS countries have presented their proposal for a common portal for the SMEs. The Indian proposal has a few USPs over the others. Firstly, SMEs in each of the BRICS countries have a different criteria for establishing itself as a SME. If this fact needs to be considered a common formula needs to be first determined for planning a common incentive or policy. Strength of SMEs in terms of credit ratings, for eg BB, B+ etc in each of these countries needs to be assessed to come out with a common rating same across all countries. This rating should again be identified and recognized in each of these countries so as to develop a level of mutual trust between these countries. The process adopted to rate these SMEs across the BRICS countries needs to have a non monopolistic or perfect competition approach. When the SMEs undergo a common process of weighting and identification than a mutual trust is developed among the SMEs. Secondly the portal should provide a system to exchange business offers and requests to encourage innovation and technology exchange and also, exchange of R & D and collaborations. For eg a company may need a match for green energy technology or a packaging technology etc. amongst these BRICS countries. This portal should offer facilitation of funds support to the SMEs having joint ventures. This will help pool resources, knowledge and human resources.

Secondly, in case of BRICS countries the major challenge is language. This platform should be compatible to local language. Thirdly, this platform should be providing market access by providing information on SPS and TBT. One of the biggest problems faced by exporters in the five countries is the lack of knowledge on various non-tariff measures (NTMs), such as new standards or specifications. Most of the times they get to know about the NTMs only when their goods are rejected. If this issue is addressed, it will serve as a big incentive for industry in the five nations to trade with each other. Also, all these countries have different measures for every product eg FSSAI requirement for food business should be registered and tested with FSSAI. Every year new 200 SPS and TBT measures are being generated by countries hence as an SME is in dilemma whether its product is accepted or not. Market access is thus going to play a key role needs to provide the tariff line.

Fourthly, each of these countries needs to support SME, a mandatory government purchase procurement needs to be made from SMEs this should apply to home country or to the other BRICS countries . This procurement needs to be identified on percentage basis.

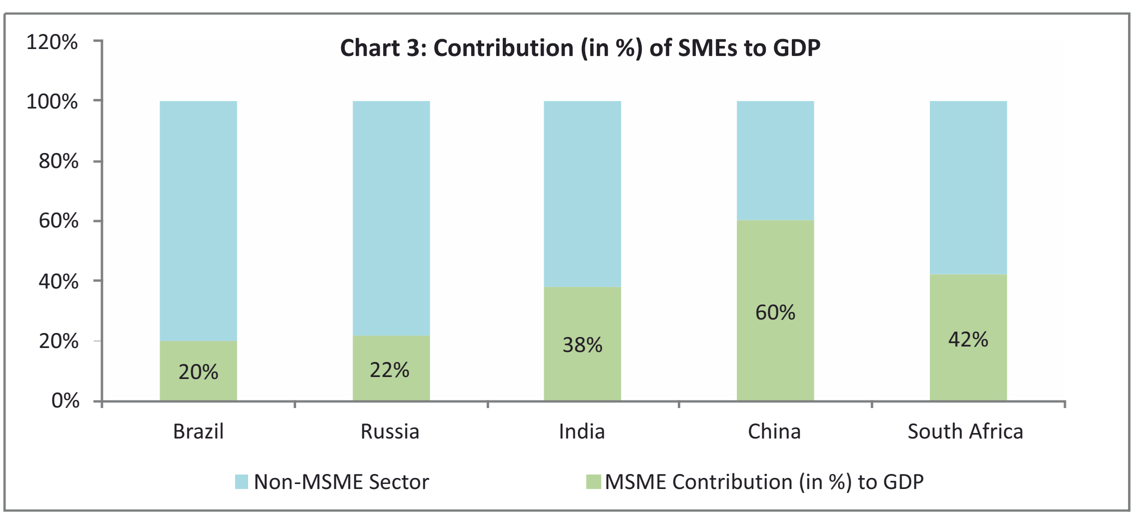
Fifthly, the portal should display the banking rules of each country with export import procedure of each country which needs to be published on the portal . In India IEC is required and what is the same for other country needs to be specified.

Sixthly, in context to preferential tariff one needs to be careful as China will look forward to develop as a economic block. Common FTA by China but it will put up a large concern for countries allowing China to do this will raise a conflict. Trade agreements needs to cautiously done and this is one of the main reason why BRICS trade taking shape.

Seventh , the portal should provide online exchange of documents.

One of the propositions of this portal has been influenced by Brazil's, as SMEs in Brazil are highly successful in participating in government procurements which capture almost 90 per cent of the business. The BRICS countries could draw from Brazil's legislative frameworks and other policy initiatives to help their small industry also get a chunk of government business.The BRICS grouping of five emerging economies Brazil, Russia, India, China and South Africa together account for a GDP of over $16 trillion, which is about half that of the seven major advanced economies. More than 40 per cent of the BRICS economies are driven by the MSME sector, according to government estimates.

The graphs below show the percentage share of SMEs in total GDP with China showing the highest share followed by India, and South Africa showing a moderate share. Brazil and Russia are lagging behind with just about 20% and 22%.



Source: International Finance Corporation

The sectoral distribution again indicates services sector contributing the largest share in Brazil, India and South Africa while China showing moderate contribution in services as well as manufacturing sector.

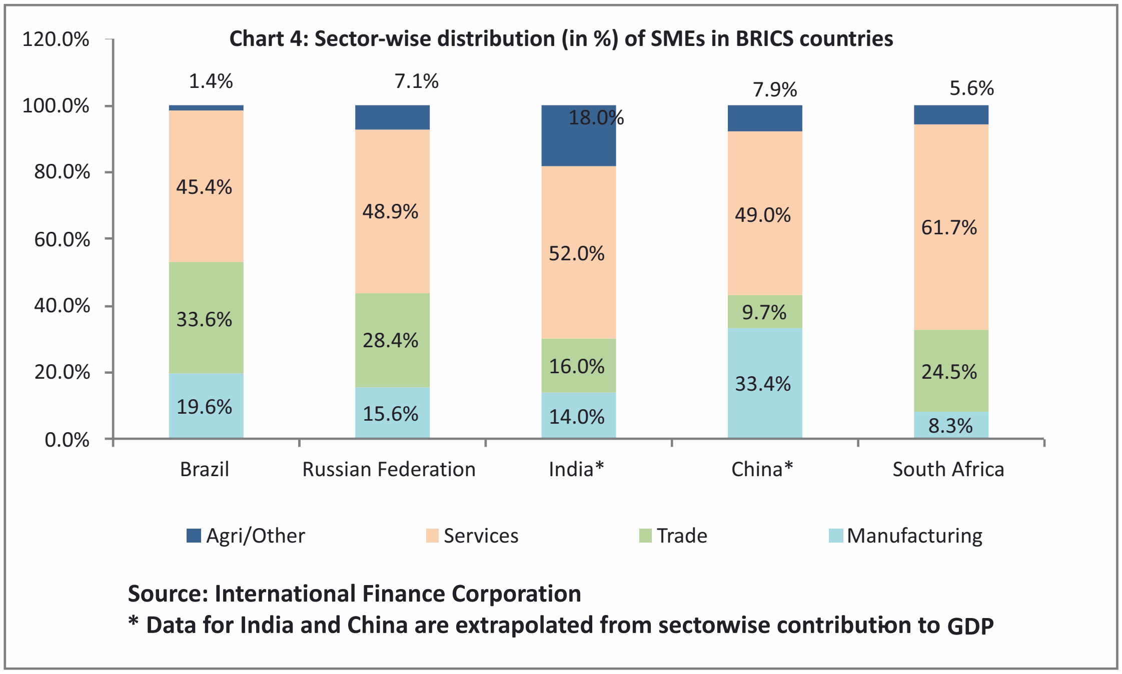


Chart 4: Sector-wise distribution (in %) of SMEs in BRICS countries

Source: International Finance Corporation
*** Data for India and China are extrapolated from sectorwise contribution to GDP**

The SME sector in each of the BRICS countries however does not stand at par when it comes to discussion on equality and parity. This is slated to be a major road block in cooperation between these BRICS SMEs. Except for India the first classification in Brazil, Russia and China is based on number of persons employed where as South Africa employees turnover as well as number of employees for classification.

Table 17: Definition of MSMEs in BRICS

Country Name	Definition Criteria	MSME Definitions		
		Micro	**Small**	**Medium**
Brazil	Number of persons employed	0-9	10-49	50-499
China	Number of persons employed	NA	less than 300 Industry less than 600 Construction less than 100 Wholesale less than 100 Retail less than 500 Transport less than 400 Post less than 400 in Hotels & Restaurants	less than 2000 Industry less than 3000 Construction less than 200 Wholesale less than 500 Retail less than 3000 Transport less than 1000 Post less than 800 in Hotels & Restaurants

Table Continued...

Country Name	Definition Criteria	MSME Definitions		
		Micro	Small	Medium
India**	Investment (in Rupees) in plant and machinery (for manufacturing sector); Investment(in Rupees) in equipments (for services sector)	In manufacturing sector: Does not exceed 2.5 million; In services sector: Does not exceed 1.0 million	In manufacturing sector: More than 2.5 million but does not exceed 50.0 million; In services sector: More than 1.0 million but does not exceed 20.0 million	In manufacturing sector: More than 50 million but does not exceed 100 million; In services sector: More than 20 million but does not exceed 50 million
Russian Federation	Number of persons employed	1-15	16-100	101-250
South Africa*	Number of persons employed	Agriculture sector: less than 10, other sectors less than 20	less than 50	In agriculture sector: less than 100; other sectors: less than 200
	Turnover (in Rand)	less than 6 million	less than 32 million	less than 64 million
*** In South Africa, MSMEs are defined under two criteria: 1. Number of persons employed, 2. turnover** **** According to Union Ministry of MSME notification dated September 29, 2006**				
Source: International Finance Corporation				

The general criteria for tax benefits is displayed as below with SMEs in South Africa , Russia and India liable for moderate taxation structures.

Table 18: Tax Incentives for MSMEs in BRICS

Country Name	Criteria for tax incentives	Tax incentives
Brazil^	Enterprises with annual turnover of upto 3.6 million Brazilian Real are eligible for concessional tax rates under Simples Nacional tax regime	SMEs are taxed at a progressively higher tax rate of between 4.00% and 11.61% based on their annual turnover. This is far lower than the standard tax rate of 15.83% applicable to all other enterprises
China*	Enterprises in non -manufacturing sectors are eligible for tax incentives if they have - less than 300,000 RMB in annual taxable income, less than 10 million RMB in total assets, less than 80 employees. For manufacturing enterprises, the criteria is - less than 100 employees maximum of 30 million RMB in total assets.	The standard Enterprise Income Tax Rate in China is 25%. However, for small and medium enterprises, the applicable rate is 20%.

Table Continued...

Country Name	Criteria for tax incentives	Tax incentives
India	Enterprises with turnover of not more than Rs 2 crore are eligible to avail presumptive exemption scheme. Small enterprises with turnover of not more than Rs 5 crore are eligible for concessional corporate tax rate	The Indian government exempts MSMEs from maintaining books of accounts under the presumptive taxation scheme. The Indian government also proposed to impose a lower corporate tax of 29% plus surcharge and ce ss (instead of the standard rate of 30%) for small enterprises . Also, for start -up companies, the government offers full tax exemption on profits for first 3 years of operation.
Russian Federation	The sales revenue threshold for companies eligible under simplified tax system is determined periodically by the Government of Russia	The Russian government allows companies below a specific sales revenue threshold to opt for simplified tax system (STS). This system reduces the effective tax and compliance burde n of assessees.
South Africa**	SMEs with taxable income below 0.55 million Rand are eligible for concessional corporate tax rate	MSMEs in South Africa are not taxed at the standard rate of 28% that is applicable to large corporates. SMEs with income upto 0.07 million Rand are exempt from any tax. SMEs with taxable income of 0.07 million Rand to 0.36 million Rand are taxed at 7% rate. SMEs with taxable income of 0.36 million Rand to 0.55 million Rand are taxed at 21%. Enterprises with taxable income above 0.55 million Rand are taxed at the standard rate of 28%.
^ Source: By FGV Progetos * Source: EU SME Centre, China Enterprise Income Tax, Government documents of relevant countries ** Source: SMALL AND MEDIUM ENTERPRISES: TAXATION CONSIDERATIONS, INTERIM REPORT, JULY 2014, Government of South Africa. The mentioned tax slab is applicable till March 2015 and it is subject to revision thereafter.		

The annual turnover criteria in local currencies is displayed as below.

Table 19: MSME Definition Based on Annual Turnover in BRICS (in Local Currencies)

Country Name	Micro	Small	Medium
Brazil	less than or equal to 0.24 million Brazilian Real	More than 0.24 million Brazilian Real and less than or equal to 2.4 million Brazilian Real	NA
Russia		less than 400 million Rouble	400 million - 1 billion Rouble
India	less than 2.5 million Rupees	2.5 million to 50 million Rupees	50 million to 100 million Rupees
	less than 1.0 million Rupees	1 million to 20 million Rupees	20 million to 50 million Rupees
China		less than 30 million yuan	30 million - 300 million yuan
South Africa*	less than 0.2 million Rand	0.5 million - 6 million Rand (Very small) 3 million-32 million (Small)	5 million -64 million Rand
Note: Russia and China classify enterprises as small and medium enterprises. In India, enterprises are classified as Micro, Small and Medium Enterprises. In South Africa, the government classifies enterprises as micro, very small, small and medium enterprises Definition for Brazil is from Sebrae, 2009 * National Small Enterprise Act, 1996, Government of South Africa			
Source: Edinburgh Group, Growing the global economy through SMEs			

An overview of SMEs in each of the BRICS countries is presented as below so as to understand in the brief the evolution of SMEs in these countries. BRICS countries are culturally and administratively exclusive to each other with a few common strands in context to the evolution of the SMEs in each.

Brazil

Brazil currently has around 6.3 million small and medium-sized enterprises (SMEs). Brazil's National Development Bank classifies these businesses as companies with annual operational revenue of $38 million or less. According to the Brazilian Institute of Geography and Statistics, SMEs are responsible for 20 percent of the country's GDP.

In order to formalize business and benefit in the SME sector a law was passed in 2006 in Brazil which helped create the "individual micro entrepreneur" by allowing businesses that make up to $25,000 a year to become formalized. Micro and small enterprises represent, almost six million of the national enterprises and is responsible for 53% of the formal workforce in the country, thus being a major employer in Brazil. The government backed SME institution SEBRAE is present in every Brazilian state, offering improvement and good quality information not only for business companies, but to employers and students too, regarding the local economy and the process of doing business in Brazil. The services offered by the institutions include both companies and private people, improving the quality of the service provided by both of them. The courses offered by SEBRAE are very respected and the institution has a very positive reputation in Brazil.In January 2014 alone, SMEs created 47,700 new jobs in Brazil, according to the Brazilian Service of Support for Micro and Small Enterprises. Women's participation has grown by 18 percent with 52 percent of SMEs being headed by women. Also, women represent around 48 percent of those who open franchises in Brazil. In Brazil, 29 percent of the 250 fastest-growing SMEs focus on information technology and the internet. Brazilian SMEs who adopted new technologies grew their revenue 16 percent more than their counterparts and generated 11 percent more jobs. In a bid to spur more tech startups, the federal government launched the Start-Up Brazil program . The program partners with Brazilian accelerators and invests in tech startups, as well as providing training and support. São Paulo is home to 40 percent of entrepreneurs who head the fastest growing SMEs in the country. The Brazilian Southeast (Espirito Santo, Minas Gerais, Rio de Janeiro, and São Paulo) is home to 57 percent of the 250 fastest growing SMEs. These businesses grew an average of 25 percent between 2010 and 2012. The two major issues faced by SMEs in Brazil are finance and bureaucratic inefficiency. The Brazilian SMEs find securing Working Capital difficult as the interest rates for working capital are much higher than that for term loans. In Brazil, the interest rates for Term loans are more or less comparable to what is prevalent in India however, the rates for Working Capital could be as high as 10-12% per month or over 100% per annum. Thus Brazilian SMEs are advised to save some money from term loan and use it as working capital.

Russia

Approximately 80% of SME turnover occurs in the European part of Russia, with 48% of total SME turnover coming from the Central and North West Federal Districts. SMEs located in Moscow and Saint Petersburg generates 18% and 7% of the total turnover. SMEs in Russia also face certain developmental obstacles such as tax burden which has become a major obstacle for entrepreneurs. Tax legislation fluctuates widely and tax administration is unduly difficult. Administrative barriers and corruption are the next obstacles for business in Russia. The most challenging procedures in establishing a new business are dealing with construction permits , getting connected to the gas and electricity grid and trading across borders . The only positive side is enforcement of contracts . More than half of the entrepreneurs are calling for an increase of financial support to the SME segment. The current situation in this field can be characterized by limited access to finance, high costs of financing and predominantly short-term loans available to business. About 20% of entrepreneurs use financing from relatives or friends. Meanwhile, banks remain the key source of financing for the SME segment. The key sources of cheap long-term financing to commercial banks are VEB and international development institutions. VEB provides financing to small and medium businesses through its subsidiary SME Bank. The volume of SME Bank's financial support to SME is only 2% of all loans to SME provided by banks (and 5% on the market of long-term financing above 3 years). Thus, there is strong potential for international development institutions to influence the development of the SME segment in Russia by providing financing.

Russian government provides financial support in form of lending money under favorable conditions like lower interest rate, longer term, etc which are the most popular among entrepreneurs. Special tax regimes like lower tax rate for some sectors, simplified taxation and requirements for documents, renting or acquisition of property under favorable conditions, provision of services or delivery of goods for state needs are some of the supports offered to develop this sector. Since 2005 the Ministry of Economic

Development has run the federal program of SME financial support. The main priorities of this program are, innovative companies, mid-sized enterprises, and assistance in the development of leasing for small entities, support for beginner entrepreneurs via grants creation of business incubators, industrial parks and entrepreneurship centers. Financial support for small and medium business is exercised through different channels. One way is through regional governments. The volume of annual support is approximately 0.4% of the total loan portfolio of all banks to SME. These subsidies are meant to increase the volume of regional programs of support to SME that will in turn increase the number of companies which will receive financial support. However, the distribution of subsidies is not uniform across all regions. Regional leaders are, Moscow (7.5%), Krasnodar Krai (5.0%) and Saint Petersburg (4.6%). Regional outsiders are, Jewish Autonomous Oblast (0.1%), Chukotka Autonomous Okrug (0.03%), Nenets Autonomous Okrug (0.03%). Improvements such as revising electricity connection prices, eliminating requirement to obtain cadastral passport on land plots, abolishing the requirement to have the bank signature card notarized before opening a company bank account, eliminating several requirements for construction project approvals, reducing the time required to register a new building and other reforms, though the Doing Business methodology has limitations it reveals that Russia steadily moves towards and enforces crucial and right directions in changes for better conditions in doing businesses. The goal set by the government is to reach top-20 by the year 2018.

India

Indian Small and Medium Enterprises (SME) sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades. SMEs not only play crucial role in providing large employment opportunities at comparatively lower capital cost than large industries but also help in industrialization of rural areas. SMEs are complementary to large industries as ancillary units and this sector contributes enormously to the socio-economic development of the country. The Sector consisting of 36 million units, as of today, provides employment to over 80 million persons. The Sector through more than 6,000 products contributes about 8% to GDP besides 45% to the total manufacturing output and 40% to the exports from the country. The SME sector has the potential to spread industrial growth across the country and can be a major partner in the process of inclusive growth.

SMEs also play a significant role in Nation development through high contribution to Domestic Production, Significant Export Earnings, Low Investment Requirements, Operational Flexibility, Location Wise Mobility, Low Intensive Imports, Capacities to Develop Appropriate Indigenous Technology, Import Substitution, Contribution towards Defence Production, Technology Oriented Industries, Competitiveness in Domestic and Export Markets thereby generating new entrepreneurs by providing knowledge and training. India apart from the mainstream SME culture has its own rural SME market especially in the sector of handlooms and handicrafts which has wide popularity due to its uniqueness.

Despite their high enthusiasm and inherent capabilities to grow, SMEs in India are also facing a number of problems like sub-optimal scale of operation, technological obsolescence, supply chain inefficiencies, increasing domestic & global competition, working capital shortages, not getting trade receivables from large and multinational companies on time, insufficient skilled manpower, change in manufacturing strategies and turbulent and uncertain market scenario. To survive with such issues and compete with large and global enterprises, SMEs need to adopt innovative approaches in their operations. SMEs that are innovative, inventive, international in their business outlook, have a strong technological base, competitive spirit and a willingness to restructure themselves can withstand the present challenges and come out successfully to contribute 22% to GDP. Indian SMEs are always ready to accept and acquire new technologies, new business ideas and automation in industrial and allied sectors.

In an attempt to foster cooperation among BRICS SMEs there have been reports of signing a common free trade agreement between the BRICS countries. However, the biggest stumbling block is that members don't offer sufficient goods and services that are complementary to one another. They all are heavy exporters of cheap raw materials, with China gaining most from its demand for raw materials, even though the demand has slacked off a bit recently.

Some progress is being made in looking at increasing value-added export and a study has identified South Africa's top 20 value-added products with a revealed comparative advantage in each BRICS market. Another problem is that the members like India and Brazil discriminate against one another through high tariff barriers, buy local demands for procurement and have investment restrictions. The report notes that since 2008 BRICS governments have introduced 1 451 policies that favor domestic commercial interests over foreign ones, equivalent to 32% of such measures world-wide. Discussion at Ufa may look at the idea of establishing a barrier-free e-commerce zone between all members. This could make online sales to customers outside their respective borders easier however it is still skeptical that India would not back such an agreement. There could atleast be a pro FTA action of just allowing BRICS member states to have visa-free access to one another's respective countries. Brazilians are best off in this regard as they can visit Russia and South Africa without requiring a visa. Russians and South Africans can also visit Brazil free visa.The much anticipated US$100-billion New Development Bank could also benefit small businesses indirectly as it plans to focus on investments in infrastructure and renewable energy.

There have been other attempts at institution level apart from the center level to boost cooperation between BRICS SMEs. There has been exchange of delegations inter BRICS. Recently, a high level delegation from SEBRAE was in India, to learn and share the best practices on SME development initiatives, and also to discuss the SME cooperation strategy among BRICS.

FISME and SEBRAE discussed the SME cooperation program, a criteria for dialogue among BRICS.

Box 18: Challenges in Synergy within SMEs of BRICS Nations in Trade And Investment, FISME

Upscaling of trade And investment within SMEs of BRICS countries has emerged as an important initiative under the BRICS cooperation framework. FISME has participated in the MSME Round Tables held in Moscow in July, 2015 and subsequently in the Agra Roundtable held in July, 2016.

The discussions during both the above Roundtables veered around exchange of information on Legal framework and institutional structures of MSMEs in the BRICS region; Networking of MSMEs in the region; exchanging Good regulatory practices (GRPs) related to MSMEs; and promotion of trade and investment among the BRICS SMEs.

However, the prime focus of FISME in all the above discussions was to institutionalize an apex SME Association of BRICS countries and develop value chains among the BRICS SMEs. While creation of a framework of a BRICS Apex Associations of MSMEs found support in the official document of Government of India circulated for the Moscow Roundtable, a full session of the Agra Roundtable was devoted to developing intra BRICS value chains.

On the need for a BRICS apex MSME Association, FISME's position is that it is best to allow businesses perform under the real market conditions with minimum Government intervention. To allow the SMEs of BRICS countries to enhance business transactions among themselves the Association could play a pivotal role by facilitating exchange of information, cross visit of trade delegations and advocating removal of non - tariff barriers.

While FISME's above approach and offer to host the Association secretariat during the formative stage, found wide acceptance from the SME participants from other BRICS nations, till now nothing concrete has emerged, may be due to the absence of political unanimity on the issue.The BRICS Working Group on SMEs have held discussions on the sidelines of the 8th Summit of BRICS in Goa in 2016. A Brazilian delegation from SEBRAE was also welcomed by FISME to facilitate an active dialogue.

Regarding the issue of developing value chains within BRICS SMEs, FISME Secretary General was invited to make a presentation at the Agra Roundtable where he explained with example how the BRICS countries, including China, still get the lowest value in the global value chains and also ways for the SMEs of the BRICS nations to move up the value chains.

FISME particularly advocated filling of the knowledge gaps, providing institutional support, developing mega support programs and promoting Aggregators / common Brands, towards assisting the BRICS SMEs to move up the value chain.

With all the above said and done, one should not be very hopeful about immediate public and private initiatives for institutionalizing co-operation and co-ordination among BRICS SMEs. The reasons are many but primarily the widely different scale of operation, support framework and political structure of the BRICS nations. Even with the best intentions of the BRICS Governments, a concerted move of the BRICS SMEs to develop synergy in the global market, particularly in developing intra BRICS value chain, may take more time till the business control and support framework, particularly the cross border trades are homogenized or harmonized.

FISME has been entrusted to prepare a background study on SME cooperation for BRICS Summit which was held in New Delhi, earlier this year. The study 'Deepening Cooperation Among SMEs in BRICS Members' based its recommendation on three common challenges confronted by all BRICS nations: high income inequality, presence of large informal sector and dwindling of traditional foreign markets. The study has suggested a series of cooperation measures under three heads such as: cross-country learning of policy best-practices in BRICS, promotion of trade and investment in SME sphere in BRICS with proposed sectors for cooperation, and institutional mechanism for implementation.

BRICS SMEs have large scope for development. However, perfect regulatory framework can only boost trade and business among them. This framework needs to be unbiased and built on the basis of mutual trust and fair dialogue.

China

China's communist climate hampered development of the Small and Medium Enterprises (SMEs) sector. However, the increasingly significant contribution of SMEs to the economic growth of the country prompted the Chinese government to improve policies and measures concerning the development of SMEs which now play a significant role in China's economic development. Realizing the importance of SMEs in the economic development, the central government promulgated the SME Promotion Law, which was a major shift in attitude from the central government towards SMEs after years of market reform.

SMEs played an essential role in driving economic growth through investment in fixed assets, generating exports, and promoting technology assimilation. SMEs are estimated to contribute more than 60 per cent of China's GDP and have outperformed state owned enterprises (SOEs) becoming the biggest source of investment in urban fixed assets. SMEs have accounted for over half of the total investment in urban fixed assets and surpassed SOEs in generating exports. A large number of technology-oriented SMEs are headquartered in innovation and high technology zones in cities like Beijing and Shenzhen. These SMEs, which are flexible and able to rapidly adapt to new technologies as well as to draw in and train specialized human capital, are significant in making new services and products available and facilitating the spread of technology and innovation. The development of the solar industry in Dezhou city where local large manufacturers such as Himin Group have shown strong leadership in undertaking major R&D projects is a fine example of such a case, thus, small businesses are important in forming industrial agglomeration, which has catalysed the deployment of solar innovations.The SME sector contributes to China's economy by serving as an engine of job creation. Currently, SMEs account for around 80 percent of China's manufacturing employment and are estimated to create 80 per cent of new urban employment. More importantly, SMEs employ more low-income workers and socially vulnerable groups and sometimes are the only source of employment in poorer regions. The opportunity to work at SMEs also provides disadvantaged groups with access to knowledge which comes from working with other people, potentially generating positive externalities for improving human capital.Tax revenue collected from SMEs has also increased significantly in the last decade. Its average annual growth rate of around 25 per cent is well above China's GDP growth rate.

SMEs in China however are susceptible to funding challenges and underfunding is a risk for the health and continuing growth of China's SME sector. China Enterprise Survey System's latest data indicates that more than 40 per cent of the 4,283 surveyed enterprises considered lack of finance to be their greatest challenge. The monetary tightening policy adopted by the People's Bank of China further marginalized SMEs from the formal banking system. Economic theory suggests that credit market failure, attributed to information asymmetries, is the key cause for lack of finance for SMEs. Lenders are imperfectly informed about borrowers. Bank officers do not have 'perfect' information on enterprises and their proposals. This leads to insufficient credit available for sound or 'bankable' propositions. Enterprises in their early stages of development such as the SMEs face more acute asymmetric information problems, because information on these enterprises is limited and they sometimes lack transparency. Also, assets of start-up firms are often knowledge based and exclusively associated with the founding entrepreneurs. Entrepreneurs are reluctant to provide full information about their knowledge of opportunity, as disclosure may help competitors. In this context, banking institutions face higher costs in obtaining information and monitoring small enterprises, and thus have less incentive to extend credit to them.

Another issue that hinders Chinese SMEs' access to formal finance is that most of them lack formal corporate structures or fixed assets as collateral and their ownership and financial structures tend to be opaque. This makes it difficult for banks to evaluate their operation and financial circumstances. Moreover, China lacks an adequate credit rating system for SMEs, or the appropriate financial-service institutions. This lessens the incentives for SMEs to build a credit reputation.

Finally, to respond appropriately to SMEs' financing challenges, it is important to note the distinct features of

China's SME financing structure. In particular, informal and semi-formal finances provide a major source of credit for China's SMEs. Yet, rather than being regulated by formal laws, they are mainly supported by informal rules, social norms and structures, and enterprise relations, which have evolved through social and market development and vary from one locality to another. Thus, the same type of informal finance can play a different role in local economies across regions, due to the heterogeneity of local institutional support. Moreover, the boundary between formal and informal finance institutions in China is not always clear. There is a transition from informal to formal finance institutions where some finance institutions and arrangements can be either formal or semi-formal. However, certain reforms have already been rolling out wherein, central government approved plans to set up a pilot zone in Wenzhou city to regulate semi-formal and informal financing activities. A batch of non-governmental financing institutions has received permission to be set up officially on a trial basis. Wenzhou's experience will provide lessons for the wider and deeper level of financial reform.

South Africa

The definition for SMEs encompasses a very broad range of firms, some of which includes formally registered, informal and non-VAT registered organizations (The DTI, 2008). Small businesses range from medium-sized enterprises, such as established traditional family businesses employing over a hundred people, to informal micro-enterprises. The latter includes survivalist self-employed persons from the poorest layers of the population. The upper end of the range is comparable to the small- and medium-sized enterprises (SME) segment found in developed countries. In South Africa, a large majority of SMEs are concentrated on the very lowest end mostly from the informal sector, which comprise of street trading enterprises, backyard manufacturing and services, and occasional home-based evening jobs which are also termed as SMME. These SMMEs are classified as survival entities that have very little growth potential and are less likely to hire staff. Government policy on South African SMME development was initially documented in the 1995 White Paper on SMME development. The Integrated Small Business Development Strategy provided an action plan with focus on, increasing financial and non-financial support, creating a demand for the products and services provided by the SMMEs and reducing regulatory constraints . The government established a number of institutions BER Research which would be responsible for the implementation of small business development strategy. The Small Enterprise Development Agency (SEDA) is an agency of the Department of Small Business Development. It was established in December 2004, through the National Small Business Amendment Act. It is mandated to implement government's small business strategy, design and implement a standard and common national delivery network for small enterprise development, and integrate government-funded small enterprise support agencies across all tiers of government. The Small Enterprise Finance Agency (SEFA) was merged with the South African Micro-Finance Apex Fund (SAMAF) and Khula Enterprise Finance Limited, to cater to small businesses requiring funding up to a limit of R3 million. SEFA offers bridging finance, revolving loans, term loans, asset finance and funds working capital needs. The National Youth Development Agency (NYDA) was formed with the purpose of assisting young South Africans between the ages of 14 and 35 years to start businesses and to finance existing businesses. In order to enable and support technological innovation, as well as to enhance the global competitiveness of South African businesses, the Department of Science and Technology established the Technology and Innovation Agency (TIA). The formation of the TIA was through a merger of seven entities which were previously tasked to do the same. Lastly, the National Empowerment Fund (NEF) was founded with the intention of offering financial and non-financial support to black empowered businesses. Risks to SMMEs refer to forces whether internal or external to the small business sector that threaten their existence as a going concern. The DTI (2008) found that the majority of South Africa's SMMEs rarely survive beyond their nascent phases, lasting for an average of less than 3.5 years. According to Global Entrepreneurship Monitor (GEM), the survival rate for start-ups is low and opportunities for entrepreneurial activity appears to be lowest in developing countries. This is most likely because developing economies tend to house a larger proportion of necessity-driven entrepreneurship, whereas opportunity driven activities are most common in developed countries.

Conclusion

The culture of SME sector is different in different countries. Inspite of these cultural differences, it will be learning curve for this sector through inter-country exchanges. The SMEs require business connect to optimum use of their capacities and provide economy of scope which is only possible through better networking.

Section 2

Data Analysis

5. Economic Potential and Scope for Expansion

5.
Economic Potential and Scope for Expansion

An overall view of the BRICS economy suggests that the individual economies have a diverse economic climate and the intra BRICS country trade prominently comprises small technology equipment and raw materials. In order to understand the economic potential of the BRICS engagement we need to understand the micro as well as the macro perspective through the conduction of a SWOT analysis of individual countries along with the BRICS association as a whole. The micro perspective of this economy can be understood in terms of GDP, per capita income, human resource potential, trade balance and investment and consumption. Through the macro perspective we need to analyse how the BRICS association can provide intra country competitive advantage for its trade and investment needs alongwith other responsible areas of association like climate change, WTO participation and funding development agenda. If the BRICS economies have to be the driver of global economic growth, then they need to identify the areas of mutual co-operation on the basis of sound understanding of the strengths and weaknesses of each member country so as to coagulate the same for the BRICS association.

Microview

The economic potential of a country is reflected in the size of its economy, the pace of expansion of economic activity, per capita income in the economy, savings and investment patterns, trade balance and so on.

Strengths

The greatest strength of the BRICS countries is the sheer size of their economies.

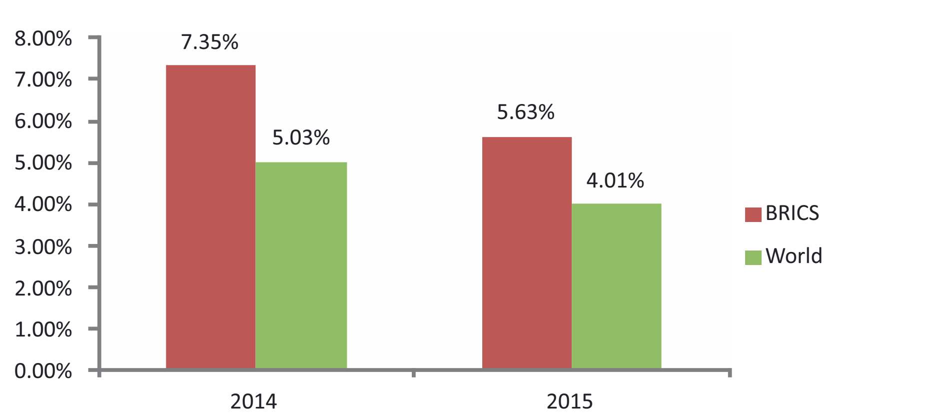
Table 20: GDP of BRICS Countries

Countries	GDP based on PPP (USD million) 2015	Rank
China	19,524,348	1
India	7,982,528	3
Russian Federation	3,579,826	6
Brazil	3,192,398	7
South Africa	723,516	28

Source: World Bank

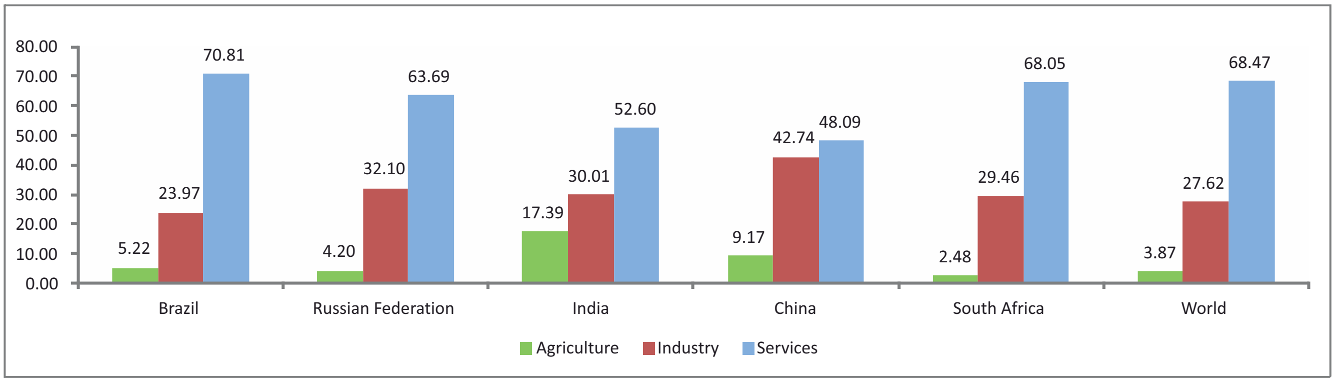
All the BRICS countries except South Africa rank in the top 10 world economies in terms of the size of GDP (based on purchasing power parity). While China ranks first, India, Russia and Brazil rank 3rd, 6th and 7th respectively in terms of the size of their GDP. South Africa ranks 28th on this count. Large size of their economies would make BRICS a formidable group in the international forum, thereby enabling them to influence global policy framework.

Chart 5: GDP Growth Comparison of BRICS and World



Source: IMF World Economic Outlook Database GDP based on purchasing power parity terms

Chart 6: Sector-wise Contribution to GDP



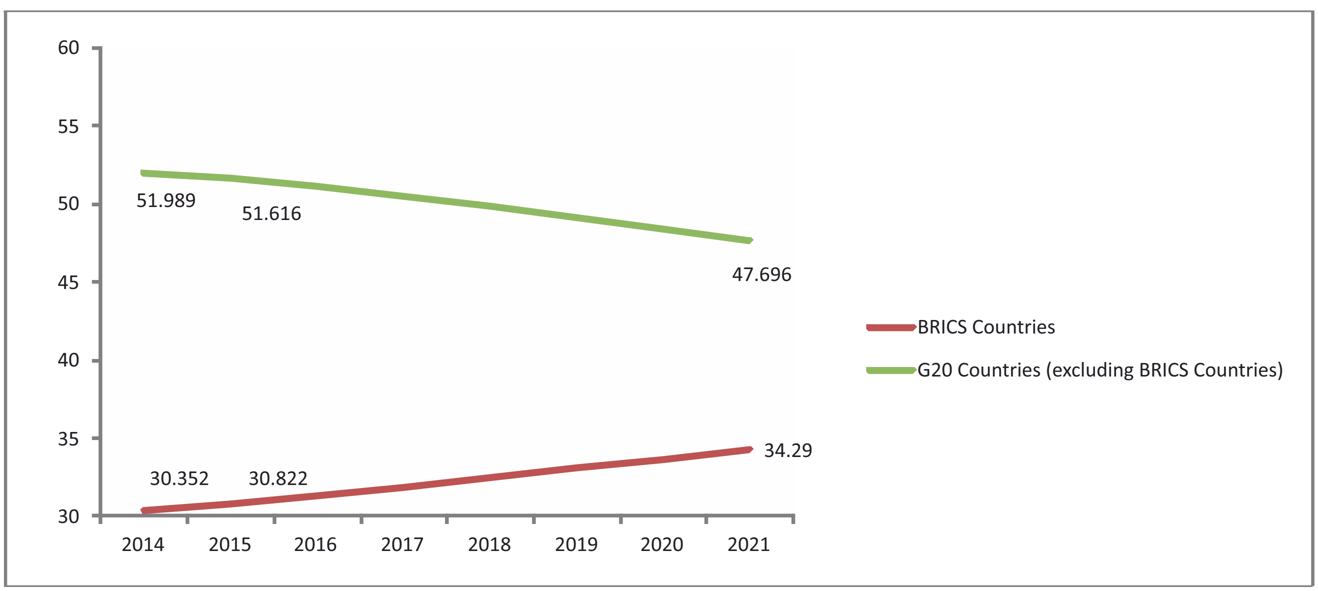
Source: World Bank, World Development Indicators Database

The inherent strength of the BRICS countries lies in the diverse competitive advantage of these economies. For instance, commodity and agriculture sector are competitive in Brazil, while China is highly efficient in the manufacturing sector. India has competitive advantage in financial services sector, especially information technology and IT-enabled services. South Africa has a strong mineral and mining sector as it produces gold, platinum, diamonds, and base metals. On the other hand, Russia has a comparative advantage in crude oil, natural gas and petroleum products.

In terms of contribution to GDP, services is a dominant sector in most of the BRICS countries except China, where the services sector accounts for less than 50% of GDP. In South Africa and Brazil, services sector contributes 68% and 70% respectively to the total GDP. This is in line with the global average of 68% (see the graph above).

The BRICS economies, which together account for 42% of the world population, contribute over 30% to the world GDP and according to the projection from the International Monetary Fund (IMF), this share is expected to rise to over 34% by 2021. Interestingly, while the share of BRICS economies rises, the contribution of non-BRICS economies in the G20 group of nations to the world GDP is expected to fall from 51% today to 47% by 2021. This reflects the relative strength of the BRICS economies vis-à-vis other developing and developed economies in the G20 group (which includes USA, Japan, UK, Canada, European Union, Argentina, Turkey, Mexico, South Korea, Australia, Indonesia and the BRICS countries).

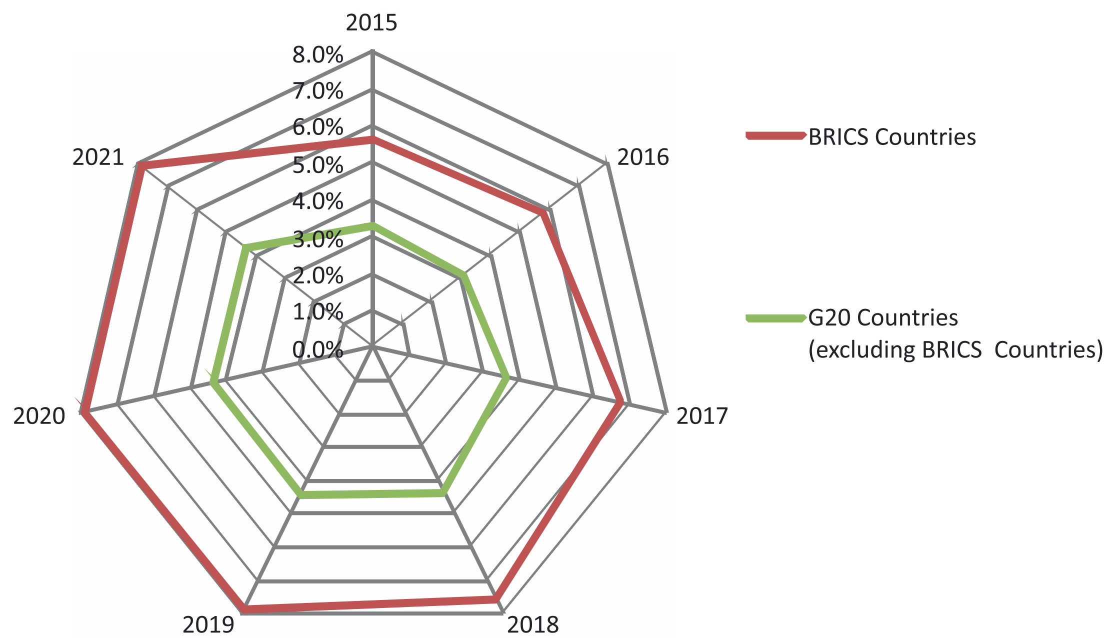
Chart 7: Share of Country Groups in World GDP



Source: IMF World Economic Database April 2016

The increase in the share of BRICS countries in world GDP would be driven by significantly higher growth in these economies compared to other G20 countries in the coming years. Macroeconomic projection available with the International Monetary Fund (IMF) shows that economic growth in the BRICS block would be at least 2.5% higher than the other G20 countries every year till 2021.

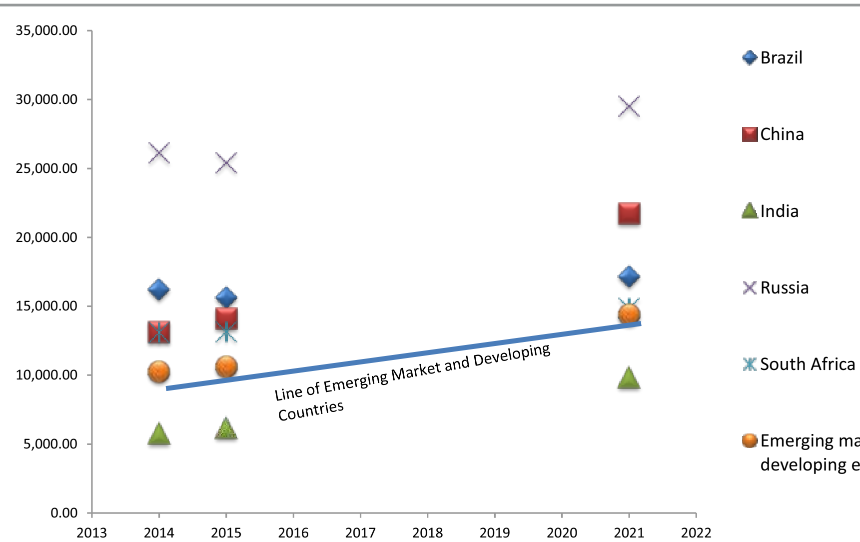
Chart 8: GDP Growth Forecast



Calculated from World Economic Outlook Database April 2016, IMF

Per capita income of a country signals the productivity of human resource of the nation. High per capita income enables people to have high standard of living and access education, healthcare and other services that augment human productivity.

Chart 9: Per Capita Income of BRICS, Emerging Market and Developing Countries



Per Capita Income based on Purchasing Power Parity Projections from World Economic Outlook April 2016, IMF

High per capita income is a key driver of consumption which supports consumer durables and consumer non-durable industries. The per capita income of all the BRICS countries, except India, is higher than the average per capita income of the emerging and developing countries (as can be seen from the above chart).

Box 19: BRICS: New Opportunities, New Challenges

Dr. Pralok Gupta, Assistant Professor (services and investment), Centre for WTO studies, IIFT, New Delhi, Views are personal

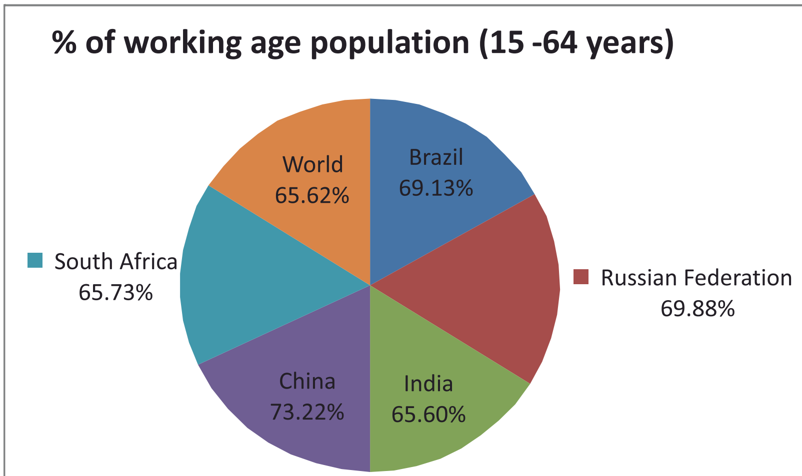
BRIC acronym was first coined by Goldman Sachs in 2001 to represent four emerging economies of the world - Brazil, Russia, India and China. It became BRICS after South Africa joined it in 2011. BRICS economies account for 43% of the world population, 30% of the world GDP and 17% share in the world trade. In spite of all members of BRICS being important economies of the world, these members are not yet able to pose this group as an important bloc in the global arena. This could be attributed to lack of mutual cooperation and preferential treatment within the group.

There are efforts by BRICS members to engage gainfully in recent past. Since 2009, the BRICS members have met annually at formal summits and India is hosting the 8th BRICS Summit in October 2016. Starting with economic issues of mutual interest, the BRICS meetings had considerably widened their agenda of discussion over the years and included many contemporary global issues. The modus operandi of BRICS cooperation includes consultations on issues of mutual interest through meetings of Leaders as well as of Ministers of Finance, Trade, Health, Education, Agriculture, Communication, Labour, etc. and practical cooperation in various areas through meetings of Working Groups/Senior Officials.

It must be noted that BRICS members have many complementarities to share with each other. Whereas Brazil and Russia are rich in natural resources and commodities, India and China are net importers of these items. Whereas India, Brazil and South Africa have demographic dividend given the younger age of their working population, China and Russia are facing problem of aging of population. China's strength lies in low cost manufacturing and India has competitive advantage in services. Thus, there are a number of areas where BRICS members can engage with each other and gain mutually. However, the realization of these benefits is subject to overcoming challenges, such as, geographical distances among members, language barriers, geo-political and trade conflicts between some BRICS members etc.

Among BRICS countries, Russia leads the pack with a per capita income of USD 25,410 (based on purchasing power parity) in 2015 and this is expected to grow to USD 29,517 by 2021. Brazil, China and South Africa have per capita income of USD 15,614, USD 14,107, and USD 13,165 respectively as of 2015. While India's per capita income is far less at USD 6,161 as of 2015, it is expected to grow almost 60% to USD 9,837 by 2021. India's rising per capita income can be inferred from the growing internet penetration, strong sale of consumer durable items such as cars, two-wheelers, smart phones and other consumer electronic appliances.

Chart 10: Proportion of Working Age Population in BRICS



Source: World Development Indicators, World Bank 2015

Such a strong growth projection for the BRICS countries is not surprising, given the huge human resource potential available in these countries. Most of these countries have a huge proportion of working age population. As can be seen from the following chart, the proportion of working age population in total population is significantly higher for China, Brazil and Russia compared to the world average of 65%.

Weaknesses

One of the weaknesses of the BRICS countries is that while they have huge proportion of working age population, the productivity of human capital is questionable. According to the Human Capital Index of the World Economic Forum, BRICS countries rank poorly in terms of labor force productivity. Out of 124 countries, India, South Africa, Brazil and China are ranked 100, 92, 78 and 64 respectively in the Human Capital Index 2015. Only Russia fares comparatively better with a ranking of 24 among the BRICS countries. BRICS countries must focus on imparting skill based training to their labour force in order to reap the benefit of demographic dividend.

Table 21: Human Capital Index 2015

Countries	Rank out of 124 countries
Brazil	78
Russia	26
India	100
China	64
South Africa	92
Source: World Economic Forum	

In recent years, policy makers of the BRICS countries have woken up to the need for policy push in skill development. The South African government has been implementing National Skills Development Strategy (NSDS) to promote institutional capacity for skill development that effectively responds to the needs of the labour market. One of the goals of this strategy is to address the skill shortages in the artisanal, technical and professional sectors of the economy. In India, the government is implementing the National Skill Development Mission (NSDM) to augment the skilling capacity in the country and meet the demand for skilled workers from the industry. Notably, skilling is no longer considered a sole responsibility of the government thus, industry is partnering with the former through innovative public private partnership model for imparting necessary

Box 20: India-Russia Co-operation

Mr. Perminov Alexander, Representative in India (Mumbai), 'Bank for Development and Foreign Economic Affairs of Russian Federation' (Vnesheconom Bank)

"Vnesheconombank is owned by the Government of Russia and hence our activities in India are derived from the mandate of the Russian government. Our bank has offered financial assistance to the recently set up nuclear power plant at Kudankulam in Tamil Nadu. We are also closely working with the Ministry of Defence, Government of India to support trade and investment relationship between both the countries in the defence sector. Vnesheconombank also has around 10 bilateral agreements with various commercial banks in India such as Canada Bank, Bank of Baroda.

India's EXIM Bank has partnered with Export-Import Bank of the Russian Federation, Russia and our bank to facilitate bilateral trade volume, investment and exchange of capital technology between both the countries.

Specifically, India's EXIM Bank agreed to extend a Line of Credit (LoC) of USD 100 million to our bank in December 2009 and it came into effect in January 2010. The LoC is used to fund India's export of capital goods, equipment and services to Russia.

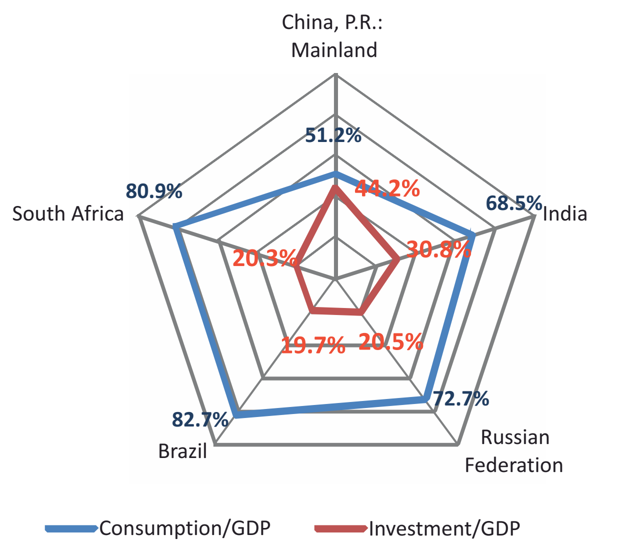
In December 2010, Vnesheconombank and India's EXIM Bank signed a memorandum of understanding to enhance the utilization of this LoC. Under this MoU, the Russian Bank for Development, which is the wholly owned subsidiary of Vnesheconombank and which offers financial support to Russian small and medium enterprises, can utilize this LoC.

In another development, the state financial institutions of the five BRICS countries entered into partnership to create BRICS Interbank Co-operation Mechanism in 2010. The financial institutions from BRICS countries that are partner to this mechanism are the Brazilian Development Bank (BNDES), State Corporation Bank for Development and Foreign Economic Affairs (Vnesheconombank), Export-Import Bank of India, China Development Bank Corporation, Development Bank of Southern Africa (DBSA).

This mechanism creates a framework for offering financial and banking services to investment projects within the BRICS countries. The mechanism also envisages settlement of mutual payments and financing investment projects in local currencies."

Another area where the BRICS countries need to work is that of reorienting of the consumption and investment patterns in these countries. On the one hand, countries such as Brazil, South Africa and Russia are consumption driven economies, while China is investment-led economy.

Chart 13: Share of Investment and Consumption in GDP



Source: International Financial Statistics, IMF

Excessive dominance of consumption may not offer sustainable growth in the long run as it creates unsustainable trade deficit and balance of payment crisis. Consumption (both government and household consumption) accounts for 82.7% and 80.9% of GDP respectively in Brazil and South Africa (see the chart below). The share of consumption must decline in these countries and it should be replaced with investment. On the other hand, domestic consumption accounts for only 51.2% of the GDP in China and hence it had to rely on exports (external demand) to drive economic growth. This strategy of export-led growth fails in times of adverse economic conditions in the importing countries. Therefore, the Chinese government is taking steps to stimulate domestic consumption and reduce reliance on external demand. Consumption and investment pattern in India and Russia are more balanced compared to other BRICS countries, although the share of investment can increase slightly in these countries.

As can be seen from the table below, countries with high consumption (Brazil and South Africa) are running deficit in their current account because of higher imports than exports. Higher imports impose strain on the foreign exchange reserves of the country and thereby create imbalance in the external sector.

Table 22: Current Account Balance (as % of GDP) in BRICS Countries

Countries	Current Account Balance (as % of GDP) in 2015
Brazil	-3.32
China	2.67
India	-1.25
Russia	4.96
South Africa	-4.37
Source: IMF	

Table 23: Savings as % of GDP in BRICS Countries

Countries	Savings as % of GDP in 2015
Brazil	16.36
China	46.00
India	32.00
Russia	23.35
South Africa	5.14
Source: IMF	

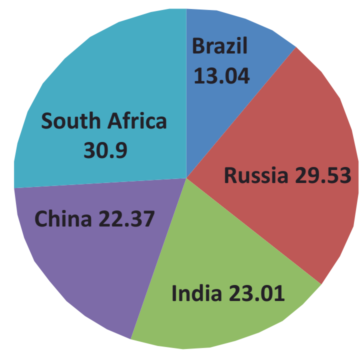
Savings is a mirror image of consumption. As can be seen from the above table, Brazil and South Africa have the lowest savings rate among BRICS countries because of their high domestic consumption. Savings is a key source of capital for an economy. Lack of sufficient savings in the domestic economy may force countries to depend on foreign sources for capital. Excessive reliance on foreign capital exposes the country to reversal of capital flows, risks from adverse movement in exchange rate and so on. Therefore, South Africa and Brazil must stimulate domestic savings to reduce dependence on foreign sources for capital.

skills to youth. Every month, around one million youth enter the labour force in India. Therefore, the country needs to develop enough skilling capacity to train such a huge army of youth that join the workforce every month.

Other BRICS countries must learn from the success story of China in skill development. Chinese government created a dynamic institutional system for vocational education and training that responds to the changing skill requirement of industries. The Chinese government set up a robust vocational training system by offering financial incentives to students, capacity building in educational institutions, occupation-based curriculum design, encouraging industry participation and so on.

Another weakness of the BRICS economies is the over-reliance of Brazil and Russia on commodities sector. In Russia, crude oil, petroleum products, and natural gas contribute about 68% to its total export revenues. Similarly, mining of iron ore and production of oil and gas contribute significantly to the GDP and export revenue of Brazil. Therefore, the recent decline in global commodity prices affected the export performance and hence the overall economic growth in Brazil and Russia. The following chart shows that while the economies of China, India and South Africa expanded, Russia and Brazil suffered contraction in terms of real GDP in 2015. Brazil and Russia must diversify their economic activity to manufacturing and services to de-risk their economies from volatility in commodity prices. In this regard, the BRICS Business Forum must evolve effective strategies to create value chain in manufacturing and services sector among the BRICS economies.

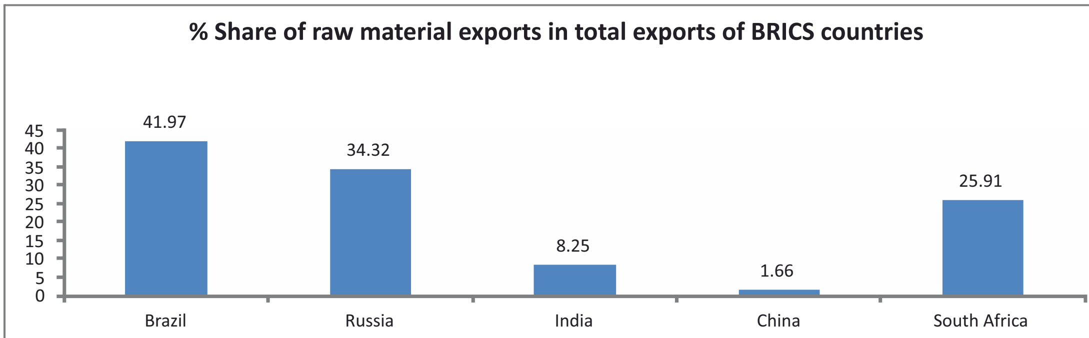
Chart 11: Export of Goods and Services as % of GDP in BRICS Countries



Source: World Integrated Trade Solutiion, World Bank; Data for India taken from RBI

Another weakness of the BRICS countries (except Brazil) is that exports of goods and services constitute a sizable portion of their GDP. For countries such as South Africa and Russia, exports contribute around 30% to the overall GDP. Over-reliance on exports may adversely affect these countries especially when there is a demand shock in the importing countries. Adverse movement in exchange rate of these countries may also affect their export revenues.

Chart 12: Proportion of Raw Material Exports in Total Exports of BRICS Countries



Source: World Integrated Trade Solution, World Bank 2015

More importantly, export of raw material such as oil and gas, minerals and metals and agriculture commodities constitute 34% and 25% respectively in Russia and South Africa. Adverse movement in the global prices of these commodities may affect the export earnings of these countries. In this regard, the case of Brazil is notable. Although exports contribute only 13% to the GDP of Brazil, share of raw material in the total export basket is 41% (highest among BRICS countries). Consequently, export revenue of Brazil largely depends on the commodity prices in the global market. Brazil, Russia and South Africa must, therefore, diversify their export basket away from raw materials to value added commodities.

Yet another weakness of some of the BRICS countries is the prevalence of poverty and high income inequality. In India and South Africa, around 21% and 16% of population respectively are living on less than USD 1.90 a day (poverty line of World Bank). Russia's performance on this count is far impressive as only 0.04% of the people live on less than USD 1.90 a day. Brazil has substantially reduced its poverty ratio in the last 13 years on account of the implementation of Bolsa Familia, an ambitious social entitlement programme. Under this programme, Brazilian government offers a fixed monthly stipend to poor people on condition that they would send their children to school. The programme, which was launched in 2003, reduced poverty in Brazil from over 9% to 4% by 2014.

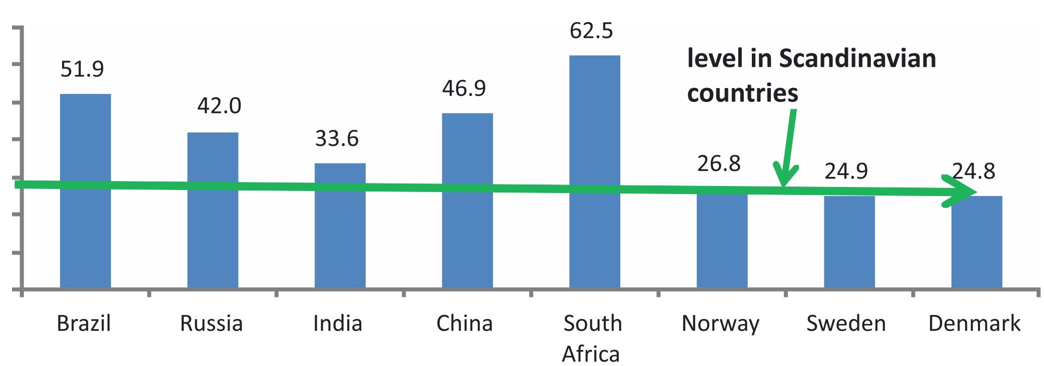
Although Brazil succeeded in reducing poverty, the country suffers from high income inequality as 41% of the total national income accrues to top 10% of the population. This figure is the highest in South Africa where the top 10% of the population claim 51% of the total national income. Although incidence of poverty is miniscule in Russia, 32% of the national income goes to top 10% of the population. High income inequality and poverty creates discontent among marginalized people in the society and may also cause social unrest. Sometimes, economic reforms are blamed for persistence of poverty and this creates political roadblocks for further economic reforms in the country.

Table 24: Income Distribution and Poverty Headcount Ratio in BRICS Countries

Countries	Income share held by wealthiest 10% of population	Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population)
Brazil	41.82	4.87
Russia	32.22	0.04
India	29.98	21.25
China	29.98	4.10
South Africa	51.26	16.56
Source: World Bank		

It is no wonder that BRICS countries rank poorly in the Gini index, which measures magnitude of income inequality in a country. Lower the Gini index, lower is the income inequality and vice versa. Scandinavian countries of Norway, Sweden and Denmark have favourable Gini index of around 25 because of low income inequality. In contrast, BRICS countries such as South Africa, Brazil, and China have Gini index of 62.5, 51.9 and 42.0 respectively.

Chart 14: Gini Index of BRICS Vs Scandinavian Countries



Source: Central Intelligence Agency

While poverty can be addressed through effective social policies, income inequality can be addressed only in the long run through measures such as promoting equal access to education and credit, encouraging entrepreneurship among marginalized sections of population and so on. The Indian government introduced Pradhan Mantri MUDRA scheme which promotes access to finance for entrepreneurs from lower sections of the society.

Table 25: US Treasury Holdings in BRICS Countries

Countries	US Treasury Securities Holding (in Billion Dollar) as of June 2016	% of total US Securities (Outstanding)
China	1240.82	19.8
India	117.23	1.9
Brazil	251.55	4
Russia	90.94	1.4
South Africa	9.13	0.1
Total	**6,280.97**	
Source: US Department of Treasury		

Another weakness in BRICS group, which is mostly relevant to China, is the lurking dollar trap. In the last two decades, economic growth in China is led largely by export sector. The Chinese central bank has amassed over USD 3 trillion worth of reserves from the dollar earnings of the Chinese exporters. The bank also invested a large portion of these reserves in the low-yielding US treasury securities. Of the total issued US Treasury Securities, almost 20% is held by China (see the table above). Such a mammoth holding of US Treasury Securities exposes Chinese central bank to portfolio losses arising from adverse movement in US interest rates. The central bank cannot get rid of these securities and it has to hold them till their maturities. This is because any attempt by the Chinese central bank to sell even a small portion of its US treasury security holdings would depreciate the value of dollar. This would in turn strengthen yuan exchange rate and thereby affect Chinese exports. Therefore, China is left with no option but to hold the mammoth US treasury securities till the end of their maturities. This is called dollar trap. In a way, this argument is applicable to the entire BRICS group as they together hold more than 27% of the total issued US treasury securities.

Opportunities

In the days to come, BRICS countries must leverage the trade and investment opportunities offered to different countries within the block. In 2013, leaders of the five countries set up the BRICS Business Council to promote economies co-operation among business communities.

One of the ways to promote economic co-operation among the BRICS countries is to enhance the use of local currencies for cross-border investment and trade. In 2014, the Government of Russia and China signed a currency swap agreement worth USD 24.4 billion for three years. Under this agreement, businessmen from both the countries would conduct mutual trade and investment in their local currencies (renminbi or ruble) instead of the US dollar. China and Brazil also have a swap line of about $30 billion in place following a 3-year agreement signed between the central banks.

Another promising area for collaboration among BRICS countries is the infrastructure sector. Developing countries such as India, Brazil and South Africa have planned mammoth investment in roads, ports, airports, railways and other infrastructure sectors. These countries would rope in private investors, both domestic and foreign, to develop these infrastructure facilities. For instance, Brazilian government has allowed foreign companies to bid for its infrastructure projects, especially in the airport sector. These countries have adopted a non-discriminatory and transparent bidding process to facilitate participation of foreign companies in infrastructure projects.

Similarly, Indian government has ambitious target for infrastructure creation. The government is constructing roads with a target of 40 km per day in order to boost connectivity and remove bottlenecks. The government has planned five industrial corridor projects to boost economic development. These five corridors are Delhi-Mumbai Industrial Corridor, Bengaluru-Mumbai Economic Corridor, Chennai-Bengaluru Industrial Corridor, Vizag-Chennai Industrial Corridor and Amritsar-Kolkata Industrial Corridor. These projects would attract huge investment in logistics infrastructure. Besides, the government has unleashed the ambitious Sagarmala Plan (Port-led Development Plan) that may attract investment of Rs. 4 trillion over 10 years from 2015.

Table 26: Plan for Infrastructure in Select BRICS Countries

Countries	Plan for Infrastructure
South Africa	The National Development Plan 2030 aims to increase public infrastructure investment to 10 percent of gross domestic product (GDP) to develop transport, energy and water facilities.
India	The government aims to attract Rs. 4 trillion investments under the Port-led Development Plan (Sagarmala Plan). The plan includes capacity expansion at existing ports, development of new ports, enhancement of road and rail connectivity to major and non-major ports and so on over 2015-2025
Brazil	Brazilian government would offer infrastructure projects worth 200 billion Brazilian reais to private sector over the next two years through 2018. These projects include building of roads, railways, ports, airports and so on.
Source: Government Announcements, Press Releases	

Heavy investment in infrastructure sector in BRICS countries may boost the production of construction materials such as cement and steel in countries such as China and India. China, which has developed excellent infrastructure at its home country, has huge role to play in the development of the same in other BRICS countries. China is one of the leading producers of cement and steel, which are used in infrastructure projects. Currently, Brazil and South Africa import around 30% of steel products from China (see the table below). However, import of cement and concrete construction materials by these two countries from China is miniscule (as can be seen from the table below). Therefore, there is tremendous scope for China to supply cement products to Brazil and South Africa.

Table 27: Import of Refractory Cements, Mortars and Concrete by Brazil (Import in 1000 USD)

Source of import	2014	2015
China	328.5 (1.44%)	639.63 (3.42%)
India	105.13 (0.46%)	141.48 (0.76%)
World	22774.77	18700.96
Source: World Integrated Trade Solutions, World Bank Figures in bracket represent % share in total imports		

Table 28: Import of Refractory Cements, Mortars and Concrete by South Africa (Import in 1000 USD)

Source of import	2014	2015
China	858.11 (5.0%)	1060.39 (9.2%)
India	330.67 (1.9%)	440.94 (3.8%)
World	17078.552	11484.674

Source: World Integrated Trade Solutions, World Bank

Table 29: Import of Iron, Steel Bars and related Products by Brazil (in USD 1000)

Source of Import	2014	2015
China	226959.34 (29.5%)	153157.2 (33.6%)
India	29221.68 (3.8%)	22074.44 (4.8%)
World	770062.98	455349.82

Source: World Integrated Trade Solutions, World Bank
Figures in bracket represent % share in total imports

Table 30: Import of Iron, Steel Bars and related Products by South Africa (in USD 1000)

Source of Import	2014	2015
China	59148.86 (32.6%)	48855.48 (37.3%)
India	18686.19 (10.3%)	12240.75 (9.4%)
World	181498.9	130913.93

Source: World Integrated Trade Solutions, World Bank
Figures in bracket represent % share in total imports

Table 31: Production of Cement and Steel

Countries	Cement (million tonne)	Steel (million tonne)
China	2 476.1	822.7
India	256	81.5
Russia	68.54	70.27
Brazil	79.09	52.21

Source: BRICS Statistics Publication 2015

In South Africa, the government has provided renewed thrust to gas-based industrialization to promote use of natural gas as fuel for power generation and operation of industries. South Africa wants to increase the use of natural gas as fuel in order to reduce its dependence on coal and other fuel that have high carbon footprint. The country plans to import liquefied natural gas to reduce its dependence on coal. Russia being a key producer and exporter of natural gas (see table below), South Africa can collaborate with Russia in this initiative.

Table 32: Production of Natural Gas

Countries	Year	Natural Gas Production (billion cu. M)
Brazil	2013	28.2
Russia	2014	639
India	2013	35.4
China	2014	130

Source: BRICS Statistics Publication 2015

While import of natural gas from Russia could be a short-term strategy to meet shortage of the fuel, in the long run, South Africa must collaborate with China to develop shale gas in its semi-desert Karoo region, which is believed to hold at least 485 trillion cubic feet of shale gas. China Petrochemical Corp., the second-largest oil and gas producer in China, produces shale gas from Fuling in southwest China. China's Fuling district is estimated to have 380.6 billion cubic meters of shale gas reserves.

Another area of co-operation between China and South Africa is the solar energy sector. China is one of the leading producer and exporter of solar panels. South African government plans to enhance the share of renewable energy, especially solar energy, in its energy mix. South Africa has huge potential for solar energy as most areas in the country receive on an average more than 2500 hours of sunshine per year. The country receives average solar-radiation levels of between 4.5 and 6.5kWh/per square metre per day. Therefore, China can export solar power generation equipments to South Africa to enable it to achieve its renewable energy goals.

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Threats

The greatest threat for the BRICS countries, especially China is the deteriorating environment. According to environmentalists, indiscriminate pursuit of industrialization by China has harmed its natural resources beyond repair. Environmentalists feel that more than half of China's water cannot be treated and made safe for drinking. Further, imprudent discharge of industrial waste has spoiled surface water in many areas of the country.

Alarmed by the warning of environmentalists, Chinese policy makers have taken several measures in recent years to protect environment and undo the damage caused to ecology. In 2015, the Chinese government updated its Environmental Protection Law (EPL) 1989 and mandated strict environment compliance standards for industrial projects. The country has set up over 130 environmental courts between 2007 and 2013, some of which are newly created environmental divisions within the existing courts. The new law offers stringent punishment for non-compliance of environment norms and expands the scope of projects subjected to environmental impact assessments. The government has also allowed non government organizations to file complaints against violators of environment laws. Despite these measures, there are several challenges in protecting environment in the country (see table below).

Table 33: Protecting Environment in China

Progress	Challenges
Revised Environmental Protection Law (EPL) implemented in 2015	Environment laws are strong on paper, weak on implementation
Non-Government Organisations allowed to file case against polluters	NGOs lack financial backing
In recent years, there has been rapid growth in the number of environment courts in China	China's court system is not independent of the government or the Chinese Communist Party, which often intervenes in disputes

Source: Extracts from a study by David H. Shinn, Adjunct Professor of International Affairs at The George Washington University's Elliott School of International Affairs

If Chinese companies' environment over-reach in their home country it is not enough, they are accused of similar practices in African countries as well. Many of the state-owned companies of China have invested heavily in mining, oil and gas, and other projects in Africa. Many of these companies, which are owned by the provincial governments and municipal bodies in China, have failed to observe environment norms. Somaliland, a country in east Africa, is the victim of environmentally degrading practices of the Chinese leather gloves manufacturer Jeronimo Group Industries & Trading PLC. The company is blamed for indiscriminate discharge of waste into rivers, causing harm to livestock and human beings in Dar-Buruq village.

In another instance, China National Fisheries Corporation and other Chinese companies are blamed for unsustainable fishing practices, thereby harming marine resources in West African ocean. According to global environment watchdog Greenpeace, Chinese fishing companies do not disclose their true quantity of fishing in the West African ocean.

Similarly, some Chinese companies allegedly involve themselves in illegal logging of timber in some of the African countries such as Cameroon and thereby harm the forest resources of these countries. Chinese companies' illegal logging is helped by the poor forest governance standards and corrupt forest authorities in Africa. According to the Center for International Forestry Research, Chinese companies have violated forest laws in four African countries.

Following a spate of allegations of environment irregularities, Chinese government has tightened environment guidelines for companies investing in foreign countries. However, some observers feel that the government must make the guidelines more comprehensive and binding. Along with the government, Chinese financial institutions, including China's EXIM Bank, adopted voluntary environmental guidelines for funding overseas projects.

China is not alone in the list of violators of environment norms in Africa. Other BRICS countries such as South Africa, Brazil have also received their fair share of criticism in this regard. According to data from UNCTAD, the share of BRICS countries in Africa's total value of greenfield projects rose from 19% in 2003 to almost one quarter in 2012. Persistent environment violation by BRICS companies in Africa may affect the credibility of the group in the international forum. In the past, western countries from USA and Europe were targeted for harming the ecology of Africa. The greatest threat for the BRICS countries is that they should not follow the path of these western companies in future.

The micro perspective of the individual countries has been dwelt upon deeply in the above discussion. Summed up the same in the figure below:

Table 34: SWOT of BRICS Countries, Micro View

Strengths	Weaknesses
• Contribute over 30% to world GDP • Huge consumer market as BRICS comprise 42% of world population • 4 BRICS countries feature in top 10 rank in terms of foreign exchange reserves • Abundant in natural resources	• Over-reliance of Russia and South Africa on exports • Low domestic consumption in China; China's dollar debt trap • Poor labour productivity • High income inequality in Brazil, South Africa and India
Opportunities	**Threats**
Intra country value chain and exports of value added goods	BRICS countries' neo-colonialism in Africa China's claim in South China Sea leading to political distress

Macro view

One of the major strengths of the BRICS countries is to leverage their relative strength in the world economy to influence policymaking in multilateral fora such as the International Monetary Fund, World Bank, United Nations and so on. The other strength prevails in the setting up of the New Development Bank (NDB Bank) which provides economic power to the BRICS countries to fund their development projects. The united projection of steps taken towards the climate change agenda to curb the same has already made a positive impact on the global economies.

Table 35: SWOT of BRICS Countries, Macro View

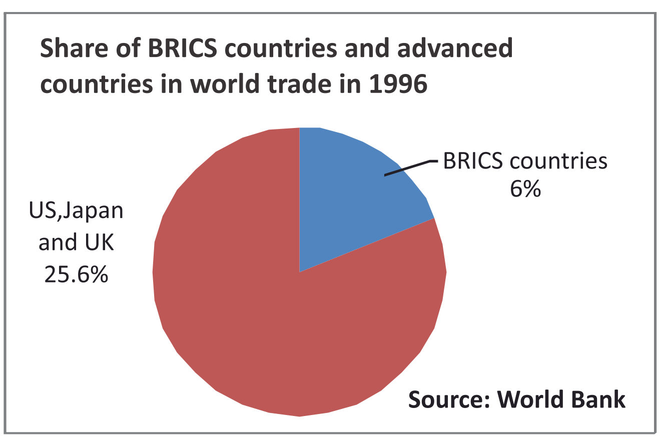
Strengths	**Weaknesses**
• Use of local currencies for intra-BRICS trade and investment • Funding infrastructure through New Development Bank • Common Climate Change agenda	No evident manufacturing supply chain intra BRICS
Opportunity	**Threat**
BRICS can be a powerful block to influence policy making at World Trade Organisation and United Nations	China's claim in South China Sea leading to political distress

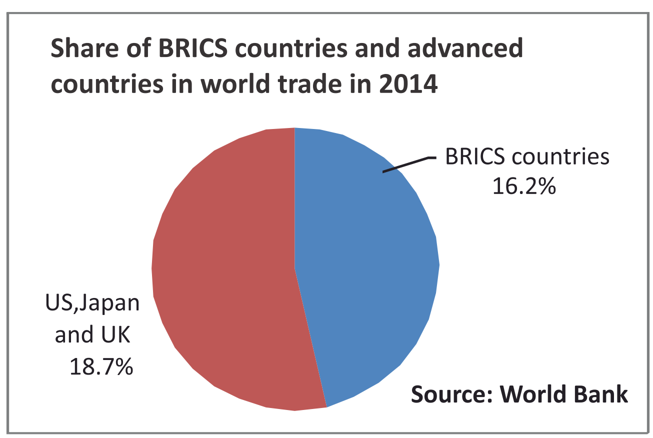
Unitedly, BRICS countries can play an important role in reforming some of the elements of the international monetary system that evolved several decades ago. One such element is the creation of a sustainable international reserve currency. The present system of international reserve currency based on US dollar is not sustainable as is evident from the financial crisis in 2008. Presently, price of most of the commodities, including crude oil, gold are expressed in dollar in the international market. The monetary and fiscal policy adopted in the USA affects the value of dollar and in turn the price of these commodities. Therefore, indirectly, the monetary and fiscal policies followed in the USA affects inflation in other countries. In order to avoid the side effects of US policies on other countries, several economists have argued for the development of an alternative to the US dollar as international reserve currency.

In 1969, the International Monetary Fund (IMF) introduced a supplementary international reserve asset known as Special Drawing Right (SDR) alongside US dollar. SDR is neither a currency, nor a claim on the IMF. Rather, it is a potential claim on the freely usable currencies of IMF members. SDR is value based on a basket of currencies which include the US dollar, euro, Japanese yen, and pound sterling. In the beginning, it was decided to use the currencies of the USA, Japan and UK to value SDR because the share of these countries in global trade and GDP was substantial. However, in recent years, the share of these countries has declined and that of the emerging economies, including BRICS has increased (see the chart below).

Therefore, there is a legitimate reason to include the currencies of BRICS countries in valuing SDRs. Based on this argument, IMF decided to include Chinese renminbi in the basket of currencies used for valuing SDRs effective October 1, 2016. The weights assigned for the US dollar, euro, Chinese renminbi, Japanese yen, and pound sterling in valuing SDR are respectively 41.73%, 30.93%, 10.92%, 8.33%, and 8.09%. As the share of BRICS countries in world trade and GDP increases further in future, the weight of Chinese currency in the SDR basket must increase and the currencies of other BRICS countries must also be introduced. This is possible only if all the BRICS countries make a concerted and coordinated effort to influence the decision making apparatus of the IMF in future. Introducing the currencies of the BRICS countries in the SDR basket is the first step towards internationalization of their currencies.

Chart 15: Share of BRICS Countries and Advanced Countries in World Trade





BRICS countries must also work towards developing their financial system and maintaining stability in their macroeconomy in order to improve the appeal of their currencies in the international market. Increasing the acceptability of the currencies of the BRICS countries in international trade and finance would reduce the dominance of US dollar in international reserve currency system. The Chinese government's move to allow companies to issue yuan-denominated bonds in the global financial market and similar move by the Indian government are welcome steps to make their local currencies globally popular.

A major weakness among BRICS countries is lack of global value chains in many sectors, where they have comparative advantage. There is a need to build intra-BRICS value chain by taking advantage of the abundant natural resources in Brazil South Africa and Russia, manufacturing strength in China and availability of human resource in India. The other major weakness among the BRICS association is a loose non institutionalized binding among the BRICS countries.

Though the establishment of the NDB has cemented intra BRIC country ties, there seems to be not much of formal binding between each other. Every BRICS country has maintained a BRICS desk but there is no central facilitating agency to facilitate information and operations of mutual benefit. Though intra BRICS trade has shown growth, the FDI has been a major weakness especially with India due to its rigid political controls.

FDI growth will boost opportunities for economic cooperation in the fields of mining, hydroelectricity power generation etc. Finally, the major threat to the BRICS engagement is the ongoing border dispute between India and China and the south China Sea issue which hampers trade between the BRICS and the other countries having value chains which have duly lost the logistic timing in fulfilling the supply and demand of goods.

Thus, from the above analysis it is clear that the BRICS engagement needs to prepare a clear roadmap without any conflict of interests.

Analysis indicates that except India, other BRICS countries exhibit a fairly good per capita income. This points to a burgeoning domestic consumption pattern which normally indicates penchant for imports thus loss of foreign exchange. A trade balance needs to be in place to avoid current account deficits.

Apart from India, all other BRICS countries are oil rich which means trade in crude oil is possible between India and other BRICS countries. However, the economies of scope being volatile has led to non stability of trade in the same, with India resorting to different trade exchanges . China is a major importer of crude oil, which is sourced largely from Russia.

The major strength of the BRICS countries is their ability to converge on a common goal of funding development through a mutually benefitting agenda on basis of their home currency. The other strength is working towards a common goal i.e. taking steps towards minimizing climate change. At the same time, there appear immense avenues in this context for skill development and expertise sharing among the BRICS countries.

One of the major challenges in the BRICS engagement is the lopsided trade relationship between India and China. In 2015-16, India imported USD 61.7 billion worth of goods from China, while it exported only USD 9.01 billion worth of goods. Thus, India runs a trade deficit of USD 52.69 billion with China. Share of China in India's total trade deficit has more than doubled from 20% in 2011-12 to 44% in 2015-16.

India's trade deficit with China has risen from USD 29.31 billion in 2010-11 to USD 52.69 billion as of 2015-16. The widening trade deficit with China is a major concern for India's policymakers and manufacturers who compete with Chinese goods. Indian manufacturers, who are affected by competition from cheap Chinese goods, have demanded Indian government to levy import duty on these goods.

The growing trade deficit has been one of the agenda in the dialogue on bilateral co-operation between policymakers of both the countries. The Indian government plans to reduce the huge trade deficit with China by increasing its export of pharmaceutical products and information technology services, in which it has competitive advantage. Therefore, the Indian government is seeking greater market access in these sectors.

In future, India must explore export opportunities in others sectors such as processed food and healthcare, telemedicine in the services sector. Also, Chinese authorities must enhance market access by reducing tariff and non-tariff barriers for Indian goods and services. Economic co-operation between India and China may not be sustainable in the long run if both the countries fail to address the widening bilateral trade deficit.

Conclusion

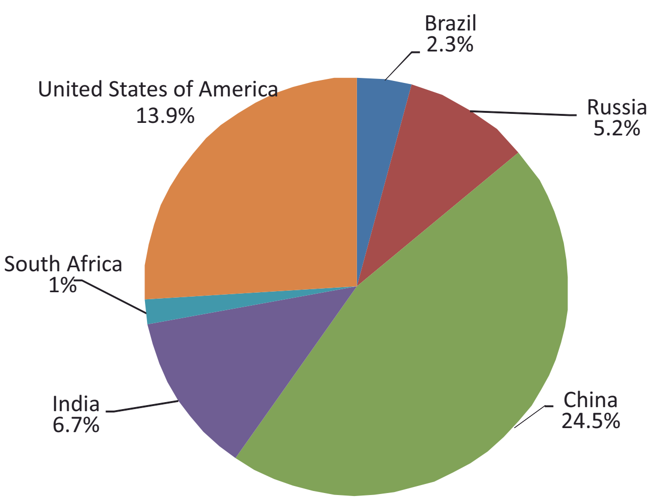
The BRICS economies if work on a synergetic model which will complement strengths and dilute the inefficiencies will no doubt benefit from mutual cooperation. This relation needs to be worked on mutual benefit sharing basis.

6.
Global Social Responsibility Inter BRICS

6.
Global Social Responsibility Inter BRICS

Climate change has recently taken a grip globally, as the same has not only affected productivity of food commodities but also has affected health at large, degrading human life. It also plays a major role in the process of trade and development. Climate change is a phenomenon which has been artificially boosted due to mismanagement of environment by the humans in their quest for development. Over use of fertilizers and pesticides to increase yield of food commodities and maintain export standards and potential has led to contamination of food, also building excessive thermal plants to fulfill energy requirements of manufacturing activity leading to extensive release of GHG emissions contaminating the air etc. These have been the major causes of climate change. Individually, the BRICS countries have taken responsibility to curb factors causing climate change while keeping their development agenda in shape. Power production using renewable energy sources has been explored and implemented on a higher side rather than burning of fossil fuels. At the same time attempts are being made to curb extensive artificial fertilizers by reducing subsidies and encouraging organic fertilizers and pesticides. Though China is the main contributor to GHG and aerosol emissions which cause environmental contamination leading to warming of the atmosphere and thus disrupting normal atmospheric conditions, leading to excessive rain or drought conditions, the other BRICS countries are lower on the same and would be discussed deeply in this chapter.

Chart 16: Share of BRICS in World Emission of GHG

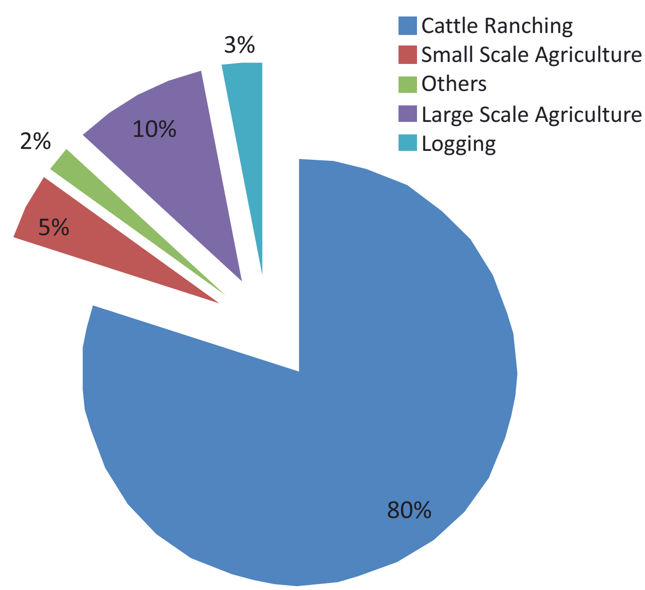


Source: CAIT Climate Data Explorer, 2015; World Resources Institute

Brazil

Brazil's quest for development has taken a toll on its forests thus adding to the ill effects of climate change. Since 1970, over 600,000 square kilometers of Amazon rainforest have been lost and current trends predict as much as 40% of the forest could be lost by 2050. (The Brazilian Amazon region is an unique area as it holds the world's largest rainforest. This area is one of the highly deforested areas in the world. Some reasons for this are widespread agriculture, cattle grazing and logging purposes. Deforestation is highest in the Mato Grosso, Rondonia, and Para regions because of the soybean industry and biofuels movement. The vast majority of deforestation occurred after 1960 from road building and other activities. Government agencies and the World Wildlife Federation (WWF) and others are working to improve the area's forests. Natives are having trouble keeping their land intact and there are issues with violence. In order for less deforestation to occur, people have to reduce their consumption of cattle, wood products, and urge politicians and businesses not to support actions that further deforest the Amazon Basin. In addition to supplying water to Brazil's vital hydro-electric fleet, the Amazon rainforest also acts as a carbon sink however the rising temperatures and drought are limiting its ability to perform this function. Environmentalists blame the agribusiness lobby for watering down a forest code. Causes for deforestation are depicted in the graph below

Chart 17: Causes of Deforestation in Brazilian Amazon



Source: CBy Rhett Butler, Founder, Mongabay.com

Brazil has widespread Soybean cultivation and is also the biggest exporter of soybeans. Increased demand has led to high prices therefore Brazil has to produce more soybeans and this has led to large deforestation not only by that industry, but also by increased road building, infrastructure requirements. Also, the land is being burned in these regions to make room for agriculture and is significantly contributing to greenhouse gases. The Beef and the Cattle industry is growing too. Currently, exports are more than 1 million metric tons. Growing exports will not only increase cattle grazing but will further add to deforestation. Logging is strictly licensed in the region, however it happens illegally on a widespread basis, though timber is only supposed to be harvested in designated areas. Logging directly accounts for two to three percent of deforestation action. Deforestation could significantly reduce tropical rainfall and it is found that air passing over extensive forests on the Earth's tropical regions produces at least twice as much rain as air passing over little vegetation. These forests have known to have affected rainfall thousands of kilometres away. This would have dramatic impacts on farmers working within tropical basins such as the Amazon and Congo as well as reducing their hydro-electricity capacity from receding river flows.

Aerial view of the Amazon, near the city of Manaus. Roads open up pristine swathes of rainforest to deforestation (credit: Neil Palmer/CIAT)

Measures to Mitigate Climate Change

The state of 206 million people has pledged to cut greenhouse gases 37% by 2025 from 2005 levels, possibly rising to 43% by 2030.The Brazilian government to crack down on the deforestation, is putting more and more people out in the forests to monitor activities. The government has spearheaded to fine agencies which buy or use products that come from deforested land. Electronic logging certificates are now being instituted to reduce fraudulent certificates which are causing widespread deforestation. Under Brazil's "concentric differentiation" proposal, countries gravitate towards a core of economy-wide cuts as they develop. The proposal is one example of the country's adroit diplomacy. Brazil has embraced greenhouse gas cuts, however, it supports countries' right to development .It is the first developing country to outline an absolute emissions cut, rather than linking one to forecasts of future growth. Eliminating illegal tree-cutting in the Amazon, restoring forests roughly the size of Pennsylvania and boosting renewable energy's share of power generation to meet the aim. These plans will make emissions fall back to 1990 levels of 1,300 million tonnes (MtCO2) of carbon dioxide by 2030, rather than rise to 3,400 MtCO2 without action. Scaling up renewable power is also central to Brazil's commitments. A major roll-out of wind and solar power are planned to meet a target for non-hydro renewable sources to provide 23% of power supply by 2030. Soy-producing Mato Grosso state, the country's breadbasket, committed to zero illegal deforestation at the COP21 summit. Other Amazonian regions like Para and Acre are drawing up their own strategies. Still the country has seen huge advances, bringing the private sector on board with its climate plan. "Production but protection" is the refrain uttered by officials at a London event to promote its Amazon Fund, a forest protection scheme financed by Norway. At the UN talks, Brazil negotiates with China, India and South Africa in the BASIC grouping, and the 134-strong developing G77 bloc. Brazil was a key broker of 2015's landmark global warming accord in Paris. The South American heavyweight has sworn to get tough on tree-cutting and deploy renewable energies in its offer to an UN climate deal. The plan aims to cut carbon emissions by 37% within ten years from 2005 levels. At the same time, it chokes off funds for low carbon investment and raises pressure to scale back environmental regulations seen as cumbersome for business like soy and beef producers.

Russia

The rise in inflation and the cost of living has put the number of poor Russians at 21.7 million, or 15 percent of the population. Russia is one of the largest exporter of crude oil and nuclear material which naturally occurs all over the Russian land mass. Today fossil fuels contribute around 70 percent of Russia's total export revenues, and if minerals and metals are included, the share goes up to 90 percent. These two commodities produce waste which extremely spoils the environment. However Russian economy thrives on these exports to a very large scale. Joining the climate change bandwagon means playing down its own development prospects for Russia. Russia historically had a skeptical attitude regarding the necessity of international action on climate change. However, the negative effects of climate change have started showing their marks on the Russian landscape itself which has actually driven Russia to enter the climate change supporting alliance.

Though the climate action plan appeared to be a positive development, it was observed that Russia's submission, which calls for a 30 percent emissions reduction below 1990-levels, could actually allow Russia to increase its emissions, which are currently 35 percent below 1990-levels (due to the collapse of the Soviet Union and the breakdown of its carbon-intensive economy).

The main issue behind Russia's skeptical assertion to support climate change is that it has been marred by its economy being subjected to series of hits resulting in hampering growth. As the economy solely derives monetary benefits from the export of crude and nuclear material, clamping production in the same means hitting the economy further thus Moscow's reluctance to join the increasingly unified international community in agreeing on meaningful emission reduction targets is attributable to these and other several factors.

Russia projects that Russian agriculture could benefit from climate change as the melting of the ice shelf is a plus point for Russia. As enormous swathes of perpetually frozen, barren territory would be transformed into arable land and the extraction of mineral resources farther north of the Arctic Circle would become possible. Large land mass covered by ice shelf has practically left Russia with small agricultural area and they have to heavily depend on food imports. However, this limited and optimistic view appears misguided. It is increasingly clear that climate change is likely to adversely affect Russia in several ways, from severe weather events to territorial loss to growing instability on the country's southern periphery and in its major cities. Historical non-arable regions in Siberia could indeed see their agricultural productivity increase, regions in the south and west of Russia that are currently arable are likely to be increasingly affected by drought, wildfire, and changing irrigation patterns, a process that is already under way. The melting of permafrost in Russia's far north could alter river flow patterns sufficiently to create water shortages in Stavropol and Krasnodar, historically the country's most productive agricultural regions.

Consequently, while Siberia becomes newly fertile, the country's traditional breadbasket in the Volga River basin could become arid. Additionally, the rising incidence of drought and wildfire associated with climate change could be devastating for agricultural production in western Russia. In 2010, unprecedented summer heat caused massive wildfires that dramatically reduced agricultural output in western Russia, destroying one third of the country's wheat harvest. The country experienced another major heat wave with a devastating impact on agricultural output in the summer of 2012, suggesting that this pattern is likely to continue and intensify as global temperatures rise. Accordingly, any gains in agricultural productivity farther north could be offset by drought and wildfire in southern and western Russia and by the effect of melting permafrost on the country's irrigation patterns, confounding any hopes of increased grain production.

Second, Russia's proximity to the Arctic Circle and long northern coastline make the country unusually vulnerable to rising sea levels and consequent erosion. As the permafrost in northern Russia retreats and sea levels rise, the country is reportedly losing 468 square kilometers to erosion every year. This trend, worrying in its own right, is likely to accelerate as global temperatures continue to rise. Scientists have further cautioned that the effect of climate change on the permafrost in Russia's northern territories could have devastating effects on regional ecological systems (including wildlife) and on crucial infrastructure, including roads, rail lines, and oil and gas pipelines. The potential harm resulting from melting permafrost in northern Russia has been vividly illustrated by the sudden appearance of massive, unexplained craters in Siberia, scientists have concluded that these craters are formed as a result of subterranean permafrost melt and the consequent collapse of underground geological formations.

Measures to Mitigate Climate Change

Reviewing the figures, under the Kyoto Protocol, adopted in 1997, Russia has reduced its levels of greenhouse gas emissions by 40 billion tons from 1990 levels, an amount nearly equivalent to the entire global output of greenhouse gases today. It was pledged that over all, Russia will cut greenhouse gas levels by 70 percent from those levels by 2030.

Russia has proposed to use nanotechnology in lowering worldwide greenhouse gases emissions. It proposes a "New Approach" which focuses on efforts to reduce emissions involving five materials: steel, cement, aluminum, plastic and paper. The proposal is not on the reduction of the production of these materials but rather making these materials lighter, stronger and more efficient. With this approach, nanotechnology is put into the spotlight as the primary technology in making this proposal possible in real-world applications. Rusnano is a company that is dedicated to nanotechnology. They received $10B of funding from the Russian government. They are pegged to be the frontrunner in research and application of nanotechnology in the production of the mentioned materials."Carbon nanotubes have been shown to toughen aluminum, make plastics conductive and extend the life of lithium-ion batteries.

Russia is preparing the ground for future regulation of carbon emissions, amid calls to wean the economy off its heavy dependence on polluting fossil fuels. Russia's Ministry of Natural Resources and Environment has published a draft law introducing a baseline for controlling planet-warming emissions. It includes a legal definition of greenhouse gases and how to measure and report emissions, as well as enshrining the government's right to regulate them. The draft sets out rules for potential systems to monitor and regulate emissions of carbon dioxide (CO2) and other climate-changing gases.

National carbon schemes have been introduced or are being created in more than 40 countries, with a further 20 systems being put in place at sub-national levels.

The government adopted a framework for a system to monitor, report and verify greenhouse gas emissions, which will be obligatory for companies and regions. The system will be tested next year, and from 2017, all companies with annual emissions of 50,000 tonnes of CO2-equivalent or higher will be required to report on them.

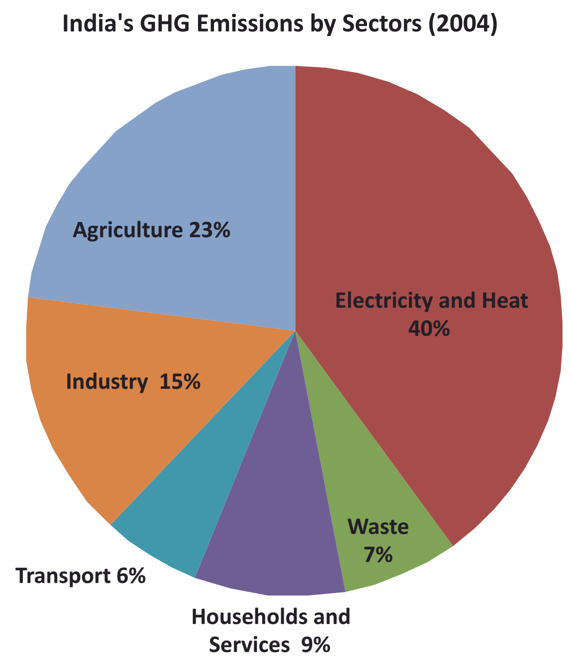
Russia will reduce its emissions 80 to 90 percent by 2050 from 1990 levels, strengthening the resilience of its economy which is heavily influenced by global oil and gas prices, via the Deep Decarbonization Pathways Project. The deep decarbonisation pathway implies higher emissions cuts would lead to growth in investments and energy bill savings that could boost GDP by at least 1 percent per year and jobs by a net gain of more than 3 percent by 2050. It would also require to switch to public transport, residential heating and industrial production from fossil fuel to electricity use.

Legislation supporting the development of renewables and energy efficiency has been adopted in the last few years.

India

Smoke from brick kilns

Chart 18: India's GHG Emissions by Sector



Source: Fact Sheet by Pew Center on Global Climate Change and The Energy and Resources Institute (TERI), September 2008

The Fourth Assessment Report from the IPCC suggests that monsoonal changes, Himalayan glacier retreat, and sea level rise around the low-lying coastal metropolises of Mumbai and Chennai all threaten India's growing population. Hurricane Nargis' devastating impact in Myanmar in May 2008 was presented as an illustration of this threat. In common with other developing countries India considers that the solution to the world's climate change problems is primarily the responsibility of the developed industrialized world. It has resisted efforts for a limit to be placed on its own GHG emissions. Nevertheless, India is a participant in the Kyoto Protocol and is the second largest source of CDM emission credits after China. However, like China it has reportedly rejected the imposition on any binding limits on its GHG emissions.

Measures to Mitigate Climate Change

On 30 June 2008, the Indian Prime Ministers Council on Climate Change released India's National Action Plan on Climate Change . This document primarily offers a list of eight technological efforts, the pride of place being given to research and development of solar energy. It also lists both

Box 21: BRICS Co-operation in Climate Change

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Global warming and climate change have emerged as priority issues of policy focus at various international fora in recent times. The co-operation mechanism of the BRICS countries on this issue operates at two levels – 1. BASIC countries level, 2. BRICS countries level.

Brazil, South Africa, India and China formed the BASIC bloc in 2009 to co-ordinate their efforts on combating climate change. This bloc has also played an important role in the negotiations at the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) in December 2015. These four countries set up an expert group to suggest measures for addressing global warming and climate change. The expert group prepared a report on 'Equitable Access to Sustainable Development in Climate Change' in 2011.

At the second level, the five BRICS countries, including Russia, is developing co-operation mechanism to address climate change. As part of this initiative, the BRICS University is promoting education and research on climate change. Several educational institutions of the BRICS countries, including around six institutions from India, are part of this education and research programme. Tata Institute of Social Sciences (TISS), Mumbai, which is one of the institutions in this programme, offers post graduate courses on climate change.

TISS is also actively working with other institutions in the BRICS countries to promote education, research and awareness on climate change, greenhouse gases and so on. For instance, TISS works jointly with the Energy Resource Centre in Cape Town, South Africa in conducting workshops on energy modeling.

The five BRICS countries are at various levels of economic development and they have divergent interest. Therefore, we don't see substantial institutional link, apart from the ones mentioned above, for co-operation in climate change among these countries. However, I see great potential for collaboration among these five countries in future on this issue. In order to deepen their co-operation, BRICS countries must evolve an effective funding mechanism for supporting research and innovation projects in sustainable energy and climate change mitigation technologies.

new and existing policies and many of these policies are already being implemented as part of the centralised economic plan drawn up by India's Planning Commission.

Indian GHG emissions policy, until recently, did not appear to be the specific product of a concern about the environment. However, the following policies do potentially reduce the amount of India's GHG emissions. These measures are being implemented under the current Eleventh Five-Year Plan.

Measures in relation to power generation in India include:
1. Increasing renewable energy to 10 per cent of total electricity generation capacity
2. Solar power to receive government financial assistance
3. Closing inefficient coal fired power generation and development of 'Integrated Gasification Combined Cycle' coal fired power plants
4. Developing coal bed methane electricity generation by providing 'liberal' financial assistance
5. Expanding the nuclear power industry.

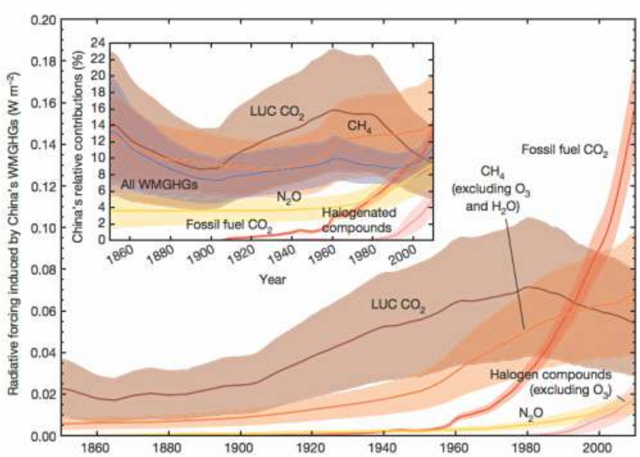
Energy efficiency and conservation measures include:
1. Efficiency labeling for electrical appliances
2. Mandatory energy audits for large energy consuming industries
3. Developing energy demand programs for large energy users
4. Replacement of all incandescent light bulbs with compact fluorescent lamps
5. Establishment of an energy efficient building code for large commercial buildings
6. A higher electricity tariff for large scale electricity users.

Under the national fuel policy (2003) the following measures are being implemented:
1. New four wheel vehicles are to meet European emissions standards by 2010
2. Conversion of public transport and taxies to compressed natural gas fuel
3. Expansion of urban mass transport systems
4. Expansion of ethanol–blended gasoline sales.
In addition the government is seeking to expand the amount of forest cover in India by 1 per cent a year through to 2012.

China

China accounts for a tenth of all the greenhouse gases and aerosols that have collected in the atmosphere over the industrial era. Boasting one of the world's largest economies, China has overtaken the EU and the US as the world's largest emitter, with CO2 emissions from fossil fuels tripling over the past 30 years. However at the same time China's relative contribution to climate change has remained steady – around the 10% mark – over the whole industrial period. This includes factors that have a warming influence, such as greenhouse gases and black carbon and those that induce cooling, such as sulphate and nitrate aerosols.

The graph below (main, not inset) shows the impact on global temperature – known as the radioactive forcing – from different anthropogenic sources of greenhouse gases in China extending back to 1850.



Main: Historical changes in the warming attributable to greenhouse gases from different anthropogenic sources in China. Coloured lines represent the model best estimates, shading gives the uncertainty range. Inset: Above, expressed as a percentage of the global total. Source: Li et al., (2016).

China currently accounts for 12% of the total greenhouse gases in the atmosphere – a figure that has remained fairly steady over the industrial period, at around 8-12%. This is effectively the balance of impacts from all China's greenhouse gas emissions over time – i.e. carbon dioxide, methane, nitrous oxide and halogen compounds – and from all anthropogenic sources. Relative to the rest of the world, China's share of greenhouse gas warming fell slightly in the 1960s, 70s and 80s before starting to climb again as economic growth and fossil fuel burning accelerated.

At the same time, China is responsible for a disproportionate amount of the aerosols emitted around the world, some of which have a strong cooling effect. Though this disperses the effects of warming, rise in aerosols gives rise to air pollution. Air pollution is a serious environmental issue in China, where 1.3m people die each year because of exposure to poor-quality air outdoors.

China's challenges in adapting to climate change are particularly acute as it is a country struggling to prevent even more pollution and natural disasters that stem, in part, from 30 years of unchecked economic growth. Like the United States, the impacts of global climate change in China are diverse, due to the country's vast size and its drastically different geographies ranging from extensive mountains, grasslands and deserts to tropical forests and low-lying coastal areas. The main ones being melting glaciers, rising sea levels, biodiversity loss, and increase in natural disasters etc. The rapid change in temperature has a direct and profound impact on glaciers. Projections show that a temperature rise of 4 degrees Celsius could trigger rapid melting of glaciers on a global scale.

Glaciers melting in the Himalayas could lead to the overflow of 200 glacial lakes and produce large-scale flooding and mudslides in mountainous areas. Areas along the Sichuan-Tibet Highway (Chuan Zhang Gong Lu), the upstream region of Yarkand River, the Eastern part of Pamirs Plateau, and the middle part of Mount Tian have all encountered increasingly frequent and devastating mud slides. In a particularly devastating example, on 10 June 2004, rapid landslides and massive flooding from the River Yi'ong Zangbo in the Tibetan Plateau destroyed major highways and bridges connecting neighboring regions. The massive flood destroyed approximately 10 bridges, 50 miles of highway and hundreds of homes in Tibet. The region containing the sources of the two major rivers in China, the Yangtze River and the Yellow River, used to be covered by around 1,369.86 km2 of glacier, whose abundant runoff provides water for both the Yangtze River and the Yellow River. In recent years, the glacier coverage in the source regions has decreased by around 15km2 . Chinese scientists predict that even if global warming stops, one-third of the glacial area in Tibet will disappear by 2050, and half will disappear by 2090. Glacial retreat may cause a transformation in the pattern of rivers that currently feed the Yangtze River. If these rivers fail to flow into the Yangtze River, the natural runoff volume of the Yangtze River is likely to decrease by 25 percent in the future. Furthermore, if the Yangtze River runoff decreases, the wetland ecosystem in Qinghai a major migratory bird habitat located in northwestern China will face possible desertification.

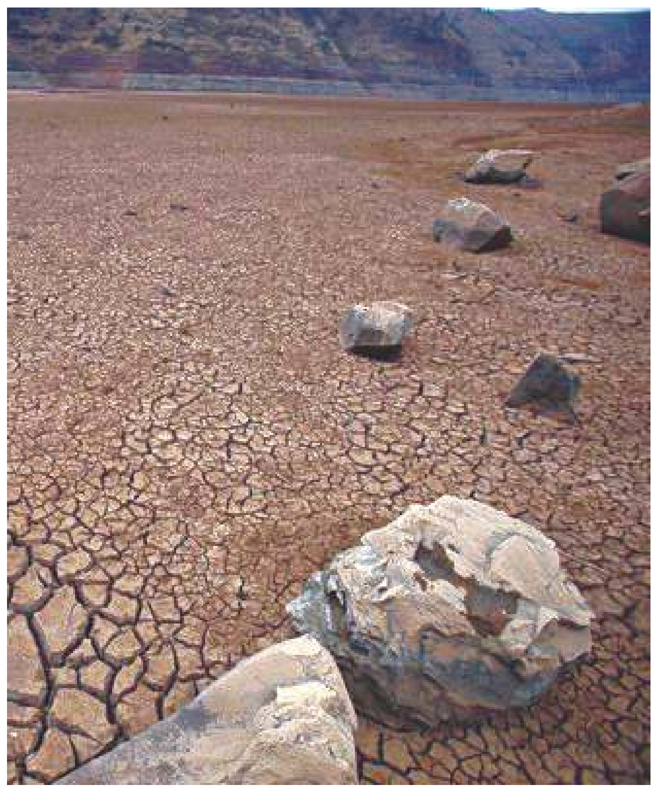
Global warming has a direct impact on China's coastal areas as the rise in average global temperature accelerates the melting of ice caps and increasing sea levels rise. Rapid urbanization along China's coasts also exacerbates the threats from rising sea levels. Shanghai and Tianjin, for instance, show higher rates of sea level rise due to their high concentration of buildings and their over-extraction of groundwater, which decreases land load carrying capacity and accelerates land sinking. Sinking Shanghai, located in a low-lying area near the mouth of the Yangtze River, has a relatively lower land level, making it inherently vulnerable to rising sea levels.

Hong Kong is especially vulnerable to sea level rise due to its geography, high concentration of skyscrapers, and massive amount of reclaimed land. The mean sea level of Victoria Harbor in Hong Kong has increased by 0.12 meters in the past 50 years.

As one of the most biodiverse countries in the world, China is home to 17,300 species of plants and animals. This includes 667 vertebrates, unique geneses, ancient flora and fauna as well as rare animal species. For instance, species, such as giant pandas, golden monkeys and takins only exist in China's high mountain forests in the Southwest. Rapid industrialization, urbanization as well as logging, mining, and hunting, have led to degradation of the habitats of these species. The International Union for Conservation of Nature in its China Species Red list estimates that 34.74 percent of invertebrates, 35.92 percent of vertebrates, 69.91 percent of gymnosperm and 86.63 percent of angiosperm in China are endangered the figures are far higher than the earlier, official government figures that ranged from 2 to 30 percent. China has abundant coral resources along its South China Sea, particularly around Hainan Island. Rapid urbanization, industrialization, and an increase in population along the coast have contributed to the degradation of many coral reefs. Over-fishing and coral mining are causing 80 percent of coral reef degradation around Hainan Island. The increase of carbon dioxide, a major contributing factor to climate change, is also causing ocean acidification. A quarter of carbon dioxide produced from fossil fuels interacts with water and causes carbonic acid. Because coral is sensitive to pH changes, a moderate ocean acidification (a slight decrease in pH) can slow coral growth and cause coral calcification. In the IPCC's third assessment report, the IPCC concluded that extreme weather events, including heat waves, extra tropical and tropical cyclones, droughts, intense rainfall, thunderstorms, snow avalanches and dust storms, are increasing in Asia, particularly in China. The China Meteorological Administration predicts that changing climate trends on land in China include: (1) increasingly frequent and severe dust storms in northern China, (2) less rainfall in eastern coastal areas, and (3) stronger snow storms in southern and central China. The most notable climate trend in the coastal areas includes the increases in sea surface temperatures resulting in more powerful tropical cyclones.

According to World Bank estimates, 480 million Chinese, almost 40 percent of the population, are currently living in regions facing water scarcity. The occurrence of droughts in China, as the United Nations and the World Bank predict, will continue to increase in severity in the next 50 years. Extreme weather events, including typhoons, floods, and droughts have caused great economic loss and adverse

The state-owned, coal-burning Xuanwei Power Station in Yunnan province



Consequences of climate change: Severe drought in Yunnan in March, 2010

Measures to mitigate climate change

- China's twelfth five-year plan (FYP), covering 2011-15, spelled out a number of reforms to domestic energy and climate policies under Guiding Policy Framework.
- China has established pilot carbon trading systems in some of its municipalities and two provinces across the country Cap-and-Trade Programs. On June 19, 2014, the seventh of these pilots was launched in the city of Chongqing. The pilots cover between 35 to 60 percent of emissions within their respective jurisdictions. Each operates under its own rules tailored to regional or local circumstances. The sub-national pilots reflect China's growing interest in the use of market-based instruments and emissions trading in particular to reduce greenhouse gas emissions. The experience gained through these pilot programs is developing familiarity with emissions trading among companies and regulators in large portions of China, and will inform the design of any future national carbon market.
- The twelfth FYP set a target of increasing non-fossil energy to 11.4 percent of total energy use by 2015. Hydroelectric power is the main non-fossil energy source in China, generating 14.7 percent of electricity in 2011. The government wishes to increase installed hydroelectric capacity from 230 GW in 2011, to 330 GW in 2017. Solar and wind energy deployment has increased at rapid pace – for instance, China installed 12.9 GW of solar photovoltaic (PV) in 2013 to reach a total capacity to 20 GW.1 The Chinese government announced targets to increase solar and wind capacity to 70 and 150 GW, respectively, by 2017. After many years of rapid increases, the government is now taking steps to reduce China's coal consumption as in 2013, 67.5 percent of energy consumption was from coal.
- The government has issued the Air Pollution Prevention and Control Action plan with the headline target of reducing coal consumption to 65 percent of total primary energy by 2017. Bans on new coal power plants are now in place in three industrial regions: Beijing-Tianjin-Hebei, Yangtze River Delta and the Pearl River Delta. The Ministry of Industry and Information Technology announced plans to reduce coal consumption by 80 million tons by 2017, and 160 million tons by 2020. China's total coal consumption in 2014 was approximately 2.8 billion tons. At the same time, the State Council has announced plans to cap national coal consumption at 4.2 billion tons from 2020 onwards.
- Nuclear power will play an increasing role in China's energy mix in coming years. Capacity will increase from 14 GW in 2013 to 48 GW by 2017. In total, there are 26 reactors currently in operation, and 28 under construction. The government has set a target of 58 GW of nuclear capacity by 2020.
- Improving energy efficiency is critical to achieving China's carbon intensity targets. In 2008, China passed the Energy Conservation Law to boost energy efficiency throughout the Chinese economy. In 2010, the NDRC implemented demand side management regulations that require utilities to achieve electricity savings of 0.3 percent per year, and reduce peak demand by the same percentage. China also has sector specific energy efficiency standards – for instance, new commercial buildings must comply with building codes on energy use and energy efficiency standards for household appliances that will become more stringent over time.
- In 2012 the China State Council approved a development plan for energy saving from the automobile industry up to 2020. The objective is to speed the development and roll out of more fuel-efficient cars and new energy sources. For manufacturers, China set target fuel economy standards for new cars of 5L/100km, approximately 47 miles per gallon (mpg), by 2020. Consumers were offered a reduction in the vehicle tax paid on energy saving vehicles by half, and eliminating vehicle tax altogether on electric cars.
- China is now planting forests on a larger scale than anywhere else on the planet. These plantations sequester CO2 from the atmosphere, so that Chinese forests are now a net sink of this gas."
- Development of a coal-bed methane industry. Capturing methane (CH4) released during coal production and using it as a fuel to both, reduces emissions and substitutes for other fuel use and emissions
- Fuel economy standards and taxes for motor vehicles. The average Chinese passenger vehicle is required to meet a 36 miles per gallon requirement in 2008. In addition, the Chinese Ministry of Finance adopted a 'gas-guzzler' structure for taxes on new vehicles, doubling taxes on large vehicles while reducing them on small vehicles. More specifically, purchasers of cars with engines above 4-litre capacity will pay a tax of 40 per cent. The tax on vehicles with engines between 3 and 4 litres will rise from 15 per cent to 25 per cent of the purchase price. In contrast, the tax on automobiles with engines less than 1-litre engine capacity will be reduced from 3 per cent to 1 per cent.
- Closing inefficient industrial facilities. In 2006, China announced the decommissioning of hundreds of small, old, industrial plants. Many of the plants were in the cement and steel sectors, but other chemical, refining, and manufacturing facilities were slated for closure as well.

South Africa

In climate terms, South Africa is already living on the edge. Much of it is arid or semi-arid and the whole country is subject to droughts and floods. Even small variations in rainfall or temperatures would exacerbate this already stressed environment. Most South African crops are grown in areas that are only just climatically suitable and with limited water supplies. The climate is set to change for the worse because of rising global emissions of greenhouse gases. There are already ominous signs of change , dry seasons are becoming longer and wet seasons starting later. Rainfall is reported to becoming even more variable, with rain coming in more concentrated, violent bursts in sea level around the coast of SA has increased over a period of time thus decreasing its land mass. As the climate changes, it is South Africa's poor, the majority of the population, who will be the hardest hit. Climate change could increase the prevalence and distribution of vector-borne diseases such as malaria and dengue fever and water-borne diseases such as cholera and dysentery. Such things mean that people living with HIV/AIDS in particular would experience increased risks. South Africa has been playing an influential role as a developing country in international climate change negotiations even though it is not yet obliged to make commitments to reduce emissions. South Africa is also the largest emitter of green house gases on the African continent and home to the world's biggest single emitter of CO2 (Sasol's Secunda plant, which converts coal to diesel and other fuels). South Africa's dependency on coal-fired power stations has already resulted in a yearly per capita emission rate of about 10 tons of carbon dioxide, 43 percent higher than the global average. But despite extremely high per capita energy use, 30% of South African citizens do not have access to electricity. South Africa is faced with a difficult challenge in trying to juggle three imperatives, development (conventionally based on fossil fuels), poverty eradication and climate change.

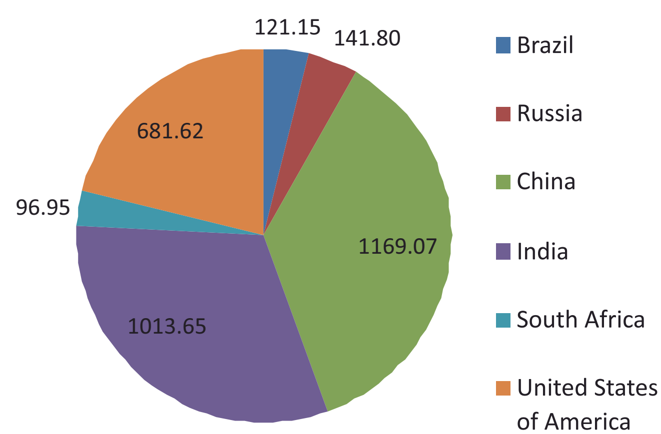
Measures to mitigate climate change

With more than 80% of the country's GHG emissions attributable to energy supply and use, the focus of the tension between national development objectives and climate change mitigation objectives is therefore the energy system. Major government interventions in this area include the 2003 White Paper on Renewable Energy, the 2005 Energy Efficiency Strategy and 2008 Review, the development of the Long Term Mitigation Scenarios (LTMS), and the 2011 National Climate Change Response Policy. Four major areas with the largest mitigation potential in terms of achieving the greatest emission reductions in a cost-effective manner have been identified as energy efficiency, electricity generation, transport, and carbon capture and storage. These deserve particular attention in terms of South Africa's mitigation technology needs. One-hundred-and-twenty-five Clean Development Mechanism (CDM) projects have been submitted at Project Information Note stage, 29 at Project Design Document stage, and of these, 15 have been registered. The latter are expected to generate about 37 361 000 Certified Emission Reductions (US$528 million in revenue) over their lifetime. Apart from mitigation projects aimed at obtaining CDM credits, 56 mitigation projects have been captured in the Department of Environmental Affairs' National Climate Change Response Database, with a total emission reduction potential of 25 million tonnes of CO2e between 2000 and 2050.

Conclusions

We conclude that there is an apparent conflict between the development agenda of the BRICS countries and the issue of climate change. Inspite of this conflict major steps have been taken by the BRICS countries to deal with the climate change agenda. It is important to note that the BRICS countries have been taking significant steps to decrease the mal effects of climate change on their own without having any contemplations on the developed countries who have a record of not curbing long term GHG emissions. In this section we assess the BRICS countries and contribution to climate change viz-a-viz their land mass and population size.

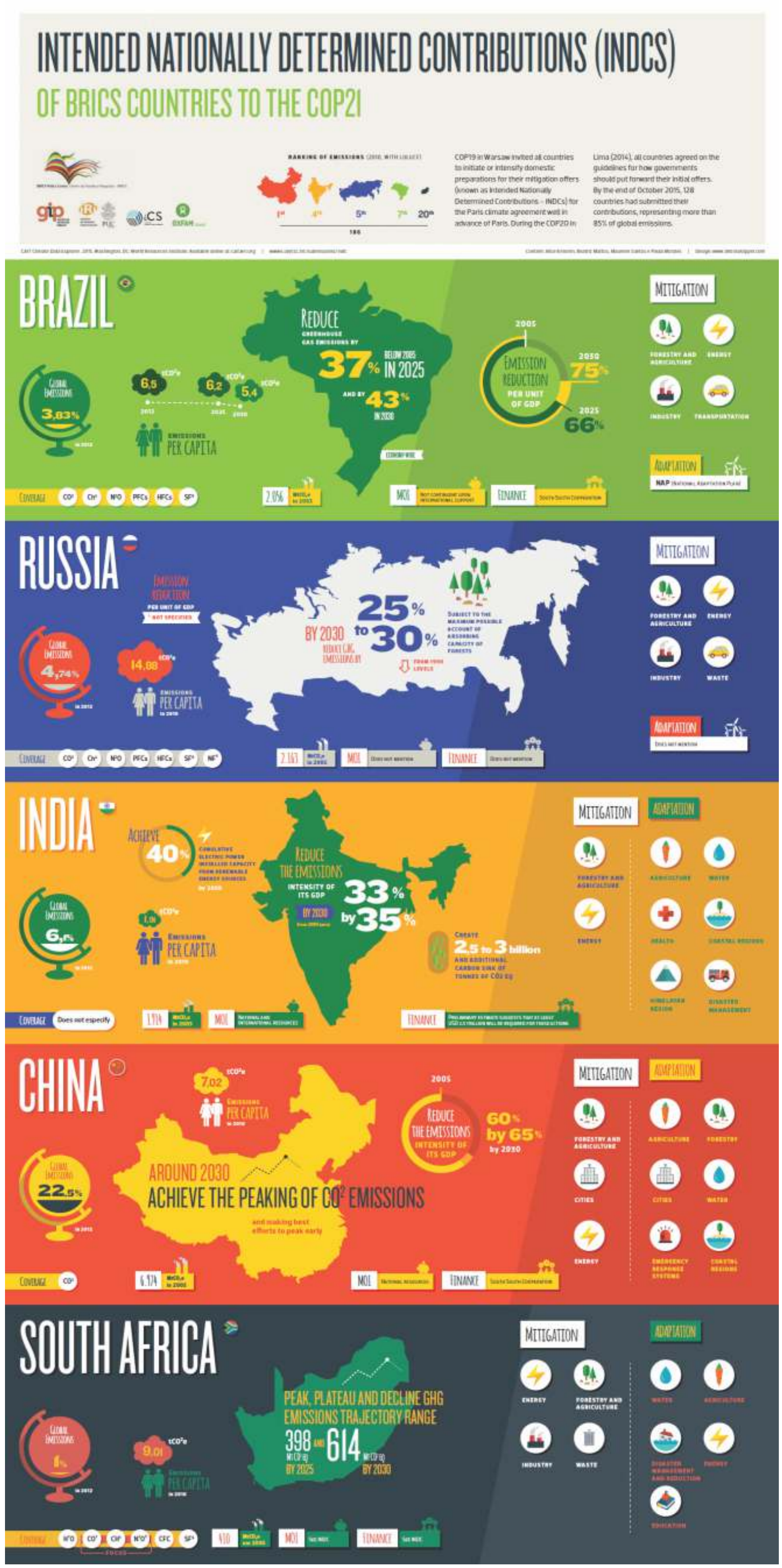
Chart 19: GHG Emissions (tonne CO2e Per Sq Kilometre)



Source: CAIT Climate Data Explorer, 2015: World Resources Institute
*** Greenhouse gas emission expressed in carbon dioxide equivalent**
Data on Land area taken from World Bank Database 2016

Considering the above pie chart, China stands at rank 1 and India rank 2 when compared to the US. The GHG emissions considered here are in absolute terms against the respective landmasses. It is alarming for India to curb its GHG emissions on a war footing. Russia ranks 3, as most of its emissions are contributed by the smaller habitable area even though large portions of Russia are inhabitable, therefore Russia needs to make most of its forests and develop them to be used as a carbon sink . Brazil and South Africa are at rank 4 and 5 which is a comfortable zone of pollution standards. China and India need to make enough attempts to create carbon sinks by planting forests not only in their borders of jurisdiction but moving beyond their boundaries and implementing carbon sink strategies. They need to make investment in deserted countries in irrigation projects to reach water to larger portion of deserts and develop palm forests which do not require large amounts of waters for growth. Also these countries need to support in aiding reverse desertification afforestation projects if they wish to keep up with the development agenda along with keeping climate change in check.

Unlike aerosols, greenhouse gases stay in the atmosphere for a very long time. Carbon dioxide emitted at the start of the industrial revolution is still warming the atmosphere today, which is why scientists take into account historical emissions as well as present day ones to work out a country's contribution to climate change. Climate change is a niche issue of prime importance in bilateral cooperation, as impending laissez faire attitude of a polluting country can excessively damage the development agenda of a developing country resulting in lower human development index.



The lack of a commitment by developing countries under the Kyoto Protocol to reduce their GHG emissions has been cited as a reason for some developed countries not to ratify the protocol, though all such countries acknowledge the need to reduce GHG emissions. The need to include the developing countries in any new global agreement is seen as a very important issue for both government and opposition in Australia. Generally, without successful efforts to curb GHG emissions, developing nations will be responsible for 90 per cent of the growth in such emissions over the next two decades. The bulk of this growth will come from India and China.

To control global GHG emissions, developing countries need to be participants in any global emissions reduction agreement. There are some who suggest that if large developing countries do not make significant commitments to reduce their GHG emissions then developed countries, such as Australia, should not commit to large reductions in their emissions. This notion seems to be reflected in the recent Government White Paper on the proposed Australian emissions trading scheme which stated that Australia's GHG emissions reduction target would be 5 per cent compared to emissions in 2000, absent any international agreement. Critics do not regard this to be an effective target.

An emerging common theme amongst the policies of Brazil, China and India is the growing realisation of the potential severity of the impact of climate change upon them. This appears to have led to increased efforts on their part to meet these challenges. This is a positive sign for their undertaking increased commitments to reduce their GHG emissions in the context of any new international agreement. Indeed, developing countries generally committed to undertaking 'nationally appropriate mitigation actions…in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner' at the United Nations Bali Climate Change Conference in late 2007.

Yet, these countries still appear to insist on a firmer commitment by developed countries, including Australia, to reduce emissions before they will commit to setting a formal target for their GHG emissions. As the above conference decision indicates this commitment may depend on the willingness of the developed world to assist in this task via financing emissions control measures in the developing world and appropriate technology transfer.

Since the Bali meeting some progress has been made towards meeting these apparent developing country requirements. The Poznań UN Climate Change Conference established an enhanced Climate Change Adaptation Fund to assist developing countries. Further proposals on extending the extent of the Kyoto Protocol's Clean Development, and Joint Implementation Mechanisms were put forward. Other funding proposals were suggested but not adopted (to the intense disappointment of developing country participants). This is not rapid progress, but it is progress nonetheless.

Further, the developed countries appear to be making those firmer commitments. The new United States Administration has committed to establishing an emissions trading scheme. Australia has officially stated its commitment to reduce its GHG emissions by 60 per cent over 2000 levels and published a white paper outlining the proposed Australian Carbon Pollution Reduction Scheme. The European Union has undertaken, in the absence of any global agreement, to reduce its own GHG emissions by 20 per cent and take other mitigation measures.

These developments may encourage developing counties to undertake additional commitments to reduce their own GHG emissions. But it is still questionable whether these additional commitments will include participation in any global emissions trading scheme or the setting of binding targets on their own GHG emissions. The best that may be expected is for developing countries to intensify their own mitigation efforts as outlined above. This would still constitute a substantial change from their previous positions.

However, the willingness of Russia to undertake additional commitments in the context of a new global GHG emissions agreement seems questionable. Its stance still appears to be based on a narrow perception of its own short term economic interest, despite the potentially serious impact of climate change upon its territory. That said, any new international agreement that offered significant commercial advantages to Russia would meet with its approval.

Attachment 1: Policies in Force - Brazil, China and India

Following are extracts from the International Energy Agency's Policy database in early February 2009 showing the climate change policies currently in force in Brazil, China and India. However, they are not a complete list of policies be pursued by these countries. The purpose of these tables is to illustrate some of the policies currently in force in these countries addressing climate change issues.

Table 36: Climate Change Policies in Force in Brazil

Policy Name	Type	Target
Mandatory Biodiesel Requirement Programme of Incentives for Alternative Electricity Sources - Programa de Incentivo a Fontes Alternativas de Energia Elétrica - PROINFA	• Incentives/Subsidies • Regulatory Instruments • Tradable Permits	• Energy Production
Brazilian Climate Change Forum	• Education and Outreach • Policy Processes	• Multi-sectoral Policy
Interministerial Commission on Climate Change (CIMGC)	• Policy Processes • RD & D • Education and Outreach	• Framework Policy

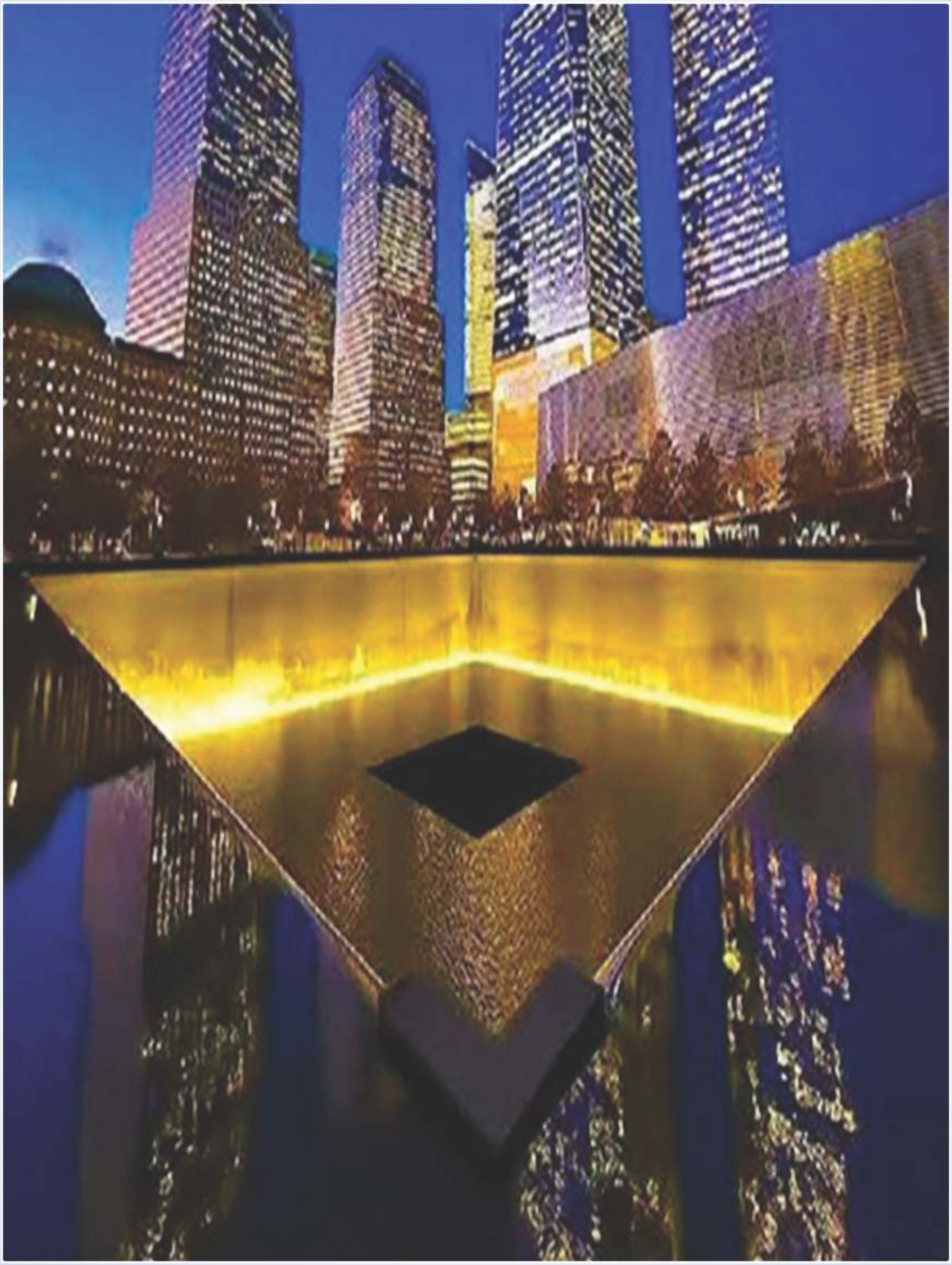
Table 37: Climate Change Policies in Force in China

Policy Name	Type	Target
Hong Kong - Tax Incentives for Environmentally Friendly Commercial Vehicles	• Financial	• Transport
National Climate Change Program	• Policy Processes	• Framework Policy
Preferential Tax Policies for Renewable Energy	• Financial	• Energy Production
Renewable Energy Development Targets	• Policy Processes	• Framework Policy
Renewable Energy Law	• Policy Processes	• Energy Production
Australia - China Bilateral Cooperation on Climate Change (MOU)	• Education and Outreach • Policy Processes • Voluntary Agreement	• Framework Policy
Wind Power Concession Programme	• Incentives/Subsidies	• Energy Production
Reduced VAT and Income Tax	• Financial	• Energy Production
Brightness Programme	• Policy Processes	• Energy Production

Table 38: Climate Change Policies in Force in India

Policy Name	Type	Target
Generation based incentives for wind power	• Incentives/Subsidies	• Energy Production
National Action Plan on Climate Change	• Policy Processes	• Framework Policy
Solar Power Generation Based Incentive	• Incentives/Subsidies	• Energy Production
Energy Conservation Building Code	• Regulatory Instruments	• Buildings
Ethanol Production	• Incentives/Subsidies Policy Processes Regulatory Instruments	• Transport
Pre-Payment Electricity Metering	• Regulatory Instruments	• Buildings • Multi-sectoral Policy
Tariff Policy 2006	• Incentives/Subsidies Regulatory Instruments	• Energy Production
Central Financial Assistance (CFA) for Biogas Plants	• Education and Outreach Financial Policy Processes Regulatory Instruments Incentives/Subsidies	• Energy Production
Energy Conservation Act	• Education and Outreach Regulatory Instruments	• Framework Policy

7.
Trade Dynamics In BRICS Countries



7.
Trade Dynamics In BRICS Countries

Inclusion of the trade dimension in BRICS agenda displays the further strengthening of the BRICS alliance . Trade helps businesses grow along with multilateral exchange of knowledge and expertise. Trade has been localized by formation of trade blocks to promote trade among constituent countries based on the principle of mutual benefit. At the same time, BRICS was developed as a concept for development rather than as mere alliance alone. However, total existing trade of the BRICS countries viz a viz the trading blocks has been examined in this chapter to understand possible strengths of this block in context to the others.

Box 22: Broad Perspective on BRICS Engagement

Mr. Madan Sabnavis, Chief Economist, CARE Ratings

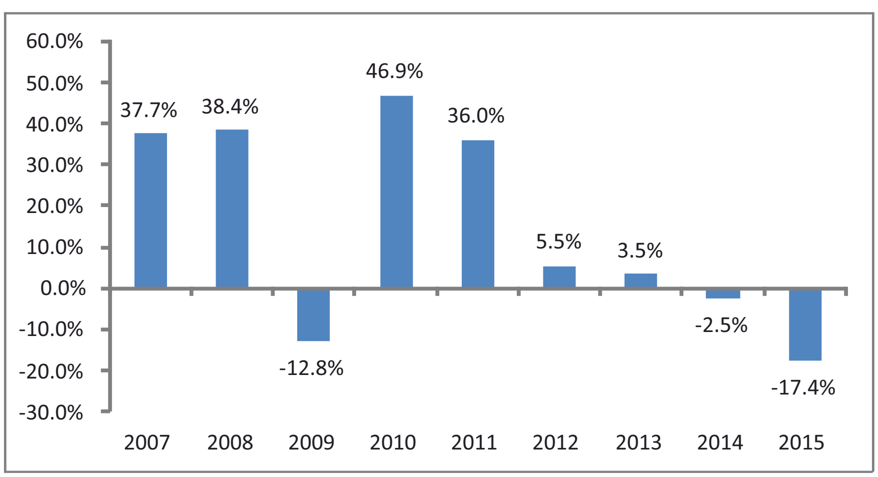
The members of the BRICS Alliance have vast diversity in terms of political system, geography, language and culture. Also, there is certain amount of mutual distrust between countries such as China and India. Other economic groups such as ASEAN, SAARC have the advantage of geographical proximity, which is not the case for BRICS countries. The huge distance among the BRICS countries give rise to high logistics cost and time for transportation of goods and people. Because of these factors, the BRICS group has remained a fragile alliance at the political level.

In this context, it is difficult for BRICS countries to adopt a free trade agreement which could improve exports and employment opportunities in all the member countries.

The BRICS countries have set up New Development Bank to finance the infrastructure and development projects in member countries. The effectiveness of this agency depends on the mode of financing adopted by this bank. If the bank successfully raises funds from offshore markets such as the USA or London, its cost of funds would be less and it can offer loans to developing countries at a reasonable interest rate. On the other hand, if the bank raises funds from BRICS countries, its cost of funds would be high and its functioning would be no different from the existing development finance companies in the member countries.

International trade accounts for a considerable share of the GDP of the BRICS countries. Exports of goods and services contribute 30% and 29.5% respectively to the GDP of South Africa and Russia respectively. The corresponding figure for China and India are 22.4% and 23% respectively. Among the five BRICS countries, it is only in Brazil that the share of exports in total GDP is comparatively less at 13%. The share of BRICS countries in world trade rose from 6% in 1996 to 16% today. Considering the significant contribution of international trade to the economy of the BRICS countries, this section is devoted to the analysis of trade dynamics in the BRICS countries.

Chart 20: Growth (in %) in Intra-BRICS Trade Volume



Source: World Integrated Trade Solutions

As can be seen from the above chart, growth in trade volume within the BRICS countries was strong until 2011. Since then, there has been sharp decline in the growth of intra-BRICS trade and during 2014 and 2015 it witnessed negative growth. The main reason for the sharp decline in intra-BRICS trade volume during 2014 and 2015 is the fall in commodity prices. This affected bilateral trade volume of major commodity exporting countries such as Brazil, Russia and South Africa with the other two BRICS countries. For instance, bilateral trade between Brazil and India declined 30.8% in 2015. Similarly, bilateral trade between Russia and China fell 28% and that of China and South Africa contracted 23.5%. However, trade between India and China was relatively less affected with only 0.7% contraction during 2015. This is because even though India's exports to China declined 28.7%, its imports from China expanded 5.8% during the said year. India's exports to China fell because of sharp decline in the shipment of cotton, mineral fuel and organic chemicals, which together account for around 50% of India's exports.

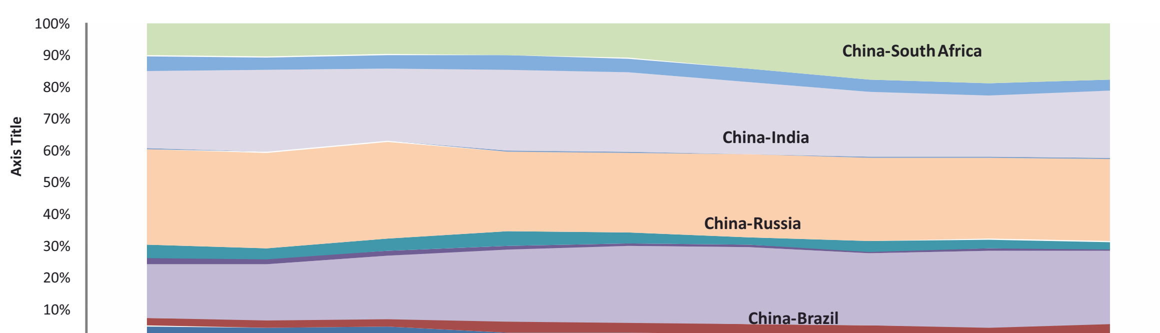
Box 23: Promoting India-Russia Trade

Dr Yadnya Pitale, Joint Director , Research MVIRDC , WTC Mumbai.

China has captured most of the Russian market with very little access for the exporters from India to pitch in. However, a good demand exists for India in the food processing sector exports to Russia. India runs a negative trade balance with China . A probable FTA intra BRICS can provide some weight to Indo-Russian trade so as to offset this negative trade balance of India with China. Fulfillment of India's energy requirements is the key to bring about financial equality among Indian masses a strategic tie up with Russia in case of oil imports will help India achieve this objective.

On the other hand, China exports electrical machineries and equipments, nuclear reactors, boilers and related machineries, chemicals, fertilizers, plastic and plastic products, value added textile products and so on. Chinese export of these goods to India continued to remain strong in 2015.

Chart 21: Share of Bilateral Trade in Total Intra-BRICS Trade



	2006	2007	2008	2009	2010	2011	2012	2013	2014
China-South Africa	10.3%	10.7%	9.8%	10.1%	11.0%	14.3%	17.9%	18.8%	17.8%
India-South Africa	4.8%	4.0%	4.4%	4.4%	4.5%	4.3%	3.9%	3.8%	3.5%
India-China	24.5%	25.8%	22.8%	25.7%	25.1%	22.7%	20.5%	19.6%	21.2%
Russia-South Africa	0.2%	0.2%	0.3%	0.3%	0.2%	0.2%	0.3%	0.3%	0.3%
Russia-China	29.9%	30.0%	30.6%	24.8%	25.1%	26.0%	26.1%	25.6%	26.1%
Russia-India	4.1%	3.3%	3.8%	4.7%	3.2%	2.3%	3.2%	2.9%	2.2%
Brazil-South Africa	2.0%	1.7%	1.4%	1.1%	0.9%	0.8%	0.8%	0.7%	0.6%
Brazil-China	17.1%	17.7%	20.0%	22.7%	24.1%	24.2%	22.5%	24.0%	23.0%
Brazil-India	2.5%	2.4%	2.6%	3.5%	3.3%	2.9%	3.2%	2.7%	3.4%
Brazil-Russia	4.6%	4.1%	4.4%	2.7%	2.6%	2.3%	1.8%	1.6%	2.0%

Source: World Integrated Trade Solutions

As can be seen from the above chart, bilateral trade among BRICS countries is largely dominated by China's trade with fellow BRICS countries. Especially, Russia-China bilateral trade accounts for 26% of total intra-BRICS trade volume. Similarly, the contribution of Brazil-China trade is 23%, India-China trade is 21% and China-South Africa trade is 17.8%. Thus, China's trade with other BRICS countries account for 88% of total intra-BRICS trade volume. Considering the substantial contribution of China to the intra-BRICS trade volume, it is worth examining in detail the product-wise components of trade between China and other BRICS countries and the relevant value chain.

China has set up a strong value chain in the minerals and metals sector in its bilateral trade relations with Russia. For instance, China imported USD 677 million of iron ores and concentrates and USD 2198 million of coal and lignite from Russia in 2014. In return, the country exported USD 1004 million of finished iron and steel products. Similarly, China imported USD 387 million of primary plastics from Russia and exported finished plastic articles worth USD 743 million in 2014.

Chart 22 A: China-Russia Value Chain in minerals and metals

In the same way, China has established strong value chain in the furniture industry by importing raw wood from Russia and exporting finished furniture to South Africa and India. In 2014, China imported rough wood worth USD 1542 million and sliced wood worth 1558 million from Russia. In turn, it exported furniture and parts to India and South Africa worth respectively USD 702 million and USD 579 million.

Chart 22 B: Russia-China-South Africa/India Value Chain in furniture

In the leather industry, China has built strong value chain between with India, Brazil and South Africa. China bought USD 932 million and USD 258 million worth of bovine leather respectively from Brazil and India in 2014. It converted them into suitcase, hand bags, footwear and other products and sold the same to Brazil and South Africa. South Africa bought USD 766 million worth of footwear and parts, USD 298 million worth of suitcase, hand bags and other products from China in 2014.

Chart 22 C: Brazil/India – China – South Africa/Brazil value chain in leather Industry

In the textile industry, China imported USD 1529 million and USD 276 million worth cotton from India and Brazil in 2014 and exported textiles, yarn and fabrics worth USD 3285 million and USD 2522 million to these two countries. China also exported garments and clothing accessories to Russia and South Africa worth USD 9993 million and USD 1813 million in 2014.

Chart 22 D: India/Brazil-China-India/Brazil/ Russia/South Africa value chain in garment industry

Box 24: Strengthening India-China Partnership

Mr. Zheng Bin, Chief Executive Officer, ICBC and Chairman, Mumbai Chinese Enterprise Association

BRICS is emerging as a trade and economic block rather than just a political block. Before the emergence of the BRICS concept, people from the member countries used to have trading and economic relationship with western countries such as the USA, UK etc. However, in recent years, we see growing people-to-people interaction among BRICS countries. In fact, till some years ago, exchange of people and businessmen between China and India was limited. But in recent times, the situation has been changing and there is greater movement of people between both the countries.

As a sign of improvement in relationship, the investment from China to India has grown several-fold (around 400-500%) in the last one year. This is also because of the fact that India is emerging as the fastest growing economy in the world and it is increasingly being seen as an attractive investment destination by foreign investors.

China has grown at an exceptionally high rate in the last three decades and in future it is difficult for it to sustain growth above 8-9%. On the other hand, emerging economies such as Vietnam, Thailand have far less population compared to China or India. In this context, India is in a uniquely advantageous position in the world and in the next 10-15 years, no country in the world can match India's pace of economic growth.

Although India is the fastest growing economy in the world, the productivity of labour in India is far less compared to that in China. For instance, in the mining industry, while an Indian labourer drills 20 metre per day, a Chinese labourer drills around 100 metre per day. Therefore, there is scope for India and China to work together in the areas of skill development, labour training, exchange of cutting edge production technologies and so on.

Another area of co-operation between both the countries is the use of local currency for trade in goods and services. China has a currency swap agreement with Brazil and South Africa to accept local currencies of each other for trading in goods and services. India can also explore similar agreement with China for developing commercial ties between both the countries.

There is also scope for partnership in the financial services sector between both the countries. One such area is the setting up of a common rating agency for BRICS countries to reduce the reliance of BRICS and other emerging economies on the rating agencies of the western countries.

However, deeper partnership in the financial services sector requires that India relax some of its regulatory norms for foreign financial institutions setting up operation in this country. Currently, foreign banks setting up operation in India must comply with priority sector lending norms. Similarly, there is restriction on the number of foreign nationals who can work in the Indian branch of a foreign bank. A related point in this regard is that the government must relax visa norms to enable hassle-free movement of people between both the countries.

ICBC is committed to improve the economic partnership of India and China. The company has financed some of the companies in Tata Group, Adani Group, ILFS and so on. The bank acts as a gateway for Indian companies to have partnership with Chinese companies.

Similarly, China exports other value added products to Russia, India, Brazil and China as follows –

Table 39: Value Added Exports From China to BRICS Countries in 2014

Russia	
Commodities	**USD Million**
Garments and clothing accessories	9993
Textile yarn, fabrics and made-up articles	3193
Footwear and parts thereof	3098
Telephone sets	2118
Auto parts and accessories	2100
Automatic data processing machines and units	1912
Lampsand lighting fittings	1571
Products of steel or iron	1004
Plastic articles	743
Motor vehicles	725

India	
Commodities	**USD Million**
Textile yarn, fabrics and made-up articles	3285
Products of steel or iron	3102
Automatic data processing machines and units	2924
Fertilizer	2340
Telephone sets	1981
Medical and pharmaceutical products	1419
Auto parts and accessories	873
Garments and clothing accessories	872
Lampsand lighting fittings	702
Furniture and parts	702

Brazil	
Commodities	**USD Million**
Textile yarn, fabrics and made-up articles	2522
Garments and clothing accessories	2037
Products of steel or iron	1588
Liquid crystal display panel	1077
Auto parts and accessories	981
Suit-case,hand bags and similar containers	702
Automatic data processing machines and units	631
Air conditioner	593
Fertilizer	566
Ship	563

Source: World Integrated Trade Solutions

South Africa	
Commodities	**USD Million**
Garments and clothing accessories	1813
Textile yarn, fabrics and made-up articles	959
Footwear and parts thereof	766
Automatic data processing machines and units	615
Furniture and parts	579
Telephone sets	521
Products of steel or iron	500
Auto parts and accessories	482
Suit-case,hand bags and similar containers	298
Pottery or porcelain ware	275

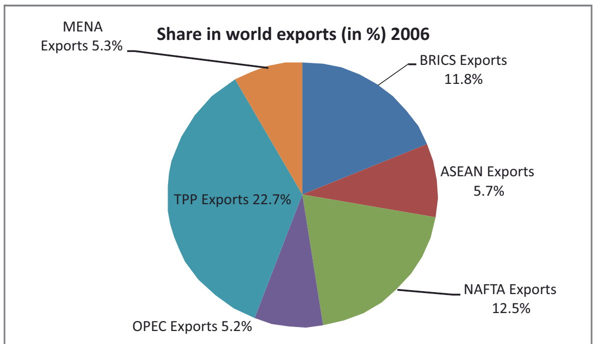
Source: World Integrated Trade Solutions

BRICS Vs Other Trade Blocks

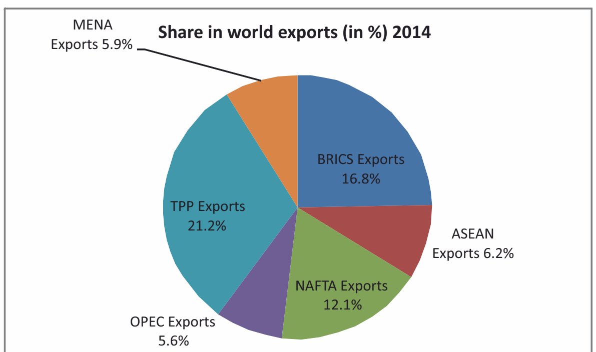
Exports

Here, we analyse the share of BRICS countries in world trade and comparative performance of BRICS exports and imports vis-à-vis exports and imports of major country blocks such as The North American Free Trade Agreement (NAFTA – 3 countries), Transpacific Partnership (TPP – 12 countries), Middle East North Africa (MENA – 21 countries), Association of Southeast Asian Nations (ASEAN – 10 countries) and The Organization of the Petroleum Exporting Countries (OPEC- 12 countries). The analysis includes trend analysis, correlation analysis and volatility analysis based on trade data of nine years from 2006 to 2014 of the relevant countries from World Integrated Trade Solutions (WITS), which is developed by the World Bank. The selection of this period allows us to analyse the trade patterns of the BRICS countries before the global financial crisis of 2008 and after the crisis.

Chart 23: Share of Country Groups in World Exports



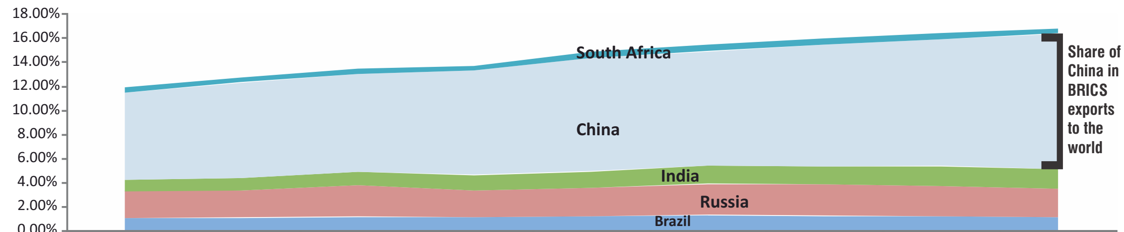
Source: World Integrated Trade Solutions



Source: World Integrated Trade Solutions

As can be seen from the above chart, the share of exports of BRICS countries rose 5% from 11.8% in 2006 to 16.8% in 2014. During the same period, the share of exports of other country groups such as MENA, NAFTA, ASEAN, TPP and OPEC have remained stagnant.

Chart 24: Share of BRICS Countries in World Exports



	2006	2007	2008	2009	2010	2011	2012	2013	2014
Share (in %) of South Africa in world exports	0.39%	0.42%	0.42%	0.39%	0.49%	0.54%	0.49%	0.46%	0.44%
Share (in %) of China in world exports	7.25%	7.98%	8.15%	8.72%	9.45%	9.52%	10.20%	10.62%	11.35%
Share (in %) of India in world exports	0.91%	0.95%	1.04%	1.28%	1.32%	1.51%	1.44%	1.62%	1.54%
Share (in %) of Russia in world exports	2.26%	2.30%	2.67%	2.19%	2.38%	2.59%	2.61%	2.54%	2.41%
Share (in %) of Brazil in world exports	1.03%	1.05%	1.13%	1.11%	1.18%	1.28%	1.21%	1.16%	1.09%

Source:World Integrated Trade Solution

The increasing share of BRICS group in world exports indicates its growing dominance in world economy. However, country by country analysis suggests that this 5% growth of export share of the BRICS group came largely from the increase in the share of China and to some extent India in world exports (see the chart above). China's share in BRICS exports grew 4% from 7.25% in 2006 to 11.35% in 2014. While India's share expanded 0.63% during the corresponding period. Share of the Russian exports to world exports remained largely steady around 2.4% during the nine-year period. Similarly, there was no significant change in the contribution of exports from South Africa and Brazil to world exports during this period.

Trend Analysis

Chart 25: Annual Growth (in %) in exports of Country Groups

Source: World Integrated Trade Solutions

We have analysed the annual trend of exports across these trade blocks. There is a significant co-movement in the trend of exports of these six trade blocks (as can be seen from the above graph). During 2009, exports of all the country groups witnessed negative growth in the aftermath of the global financial crisis. In the following year, there is a recovery in the trend and remained in positive territory till 2013. After 2013, exports contracted on an annual basis for all of them. It is also, important to note in this trend that the BRICS trend has maintained consistency in rise and fall along with NAFTA, ASEAN and TPP due to the well diversified export basket. There is steep rise and fall in trends of OPEC and MENA blocks.

Correlation with World Exports

In this section, we examine the correlation of the growth in global exports and the exports of the individual trade blocks. Global exports have always been concentrated in exports of energy rich commodities such as crude oil and coal. As can be seen from the following table, the strong covariance of exports growth in OPEC and MENA country groups with the world exports growth proves this fact.

Table 40: Correlation Coefficient Matrix of Annual Exports Growth

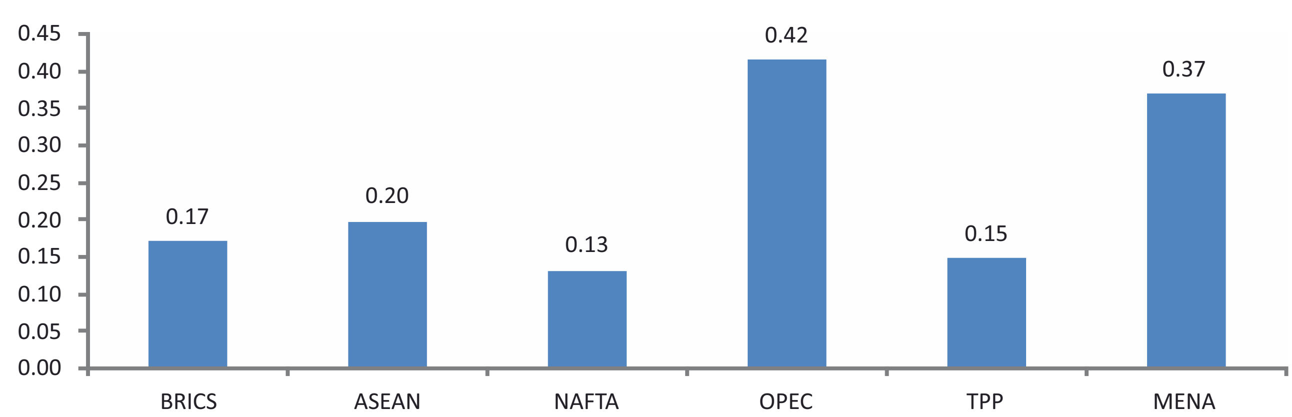
	BRICS	*ASEAN*	*NAFTA*	*OPEC*	*TPP*	*MENA*	*World Exports*
BRICS	1.00						
ASEAN	0.97	1.00					
NAFTA	0.97	0.97	1.00				
OPEC	0.83	0.88	0.84	1.00			
TPP	0.97	0.99	0.99	0.86	1.00		
MENA	0.89	0.93	0.91	0.97	0.92	1.00	
World Exports	0.99	0.96	0.97	0.83	0.97	0.89	1.00

There is a significant correlation between the trade blocks and world exports inferring regular dynamic trade between them.

Volatility Analysis

In this section, we examined whether the growth in the exports of these major trade blocks is steady or volatile. The volatility of exports for each of these trade blocks has been computed viz a viz last nine years from 2006 to 2014. It was found that the growth in the exports of MENA and OPEC countries is more volatile than that of BRICS, NAFTA, ASEAN and TPP country groups (see the chart below).

Chart 26: Standard Deviation of Annual Growth in Total Exports of Country Groups



Source: World Integrated Trade Solutions; World Trade Centre Mumbai calculations

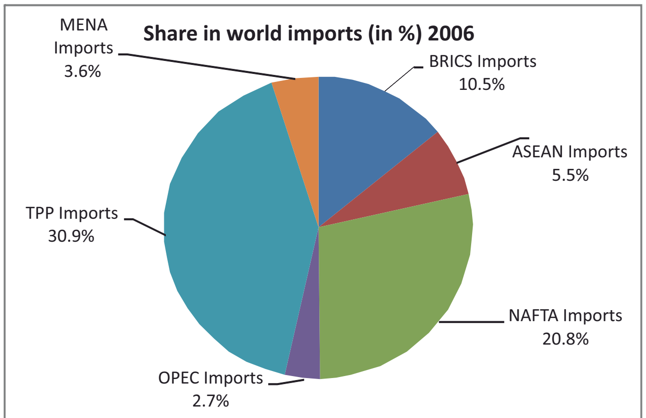
The high volatility of the exports growth in MENA and OPEC countries could be attributed to the nature of their export baskets. Export baskets of OPEC and MENA countries are dominated by commodities, especially crude oil. The average share of crude oil and other fuel in the total export revenue of MENA and OPEC countries is 60% and 64% respectively. Value of commodity exports are subject to the international commodity prices, which are highly volatile. Therefore, export performance (in value terms) of MENA and OPEC countries are influenced by swings in commodity prices. Also, demand for commodities depends on the economic condition in the importing countries. Strong economic growth creates high demand for raw materials, metals and other primary commodities, thereby improving the export performance of commodity exporters. On the other hand, weak economic growth reduces import of these commodities. Therefore, the exports growth in the commodity-dependent countries in MENA and OPEC are subject to high volatility.

On the other hand, the exports baskets of NAFTA, TPP, ASEAN and BRICS are well diversified and they include manufactured value added goods. The export basket of China, which accounts for 70% of BRICS exports, is largely manufactured goods, capital goods, and other value added commodities. Similarly, machinery, vehicles and parts, plastic articles and other manufactured products contribute over 50% to the export revenue of ASEAN countries. The export basket of USA, which accounts for 65% of the exports of NAFTA countries, comprise of 33% capital goods and 24% consumer goods. The share of crude oil, petroleum products and other fuel in the total export basket of ASEAN is only 11%. The corresponding share for the USA and China are 8% and 1% respectively. Therefore, the growth in the exports of BRICS, NAFTA, ASEAN and TPP countries is subject to less volatility compared to MENA and OPEC countries. We can also conclude from this comparison of exports of the six trade blocks that a well diversified export basket exhibits less volatility that a highly concentrated one.

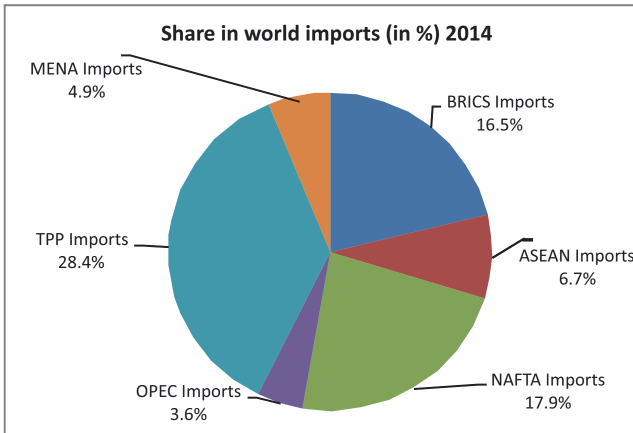
Imports

Now, we analyse the trends in the imports of BRICS countries and how they compare with the imports of other trade groups. As can be seen from the following graph, the share of BRICS group in world imports has risen the most among all the six trade blocks considered in this study between 2006 and 2014.

Chart 27: Share of Country Groups in World Imports



Source: World Integrated Trade Solutions

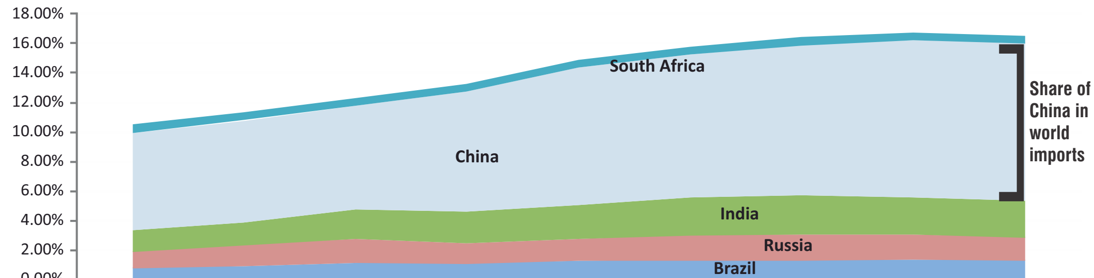


Source: World Integrated Trade Solutions

BRICS countries had a share of 16.5% in total world imports in 2014, which is far higher than 10.5% in 2006. The share of ASEAN countries rose marginally from 5.5% to 6.7% during this period. Similarly, the share of OPEC and MENA countries shows marginal growth. However, the share of NAFTA and TPP groups witnessed declined in share of world imports.

Again, the increase in the share of BRICS countries in world imports is largely led by China. The following chart illustrates the growth in the import share of BRICS countries between 2006 and 2014. The chart shows that China's share in world imports grew from 6.53% in 2006 to 10.68% in 2014.

Chart 28: Share of BRICS Countries in World Imports



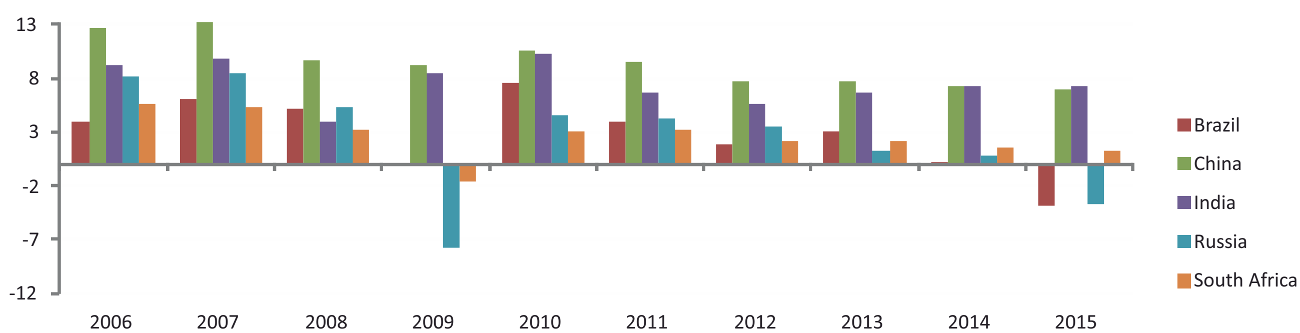
	2006	2007	2008	2009	2010	2011	2012	2013	2014
Share (in %) of South Africa in world Imports	0.57%	0.57%	0.54%	0.52%	0.55%	0.57%	0.58%	0.56%	0.54%
Share (in %) of China in world Imports	6.53%	6.87%	7.04%	8.14%	9.27%	9.70%	10.12%	10.64%	10.68%
Share (in %) of India in world Imports	1.47%	1.57%	1.96%	2.16%	2.32%	2.57%	2.72%	2.54%	2.51%
Share (in %) of Russia in world Imports	1.14%	1.43%	1.66%	1.38%	1.52%	1.70%	1.76%	1.72%	1.56%
Share (in %) of Brazil in world Imports	0.75%	0.87%	1.08%	1.03%	1.20%	1.26%	1.24%	1.31%	1.25%

Source: World Integrated Trade Solution

On the other hand, the share of India grew marginally from 1.47% to 2.51%, while that of Brazil expanded from 0.75% to 1.25%. The share of Russia grew even less from 1.14% to 1.56%. South Africa witnessed marginal decline in its share from 0.57% to 0.54%.

China's import share was growing faster than other BRICS countries because of its strong domestic economic growth. as can be seen from the following graph, the annual GDP growth rate of China (shown in green bar) was higher than other BRICS countries between 2006 and 2014.

Chart 29: Growth Rate (in %) of GDP in Current Prices



Source: World Economic Outlook 2016, IMF

Between 2006 and 2015, China's GDP at current prices expanded at an average annual rate of 9.54% compared to 7.52% in India, 2.47% in Russia, 2.76% in Brazil and 2.61% in South Africa. China had to import huge raw materials and capital goods to support the high growth in its domestic economy. As can be seen from the following table, China ranked first among BRICS countries in terms of share of capital goods in total imports. Similarly, China ranked second after India among BRICS countries in terms of share of raw material total imports.

Table 41: Share of Raw Material Imports in Total Imports

Countries	2006	2011	2015
India	38.26	37.3	31.64
China	18.58	28.77	21.79
South Africa	18.04	18.05	14.33
Russia	10.03	7.56	9.66
Brazil	16.72	12.26	9.57

Source: World Integrated Trade Solution

Table 42: Share of Capital Goods Imports in Total Imports

Countries	2006	2011	2015
China	49.01	37.45	42.1
Russia	32.06	35.18	38.13
Brazil	35.58	32.59	34.29
South Africa	31.58	29.75	29.26
India	22.71	16.26	20.24

Source: World Integrated Trade Solution

Conclusion

Thus, we can fairly say that BRICS has tremendous competitive advantage of being developed as a trade block. BRICS block has diversified range of imports and exports. Intra country movement of trade will be beneficial to the block as such.

8.
Finding Primary Facts

8. Finding Primary Facts

The study "Engineering of the BRICS Engagement", aims to analyze BRICS engagement in context to its impact on bilateral relations between the countries. The BRICS engagement has grown from a group formed for the purpose of development in the emerging economies into a stronger alliance representing itself in one of the important dimensions upon which bilateral relations are based. The NDB, CRF, Arbitration Center, Credit Rating Agency are some of the dimensions upon which the BRICS alliance is working upon. Apart from these there are various other institutional mechanisms important being climate change agenda, information sharing and boosting trade on basis of a comprehensive FTA which are presently on the BRICS agenda and are taken up for study. India hosted the 8th BRICS Summit during its Chairmanship in October 2016 in Goa. The theme of India's BRICS Chairmanship is Building Responsive, Inclusive and Collective Solutions. During India's BRICS Chairmanship, it was proposed to adopt a five-pronged approach:

(I) Institution building to further deepen, sustain and institutionalize BRICS cooperation;

(ii) Implementation of the decisions from previous Summits;

(iii) Integrating the existing cooperation mechanisms;

(iv) Innovation, i.e., new cooperation mechanisms; and

(v) Continuity, i.e., continuation of mutually agreed existing BRICS cooperation mechanisms.

In context to the five pronged approach the study has made an attempt to understand the present scenario and the present viability and potential of this alliance. Also, interactive meetings were held with many stakeholders concerned with the BRICS agenda which consisted of country representatives of the BRICS nations, BRICS banking concerns, traders, Indian stock exchange and credit rating agency representatives and economists. The study has included qualitative assessments and secondary data analysis in the relevant chapters . This chapter focuses on some discreet issues concerned with the global confidence in the BRICS alliance which needed mention and are thus quantitavely represented.

Box 25: Sustainability of BRICS Alliance

Mr. Sergey Mitreykin, Head Representative Office, Gazprombank

The NDB will be a challenge for IMF may be five decades down the line. The engagement is a sustainable one.

Mr. Ruijin Yang, Deputy Director General, People's Republic of China

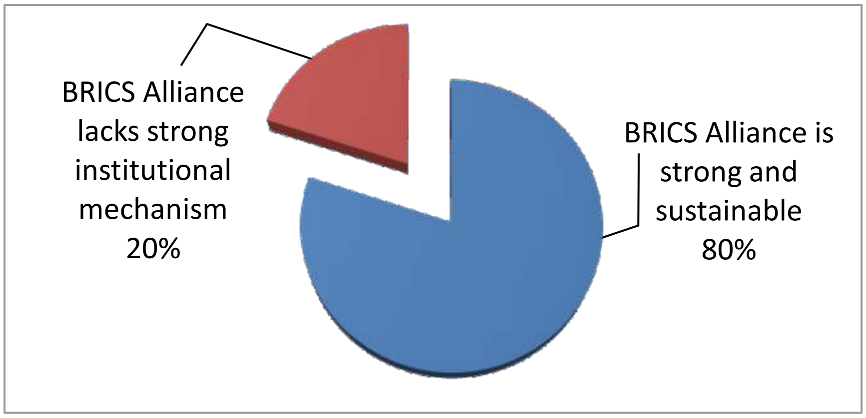
The BRICS engagement is a sustainable one and has a bright future in spite of the various conflicts.

Mr. Andrew Cross, Deputy Treasurer, IFC-Asia & Pacific

The IMF is having a depth and the NDB will require many years to compete with this depth of funds.

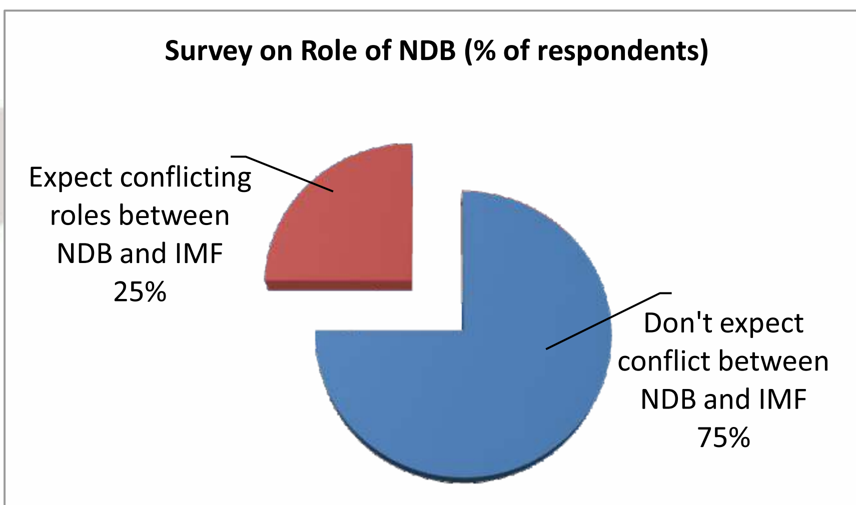
An overwhelming 80% of participants in the survey believe that the BRICS group is a robust and sustainable alliance despite the prevailing disturbances in Brazil, India and China. China faces economic slowdown coupled with property price bubble, political leadership crisis in Brazil and South Africa, India, on the other hand, faces border issues with its neighbor. The participants feel that the BRICS forum offers a credible institutional arrangement for member countries to support each other in times of economic or financial crisis.

Chart 30 A: Survey Response; Sustainability of BRICS Alliance (% of respondents)



There is a strong positive response on the role and credibility of New Development Bank (NDB), majority of the participants expressed hope that the body would emerge as a credible multilateral institution to support the financial needs of less developed countries. At the same time, 75% of the respondents believe that there is no evidence of conflict between the roles of International Monetary Fund and NDB. Also, respondents feel that there would be no concentration of capital and financial interest of any one country and further dilution in stake is a positive indication with the BRICS banner being maintained for the institution.

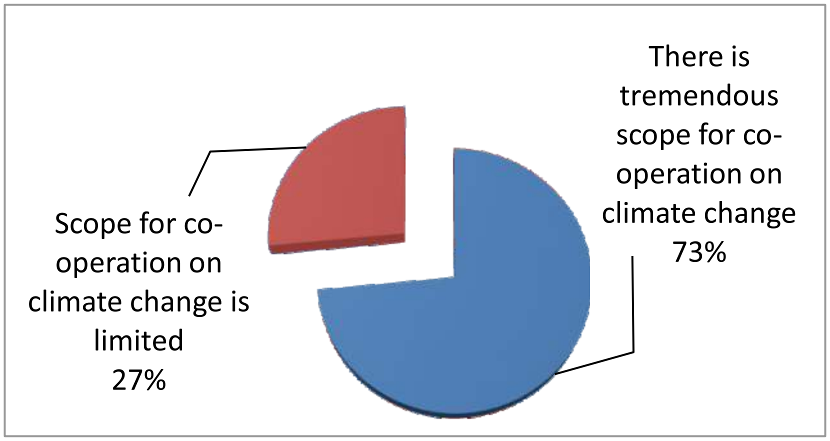
Chart 30 B: Survey Response; Role of NDB (% of respondents)



Climate Change and BRICS

Climate change has been an important agenda for major country associations. Also, it is gaining importance in the emerging market countries due to the mass exploitation of resources for ensure growth and development leading to pollution of the environment. 74% of the participants emphasized importance and alignment with the global climate protection principles.

Chart 30 C: Survey Response; Co-operation Among BRICS in Mitigating Climate Change (% of respondents)



The coming together of the BRICS nations was perceived to be setting up of a political block however with the setting up of the NDB Bank its emergence as development block became more evident. In the recent meetings and deliberations common trade and investments appeared on the agenda hence BRICS emerging as an economic block also became evident.

Yaping Qian, Center for BRICS Studies, Fudan University

BRICS has a bright future while facing skepticisms and challenges since it was created in 2001 as an investment concept. Over the past decade, BRICS countries serve as important engines for world economic recovery. Although BRICS members' economic growth has slowed down (except India) since 2013, which adds obstacles and uncertainties to BRICS cooperation, BRICS countries still hold important common interests and enjoy wide space for cooperation.

After a decade of cooperation, BRICS has become a political club and established a number of mechanisms and institutions, such as the New Development Bank, but it still has a long way to go to serve as an important and stable political entity which might impact significantly on global governance The core question of BRICS in the next decade is how to deepen practical cooperation within the five countries in an all-round manner. BRICS countries should make more efforts in the following areas:

First, strengthen pragmatic cooperation in economy and trade. It is important for BRICS countries to strength internal cooperation to expand common interests, jointly address challenges and play their roles in international economic cooperation. The further substantial development of the BRICS and how its role plays in the world depends upon their respective development, their capabilities to overcome the structural obstacles among the five countries. BRCIS members should seek common ground while reserving differences and encourage measures to find and expand common interests in practical areas, such as infrastructure construction, Global Value Chains, etc.

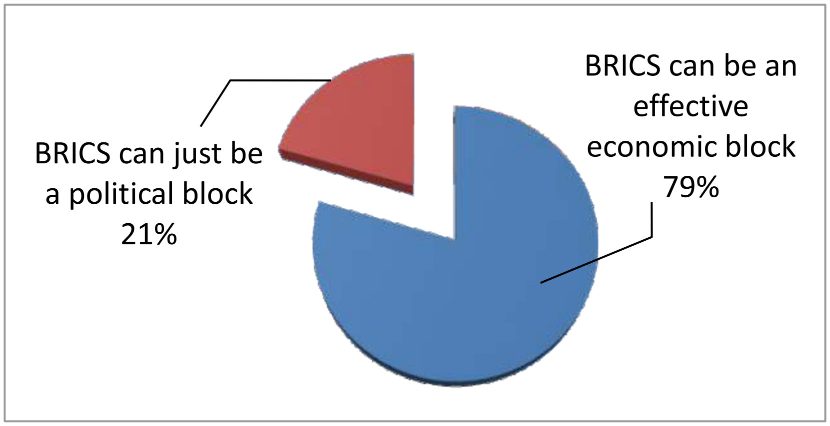
Second, BRIC countries are all regional powers and have common goals to increase their voice and rights in the international arena. With global governance facing unprecedented difficulties, BRICS members have the responsibility and ability to provide global public goods through south-south cooperation and safeguard peace and stability in the region.

Third, BRICS countries need to enhance people-to-people and cultural exchanges, which is the basis of BRICS cooperation. Because of the heterogeneous nature of the five members, such as their great disparity of economic size and position in the global production chains, different values, different political structures and geopolitical interests, there exists many structural obstacles and challenges in the course of their efforts to strengthen its cohesive force of cooperation. BRICS members need to deepen mutual understanding and friendship through active exchanges at all levels, especially non-governmental exchanges.

Trade and Investment Inter BRICS

Nearly 79% respondents positive response asserts this aspect. Trade and investment options are being explored through a common Free Trade Agreement, credit rating agency, arbitration center etc.

Chart 30 D: Survey Response; Can BRICS Be An Effective Economic Bloc? (% of respondents)



The study also explored the various challenges that would be encountered while having a common FTA between the BRICS countries. The same are projected in the graph below.

Chart 30 E: Survey Response; Challenges in FTA Among BRICS (% of respondents)

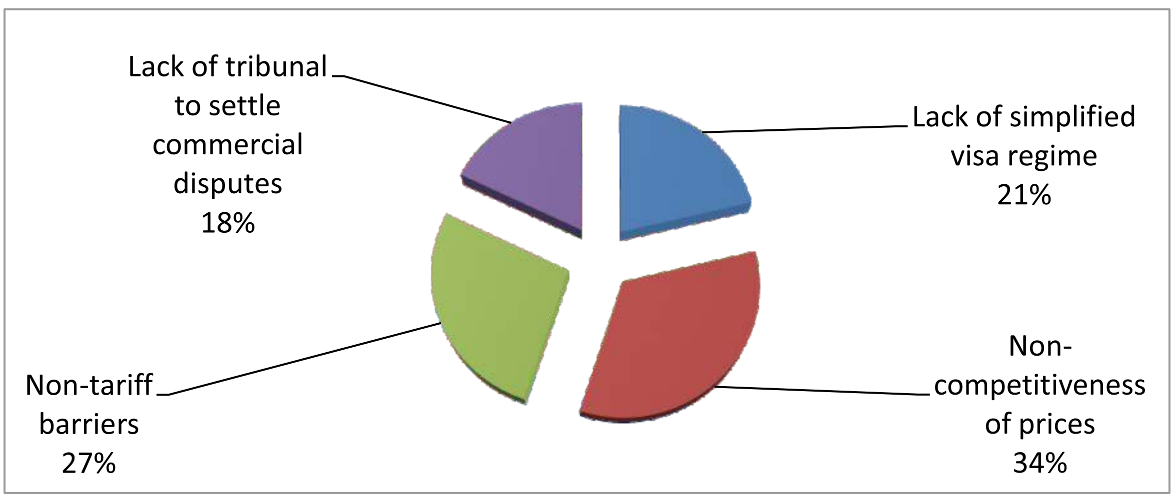
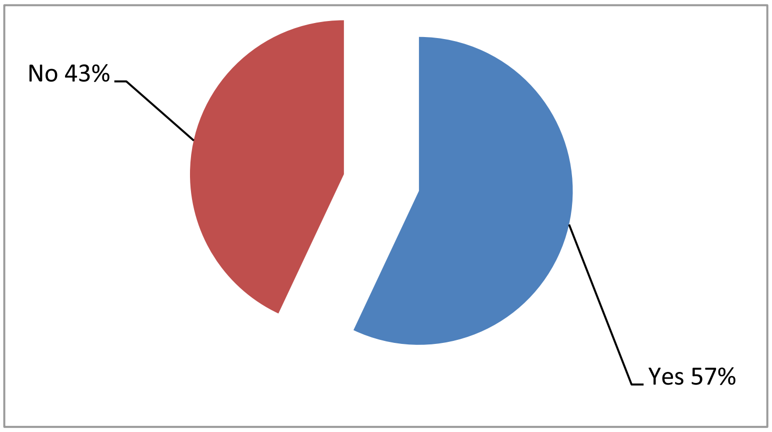


Chart 30 F: Survey Response; Should BRICS Have a Common Secretariat? (% of respondents)



Further, all the respondents agreed that the most beneficial impact of the BRICS alliance would be the reduced reliance on US dollar as a currency for cross border trade and investment and increasing use of local currencies of member countries for this purpose. This enables BRICS countries to import goods from other member countries and pay for it in local currency when they face shortage of dollar reserves or when they face balance of payment crisis. Increasing use of local currencies also helps BRICS countries to diversify the composition of their foreign exchange reserves to non-dollar currencies.

Conclusion

It can be thus fairly concluded that there is enough global confidence in the BRICS alliance.

Conclusions and Recommendations

Globalization has witnessed countries associating with each other and emerging into trading blocs however, BRICS is not one of this kind. Some of these trading blocs have been thoroughly successful especially due to heightened economies of scope, whereas some have fallen apart due to various reasons.

Most of the countries which came together to build trade blocs did so when there already existed a healthy trade amongst these countries and it required a boost to achieve further growth in this trade. Cooperation among businesses in the regional context emerged as a natural process. This already existing cooperation amongst regional intra country firms created shared interests and paved a path for governments to move towards more formal associations, such as the Association of Southeast Asian Nations (ASEAN). Regional trade agreements reach their full potential when the political and ideological differences among participating countries are minimal and are solely for purpose of trade and its development. There is no other dimension for such kind of trade flow arrangement apart from trade. At the most there is an attempt to align and coordinate with each other their monetary and fiscal policies. Any disturbance created due to the country's monetary and fiscal policies hampers trade deals which work best when member states are politically aligned. In fact, uncoordinated fiscal policies in the European Union framework are responsible for current financial turmoil in the region, with a negative impact on trade.

Every association or coming together by countries for trade is done for the purpose of -

Foreign Direct Investment: An increase in foreign direct investment results from trade blocs and benefits the economies of participating nations. Larger markets are created, resulting in lower costs to manufacture products locally.

Economies of Scale: The larger markets created via trading blocs permit economies of scale. The average cost of production is decreased because mass production is allowed.

Competition: Trade blocs bring manufacturers in numerous countries closer together, resulting in greater competition. Accordingly, the increased competition promotes greater efficiency within firms.Trade Effects Trade blocs eliminate tariffs, thus driving the cost of imports down. As a result, demand changes and consumers make purchases based on the lowest prices, allowing firms with a competitive advantage in production to thrive.

Market Efficiency: The increased consumption experienced with changes in demand combines with a greater amount of products being manufactured to result in an efficient market. The BRICS framework too is the brainchild of globalization similar to the RTAs. However there exists one major difference contributed mainly due to the process of its formation. The term "BRIC" was coined in 2001 by then-chairman of Goldman Sachs Asset Management, Jim O'Neill, in his publication Building Better Global Economic BRICs. The foreign ministers of the initial four BRIC states (Brazil, Russia, India, and China) met in New York City in September 2006 at the margins of the General Debate of the UN General Assembly, beginning a series of high-level meetings. A full-scale diplomatic meeting was held in Yekaterinburg, Russia, on 16 June 2009. The BRICS which was coinage of words for the emerging markets came together for purpose of integration to provide leverage to their country's economic agenda by developing a common funding institution and decreasing the dependency on international loans by IMF or the World Bank. Thus, this frame is a unique bloc of 5 nations coming together not for trade as in the case of the other blocs which are an effect of globalisation.

Starting essentially with economic issues of mutual interest, the agenda of BRICS meetings has considerably widened over the years to encompass topical global issues. BRICS cooperation has two pillars – consultation on issues of mutual interest through meetings of Leaders as well as of Ministers of Finance, Trade, Health, S&T, Education, Agriculture, Communication, Labor, etc. and practical cooperation in a number of areas through meetings of Working Groups/Senior Officials. Regular annual Summits as well as meetings of Leaders on the margins of G20 Summits are held.

The BRICS framework which began with the development agenda has given rise to forums and institutions under its fold which comprise of representatives from each of the countries. Thus, BRICS has objectives beyond the single issue of trade and its development so as to come together with some kind of trade agreement binding on each other. BRICS has brought into limelight issues which affect not only these five countries but also the entire globe in particular. The BRICS will rarely act together toward particular foreign policy goals, but count on them to all collectively demand the global economy truly serve the interests of consumers in the global marketplace. Each member of the BRICS have specific and diverse characteristics, but their interest toward a more equitable global economic order is all but universal among them.

In the recently concluded BRICS Summit at Goa five pillars were suggested to be the basis of cooperation among the BRICS countries. This BRICS study, "Engineering of the BRICS Engagement", has explored the BRICS engagement with reference to these five pillars,
(I) Institution building to further deepen sustain and institutionalize BRICS cooperation;
(ii) Implementation of the decisions from previous Summits;
(iii) Integrating the existing cooperation mechanisms;
(iv) Innovation, i.e., new cooperation mechanisms; and
(v) Continuity, i.e., continuation of mutually agreed existing BRICS cooperation mechanisms.
and analysis of each pillar in terms of the topics selected has led to below conclusions.

Institutional Mechanisms in BRICS

The BRICS institutions will no doubt pave a way for regional cooperation in all types of exchanges like culture, health and education, financial services, financial inclusion etc.

Financial Integration and Investments: Context to India

We can fairly conclude that India's engagement with China in terms of trade is highest followed by South Africa, Brazil and Russia. All the other trading partners Russia, Brazil and South Africa also report a higher trade numbers with China. This verifies that China has been a beneficiary of this engagement and leads the BRICS engagement as a larger trade partner. At the same time, Brazil and Russia have been in trade surplus with China. This observation implies above all the BRICS engagement has mutually benefitted the BRICS countries with no concentration of benefit within any one country. We have also observed that the share and prominence of FDI from India and China has been the major one even amongst the BRICS countries. There have been bottlenecks for the FDI investment of other BRICS countries into India majorly due to Indian policies being a hindrance to the same . However, there are major policy reforms in queue to open the Indian side for the necessary international interventions on basis of mutual cooperation.

BRICS and Major Country Exchanges

BRICS association with LICs and MICs is based on the foundation of mutual benefit. Development of this region and tracking the same being one of the major objectives. Another interesting part of this association is that there is absolutely zero interference in the political affairs of the LIC or MIC.

SME Scenario inter BRICS

The culture of SME sector is different in different countries. Inspite of these cultural differences it will be learning curve for this sector through inter country exchanges. The SMEs require business connect to optimum use of their capacities and provide economy of scope which is only possible through better networking.

Economic Potential and Scope for Expansion

The BRICS economies if work on a synergetic model which will complement strengths and dilute the inefficiencies will no doubt benefit from mutual cooperation. This relation needs to be worked on mutual benefit sharing basis.

Trade Dynamics in BRICS Countries

Thus we can fairly say that BRICS has tremendous and competitive advantage of being developed as a trade block. BRICS block has diversified range of imports and exports. Intera country movement of trade will be beneficial to the block as such.

Global Social Responsibility Inter BRICS

We conclude that there is an apparent conflict between the development agenda of the BRICS countries and the issue of climate change. Inspite of this conflict major steps have been taken by the BRICS countries to deal with the climate change agenda. It is important to note that the BRICS countries have been taking significant steps to decrease the mal effects of climate change on their own without having any contemplations on the developed countries who have a record of not curbing long term GHG emissions. In this section we assess the BRICS countries and contribution to climate change viz-a-viz their land mass and population size.

Finding Primary Facts

It can be thus fairly concluded that there is enough global confidence in the BRICS alliance.

In context to these above conclusions, one can make a fairly good general conclusion that the BRICS alliance has a sustainable future and would remain committed to the reason of its existence.

In case of such a steady commitment there would be worthy expectations from this alliance and as we have explored this alliance major institution building is inevitable which will serve the global needs. Hence, there are some recommendations that this alliance needs to pay heed to so as to serve the best interests of its objectives.

Recommendations

1. Setting up of a BRICS Secretariat

Dr Yadnya Pitale, Jt-Director Research , MVIRDC WTC Mumbai,

It was observed during the course of interviews that there was an urgent need to have a common secretariat which could be focal point for communication for the country representatives to have a dialogue and record keeping. A secretariat will provide a formal platform for intra BRICS interactions but also help in capacity building exercise for such interactions.

Presently, the countries have BRICS desk but there are certain activities which have been happening which are totally independent of these desks and information remains very private to entities from these countries coordinating on their own.

2. BRICS Stock Exchange

This would be another such BRICS institution which can further assist the NDB to make project lending more efficient and secure. BRICS companies can be listed on this BRICS exchange and can be available inter BRICS equity trade.

Dr. Vardhana Pawaskar, General Manager- Research, BSE Limited

Most of the BRICS countries are developing economies that need huge capital for their infrastructure and development projects. There is a need to strengthen co-operation among these BRICS countries to evolve a robust financial system to meet the ever growing funding requirement of the BRICS countries. The setting up of the New Development Bank and the proposal to strengthen BRICS bond markets and develop BRICS rating agency are expected to improve the flow of foreign capital to the BRICS countries.

In this connection it is worth mentioning the initiative of BSE (formerly known as Bombay Stock Exchange Ltd.), Asia's oldest stock exchange, to set up BSE International Exchange (IFSC) Ltd and BSE International Clearing Corporation (IFSC) in Gujarat International Finance Tec-City (GIFT), at Gandhinagar, Gujarat.

GIFT is an emerging global Financial and IT Services hub, on the lines of globally benchmarked financial centres such as Shinjuku, Tokyo, Lujiazui, Shanghai, La Defense, Paris, London Dockyards and so on.

BSE International Exchange (IFSC) Ltd would enable Indian companies, including start-ups and small and medium enterprises raise funds by issuing foreign currency instruments. The exchange would also serve as a platform for foreign companies to list in India and raise funds in rupee. BSE is taking various outreach programmes to attract companies from BRICS countries to be listed on this exchange and benefit from various fiscal advantages offered by the government. The Indian government has waived security transaction tax, commodity transaction tax, dividend distribution tax and long term capital gain tax for units located in IFSC. We expect small and medium enterprises, start-up companies from the BRICS group to take advantage of this by listing in the BSE International Exchange (IFSC).

The Bombay Stock Exchange has already set up an International Stock Exchange at the GIFT City and it was through this study an idea was proposed to have a desk especially for listing of the BRICS companies. Listing helps in meeting the compliance standards and boost investments. At the same time, a BRICS Stock Exchange would serve as a platform for launching external debt instruments of the BRICS countries.

3. BRICS Urban Development Portal

Urbanisation will not remain restricted to only cities of tomorrow but villages will also experience spurt in modern services. Every region has its own special needs which can be accomplished through innovation and technology.

Dr T.Jayaraman, PhD, School of Habitat Studies, TISS

This open dialogues between various urban rural experiences and their development can be exchanged at meetings. These meetings comprising of mayors of corporations, village heads etc from the BRICS countries can be hosted at WTC Mumbai.

4. Setting Up of a BRICS Trade Facilitation Panel

The BRICS countries are not at a competitive advantage to each other however, there is a large amount of trade between China and other countries and with China enjoying a positive number. This has been hampering the setting up of a FTA between the BRICS countries. This can lead to trade disputes, such as those between the EU and NAFTA, including the recent Boeing (US)/Airbus (EU) dispute. The EU and US have a long history of trade disputes, including the dispute over US steel tariffs, which were declared illegal by the WTO in 2005. In addition, there are the so-called beef wars with the US applying £60m tariffs on EU beef in response to the EU's ban on US beef treated with hormones; and complaints to the WTO of each other's generous agricultural support. If trade needs to be enhanced bottom-up approaches, in which companies develop supply chains across borders, are more effective in facilitating regional integration than are top-down approaches imposed by governments. There needs to be an intense research before embarking on this agenda. Hence a BRICS panel for trade facilitation needs to be set up so that an amendment can be made with each changing time in the global economy. This would provide a flexibility of operation and avoid conflicts of interests.

5. Development of intra BRICS transit infrastructure

The BRICS countries especially India has very poor transit infrastructure with stubborn visa rules. This needs to be diluted for free movement of businesses to travel to and fro. Hence , the primary objective of this study was to understand the various institutions under this BRICS agenda , secondly understand the sustainability of this alliance in the near future and thirdly explore the avenues in strengthening this alliance.

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Annexure I

ARC Ratings – A Model for Proposed BRICS Rating Agency

ARC Ratings, S.A

ARC Ratings, S.A. is an international credit rating agency (CRA) based in Europe and registered with the European Securities and Markets Authority (ESMA). Amalgamating the know-how and background of five experienced partner agencies on four continents, ARC Ratings takes advantage of its global reach, local expertise and network-based approach to best serve issuers and investors by assigning stable credit ratings that optimally identify credit risk.

ARC Ratings addresses the need of global capital markets for a stronger competitive environment in the credit rating business. ARC Ratings results from the combined efforts of five domestic CRAs to transform one of them, Companhia Portuguesa de Rating, S.A. (CPR), a 27-year old European Credit Rating Agency, into a global CRA. The five founding partners are:
- ARC Ratings (former CPR);
- Credit Analysis & Research Ltd. (CARE);
- Global Credit Ratings Co. (GCR);
- Malaysian Rating Corporation Berhad (MARC); and
- SR Rating, Ltda.

ARC

ARC Ratings, S.A. (former Companhia Portuguesa de Rating, S.A. - CPR)
CPR was established in 1988 and in 2013 legally converted into ARC Ratings, S.A.. Through its 25 years old history, CPR rated many of the most relevant companies and banks in Portugal and in 2011 CPR was one of the first European credit rating agencies to be registered with the European Securities and Markets Authority. Prior to its conversion into ARC Ratings, S.A., CPR was the market leader for ratings issued in Portugal.

CARE

Credit Analysis and Research Limited
CARE Ratings commenced operations in April 1993, promoted by major banks and financial institutions in India, and over nearly two decades, it has established itself as the second-largest credit rating agency in India. CARE Ratings has emerged as the leading agency for covering many rating segments like that for banks and sub-sovereigns. With majority shareholding by leading domestic banks and financial institutions in India, CARE is a listed company since the end of 2012.

CARE Ratings is headquartered in Mumbai and has regional offices in Ahmedabad, Bangalore, Chennai, Hyderabad, Jaipur, Kolkata, New Delhi, Pune and an international operation in Male in the Republic of Maldives.

GCR

Global Credit Rating Company Limited
GCR was established in 1996, as the African arm of Duff & Phelps Corporation and has now DEG/KfW Group (owned by the German Government), and PROPARCO (majority-owned by the French Government) are key institutional shareholders in the company. GCR has experienced rapid growth and positioned itself as the African market leader, accounting for the majority of all ratings accorded on the African continent.

GCR's African regional headquarters are based in Johannesburg, with its main SADC, West, and East African regional offices established in Harare (Zimbabwe), Lagos (Nigeria) and Nairobi (Kenya) respectively.

MARC

Malaysian Rating Corporation Berhad
MARC was launched in 1995 and is now the second largest rating agency in Malaysia. Its shareholders are CARE Ratings, major life and general insurance companies, stockbrokers and investment banks in Malaysia.

The agency undertakes ratings of corporates and corporate debt issues, including Islamic capital market instruments, asset-backed securities, as well as financial strength ratings of financial institutions and insurance companies.

SR RATINGS

SR Ratings, LTDA.
Founded in 1993, SR Ratings has a long and sound presence in the Brazilian market. The company has proprietary offices

in São Paulo and Rio de Janeiro. The company maintains close international partnerships and thus enjoys proximity with American, European and Asian investors.

BENEFITS FROM BUILDING A NETWORK

ARC ratings form the centre of this network of five partners from four different continents. Joining forces allows the network to:
- Take clients all the way, from local to international ratings
- Develop and implement best practices based on ARC's methodology
- Produce and share research across the network
- Provide lead analysts to participate in ARC's rating panels
- Refer mandates across the network
- ARC's approach is designed to benefit issuers as well as investors and hopes to restore credit rating's anticipatory role.

OVERALL COVERAGE

ARC's network rates more than 6,000 entities and has extensive experience in many economic sectors and in all rating market segments.

AN OVERVIEW

ARC's methodologies are thoughtful, transparent and responsive to market needs. They incorporate the effects of any relevant quantitative and qualitative risks and by extensive local knowledge they offer insights superior to those of their competitors.

All of ARC's methodologies are dynamic and undergo continuous reviews, a process possible due to a corporate culture encouraging multi-perspective critical thinking along with criteria updates. As a support mechanism to this continuous process is the establishment of ARC's knowledge network and its Advisory Board.

CORPORATE METHODOLOGY

ARC's corporate methodology…
- …centres around the rated entity's underlying business model and its sustainability in the broader context of macroeconomic shifts, leading to the assessment of the rated entity's resilience
- …takes into account cyclical and sector trends
- …demands an in-depth analysis not only of the rated entity but also of the underlying context in which it operates
- …recognizes the paramount importance of local knowledge for the full understanding of the rated entity and therefore for a correct assessment of the entity's capacity to fulfill its obligations

- …dynamically adjusts to on-going developments within the market

ARC's Corporate methodology can be assessed on ARC Ratings website (www.arcratings.com).

FINANCIAL INSTITUTIONS METHODOLOGY

ARC's Financial Institutions methodology includes...
- ...a network analysis-based assessment of the interconnectedness of each rated financial institution in order to understand its systemic importance.
- ...an analysis of the complexity of the respective financial institution reflected not only by its on and off-balance sheet positions, but also in reviewing the results of so-called living wills, where they exist
- ...concentration risk, not only of the institution to be rated, but also of the system within which it is headquartered
- ...ARC Ratings centres its analysis on liquidity risk as liquidity risk equates to credit risk for financial institutions
- ...In addition to liquidity and systemic risk, ARC Ratings' rating methodology incorporates also considers market and operational risk, as far as those risks may impact the creditworthiness of the rated institution

STRUCTURED FINANCE METHODOLOGY

In its methodologies of structured transactions ARC Ratings applies:
- The inherent economic value of structures
- Models, where used to assess creditworthiness, as supplements to qualitative analysis
- Assessment of the underlying assets as the basis for rating structured transactions
- Complexity of structures
- Stress-testing against the background of extreme scenarios
- Strict external controls by rating only such structured transactions with full disclosure by their prospective issuer
- Strict internal controls, prohibiting ARC Ratings to advise issuers on optimal composition of any structured transactions.

Structured Finance transactions include all forms of asset backed securities, amongst others:
- Residential and Commercial Mortgages
- Auto Loans
- Consumer Loans
- Trade Receivables

- Repack Vehicles
- Equipment Leases
- Structured Credit

ARC Ratings' Structured Finance Rating Methodology lays down the fundamental considerations for any structured finance transaction rated by ARC and is complemented by specific criteria for each major structured finance asset type.

Sovereign Methodology

ARC's unique vision for sovereign ratings includes…

- …a comprehensive approach to incorporating all dynamic macro factors into our analysis of the creditworthiness of sovereigns
- …an intimate knowledge of our partner countries due to our local presence and expertise, a model that we extend to our entire sovereign ratings universe
- …a thoughtful integration of conventional indicators used in sovereign risk analysis with more nuanced ones that target the scope for financial volatility and recovery
- …a robust quantitative framework that is also inspired by qualitative elements

ARC's Sovereigns Rating methodology can be assessed on ARC Ratings website (www.arcratings.com).

THE BENEFITS OF AN ARC RATING

- Investors and issuers receive an independent, neutral and deeply considered rating
- ARC's global presence and multi-cultural structure allows its ratings to be more adaptive to the local market
- ARC's approach is rigorous, systematic, continuous and timely
- ARC uses a mixture of public and private information to make informed comparisons within markets
- ARC's offices are located in multiple markets globally which allows for effective market monitoring and the ability to respond swiftly to any market.

ARC'S OTHER SERVICES
ARC'S CREDIT ASSESMENTS

A Credit Assessment is a credit rating provided for private and confidential use by an issuer. A Credit Assessment is assigned by following ARC's rating methodologies regarding such issuer or specific issue.

ARC Ratings assigns a range of notations to an entity or issue for strictly private and confidential use (up to three notches for a medium and long term rating).

Like all other services offered by ARC Ratings, a Rating Assessment:

- has to be solicited by an issuer / analysed entity;
- is based on a minimum level of information as deemed necessary by ARC Ratings; and
- has an absolute guarantee of confidentiality

The credit assessment may be converted into a public rating, if requested by the issuer. The cost for such public rating will be discounted by the cost for the credit assessment as long as the public rating process commences within six months following the conclusion of the credit assessment process.

ARC'S STRATEGIC ANALYSIS OF RISKS

A strategic analysis of risks uses ARC Ratings' rating methodologies to provide a report on the risks of the reviewed entity without assigning a rating. For this purpose, ARC Ratings:

- Assesses and discusses the entity's relevant risks with the entity's management;
- Assesses and discusses the entity's economic, business and financial position; and
- Assesses and discusses the entity's strategy and outlook.

Such strategic risk analysis serves the entity's identification of strengths and weaknesses and remains confidential.
However, ARC Ratings will publish such assessment upon the request of the respective entity. The latter may help such entity to improve its transparency in the market.

Like all other services offered by ARC Ratings, a Strategic Analysis of Risks:

- has to be solicited by the issuer / analysed entity;
- is based on all information deemed necessary; and
- has an absolute guarantee of confidentiality.

The reviewed entity may request that the Strategic Analysis of Risks be supplemented by assigning a rating and be made public. To the fees of such public rating will be deducted the fee of the Strategic Analysis of Risks as long as the rating process is engaged within six months following the conclusion of the Strategic Analysis of Risks.

Annexure II

India Macro Update Nov 2016 - By Bombay Stock Exchange

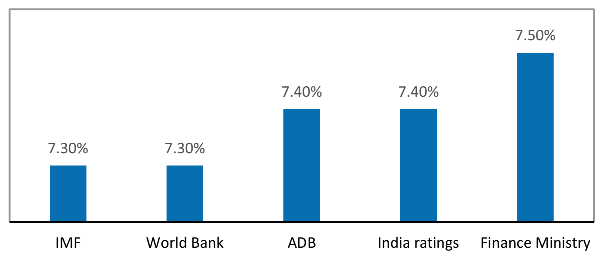
Indian Economy to take-off on a Fast Growth Trajectory

- Fastest growing major economy in the world with a 7.9% y-o-y growth in March 2016
- World economy expected to grow by 3.4% in 2016 as projected by IMF**
- Most analysts consider India to be a bright spot in the global economy
- Public investment has picked up with faster clearance of key projects
- Better infrastructure and greater ease of doing business are promoting private investment while increased benefits and wages after the 7th pay commission for public employees is expected to boost private consumption.
- Interest rate are at the lowest level in the last 5 years and RBI, in addition has announced several structural changes to increase liquidity in the system

Fiscal deficit as a % of GDP

2014-15	2015-16	2016-17	2017-18
4.1% (met)	3.9% (met)	3.5% (target)	3.0% (target)

India's GDP growth projections for FY16-17



Average real GDP growth during FY11-20 expected to be 9.5%***

2nd best performing stock market in 2014

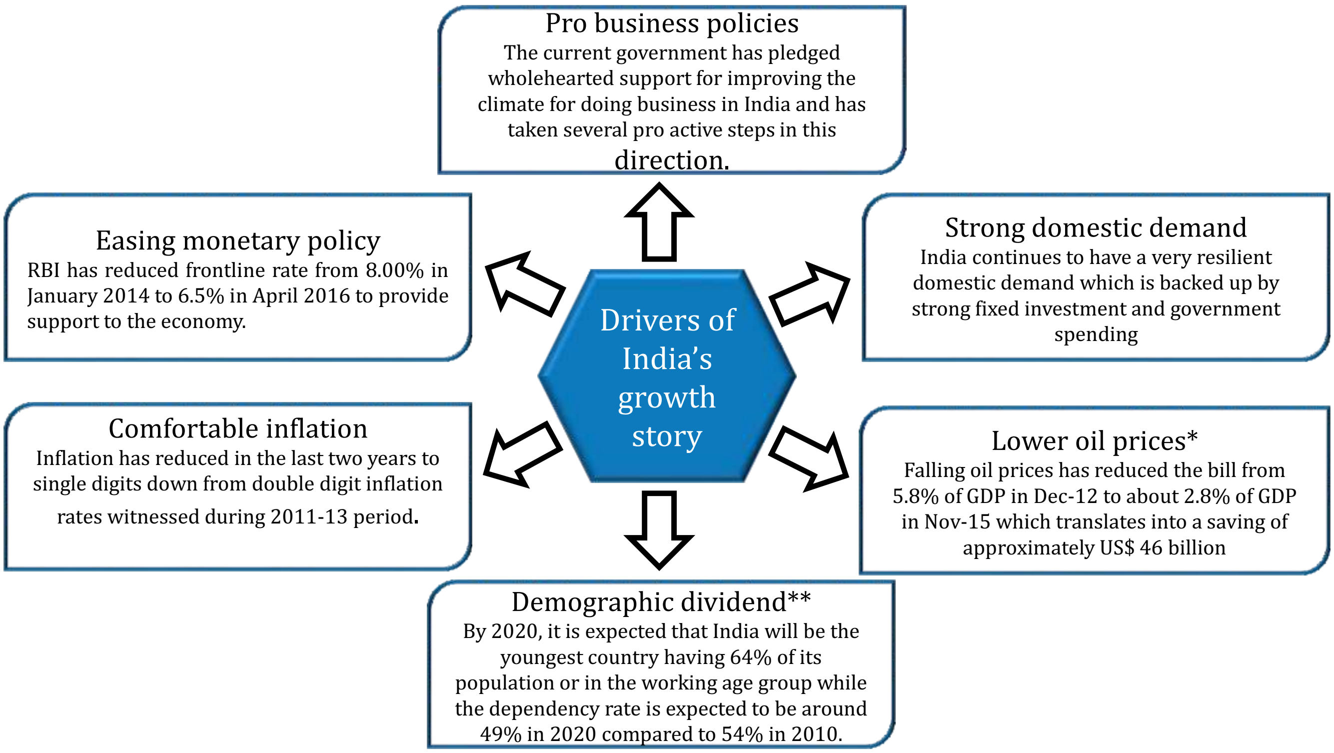
Expected size of economy by 2020 US$ 5 trillion***

Source: Economic survey
**WEO Update - October 2015, IMF (http://www.imf.org/external/pubs/ft/weo/2015/02/)
***D&B: India 2020 Economy outlook (http://www.dnb.co.in/India2020economyoutlook/default.asp)

1st	Fastest growing major economy
1st	Greenfield FDI destination, Jan-June 2015
1st	Among 100 countries on Growth, Innovation and Leadership Index
1st	Most attractive investment destination globally
1st	Among 110 investment destination polled globally
7TH	Most valued nation brand in the world
10th	Among the top 10 FDI destinations
130	Improvement by 12 Ranks in 2016 Ease of Doing Business List from 142nd
48%	Growth in FDI inflows

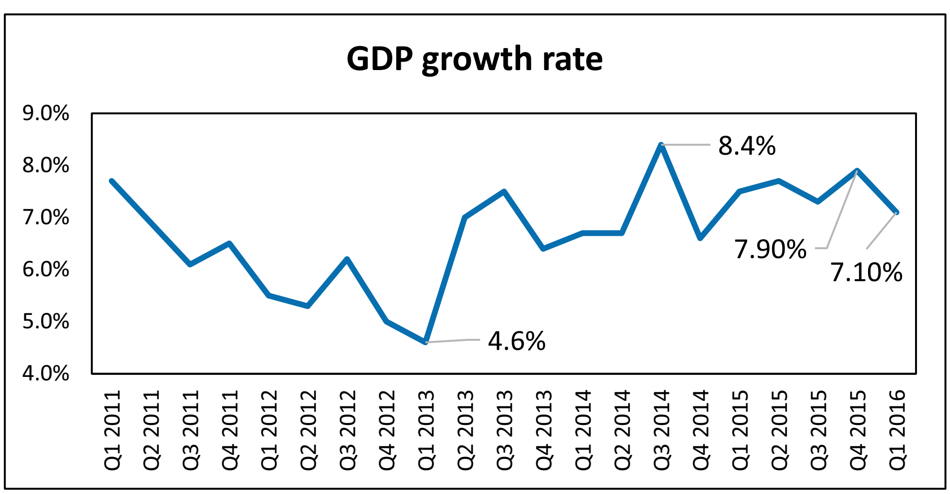
Source: IMF, Financial times, Frost & Sullivan, EY, Foreign Policy Magazine, UNCTAD, World Bank, Make in India Week Brochure, Central Board of Excise and Customs

Strong fundamentals driving growth

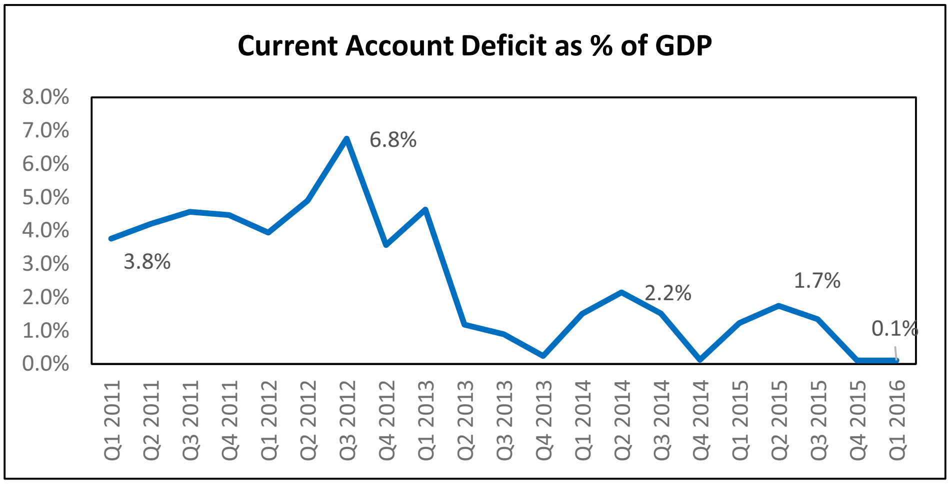


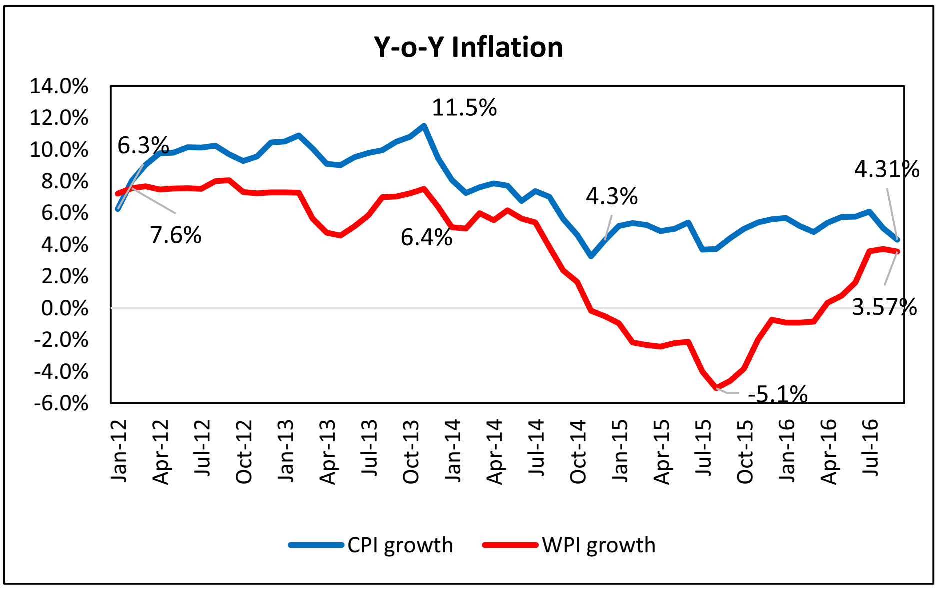
Sources : *Morgan Stanley-India Economics, Dec-15
**D&B, India 2020 Economy outlook

Economic fundamentals (1 of 3)
Fastest growing major economy with strong fundamentals



Sources: CMIE



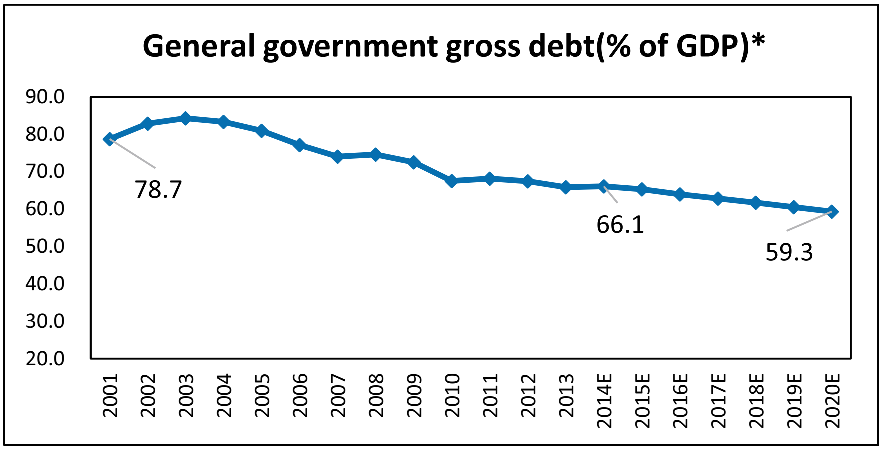


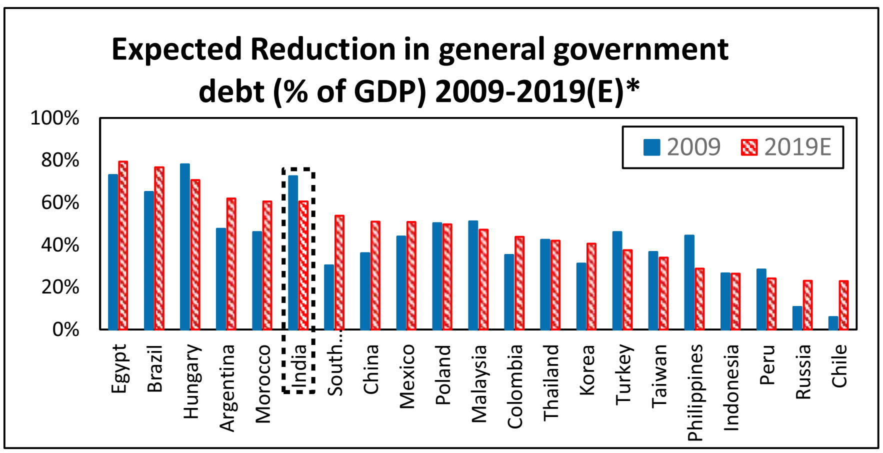
Sources: CMIE

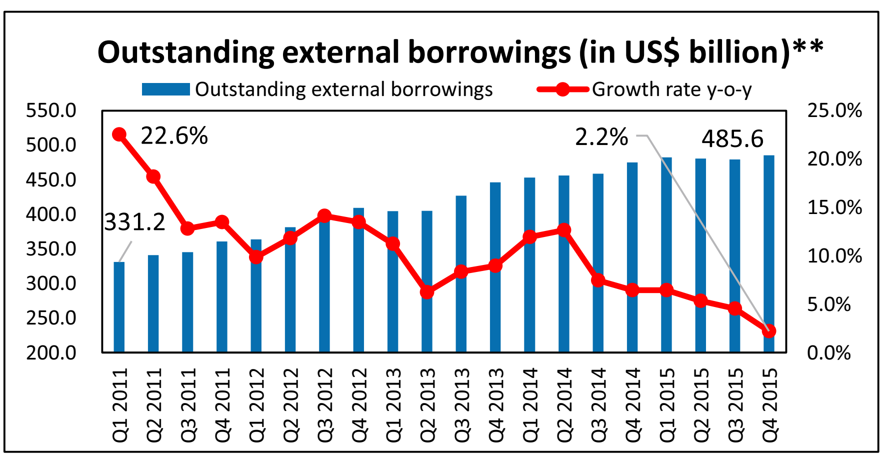
- GDP rose by 7.1% in Q1 of FY17 as against the 7.9% in last quarter of FY16 on account of higher subsidy expenditure by government.
- Falling oil and commodities prices have ensured that the current account deficit (CAD) have come down to manageable levels after touching a high of 6.8% in Q3- 12. The contraction in the CAD in the June quarter was primarily on account of a narrowing of the trade deficit to $23.8 billion from $34.2 billion a year ago.
- Wholesale inflation eased to 3.57 percent in September as food articles, led by vegetables, witnessed softening of prices.CPI has increased to 5.8% on a YoY basis which is higher than RBI's target rate of 5% till Mar-17 and most analyst rule out any immediate rate cut.

India's economic fundamentals - Improving sovereign debt position

- As per the IMF's October 2015 survey India's government gross debt as a percentage of GDP is expected to consistently fall from 78.7% in 2001 to an estimated level of 59.3%in2020whichimpliesprudentfiscaldisciplinebythegovernment.
- A look at the change in general government debt as a percentage of GDP for various Emerging Market (EM) economies indicate that India is expected to reduce this number by 12% on an absolute basis by 2019 as compared to 2009; which is only second to Philippines which is expected to reduce it by 15.6% by2019.
- India's external borrowings grew by US$10.6 billion in Q4-15 over on a y-o-y basis translating in a growth of 2.2%. Even though it is the highest level since FY2011, the growth rate is the lowest which is indicative of fiscal prudence.







Source: *IMF World Economic Outlook, October 2015
****CMIE**

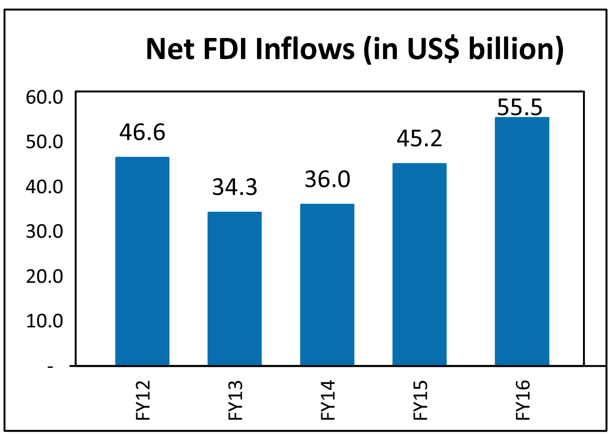
Economic fundamentals (3 of 3)
FDI inflows for FY16 highest in the last 5 years

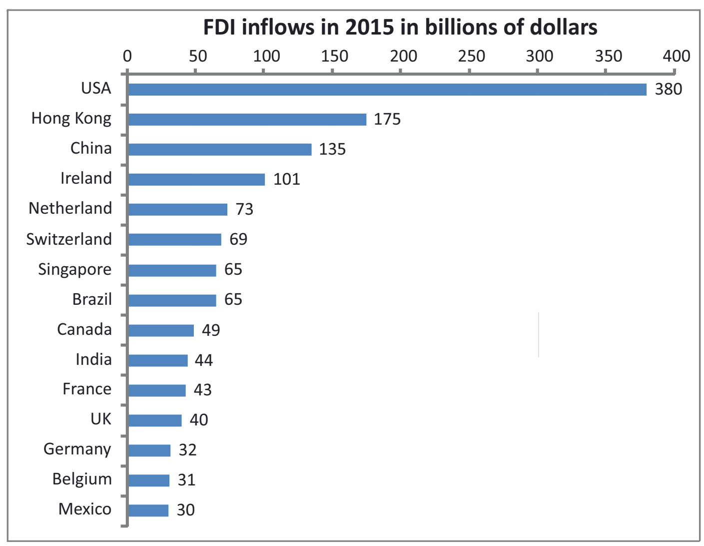
Total inflows to India on accumulative basis since April 2000 amounts to US$288.6 billion and Services sector continues to attract the maximum FDI into India. FDI investments in the IT sector has increased by 471% in FY16 as compared to FY14.

Gross FDI inflows to India in FY16 reached US$55.5 billion and have grown by 22.8% compared to FY15. FDI inflows were primarily driven by investments in infrastructure and the services sector. Mauritius and Singapore together contribute close to 50% of the total FDI inflows for this fiscal year. Gross FDI inflows to India have grown at a CAGR of 4.5% during FY12-FY16.

FIIs have turned net sellers in FY16; the first time since FY11 selling equities of Rs.181.8 Cr. And debt of Rs.40Cr.

Sector	Cumulative inflows in US$ billion (April 2000 – Mar 2016)	% share of FDI inflows
Services	50.8	17.6%
Infra & real estate	24.2	8.4%
IT	21.0	7.3%
Telecom	18.4	6.4%
Automobile	15.1	5.2%
Pharmaceuticals	13.8	4.8%
Chemicals	11.9	4.1%
Others	133.4	46.2%





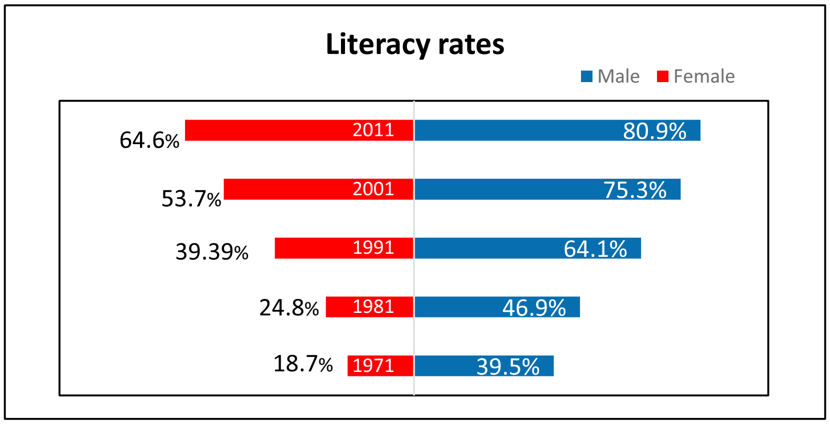
Sources: CMIE
****Total FDI, Department of Industrial Policy and Promotion**
(http://dipp.nic.in/English/Publications/FDI_Statistics/FDI_Statistics.aspx)
Indian Demographics

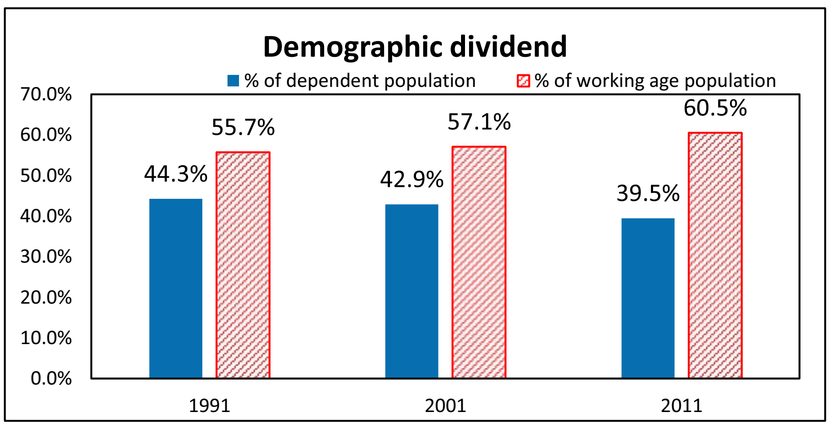
India Demographics

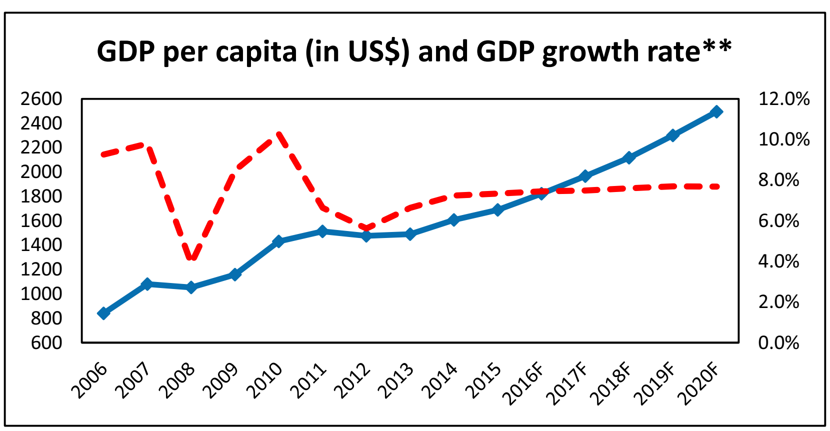
India's over all literacy rates increased from 64.8% as per the 2001 census to 73.0% in the 2011 census. Female literacy rates increased by 10.9% compared to 5.6% for males in the latest census.

With an increase in the population the proportion of working age population (15-60 years) increased to 60.5% which makes India one of the youngest nations in the world with a median age of 27.3 years. It also makes India home to the largest youth population in the world***

India's GDP per capita is expected to grow at a CAGR of 5.7% during 2010-2020. A healthy GDP growth rate is expected to bring a large section of India's population above the poverty line







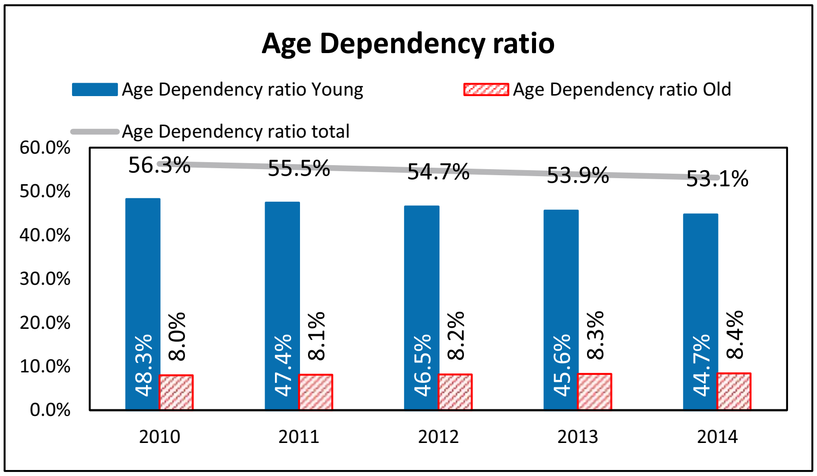
*Sources: CMIE
**IMF
***United Nations

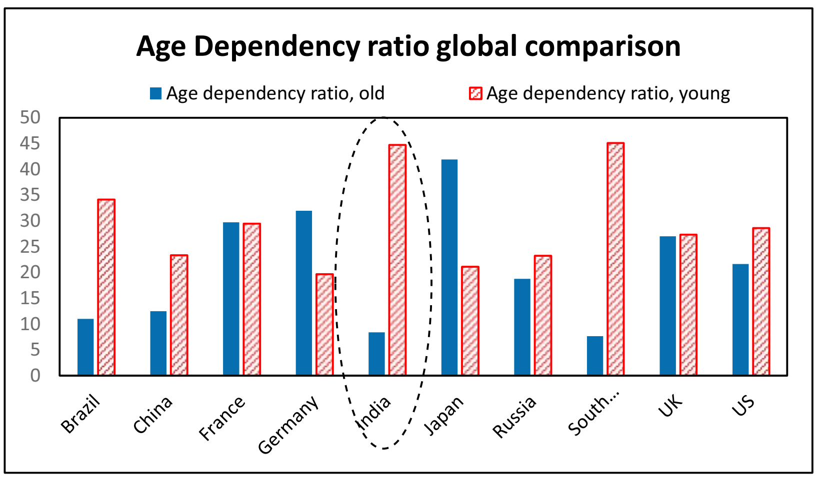
India Demographics

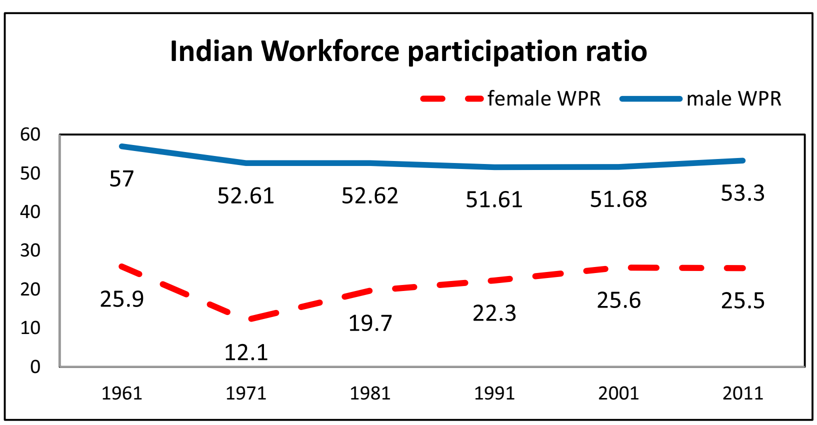
India's Dependency ratio has been falling consistently since 2010 and by 2050 this ratio is expected to fall below 50%

India has the second best young-age dependency ratio compared to major global economies and as per a UN report India has the largest youth population in the world which can act as a major boost to the economy as the labour market expands

Over the years, the female workforce participation has seen an increase, however, it is still lower than desired levels. Current efforts of the government like Skill India and increased expenditure on education is expected to boost this ratio.



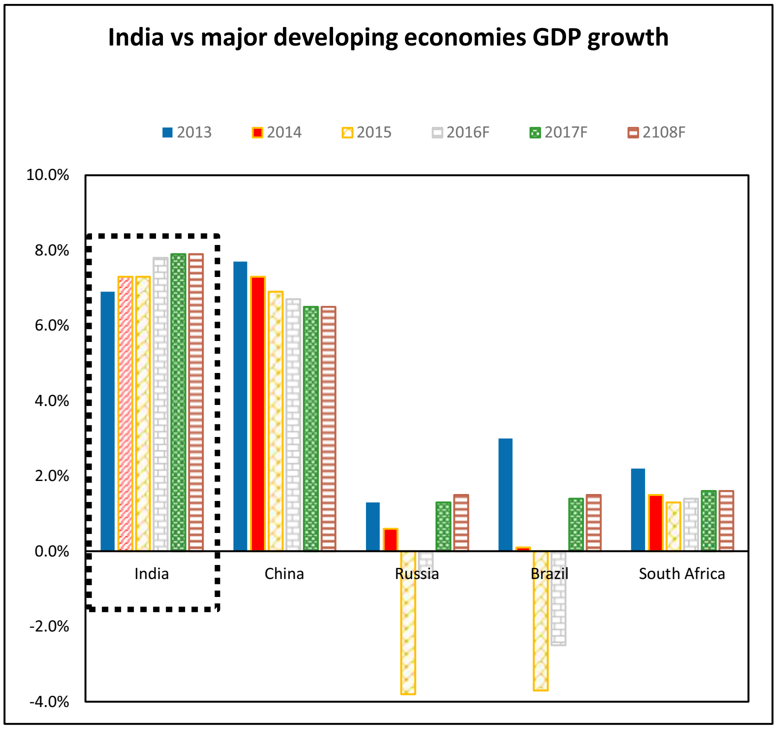




*Sources: World Bank

BRICS Comparison

- Among the BRICS nations, India has the highest GDP growth rate projection
- China is heading for a new normal growth rate which is significantly lower than those recorded in the past two decades
- Due to a steep fall in oil prices and economic sanctions, Russian economy is facing challenges to revive growth
- Brazil suffering from Stagflation and negative growth rate
- South Africa is on the brink of recession and is battling stagflation and is facingsub-2% growth in 2015

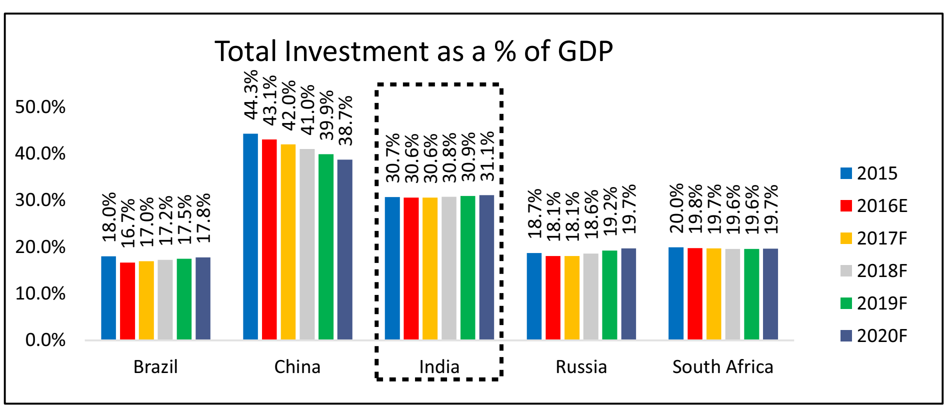


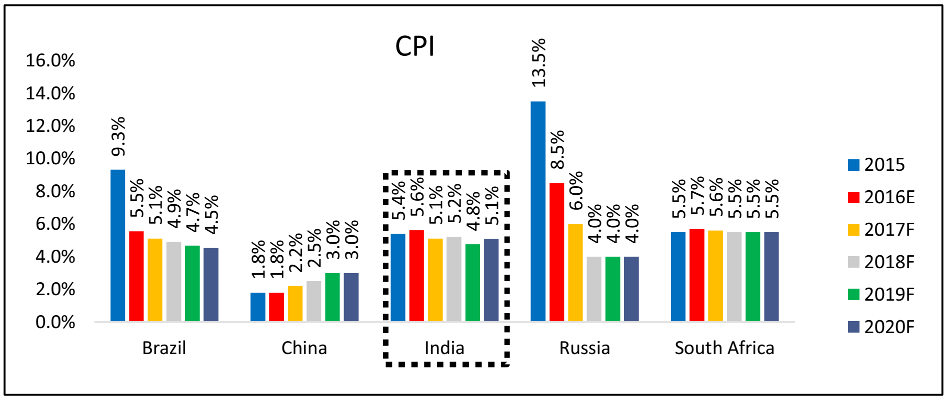
Source: World Bank

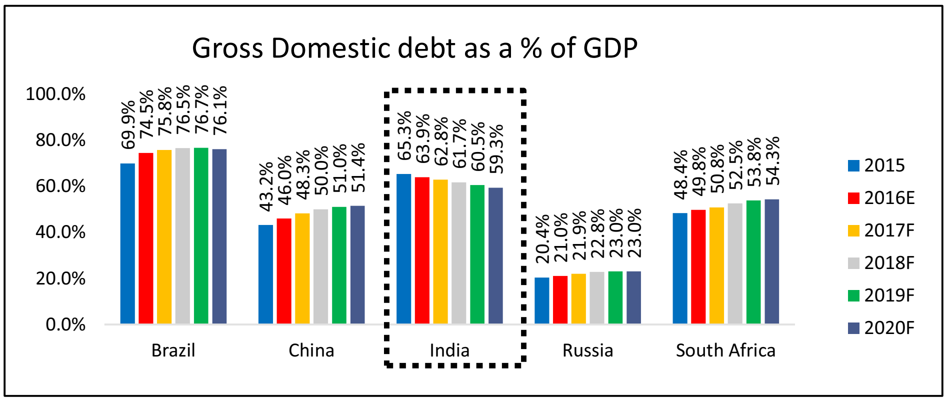
Key Growth Indicators

Core inflation has remained broadly stable well below inflation objectives. In many emerging market economies, notably those with weak domestic demand, headline inflation has declined.

There is a large scope for investments particularly in agricultural sector as capital formation is one of the cornerstones for the economic development in a country. Pace of fiscal consolidation needs to strike an appropriate balance between debt reduction and imposing a drag on economic activity.







Source: IMF, UN, World Bank

Growth to be led by Moderate Inflation, Increased Infrastructure Investments and Efficient Debt Management

Major Global-Economic Issues

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Annexure III

SMERA Analysis (December 2, 2016) : Case for a Relook of India's Sovereign Ratings

India: World's seventh largest economy is too big to fall

We derive significant comfort from the sheer size of the Indian economy and its overall weight in the global GDP. We believe that the country's sovereign ratings must reflect this reality and call for a rating upgrade to justify India's stature. The Indian GDP contributes 3% to the global GDP, which is valued at $79 trillion and is currently the seventh largest economy in nominal terms. It is an established fact among rating agencies that size does matter; with size of a sovereign/ corporation significantly influencing its ratings positively. India maintains a large diversified economy which exerts significant influence over the global economy. Among the top ten economies, the justification to classify India under the minimum investment category group lacks merit.

"Among top 10 global economies, India maintains the lowest investment grade category apart from Brazil"

India comfortably meeting its fiscal responsibility

The economy is well on its way in meeting its current fiscal deficit target of 3% by end of FY2017-18. The gradual reduction of deficit by way of reduced spend on subsidy as well as better fiscal management through raising fresh tax avenues has helped this cause. SMERA estimates that India's better position in terms of fiscal responsibility places it higher as compared to similar rated peers such as Brazil and Malaysia. Post demonetization, amnesty taxes levied on unaccounted money will increase Government's direct tax collection and this is in addition to the impending benefits from GST. The new tax system will entice more unorganized entities to enter the tax framework as they foresee benefits percolating from ITC (Input Tax Credit), which will basically record their contribution to the supply chain. Further we believe that the assessment of India's debt paying capability should not be confined to this particular ratio and consider various other parameters such as external debt to GDP, forex (import coverage) as well as debt as a percent of GDP.

Sovereign	External Debt to GDP
India	22%
Brazil	24%
Malaysia	67%
Indonesia	34%

Source: SMERA Research; World Bank

India is the world's fastest growing economy with manageable public debt

At an average growth rate of 7%, India is the world's fastest growing major economy and SMERA estimates that India will be an $11.34 trillion economy within the next two decades. A majority of India's growth has been fuelled by government expenditure and mobilization of government debt has been increasing at 15%- public debt however remains manageable at 60% to GDP. At 22%, India also maintains one of the lowest external debt to GDP ratios among peers. Given the global recession, we believe that deficit spending has been fuelling economic activity and India is not an exception. Global debt (private+ public) has exceeded 300% of global GDP; India records significantly lower numbers as compared peers such as China, US along with other higher rated sovereigns. We maintain that with an annualized incremental GDP of nearly $200 billion, India has been experiencing unprecedented growth and has outclassed its peers.

Despite recording the highest economic growth rate, India sovereign ratings are not positively impacted. The only other major economy standing in line with India's sovereign rating category is Brazil, which has been contracting by an annualized rate of 2% and recording inflation of over 10%."

Low per capita is purely a function of population size

SMERA maintains that international rating agencies' fixation with India's low per capita GDP is uncalled for and their argument deserves reconsideration. With a GDP of $2.3 trillion, per capita income distribution is just a function of the size of population. At current rate, SMERA estimates that India's population will stabilize in terms of replacement rate by not before the year 2064 but the economy will enjoy its demographic dividend for the preceding four decades. What this means is that per capita incomes will continue to double every ten years for the next five decades placing India among world's top rated sovereigns in terms of per capita wealth creation. Furthermore, with a low base, SMERA believes that an innovative economy such as India has the ability to avoid the 'Middle Income Trap' as previously experienced by other investment grade sovereigns such as Brazil and Russia. The past trends of high growth and massive resource mobilization spanning over a decade gives us confidence in our assessment.

Reform oriented Government and its willingness to implement change

We derive comfort from over two decades of stable, reform oriented governments in India. This correlates well with the very low political risk involved and smooth democratic transitions leading to unparalleled government accountability among peers. Modi government's pro development agenda has been fuelling confidence in India's future economic outlook and current affairs. GST, Asset Quality Review (AQR) as well as Bankruptcy Code point towards the Government's reformist intent. Furthermore, an increasingly transitional rural economy requires a lot of support at this time and poverty alleviation efforts have therefore maintained focused in the hinterlands. As expected, rural economy and agriculture sector has been lately given more emphasis in governmental reforms and by way of public expenditure. Several measures in agriculture sector has been initiated to double the farmers' income in next five years. These initiatives will be complemented by healthy rainfall and concerted effort has been made to make India monsoon proof in the near term. Several other initiatives are likely to improve the quality of life of the people significantly and thereby per-capita income of the country as well. Moreover, this will further accelerate the pace of economic growth in future.

Other factors worth considering while rating India

India has outperformed similar rated peers in parameters such as, consumer price index, rate of growth, external sector performance and is well on its way in meeting its FRBM mandates. SMERA estimates that CPI will remain lower than 5.6%, which is significantly better performance as compared to peers such as Indonesia, Brazil and Russia. Also, India maintains its number 14 position as a global trader; the external sector is performing strongly as compared to major heavy weights such as the US, China and Japan. Amidst a global slowdown, growth rate of merchandise exports of these countries have dropped by above (-) 6% in 2016 (YTD). India's export growth, however, has contracted marginally by (-) 3.7% in 2016 (YTD). This indicates, competitiveness of Indian industries in the global market is improving. The current account balance to GDP ratio has improved significantly as well from -1.3% in FY15 to -1.1 in FY 16 and further -0.1% in Q1, Fy17.

Obsolete rating methodology for sovereign ratings

We maintain that traditional rating models for sovereigns have become too conventional and are no longer driven by independent judgements or opinions. Certain parameters such as per capita income, fiscal prudence and extent of policy implementation are outright benchmark driven and cannot be realistically looked in isolation. We estimate that India's public debt is below the global average of 64% of GDP and is less than 100% of GDP when private debt (all instruments included) is considered additionally. This gives us significant comfort regarding India's debt servicing capabilities and hence do not foresee any chance of a default occurring. We call for a more exhaustive rating methodology for rating dynamic sovereigns such as India and contend that an equal weightage must be given to subjective, opinion based non-financial aspects.

"We maintain that traditional rating models for sovereigns have become too conventional and are no longer driven by independent judgements or opinions. We call for a more exhaustive rating methodology for rating dynamic sovereigns such as India and contend that an equal weightage must be given to subjective, opinion based non-financial aspects."

India's parallel: A peculiar case of China

While considering the case of China, we find that the economy maintained a BBB+ rating in the year 1999 despite mirroring current Indian parameters. The country recorded a fiscal deficit of over 7.5%, had a per capita income below $1000 (in current prices) and a GDP growth of nearly 7.6%. India in comparison is positioned in better circumstances at this point in time. Despite being an export oriented economy recording a favorable current account balance, China's forex reserves were half of what India maintains today while being a domestic demand driven economy. Even while considering the weight of the economy in terms of global GDP, China's contribution was less significant than that of India currently.

Variable	India (Year 2016)	China (Year 1999)
GDP Per Capita	$1805* ($1581 in Current Prices)	$1637 ($869 in Current Prices)
GDP Growth	7.6%	7.6%
Forex Reserves	$360 Bn	$160 Bn
Relative Weight in Global GDP	3%	3.5%
Sovereign Rating	BBB-	BBB+

Key Macroeconomic Indicators of Select Countries

Countries	GDP / Capita ($)		GDP Growth (%)		Current Account Balance (% of GDP)		CPI (Inflation in %)		Export/GDP (%)		Public Debt/ GDP	FX Reserve ($ Bn)	Ratings		2015
	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	In %	2015	Fitch	S&P	
Brazil	11,729	8,539	0.10	-3.85	-4.31	-3.32	6.33	9.03	11.19	13.04	65.20	355	BB+	BB	Democracy
China	7,587	7,925	7.27	6.90	2.68	3.04	2.00	1.44	23.92	22.37	65.68	3166		AA-	Communist
Estonia	20,148	17,295	2.91	1.07	0.98	2.13	-0.14	-0.46	83.91	79.76	8.49	0.47		AA-	Demecracy
Greece	21,627	18,036	0.65	-0.23	-2.07	-0.05	-1.31	-1.74	32.69	30.11	158.54	7	CCC	B-	Demecracy
Hungary	14,022	12,259	3.67	2.94	1.96	4.17	-0.22	-0.07	89.25	NA	79.01	31	BBB-	BB+	Demecracy
Indonesia	3,500	3,346	5.02	4.79	-3.09	2.20	6.39	6.36	23.63	21.09	24.01	107	BBB-	BB+	Demecracy
India	1,577	1,582	7.24	7.57	-1.34	1.25	6.35	5.87	22.91	19.30	41.11	371	BBB-	BBB-	Demecracy
Latvia	15,692	13,665	2.36	1.89	-2.00	-1.23	0.61	0.20	59.50	58.76	36.41	3	BBB	A-	Demecracy
Malaysia	11,307	9,766	5.99	4.95	4.39	3.02	3.14	2.10	73.85	71.00	55.47	95	A-	A+	Democracy\Monarchy
Philippines	2,873	2,899	6.13	5.81	3.78	2.88	4.10	1.43	28.66	27.94	41.91	86	BBB-	BBB	Democracy
Poland	14,337	12,494	3.28	3.65	-2.04	-0.25	0.11	-0.99	47.46	49.36	55.16	100	A-	A-	Democracy
Portugal	22,124	19,223	0.91	1.45	0.09	0.45	-0.28	0.49	40.04	40.34	122.98	21	BB+	BB	Democracy
Romania	10,012	8,973	2.96	3.74	-0.48	-1.13	1.07	-0.59	41.22	41.09	37.03	40	BBB-	BBB-	Democracy
Russian Federation	13,902	9,057	0.71	-3.73	2.83	5.20	7.81	15.53	27.54	29.53	10.87	398	BBB-	BBB-	Democracy\Autocracy
Turkey	10,304	9,130	3.02	3.98	-5.45	-4.49	8.85	7.67	27.88	27.96	35.01	39	BBB-	BB+	Democracy
Vietnam	2,052	2,111	5.98	6.68	5.03	0.47	4.09	0.63	86.40	89.78	52.09	99	BB-	BB-	Democracy
South Africa	6,472	5,692	1.55	1.28	-5.33	-4.36	6.38	4.59	31.25	30.90	42.28	46	AA-	AA-	Democracy
Australia	61996	56328	2.50	2.26	-3.03	-4.36	1.61	0.90	20.90	19.79	34.25	46	AAA	AAA	Democracy
Canada	50185	43249	2.47	1.08	-2.27	-3.17	1.91	1.13	31.66	31.54	86.51	82.1	AAA	AAA	Democracy
Denmark	61331	52002	1.26	1.18	6.19	7.01	0.56	0.45	203.27	213.85	50.10	61.3	AAA	AAA	Democracy
Hong Kong	40216	42423	2.61	2.36	1.30	3.11	4.43	3.00	219.44	201.16	32.29	361.9	AAA	AAA	Democracy
Luxemberg	116613	101450	4.07	4.85	5.47	5.53	0.63	0.47	82.89	82.76	21.13	0.9	AAA	AAA	Democracy
Netherland	52139	44433	1.01	1.99	8.89	8.56	0.98	0.60	38.66	37.05	71.73	42.9	AAA	AAA	Democracy
Norway	97430	74735	2.21	1.60	11.94	8.78	2.03	2.17	192.11	176.49	34.11	63.1	AAA	AAA	Democracy
Singapore	56007	52889	3.26	2.01	17.47	19.79	1.01	-0.54	64.31	63.49	111.01	246.3	AAA	AAA	Democracy
Switzerland	54398	55837	1.89	0.91	8.78	11.42	-0.01	-1.14	13.50	12.56	15.70	607.8	AAA	AAA	Democracy
United States	85611	80215	2.43	2.43	-2.26	-2.58	1.62	0.12	53.38	53.27	106.71	109.6	AAA	AA+	Democracy
Germany	47767	41219	1.60	1.69	7.27	8.50	0.91	0.23	45.73	46.92	81.96	60.8	AAA	AAA	Democracy

About Us

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Annexure IV

Excerpts from a Working Paper on 'Intra-BRICS Trade: An Indian Perspective' by Export Import Bank of India, October 2016

Growing synergies among the BRICS economies is mutually beneficial to the members

The mutually invigorating trade interactions among the BRICS countries is reflected in their trade composition. Brazil and Russia are among the world's largest producers and exporters of natural resource, while most of their imports include manufactured and processed goods. India and China, on the other hand, are among the major exporters of manufactured and processed goods, and major importers of natural resources. South Africa, apart from being a major trading partner for India, China and Brazil, serves as an important trade route for India-Brazil trade. Thus, growing synergies among the BRICS economies is mutually beneficial to the members.

According to Goldman Sachs, a significant driver of BRICS growth stems from the large scale Chinese and Indian industrialisation and urbanisation creating strong demand for Russia's and Brazil's abundance of natural resources.

India must focus on its export potential to BRICS countries

To further enhance India's trade with the BRICS countries, and at the same time to address the rising trade deficit, an important strategy would be to focus on India's export potential to these countries. Such a strategy would also contribute to the overall efforts to enhance India's trade with BRICS. While India's current global capability could be matched with the import demand of BRICS countries, leading to enhanced exports from India, strategy to promote bilateral trade relations could also encompass the case for enhancing domestic production in India to cater to the large demand existing in other BRICS countries.

Given India's expertise in several manufactured products, and technology which is affordable and adaptable, other BRICS countries would also stand to gain with increased import of such items from India. This would also help in further strengthening bilateral ties, and resulting in a mutually rewarding long-term partnership. Potential items of export for India to other BRICS countries up to the 6-digit HS code, have been identified and presented in the study.

To further enhance India's trade with the BRICS countries, and at the same time to address the rising trade deficit, an important strategy would be to focus on India's export potential to these countries. Such a strategy would also contribute to the overall efforts to enhance India's trade with BRICS.

Identification of potential items of India's exports to the focus markets, would be based on the following criteria:

- Identification of major items of imports of the select focus markets, and share of India in each product line of imports, based on 2-digit HS commodity code; and
- Selection of potential items of India's exports to each of the focus markets, based on low share of India in target country's import basket of major commodities, keeping in view India's global export capability. This would entail identification of potential export items to each focus market, under each 2-digit HS code, upto the 6-digit HS commodity code.

While India's current global capability could be matched with the import demand of BRICS countries, leading to enhanced exports from India, strategy to promote bilateral trade relations could also encompass the case for enhancing domestic production in India to cater to the large demand existing in other BRICS countries.

Given India's expertise in several manufactured products, and technology which is affordable and adaptable, other BRICS countries would also stand to gain with increased import of such items from India.

Moreover, matching India's capability in high value-added production and manufacturing with an increasing import demand for such products and technology, could prove to be a win-win situation for both India and other BRICS countries. This would also help in further strengthening bilateral ties, and resulting in a mutually rewarding long-term partnership.

Potential items of India's exports to China include the following:

Product Description	HS Code
Mineral fuels, oils and its distillation products	(HS 27)
Machinery and equipment	(HS 84)
Vehicles other than railway or tramway	(HS 87)
Pharmaceutical products	(HS 30)
Articles of iron or steel	(HS 73)
Aluminium and its articles	(HS 76)
Edible fruit and nuts	(HS 08)
Man made filaments and other textile materials	(HS 54)

At the two-digit level, India may consider enhancing its exports to South Africa particularly with respect to the commodities listed below:

Product Description	HS Code
Copper and its articles	(HS 74)
Animal or vegetable fats and oils	(HS 15)
Wood and its articles	(HS 44)
Albuminoidal substances	(HS 35)

In order to expand cooperation in trade among BRICS countries, the following goals should be pursued:

- enhancing consultations and exchanging information on macroeconomic and trade policies;
- encouraging trade and investment links between BRICS countries with an emphasis on promoting market access on goods and services amongst BRICS countries and supporting industrial complementarities, sustainable development and inclusive growth;
- simplifying and increasing the efficiency of administrative procedures to facilitate and accelerate mutual trade and investment;
- improving the transparency of trade and investment climate in the framework of international obligations and national legislation; and
- creating favorable conditions for development of mutual trade and foreign direct investment in the BRICS countries in order to diversify production and exports.

Given India's export potential, and the rising demand in Russian markets, focus items of India's exports to Russia would include the following:

Product Description	HS Code
Machinery and equipment	(HS 84)
Electrical machinery and equipment	(HS 85)
Vehicles other than railway or tramway	(HS 87)
Plastics and its articles	(HS 39)
Optical, photographic, medical or surgical instruments	(HS 90)
Inorganic chemicals	(HS 28)
Copper and its articles	(HS 74)
Furniture; bedding, mattresses, and cushions	(HS 94)
Salt, sulphur, lime and cement	(HS 25)
Footwear and gaiters	(HS 64)
Edible vegetables and certain roots and tubers	(HS 07)

Potential items of India's exports to Brazil would include:

Product Description	HS Code
Machinery and equipment	(HS 84)
Electrical machinery and equipment	(HS 85)
Vehicles other than railway or tramway	(HS 87)
Plastics and its articles	(HS 39)
Optical, photographic, medical or surgical instruments	(HS 90)
Inorganic chemicals	(HS 28)
Copper and its articles	(HS 74)
Furniture; bedding, mattresses, and cushions	(HS 94)
Salt, sulphur, lime and cement	(HS 25)
Footwear and gaiters	(HS 64)
Edible vegetables and certain roots and tubers	(HS 07)

Annexure V

Excerpts from EXIM Bank Study on 'Sustainable Investment Opportunities in Africa: Prospects for BRICS' (Working Paper No. 55), November 2016

Resource Endowment of Africa

- Guinea has the world's largest reserves of bauxite in the world, almost one-third of the world reserves of 7,400,000 million metric tonnes. However, in terms of production it is at the fourth position, after Australia, China, and Brazil.
- While Latin America will always be the most important source of copper supply globally, given its sheer size and volume of production and reserves, Africa with its rich reserves in Congo and Zambia is also a significant player. In terms of production, both Congo and Zambia are amongst the top 10 in the world, with a share of 5.9% and 3.9%, respectively.
- Amongst the key producers of coal, South Africa occupies the first position. It is also the key consumer and exporter of coal, in terms of volume. In fact, more than 90% ofthe coal in Africa is produced and consumed in South Africa.
- Mozambique, which is the second largest producer of coal in Africa, has been showing significant potential for additional mineral deposits, off late. Significant reserves of coking coal have been discovered in the Tete province and the Zambezi area of the country, which have attracted a number of prominent mining companies.
- The share of Africa in global oil reserves has increased from 6.4% in 1995 to 7.6% in 2015, which is higher than the entire Asia Pacific and close to Europe and Eurasia regions. The continent produces around 9.1% of world's crude oil output. A country-wise breakup of Africa in terms of world oil reserves shows Libya having the highest oil reserves with a share of 37.5%, followed by Nigeria (28.7% share), Angola (9.8% share), and Algeria (9.4%).
- South Africa, which contributed about 33% of Africa's installed solar capacity during the turn of the century, has been successful in increasing its share phenomenally to 71% in 2015.

BRICS Engagement in Africa

- BRICS economies have invested US$ 138.74 bn across sectors between 2003 and 2015. Remarkably, all the five BRICS economies have individually invested in at least one African country consistently every year during this 12 year period (2003 to 2015), although the value of investments has fluctuated.

Recommendations for future BRICS Engagement in Africa

- BRICS economies have created a reasonably sound healthcare system and can play a key role in partnering with the African economies by replicating their healthcare development model.
- **Co-Financing by BRICS economies:** Co-financing is a very well-established way of working for development. BRICS economies can come together to assist the African countries in a variety of sectors to improve the economy. Each of these economies can jointly, or bilaterally finance a program or a project, and share the best practices in terms of financial capability and technical expertise to monitor execution.
- **Supporting Sustainable Development Projects:** The emerging economies of BRICS could endeavor to increase their participation in areas of sustainable development through innovations in policy and tools. Possible areas of such interventions could be: Utilizing the latent agricultural potential of Africa towards meeting its own needs and even catering to the global demand; Harnessing the naturally endowed solar energy in Africa; Building healthcare facilities towards making a healthy Africa; and Facilitate in creating value added linkages in both mining and agriculture.
- **Set up fund to support agriculture sector:** Deutsche Bank, for example, has set up the Africa Agriculture and Trade Investment Fund (AATIF), which aims to support sustainably the incomes of people working in agriculture, ensure food security and increase the competitiveness of local businesses. BRICS countries could consider jointly floating a similar Fund to not only augment agriculture production in Africa but also promote exports from the region.
- **Facilitating development of physical infrastructure:** Physical infrastructure such as roads, ports, railways, electricity and information communications technology are all vital enablers of economic growth. The Governments of the BRICS economies have ably supported the private sector in improving the infrastructure conditions in their respective countries, and have encouraged the public-private partnership mode. It may be noted that private sector participation is usually critical especially for undertaking complex infrastructure development projects.

- BRICS economies could share their experiences wherein the Government entities identify the projects, and run a bid for private companies to participate to execute the project. The capacity and conduct of government sponsors can have a major impact on the initiation and delivery of infrastructure development projects. The Governments in Africa need to be able to efficiently and competently identify, and execute deals with private partners, and manage projects over the course of their lifecycles with greater amount of transparency.
- **Facilitating development of financial architecture:** BRICS countries have developed a fairly robust financial architecture within their domestic economies. These include a mechanism to devise a sound monetary policy, regulatory mechanisms to oversee the functioning of banking, insurance, capital markets, etc., and significant penetration of technology in the banking business. Such experience of an evolving financial architecture in a developing country context, which has now graduated to become fairly robust, needs to be shared with African counterparts for any meaningful partnership.

Annexure VI

Wellness, Health and Ayurveda

This article was presented by Professor Bhushan Patwardhan, PhD, FAMS, Center for Complementary & Integrative Health, Interdisciplinary School of Health Sciences,
Savitribai Phule Pune University at the BRICS Wellness Workshop in Bengaluru during 10-11 September 2016.

Concepts

The concept of health revolves around a few key words like well-being, wellness, and happiness. It seems to have its origin in the proto-Germanic word hailitho meaning "whole, uninjured, of good omen". An old Norse term heill means "healthy", and hælan means "to heal". Health also denotes prosperity, happiness, welfare, preservation, and safety. Often the terms health and wellness are used together in Western culture. In Oriental language, the A more profound and appropriate term for health used in Ayurveda is *Swasthya,*.

In many cultures and traditions the proverb "health is wealth" is popular. For every individual, health is something very important and crucial for life and existence. Everyone hopes and aspires to health and wellness, naturally. Health is equilibrium, a balance, and a state of harmony. When we lose it, we know that it existed. It is easier to know illness, but very difficult to know wellness. Probably due to this, mostly health is described and discussed in relation to disease/illness/sickness.

Definitions

Ayurveda defines health in much broader perspective. A healthy state as per Ayurveda is an condition where the dynamic principles like Doshas, Agni, Dhatu, and Mala are in optimally natural balanced state. This is actually a state of biological equilibrium or homeostasis finally leading to happiness and bliss at the levels body, mind and spirit. This is much better description of wellness where holistic view is taken as against just absence of disease or illness is assumed to be state of health.

The WHO adopted definition of health in 1948 as "A state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity". Thought leaders have raised several questions related to this definition. How can one define "a state of complete well-being"? How do we measure well-being? Actually, there is no reliable instrument to measure well-being. In the WHO's definition, dimensions of health are connected to the term well-being. What is a state of well-being? Indeed, it is very difficult to answer this question. A state of well-being is very difficult to measure. It is very subjective, consequential, judgmental, and qualitative. According to the principles of management, "what cannot be measured cannot be managed". Can we manage well-being? What is the meaning of a state, when we say a state of well-being?

Dimensions

There are four main determinants of health including Nutrition, Environment, Lifestyle and Genetics. The fifth indirect determinant is medical care (Figure 1). There are seven prominent dimensions of health and wellness. These include social, emotional, spiritual, environmental, occupational, intellectual, and physical wellness. All these dimensions contribute to our quality of life(Figure 2).

1. The physical dimension relates to the maintenance of a good quality of life, allowing the individual to perform daily activities without undue fatigue or physical stress, and the importance of adopting healthy habits like balanced diet, and exercise, while avoiding bad habits like tobacco, drugs, and alcohol.
2. The social dimension is about the ability to connect and relate to other people in positive relationships with family, friends, and colleagues.
3. The emotional dimension is the ability to meeting challenges, and to understand own strengths and limitations, while respecting others, and overcoming personal ego. The ability to acknowledge and share feelings of anger, fear, sadness, or stress, and hope, love, joy, and happiness in a productive manner.
4. The environmental dimension is the ability to recognize our responsibility to preserve nature, and protect the ecosystem: air, water, land, forests, homes, and communities, or our planet, thus improving the standard of living, quality of life, and status of environment.
5. The occupational dimension is about balancing work pressures, and job satisfaction, while making positive contributions to enterprise organizations, and also to society.
6. The intellectual dimension is the ability to keep an open mind to new ideas and experiences. The desire to learn new concepts, improve skills, and engaging in lifelong learning contributes to the intellectual dimension.
7. Awareness of the spiritual dimension is a recent realization, especially in the West; it is a quest to find our sense of purpose, and apprehend the meaning of life. It is about the ability to think beyond selfish motives, to establish peace and harmony, and understand the importance of values, personal purpose, and a common purpose that binds humanity.

The dimensions of health and wellness now encompass individual or public health, and involve healthy environments, unpolluted rivers, healthy towns, healthy cities, healthy nations, and planetary health.

Well-being to Wellness

The concept of well-being seem to benow gradually transmuting into a broader concept of wellness, and is getting closer to the Ayurvedic concept of Swasthya. Well-being is about wellness. Wellness and well-being are not synonyms, but the differences are very subtle. Well-being as a concept involves total life experience, happiness, and prosperity. Wellness refers mainly to the individual feeling of one's body/mind/spirit. The concept of wellness is beyond physical health and fitness. Wellness involves improving quality of life at various levels (Figure 3). Wellness is considered an integration of states of physical, mental, social, and spiritual well-being. Because it is difficult to differentiate between these concepts, it is necessary to discuss the dimensions of health, well-being, and wellness together. The concept of wellness provides a conscious way of living for individuals and society to reach their fullest potential. However, the term wellness is generally used in myopic fashion in the limited context of spa-going, relaxation, and personal recreation.

The term *wellness* was first explained by Halbert L. Dunn, who was chief of the United States' National Office of Vital Statistics. Dunn described a high level of wellness as "performance at full potential in accordance with individual age and makeup". He suggested that health dimensions range from high-level wellness, to death. The concept of wellness has a spiritual and social context. Dunn suggests that to "know yourself" is the fundamental principle of wellness. In-depth knowledge of the outside world is possible only with the knowledge of one's inner self. The role of wisdom and maturity possessed by senior citizens, and successful people contribute to the wellness of society. He further explains the connection between biological nature, and the spirit of man as "creative expression". An expression of the self in search of universal truth provides inner satisfaction to humanity on an individual level. Core values like creative expression, trust, love, security, maturity, and altruism bring about wellness at a societal level. Dunn presents an optimistic vision that encompasses the wisdom of the East and West. He also admits the practical difficulties of his proposition, but suggests that dreaming in this direction can produce wellness for society.

Applications

Few academic institutions are actively involved in propagating the concept of wellness. The University of California, Riverside has a wellness program for its faculty, staff, and retired members. The program includes social, emotional, spiritual, environmental, occupational, and intellectual and physical wellness. The University of Pittsburg starts wellness orientation right from the student admission. Wellness related research, and its translation into national programs are very limited, despite having a sound, philosophical background. It is important to discuss the basics of health and wellness with a focus on preventive, protective and proactive approaches. An optimistic view is necessary while looking at health. The domination of a pessimistic view, with the lifelong dependence on disease treatments and drugs is leading to the medicalization of society. As a result, people are trapped in the vicious circle of drugs, doctors, diagnostics, hospitals and insurance (Figure 4).

Role of Ayurveda and Yoga

Today's wellness programs based on putative health benefits, along with commercial packages, dietary supplements, and exercise devices have many limitations. The commercialization of wellness as a package seems like going an exploitative path. Wellness is a very individual experience. To achieve a state of wellness, it is important to empower individual. With systematic efforts, and experience-based guidance from Ayurveda and Yoga it will be possible to achieve, maintain, and protect health and promote wellness[1].

While modern medicine provides objective tools for health assessment, Ayurveda and Yoga empower individuals with the knowledge, attitude, and behavior for positive health and wellness. The concept of health promotion in Yoga and Ayurveda are quite comprehensive. Ayurveda advocates for health promotion through advice on diet and lifestyle. This branch is known as *Swasthavritta*, which is an Ayurvedic pronouncement for healthy life. Any deviation from *Swasthavritta* may lead to an imbalance in *Dosha*, resulting in ill-health. The *Swasthavritta* incorporates advice pertaining to age, nutritional status, metabolic attributes, and individual tolerance and sensitivity in the context of environmental and seasonal variations. According to Ayurveda, the three *Dosha* undergo chrono-biological changes during the day and night cycle (Figure 5). The accompanying illustration of the Ayurvedic clock is very interesting. *Dosha* are also affected by the pattern of daily routine, foods habits, and behaviors. Ayurveda suggests matching daily food and behavior in such a way that the *Dosha* are maintained in the balanced state. For example, one should consume food when *Pitta Dosha* is at the highest peak, exercise when *Kapha* is increased, and rest when *Vata* is aggravated. If daily activities are not synchronized with *Dosha* levels, the result might be imbalance, and disease. Hence the history of patient's diet and lifestyle is important for diagnosis. The treatment includes detailed advice on when to eat, and what to eat, and aims to harmonize *Dosha* with the properties of diet and drugs. Sometimes a useful substance may be harmful if consumed at wrong time. An asthmatic may be advised to drink medicated water at bedtime to avoid the aggravation of *Kapha* during the night.

Ayurveda advises specific changes in diet and lifestyle according to various seasons. This is known as *Ritucharya*. Specific interventions like *Panchakarma* are also advocated in particular seasons. The guidelines for daily routine, seasonal changes, and treatment regime are specific to *Dosha* changes, and aim to achieve a dynamic balance of the *Dosha*. A chrono-biology clock based on *Swasthavritta* from Ayurveda is very useful to plan various activities during the day and seasons for optimal output and health. This is known as *Dinacharya* and *Ritucharya* that helps health protection depending on predominance of dosha in each season.

In short, to move from disease to health, and from Illness to Wellness, it is necessary to replace 'I' with 'We'. It is necessary to first protect well and then ill should be treated. Clearly, it is an active and participatory effort, which cannot be achieved in isolation. Health and wellness are something natural, but understanding perfect health state is very difficult. As against, an understanding of a perfect disease state or illness is fairly easy. Undoubtedly, present science understands diseases and illness better than health and wellness. To promote health and wellness rather than medicines, we need more emphasis on nutrition, diet, lifestyle, and behavior modification. Ayurveda and Yoga propose a greater focus on mind, and strengthening the inner strength. Today, the importance of wellness, health promotion and disease prevention can no longer be overshadowed by disease treatment and therapeutics.

1. Patwardhan B, Mutalik G TG: Integrative Approaches For Health: Biomedical Research, Ayurveda and Yoga. First Edit. San Diago, USA: Academic Press, Elsevier Inc; 2015.

Figure 1
Determinants of Health

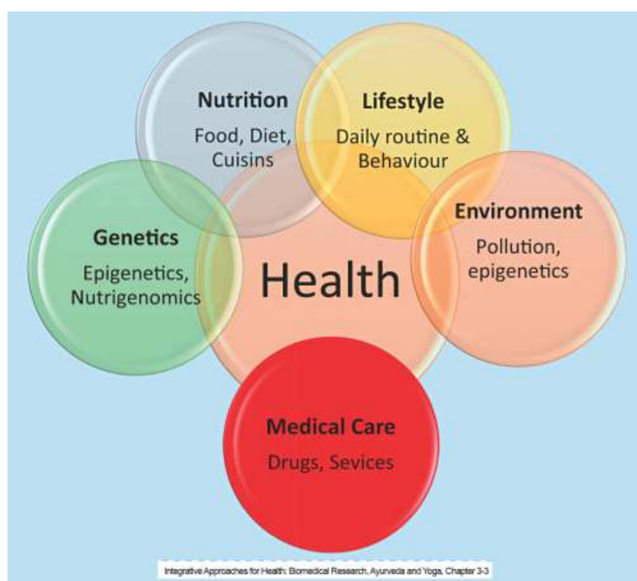


Figure 2: Dimensions of Wellness

Figure 3: Factors influencing Quality of Life

Figure 4: Vicious Cycle of Medical Care

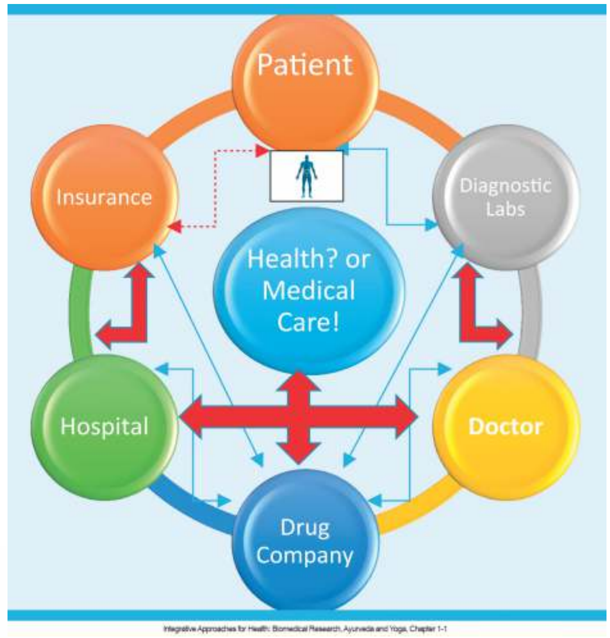


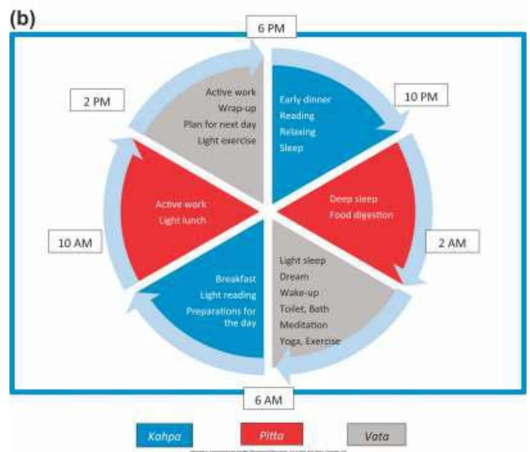
Figure 5
Dosha Influence on Dinacharya

(a)

Daily routine as advised by Ayurveda (*Dinacharya*)

1. Wake up before sunrise
2. Clean face, mouth and eyes
3. Drink warm water
4. Bowel and Bladder Evacuation
5. Tooth, Tongue and Gum cleaning
6. Light oil massage and Bath
7. Use natural perfumes
8. Exercise, Yoga, Pranayama
9. Meditation
10. Breakfast
11. Work, Lunch, Work
12. Dinner with family before sunset
13. Light reading, socializing
14. Sleep

(b)



Media Releases

Bloomberg, New Delhi

BRICS trade ministers will meet in New Delhi on Thursday ahead of the 8th BRICS Summit meeting in Goa on Saturday and Sunday to discuss global economic trends and their influence on BRICS trade and investment. Though India is not in a hurry to consider the Chinese proposal to have a free trade area among BRICS nations, the five emerging economies will sign an agreement at the upcoming Goa summit for better customs cooperation with an eye to reduce non-tariff barriers among the nations. BRICS comprises the five emerging economies of Brazil, Russia, India, China and South Africa. China's ministry of commerce (MoC) on Sunday said a free trade area would be a "significant form of cooperation" between BRICS nations, the state-run China Daily reported. MoC spokesperson Shen Danyang at a press briefing said that by setting up a free trade area, BRICS countries would be able to remove tariff and non-tariff barriers, give play to their comparative advantages, and advance trade and investment liberalization among them. India's commerce minister Nirmala Sitharaman, however, on Monday said she is not aware of any such proposal. BRICS trade ministers will meet in New Delhi on Thursday ahead of the 8th BRICS Summit meeting in Goa on Saturday and Sunday to discuss global economic trends and their influence on BRICS trade and investment. A commerce ministry official, speaking on condition of anonymity, said that agreements on developing a portal for small and medium enterprises as well as one on non-tariff measures are expected to be signed in Goa. "A BRICS portal on non-tariff measures will be developed. This is meant to encourage better understanding of non-tariff measures of each country among exporters," a commerce ministry official said. Another agreement on cooperation on e-commerce which will lead to only information exchange in the area may also be signed. The official said the ministry's proposal to come out with a travel card for easier visas for businessmen and tourists among the BRICS nations did not take off as the Union home ministry is not very keen on it.

Are BRICS states ready to unleash their growth potential?

Indira Rajaraman is an economist.

If they can rise above political differences and see the advantages of cooperation, they might yet validate Goldman Sachs's 2001 vision. BRICS: The very word has such a good feel. In one of those experiments where they map areas of the brain which light up in response to various stimuli, I am sure the word "bricks", like sun-dappled, lights up the happy areas. It has that constructive association, with building and improvement, and structures that keep out the rain. BRIC in singular, which is what it started out as, was an invented country grouping of the research department of Goldman Sachs in 2001—Brazil, Russia, India and China. With the bursting of the dot-com bubble, the ground was fertile for creating a new group of large economies and investing it with the responsibility of powering growth in a globalized world. It became BRICS with the inclusion of South Africa 10 years later. That initial vision projected economic pre-eminence for the group over a horizon of 50 years. We are only 15 years into it, but from this vantage point, the vision looks decidedly askew. What did the initial four in 2001, or the five today in 2016, have in common other than the fact of being large and federally governed? But the anointed countries took the grouping sufficiently seriously that they formalized it in 2006. After the global crisis of 2008 which gave it a further sense of its own importance in pulling the world out of recession, annual BRICS summits were convened. In October, India hosted the eighth annual summit.

How well are the BRICS countries poised to unleash their growth potential through providing economic opportunity for all? For this, the best measure, with all its limitations, is the World Bank's Ease of Doing Business (EDB) rankings. The 2017 edition of this annual exercise has just come out. It assigns to each of 190 countries an index value configured as an average across 10 constituent indicators. These include time taken to get construction permits and electricity connections, procedural issues with paying taxes and such. The World Economic Forum's Competitive Index by contrast encompasses far too wide a range of indicators to be useful.
The 2017 edition shows very little change from 2016 in the relative standing of BRICS countries. The media coverage focuses on rankings, but what matters is the index value itself. For each of the 10 constituent indicators, the distance to frontier (DTF) score is obtained for each country as a percentage of the distance from the worst to the frontier. Of the BRICS five, Russia shows the highest improvement in its index value relative to 2016 (but interestingly is not marked with an upward arrow in the summary table!). The index value for India has improved by roughly 0.6 over last year. It has to be remembered that even if a country stays where it was on a particular indicator, its DTF index could change if the performance of the worst country changes (the frontier is revised only once every five years).

As things presently stand, the BRICS span goes from Russia at an overall index value of 73.19 to India at 55.27, with South

Africa (65.20), China (64.28) and Brazil (56.53) in between. The relatively low value for China is a bit of a surprise. Hong Kong is listed separately and is of course somewhere near the top.

The limitations of the index are well known—the confinement of data collection to the largest city in each country, or in countries of BRICS dimensions, the two largest cities. But the much more serious limitation is that each constituent indicator is measured by the median or modal duration between application and receipt of permit, as assessed by knowledgeable people. The principal structural problem in India is that the dispersion around such a median is very high on the upside.

The evidence for this is clearly visible in the evolution of banking regulation over the last few years. In any loan contract, the date of commencement of commercial operations (DCCO) marks the date from which servicing of the loan is scheduled to commence. In May 2013, when the definition of non-performing assets was tightened with a forward effective date of 1 April 2015, regulatory forbearance of DCCO delays on account of failure to get the requisite permits was actually extended at the same time, by up to two years. These are delays beyond the expected date of getting starting permits.

Staying with the median measure, with all its limitations, what is interesting is that the relative positioning of the BRICS five shifts between the 10 constituent indicators. India has the highest DTF index value for protecting minority investors within BRICS, and surprisingly, for getting electricity connections. The shifting rankings within BRICS between indicators suggests a promising field for mutual consultation and learning.

For any kind of deep structural cooperation between member countries, BRICS needs to set up working groups which would meet sequentially in the different countries, and take on board the particular issues needing redressal in each within a particular sector. Instead, the BRICS meetings have degenerated into the usual content-free official exchanges, with some sectoral meetings but in a conference format with very little to take away in terms of specifics.

When the BRICS idea first took shape, I was actually in favour of it. At the time of its formation, there was no G20, only G8, and I saw it as recognition of the importance of wider global partnerships. It was not a free trade group, which was refreshing because it indicated intent to develop other avenues of mutual economic assistance. There have indeed been some positive moves in that direction.

There is the New Development Bank (NDB) for infrastructure lending, with a focus on renewable energy. Headquartered in Shanghai, it started operations in July 2015 under the chairmanship of K.V. Kamath, who has a record of dynamism in the Indian banking sector. It has made an initial set of project loans in all five member countries, and has successfully concluded a bond flotation in the Chinese market.

There is also a BRICS currency reserve arrangement amounting to $100 billion, operationalized in July 2015. Access for members to short-term liquidity to tide over external crises is defined at the amount of capital contributed, less for China, more for South Africa. This too is an important initiative. But both this and the NDB are too recent to look for impact.

The proposals before the eighth summit just held in Goa were very promising. One was to create a new BRICS credit rating agency, a much needed element of competition in the sovereign rating space. The other was for cooperation between the national Export-Import banks of the five countries and the NDB, which could have augmented infrastructure loans with trade finance for construction exports.

These excellent Indian initiatives might have been made earlier and progressed faster if bureaucratic responsibility for BRICS were differently housed in India, in a group including the NITI Aayog and the department of economic affairs of the ministry of finance instead of just the ministry of external affairs. But located as it is, the BRICS formation is viewed in diplomatic terms. The latest summit declaration of group solidarity in the battle against terror may have carried some signalling value, but what it can deliver is uncertain given the funding patterns for terror. Any heft such a message carries can only emanate from the combined economic might of BRICS, and more importantly, evidence of economic cooperation within the group.

Russia, politically the dominant member, shows no indication of being interested in any form of group identity with other countries in defining its global presence. Its focus seems confined to restoring the geostrategic pole that was lost with the disintegration of the former USSR. Russia seems more interested in bilateral deals with individual members of BRICS, especially if they include a defence equipment purchase component, rather than in the group itself. Even though Russia is now in an oil-induced recession, this is a temporary blip in a country that has robustly survived its transformation from a socialist to a market-based economic system, and going by the EDB exercise, has surpassed many countries with longer traditions of freedom to engage in markets.

China is far and away the dominant member in economic terms, and will remain so for the foreseeable future. It is madness to cite the recent crossing of the Indian growth rate above the Chinese as evidence in any sense of the loss of China's economic dominance. Alarmists might speak of the imminent collapse of the Chinese financial sector owing to runaway local government fiscal deficits, or point to its performance on the EDB index as evidence of structural infirmity. But the many decades of high investment in physical and human capital have given China an unsurpassed asset base in infrastructure, energy, health and education, everything needed to power the economic engine. The physical infrastructure is visibly in place, even if some of it is in vacant unoccupied housing. China prowls the world in search of raw materials, seemingly unfettered by any sense of group identity or obligation to BRICS.

At the same time at which the BRICS NDB was started, China spearheaded a parallel Asian Infrastructure Investment Bank (AIIB) with roughly the same size of authorized capital and much wider country membership extending well beyond Asia. But the sectoral focus of NDB on renewable energy differentiates it from AIIB, and gives it a more progressive colour.

If the country members of BRICS display the statesmanship needed to rise above political differences and see the advantages of mutual cooperation, the club might yet validate that 2001 vision of the Goldman Sachs research department.

The BRICS push for a more equitable world

Godfrey Netswera is academic director for Brics at the National Institute for the Humanities and Social Sciences, South Africa.

The grouping has entered an era of building the institutions needed to implement its agenda. There is serious scepticism about the intentions and potential achievements of the BRICS (Brazil, Russia, India, China and South Africa) grouping. Many Western commentators have already declared its failure to sustain itself due to its inability to institutionalize and therefore implement a programmatic agenda. BRICS is, therefore, perceived to be a rhetoric that, like the Non-Aligned Movement, will fade in the near future.

To the contrary, since it began to meet annually in 2009, BRICS has made significant strides in cementing its permanency. Unlike other historical multilateral forums of the South, such as the Non-Aligned Movement or even Ibsa (India, Brazil, South Africa), BRICS has entered an institutionalization era. Without commitment towards institutions, multilateral forums have a very slim chance of success.

The establishment of the BRICS Think Tanks Council (BTTC) in 2013 was one such important milestone in the institutionalization agenda. Academics from the five BRICS nations are able to engage in important conversations annually for the advancement of the BRICS agenda and make recommendations to the BRICS heads of state. The BRICS Academic Forum of 2016 in Goa, for instance, made recommendations for the establishment of the BRICS Rating Agency, which the heads of state endorsed at the BRICS summit.

The New Development Bank (NDB) is another important development that sets BRICS apart from other multilateral formations. Its objective of funding infrastructure projects in the developing countries and meeting the aspirations of millions through sustainable development would seem to duplicate the mission of the International Monetary Fund (IMF).

However, we should bear in mind the perception that the Bretton Woods institutions (IMF and World Bank) preside over lending conditions that are neither developmental nor in the interest of the countries of the South. Much has been written about the adverse effects that structural adjustment programmes had on the African continent in particular.

It is for this reason that BRICS agitates for the reform of important international instruments like the UN security council and the World Bank. To prove to the international community that reforms are necessary and possible, BRICS applies its own fairer methodologies of engagement. For instance, NDB, unlike the IMF, applies equal voting power without provisions for veto powers. The bank will thus foster greater financial and development cooperation among the BRICS nations as well as between the BRICS nations and other countries of the South. With a population of around 3 billion people, comprising nearly 45% of the world population, and with a total gross domestic product of over 25% of the global market and growing, BRICS will become an important global player of the future.

The BTTC Academic Forum recommended important developments in line with the BRICS grouping's institutionalization ideals. Among its recommendations were the following:

Establishment of an NDB knowledge hub or analytical support centre that will produce important data sets for the supporting work of the NDB on the economic development and performance indicators of BRICS nations. This move will ensure less dependence on the data sets from the World Bank and UN subsidiaries on conditions within the BRICS countries. The centre would provide intellectual leadership on finance, economics and trade within and beyond the BRICS nations. In consideration of this important ideal, think how poverty at a global level is currently being measured and potential bias embedded in the measure.

The existing economic rating agencies are currently located in the north. The perception is that the work of these agencies is biased or somehow influenced for an outcome that does not favour the countries of the South. For this reason, the BTTC recommended the establishment of a BRICS rating agency whose existence may help facilitate alternative ratings for the institutions and governments in the global South.

The international community currently trades through the use of the dollar, with major implications. It is therefore recommended that BRICS nations should consider the implementation of currency swaps and settle trade among themselves using local currencies. Such a move would have major economic benefits for countries in the South that have very limited dollar reserves.

INDIA TO ACCENTUATE CO-MEMBERS TO SUPPORT ADOPTION OF ITS KEY ANTI-TERROR INITIATIVE CCIT

DipanjanRoy Chaudhury, Benaulim

India will impress upon co-members to support its key anti-terror initiative at UN -Comprehensive Convention on International Terrorism (CCIT) -during the eighth edition of the BRICS Summit in Goa on Sunday. CCIT's adoption will provide the legal framework to fight terrorism globally.

Launched in 1996 by India, CCIT provides a legal framework which would make it binding on all countries to deny funds and safe haven to terror groups. But the pact has been deadlocked over differences on defining terrorism and terrorists by certain countries including certain western nations.

During her address at UNGA last month, External Affairs Minister Sushma Swaraj had sought support for adoption of CCIT. However, there are some BRICS members too have differences on definition on terrorism. At a briefing in New Delhi, last week, MEA Secretary (Economic Relations) Amar Sinha had said "global regime is already inscribed in the agenda of UN. We have been pressing all our partners in all for and here also we will push this along. The issue which has been the stumbling block is how to define terrorism. There are many countries, in fact, our NSA in the meeting had suggested perhaps we can move on terror cooperation without actually coming to a definition of terrorism because everybody knows. When a terrorist act happens you know exactly what terrorism is. So you don't have to first start defining it. You take the act as a terrorist act and work backwards. So that is one of the suggestions but I am sure we will push that."

However, Indian officials claimed there is a growing resonance among UN members on the need for such a legal framework. The initiative has seen "a lot of progress" and there was a wide agreement on most of it, according to the officials familiar with the matter.CCIT was pushed by Narendra Modi in his address at the 69th Session of the UN General Assembly in September 2014.

"Terrorism is undoubtedly the single-biggest threat to international peace and security ," a senior official said, adding the convention would give "legal teeth to prosecuting terrorist acts". To forge that last mile of consensus on CCIT, India is considering all options, including "voting" at UN, said another official.

BRICS leaders commit to reviving economic growth

At BRICS Summit 2016 in Goa, members failed to reach consensus on a credit rating agency and cooperation between exim banks and New Development Bank

The world's five largest emerging economies, which together account for 30% of the world's economic output, committed themselves to reviving global growth by using a combination of monetary, fiscal and structural tools at the eighth BRICS summit in Goa on Sunday.

But Brazil, Russia, India, China and South Africa could not sustain the momentum on institution-building they generated in past summits after creating the New Development Bank (NDB) and the Contingent Reserve Arrangement (CRA), meant to serve as a shield against global liquidity pressures.
The five members of BRICS failed to reach consensus on signing two crucial agreements—one to create a BRICS credit rating agency and the other on cooperation between their export-import banks and the NDB.

"We reiterate our determination to use all policy tools—monetary, fiscal, and structural, individually and collectively—to achieve the goal of strong, sustainable, balanced and inclusive growth," the five countries pledged in their Goa Declaration. "Monetary policy will continue to support the economic activity and ensure price stability, consistent with central banks' mandates."

The BRICS summit was held at the Taj Exotica hotel overlooking Benaulim beach in Goa. Presided over by Prime Minister Narendra Modi, the summit was attended by the heads of government from the four other member states: presidents Michel Temer of Brazil, Vladimir Putin of Russia, Xi Jinping of China and Jacob Zuma of South Africa.

The five emerging economies, however, contended that monetary policy alone cannot lead to balanced and sustainable growth and stressed the role of structural reforms.

"We emphasise that our fiscal policies are equally important to support our common growth objectives. We also take note that the spillover effects of certain policy measures in some systemically important, advanced economies can have adverse impact on growth prospects of emerging economies," the declaration stated.

The BRICS group accounts for 43% of the world's population and has 17% share in world trade. The group's exports to the rest of the world amounted to $3.48 trillion in 2014. Between 2006 and 2015, intra-BRICS trade increased 163%—from $93 billion to $244 billion.

The leaders noted that they were meeting at a time when global economic recovery is progressing with improved resilience and the emergence of new sources of growth. "The growth, though, is weaker than expected with downside risks to the global economy continuing to persist. This gets reflected in a variety of challenges including commodity price volatility, weak trade, high private and public indebtedness, inequality and lack of inclusiveness of economic growth. Meanwhile, the benefits from growth need to be shared broadly in an inclusive manner. Geopolitical conflicts, terrorism, refugee flows, illicit financial flows and the outcome of the UK referendum have further added to the uncertainty in the global economy," they added.

On the proposed BRICS credit rating agency, the declaration said experts from the grouping will explore the possibility of setting up one based on market-oriented principles to strengthen the global governance architecture.

The BRICS leaders did not sign an agreement on the proposed agency as they thought it needs more consultations among experts, said Amar Sinha, secretary of economic relations in the ministry of external affairs. "Every credit rating agency has to have credibility and access to absolutely dependable data. The experts of all member countries will now work on these issues," he told journalists.

Mint reported on 14 October that China was opposing India's proposal for a BRICS-sponsored credit rating agency, holding that a government-backed agency will have little credibility. The leaders said non-tariff measures (NTMs), the services sector, and standardization and conformity assessments were possible areas of future cooperation. "We welcome, in this context, the continued realization of the major BRICS economic initiatives, such as enhanced cooperation in e-commerce, 'single-window' IPR (intellectual property rights) cooperation, trade promotion, and micro, small and medium enterprises (MSMEs)," they said.

Modi sees opportunities for cooperation between BRICS, Bimstec

The BRICS nations signed an agreement on the establishment of a Customs Cooperation Committee and said they were exploring the means of enhancing collaborations in the future, including those aimed at creating a legal basis for customs cooperation and facilitating procedures of customs control.

Bilateral trade reached USD 109 billion, GST to boost it further: US to India

Pritzker said the Obama Administration in the past seven-and-a-half years has made significant progress toward realising the potential of what could be one of the largest commercial relationships in the world.

Press Trust of India, August 28, 2016

Bullish on expanding economic ties with India, the US on Sunday said bilateral trade has reached USD 109 billion and it will get a further boost from new reforms including GST even as it flagged persisting concerns American firms have on issues related to business climate in the fast-growing economy.

US Commerce Secretary Penny Pritzker, who will be on a 3-day India visit from Monday, also said that travel and tourism and sub-national engagement have been identified as two new areas of focus to drive commercial cooperation between the two countries in 2017, under which the focus would shift from India and the US to Chennai and Charleston.

She said the Obama Administration in the past seven-and-a-half years has made significant progress toward realising the potential of what could be one of the largest commercial relationships in the world.

“Our two countries enjoy a thriving trade and investment relationship. US-India bilateral trade reached USD 109 billion in 2015, up from USD 37 billion in 2005.

“US and Indian companies are also investing in each other’s economies at record levels. In 2015, US investment in India reached more than USD 28 billion and Indian investment in the United States reached more than USD 11 billion. In fact, US affiliates of Indian-owned firms now employ more than 52,000 workers in the US,” Pritzker told reporters in an interview.

She exuded confidence that “India’s rapidly growing economy and the Modi government’s ambitious reform agenda, including the landmark Goods and Services Tax, passage of the recent national bankruptcy law, and liberalised foreign direct investment limits in key sectors, point toward a deeper economic relationship in the years ahead.”

Asserting that there is a tremendous potential for the US and India to achieve even more together, the Secretary said she is particularly excited over two new areas of focus that will drive their cooperation in the coming year — travel and tourism and subnational engagement.

She described increasing the number of travelers who move between the US and India as a significant commercial opportunity. More than 1 million people travel between the two countries each year.

“While that figure is strong, there is certainly potential for growth,” she added.

On sub-national engagement, Pritzker said: “Both US and Indian states play a vital role in driving economic growth and setting business climate policy. Companies choose to invest in Charleston, South Carolina or Chennai just as much as they select the US and India.”

Pritzker said Prime Minister Narendra Modi’s commitment to host the 2017 Global Entrepreneurship Summit will highlight India’s strong culture of innovation on the global stage and provide Indian entrepreneurs with an exceptional opportunity to meet with top investors and network with their international peers.

Pritzker, who has been the US Secretary of Commerce for over three years and is a key member of President Barack Obama’s economic team, will be travelling to India for the second US-India Strategic and Commercial Dialogue and the US-India CEO Forum.

During the visit, she will meet Indian entrepreneurs and participate in an event celebrating US-India cooperation on travel and tourism. India and the US have decided to be Travel and Tourism Partner Countries in 2017.

On whether the Modi government has delivered on its target of improving ease of doing business score and the feedback from the US companies operating in India, she said: “We welcome Prime Minister Modi’s ambitious efforts to improve India’s business climate and enable greater trade and investment. The recent passage of the Goods and Services Tax, for example, is a truly historic accomplishment with potentially far-reaching benefits for the Indian economy and our expanding bilateral trade and investment partnership with India.”

She added: “However, the GST is just one in a series of steps the Indian government has taken to improve the ease of doing business in India. Since taking office in 2014, the Modi government has passed the national bankruptcy law, raised foreign direct investment caps in sectors including defense and insurance, established commercial courts, and ratified the WTO Trade Facilitation Agreement.

“On infrastructure, the Modi government has established Special Purpose Vehicles for smart cities, promoted municipal bonds for urban development, and launched a National Infrastructure Investment Fund. We applaud these reforms and urge the Government of India to prioritise their full implementation.”

She further said that while the US companies have responded positively to these efforts, they also continue to raise concerns about persistent business climate issues that impede greater trade and investment between our two countries.

Pritzker said: “These include unclear tax policies, burdensome regulations, inadequate protection and enforcement of intellectual property rights, and onerous localization requirements. Companies seek a more transparent and predictable policy environment, including consistent notice and comment procedures in the rule-making process, in order to plan investments and inform long-term business decisions.

"Industry also sees promising opportunities to facilitate trade further through streamlining complex and cumbersome customs processing procedures, implementing a single-window approach to government licensing, and increasing predictability and efficiency in government approvals and inspections related to cross-border trade."

BRICS must intensify efforts against terror, its sponsors: Narendra Modi

Narendra Modi says it is the BRICS' shared responsibility to shape the global agenda and help developing nations achieve their objectives.

By K.J .M. Varma, Press Trust of India, September 04 2016

Lake State Guest House in Hangzhou, China, Sunday. Photo: AP

Hangzhou: India on Sunday called for intensified joint efforts by other BRICS (Brazil, Russia, India, China and South Africa) members to combat terrorism as Prime Minister Narendra Modi sought coordinated actions by the grouping to "isolate supporters and sponsors of terror", in an apparent reference to Pakistan.

In a hard-hitting intervention while leading from the chair, Modi in his address to the BRICS leaders meeting here said "terrorists in South Asia or any where for that matter do not own banks or weapons factories". "Clearly someone funds and arms them and BRICS must intensify joint efforts not just to fight terror but to coordinate actions to isolate those who are supporters and sponsors of terror," he said, without naming Pakistan which is a close ally of China.

Describing BRICS as "an influential voice" in international discourse, Modi said it was the grouping's shared responsibility to shape the global agenda and help developing nations achieve their objectives. He said terrorism remains the "primary source of instability and the biggest threat to our societies" and countries and the supplies chains have a global reach. Use of social media to promote radical ideology is "growing dimension of this threat", he added.

External affairs ministry spokesperson Vikas Swarup during a media briefing said "this (Modi's address to the BRICS leaders meeting) tells you how strongly Prime Minister intervened on the issue of terror and how be believes that this really is the central challenge facing the moment and unless we have collective approach to this, it will not be possible for us to defeat this."

Swarup said it was important to have informal discussions with the other BRICS leaders ahead of the grouping's 8th annual summit in Goa from 15-16 October.

Modi, in his address to the four other leaders of the grouping said: "We, as BRICS, are an influential voice in international discourse. It is, therefore, our shared responsibility to shape the international agenda.

"Our shared responsibility to shape international agenda in manner that helps developing nations achieve their objectives," he said in this picturesque eastern Chinese city on the sidelines of the G20 summit.

BRICS brings together five major emerging economies, comprising 43% of the world population, having 37% of the world GDP (gross domestic product) and 17% share in the world trade.

Modi said that as chair of BRICS, "'Building Responsive, Inclusive and Collective Solutions' is the theme we have chosen which mirrors central priorities at G20 summit". "We've taken BRICS out of capitals to involve people from all walks of life. It will be an opportunity to deepen our ties and with BIMSTEC (Bay of Bengal Initiative for Multi- Sectoral Technical and Economic Cooperation) countries.

The four other leaders who participated in the meeting of the five-member bloc included Brazilian President Michel Temer, Chinese President Xi Jinping—with whom Modi held bilateral talks earlier, Russian President Vladimir Putin and South African President Jacob Zuma.

"Our summit next month would not only be an opportunity to deepen ties with ourselves, we will also interact with India's neighbouring countries of BIMSTEC—Nepal, Bhutan, Bangladesh, Sri Lanka, Myanmar and Thailand, who have been invited for the outreach summit. We welcome you all to Goa next month," Modi said while concluding his brief address.

As a formal grouping, BRIC started after the meeting of the leaders of Russia, India and China in St. Petersburg on the margins of G8 Outreach Summit in 2006.

The grouping was formalised during the 1st meeting of BRIC foreign ministers on the sidelines of UN General Assembly in New York in 2006. The 1st BRIC Summit was held in Yekaterinburg, Russia, on 16 June 2009. BRIC was expanded into BRICS with the inclusion of South Africa at the BRIC foreign ministers' meeting in New York in September 2010.

Accordingly, South Africa attended the 3rd BRICS summit in Sanya, China in April 2011.

Reimagining BRICS

By Harsh V. Pant*, The Hindu, October 18, 2016

India has tried to use the multilateral forum to serve its larger strategic ends

With India announcing that all five BRICS member states are united in acknowledging the global threat posed by terrorism, and that those who support terror are as much a threat to us than those who perpetrate acts of terror, the eighth BRICS summit came to an end on Sunday in Goa. The BRICS agenda moved forward a bit with the BRICS leaders united in their "view to establish the BRICS Agriculture Research Platform, BRICS Railway Research Network, BRICS Sports Council, and various youth-centric fora" and agreeing "to fast track the setting up of a BRICS Rating Agency" based on market-oriented principles to "further bridge the gap in the global financial architecture."

Prime Minister Narendra Modi said that the Goa declaration laid down "a comprehensive vision for our cooperation and coordination, within BRICS and on international issues." But it was clear from the way India shaped the agenda of the Goa summit that Mr. Modi was working towards a different end game this time, looking beyond the immediate BRICS mandate.

Focus on terrorism

The Prime Minister's focus, by and large, remained on the issue of terrorism. Without naming Pakistan, he used the BRICS platform to refer to the country as the "mothership of terrorism", and forcefully argued that a "selective approach against terrorism" would be both futile and counterproductive. In more ways than one, he made it plain to his BRICS partners that this is an issue on which India feels rather strongly and that "BRICS needs to work together and act decisively to combat this threat."

This message was primarily aimed at China, a country with which India has had differences on the issue of Pakistan-sponsored terrorism against India. Mr. Modi was not very successful in convincing the Chinese leadership to change Beijing's stance on Jaish-e-Mohammad (JeM) chief Masood Azhar, who India believes was behind the Pathankot attack this year and the Parliament attack of 2001. China had recently put a technical hold once again at the United Nations and prevented Azhar from being designated a global terrorist, despite JeM being a UN-proscribed terror group.

Recognising the limits of bilateral Sino-Indian engagement, India seems to have now decided to use the leverage of a multilateral platform to put China on notice. New Delhi would be hoping that, by suggesting that "those who nurture, shelter, support and sponsor such forces of violence and terror are as much a threat to us as terrorists themselves", it might eventually succeed in pressurising China to alter its position. However, with China refusing to budge, it is now hoped that Chinese State Councillor Yang Jiechi, who the leaders decided would travel to India again, would meet National Security Adviser Ajit Doval and discuss the issue further.

The other change that India introduced to the BRICS agenda was also significant as it underscored India's changing priorities. India used the summit to reach out to its neighbours by initiating the BRICS-BIMSTEC outreach. Founded in 1997, the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) now includes Nepal and Bhutan apart from Bangladesh, India, Myanmar, Sri Lanka and Thailand. Set up with the objective of enhancing technological and economic cooperation among South Asian and South-east Asian countries along the coast of the Bay of Bengal, it has been neglected so far by its members.

New Delhi has now decided to lead the regional economic cooperation efforts against the backdrop of Pakistan's marginalisation in South Asia. The cancellation of the SAARC summit in Islamabad, with Bangladesh, Bhutan and Afghanistan deciding to stay away like India, has galvanised New Delhi's efforts to look at new ways to foster regional cooperation. India's outreach to BIMSTEC during the BRICS summit is an important signal that New Delhi is serious about its role as a facilitator of economic cooperation in South Asia.

Bilateral ties with Russia

Finally, India used the Goa summit to re-galvanise its long-standing partnership with Russia, which was in danger of losing direction. Russia's decision to hold military exercises with Pakistan did not go down well with India at a time when it was seeking to diplomatically isolate Pakistan after the Uri terror attacks. Russia, for its part, has been concerned about India's tilt towards the U.S. In Goa, the two states reaffirmed the strategic nature of their friendship once again. India signed three major deals worth billions of dollars with Russia: five S-400 Triumf air defence systems, four stealth frigates, and a joint venture to manufacture Kamov-226T utility helicopters in India.

Recognising the limits of the BRICS mandate at a time of slowing economies and growing intra-BRICS political divergences, India has tried to reimagine the multilateral forum to serve its larger strategic ends. For Mr. Modi, BRICS is an important platform to showcase to his domestic critics that his foreign policy remains independent of, and not subservient to, the U.S. He has cleverly used the BRICS platform to position New Delhi's priorities on to the agenda of the forum. How far he succeeds in achieving Indian objectives will determine Indian investment in BRICS in the future.

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India seeks $500-bn BRICS trade by 2020

By Archis Mohan, Business Standard, October 17, 2016

Leaders of the five economies agree to work on credit rating agency, trade in local currency and cooperation on tax evasion

While a key agreement on setting up a BRICS credit rating agency eluded them, leaders of the five emerging large economies ended their eighth summit with a commitment to strive for greater synergy and higher economic growth.

With Indian and Chinese exports to the West shrinking, Prime Minister Narendra Modi called for doubling of intra-BRICS trade to $500 billion by 2020.

This was seen as a key to spur growth in BRICS economies, two of which have recorded negative growth. Chinese President Xi Jinping drew attention to "some countries getting more inward looking in their policies... Protectionism is rising and the forces against globalisation are an emerging risk," he said.

The 'Goa Declaration', issued at the end of the summit, welcomed "experts exploring the possibility of setting up an independent BRICS Rating Agency based on market-oriented principles, in order to further strengthen the global governance architecture. However, it was felt that experts should study the proposal further since credit rating agencies need to have credibility," said Amar Sinha, secretary (economic relations), external affairs ministry.

An important idea that nearly reached fruition was the suggestion that BRICS members should trade in their local currencies. If this happens, trading costs could come down by up to six per cent, according to estimates.

Member countries also called for greater cooperation on issues of tax evasion, unaccounted or 'black money'. The member countries affirmed "that profit should be taxed in the jurisdiction where the economic activity is performed and the value is created."

It said BRICS countries supported the Common Reporting Standard for Automatic Exchange of Tax Information (AEOI). "We support the implementation of the Base Erosion and Profit Shifting Project (BEPS) with due regard to the national realities of the countries," the declaration said. It noted that aggressive tax planning and tax practices hurt equitable development and economic growth and that "Base Erosion and Profit Shifting must be effectively tackled."

In the context of India, the declaration also recognised "that nuclear energy will play a significant role for some of the BRICS countries." The declaration stated that the member countries underlined the "importance of predictability in accessing technology and finance for expansion of civil nuclear energy capacity which would contribute to the sustainable development of BRICS countries."

The Chinese President called upon other members to ensure the success of the New Development Bank (NDB), and also open it to the "BRICS circle of friends". Later, speaking at the BIMSTEC Outreach Summit, Modi said the BRICS Bank could in future lend to BIMSTEC members countries as well. The declaration said "BRICS institution building is critical" for the shared vision of member countries of "transforming the global financial architecture to one based on the principles of fairness and equity." There was enough evidence that BRICS countries were committed to supporting the NDB. Briefing BRICS leaders, NDB president KV Kamath said the bank aimed at lending $2.5 billion next year and was encouraging local currency financing to minimise currency risks. He said the bank would expand from 60-member staff to 350 by the end of its third year.

However, the BRICS members called "for the advanced European economies to meet their commitment to cede two chairs on the Executive Board of the IMF." The declaration further said: "The reform of the IMF should strengthen the voice and representation of the poorest members of the IMF, including Sub-Saharan Africa."

The member states inked three agreements — to set up a BRICS Agricultural Research Platform; strengthening interaction among customs administrations of member countries; and between the BRICS countries National Development Banks and the New Development Bank, popularly known as BRICS Bank, to strengthen the BRICS

Inter-bank Cooperation Mechanism to help increase intra-BRICS trade, investments and business.

Another initiative at this year's summit was to institute annual BRICS Economic Research Award to promote advanced research in economics of relevance to BRICS countries. "It's aimed at creating a body of work of indigenous economic thinking with relevance to BRICS," Sinha said.

The declaration termed the operationalisation of the New Development Bank (NDB) and the BRICS Contingent Reserve Arrangements (CRA) has strengthened the global financial safety net. The declaration noted that global economic recovery is progressing but is weaker than expected with downside risks continuing to persist.

"This gets reflected in a variety of challenges including commodity price volatility, weak trade, high private and public indebtedness, inequality and lack of inclusiveness of economic growth," the declaration said. It noted that the "outcome of UK referendum have further added to the uncertainty in the global economy."

The BRICS countries said they were determined to use all policy tools — monetary, fiscal, and structural, individually and collectively, to achieve the goal of strong, sustainable, balanced and inclusive growth. "We also take note that the spill-over effects of certain policy measures in some systemically important advanced economies can have adverse impact on growth prospects of emerging economies," it said. The leaders called for the need to use tax policy and public expenditure in a more growth-friendly way.
They said that they shared concerns regarding the challenges of sovereign debt restructurings, and noted that timely and successful debt restructuring is key for ensuring access to international capital markets, and hence economic growth, for countries with high debt levels.

The declaration also noted the deliberations on a BRICS Railways Research Network aimed at promoting research and development in the sector.

Russian and Indian enterprises need new model of cooperation: DV Manturov, Minister of Industry & Trade, Russia

By Dipanjan Roy Chaudhury, ET Bureau October 12, 2016
Russia is trying to develop a new model of industrial cooperation with India, with an eye on metallurgy, aircraft, shipbuilding, automotive construction and chemical industries sectors, says minister of industry and trade DV Manturov . In an interview to ET, the Russian minister, who's in India for the annual bilateral summit and BRICS Summit, says his country is hoping to clinch a number of joint ventures with different states in India. Edited excerpt

How do you look at expanding economic partnership with India?

The openness of the Indian economy to direct investments and attract foreign capital is highly valued by Russian investors. We are closely monitoring the innovations that are being undertaken by India to reform the country's economy. I would like to recall that in January 2015, Manohar Parrikar, India's defence minister, invited Russian defence enterprises to actively participate in this new governmental initiative.
To enter the Indian market, we need to develop a new model of industrial cooperation between Russian and Indian enterprises, create joint ventures, transfer technologies, etc. We are planning to sign an MoU between Andhra Pradesh state and the United Shipbuilding Corporation for joint development of cargo and passenger transport vessels, as well as the development and modernisation of military and civilian ships, and a memorandum between TekhnoNIKOL Corporation and Andhra Pradesh for the implementation of a project involving construction of a plant of polymer bitumen construction materials in India, with investments of $100 million.

How has INNOPROM-2016 — Russia's biggest manufacturing show, where India was a partner — boosted economic partnership?

The large-scale participation of India this summer at INNOPROM-2016 gave an impetus to our partnership. The fact that regional heads (three CMs) participated in the show was important. Its logical continuation will be our business mission, which will start on October 11and include visits to four regions — Rajasthan, Andhra Pradesh, Delhi and Delhi and Maharashtra. It is important that the invitations for participation were received directly from the state heads (Cms). I would like to note that Russian business community, industrial associations and heads of manufacturing companies and state corporations have shown keen interest in participating in the business mission.

What sort of joint venture projects is Russia keen to explore in India?

India-Russia JV projects cover areas like metallurgy, aircraft and automotive construction, chemical industries and other high-tech fields. We are actively cooperating in the mining sector and Indian partners are keen to modernise their metallurgical plants which were built with help of erstwhile USSR. India is a very promising market for Russian mining equipment. India is also one of Russia's largest partners when it comes to foreign trade in chemical products. Mineral fertilizers traditionally form the basis of Russian exports of chemical products to India.

Could you please elaborate on military and technical cooperation between the two countries?

Russia and India are major partners in the sphere of military and technical cooperation. Over 70% of weapons and military equipment used by the Indian Army, Air Force and Navy are of Russian and Soviet production. Licensed production of the Su-30MKI fighters is one of the largest projects involving the transfer of technologies to India. Russia is also working with India in the sphere of civil aviation. The United Aircraft Corporation has been working with Indian companies for possible industrial cooperation. What should be noted is the work being done on joint projects involving the Il-114, MS-21and SSJ-100 aircraft.

Earlier this year HAL sent an official request to a Russian manufacturer to enquire to create Indian aircraft. We can offer Russian experience in the creation of this aircraft, and could consider the possibility of participation both in this project as a whole and in its individual stages (from the design stage to after-sales service). We propose organising the production of Il-114-300 aircraft through the creation of a joint venture. The MS-21aircraft, the first flight of which is planned for the beginning of 2017 can be an area of cooperation. This is being developed by the Irkut Corporation, a long-time partner of India on the Su-30MKI project.

The project involving the creation of a joint venture for the production and supply of Ka-226T helicopters will be a key step. All documents have been agreed upon. We are planning to sign them during the India-Russia and BRICS Summits on October 15-16 in Goa. Currently, in addition, the Russian Helicopters Holding is participating in a tender for the supply of two civil aviation Mi-172 helicopters, in addition to those that are already operating in India.

The long-time close cooperation (for more than 50 years) in high technology areas between Russia and India has proven its effectiveness. Over the years, we have got to know each other well, we know our strengths and weaknesses; together we have built factories, debugged technologies and trained pilots, engineers and technicians. Besides, we are engaged in serial manufacturing of various classes of ships, the construction of India's first domestically built aircraft carrier, the Vikrant. In India, we are also working on designing the new aircraft carrier Vishul. We are also engaged in serial manufacturing of various classes of ships.

India Asks China to Ease Trade Imbalance, Invest in MSMEs
Press Trust of India, October 12 2016

Kalraj Mishra urges long term partnership in areas such as IT, digital, mobile parts and auto ancillaries.

India has asked China to address the burgeoning trade imbalance while making a strong pitch for Chinese investments in its micro, small and medium enterprises (MSME) sector, specially in fields like IT, digital, mobile components and automobile ancillaries.

India's MSME sector is poised for a major leap driven by the high growth with high level of innovation and seeks a long term partnership with Chinese entrepreneurs and investors especially in areas like IT and digital, mobile components, automobile ancillaries, MSME Minister Kalraj Mishra said in Guangzhou on Monday.

He made the remarks at the China International Small and Medium Enterprises Fair (CISMEF). India co-hosted the CISMEF, 2016. A host of Indian enterprises took part in the fair.

Mishra said immense opportunities exist for cooperation between the SMEs of India and China for mutual benefits - especially under the rubric of Make In India initiative launched by Prime Minister Narendra Modi.

During his meetings with Chinese officials, Mishra also raised India's concern of the huge imbalance in trade figures and urged Chinese interlocutors to work with India to reduce this deficit in the interest of sustainable bilateral trade, the statement said.

Last year, the imbalance was claimed to be $46 billion in China's favour in over $70 billion bilateral trade. Over 120 SME units from various part of India, comprising of sectors like textile, garments, cycle parts, machine tools, paper and paper products, plastic products, solar products, LED lights, machines tools, jewellery, pharmaceutical, agricultural products and handicrafts are taking part in the fair.

Mishra along with Governor of Guangdong province Zhu Xiaodan jointly inaugurated the India pavilion. CISMEF attracts a large number of visitors from China as well as other countries and is expected to provide huge market opportunity, the statement said.

Participation of Indian MSMEs is relevant even as China emerged as India's largest trading partner, it said, adding that the fair will also provide opportunity for Indian SMEs to network with Chinese as well as foreign SMEs besides by benchmarking their products and quality with the international products.

Mishra also met Guangdong Party Secretary Hu Chunhua, Guangdong Governor Zhu, Vice Minister of Ministry of Trade and IT Xin Guobin.

BRICS of Hope

Sreeram Chaulia

The eighth BRICS summit in Goa is an occasion to consolidate past institutional progress and chart a sustained path of economic revival for 43 of the world's population.

PM Narendra Modi has led the charge for an economic rebound by launching the first ever BRICS Trade Fair in New Delhi to link corporations, strike deals and showcase outstanding industrial innovations to inspire entrepreneurs. Intra-BRICS trade, which has leapfrogged year-on-year, is being boosted through agreements on understanding and reducing non-tariff barriers (NTBs) among member states and linking small and medium enterprises (SMEs) that need international partners but lack platforms to meet.

Even as BRICS heads of government will note with satisfaction in Goa that their signature New Development Bank (NDB), presided by KV Kamath, has taken off with the first set of loans worth $811 million to ecologically friendly infrastructure projects, they are not resting on past laurels.

The ambitious idea of setting up a new BRICS credit rating agency to challenge the triopoly of the big three western agencies, which have been discredited for conflicts of interest and in-built bias against rising powers, is being fast-tracked. Our own ratings mechanism will grant us autonomy from speculative attacks of Wall Street and other rapacious global financial entities that undermine economic stability in BRICS.

Another novelty in this year's BRICS summit is India conjoining it with BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) to explore connectivity and business opportunities with South Asian and Southeast Asian countries. The more BRICS reaches out with the rest of the developing world, the stronger will its foundations be amid global economic shakiness.

On the political front, Modi is leveraging his leadership of this year's summit to press for a united stance against terrorism. BRICS governments have already denounced recent terrorist attacks in India, but China's commitment to a commonly shared BRICS vision and action in this crucial sphere is questionable due to its strategic alliance with Pakistan. If each BRICS nation narrowly defines its specific threats and stays ambivalent about threats faced by other member states, there is no multilateral push worth its salt.

BRICS must innovate not just in the economic sphere but also in security. The meeting of national security advisers of BRICS is a welcome step with immense potential. They must probe novel initiatives such as forming a combined squad of elite BRICS anti-terrorism special operations troops that can be rapidly deployed in crises.

BRICS foreign ministers have emphasised the value of resolving armed conflicts in Africa in a process "led by Africa" and recognized Russia's centrality in ending the war in Syria. Such pronouncements dovetail with the sentiment expressed at the BRICS Youth Summit in Guwahati in July that collective action which heeds the expectations and talents of our people "can be used to shift power from the West to the BRICS".

BRICS leaders assembled in Goa are cognizant of this radical sentiment from below which wants nothing less than a re-vamped world order. It is a heavy mantle to carry, especially when the economic success of BRICS has been dented. But, together, we can rise again.

World Economic Forum
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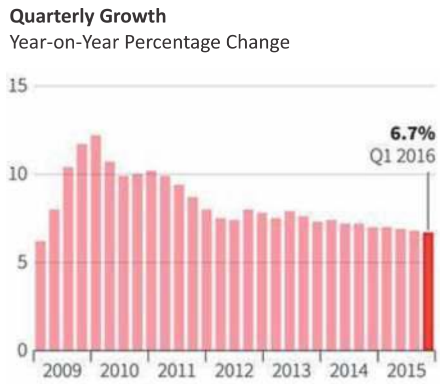
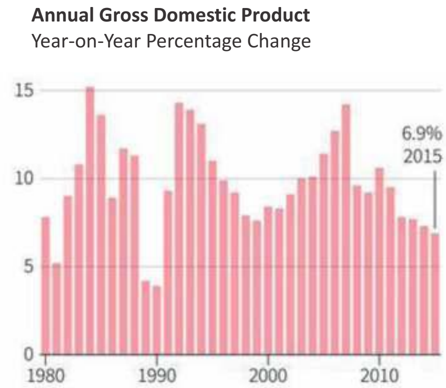
The BRICS club (Brazil, Russia, India, China and South Africa), which used to be known for its tremendous growth potential, is today in the midst of severe economic and political woes. Apart from the Federal rate increase which has contributed to the mounting debt burden for these economies; falling global commodity prices have affected these emerging markets which rely heavily on export led growth.

Moreover, the structural transformation of China, which has been the main driver of this group, from an export driven economy to a one relying on domestic consumption, has added to the current woes of BRICS. Among these economies, India is the only country which has shown signs of strong potential for growth. It has largely benefited from being a net importer of crude and other commodities whose prices have fallen and also has the advantage of being less susceptible to the market volatility as it is less dependent on exports for its growth. The share of exports of goods and services in GDP in 2014 was 23.2% in India, while that of Russia was 30% and South Africa was 31.3%.

China GDP Slows

China's economy may have grown at its slowest pace since the global financial crisis in the first quarter of 2016 highlighting the headwinds the world's second largest economy still faces despite recent signs of stabilization.





Source: Thomson Reuters Eikon

India has the lowest per capita GDP of $5,238 among the other members of the bloc and is also lagging behind the other BRICS economies in terms of quality of life. However, economic reforms initiated by the Indian Prime Minister Narendra Modi, have led to greater foreign investments and improved economic competitiveness in recent times. India's ranking in the World Economic Forum's, Global Competitiveness Report improved from 71 in 2014 to 55 in 2015. Nevertheless, excluding Brazil, all the other BRICS countries are still ranked higher than India in the report.

In terms of social development, BRICS economies have shown a mixed performance. In the Social Progress Index (SPI) developed by the Social Progress Imperative, a nonprofit organization based in Washington, Brazil (70.89) surpasses all the other member countries, followed by South Africa (65.64), Russia (63.64), China (59.07) and India (53.06).

Meanwhile, Russia outperforms the rest of the economies in terms of Basic Human Needs (Nutrition and basic medical care, Air, water and sanitation, Shelter and Personal safety), Brazil leads the group on Foundations of Wellbeing (Access to basic knowledge, Access to information and communication, Health and wellness, and Ecosystem sustainability) and Opportunity (Personal rights, Access to higher education, Personal freedom and choice and Tolerance and inclusion) dimensions of the SPI. India, which belongs to the group of low social progress countries, falls behind the other BRICS countries in both Basic Human Needs and Foundations of Wellbeing and only stays ahead of China in the Opportunity dimension.

Further assessment of the SPI for the bloc shows that Personal safety has been an area of concern in South Africa and Brazil. The homicide rate, defined as deaths deliberately inflicted on a person by another person, per 100,000 people, is 5 on a scale of 1-5 for both countries. In contrast, China has the lowest homicide rate of 1.

Moreover, the rate of traffic deaths has been observed to be the highest for South Africa, followed by Brazil. Areas such as Water, Sanitation and Shelter have been challenging for India primarily due to lack of access to piped water, improved sanitation facilities, electricity and household air pollution. In addition to this, India has about 15% of its population which is undernourished, as compared to Brazil, Russia and South Africa which have only 5% undernourished people.

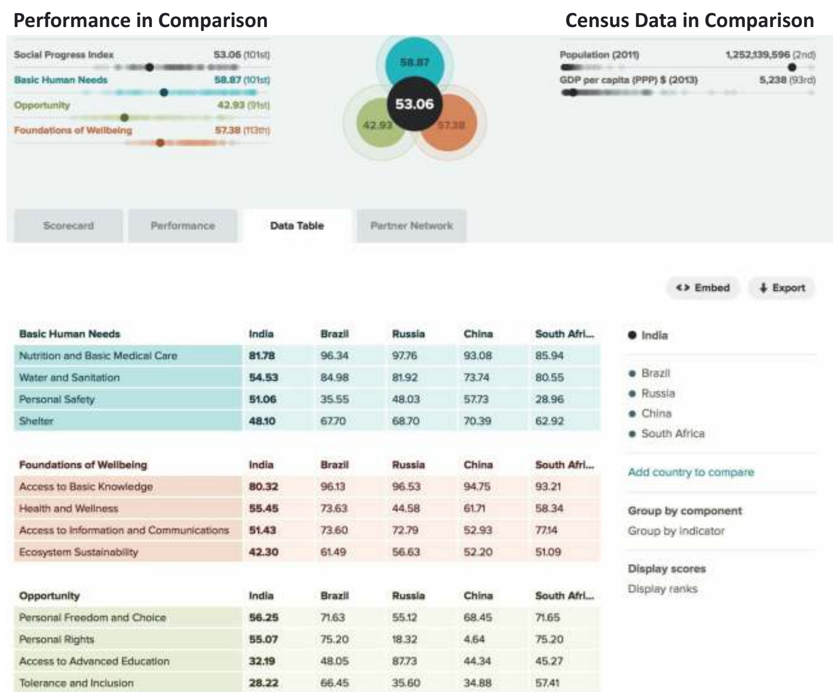
Maternal mortality rate and child mortality rates are also very high in India relative to the others in the group. On the front of health and wellness, South Africa has the lowest life expectancy for its population (56.1) and China has the highest (75.2). Another major aspect of a nation's wellbeing is its environmental sustainability, which could be measured by its amount of greenhouse gas emissions. China, Russia and South Africa have high content of greenhouse gas emissions relative to Brazil and India.

On the dimension of Education, Russia has the highest adult literacy rate of 99.7%, while India lags behind with 71.2%. Moreover, India sees the highest inequality in education among the other BRICS economies. The average number of years of school attended by women between the age group of 25-35 years is as low as 5.6 compared to Russia (13.8) and South Africa (10.4). Another major aspect which is crucial to a nation's prosperity is Tolerance and inclusion. While, India shows a weak performance on this front compared to other countries, it stays far ahead of China and Russia on personal rights such as political rights, private property rights and the like.

Thus, while the BRICS countries (except for India) have shared a common economic downturn in recent times, their social environments are diverse in several respects. A cross country comparison for the BRICS shows that economic progress alone may not necessarily translate into a higher quality of life for these economies. The chart below shows that countries such as Brazil and South Africa, which lag behind Russia in GDP per capita, are socially more progressive. In 2015, Russia (GDP per capita of $23,564) had a SPI score of 63.64, while Brazil (GDP per capita of $14,555) and South Africa (GDP per capita of $12,106) had SPI scores of 70.89 and 65.64, respectively. Similar trends between GDP per capita and SPI have been found also outside the BRICS club, in countries such as the US, which has been ranked 16 for social progress. Countries such as UAE, Kuwait and Saudi Arabia have also achieved a low social progress score compared to their level of GDP per capita.

INDIA

In the **Basic Human Needs Dimension**, India performs best on **Nutrition and Basic Medical Care** and has most opportunity to improve on the **Shelter** component. In the Foundations of Wellbeing Dimension, India scores highest on **Access to Basic Knowledge** but lags on the **Ecosystem Sustainability** component. In the Opportunity Dimension, India is strongest on **Personal Freedom and Choice** and has the most room to improve on **Tolerance and Inclusion**.



Basic Human Needs	India	Brazil	Russia	China	South Afri...
Nutrition and Basic Medical Care	**81.78**	96.34	97.76	93.08	85.94
Water and Sanitation	**54.53**	84.98	81.92	73.74	80.55
Personal Safety	**51.06**	35.55	48.03	57.73	28.96
Shelter	**48.10**	67.70	68.70	70.39	62.92
Foundations of Wellbeing	**India**	**Brazil**	**Russia**	**China**	**South Afri...**
Access to Basic Knowledge	**80.32**	96.13	96.53	94.75	93.21
Health and Wellness	**55.45**	73.63	44.58	61.71	58.34
Access to Information and Communications	**51.43**	73.60	72.79	52.93	77.14
Ecosystem Sustainability	**42.30**	61.49	56.63	52.20	51.09
Opportunity	**India**	**Brazil**	**Russia**	**China**	**South Afri...**
Personal Freedom and Choice	**56.25**	71.63	55.12	68.45	71.65
Personal Rights	**55.07**	75.20	18.32	4.64	75.20
Access to Advanced Education	**32.19**	48.05	87.73	44.34	45.27
Tolerance and Inclusion	**28.22**	66.45	35.60	34.88	57.41

Image: socialprogressimperative.org

Since social progress of a nation may also affect its economic prosperity, it is crucial for nations to undertake measures in the social spheres in which they are lagging behind. While India still needs to invest its resources in meeting its basic human needs, countries such as China and Russia need to bring about institutional changes that could protect the rights and freedom of its people. The bloc needs to address environmental issues by building energy efficient technologies that could lead to the path of sustainable development. Among the BRICS economies, South Africa, China and Russia should lay greater emphasis on policy dialogues to reduce the extent of their greenhouse gas emissions. In addition to this, South Africa and Brazil should focus on ensuring personal safety to its people. Greater government support through increased spending on social sectors or though policy changes may promote social development and protect the falling BRICS.

A measure in this direction has been taken up by the Brazilian economy through a construction of SPI for its Amazon region, which covers 772 municipalities and nine states. The region has been marked down for social development compared to other regions of Brazil, primarily due to activities such as deforestation, leading to depletion of natural resources. Such sub-national level initiatives can play a pivotal role in fostering social progress, through identification of specific communities where a country is falling behind, and assist in designing development models targeting the social or environmental progress of these regions.

List of Boxes, Tables, and Charts

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