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Third Annual Report BRICS Business Council 2015-16

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Foreword

The present global economic environment is fraught with challenges and global economic activity remains subdued. Even after seven years of global financial crisis, the world economy is struggling to regain momentum. Growth in advanced economies remains weak and that in developing and emerging economies remains way below potential.

As per World Bank's Global Economic Prospects Report (June 2016), global growth for 2016 is projected at 2.4 percent, unchanged from that of 2015. Prospects for major advanced economies have deteriorated, amid weak global trade and manufacturing activity. Advanced economies are expected to expand by 1.7 percent in 2016, 0.5 percentage point below January projections. Emerging market and developing economies face challenges, including the fall-out of sluggish advanced economy growth, tighter financial conditions, and low commodity prices. For 2016, growth in emerging markets and developing economies is forecast at 3.5 percent, 0.6 percentage point below previous projections.

The last two years have specifically seen deterioration in prospects of emerging markets, which have hitherto driven the global growth in the aftermath of the financial crisis. The BRICS countries accounted for about 40 percent of global growth from 2010 to 2015, up from about 10 percent during the 1990s. The group now accounts for more than one-fifth of the global activity—as much as the United States, and more than the Euro Area.

The report also identifies a wide range of risks that threaten to derail the global economic recovery, including a sharper-than-expected slowdown in major emerging markets, sudden escalation of financial market volatility, heightened geopolitical tensions, slowing activity in advanced economies, and diminished confidence in the effectiveness of policies to spur growth.

Notwithstanding the downside risks and challenges, some recent reports have indicated improved growth prospects for 2016-17 for large emerging economies, especially the BRICS countries. IMF's World Economic Outlook report (July 2016) indicates that the near-term outlook in China has improved thanks to recent policy support; Brazil's 2016 recession is projected to be slightly less severe, with a return to positive growth in 2017; Russia's GDP decline is projected to be milder owing to higher oil prices; South Africa is expected to see modest recovery in 2017 and economic activity in India is expected to remain buoyant.

Over the years, BRICS countries have evolved into a reckoning global force, which has been reshaping the global order through various new international institutions such as the New Development Bank. Since the formation of the BRICS group, BRICS has developed strategic cooperation mechanisms on numerous issues, some of which have been implemented already while others are deemed as ongoing issues for dialogue.

The aim of BRICS co-operation is to complement and strengthen the existing multilateral and bilateral relations between the member nations. There are several shared interests that bring the

BRICS economies together. In order to achieve their goals of sustainable, inclusive and dynamic growth, the leaders of the member nations, prioritized areas for co-operation between the member nations and with the rest of the world. The priority areas identified in the Strategy for a BRICS Economic Partnership include: Trade and Investment, Manufacturing and Minerals processing, Energy, Agricultural co-operation, Science, Technology and Innovation, Financial co-operation, Connectivity (Institutional, Physical and People to people connectivity), and ICT co-operation.

Development of intra-BRICS cooperation in various international and regional platforms is vital for the promotion of common interests in international trade, investment, industrial, scientific and technological cooperation. This would also strengthen their positions in the global economy.

Amidst the current global economic scenario, there is a need for new approaches, mechanisms and models to strengthen intra-BRICS economic co-operation. BRICS Business Council members are committed to working with each other and with the BRICS governments by building on synergies and complementarities across sectors to address the developmental challenges and achieve higher growth trajectory for their economies.

One of the most significant initiatives of the BRICS has been the institutionalization of the New Development Bank (NDB). Through NDB, BRICS seek to reform the global development financial architecture and to ensure that the needs of economically vulnerable sections of developing and emerging economies get priority in development financing. The NDB has already announced its first tranche of funding for green and sustainable projects for all five BRICS members. Other supporting organizations such as the New Development Bank Institute are also under consideration.

While the trade and investment flows amongst the BRICS nations have been increasing, these are still below potential. The first BRICS trade fair organized on the sidelines of the eighth BRICS Summit in India, was planned to bring together the business houses, entrepreneurs and other relevant players on a common platform and to provide a thrust to intra-BRICS economic and social engagements. The inaugural trade fair focused on Innovation and showcased the best technologies from across BRICS nations, which can help in providing solutions to the main development challenges across BRICS nations.

The BRICS Business Council has endeavoured to contribute to intra-BRICS co-operation, especially by identifying areas of co-operation from the perspective of the private sector communities of the BRICS countries, and suggesting initiatives and actions to the BRICS Governments to strengthen trade and investments ties.

This third annual report details the progress and implementation of the work program set out for BRICS Business Council for 2015-2016 as identified by the members in the first and second annual report, in terms of creating a favorable business environment; local currency payment system; facilitating business travel; implementing trade facilitation; ensuring regulatory cooperation;

promoting cooperation in infrastructure development; engagement with the New Development Bank; steps towards enhancing investment ties including implementation of BRICS Business Council Declaration on Investment Principles.

In this document, BRICS Business Council reports on various intra-BRICS business initiatives during 2015-2016 and sets out actions that BRICS economies could take to enhance economic, trade and investment ties amongst the BRICS countries.

The reports of the seven BRICS Business Council Working Groups are annexed to this report, bringing detailed information of their activities and recommendations in the following areas: Agribusiness, Energy and Green Economy, Financial Services, Infrastructure, Manufacturing, Skills Development and Deregulation.

The Chairpersons of the BRICS Business Council countries are honoured to submit the 'BRICS Business Council 2015-2016 Third Annual Report' to the Governments of the BRICS nations.

It is highly encouraging that some of the key recommendations of the BRICS Business Council in the last two annual reports were noted in the annual Summit Declarations adopted by the BRICS Leaders.

BRICS Business Council submits the third annual report to the BRICS leaders and looks forward to discussing its recommendations with the Governments. We continuously seek the guidance of our leaders towards enhancing co-operation between BRICS countries and contributing meaningfully to achieve the common objectives of driving growth, generating employment and promoting sustainable development of our economies.

Goa, India, 15 October, 2016

Mr. Onkar Kanwar (Republic of India)

Mr. José Rubens de La Rosa (Federative Republic of Brazil)

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Capt. XU Lirong (People's Republic of China)

Mr. Brian Molefe (Republic of South Africa)

Key Recommendations for the BRICS Governments

The key recommendations of the BRICS Business Council to the BRICS governments as detailed in this Annual Report are summarized as below:

1. BRICS Social Security Agreements

The BRICS Business Council supports the idea of creating a 'BRICS Social Security Agreement' or bilateral agreements amongst BRICS countries, with a view to alleviating the burden of dual social security contributions. Such agreements will make it possible for the periods of service rendered by employee in the host countries to be combined to determine eligibility for social security benefits. The Social Security Agreements will thus benefit workers moving across borders and also the companies as it will reduce the cost of doing business and create social safety nets.

2. Financial Framework for Sustainable Development

Promoting a financial framework for sustainable development is one of the key areas of cooperation among the BRICS for ensuring inclusive development. There are huge opportunities to collaborate on climate change technology, climate finance adaptation measures and other sustainable development areas. BRICS Business Council recommends drawing up a financial cooperation program for sustainable development projects. The Council has suggested that the New Development Bank may fix a specific percentage of its resources for funding sustainability projects aligned to achievement of SDGs in BRICS nations. The BRICS Business Council commends the progress made in the signing of co-operation agreement between the relevant Development Finance Institutions.

3. BRICS Infrastructure Project Preparation Facility

BRICS Business Council has sought support of New Development Bank in setting up of a BRICS Infrastructure Project Development Facility. Such an organization can provide assistance on the entire gamut of project development expertise including project identification, pre-feasibility, post-feasibility, preparation of DPR and environment & social impact assessment. Through such a platform, projects can be converted from conceptualization stage to the bankability stage. In countries where such an institution exists, NDB can help enhance such structures and where there are none, NDB can help set up an independent unit.

4. Local Capital Markets development through New Development Bank

To unlock capital markets in BRICS countries for development financing, the BRICS Business Council has sought support of the New Development Bank in development of deep and vibrant local bond markets in BRICS countries. This would further provide governments and corporates with an alternative and cost effective source of debt funding, especially for green economy projects.

5. BRICS Angels Network

The BRICS Business Council has recommended creation of a BRICS Angels Network, which can help talented young entrepreneurs across BRICS countries to create an eco-system of start-ups, thereby fostering entrepreneurship and promoting innovation among the BRICS economies.

6. BRICS Trade Settlement in Local Currencies

To promote common interests and objectives of BRICS countries on trade, business, investment and manufacturing ties, the BRICS Business Council urges the respective governments to expand the scope and scale of pricing in local currency for intra-BRICS transactions and to develop the necessary infrastructure to support such payments.

7. BRICS co-operation in Agri-business

Agri-business is one of the key priority areas for intra-BRICS co-operation. BRICS Business Council support enhancing this co-operation by sharing best practices related to sustainable agriculture production, productivity, environment protection and food security and contributing towards research activities in these areas.

BRICS nations can work together to manage and disseminate knowledge on sustainable approaches to agricultural technology. They can also jointly develop technical programmes to support innovation in mechanization and facilitate the implementation of sustainable technology initiatives at the field level. Exchange of knowledge on water conservation is also of critical importance. The idea of a BRICS Seed Bank has also been discussed in the Business Council.

8. BRICS co-operation in Energy

In order to build a common and strategic long term view about the future of their energy sectors and a productive business environment among the BRICS countries, Business Council recommends developing a broad guideline, including definitions; approaches, recommendations on enabling policies and enabling environments for promoting effective mechanisms for cooperation; knowledge transfer and corporate partnerships related to energy within the developmental mandate of BRICS countries. In addition, the countries should accelerate R&D into renewable energy, the development as well as transfer of energy efficient and environmentally friendly technologies and equipment and establish centers of excellence in BRICS countries to share the unique capabilities of each country.

BRICS Business Council has also requested the New Development Bank to establish a BRICS renewable energy fund and to adopt a set of specific polices within the NDB to provide support for the implementation of the energy projects in BRICS and other emerging economies.

9. BRICS Co-operation in Skill Development

The BRICS nations should increase bilateral and multilateral cooperation in skills development for Industry 4.0. . The skill development institutes across the BRICS nations can collaborate to innovate and develop cost-effective learning tools related to Industry 4.0. BRICS nations can also collaborate towards the development of a standard qualification framework. Such a standard qualification will support a worker's mobility from one BRICS nation to another BRICS nation and, at the same time, will allow him or her to pursue education for the next level of qualification, avoiding any repetition.

Since skill development is a focal area for all BRICS countries, the Business Council has also recommended establishing a Skills Development Fund, in order to provide financial support to the projects in the field of training and quality education.

10. BRICS Co-operation in Manufacturing

Manufacturing sector is a priority area of co-operation. BRICS nations should continue to promote and increase value added trade and manufacturing amongst themselves.

11. BRICS Trade Facilitation Network

To facilitate trade as well as to advance cooperation initiatives, including the provision of technical assistance to developing countries, the BRICS Business Council has recommended that the governments continue trade facilitation efforts considering the perspective of private sector.

12. BRICS Standardization Research Framework

To ensure best practices on institutional and policy mechanisms on various regulations and standards across BRICS countries, the BRICS Business Council suggests setting up a BRICS Standardization Research Framework. Such a framework can facilitate better harmonization of trade and investment policies among BRICS economies and help find effective solutions for removal of trade barriers.

13. Advisory role and observer status for BRICS Business Council in New Development Bank

Private sector participation and involvement in various government discussions, dialogues and policy formulation is essential to find practical and effective solutions to address the issues and challenges faced by our economies. It is in this context that BRICS Business Council can be effectively engaged as an advisory council to the New Development Bank. BRICS Business Council has requested the New Development Bank to provide observer status to the chairpersons of the BRICS Business Council.

14. Cooperation and Facilitation of intra-BRICS Investments

The BRICS Business Council reiterated the importance of the Common Declaration on Investment Principles, adopted at its meeting in July 2015, in Ufa, Russia, and reaffirmed its commitments, asking the Governments to discuss forms of enhancing cooperation and facilitation of intra-BRICS investments.

In addition to the above, there are a few other areas that were examined by the BRICS Business Council. In relation to the BRICS Rating Agency and New International Payment Card System proposals, some members of the BRICS Business Council feel that there is a need for further discussions.

BRICS Rating Agency

The idea of a Rating Agency that takes into account the emerging market realities has been discussed by the Council members. While most members felt that such an institution could eventually provide a more thorough and complete credit rating analysis of companies in the BRICS countries, some concerns have also been highlighted that need further deliberations. It was suggested that BRICS countries should also study how to establish cooperation to develop markets for private credit rating agencies.

New International Payment Card System for BRICS

The BRICS Business Council members are discussing an international payment card system among the BRICS to promote settlements of international transactions in national currencies. The Financial Services Working Group has created a sub-group that would focus on the proposal of a New International Payment Card System. It is also suggested that Central Banks of member countries be engaged in these discussions to take into account the interests of all BRICS countries.

Contents

Part A

Ensuring Greater Trade, Investment and Business Co-operation

1. Trade and Investment Ties

1.1. Favourable Business Environment

A business environment that enables enterprises to operate with ease is a basic requirement for attracting investments, both domestic and foreign. To enhance the investment ties amongst BRICS nations, one of the recommendations has been to deepen the provision of information on how to do business in respective countries. To create a favourable business environment, BRICS Business Council has requested the BRICS Governments to enhance transparency with respect to local legislation and requirements for trade and investments, and to establish national focal points to resolve business queries.

Enhancing ease of doing business has been a focal area of policymakers across BRICS countries. Brazil's successful implementation of SISCOMEX (Single Window Program of Foreign Trade) will not only help in streamlining and simplifying customs procedures but also reduce average processing time for exports and imports. Russia has embarked on a number of administrative reforms including simplification of procedures for businesses to open a bank account, to get electricity connection and to register property. Russia has also introduced a centralized collateral registry, which will improve access to credit. India too has made significant progress in simplifying procedures and reducing time taken for incorporation of business, to obtain electricity and to get various environmental clearances. The Central Government in India has shared best practices to improve business environment with all State Governments, which are actively undertaking administrative and procedural reforms. China has undertaken reforms of business tax and reduced the contribution made by employers to social security fund for their employees, thereby lowering the burden on enterprises. In South Africa, extensive tariff liberalisation has taken place since 1994 and the country is ranked amongst the most open jurisdictions for FDI in the world. The countries are increasingly using information technology for simplification, rationalization and compliance of various rules, regulations and procedures.

All these efforts are reflected in the progress made by BRICS countries in their 'Doing Business' ranking of the World Bank (2016). Russia has moved up to Rank 51 from Rank 62, China has moved up 6 places to Rank 84, India's ranking has risen by 12 places to 130, and Brazil's rank has improved by 4 places to 116 position.

According to the World Economic Forum (WEF) Global Competitiveness Report for 2015 – 2016, South Africa climbed seven places to reach 49th, thanks largely to increased uptake of ICTs—especially higher Internet bandwidth—and improvements in innovation (up by five places to 38th). South Africa also hosts the continent's most efficient financial market (12th) and benefits from a sound goods market (38th), which is driven by strong domestic competition (28th) and an efficient transport infrastructure (29th). It further benefits from strong institutions (38th), particularly property rights (24th) and a robust and independent legal framework.

While we do recognize the reform activities across BRICS countries, it is suggested that BRICS governments should continue their efforts in improving the business environment across various parameters and ensure favourable business conditions for investors at home as well as from other BRICS countries.

One of the suggestions for the BRICS Governments to ease the burden on companies having their businesses in these countries is to introduce a **BRICS Social Security Agreement (SSA).** We support the proposal of BRICS Employment Working Group to have SSA with member countries of BRICS. Such an agreement would alleviate the burden of dual social security contributions, which occur when a worker from one country works in another country. This will also benefit workers who divide their careers between the BRICS countries.

1.2. Local Currencies: Trade and Payment System

The BRICS Business Council has advocated promotion of common interests of BRICS countries on trade and investment ties. In its earlier reports, BRICS Business Council "urged" expansion of the scope and scale of pricing and payment in local currency for intra-BRICS deals and transactions.

At the 2015 BRICS Summit in Russia, ministers from BRICS nations, initiated consultations for a payment system that would support settlements in national currencies.

The BRICS countries should continue consultations on the subject of trading in local currencies and payment system through the Contact Group on Economic and Trade Issues (CGETI), taking into consideration the discussions and undertaking by the Ministers of Finance and Central Banks.

A related point is the creation of an independent International Payment Card System. The Financial Services Working Group of the BRICS Business Council has suggested that BRICS and Eurasian Economic Union (EAEU) should create an independent International Payment System – New International Payment Card (NIPCS). China's UnionPay has moved far ahead in its international expansion compared to other National Payment Systems in BRICS countries and may create the necessary starting point for the whole NIPCS project.

With respect to the bilateral currency swap arrangements between BRICS countries, there has been some progress. Russia and China signed a bilateral local currency swap arrangement in October 2014 and up to the March 2016 the CBR and the PBC have successfully launched several currency swap trades. China has also signed currency swap agreements with Brazil and South Africa. India and Russia have set up a joint working group to study and recommend a plan of action for measures to promote local currency settlements in India-Russia trade. Both sides are consulting their respective industry and businesspersons in order to reach a broad-based consensus on this issue. Such arrangements are expected to facilitate cross-border trade in local currencies between businesses and financial institutions in BRICS countries.

Consideration should also be given to removing barriers to carbon credit projects (green financing) in developing countries, specifically the high transaction costs which are indexed to the US dollar. This includes costs of registering projects and paying auditors. It would be far more favourable for implementing these projects in BRICS countries if these transactions were costed within the context of local currencies.

1.3. Business Travel Facilitation

In its previous reports, BRICS Business Council has suggested the BRICS Governments to make special arrangements for visas to facilitate and encourage BRICS people to people exchange, including simplifying the visa approval procedures and reducing the time of approval.

The Brazilian Section of the BRICS Business Council has initiated work on a report that will explore trade facilitation perspective on movement of persons, global process of entry visas elimination, benchmarking of entry visa facilitation initiatives (specially the APEC Business Travel Card) and identify issues related to the implementation of the BRICS Business Travel Card.

While BRICS Business Council is assessing the feasibility of introduction of a ‘BRICS Business Travel Card’, the Governments in BRICS countries are also examining the possibility of its launch. Over the last year, BRICS countries have had various discussions on BRICS Business Travel Card, visa facilitation agreement, etc.

Effective from 23 December 2014, South Africa implemented a 10 year BRICS visa for business executives from BRICS countries. BRICS business executives who apply for visa to visit South Africa for short business trips and meet the criterion, are now issued port of entry visas to South Africa allowing them multiple entries for up to 10 years, with each visit not to exceed 30 days. The long-term visa applies to diplomatic, official/service and ordinary passport holders.

Russia has also indicated that mutual exemption of visas with other BRICS nations would be put on the agenda. The agreement between China and South Africa on the mutual exemption of visas to holders of diplomatic and service passports too entered into force on March 1, 2016.

India has provided e-tourist visa facility to the citizens of BRICS countries, wherein prospective visitors can apply and pay for an Indian visa online without visiting the Indian Mission.

While the ‘BRICS Business Travel Card’ is being discussed, in the interim it is suggested that the BRICS Governments should:

(a) Agree on **Reciprocal Visa Exemption Arrangements** in order to permit visa-free entry for a limited time under certain conditions (e.g. Brazil and Russia and Brazil and South Africa arrangements); or
(b) Conclude **Visa Facilitation Agreements**, which provide procedural facilitations of the issuance of visas for nationals of BRICS countries (e.g. reduction of the visa fee, issuance of multiple-entry visas for specific categories of applicants, shorter processing times); or

(c) **Issue ten-year-multiple-entries visa** to bona-fide business executives of all BRICS countries, as has been the case in South Africa.

1.4. Trade Facilitation

BRICS Business Council considers that the implementation of the Trade Facilitation Agreement of the WTO is decisive for reducing transaction costs in international trade. In-fact, most of the BRICS countries have ratified the Trade Facilitation Agreement. While China ratified TFA in September 2015, Brazil, India and Russia concluded the ratification process of TFA in 2016.

BRICS Business Council suggests that the BRICS Governments should provide information publicly on steps being considered to facilitate trade amongst BRICS countries.

BRICS Business Council has discussed a **BRICS Trade Facilitation Network,** which would seek to strengthen coordination, cooperation and partnership between BRICS countries, their national single windows, and other relevant actors, in order to promote interaction through electronic windows. These systems serve as a tool for facilitating trade and to optimize and reduce the time and costs associated with transactions of export, import and transit of goods according to standards, recommendations and good practices suggested by international organizations, including the WTO, the World Customs Organization (WCO) and the United Nations Centre for Trade Facilitation and e-Business (UN/CEFACT).

The main objectives of the Network would be:

- Promote the exchange of information on the implementation by BRICS countries of their commitments under the TFA, in the perspective of private sector.
- Promote the use of single windows as a tool for supporting public and private sector in its efforts to facilitate trade.
- To be a BRICS forum to create, centralize and disseminate knowledge based on analysis studies and exchange of experiences and best practices of the existing single windows in the BRICS countries and the rest of the world.
- Promote the integration of single windows in BRICS and the electronic exchange of data and documents, including discussion of issues such as dispute resolution (for example, validity of electronic documents as evidence in court, homologation paper documents andprotocols), acceptance and validity of electronic documents, data protection, security of information in the use of electronic signatures, and the retention and storage of data, among other issues.

1.5. Regulatory Co-operation

Technical barriers and sanitary and phytosanitary measures are becoming a source of concern in international trade. Regulations and standards are proliferating and creating barriers to trade, particularly when they are set individually by countries outside of the umbrella of international organizations.

The Deregulation working group of BRICS Business Council has identified various administrative barriers in each of the BRICS countries that restrict trade and investment from rest of the BRICS countries. A summary of their report is appended in Annex 7 of this report. In addition to this exercise, BRICS Business Council can look at existing trade barriers – or unilateral measures taken by other countries that currently hamper or have the potential to hamper trade from BRICS countries and look at ways of cooperating on dealing with these.

It is recommended that international standards be adopted for better harmonization of technical standards and to remove barriers to trade, while duly taking into consideration the national priorities of member countries. BRICS Business Council also urges the BRICS Governments to ensure close cooperation amongst BRICS regulatory authorities. Regulatory cooperation across key industries is fundamental to support investment and trade.

BRICS Business Council supports the decisions taken in the meetings of BRICS Heads of National Standardization Bodies, Heads of Tax Administrations, Heads of Customs Agencies, and First Meeting of the BRICS Heads of the Migration Authorities that took place during 2015, and the meetings of BRICS Ministers of Labour & Employment, BRICS Education Ministers, BRICS Minister of Telecommunications, and BRICS Customs Agencies that took place in 2016, and commits full co-operation in this context.

BRICS Business Council suggests setting up of a **BRICS Standardisation Research framework**, which could serve as a platform to exchange information and best practices on institutional and policy mechanisms on various regulations and standards across BRICS countries, with a view to having better harmonization and enable the removal of trade barriers.

It is further suggested that BRICS countries should:

- Promote the mutual recognition of standards among the BRICS countries in such key fields as the next-generation information technology, railways, highways, power, oil, gas, aerospace, engineering and agricultural machinery, and medical and dental devices.
- Carry out a comparative analysis of a number of standards for the import and export of bulk commodities among the BRICS countries.
- Jointly work out an array of international standards, organize bilateral or multilateral cooperation and exchange activities for standardization at all levels
- Commit building a high-quality system of international standardization talents;
- Set-up regional standardization research centers/ platform, which will function as technical service providers
- Conduct the evaluation of internalization standardization performance, and
- Improve the incentive mechanism for involvement in international standardization activities.

1.6. Co-operation in Infrastructure Development

Infrastructure expansion is a fundamental driver of sustainable economic, social, and environmental development. Each BRICS country needs huge financial resources to meet their growing demand of infrastructure requirements to boost investments in the country, facilitate trade and at the same time keep the economy's growth momentum going. Infrastructure development thus remains a top priority for all BRICS economies.

Development and modernization of transport and connectivity are strategic priorities for all BRICS countries, and one of the several lines of activity where BRICS could build up and realize is multilateral projects. The New Development Bank has in-fact approved five infrastructure projects in the field of energy.

The Infrastructure working group of the BRICS Business Council has identified some key infrastructure projects that present immense opportunities for international co-operation. These include Integration Priority Agenda (API) in Latin America, the Brazilian Grow Programme (Programa Crescer), the Programme for Infrastructure Development in Africa (PIDA), the Silk Road Economic Belt and Maritime Silk Road (B&R) in Eurasia, Industrial Corridors, Economic Corridors and Smart Cities in India, and High Speed Railway Project – Kazan in Russia.

To ensure close co-operation in development of infrastructure across BRICS economies, it is suggested that:

- The New Development Bank should cater to the national infrastructure projects of each BRICS countries which are crucial for enhancing the quality of life and promoting Trade and Investments.
- The BRICS infrastructure working group should align their discussions on the lines of the priorities being set by the New Development Bank.
- The Infrastructure working group of BRICS Business Council should continue to work towards developing an approach to evaluate feasibility of infrastructure projects for joint implementation by BRICS countries.
- The sharing of best practices and ideas from various subject matter experts in the field of infrastructure is facilitated. This can be enabled through the BRICS Business Portal.

1.7. Engagement with New Development Bank

BRICS Business Council should have deeper engagement with the New Development Bank to ensure greater involvement of the private sector in project selection for lending.

In the second annual report, BRICS Business Council had made specific recommendations for NDB, including simplification of procedures for project selection, financing of early stage feasibility and engineering studies, serving as the Guarantee Fund for sovereign risk for specific projects and providing direct financing in domestic currencies.

It is suggested that a robust sector wise pipeline of projects should be developed for each country and submitted to the New Development Bank for consideration. These could include cross-border projects where more than one BRICS country has an interest.

The NDB should also consider funding for large-scale R&D infrastructure pilot projects, particularly where there are BRICS research partnerships and where new technologies that are aligned with BRICS economic needs are proposed.

One of the suggestions of the Skills Development Working Group for the New Development Bank is that all proposed projects at feasibility and implementation stages should include skills aspect, facilitating local skills development and usage in projects.

It is further suggested that BRICS Business Council be effectively engaged as an advisory council to the New Development Bank. The NDB should consider providing observer status to the chairpersons of the BRICS Business Council. This will ensure greater integration between NDB and BRICS Business Council and facilitate achievement of the key objective of developing infrastructure and other sustainable development projects in BRICS and other developing countries.

1.8. Investment ties

The BRICS Business Council reiterates the importance of the Common Declaration on Investment Principles, adopted at its meeting in July 2015, in Ufa, Russia, and the members reaffirm their commitments. The Declaration inter-alia provided for greater transparency and awareness with respect to investment policies across BRICS countries, facilitation of business travel, easier transfer of funds, coherence of investment related policies at national as well as international level, establishment of an ombudsman for supporting investors from BRICS countries and enhanced co-operation to minimize regulatory and institutional barriers to the flow of investments amongst BRICS nations.

Over the years, the BRICS countries have launched aggressive reforms in streamlining investment procedures to attract more foreign capital.

The Brazilian government has developed an Investment Facilitation and Cooperation Agreement (ACFI) model, which is based on three pillars: institutional governance; mechanisms for risk mitigation and prevention of disputes; and thematic agendas for cooperation and investment facilitation. The National Plan for Exports, launched in 2015 by the Brazilian government brought in the Market Access pillar to negotiate investment agreements, which has supported the international movement of Brazilian companies in countries where Brazil has an active interest. The Agreement also establishes mechanisms to prevent or resolve disputes through cooperation through an Ombudsman or arbitration (State-to-State), which will help foreign companies that have investments in Brazil. Brazil also launched the 'Brazilian Official Guide on Investment Opportunities' in August 2016. This new version of the Brazilian Official Guide on Investment Opportunities contains 149 projects in state and federal levels, totaling more than US$ 47 billion in projects to be carried out in the near future. There are opportunities in various sectors such as energy, highways, railways, ports, airports, telecommunications, generation and transmission of energy, urban mobility, construction, tourism and many others.

According to the outline of China's 13th Five-Year Plan, it is imperative to harmonize laws and regulations on domestic and foreign capital, develop basic laws and regulations on foreign capital and protect the legitimate rights and interests of foreign-funded enterprises. It is also required to improve the overseas investment management system, the foreign investment management system based on filing and supplemented by examination and approval, and the foreign investment promotion policy and service system so as to lift the level of facilitation.

To improve the investment environment and attract greater foreign investments, Government of India has liberalized FDI rules in several sectors such as insurance, pension, defence, railways infrastructure, construction, e-commerce, processed food retail, civil aviation, and media & broadcasting sectors, amongst others. Department of Industrial Policy and Promotion (DIPP) has also prepared a compendium consolidating all FDI related instructions to prepare a comprehensive booklet for easy reference of investors.

In December 2015, South Africa passed the Promotion and Protection of Investment Bill following an extensive public consultation process. The Bill seeks to promote investments and clarify the level of protection that an investor may expect in the Republic of South Africa and ensure that South Africa remains open to foreign investment. It promotes a balance between the rights and obligations of investors, and provides clarity on the standards of protection applied to investment.

To enhance the investment co-operation among BRICS countries, BRICS Business Council suggests:

- An institutional dialogue to exchange information about the models adopted or under consideration by various BRICS countries. This process could be used as a platform to identify areas of convergence and joint development and to identify areas where there is divergence and debate on the possible way forward. For instance, India and South Africa are reviewing their models of bilateral investment protection agreements and the exchange of experiences can be relevant for better solutions to protect business investments in BRICS countries and also in other emerging economies.
- Developing joint initiatives and studies on foreign investments. BRICS Think Tanks Council could support in preparing such studies.
- Developing and implementing projects identified in the 'BRICS Roadmap for Trade, Economic and Investment Co-operation until 2020'.
- Closer engagement between BRICS Business Council and the New Development Bank on project identification, and for establishing BRICS Project Preparation Facility.
- Combine major national initiatives of BRICS countries. For example, China's Belt and Road initiative and Russia's Eurasian Economic Union initiative

- Promote the development of SMEs in BRICS countries.
- Boost e-commerce in BRICS countries.
- Support further development of interregional cooperation.
- Conduct international cooperation in production capacity. For example, the production capacity for high speed railway, bullet train, nuclear power plant, port and terminal, etc.
- Explore the strategic relevance of infrastructure projects and agribusiness, prioritizing investments to promote progress in logistics.

1.9. Implementation of BRICS Roadmap for Trade, Economic and Investment Co-operation 2020

The BRICS Roadmap for Trade, Economic and Investment Cooperation 2020 includes 61 projects suggested by Russian companies for joint implementation with partners from BRICS countries.

Several projects which are included in the Roadmap were proposed by BRICS Business Council Working Groups and Russian Chapter of BRICS Business Council.

Amongst those projects are Elimination of administrative barriers and Fostering cooperation among BRICS countries in the personnel training, which have been discussed in the Deregulation and Skills Development Working Groups of BRICS Business Council.

Most of the projects require support in terms of establishing business contacts with companies and financial organizations from BRICS countries interested to take part in the project implementation. To facilitate this, BRICS Business Council on a regular basis takes special measures aimed at business matchmaking and further development of business connections.

1.10. Implementation of the Strategy for BRICS Economic Partnership

In July 2015, the 7th BRICS Summit was held in Ufa, Russia. As one of the key deliverables, the five Heads of State agreed on the *Strategy for BRICS Economic Partnership* (hereinafter referred to as the Strategy), which draws a road map and lays a solid foundation for the BRICS countries to expand their comprehensive, practical trade and economic cooperation.

The Strategy pointed out that in order to expand trade and investment cooperation, the following goals should be pursued:

- promoting business cooperation through appropriate channels, including through the BRICS Business Council, annual business forums, the Exchanges Alliance, the Interbank Cooperation Forum;
- encouraging the BRICS Business Council to strengthen and build upon the existing MSME portal which bridges the information gap and eases accessibility of support services to MSMEs.

In order to implement the Strategy, the BRICS Business Council will use its best efforts to:

a) Constantly improve its institution and mechanism, so as to maintain the good momentum of cooperation.
   - assign specific duties and cooperation sectors for all Council members to preside over;
   - invite more industrial associations to the seven working groups, in order to improve the composition of working group members and to ensure that the working group members share common interests and are kept on the same page;
   - set out working principles for the working groups in accordance with the Terms of Reference of the Business Council;
   - maintain the regular meeting mechanism of monthly teleconference, mid-term and annual meetings among the five national sections of the Council;
   - organize regular meetings of the national sections and secretariats, build smooth channels for reporting and solving problems, and ensure the leadership and cohesion of the Business Council at all levels.

b) Pool wisdom from the business community, offer advice and suggestions to the BRICS Governments.
   - maintain close contacts with the ministries and governmental bodies of BRICS countries, and offer policy suggestions and intellectual support as required by relevant authorities;
   - reflect the policy obstacles encountered in industrial and commercial cooperation and their solutions to the BRICS governments through annual reports;

c) Step up engagements with other mechanisms under the BRICS framework.
   - Build a line of communication with organizations such as the BRICS Contact Group on Economic and Trade Issues, New Development Bank, BRICS Think Tanks Council, BRICS Universities League, etc, to share information resources and work experience and seek cooperation opportunities.

d) Set up a business matchmaking platform and facilitate cooperation on specific projects.
   - organize business delegations to attend the various business activities during the annual and mid-term meetings of the Council, stimulate matchmaking between member enterprises and those in BRICS countries;
   - invite BRICS businesses to a variety of multilateral and bilateral business activities under the BRICS framework.
   - Take part in various forums and international conferences on behalf of the Business Council, disseminate "positive energy" for BRICS cooperation.
   - share business opportunities, best practices, policies & regulations and dispute settlement information through BRICS Business Portal and national websites.

e) Pay close attention to the development of small-and medium-sized enterprises.
   - invite more micro-, small- and medium-sized enterprises (MSMEs) to join the working groups;

- increase the proportion of MSMEs in the enterprise library on the BRICS Information Sharing & Exchange Platform;
- host seminars for MSMEs in BRICS countries, engage relevant government authorities to forge links between SMEs and competent government authorities;
- take part in associated business activities, establish communication and feedback channels for MSMEs to address their practical concerns.

Meanwhile, it has been suggested that the Business Council focus on the following sectors:

Energy and Green Economy

a) Promote energy diplomacy to create a favorable environment for overseas investments by energy enterprises in the BRICS countries.
   - Energy cooperation should be highlighted in concessional loan, debt relief and technical assistance agreements.
   - promote the signing of inter-governmental energy cooperation agreements and facilitate the global operations and reduce geopolitical risks of energy enterprises in the BRICS countries.
   - push forward the conclusion of regional and multilateral investment treaties, double taxation avoidance agreements, open investment treaties, etc. with the BRICS nations,
   - provide legal protection and dispute settlement basis for investment projects, ensure the security of overseas investments, cut the tax burden on businesses, ease market access, expand areas for open cooperation, and foster a trade and investment environment that is more free and more open.
   - facilitate the entry and exit of relevant materials and personnel of major projects overseas, including complete equipment, materials, construction machinery and living supplies of construction personnel.

b) Establish a BRICS energy cooperation and service platform to provide a comprehensive package of services to energy enterprises.
   – By coordinating with associations, chambers of commerce and intermediaries, establish a BRICS energy cooperation and service platform to offer easy consultation service to energy enterprises, and build a bridge of communication with international industry associations in terms of investment environment, legal guarantee, risk early warning, bank credit, business dynamics, etc.

c) enhance the software power and publicity, promote mutual understanding between energy enterprises, and expand their international influence.
   - advertise the remarkable results in developing local economy, upgrade energy industry and boost employment through energy cooperation between BRICS energy enterprises and the five countries.
   - demonstrate the technological achievements and strength of these enterprises and consolidate the foundation of cooperation, through industry conferences, exhibitions, forums and other forms.

d) Further deepen integrated energy cooperation.
   – In the energy cooperation among the BRICS nations, it is recommended that the focus remains the leading role of upstream cooperation, and leverage the integrated advantages

of energy firms in upstream exploration and development, oil refining and chemical engineering, engineering technology, engineering equipment and trade, and press ahead with the integrated cooperation pattern.

e) Seek win-win outcomes and build a community of shared interests for BRICS energy cooperation.
   - Energy cooperation within the BRICS group should reflect the principle of “win-win”; constantly deepen all-round cooperation, pursue complementarity, mutual benefit and common development, strengthen the interest ties between energy producers and consumers to build a community of shared interests.

Skills Development

In the Strategy for BRICS Economic Partnership, skills development is mainly covered in such sections as “Trade and Investment”, “Manufacturing”, “Technology and Innovation” “Connectivity”, “Education” and “ICT Cooperation”, which speak volumes for its decisive role in the healthy and sustained development of various industries. Besides, the movement of human resources, skills and technologies among the BRICS nations is a critical element in overall co-operation.

a) Develop vocational education to meet socioeconomic development needs. Enterprises in the BRICS countries should adopt a long-term view and build time-honored brands, carry forward the craftsman’s spirit and stimulate individual creativity. Governments should encourage colleges and universities to bolster their ability in interdisciplinary integration, improve their social practices and enhance university-enterprise cooperation. Colleges, universities and vocational schools should undertake improvements, for example, establishing a multidimensional evaluation system for both students and teachers, and laying more emphasis on the actual effects after students start their career.
b) Stress the pivotal role of human resources. It is suggested that the BRICS governments enhance their HR capability building mechanism and education system. Companies should organize professional and technical training, establish links with schools and nurture talents suited to the development needs of the economies.

Agricultural Economy

a) utilize the existing BRICS Business Portal and national websites, establish the agricultural market information system, improve the communication and connectivity system, provide agriculture-related information and build enterprise platforms.
b) encourage enterprises to attend the BRICS Trade Fair and BRICS Business Forum. An independent "Agricultural Exhibition Zone" or "Agricultural Sub-forum" may be set at the fair or forum to engage both agricultural scientists and entrepreneurs, to strengthen dialogue and communication in all fields, to provide opportunities for improving agricultural productivity, and to promote trade and investment in the agricultural sector.
c) apply to set up the "Professional Farmer Training Fund" in the New Development Bank for training small-scale farming techniques, sustainable plantation cultivation, etc. in order to train professionals and sharpen the professional competence of professional farmers and forestry workers and pave the way for agricultural technology developments and innovations.
d) establish forest certification system with mutual recognition among the BRICS countries. A mutually recognized forest certification system is suggested to lower the trading cost, propel sustainable forestry development, and mitigate effects of climate change.
e) boost cooperation in the pulp and paper industry within the BRICS countries.
f) make better use of biomass energy by developing a biomass energy list mutually recognized by the BRICS countries, and promoting typical cases of biomass energy utilization within those countries, which will help lift agricultural productivity and be of great significance to sustainable agricultural development, energy saving and carbon reduction, and climate change mitigation.
g) Relevant government authorities of the five countries are called on to further their communication and collaboration regarding agricultural aid, market access, food safety, labeling rules, and others.

It is also recommended that virtual centres of excellence in key areas of cooperation be identified and set-up to further deepen collaboration. For instance, South African BRICS Business Council has begun to identify Centres of Excellence with Africa in the Energy and Green Economy space.

2. Business Promotion

2.1. BRICS Business Portal and BRICS Business Council National Websites

The BRICS Information Sharing and Exchanging Platform (http://www.brics-info.org/, hereinafter referred to as the BRICS Business Portal), which was established with the valuable support of Fudan University, China is serving as a repository of information to stimulate and accelerate the exchange of trade, business and investment in the BRICS countries.

Practical business information and best practices have been shared through the portal by the BRICS Business Council, such as the official Investment Guides of the BRICS countries, and the website of the "Make in India" initiative. The BRICS Business Council Working Groups are also utilizing significant information on investment, trade, development and technical exchange interests, which are being constantly updated on the BRICS Business Portal.

The national chapters of BRICS Business Council have also developed their own national websites, which have been linked with the BRICS Business Portal. The national websites of Brazil (http://www.portaldaindustria.com.br/cni/canal/brics-en/), Russia (http://brics.tpprf.ru/ru/), India (https://www.bricsbusinesscouncil.in/) and South Africa (http://bricsbusinesscouncil.co.za/) have been connected with the BRICS Business Portal. Russian Chapter web-site is currently under revision, after which it will be presented in both Russian and English versions.

BRICS Business Council will make continuous efforts to provide the relevant information to the larger business community through the BRICS Business Portal and the National Chapters' websites.

2.2. Fairs, Exhibitions and Forums

The first BRICS Trade Fair was organized on October 12 - 14, 2016 in New Delhi, India on the theme 'Building BRICS - Innovation for Collaboration'. One of the key objectives was to showcase some of the best technologies available across BRICS nations to address BRICS countries' development challenges.

Leading private and public sector companies from the five BRICS countries showcased their goods, services and technologies at the BRICS Trade Fair, representing over 20 sectors including agriculture, agro processing, auto and auto components, gems and jewellery, chemical, green energy, handicraft, pharmaceuticals, textile, infrastructure, IT and tourism among others. The BRICS Trade Fair also brought together young entrepreneurs from across BRICS nations. State and provincial governments from BRICS countries also showcased their strengths and investment projects available. The Trade Fair also saw participation of business leaders from BIMSTEC countries.

The inaugural BRICS Trade Fair met with huge success, resulting in over 500 business meetings, which will go a long way in enhancing the economic and business co-operation amongst the BRICS nations.

The BRICS Business Council hopes that BRICS Trade Fair will be made a permanent annual event and be hosted in the country holding BRICS Presidency. This will serve as a great platform to bring together business community from the BRICS nations and create large opportunity for exploring business partnerships for mutual benefit of the economies.

Alongside the BRICS Trade Fair, the BRICS Business Council, in partnership with the business communities in the BRICS countries, will continue supporting organization of sector specific trade fairs, exhibitions and forums within the BRICS nations to promote trade, business, investment and manufacturing ties amongst BRICS countries.

2.3. Business Interests and Joint Projects Promotion

Several cross-border and transnational projects have the potential of contributing significantly to the development of the emerging and developing economies, with benefits accruing in the form of development of infrastructure, creation of jobs, income growth and poverty alleviation.

In order to create opportunities to increase the trade and investment ties amongst the BRICS countries and for the establishment of globally competitive partnerships and joint ventures, each BRICS Business Council Chapter has identified key industries/sectors and projects that it wants to promote domestically as well as industries/sectors and projects that it wants to pursue in the other BRICS countries.

a) **The Bi-oceanic Railway Connection project**: It is planned to cover the eastern and western sections: the eastern section is approximately 2,000km long and located in the territory of Brazil; while the western section is nearly 3,500km in length (ca. 2,300km in Brazil and ca. 1,200km in Peru). This project is still in the stage of preliminary research. The New Development Bank can consider this project and devise a rational financing plan based on the feasibility study results.
b) **Moscow – Kazan High Speed Railway Project**: The 770 km Moscow – Kazan line will be the first stage in establishing high-speed rail services in the Russian Federation. The HSL-2 link, supposedly, will run across 6 territories including, Moscow and Moscow region, Vladimir and Nizhny Novgorod region, Tatarstan and Udmurtia. The high-speed rail link will reduce travelling times between Moscow and Kazan from the current 14 hours (on the existing railway infrastructure) down to 3.5 hours. The total cost of the Moscow-Kazan high-speed railway line is estimated at over 1 trillion rubles (around $16 bln). The Moscow-Kazan section may later be extended to China, connecting the two countries across Kazakhstan.
c) Brazil is focusing on a new cycle of sustainable growth, based on an extensive adjustment process and the adoption of measures to improve competitiveness and productivity. The Brazilian Official Guide on Investment Opportunities supports this new cycle of growth by identifying investment opportunities across the country. The guide presents trustworthy,

systematized and high level information to both foreign and domestic investors about specific projects. It provides direct contact information for each project, which fosters transparent relations between public and private entities. Brazil offers a safe and outstanding investment environment, full of business opportunities. In the past years, the country´s demand for infrastructure services has increased significantly. The new version of the Brazilian Official Guide on Investment Opportunities contains 149 projects in state and federal levels, totaling more than US$ 47 billion in projects to be carried out in the near future. There are opportunities in various sectors such as energy, highways, railways, ports, airports, telecommunications, generation and transmission of energy, urban mobility, construction, tourism and many others. For further information, consult http://www.apexbrasil.com.br/en/publications

d) The Brazilian programme, called Programa Crescer ("Programme Grow"), was introduced in 25 September 2016, with the announcement of 34 infrastructure projects that will be awarded to the private sector under the concession model. The projects, which will be granted in the concession model, are: ***in Transport***: Porto Alegre Airport; Salvador Airport; Florianopolis Airport; Fortaleza Airport; Santarém Fuel Terminals (STM 04 and 05); Wheat Terminal of Rio de Janeiro; Motorway (BR-364/365/GO/MG); Motorway (BR-101/116/290/386/RS); Motorway (EF-151 SP/MG/GO/TO); Motorway (EF-170 MT/PA); Motorway (EF-334/BA – FIOL); ***in Energy***: Fourth round of auctions of marginal oil and gas fields (onshore fields) under the concession regime; Fourth round of auctions of 'exploratory blocks' for oil and gas under the concession regime; Second round of auctions under the production sharing regime (unifiable areas); Amazonas Distribuidora de Energia SA. (electric utility); Boa Vista Energia S.A. (electric utility); Companhia de Eletricidade do Acre (electric utility); Companhia Energética de Alagoas (electric utility); Companhia de Energia do Piauí (electric utility); São Simão (GO) hydroelectric power plant; Volta Grande (MG) hydroelectric power plant; Miranda (MG) hydroelectric power plant; Pery (SC) hydroelectric power plant; Trafo (TO) hydroelectric power plant; Centrais Elétricas de Rondônia S.A. (electric utility); ***in Mining***: Phosphate mining rights for the Miriri mine (PB/PE); Copper, lead and zinc mining rights for the Palmeirópolis mine (TO); Coal mining rights for the Candiota mine (RS); Copper mining rights for the Bom Jardim mine (GO); Assets of the Brazilian Mineral Resources Research Company – CPRM; and the ***Concession of the Loteria* Instantânea Exclusiva** (Lotex) lottery modality.

e) Various projects for investment in South Africa are available at http://bricsbusinesscouncil.co.za/

f) The list of some of the key projects developed and executed by China in BRICS countries is provided in Annex 8 of this report.

g) Various projects for investment in India's infrastructure sector are available at https://www.bricsbusinesscouncil.in/docs/InvestmentOpportunities/Key%20Investible%20Projects%20Across%20Infrastructure%20Sector.pdf

h) India has a guide to facilitate entry of foreign investors in India. The report can be accessed at https://www.bricsbusinesscouncil.in/docs/ToolKit/Toolkit_Entry%20of%20Foreign%20Investors%20in%20India_Aug26%20v6.pdf

3. Best Practices and Information Exchange

Brazil's business partnerships and engagements with other BRICS Countries

a) Between January 2015 and August 2016, there were 27 projects in Brazil that received investments from partners of BRICS:

- Russia announced 6 projects in Brazil, creating 617 jobs. The parent companies comprehend Uralkali; Morton; Rosatom; United Aircraft Corporation (UAC); Russian Technologies State Corporation (Rostec); and PhosAgro.
- India announced 1 project of the Accutest Research Laboratories, in Brazil, generating 40 estimated jobs.
- There were 20 projects in Brazil that received Chinese investments, creating 4.094 estimated jobs. The parent companies investing in Brazil were: China Unicom; TCL; Zotye Holding; China National Oils, Foodstuffs and Cereals Corporation (COFCO); Chery Automobile; Broad Homes Industrial; BYD; Guangxi Liugong Machinery; East Shineray Holding; Dongguan Kingsun Optoelectronic; Aviation Industry Corporation of China; ZTT International Limited; Advanced Optronic Devices (AOD); Yasuna Group; Fenchem Biotek; Lanzhou Lanshi Group; Kingsoft; Hangzhou Zhongce Rubber; Mesnac; and Joyson.

b) In the same period, there were also 2 projects in China, that received Brazilian investments (Hejoassu and Votorantim), in the sectors of metals and chemicals, generating 282 estimated jobs.

c) The Fourth Session of the China-Brazil High-Level Coordination and Cooperation Committee (COSBAN) took place in Brasília, in June 2015. COSBAN is a mechanism for political dialogue of the highest level between Brazil and China. In its eleven subcommittees (Political; Economic and Trade; Energy and Mining; Agriculture; Inspection and Quarantine; Economic and Financial; Science, Technology and Innovation; Space Cooperation; Industry and Information Technology; Educational; and Cultural), the most relevant themes of the bilateral agenda are addressed.

d) In September 2015, the Seventh Meeting of the Brazilian-Russian High-Level Commission on Cooperation took place in Russia. Stablished in 1997, it is the main periodic dialogue mechanism of the strategic partnership between the two countries. Subjects for discussion in these meetings included fishery, civil aviation, defense, tourism, agriculture, transportation, energy, infrastructure, logistics and industrial development.

e) In October 2015, National Confederation of Industry organized a mission related to the Cantor Fair, in Guangzhou, in China, with the participation of 144 companies, from the States of Amazonas, Ceará, Santa Catarina e Sergipe. Technical visits were conducted to Shanghai Zhenhua Heavy Industry (ZPMC); Shanghai Automotive Equipment Manufacture Co.,Ltd (DEMC); and Guangzhou Shipyard International Company Limited (GSI).

f) The Seventh India-Brazil Joint Commission Meeting was held in New Delhi on 18-19 November 2015. Brazil and India reviewed bilateral ties and expressed satisfaction with the outcome of this important mechanism of the Joint Commission which further deepened political dialogue between the two countries.

g) In May 2016, the National Confederation of Industry organized a mission related to the SIAL China, in Shanghai, with the participation of 40 companies from São Paulo, Minas Gerais, Pará, Paraná, Rio de Janeiro and Santa Catarina.

h) The Meeting of the Brazil-India Mechanism of Trade Monitoring took place in September 2016 in Brasilia, and considered issues related to trade and investment promotion.

i) The President of Brazil, Michel Temer, travelled to China on the beginning of September 2016, where he served on his first official trip in office. President Temer attended the G20 Summit and bilateral meetings with Heads of State and entrepreneurs, participating also of the Brazil-China High-Level Business Seminar in Shanghai.

j) In September 2016, Brazilian Agriculture Minister Blairo Maggi promoted a 25-day mission to Asian countries, including India and China, with the objective of showcasing Brazil's agricultural potential. Deals signed between Brazilian and foreign businesses during the mission were estimated at around US$ 1.5 billion. Maggi also attended a meeting of BRICS Agriculture and Agrarian Development Ministers in India.

k) The National Confederation of Industry is participating in the Training Program for Latin American Countries Trade Promotion Organizations (TPOs) and Chambers of Commerce/Industry, organized by the China Council for the Promotion of International Trade (CCPIT). This training enhances the relations between Chinese and Latin American Institutions and creates a space to discuss innovation and best practices in services to promote internationalization of companies. There was also the 10th China-Latin America and the Caribbean Business Summit, which was held in Tangshan city on October 14 and 15, 2016.

l) In 2016, the National Confederation of Industry became member of the Belt & Road Industrial and Commercial Alliance (BRICA), a multilateral cooperation mechanism envisioned and initiated by the China Federation of Industrial Economics (CFIE) to unite leading industrial and commercial organizations worldwide for the common prosperity along the Silk Road Economic Belt and 21st Century Maritime Silk Road.

<u>Events organized in Russia with participation of BRICS countries</u>

During the period of 2015-2016, several key events were organized with participation of BRICS countries under the auspices of Russian Chapter.

a) **First Meeting of Exhibition Companies of the SCO and BRICS Countries, Moscow, Russia, May 26, 2015. The purpose of meeting was to** establish direct contacts between exhibition organizations of the BRICS countries for regular interaction and information exchange. The conference participants agreed to continue cooperation and consider creation of an advisory council of the exhibition companies of the BRICS countries to coordinate the cooperation both on bilateral and multilateral basis.

b) **BRICS Business Forum "BRICS Economic Cooperation: Opportunities for Growth and Development", Saint-Petersburg, Russia, on June 18, 2015**. For the first time BRICS session was held within the framework of Saint-Petersburg International Economic Forum, the largest business forum organized in Russia Participants of the BRICS discussion shared their opinion on the current state of trade and investment between the BRICS countries and future prospects in this area, taking into account creation of New Development Bank, ways to stimulate economic recovery in the BRICS countries, mechanisms for building and strengthening inter-regional ties, ways to establish favorable business environment, harmonize trade regulations and remove administrative barriers and bottlenecks. Discussed issues were further developed during the followed event of Russian presidency in BRICS, which were mostly held in Russian regions (Khanty-Mansiysk, Ufa, Rostov-on-Don etc.)

c) **The second BRICS Business Forum** within the framework of Saint-Petersburg International Economic Forum was held in Saint-Petersburg, Russia, on June 16, 2016. The session was titled as BRICS: Joining forces to achieve stable economic growth. Discussion was focused on prospects for the development and diversification of economic cooperation between the BRICS countries, and opportunities to expand market access amongst the five economies. Participants discussed national development programmes and instruments to facilitate investment activities, as well as the role of the BRICS New Development Bank in supporting promising areas such as infrastructure, energy, and others.

d) **International IT-Forum with BRICS and SCO participation in Khanty-Mansiysk, Russia, which is organized annually (July 6-7, 2015 and June 8-9, 2016). The main goal of this forum is to support further sharing of best practices in the IT sector** and to facilitate the harmonization of the legislation in the field of e-trading, electronic communication and electronic document management.

e) **First Small Business Forum of the SCO and BRICS Regions in Ufa, Russia, on October 21-23, 2015.** The Forum for Small Businesses has become the first unique and effective integration platform fostering economic cooperation between businesses and regional authorities. At R2R meetings, regions have a chance to directly interact with one another. Delegates discussed financial and infrastructure support for small and medium businesses and delivered key recommendations on busting cooperation between SCO and BRICS small and medium businesses. The agreement was reached about holding Small Business Forum of the SCO and BRICS Regions on regular basis. The next time Forum will be held in Ufa on December 1-2, 2016.

India's engagements with other BRICS Countries after the Ufa summit

a) FICCI hosted a roundtable industry interaction with the visiting Russian delegates from the Ministry for the Development of the Far East, Russian Federation in October 2015. The Meeting was represented by leading companies from India like EIL, Tata Steel, SREI infrastructure, GE, RITES, IL&FS to name a few.

b) FICCI hosted a high powered official cum business delegation led by Mr Evgeny Kuryashev, Governow Sverdlovsk Region, Russian Federation on **March 10, 2016**. The Governor was accompanied by the Minister for International and Foreign Economic Relations, the Minister for Investment and Development and other ministers from the Sverdlovsk Region. The high powered business delegation was led by Mr Andrey Besedin, President of the Ural Chamber of Commerce and Industry and comprised organizations from the following sectors: Higher Professional Education; Manufacture of refractory products & materials; Machine-building for railroad machinery; Logistics; Manufacture of products in biotechnology, pharmaceuticals & medical equipment; Laser technologies – titanium; Pharmaceuticals; Heavy Machinery; Medical Equipment; Machine Building – Drilling equipment; Equipment for gas & petroleum processing, chemical, petrochemical Industry; Metal working Equipment; ICT and Industrial equipment.

c) FICCI along with the Government of Moscow /Trade Representation of the Russian Federation in India organized a Roundtable for the visiting official and business delegation from Moscow. The delegation was from the Transport Infrastructure sector and comprised various CEOs of Moscow Transport companies and transport authorities in New Delhi, India on **April 27, 2016**. The objective of the visit was to exchange experience in development of transport and logistic infrastructure of megalopolises. A roundtable was organized on 'The New Model of Surface Passenger Urban Vehicle Management' Representatives from the Delhi Government and Industry stakeholders from the Transport Sector participated in the round table.

d) FICCI participated in the India Pavilion of Innoprom 2016 in Ekaterinburg, Russian Federation. India was the partner country this year. Ms. Nirmala Sitharaman, Indian Minister for Commerce & Industry, led a delegation comprising 110 Indian companies, three state Chief Ministers and senior officials to Yekaterinburg for INNOPROM. FICCI also organized a BRICS pavilion at Innoprom.

e) FICCI with support from Ministry of Commerce and Industry, Government of India had organized the "India Pavilion at the "20th AGROPRODMASH" which was held from 05-09 October, 2015 at the Expocentre Fairgrounds, Moscow. The event was organized by "Expocentre Moscow" and had the participation of over 36 countries and over 800 exhibitors from around the world. About 45 Indian companies participated in the exhibition and showcased their products.

f) FICCI organized a meeting with an official and business delegation from the Sverdlovsk region in Russia led by the Governor Mr Evgeny Kuyvashev on March 10, 2016. The Governor was accompanied by the Minister for International and Foreign Economic Relations, the Minister for Investment and Development and other ministers from the Sverdlovsk Region. The high powered business delegation was led by Mr Andrey Besedin, President of the Ural Chamber of Commerce and Industry

g) The Governor opined that bilateral trade and economic relations between the Sverdlovsk region and the Republic of India could develop and prosper in the field of mining industry, energy, oil and gas industry, metal industry.
h) India participated at the China International Fair for Investment & Trade (CIFIT) held on 8-11 September, 2015 in Xiamen, China. More than 200 G2Bs and B2Bs were organized at the 'Make in India Pavilion' in CIFIT.
i) FICCI organized an interactive dinner meeting in honour of H.E. Mr. Li Yuanchao, Vice President of the People's Republic of China on November 6, 2015, Mumtaj Mahal, Taj Palace Hotel, New Delhi which provided an excellent opportunity to senior Industry leaders to interact with Hon'ble Vice President of China and CEOs of Chinese companies.
j) FICCI organized India - China (Zhejiang) Investment & Trade Symposium on 20th November, 2015 at New Delhi. More than 500 B2Bs were organized for a 100-member business delegation from Zhejiang Province that visited India. FICCI also signed a Cooperation Agreement with CCPIT-Zhejiang at the meeting
k) An interactive meeting with Silk Road Fund delegation from China was held on 2nd March, 2016 at FICCI, New Delhi
l) FICCI organized an Interactive Session with Senator H E Ms Katia Abreu, Minister of Agriculture, Livestock and Supply, Brazil, on November 16, 2015, at New Delhi, India. The Senator was accompanied by a high level government and industry delegation and the discussions focused on promoting agriculture cooperation between India and Brazil.
m) FICCI organized "Namaskar Africa 2015: India Southern Africa Business Forum & Exhibition" on 25-26 November 2015 in Maputo, Mozambique. The objective of the programme was to enhance and diversify India's economic engagement with Africa. African countries including South Africa participated at the 'Namaskar Africa 2015'.
n) FICCI in partnership with other chambers organized India-Africa Business Forum alongside the 3rd India-Africa Forum Summit at New Delhi where delegates from across Africa including South Africa participated
o) The 3rd meeting of India-Africa Business Council was organized by FICCI in partnership with DIPP and AUC in October 2015 at New Delhi which was attended by industry leaders from Africa including South Africa.
p) The FICCI pavilion of the exhibition organized alongside IAFS 3 was visited by Dr Jacob Zuma, Hon'ble President of South Africa and other senior dignitaries.
q) FICCI leadership also joined an interactive business Luncheon with Dr. Jacob Zuma Hon'ble President of South Africa during his visit to India in October 2015.
r) FICCI organised India China Investment Conclave on 7th October 2016 in New Delhi for a group of 200 Chinese businessmen, city government representatives and officials. This was organized by FICCI in collaboration with NITI Aayog and National Development and Reforms Commission of China (NDRC) on the sidelines of the India China Strategic Economic Dialogue (SED).

   The programme was an endeavour by FICCI to provide a holistic overview of investment opportunities in India's high growth sectors and states to Chinese companies and economic decision makers. Eleven Indian states from across the country made presentations on the benefits and concessions available to Chinese companies and highlighted projects where a partnership with China would bring benefits to both sides. Later, the representatives of Indian states held one to one G2B discussions with select Chinese companies. Senior government representatives from Central government Ministries, Invest India and industry representative from the solar energy sector participated in a panel discussion moderated by Secretary DIPP.

China’s business partnerships and engagements with other BRICS Countries

a) The China-LAC Cooperation Fund (CLCF) was officially inaugurated. The CLCF was launched during President Xi Jinping’s visit to Brazil in July 2014 when China made the commitment to contribute USD 5 billion to the Fund. In April 2015, the Chinese government further expanded its contribution to USD 10 billion. The Fund is committed to investing in the energy resource, infrastructure, agriculture, manufacturing, sci-tech innovation and information industries of the Latin America and Caribbean countries in the form of equity stake and credit financing. In January 2016, the Fund was formally put into operation. To date, there have been more than 60 reserve projects in over 10 LAC countries, covering infrastructure, energy resource, agriculture, manufacturing, productivity cooperation and many other sectors.
b) The China-Africa Fund for Industrial Cooperation (CAFIC) was founded. President Xi Jinping announced the establishment of the CAFIC at the opening ceremony of the Forum on China-Africa Cooperation (FOCAC) in Johannesburg on December 4, 2015, with the initial funding of USD10 billion. The Fund was jointly founded by the State Administration of Foreign Exchange (SAFE) and the Export-Import Bank of China. Mainly engaged in equity investment, the Fund largely serves the construction of the high-speed railway network, expressway network and regional airline network, as well as the industrialization of local areas, covering a range of domains including the manufacturing, hi-tech, agriculture, energy and mineral products, infrastructure and financial industries. In terms of the target regions, the Fund mainly focuses on the Sub-Sahara Region. So far, the establishment work of the Fund has been completed in Beijing.
c) In 2015, Chinese enterprise Leyard invested RMB121 million to subscribe the shares of MIC Electronics (MIC), an Indian LED manufacturer, in a joint effort to achieve better performance by integrating its own products with the brand popularity and sales channel of MIC.
d) China Railway Construction Corporation (CRCC) and the government of the State of Para in Brazil signed a letter of intent for logistics and infrastructure project investment. The investment to be made by CRCC will stimulate the construction of port and railway projects of Para, push forward the development of the projects’ vicinity areas, and fuel the employment and income growth of local people.
e) Dalian Wanda Group and China Fortune Land Development Co., Ltd. (CFLD) signed a memorandum with the Indian state of Haryana for potential investments to build new industry cities, out of which the total investment in the Wanda Industry City alone will reach USD 10 billion. The state of Haryana will witness a flow of new investments from Chinese enterprises. More than 100 micro, small and medium-sized enterprises have agreed to move their production bases to Haryana, which will bring along an investment of USD 1 billion, in addition to a host of job opportunities. These enterprises come from many different areas, including the textile, engineering, and auto spare parts manufacturing industries.

South Africa's engagement with other BRICS countries

In addition to the aforementioned events witnessing South African participation across BRICS countries, a business delegation from South Africa also participated in the Golden Autumn Harvest Exhibition from 8 - 11 October 2016.

Additionally, since the UFA Summit, South Africa undertook high-level Investment and Trade Initiative missions with business delegations to Russia, India, and Brazil as well as hosted the South African Expositions in China.

The South African Skills Development Working group has conducted a number of knowledge sharing initiatives, including forecasting and TVET best practices and is currently working on a project of the impact of Manufacturing 4.0.

The South African Business Council has also developed and launched a portal and linked it to the Fudan Portal. This South African portal aims to not only provide information to other BRICS Business Councils, member companies and governments, but also provides a platform for communication and collaboration at a national and continental level.

The portal has a facility where South African companies can register and then gain access to the various working group information, events, newsletters and other relevant information. The portal is also linked to social media channels to facilitate provision of information on key initiatives.

Part B

Trade and Investment Liberalisation Measures

1. Country-specific Barriers

BRICS Business Council Working Group on 'Deregulation' has conducted a survey on various administrative and other non-tariff barriers being faced by companies doing business with other BRICS countries. The key findings of the report are annexed to this annual report.

BRICS Business Council requests the Contact Group on Economic and Trade Issues (CGETI) and seeks their support in addressing the key issues being faced by the BRICS business community.

1.1. Technical regulations and standards

Each country has a right to implement measures needed to achieve legitimate trade policy objectives, such as the protection of national security, human health and safety, or protection of the environment. However, it is crucial to ensure that regulations, standards, testing and certification procedures do not create unnecessary obstacles limiting access to the market.

Over the past years, the use of tariffs as a regulatory tool have seen a steady decline, and governments worldwide tend to introduce more and more technical regulatory requirements that often have a negative impact on trade and the competitiveness of exporters, and in particular small and medium enterprises.

In order to minimize this impact, it is suggested that the BRICS governments should strive to attain the following policy objectives:

- Achieve greater harmonization, through more wide-spread use of international standards
- Improve the implementation of transparency provisions, to ensure that trade partners are systematically consulted on regulatory initiatives that might influence trade
- Adopt a more risk-oriented approach in deciding what conformity assessment procedures should be used for assessing compliance of products.

The BRICS Business Council Working Group on Deregulation has examined this subject and identified some cases of technical barriers to trade and investment effective in BRICS countries. A summary of the working group report is in Annex 7 of this Annual Report.

1.2. Customs administration

In addition to barriers associated with technical regulation, complicated customs procedures can be a difficult hurdle for companies wishing to enter the market. The long time needed for customs clearance (under the destination inspection), the overuse of physical inspections and the different valuation methods experienced by exporters within BRICS create additional unnecessary costs and get in the way of expanding the trade and investment flows.
Measures such as the simplification of customs clearance procedures, strengthening customs cooperation and the exchange of information on national customs law, are included in the Strategy for BRICS Economic Partnership and the BRICS Trade and Investment Facilitation Plan.

The BRICS Business Council suggests that the BRICS governments strive to:

- Implement the measures already described in the official documents,
- Ensure widespread transition to the electronic document flow at customs,
- Harmonize foreign trade commodity codes or develop a mechanism for resolving differences thereof,
- Exchange information on the prevention of smuggling, and
- Devise a common approach to cooperation with the business community.

1.3. Financial and corporate regulation

BRICS Business Council acknowledges the importance of active intra-BRICS investment cooperation, especially in contributing to economic growth, and facilitating the use of existing opportunities of BRICS economic complementarity. A key requirement to boost the investment inflows is to ensure greater transparency and predictability in the investment environment and create favorable conditions for foreign direct investment in the BRICS countries.

To promote greater regulatory coherence and cooperation amongst BRICS countries, there should be greater coordination across authorities and institutions and continuous efforts should be taken to identify, assess and resolve the key issues impeding the investment flows amongst the BRICS countries.

The BRICS Business Council suggests that:

- BRICS governments should undertake reforms to reduce barriers to domestic and foreign entry, reduce the cost and time of doing business, and make the regulatory framework more predictable.
- Regulatory institutions of the BRICS countries (including Central Banks) should strengthen communication and cooperation amongst themselves.
- BRICS governments should ensure a level playing field to safeguard a competitive environment for private operators and reduce concerns and risks over regulatory discretion

The BRICS Business Council Working Group on Deregulation has examined this subject and identified some restrictive financial and business regulations for foreign companies in the BRICS countries.

1.4. Business Mobility

A smooth flow of international trade and investment requires personal contact with trading and investing partners. Often the visa restrictions and regulations related to work permits act as a hindrance to the trade and investment flows between countries.

To ensure trade and investment expansion amongst BRICS countries, it is important that the issues related to mobility of persons (especially business and professional personnel) is liberalized. BRICS Business Council has suggested the BRICS Governments to make special arrangements on visas to facilitate and encourage BRICS people to people exchange, including simplifying the visa approval procedures and reducing the time of approval.

Some of the specific suggestions of BRICS Business Council for the BRICS government are:

- The process to grant work permits and visas should be hastened and made less complex. There should be concerted efforts by all BRICS Governments to cut down on the procedures and number of days involved in issuance of business visas for the bona-fide business executives of BRICS countries travelling to other BRICS nations.
- Longer duration business visas with multiple entries should be issued for highly skilled workers and senior executives on a reciprocal basis.
- Countries should do away with asking for a hard copy of the invite letter, and scanned version should be accepted by respective missions on reciprocal basis to facilitate transfers of senior executives for business related activities.
- Companies should be permitted to take the responsibility of certifying/legalizing documents in order to streamline work permits processing.
- BRICS countries should arrange a new kind of visa for bona-fide businessmen. Quotas on BRICS visas should be granted to qualified companies/organizations. In the initial stage, 500 reputed companies/organizations of each BRICS country can receive 1000 BRICS visas for work and business trips and travel freely among BRICS countries. In the second stage, more companies/organizations can be qualified and added to the list.
- Chamber of Commerce and Industry of the Russian Federation (CCI of Russia) and FICCI have signed a MoU for facilitating business visas for their respective businessmen travelling to each other's country, as per the agreement signed between the two governments on simplification of requirements for mutual travel or certain categories of citizens of the two countries. Similar arrangements amongst BRICS countries could be looked at.

The BRICS Business Council Working Group on Deregulation has examined this subject and identified some country-specific issues with respect to business mobility in BRICS countries. A summary of the report of the deregulation working group is provided in Annex 7 of this Annual Report.

2. Promoting Good Regulatory Practice

The Deregulation Working Group of the BRICS Business Council has suggested two mechanisms to strengthen co-ordination and sharing of good regulatory practice across the BRICS member countries.

a) BRICS Trade Facilitation Network

BRICS Business Council has discussed creation of a BRICS Trade Facilitation Network, to strengthen coordination, cooperation and partnership between BRICS countries, their national single windows, and other relevant actors, in order to promote interaction between the electronic windows.

It will serve as a tool for facilitating trade and to optimize and reduce the time and costs associated with transactions of export, import and transit of goods according to standards, recommendations and good practices suggested by international organizations, including the WTO, the World Customs Organization (WCO) and the United Nations Centre for Trade Facilitation and e-Business (UN/CEFACT). Extra-BRICS institutions wishing to participate as observers would be also welcome.

b) BRICS Market Access Strategies Dialogue

BRICS Business Council suggests creation of a BRICS Market Access Strategies Dialogue in order to exchange information and best practices on institutional and policy mechanisms to identify and remove trade barriers in foreign markets.

The main purpose of proposed BRICS Market Access Strategies Dialogue is to conduct a comparative analysis of the institutional framework and resources that BRICS governments have put in place to identify, assess the legality, and take action to remove barriers to trade in goods, services, and investment in foreign markets. Based on this comparative analysis, it would be possible to draw recommendations for enhancing BRICS countries' market access strategy, through a combination of information-gathering and surveillance mechanisms, petitioning procedures, and a review of the governmental resources that the countries currently employs to remove barriers to trade in its goods and services.
This initiative could focus on the following four specific elements:

- *What are the mechanisms in place to identify and monitor trade barriers?*
- *Do these mechanisms count on the participation of the private sector?*
- *Whether and to what extent there are institutional mechanisms for domestic producers to petition the government to take action before the WTO or other regional or bilateral fora against illegal trade barriers?*
- *What are the resources used by the governments to obtain the removal of these trade barriers through international adjudication?*

Part C

Advisory Role of BRICS Business Council

Advisory Role of BRICS Business Council

The BRICS Business Council has been playing an active role in strengthening and promoting economic, trade, business and investment ties amongst the business communities of the five BRICS countries.

Seven working groups of the BRICS Business Council have been engaged in continuous dialogue to discuss the key development issues and economic partnership challenges being faced by BRICS countries in respective areas. The BRICS Business Council as well as its working groups have also made specific recommendations for the BRICS government to enhance the economic, trade and investment ties amongst BRICS countries.

The BRICS Business Council will continue to play an advisory role to the BRICS government through presenting its recommendations to BRICS Leaders at Annual Summits and sharing its recommendations with the CGETI.

BRICS Business Council is prepared to provide advice on the implementation of the BRICS agenda and on other specific business sector priorities, and to respond when the various BRICS fora request information about business-related issues or to provide the business perspective on specific areas of cooperation

The BRICS Business Council will work in close partnership with and provide its recommendations to enrich the discussions with the Government of the BRICS economies.

The BRICS government should continue to engage BRICS Business Council at various fora involving BRICS and involve participation of BRICS Business Council representatives in its various meeting, including but not limited to the following:

- Meetings of BRICS Trade Ministers;
- Meetings of BRICS CGETI;
- Meetings of BRICS Finance Ministers;
- BRICS Financial Forum;
- Meetings of New Development Bank;
- Meetings of BRICS Ministers of Science and Technology;
- Meetings of BRICS Ministers of Agriculture and Agrarian Development;
- Meetings of BRICS Ministers of Education;
- Meetings of BRICS Industry Ministers
- Meetings of BRICS Ministers of Energy
- Meetings of BRICS Heads of Customs Agencies
- Meetings of Working Groups related to trade and investment issues.

Annexes

Annex 1: Summary Report of BRICS Business Council Working Group on Manufacturing

Introduction to Manufacturing Sectors in BRICS countries

In 2015, BRICS countries accounted for a total nominal GDP of US$ 16.92 trillion, equivalent to 23.1% of world GDP. Their territories are home to 3.073 billion inhabitants (53.4% of the world's population). Its exports in 2014 amounted to, US $ 3.48 trillion. Imports in that same year amounted to US $ 3.03 trillion. Since 2001, the BRICS have more than doubled their share of world exports. In that year, the group represented 8.1% of world's total exports; in 2015, they accounted for 19.1% of that total. Between 2006 and 2015, intra-BRICS trade increased 162%, from US $ 93 to 244 billion.

Intra-Block BRICS Exports

Year	Intra-block Exports (US$ Billion)
2006	93
2007	129
2008	169
2009	144
2010	211
2011	275
2012	281
2013	296
2014	295
2015	244
Average growth	162% (over 10 years)

- Manufacturing sector as % of GDP, World Bank, **2014**:

Countries	Industry*	Manufacturing
Brazil	24	12
Russia	32	6
India	30	16
China	43	30
South Africa	29	13

**Industry: It comprises value added in mining, manufacturing construction, electricity, water, and gas.*

- Sector as % of GDP, World Bank, **2015**:

Countries	Manufacturing value added (annual growth%)	Manufactures exports (% of merchandise exports)	High technology exports % of manufactured exports (2014)
Brazil	-9.7	38.1	10.6
Russia	-5.1	20.5	11.5

India	5.5 (2014)	70.6	8.6
China	-	94.3	25.4
South Africa	49.4	0.1	5.9

Working Group Meetings
Manufacturing Working Group of BRICS Business Council under India's term has come together through teleconference three times on the following dates:

- Teleconference on, 21 July 2016;
- Teleconference on, 30 August 2016;
- Teleconference on, 29 September 2016

This report seeks to summarize the work and the proposals developed over the period. This report shares work done so far related to the manufacturing by the BRICS countries based on the recommendations of the industry from BRICS countries. Also, it highlights policy recommendations for the BRICS governments that could deepen economic cooperation.

National Single Window Agency
Member countries have done work related to Single Window platform and agencies to make it easier for the business to invest. The progress of the work done so far on these Single Window agency/portal needs to be exchanged between the member countries and its industry.

Priority Sectors
The working Group has identified few priority sectors for cooperation amongst BRICS. In the next few weeks, the Group needs to come out with sector specific strategy to enhance engagement and business of BRICS industry in these sectors. These priority sectors are:

- Industrial equipment
- Machinery and security
- Metals and Mining
- Public transportation like buses and trams
- Pharmaceutical

BRICS Centre for Manufacturing Technology
The Working Group also proposes to set up a BRICS center for manufacturing technology to focus on key areas of innovation to provide solutions to the world in major problems of the society in the area of health, water, renewables, and advanced manufacturing which is of common interest to all members of the BRICS business council on manufacturing. The details with regard to this need to be worked out if there is enough support from the Government on this.

BRICS Business Portal
The BRICS Business information exchange platform was created to undertake the development and make the platform the most authoritative information platform, so as to boost the trade and investment ties between the BRICS countries by providing stable, reliable and sustainable information services. It is proposed that the Manufacturing Working Group uses this platform to

improve information exchange among BRICS companies. This is an important step to bridge gaps of knowledge and trust that may keep companies of BRICS countries apart.

Trade Fairs and Exhibition

The Working Group supports participation of BRICS countries in each other's trade fairs, exhibitions and forums, which it views as the most promising for business promotion and would like to see it included in the Business Portal and other appropriate BBC tools and activities. First BRICS Trade Fair is a step in this direction for engaging companies from BRICS countries to come together at one platform to showcase their best technologies and products for mutual cooperation and benefit. It is supported by the members to have this organized annually in the country of and by the host nation.

Non-tariff Barriers

The Manufacturing Working Group recommends that governments take steps towards building a more coherent system of certification of manufacturing products among the BRICS countries. The objective of this action would be to reduce risks of technical standards becoming effectively non-tariff barriers between the BRICS, but also to increase the quality of goods produced in the BRICS countries.

The Working Group proposes that the BRICS Business Portal is used as an on-line platform to provide guidance and information about technical standards and product certification, with the BBC national Secretariats coordinating with their respective governments and providing contact information of relevant government agencies.

BRICS Business Travel Card

The Manufacturing Working Group supports the BBC's initiative to seek the establishment of a BRICS business travel card for bona fide business executives of BRICS companies. The points the Working Group views as particularly important are:

- The BRICS travel card is intended to facilitate the traveling of bona fide business people within BRICS countries with ease;

- The BRICS travel card will not be utilized as a replacement for the obtainment of the work visa;

- The main objective is to facilitate meeting between BRICS business people and potential commercial partners from BRICS countries and the related decision- making process;

Unfair Trade Practices

To mitigate unfair trade practices in BRICS countries, this Working Group recommends, as a manner to help prevent such practices, that BRICS countries make an immediate effort to align actions concerning the creation of their Single Window sites, where, as agreed at the WTO, countries should consolidate their official foreign trade operational platforms (for the filling of forms, requests of licenses and other legal requirements).

The transparency and simplification that would result from this initiative would help prevent potential practices of under-invoicing, misclassification of tariff headings, among others.

Promote intra-BRICS trade in local currencies
The Working Group supports initiatives to conduct studies aimed at ascertaining the possibility of implementation of a swap in local currencies that does not generate an overstock of any of the partner's currencies.

New Development Bank (NDB)
Manufacturing Working Group suggests the expansion of areas of operations of the NDB in order to start acting as a first class financial guarantor. The role of the NDB has been discussed by different working groups and the BBC. Since manufacturing has a key role in the advancement of infrastructure projects and sustainable development - due to procurement, development of value chain, and supply industries - this Working Group is of the view that the promotion of the manufacturing sector projects should be considered as a key component for financing by the NDB.

The Manufacturing Working Group has specific recommendations related to the role of the bank in manufacturing. The recommendations are about how the NDB's resources could foster the value chains located in the BRICS's countries.

- The Council should work with officials of the NDB, so as to ensure that the projects prepared by BRICS businessmen are in line with the prescribed norms of the Bank.
- NDB's annual report should point out the supply chains involved in the projects.
- To ensure a transparent and efficient competition among the suppliers of goods for NDB's projects is the publication of a clear definition of what configure a "sustainable development project". The Manufacturing WG believes that the construction of guidelines around this concept is important to ensure the minimum of arbitrariness in the process of selection of eligible suppliers.
- The NDB should function as an assurance bank of first class for trade among its members and help minimize the currency risk

Major Recommendations

- Members of the Working Group encouraged setting up of BRICS Centre for Manufacturing Technology and to promote cross-border joint venture facilitation. In particular they agreed to work on the architect and the structure for such centre.
- Members were urged to become more active on BRICS Business Portal.
- All the Members agreed that trade needs to be broad-based, both within the countries and across manufacturing sectors.
- Members emphasized the need for reskilling and skill development given the advancements made in technology.
- Members also agreed to include aerospace manufacturing as a part of this Working Group.
- The share of manufacturing in most of the BRICS countries is low and members suggested that collaborative efforts are required to improve the share of manufacturing in the respective GDP of countries.
- Members also suggested that the New Development Bank should finance projects related to manufacturing sector too.

Annex 2: Summary Report of BRICS Business Council Working Group on Skill Development

Under the Chairmanship of India in 2016, the BRICS Business Council Skill Development Working Group (BBC - SDWG) successfully carried forward the discussions and activities initiated by the Russian chapter in 2015 and also discussed some new prospective avenues/projects that can be jointly taken up among the BRICS member countries.

In view of the impending 4th industrial revolution, during the handing over ceremony in Moscow, it was proposed by India to study industry 4.0 scenario in BRICS countries and develop multilateral and bilateral projects for member countries. The proposal was accepted enthusiastically by other member countries. Interestingly, China, Russia and Brazil have already taken considerable steps to address the disruption that will be caused, however, India and South Africa, are still in the nascent stage of Industry 4.0. It was agreed that the study would entail mapping futuristic jobs; working on transnational qualifications; building training capacity; curriculum development and mobility of skilled workforce.

As part of BRCS SDWG mandate for 2016-17, a white paper on **Skill Development for Industry 4.0** is being developed jointly by FICCI and Roland Berger (a German consulting firm) with inputs from Brazil, China, India, Russia and South Africa respectively.

This is extremely relevant for India in the context of 'Make in India' campaign, which would step up the sector's contribution to India's GDP from 16% to 25%. In the age of advanced manufacturing which includes composite materials, quantum engineering, 3D printing, robotics etc., it is expected to disrupt functioning and growth of sectors ranging from transport to construction to automobile to textile among others. Today, India does not have the capacity and capability in higher education and vocational training to support Manufacturing 4.0. This needs to be addressed in a strategic and streamlined manner. To achieve this, there exists a need to map the futuristic demand of skills required in the industry 4.0 sector.

In order to take this forward, following activities were planned for the year 2016-17 during India's chairmanship:

- ✓ Development of White Paper on Skill Development for Industry 4.0
- ✓ Seminar on 16th Sep, 2016 to showcase best practices and to ideate projects through participation of domain experts.
- ✓ Signing of MoU among the BRICS nations to carry out joint activities in skills domain
- ✓ Skill Development Working Group meeting on 14th Oct 2016 in New Delhi and release of White Paper in BRICS Business Council Working Group Meeting.

Over the past few months, several ideas have been exchanged amongst the group members. Based on primary and secondary research, status of adoption of Industry 4.0 have been identified; **Skill readiness of labor for Industry 4.0 in BRICS nations** have been captured; challenges faced by BRICS nations; and based on finding, some important recommendations have been made to gear up for skilling personnel to meet the new demands which will arise in industry 4.0 in the near future. These have been summarized in the subsequent sections.

Industry 4.0 – An overview

Industry 4.0, christened so based on its promise as the fourth industrial revolution, encompasses a wide spectrum of technological advances across the value-chain. Industry 4.0 technologies – Automation, Internet of Things, Artificial Intelligence, Additive Manufacturing, etc. – are revolutionizing the traditional manufacturing processes. And as a result of increased use of digital technologies, the boundary between the real and the virtual world is increasingly blurring, giving birth to what are known as cyber-physical production systems. Several Industry 4.0 technologies have gained or are gaining prominence. However, a 'Smart Factory' or Factory 4.0 that leverages all key tenets is not yet very common.

Industry 4.0's primary appeal lies in its ability to act as an economic game-changer for companies. Technologies such as mass customization and 3D printing not only offer greater flexibility to meet varied demand from customers but also help companies in reducing the lead time for developing prototypes. Industry 4.0, which started off as Germany's brainchild, is expected to minimize the labor cost advantages of traditional low-cost locations, making it attractive for manufacturers to bring previously offshored jobs back home.

Industry 4.0 has come into geo-political focus, garnering attention from national governments. Countries across the world have pioneered full-fledged national missions to be a part of this fourth industrial revolution – *Industrie 4.0* in Germany, *Advanced Manufacturing Partnership 2.0* in USA, *Revitalization and Robots Strategy* in Japan, *Industrie du Futur* in France and *Intelligent Factories Cluster*s in Italy, to name a few. To ensure sustenance of manufacturing competiveness, emerging markets have also initiated the adoption of next generation manufacturing through the launch national strategies – most notably, China had launched 'Made in China 2025' to promote Industry 4.0, India had initiated the 'Make in India' mission to promote manufacturing, Russia had issued a program called the 'Development of the manufacturing industry and improvement of its competitiveness for the period till 2020'. While Brazil and South Africa do not have a national strategy, several initiatives across robotics and Industry 4.0 have been undertaken.

Current status of adoption of Industry 4.0 in BRICS nations

In the last decade, BRICS nations have gained significant traction in the world economy as producers of goods and services, receivers of capital and potential consumer markets. They have been recognized as some of the fastest growing nations and have come to play an important role in the global economy. This is in contrast to the developed nations where the growth has stagnated. BRICS's contribution in global GDP, global manufacturing value add, manufactured exports and high-tech exports have increased significantly between 2000 and 2014.

The rise in contribution of BRICS nations was supported by easy availability of a large and cheap labor force in BRICS nations, resulting in improved manufacturing competitiveness at global level and incentivizing firms from developed nations to set up local manufacturing plants. China and India further emerged as important destinations due to their huge populations and large unpenetrated domestic markets. However, the cost differential is narrowing with most of the BRICS nations witnessing significant increase in manufacturing costs, primarily due to increasing wages.

With cost advantages getting eroded, it has now become important for BRICS nations to adopt advanced manufacturing technology to remain competitive in the global market. However, except for China which has made significant progress in adopting Industry 4.0 technologies, all the other BRICS nations have low levels of industrial automation (robot density), low numbers of Industry 4.0-related patent applications, low numbers of machine-to-machine connections and limited activities in robotics and additive manufacturing by companies.

At present, each BRICS nation is at different stage in terms of adoption of Industry 4.0. China has been leading with the launch of Made in China 2025 plan, Brazil is developing its advanced manufacturing policy. Russia is promoting individual Industry 4.0 technologies through its TechNet initiative. India is promoting manufacturing and use of ICT through launch of Make in India and Digital India program. South Africa is yet to take any nationwide step.

At the same time, few independent and isolated initiatives have been launched to support Industry 4.0 adoption in BRICS nations. For instance, in Brazil, an industry-wide Industry 4.0 assessment has been carried out. In Russia, a consortium has been set-up to assist the application of Industrial Internet. In India, an educational institute has joined hands with a global aircraft manufacturer to establish a smart factory. In China, a cell phone module manufacturer has completely automated its production lines. In South Africa, the public sector invests into research on additive manufacturing.

However, a number of challenges hinder Industry 4.0 adoption. The massive upfront capital requirements and sizeable investments in R&D and implementation deter corporations, particularly those in emerging markets, from foraying into Industry 4.0. Low awareness, lack of clarity in defining return on investment, difficulties in integrating new hardware and software, inappropriate infrastructure, information security, lack of skilled workforce, insufficient IT infrastructure and lack of credits are some of the other key challenges that hinder the adoption of Industry 4.0. Furthermore, the education and skill level of employees is often below the expectations of companies.

Skill readiness of labor for Industry 4.0 in BRICS nations

The success of any industry depends not only on the machines deployed for manufacturing the products but also on the labor force employed. It is important that employees have the required skill sets to operate machines efficiently and to ensure that the processes are running as per standard operating procedures.

General education as well as vocational education have a critical role to play in making employees industry ready. They lay the foundation for skill development, which is critical for economic growth and social development of a country. BRICS nations, however, face a dual challenge of a lack of highly-trained employees and non-employability of a large section of the educated labor force due to skills mismatch.

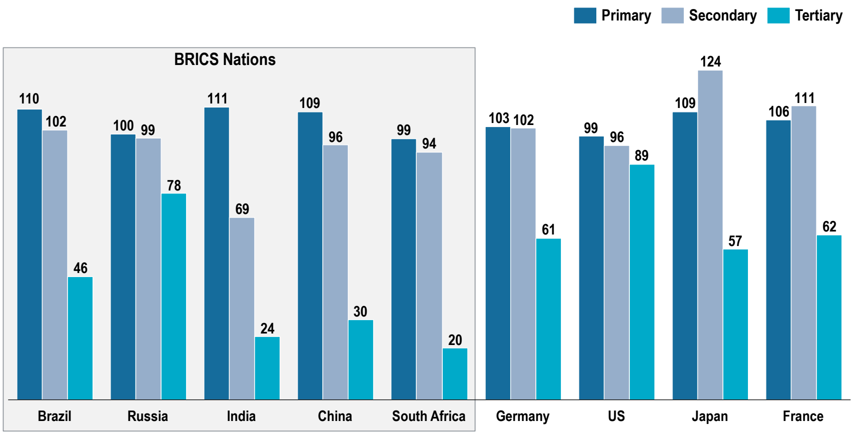

Figure 1: Gross Enrolment Ratio at various education levels

The current skilling levels in BRICS nations can be evaluated by analyzing the Gross Enrolment Ratio (GER) at various levels of education and participation of students in vocational training.
At primary level, all BRICS nations have a high enrolment ratio of more than 100%.[1] At secondary education level, except for India, which has a very low gross enrolment ratio of 69%, all other BRICS nations have a ratio close to 95% comparable to ratios in developed nations like Germany, UK, Japan and France. At tertiary education level, only Russia, amongst the BRICS nations, has a GER comparable to that of developed nations. The enrolment ratio for India, China and South Africa is almost half or less than half of that in developed nations, which have gross enrolment ratios of around 60%.

In terms of participation in vocational education, the percentage of upper-secondary students enrolled in vocational courses in Brazil, India and South Africa stood at 8%, 3% and 12%, respectively. A very small percentage of students entering upper-secondary education level opt for technical and vocational courses. Russia and China, however, have higher participation in vocational education at upper secondary level – 52% and 46% respectively.

At these skilling levels, companies across the BRICS nations are facing challenges in finding skilled workforce at current skill levels. As per a survey conducted by Manpower Group, globally 38% of the employers face some kind of difficulty in filling job vacancies. While the difficulty is less in South Africa (31%) and China (24%) as compared to the global average, the challenge is higher for companies in Brazil (61%) and India (58%). Finding suitable candidates for job roles like skilled trade workers, technicians and sales representatives remains a big challenge with skilled trade workers being the most difficult to find for the last 4 years. Around 35% of the

[1] A number more than 100% indicates that a number of students are undergoing grade repetition.

employers quoted lack of available applicants as a major reason for the difficulty experienced in filling jobs. 34% of the employers mentioned lack of candidates with required technical competencies (hard skills) as another reason while around 20% of the employers reported lack of experience and lack of workplace competencies (soft skills) as the other main reason for the same.

With the increase in adoption of advanced manufacturing technologies, the problem is bound to become even more severe. Not only will there be a lack of manpower with the desired skill sets but employers will have to make high capital investment in re-skilling and up-skilling their existing workforce to suit their requirements.

Skills for the future

With the advancement in technology and gradual implementation of Industry 4.0 solutions like automation, the skill requirement in industry is going to change significantly. It is very important to understand what changes Industry 4.0 will bring in the current manufacturing setup, what the new tasks that a laborer would have to do will be, how it is going to be different from what he or she has been doing and what additional skills would be required to carry out those tasks successfully.

The next industrial revolution will bring higher level of automation and interconnectivity in the manufacturing process. The tools, technologies and machines to be used are expected to be different from what is present today. Smart machines will coordinate manufacturing processes by themselves, smart service robots will collaborate with workers on assembly lines and smart transport systems will transfer goods from one place to another. Smart devices like tablets, wearables, etc., will be used to gather and analyze real-time information.

Information and data will be the key elements which the employees will have to process in their day-to-day jobs. Artificial intelligence will enable collaboration between humans and machines. And the interaction will not only be limited to pressing or touching buttons, but will also involve use of voice and gesture. Workers will use devices like smartphones and tablets for communication and machine operation. New jobs will require employees to be a part of the planning process and to be involved in process improvement and optimization activities. People would be required to do less of manual work and more tasks of control and supervision of processes.

As per the 'Future of Jobs' survey conducted by the World Economic Forum, it is expected that a number of skills that are not considered to be significant in today's context will form one-third of the desired core skill sets of most occupations in 2020. Such a shift in the skill requirement is expected with increased digitalization.

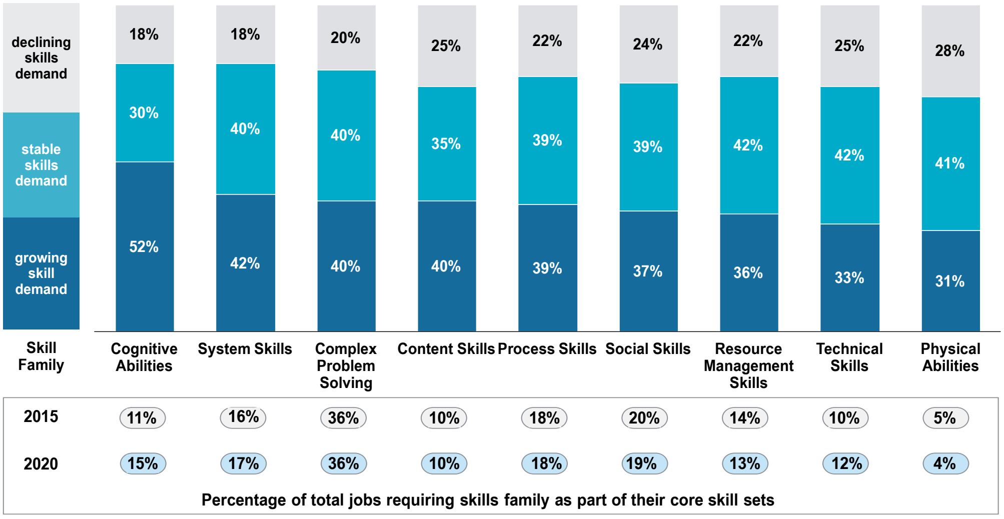

Figure 2 - Change in demand for core work-related skills[i]

With adoption of automation and artificial intelligence, a number of tasks involving technical skills like troubleshooting, quality control, etc., and resource management skills like people and time management would be eliminated. It is expected that the percentage of jobs requiring Technical Skills and Resource Management Skills as part of their core skill sets will go down from currently 14% and 14%, respectively, to 12% and 13%, respectively, in 2020. The percentage of jobs requiring Cognitive Abilities as a core skill will rise to 15%, from a current level of 11%.

Though skills demand at an aggregate industry level is expected to evolve as mentioned above, the degree of change in skill requirements within individual job families is even more significant. For example, among all the jobs requiring cognitive abilities as part of their core skill sets, 52% of the jobs do not have such requirements now and are expected to have growing demand of cognitive abilities skill set by 2020. In 30% of the jobs, the demand for cognitive abilities skill set currently is high and is expected to have stable demand. The remaining 16% of jobs which require high cognitive abilities today will see a decline in importance of cognitive abilities. Cognitive abilities, system skills and complex problem solving skills are the top three skills expected to be high in demand and will continue to remain important.

Challenges faced in skill development by BRICS nations

All BRICS nations have realized the importance of skill development in achieving economic growth in the future and have taken various measures to bridge the skill gap. From increasing education expenditure to increasing the network of vocational training institutes by establishing nation-wide programs, initiatives have been launched to make the labor force industry-ready. However, BRICS nations face a number of skill development challenges:

- **Demand supply mismatch**: There exists a mismatch between the skill sets job applicants have and the skill sets they are expected to possess, resulting in low employability among the youth.

- **Lack of access**: A number of students are unable to pursue vocational education due to lack of sufficient number of vocational schools and training institutes across the country.
- **Lack of industrial training:** The vocational education in BRICS nations comprises of classroom based courses and apprenticeships are not included as a mandatory part of educational programs. As a result, students lack practical exposure, rendering them less competent.
- **Poor quality**: BRICS nations also face challenges due to inflexible and outdated curricula, shortage of qualified teachers and trainers and unavailability of proper and up-to-date infrastructure.
- **Lack of resources**: Skill development efforts are also hindered by lack of available funds.
- **Negative image at secondary level**: The Vocational Education and Training (VET) track suffers from a negative image, i.e., VET is for school drop-outs rather than a way of training workers. The problem of negative image of vocational courses is much more severe at secondary level.

Skill development initiatives undertaken by BRICS nations

In order to bridge the existing skill gap, several initiatives have been undertaken by BRICS nations. Though some initiatives have been undertaken at the federal / central level, a few nations amongst the BRICS have also entered into bilateral agreements with developed nations to further strengthen their efforts in skill development. Across the BRICS nations, expenditure on education as a share of GDP has increased over the years and has become a major part of country's total public expenditure, accounting for more than 10%.

In Brazil, Sistema S, a group of 10 non-profit private institutes classified as autonomous social services, undertake activities related to public interest like skill development. Each of these institutes is associated with a particular sector and is responsible for improving the quality of life of workers within that sector and providing technical and professional education to meet the industry demand of qualified workers. These institutes use funds raised by collecting mandatory payroll taxes from the firms in their associated sectors. The launch of a federal education and training program – PRONATEC – has also played a significant role in improving the VET quality and network, increasing educational opportunities from initial training to professional qualification and increasing pedagogical resources. Under the PRONATEC program, the Brazilian government has provided funds for establishing vocational institutes and has offered financial assistance (through scholarship and low interest loans) to students undergoing vocational education.

Russia undertook the 'Skill Development for Industrial Growth' initiative under the Agency for Strategic Initiatives to bridge the gap between industry's skill demand and supply and to further strengthen academia-industry links. As part of the initiative, Russia has developed an 'Atlas of Emerging Jobs' which lists down the occupations that are bound to get outdated and the prospective new jobs and their respective skill requirement. It has also taken measures like taking part in the WorldSkills competition to promote vocational education. Recognizing practical learning as an important aspect of vocational training, it has implemented dual education in 13 regions under this initiative.

In India, skill development was one of the most important points of discussion in the 12th five-year plan. As part of its National Policy on Skill Development, India has established the National Skill Development Corporation (NSDC) to support for-profit training institutes. Sector Skill Councils have been established to involve industry in certifying trainers and developing training curricula, occupational standards and qualification level competencies. India has also launched the National Skill Qualification Framework (NSQF) to provide mobility and has initiated the National Employability Enhancement Mission to promote the apprenticeship model of learning. The Skill India program has been launched to provide scholarships and low interest loans, to recognize prior learning, to give skill cards and certificates and to develop an apprenticeship portal. India has also collaborated with the European Union with the objective to improve quality and increase the number of skilled workers in various sectors.

In China, the government has started offering a subsidy of CNY 1500 (USD 230) per year to students in VET schools to offset their fees and has also launched an initiative to make tuition free for upper secondary vocational school students. Additionally, Germany and China have been cooperating intensively in the fields of higher education and vocational education and training. As part of the collaboration, the Chinese Education Ministry and the German Federal Minister of Education and Research (BMBF) have been holding regular strategy talks on education policy since 2004. They have also agreed to expand cooperation in the field of *Industry of the Future*, particularly in the context of smart production processes and joint research and innovation funding procedures.

In South Africa, Sector Education and Training Authorities (SETA) were established as part of National Skill Development Strategy of 2000. SETAs have played an important role in expanding the vocational training network across the country. There are currently 21 SETAs, each representing a sector. Each SETA is responsible for managing and creating internships, unit-based skilling programmes and apprenticeships within its industry. South Africa has also been levying a skill development tax of 1% on the wage bills of the companies for raising funds for skill development activities.

Recommendations to collaborate for skill development

Though each of the BRICS nations has undertaken skill development initiatives, the current system of vocational education is not efficient to train the labor force for the factories of future. There exists an opportunity for BRICS nations to leverage their strengths to overcome challenges in skill development and to collaborate to make their labor force Industry 4.0-ready.

1. Preparatory: Assessment of future skill demand

As part of the preparatory phase, a BRICS Skill Development Governance Body should be established with the collaboration of the various BRICS governments to oversee the skill development activities in BRICS nations.

A Task Force should be commissioned under the governance body, which should have representation from Industry 4.0 end users and solution providers and from the training institutes in each of these BRICS nations. This task force will be responsible for assessing the current state and expected progress of Industry 4.0 adoption. Based on the assessment, the task force will develop a set of recommendations revolving around the changes required in training curricula and methodology for meeting industry's skill demand at various stages of adoption of Industry 4.0. Their set of recommendations will then be passed on to the bodies involved in skill development in BRICS nations for implementing changes in the skill training methodology to ensure that Industry 4.0-related skills are imparted.

The governance body will oversee the functioning of the task force and will be responsible for coordinating with the skill development bodies for tracking the progress made and monitoring the results achieved with the implementation of recommendations given by the task force. It will be responsible for facilitating cross-sharing of learnings and challenges faced in skill development by BRICS countries. It will be entrusted with the responsibility to frequently assess and create a database of the strengths, competencies and weaknesses of BRICS nations in terms of skill sets. This database will be shared amongst BRICS nations and will act as a guidebook for collaboration opportunities.

As part of the preparatory phase, BRICS nations should also partner with European Training Foundation (ETF) and should actively take part in the Torino Process. The aim of the Torino Process is to provide a concise, documented analysis of vocational education and training reform in each ETF-member country, including identification of key policy trends, challenges, constraints, best practices and opportunities. The adoption of Industry 4.0 in the European Union and other ETF-member countries will increase focus on bringing elements of advanced technology in the skill development and vocational education system. BRICS nations can significantly benefit from actively taking part in Torino Process as it will help these nations to learn and adopt the initiatives and best practices followed by the other countries for skill development for Industry 4.0. Inputs received from participation in these processes will also help the governance body and the task force in creating recommendations that are in line with the international skill development activities.

2. Infrastructure: Improving quality of course content and trainers

In a number of BRICS nations, the curricula used for skill training are developed without the involvement of industry. As a result, the gap between skill sets demanded and skill sets supplied keeps on increasing. BRICS nations should involve industry in the skill development process as they play an important role in the job market. Efforts should also be made to involve Industry 4.0 solution providers in these councils as they can provide valuable inputs related to future technologies, based on which training curricula can be modified and improved further. Industry's involvement is also required to promote dual training / apprenticeships so that students are exposed to experiential learning and do not have only theoretical knowledge.

The BRICS nations can also collaborate to form a body, similar to SETA, and undertake skill training activities related to Industry 4.0 technologies like robotics, system integration, etc. by establishing training institutes across the BRICS nations.

The BRICS nations should set-up a body which will be responsible for content development for skill training related to Industry 4.0. Based on the skill sets identified by the task force and the sector specific skill councils, BRICS nations can collaborate together through the mentioned body for developing course content. This course content can be uploaded on a BRICS cloud (using digital technology) and shared across the nations. No one particular skill will be required for Industry 4.0. Workers will have to be trained in numerous skills to make them Industry 4.0-ready. And given that none of the BRICS nations are expert in all the technologies expected to form Industry 4.0, each of the BRICS nations should leverage their strengths and expertise to develop a holistic course content.

This body can also support in addressing the issue of quality of trainers available in the market. Just how each BRICS nation will use their expertise to develop course content, they can also collaborate to train the faculties or trainers. Exchange programs where trainers are exposed to industrial setups of other countries should be launched. Such collaboration would ensure that all the BRICS nations are able to benefit from the expertise of each other.

BRICS nations should also work together to set up a platform for collaboration of their institutes and universities. For example, TU Braunschweig (Germany) and BITS Pilani (India) are working together to set-up, at BITS Pilani, a learning factory which will consist of Industry 4.0 technologies. On similar lines, the skill development institutes across the BRICS nations can collaborate to innovate and develop cost-effective learning tools related to Industry 4.0.

3. Implementation: Promote vocational education and increase its reach

Another important element of skill development is to efficiently provide skill training to the youth. BRICS nations face significant challenges in terms of the reach of skill development institutes (vocational training schools), which is indirectly related to the availability of funds. BRICS nations can collaborate and raise funds to support skill development initiatives. Alternatively, they can also raise funds from the New Development Bank (BRICS Bank) established to support infrastructure projects and can use these funds raised for establishing training institutes, which will help in increasing the reach of vocational training.

Initiatives like PRONATEC of Brazil have played an important role in promoting vocational education across the country. As part of the program, the government provides scholarships and loans for vocational education and funds for expansion of technical and vocational institutes. Other BRICS nations should launch similar program to promote and increase reach of vocational education.

In line with the WorldSkills competition, the BRICS governance body can take the initiatives to jointly organize a BRICS Skills competition for the five nations every alternate year, when the

WorldSkills competition is not planned. The aim of the WorldSkills competition is to promote technical and vocational education amongst the citizens of its participating countries by raising the skilled professional worldwide. The WorldSkills competition focuses on all types of skills across the sectors. Similarly, the BRICS Skills competition can emphasize on basic sector-specific skills as well as Industry 4.0-related skills like mechatronics, data analytics etc. Such a competition will not only promote VET amongst the BRICS nations but also support skill development for Industry 4.0.

4. Opportunity: Standardization for increasing mobility within and across BRICS nations

National Qualification Framework (NQF) plays an important role in every country as it follows an outcome based approach and helps in defining the career progression track. If a worker has a particular level of certification, he or she can anytime go back and continue his or her education for the next level of qualification. All the BRICS nations except Brazil have their own national qualification framework, which provides workers with the mobility to shift education tracks from general to vocational education and vice versa. However, if a worker goes outside his or her country to other BRICS nations, he or she has to undergo certification programs again.

In order to provide easy mobility across the European Union, the European countries have established a common European Qualification Framework (EQF), which acts as a translation device to make the national qualifications of a particular European country readable in other European countries. Such a standard EQF facilitates mobility across European nations and supports lifelong learning.

Similarly, BRICS nations can also collaborate to develop a standard qualification framework. Such a standard qualification will support a worker's mobility from one BRICS nation to another BRICS nation and, at the same time, will allow him or her to pursue education for the next level of qualification, avoiding any repetition. This will also help countries in standardizing the outcomes of learnings and occupational standards across the BRICS nations. As a result, the quality of workers joining the workforce will improve and the workers will have the option to move across BRICS nations easily.

The qualification framework should also be modified to include elements of Industry 4.0 to ensure that a labor at particular level possess certain Industry 4.0-related skills, in addition to the technical skills he or she is expected to have based on the industry demand.

Update on activities completed

- Till now the BRICS SDWG has done 3 meetings over conference calls.
- A Seminar was organised on 16th Sep 2016 at FICCI, New Delhi, on the sidelines of 9th Global Skills Summit to gather inputs from domain experts from Industry 4.0 and Skills fraternity which have been incorporated in the White Paper. China, India, Russia and South Africa participated in the Seminar
- A visit to model (award winning) Industrial Training Institute (PUSA) was organized for BRICS delegate on 14th Sep, 2016 in New Delhi

On-going Activities-

- Development of agenda for BRICS Business Council Working Group Meeting to be held on 14th Oct 2016
- Finalisation of the MoU
- Identification of multilateral and bilateral projects
- Proposal to BRICS Forum to set up Skill Development

Annex 3: Summary Report of BRICS Business Council Working Group on Financial Services

Under the Chairmanship of India in 2016, the BRICS Business Council Financial Services Working Group (BBC - FSWG) successfully carried forward the discussions and activities initiated by the Russian chapter in 2015 and also discussed some new avenues of economic and financial partnership among the BRICS member countries.

The group deliberated upon seven key areas of cooperation including – formation of a BRICS Rating Agency, creation of a New International Payment Card System (NIPCS) for BRICS, SCO & EAEU countries, Infrastructure Financing, Sustainable Development, Financial Inclusion, Start-up and New Project Financing & Entrepreneurship, and setting up a New Development Bank Institute (NDBI) to serve as a think tank for New Development Bank (NDB), with the last three of these areas being introduced by India in its presidency this year. Over the past few months, several ideas have been exchanged amongst the group members and some important recommendations have been made regarding each of these areas of engagement, which are summarised in the subsequent sections.

1. BRICS Rating Agency

The proposal for establishing a Rating Agency for the BRICS countries was first mooted by the BRICS Business Council – Financial Services Working Group under the Russian presidency. During the Indian presidency, members of the BBC - FSWG further explored the concept and reaffirmed the importance of this proposal. The India section presented a study on this subject, which revealed the following key points:

- **Need for a BRICS Rating Agency (BRICS RA)**: The present ratings that are assigned either at the national or global scale have their respective limitations and have not been portraying the creditworthiness of the issuers from the emerging economies appropriately. To facilitate larger capital flows into the emerging countries, a robust credit evaluation mechanism is therefore required for cross-border investors. An alternative Rating Agency for the emerging countries including BRICS, providing ratings on a broader emerging market scale that takes into consideration the typical features of an emerging economy would help investors in efficiently allocating funds within these geographies. The proposed rating agency as a new player in the rating industry would also offer competition to the 'three big' global rating agencies which dominate the rating market currently.

- **Ownership and Shareholding**: The proposed Rating Agency should have a diversified shareholding structure to ensure political independence, which is critical for the success of a credit rating agency. The shareholding pattern could be divided amongst various member development banks from the BRICS nations, multilateral agencies, and other public and private financial institutions. The New Development Bank could also consider becoming a stakeholder to ensure long-term stability and independence from a single sovereign, while

BRICS countries may consider being indirect shareholders through multilateral agency such as the NDB, member development banks, or financial institutions.

- **Regulatory Considerations and Country of Establishment**: The study findings suggest that it is important that the BRICS Rating Agency should be established in a country that offers a robust regulatory framework in line with global standards. Other factors such as the size and reach of capital markets and the presence of a well-developed domestic credit rating industry should also be considered while evaluating the country of establishment for the proposed agency.

- **Scope of Services and Proposed Business Model**: In terms of services, the BRICS Rating Agency could initially consider rating three types of entities and instruments including: corporate sector debt (bank loans, bonds, debentures and other capital market instruments), public sector debt for state owned enterprises, and urban local bodies, and structured finance transactions and ratings for financial institutions. It would also be important to determine whether the institution would be a profit making organisation or a non-profit making entity, as this will have a bearing on the business model of the Rating Agency. While the study shows that the 'issuer pays' business model is better than the other models, it has been suggested that in the initial stages of operations, the BRICS Rating Agency can have the flexibility of offering its services both under the 'issuer pays' as well as the 'investor pays' business models.

Next Steps: The members agreed to continue the work on setting up the BRICS Rating Agency, with a dedicated BRICS Rating Agency Taskforce that should be set up to take this forward and address the considerations. It was agreed that credibility, ownership and methodology of such a rating agency are critical. The members need to promote and enhance a vibrant private local market of rating agencies in the BRICS countries. The Task Force would take this up on a priority basis with a view to establishing an MoU as a next step.

2. New International Payment Card System (NIPCS)

The idea of developing a New International Payment Card System for the BRICS countries was proposed by the Financial Services Working Group under the Russian presidency basis the fact that the BRICS and the EAEU (Eurasian Economic Union) countries though have their own National Payment Systems (NPS) and local payment cards, their payment cards' operations internationally are mostly served by International Payment Systems (IPS) such as Visa, MasterCard or American Express. Since these IPS' are managed from the outside, their actions often do not correspond to BRICS or EAEU interests. Thus creation of an independent international payment system by the leading emerging market economies could remove the political risks for their international payments to some extent.

The Financial Services Working Group further discussed the various aspects of the project under the Indian presidency and a detailed implementation process has been suggested for early establishment of the NIPCS. The following recommendations have been made in this regard:

- One-way acceptance of China Union Pay (CUP) cards in India, Brazil and Russia be made two-way. South Africa to join the network once its own domestic card payment network is established.
- Once two-way linkage with CUP by the four countries becomes operational, the project can be taken to its next phase whereby all five countries would accept the cards of other BRICS countries. The idea is to eventually create a NIPCS for BRICS and other countries.
- The business rules for mutual acceptance of cards by five domestic networks be drafted. It is estimated that this activity would take about 3 years. It has also been suggested that NDB plays an important role to speed-up the development of NIPCS.
- A **special Taskforce for the NIPCS project** has been created with representation from the member countries to work in this area. Exchange of people across such platforms will be beneficial.
- It has been proposed that the settlement between the networks could be made bilateral in local currencies and interoperability of domestic card systems may not require creation of any new infrastructure. Each country, however, would be required to upgrade their existing systems which will involve additional expenditure. It has been suggested that the cost could be substantially reduced by developing the multi-lateral mechanism to bring interoperability through NDB.
- Alternatively, it has also been recommended that a network of centralised hubs or a centralized hub be developed to link the national payment systems, applying unified business rules and technical standards, and distinguishing handling methods for domestic and cross-border transactions.

3. Infrastructure Financing

Infrastructure development is a critical pre-requisite for driving economic growth of an economy. However, inadequate availability of funds for financing infrastructure projects has constrained the growth of infrastructure in most of the BRICS countries. In view of this, 'Infrastructure Financing' was included as one of the areas of focus for BRICS cooperation under the Russian presidency. The group deliberated on the ways by which the BRICS economies can work together to support infrastructure development in the region and complimented the NDB for extending the first loan tranche of over US$ 800 million in early 2016 to Brazil, China, India and South Africa to support renewable energy projects.

Under the Indian presidency, the Financial Services Working Group carried forward the discussions and highlighted various suggestions to pursue the cause further:

- The group felt that better clarity is needed regarding NDB's exposure limit to private sector, which would be critical to determine private sector's role towards proposing infrastructure projects to the NDB and to decide the sectors for promotion.

- The NDB could have a private sector financing arm like the IFC of World Bank and minimise its operational cost by using the existing networks of five BRICS countries comprising well-established commercial banks branches and subsidiaries.
- NDB can work with the commercial banks in the five countries to extend funding support to the private sector. BRICS countries can co-invest and cooperate in infrastructure financing especially to support the private sector's involvement in that area.
- NDB can play an important role by offering various financial instruments to facilitate infra-financing in BRICS nations. The FSWG would like to work with the NDB to develop a list of such instruments for consideration by the NDB.
- There is a clear need for supporting an Infrastructure Project Development Facility in the BRICS nations. NDB can help enhance such structures that already exist or help support an independent unit. Bankability and viability studies are an important part of infrastructure financing and NDB can work towards forming a company to look after this task.

4. Sustainable Development

Sustainable Development, which has been a focus area in the overall working agenda of the Financial Services Working Group, remained an important part of discussions under the Indian presidency. The BRICS Business Council Financial Services Working Group agreed that there is a need for a more coordinated approach both at a national and international level to take forward the concept of '*Green Financing*'. It is imperative to create more incentives and enhance the attractiveness of green projects for the private sector. The group also concluded that the recommendations captured in the UNEP Inquiry Report, 2015 could be considered for promoting sustainable development in BRICS countries.

In this context, six specific areas have been highlighted for further deliberations and execution, including:

- **Funding of sustainable projects through New Development Bank:** The NDB could fix a specific percentage for funding sustainability projects aligned to achievement of Sustainable Development Goals (SDGs) involving all types of projects like clean energy, energy efficiency, water conservation, sanitation, climate change, etc.

- **Role of BRICS Commercial Banks for establishing Green Finance mechanism:** Commercial banks in each of the BRICS countries could be encouraged to develop green credit businesses by introducing green finance re-lending, subsidized green lending and guarantee and green ratings. The commercial banks could establish 'Green Finance Business Units' and support Green financial instruments based on collateralized or pledged carbon emission rights, pollutant emission rights and carbon usufruct rights and other environmental rights.

- **International Solar Alliance (ISA):** With the launch of the International Solar Alliance, the BRICS nations could look at dedicated funds that will channel finance into solar projects. In some of these projects/areas, the BRICS countries can discuss ways of working together with member countries of the International Solar Alliance under a collaborative framework under the BRICS initiative.

- **Enhancing Cooperation under UNFCCC:** Another area of cooperation and financing could be climate change mitigation and adaptation where collaborative projects amongst the BRICS countries could be identified. These could be further aligned to the INDC (Intended Nationally Determined Contribution) targets that each of the countries have committed.

- **Green Bonds:** The UNEP Inquiry recommendations suggest that other than the banks and financial institutions, a separate focus on unlocking the capital markets for Green Financing is critical. It is essential to see how private capital markets can be brought into the picture and the regulatory measures which will be required that will allow the capital market to embed in these kinds of projects. Since financing from banks and financial institutions (or public funding) is expected to be limited, development of the Green Bonds market in each of the BRICS countries should be looked at by the member countries.

- **De-risking Hedging Cost:** A mechanism could be developed among BRICS countries to involve institutional investors, so as to promote a fund that could help in de-risking the hedging cost. This could go a long way in addressing the financing gap that some of these projects face particularly in the clean energy area.

5. Financial Inclusion

The concept of financial inclusion has been recognized as one of the most powerful tools to ensure poverty reduction & equitable growth and has therefore been adopted as a top development priority by policy makers around the globe. It has been observed that despite recording healthy growth by BRICS countries, a sizeable proportion of population in these countries continue to remain outside the ambit of the formal financial system. This is despite the efforts made by the governments of the five BRICS nations to improve delivery of low-cost financial services to the poor people to encourage them to use formal sources of financial services.

Keeping the above scenario into consideration, the Indian chapter proposed to include 'Financial Inclusion' as one of the areas for cooperation amongst the BRICS nations. It has been agreed that BRICS nations should continue to make progress towards further strengthening their financial systems and discuss more innovative ideas to take the financial inclusion agenda forward, which would be critical for the overall economic development of the BRICS countries. BRICS nations largely share similar socio-economic conditions, and therefore could benefit immensely from sharing their respective experiences and knowledge on financial inclusion. This would also be instrumental towards attaining their respective financial inclusion agenda.

6. Start-up and New Project Financing & Entrepreneurship

Start-up and New Project financing is a new area that has been proposed by the Financial Services Working group under the Indian presidency with a view to accelerate entrepreneurship and business creation for large scale employment generation among the BRICS economies. Job creation has been a key issue confronted by the BRICS economies and it has been established globally that start-ups and SMEs have been the main source of new employment creation. Therefore, it is important to create a vibrant entrepreneurial ecosystem in the BRICS countries through providing a conducive business environment, devising catalytic government policies and regulatory framework.

However, the ecosystem for starting and running new ventures in BRICS countries presently has several gaps, with most of these economies ranking low on comparative ratings across parameters like entrepreneurship, innovation and ease of doing business. Moreover, banks and financial institutions in these countries have been found to be less forthcoming towards lending to first-generation entrepreneurs and to MSMEs. To resolve these issues and promote entrepreneurship in BRICS countries, the Financial Services Working Group has suggested some measures for consideration:

- Providing greater access to capital for start-ups and SMEs through recognizing and incentivizing early stage investor classes, removing regulatory hurdles that inhibit domestic fund raising and by developing and scaling up debt offerings.
- Making provisions for angel investors and VC Funds to get exits on their investments.
- Enhancing and scaling up Venture Incubation Programs.
- Enhancing ease of doing business by introducing policy measures like single window government approvals, permitting self-regulation and self-compliance for businesses and facilitating labour law reforms.
- Establishing expeditious procedures for closing of businesses which is critical for start-ups as early stage businesses have higher rate of failure.
- Encouraging educational institutions to support the entrepreneurial ecosystem with the help of measures like including more courses on entrepreneurship, establishing focused research partnership with corporates and inviting more number of visiting faculty from the corporate world.
- The NDB should consider support of SME development and entrepreneurship.

A dedicated **Start-Up Financing Taskforce** has been created to carry forward the work in this area.

7. New Development Bank Institute (NDBI)

The New Development Bank (NDB) has been formed with the prime objective of financing infrastructure and sustainable development in BRICS and other emerging economies. It is estimated that emerging economies require about US$ 1 trillion investment per year towards infrastructure development. As compared to this mammoth requirement, the current annual resource commitment of Multilateral Development Banks has been only about US$ 100 billion. Thus, there is a need that MDBs including the NDB make special efforts to reinvent themselves and introduce innovative instruments, identify priority areas and allocate funds judiciously. Besides, the New Development Bank also envisages serving as a knowledge sharing platform among the developing countries to promote sustainable development.

BBC-FSWG has taken note of the proposal of setting up of a New Development Bank Institute, which will serve as a think tank and a research / policy advisory body and would continue deliberations in this regard.

Annex 4: Summary Report of BRICS Business Council Working Group on Energy and Green Economy

Under the Chairmanship of India in 2016, the BRICS Business Council Working Group on Energy and Green Economy successfully carried forward the discussions and activities initiated by the Brazilian chapter in 2015, continued by Russia in 2016 and also discussed important new avenues of collaboration among the BRICS member countries.

The Energy and Green Economy Working Group Note represents a selection of opportunities that affect the energy and green economy sectors in the BRICS nations. The primary objective of the Working Group is to address the challenges of the energy trilemma relating to energy security of supply, energy social equity and environmental sustainability within the BRICS countries, to achieve the goal of secure and sustainable energy for all. The Scope of work which has been agreed upon for collaboration and cooperation amongst the BRICS Nations is categorised under two heads, namely **Energy** and **Green Economy**. The areas prioritised for action under Energy are Solar Energy (both Grid Connected and Decentralised), Wind Energy (Onshore and Offshore), Bio Energy (Waste to Energy, Biogas, Biofuel/Biodiesel and Biomass), Hydro Energy, Tidal Energy, Geothermal Energy, Energy Storage, Clean Coal (technologies for existing as well as new thermal power plants), Natural Gas, Oil and Nuclear Energy. The scope under green economy covers recycling, waste management (urban, agro and industrial wastes), energy efficiency (buildings, transportation, industry and energy services), Micro-grids, Bio-economy (use of forests and land resources efficiently), green transport (electric mobility, hybrids, bio-fuels including bio-CNG) and Smart Cities.

There is a need to develop a common understanding of **Green Economy** among the BRICS countries and drive towards a common view in promoting this green economy. The BRICS countries should look at developing a broad guideline, including definitions; approaches, recommendations on enabling policies and enabling environments for promoting the green economy within the developmental mandate of BRICS countries. The following areas require cooperation amongst the BRICS nations for a sound and sustainable Energy and Green Economy Scenario:

Trade Collaboration

- Negotiate multilateral and/or bilateral agreements to promote foreign direct investments among BRICS countries as well as to create joint ventures among their enterprises in BRICS countries or third countries in ventures related with the key strategic projects.
- Removal of trade barriers between BRICS nations Green Energy Sector
- Collaboration amongst members and joint representation at world forum on solar, wind and hydro products.
- BRICS cooperation is required for trade of Crude Oil, Oil Products and LNG especially with respect to storage, shipping etc.

- Cost competitiveness cooperation is also necessary for Engineering Standards Recognition and Engineering, Procurement, Construction and Maintenance, especially for oil and LNG.
- Exploring trade of Feedstock amongst the BRICS countries to increase manufacture of bio fuel and exploring possibility of trade of biofuel.
- The BRICS countries can share business viability models if available amongst them starting from biomass fuel chain procurement, biomass storage technology and finally conversion of biomass fuel to electricity technology. They could also share how these models are supported by state and central regulatory policy

Technology Collaboration

The promotion of inclusive growth and sustainable solutions can be achieved by thoroughly approaching cutting-edge technologies and fostering innovation in the energy field. By using clean energy sources and expanding their energy matrixes, the BRICS countries can avoid climate change at a great scale, since these countries have a huge potential to produce and consume energy.

- Encourage the cooperation among BRICS countries with specific experiences in energy and those pursuing them
- Implement means of using renewable and carbon-free technologies, aiming to reduce carbon emissions.
- Create a platform to facilitate high-level dialogue, exchange of scientific and technological knowledge, experience sharing and best practices discussions on critical issues concerning the energy sector and training of scientists and experts in the forefront energy production technologies
- Support partnerships and collaboration among industry and academic institutions of BRICS countries to make a valuable contribution to capacity building in energy sector
- Develop cooperation programs and mechanisms to structure the development of joint projects and research related with the energy sources mentioned in the scope of the Working group
- Develop innovative financing solutions to fund construction of new large-scale energy projects in BRICS countries
- Promote new energy sources, for example nuclear technologies, for water production to supply households and industry with pure water and avoid water scarcity
- Develop energy markets in each BRICS' region, to maximize the cost-effectiveness of power exchange and to provide sustainable economic growth within these regions
- Advanced level of Technology transfer and collaboration is needed with the BRICS nations especially for biofuels
- Create the conditions and accelerate the development as well as transfer of energy efficient and environmentally friendly technologies and equipment;
- Technical collaboration for undertaking research and development in developing low cost energy storage devices which could be economically sustainable and scalable;
- Technology collaboration for cost effective energy storage solutions for renewable energy

- Leverage Information Technology (IT) as a key enabler in the digital transformation of the BRICS Economies to achieve their energy and green economy objectives. For instance smart grids, smart cities, end-use Energy Management etc.

Research and Development

- Encourage research on practical implementation of energy efficiency initiatives in the BRICS countries, taking into account national interests, including through the BRICS Think-Tanks Council and Academic Forum
- Collaboration among industry and academic institutions of BRICS countries for grid connected solar power projects, off grid solar products, wind, hydro energy, biofuels, energy efficiency products, microgrids, energy storage and green transportation
- Promote sharing of best practices, information and data related to plant performance, equipment efficiency, on ground equipment performance etc.
- Joint investment in Research and development in new and advanced technologies such as solar coupled with storage or hybrid systems.
- Under Clean coal technologies, for existing thermal power plants, it is suggested to explore technology research and development for upgradation of legacy power plants, use of Gas grid to repower coal fired power plants, conversion into tri-generation power plants, coal to oil and coal to chemical conversion and joint venture opportunities amongst the BRICS nations
- Cooperation programs and mechanisms to develop joint projects

Skill Development

- As with the energy policy and regulatory landscapes, different countries have different approaches and successes and challenges with such approaches. This provides an opportunity to learn from the different approaches especially since these are areas that are crucial for transitioning to lower carbon technologies and the green economy. Development of a case studies compendium from the different workgroups can be done with regards to lessons learned for these areas.
- Create a platform to facilitate high-level dialogue, experience sharing and best practices discussions
- Training of scientists and experts in the forefront energy production technologies
- Periodic meetings of policy makers and nominees for skills training Institutes such as National Institute of Solar Energy help provide solar technical expertise and helps create skilled manpower.
- Setting up joint skill training activities and sharing of best practices and sharing of equipment performance through periodic interactions.
- Promote community based engagements for rural areas and train the local youths to operate and maintain the solar PV systems. These would be helpful in creating local employment.

Capital and Finance

- Establish a forum to provide general information and communication on investment opportunities and projects amongst BRICS countries.
- Identify specific projects to be prioritized and that need country buy-in and support; Encourage and support the establishment of a BRICS energy fund to promote joint research in strategic scientific projects

- **Green Financing**
    - There are opportunities for BRICS countries to access green funds that have been made available for green technologies. It is important to understand what these green funds and green financing opportunities are, their rules and eligibility criteria for possible access by projects in BRICS countries.
    - A Green Financing Framework may be developed where the lessons learned from successful applications to the Green Climate Fund may be used.
- **Credit Enhancement and Hedging Mechanism**
    - Cover 'Country Risk' through insurance, in similar conditions as those used by MIGA – World Bank.
    - Provide hedge for cambial risk, in case project funding is not in the same currency as the receivables.
    - Create available credit lines with more competitive costs than those existing in local markets.
- **New Development Bank**
    - Participate as a multilateral institution to structure financing through A / B Loans.
    - The NDB can work like Eximbank in the supply chain equipment and services in countries in the areas of interest of the BRICS member countries. Thus, the NDB should offer credit lines to stimulate the production of asset and services for export of BRICS member countries.
    - Establish a BRICS renewable energy fund within the NDB to provide support for the implementation of the energy projects by the BRICS country-members on the territory of BRICS countries and in third countries
    - Creation of provision for credit enhancement and offer loan on local currency (hedging to be taken up by BRICS bank on its balance-sheet).
- **Green Bonds (encourage the emission of green bonds for renewable energy projects)**
    - Establish a project portfolio
    - Strengthen local bond market
    - Adopt strategies for the public issuance of green bonds
    - Support the development of specific regulations
    - Select investments in strategic projects
    - Increase credit and support the adoption of tax incentives
    - Develop instruments to add assets and structure risks
    - Adapt banking risks for investments in renewable energy projects

- **Others**
    - Financing of solar equipments by manufacturers, provision of easy financing terms and conditions on these equipments or currency hedging provision.
    - Provision of special subsidized financing schemes for below the line rural customers that are not connected to the grid and are without electricity.
    - Removing barriers to capital flow between BRICS participants into decentralised solar value chain.

Development of MSMEs

- A framework should be developed to promote the involvement of SME's in the supply chain of the green economy/green technologies. The elements that could be part of such a framework to promote SME development in the Green Economy space in BRICS countries are[2]:

- **Finance and investment**
  The requirements and needs of SMEs for investment and finance and specific schemes such as micro- financing and e-finance should be considered. The cash flow requirements of SMEs and financing time frames (very short term help and long term accompanying one) need to be under stood and integrated into financing and investment schemes. Banks should also consider SMEs as key sources to detect successful approaches before scaling them up.
- **Resource efficiency and decoupling**
  The role that SMEs may play for resource efficiency in the value chain cannot be underestimated. Dialogue and collaborations need to include SMEs and consider how they can leverage growing market share by introducing their innovations in the value chain. Supporting structures, for example chambers of commerce, can be one way to allow SMEs to gain access and more actively participate in the debate on resource efficiency and innovation building.
- **Awareness**
  Given their local involvement and ties, SMEs are essential in implementing concrete solutions to local social innovations. Awareness programmes specifically tailored for SMEs need to be integrated into any public or private programmes and best practice examples from SME's recorded and shared across a wide spectrum of sectors.
- **Education and skills**
  When awareness has reached SMEs, they have an important role in education and skill building. SMEs have often close relationships with local education structures and thus can help build "sustainability" into education schemes.

[2] The element have been taken from International Chamber of Commerce's Green Economy Roadmap

- **Employment**

  Many new jobs are created by SMEs. They are crucial actors in the local economy and in overcoming poverty by offering employment and integration in their respective economies. Furthermore, SMEs can adapt to local demand and offer solutions quickly because of a better knowledge of employment conditions in their areas.
- **Integrated environmental, social and economic policy and decision-making**

  SMEs are of particular value in niche areas and their inclusion in green growth should be leveraged further.
- **Governance and partnerships**

  SMEs play an important role in value chains and touch on many cross-cutting areas in society. Partnerships between multinational enterprises and SMEs should be encouraged, especially by sectoral and global business associations, through greater promotion of the many successful existing cases.

Policy Planning

- Making the larger environmental policy framework of the BRICS Nations agile and aligned towards creation of a green economy and sustainable development.
- Sharing of national energy policy landscapes as it is essential to know how energy markets are regulated and governed. This will also help to determine what the enablers and barriers are.
- Develop transparent legal and regulatory frameworks and regulations to facilitate long-term planning and investment
- A Regulatory and Governance Framework for Green Economy opportunities for the Energy sector in BRICS countries should be prepared identifying policy and regulatory enabler. This document should include specific examples like India's experience with regulations for rooftop PV, South Africa's experience with the IPP renewable energy programme, etc.
- Development of carbon market
- Promote joint new large-scale energy projects in the countries outside BRICS
- Develop transparent legal and regulatory frameworks
- Adopting policies and developing framework that leads to faster integration of off-grid areas to the main grid
- Strengthen cooperation between public and private sector to stimulate investment in energy efficient technologies;
- Formation of a core group among the BRICS nations to drive the policy decisions of various governments for increasing the usage of energy storage for renewable energy projects;
- Creation of funding mechanism for setting up manufacturing facilities, providing incentives or develop subsidy mechanism to renewable energy generators for promoting energy storage;

Standards, Testing and Certifications

- Closer cooperation is required amongst regulatory authorities. The process of regulating the adherence to these standards and regulations should be recognized within the BRICS countries
- Exchange of best practices
- Development of standards for renewable energy products and equipment and testing and certification protocols and facilities

Localisation

- Promoting local involvement through requirement for a local/ domestic partner.
- Local or well-localized players to dominate the downstream side including project development, installation, and distribution.
- Parties to share best practices on localisation.

Centres of Excellence

- To formally recognise and promote knowledge centers in BRICS countries in order to facilitate knowledge transfer and sharing of best practice. Identification of knowledge centers in the BRICS countries in terms of technology (coal, nuclear, gas, renewables, etc.), the Green Economy, Governance, Environmental compliance, Social impact etc. should be done with a view to establishing different Centers of Excellence in the different BRICS countries. It could have specific examples like India's experience with social impacts in rural communities.

Specific Recommendations

- Establish a specialized BRICS renewable energy coordination mechanisms to provide special services to enterprises and to assist in the communication between governments and business
- Explore the possibilities to offer national treatment to energy projects and enterprises from BRICS countries so they may be treated like local companies
- Establish a BRICS renewable energy fund within the NDB to provide support for the implementation of the energy projects by the BRICS country-members on the territory of BRICS countries and in third countries
- Creation of a "BRICS alliance" for Cellulosic Ethanol and Bio-CNG like the International Solar Alliance can be a way forward in this direction (in consultation with the Agri Business Working Group).
- Tie up with other countries outside BRICS nation for acquiring the advanced technical knowhow in energy storage;
- Creation of funding mechanism for setting up manufacturing facilities, providing incentives or develop subsidy mechanism to renewable energy generators for promoting energy storage;
- BRICS countries can collaborate to develop a common Green Buildings rating system which may be adapted in all BRICS countries according to country specific requirements. Successful

examples like LEEDS rating system or the Indian system of GRIHA ratings may be considered.

- Promote and support projects, agreements and actions focused on the developing of power trade and exchange in multilateral markets located in the BRICS' regions:
    - Support Southern Africa regional power integration
    - Support South America regional power integration
    - Identify the key infrastructure projects related with the issue
    - Promote long term partnerships among enterprises, investors and authorities of the BRICS countries with the objectives to design, supply, fund, build and operate those projects
    - Disseminate the best practices related with the deployment of the projects as well the policies and bilateral or multilateral treaties established and related with their building and operation.
    - Promote and support new energy generating and infrastructure projects to develop the common energy market in each BRICS' region, to maximize the cost-effectiveness of power exchange and to provide sustainable economic growth within these regions
- In identifying microgrids as a key solution to providing low-carbon alternatives for people without access to electricity, it is evident that microgrids enable high penetration of renewables in the energy mix. Therefore microgrids are also an attractive alternative in contexts where people have access to a centralized electricity grid. In these cases the current grid may not be able to deliver the necessary level of service or has a high operating cost due to reliance on fossil fuels. The required technology for low-carbon microgrids exists and many customer/demand profiles are already economically attractive alternatives today but there are significant barriers to implementation. There is an opportunity to identify these barriers and work on business solutions as a collective given the need for these types of solutions in the BRICS countries
- National level Policy support Framework for Biofuels

Key takeaways (from Working Group Meeting on October 14, 2016, New Delhi)

1. Work around NDB to create a framework for accessing finance for energy projects and identify specific project opportunities for joint collaboration.
2. Cost competitiveness cooperation is also necessary for Engineering Standards Recognition and Engineering, Procurement, Construction and Maintenance
3. Experience sharing amongst BRICS Nations in terms of mobilising Energy for deprived sections of society and collaboration for Energy Social Equity in an institutionalised manner.
4. Establish a BRICS renewable energy fund within the NDB to provide support for the implementation of the energy projects by the BRICS country-members on the territory of BRICS countries
5. Focussed Discussion on Nuclear Energy

Actionable Points (from Working Group Meeting on October 14, 2016, New Delhi)

1. Setting up of a BRICS Energy Excellence Centre: It is proposed to be a combination of a think tank cum technology centre from BRICS countries supporting Governments and Businesses. The Working Group will set up a Committee to explore and take forward the idea of the Centre
2. Green Fund: Utilising funds for enhancing manufacturing capabilities, decentralised grids etc
3. Identification of Specific Projects to be made available to the BRICS countries for exploring joint collaboration for these projects.

Annex 5: Summary Report of BRICS Business Council Working Group on Infrastructure

Under the Chairmanship of India in 2016, the BRICS Business Council Infrastructure Working Group (BBC - IWG) successfully carried forward the discussions and activities initiated by the Russian chapter in 2015 and also discussed some new avenues to establish a cooperative framework for promoting infrastructure development and increasing the economic growth & competitiveness of the BRICS economies in the global arena

The group deliberated key areas of cooperation including setting up a 'Cooperative Framework', engagement with New Development Bank (NDB) and Export Credit Agencies, promoting & facilitating investments, creating a mechanism for sharing of knowledge/ technology for sustainable infrastructure development, cooperation on maritime matters, etc. Over the past few months, several ideas have been exchanged amongst the group members and some important recommendations have been made regarding each of these areas of engagement, which are summarised in the subsequent sections.

1. Setting-up a Cooperative Framework

Connectivity is an essential prerequisite for enhancing competitiveness of BRICS. Development of safe, balanced and dynamic transnational transportation and logistics systems is essential for development of the BRICS countries. A well-established cooperative framework among the BRICS countries would help in promoting co-operative infrastructure development and increasing the economic growth & competitiveness of the BRICS economies in the global arena.

The working group has suggested some of the measures for consideration:

- Strengthening coordination in the World Trade Organisation's, as well as in other multilateral forum where infrastructure and investment matters arise.
- Conducting regular meetings among BRICS high-level officials in multilateral and international organisations where infrastructure and investment matters arise.
- Identifying areas for possible development cooperation activities of BRICS that could support the development aspirations of developing countries.

2. Alternate source of funding including New Development Bank (NDB)

BRICS countries face huge annual infrastructure investment requirements and an equally huge gap in available financing. Any effort to narrow the gap would require a collaborative effort among all stakeholders, including the private and public sectors (including Multilateral Development Banks like NDB, Financial Institutions, Export Credit Agencies, etc.) both within and across countries. BRICS countries can increase their economic cooperation by greater engagement with NDB. It can make available additional resources by recycling the savings accumulated in emerging countries which are presently being locked up in Treasury bonds having much lower returns. NDB should carry out feasibility study for projects being shortlisted by BRICS countries, provisions of guarantee and creation of hedging mechanism to allow BRICS companies to work in all BRICS countries.

The Infrastructure Working Group has designed the basic proposals on development of interaction with NDB:

- It has been proposed a simplified procedure for project selection, including the possibility of providing financial means on the basis of project and/or corporate-wide principles, in order to reduce the timeframe of projects finalization and approval process may be additionally made to the NDB investment policy (prior to its ratification).
- Currency hedging and absorbing the risk of currency volatility
- Financing early stage feasibility and engineering studies for the development of infrastructure projects that will lead to regional development;
- Developing mechanisms to provide Equity Financing for Infrastructure projects;
- Have the role as or include a Guarantee Fund for sovereign risk to allow for greater use of Project Finance structures and access to wider range sources of finding (i.e. pension funds, commercial banks, etc.) for infrastructure development in the targeted regions of interest to the BRICS;
- Creating mechanisms to promote the integration between the NDB and the BRICS Business Council.
- Providing comfort to Domestic lenders through mechanisms to reduce their costs of borrowings
- Providing direct financing in the domestic currency
- Allowing domestic companies to use their credit enhancements to borrow moneys internationally
- Providing Interest Subsidy to Developers, as all the BRICS countries are facing issues of high interest rates.
- Financing Infrastructure projects with a time horizon of 25 to 30 years
- Supporting cross border infrastructure investments by providing standard set of bankable documents.

3. Promoting and Facilitating Investment

Promoting and facilitating investment was deliberated as one of the focused areas among the BRICS countries. Under the Indian presidency, the Infrastructure Working Group carried forward the discussions and highlighted various suggestions to pursue the cause further:

- Sharing and exchanging information and experiences in infrastructure and construction.
- Enhancing information exchange on infrastructure/investment policies and business opportunities through mechanisms including websites for trade/investment information sharing.

- Encouraging trade/investment promotion agencies to establish stronger relationships, and providing policy support for infrastructure investment missions amongst the BRICS Members.
- Expanding cooperation on infrastructure investment promotion platforms such as trade fairs and expositions to increase opportunities for BRICS enterprises to meet, communicate and cooperate with each other.
- Improving the transparency of the infrastructure investment environment in line with their respective laws and regulations.
- Enhancing communication and cooperation in the areas of standardisation, certification, inspection and quarantine.
- Enhancing communication and cooperation between agencies responsible for trade remedies.
- Considering the effect that a positive outcome of the work by Ministries of Finance and Central Banks on settlement in local currencies may have as a support to enhanced intra-BRICS trade.
- Encouraging relevant enterprises to participate in infrastructure development and construction in the BRICS countries, and having mutually beneficial cooperation with each other
- Analysing the prospects for joint bids by BRICS enterprises in international infrastructure and construction projects.

4. Creating a mechanism for sharing of knowledge/ technology for sustainable infrastructure development

Cross-border cooperation and the flow of knowledge is an essential condition for supporting large-scale innovation and research projects in the BRICS countries. As the infrastructure projects require advance technologies & skill-sets, cooperation in skill development for design, construction and operation of infrastructure facilities; establishment of training centres; exchange of experiences and practices with regard to efficient city transport systems/ freight movement systems, etc. would help in building sustainable infrastructure. The group deliberated on the ways by which the BRICS economies can work together to undertake innovation cooperation:

- Broaden cooperation in the field of educational programs, conducting joint training programmes to support human capital development, including short-term exchanges between technical experts, project managers, etc.
- Jointly conducting Research and Development (R&D) and studies on advanced technologies in infrastructure sectors of mutual interest which contribute to development of sustainable infrastructure facilities.
- Establishing project platforms to promote communication and cooperation in high technology areas.
- Encouraging the expansion of trade and investment in high value-added products related to infrastructure.
- Advancing dialogue and communications in emerging industries, and promoting trade and investment in industries that are technology-, knowledge-, or capital- intensive.
- Small Contracters Cooperation (SCC)

- Conducting information exchange on SCCs regulatory and supporting policies, as well as the experiences and practices in this area.
- Exploring possibilities of signing a BRICS SCCs Cooperation Agreement.
- Encouraging promotion agencies such as SCCs associations and development centres to establish contacts and hold joint activities including trade/investment expos, human resource training, consulting, seminars, etc.

5. Cooperation on Maritime Matters

As all BRICS members are Maritime members with sizable shipping activities, so the Infrastructure Working Group agreed to explore joint efforts that will assist in optimizing utilization of the available resources of BRICS members by way of individual companies or by establishing JV partnership firms.

In order to bolster maritime cooperation between the BRICS countries, group made the following recommendations:

- Creating a cooperative framework on all IMO related matters and regulatory aspects of international trade and maritime transport, eliminating obstacles and restrictions of international maritime services.
- Despite trade volumes being undisputedly highest intra-Asia upto 2014 – shipping businesses in terms of ship finance and ship owning have been disproportionately concentrated in EU & other western countries. The BRICS Infrastructure Working Group should aim to redress this lopsided market structure.
- The aim of this Infrastructure Working Group for the "Maritime Sector" should be to encourage national fleets of other BRICS nations and give them the status next best to their national fleet for employment under "Setting up a Cooperative Framework'.
- There could be better employment terms for other BRICS nationals and technology transfer especially in dredging and ship building. This could work especially in oil & gas exploration, ship repairs, ship breaking and dredging. This would increase the scope of niche small to mid-sized companies in oil & gas exploration, ship repairs, ship breaking and dredging.
- The New Development Bank (NDB) has vast scope in lending to maritime infrastructure especially that India lacks infrastructure needed for first and last mile connectivity.
- There is a need to set up a fund under the NDB dedicated to ship owning and related infrastructure.

6. Proposed Projects

Each country to identify one iconic product and all the BRICS countries to support and deliver the projects

India Specific Projects:

a) Deep Water Port in Sagar mala project
b) Integrated Maritime Complex

c) High Speed Rail Corridor

South Africa Specific Projects:

a) The Development of rig repair, ship repair and ship building facilities at the Port of Saldanha
b) SADC Regional Locomotive and Wagon Leasing Pool
c) Durban Dig-Out Port

Russia Specific Projects:

a) Moscow - Kazan High-Speed Rail Project (a pilot part of the Eurasian High-Speed Transport Corridor)

Brazil Specific Projects:

a) Projects listed in the Programa Crescer ("Programme Grow") in the area of transports, which will be granted in the concession model: Porto Alegre Airport; Salvador Airport; Florianopolis Airport; Fortaleza Airport; Santarém Fuel Terminals (STM 04 and 05); Wheat Terminal of Rio de Janeiro; Motorway (BR-364/365/GO/MG); Motorway (BR-101/116/290/386/RS); Motorway (EF-151 SP/MG/GO/TO); Motorway (EF-170 MT/PA); Motorway (EF-334/BA – FIOL);

b) Projects in the area of Logistic and Transportation of the Brazilian Official Guide on Investment Opportunities 2016, available at: http://www.apexbrasil.com.br/en/publications

Annex 6: Summary Report of BRICS Business Council Working Group on Agri-Business

Agriculture is benefiting from technological innovation and there is a growing recognition among the governments about agriculture being a leading engine of economic growth. The acknowledgement of the sector's role in development and growth lays a fresh impetus for fostering investments in agriculture which will lead to a rise in productivity and income generation. This is especially true for developing countries where large populations are still dependent on agriculture as their primary source of livelihood.

Agriculture is facing daunting challenges. Demand for food continues to accelerate, driven by growing populations, rising prosperity and ongoing urbanisation, particularly in economies such as Brazil, Russia, India and China. At the same time, food production is coming under pressure owing to limitations on resources, including land and water, technological fatigue, lack of access to adequate capital and environmental considerations.

Already, many emerging markets are demonstrating a strong commitment to tackling the challenges of food supply in their countries. While these countries' agricultural systems are diverse, their successes can provide valuable lessons for other countries poised to benefit from high-growth economies—and for developed markets too. The BRICS countries, as major agricultural powers that have immense potential to raise agricultural production, could play an important role in the future in the global agricultural market as major players.

Under the Chairmanship of India in 2016, the BRICS Business Council Agribusiness Working Group successfully carried forward the discussions initiated by the Russian chapter in 2015 and also discussed some new avenues of partnership among the BRICS member countries. The group deliberated upon key areas of cooperation. Over the past few months, several ideas have been exchanged amongst the group members and some important suggestions have been made regarding each of these areas of engagement, which are summarised in the subsequent sections.

1. Skill Development in Agriculture, Livestock, Fisheries & Allied Activities

Globalization, knowledge and competition have intensified the need for a highly skilled workforce as it enables the nations to accelerate their growth rate towards a higher growth trajectory. As India moves towards the knowledge economy, it becomes increasingly important to focus on advancement of the skills and these skills have to be relevant to the emerging economic environment. An efficient skill development is a critical pre-requisite for transforming its rural economy. However, inadequate skilling capabilities has constrained the growth of agriculture sector.

In view of this, 'Skill development in Agriculture Livestock, Fisheries & Allied Activities' was included as one of the areas of focus for BRICS cooperation under the Indian presidency. The group deliberated on the ways by which the BRICS economies can work together to support various skilling initiative in agriculture sector.

Under the Indian presidency, the Agribusiness working group deliberated upon various development initiatives which BRICS nations are undergoing. It was suggested that experiences from other countries can be utilized to have a holistic solution to boost economic agricultural growth through knowledge management programs. ***The Indian chapter proposed to organize field visits for International delegates to agriculture institutions to showcase the latest innovations in Indian agriculture. It was also suggested that inbound and outbound certified training programmes could be organised in the agriculture sector, inviting various agri experts from BRICS nations.***

The Agribusiness Working Group highlighted that BRICS can serve as a major platform for mutual cooperation in the agriculture particularly in areas such as mechanization, increasing crop productivity, infrastructure, logistics and skill development. The grouping can also work upon strengthening technological and industrial cooperation on livestock, fisheries to ensure national food security.

2. Sharing best agriculture practices

Exchange of best practices in agriculture has been a focus area in the overall working agenda of the Agribusiness Working Group and remained an important part of discussions under the Indian presidency. The BRICS Business Council Agribusiness Working Group agreed that there is a need for a coordinated approach to take forward the concept of exchange of best practices in agriculture.

The group stressed upon creating a business dialogue aimed at developing mechanisms of cooperation and exchange of best practices of different BRICS countries. BRICS nations can support each other by sharing best practices that have led to improvement in production and crop productivity. E.g. Brazil is the world leader in sugarcane production. The Brazilian sugarcane industry employs modern agronomic management practices to enhance productivity and protect the environment. Key features of Brazil's sustainable approach to cultivation and processing include: low soil erosion, minimum water use, reduced use of agrochemicals, and environmental protection. Similarly, China has done very well in hybrid rice production.

The working group observed that prevailing best practices in different sectors like, warehousing, water conservation should also be focused upon. Exchange of knowledge on water conservation is also of critical importance.

Brazil could assist India with regard to ethanol production and blending policy, while also suggesting ways to improve sugarcane seed varieties. As part of adopting sustainable agricultural practices, India can discuss water saving technologies and drip and sprinkler systems for sugarcane. In turn, India can offer technologies on boilers and cogeneration as well as help BRICS countries on crop area estimation through satellites. Such experiences can be shared among the BRICS nations which will help in attaining the goal of self-sufficiency.

Under the Indian presidency it is proposed to create a dedicated online BRICS Agri portal, which can serve as a platform for sharing and exchanging information on various aspects of innovations, technologies etc. in agriculture among the BRICS economies.

3. Development of a strategy for ensuring food security

Fluctuation of global food prices, coupled with the global financial crisis, is threatening global food security. As a result, the number of people suffering from hunger and malnutrition grows bigger every year and progress towards the achievement of the Sustainable Development Goals may be impeded. The group was of the consensus that this challenge should be addressed without delay in a comprehensive manner through definite action by all countries. BRICS countries are an important grouping to deal with the global food crisis, promote global economic recovery and play an important role in global initiatives on food security.

Food security, which has been a focus area in the overall working agenda of the Agribusiness Working Group, remained an important part of discussions under the Indian presidency. It was discussed that the BRICS countries should exchange concepts and technologies to enhance their agricultural productivity to ensure food security at the same time maintaining ecological safety. Ensuring food security is a key public policy objective in all the BRICS countries.

The Agribusiness working group leaders professed that inclusive agricultural policies, if pioneered by the BRICS, could have a remarkable impact on sustainable agricultural production and global food security, while at the same time improving nutrition and livelihoods of the people that produce our food.

Countries can exchange experiences in public policies and programmes for food and nutritional security. Brazil can share the implications of Zero Hunger project, which mobilized various public and private efforts around a common goal of overcoming food and nutritional insecurity that affects thousands of Brazilians. Based on the pillars of conditional cash transfer, school meals and strengthening family agriculture, Fome Zero has been able to reduce poverty, provide food security and reduce hunger. South Africa is also working on a project for creating seed banks by conserving and banking the different varieties of seeds.

4. Innovation and technology frontiers

The need for technological development in agriculture to achieve "sustainable intensification" is on the agenda of all the BRICS countries. Innovation is also at the centre of the Agribusiness working Group strategy. While the potential of technological development for sustainability of agriculture is acknowledged, there is a global trend towards increased awareness about environmental safety. The Agribusiness working group is involved in anticipation and technological foresight on new technologies relevant for agriculture, notably in the area of mechanization, soil improvement, crop breeding and other technologies.

Farm mechanization if undertaken in a sustainable and inclusive way, it can be a game changer for agricultural systems, helping remove the drudgery associated with farm work, overcoming time and labour bottlenecks, and reducing the environmental footprint of agriculture. The working group stressed upon the use of sustainable farm mechanization which contributes to environmental sustainability by increasing energy efficiency, reducing carbon emissions, through applications that avoid soil degradation by means of conservation and low tillage and ensures measures to conserve soil fertility.

The demand for sustainable mechanization and services will continue to rise with a growing population's demand for food and feed. A new partnership is required that aims to promote wider use of sustainable agricultural mechanization in BRICS countries. Under the Indian presidency it is proposed that the BRICS nations can work together to manage and disseminate knowledge on sustainable approaches to agricultural mechanization. They can also jointly develop technical programmes to support innovation in mechanization and facilitate the implementation of sustainable mechanization initiatives at the field level. ***Indian chapter proposes to organize live demonstration of innovative farm machinery/ equipments with institutional mechanism with the agriculture universities in the country.***

The members suggested that soil is also one of the most important natural resources. Its productivity depends on good agricultural practices of sustainable agriculture that allow to establish a balance between highly profitable production of agricultural products and natural resources maintenance. The innovations in this area is also very much critical for maintenance and enhancement of soil fertility, as well as for production of rich, high-quality and environmentally friendly crops. The use of soil conditioners is being promoted for enhancing soil nutrition. Regular application of soil conditioners increases humus levels in the soil and reduces dosages of mineral fertilizers application.

Agricultural successes in high-growth emerging markets are often based on a widespread adoption of plant breeding technologies, including hybridisation. Similarly, innovations in IT application in agriculture, vaccination in livestock, breeding systems, feed formulation, cold chain and GIS & GPS based systems in agriculture should also be explored and possible exchange of experiences and learnings on the same from the BRICS nations could be encouraged.

5. Climate change and sustainable development in agriculture

Negative impact of climate change in agriculture and food security is a global problem of enormous economic and environmental significance. There is a need to acknowledge these adverse impacts by developing and adapting technologies that enhance resilience of agricultural systems while increasing sustainable and environmentally friendly agricultural production. The Agribusiness Working group focussed on acclimatizing measures to overcome the issues related to climate change which in turn will lead to food security.

BRICS countries, contribute about 40 per cent to global Green House gas emissions. At the present rate of emissions, the earth will become warmer, causing devastation in terms of rising sea levels, floods, famines, submergence of islands and coastal areas and much more. International observers should recognize and reinforce the environmental progress BRICS countries have made.

Brazil has a National Forest Program established in 2000. The program aims at promoting the sustainable development of forests by expanding to 50 million ha the area covered by National forests in the Legal Amazon by 2010. Some of the mitigation measures identified in the livestock sector in Brazil are creation of agro-pastoral or agro-sylvo-pastoral systems where farmland is integrated with land for grazing of livestock and/or with forests. Other mitigation measures which Brazil is following is the increased use of sugar cane as supplementary diet when the fodder availability from pastures is low and an improved diet associated with an animal genetic improvement, both leading to reduced methane emissions.

The group deliberated that in the last decade, several of the BRICS countries have developed significant environmental expertise — notably in controlling deforestation and building renewable energy. ***The BRICS nations could help each other by extending their innovations in reducing deforestation and expanding renewable energy across the developing world, bringing real environmental improvements, including in reducing climate emissions***

It was proposed that BRICS countries can explore the possibility of establishing a collaborative platform to share best environmental practices and facilitate the exchange of environmentally sound technologies and know-how with participation of public and private stakeholders.

6. Ease of doing business within the BRICS countries

The BRICS nations should aim at complementing and strengthening existing bilateral and multilateral relations between Member countries which will contribute in increasing the economic growth and competitiveness of the BRICS economies in the global arena. Hence, improving bilateral / multilateral trade agreements will promote foreign investments among BRICS countries.

Sanitary and Phyto-Sanitary (SPS) measures adversely affect the cost-competitiveness of traded products and hurt intra-regional trade flows. There is a need to strengthen cooperation in this area. **The working group should strategize G2G agreements within the Governments of the BRICS countries so that technicalities of one country be utilized by other countries also.**

Annex 7: Summary Report of BRICS Business Council Working Group on Deregulation

Regulatory reforms are an important part of the economic policy framework of countries as it remains one of the most important channels to further industrial growth and development. Various studies have established the significance of regulatory reforms and have shown that countries which have been proactive towards liberalizing entry and reducing market barriers have successfully augmented trade and investment levels. Studies also establish a clear link between deregulation and enhancement of productivity and competition.

Easing regulations to spur trade and investment has been an important part of the policy formulation and action for the BRICS countries. This has enabled the BRICS nations to enhance their global engagement. However, it remains imperative that the five countries consolidate their agenda with regard to addressing administrative issues and work together to further improve intra-BRICS trade and investment linkages. The trade and investments between the BRICS bloc has a huge potential to grow and we should jointly plan for multi-fold increase in our current engagement level.

During the discussions amongst members of the BRICS Business Council Working Group on Deregulation under Russian Presidency, issues with regard to technical barriers to trade, customs administration, visa barriers etc. were brought to the fore. In addition to these issues, some interesting recommendations were also put on table for discussion by the national chapters.

Under India's Presidency in 2016, the Working Group carried forward the discussions initiated last year. Members of the Working Group re-iterated that there is an imperative need to promote facilitation of business visas and the BRICS nations should consider introduction of a BRICS Business Travel Card. It was further suggested that the steps being taken in the respective countries for enhancing the ease of doing business and for promoting trade facilitation should be widely publicised and shared with memebrs of the business community. Members also further examined suggestions such as putting in place a BRICS Trade Facilitation Network and a BRICS Market Access Strategies Dialogue. The following paragraphs provide more details on these subjects.

(i) Visa/Travel Card Facilitation: Introduction of a BRICS Business Travel Card has been one of the key agenda points pursued by the BRICS Business Council members. The same has been proposed during the earlier discussions as well. The availability of simpler and quicker entry procedures will be a boon for the business community and will be a big step forward for intra-BRICS trade and investment facilitation.

The Working Group members suggest that that a multi-year multi-entry visa should be considered by the BRICS nations for bona-fide business people as business mobility between the countries remains a key challenge. In fact, South Africa has already announced a 10 year visa for nationals of the BRICS countries, who apply for visas to visit South Africa for short-term business purposes. This is a very encouraging step and the Governments of other countries should also be requested to follow this.

BRICS countries could look at arranging a new kind of visa for bona-fide businessmen. Quotas on BRICS visas should be granted to qualified companies/organizations. In the initial stage, 500 reputed companies/organizations of each BRICS country can receive 1000 BRICS visas for work and business trips and travel freely among BRICS countries. In the second stage, more companies/organizations can be qualified and added to the list.

Further, Brazil Chapter of the BRICS Business Council Working Group on Deregulation along with the Sao Paulo University has initiated a study to gauge the feasibility and benefits of such a visa facilitation framework and the interim findings of this study were shared at the BRICS Business Council meeting at New Delhi. The final findings of this study will be presented in due course upon completion.

(ii) Ease of Doing Business / Trade Facilitation Measures: BRICS nations remain committed to improve the business climate in their respective countries. For instance, enhancing ease of doing business has been one of the key priorities for the Indian government. Over the course of last two years, several path breaking policy and procedural reform measures have been introduced that have improved the business environment. Likewise, Brazil, China, Russia and South Africa also have a structured agenda in place to make the business climate more conducive in their respective countries. The Russia Chapter has shared a detailed plan with the Deregulation Working Group members on how are the authorities in Russia are working to achieve the goal to feature in the top-20 ease of doing business ranking by 2018.

The Working Group members also discussed how cross-sharing of experience in each country on steps taken to enhance ease of doing business can help all nations. It was also suggested that the governments should widely publicise the steps being undertaken to further regulatory reforms and promote trade facilitation amongst members of the BRICS business fraternity. The BRICS Information and Exchanging Platform maintained by the Fudan University and the National Chapter websites can be used as a channel / medium to disseminate such information. This will make it easier for all members to remain abreast of initiatives being announced.

(iii) Survey: Administrative Barriers in Intra-BRICS Trade & Investment

Each of the National Chapters undertook a survey amongst their domestic companies to understand the administrative barriers being faced in intra-BRICS trade and investment. The respondents reported barriers they face with respect to technical regulations, customs administration, financial & corporate regulations, visas & migration and standards in e-commerce. The companies also made recommendations for overcoming these administrative barriers and indicated the leading authority that can initiate action.

The survey responses have been compiled by the Deregulation Working Group in the form of a report. It is further proposed that these administrative issues may be discussed with the Contact Group on Economic and Trade Issues (CGETI). Further, it is felt that these inputs may also be useful for discussion at the bilateral level amongst governments for advice on resolution. Members of the Deregulation Working Group feel that resolution of these issues will help facilitate trade and investment flows amongst BRICS nations.

(iv) It is further suggested that we should examine establishing a formal channel of dialogue between the Contact Group on Economic and Trade Issues (CGETI) and Deregulation Working Group/BRICS Business Council to bring greater synergy in our work with that of the government

(v) Issues for further consultation and discussions

With regard to the suggestions on setting up a BRICS Trade Facilitation Network and BRICS Market Access Strategies Dialogue, members are of the view that these areas are important for the countries to work on together.

Now that the Protocol of Amendment inserting the TFA into Annex 1A of the WTO Agreement has been adopted by the General Council; the countries will have to pursue this seriously. It is important for both the private and public sector companies to know how and what progress is being made on trade facilitation and an update on this will be a useful reference.

Also, at present non-tariff trade barriers (NTBs) pose a graver challenge than the traditional tariff measures as they are often less transparent and harder to identify and it is also more difficult to assess their legality. While some of the countries already have certain mechanisms in place to capture qualitative and quantitative information on trade barriers, it was proposed to consider having exchange of information and best practices on such institutional and policy mechanisms. This will allow for a better understanding of how the systems function and the countries can benefit from cross learning and sharing of experience.

While agreeing on the importance of these two areas, members are of the view that the group should have further consultation on these subjects and seek guidance from the authorities in their respective countries. The members would continue with their discussions on these subjects.

Further, the India Chapter shared the Draft Framework Mechanism for Non-Tariff Measure (NTM) Resolution amongst the BRICS being discussed at the CGETI. The BRICS Mechanism on Non-Tariff Measure (NTM) Resolution seeks to be an informal and non-legal mechanism for exploring practical trade solutions to NTMs among BRICS countries.

The working group members felt that this framework would also require further consultation with their respective authorities. While it was agreed in general that it could be a good mechanism, it was suggested that more deliberation on its effectiveness and result orientation will be needed.

Annex 8: List of Projects Developed and Executed in BRICS

SN	COMPANY NAME	PROJECT NAME	PROJECT LOCATION	CONSTRACT AMOUNT (10 THOUSAND $)	DATE OF CONTRACT	COMPLETION TIME	BRIEF DESCRIPTION
1	CREC	Moscow to Kazan HSR	Russia	13349	2015.06.18	2016.11.30	Project Survey & Engineering, Land-surveying & Design, and Design Document for Construction
2	CREC	DMRC CC24	India	18352	11-2012	22-01-2016, 70.54% completed	Design and construction of tunnel by shield TBM, Tunnels, Stations and Ramp by cut & cover method .
3	CREC	DMRC CC20	India	6855	02-2013	23-07-2015, 81.65% completed	The length of the contract is 2092m,including one station and two sections, tunnel by shield TBM.
4	CREC	MM1 Taloja warehouse and workshop	India	2380	11-2013	25-03-2015, 98% completed	Mumbai Taloja rail yard and maintenance shop, including building works for locomotive workshop, maintenance room, administrative office, control center, staff canteen, central warehouse and electrical works.
5	CREC	DMRC/MU/LINE2/AC/01	India	10557	16-06-2016 received letter of acceptance		Part Design and construction of viaduct and 9 elevated stations from chainage (-) 414.430 m to 8283.501. J. Kumar-CRTG participate in Joint Venture to submit the bid and the cntract sum is INR 6,408,680,329, equivalent to CNY 696,747,155 (1:9.918). Participation ratio in the JV CRTG takes 26%.

6	CREC	DMRC/MU/LINE2/AC/02	India	11598	17-06-2016 received letter of acceptance		Part Design and construction of viaduct and 9 elevated stations from chainage 8283.501 to 18181.343. J. Kumar-CRTG participate in Joint Venture to submit the bid and the cntract sum is INR7,040,643,679, equivalent to CNY 765,453,759 (1:9.918). Participation ratio in the JV CRTG takes 26%.
7	CREC	MM3-CBS-UGC 05	India	45872	05-07-2016 received letter of acceptance		Design and construction of underground sections including four underground stations. The total length is 3620.5m, time for completion is 1638days. J. Kumar-CRTG participate in Joint Venture to submit the bid and the cntract sum is INR28,177,259,472, equivalent to CNY3,031,181,767 (1:9.918). Participation ratio in the JV CRTG takes 25%.
8	CREC	MM3-CBS-UGC 06	India	34496	05-07-2016 received letter of acceptance		Design and construction of underground sections The total length is 3500m, inclding 3 sections and 3 stations. time for completion is 1638days. J. Kumar-CRTG participate in Joint Venture to submit the bid and the cntract sum is INR21,189,965,063, equivalent to CNY2,279,520,328 (1:9.918). Participation ratio in the JV CRTG takes 25%.
9	CREC	DMRC CC27	India	303	27-01-2015		Equipment sale and trial tunneling operation

10	CREC	Eastern Dedicated Freight Corridor -Phase 3 Project	India	63000			It is the design and build project including 2 contract packages. The contract package 301 is to design and construct the single line dedicated freight corridor between the sahnewal station and the pilkhani station, which is about 175 km.The main work include subgrade/ballast forming,railway track, bridge,structures,building, patio, testing and intergration of railway system based on construction.The contract package 302 is to diesgn ans construct the double line dedicated freight corridor between the Dadri station and the Khurja station, which is about 46 km.The main work include subgrade/ballast forming,railway track, bridge,structures,building, patio, testing and intergration of railway system based on construction.
11	CREC	Bihar six-lane extradosed bridge crossing the Ganges River	India	50000			The project is locted in the Bihar which is the extradosed bridge crossing the Ganges River.The length of bridge is 22.7 km and the main bridge is 9.76 km. It's the two-way six-lane highway bridge.
12	CRRC Co. Ltd	High Speed Railwayline Project Moscow-Kazan	Russia	To be decided	Negotiation	To be decided	The High Speed Railway line Project Moscow-Kazan is a inter-government project. Total length of the railway line is 770 km, design speed is over 300 km/h. CRRC, as a member of the working group of enterprises under the leadership of China Railway, is keeping track with the project.

13	CRRC Co. Ltd	Supply of EMU to State Government of Rio de Janeiro	Brazil	60000	Year of 2009	Year of 2016	From year 2009, CRRC Changchun Company has supplied 110 EMUs ,in composition of 4 cars per train, to the state government of Rio de Janeiro, as part of the improvement plan of the state urban transportation
14	CRRC Co. Ltd	Supply of metro cars to MetroRio	Brazil	28000	Year of 2009	Year of 2016	From year 2009, CRRC Changchun Company has supplied 34 train sets of metro cars to MetroRio, in composition of 6 cars per train,serving lA line and the newly opened Olympic line 4
15	CRRC Co. Ltd	232 45D Diesel Locomotive SA	South Africa	92000	17 Mar,2014	Year of 2019	
16	CRRC Co. Ltd	95 Class 20E Electric Locomotives	South Africa	40000	2012.10	2015.6	
17	CRRC Co. Ltd	100 Class 21E Electric Locomotives	South Africa	41000	2014.3	2015.11	
18	CRRC Co. Ltd	359 Class 22E Electric Locomotives	South Africa	169000	2014.3	Predicted in 2019	
19	CRRC Co. Ltd	Mumbai Metro Line 1	INDIA	11700	2008	2014	CRRC Nanjing Puzhen Co.,Ltd signed contract with Reliance for supplying 60 metro cars to Mumbai Line 1 in 2008.
20	CRRC Co. Ltd	Flat Wagon with 6-Axle	INDIA	157	2009	2010	CRRC Qiqihar Rolling Stock Co.,Ltd. signed contract with ESSAR for supplying 20 flat wagon with 6-Axle in 2009.
21	CRRC Co. Ltd	Shunting Locomotive	INDIA	456	2009	2012	CRRC Dalian Co.,Ltd. signed contract with Electrosteel Steels for supplying 5 shunting locomotives in 2009.
22	CRRC Co. Ltd	Gurgaon Metro	INDIA	4700	2013	2014	CRRC Zhuzhou Locomotive Co.,Ltd. signed contract with Siemens for supplying 36 metro cars to Gurgaon in 2013.

23	CRRC Co. Ltd	New Mumbai Metro	INDIA	4900	2014	2016	CRRC Zhuzhou Locomotive Co.,Ltd. signed contract with Mumbai Metro for supplying 24 metro cars to New Mumbai in 2014.
24	CRRC Co. Ltd	Calcutta Metro	INDIA	14000	2015	Appr.2018	CRRC Dalian Co.,Ltd. signed contract with Indian Railways for supplying 112 metro cars to Calcutta in 2015.
25	CRRC Co. Ltd	Noida Metro	INDIA	11000	2016	Appr.2018	CRRC Corporation Limited signed contract with Delhi Metro for supplying 76 metro cars to Noida in 2016.
26	CRRC Co. Ltd	Generator and Traction Motor for Diesel Locomotive	INDIA	4150	2008-2016	2008-2016	CRRC Yongji Electric Co.,Ltd. supplied Indian Railways with 60 Generator and 1131 Tractor Motor for Diesel Locomotive.