global POLICY

GP-ORF Series

A DECADE OF BRICS: Indian Perspectives for the Future

Editor: Samir Saran

Durham University

WILEY-BLACKWELL

A DECADE OF BRICS:

Indian Perspectives for the Future

Editor: Samir Saran

A Decade of BRICS: Indian Perspectives for the Future

ISBN: 978-81-935340-5-2

Designer:
Simi Jaison Designs

Contents

EDITOR'S NOTE

Samir Saran
Vice President, ORF

The formation of BRICS was an unprecedented and unlikely event in history. Originally conceived as a handy acronym describing the emerging economies of the world, the economic term came into being as a political entity in 2006, on the sidelines of the United Nations General Assembly. The foreign ministers of Brazil, Russia, India, and China met during the conference and agreed to bring their respective heads of state together for annual summits to discuss shared political and economic interests. The inaugural summit meeting of the grouping, held in Yekaterinburg on June 16, 2009 was characterised by productive dialogue and a strengthening of relations. Subsequent meetings inspired a note-worthy addition to the coalition in 2011, as South Africa was invited to join, bringing the BRICS grouping to its full standing.

Observers of the geo-political world order have long espoused the refrain that BRICS is characterised by three I's – Ideology, Issues, and Institutions. Yet, the group's inception did not necessarily come about as result of common ideology – each nation had varying motivations dictating their decision to enter into the grouping. Russia, rising from the ashes of the Soviet Union, viewed the possible alliance as a mechanism to bring change to the global governance architecture dominated by the US and its allies. China deemed the formation of the coalition a key measure in furthering its economic and political ambitions. Brazil saw BRICS as a vehicle through which it could transform itself from a regional power to a global power. South Africa, moving on from the ignominy associated with apartheid, needed the grouping to legitimise its standing in the world as the tallest leader in Africa. India saw BRICS as a ladder that would allow it to make the jump from the geo-economic assembly line to the high table of global management.

Despite the divergent rationales behind each member's motivation for joining the alliance, there remained some commonalities. The embedded power structures within the Western hemisphere were a key driver of aggregation for BRICS. Each member of the coalition believed that the existing global governance institutions did not allow them the influence due to them. Yet, none of the countries were capable of asking for significant change by themselves. They came to the realisation they needed an entente that would force a more inclusive governance architecture. These were the foundational drivers that led to the creation of this group. Moreover, even as these five countries came together, there were two ideals around which BRICS would organise their cooperation. First, each nation's sovereignty would be paramount within the power structures of the world. Second, each state would seek greater democracy in the international decision-making process, regardless of domestic regimes.

TO SURVIVE, BRICS MUST SHIFT FOCUS TOWARDS INSTITUTIONS AND ISSUES.

As we approach the first decade of BRICS, the ideological incoherence among its members is apparent, as each nation continues to pursue its own agenda. Russia has capitalised on the malaise that plagued Europe and the United States after the 2009 financial crisis, positioning itself as the most important political player in the Middle East and perhaps even in Europe. Brazil and South Africa have succumbed once again to internal strife, as economic woes and systemic corruption force them to turn their focus inward. The divergent ideologies of the member states are perhaps most evident in the current border standoff between India and China as the latter's ambitions to dominate Asia becomes apparent. The proposed China-Pakistan Economic Corridor (CPEC) provides further indications of China's bid to ride roughshod over India's sovereign concerns.

Given the contemporary reality, it seems that BRICS nations will be unable to agree on a common political ideology. Therefore, in order for the alliance to survive, the focus must be shifted to the remaining two I's – Institutions and Issues. To manage the paradox of geo-political tensions and mutually beneficial prospects, a greater focus must be placed on cooperating on key issues important to each nation and the continued institutionalisation of the grouping. The creation of affiliated organisations and bodies such as the New Development Bank and a convergence on matters significant to all five member nations will allow members to pursue sovereign interests while still permitting for the continued existence of the BRICS vehicle. This volume, featuring commentary from pre-eminent scholars and emerging next generation researchers, attempts to put forward measures that can separate and insulate the group from the vagaries of international discord.

The first chapter of the volume provides an overarching framework by examining the history of global governance structures which have long been dominated by developed nations from powerful geographies. In *BRICS Role in Global Governance Processes*, H.H.S. Viswanathan and Shubh Soni discuss the events that have led to the current state of affairs and the opportunities and challenges that can be derived from it. Viswanathan and Soni propose key areas that the BRICS grouping can focus on to better position themselves in the global framework, including a reformation of global taxation norms and an expansion of the mandate of the New Development Bank.

In the next chapter of the volume, Samir Saran and Aparajit Pandey attempt to address the gap in institutional cooperation among alliance members by putting forth the argument for the creation of a BRICS-centric research institution tied to the New Development Bank. *The Case for the New Development Bank Institute* illustrates how the new research organisation could provide institutional support for the New Development Bank. Saran and Pandey go on to propose avenues through which the institute could help BRICS develop intellectual heft in an increasingly data-driven world by focusing on forward-thinking research streams such as the creation of a BRICS-centric digital free trade zone and the formation of a BRICS Energy alliance.

The theme of a BRICS Energy alliance is further elaborated upon in *Rebuilding BRICS through Energy*. In this chapter, Aparajit Pandey maps the energy profiles of each member nation and puts forth key areas where coordination can be mutually beneficial for all five member states, including the establishment of alternative oil benchmarks and the formation of a BRICS Energy Policy Institute.

While issues pertaining to international cooperation, open markets, and trade often dominate BRICS discussions, the development needs of the member nations must also be addressed. In *Scripting a New Development Paradigm*, Pulin B. Nayak looks at BRICS through a developmental prism, tracing the growth trajectory of all five member states. Nayak posits that the traditional development pathways espoused by Western scholars are outdated when applied to BRICS, and illustrates the need for new theories from academics and scholars indigenous to the BRICS countries.

The volume moves from theory to implementation as Vikrom Mathur looks at the current state of affairs with regards to BRICS and their achievement of the Sustainable Development Goals (SDG). *BRICS and SDG’s: Prospects of Mini-lateral Action on a Multilateral Agenda* suggests areas of cooperation for the grouping, including the restructuring of global systems to facilitate trade and development finance for emerging economies, and a strengthening of the existing SDG framework.

The volume continues on the theme of development by focusing on a crucial topic that concerns all nations – health. In *Common Health Challenges and Prospects for Cooperation in BRICS,* T.C. James outlines how the BRICS nations have historically dealt with health challenges under the two global development frameworks – the Millennium Development Goals (MDG) and its successor, the Sustainable Development Goals. James summarises each country’s unique healthcare model before demonstrating the immense scope for collaboration amongst BRICS countries in healthcare-related fields such as pharmaceuticals and research.

Rising urbanisation trends and climate change effects have coalesced into developmental pressure points for cities within BRICS. Rumi Aijaz attempts to address these issues by proposing policymaking measures aimed at creating smart cities across member nations in *BRICS Vision for Smart Cities*. Suggestions include the formation of innovation hubs, facilitating citizen engagement, and creating international BRICS friendship parks.

The next area of discussion addresses the issue of gender, a topic that is often marginalised in global governance conversations. Urvashi Aneja and Vidisha Mishra help bring to light the institutional gender inequality that is endemic within the BRICS institutional framework, highlighting the issues of gendered language and lack of female leadership within the organisation. *Gendering the BRICS Agenda* goes on to suggest measures that can help catalyse female involvement across all ranges of BRICS activities and dimensions of collaboration.

While development is a vital matter of interest for BRICS, discussion on any world grouping is incomplete without due deliberation on issues of global security, both conventional and new. In *The BRICS Security Agenda: Challenges Galore,* Harsh Pant discusses the origins of BRICS and the commonalities that exist amongst the five member nations on security matters. Pant also highlights the security-related issues on which member states have differing attitudes, and calls for coordination on major international issues, lest political divergence break the coalition.

Having contemplated traditional security challenges, the volume shifts to the question of cyber security issues in an increasingly interconnected world. In *China's Cyber Sovereignty Vision – Can BRICS Concur?,* Madhulika Srikumar depicts the current state of global cyber norms and describes the cyber governance model championed by China. Srikumar goes on to explore the applicability of the Chinese model for the BRICS grouping, and proposes potential avenues of dialogue pertaining to cyber norms amongst alliance members.

The fortification of the BRICS alliance is incumbent upon collaboration across the areas of economics, development, and security that have been elucidated upon so far. To truly prosper, however, BRICS must also be forward thinking. The alliance must be willing to move beyond government to government linkages and occasional summits. While proposing policy mandates and governance measures is undoubtedly essential to any organisation, true progress and innovation comes from constituencies. Fostering conversation amongst the people, academia, and businesses of member nations can unleash the creative energies of these groups, creating relationships stronger than any multilateral collaboration efforts can achieve.

One of the means that can be used to foster these interactions is in the digital world where member states reside next to each other in a virtual neighbourhood. Cyberspace presents limitless potential in the sectors of finance, trade, and intellectual partnership. By adopting new technology, BRICS can outmanoeuvre the governance structures of the old world.

The formation of BRICS was truly an important endeavour because of its unique approach to global governance. The alliance was born under the premise that every nation, regardless of its economic prowess or military might, had the right to a voice in international matters. While tensions between member states have thrown its future into doubt, if it can seize the economic, developmental, and security opportunities available, there is still potential for BRICS to change the global paradigms that have shaped the world this past century.

BRICS ROLE IN GLOBAL GOVERNANCE PROCESSES

H.H.S. Viswanathan, Distinguished Fellow, ORF

Shubh Soni, Programme Coordinator, Global Governance Programme, ORF

Introduction

In today's globalised world, the interdependence among nations is complex and intense. The world has been rendered virtually borderless due to high speed transfer of goods, capital, pathogens – and their environmental consequences. In such a world, global governance, or lack of it, has become the single most dominating challenge.

What is global governance? The simplest definition would be: "Management of transnational issues through voluntary international cooperation."[1] The operational term here is "voluntary international cooperation." This makes bringing all stakeholders on board absolutely essential while managing issues that affect nations in the absence of a formal government.

The institution which comes closest to overseeing global governance is the United Nations (UN). The UN defines global governance as "the sum of laws, norms, policies, and institutions that define, constitute, and mediate trans-border relations between states, cultures, citizens, intergovernmental and nongovernmental organisations, and the market. It embraces the totality of institutions, policies, rules, practices, norms, procedures, and initiatives by which states and their citizens (indeed, humanity as a whole) try to bring more predictability, stability, and order to their responses to transnational challenges—such as climate change and environmental degradation, nuclear proliferation, and terrorism—which go beyond the capacity of a single state to solve."[2]

Thus as per the UN, global governance is required for (i) managing trans-border relations between different sections of society which interact with one another on an almost daily basis; (ii) ensuring a stable world order wherein such interactions lead to the prosperity of the human race; and (iii) bringing together member nations to fight challenges that are of common concern, and which no individual nation can tackle on its own.

From an emerging and developing country perspective, global governance can be seen as an attempt to level the global playing field to make it more equitable. For such nations, the priority is to ensure that whatever gains are made as a result of interactions at the supranational level are enjoyed equitably by all nations.

History, however, shows that global governance norms and rules favour certain powerful geographies over others. And one of the principle reasons for this inequity is the fact these geographies had a disproportionate say in the rule-making process itself. Such a framework of global governance is no longer viable, particularly given recent developments in these so-called powerful geographies. Emerging economies and developing nations will need to be brought on-board if global governance in the 21st century is to succeed.

BRICS is a grouping ideally situated to address some of the lacunae in the global governance processes witnessed today. This paper is an attempt to highlight the specific areas where BRICS cooperation can lead to more equitable outcomes, and also to propose how such cooperation can take place.

The Current State of Play – Challenges and Opportunities

The birth of the UN and the Bretton Woods Institutions was the beginning of a 70-year period wherein the world enjoyed enormous political security and economic prosperity. Much of the success of this period was due to the "liberal" and "global" nature of this period. Colonialism receded and new nations were born – in 1946, there were 35 member states in the UN[3]; in 1970 this number stood at 127[4]; and in 2011 the UN accepted its 193 member.[5] There was an increase in the flow of goods, services and labour between nations – from 1948 to 2015, total merchandise trade went up by 28,417 percent[6]; and between 1960 and 2015, world GDP went up by 5,481 percent.[7]

As the graphs below highlight, much of the economic prosperity of this period occurred after the collapse of the Soviet Union in 1991. This phase, classified in this paper as Globalisation 1.0, saw the establishment of various multilateral institutions, both within and outside the aegis of the UN, which promoted the ideals of a liberal and open world order – the World Trade Organisation (WTO), the European Union (EU), the United Nations Framework Convention on Climate Change (UNFCCC). The ethos of Globalisation 1.0 was predicated on free movement of goods, services, investments, labour (to a limited extent), ideas, and data. This process greatly helped emerging economies, as it gave them a comparative advantage vis-à-vis developed nations, particularly in labour markets.

Two recent occurrences, however, seek to undermine the efforts of Globalisation 1.0. The verdict of the referendum in the UK on whether it should leave the EU, and that of the US Presidential Election in 2016, are both signs that the erstwhile champions of an open and liberal global order no longer have faith in the founding principles of Globalisation 1.0. The tremors were first felt in 2008 when a financial crisis in the US brought the global economy to a halt. This was quickly followed by a financial crisis in Europe in 2010, and the first signs of an inward-looking US and Europe began to appear.

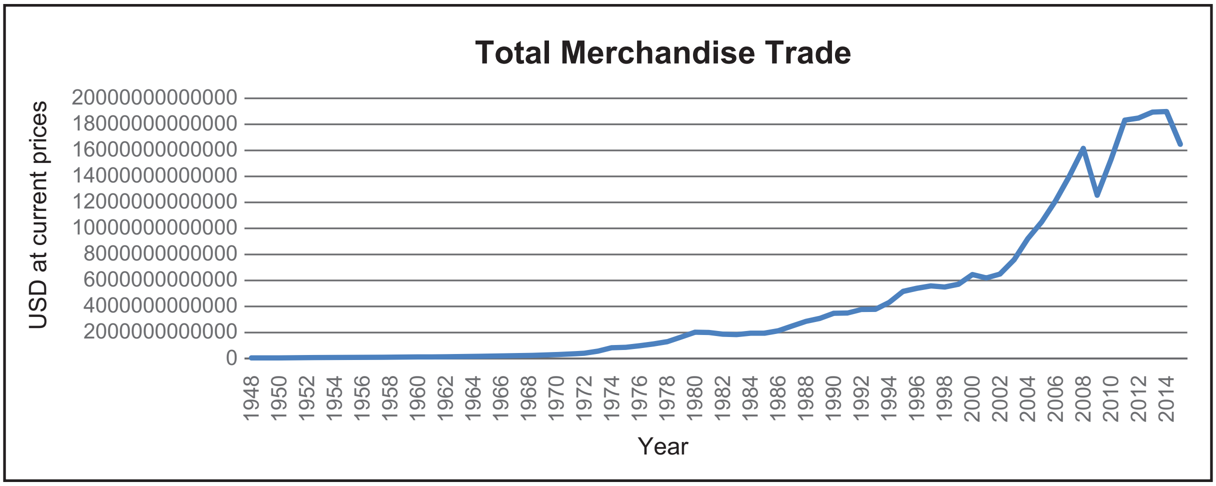
Globalisation 2.0 was rather short-lived. Beginning post the financial crisis of 2008, there was an attempt to undermine the multilateral system, in particular the WTO, with the advent of mega-regional trade agreements. Led primarily by the US through the Trans-Pacific Partnership (TPP) and Transatlantic Trade and Investment Partnership (TTIP), an attempt was made to impose non-trade related requirements on the flow of goods and services across nations. Countries wanting to sign up for these agreements had to make domestic changes in areas such as Intellectual Property Rights, Labour Laws, and Environmental Regulations to gain access. Globalisation 2.0 was an implicit attempt to restrict market access for emerging economies as it left out the entire African continent and large economies of Asia, including India, by creating new norms around trade. In essence, Globalisation 2.0 was an attempt to change the rules of the game in favour of the developed world. The election victory of Donald Trump and his subsequent efforts to withdraw from the TPP made this implicit attempt explicit.[8]

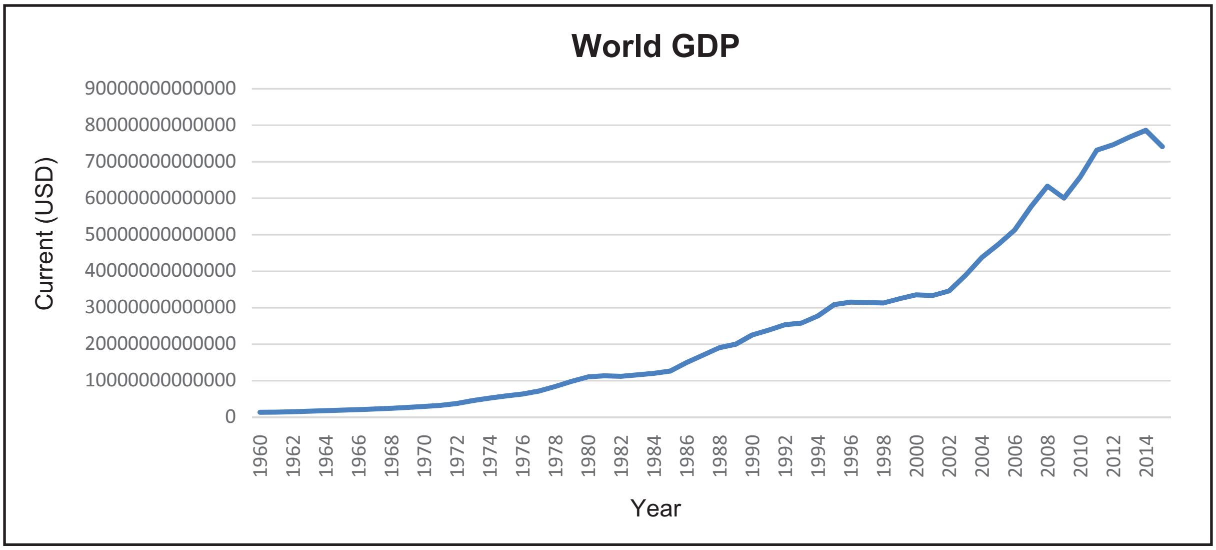
The following quotes by President Trump give a clear indication of how certain geographies seek to define Globalisation 3.0:

"Our politicians have aggressively pursued a policy of globalisation – moving our jobs, our wealth and our factories to Mexico and overseas." – Donald J. Trump, at a speech in Pennsylvania[9]

"We must protect our borders from the ravages of other countries making our products, stealing our companies and destroying our jobs. Protection will lead to great prosperity and strength."

"We will follow two simple rules: buy American and hire American." – Donald J. Trump in response to Xi Jingping's remarks at the World Economic Forum.[10]





The current unstable world order, however, provides the BRICS grouping with an opportunity to shape the contours of globalisation 3.0. Globalisation will play an integral part as each of these big nations, together accounting for 43 percent of the world population[11] and 30 percent of world GDP,[12] moves towards the next step of its development cycle. A BRICS-led framework for global governance, predicated on the ideal of a free and open world order, is vital for the economic development of these five nations along with other similar emerging and developing economies, and for political stability in the global order.

BRICS Priority Areas

As mentioned in the previous section, the framework of globalisation in the 21st century will determine the economic development of each of the five BRICS nations, and the political environment within which this development takes place. The erstwhile champions of an open and liberal global order are today against the idea of such a framework as the benefits of Globalisation 1.0 no longer come to them. Irrespective of the domestic political framework within each BRICS country, the grouping has demonstrated its commitment to a democratic international order. The following quote from the eighth BRICS Summit's Goa Declaration in October 2016 illustrates this collective desire:

"We reiterate our common vision of ongoing profound shifts in the world as it transitions to a more just, democratic, and multi-polar international order based on the central role of the United Nations, and respect for international law."[13]

There are several avenues where a BRICS model of cooperation can provide the international community an example of a multilateral, inclusive, and open global system. For the purposes of this paper, the authors will focus on four such avenues, namely multilateral trade, the 2030 development agenda, internet governance, and global taxation.

Multilateral Trade: Much of the backlash around Globalisation 1.0 has been to its approach to multilateral trade. Established in 1995, the WTO was for over a decade and a half the guiding institution on how nations must trade with one another. A multilateral institution at its core, the WTO, at its foundation explicitly states that any decision taken by the body must have the consensus of all its members.[14] Where a consensus is not reached, WTO allows for voting on the basis of "one country, one vote."[15] Therefore, unlike the UN, the World Bank, or the International Monetary Fund (IMF), it puts each WTO member on an equal footing.[16] In recent years, however, there has been an attempt to undermine the primacy of the WTO as the governing body of international trade.

This has taken place by creating mega-regional trade agreements (as discussed in the previous section); through bilateral agreements; or through unilateral sanctions against nations. The BRICS nations on their part have explicitly stated that they view the WTO as the sole governing body on international trade.[17] BRICS continues to state this joint vision in the interest of its own member economies, and those of similar emerging and developing economies, as these nations are the most adversely affected by any other governing framework.

Given the current situation wherein the WTO is being consistently undermined, BRICS should seek to create a BRICS-led model of multilateral trade. The foundational principles of this model should be based on the WTO model of consensus building, and of lowering tariff and non-tariff barriers. Providing such a model successfully, however, would require significant improvements in intra-BRICS trade. As of 2015, intra-BRICS imports amounted USD 242.3 billion,[18] and intra-BRICS exports amounted to USD 296.7 billion.[19] Given the size of the five economies, there is significant scope for improvement – for instance, exports from China to the US in 2015 were almost double of all intra-BRICS exports.[20]

No doubt there has been a three-fold improvement in intra-BRICS trade in the period 2006-2015, but there is still enormous scope to further this cooperation. The two modes that have recently gained traction are (i) a joint 'single window clearance mechanism,' and (ii) trade in local currencies.[21]

A joint 'single window clearance mechanism' has the potential to ease business transactions and can also provide a framework for increasing e-commerce between the five countries.[22] Under this mechanism, a BRICS alternative to the global SWIFT payment method and a BRICS-wide clearing house can further bolster trade amongst the countries.[23] Micro, small, and medium enterprises in particular stand to benefit greatly from such initiatives, and given the importance this sector has in the economy of individual BRICS nations, a collaborative clearing mechanism must feature on top of the priority list.

Increased trade in local currencies is another idea that has been mooted over the years but is yet to see significant development. This mechanism does three things – first, it reduces the cost of transactions. Currently, if an Indian trader looks to export goods to Russia, the payment is first converted from INR to USD, and then USD to RUB. By making trade in local currency easier, the Indian trader could simply make the transaction in INR and reduce its transaction cost. Second, it reduces the exchange rate risk each BRICS country enters into while trading with the other. The cost of transaction for an Indian exporter goes up significantly if INR appreciates in a short span of time. And third, trade in local currencies reduces the dependency of BRICS nations on USD. Trade amongst BRICS can be adversely impacted by monetary decisions in the US, a third party.[24]

To successfully implement trade in local currencies however, there is a need to develop a market for these currencies in the respective BRICS countries. While there has been much talk on this front in the last five years, the time has come for BRICS nations to seriously consider these options and move towards implementation.

The 2030 Development Agenda: 2015 was a pivotal year for international development. In September and December of that year, the international community adopted the Sustainable Development Goals at the UN General Assembly, and the Paris Climate Conference (Conference of Parties 21) agreement, respectively. Collectively known as the 2030 Development Agenda, both these create a pathway for development for the next 15 years.

The BRICS grouping showcased its commitment to the cause of development by signing both these agreements. Both the BRICS summits that followed the signing further the BRICS commitment to development:

The Ufa Summit in 2015, the theme for which was "BRICS Partnership – a Powerful Factor of Global Development" stated: *"We reiterate that the NDB [New Development Bank] shall serve as a powerful instrument for financing infrastructure investment and sustainable development projects in the BRICS and other developing countries and emerging market economies and for enhancing economic cooperation between our countries"*[25]

The Goa Summit in 2016, with the theme of "Building Responsive, Inclusive and Collective Solutions," stated: *"We agree that emerging challenges to global peace and security and to sustainable development require further enhancing of our collective efforts."*[26]

In its Intended Nationally Determined Contributions, submitted at the Paris Climate Conference, India projects its electricity demand as increasing from 776 TWh (tetrawatts per hour) in 2012, to 2,499 TWh in 2030.[27] This projection is based on the fact that in the next decade and a half India will need to industrialise, eradicate poverty, and provide its population with better living standards. In these efforts, India is not alone – several emerging and developing economies, including those of the BRICS, have similar ambitions going forward.

These objectives, however, can only be met through an increase in international financial and technological flows to these economies. There exist today significant hurdles that constrain the flow of finance and technology to emerging markets, thereby undermining their efforts towards achieving their development targets. The next two paragraphs earmark specific areas where BRICS cooperation can lead to a friendlier finance and technology framework for development.

Making Finance Available*:* The IMF estimates that there currently exists USD 100 trillion in global savings (in the form of pension funds, insurance companies and mutual funds, and other investors such as sovereign wealth funds).[28] The same paper also makes the claim that there exists an infrastructure funding gap between USD 1 trillion and USD 1.5 trillion each year, with the deficit significantly higher in developing countries.[29] There is therefore sufficient finance available to meet the investment needs of developing nations; the hurdle lies in the lack of appetite of the global community to create financial instruments to invest in development needs of developing and emerging societies. A concerted BRICS effort, which seeks to create these instruments, has the potential to significantly alter how international development finance is viewed.

Accessing Technology: The existing intellectual property rights (IPR) regime discourages inventions from actually entering the market – in fact, it only helps large multinational corporations increase profits by creating an "intellectual monopoly." There is already convergence amongst BRICS nations on the need to reform the IPR regime to make it developing country-friendly. During the deliberations on the Bali Action Plan in 2008, post the Conference of Parties in Bali in 2007, a number of developing nations stressed the need to address the IPR challenge. India argued that the full potential of technological advancement would require a framework across the technology cycle, from R&D to deployment. On IPR specifically, India maintained that technology transfer should be aided through a suitable IPR regime. Brazil has repeatedly called for institutionalising a "coherent and comprehensive" instrument for technology transfer – a "Technology Protocol" – under the UNFCCC. South Africa on its part has stressed the need for preferential terms for developing countries, with the least developed countries obtaining technology for free. China has also argued for change – demanding removal of barriers and other negative market forces to enable technology transfer.[30] What is now needed is a BRICS-wide collective proposal, which lays out a framework of exactly how intellectual property goes from being a roadblock to a catalyst vis-à-vis sustainable development.

Global Taxation Policy: A critical component of financing development, alongside access to global savings as mentioned above, is the international framework around taxation. Gaps and loopholes in international taxation policy, commonly referred to as base erosion and profit shifting (BEPS), have allowed individuals and corporations alike to either make their profits "disappear," or move them to a location where they would not be taxed. It is estimated that annual losses on account of BEPS amount to anywhere between 4-10 percent of global corporate tax revenues – viz., anywhere between USD 100 to 240 billion annually.[31] Moreover, given the heavy reliance on corporate tax revenue in developing countries, the impact of such losses is even higher.

The issue of BEPS was brought up at the UN Financing for Development (FfD) conference in Addis Ababa, Ethiopia, in July 2015. In fact, the failure of the FfD to heed the demands of developing countries on BEPS is widely regarded as its biggest failure.

At the FfD, India and Brazil led the demand to replace the ineffective UN Committee on Tax Experts with an intergovernmental tax body that would be representative of all countries in the world.[32] The UN Committee of Experts on International Cooperation in Tax Matters is currently the body deputed to oversee the international taxation regime. This committee comprises 25 members nominated by governments and acting in their expert capacity.[33] However, the norms around global taxation are set by the Organisation for Economic Co-operation and Development (OECD). This grouping, which comprises 34 of the world's richest countries, has taken on the mantle to create norms for developing countries without the developing world having a say in them. India's and Brazil's efforts to replace, or upgrade, the UN Committee of Tax Experts is aimed at correcting precisely this imbalance. An intergovernmental tax body, as proposed by these two members of the BRICS, has multiple objectives. First, it would be a critical step towards devising a coherent global taxation regime without the existing ambiguities which inhibit BEPS.[34] Second, it would facilitate better coordination among tax officials of different geographies.[35] Third, it would ease the pressure on developing nations on providing competitive tax benefits.[36] Currently, developing nations compete with one another to get investment by providing tax benefits to multilateral corporations. This has adversely impacted their economies.[37] Fourth, it will simplify the taxation regime and ensure those nations that are paying tax twice do not have to do so, and those that are liable to pay but are not, are made to do so.[38] Fifth, it will enable the developing nations to garner international support against tax havens.[39] And sixth, a democratically arrived at taxation regime would ensure no country is hostage to norms created by other nations.

A global level playing field vis-à-vis international taxation should be high on the BRICS priority list. India and Brazil are already on the same page. A united BRICS stand on creating an intergovernmental body on taxation would send out a strong political signal to the OECD countries that the current framework can no longer be sustained. This united stand should be followed by a BRICS proposition on international tax, which details the contours of such a body. Such a counter-narrative, with a strong proposal, would bode well for future Financing for Development summits, and would generate greater momentum towards establishing the intergovernmental body.

Internet Governance: As the Sustainable Development Goals highlight, much of the development in the 21st century will be predicated on the internet. Increasing access to the internet in developing nations has the potential to significantly improve the government-citizen relationship as delivery of essential public goods becomes more streamlined. However, as more and more people come online, questions around the security of their data will take centre stage. Access and security cannot be delinked. Governance using cyberspace will only be successful if users trust the medium. This trust must be ensured through a collaborative effort by the government that provides the services, and the actors responsible for maintaining the internet architecture.

The development agenda of the past was dominated by actors in certain geographies – the norms set by the Bretton Woods Institutions, which were fraught with inequities, went unchallenged for decades. The norms around internet governance, however, are still evolving. A joint BRICS action plan on internet governance has the potential to ensure the 20th century agenda is not replicated in the 21st century.

At present, the BRICS have divergent views on global norms around the internet. China, for instance, has indicated that the internet must be subjected to its national laws, as opposed to international values.[40] Russia too has argued that internet governance must come under the aegis of the UN wherein the sovereign is the dominant actor.[41] India and Brazil on the other hand are in favour of a multi-stakeholder approach led by the Internet Corporation for Assigned Names and Numbers.[42]

Despite these divergent views, there remain significant areas for BRICS collaboration. The low-hanging fruit herein is trade and e-commerce. There is also scope for exchange of existing technologies and best practices in the areas of healthcare delivery, education, and financial inclusion, which are of critical importance not just for BRICS but for other developing nations as well. Learnings from one another on local language content, to bridge the digital divide among English and non-English speaking communities, is another area where the BRICS nations could collaborate. A BRICS collaborative framework could then be expanded and exported to other parts of the world to include more developing economies.

It is important for BRICS nations not to get too caught up in the semantics of multilateral versus multi-stakeholder models of internet governance. The five countries instead should identify areas of practical cooperation and let their actions speak louder than words. The more connected the five member nations, the greater the chances of convergence on larger governance issues.

The New Development Bank

The BRICS New Development Bank (NDB) was conceived in 2012 at the BRICS Summit in New Delhi. In 2014, at the BRICS Summit in Fortaleza, Brazil, the NDB was formally established.[43] Initially, each of the five member nations made contributions of USD 10 billion each, taking the bank's initial capital to USD 50 billion.[44] Given the equal initial contribution, the bank's total share of holding is equally divided, as are the voting rights. It is expected that over time the amount of committed capital will double to reach the initial authorised capital ceiling of USD 100 billion.[45]

Along with the NDB, the BRICS also established the Contingent Reserve Agency (CRA). The purpose of this reserve is to provide additional liquidity protection to member nations in the event of a short-term balance of payments crisis. Operationalised in 2016, the CRA has capital worth USD 100 billion. Unlike the NDB however, the CRA is funded primarily by China (41 percent), followed by India, Russia, and Brazil (18 percent each), and then South Africa (5 percent).

The NDB and CRA were established primarily as a result of the inability of the Bretton Woods Institutions, i.e., the IMF and the World Bank, to carry out reforms in favour of developing economies. Such has been the influence of developed economies on these institutions that the reform structure of the IMF, which was agreed upon by the G20 group in Seoul, Korea, in 2010, was held hostage by the US, as any progress on this front required US Congressional approval.[46]

The other major criticism of these institutions has been the stringent conditionalities which they impose on developing nations. Joseph Stiglitz, the former chief economist of the World Bank has been extremely critical of how the bank operates. The Nobel laureate, when asked who benefitted most from US and IMF imposed bailouts, had this to say:

"*These policies protect foreign creditors. If I came to the problem of what can I do to maintain the Thai economy from the perspective of the chairman of the collection committee of the international creditors, I might mistakenly say the most important thing is to make sure people don't abrogate their debt. Senior people in the IMF actually said that not paying the* *debt was an abrogation of a contract, whereas anybody who knows about capitalism knows that bankruptcy is an essential part of capitalism.*

In East Asia, you had private debtors. The appropriate response when you have private debtors who can't pay is bankruptcy. It is not the nationalisation of private debts, which the IMF has facilitated in many countries. Nationalisation of private debts undermines prudential lender behaviour and is a government intervention in the market. But that's not the view you'd take if you were chairing the creditors."[47]

Given this scenario, the purpose behind the NDB and the CRA was two-fold. The first was to complement the work already being done by existing institutions. There is acceptance among the BRICS nations, as can be inferred from the amount of initial and authorised capital, that it cannot substitute the World Bank or the IMF. Despite the large pool of funds deployed towards development assistance (through overseas development assistance and through the World Bank), there exists a shortfall of about USD 73 billion to meet the health, education, and social security targets of the SDG.[48] The NDB therefore looks to complement the work already being done by other institutions and agencies, rather than to substitute them.[49]

Secondly, the aim of the bank was to move away from the aforementioned conditionalities as imposed by the Bretton Woods Institutions. The NDB offers an alternative to developing economies should they deem the terms of the World Bank too stringent, i.e., the NDB breaks the monopoly of existing multilateral development banks.

The establishment of the NDB and the CRA was a major milestone in BRICS cooperation. It put to rest much of the concern around the future of the grouping as it institutionalised the engagement between the five nations. The next steps therefore must follow in the same vein. The time has come to create more such institutions, within and outside the aegis of the NDB, to further strengthen the grouping. These are some of the areas where institutionalisation is needed:

The New Development Bank Institute: To ensure correct avenues are identified, and the right policies implemented, the NDB must be supported by a research and analysis unit. This unit, titled in this publication as the New Development Bank Institute (NDBI), can provide policy options to the NDB, keeping in mind the needs of developing and emerging economies. Given the dominance of the US and the EU at the Bretton Woods Institutions, the research wings of the World Bank and the IMF have inherent biases which often go against the needs of emerging economies. The aim of the NDBI therefore should be to provide bias-free and country-specific policy solutions to the NDB.

BRICS Standards and Benchmarks: As mentioned in previous sections, there is enormous potential to grow intra-BRICS trade, based on WTO principles. One policy option which could expand trade among the five nations is the creation of common standards and benchmarks. Unlike the mega-regional trade agreements, these standards and benchmarks will not include non-trade issues and can focus on reducing existing barriers. A BRICS Standards and Benchmarks Agency (BRICS S&B), under the aegis of the NDBI, is ideally suited to creating such a framework. Driven largely through the e-commerce sector, as mentioned earlier, such an agency has the potential to be a game changer, particularly for medium- and small-scale enterprises.

BRICS Credit Agency: The aforementioned conditionalities imposed by the Bretton Woods Institutions stem from their judgement of a nation's economic health, or credit worthiness. The international credit rating mechanism today is dominated by the same countries that dominate the World Bank and the IMF. For both political and economic reasons, developing nations must create their own tools for assessing credit worthiness of not just economies similar to theirs, but also of developed nations.[50] A BRICS Credit Agency, as an extension of the CRA, can be one such institution to break the existing monopoly of developed nations.[51]

BRICS Innovation Fund: Even a cursory mapping of the innovation hubs of the 19th and 20th centuries, with the consumption patterns of innovative products in those eras, will highlight that highest consumption and innovation resided in the same geographies.

This alignment of innovation and consumption has shifted in the 21st century. While innovation continues to reside in more developed economies, maximum consumption in the 21st century takes place in Asia and Africa. This is primarily due to two reasons: Asia and Africa have the highest populations in the world; and the purchasing power and aspirations of nations on these two continents has risen significantly.

The asymmetry of the 21st century demonstrates the need for developing and emerging economies to become innovation centres themselves. This is because of two reasons. First, there is an attempt by innovation centres to restrict the ability of developing and emerging economies to build on existing innovation, lest the developed nations lose this monopoly. The IPR regime is one such mechanism currently deployed which undermines innovation in new geographies. Second, developing and emerging economies must move away from excessive reliance on developed nations to fulfil their needs, and develop their own capacities that are more in-sync with their development needs.

A BRICS Innovation Fund that not only identifies potentially successful ideas in these five nations, but also provides innovators with financial and technical support, will go a long way in bridging the innovation-consumption gap. Such a fund can be instituted within the NDB and focused on the priority areas of the bank. It can work closely with enterprises and institutions in the five countries that seek resources to create innovative solutions and products.

Bringing Back Multilateralism

For global governance to be successful, it does not only need to be fair and equitable, but also seem to be so. And this perception is what makes multilateralism the bedrock of successful global governance. Participation of the maximum number of stakeholders is essential to give the decision-making process legitimacy and credibility. Even Henry Kissinger, renowned by many as the father of modern day realpolitik, has argued that institutions that deal with global governance must have both power and legitimacy.[52] Without the former, institutions become ineffective; and without the latter, they unravel very quickly.

International issues over the last five decades were being increasingly addressed in various multilateral forums. It is a matter of concern that the process of multilateralism is getting weakened both by neglect and design. This is a worrying trend, particularly for emerging and developing economies. It was with considerable political will and effort that institutions like the UN and the WTO were built. The erstwhile strong supporters of the multilateral concept like the US and Europe are now retreating from the process. This can lead to a serious deficit in global governance, and put at risk the economic prosperity and national security of developing and emerging economies.

The BRICS is one group which can and should pick up the baton and strengthen the multilateral process. The attempt will not be easy. BRICS will have to co-opt other like-minded nations both from the developing and the developed world in its new initiatives to renew multilateralism.

THE CASE FOR THE NEW DEVELOPMENT BANK INSTITUTE

Samir Saran, Vice President, ORF

Aparajit Pandey, Programme Coordinator, Climate Change & Development Initiative, ORF

Introduction

The New Development Bank (NDB) is by any measure an audacious enterprise. After years of frustrating attempts to incite change in the traditional Bretton Woods Institutions, the BRICS nations decided that it was better to form a rival multilateral bank, rather than continue to beat their heads against the metaphorical barricades impeding reforms within the International Monetary Fund (IMF) and the World Bank. The resulting brainchild was a bank designed to "support public or private projects through loans, guarantees, equity participation and other financial instruments."[1]

By forming the NDB, the BRICS nations have made a bid to break free from the neo-colonial provisions and oligarchical leadership of the Bretton Woods Institutions. Yet, the developed nations of the world still have the ability to exert significant economic influence through their research heft and ability to stitch together development and growth narratives based on such research.

Without doubt, the vast majority of research organisations focused on monetary and fiscal policies are influenced by the Bretton Woods Institutions. If the BRICS nations want to truly craft an economic alternative, there is an additional step that needs to be taken. The coalition needs to invest in a research institution focused on the needs of the BRICS nations and other emerging economies of the world.

History and Origin of the NDB

Conceived in 2012 and birthed in mid-2015, the NDB is in the nascent stages of its development, although the amount of capital at its disposal does give it a certain amount of financial heft.[2] With shares divided equally between the BRICS nations and initial contributions of USD 10 billion each, the NDB currently has USD 50 billion in capital at its disposal. It is expected that over time the committed capital will double to reach the authorised ceiling of USD 100 billion.[3] The NDB is allowed to lend USD 34 billion annually[4] with the primary focus of the bank being infrastructure and sustainable development projects.

While the bank was started in the name of BRICS co-operation, membership is open to any member of the UN. However, the combined share of the BRICS nations cannot drop below 55 percent of voting power according to the articles of agreement. To ensure that the NDB remains a viable organisation and achieves its goal of complementing, supplementing and challenging the writ of the World Bank and the IMF, an eventual expansion of its membership seems imminent. Discussions regarding the addition of members have already been initiated, with expectations that membership will expand by 2018.[5]

The bank is governed through a three-tier mechanism – a Board of Governors; a Board of Directors; and an executive leadership comprising of a President and multiple Vice Presidents. The Board of Governors comprises of one appointee from each of the member states and is tasked with making broad macro decisions, including those relating to membership additions, organisational alliances, and capital changes. Additionally, the Board of Governors is the ultimate authority in all decision-making processes regarding the bank.[6]

The Board of Directors is next on the hierarchical rung of the organisation. Made up of appointees from each founding member, the board acts as the intermediate leadership body for the NDB, making decisions on appointments to the investment and credit committees, and voting on investment proposals put forth by the President.

The executive leadership of the NDB consists of a rotating President and one Vice President from each of the remaining member nations (with the exception of the member nation that the President originates from). The executive leadership acts as the head of both the investment and credit committees, while also handling the day-to-day operations of the NDB, including administrative and staffing decisions.

The bank has already begun to take operational steps, with loans of USD 1.5 billion approved for seven projects across all five member states. The NDB has also officially entered into its first loan agreement, which was signed on 21 December 2016 with the People's Republic of China for a renewable energy project designed to provide 100 MW of solar energy. In addition to its lending activities, the NDB has also ventured into the debt capital market with a successful green bond issue on 18 July 2016. Issued at a 3.07 percent nominal rate over five years, the bond proceeds are earmarked specifically for infrastructure and sustainable development projects in its member countries.[7]

The NDB has expressed collegial sentiments towards other multilateral development banks, issuing statements recognising the Asian Infrastructure Investment Bank as a sister institution, and signing a memorandum of understanding on strategic cooperation with the Asian Development Bank. The bank's leadership has even publicly proclaimed its willingness to work with the Bretton Woods Institutions.

The Importance of the NDB

It is easy to see the cause of the BRICS nations' disgruntlement with the traditional multilateral financial institutions. BRICS countries collectively account for close to 40 percent of the global population and 30 percent of the world's economic output.[8] Yet, even after recent reforms, BRICS countries hold only 14.7 percent of the IMF's voting shares[9] and 13.68 percent of the World Bank's voting shares.[10] Both institutions happen to be headquartered in Washington D.C. and every World Bank president since the inception of the institution has been American.

Representation is not the only issue of consternation for developing nations when it comes to dealing with the World Bank and the IMF. Both institutions have long been accused of imposing draconian policies and conditions, including the cancellation of subsidies, the lowering of minimum wages, and the curtailing of domestic spending.[11]

The impact of dominant Western biases within the Bretton Woods Institutions are not limited to the financial implications they have on the rest of the world. Many global research organisations tend to either branch off from or have associations with the World Bank and the IMF. The outcome of such associations leads to inherent biases in economic thinking, policy evaluation, and policy suggestions with regards to the emerging markets and developing economies of the world.

THE WORLD BANK, IMF, AND OECD HAVE FOSTERED WEST-CENTRIC BIASES IN THE GLOBAL ECONOMIC GOVERNANCE ARCHITECTURE, LEADING TO DANGEROUS GAPS IN KNOWLEDGE BASES.

An example of one such research organisation is the World Bank's Development Economics Group (DEC). Regarded as one of the World Bank's primary research arms, the DEC has a mandate to increase the World Bank's understanding of development policies and programmes.[12] The DEC has traditionally been headed by the Chief Economist of the World Bank, who have overwhelmingly been born and educated in developed economies throughout the history of the World Bank.

A second research arm of the World Bank is the Development Research Group which cites itself as "one of the most influential centres of development research in the world."[13] A cursory glance shows that the senior leadership of the Development Research Group does not have a single representative from an emerging economy.

The research arm of the IMF has similar biases. The majority of analysis and policy initiatives stemming from the IMF have a limited focus with an organisational focus on structural readjustment, monetary policy coordination, and shock absorption. Even reports with a broader scope, such as the bi-annual World Economic Outlook, continue to show biases towards the developed economies of the world, with the most recent report dominated almost entirely by analysis and forecasts of the US and UK markets.[14]

West-centric biases are not limited to research organisations originating from the Bretton Woods Institutions. The Organisation for Economic Cooperation and Development (OECD), an intergovernmental economic body comprised of 35 sovereign nations, has long been regarded as one of the shapers of economic and financial thinking throughout the world. Reputed as a leader in global economic thought, its guidelines have at times been implemented as *de facto* standards on a global level.[15] It is important to note, however, that the OECD is almost exclusively made up of developed European countries with large GDPs, high development indices,[16] and inherent biases that affect its policy suggestions and analysis.

The organisations, despite their developed world biases, are ingrained in the economic governance architecture of the world. When global forums need data for decision-making processes or policy suggestions, they turn to the World Bank, IMF, and the OECD. The G-20, for example, has a formalised partnership with the OECD aimed at "contributing to virtually all of the Group's strands of work, and most G-20 working groups with data, analytical reports, policy recommendations and standards."[17] The European Union has a similar partnership with the IMF, centred, ironically enough, on creating frameworks for developing countries in order to help them achieve their sustainable development goals.[18] The BRICS countries themselves have partnered with,[19] sought inputs from[20] and implemented policy solutions given by[21] the same organisations.

The western-dominated perspectives of the research organisations are not restricted to inherent biases stemming from a lack of representation and diversity. There are also dangerous gaps in the knowledge bases of the World Bank, the IMF, and the OECD. Researchers born and educated in developed nations are often unwittingly ignorant of scenarios specific to developing and emerging economies. An example would be the sizeable informal economies present in many developing economies that cannot be easily quantified but must be taken into account when formulating macroeconomic policies.

The Case for a New Development Bank Institute

It is apparent then, that the next step to be taken to establish a BRICS-focused financial framework is the creation of a new institutional research arm – the New Development Bank Institute (NDBI). Linked directly to the NDB and the BRICS nations, the NDBI will be expected to provide research support for the NDB, with special attention paid to issues dealing with development finance, the raising of capital, procurement policies, and the implementation of best practices. The NDBI will also act as the technical secretariat for the NDB by conducting due diligence and stress tests for any policy decisions formulated by the bank.

Additionally, and perhaps more importantly, the NDBI will look to fill the existing gaps and correct the biases of western-dominated research organisations. Drawing on the expertise of its own member states, the NDBI will look to create a paradigm of knowledge, concentrating on specific traits pertaining to each member state's economy. Furthermore, the institute will also place emphasis on research focused on emerging economies in general. The NDBI will be charged with bringing this "emerging markets perspective" to all major global forums. The optimal scenario envisions the G-20 eventually partnering with the NDBI rather than the OECD on matters concerning the developing world.

Along with supporting the NDB and acting as a thought leader for economic issues relating to developing countries, the institute should also use its unique position to gather data and create a knowledge database that focuses on the world through the prism of emerging economies. The current sources for all global economic data reside within the western-dominated research groups – the OECD, World Bank and IMF. Leaving aside the potential biases and gaps that could be created as a result of the mishandling and misinterpretation of data from emerging economies, diversifying and spreading knowledge is important.

Providing Institutional Support

Given the nascent nature of the NDB, it can be speculated without significantly stretching credulity that there will be a sizeable amount of institutional support that the NDBI will need to provide to the bank. The priority for institutional support from the NDBI will initially need to be concentrated on solidifying the BRICS Contingency Reserve Arrangement (CRA), which is meant to be the BRICS answer to the IMF.

The CRA is a reserve pool created by the BRICS nations to act as a buffer in case a member state has a short-term balance of payments issue or is in the midst of a currency crisis. With an initial pool of USD 100 billion,[22] the CRA allows member nations to deal with liquidity or currency risk issues without the onerous conditions often imposed by the IMF. The CRA also allows for direct currency swaps between the Reserve Banks of the member states, effectively side-stepping broker fees and currency exchange slippage.

While initial conditions for access of funds from the CRA are stringent, with limits on how much each member state can borrow and a relatively shallow pool of funds to draw from, it is expected that the arrangement will continue to evolve with the growth of the NDB. To ensure that the CRA remains viable and achieves its potential, it is imperative that the NDBI develop an early-warning system surveying currency markets with a particular focus placed on the currencies of member states. In addition to a robust and well tested early-warning system, the NDBI should focus on constructing viable and replicable hedging strategies for each of the member states, while also creating test case scenarios highlighting expected actions in the case of a wholescale global crisis.

Considering the fact that the NDB was able to successfully launch a bond issuance within its first year of operations,[23] it can be stated with some certainty that the bank will not be content with simply acting as a "lend and wait" operation. In anticipation of deeper forays into debt capital markets, the NDBI would be best served by engaging in deep dive feasibility studies on project financing and the creation of financial instruments for each member state. A logical starting point would be an exploration of local-currency bond issuances, taking into consideration the development stage and appetite of the debt capital market in each of the member states.

A potential medium term goal the NDBI could focus on is the launch of a credit enhancement scheme and the creation of a mechanism that will allow the NDB to give partial guarantees and provide political risk insurance for projects. If the aim of the NDB is to operate on the same playing field as the World Bank, lending and issuing bonds are not going to be enough. Providing pathways for institutional investor entry should be one of the primary goals of the NDB and the aforementioned provisions could help increase the flow of private capital into BRICS markets.

In the long term, the NDBI should aim to build up enough project financing expertise and local market knowledge in the BRICS markets so that complicated finance instruments such as Infrastructure Investment Trusts and blended project financing can be employed, thereby allowing investment flow for infrastructure projects to be scaled up exponentially.

THE NDBI SHOULD INITIALLY FOCUS ON DIGITAL ECONOMY, ENERGY, AND THE INFORMAL SECTOR.

All the financial wizardry in the world will be no use, however, if there is no place for the funds to go. It is important, then, that the NDBI also start implementing capacity increasing measures and a pipeline of projects concurrent to the measures mentioned earlier in the section. The capacity increasing measures will go hand in hand with the knowledge creation mandate of the NDBI. Investors tend to be particular with regard to infrastructure or renewable energy opportunities in emerging economies, and the successful education of investors is contingent on having a database of clean and easily replicable transactional data. If the NDBI is able to leverage contacts within each member state and combine it with fairly basic technology, a viable pipeline of projects spanning across the BRICS nations can be easily created.

Preparing the Research Scope

Along with providing institutional support, creating research capabilities that allow the NDBI to be on par with the OECD, World Bank, and IMF is a key step in ensuring that BRICS can act as a counter to the Bretton Woods Institutions. The NDBI cannot afford to imitate the methods of western-dominant research organisations if it wishes to be thought of as an equal. The research scope of the NDBI needs to be forward looking and focused on the BRICS nations, especially during the first few years of its existence. Once it has been able to establish its subject matter expertise, it can look into a more general approach to research. Given the circumstances, it is important that the NDBI during the first three years of its existence focuses on a few specific research streams – the establishment of a vibrant digital economy amongst BRICS nations, the feasibility of creating energy/commodity markets for BRICS nations, and the formalisation of the informal sector within member nations. All three streams have the advantage of being forward-looking and applicable to other emerging economies while also being largely overlooked by traditional western-dominated research organisations.

A distinct advantage held by the BRICS nations is their digital connectivity – all five nations are ranked in the top 50 by the 2016 Global Connectivity Index.[24] The cyber connectivity of the group allows for a number of possibilities, and it is here that the NDBI can make its first significant mark as a research organisation. A stream geared towards creating a "free digital trade zone" among the BRICS nations should be among the first research priorities for the NDBI. An exploration of the architecture of the digital trade zone would include looking at alternatives to the globally used SWIFT system for fund transfers, along with the viability of a BRICS-wide digital clearing house. Regardless of the eventual implementation of the digital trade zone, the NDBI would establish itself as a thought leader in the global digital economy space by pursuing this research stream.

Another advantage for the BRICS nations is the fortuitous matchup of the nations in terms of energy and commodity production and consumption. Russia and Brazil are among the world's largest energy and commodity producers, while China and India are among the world's largest consumers of energy and commodities. Additionally, all four countries happen to have state companies with significant market share in the oil sector, which allows for relative ease in the trading of large volumes of oil. The potential gains associated with circumventing the traditional energy and commodity markets are too promising to not be studied. A research stream focused on the benefits of bypassing the traditional Brent and WTI crude oil markets, and a separate research stream looking at the logistical viability of creating this secondary energy market, would once again make NDBI one of the thought leaders in the sector, regardless of the actual implementation of any such market.

In order to outpace the research arms of the western-dominant research organisations, it is important that the NDBI explore adaptability to future trends as well. One of the most important trends over the next 50 years will be the move from formal employment to informal employment. Although the informal sector is notoriously difficult to measure, BRICS nations are estimated to have between 32 percent and 84 percent of their non-agricultural workforce in the informal sector.[25] This is problematic both for those employed in the informal sector, who remain unprotected by regulations, as well as the government, which cannot tax these shadow economies.

As the world becomes increasingly digitally interconnected, the phenomenon of "Uberisation" (the cutting out of traditional middlemen in transactions) will only lead to a greater number of people "employed" by the informal sector.[26] It is imperative, then, that the NDBI take the lead in looking at better ways to quantify the informal sector, explore methodologies to incorporate the informal sector into mainstream economies, and look at potential policies for taxation and regulation of the informal sector if assimilation is not viable.

In tackling the aforementioned research streams, the NDBI will be able to establish itself as a research institute of significance, while also examining the risks and opportunities associated with economic transformation in the context of current global geo-economic trends. As the NDBI matures and evolves it can start looking at further areas of concern for BRICS and other emerging economies, such as growth in a carbon-constrained world, globalisation and trade in the age of populism, and adjustments for western fatigue in the provision of global public goods.

Structuring the NDBI

While clear pathways allowing the NDB and the NDBI to compete on an operational and research level with the World Bank and the IMF have been illustrated, it would be foolish to overlook the structure of the NDBI. The structuring of an organisation can make it a catalytic force for transformation or leave it mired in metaphorical quicksand.

The NBDI should ideally have a nimble structure, allowing it to harness a mix of physical and virtual infrastructure for optimal results. Given the need for the building up of investor capacity as well as the creation of viable project pipelines, the NDBI would, optimally, have offices in the financial centres of each BRICS nation. An office and staff presence in each country would also contribute to the deep level of local expertise that is eventually envisioned for the NDBI. The ideal location for the permanent headquarters would be Mumbai, which is home to the Reserve Bank of India, a world class business school, a plethora of economic research houses, and many of the world's major financial services companies and international banks.

The NDBI would ideally be a lean organisation, with a permanent staff at each office made up of researchers with at least three to five years of domestic experience. Researchers would be supported by local staff to help coordinate administrative details and facilitate outreach programmes. The researchers at each local office should be able to leverage their domestic experience and local networks to reach out to a much larger group of domain experts, who would retain their primary professional affiliations while providing inputs when needed.

In order to maintain a BRICS-centric approach to the NDBI, 75 percent of the research staff should hail from BRICS nations with the remaining 25 percent coming from other parts of the world. The NDBI should also aim to have non-resident scholars make up the majority of its research professionals, to encourage greater participation from a wide spectrum outside of the traditional policy and academia space.

The governance of the NDBI should be similar to the leadership structure of the bank itself, with a Board of Directors composed of appointees from each member nation and a rotating (by member state) director overseeing the day-to-day activities of the institution. The budget would ideally be made up of equal annual contributions from each member state.

Conclusion

The past decade has seen seismic shifts in the geopolitical structures of the world, as nations once regarded as the third world have become political and economic forces. No longer feeling the need to be beholden to old world financial institutions, the BRICS nations have made a bold statement of their intention to free themselves of western-dominated multilateral organisations with the creation of the NDB.

To ensure that the NDB is able to truly rival the Bretton Woods Institutions, however, the formation of an ancillary research arm is needed. The research arm will be expected to provide the organisational support that the bank needs to build a financial infrastructure rivalling that of the World Bank and the IMF. The support would ideally be focused on strengthening the BRICS Contingency Reserve Arrangement, creating viable financial instruments, and investing in advanced project-finance solutions.

Additionally, the research arm will also be charged with producing forward-thinking research output relating to the BRICS nations and emerging economies, as a countermeasure to the decades of western-dominated research from institutions such as the World Bank, IMF, and the OECD. The primary research output in the first few years would concentrate on the possibilities of a BRICS digital trade zone, opportunities available in the energy and commodity markets, and the integration of informal sectors amongst the economies of member states.

There is a desire amongst the BRICS nations for a new type of financial interdependence where the ethos, anxieties, and aspirations of the emerging world can find resonance in the architecture that manages the flow of intra and development finance. The creation of the NDBI can be one of the keys to ensure that the desire is fulfilled.

REBUILDING BRICS THROUGH ENERGY

Aparajit Pandey
Programme Coordinator, Climate Change & Development Initiative, ORF

Introduction

The BRICS alliance was born as a bid to counter the marginalisation of its member countries on the global economic and political stage and rose to prominence in the early part of the 21st century as the member nations went through periods of rapid economic growth and development. There have been a number of changes since the original formation of the BRICS alliance, however, leaving the coalition in a precarious situation given the current global climate. While the alliance was formed as a geopolitical counterweight to the Western world, its continuing viability will depend not on its status as a political bulwark against the hegemony of the developed world, but rather on its abilities to bring economic prosperity to its member nations. It is for this reason that a deepening of relations through the building of a BRICS Energy alliances should be considered.

The idea of a BRICS Energy Alliance is not an entirely novel concept – Russian president Vladimir Putin urged the BRICS member states to consider such an alliance during the sixth BRICS summit in Fortazela.[1] Among other ideas, Mr. Putin's proposal suggested the formation of a fuel reserve bank and an energy policy institution, both of which were aimed at ensuring the energy security of the BRICS nations. Along with these suggestions, there are a number of other energy focused actions that can be taken, including intensifying cooperation among member countries for energy trading purposes and facilitating the formation of alternative oil energy benchmarks.

Overview of BRICS Energy Makeup and Resources

To better understand the opportunities that a BRICS Energy Alliance can offer, it is important to first understand the energy makeup and resources of each of its member nations.

Brazil

Despite being the seventh largest energy consumer in the world,[2] Brazil has been able to gain energy independence as a result of bountiful natural resources and productive use of renewable energy. The main sources of energy in Brazil are renewables, which make up more than 42 percent of its energy mix; oil, which accounts for approximately 37 percent of energy consumption; and natural gas, which contributes around 14 percent to meeting Brazil's energy needs. Coal and nuclear power make up the remaining seven percent.[3]

Traditionally dependent on imports, the discovery of large offshore reserves in the past decade has turned Brazil into a net oil exporter. With the 15th largest proven oil reserves in the world,[4] Brazil is expected to play a large role in global oil markets moving forward, despite recent setbacks in accessing its prodigious offshore oil stores.

Despite making up a relatively smaller portion of the overall energy mix, around 50 percent of Brazil's natural gas is imported.[5] Brazil does not have large coal reserves and depends on imports for the majority of its coal needs, with the largest imports coming from Australia, the United States and Colombia.[6] While Brazil has the 10th largest uranium reserves in the world, it has not been able to tap into the resource for export purposes and was dealing with domestic supply issues as recently as May 2017.[7] Although the mining of uranium is currently impeded by regulatory roadblocks, the plentiful reserves could pay significant dividends in the future if they are accessed.

Russia

Russia, akin to Brazil, has been able to achieve energy independence despite being the fourth largest energy consumer in the world,[8] as a result of its substantial natural resources. Russia's energy primarily comes from thermal sources, with natural gas accounting for 52 percent of the country's energy consumption, and oil and coal contributing 23 percent and 10 percent respectively. Non-fossil fuel-based energy comes largely from Russia's nuclear power plants which provide 13 percent of the country's energy, while renewable energy contributes a marginal two percent.

Russia's abundant natural resources make it one of the world's primary providers of energy. Taking advantage of the 800 billion barrels of crude oil reserves it has,[9] Russia is currently the largest exporter of crude oil in the world.[10] In addition to oil, Russia is also the largest exporter of natural gas, accounting for 20 percent of the world's gas exports.[11] Despite the relatively small proportion of coal used in Russia's domestic energy mix, it is still a large player in the global coal market, exporting the third largest amount of coal in the world.[12] There remains scope for Russia to capture an even larger share of the global coal market, considering it has the second largest coal reserves in the world.[13]

BRAZIL AND RUSSIA ARE NET EXPORTERS OF ENERGY; INDIA AND CHINA ARE LARGE ENERGY CONSUMERS AND IMPORTERS.

Russia's energy exports are not limited to hydrocarbons, however. It exports USD 226 million worth of natural uranium globally,[14] taking advantage of the fourth largest reserve of uranium in the world.[15] In addition to raw resources, Russia has also become a large global provider of nuclear technology, having reached agreements worth USD 300 billion to build 30 nuclear reactors in 12 countries.[16] It has also signed broad memorandums of cooperation on the construction of nuclear power plants with a number of other nations.[17]

India

India is the third largest consumer of energy in the world[18] and unlike some of its BRICS cousins, has not yet been able to achieve energy independence. While not as resource rich as Russia, India still ranks in the upper 15th percentile for both oil and natural gas reserves globally[19] and has the fifth largest coal reserves in the world. A massive population with increasingly higher energy demands, combined with rapid urbanisation and an economic shift from agriculture to manufacturing have led to India's dependence on imports for many of its energy needs, despite its resources.[20] India is fuelled largely through coal, which makes up 46 percent of the energy mix; renewable energy, which contributes 26 percent, and oil which accounts for 22 percent of energy consumption.[21] Natural gas and nuclear energy are relatively small contributors to India's energy mix, making up five percent and one percent respectively.

Traditionally, India has relied on domestic coal reserves to meet its needs. Rapidly increasing energy demands combined with a mining sector that is struggling to meet production needs, however, have led to a significant increase in coal imports over the last decade.[22] While the government has taken steps to boost domestic production, India will have to rely on imports to meet 25 to 30 percent of its coal demands for the foreseeable future, with Indonesia, Australia, and South Africa acting as the primary suppliers.

As the fourth largest consumer of crude oil in the world, India is heavily reliant on imports to meet demand, with 80 percent of the country's oil consumption originating from foreign sources.[23] More than half the country's oil imports come from the Middle East, which has raised concerns regarding the nation's energy security outlook.[24] These concerns are undoubtedly exacerbated by India's dependence on a single country (Qatar) for 82 percent of its natural gas imports.[25] While it is not quite as reliant on external sources to fulfil its natural gas needs, as is the case with oil, imports still account for more than a third of India's gas consumption.[26] The nation's nuclear energy sector is also dependent on imports due to modest domestic uranium reserves and drastically underdeveloped mining capabilities.

China

Home to the largest population in the world and a robust economy that is heavily dependent on the manufacturing sector, China is, unsurprisingly, the largest energy consumer in the world. While not quite as naturally endowed as other BRICS member states, China remains a resource-rich nation with the third largest coal reserves in the world, and crude oil, natural gas, and uranium reserves that place it in the top 10 percentile globally. With demand outstripping domestic production, however, the world's second largest economy continues to rely on imports to meet its energy demands. As is the case with Russia, thermal power is the main source of energy for the country, with coal accounting for 66 percent of the energy mix, oil making up 18 percent, and natural gas contributing an additional five percent. Other sources include renewables, which add 10 percent to the mix, and nuclear energy, which supplies one percent of China's energy.

As the largest producer of coal in the world, China has been putting its coal reserves to good use, and was a net exporter of coal less than 10 years ago. Despite quadrupling coal production since the year 2000, however, China has not been able to meet its monumental domestic needs and is now the largest importer of coal in the world.[27] The main sources of China's coal imports are Australia, Indonesia, and Mongolia, which account for 74 percent of imports collectively, undoubtedly raising energy security concerns for China. More troublesome from an energy security perspective is China's[28] dependence on the Middle East for 51 percent of its sizeable oil imports.

As the largest crude oil consumer in the world,[29] China relies on imports to fulfil two-thirds of its demand[30] and any disruption in oil supply from the Gulf states could bring the country's sizeable economy to a screeching halt.

Similarly, China's dependence on imports to meet 35 percent of its natural gas demands[31] is sure to be an area of concern for the government, despite the relatively small role gas plays in the country's energy mix. While the natural gas suppliers for the country are geographically disparate, close to 80 percent of natural gas imports end up coming from three countries – Turkmenistan, Qatar, and Australia. China also has high import dependency in nuclear energy, with domestic production currently making up less than 20 percent of the country's uranium consumption.[32] Following the trend that has been established with its other energy sources, China does not have a diversity of import partners, depending on Kazakhstan for 65 percent of its uranium imports.[33]

South Africa

Despite its stature as an upper-middle income economy driven by a sizeable manufacturing industry, South Africa is modest in its energy needs, especially when compared to its BRICS cousins. While it has not been able to achieve complete energy independence, South Africa remains less dependent on imports than China and India. South Africa's energy demands, as is the case with China and Russia, are largely met by thermal power, as 72 percent of the country's energy comes from coal, with oil and natural gas making up 22 percent and three percent of the energy mix respectively.[34] Other sources of energy include nuclear energy and renewables, which account for three percent and one percent of South Africa's energy consumption respectively.

South Africa has the ninth largest coal reserves in the world, and has put these reserves to good use, as is demonstrated by coal's prominence in South Africa's energy mix. Despite prodigious domestic consumption, South Africa has been able to use its reserves to meet its energy demands, and is currently the sixth largest global exporter of coal.[35] Similarly, while nuclear energy makes up a small part of the country's overall energy consumption, South Africa has been able to meet domestic demand thanks to the fifth largest uranium reserves[36] in the world, and was a net exporter of uranium in 2015. In contrast to its abundance of coal and uranium reserves, South Africa has modest crude oil and natural gas reserves,[37] leaving it dependent on foreign sources for approximately 65 percent of domestic oil consumption and 75 percent of its natural gas consumption. The country's import dependency is exacerbated by its lack of diversity in trade partners. With Saudi Arabia and Nigeria accounting for 69 percent of all oil imports and Mozambique being its sole provider of natural gas, energy security is certain to be an area of concern for the country.

Energy Cooperation between BRICS

There is already a substantial amount of cooperation between the BRICS countries when it comes to energy. The largest recipient of Russian crude oil exports is China,[38] and the largest recipient of South African coal is India.[39] There have been additional deals struck that will ramp up energy trade between the BRICS nations, with China and Russia having reached a deal to build a 4,000 km natural gas pipeline.[40] The process was undoubtedly aided by China's investment in Russia's natural gas and crude oil state corporations, Gazprom and Rosneft. China has also recently negotiated an agreement with Brazil which provides it with 200,000 barrels of crude oil in exchange for a USD 10 billion loan. There have also been agreements reached between India and Russia that should deepen energy ties between the BRICS nations – namely a USD 25 billion deal to build a 4,500 km pipeline which will connect the electricity grids of the two countries.[41]

The Case for a BRICS Energy Alliance

It is clear that synergies exist within the BRICS bloc, seeing as Russia and Brazil happen to be amongst the largest net exporters of energy in the world, while India and China are dependent on imports to meet their prodigious energy needs. If the coalition can work together to facilitate additional trading of energy resources among member nations and develop alternative oil benchmarks that allow them to bypass the dominance of Western oil traders, member nations will benefit individually and collectively. Additionally, as Mr. Putin suggested, the creation of a BRICS fuel reserve bank and BRICS Energy Policy Institution would help assuage the energy security concerns of member states.

Facilitating Energy Trade

There are five major fuel sources that provide energy for the BRICS nations – coal, crude oil, natural gas, nuclear power, and renewable energy. While energy trade exists between member states for many of the fuel sources, there remain opportunities to deepen trade ties between the nations to the mutual benefit of all involved.

Coal

Coal dominates energy production amongst three of the five BRICS nations, with both China and India being dependent on imports to meet their domestic energy demands. The traditional coal markets in both countries are changing, however, with concerns related to economic value, pollution levels, and climate change affecting change in governmental policies.

The Indian government has been under pressure to provide a boost to its flagging domestic coal mining industry and has put policies into place aimed at reducing the country's dependence on imported coal for its public sector entities.[42] As the Indian government attempts to promote domestic production at the expense of imports, private Indian companies have been looking for more 'bang for their buck.' While India has traditionally procured the majority of its coal from Indonesia, there has been a recent shift with imports from South Africa and Russia increasing by 25 percent and 26 percent respectively between 2015 and 2016.[43] Considering that South African and Russian varieties of coal are able to produce 33 percent and 20 percent more energy respectively than the Indonesian varieties,[44] encouraging agreements between South African and Russian corporations and their Indian counterparts would be mutually beneficial for all three countries and the BRICS alliance in general.

China's use of coal has allowed it to build and sustain a massive manufacturing base, which has been the key driver for its economic success. However, rising concerns about pollution and climate change have led to a 'clean coal' movement within the country aimed at revamping old thermal plants.[45] To truly reduce pollution and greenhouse gas emissions, however, the Chinese government will have to commit to alternative sources for its coal imports which, at the moment, come mainly from Australia, Indonesia, and Mongolia. While Australian coal exports are 'cleaner' than their international counterparts,[46] Indonesian and Mongolian varieties are of a lower grade.[47] In order to continue to move towards a 'cleaner' coal industry, China should look at partnering with South African and Russian corporations for its future coal needs – a move that could be a win-win for BRICS overall.

Oil

As is the case with coal, there is a symmetry that is present within the BRICS alliance, with two member nations being net exporters of crude oil with large domestic reserves to fall back on, and three nations relying on imports to fill their needs. Despite this symmetry, the crude oil trade between the nations is underdeveloped and there remain opportunities for trade that would help all of them.

When addressing the issue of oil, it is important to take into account the fact that petroleum is the actual end product of crude oil. After barrels of oil are imported into the host country, they go through a refining process which allows for them to be turned into yields such as gasoline, jet fuel or diesel. The refining process is complicated and crude from certain geographies cannot always be processed by older refineries, which often lack the technological complexity to switch between different types of crude oil compositions. As such, oil cannot be treated as a homogenous resource – crude from different geographies is not always interchangeable.

China is the largest oil importer in the world and will continue to be for the foreseeable future. As has been noted in the overview section above, China has a large oil import dependency rate with two-thirds of its demand being met by foreign sources. The Middle East makes up much of the oil import market for China, leading to energy security concerns for the nation. In the event of regional strife or political upheaval in the Middle East, the Chinese economy would be among the worst affected globally. On average, China's refineries are sophisticated enough to handle a number of different crude types, allowing it to shift its geographical import sources comfortably.[48] It stands to reason then, that to allay energy security, the Chinese government has been attempting to increase imports from other areas of the world, particularly Russia and Brazil.[49] However, there is still room for increased trade, particularly with Brazil, which is still developing some of the oil reserves that were found in the past decade. Increasing trade with Russia would also be beneficial for China, not just for energy security purposes but also because of potential savings that would be garnered through lowered logistical costs considering the proximity of the two countries.

India's energy security situation, in relation to oil, is in many ways worse than that of China. As has been noted in the energy overview section above, India currently obtains 63 percent of its crude oil imports from the Middle East. Its lack of diversity in crude oil sources is further exacerbated by its high import dependency, with 80 percent of the oil used coming from foreign sources. Unlike China, India has not been able to tap into the BRICS alliance for crude oil purposes, with neither Russia nor Brazil ranking among the top 10 crude oil exporters to India. Considering that Indian refineries, by and large, are able to process a number of different crude types,[50] the lack of imports from BRICS countries is a bit mystifying. To diversify its oil supply and become more energy secure, India must look towards Russia and Brazil as possible trade partners.

South Africa's energy security situation is perhaps more precarious than that of India in relation to crude oil. The country is dependent on outside sources for close to two-thirds of its needs. Exacerbating this is the fact that two countries (Saudi Arabia and Nigeria) provide 70 percent of the imports. Following the recent sale of the country's entire strategic oil reserves,[51] it might behove the South African government to diversify its crude oil sources, if the oil refining industry in the nation allows for it. Partnering with fellow BRICS members Brazil and Russia would be mutually beneficial for all involved.

Natural gas

Despite recent developments involving high-level departures from the Paris Agreement, the world is still committed to working together to fight the problem of climate change. While renewable and nuclear energy have been touted as the primary weapons that can be used in this fight, many nations have been turning to natural gas as a reasonably clean form of thermal power. China and India, especially, have viewed natural gas as a key alternative to reduce national dependence on coal.

BRICS IS UNIQUELY SITUATED TO PROVIDE AN ALTERNATIVE TO THE WTI AND THE BRENT.

China, as is the case with almost all its energy sources, is dependent on foreign sources to meet about a third of its natural gas needs, with imports rising over the past few years as a glut of supply in the market drives costs down. With more than 60 percent of imports coming from two countries, energy security remains an issue in the natural gas sector. China has already partnered with Russia in the building of a gas pipeline, but considering that only 1.2 percent of China's natural gas comes from Russia, increasing trade between the two countries would help assuage China's natural gas energy security concerns, while also providing a boost to Russia's economy.

India's energy security issues in relation to natural gas are worse than China's, with 80 percent of its natural gas coming from Qatar. Diversification of its natural gas sources is important for India, especially considering the historical instability that has plagued the West Asian region. India's agreement to build a natural gas pipeline with Russia is important, but further steps should be taken, especially given the fact that additional pipelines would allow India to move away from the more expensive liquefied natural gas option that it currently uses.

Developing Alternative Oil Price Benchmarks

A key area BRICS nations can collaborate on for the mutual benefit of all member states is the establishment of alternative oil price benchmarks. The price of oil is set through the use of benchmarks on financial exchanges, with oil barrels around the world being priced at a premium or discount depending on their port of origin and a number of other factors. The two most important global benchmarks are the WTI and the Brent, which are influenced by heavy trading in the New York and London financial markets by banks, hedge funds, and speculators. This means that in essence the price of global oil is, at least in part, determined by what American and European investment bankers think it should be. The liquidity and heavy volume of oil that is traded, along with the fact that they were originally conceived in the Western hemisphere, has given the Brent and WTI benchmarks global credibility.

BRICS is uniquely situated to provide a counterbalance to these benchmarks. As has been discussed, the BRICS countries are comprised of some of the largest global producers and consumers of energy. Additionally, in each of these countries, state-owned corporations control large parts of the oil trade market. If the BRICS nations were to increase crude oil trade flow among one another, as has been proposed in the previous section, the volume of the oil trade, coupled with the ability of each sovereign to control such trades, could allow for the establishment of a new oil trade exchange with a benchmark that adheres to neither the WTI nor the Brent.

Creating a new exchange will have several benefits. First and foremost, the benchmarks set under the exchange will not be subject to the wishes and whimsies of American and European investors. Second, a new exchange will allow for efficient and transparent prices without hidden premiums and discounts. The transparency and volume will only serve to encourage more speculators, especially from developing countries, weary of the long-time Western monopoly on oil pricing. Third, a successful oil exchange could lead to a wider exchange for a range of commodities such as natural gas, coal, iron, and agro-commodities, generating even greater economic gains for BRICS member nations.

The creation of a new benchmark would be contingent, of course, upon investor faith in the oil pricing mechanisms that exist within the BRICS nations. Considering the controlled nature of the markets within Russia, China, and India, and the exploitative nature of certain parts of the South African and Brazilian governments, steps must be taken to ensure price transparency within the BRICS nations. A coordinated market reform effort with regard to the crude oil market would be instrumental in the creation of a BRICS exchange.

Fuel Reserve Bank

In Mr. Putin's speech during the 2014 Fortaleza BRICS summit, one of the specific proposals made in relation to the BRICS Energy Alliance was the creation of a fuel reserve bank. As demonstrated in the energy overview section above, the consumer nations of the BRICS bloc are dependent upon the Middle East to fulfil a significant portion of their oil needs. A fuel reserve bank could help assuage the energy security concerns related to oil for China, India, and South Africa, while allowing Brazil and Russia to bolster their economies.

The idea of joint fuel reserves is not entirely uncommon from a global governance perspective. Japan, South Korea, and New Zealand have agreements in place to share their strategic petroleum reserves (SPR) in emergencies.[52] Israel has negotiated a deal that would allow it to buy oil from the US for up to five years in case of an embargo against it, or other emergencies.[53] France, Germany, and Italy also have similar agreements in place.[54]

It is more common, however, for oil importing nations of the world to have individually built up SPRs designed to act as a buffer in case of a major disruption in the country's oil supply. The United States for example, has the capacity to hold 713.5 million barrels of oil in its SPR,[55] which is meant to theoretically replace 60 days' worth of its oil imports. The oil importing countries of the BRICS bloc, in contrast, have struggled to build up such SPRs. India currently holds 37 million barrels in its reserves, which could replace 10 days' worth of oil imports.[56] Although there has not been any official data released, China's SPR is estimated to be approximately 200 million barrels of oil, which would allow it to survive close to 30 days without any imports.[57] South Africa is in the most dismal situation, as recent news reports reveal that the entirety of its SPR has been sold off.[58] While current oil prices make it unlikely, if a massive oil flow disrupting event or an *en masse* embargo from a group of nations such as OPEC were to occur, the oil-importing member states of BRICS would be in a precarious position.

With this in mind, a BRICS fuel reserve bank or sharing agreement would be beneficial for all five member states. One possible way to construct such a reserve would be through the use of forward storage agreements. In this scenario, the oil exporting nations of BRICS (Brazil and Russia) would build and store reserves of oil within the oil importing nations of BRICS (China, Russia, and India). Legal rights to the reserves would continue to be held by the country of origin, until such time that the host nation would wish to draw upon the reserves, at which point the reserves would be sold at either the current market price or a previously agreed upon amount. To compensate the suppliers of the reserves, the host nations would agree to a nominal annual fee which could be set at a certain percent of the average crude oil price for the year.

A BRICS fuel reserve bank built through the use of forward storage agreements would be advantageous to all five BRICS nations. The host nations would be able to assuage their energy security concerns and rapidly build up SPRs that match global standards without incurring huge expenses. Such an agreement would also benefit the host nations economically, by allowing for the diversion of funds allocated for the build-up of SPRs to other crucial areas. By the same measure, the supplying nations would not incur any significant opportunity cost in the building of foreign SPRs considering their sizeable oil reserves. They would also gain economically from the aforementioned storage fees paid by the host nations.

Energy Policy Institute

Another key measure proposed by Mr. Putin at the 2014 Fortaleza BRICS Summit was the creation of an Energy Policy Institute under the BRICS umbrella. In the current global governance structures, the conversation around energy is framed largely in a Western context. This is chiefly due to energy policy being dominated by the Western hemisphere, with the International Energy Agency (IEA) often acting as the *de facto* database for global energy matters. Often the only alternative sources for global energy data are European and US private energy corporations, such as British Petroleum. With the IEA being an offshoot of the OECD, an organisation made up almost entirely of high-income countries, and private corporations existing solely to make profits for their shareholders, inherent biases in data are bound to exist.

The creation of a BRICS Energy Policy Institute could act as a counterbalance to these Western-dominated agencies. With the facility to draw inputs from some of the world's largest consumers and producers of energy, the institute would not only be able to draw upon a wealth of information, but could also bring to the forefront energy directives and stratagems for developing countries to use as guidance.

The main objective of a BRICS Energy Policy Institute would be the study and delivery of energy-related analysis relevant to BRICS member states and other developing economies. Research streams could include energy and energy security; trend analysis for global energy sources from a BRICS perspective; energy efficiency in developing countries; catalysing investments for renewable energy projects; and presenting development scenarios for BRICS and other developing nations. The BRICS Energy Policy Institute could also work as an organisational resource for BRICS nations looking to develop innovative energy policies and act as a facilitator for knowledge transfer and training programmes.

Conclusion

Despite recent geopolitical tensions, there is much to be gained from the BRICS platform. At a time where traditional global governance structures have proven themselves to be inadequate, BRICS can be a stabilising force by providing leadership and guidance for the emerging and developing economies of the world. One of the main platforms than can help bring BRICS together is energy and it would be mutually and collectively beneficial for the member states to pursue a BRICS Energy Alliance.

Encouraging energy trade ties among coalition members can help assuage the energy security concerns that are prevalent amongst the energy-dependent member nations and allow members to fulfil their moral obligations to provide cleaner and better energy under the Paris Agreement. The creation of a BRICS-based crude oil benchmark can help bypass the traditional Western influenced oil benchmarks, and provide fairer and more transparent pricing for the trade of oil among member states. A fuel reserve bank can provide energy security for energy dependent member states, in addition to providing economic gains and growth opportunities for all members of the bloc. The facilitation of these energy ties can be conducted under the auspices of a BRICS Energy Policy Institute, which can also break the traditional Western policy stranglehold and data biases that exist in the current global framework.

In 1776, Adam Smith showed the world how international trade could be mutually beneficial for all parties involved. In 2017, as much of the populace of the world lashes back against this fundamental idea and rejects globalisation, the BRICS nations should revert to the first concepts of economics and use an energy alliance as one of the pillars the BRICS foundation can stand upon.

SCRIPTING A NEW DEVELOPMENT PARADIGM: INDIA AND THE BRICS PARTNERSHIP

PULIN B. NAYAK
CENTRE FOR DEVELOPMENT ECONOMICS, DELHI SCHOOL OF ECONOMICS

Introduction

The world is at a crucial stage on the path of development and human progress. There are countries, mainly in North America and Western Europe, which have reached unprecedented levels of prosperity with per capita incomes in the range of USD 40,000 or above. On the other hand, there are countries in Asia, Africa, and Latin America, where large swathes of the population are at the most basic level of survival.

There is also a third group of countries positioned somewhere in between. BRICS is a grouping of five countries where three of the five – China, Brazil, and Russia – have per capita incomes in the range of USD 7,500-8,500. And then there are South Africa and India with per capita incomes of about USD 4,800 and USD 1,800 respectively. Within the BRICS countries there does exist wide variation in average living standards, arising essentially out of India's low income level. But it is important to recognise that what India lacks in average level of material living of its vast masses, it possibly more than makes up for in its high aspiration quotient and its rich civilisational history.

But surely India's chief heft comes also from its population base, with China and India being the only two countries in the world with billion plus populations. Russia, Brazil, and China have huge land masses, and India and South Africa too are geographically large countries. More than anything else, all the five countries of BRICS have a self-perception of a substantial degree of exceptionalism. This gives each of them a belief that they have a special position in the geopolitical equation. Russia and China are of course members of the UN Security Council, which places them at a unique vantage point. China, in coming years, is set to become the country with the largest GDP.

There is also a second major factor that brings these five countries together. It is the idea that these countries can collectively think of charting a path of development that is distinct from the development track that was followed by the countries of North America and Western Europe. It is now clear how wasteful and environmentally destructive the development path of these latter countries have been, and if there is any possibility of an alternative path of development, the lead towards it could well come from the BRICS collective.

On the Human Development Index (HDI), the BRICS countries represent a substantial spread. In a listing of 188 countries, Russia (ranked at 50), Brazil (75), and China (90) are in the list of 'high human development' index countries. South Africa (116) and India (130) are in the 'medium human development' index category. It is important to recognise, for what it is worth, that the BRICS countries are positioned in a triadic setting where there are some 50 countries above and some 58 countries below the medium bandwidth of some 80 countries within which the BRICS countries are positioned. It is this membership of the medium to high human development indexed countries that gives the BRICS countries a degree of commonality in their joint pursuit of their developmental aspirations. There are some 49 countries which are in the 'very high human development index' grouping. It should be a matter of some comfort that even though positioned quite low, India is not a member of the grouping of some 43 countries in the 'low human development' category.

It is of course well known that the HDI is a composite index of per capita income, life expectancy, and education, and to that extent offers a more holistic picture of the measure of development of a country than a ranking purely in terms of a monetary measure of well-being. This is a matter of no small import. We might agree that there is broad consensus among welfare economists and development thinkers that the concept of 'well-being' or 'wellness' ought to go beyond the dollar or rupee measure of per capita income, and ought to minimally consider elements of health and education, at the very least, as legitimate constituents of well-being.

In this context one might mention that there has been a very worthwhile attempt by the Delhi-based think tank Research and Information Systems for Developing Countries (RIS) to compute a BRICS wellness index, which looks at the well-being of the member countries. In addition to the parameters already mentioned, there is an attempt to consider 'sustainability,' looking at the very real concern of ecology as well as the issue of intergenerational equity. Looked at in this light, this index offers an estimate of wellness consistent with a long term – and therefore dynamic – perspective, rather than a purely static measure of human welfare. Once developed and subjected to careful scrutiny before its final intellectual acceptance, this index could possibly offer yet another way of considering the well-being of all other countries of the world as well.

Development Theory

Concepts of economic development have a hoary past. For present day political economists, perhaps the first formal notions of development have to be traced to the writings of Adam Smith who in 1776 sought to enquire into the nature and causes of the wealth of nations. He was followed in this attempt by a succession of major thinkers: Malthus, Ricardo, Mill, and Marx. Classical political economy was essentially concerned with the issue of development in a world that was characterised by widespread poverty. John Kenneth Galbraith (1958) had famously said: "The experience of nations with well-being is exceedingly brief. Nearly all, throughout history, have been very poor."

This essay examines the possibility of some new paradigms of development, especially in the context of India. When Joseph Schumpeter wrote his *Theory of Economic Development* somewhat more than a century back in 1911, he was addressing the issue in the context of the advanced countries of the west, viz., England, Germany, and the US. His enquiry essentially was a continuation of writings in the classical tradition and for Schumpeter, the key to the development process was in the hands of the 'entrepreneur' who was responsible for combining factors of production in innovative ways to produce new goods that had a significant market.

However, in the contemporary context, it would not be incorrect to suggest that economic development refers to the development of the large swathe of countries in Asia, Africa, and Latin America. Economic development is very much a post-war notion, pioneered in the writings of Joan Robinson, Paul Rosenstein-Rodan, Albert Hirschman, William Arthur Lewis, and Ragnar Nurkse, among many others. This new field emerged in the context of writings of two groups of countries: those of Eastern Europe reconstructing after the devastations of World War II, and those countries of Asia, Africa, and Latin America that were emerging into freedom after centuries of colonial rule.

BRICS COUNTRIES CAN COME TOGETHER TO PROVIDE AN ALTERNATIVE PATH OF DEVELOPMENT.

The original writers, notably Nurkse (1953), thought of underdevelopment as arising due to a lack of capital formation, and the first set of writings emphasised the importance of mobilising resources to provision for and construct physical capital. Countries were trapped in a low-level equilibrium, and the idea was that this was happening because rates of savings in these newly independent countries were very low, possibly as low as four to five percentage points of GDP. Arthur Lewis's (1954) assessment was to suggest that the savings rate had to be increased to at least in the region of about 12 percent of GDP. W.W. Rostow suggested that an initial early effort was a prerequisite for a take-off into self-sustained growth, rather as one must have some minimum speed and acceleration to achieve the take-off of an aircraft.

The literature on development theory is vast and it is not our intention to attempt any comprehensive summary. One of the major strands of analysis, associated with Nurkse, was to suggest that a developing country must attempt to have balanced growth in both the agricultural and industrial sectors of the economy. An inter-sectoral balance was regarded as necessary so that each sector provides an adequate market for the produce of the other. Nurkse argued that it was the limitation in the size of the market that also limited the inducement to invest and acted as a constraint on the possibility of growth of a poor economy. Contrasting with this view were the contributions, among others, of Albert Hirschman and Hans Singer, who made a case for unbalanced growth. The idea was that a country should chart a growth path in areas where it enjoyed some inherent comparative advantage, with the process picking up momentum by making use of backward and forward linkages.

One of the major contributors to the literature was Paul Rosenstein-Rodan (1984) whose argument may be summed up in the phrase *natura facit saltum*, i.e., nature does make a jump. This was the opposite of the motto *natura non facit saltum* that Alfred Marshall had thought appropriate for economics. Rosenstein-Rodan's main contention was that unless a country at a low level of per capita income makes a concerted attempt for a 'big push' that simultaneously invests resources in several interrelated lines, the effort is most likely doomed to failure.

Amidst the voluminous writings on development there is a significant strand that conceptualises the development process in a necessarily holistic framework. Perhaps among the best practitioners of this approach is the Swedish Nobel laureate Gunnar Myrdal (1968) who wrote a magisterial three-volume tome, *Asian Drama*. The canvas of this ambitious opus was broad enough to examine the sociological and political elements of the development process. It can hardly be gainsaid that economic development cannot occur in a vacuum and adopting a holistic framework is a prerequisite of any serious study of this field. A number of India's major actors in the freedom struggle, notably Jawaharlal Nehru and Mahatma Gandhi, too had some systematic thoughts on the subject of development, and their conceptualisations were not in the narrow economistic mode.

In all of the above it is clear that the process of growth and development has to be closely guided by the visible and omniscient hand of the state (see Sen (2001), Datta-Chaudhuri (1990), and Nayak (1996), for example, for a review). It is clear that the classical postulate of the market system guided by the invisible hand, developed in the writings of Smith and Ricardo, simply fails to yield the desired results in many of the countries of Asia and Africa that have had a long colonial past. This idea was also quite apparent to some continental writers. Following Smith and Ricardo, the German economist Friedrich List put forward a strong argument for a large role of the state in his writings. In particular, List favoured a strong interventionist government and high tariffs to protect infant industries from British competition.

The classical system was of course fundamentally based on the idea that the best course of action for the state would be to adopt the stance of laissez-faire and allow economic agents to pursue their self-set goals without any let or hindrance. The chief claim, and the belief, was that the system would not only result in social harmony but would also satisfy some welfare properties captured by the economists' notion of Pareto optimality. This particular result was also accorded the position of the first fundamental theorem of welfare economics. But it is well known that this theorem holds under a number of crucial, and limiting, assumptions. For example, it is necessary to assume that all agents are infinitesimally small and that there are no monopoly or monopsony elements, that there are no externalities, and that the structure of production is such that there are no increasing returns to scale.

It is well known that none of the above assumptions actually hold in any economy, including the ones in Western Europe or North America. Thus, the possibility of these assumptions holding true for developing countries with low levels of real income may safely be disregarded. This situation denotes a simple case of failure of allocative efficiency, which would call for the regulatory presence of the state apparatus. The state would have to employ appropriate corrective policies – for example, tax and expenditure policies - to deal with the problem.

But in addition to ensuring efficiency in resource use, the state in a developing country may have to play the lead role in creating infrastructure and setting up industries requiring heavy sunk costs in areas like steel and cement, which would provide necessary inputs to the rest of the economy.

All of the above would call for an activist role for the state in the development process. A fundamental requirement here would be the ability of the state to mobilise adequate resources for the developmental process. The two chief options available are taxation and borrowing, and of course, public expenditure would have to be curtailed to the barest essentials. Clearly, resource mobilisation has to be worked out efficiently as well as equitably, and in a manner that it does not give a fillip to inflationary pressures.

The Indian Context

In the Indian context, ever since the onset of economic reforms a quarter century ago, a substantial measure of progress has been achieved in the area of taxation. Personal income taxes have been substantially overhauled from around the mid-1990s, and they are very much in line with the best international practice of having a moderate rate structure. But the other arm of best practice, viz., the need for widening the base, still appears to be a long haul. Only about three percent of households pay personal income tax in India, and pilot studies reveal that there would be at least another 2-3 percent of households which ought to be in the personal income tax net but are not.

In the realm of indirect taxes, which have been the mainstay of the Indian tax system, there was a widespread perception that the system of excise taxes at the Centre, and sales taxes at the state level, had become irrational, inefficient, and unwieldy, and a comprehensive reform on the lines of a rational value-added base was urgently called for. It is this which is being attempted with the introduction of the Goods and Services Tax (GST), which is a generalised tax on goods and services based on the 'value added' principle.

It must nevertheless be mentioned that despite a quarter century of extensive reforms in the area of public finances, the tax to GDP ratio in India has hardly moved up from the groove of about 17 to 17.5 percent or so. Concerted effort towards base widening and better implementation and enforcement, combined with an effective implementation of GST, ought to help step up the tax to GDP ratio at least by about three to four percentage points. This would provide the much-needed fiscal space to address the crying needs of several serious infrastructural constraints that the economy continues to face, to which the private sector is unlikely to respond – which means that the onus has to be borne by the state.

In certain specific spheres, the actual reality in India in the past decade should give some reason for comfort. Starting from the early years of planning in the 1950s, the country has travelled a long way. India's savings rate right now is in the region of about 30 percent of GDP, and it was as high as 35.7 percent in 2006-07. With a rough capital output ratio of around four, India today is growing roughly in the range of about 7-7.5 percent, which emerges from a direct and crude application of the Harrod-Domar formulation of growth. China's savings rate has been in the range of around 45 to 50 percent of GDP, which gave it the advantage of a 9-10 percent annual growth rate of GDP, or even more, over a period of more than three decades from the early 1980s.

Around 1979-80 the per capita income level in dollar terms was almost the same in China and India. After more than three decades of near double-digit growth, China's per capita income today has a multiplicative factor of around four or more. This is just one example of what John Maynard Keynes had called the power of compound interest.

It is gratifying to note that the current growth rate of India is possibly the highest among the major countries of the world, tipping that of even the mighty powerhouse China. The growth rates of Brazil, Russia, and South Africa have been much more modest, but there are great possibilities of substantially increased growth rates in each of these countries. As a collective group, therefore, there is great potential for significant growth that these countries can bring to bear to the world economy at large. This is particularly important because, for a variety of reasons, the advanced countries of North America and West Europe have been experiencing rather tepid growth in the recent past.

BRICS countries account for over 3.6 billion, or about one half, of the world's population. Together they account for about 22 percent of the gross world product. If the purchasing power parity notion is used, the share of the BRICS countries in the world's gross product moves up to about 31 percent. Against this background, the combined International Monetary Fund (IMF) quota of the BRICS countries is around 14.8 percent, and their combined vote share in the World Bank works out to a meagre 13.2 percent. A comprehensive reform of both the IMF and the World Bank would seem to be an urgent need of the hour. The case for the coming together of the BRICS countries to offer a counter to the existing world financial order should therefore be self-evident.

But it is also important to recognise that not everything is satisfactory within the BRICS countries themselves. There are two or three major issues that call for careful consideration.

The first has to do with the level of education and health. India is far from being in a satisfactory position in both these aspects. The achievement level is woefully low. Public expenditure on health as a fraction of GDP in India is as low as 1.3 percent (in China it is about 2.9 percent), whereas in EU countries the figure is in the range of about 6-8 percent of GDP, and in the Netherlands in excess of 10 percent. In India, a single illness of even a week to 10 days in an upper income family can completely destabilise its annual family budget. The difficulty and despair of the bottom rungs of society in this regard, it need hardly be added, is several-fold more acute.

Adhering to the advice of the major world lending bodies like the World Bank and the IMF, several countries, India included, have tended to think of certain notions like fiscal deficit as being sacrosanct, and have allowed the private sector to come into merit goods like health and education to an extent that is already rather discomfiting. In health and education systems the public sector must have a strong presence. This is not an argument for doing away with the private sector, but for bolstering the presence of the public sector to a much greater degree.

A second issue pertains to the degree of inequality in income and wealth in the BRICS countries. Regrettably, the situation in all the countries should give us cause for concern. The very process of market-led reform and growth that India opted for a quarter century ago did increase the growth rate of GDP from 6-6.5 percent to the nine percent plus range during 2005-08, for instance, but this also brought about an accentuation of inequality. This is possibly a global phenomenon, as has been emphasised by the enormous work done by Piketty, Atkinson, as well as Stiglitz. The Gini coefficient – a measure of inequality of incomes – in each one of the BRICS countries is uncomfortably high. It hardly needs belabouring that some notion of income and wealth equality is a prerequisite for social and political harmony. There is a further consequence of the secular trend towards an increase in inequality. Following the seminal contributions of Keynes and Michal Kalecki, it is now well recognised that a highly skewed distribution of income ultimately constrains the level of aggregate demand and therefore of economic activity as a whole.

Need for Indigenous Thinking

While trying to think of new development paradigms there is a strong case for paying heed to some of the home-grown notions of development that have emerged from the BRICS countries that might be distinct from the mainstream economic tradition.

Consider, in the Indian context, the thinking of Gandhi. Gandhi was not a trained economist, but he had thought substantially on the issue of development. His major tract was *Hind Swaraj*, written in 1909, penned on board a ship during his voyage from England to South Africa. Gandhi had also had extensive exchanges with Leo Tolstoy, so there was a Russian connection as well. Both Gandhi and Tolstoy were critical of the pursuit of individual self-interest which was the sheet anchor of Adam Smith's *Wealth of Nations*. *Hind Swaraj* was a strong critique of the Western notion of material growth. For Gandhi, development was necessarily an issue that had normative connotations. There are many other issues that Gandhi talked of – there is a school of thinking that is today known as Gandhian economics - but some are worth special mention here.

Gandhi talked of limitation of wants. This is the exact obverse of the entire classical and neoclassical project of expansion of the goods space, but possibly it is the only objective ultimately consistent with ecological balance in the long run.

Another key focus of Gandhi was on the 'daridra narayan,' the welfare of the poorest member of society. This is a Rawlsian concept, which Gandhi independently was aware of and emphasised. This is not to minimise the importance of the foundational formulation of John Rawls that has totally transformed the terms of discussion in theoretical welfare economics.

These were not the only elements in Gandhi's economic thought. Crucial for him was the need to provide employment to the teeming millions of India's workforce. It is in this context that Gandhi had argued against 'machinery' in *Hind Swaraj*. Gandhi was not against machines as such, but in the Indian context, if machines meant loss of employment, Gandhi was against them. One of the other major elements of Gandhi's thoughts was the idea of 'bread labour' that he borrowed from Tolstoy and the Russian peasant-thinker Timothy Bondareff, which enabled Gandhi to suggest that 'those who ate without doing work were thieves.' Gandhi's economics was thus very strongly rooted in ethics, and in fact he could not accept economics as a purely scientific field of enquiry.

Among indigenous modes of development thought, it would not be inappropriate to also consider the economic formulations of Jawaharlal Nehru, who like Gandhi, was not a trained economist. Yet, by the time he joined the freedom struggle as an active participant under the tutelage of Gandhi in the 1920s, Nehru had some rather well-formed views on economic development. As early as 1910-12 when he was 'hovering about London' pursuing his legal studies, Nehru had been attracted to Fabian socialist ideas. Nehru visited the Soviet Union in 1927 and was much impressed with what he saw. The Soviets had embarked on their five-year plans in 1928. The results were soon seen to be very positive and Nehru was one of the early converts to the idea of planning to bring about rapid economic and social development, once India gained independence.

In contrast to Gandhi, Nehru was a moderniser and believed in rapid industrialisation to lift India out of the morass of poverty. For him, planning was a necessary tool to bring about social transformation (see Nayak (2016)). After India gained Independence, Gandhi was assassinated within six months, and it was Nehru who substantially steered India's developmental path. In keeping with Nehru's essential thinking, heavy industries were given a strong push in the Second Five-Year Plan (1956-61) which was jointly formulated with P.C. Mahalanobis. But this was also the period in which Nehru gave a strong thrust to education and health by setting up the Indian Institutes of Technology and Indian Institutes of Management, and the All India Institutes of Medical Sciences in Delhi. The key idea was that education and health are merit goods and the state must have a strong presence in the provisioning of these goods and, more importantly, they should be provided free of cost by the state.

In present times and in certain quarters the Nehruvian predilection for the public sector is frequently seen as the villain of the piece in India's continuing fight against poverty. In fact, there was historical logic in the development strategy followed by Nehru. Again, the differences between Gandhi and Nehru in terms of their economic thinking have been overly played up. While certainly keen to promote industrialisation and heavy industries, Nehru, particularly in the latter part of his tenure as Prime Minister, was very much conscious of the need for careful attention to agricultural performance.

As the Chairperson of the Planning Commission, Nehru was careful about the drafting of the 'approach' to each of the five-year plans. In the very first page of the approach to the Third Five-Year Plan (1961-66) there is the following passage: "In the scheme of development during the Third Plan, the first priority necessarily belongs to agriculture. Experience in the first two Plans, and especially in the Second, has shown that the rate of growth of agricultural production is one of the main limiting factors in the progress of the Indian economy. Agricultural production has therefore to be increased to the largest extent feasible, and adequate resources have to be provided under the Third Plan for realising the agricultural targets" (Planning Commission (1961)).

Conclusion

All countries want high growth rates, especially countries like India and South Africa, where there are large pockets of poverty and even destitution. But there is no need to be fetishist about the growth rate. At the end of the day, the growth rate is only a means and not an end. The end must be a higher level of individual and social well-being. Individuals must be enabled to achieve and perform to the highest levels they are capable of. At a social level, countries require a high degree of peace and social harmony, a clean environment, and sustainable ecology.

There must be original indigenous formulations emerging from China, Russia, Brazil, and South Africa as well, and all five countries should try to know more about one another.

A continuation of the existing world economic order will not address the requirements of the BRICS countries. In the recent preparatory get-togethers prior to the 8th BRICS conference in Goa, there were a number of sceptical points of view presented, paradoxically, by some of the leading lights of reputable Indian think tanks. This perhaps should not have come as a surprise. There is always a conventional way of thinking dominated by the existing order, and such modes of thinking rarely, if ever, question the status quo.

The ground reality, however, is one where at least two of the five BRICS countries, viz. India and China, are among the fastest growing countries of the world. These are both low-wage economies and together account for some 38 percent of the world population. Sustained rapid growth in these countries is likely to alter the entire pattern of world trade and production in years to come. Combined with the other three physically large economies of Brazil, Russia, and South Africa, this group of five has the potential to alter the course of investment and growth in the world at large. For this they have to make a beginning by setting up the appropriate institutions. A major beginning has been made with the setting up of the New Development Bank in Shanghai.

There is no room for pessimism here. It is essential to ensure that the citizenry of the BRICS countries, now enjoying only modest levels of real income, achieve, through active and purposive collaboration among these countries, a much higher level of well-being. This would be best realised if the nationals of each of these countries have adequate levels of education, health, and social security. There is no need to be fetishist about the growth rate, but there is need to be sensitive about the well-being and aspirations of the bottom rungs of the population across the BRICS countries. This should not seem an outlandish enterprise.

The author is deeply indebted to participants of the 8th BRICS Academic Forum in Goa during 19-22 September 2016 for making a number of critical observations on the paper. All errors are the author's.

BRICS & SDGS: PROSPECTS OF MINILATERAL ACTION ON A MULTILATERAL AGENDA?

Vikrom Mathur
Senior Fellow and Head, Climate Change and Development Initiative, ORF

Introduction

A prominent trend in global affairs in the 21st century has been the emergence of collectives and alliances of nations as alternatives to traditional multilateral cooperation under the aegis of the United Nations (UN) and Bretton Woods Institutions. Global governance analysts have debated the promise and perils of this trend, most recently for global climate action, under diverse framings such as: minilateralism,[1] clubs,[2] building blocks approach,[3] polycentric governance,[4] and fragmented global governance.[5]

The BRICS alliance is one such grouping of nations – an alliance formed by five countries because of their shared economic potential, despite their varying geopolitical tendencies. Does the BRICS offer a viable platform for the implementation of the multilateral Sustainable Development Goals (SDGs) of the UN?

This paper argues that the BRICS platform provides pragmatic possibilities for global action on the SDGs under the normative umbrella of the UN Agenda 2030. The BRICS countries can learn from one another while also providing a forum for interrogating and reforming global processes relevant to the sustainable development agenda.

Financing for development, peace and security, trade and technology regimes, all relate to development and need to be taken into account for the BRICS to achieve their SDGs. The SDG regime itself needs to be strengthened as systems for monitoring and evaluation of the goals evolve.

This paper is organised in three main sections: (i) the current development state of BRICS nations individually and the development gains that have been made as a result of cooperation across the bloc, (ii) key areas in which the alliance can cooperate to enhance achievement of SDGs – finance, trade, technology regimes, and peace and security, and (iii) the positions the BRICS nations need to negotiate around in the ongoing attempts to strengthen the SDG regime through the establishment of monitoring systems.

SDGs across BRICS

The Current State of Development across BRICS

The BRICS countries account for about 40 percent of world population and around 25 percent of world GDP in Purchasing Power Parity terms.[6] Considering the proportion of the world's population and economic wealth that exists among the five member states, the global success of the SDGs will be heavily dependent on their successful implementation in the BRICS countries. It is important, therefore, to examine the state of development that currently exists across the alliance.

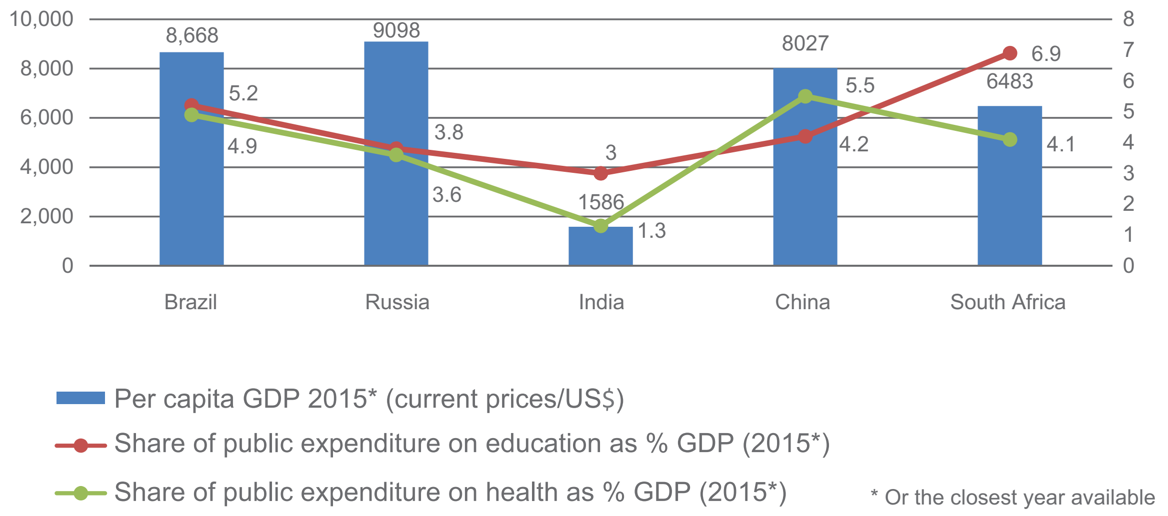
In terms of economic development, India has the lowest per capita GDP (current prices/USD) among the five countries. India's lack of the economic power affects many other development areas, a fact that is reflected in the country's health and education spending as a percentage of GDP (see Figure 1). It would, however, be a misnomer to link economic wealth to sovereign social sector spending, as can be seen with Russia which spends less on health and education than most of its BRICS cousins, despite having the highest per capita GDP in the group.

An analysis of public sector spending also allows us to examine the priorities of each BRICS member nation. China, for example, spends relatively more on health than education while both South Africa and India spend relatively more on education than health.

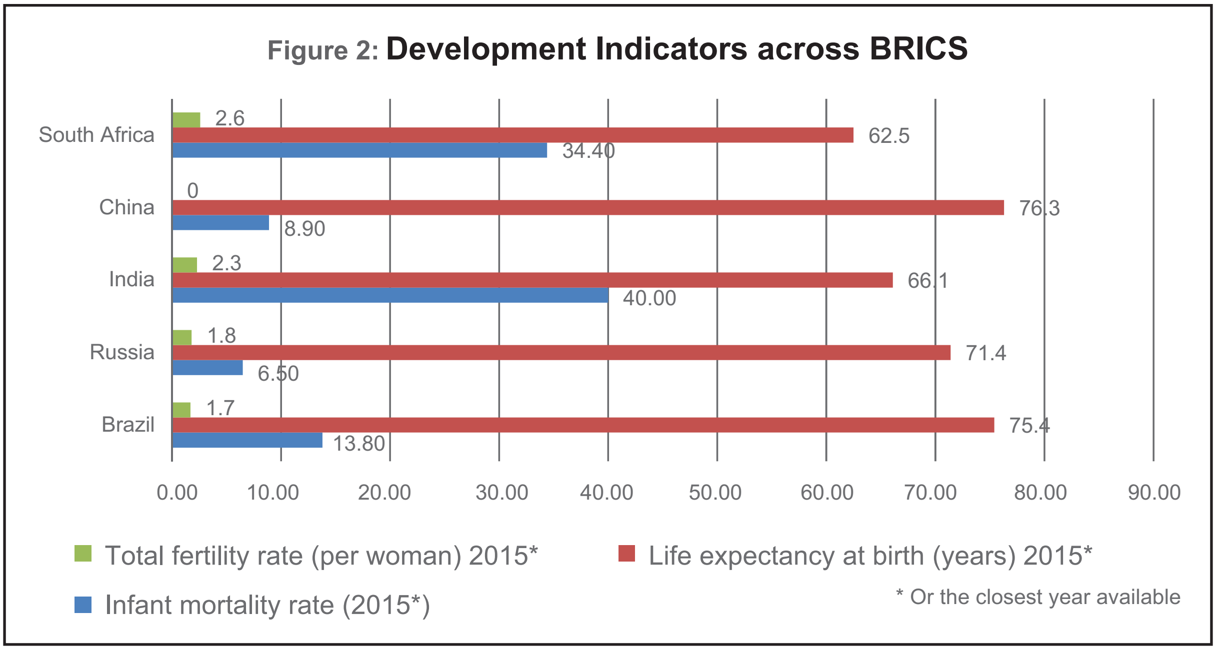
It is interesting to note that India has the youngest population, while Russia has the oldest. This also brings up the issue of what is known as the "demographic dividend," which countries like India can exploit, and the need to invest in human development to make full use of the opportunity.

BRICS nations have, over the past few decades, seen sustained poverty reduction, driven by stable economic growth. However, the widest inter-national differences among the five indicators explored below

Figure 1: **Income and Social Sector Spending among BRICS Countries**



Source: WITS COMTRADE



Source: WITS COMTRADE

Table 1: Trends across BRICS Nations

Country Name	Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population)		Literacy rate, youth female (% of females ages 15-24)		Prevalence of undernou-rishment (% of population)		Labor force participation rate, female (% of female population ages 15+)		Births attended by skilled health staff (% of total)	
	1990	2011*	1990*	2015	1990*	2015	1990	2014	1990*	2008*
Brazil	20.6	5.5	95.7	99.3	14.8	5	45	59.4	69.5	98.1
China	66.6	7.9	91.4	99.7	23.9	9.3	73	64	94	99.9
Russia	2.3	0.1	99.7	99.7	..	..	60	57	99.2	99.7
India	45.9	21.2	49.3	87.2	23.7	15.2	35	27	34.2	52.3
South Africa	29.2	16.6	94.2	99.3	5	5	39	44.7	82	94.3

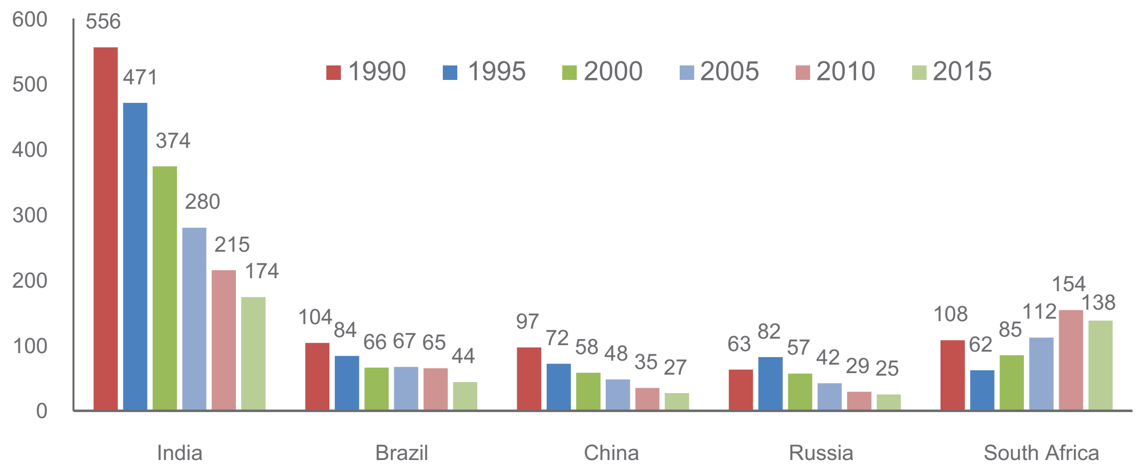
** Or the closest year available*
Source: World Development Indicators

continue to exist in the poverty headcount ratio, which ranges from 0.1 percent for Russia to 21.2 percent for India. The most remarkable achievements have occurred in China, which has managed to decrease its poverty headcount by nearly 60 percent in two decades. Apart from India, where literacy rate for females aged 15-24 stands at 87.2 percent, all other BRICS countries have achieved around 100 percent literacy among their youth.

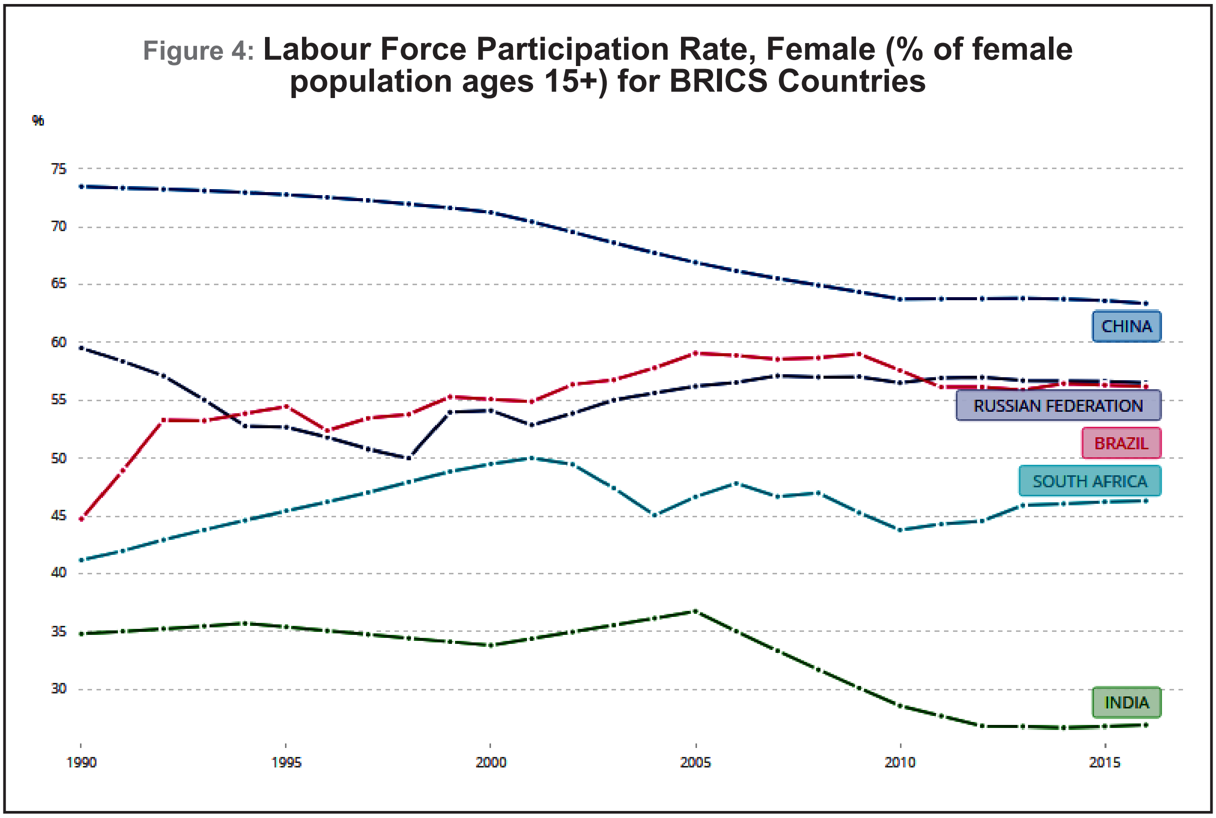
Over the last few decades, Brazil, China, and India have managed to bring down the proportion of their respective undernourished populations considerably. China's achievement remains truly remarkable, while South Africa has faced stagnation, albeit at a low baseline. It should be noted that the AIDS epidemic in South Africa was significantly exacerbated by the delay in governmental response in acknowledging and putting in place policies to mitigate the public health disaster. South Africa's development indicators have suffered across the board due to the lapses of the public health decision makers of the era. For example, South Africa is the only country within BRICS where the Maternal Mortality Ratio has actually increased in the past few decades (Figure 3). In fact, studies have shown that HIV infection is the most important condition contributing to maternal death in South Africa.[7]

In an interesting turn of events, the labour force participation rate of women, regarded as a key development indicator, does not capture the full extent of the development story for certain BRICS nations. India and China have seen a decline in the labour force participation rate of women over the last few decades (Figure 5). In India's case, a World Bank study has found that the decision to join the labour force is, counter intuitively, primarily influenced by economic stability rather than social norms, educational attainment, and age.[8] In other words, rising economic security and stability of their respective households are driving women out of the workforce and disincentivising them from re-joining.

Figure 3: **Maternal Mortality Ratio in BRICS Countries**



Source: http://www.who.int/healthinfo/statistics/en/



Source: BRICS Joint Statistical Publication, 2016, MoSPI, Government of India

Intra-BRICS Cooperation

Health is one of the key areas in which cross-BRICS collaboration has seen movement in recent years. A key step in the right direction occurred during the BRICS 2016 Health Ministers' meeting in New Delhi where an agreement was reached to convene a health working group aimed at coordinating work on a variety of health-related issues. The working group was given a mandate to strengthen sovereign regulatory systems; increase knowledge sharing among member nations; facilitate effective handling of health emergencies; and provide recommendations for the promotion of R&D for innovative medical products (drugs, vaccines, and medical technologies). Additional issues the working group will consider include the promotion of existing IT platforms; the building of regulatory capacity through an institutional development plan for BRICS countries; and advancing cooperation and action on research on HIV, tuberculosis, and malaria in the BRICS countries.[9]

Additionally, BRICS nations have agreed to make collaborative efforts to reduce premature mortality due to Non-Communicable Diseases (NCDs). This will be done through the development of cost-effective diagnostics, medicines, technologies, and behavioural-change strategies required for the management of key NCDs. Plans are also being made for the sharing of systems for monitoring and evaluation in NCDs and their risk factors. There have also been commitments made to advance operational research as well as share training programmes for various categories of healthcare personnel in order to facilitate capacity building to diagnose and manage NCDs.[10]

Leveraging BRICS to Achieve SDGs

Achieving the SDGs that were outlined under the 2030 Addis Ababa Action Agenda is a daunting task, considering the ambitious targets that were set. To give sovereign nations the best chance to achieve these goals, it is important to overcome some of the major development roadblocks that exist currently.

Financing Development

One of the major issues facing emerging and developing economies in the world relates to the paucity of funds earmarked to achieve SDGs. While some SDGs will invariably require public sector spending, others can be achieved through alternative methods of funding. One example is the funding of infrastructure projects (which are relevant to the achievement of a number of SDGs) through the use of private capital and multilateral development banks.

Current projections show that conservatively, USD 836 billion is needed annually to fund infrastructure projects in emerging economies. Unfortunately, the amount of funding currently being made available is woefully inadequate, leaving a USD 452 billion funding gap that needs to be bridged.[11] It is important to note that this funding gap exists for projects that are not only important for the achievement of SDGs but also happen to be profitable for investors. The disparity between the opportunities provided by infrastructure projects and the inadequacy of available funding for them is hard to explain from a financial perspective. Infrastructure projects provide a steady, predictable, and long-term income stream, often with inflation protection. They are just the kind of investments that investors (whether private institutions or public multilateral organisations) desire.

The reasons usually given for this funding gap are threefold – investors shy away from the risks associated with investing in emerging countries; there is a lack of investor knowledge on how to conduct business in developing economies; and investors often lack the specialised skills needed to successfully analyse emerging market infrastructure projects.

In finance, when there is a lack of investor interest in a project, loans from banks can often help make up the funding gap. Unfortunately, this is not possible in the case of infrastructure projects in emerging countries. Due to the laxity with which loans were granted by banks prior to 2008, new regulations have been put in place to make sure that a financial crisis does not occur again. An unintended consequence of these regulations (known as the Basel Regulations) has been the curtailing of long term or "risky" loans by many international banks. Infrastructure projects in developing countries have a long-term investment horizon and have more risk associated with them than projects in developed countries, which makes lending for such projects prohibitively costly for banks.

It is for situations such as these that the Bretton Wood Institutions have been created. Robert Keohane's theory of institutions[12] states that multilateral institutions are created to battle cases of market failure. Yet the International Monetary Fund (IMF) and the World Bank have not held up their end of the bargain. A slow-moving bureaucracy, an allocation system based on contributions, and an unwillingness to alter structures to reflect current economic power dimensions have led to a lack of funding from the Bretton Wood Institutions to the emerging economies that need it the most.[13] Recent resolutions have finally been passed allocating more economic power and giving the BRICS nations more say in the allocation of funds. Yet the profound distrust with which these institutions are viewed by developing nations and the shrivelling up of investments made by the World Bank have led to uncertainty about the future of the Bretton Wood Institutions.[14] While the uncertainty and lack of funding is unfortunate, the situation does provide an opportunity for BRICS cooperation with regards to development, under the aegis of the New Development Bank (NDB).

From a financial perspective, the NDB can help mitigate many of the risks that make emerging country infrastructure projects unattractive for investors. Using the expertise of their member countries, the NDB can battle the lack of knowledge that hinders the conduct of business in developing countries, while helping to smoothen out some of the political risks. Concurrently, the investments made by the NDB could help to create a template for private investors to use when they analyse potential infrastructure and sustainable development projects in emerging markets. Perhaps most importantly, the NDB could act as either a co-investor or a backstop for potentially risky investments, providing a powerful multiplier effect to infrastructure and sustainable development resource investing.

From a political perspective, the NDB allows the BRICS nations to take a key step towards helping bridge a fundamental need of many of the world's emerging economies, while also giving notice to established multilateral organisations that they are not afraid to strike out on their own. It also provides further impetus for the reformation of the IMF and World Bank, lest they be made irrelevant by new multilateral organisations such as the NDB or the Asian Infrastructure Investment Bank. If the Bretton Woods Institutions do recognise the need for change, there can be even more value brought about by building synergistic alliances between the new world and old world multilateral organisations.

Cooperating under the banner of the NDB can also give BRICS nations an opportunity to work together on issues that are not related to infrastructure investing. The issue of low-income country debt has been a dividing line in the UN for decades, and the BRICS nations have stood steadfastly with the low-income nations, which are often left helpless when the debt they owe is sold off to hedge funds or vulture funds.

As shown by the case of Argentina versus NML Capital,[15] not even sovereign nations have the bargaining capacity to escape powerful creditors. (After Argentina defaulted on its loans during its severe economic crisis in the early 2000s, the US Supreme Court ruled that its status as a sovereign country did not grant it immunity from vulture fund NML seizing its assets.) The NDB can help fight such impoverishment of nations by buying debt from sovereign creditors to prevent it from falling into the hands of hedge/vulture funds. The bank can also offset some of the debt that is owed by extremely indebted nations through profits from successful infrastructure projects over time. As the NDB grows in stature, BRICS nations can provide a voice for the disenfranchised and push back on issues of debt against inequitable organisations such as the UN. By enhancing and empowering its cooperative multilateral bank, the BRICS member states can help assuage many of the development financing issues they are currently facing.

Encouraging Fair Trade Regimes

As is apparent from some recent political events, there has been a global backlash against the concept of globalisation, with the electorate of many developed nations suffering from free trade fatigue. As political rhetoric espousing protectionism ramps up, it is important that the progress towards establishing a more inclusive global trade framework for developing countries is not swept under the rug. To achieve SDGs globally and individually, it is imperative that the BRICS nations use their influence to push WTO reforms forward.

The Doha Development Agenda and the sluggish progress of its negotiations is a classic example of the inherent weaknesses of the WTO. More than 15 years after the Doha trade talks were proposed, the deal is still under negotiation. Many celebrated the progress made on agricultural trade as part of the "Nairobi Package" in 2015[16] – specifically, member states agreeing to get rid of export subsidies in agriculture. However, certain loopholes in the agreement render this hard-won consensus largely ineffective. For instance, there is the argument that what was earlier classified under export subsidies can now be easily couched under domestic subsidies.

The WTO has, in the past, proved to be an effective arbiter of international trade, and is the ideal platform for global negotiations on trade. However, it is often very difficult for all member states to agree on the terms of a deal. Even if consensus is reached, the outcomes are generally severely diluted versions of the original proposal – and thus are considered hollow commitments. The agricultural subsidies agreement under the Doha Agenda is a case in point. Further, the negotiations are long, drawn-out processes, and members might be unwilling to wait for such a protracted period of time. For the WTO to remain relevant in the current economic climate it must address these challenges – it needs to transition from idealism to pragmatism.

A pragmatic approach to multilateral trade requires reassessing traditional approaches and systems. A broad trade agenda with the condition of a single undertaking might not be the most effective approach to global trade agreements. The long gestation period means that issues identified at the beginning of the process may become irrelevant by the time the outcomes are agreed upon. Alternately, certain topics may have more relevance by the time the outcomes are finalised. For example, e-commerce and the use of digital instruments in old sectors of trade are new domains that require attention. As such, rather than taking up a wide-sweeping agenda, a more fruitful approach would be to take up individual sets of inter-related ideas that can be negotiated within shorter time-frames. Unlike regional trade agreements, the WTO functions under a one-country, one-vote framework. Given the democratic design of the organisation, BRICS should work towards strengthening the WTO platform, taking into account new developments and requirements of the global economy.

Peace for Development

Terrorism has become a serious threat to international security. Be it with home-grown extremists or Pakistan-sponsored Khalistani and Kashmiri separatists, India has had a long history of dealing with the threat of terrorism. This is not an issue that is unique to India, however. Horrific terror attacks conducted by Chechen separatists in Russia and the recent spate of attacks by Uyghur separatists in China are well documented. More worrisome has been the recent and rapid spread of the Islamic State's ideology through social media, that has allowed IS to recruit followers across the world. In the existing, strongly inter-connected international system, BRICS nations remain as vulnerable to attacks by local IS recruits as any other country. In addition to preventing unnecessary loss of life, domestic security remains one of the keys for achieving many of the SDGs under the Addis Agenda. BRICS nations therefore share a common agenda of mitigating the threat of terrorism.

Recognising this, BRICS at its 8th Summit in held in October 2016 in Goa called upon all nations to expedite the adoption of the Comprehensive Convention on International Terrorism (CCIT) at the UN General Assembly (UNGA). The objectives of CCIT include having a universal definition of terrorism that all 193-members of the UNGA will adopt into their own criminal law, banning all terror groups and shutting down terror camps regardless of their stated objectives, prosecuting all terrorists under special laws, and making cross-border terrorism an extraditable offence worldwide. The original draft of CCIT was proposed by India at the UNGA two decades ago in 1996. However, due to disagreements over definitions of what would constitute an act of terrorism and a terrorist group under various national laws, the draft remained in consideration and could not be adopted. Fixing these loopholes, India tabled a revised draft of the CCIT at the UNGA in September 2016, urging all members to pass it. BRICS's endorsement of swift adoption of the CCIT certainly captures the alignments of the BRICS nations, in so far as international security is concerned.

Terrorism, however, is just one of the threats to internationals security and the CCIT is just a tool to fill the legal lacuna in the fight against terror. A deeper assessment of BRICS nations' individual positions even in the fight against terror captures fissures within this minilateral club. China's decision to block India's move for a UN-imposed ban on the Pakistan-based Jaish-e-Mohammad chief, Masood Azhar, is a case in point. Masood Azhar is accused of masterminding the terror attack at the Pathankot Air Force Station in northern India. China's decision to block a UN ban on Masood Azhar appears to be driven by its geopolitical interests, which has allowed its ally – Pakistan – to use terrorists as state proxies against India. Given its policy, Pakistan is expected to go all out in opposing adoption of the CCIT and will likely influence China's position when it comes to voting on CCIT's adoption.

More efforts are therefore required to align BRICS countries' individual positions against terrorism to ensure that they retain a common voice on terrorism. If the member states cannot cooperate on peace and security issues, it will be difficult for them to achieve their SDGs.

Strengthening the SDG Regime

Conceived during the Addis Agenda meet in 2014, the SDGs are meant to be a universally shared global vision, intended to provide a safe, progressive, and sustainable life for all people. The SDGs are ambitious and aim to lift humanity to a stage that has never been achieved throughout history. It is important to recognise, however, that there are ways for the SDG regime to be strengthened to help ensure that that the goals are achieved over the next 13 years. Areas for improvement include promoting differentiation amongst signatories; streamlining the key indicator requirements in order to focus on only a few key development indicators; curtailing certain follow-up and review mechanisms; and encouraging more participation from the developed nations of the world.

BRICS NATIONS MUST PUSH FOR FOCUSING ON A FEW KEY DEVELOPMENT INDICIATORS UNDER THE SDG AGENDA.

The BRICS nations have sought to evaluate each possible goal in the Addis Agenda in terms of specific deliverables for all developed countries.[17] In their view, the concept of universality is complementary to the idea of differentiation when it comes to designing specific action items for countries. The member states should work together to make sure that differentiation, as embodied in the principle of Common But Differentiated Response towards climate change under the United Nations Framework of Convention on Climate Change, remains the basis of crafting targets under the SDGs.[18]

There is undoubtedly value in tracking a common set of indicators on key aspects of development across countries. Taking health as an example, tracking the progress towards the previous Millennium Development Goals (MDG) regime has led to substantial improvements in monitoring capacity for many nations. Such commitments not only put pressure on governments to deliver on the promises they made under the SDG framework, but also provide a way for civil society, parliaments, and the media to hold their leaders accountable.[19]

Yet there are concerns about the burdens associated with the current global indicator framework. The 17 goals and 169 targets of the SDG framework are complemented by 231 indicators, approximately five times the number of indicators that existed in the MDG era. The reporting burden associated with these 231 indicators is much greater than in the MDG era and has already been shown to be stretching the resources of developing nations, taking away from implementation capacity. For example, the Indian Ministry of Statistics suggests that the country currently has the capacity to collect data for only 23 out of the 231 SDG indicators. It is incumbent upon the BRICS nations with their collective geopolitical might to push for a more streamlined approach under the SDG framework, focusing on a few key development indicators rather than burdening nations with the current scattershot approach.

The follow-up and review mechanism is an important part of the SDG framework. For SDGs to be effective, the follow-up and review mechanism must be lean, flexible, voluntary, state-led, participatory, and non-prescriptive. It should also maintain a forward-looking and positive mindset with the intention of sharing best practices and enabling implementation at the national level.[20] There have been concerns raised, however, about the UN proposal that would use the voluntary common reporting guidelines as a template. In any truly voluntary exercise, such a template should not be necessary. It should be the position of the BRICS nations that the High Level Political Forum on sustainable development convened under the aegis of the UN need not provide any feedback to member states on voluntary national reviews.

The SDGs are applicable to all the nations of the world – developed and developing. Yet, SDGs are often regarded as a third-world issue and receive little attention from the developed parts of the world. This makes the achievement of SGDs difficult, as there are certain goals – such as Goal 12: Sustainable Consumption and Production; Goal 13: Action to Combat Climate Change; and Goal 17: Means of Implementation – that require strong action by developed nations as well for SDGs to be achieved on a global level.

The divide in national responsibilities is exacerbated by the fact that despite the universal framing of the 2030 Agenda, the responsibilities of developed nations, including outside responsibilities, remain largely outside the indicator framework.[21] There is additional cause for concern in that the focus of most of the indicators seems to be exclusively on national action, even in respect of those targets that are clearly meant for international cooperation.

A clear example of the focus on national indicators can be seen under Target 12.1 of the framework, which calls for the implementation of a 10-year framework on sustainable consumption and production (SCP) for all countries, with developed nations taking the lead. The indicator for this target, however, neglects any accountability for the leadership role that must be taken by developed nations, focusing rather on a simple headcount of countries that have implemented or formulated an SCP framework. It could be argued that the main reason for the lack of accountability for developed nations for this indicator is political.[22]

Another example of lack of accountability for developed nations can be seen under Target 1a, which calls for the mobilisation of resources from a variety of sources to provide adequate and predictable means for developing countries to implement programmes and policies to end poverty in all its dimensions.[23] The suggested indicator for this target, however, focuses only on national resource availability. This is true of several such targets. Needless to say, this detracts from the spirit of the SDGs and in particular the Means of Implementation targets which seek to enhance international support for developing country actions.[24] It is important for the BRICS nations to use their international governance platform and political power to push for a reformation of the SDG indicators to reflect the responsibilities that developed nations must take on under the SDG framework.

Conclusion: A Bargaining Coalition or an Imagined Community?

The fundamental reason behind the BRICS coalition coming together was the political and economic potential of the member nations. As emerging economies with large markets and high growth potential, they were a viable alternative to the traditional Bretton Woods Institutions. When looking at the current political climate, there is limited convergence between the member nations on normative questions and internally the countries have very little in common. Critics have argued that the political differences between the BRICS nations will override the alliance around shared economic prospects.

There remain avenues that will allow for the continued existence and prospering of the BRICS alliance, with collaboration on the issue of sustainable development goals being a key one. The narrow rationalist framing of the BRICS as a bargaining coalition against the established economic order and the power of Bretton Wood Institutions and processes has shown itself to be untenable in the current global geopolitical process. An alternative view that promotes BRICS as an imagined community or solidarity based, creating pathways along which cooperation will evolve in various domains, is a more evolved direction that will allow for the continued existence of the coalition, with collaboration on the achievement of SDGs being one of the key domains.

COMMON HEALTH CHALLENGES AND PROSPECTS FOR COOPERATION IN BRICS

Professor T.C. James
Visiting Fellow, Research and Information System for Developing Countries

Introduction

In the health sector, the BRICS countries present an interesting and diverse picture. In 1990, Russia was a country with very good health indicators – life expectancy at 69 years, Infant Mortality Rate (IMR) (deaths per 1,000 live births) at 22 and Maternal Mortality Rate (MMR) (mothers dying in childbirth per 100,000 births) at 63. Because of its socialist system, it had very good healthcare facilities in the public sector, which were both accessible and affordable.

In that year, the health indicators of the other four BRICS members were in stark contrast. Brazil's life expectancy was 65 years, IMR 51 and MMR 104. India's figures were 58, 88 and 556 respectively. Those of South Africa were 62, 47 and 108. China, also a Communist country, had life expectancy at 69 years, IMR at 42 and MMR at 97.[1] In the years between 1990 and 2015, the BRICS countries made significant progress, but at varying rates.

Millennium Development Goals

The Millennium Development Goal (MDG) process could be considered a major factor in this development. It set certain common goals for all countries, not only BRICS but the entire world, to be achieved by 2015. Among the MDGs, three were of particular significance to the health sector – Goal 4, reducing child mortality; Goal 5, improving maternal health; and Goal 6, combating HIV/AIDS, malaria, tuberculosis (TB) and other diseases. At the global level, there has been significant progress in achieving these goals with the global number of deaths of children under five coming down from 12.7 million in 1990 to six million in 2015.[2]

Similarly, in the case of maternal health, progress has been very good, with the world MMR shrinking from 380 in 1990 to 330 in 2000 and further to 210 in 2013,[3] i.e., a decline of about 45 percent, most of it occurring after 2000. As for combating identified diseases, there have been significant achievements as well with the level of new HIV infections being brought down from 3.5 million to 2.1 million, a nearly

40 percent drop. As per the UN MDGs Report 2015, over 6.2 million deaths on account of malaria have been averted between 2000 and 2015. Treatment saved about 37 million people suffering from TB during the period 2000 to 2013, with the TB mortality rate falling 45 percent and the prevalence rate 41 percent in the period 1990 to 2013.[4]

The record of the BRICS nations in attaining these three goals, from 1990 to 2015, is presented in Figures 1, 2 and 3.

Figure 1: Infant Mortality Rate (per 1,000 live births)

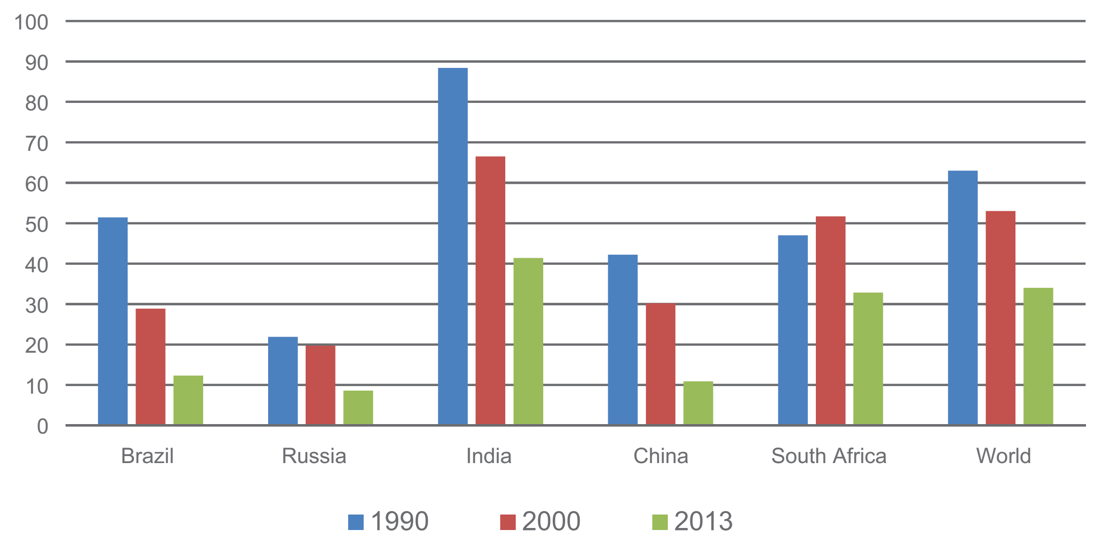
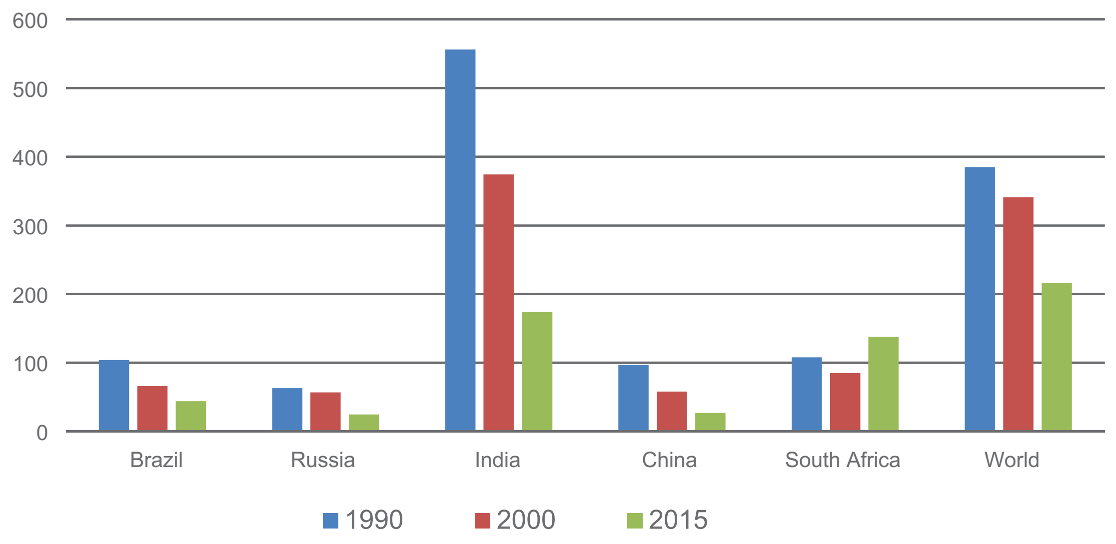
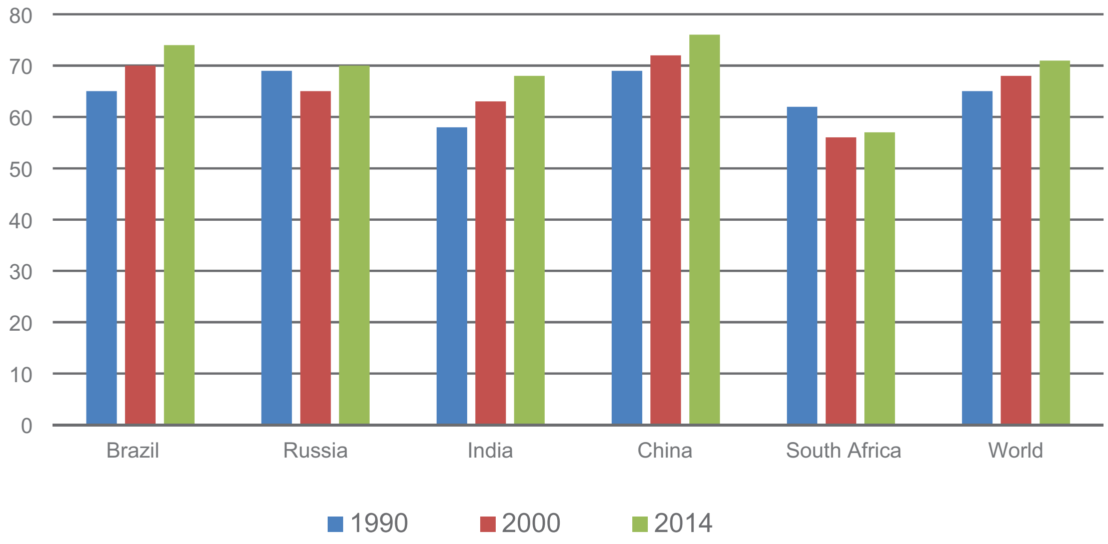


Figure 2: Maternal Mortality Ratio (per 100,000 live births)



Source: UNSD MDG Database

Figure 3: **Life Expectancy at Birth, total** (years)



Source: UNSD MDG Database

As far as IMR is concerned, the BRICS countries, except India, have done generally better than the rest of the world.

With MMR, again, all BRICS countries barring India have done consistently better than the world average. In fact, Russia has been outstanding. India too had reduced its ratio below the world average by 2015, a significant achievement, considering that it started with a very high ratio.

Coming to life expectancy at birth, Brazil and China have been consistently better than the world average. Russia, above the world average in 1990, had fallen behind by 2000, and still remains so. South Africa too, like Russia, was close to the world average in 1990, but regressed thereafter till 2000, followed by a mild recovery till 2014, but has still not yet reached its level of 1990.

Sustainable Development Goals

Following the success of the MDGs, the world community committed itself to the more wide-ranging Sustainable Development Goals (SDGs), numbering 17 in total, to be achieved by the year 2030. Goal 3 on ensuring healthy lives and promoting well-being for all at all ages is directly related to health, but many other goals and several targets, such as ending poverty in all its forms everywhere (Goal 1), ending hunger, achieving food security and improved nutrition (Goal 2), ensuring availability of water and sanitation for all (Goal 6), ensuring access to affordable and reliable modern energy for all (Goal 7), and taking urgent action to combat climate change and its impact (Goal 13), are indirectly related to the achievement of health for all. In fact, as had already been recognised in the Rio+20 document, "health is simultaneously, a pre-condition for and an outcome and indicator of, all three dimensions for sustainable development" (UN, 2012). The BRICS countries which account for 42 percent of the world population (UNDP 2011) are, as a group, a major determinant of the achievement of these goals.

With 19.8 percent (27.1 percent in PPP terms) of the global GDP, the coalition is a major global player.

The global targets to be achieved by 2030 – reduction of MMR to less than 70, ending preventable deaths of newborns and children under five years altogether, reducing neonatal mortality to less than 12 per 1,000 live births and under-five mortality to less than 25 per 1,000 live births, ending the epidemics of AIDS, TB, malaria, and other communicable diseases, will not be achieved unless the BRICS nations achieve them too. This is particularly so when one looks at the current status of the BRICS members on these and other global targets.

Health Status in BRICS

Table 1 presents the disease burden and certain other indicators for the BRICS countries.

On certain indicators, BRICS nations have done better than the global average, but considering the size of their populations, and also in comparison with the Organisation for Economic Co-operation and Development (OECD) countries, the BRICS nations have much to do to catch up.

In fact, the BRICS countries account for the majority of leprosy, malaria, TB, and HIV/AIDS cases. South Africa has the largest number of persons suffering from HIV/AIDS in the world. India has the same dubious distinction with regard to TB, with more than 27 percent of the world's TB cases in this country.

Table 1: Disease Burden in BRICS and the World (2012)

Disease/Indicator	Brazil	Russia	India	China	South Africa	World
Maternal Mortality Ratio (per 100,000 live births)	44	25	174	27	138	216
Neonatal Mortality Rate (per 1,000 live births)	9	5	28	6	11	19
Under-five Mortality Rate (per 1,000 live births)	16	10	48	11	41	43
Number of people living with HIV/AIDS	830,000	-	2,100,000	2,088,642	7,000,000	36,700, 000
Number of Tuberculosis cases	81,137	130,904	1,740,435	804,103	294,603	6,375,585
Number of Malaria cases	230,000	-	17,000,000	4,800	19,000	214,000,000
Percentage of Under-five deaths due to diarrhoea	3%	1%	10%	3%	9%	-

Source: WHO GHO Database, UN AIDS, and UNICEF

All five are considered high burden countries for TB (BTTC: 2015). If these countries are able to achieve their targets, the universal target achievement can become a reality. The incidence of Non-Communicable Diseases (NCDs) has also been steadily rising in these countries, owing to changes in lifestyle and food habits, following the rise in the economic status of their people. These add a double burden on these countries.

There is diversity among BRICS member countries in regard to their levels of health achievement and in the provision of health-care. This is seen in the differing strengths and weaknesses of the countries in the area of health-care. (See Table 2)

The growing prosperity of these countries also makes them major players in health-care globally. The traditional high-income economies are currently in a period of 'no growth' (Harmer: 2013), whereas the BRICS countries belong to the group of emerging economies with high growth rate. The gap in the required public health expenditure globally can be reduced only by the efforts of this bloc.

BRICS economies are generally growing at a faster pace than other countries, but economic growth is not always translated into healthcare improvements. India is the fastest growing economy, but it is way behind other BRICS members in the matter of health-care. One reason could be the comparatively low public expenditure on health. As per a 2012 estimate (Rodwin: 2015), public expenditure on health as a percentage of GDP in the five countries is 3.32 only. By 2014, the average had dropped further to 3.24 percent. The position is much the same across individual countries, as can be seen from Table 3. There has not been much change in the focus on health in the national government budgets.

Health for all can become a reality only with high public expenditure on health-care since Universal Health Coverage (UHC) cannot be brought about, particularly in countries where the majority of the people are poor. The World Health Organization (WHO) and the World Bank have defined UHC as a situation where "all people receive the health services they need without suffering financial hardship when paying for them."[5] When public expenditure on health-care

Table 2: Health-care Status in BRICS Countries

<table>
<tr><th colspan="2">Indicator</th><th>Brazil</th><th>Russia</th><th>India</th><th>China</th><th>South Africa</th></tr>
<tr><td colspan="2">Density of hospital beds per 100,000 population (2004-2014)</td><td>22</td><td>82</td><td>7</td><td>42</td><td>–</td></tr>
<tr><td colspan="2">Density of physicians (Total number per 1,000 population) 1998-2014</td><td>1.891</td><td>4.309</td><td>0.702</td><td>1.491</td><td>0.776</td></tr>
<tr><td rowspan="2">Median availability of selected generic medicines in public and private health facilities. 2007-2013</td><td>Public %</td><td>–</td><td>100</td><td>22.1</td><td>15.5</td><td>–</td></tr>
<tr><td>Private %</td><td>76.7</td><td>100</td><td>76.8</td><td>13.3</td><td>71.7</td></tr>
</table>

Source: WHO Database

Table 3: Public Health Expenditure in BRICS as a Percentage of GDP

Country	Percentage of public health expenditure as a percentage of GDP in 2012*	Percentage of public health expenditure as a percentage of GDP in 2014**
Brazil	4.3	3.8
Russia	3.8	3.7
India	1.3	1.4
China	3.0	3.1
South Africa	4.2	4.2
BRICS average	3.32	3.24

**From Rodin 2015*
*** Source: World Health Organization*

Table 4: Per Capita Total Expenditure on Health (PPP int. $)

Country	2010	2011	2012	2013	2014
Brazil	1167.13	1199.85	1257.33	1334.1	1318.17
Russia	1397.18	1489.66	1653.68	1777.13	1835.71
India	186.72	202.95	217.18	240.12	267.41
China	450.34	515.14	588.36	654.37	730.52
South Africa	990.91	1044.83	1097.43	1123.63	1148.37

Source: WHO GHO Database

is low, out-of-pocket expenses on health-care go up. With the spectre of consequential debt, many hesitate to access health-care. High out-of-pocket expenditure on health is a common problem for citizens of almost all BRICS countries, the amount ranging from 31.08 percent of total health-care expenditure in Brazil to 58.05 percent in India. Only in South Africa is it 7.21 percent (Rodin: 2015). The per capita expenditure on health in PPP terms is the highest in Russia and lowest in India. (See Table 4)

Table 4 brings out the linkages between per capita expenditure on health and health outcomes. The country with the lowest per capita expenditure is India, which also has the lowest score on health indicators. Russia's per capita expenditure is the highest and it leads in many of the indicators. In the case of South Africa, its per capita expenditure on health is more than that of China, and yet its health-care achievements are not on par with China's, reflecting the possibility that the money has either not been spent in the most effective ways or that the cost of health-care is much higher than in China.

Research & Development (R&D)

Innovations in health-care are crucial to tackle diseases, for which Research and Development (R&D) is required. But R&D also needs huge investments. It is innovations which have taken the OECD countries and the developed world to where they are today (OECD: 2015). At present, most pharmaceutical R&D is taking place in the OECD countries. With increasing incidences of Anti-Microbial Resistance (AMR), R&D has become a continuous necessity for BRICS countries. At present, public investment in R&D in these countries is not very high. (See Table 5)

All BRICS countries are below the global average in R&D. Among them, China is the one moving fastest towards world average levels. The below table gives figures for overall R&D, and is not limited to pharmaceuticals; R&D has to be in all areas of technology because of the inter-linkages that now exist among them. For example, successful innovations in information technology can add to innovations in health-care and pharmaceuticals. At the same time, BRICS countries will have to focus more on areas which are a priority for them, but which other countries are not investing in. This particularly applies to finding remedies for neglected tropical diseases like TB and malaria. The high cost of medical devices can also be addressed only when these countries give a fillip to the development of low cost devices through their R&D. What will work in favour of BRICS countries is that they have a large number of trained researchers.

Pharmaceutical Trade

Availability of medicines is perhaps the most important factor in health-care. Trade in pharmaceuticals plays a significant role in ensuring drug availability. BRICS nations together account for a total external trade of the value of USD 71,431.13 million in 2015 which is less than seven percent (6.74 %) of the total world trade in pharmaceutical products that year. The intra-BRICS trade is the one which will bring out the complementariness of the pharmaceutical industry of the five BRICS countries. However, in intra-BRICS trade, pharmaceuticals are hardly a significant component, except in the case of South Africa. South Africa's trade in pharmaceuticals with other BRICS members amounts to 23 percent of its global pharmaceutical trade. But South Africa has the lowest global pharmaceutical trade in value among the BRICS countries, USD 2,359.85 million compared to Brazil's USD 8,591.49 million, China's USD 33,807.17 million, India's USD 17,051.42 million, and Russia's USD 9,621.20 million. Brazil's pharmaceutical trade with other BRICS countries is 4.87 percent of its total pharma trade, China's is 2.40 percent, India's 9.23 percent, and Russia's 5.79 percent. The shares of BRICS members in global trade in pharmaceutical products, including bulk and formulations, are

Table 5: Research and Development Expenditure (% of GDP)

Country	2007	2008	2009	2010	2011	2012	2013	2014
Brazil	1.08	1.13	1.12	1.16	1.14	1.15	1.24	..
China	1.38	1.46	1.68	1.73	1.79	1.93	2.01	2.05
India	0.79	0.84	0.82	0.80	0.82	..	..	..
Russian Federation	1.12	1.04	1.25	1.13	1.09	1.13	1.13	1.19
South Africa	0.88	0.89	0.84	0.74	0.73	0.73	..	..
World	1.97	2.03	2.06	2.06	2.05	2.13	2.12	...

Source: WDI Database; World Bank

Table 6: BRICS Trade in Pharmaceutical Products in 2015

BRICS Member	Partner Countries	Value (USD Million)			Share in World (%)		
		Export	Import	Total	Export	Import	Total
Brazil	World	1390.10	7201.39	8591.49	100	100	100
	BRICS	41.47	670.30	711.76	2.98	9.31	8.28
	China	14.68	360.33	375.00	1.06	5.00	4.36
	India	12.73	305.38	318.11	0.92	4.24	3.70
	Russian Federation	1.83	0.12	1.96	0.13	0.00	0.02
	South Africa	12.22	4.47	16.70	0.88	0.06	0.19
China	World	13490.83	20316.34	33807.17	100	100	100
	BRICS	1960.09	197.32	2157.41	14.53	0.97	6.38
	Brazil	407.71	42.94	450.65	3.02	0.21	1.33
	India	1361.97	71.44	1433.41	10.10	0.35	4.24
	Russian Federation	113.78	0.21	113.99	0.84	0.00	0.34
	South Africa	76.62	71.14	147.76	0.57	0.35	0.44
India	World	13903.10	3148.32	17051.42	100	100	100
	BRICS	1198.79	1294.97	2493.77	8.62	41.13	14.62
	Brazil	275.02	62.92	337.94	1.98	2.00	1.98
	China	81.62	1229.89	1311.51	0.59	39.06	7.69
	Russian Federation	359.81	0.21	360.02	2.59	0.01	2.11
	South Africa	482.35	1.95	484.29	3.47	0.06	2.84
Russia	World	549.44	9071.76	9621.20	100	100	100
	BRICS	1.61	643.96	645.57	0.29	7.10	6.71
	Brazil	0.00	4.13	4.13	0.00	0.05	0.04
	China	0.53	162.28	162.81	0.10	1.79	1.69
	India	1.08	476.02	477.10	0.20	5.25	4.96
	South Africa		0.22	0.22	0.00	0.00	0.00
South Africa	World	375.50	1984.36	2359.85	100	100	100
	BRICS	8.34	534.53	542.87	2.22	26.94	23.00
	Brazil	1.56	29.89	31.45	0.42	1.51	1.33
	China	4.35	65.14	69.49	1.16	3.28	2.94
	India	2.43	439.24	441.67	0.65	22.14	18.72
	Russian Federation	0.00	0.00	0.00	0.00	0.00	0.00

Source: WITS COMTRADE
Note: Product nomenclature used SITC Revision 3 (Product code 54)

presented in Table 6 and their individual shares in intra-BRICS trade in the same are presented in Table 7. There is ample scope for increasing these shares, both in intra-BRICS trade and in global trade, which would contribute to the availability of medicines in these countries and could also lead to reduction of

Table 7: Share of Intra BRICS Trade in Pharmaceutical Products including Bulk and Formulation in 2015 (%)

BRICS Member	Partner Countries	Pharmaceutical Products			Bulk Drugs			Formulation		
		Export	Import	Total	Export	Import	Total	Export	Import	Total
Brazil	China	35.39	53.76	52.69	63.50	77.14	76.71	21.37	11.36	12.40
	India	30.70	45.56	44.69	19.30	22.63	22.53	36.39	87.13	81.85
	Russian Federation	4.42	0.02	0.28	9.34	0.03	0.32	1.97	0.00	0.21
	South Africa	29.48	0.67	2.35	7.87	0.20	0.44	40.26	1.51	5.54
China	Brazil	20.80	21.76	20.89	19.08	9.61	18.70	34.23	29.03	32.37
	India	69.49	36.20	66.44	72.21	72.13	72.21	48.18	14.72	36.23
	Russian Federation	5.80	0.11	5.28	5.39	0.29	5.18	9.03	0.00	5.80
	South Africa	3.91	36.05	6.85	3.31	4.59	3.36	8.57	54.87	25.10
India	Brazil	22.94	4.86	13.55	55.71	0.31	7.06	17.71	56.72	21.29
	China	6.81	94.97	52.59	36.06	99.62	91.88	2.14	42.02	5.80
	Russian Federation	30.01	0.02	14.44	3.93	0.00	0.48	34.18	0.15	31.06
	South Africa	40.24	0.15	19.42	4.31	0.07	0.58	45.98	1.11	41.86
Russia	Brazil	0.02	0.64	0.64	0.00	1.85	1.84	0.20	0.26	0.26
	China	33.13	25.20	25.22	32.25	87.97	87.44	42.81	5.45	5.46
	India	66.85	73.92	73.90	67.75	9.76	10.31	56.98	94.11	94.10
	South Africa	0.00	0.03	0.03	0.00	0.14	0.14	0.00	0.00	0.00
South Africa	Brazil	18.72	5.59	5.79	27.87	1.14	1.35	18.04	6.30	6.49
	China	52.14	12.19	12.80	4.72	71.60	71.08	55.68	2.74	3.62
	India	29.14	82.17	81.36	67.41	27.24	27.55	26.28	90.91	89.84
	Russian Federation									

Source: WITS COMTRADE
Note: Product nomenclature used SITC Revision 3

cost. For example, India, although the largest global supplier of generic drugs, has a share value of only 1.4 percent in the global pharmaceutical industry (Khorana: 2016).

What emerges from the above statistics is that among the BRICS nations, China leads in trade in bulk drugs, both exports and imports, whereas in formulations, India is the leading exporter. China is also a major importer and the largest among BRICS nations in formulations trade, reflective of the respective strengths of these two countries (See Figures 4 and 5).

Figure 4: Trade in Bulk Products with World in 2015 (USD Million)

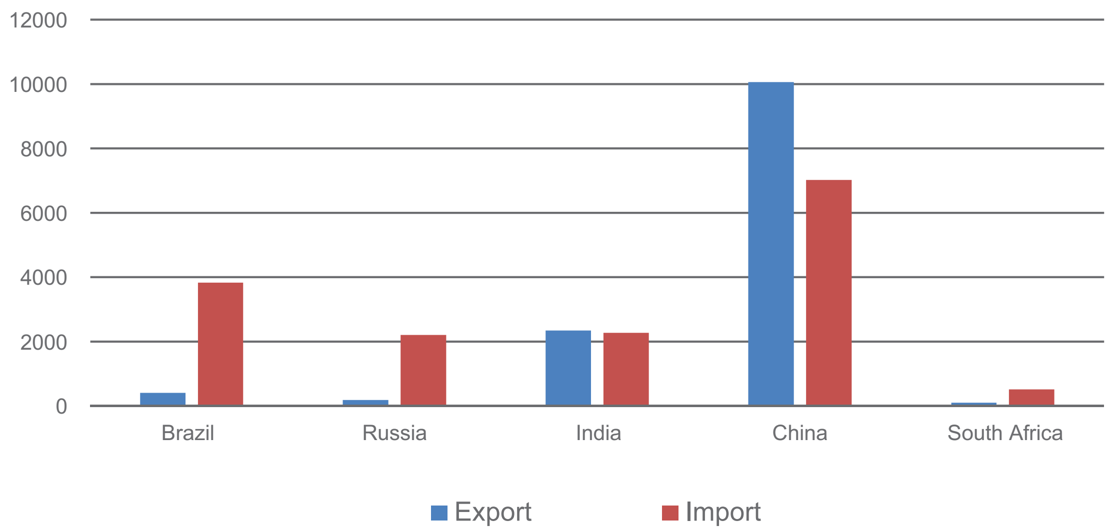
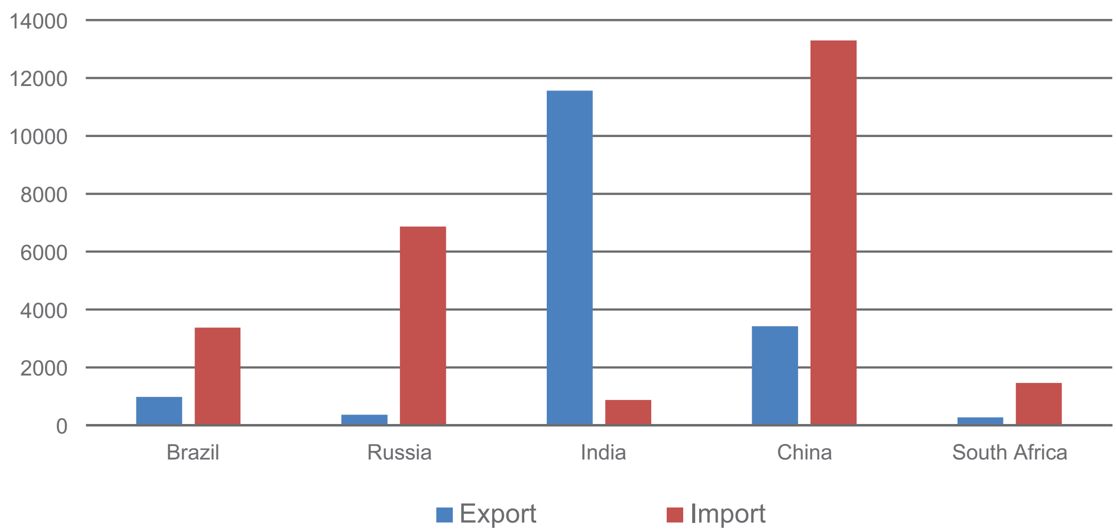


Figure 5: Trade in Formulations with World in 2015 (USD Million)



Source: WITS COMTRADE

Health-care Experiences and Models

Brazil: Since 1988, Brazil has been following a dual healthcare system. It guaranteed the constitutional right to free health-care for all citizens, through the Unified Health System that allowed the public care system alongside a parallel private healthcare one (ILC-BR, 2013). Community-based public health-care teams were the mainstay of the public system. An important component of this is the Family Health-care Programme, established in 1994, as part of the Family Health Strategy (FHS), that registers people in small communities with the local health administration and provides home visits by a multi-professional health team. Community Centres, Geriatric Medical Centres, E-Health Kits, and Mobile Eye Clinics are some of the good initiatives in this programme. These have been able to provide universal primary health coverage across Brazil (Macinko and Harris, 2015).

Russia: The Russian Federation had begun with a country-wide network of medical facilities which was fully public funded – one of the hallmarks of the former Soviet model. This made access easy and ensured affordability. But since 1991, the network has shrunk; the number of hospitals and out-patient facilities has been reduced, possibly because of a resource crunch. A large number of dispensaries and hospitals in villages have been closed down. The privatisation of the healthcare system has since adversely affected the health of the people. Morbidity has risen. The Russian Federation introduced a decentralised Mandatory Health Insurance scheme in the early 1990s, but in recent years it has been getting more centralised again.[6]

India: There have been some good experiences in the healthcare field in India. One is the success of the polio eradication drive through vaccination. This has been possible because of concerted action at different levels: awareness was built through media advertisements, SMS reminders to parents, road shows by Non-Governmental Organisations (NGOs), celebrity involvement in parent awareness programmes, support of international organisations like WHO, etc. Availability of adequate vaccines was ensured at all healthcare centres, both public and private, using NGOs to reach out to remote areas with vaccines, holding 'vaccines on wheels' drives in urban slums. There was close monitoring and tracking of all polio centres to prevent absenteeism and ensure availability of doses. Rapid Response Teams were developed in all States and Union Territories to respond to any periodic outbreak. There was very positive community involvement. People from all walks of life came together. India was declared polio free by WHO on 27 March 2014.[7]

Another good example is in the eye-care sector, by a private player. Aravind Eye Hospitals has developed an institutional healthcare framework, adopting a "focused factory" model, relying on standardisation of methods, use of low-cost technology, generation of patient volumes, attracting and training of workforce, etc. It examines over two million patients annually across five hospitals (with 3,950 beds). The average number of cataract surgeries performed by an Aravind Eye Care doctor per year is 2,000, almost 10 times the all India average. It also produces intraocular lenses used in cataract surgery at its own Aurolabs, thereby reducing costs (Ruger: 2010).

The Narayana Hrudayalaya, Bengaluru, with a national network of 26 hospitals, 6,900 beds across 16 cities, employing 13,000 people and 1,500 doctors, provides an innovative and replicable model of modern, quality treatment to poor patients. In this model, those who can afford to pay do so, and those who cannot, get free treatment. It is leveraged on economies of scale, frugality, reduction of cost of administration, assembly line-like operations, supply management, keeping inventory low, and using IT.[8]

China: China's healthcare system had made remarkable progress with its innovative approaches – such as the use of barefoot doctors and cooperative health-care – long ago. However, of late it is facing problems because of increasingly high dependence on private health-care, increasing cost of health-care, an ageing population, increasing incidence of NCDs, etc. China, like some other emerging economies, is facing the 'double burden of diseases' in that infectious diseases, though controlled to a great extent, still exist, particularly in the rural areas, while urban areas are more affected by NCDs. AIDS has also become a major health threat. Affordability too has become a major issue as a result of liberalisation and globalisation. More than 80 percent of the people are not covered by health insurance, leading to a situation of health insecurity (Hu: 2006).

South Africa: South Africa has initiated a number of policy interventions and programmes with the objectives of increasing life expectancy, decreasing maternal and child mortality, combating HIV and AIDS, decreasing the impact of TB, and strengthening health system effectiveness. Since 1995, all children have been vaccinated against Hepatitis B. Blood safety has effectively reduced Hepatitis B and hepatitis transmission through blood transfusion. In HIV and AIDS control, the country has rolled out the world's largest treatment programme, with over 2.7 million people started on antiretroviral drugs.[9]

BRICS Commitments to Health for All

The BRICS group from its very inception recognised the pivotal role of health in its effort to achieve economic progress and provide its citizens a lifestyle comparable to the developed world. This took the form of regular meetings of the Health Ministers of BRICS nations, sometimes alongside the BRICS summits and sometimes separately.[10]

2011

The first meeting of the BRICS Health Ministers was held in Beijing in July 2011. Universal affordable access to medicine was the focus. The Beijing Declaration committed to strengthening collaboration in the area of access to public health and services. It identified the following priority areas for collaboration:

- Strengthening health systems and overcoming barriers to access to affordable, quality, efficacious, safe medical products, vaccines and other health technologies for HIV/AIDS, TB, viral hepatitis, malaria, and other infectious diseases and non-communicable diseases;
- Exploring and promoting, effective transfer of technology to strengthen innovation capacity to benefit public health in developing countries; and
- Collaborating with international organisations, including WHO and UNAIDS, the Global Fund to Fight AIDS, Tuberculosis and Malaria, and the Global Alliance for Vaccines and Immunisation (GAVI), to increase access to affordable, quality, efficacious and safe medicines, vaccines and other medical products that serve public health needs.

2013

The second meeting of BRICS Health Ministers was held in New Delhi on 11 January 2013, which reiterated their commitment to the Beijing Declaration. This meeting focused on the global threat of NCDs, combating mental disorders through a multi-pronged approach, multi-drug resistant TB, and the challenge posed by HIV and malaria. It also noted the capacity of BRICS countries for R&D and manufacturing affordable health products, and their capability to conduct clinical trials, and called for strengthened cooperation in application of bio-technology for health benefits. The Cape Town Declaration of November 2013 also called for enhanced cooperation in these areas.

2015

The Ufa (Russia) Declaration of July 2015 made a very clear statement on health by reaffirming the right of every person without distinctions to the highest attainable standards of physical and mental health. It also expressed concern about the growing threat of communicable and non-communicable diseases, and made a clear statement about the BRICS nations' willingness to cooperate and coordinate their efforts "to tackle global health challenges and ensure that BRICS countries jointly contribute to improve global health security." They identified the following three specific areas for cooperation:

- Management of risks related to emerging infections with pandemic potential;
- Compliance with commitments to stop the spread of, and eradicate, communicable diseases that hamper development (HIV/AIDS, TB, malaria, "neglected" tropical diseases, poliomyelitis, measles); and
- Research, development, production, and supply of medicines aimed at providing increased access to prevention and treatment of communicable diseases.

The fifth Health Ministers' meeting was held in Moscow on 30 October 2015. This was in the backdrop of the UN Summit on Sustainable Development in September 2015 and, naturally, it reaffirmed the BRICS nations' commitment to ensuring healthy lives and promoting well-being for all at all ages as expressed in Goal 3 of the SDGs adopted by the UN. It also recognised the importance of the other goals which contribute to, and impact on, public health. This declaration is of particular significance since it highlighted the interdependence of public health and socio-economic development – health of people is reflective of their social and economic conditions and cannot be dealt with separately, ignoring social and economic realities such as family, class, caste, and income. It recognised the formidable challenges of communicable diseases, TB, and HIV/AIDS. It also resolved to strive to achieve the Global 2020 NTD (Neglected Tropical Diseases) control and elimination goal. Further, it took note of the growing incidence of NCDs and mental health disorders, and even road accidents in BRICS nations, and agreed to strengthen their cooperation in reducing these.

2016

In the recently held BRICS Summit in Goa, India, on 16 October 2016, the leaders who attended noted the efforts by BRICS Health Ministers to achieve the 90–90–90 HIV treatment target by 2020 (set by the Joint UN Programme on HIV/AIDS).[11] They also underlined the imperative of advancing cooperation and action on HIV and TB in the BRICS countries, including in the production of quality-assured drugs and diagnostics. They recognised the serious threat that AMR poses to public health and the importance of cooperation among BRICS countries in promoting R&D of medicines and diagnostic tools to end epidemics and facilitate access to safe, effective, and affordable essential medicines.

ALL BRICS COUNTRIES NEED MASSIVE PUBLIC INVESTMENT IN HEALTHCARE.

Thus, one can see continued and sustained commitment to cooperation among the BRICS nations. This commitment is not limited to the regular interactions among the health ministers of the countries, or the meetings of health officials, but also exists at the highest political level, thus demonstrating the political commitment to the process of achieving health for all. BRICS nations have diagnosed correctly the common challenges faced by them. What is needed is to carry forward this cooperation in a sustained way, at the ground level, through adequate financial allocations and targeted programmes and schemes.

Common Challenges and Prospects for Cooperation: Some Policy Thoughts

In the healthcare sector, the BRICS countries face similar challenges, though in varying degrees. Each country has its own strengths and weaknesses. But each country can share its expertise and best practices and models with the others, and coordinate their positions on health-related issues including Intellectual Property Rights (IPRs) in global forums on a regular basis. BRICS can create a common institutional platform for that.

Physical Access: Availability of primary health services at a reasonable distance, say 5 km from every residence, is a pre-requisite for ensuring public health. These services should include access to Out Patient (OPD) consultation, In Patient (IPD) treatment, and diagnostic centres. In India, around 80 percent households have access to OPDs, while around 53 percent only have access to IPDs and diagnostic centres. A second related problem is the persisting urban-rural divide – access is much more difficult in rural areas. Of course, in both rural and urban areas there have been significant improvements during the last decade, as the result of a number of measures taken to achieve the MDGs relating to health. The National Rural Health Mission (launched in 2005) and the National Urban Health Mission (launched in 2013) have helped, but much more remains to be done if the SDGs are to be achieved.

Affordability: A very grave challenge is that of affordability. This has many dimensions such as affordability of physician/surgeon services, affordability of in-patient treatment costs, affordability of nursing care (at home and in specialised care homes/hospitals), affordability of medicines, and affordability of diagnostic tests. With high levels of out-of-pocket expenditure, affordability remains a major issue in BRICS countries despite their economic progress. Only concerted efforts can address this problem.

Efficiency: The investments in physical infrastructure, human resources, and provision of medicines, diagnostics, and services have to be made in an effective and efficient way. In many places, while physical infrastructure has been erected, doctors and nurses are often not available, or medicines and equipment have not reached. In the current economic system, one possible model to ensure efficiency could be the Public-Private Partnership model, where the government sets up the basic infrastructure and then entrusts the service provision to private players.

Intellectual Property Rights: The global IPR regime works against availability and affordability of medicines and diagnostics. Strong pharmaceutical lobbies emphasise IPR protection to ensure continued high profits. The one-sided stress on private rights, ignoring the basic objectives of IP protection – that of encouraging innovation and creativity in the public interest – should not be allowed to dictate public policies. BRICS as a group should take a unified stand on this and bring about a paradigm shift in perceptions.

Research & Development: Public investment in medical R&D in the BRICS countries is mostly low, as noted earlier. Everywhere, basic research in science has to be funded from public sources, since private capital does not have adequate incentive to invest in it, in view of the long gestation period and higher risks involved. A minimum of around four percent of GDP should be spent on R&D. The health problems of the BRICS countries are not the same as those of the OECD countries and they will have to find new cures for those special problems at least without depending on the West. An area in which BRICS nations can do significantly better is clinical trials. They can design common protocols and harmonised regulations to facilitate this.

Traditional Medicines (TMs): The Communiqué of the 2nd meeting of BRICS Health Ministers in New Delhi in January 2013 acknowledged the value and importance of traditional medicine and the need for knowledge-sharing in this area to secure public health needs. The BRICS nations are quite rich in traditional medicine. China and India, particularly, have long histories of development and use of TMs – Traditional Chinese Medicines in China and various Indian Systems of Medicine, like Ayurveda, Siddha, and Unani. These systems seek the overall physical well-being of the patient, unlike modern reductionist medicine which targets specific molecules without looking into the impact of such targeting on the whole body and mind. TMs are also sustainable and in tune with nature. They have to be brought back into health-care in an integrated way, as spelt out in the September 2016 BRICS Wellness Workshop in Bengaluru. For BRICS nations, mutual recognition of one another's traditional medicine systems and establishing certain common protocols will contribute to this.

Preventive Health-care: Many diseases and medical hazards are preventable if correct lifestyles are pursued. Absence of hygiene and sanitation is responsible for most vector-borne diseases. As per one estimate, poor hygiene and sanitation costs India INR 2,722.50 billion (INR 2,178 per person), mostly in healthcare expenses. The Swachh Bharat Abhiyan (movement for a clean India) launched by the government is trying to change this. Similar issues exist in some of the other BRICS countries too. Clean air and water are two basic elements in preventive health-care. The BRICS countries are rich in biodiversity, which significantly contributes to the ecological health of the earth. They need to take sustained measures as a group to conserve this diversity and promote climate control. Linked to this is the issue of cooperation and concerted efforts with their geographical neighbours in tackling climate-related and environmental issues, as well as communicable diseases, since many a time, climate and air and even communicable diseases do not adhere to political boundaries

Pharmaceutical Industry: China's strength lies in bulk drug production, whereas India is the leading producer of generics in the world. These strengths can be shared with the other BRICS countries. To make available drugs at affordable prices, BRICS nations could consider having a common pharmaceutical market. Harmonisation of the drug regulations will significantly contribute to this end.

BRICS nations also have country-specific problems in health-care. Brazil is not able to attract qualified health workers in remote areas (Rao et al: 2013). Cooperation can facilitate easy movement of medical practitioners among the BRICS countries, so that countries which have large human resources in this sector can help those with fewer resources.

The existing situation raises multiple problems. In India, private health-care is the predominant form of health-care in most parts. Most health-care expenses are paid by patients out of their own pockets. There is not enough health insurance, especially in rural areas. Most patients raise loans for health-care that many a time push them into debt traps. It adversely affects their economic security, which has a cascading impact on their standard of living, including nutrition and sanitation, which further pushes them down the health ladder. In the Russian Federation, formal and informal out-of-pocket payments remain barriers to accessing health-care (Rao, et al: 2013). In India, the recently launched National Health Assurance Mission, once fully implemented, may lead to improvements. A possible initial step for the BRICS group could be to share some of the successful models already available in member countries. For example, the cost of medical devices in Brazil is one-fourth of that in India. The development of India's generic pharma industry was a result of adapting the patent regime to national conditions.

The single most important factor in the efforts to achieve universal health is provision of healthcare facilities. What is required in all the BRICS countries is massive public investment in health-care. Developed countries have been spending a much higher proportion of their GDP on health-care than BRICS countries. In India, states which have invested substantially in health-care, such as Kerala, Goa, and Sikkim, have reaped rich dividends. This is particularly necessary in primary and secondary level health-care since the private sector, with honourable exceptions, will not have much incentive for such investments.

Conclusion

Human beings in the BRICS countries will lead healthier lives once these issues are addressed. In the BRICS Wellness Forum held in Bengaluru in September 2016, India had proposed a new growth measurement index that spanned sustainable economic, social, personal, and environmental health (RIS: 2016). The partner nations welcomed the concept. It should be taken forward.

BRICS VISION FOR SMART CITIES

Rumi Aijaz

Senior Fellow, Urbanisation & Smart Cities Initiative, ORF

Introduction

BRICS governments are now cooperating on numerous public policy issues. The effort is to work together for peace, development, and prosperity. To achieve these goals, several steps have been taken. High-level inter-governmental meetings and yearly summits have been held, an independent organisation (the BRICS International Forum) has been formed to carry forward the BRICS agenda, and the New Development Bank (NDB) has been established with the primary objective of lending for infrastructure projects. BRICS also engages with non-state actors in this endeavour.

With the passage of time, the BRICS agenda has widened. During the formative years, economic and strategic issues were the main priority areas. Subsequently, attention has also been paid to newly emerging challenges. Urbanisation is one such identified area. This can be seen in the declaration adopted by the member nations at the eighth BRICS Summit hosted by India during its presidency in 2016. There is agreement on enhanced cooperation to deal with the multi-dimensional challenges and opportunities of urbanisation. Specifically, importance is being laid on strengthening urban governance, making cities safe and inclusive, improving urban transport, financing of urban infrastructure, and building sustainable cities (Goa Declaration, Point 97). Further discussions are expected to take place on ways to improve people's wellbeing, and accelerate the implementation of the 2030 agenda for sustainable development[1] at the upcoming ninth BRICS Summit in Xiamen (Fujian Province) in September 2017 under China's presidency.

Urban settlements and regions across the world are undergoing transformation at a pace faster than their rural counterparts. Within these urban spaces, the interplay of multiple factors (such as increasing population density, growing investment, scientific and technological advancements) creates both opportunities and pressures. The challenge lies in efficiently managing and sustaining this transformation.

In many urban areas, the prevailing conditions could be said to be worrying. There are wide social and economic inequalities; there is the deterioration in living, spatial, and environmental conditions; there is racial and migrant discrimination; there is the politics of community polarisation; there is rising civil unrest and insecurity. Such adversities disrupt city life and the economy, and are mainly the result of lack of planning and a governance deficit. Given that urbanisation creates opportunities, there is urgent need to build greater understanding to manage the phenomenon.

The introductory section of this paper has discussed the growing significance of urbanisation. Proper understanding of the changing characteristics of urban areas can help in successfully responding to emerging problems. In the next section, urban population data of BRICS countries are analysed to make the point that national populations tend to get concentrated in cities and city regions. Thereafter, smart initiatives undertaken in select cities of BRICS to tackle emerging challenges of urbanisation are described. In the final section, a vision for creating smart cities in BRICS nations is presented.

Urbanisation in BRICS

BRICS countries accommodate over 1.5 billion urban residents. Their share in the world's urban population is about 40 percent.[2] Individually, the countries are experiencing urbanisation at a varying pace. The absolute urban populations of China and India may be huge (between 400 and 800 million), yet the share of urban population in total population in these countries is relatively low at 56 percent and 31 percent respectively. In contrast, the corresponding figure is high in Brazil, Russia and South Africa (between 65 and 90 percent). Thus, China and India are comparatively less urbanised, with significant proportions of the population living in rural areas.

A prominent urbanisation trend is the imbalance in distribution of urban population within each BRICS country, and growth in the number of cities and urban agglomerations (UAs). Existing cities/UAs have been attracting population, investment, and economic activities for long and thus, their densities are increasing by the day. Several medium-size urban settlements (towns) are also moving up in the urban hierarchy and being reclassified as cities due to increases in their population and their changing characteristics. The numerous policy and plan interventions made to restrict growth in existing cities and urban agglomerations have met with little success. At the same time, there is growing belief that the full growth potential of existing cities remains unfulfilled, and considering their significance for the nation and society at large, there is scope for accommodating further growth in such cities. Brand new cities can also be built on vacant lands.

The growing focus on promoting city-led growth and development calls for application of smart strategies to ensure that the cities of the future offer a better quality of life. BRICS nations possess rich knowledge, skills, institutions, resources, and technology. Identification and judicious utilisation of these assets can help greatly in addressing the common set of city-level challenges confronting BRICS, and in moving towards the goal of making smart cities.

Smart City Initiatives

Of late, the concept of 'smart city' is gaining popularity. It is an evolving idea constantly being refined by various stakeholders, who suggest that smart solutions can help in conservation of resources and in overcoming numerous city-level problems. The idea builds upon previous reform efforts, and includes new elements – such as the creation of specialised entities, and the use of digital technologies in an integrated manner – to tackle emerging challenges.

Governments of many countries are aligning their governance agendas and practices with the smart city concept. India, for example, launched the Smart Cities Mission in June 2015 with the aim of improving living conditions and achieving higher economic growth in 100 urban centres across the country.

Creating smart cities can be a very challenging exercise. It requires rational and participatory decision- and policymaking, sound urban planning and project formulation, effective enforcement of laws and implementation, integration and management of numerous city sectors and services, use of digital technologies, resource mobilisation, and capacity building of city-level functionaries for superior management and governance. Equally important in this effort is community sensitisation. Essentially, the objective is to create sustainable and economically strong urban centres that offer an improved quality of life to all sections of society and meet their requirements in a desirable manner.

The following examples from BRICS nations demonstrate initiatives underway for making cities smarter:

- *Brazil*: The city of Águas de São Pedro is being transformed into a digital-driven smart city. Steps have been taken to modernise the telecommunications network and deploy smart solutions in the areas of health, education, security, and tourism.[3]
- *Russia*: Moscow has established a unique centralised online platform that allows collection of substantial data and creates services by anticipating popular demand.[4]
- *India*: Smart city projects have been launched in several cities under the Smart Cities Mission. In Pune, work is underway on slum rehabilitation, creation of street and pedestrian walkways, traffic demand modelling, developing a common mobility card.[5]
- *China*: The city of Yinchuan is being made the most high-tech city with facial recognition systems in transport buses, holograms at the city hall, and solar-powered waste bins.[6]
- *South Africa*: Johannesburg has been ranked as the top city in Africa in terms of sustainable urban development and ICT maturity.[7]

A Vision for BRICS Nations

A realistic vision for smart cities can be drawn up on the basis of a thorough understanding of the prevailing problems and the experiences gained from ongoing efforts. Using this approach, an attempt is made to describe important requirements for making smart cities in the sub-sections that follow.[8]

Establish specialised entities, sponsor programmes and industry alliances: To facilitate the smart city development process, it is necessary to put in place specialised governance architecture and engage with expert stakeholders. In China, for example, smart city pilot projects are led by the Ministry of Housing and Urban and Rural Development, which encourages setting up of smart city organisations and promotes industry alliances. Several ministries have also come together to form a smart city inter-ministerial coordination mechanism and a working group to coordinate and solve cross-sector, cross-domain problems during the process of smart city construction.

Improve expertise of local bureaucracy through training: Greater efforts should be made to improve the expertise of local bureaucratic personnel and elected representatives through training for better revenue mobilisation and successful implementation of urban development projects. Training courses should offer up-to-date information on methods to be used for dealing with contemporary and future urban challenges. Necessary support should be provided to the functionaries for effective implementation of lessons learnt during training. A study of Brazilian municipalities shows how funding innovations for urban development projects may not be effective as the low level of bureaucratic expertise prevents local governments from meeting the complexity of non-traditional funding. The study also observes varying levels of motivation among the personnel to implement urban programmes.

Systematise spatial data and interactions among stakeholders for effective policy implementation: There is a tool (Agent-based Modelling) available which can help to systematise the bundle of available spatial data and interactions among multiple actors, and anticipate outcomes of a proposed policy before it is implemented. In this method, a computational simulation runs a model in which the actions and interactions among citizens, firms, institutions, and governments are analysed (for example, investigating the collection of taxes and redistribution of public services across municipalities). Using the tool, it is possible to acquire a better understanding of the actual conditions prevailing in cities, and thus formulate effective policy solutions. Researchers at IPEA in Brazil are refining and using such a model.

Engage more with non-state actors: Committed NGOs and private sector organisations working independently for the welfare of people and the city should be identified and engaged in the urban restructuring process. The Aajeevika Bureau (an NGO headquartered in Rajasthan, India), for example, provides a range of services to migrants and their households, including registration of migrant workers and issuance of identity cards, skills training and placement, and legal aid, among others.

Promote international goodwill through exchange of ideas: Relations between countries can improve by identifying/recognising activities of mutual interest and facilitating interactions among the people. The goodwill so generated can help countries to overcome inhibitions and work together on various issues. For example, public parks can be a symbol of good relations between the BRICS countries. The Soul and Soil Park in Vladivostok (Russia), or the Pacific Rim Park in Yantai (China) were created by the local people using a variety of materials, such as wood, natural stones, trimmed bricks, small pebbles, sea shells, coloured glass bottles, marbles, granite, etc. These have given opportunities to students, architects, and designers to come together, express themselves, show their creativity, and bring to the fore the ideas of peace and friendship.

Mobilise funds from a combination of sources: Availability of funds is essential for implementing development projects. Since budgeted funds alone are inadequate, other modes of financing need to be explored. In China, funds are made available from a combination of sources, including government funds, bank loans, and enterprises' own funds. In this way, smart city pilot projects become eligible for funding from an investment fund sponsored by the state-owned China Development Bank. Investment from local government and private sources is also growing. The future work focusing on smart city financing in China is expected to include: establishing a market-oriented operation mechanism; nurturing full participation of enterprises and social capital; and establishing smart city credit rating systems. In addition to raising funds in innovative ways from within the country, the possibility of obtaining loans from the NDB should be explored.

Increase penetration of digital technologies: Digital technologies are fast becoming an integral part of everyday life. One example is the use of cashless technologies that allow 'one-touch' payments for various kinds of services. The expansion of these technologies, however, is occurring in a limited manner and is restricted to large urban settlements. Thus, only those who have access can derive the benefits.

The Skolkovo Institute for Emerging Market Studies in Russia has attempted to introduce a quantitative measurement of the depth of penetration of digital technologies in various sectors, such as transportation, finance, retail trade, health-care, education, media, and administration. Its assessment confirms a 70 percent threshold in internet penetration (i.e., percentage of adults using internet regularly) in the 15 biggest cities of Russia.

INCREASING DIGITAL PENETRATION CAN HELP PROVIDE PUBLIC SERVICES, GET CITIZEN FEEDBACK, LIMIT CRIME, AND ADDRESS URBAN INEQUALITY.

Numerous benefits can be derived by providing web and mobile-based citizen services, and installing video surveillance systems. For example, IT systems set up for registering complaints pertaining to housing and public utilities can help government agencies to quickly resolve the problems that arise, based on inputs and photos received from citizens. Also, an online e-referendum system can allow the city government to submit vital issues for the consideration of citizens. Similarly, IT-enabled surveillance systems can effectively help in identifying and solving crimes. Widespread use of ICT platforms (such as *Our City* and *Active Citizen*) as well as real-time security surveillance in Moscow has resulted in time and budget savings for the city government.

Online platforms containing up-to-date data and information on numerous human development indicators such as demography and health, education, income, labour, housing, and vulnerability can help in understanding and effectively responding to urban inequalities. One such platform, the Atlas of Human Development in Brazil, has been created jointly by UNDP, IPEA, and FJP in Brazil, which provides data for municipalities, states, and metropolitan areas. Here citizens get the opportunity to interact and participate in building guidelines for the cities' future.

China and India are making efforts to simplify the processes involved in delivering government services to citizens by laying down a comprehensive ICT architecture, building a national citizen database, and creating online platforms and a single window to meet citizens' needs in an easy and friendly manner.

The use of internet-based social media tools and platforms (such as smartphones, Twitter and Facebook) is increasing by the day. Citizens often discuss serious governance issues among themselves using these modes of communication. Such modes can be customised to advance meaningful citizen engagement with government. This would help in maintaining an informed decision-making process for policymaking, planning, and implementing of infrastructure projects. To facilitate regular interactions between government officials and citizens, and obtain feedback, city governments should ensure an increase in smartphone ownership, and provision of affordable and fast internet and free Wi-Fi services.

India's Prime Minister Narendra Modi, for example, took questions directly from the public using the MyGov platform, created for generating citizen feedback on policy issues and governance. Issues discussed on it include suggestions for the rail budget and the new education policy. In Vijayawada, Andhra Pradesh, about 300 camps were set up in educational institutions to invite ideas from students. The city of Jaipur is running a contest for citizens on the MyGov platform to generate ideas for redesigning a park and a traffic junction.

Use GIS and rational guidelines for provision of social facilities*:* Conventional planning for new facility location based on planning units (i.e., blocks or suburbs) does not always address the issue of ensuring access. Instead, planning can be done on ability to reach a facility within a desired distance. In this approach, supply and demand are matched within a spatial context based on access parameters (such as distance or time) in conjunction with provision norms (such as population threshold per facility) for specific services. This method can help to inform GIS-based planning for capital budget processes and thus maximise return on investment. The Council for Scientific and Industrial Research (CSIR) in South Africa has consolidated, refined, and adjusted guidelines for the provision of social facilities in South African settlements to achieve equity in facility provision.

Map built-up structures and infrastructure networks: Mapping buildings and infrastructure in cities can help in the restructuring process. A complete listing of all built up structures (properties) will ensure improved collection of property tax. Similarly, maps showing infrastructure networks (water, sewer lines; electricity cables) situated both above and below the ground will be helpful at the time of undertaking any excavation and tunnelling work.

Build innovation hubs*:* Knowledge of vocal, creative, digitally active citizens can be effectively utilised in city management by creating public spaces, where citizens and the administration can discuss problems with entrepreneurs, and find suitable solutions.

Build resilience by capturing and attending to city diversity*:* Smart city plans should be based on the social and cultural diversity prevalent in cities, and must contain directions for managing critical urban sectors, such as peri-urban informal growth, housing for the poor, traffic congestion, rights of migrants, flooding, and disaster management.

Create career opportunities for the jobless*:* Unemployed youths should have access to registration on government database, and should be identified, trained and assisted in starting various types of income generating activities / self-employment ventures.

Ensure public safety through improved governance and technology*:* Safety and security concerns dominate in cities. Not a day passes without a crime or some kind of conflict being reported. A smart city should be able to offer safety to all its citizens. To achieve this goal, communities and educational institutions must sensitise and educate children on matters of safety. The state should also sensitise and reform functioning of governing bodies, the police force, and other law enforcement agencies. In this respect, the following measures would be useful: adequate surveillance and monitoring by the administration, ensuring good lighting and visibility in public spaces, technology-driven interventions, and reducing the gap between the lifestyles of the upper, middle, and lower classes by creating job opportunities, building an affordable housing stock, and providing sanitation facilities to the poor. Further, at places (e g., South Africa) where the history of racism has not been resolved and there is a long legacy of gender-based violence, policies and action plans must address such core issues.

The internet and social media can be used by citizens living in low-income areas to report misconduct and brutality by the administration (such as by the police) and to map violence. Internet activism in the *favelas* and low-income neighbourhoods of Rio de Janeiro started with the local population obtaining internet connections and smartphones. This has helped in the propagation of reports and producing of evidence of serious human rights violations. Indeed, smartphones can be used as a tool of social control over abuse.

Offer travel subsidy to low income workers*:* People with low incomes find it very difficult to bear the cost of living in cities. In addition to meeting their basic needs, a significant amount of money is spent on daily travel. This problem can be overcome by implementing a rational public transport policy. In Brazil, for example, steps have been taken to ensure that low-income workers engaged in formal employment do not spend more than a fixed proportion (six percent) of their basic salary on public transport. The additional cost of the workers' travel is borne by the employer. The results of this policy (called *Vale-Transporte*) are seen in the form of higher level of attendance at workplaces, and rise in the demand for public transport services.

***Incorporate elderly needs in mobility plans**:* Mobility planning for the elderly must be done based on their movements. In Shanghai, data on places most frequently visited by the elderly (such as grocery stores, parks, etc.) were collected through surveys conducted over a period of eight years. Such data helped in the formulation of effective mobility plans. In the city's urban planning bureau, a data/information collection centre has been created that provides inputs for designing new development projects.

***Protect environment by integrating nature into urban design**:* The deterioration of the environment can be seen in the form of urban heat island effects, CO_2 emissions, soil sealing, biodiversity loss, exploitation of natural resources, air, water, and soil pollution, and climate change. In China, about 40 percent of cities are becoming resource exhaustive (coal reserves are declining, as are water sources and green areas) due to uncontrolled exploitation by industries, and are thus facing different levels of ecological security problems. Such problems adversely affect a nation's health and productivity, and can be overcome by integrating nature into the urban design process so that there is a balance between ecological security and economic development. For example, promoting and investing in non-polluting industries (eg., agro-based, finance, tourism, logistics, high tech, IT), development of green areas/buildings/fuels and using eco-friendly vehicles can help in improving the aesthetics, environment, and overall quality of life of residents of cities. The goal can be achieved through more investment and use of new financial instruments that support smarter urban infrastructure and technology.

Acknowledgements

BRAZIL: Ana Paula Bruno, Ministry of Cities; Bárbara Oliveira Marguti, Institute for Applied Economic Research (IPEA); Bernardo Alves Furtado, IPEA; Carlos H.R. de Carvalho, IPEA; Daniel da Mata, IPEA; Rute Imanishi Rodrigues, IPEA. **RUSSIA**: Alessio Russo,Far-Eastern Federal University (FEFU); Alexey V. Parnyakov, FEFU; Andrey Belozerov, Department of IT of Moscow Government; Vladimir Korovkin, Moscow School of Management SKOLKOVO. **INDIA**: Akhilesh Mishra, Director, MyGov; Arvind Gupta, Head, Digital India Foundation; Kanchan Gandhi, School of Planning and Architecture; V.N. Alok, Indian Institute of Public Administration. **CHINA**: Jie Xu, Chinese Academy of Governance; Jijun Chen, China Architecture Design Group; Ning Jiajun,State Information Center; Yang Li, Shanghai International Studies University; Yifan Yu, Tongji University; Zhenqiang Xu, Chinese Society for Urban Studies. **SOUTH AFRICA**: Cheri Green, Council for Scientific and Industrial Research; Kedibone Phago, Mangosuthu University of Technology; Rozena Maart, University of Kwa Zulu Natal; Simphiwe E. Mini, University of South Africa

GENDERING THE BRICS AGENDA

Urvashi Aneja, Fellow, Climate Change & Development Initiative, ORF

Vidisha Mishra, Junior Fellow, Climate Change & Development Initiative, ORF

Introduction

The five countries in the BRICS formation, Brazil, Russia, India, China, and South Africa, together account for 43 percent of the world's population, 46 percent of the global labour force, 30 percent of the earth's landmass, and 25 percent of the world's share of global gross domestic product (GDP).[1] In the last decade, these countries have managed to establish themselves as emerging powers, distinguished by their large, fast-growing economies, and increasing influence on regional and global affairs. However, the impact of this economic growth on the gendered nature of poverty and inequality within the BRICS countries has not been explored adequately.[2] Even though the links between empowering women, alleviating poverty, increasing productivity, and combating climate change are now well recognised, pervasive gender inequality continues to exist within international multilateral groupings such as BRICS, and is not given the attention it deserves.

Approximately 50 percent of world's poor live in BRICS countries.[3] According to the World Economic Forum's Global Gender Gap Report, 2016,[4] within the grouping, the highest-placed nation (the one with the lowest gender gap) remains South Africa (ranked at No. 15), which moved up four places since last year with improvements across all pillars. The Russian Federation (75) was next, followed by Brazil (79). India (87) gained 21 spots over the past year and overtook China (99) with improvements across Economic Participation and Opportunity and Educational Attainment. It is often assumed that putting gender on the BRICS agenda in any concrete way will lead to inevitable hiccups due to differing national ideologies, norms, and values of the five member nations. Conversely, well before BRICS consultative processes began, civil society in these countries had repeatedly agreed on the need to prioritise gender-related issues, to provide equal rights to women in political, economic, and social spheres.

So far, the two areas where BRICS cooperation has been most productive are trade and development finance – both of which have linkages to gender. There exists a two-way relationship between gender equality and trade policy: while men and women are affected differently by trade policies, gender inequalities, in turn, impact trade policy outcomes and economic growth.[5] Women interact with the global trading economy as consumers, workers, and business-owners. For example, they benefit as workers if a country has a comparative advantage in a women-labour driven sector as resources will flow towards that sector, thus expanding further employment opportunities for women.[6] Therefore, even if it is argued that BRICS is driven by an exclusively geo-economic and trade agenda, it is important to mainstream a gendered approach. Yet, conversations around trade, women's empowerment, and sustainable development have been held in silos within the BRICS context.

With the formation of the BRICS development bank, also known as the New Development Bank (NDB), it is believed that the grouping's impact on its member-states will increase. Therefore, moving forward, there is an opportunity for the BRICS agenda, and particularly for the NDB, to prioritise the interests of the marginalised sections in each of its member countries, a majority of which constitute women and girls.[7] This chapter focuses on the potential of women and girls as agents in achieving the 2030 sustainable development agenda within BRICS. In addition, by exploring the interlinked themes of the growing digital economy, entrepreneurship, and leadership, the chapter attempts to unpack the emerging opportunities for placing gender firmly on the BRICS and NDB agenda.

Gender Mainstreaming: Objective and Solution

Among the 17 goals of the 2030 agenda, gender is not only listed as a standalone goal, but is also closely related to the other 12 goals. At the 2015 UN Commission on the Status of Women held at the UN headquarters in New York, member states prioritised women's empowerment and its link to sustainable development. While the standalone Goal 5 in the SDG agenda (relating to gender equality) is necessary, gender perspectives must continue to be central to all sustainable development discussions. It is now well recognised that the SDGs cannot be achieved without women's equal and active participation. In addition to the moral imperative, there are strong economic reasons for this. A recent report by McKenzie concluded that approximately 38 trillion dollars or 26 percent could be added to the global annual GDP if women participated in the labour force at the same rate as men. This impact is roughly equivalent to the size of the combined US and Chinese economies today.[8]

However, economic development does not necessarily mean improvement of women's status. In most parts of the world, inequality still exists between women and men in rights, opportunities, and access to resources. Women and girls are disproportionally affected by the economic, social, and environmental shocks and stressors. For example, while climate change and national disasters affect everyone, women and girls bear the heaviest burden of these because of structural issues, including unequal access to credit, land ownership, and decision making.[9] Here lies the first opportunity for the BRICS to mainstream gender across all discussions. The synergies between gender equality, women's empowerment, and economic, social, and environmental sustainability have been widely acknowledged.[10] BRICS leaders have held an informal meeting and issued a media statement to affirm their commitment to achieving the 2030 agenda, including strengthening BRICS cooperation in the field of gender equality – it is important that this is followed by action.

Further, the recognition of women and girls as agents of development, as opposed to being passive recipients, needs further mainstreaming within the development narrative. This is a huge challenge globally, but particularly so in developing countries. In India, for example, despite increases in the number of girls in educational institutions and in women's average incomes, female participation in the workforce in 2008 was lower than in 1983. Today, according to an International Labour Organization study, less than 30 percent of women above 15 years in India are part of the labour force.[11] India, unfortunately, ranks lowest amongst the BRICS countries in terms of female participation in the workforce. China stands first with 64 percent, Brazil, second, with 59 percent, Russia at 57 percent, and South Africa at 45 percent.[12] The study also maintained that the gap in male to female workforce participation in rural India for 2011 was 30 percent while the same for urban India stood at 40 percent. What these figures then suggest is that the benefits accruing to the liberalised economy in India since the 1990s such as rise in income, job opportunities, education, and better healthcare have failed to have a positive impact on female participation in India's workforce.

Studies suggest that the two main factors keeping women at home are social customs and very low education levels. The impact of the external environment and social customs must not be underestimated. For instance, according to a 2010 report[13] pertaining to the city of Leicester in the UK, where one in four city dwellers is of Indian background, economic activity rates amongst Indian women were nine percent lower than for Indian women nationally in the UK. This demonstrates the impact of social norms, which can be seen replicated amongst migrants.

Moving forward, it is also important to address the impact of the unfolding digital revolution on social, political, and economic spheres of emerging new information societies. The future of work is likely to be driven by technology, informality, and entrepreneurship; this can both eradicate and exacerbate existing gender hierarchies. Therefore, futuristic discussions on women's economic empowerment must consider their potential to participate and thrive in this new digital workplace. At present, there is a massive digital gender divide. Globally, four billion people in the world lack the internet, and of those four billion the majorities are women. In India, statistics show that approximately 29 percent of women are online as compared to 71 percent of men, with a slight improvement in big cities.[14] Thus, there is a danger that the digital world will reproduce the same social inequities that exist in the non-digital world. Growing incidences of online bullying and misogyny prove that the digital world is mirroring the real world. This needs to be addressed for women to be empowered in the new workplace. At the same time, women's access to digital technology is simply not enough. Access must be accompanied by digital literacy. A recent study suggested that if governments and businesses can double the pace at which women become digitally fluent, gender parity in the workplace can be reached by 2040 in developed nations, and 2060 in developing nations.[15] While this is still far too slow, it is indicative of the importance of digital fluency.

Equal access and digital fluency can bring women to the new digital workplace, which can create new economic opportunities for women, particularly if the growth in the freelance economy is considered. For instance, in the case of Elance, which is one of the largest freelance portals, 44 percent of the freelance service providers are women.[16] This already indicates that in the digital economy there are tremendous opportunities for women. However, the trouble with the new workplace is that unlike formal employment it does not come with social protection, sanctions or prevention against discrimination in the workplace. These aspects are guaranteed in formal employment, but as of now, the new digital workplace is short of these guarantees. Hence, there is an urgent need to deliberate on ways in which social protection can be guaranteed for women in an informal digital economy.

Further, if the new digital workplace is the future, provisions for protection against discrimination in the workplace must be re-evaluated. As mentioned above, currently, online bullying and patriarchal attitudes in society are being reproduced in the digital workplace with little or no repercussions for the perpetrators. This presents an opportunity for BRICS' collective thinking and thought leadership to design laws and protection schemes to ensure that a) women have digital access and fluency to compete in a new digital economy, b) that there is some form of social protection in terms of labour laws, and c) that there are certain mechanisms that can guarantee individual safety and dignity in the digital workplace.

ISSUES OF 'NETWORK POWER' DESERVE EQUAL SERIOUS CONSIDERATION.

Additionally, one of the aspects of the digital economy is that it creates numerous opportunities for self-employment. According to a recent study, the percentage of women who would like to start a new business in the next five years in emerging markets is 61 compared with 29 in developed countries. Unfortunately, India still lags among the 77 countries covered in the 2015 Female Entrepreneurship Index. In India, the share of women-owned businesses is only 14 percent.[17] The main reason for India's poor score is the lack of access to finance. In the start-up boom that India is witnessing, out of the USD 9 billion invested by individual investors and venture capital funds in 2015, only 5-6 percent went to women founders.[18] Further, the OECD gender net estimated that in 2012-13, only five percent of total international aid was devoted to gender equity projects.[19] For entrepreneurship to be an effective enabler for women, capital, business support, and access to crucial networks are vital.

In this scenario, there lies an opportunity for BRICS to do things differently. The grouping should consider the possibilities of creating mechanisms through which women can have access to such capital and credit. For instance, the NDB will be a fresh source of finance for emerging economies to meet their development needs. While governments negotiate the technical aspects of the bank, it is crucial that they agree on prioritising gender equality in the NDB's core principles and objectives.

Finally, the overarching goal for the collective must be to promote more women in decision-making positions. Today, women comprise only 23 percent of the world's parliamentarians – a level well below parity.[20] This under-representation is not limited to governmental positions. In the business world, among the Fortune 500 companies, for example, only four percent of CEOs, six percent of top managers, and 15 percent of board members are women.[21] India is globally in 105th position in political representation of women with only 12 percent women in the national parliament.[22] There is a dearth of women leaders in politics, planning, and business; studies highlight the many forms of discrimination—both implicit and explicit—faced by women in these fields.

However, promoting women's leadership must not be reduced to affirmative action alone; investments in bigger ideas and strategies are required to enable women to strategically position themselves to not only compete but also lead. Equally, issues of 'network power' deserve serious consideration. Power in societies is not only exercised through institutions and laws, but also through the networks that are created. Often, policymaking is not only shaped by formal processes, but also by informal processes such as conferences and forums. At present, these networks are dominated by men. The disproportionately low representation of women at the BRICS conferences itself is a good example. Herein lies another opportunity for the BRICS nations to highlight the importance of such network power, and to consider the ways in which women can be brought into such networks. To its credit, the grouping held the BRICS Women Parliamentarians' forum in Jaipur, India this year. The two-day meeting concluded with a 19-point declaration. The delegates included five women parliamentarians from Brazil, three from Russia, 28 from India, two from China, and four from South Africa.[23] While this is a good initiative, it must come on top of mainstreaming women's voices and gender issues across the BRICS summits. Just a separate, segregated event for women parliamentarians can be interpreted as tokenism to please the emerging women constituency.

The Way Forward: Internalising the Gender Goal

A 2014 study of gender influences in the labour markets within BRICS showed that despite varied labour market outcomes for women across the collective, several similarities existed.[24] The study confirmed that the proportion of female employers was generally low for all countries, as was their ability to accede to positions of leadership. The study also highlighted that India has a skewed proportion of women workers in agriculture, self-employment, vulnerable employment, and in the informal sector. Russia fared well in terms of female participation in firm ownership, while South Africa had the highest levels of both female unemployment and female youth unemployment. Regarding the gender gap between males and females in terms of economic participation and opportunity, Russia was found to be closest to equality.

It is evident that despite variations, the countries share common expectations and aspirations to achieve the goal of women's advancement in the 2030 agenda. The BRICS female population accounts for two-fifth of the world's total female population. Therefore, the achievement of gender equality and women's empowerment in BRICS will not only give impetus to inclusive development in these countries, but also gradually promote the progress of women worldwide. However, for this to happen, BRICS must move beyond rhetorical statements and towards actionable commitments.

Brazil, Russia, India, China, and South Africa share both BRICS as well as G20 memberships. For women to realise their full potential, policies and programmes across sectors ranging from infrastructure and manufacturing to health and education should be designed with gender perspectives in mind. It is time for the countries to make use of the collective memberships and operationalise the commitments to gender equality made during both the processes. In 2015, the G20 grouping launched Women-20 or W20, a complementary grouping of female leaders, aimed to work towards empowering women and ensuring their participation in economic growth.[25] In 2016, at the G20 Summit in Hangzhou, the W20 reaffirmed the commitment to integrate gender equality perspectives in global economic governance by taking special measures to include more women-led businesses as suppliers for governments and corporations.[26] These concrete commitments deserve due diligence and robust monitoring to yield desired results.

In the future, the focus must be on sharing collective experiences, and on cooperation to recognise and minimise women's unpaid care work. This should include a significant increase in investment in the infrastructure for social care – including child care, care for the elderly, social protection, and care of the disabled. This will bring more women into the workforce. This will also need to be accompanied by greater investment in basic services and other infrastructural services such as water, health, and sanitation, which help to ease women's burden of care.[27]

Individually, the BRICS countries must formulate national plans to implement the 2030 agenda in accordance with their respective domestic policy environments. While the countries have made several significant breakthroughs as far as legal and policy frameworks to eliminate workplace discrimination are concerned, it is important to keep up the momentum against the prevalence of gender-based wage gaps and occupational segregation. In addition, it is important to set up and finance independent mechanisms and frameworks at the national level that track the BRICS's progress in implementing its key gender commitments. Further, there is a need to increase bilateral exchanges and cooperation involving women. The mechanisms of state exchanges should consider gender as an important component and invest in building mutually-beneficial capacity building networks of women. Such mechanisms could include representatives from women's and grassroots organisations, and the framework can be complementary to the G20 networks and the W20's efforts to empower women and mainstream gender perspectives in global economic governance.

Moreover, there is a case to be made for re-examining the gendered language of BRICS deliberations and declarations.[28] For instance, the Goa Declaration of 2016 mentions the word 'gender' twice – first, to reiterate the members' commitment to the gender Goal of the 2030 Agenda and to recognise women's potential in achieving the same; and secondly, to appreciate the deliberations of the BRICS Women Parliamentarians' Forum in Jaipur, which emphasised the commitment to strengthen parliamentary strategic partnerships for the achievement of the sustainable development agenda. At the same time, the words 'women' and 'gender' are absent from the rest of the text that marks important developments concerning the NDB, trade, global security challenges, infrastructure investments, development finance, business alliances, MSME sector, ICT expansion for sustainable development, affordable energy, communicable diseases such as HIV and TB, social protection and decent work, agriculture, urbanisation, migration, and climate change – all of which have well-documented inter-relationships with gender equality and women's empowerment. Hence, the BRICS documents showcase a homogenised masculine overtone where gender concerns are presented in segregation from the rest of the considerations.

Lastly, despite BRICS's repeated commitment to promoting women in leadership positions, at present, the NDB leadership is exclusively male. The board of governors, the board of directors, and the senior management do not include a single woman. While this may be labelled as coincidental, as this chapter demonstrates, it is important to take deliberate measures to avoid the systemic inertia that excludes women from decision-making roles.

In the last eight years, the BRICS collective has grown from strength to strength, despite the members' diversity. The BRICS countries have managed to strengthen cooperation in areas of trade and national security, even though together, they do no form a coherent, homogeneous "bloc." Political commentators predict that the rise of BRICS will reshape the distribution of global power.[29] However, without dismantling the internal power structures that drive gender inequality and hinder societal progress, the grouping will merely replicate the existing unequal and hierarchical world order.

THE BRICS SECURITY AGENDA: CHALLENGES GALORE

Harsh V. Pant
Distinguished Fellow and Head, Strategic Studies Programme, ORF

Introduction

Thee Goa summit of BRICS (Brazil, Russia, India, China, and South Africa) held in October 2016 underscored the challenges facing the five-nation grouping in its approach towards managing common security threats. While India's focus was on isolating Pakistan after the terror attacks in Uri in September 2016, calling Pakistan the "mothership" of terrorism and talking of terrorism as "its favourite child," the Goa declaration betrayed divisions within BRICS on the issue.[1] The declaration did not mention "cross-border terrorism" — a term used by India to describe Pakistan-sponsored terrorism.[2] It also did not name any Pakistan-based terrorist groups, including Jaish-e-Mohammad (JeM) and Lashkar-e-Toiba (LeT), whereas it named Islamic State, Al Qaeda, and Syria's Jubhat al-Nusra.

Indian Prime Minister Narendra Modi, in his own statements, tried to name and shame Pakistan. But Chinese President Xi Jinping called for "political solutions" to "regional hotspots" in a reference to the need for dialogue between India and Pakistan, even as Russian President Vladimir Putin decided not to make any reference to terrorism in his statement.[3]

The differences between India and China were particularly glaring. Targeting China, which had remained firm on blocking India's bid to get JeM chief Masood Azhar designated as an international terrorist by the United Nations (UN), Modi said that "selective approaches" to terrorists and their outfits were "futile and counter-productive" and that "there must be no distinction based on artificial and self-serving grounds." Xi, for his part, made an oblique reference to Kashmir when he talked about political solutions and regional hotspots. He also called for concrete efforts and a multi-pronged approach that address both "symptoms and root causes" of global challenges like terrorism — an argument that is in tune with Pakistan's position on Kashmir.[4]

The Goa summit made it clear that at a time when global security challenges are mounting, divergences among BRICS member states on how to manage them are also growing. This paper examines the rapidly evolving security agenda of BRICS and the challenges that this grouping faces in carving out coordinated responses in tackling them.

The BRICS Security Agenda

Jim O'Neill, an investment analyst at Goldman Sachs, came up with the term 'BRICs' in 2001. Soon thereafter, the term became more than just an economic construct as emerging powers in the form of Brazil, Russia, India, and China started negotiating the terms of the post-American world order. O'Neill predicted that "over the next 10 years, the weight of the BRICs and especially China in world GDP will grow," and went on to suggest that "in line with these prospects, world policymaking forums should be reorganised" to give more power to BRICs.[5] After first suggesting that the BRIC economies could collectively rival the G-7 (the US, the UK, France, Germany, Italy, Canada, and Japan) in terms of share of global growth by 2050, the assessment changed to conclude that the BRIC economies could rival the G-7 by 2032. The term "BRICs" soon became a brand, "a near ubiquitous financial term, shaping how a generation of investors, financiers and policymakers view the emerging markets."[6] The BRIC states soon realised the importance of this change in global perceptions about them and used it to structure a new group to underline their growing heft in global politics and economics. This was accomplished despite differing domestic political and economic institutional arrangements of these states.

The first formal summit meeting of the BRIC group was held in Yekaterinburg, Russia, in June 2009. The Yekaterinburg summit called for "a more democratic and just multi-polar world order based on the rule of international law, equality, mutual respect, cooperation, coordinated action, and collective decision-making of all states."[7] South Africa joined in December 2010, changing the nomenclature to BRICS. Since then, the joint statements of the various BRICS summits have repeatedly underscored the need for a realignment of the post-World War II global order that is based on the untrammelled supremacy of the US.

The economic rationale for the grouping today is rather tentative. The economies of Russia, Brazil, and South Africa are no longer what they were a decade ago. India remains the only bright spot, being the world's fastest-growing major economy in an otherwise gloomy global economic environment, and China can regain its past growth trajectory if it succeeds in tackling its debt problem. Importantly, there are indeed some convergences in the worldviews of the BRICS member states and they continue to have a vital role to play in tackling the most pressing international challenges.

The BRICS initiative is part of a broader pattern whereby the emerging powers are trying to coordinate their efforts on the global stage. With the US under the Obama administration, and even more so under Donald Trump, preoccupied with its internal troubles and the Eurozone mired in an economic and political crisis, the international system is increasingly feeling a vacuum. This presents an ideal opportunity for the BRICS grouping to finally emerge as a major global player.

At the international systemic level, the BRICS have found a convergence of interests by working together on climate change and global trade negotiations as well as demanding a restructuring of global financial institutions to reflect the economy's shifting centre of gravity. They share similar concerns about the international dominance of the US, the threat of terrorism from religious fundamentalist and ethnic movements, and the need to prioritise economic development. They have repeatedly expressed concern about the US use of military power around the world, and were opposed to the war in Iraq. Such actions were merely a continuation of the desire to contest US hyper-power since the end of the Cold War.

The BRICS states favour a multipolar world order where US unipolarity remains constrained by the other poles in the system. They zealously guard their national sovereignty and have been wary of US attempts to interfere in what they see as the domestic affairs of other states. These countries took strong exception to the US air strikes on Iraq in 1998, the US-led air campaign against Yugoslavia in 1999, the US campaign against Saddam Hussein in 2003, and the 2011 Western intervention in Libya. They argue that these actions violate sovereignty and undermine the authority of the UN system. They also share an interest in resisting interventionist foreign policy doctrines, such as Responsibility to Protect, emanating from the West, particularly from the US, and display conservative attitudes on the prerogatives of sovereignty. The core argument held by the global South on the restructuring of the core machinery of the UN and the allied institutions of global governance is that its mechanisms of operations are anachronistic and militate against the interests of the global South. As representations of the international world order post-World War II and the Cold War, they do not reflect, nor empathise with, the peace, security, and developmental interests of the global South. Concerning the UN Security Council, the main point on restructuring pertains to the veto powers carried by the Permanent Five.[8]

These states have likewise coordinated efforts on issues as wide-ranging as climate change, trade negotiations, energy security, and the global financial crisis. A variant of BRICS, called BASIC (Brazil, South Africa, India, and China), came together at the 2009 Copenhagen Summit on climate change to block measures for environmental protection advocated by the West. For example, they strongly resisted efforts by the US and other developed nations to link trade to labour and environmental standards—a policy that would put them at a huge disadvantage vis-à-vis the developed world, thereby hampering their drive toward economic development. They have committed themselves to crafting joint positions in the World Trade Organisation and global trade negotiations, in the hope that this might increase their leverage over developed states. These states would like to see further liberalisation of agricultural trade in developed countries and a tightening of the rules on anti-dumping. They have fought carbon emission caps proposed by the industrialised world. There is also a growing impatience among BRICS member states with the pace of reforms in international financial institutions. The 2012 Delhi declaration expressed concern over the slow pace of implementation of quota and governance reforms at the International Monetary Fund (IMF). Since then, the grouping has successfully underscored the point that the global financial and governance architecture needs a thorough overhaul in the light of a transformative shift in the global balance of economic power. They have established the New Development Bank, with an initial authorised capital of USD 100 billion, half of which will be initially underwritten by the BRICS member states with each putting forward equal contributions of USD 10 billion.

Socio-economic issues also require coordination among BRICS member states and there have been some discussions at the civil society level in that regard. Growing income and asset inequalities within the states have been one of the most significant consequences of the growth trajectory BRICS states have followed, with benefits of economic growth becoming concentrated among households at the high income level. Access to essential services, such as education and health, further aggravate these disparities and can be a precursor to political conflicts. The BRICS agenda is yet to fully come to terms with such intra-state dynamics that have significant global implications.

Terrorism has been repeatedly highlighted in all the BRICS declarations till date as a major security challenge facing the five nations. Violent and ideological extremism affects all the member states of BRICS. In the 2015 BRICS declaration in Ufa, the member states reiterated their "strong condemnation of terrorism in all its forms and manifestations and stress that there can be no justification, whatsoever, for any acts of terrorism, whether based upon ideological, religious, political, racial, ethnic, or any other justification."[9] The BRICS member states have called for a global Counter-Terrorism Strategy under the aegis of UN to effectively handle the issue while doing their utmost, in their individual capacities, to aid the strategy. The 2016 Goa declaration further underscored that the Islamic State (IS) remains the primordial manifestation of terrorism and extremism, threatening not just BRICS members but also the international order. The IS has openly threatened India, China, and Russia with attacks. Brazil too has been under the scanner. During the 2016 Olympic Games, Brazil arrested dozens of men alleged to have links with the terror outfit, whose main motive was to disrupt the games.

The BRICS states have expressed deep concerns at the persisting security challenges in Afghanistan and the significant increase in terrorist activities in Afghanistan. They have pledged support to the efforts of the Afghan Government to achieve Afghan-led and Afghan-owned national reconciliation and combat terrorism, and expressed their readiness for constructive cooperation to facilitate security in Afghanistan, promote its independent political and economic course to becoming free from terrorism and drug trafficking. The BRICS heads of state have also stressed the importance of multilateral region-led interaction on Afghan issues, primarily by those organisations comprising Afghanistan's neighbouring countries and other regional states, such as the Shanghai Cooperation Organisation, Collective Security Treaty Organisation, and the Heart of Asia Conference.

A major security challenge, often less highlighted, is that of armed robbery at sea and the issue of piracy. All the BRICS countries have long coastlines and are heavily dependent on international trade via the sea routes. Hence, this is one aspect where all the five member states have unanimously agreed to work collectively and negate this common, collective threat. The BRICS countries intend to reinforce their cooperation towards this goal, and have called upon all parties concerned to remain engaged in the fight against these phenomena.[10]

SECURITY CHALLENGES LESS HIGHLIGHTED ARE THOSE OF ARMED ROBBERY AT SEA AND PIRACY.

Outer space is another area of concern for the BRICS member states. They have repeatedly pitched for peaceful exploration and use of outer space. Keeping in mind that all the member nations have vibrant space industries, it becomes imperative that the BRICS member states fight collectively against the harmful activities that might be carried out in outer space. They have supported agreements which seek to curb an arms race in outer space and backed efforts to start substantive work based on an updated draft treaty on the prevention of the placement of weapons in outer space and of the threat or use of force against outer space objects, submitted by China and the Russian Federation.

The BRICS states also view the deteriorating situation in various African states with concern and have called upon the international community to do everything in its capacity to resolve the crises in South Sudan and the Central African Republic. Alongside tackling Al-Shabaab in Somalia and ending the decades-long conflict that has been plaguing the Democratic Republic of Congo have also been emphasised. China and India are major investors in various African economies and they have an interest in a more stable African continent.

A range of common security threats confront the BRICS member states. As discussed above, these range from 'hard' security issues like terrorism and weapons of mass destruction to so-called 'soft' issues such as food and environmental security. In this context, the member states have repeatedly reiterated the need for effective institutions, but how to design such institutions remains a key challenge. A more fundamental issue facing the grouping is about its scope: should BRICS be ambitious and expand its remit of security issues, or should BRICS concentrate on a few key ones? The focus in coming years is likely to be on global governance as it relates to almost all dimensions of security, from economics and trade to cyber and maritime.

Growing Divergences

Despite shared goals in mitigating common security challenges, convergence among BRICS states has not been as per expectations. Rhetoric has often exceeded real achievements. For example, Brazil, Russia, China, and India all abstained on the UN Security Council resolution authorising a no-fly zone over Libya as well as "all necessary measures" for protecting Libyan civilians from Col. Muammar Gaddafi's forces.[11] But there were significant differences in their individual approaches to the Western intervention. China and Russia's abstention meant a de facto "yes"— their veto would have killed any UN action, so an abstention meant that they were willing to let the West proceed against Libya, albeit with limits. The abstentions by India and Brazil, however, combined with South Africa's vote in favour of the resolution, underline the real challenges facing both the BRICS as a coherent group and the emerging global order. The democracies found it difficult to have a common voice as they struggled with tough choices in trying to strike a balance between their values and strategic interests in crafting a response.

It has been suggested that precisely because BRICS states hold different points of view on global issues, the existence of the BRICS group provides these states with a platform where they can learn from one another, helping in the transition toward a multipolar global order.[12] That may well happen sometime in the future, but meanwhile, for all the rhetoric emanating from annual BRICS summits, emerging ground realities are increasingly becoming difficult to ignore.

Even as the BRICS member states come to terms with a rising China, a fundamental contradiction lies at the very heart of BRICS as a political idea. China and Russia have little incentive to seek a change in the global political institutional fabric. They have a stake in preserving the status quo, while the remaining three—India, Brazil, and South Africa—are struggling to enter the hallowed confines of great power politics, and as such seek a redistribution. This struggle is reflected in the debate over restructuring the permanent membership of the UN Security Council.

The BRICS have called for "comprehensive reform" of the UN to make the body "more effective, efficient, and representative."[13] However, China remains opposed to changing the permanent membership of the Security Council. The veto-wielding powers of China and Russia have an impact on global policies that Brazil, India, and South Africa can only aspire to. Not surprisingly, it was US President Barack Obama who promised India that he would help its efforts to join the Security Council during his visit to New Delhi in November 2010.[14]

While the BRICS nations want greater responsibility on economic issues, in political and security affairs they remain reluctant to share any burdens. They have not been able to fashion a coordinated response to various global challenges, as is reflected in their divergent positions at the UN. In another example, despite being dissatisfied with the global financial institutional fabric, the members of BRICS failed to collectively challenge the Western dominance of the IMF and World Bank during the 2012 leadership changes of these institutions. The candidacy of France's Christine Lagarde went unchallenged, and they failed to propose a common candidate for the presidency of the World Bank. Unless the BRICS can articulate a common vision on global issues, they will remain unable to set the global agenda and discourse.

It is also important to recognise that the BRICS' conception of global order fundamentally diverges from the liberal vision of Western states; as Zaki Laidi argues, the BRICS "are concerned with maintaining their independence of judgement and national action in a world that is increasingly economically and socially interdependent."[15] As a result, on critical global issues, the BRICS have been satisfied proffering banalities as opposed to proposing serious policy choices. On Syria, for example, the group argued that "global interests would best be served by dealing with the crisis through peaceful means that encourage broad national dialogues that reflect the legitimate aspirations of all sections of Syrian society and respect Syrian independence, territorial integrity and sovereignty."[16] The BRICS have continued to argue for respecting Syrian sovereignty and have refused to support any resolution against the regime of Bashar al-Assad. Before the Durban summit, Assad publicly urged the BRICS leaders to help stop the violence in his country. In response, the BRICS final communiqué after the Durban summit conveyed "deep concern with the deterioration of the security and humanitarian situation," and "condemned the increasing violations of human rights and of international law" but refrained from taking any sides.[17]

Similar muddled thinking guides statements on Iran. BRICS suggested that the member states "recognise Iran's right to peaceful uses of nuclear energy consistent with its international obligations, and support resolution of the issues involved through political and diplomatic means and dialogue between the parties concerned, including between the IAEA and Iran and in accordance with the provisions of the relevant UN Security Council Resolutions."[18] Even on Afghanistan, an issue that is of direct relevance to three members—Russia, India, and China—all that the group has been able to affirm so far is a "commitment to support Afghanistan's emergence as a peaceful, stable and democratic state, free of terrorism and extremism, and underscore the need for more effective regional and international cooperation for the stabilisation of Afghanistan, including by combating terrorism."[19]

Beyond the question of global leadership, it is not readily evident if the BRICS nations are even considered leaders in their own neighbourhoods. All, including China, continue to face significant challenges within their own regions. China's ham-handed assertiveness in its neighbourhood is producing a backlash, seen in a loose anti-Chinese coalition emerging in East and Southeast Asia. India's dominance of the South Asian landscape makes it a natural target of resentment from its smaller neighbours. Brazil's leadership in South America is not accepted by other states in the region, as is reflected in Argentina's rejection of the Brazilian candidacy for permanent membership of the UN Security Council. Russia's neighbours still chafe at the memory of Soviet behaviour during the Cold War, while South Africa has been found wanting in tackling challenges in its own backyard (such as the Libyan crisis).[20]

More recently, the issue of terrorism has also divided the five member states. Without naming Pakistan, India used the BRICS platform to refer to Pakistan as the "mother-ship of terrorism" and forcefully argued that a "selective approach against terrorism" would be both futile and counterproductive.[21] In more ways than one, New Delhi made it plain to its BRICS partners that this is an issue where India feels rather strongly and that "BRICS needs to work together and act decisively to end this menace of terrorism."

This message was primarily aimed at China, with which India has had differences on the issue of Pakistan-sponsored terrorism against India. India has not had much success in convincing China on the desirability of changing its stance on JeM chief Masood Azhar. China has put a technical hold at the UN and prevented Azhar — who India believes was behind the Pathankot attack of 2016 and the Parliament attack of 2001 — from being designated a global terrorist, despite JeM being a UN-proscribed terror group. China is the only member in the 15-nation UN Security Council to put a hold on India's application with all other 14 members of the Council supporting New Delhi's bid to place Azhar on the 1267 sanctions list that would subject him to an assets freeze and travel ban.

It not only blocked India's attempts to include the names of terror groups like JeM and LeT in the BRICS declaration, but after the summit also defended Pakistan, saying it is against linking any country or religion with terror and asked the world community to acknowledge Pakistan's "great sacrifices." New Delhi was hoping that the Goa declaration, by suggesting that "those who nurture, shelter, support, and sponsor forces of violence and terror are as much a threat to us as terrorists themselves," might be able to pressure China to alter its support for Pakistan. But India could only convince China to agree to discuss this matter further.

From India's perspective, more significant was the reluctance of India's traditional partner Russia to come to India's support on the issue of Pakistani-sponsored terror. China successfully persuaded Russia to keep Indian concerns on terrorism in abeyance, even as Moscow's own concerns on Syria got reflected in the declaration, which called upon all parties involved in the Syrian conflict to work for a comprehensive and peaceful resolution of the conflict, taking into account the legitimate aspirations of the people of Syria, through inclusive national dialogue and a Syrian-led political process.

As a consequence, the ability of BRICS to frame coordinated responses to global challenges has come under question.

Conclusion

The growing attraction of BRICS is partly an offshoot of the discussion on the emerging "post-American" world where many commentators argue multipolarity is likely to be the norm.[22] Yet, while BRICS may have growing economies and the idea may have morphed into a nascent political concept, it is not entirely clear if it can be translated into effective action at the global level to manage common security challenges. The BRICS nations' contribution to the global order remains tentative at best and problematic at worst. Even if the BRICS get their economic act together, the group needs to turn that strength into a unified political force. The structural challenges within the BRICS grouping are also mounting.

The BRICS mandate is under siege at a time of slowing economies and growing intra-BRICS political divergences. China has managed to create financial institutions out of this grouping, which it dominates, and Russia is increasingly looking at this forum as a platform for its shadowboxing with the US. For Indian Prime Minister Modi, who has made close US-India ties his signature foreign policy move, BRICS is an important platform to showcase to his domestic critics that his foreign policy remains independent, not subservient to America. Brazil and South Africa's participation remains perfunctory at best.

The existing architecture of global governance does not adequately reflect the political and economic realities of the 21st century. New norms and new institutions are needed to make the system more credible. The future of BRICS will be predicated on its ability to establish sustainable institutions and norms to meet the myriad security challenges facing member states.

Addressing his fellow BRICS leaders at the BRICS Goa summit in 2016, Modi suggested: "We need to confront global challenges together. We, BRICS countries, share a common future. We are not only a community of convergence interest, but take concerted actions and make progress together. It is imperative that we step up coordination and communication on major international issues and regional hotspots and act in concert to find political solution to hotspot issues and take on such global challenges like natural disasters, climate change, infectious diseases and terrorism."[23] If even on terrorism, a menace all BRICS member states face, there continue to be divergences, it raises serious questions about the ability of BRICS to play a constructive global role in managing global security challenges. BRICS should be offering credible and concrete solutions to global problems as opposed to just opposing western initiatives. The realm of security is both a challenge and an opportunity for BRICS member states. It will always be a challenge for the five member states of BRICS to work together on security issues, as national interests tend to dictate states' responses on such issues. However, if the five powers can come together to coordinate their responses towards managing global security challenges, they will be able to prove the sceptics wrong.

CHINA'S CYBER SOVEREIGNTY VISION: CAN BRICS CONCUR?

Madhulika Srikumar
Junior Fellow, Cyber Initiative, ORF

Introduction

The question of applicability of international law to cyberspace is likely settled now. The United Nations Group of Governmental Experts (UN GGE) – the UN mandated working group tasked with establishing norms for responsible state behaviour in cyberspace – in its 2013 and 2015 reports recognised that established principles of international law including the right to self-defence[1] and the laws of armed conflict[2] are applicable in the digital domain. In effect, the UN GGE has recognised that the principle of state sovereignty applies to states' cyber activities.[3] An explicit recognition of state sovereignty in cyberspace is significant because it imposes responsibilities on states – such as not to intervene in another country's internal affairs[4] and not to use one's territory to cause injury to another state's territory or to the people and properties therein.[5] The hacking and subsequent publication of emails of the US Democratic Party's National Convention in 2016,[6] where an alleged state-sanctioned cyber operation interfered in another country's election, would under this principle run afoul of the prohibition on unlawful intervention – resulting in a violation of state sovereignty.[7]

As Patrick Franzese has argued, states are capable of exercising control over their ICT frameworks with most states operating some, if not all, critical infrastructure through cyberspace.[8] For this reason alone, cyberspace, unlike outer space, is not immune from state sovereignty. In other words, sovereignty, best understood as the supreme authority of the state to administer control over its territory to the exclusion of external actors, extends to cyberspace.[9] The recognition of sovereignty – or lack thereof – forms the underlying principle and norm that has resulted in the development of international regimes over domains such as air, sea, and space.[10] Similarly, in cyberspace, identifying the extent and limits of state sovereignty is fundamental to establishing that an act constitutes a violation of international law, issues of attribution notwithstanding.[11] The pursuit of stability in cyberspace will be contingent on states agreeing upon and adopting cyber norms,[12] which as Harold Koh argued in 2012, would eventually result in binding standards for state behaviour and a 'culture of compliance' among states.[13]

States have invoked the concept of sovereignty one way or another to build “national virtual fences”[14] as they seek to control not just the infrastructure of the internet within their borders, but also the content that flows through it. Globally, Beijing has been steadily pushing for the idea of ‘cyber sovereignty,’ arguing for an international cyberspace order where states cooperate and participate on an equal footing.[15] Domestically, China has relied on the principle of ‘cyber sovereignty’ to justify its excessive regulation of the internet, through surveillance and censorship, to counter dissent and extremism online.[16] The term cyber sovereignty coined by the Chinese is a catchall phrase, a tool for the state to assert its right to govern its domestic internet. The US and many others view this assertion as a threat to the open nature of the internet, one that could result in the balkanisation of the World Wide Web.

The BRICS states, as large, emerging digital economies, struggle to balance three competing yet related imperatives: keeping their digital markets open, preserving the security of their ICT infrastructure, and adequately tackling national security concerns. In light of this, it may be advantageous for the BRICS to collectively assert control over the ICT infrastructure located within their borders. This control can establish the states’ agency over the data of their citizens – protecting them from unauthorised exploitation by foreign actors and allowing them to effectively investigate crimes in cyberspace.

While any mention of cyber sovereignty can cause stirs across the Atlantic, an argument can definitely be made for the BRICS to debate the potential benefits of sovereignty in cyberspace. What must be given central consideration, however, is how these states assert control over cyberspace in their territories in a manner that is in line with international human rights obligations.[17] This paper examines whether the Chinese impetus for cyber sovereignty can catalyse a conversation among the BRICS nations to imagine a framework for control over the internet that strengthens cyber stability. It argues that a common understanding of cyber sovereignty can significantly increase the collective bargaining power of the BRICS nations to help shape international norms for cyberspace.

China’s New Approach to Cyber Sovereignty

Support for the Sino-Russian approach on internet governance, or in this case cyber sovereignty, can be construed, Alex Grisby argues,[18] as antithetical to supporting an open and global internet. While it is debatable whether Beijing is really looking to soften its stance on digital sovereignty, developments this year seem to indicate so. China earlier this year released its first position paper on cyber norms titled *The International Strategy of Cooperation on Cyberspace*, where the administration recognised individual privacy rights, proposed a ‘multi-party’ model in cyberspace governance dominated by states, and encouraged cooperation between nations to promote digital trade and maintain stability over cyberspace.[19] China’s new cyber security law that came into effect earlier this month stipulates that sensitive data must be stored domestically, cyber security products must undergo certification, and operators of Critical Information Infrastructure (CII) must regularly assess their cyber risks.[20] The Cyberspace Administration of China (CAC), however, has decided to delay the implementation of the regulations governing cross-border data flow – these will now come into force at the end of 2018.[21] Beijing seems keen to strike the right balance through its new law, with one commentator noting that the administration “is eager to avoid being seen as stifling digital trade.”[22]

The International Strategy of Cooperation on Cyberspace released on 1 March 2017 is China’s first strategy document that lays out the state’s position on cyber norms.[23] The policy will guide China’s international engagement on cyber-related issues for the near future. China, to no one's surprise, has emphasised that the principle of cyber sovereignty can be the basis of 'win-win cooperation' among states. Other principles mentioned include international peace, shared governance, and shared benefits. The Chinese idea of cyber sovereignty first appeared in a white paper titled *The Internet in China*[24] in 2010. Since then Beijing has put forth the idea at the government-sponsored Wuzhen World Internet Conference (in 2014[25] and 2015[26]), and during the sixth BRICS summit in 2014.[27]

Beijing is likely reconsidering its earlier stance on cyber sovereignty, as the strategy paper is couched in different terms. China is keen to encourage cooperation among states to ensure security and stability over cyberspace *while* promoting users' privacy rights. This is a welcome change. Beijing's biggest concerns this time around are to prevent outside interference in any form, including espionage, surveillance or undermining of the integrity of supply chains. To be fair, some of these assertions had been made by President Jinping and Lu Wei (former head of CAC) earlier too, at international conferences.[28]

In the 2015 edition of the Wuzhen Conference, Xi Jinping acknowledged that there was a need to respect freedom of expression, but said that the world needed a "fine cyberspace order following relevant laws."[29] China for years now has 'shielded'[30] its citizens from politically sensitive material through the Great Firewall – a censorship and surveillance tool – and the requirement for internet users to register for internet services with their real names.[31] China's other concern is to promote local companies, many already ranking in the top 10 internet companies of the world.[32]

China's internet sovereignty agenda came up as a counter to the US's multi-stakeholderism model – where states take a backseat in internet governance regimes.[33] China's conflict with the US's 'internet freedom' agenda[34] was up for display during the World Conference on International Telecommunications (WCIT-12) in Dubai, when China along with Russia argued for increasing governmental control over the internet. China and Russia have been pushing for state control over internet infrastructure (or multilateralism) in the governance of cyberspace to uphold national security.[35] The Sino-Russian cyber security relationship has developed over the past year[36] in a bid to counter US dominance, whether it is the US government's influence over the administration of internet infrastructure or the omnipresence of American tech companies. The improved China-Russia relationship, dubbed as a "marriage of convenience"[37] that hinges on the principle of cyber sovereignty, presents other BRICS states the option of moderating their approaches to achieve a consensus.

Lu Wei, in a 2014 op-ed, stressed the necessity of countries coming together to maintain the overall security of international cyberspace, arguing that the internet should be transformed into a "treasure trove of Alibaba rather than a Pandora's box!"[38] While China has been victim[39] as well as perpetrator[40] of instability in cyberspace, it has been looking to promote cooperation between states to prevent militarisation and build deterrence capabilities. Wei in his op-ed noted that foreign firms could operate in China as long as they respected the local laws.[41]

Two predominant interests guided China's earlier approach to cyber sovereignty. First, that its citizens must not be exposed to opinions online that the state would deem harmful or against national interests. Second, the US and other western powers must cease to influence the governance of the internet. *The International Strategy of Cooperation on Cyberspace* indicates that the state is looking to alter its vision on cyber sovereignty as China's own capability in the technology space increases, both in terms of volume of users and the rise of Chinese internet companies. Beijing has a shared interest in ensuring the security and stability of cyberspace and seeks cooperation from other states in creating norms and ensuring compliance. China, in a bid to protect local companies and make more revenue from foreign technology companies, is trying to open its digital markets. To appease foreign companies, an official of the Chinese administration, during the release of the position paper earlier this year, noted that the Chinese internet was 'fully open' as long as companies complied with the law and did not undermine national interests.[42]

BRICS COUNTRIES MUST WEIGH NATIONAL SECURITY INTERESTS AGAINST THE ECONOMIC NECESSITY TO KEEP DIGITAL MARKETS OPEN.

BRICS Consensus on Cyber Sovereignty

A BRICS consensus is important for two reasons. First, despite only two of the BRICS nations having an internet penetration rate over 50 percent (Brazil and Russia), the number of internet users across the BRICS grouping is of global significance. An agreement and a potential plan of action between these economies – on reform in internet governance institutions, combating cyber crimes and terrorism, or protecting user privacy – can be meaningful. Second, all the BRICS countries played crucial roles in the successful transition of the Internet Assigned Numbers Authority (IANA) in 2016, which culminated in the US government relinquishing control over the Internet Corporation for Assigned Names and Numbers (ICANN), the not-for-profit corporation in charge of managing the internet's infrastructure layer. The IANA transition was proof that the BRICS states can play a defining role in the governance of the internet – a role they must extend to the creation of cyber norms.

As Beijing looks both inwards and outwards to enforce its agenda on sovereignty in cyberspace, the BRICS grouping must strongly consider reaching a consensus to make a play for the creation of global norms in cyberspace. With China hosting some of the biggest internet companies and becoming a leading provider of hardware around the world, it has emerged as a key challenger to US dominance in the market. In fact, Beijing may even be willing to concede its position on primacy of the state over cyberspace to support Chinese companies, increase their user base, and welcome foreign investment. For instance, the Electronic World Trade Platform, proposed by Alibaba, aims to create a global digital single market, the creation of which will be led by the private sector and will rely on free sharing of data across the globe.[43]

China moderating its stance and recognising the role of different stakeholders in administering the internet comes at a time when western countries such as the UK[44] are enforcing laws to increase government control over the internet for national security purposes. As China looks to prioritise individual rights through the enforcement of the national cybersecurity law by requiring service providers from outside the country to store sensitive data domestically, countries such as India or Brazil can find China's new cyber sovereignty outlook more agreeable than before. In the aftermath of the Snowden revelations Russia, China, and Brazil have all advocated data sovereignty to protect sensitive data from foreign surveillance.

BRICS states should ideally stay clear of imposing any form of excessive censorship similar to China's Great Firewall. BRICS economies will have to weigh their interest in maintaining national security against the economic necessity of keeping their digital markets open. As for countering US dominance over the internet, BRICS states are likely to be willing to commit to principles requiring increased participation from emerging economies in ICANN and other standard-setting bodies. BRICS economies can come together to recognise cyberspace as a sovereign domain and emphasise that exercising state sovereignty is in their strategic interest. The grouping can further agree on developing their technical abilities to exert sovereignty in cyberspace.

Conclusion

With commentators arguing that the BRICS as an alliance is fading in importance[45] and that China is dominating the grouping's agenda,[46] a BRICS consensus on cyber sovereignty would be momentous. Although the GGE is currently at the forefront of setting the rules of the road for responsible state behaviour in cyberspace, a BRICS consensus on cyber norms can be an influential one in the global discourse. In the light of recent events such as the DNC hack and the spread of the WannaCry ransomware – which affected computers across 150 nations in May this year – these concerns may not be unfounded. Increased militarisation of cyberspace has put many countries on edge, with many experts calling for the US National Security Agency to take responsibility for the proliferation of the WannaCry malware, based on the EternalBlue exploit developed by the agency.[47] In this backdrop, it would be prudent for the BRICS countries to assert agency over the ICT infrastructure while not straying from the democratic principles of an open internet.

With the next BRICS summit scheduled for September this year in Xiamen, India, Brazil, and South Africa (IBSA) will have the option of acceding to the Sino-Russian agenda to reinforce state control over the digital domain. Domestic developments within China that indicate a softer position on cyber sovereignty have brought the IBSA to a crossroads. While India and the rest need not piggyback on the Chinese vision, the grouping must strongly consider the opportunity of reaching a consensus with their partners to make a play for the creation of global norms in cyberspace.

ENDNOTES / REFERENCES

BRICS Role in Global Governance Processes

1 The State of Global Governance: An Audit, http://yaleglobal.yale.edu/state-global-governance-audit.

2 The UN's Role in Global Governance, UN Intellectual History Project, https://ia801303.us.archive.org/31/items/15GlobalGov/15GlobalGov.pdf.

3 Decolonization of Asia and Africa, 1945–1960, Office of the Historian, Department of State, United States of America, https://history.state.gov/milestones/1945-1952/asia-and-africa.

4 Ibid.

5 UN welcomes 193rd member state, http://www.unric.org/en/latest-un-buzz/26841-un-welcomes-193rd-member-state.

6 Authors' calculations, http://stat.wto.org/StatisticalProgram/WSDBViewData.aspx?Language=E.

7 Authors' calculations, Data.worldbank.com.

8 David Smith, "Trump withdraws from Trans-Pacific Partnership amid flurry of orders," https://www.theguardian.com/us-news/2017/jan/23/donald-trump-first-orders-trans-pacific-partnership-tpp.

9 Full transcript: Donald Trump's jobs plan speech; Roberto Suro-Mary Akers-Rich Lowry-Ben Schreckinger, http://www.politico.com/story/2016/06/full-transcript-trump-job-plan-speech-224891.

10 "Donald Trump and Xi Jinping's battle over globalization," https://www.ft.com/content/74b42cd8-e171-11e6-8405-9e5580d6e5fb.

11 Brics, Brazil, Russia, India, China & South Africa, http://brics2016.gov.in/content/innerpage/about-usphp.php.

12 Ibid.

13 8th BRICS Summit Goa Declaration, http://indianexpress.com/article/india/india-news-india/8th-brics-summit-goa-declaration-here-is-the-full-text-adopted-by-the-member-nations/.

14 World Trade Organization, https://www.wto.org/english/thewto_e/whatis_e/tif_e/org1_e.htm.

15 Ibid.

16 Ibid.

17 8th BRICS Summit Goa Declaration, http://indianexpress.com/article/india/india-news-india/8th-brics-summit-goa-declaration-here-is-the-full-text-adopted-by-the-member-nations/.

18 Export-Import Bank of India, Working Paper No. 96, Intra-BRICS Trade, http://indiainbusiness.nic.in/newdesign/upload/intra-brics-trade-an-indian-perspective.pdf.

19 Ibid.

20 Foreign Trade: Data Foreign Branch, https://www.census.gov/foreign-trade/balance/c5700.html#2015.

21 "More intra-BRICS currency trade mooted," http://www.thehindu.com/news/national/telangana/More-intra-BRICS-currency-trade-mooted/article16070624.ece.

22 Ibid.

23 Samir Saran and Abhijnan Rej, "'BRICS' to rebuild the house," http://www.orfonline.org/research/brics-to-rebuild-the-house/.

24 Dadan Upadhyay, "Goodbye dollar? BRICS set to enhance trade in national currencies," http://in.rbth.com/world/2015/02/28/goodbye_dollar_brics_set_to_enhance_trade_in_national_currencies_41685.

25 7th BRICS Summit Ufa Declaration, http://www.brics.utoronto.ca/docs/150709-ufa-declaration_en.pdf.

26 8th BRICS Summit Goa Declaration, http://indianexpress.com/article/india/india-news-india/8th-brics-summit-goa-declaration-here-is-the-full-text-adopted-by-the-member-nations/.

27 India's Intended Nationally Determined Contribution: Working Towards Climate Justice, http://www4.unfccc.int/submissions/INDC/Published%20Documents/India/1/INDIA%20INDC%20TO%20UNFCCC.pdf.

28 Rabah Arezki, Patrick Bolton, Sanjay Peters, Frederic Samama, and Joseph Stiglitz, IMF Working Paper, From Global Savings Glut to Financing Infrastructure: The Advent of Investment Platforms, https://www.imf.org/external/pubs/ft/wp/2016/wp1618.pdf.

29 Ibid.

30 Sangeeta Shashikant and Martin Khor, Intellectual Property and Technology Transfer Issues in the Context of Climate Change, http://www.twn.my/title2/IPR/pdf/ipr14.pdf.

31 OECD/G20 Base Erosion and Profit Shifting Project, 2015 Final Reports, Information Brief, https://www.oecd.org/ctp/beps-reports-2015-information-brief.pdf.

32 Rathin Roy, Failing to Finance Development, Business Standard, http://www.business-standard.com/article/opinion/rathin-roy-failing-to-finance-development-115072301549_1.html.

33 Financing for Development, Committee of Experts on International Cooperation in Tax Matters, http://www.un.org/esa/ffd/tax-committee/about-committee-tax-experts.html http://www.un.org/esa/ffd/tax-committee/about-committee-tax-experts.html.

34 Abdul Muheet Chowdhary, "Why India's Demand For UN Tax Committee Holds The Key To Funding The Paris Deal," Huffington Post, http://www.huffingtonpost.in/abdul-muheet-chowdhary/why-indias-demand-for-an-_b_8920098.html.

35 Ibid.

36 Ibid.

37 Ibid.

38 Ibid.

39 Ibid.

40 Samir Saran and Mahima Kaul, "Lessons from BRICS: Developing an Indian strategy on global internet governance," Observer Research Foundation, http://www.orfonline.org/research/lessons-from-brics-developing-an-indian-strategy-on-global-internet-governance/.

41 Ibid.

42 Ibid.

43 New Development Bank, www.ndb.int.

44 Ibid.

45 Ibid.

46 IMF governance: one step forward, one step back, http://www.brettonwoodsproject.org/2016/02/imf-governance-one-step-forward-one-step-back/.

47 Lucy Komisar, Interview with Joseph Stiglitz, The Progressive, https://www.globalpolicy.org/social-and-economic-policy/the-three-sisters-and-other-institutions/internal-critics-of-the-world-bank-and-the-imf/42796-joseph-stiglitz.html.

48 Mark Anderson, "$73 billion needed to meet development goals," *The Guardian*, http://www.thehindu.com/opinion/columns/73-billion-needed-to-meet-development-goals/article7102325.ece.

49 Shubh Soni, "BRICS New Development Bank: The Glass is Half Full," *Swarajya Magazine*, http://www.orfonline.org/research/brics-new-development-bank-glass-is-half-full/.

50 Samir Saran and Abhijnan Rej, "'BRICS' To Rebuild the House, Observer Research Foundation, http://www.orfonline.org/research/brics-to-rebuild-the-house/.

51 Ibid.

52 Henry Kissinger, *World Order* (Penguin Press: 2014).

The Case for the New Development Bank Institute

1 "Agreement on the New Development Bank," New Development Bank, 2014.

2 Ibid.

3 Raj M. Desai Vreeland and James Raymon Vreeland, "What the new bank of BRICS is all about," *Washington Post,* 2014.

4 Parag Khanna, "New BRICS Bank a Building Block of Alternative World Order," HuffPost, http://www.huffingtonpost.com/parag-khanna/new-brics-bank_b_5600027.html.

5 Maggie Zhang, "BRICS New Development Bank hopes to expand by drawing other nations as members," *South China Morning Post,* 2016.

6 "Agreement on the New Development Bank," University of Toronto, 2014, http://www.brics.utoronto.ca/docs/140715-bank.html.

7 “Ndb successfully issued first RMB-denominated green financial bond,” New Development Bank, July 19, 2016, http://www.ndb.int/press_release/ndb-successfully-issued-first-rmb-denominated-green-financial-bond/.

8 John Manning, “Can the BRICS New Development Bank compete with the World Bank and IMF?,” International Banker, 2014, https://internationalbanker.com/banking/can-brics-new-development-bank-compete-world-bank-imf/.

9 “BRICS gets greater say in IMF,” RT, 28 January 2016, https://www.rt.com/business/330438-imf-quota-brics-russia-china/.

10 “About the Developed Economics Group (DEC),” World Bank, http://www.worldbank.org/en/research/brief/about-the-development-economics-group-dec.

11 Levi Leatherberry, “The BRICS Bank: A new alternative to the IMF and World Bank,” Citizens for Global Solutions, 25 June, 2014, http://globalsolutions.org/blog/2014/06/BRICS-Bank-New-Alternative-IMF-and-World-Bank#.WZvwy_gjHs0.

12 “About the Developed Economics Group (DEC),” World Bank, http://www.worldbank.org/en/research/brief/about-the-development-economics-group-dec.

13 “About Us - Development Research Group,” Development Research Group, http://www.worldbank.org/en/research/brief/about-us.

14 IMF, *World Economic Outlook 2017*, http://www.imf.org/en/Publications/WEO/Issues/2017/04/04/world-economic-outlook-april-2017#.

15 “OECD Test Guidelines,” Indian Ministry of Science and Technology, http://dst.gov.in/oecd-test-guidelines-testing-chemicals.

16 Jorma Julin, “The OECD: Securing the Future,” OECD Observer, December 2003, http://oecdobserver.org/news/fullstory.php/aid/1197/The_OECD:_Securing_the_future.html.

17 “OECD and the G20,” OECD, http://www.oecd.org/g20/.

18 IMF, *World Economic Outlook 2017*, http://www.imf.org/en/Publications/WEO/Issues/2017/04/04/world-economic-outlook-april-2017#.

19 “Signing of cooperation agreement between the OECD and Brazil,” OECD, June 3, 2015, http://www.oecd.org/brazil/signing-of-cooperation-agreement-between-oecd-and-brazil.htm.

20 “South Africa: Concluding Statement of an IMF Staff Visit,” IMF, 23 June, 2015, http://www.imf.org/external/np/ms/2015/062315.htm.

21 “New World Bank Group Strategy to Help India Achieve its Vision,” World Bank, 12 April, 2013, http://www.worldbank.org/en/news/feature/2013/04/12/new-world-bank-group-strategy-to-help-india-achieve-its-vision.

22 “Treaty for the Establishment of a BRICS Contingent Reserve Arrangement – Fortaleza, July 15” BRICS, Ministry of External Relations, Brazil, http://brics.itamaraty.gov.br/media2/press-releases/220-treaty-for-the-establishment-of-a-brics-contingent-reserve-arrangement-fortaleza-july-15.

23 “Ndb successfully issued first RMB-denominated green financial bond,” New Development Bank, July 19, 2016, http://www.ndb.int/press_release/ndb-successfully-issued-first-rmb-denominated-green-financial-bond/.

24 “2016 Global Connectivity Index,” Huawei, http://www.huawei.com/minisite/gci/en/country_rankings.html.

25 “Statistical update on employment in the informal economy,” ILO, June 13, 2011, http://www.ilo.org/global/statistics-and-databases/WCMS_157467/lang--en/index.htm.

26 Sunny Freeman, “‘Uberization’ of everything is happening, but not every ‘Uber’ will suceed,” HuffPost, April 1, 2015, http://www.huffingtonpost.ca/2015/04/01/uberization-uber-of-everything_n_6971752.html.

Rebuilding BRICS through Energy

1 “Putin tells BRICS to set up energy bloc to boost safety,” Reuters, July 16, 2014, http://www.reuters.com/article/us-brics-summit-putin-energy-idUSKBN0FK29L20140715.

2 “World Energy Statistics,” EnerData, 2016, https://yearbook.enerdata.net/.

3 “Balanco Energetico Brasiliero,” *Empresa de Pesquisa Energitica*, 2016.

4 “The World Factbook - Crude Oil Proved Reserves,” CIA, 2016, https://www.cia.gov/library/publications/the-world-factbook/rankorder/2244rank.html.

5 Ieda Gomes, “The vanishing LNG Market in Brazil,” Oxford Institute for Energy Studies, April, 2017.

6 “Brazil Market Overview: Coal,” US International Trade Administration, 2015.

7 “Kazakhstan offers to sell Brazil uranium,” Reuters, May 6, 2017, http://uk.reuters.com/article/brazil-kazakhstan-uranium-idUKL1N1I715Q.

8 “World Energy Statistics,” EnerData, 2016, https://yearbook.enerdata.net/.

9 “The World Factbook - Crude Oil Proved Reserves,” CIA, 2016, https://www.cia.gov/library/publications/the-world-factbook/rankorder/2244rank.html.

10 “BP Statistical Review of World Energy June 2016,” BP, https://www.bp.com/content/dam/bp/pdf/energy-economics/statistical-review-2016/bp-statistical-review-of-world-energy-2016-full-report.pdf.

11 Jude Clemente, “China’s Rising Natural Gas Demand, Pipelines and LNG,” Forbes, April 24, 2016, https://www.forbes.com/sites/judeclemente/2016/04/24/chinas-rising-natural-gas-demand-pipelines-and-lng/#54d04b125d00.

12 Daniel Workman, “Coal exports by country,” World’s Top Exports, August 9, 2017, http://www.worldstopexports.com/coal-exports-country/.

13 “United States leads world in coal reserves,” US Energy Information Association, September 2, 2011, https://www.eia.gov/todayinenergy/detail.php?id=2930.

14 Daniel Workman, “Uranium Exports by Country,” World’s Top Exports, July 13, 2017, http://www.worldstopexports.com/uranium-exports-by-country/.

15 International Atomic Energy Agency & Nuclear Energy Agency, “Uranium 2016: Resources, Production and Demand,” OECD, https://www.oecd-nea.org/ndd/pubs/2016/7301-uranium-2016.pdf.

16 “Russia: Exporting Influence, One Nuclear Reactor at a time,” Stratfor, October 7, 2015, https://worldview.stratfor.com/analysis/russia-exporting-influence-one-nuclear-reactor-time.

17 Ibid.

18 “World Energy Statistics,” EnerData, 2016, https://yearbook.enerdata.net/.

19 “The World Factbook - Crude Oil Proved Reserves,” CIA, 2016, https://www.cia.gov/library/publications/the-world-factbook/rankorder/2244rank.html.

20 “World Energy Statistics,” EnerData, 2016, https://yearbook.enerdata.net/.

21 “Share of total primary energy supply in 2014,” International Energy Agency.

22 Clyde Russell, “RPT-COLUMN-India’s changing coal imports show quality over quantity,” *Reuters*, June 21, 2016, http://in.reuters.com/article/column-russell-coal-india-idINL4N19D244.

23 “Short-term Energy Outlook May 2016” U.S Energy Information Administration, https://www.eia.gov/outlooks/steo/archives/may16.pdf.

24 “Country Brief Analysis: India,” US Energy Information Administration, June 14, 2016, https://www.eia.gov/beta/international/analysis.cfm?iso=IND.

25 Tanvi Madan, “India and the Iran deal,” Brookings Institute, July 20, 2015, https://www.brookings.edu/blog/markaz/2015/07/20/india-and-the-iran-deal/.

26 Ibid.

27 Clyde Russell, “RPT-COLUMN-India’s changing coal imports show quality over quantity,” Reuters, June 21, 2016, http://in.reuters.com/article/column-russell-coal-india-idINL4N19D244.

28 “Troubled dry bulk market faces further turmoil as chinese coal imports remain weak,” BIMCO, 2015, https://www.bimco.org/news/market_analysis/2015/0814_china_coal_imports?sc_ver=1.

29 “China’s February crude oil imports hit second highest on record,” Reuters, March 8, 2017, http://www.reuters.com/article/us-china-economy-trade-crude-idUSKBN16F0G9.

30 Irina Slav, “China’s Oil Import Dependency Deepens,” OilPrice, January 13, 2017, http://oilprice.com/Latest-Energy-News/World-News/Chinas-Oil-Import-Dependency-Deepens.html.

31 Jude Clemente, “China’s Rising Natural Gas Demand, Pipelines and LNG,” Forbes, April 24, 2016, https://www.forbes.com/sites/judeclemente/2016/04/24/chinas-rising-natural-gas-demand-pipelines-and-lng/#54d04b125d00.

32 Stephen Cauchi, “Australian uranium in demand as China goes full steam for nuclear,” *The Sydney Morning Herald*, December 31, 2015, http://www.smh.com.au/business/energy/australian-uranium-in-demand-as-china-goes-full-steam-for-nuclear-20151217-glqldr.html.

33 Kevin Pang, “Uranium: China’s Yellowcake Imports Fall 10% in 2015,” Energy Intelligence, February 1, 2016, https://www.linkedin.com/pulse/uranium-chinas-yellowcake-imports-fall-10-2015-kevin-pang

34 “South Africa Country Brief,” US Energy Information Administration, April 29, 2015, https://www.eia.gov/beta/international/analysis.cfm?iso=ZAF.

35 Daniel Workman, "Coal exports by country," World's Top Exports, August 9, 2017, http://www.worldstopexports.com/coal-exports-country/.

36 International Atomic Energy Agency & Nuclear Energy Agency, "Uranium 2016: Resources, Production and Demand.," *OECD*, https://www.oecd-nea.org/ndd/pubs/2016/7301-uranium-2016.pdf

37 "The World Factbook - Crude Oil Proved Reserves," CIA, 2016, https://www.cia.gov/library/publications/the-world-factbook/rankorder/2244rank.html.

38 Jude Clemente, "U.S. Set To Rival Russia In Oil And Natural Gas Exports," Forbes, February 25, 2017, https://www.forbes.com/sites/judeclemente/2017/02/25/u-s-set-to-rival-russia-in-oil-and-natural-gas-exports/#6135f1ed1e2e.

39 "Country Brief Analysis: India," U.S. Energy Information Administration, June 14, 2016, https://www.eia.gov/beta/international/analysis.cfm?iso=IND.

40 Manish Vaid, "BRICS and the Doctrine of Energy Cooperation," Modern Diplomacy, October 24, 2016, http://moderndiplomacy.eu/index.php?option=com_k2&view=item&id=1833:brics-and-the-doctrine-of-energy-cooperation&Itemid=490.

41 Ibid.

42 Karl Mathiesen, "India to end coal imports 'in next few years,'" Climate Change News, January 18, 2017, http://www.climatechangenews.com/2017/01/18/india-to-end-coal-imports-in-next-few-years/.

43 Clyde Russell, "RPT-COLUMN-India's changing coal imports show quality over quantity," *Reuters*, June 21, 2016, http://in.reuters.com/article/column-russell-coal-india-idINL4N19D244.

44 Tim Buckley, "Australian Export Coal Quality," Institute for Energy Economics and Financial Analysis, November 23, 2015, http://ieefa.org/wp-content/uploads/2015/10/IEEFA-Australian-coal-briefing-note.pdf.

45 Mike Ives, "China's drive to clean up its coal power, one plant at a time," *New Scientist*, August 22, 2016, https://www.newscientist.com/article/2101780-chinas-drive-to-clean-up-its-coal-power-one-plant-at-a-time/.

46 "Fact check: Does Australia export cleaner coal than many other countries?," ABC News, March 3, 2016, http://www.abc.net.au/news/factcheck/2015-11-27/fact-check-is-australias-export-coal-cleaner/6952190.

47 Tim Buckley, "Australian Export Coal Quality," Institute for Energy Economics and Financial Analysis, November 23, 2015, http://ieefa.org/wp-content/uploads/2015/10/IEEFA-Australian-coal-briefing-note.pdf.

48 "Snapshot: top emerging refining markets," Offshore Technology, October 7, 2011, http://www.offshore-technology.com/features/featuresnapshot-top-emerging-refining-markets/.

49 "More Chinese crude oil imports coming from non-OPEC countries," US Energy Information Administration, April 14, 2017, https://www.eia.gov/todayinenergy/detail.php?id=30792.

50 "Snapshot: top emerging refining markets," Offshore Technology, October 7, 2011, http://www.offshore-technology.com/features/featuresnapshot-top-emerging-refining-markets/.

51 Ed Stoddard and Zimasa Mpemnyama, "UPDATE 1-South Africa sold 10 million barrels of oil to traders in December," Reuters, May 26, 2016, http://af.reuters.com/article/southAfricaNews/idAFL5N18N2OQ.

52 "South Korea, Japan agree to share oil reserves," *New York Times*, June 18, 2007, https://web.archive.org/web/20090212201429/http://www.iht.com/articles/ap/2007/06/18/business/AS-FIN-SKorea-Japan-Oil.php.

53 James A Phillips, "The Iranian Oil Crisis," Heritage Foundation, February 28, 1979, https://web.archive.org/web/20100126173509/http://www.heritage.org/Research/MiddleEast/bg76.cfm.

54 A.N. Sarkar, *Global Climate Change: Beyond Copenhagen* (Pentagon Press, 2010).

55 US Office of Fossil Energy, "Strategic Petroleum Reserve," United States Government, https://energy.gov/fe/services/petroleum-reserves/strategic-petroleum-reserve.

56 Sudheer Pal Singh, "Filling of strategic oil reserves delayed," *Business Standard*, December 23, 2015, http://www.business-standard.com/article/economy-policy/land-acquisition-woes-push-filling-of-strategic-reserves-to-march-115122200213_1.html.

57 "Oil Bulls Beware Because China's Almost Done Amassing Crude," Bloomberg, June 30, 2016, https://www.bloomberg.com/news/articles/2016-06-30/oil-bulls-beware-because-china-s-almost-done-amassing-crude.

58 Ed Stoddard and Zimasa Mpemnyama, "UPDATE 1-South Africa sold 10 million barrels of oil to traders in December," Reuters, May 26, 2016, http://af.reuters.com/article/southAfricaNews/idAFL5N18N2OQ.

Scripting a New Development Paradigm: India and the BRICS Partnership

Datta-Chaudhuri, Mrina. “Market Failure and Government Failure.” *Journal of Economic Perspectives* 4, no. 3 (1990): 25-39.

Galbraith, John Kenneth. *The Affluent Society*. Boston: Houghton Mifflin, 1958.

Gandhi, M. K. *Hind Swaraj (Indian Home Rule)*. Ahmedabad: Navjivan Publishing House, 1909.

Lewis, William Arthur. “Economic development with unlimited supplies of labour.” *Manchester School* 22, (1954): 139-91.

Myrdal, Gunnar. *Asian Drama: An Inquiry into the Poverty of Nations*. Harmondsworth: Penguin Books, 1968.

Nayak, Pulin B. “The State and the Market.” *Economic and Political Weekly* 31 no. 4 (1996): 18-22.

Nayak, Pulin B. “Planning and Social Transformation.” The 6th D. P. Dhar Memorial Lecture at Giri Institute of Development Studies, Lucknow, 2016.

Nurkse, Ragnar. *Problems of Capital Formation in Underdeveloped Countries*. Oxford: Basil Blackwell, 1953.

Planning Commission. “The Third Five Year Plan.” Government of India. 1961. http://planningcommission.nic.in/plans/planrel/fiveyr/index3.html.

Rosenstein-Rodan, Paul N. “Natura Facit Saltum: Analysis of the disequilibrium growth process.” In *Pioneers in Development*, edited by Gerald Meier and Dudley Seers. Washington, D.C.” The World Bank, 1984.

Schumpeter, Joseph. *The Theory of Economic Development*. Boston: *Harvard University Press*, (1911, 1961).

Sen, Amartya. *Development as Freedom*. New Delhi: Oxford University Press, 2001.

BRICS & SDGs: Prospects of minilateral action on a multilateral agenda?

1 Robyn Eckersley, “Moving Forward in the Climate Negotiations: Multilateralism or Minilateralism?,” *Global Environmental Politics* 12, no. 2 (May 2012): 24-42.

2 Oscar Widerberg and Daniel Engström Stenson, “Climate clubs and the UNFCCC: complement, bypass or conflict?,” Forbes, 2013.

3 Richard B. Stewart, Michael Oppenheimer and Bryce Rudyk, “Building blocks for global climate protection,” *Stanford Environmental Law Journal* 32, no. 2 (June 2013): 341-392.

4 Elinor Ostrom, “Polycentric systems for coping with collective action and global environmental change,” *Global Environmental Change* 20, no. 4 (October 2010): 550-557.

5 Frank Biermann et al., “The Fragmentation of Global Governance Architectures: A Framework for Analysis,” *Global Environmental Politics* 9, no. 4 (November 2009): 14-40.

6 BRICS, *The BRICS Report* (New Delhi: Oxford University Press, 2012), http://www.finmin.nic.in/sites/default/files/BRICS_Report.pdf.

7 Dimpho Chweneyagae et al., “The impact of HIV infection on maternal deaths in South Africa,” *South African Journal of Obstetrics and Gynaecology* 18, no. 3 (2012).

8 IANS, “Rising incomes, stability linked to declining female workforce participation: World Bank report,” *Financial Express*, May 4, 2017, http://www.financialexpress.com/india-news/rising-incomes-stability-linked-to-declining-female-workforce-participation-world-bank-report/653843/.

9 Press Information Bureau, Ministry of Health and Family Welfare, Government of India 2016, “6th BRICS Health Ministers’ Meet Delhi Communiqué,” http://pib.nic.in/newsite/PrintRelease.aspx?relid=155596#_ftn2.

10 Press Information Bureau, Ministry of Health and Family Welfare, Government of India 2016, “6th BRICS Health Ministers’ Meet Delhi Communiqué,” http://pib.nic.in/newsite/PrintRelease.aspx?relid=155596#_ftn2.

11 Fernanda Ruiz Nunez and Zichao Wei, “Infrastructure investment demands in emerging markets and developing economies,” World Bank Policy Research working paper no. 7414, 2015.

12 Rachit Ranjan, “The BRICS Butterfly Effect and Bretton-Woods Reform,” The BRICS Post, July 6, 2015, http://thebricspost.com/the-brics-butterfly-effect-and-bretton-woods-reforms/#.WZu-ZFUjHIV

13 Jane Perlez, “China Creates a World Bank of Its Own, and the U.S. Balks,” *New York Times*, December 4, 2017, http://www.nytimes.com/2015/12/05/business/international/china-creates-an-asian-bank-as-the-us-stands-aloof.html?_r=2.

14 Uri Dadush, "The Decline of the Bretton Woods Institutions," Carnegie Endowment, September 22, 2014, http://carnegieendowment.org/2014/09/22/decline-of-bretton-woods-institutions-pub-56712.

15 Anis Chowdhury, "Sovereign external debt workout: the political economy of the UN resolution," VOX, September 26, 2014, http://voxeu.org/debates/commentaries/sovereign-external-debt-workout-political-economy-un-resolution.

16 Simon Lester, "Is the Doha Round Over? The WTO's Negotiating Agenda for 2016 and Beyond," CATO Institute, February 11, 2016, https://www.cato.org/publications/free-trade-bulletin/doha-round-over-wtos-negotiating-agenda-2016-beyond.

17 Ambassador Asoke K. Mukerji, "Remarks at 10th Session of the Open Working Group on Sustainable Development Goals March 31, 2014," https://sustainabledevelopment.un.org/content/documents/7767india.pdf.

18 Ibid.

19 World Health Statistics, 2016.

20 Amit Narang, "Statement at Follow-up and Review of the 2030 Agenda at the Global level Informal Consultations chaired by PRs of Belize and Denmark," April 6, 2016 https://www.pminewyork.org/pages.php?id=2408.

21 Barbara Adams and Karen Judd, "2030 Agenda and the SDGs: indicator framework, monitoring and reporting," Global Policy Watch, March 18, 2016, https://www.globalpolicywatch.org/blog/2016/03/18/2030-agenda-sdgs-indicator/.

22 T.C.A. Anant, Statement at "Data and indicators for the 2030 Sustainable Development Agenda at the 47th Session of UN Statistical Commission March 8, 2016," https://www.pminewyork.org/pages.php?id=2389.

23 UN, "Open Working Group proposal for Sustainable Development Goals," https://sustainabledevelopment.un.org/focussdgs.html.

24 T.C.A. Anant, Statement at "Data and indicators for the 2030 Sustainable Development Agenda at the 47th Session of UN Statistical Commission March 8, 2016," https://www.pminewyork.org/pages.php?id=2389.

Common Health Challenges and Prospects for Cooperation in BRICS

1 WHO Global Health Observatory Database, http://www.who.int/gho/en/.

2 The Millennium Development Goals Report 2015, http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf.

3 Ibid

4 Ibid.

5 "Universal Health Coverage," WHO, December 2016, http://www.who.int/mediacentre/factsheets/fs395/en/.

6 "Health and Health-care in Russia and the Former Soviet Union," University of California, http://meded.ucsf.edu/gh/health-and-health-care-russia-and-former-soviet-union.

7 Thacker, N, Vashishtha V.M., Thacker D., *Polio Eradication in India: The Lessons Learned*, *Pediatrics* 138, no. 4 (2016); Dhar Aarti, "WHO officially declares India polio free," *The Hindu*, March 27, 2014; Ministry of Health and Family Welfare, Annual Report 2016-2017, http://mohfw.nic.in/annual-report-department-health-and-family-welfare--2016-17.

8 Narayana Health, www.narayanahealth.org; N. Madhavan, "Compassionate Heart, Business Mind," *Business Today*, May 25, 2014; F. Robert Jacobs and Richard B. Chase, *Operations & Supply Management* (New York: McGraw-Hill Irwin, 2010): 40.

9 "Over 2.7 million South Africans on antiretrovirals," health24.com, October 28, 2014, http://www.health24.com/Medical/HIV-AIDS/Management-of-HIV-AIDS/Over-27-million-South-Africans-on-antiretrovirals-20141028; UNAIDS, Global AIDS Update 2016, http://www.unaids.org/sites/default/files/media_asset/global-AIDS-update-2016_en.pdf.

10 This section is based on various BRICS Declarations listed in references.

11 It envisages 90 percent of people with HIV knowing they have the virus, 90 percent of those knowing getting sustained antiretroviral treatment, and 90 percent of those getting such treatment suppressing the virus's effects.

Bliss, Katherine E. (ed). *Key Players in Global Health: How Brazil, Russia, India, China and South Africa are Influencing the Game*. Washington, D.C.: CSIS Global Health Policy Center, 2010.

BRICS Health Ministers' Meeting. "Beijing Declaration." University of Toronto. 2011. http://www.brics.utoronto.ca/docs/110711-health.html.

BRICS Think Tanks Council. “Towards a Long-Term Strategy for BRICS: A proposal by the BRICS Think Tanks Council.” *National Committee on BRICS Research, Russia.* 2014. http://www.nkibrics.ru/.

Brink, Susan**.** **“**What China Can Teach The World About Successful Health-care.” NPR. 2015. http://www.npr.org/sections/goatsandsoda/2015/04/03/397158218/what-china-can-teach-the-world-about-successful-health-care.

Buss, Paulo Marchiori et al. **“**Health and development in BRICS countries.” *Saude soc*. http://dx.doi.org/10.1590/S0104-12902014000200004.

BRICS Summit. “Sanya Declaration.” Ministry of External Affairs, India*.* 2011. http://brics2016.gov.in/upload/files/document/57566e28a911e3rd.pdf.

BRICS Summit. “Ufa Declaration.” Ministry of External Affairs, India*.* 2015. http://brics2016.gov.in/upload/files/document/5763c20a72f2d7thDeclarationeng.pdf.

Cook, Linda. “Constraints on Universal Health-care in the Russian Federation Inequality, Informality and the Failures of Mandatory Health Insurance Reforms.” UNR Research Institute for Social Development. 2015. http://www.unrisd.org/80256B3C005BCCF9/(httpAuxPages)/3C45C5A972BF063BC1257DF1004C5420/$file/Cook.pdf.

Harmer et al. “‘BRICS without straw’? A systematic literature review of newly emerging economies’ influence in global health.” *Globalization and Health*. 2013. http://www.globalizationandhealth.com/content/9/1/15.

Health, Nature and Quality of Life: Towards BRICS Wellness Index. New Delhi: Research and Information System for Developing Countries, 2016. http://www.nkibrics.ru/system/asset_publications/data/57f2/d14d/6272/6908/181e/0000/original/BRICS_Wellness_Report.pdf?1475531085.

Hoff, Krista and Bob Tortora. “Health Status Varies in Emerging Economies.” Gallup. 2012. http://www.gallup.com/poll/155168/health-status-varies-emerging-economies.aspx.

Hu, Angang. *Economic and social transformation in China: Challenges and opportunities*. Vol. 3. Routledge, 2006.

Husain, Zakir. “Health of the National Rural Health Mission.” *Economic and Political Weekly* 46, no. 4 (January 2011).

India and Sustainable Development Goals: The Way Forward. New Delhi: Research and Information System for Developing Countries, 2016. http://ris.org.in/pdf/India_and_Sustainable_Development_Goals_2.pdf.

International Longevity Centre Brazil – ILC-BR. “Health and Health-care Country Paper Brazil.” 2013. http://www.ilcbrazil.org/wp-content/uploads/2014/03/health_and_health_care_country_Brazil.pdf.

“Joint Communiqué of the BRICS Member States on Health on the Sidelines of the 69th World Health Assembly.” Ministry of External Affairs, India*.* 2016. http://brics2016.gov.in/upload/files/document/5763bb2e1823469WHA.pdf.

Khorana, Sangeeta. “International Trade in the Health Sector: Forgotten Frontier?” *Commonwealth Trade Hot Topics* 126. 2016.

Macinko, James, and Matthew J. Harris. “Brazil’s family health strategy—delivering community-based primary care in a universal health system.” *New England Journal of Medicine* 372, no. 23 (2015): 2177-2181.

OECD. “Research and development in the pharmaceutical sector in health at a glance 2015: OECD Indicators.” http://dx.doi.org/10.1787/health_glance-2015-70-en.

Popovich et. al. “Health Systems in Transition. Russian Federation Health System.” *World Health Organisation.* 2011. http://www.euro.who.int/__data/assets/pdf_file/0006/157092/HiT-Russia_EN_web-with-links.pdf.

Rao, Krishna D. et al. “Progress towards universal health coverage in BRICS: translating economic growth into better health.” *Bulletin of the World Health Organization* 92, no. 6 (2014): 429-435.

Rodwin, Victor G. “Health and health-care in BRIC nations.” NYU Wagner Research Paper No. 2598570. 2015. http://dx.doi.org/10.2139/ssrn.2598570.

Ruger, Jennifer Prah, and Nora Y. Ng. “Emerging and transitioning countries’ role in global health.” *Saint Louis University Journal of Health Law & Policy* 3, no. 2 (2010): 253.

Saran, Samir, Singh, Ashok Kumar, Sharan, Vivan, “A Long-Term Vision for BRICS,” Observer Research Foundation. 2013. http://www.nkibrics.ru/system/asset_docs/data/54cf/71ac/6272/690a/8b09/0000/original/A_long-term_Vision_for_BRICS_%E2%80%93_Submission_to_the_BRICS_academic_forum_2013.pdf?1422881196.

Thacker, Naveen, Vipin M. Vashishtha, and Deep Thacker. “Polio eradication in India: The lessons learned.” *Pediatrics* (2016): e20160461.

United Nations. “Report of the United Nations Conference on Sustainable Development.” 2012. http:///www.uncsd2012.org.

Water and Sanitation Program, World Bank. “The Economic Impacts of Inadequate Sanitation in India.” http://www.wsp.org/sites/wsp.org/files/publications/wsp-esi-india.pdf.

BRICS Vision for Smart Cities

1 "Theme and Cooperation Priorities of 2017 BRICS Summit," BRICS 2017 China, https://brics2017.org/English/China2017/Theme/.

2 "World Urbanisation Prospects, The 2014 Revision," UN Department of Economic and Social Affairs, Population Division, 2014.

3 Roberta Prescott, "Inside Brazil's First Smart City," RCRWireless News, August 18, 2015.

4 "Moscow Receives World Smart City Award," Moscow Mayor, November 24, 2016, https://www.mos.ru/en/news/item/18162073/.

5 "Prime Minister to Launch Smart City Projects," Ministry of Urban Development, June 23, 2016.

6 Carl Samson, "China is Building their First 'Smart City' and it's not Beijing or Shanghai," Nextshark, October 11, 2016.

7 Danielle Petterson, "Joburg – Leading the Smart City Revolution in Africa," IFAT Africa, June 22, 2016.

8 This section of the paper primarily draws upon lessons learned from the work of scholars representing BRICS nations. The following recent publication documents their work: Rumi Aijaz, *Smart Cities Movement in BRICS*, ed. (New Delhi: Observer Research Foundation and Global Policy, 2017).

Gendering the BRICS Agenda

1 Protiva Kundu, "BRICS: Prospects and Challenges," Centre for Budget and Governance Accountability, March 2014, http://www.cbgaindia.org/wp-content/uploads/2016/04/BRICS-Prospects-and-Challenges.pdf.

2 Narnia Bohler-Muller, "Putting gender on the agenda for BRICS," Human Sciences Research Council, http://www.hsrc.ac.za/en/review/hsrc-review-march-2013/putting-gender-on-the-agenda-for-brics.

3 Protiva Kundu, "BRICS: Prospects and Challenges," Centre for Budget and Governance Accountability, March 2014, http://www.cbgaindia.org/wp-content/uploads/2016/04/BRICS-Prospects-and-Challenges.pdf.

4 The Global Gender Gap Report 2016, World Economic Forum, http://reports.weforum.org/global-gender-gap-report-2016/.

5 Gender Aspects of the Trade and Poverty Nexus: A Macro-Micro Approach, 2009, http://publications.worldbank.org/ecommerce/catalog/product?item_id=8947229 and "The impact of international trade on gender equality," World Bank, 2004, http://siteresources.worldbank.org/INTGENDER/Resources/premnote86.pdf.

6 Ben Shepherd, "Inclusive Development: Can trade be good for women?" Asia Times, January 6, 2017

7 Francesca Beausang, *Globalization and the BRICs: Why the BRICs will not rule the world for long* Springer, 2012.

8 Jonathan Woetzel et al, "How advancing women's equality can add $12 trillion to global growth," Mckinsey Global Institute, September 2015, http://www.mckinsey.com/global-themes/employment-and-growth/how-advancing-womens-equality-can-add-12-trillion-to-global-growth.

9 Vidisha Mishra, "Changing the gender agenda in India," East Asia Forum, October 3, 2015, http://www.orfonline.org/research/changing-the-gender-agenda-in-india/.

10 Ibid.

11 Ruchika Chaudhary and Sher Verick, "Female labour force participation in India and beyond," International Labour Organization, ILO DWT for South Asia and Country Office for India- New Delhi, 2014.

12 "More jobs & entrepreneurship opportunities needed to promote women empowerment & achieve gender parity," The Associated Chambers of Commerce & Industry of India, June 26, 2016, http://www.assocham.org/newsdetail.php?id=5767.

13 Participation of Women in the Labour Market in Leicester, Centre for Regional Economic and Social Research, September 2010.

14 Sanjay Vijayakumar, "India's Internet user base to touch 402 mn by December, surpassing U.S," *The Hindu*, November 17, 2016, http://www.thehindu.com/business/Industry/indias-internet-user-base-to-touch-402-mn-by-december-surpassing-us/article7888744.ece.

15 "Getting To Equal: How Digital is Helping Close the Gender Gap at Work," Accenture, 2016, https://www.accenture.com/t00010101T000000__w__/ar-es/_acnmedia/PDF-9/Accenture-Getting-To-Equal.pdf.

16 World Bank, *World Development Report 2016: Digital Dividends* (Washington, DC: World Bank, 2016). doi: 10.1596/978-1-4648-0671-1.

17 "Female Entrepreneurship 2015 Report," The Global Entrepreneurship and Development Institute, 2015, https://thegedi.org/research/womens-entrepreneurship-index/.

18 Vidisha Mishra, "Mainstreaming Gender in the India Africa Partnership," Observer Research Foundation, New Delhi, November 25, 2016, http://www.orfonline.org/research/mainstreaming-gender-in-the-india-africa-partnership/.

19 Ibid.

20 Women in National Parliaments, Inter-Parliamentary Union, December 1, 2016, http://www.ipu.org/wmn-e/world.htm.

21 Valentina Zarya, "The Percentage of Female CEOs in the Fortune 500 Drops to 4%," Fortune, June 6, 2016, http://fortune.com/2016/06/06/women-ceos-fortune-500-2016/.

22 Women in National Parliaments, Inter-Parliamentary Union, December 1, 2016, http://www.ipu.org/wmn-e/world.htm.

23 "BRICS Women's conference hosted in Jaipur: Key aspects," *India Today*, August 22, 2016, http://indiatoday.intoday.in/education/story/brics-womens-conference/1/746032.html.

24 Pinky Lalthapersad-Pillay, "Gender influences in the labour market: The case of BRICS," *Mediterranean Journal of Social Sciences* 5, No. 10 (2014): 146-155.

25 "G20 launches W20 to empower women," *The Hindu*, September 6, 2015, http://www.thehindu.com/news/international/g20-launches-w20-to-empower-women/article7622012.ece.

26 Ye Shan, "2016 W20 Meeting Closes in Xi'an, Organizers Release Official Statement," All-China Women's Federation, May 27, 2016, http://www.womenofchina.cn/womenofchina/html1/news/action/1605/2572-1.htm.

27 Ibid.

28 Debangana Chatterjee, "Gendering BRICS: Studying the Gendered Language of BRICS Declarations," ISA Asia-Pacific Conference, Hong Kong, June 27, 2016.

29 Oliver Stuenkel, "Why the West Struggles to Understand the BRICS," Global Policy, December 19, 2016.

The BRICS Security Agenda: Challenges Galore

1 "Mother-ship of terrorism: PM Modi's fresh attack on Pakistan at BRICS Summit," *Times of India*, October 16, 2016, http://timesofindia.indiatimes.com/india/Pakistan-mother-ship-of-terrorism-PM-Narendra-Modi-tells-BRICS-leaders/articleshow/54878345.cms.

2 The Goa Declaration can be found at http://www.mea.gov.in/bilateral-documents.htm?dtl/27491/Goa+Declaration+at+8th+BRICS+Summit.

3 Shubhajit Roy, "BRICS Summit: No crack in China wall, talks to continue," *Indian Express*, October 16, 2016, http://indianexpress.com/article/india/india-news-india/brics-summit-no-crack-in-china-wall-talks-to-continue-3085326/.

4 Rajesh Mahapatra and Rejaul H Laskar, "BRICS covers ground on terror, but outcome may have fallen short of Modi's hope," *Hindustan Times*, October 19, 2016, http://www.hindustantimes.com/analysis/brics-covers-ground-on-terror-but-outcome-may-have-fallen-short-of-modi-s-hope/story-irvKeBoXolSIhvougLfX6J.html.

5 Gillian Tett, "The story of the Brics," *Financial Times*, January 15, 2010, http://www.ft.com/intl/cms/s/0/112ca932-00ab-11df-ae8d-00144feabdc0.html.

6 Ibid.

7 Andrew E. Kramer, "Emerging Economies Meet in Russia," *New York Times*, June 16, 2009, http://www.nytimes.com/2009/06/17/world/europe/17bric.html?_r=0.

8 Harsh V Pant, *Indian Foreign Policy: An Overview* (New Delhi: Orient BlackSwan, 2016): 75-77.

9 The declaration is available at http://www.hindustantimes.com/analysis/brics-covers-ground-on-terror-but-outcome-may-have-fallen-short-of-modi-s-hope/story-irvKeBoXolSIhvougLfX6J.html.

10 The Goa Declaration can be found at http://www.mea.gov.in/bilateral-documents.htm?dtl/27491/Goa+Declaration+at+8th+BRICS+Summit.

11 UN Security Council Resolution 1973, SC/10200 (2011), March 17, 2011, http://www.un.org/News/Press/docs/2011/sc10200.doc.htm.

12 Oliver Stuenkel, "Why BRICS Matters," E-International Relations, March 28, 2012, http://www.e-ir.info/2012/03/28/why-brics-matters/.

13 "BRICS Summit: Delhi Declaration," Council on Foreign Relations, March 20, 2012, http://www.cfr.org/brazil/brics-summit-delhi-declaration/p27805.

14 Scott Wilson and Emily Wax, "Obama endorses India for UN Security council seat," *The Washington Post*, November 8, 2010, http://www.washingtonpost.com/wp-dyn/content/article/2010/11/08/AR2010110807129.html/.

15 Zaki Laidi, "The BRICS Against the West?" Sciences Po, CERI Strategy Papers, No. 11, November 2011, http://www.sciencespo.fr/ceri/sites/sciencespo.fr.ceri/files/n11_112011.pdf.

16 "BRICS Summit: Delhi Declaration," Council on Foreign Relations, March 20, 2012, http://www.cfr.org/brazil/brics-summit-delhi-declaration/p27805.

17 "Joint Statement of the Fifth BRICS Summit in Durban," Council on Foreign Relations, March 27, 2013, http://www.cfr.org/emerging-markets/joint-statement-fifth-brics-summit-durban-march-2013/p30341.

18 Ibid.

19 Ibid.

20 Eusebius McKaiser, "Mind the UN–AU Gap," *New York Times*, January 18, 2012, http://latitude.blogs.nytimes.com/2012/01/18/south-africa-must-recognize-its-role-in-african-union-problems/.

21 "Mother-ship of terrorism: PM Modi's fresh attack on Pakistan at BRICS Summit," *Times of India*, October 16, 2016, http://timesofindia.indiatimes.com/india/Pakistan-mother-ship-of-terrorism-PM-Narendra-Modi-tells-BRICS-leaders/articleshow/54878345.cms.

22 For a cogent exposition of this argument, see Fareed Zakaria, *The Post-American World* (New York: W.W. Norton, 2008).

23 Shubhajit Roy, "India Slams Pakistan over BRICS Wall," *Indian Express*, October 17, 2016, http://indianexpress.com/article/india/india-news-india/brics-summit-2016-pm-narendra-modi-pakistan-terrorism-2016-3086323/.

China's Cyber Sovereignty Vision: Can BRICS concur?

1 United Nations General Assembly, Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security, 24.06.2013, A/68/98, www.unidir.org/.../developments-in-the-field-of-information-and-telecommunications.

2 United Nations General Assembly, Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security, 22.07.2015, A/70/174 http://www.un.org/ga/search/view_doc.asp?symbol=A/70/174.

3 United Nations General Assembly, Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security, 24.06.2013, A/68/98, www.unidir.org/.../developments-in-the-field-of-information-and-telecommunications...

4 Case Concerning Military and Paramilitary Activities In and Against Nicaragua (Nicaragua v. United States of America); Merits, International Court of Justice (ICJ), 27 June 1986 – In the *Nicaragua case* the Court observed that customary international law forbids states from intervening in another, as each state is entitled by the principle of state sovereignty to decide its own political, economic and social system.

5 Trail Smelter Arbitration (United States v. Canada), Arbitral Trib., 3 U.N. Rep. Int'l Arb. Awards 1905 (1941) - "This right [= sovereignty] excludes […] not only the usurpation and exercise of sovereign rights […] but also an actual encroachment which might prejudice the natural use of the territory and the free movement of its inhabitants. […] under the principles of international law […] no State has the right to use or permit the use of its territory in such a manner as to cause injury […] in or to the territory of another or the properties or persons therein, when the case is of serious consequence […]"

6 Luke Harding, "Top Democrat's emails hacked by Russia after aide made typo, investigation finds," *The Guardian*, December 14, 2016.

7 Brian J. Egan, "International Law and Stability in Cyberspace," *Berkeley Journal of International Law* 35 (2016): 169.

8 Patrick W. Franzese, "Sovereignty in Cyberspace: Can it exist?," *Air Force Law Review* 64 (2009): 1.

9 As Franzese argues sovereignty can be best understood through the definition of Art.2(4) of the UN Charter: "All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations."

10 Patrick W. Franzese, "Sovereignty in Cyberspace: Can it exist?," *Air Force Law Review* 64 (2009): 1.

11 Ibid.

12 Martha Finnemore and Kathryn Sikkink, "International Norm Dynamics and Political Change," *International Organizations* 52 (1998): 887.

13 Harold Hongju Koh, "International Law in Cyberspace," *Harvard International Law Journal Online* (2012): 1.

14 Chris C. Demchak and Peter Dombrowski, "Rise of a cybered westphalian age," *Strategic Studies Quarterly* (Spring 2011), http://www.au.af.mil/au/ssq/2011/spring/demchak-dombrowski.pdf.

15 Catherine Cadell, "China's Xi urges cooperation among nations in governance of global internet," Reuters, November 16, 2016, http://www.reuters.com/article/us-china-internet-idUSKBN13B1FF.

16 Ibid.

17 Harold Hongju Koh, "International Law in Cyberspace," *Harvard International Law Journal Online* (2012): 1 – "[t]he physical infrastructure that supports the Internet and cyber activities is generally located in sovereign territory and is subject to the jurisdiction of the territorial State." He however emphasized that "[t]he exercise of jurisdiction by the territorial State, however, is not unlimited; it must be consistent with applicable international law, including international human rights obligations."

18 Alex Grigsby, "Do India and Brazil Really Moderate China and Russia's Approach to Cyberspace Policy?," Council on Foreign Relations, April 26, 2016, https://www.cfr.org/blog-post/do-india-and-brazil-really-moderate-china-and-russias-approach-cyberspace-policy.

19 "International Strategy of Cooperation on Cyberspace," Xinhua, March 1, 2017, http://news.xinhuanet.com/english/china/2017-03/01/c_136094371.htm.

20 "Overview of China's Cybersecurity Law," KPMG, February, 2017, https://assets.kpmg.com/content/dam/kpmg/cn/pdf/.../overview-of-cybersecurity-law.pdf.

21 Sui Lee Wee, "China's New Cybersecurity Law Leaves Foreign Firms Guessing," *The New York Times*, May 31, 2017, https://www.nytimes.com/2017/05/31/business/china-cybersecurity-law.html?_r=0.

22 Ibid.

23 "International Strategy of Cooperation on Cyberspace," Xinhua, March 1, 2017, http://news.xinhuanet.com/english/china/2017-03/01/c_136094371.htm.

24 "The Internet in China," Information Office of the State Council of the People's Republic of China, June 8, 2010, http://www.china.org.cn/government/whitepaper/node_7093508.htm.

25 World Internet Conference, 2014, http://www.xinhuanet.com/english/special/wicwuzhen2014/.

26 World Internet Conference, 2015, http://news.xinhuanet.com/english/2015-12/17/c_134927991.htm.

27 "Xi Jinping's Top Ten Network View," China.com, January 29, 2016, http://news.china.com.cn/2016-01/29/content_37693512.htm.

28 James Griffiths, "Chinese President Xi Jinping: Hands off our Internet," CNN, December 16, 2015, http://edition.cnn.com/2015/12/15/asia/wuzhen-china-internet-xi-jinping/index.html.

29 Ibid.

30 "The Great Firewall of China: Background," Torfox, Stanford, June 1, 2011, https://cs.stanford.edu/people/eroberts/cs181/projects/2010-11/FreedomOfInformationChina/the-great-firewall-of-china-background/index.html.

31 Catherine Shu, "China attempts to reinforce real-name registration for Internet users," TechCrunch, June 1, 2016, https://techcrunch.com/2016/06/01/china-attempts-to-reinforce-real-name-registration-for-internet-users/.

32 "The world's biggest internet-based companies," Deutsche Welle, August 4, 2016, http://www.dw.com/en/the-worlds-biggest-internet-based-companies/g-19446253.

33 Jeanette Hofmann ,"Multi-stakeholderism in Internet governance: putting a fiction into practice," *Journal of Cyber Policy* 1, no. 1 (2016): 29.

34 Min Jiang, "China's "Internet Sovereignty" in the Wake of WCIT-12," China US Focus, February 6, 2013, http://www.chinausfocus.com/peace-security/chinas-internet-sovereignty-in-the-wake-of-wcit-12/.

35 Ibid.

36 See Russia-China Information and Communication Technologies Development and Security Forum held in Moscow in April 2016.

37 Yuxi Wei, "China-Russia Cybersecurity Cooperation: Working Towards Cyber-Sovereignty," University of Washington, June 21, 2016, https://jsis.washington.edu/news/china-russia-cybersecurity-cooperation-working-towards-cyber-sovereignty/.

38 Lu Wei, "Cyber Sovereignty Must Rule Global Internet," HuffPost, 2014, http://www.huffingtonpost.com/lu-wei/china-cyber-sovereignty_b_6324060.html.

39 Jason Murdock, "China: We're 'victims not troublemakers' when it comes to cybercrime," International Business Times, April 18, 2016, http://www.ibtimes.co.uk/china-were-victims-not-troublemakers-when-it-comes-cybercrime-1555387.

40 Ibid.

41 Lu Wei, "Cyber Sovereignty Must Rule Global Internet," HuffPost, 2014, http://www.huffingtonpost.com/lu-wei/china-cyber-sovereignty_b_6324060.html.

42 Gerry Shih, "China seeks global support for cyber sovereignty framework," Phys , https://phys.org/news/2017-03-china-global-cyber-sovereignty-framework.html - "U.S. companies operating in China show that those who respect the Chinese law can seize the opportunity of China's Internet innovation and create immense value, while those who chose opposition will be isolated by themselves and finally abandoned by the Chinese market."

43 Manny Salvacion, "China, Europe to Lead in Creation of Global E-commerce Platform," Yibada, November 29, 2016, http://en.yibada.com/articles/170015/20161027/china-europe-lead-creation-global-e-commerce-platform.htm.

44 James Vincent, "The UK now wields unprecedented surveillance powers – Here's what it means," The Verge, October 27, 2016, https://www.theverge.com/2016/11/23/13718768/uk-surveillance-laws-explained-investigatory-powers-bill.

45 Simon Tisdall, "Has the Brics bubble burst?," *The Guardian*, March 27, 2016, https://www.theguardian.com/business/2016/mar/27/brics-bubble-burst-brazil-russia-india-china-south-africa.

46 Brahma Chellaney, "BRICS falls under China's sway," *The Japan Times*, November 23, 2016, http://www.japantimes.co.jp/opinion/2016/11/23/commentary/world-commentary/brics-falls-chinas-sway/#.WUKpLZLfrs0.

47 "The Wannacry Cyber Attack Puts NSA Hacking Back Into Focus," Fortune, May 16, 2017, http://fortune.com/2017/05/15/wannacry-ransomware-attack-nsa/.

As the BRICS grouping nears a decade of existence, this GP-ORF volume offers commentary from pre-eminent scholars and emerging next-generation researchers on measures that can separate and insulate the group from the vagaries of international discord. It provides area-specific insights and recommendations to promote a greater focus on key issues important to each BRICS nation and the continued institutionalisation of the grouping. The chapters cover the following themes: governance, development, energy, health, gender, security, smart cities, and the cyber sphere.