

**A brotherhood science diplomacy:
India-Brazil cooperation in
biotechnology**

Douglas Nascimento

**An account of Indo-Brazilian
approaches for regulating
misappropriation of bio-based resources
and associated traditional knowledge**

Sunita Tripathy

**Brazil-India relations and the UN
peacekeeping operations**

Sérgio Luiz Cruz Aguilar

Long-lost brothers in arms?

Carlos Timo Brito, Viveka Nand Jha,
Ankita Sohal

**India, Brazil and the new 'trans-
regionalism'**

Pankaj Jha

Since the early 2000s, Brazil-India relations gained new impetus as seen in the increase of high-level visits and trade flows between the two countries. A landmark of this process was the signing of the Brazil-India strategic partnership in 2006. At the multilateral level, the two countries jointly articulated positions at the UNGTAD and the G77 and supported the formulation of an alternative discourse on development and global governance through the establishment of the IBSA Forum and the BRICS.

As Brazil and India begin to identify complementarities and share perceptions about the evolving international order, there is still an enormous potential to be explored on the road ahead.

This book offers a prospective view of academics and policy makers of the two countries on the potential for greater Indo-Brazilian collaboration in the areas of science, technology and innovation; defense; sustainable and inclusive development; renewable energy; multilateral cooperation; and people-to-people exchange.

After reaching the 70-Year landmark of diplomatic relations, dialogue and cooperation must gain more density and autonomy. Our scholars can assist policymakers to identify new opportunities for advancing bilateral relations by bringing fresh views and new perspectives.

Karin Costa Vazquez

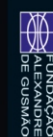
ISBN 978-85-7631-789-0



9 788576 317890 >



www.funag.gov.br



RELAÇÕES
colecção
INTERNACIONAIS

KARIN COSTA VAZQUEZ
(EDITOR)

Karin Costa Vazquez (Editor)

BRAZIL-INDIA RELATIONS BEYOND THE 70 YEARS

BRAZIL-INDIA RELATIONS BEYOND THE 70 YEARS

FUNDAÇÃO ALEXANDRE DE GUSMÃO

Foreword

Tovar da Silva Nunes

Foreword

Rengaraj Viswanathan

**The makings of Brazil-India strategic
partnership and the 70 years ahead**

Karin Costa Vazquez

**“Crossing Artha”: India-Brazil
migration and the possibilities for
cooperation**

Roberto Rodolfo Georg Uebel

**Is renewable energy the way out for
Brazil and India?**

Maria Cândida Arrais de Miranda
Mousinho

**Fiscal federalism, currency and
banking of the poorest for sustainable
and inclusive development: a research
agenda for India and Brazil**

Carlos Eduardo Carvalho, João Paulo
Nicolini Gabriel, Marcel Artioli

coleção | RELAÇÕES
INTERNACIONAIS

KARIN COSTA VAZQUEZ
(EDITOR)

BRAZIL-INDIA RELATIONS
BEYOND THE 70 YEARS

FUNDAÇÃO ALEXANDRE DE GUSMÃO

coleção | RELAÇÕES
INTERNACIONAIS

BRAZIL-INDIA RELATIONS
BEYOND THE 70 YEARS

MINISTRY OF FOREIGN AFFAIRS
ALEXANDRE DE GUSMÃO FOUNDATION

The Alexandre de Gusmão Foundation – FUNAG, established in 1971, is a public foundation linked to the Ministry of Foreign Affairs whose goal is to provide civil society with information concerning the international scenario and aspects of the Brazilian diplomatic agenda. The Foundation's mission is to foster awareness of the domestic public opinion with regard to international relations issues and Brazilian foreign policy.

FUNAG is headquartered in Brasília-DF, and has two units in its structure: the International Relations Research Institute – IPRI, and the Center for History and Diplomatic Documentation – CHDD, the latter is located in Rio de Janeiro.

KARIN COSTA VAZQUEZ
(Editor)

BRAZIL-INDIA RELATIONS
BEYOND THE 70 YEARS



FUNDAÇÃO
ALEXANDRE
DE GUSMÃO
Brasília – 2019

Copyright ©Alexandre de Gusmão Foundation
Ministry of Foreign Affairs
Esplanada dos Ministérios, Bloco H
Anexo II, Térreo, Sala 1
70170-900 Brasília-DF
Phone numbers: +55 (61) 2030-6033/6034
Fax: +55 (61) 2030-9125
Website: www.funag.gov.br
E-mail: funag@funag.gov.br

Editorial staff:

Eliane Miranda Paiva
André Luiz Ventura Ferreira
Gabriela Del Rio de Rezende
Luiz Antônio Gusmão

Graphic design and cover:

Varnei Rodrigues / Propagare Comercial Ltda.

Cover:

Land, Ocean Color, Sea Ice, City Lights - NASA Goddard Space Flight Center
Image by Reto Stöckli; enhancements by Robert Simmon.

The opinions expressed in this work are solely the authors' personal views and do not necessarily state or reflect those of the Brazilian government's foreign policy.

Printed in Brazil 2019

Dados Internacionais de Catalogação na Publicação (CIP)

B826 Brazil-India relations : beyond the 70 years / Karin Costa Vazquez (editor). –
Brasília : FUNAG, 2019.

148 p. – (Coleção relações internacionais)

ISBN: 978-85-7631-789-0

1. Parceria estratégica - Brasil - Índia. 2. Cooperação internacional - Brasil - Índia. 3. Relação diplomática - Brasil - Índia. I. Vazquez, Karin Costa. II. Série.

CDD 327.81054

CDU 327(81:540)

Depósito legal na Fundação Biblioteca Nacional conforme Lei nº 10.994, de 14/12/2004.
Bibliotecária responsável: Kathryn Cardim Araujo, CRB-1/2952

ACKNOWLEDGEMENTS

The authors are grateful to Roberta Lima Ferreira (Embassy of Brazil in New Delhi), Shobhan Saxena and Huma Siddiqui for their invaluable support and encouragement throughout the preparation of the book. The authors are equally grateful to Amika Bawa, Riddhiman Dey, Dikshit Sarma Bhagabati, and Vedant Saigal (O.P. Jindal Global University) for their research and editorial assistance.



TABLE OF CONTENTS

Foreword	9
<i>Tovar da Silva Nunes</i>	
Foreword	17
<i>Rengaraj Viswanathan</i>	
Introduction	
The makings of Brazil-India strategic partnership and the 70 years ahead	25
<i>Karin Costa Vazquez</i>	
Chapter 1	
“Crossing Artha”: India-Brazil migration and the possibilities for cooperation	31
<i>Roberto Rodolfo Georg Uebel</i>	
Chapter 2	
Is renewable energy the way out for Brazil and India?	45
<i>Maria Cândida Arrais de Miranda Mousinho</i>	

Chapter 3

Fiscal federalism, currency and banking of the poorest for sustainable and inclusive development: a research agenda for India and Brazil 57

Carlos Eduardo Carvalho, João Paulo Nicolini Gabriel, Marcel Artioli

Chapter 4

A brotherhood science diplomacy: India-Brazil cooperation in biotechnology..... 71

Douglas Nascimento

Chapter 5

An account of Indo-Brazilian approaches for regulating misappropriation of bio-based resources and associated traditional knowledge..... 83

Sunita Tripathy

Chapter 6

Brazil-India relations and the UN peacekeeping operations 99

Sérgio Luiz Cruz Aguilár

Chapter 7

Long-lost brothers in arms?..... 111

Carlos Timo Brito, Viveka Nand Jha, Ankita Sohal

Chapter 8

India, Brazil and the new ‘trans-regionalism’ 129

Pankaj Jha

FOREWORD

*Tovar da Silva Nunes*¹

In 2018, Brazil and India celebrated 70 years of diplomatic relations. Recently, these relations reached a new level, based on a common global vision and shared democratic values. The strategic partnership established in 2006 between Brazil and India has deepened, with both countries cooperating closely within BRICS, IBSA, G4, G20, BASIC, and the wider multilateral context of the United Nations. Bilateral dialogue and cooperation have also increased, but must gain more density and autonomy, as there is still an enormous potential to be explored by India and Brazil on the road ahead.

Our scholars can assist policymakers to identify new opportunities for collaboration by bringing fresh views and new perspectives. They may contribute to confirm – or redefine – priority areas and to advance projects of common interest. With this in mind, the Embassy of Brazil in New Delhi has offered institutional support to a contest of essays promoted by O.P.

¹ Ambassador of Brazil to India from August 2015 to November 2018.

Jindal Global University² to celebrate the 70 years of diplomatic relations between India and Brazil. With the invaluable support of the Alexandre de Gusmão Foundation (FUNAG),³ a selection of those essays has been compiled in this book.

The next pages present nine forward-looking and thought-provoking articles, written by Indian and Brazilian authors. They offer a prospective view on the potential of a greater Indo-Brazilian collaboration – in the areas of science, technology and innovation; trade and investment; defense; sustainable development and combating poverty; governance; multilateral cooperation; and civil society exchanges.

Before exploring the innovative ideas presented here for advancing bilateral relations, however, let us take stock of how Brazil and India have arrived where we stand. By looking at the past, we can better envisage the future.

* * * * *

Contacts between the two countries can be traced back to five centuries ago when Brazil and Goa were both outposts in Portugal's colonial outreach. Bilateral exchanges from that time are reflected in the flora and fauna, food and folk traditions of both sides. India's mangoes, coconuts, sugarcane, and jackfruit were introduced to Brazil, while cashew and manioc made their journey to India. Similarities between the *Boi Bumbá* of North Brazil and the *Poikham Kudhrai* of South India also point to the strong undercurrents of cultural and popular exchanges that took place in centuries long gone by.

2 The contest had been organized in 2018 by the Center for African, Latin American and Caribbean Studies (CALACS) at O.P. Jindal Global University, in Haryana. The Embassy of Brazil has helped with its publicity and dissemination among Brazilian universities, research centers and other interested institutions.

3 Established in 1971, FUNAG is a public foundation linked to Brazil's Ministry of Foreign Affairs. It is mandated to disseminate knowledge on Brazilian foreign policy and diplomatic history.

Although our historical journeys have followed singular paths, we have gained conscience of the challenges we face as developing nations. Our demographic, economic and political weight, along with our cultural riches and diversity, allow us to see the world through a prism of our own.

It was not fortuitous, therefore, that Brazil was the first Latin American country to establish diplomatic relations with independent India. Brazil saw in the India of 1948 a reflection of itself: a developing country testing the waters for a new role in the international system. In the following decades, India and Brazil alike would advocate in the United Nations that developing countries should have a role in the governance of the international order, refusing to be reduced to secondary actors. The Non-Aligned Movement led by Indian Prime Minister Jawaharlal Nehru in the 1950s promoted principles of mutual respect for national sovereignty and territorial integrity. In the early 1960s, Brazilian Foreign Minister Araújo Castro started to express a new – and authentically Brazilian – perspective on international relations, by not accepting a policy agenda ruled exclusively by the interests and concerns of the superpowers in the East-West axis.⁴ Each in his own way, Nehru and Castro believed that India and Brazil should have a voice in the post-war world.

Converging ideas paved the way for a more substantial collaboration at multilateral fora, such as the UNCTAD Conferences⁵

4 Araújo Castro's speech on "The Three Ds" (Disarmament, Development and Decolonization), delivered at the UN General Assembly on 19 September 1963, would become a landmark in Brazil's diplomatic history. It criticized the lack of policy space for developing countries to discuss their own challenges, beyond the dichotomy capitalism x socialism: "Not everything is East or West in the United Nations of 1963. The world possesses other cardinal points."

5 The second United Nations Conference on Trade and Development (UNCTAD) was held in 1968 in New Delhi.

and the UN General Assembly.⁶ Brazil became an observer at the Non-Aligned Movement and a close partner of India within the G77.⁷ In 1968, Brazil received the first-of-its-kind visit of an Indian head of state. In Brasilia, Prime Minister Indira Gandhi described the recently inaugurated capital city as a “vision of the future.” Constructed according to the same modernist principles of Chandigarh in India, Brasilia – said the PM – makes us think on a larger scale and believe in the human capacity to shape its destiny: “The future does not arrive on its own. Man desires it.”

However, if countries – like men – are to make history, they are also conditioned by their circumstances. The prime minister’s visit had indeed fostered bilateral relations. However, the systemic crisis of 1973 made Brazil and India retreat to models of endogenous development. Over the next two decades, they focused on the substitution of imports and the stimulus to strategic sectors such as energy, nuclear power, and IT. Despite the continued coordination at the multilateral level, introspection prevailed even after the Cold War was over. The abrupt suppression of the bipolar order, in 1991, has potentially amplified the horizon for Brazil and India, but the void of principles and rules to manage the newborn international order posed significant risk. Both countries had to rethink their models of development and give priority to regional alliances as a platform for external action.

In the mid-1990s, Brazil and India would again search for an opportunity to transcend their circumstances. In order to establish an alliance under the new *Zeitgeist*, Nehru’s and Castro’s ideas would have to be reinvented. The ability of being, at the same time,

6 India and Brazil collaborated for the approval of UNGA Resolution 3202 (S-VI) – Programme of Action on the Establishment of a New International Economic Order.

7 The G77 is a coalition group of developing countries founded in 1964 and designed to promote its members collective interests (especially in the economic front) by jointly negotiating in the United Nations. Nowadays the group has 134 members, including China.

firm in its principles and flexible in adapting to new scenarios – which traditionally marked both countries’ actions – would make this possible.

The countries exchange of high-level visits signaled the mutual interest in strengthening ties. In 1996, President Fernando Henrique Cardoso became the first Brazilian head of state to visit India. In 1998, Indian President Kocheril Narayanan reciprocated. In 2004, President Luiz Inácio Lula da Silva landed in Delhi accompanied by 100 Brazilian businesspeople. Two years later – and 38 years after Indira Gandhi – it would be the turn of Prime Minister Manmohan Singh to visit Brazil. President Lula made his second visit to India in 2007. In a short interval of 11 years, more visits of heads of state and government have taken place than in all the history of bilateral relations.

Over the last years, there was an impressive qualitative leap, with the signing of various agreements for cooperation in areas such as agriculture, biotechnology, environment, biofuels, and outer space. Furthermore, Brazil has facilitated an unprecedented convergence between India and the Mercosur. In 2009, the Preferential Trade Agreement Mercosur-India entered into effect, becoming the first instrument of its kind signed by the bloc outside the region.

Exploring the new possibilities created by the multipolar order, the two countries started to build the foundations for a new role on the international stage. They established channels of dialogue to advance on common interests and join forces to address emerging global challenges. Once more, India and Brazil made their own readings of the international system, instead of passively accepting third parties’ visions. The Strategic Dialogue Mechanism created in 2007 somehow gave new meaning to the words of Araújo Castro in 1963: from now on, “East” and “West”

would no longer be seen as a dichotomy that constrained the actions of the two countries, as during the Cold War, but rather as emerging “cardinal” poles (Brazil in the West and India in the East) that demanded to be heard.

Renewed, this vision continued to materialize through the creation of multilateral forums such as IBSA⁸ (2003), the G20 – Developing Nations⁹ (2003) and the G4¹⁰ (2005). Initially an acronym in vogue in the financial market, the BRICS gradually grew into a strategic platform for economic, political and diplomatic collaboration.

After ten summits (2009-2018), the intra-BRICS activities already encompass more than thirty areas, including agriculture, science and technology, culture, outer space, think tanks, internet, social security, intellectual property, health and tourism. In the best spirit of Nehru’s principles, as expressed in 1954, political coordination has been carried out in a constructive manner. The practice of hosting annual summits has facilitated the continuity of high-level visits: in 2014, the Prime Minister Narendra Modi traveled to Brazil for the 6th BRICS Summit, while in 2016, the President Michel Temer came to India for its 8th edition.

The New Development Bank (NDB), launched by the BRICS, represents a paradigm shift in the international financial system, especially for its South-South financing of infrastructure and sustainable development projects. Moreover, the BRICS Contingent Reserve Arrangement (CRA) provides mutual support

8 The IBSA Dialogue Forum is an international tripartite grouping for promoting international cooperation among India, Brazil and South Africa.

9 The G20 – Developing Nations (distinct from the G20 – Major Economies) emerged at the 5th WTO Ministerial Conference (Cancún, 2003) to leverage the common positions of its members at the Doha Round.

10 The G4 countries – Brazil, Germany, India, and Japan – support each other’s bids for permanent seats on the United Nations Security Council.

through liquidity and precautionary instruments in response to actual or potential short-term balance of payments pressures.

As the political dialogue between the two countries flourished, trade flows likewise began to grow: from US\$ 489 million in 2000 up to the historical peak of US\$ 10.62 billion in 2012 (an increase of 2071%). Due to the fluctuation of commodities' prices, it plummeted abruptly in the subsequent years (down to US\$ 5.64 billion in 2016) and has just started to recover, reaching US\$ 7.60 billion in 2017.

For the future, one main task is to diversify trade flows by incorporating products of higher technological content and added value.¹¹ Moreover, the series of mechanisms, memoranda, agreements and instruments conceived and signed in previous years are yet to be fully explored. Bilateral and multilateral platforms should be deepened. Brazilians and Indians need to identify major knowledge gaps to better explore opportunities for collaboration. The growing intensity and quality of our exchanges – even in the cultural dimension – are intrinsically linked to the development of a strategic vision of bilateral relations.

* * * * *

The traditional discourse about the Brazil-India relationship tends to follow a classic script: it usually draws back to 1500, when Portuguese explorer Pedro Álvares Cabral, while searching for a new sea route to India, ended up “discovering” Brazil. But little is said after that. On the contrary, it is quite common to argue that the geographic and cultural distances hamper deeper exchanges.

I will argue against it. Not underplaying the legacy of the colonial system that connected the Atlantic and the Indian Oceans

¹¹ Brazil's main exported products to India are cane sugar, copper ore and soybean oil. The country imports from India diesel, organic chemicals, pharmaceutical products, nuclear reactors, boilers and machinery.

for centuries, I believe that something more abstract unites Brazil and India. This ethereal bond is expressed in our optimistic attitude towards the world, despite material difficulties. It is present in colors, aromas and tastes that somehow make us perceive India's soul in a street corner in Brazil; and the Brazilian joy in the ebullience of Holi. It goes hand in hand with shared views about our countries' rightful place in the world, letting us look to the future with ambition; and, at the same time, value the beauty of today. This bond explains why *yoga* is increasingly popular among Brazilians and why Gandhi's message of solidarity and non-violence made him a dear historical figure in Brazil – revered, for instance, in the traditional street parade (*bloco*) Sons of Gandhi,¹² the most remarkable event of the Carnival in Salvador.

This special bond – which underlies any concrete interest or action – may bring Brazil and India much closer and take them much further in the years ahead.

12 In the city of Salvador, Northeast of Brazil, a Carnival bloc called *Filhos de Gandhi* (Sons of Gandhi) was created in 1949 and named after the late leader of India's independence movement. Dressed up to look vaguely Indian, its male components march in the streets during Carnival and several major religious festivals in Salvador along the year, bridging the sacred and the profane, as it is so characteristic of Brazilian culture.

FOREWORD

*Rengaraj Viswanathan*¹

India-Brazil relations have evolved over the years culminating in a ‘strategic partnership’ in 2006. An unprecedented number of summit meetings, high-level visits, and exchanges were held until 2011 with the Indian and the Brazilian governments actively encouraging private and public-sector companies to explore business opportunities between the two countries. Trade and investment grew significantly during this period, and a number of cooperation agreements were signed. Besides bilateral cooperation, India and Brazil – along with South Africa – formed the IBSA trilateral forum and later worked together in the BRICS. At the United Nations, the two countries worked proactively to reform the United Nations Security Council aspiring for permanent membership in the body.

After losing its vigor and becoming lukewarm in recent years, India-Brazil relations now enter a phase of uncertainty. But irrespective of the changes ahead, India perceives Brazil fundamentally as a “unique future power” given its inherent

¹ First Indian Consul-General in São Paulo, Brazil, from April 1996 to July 2000. Ambassador of India to Argentina, Paraguay and Uruguay from 2007-2013. Joint Secretary of the Latin America & Caribbean Division at the Indian Ministry of External Affairs from 2003-2007. Ambassador of India to Venezuela from 2000-2003.

strength and potential. Brazil has many distinct advantages and stronger fundamentals in comparison to the existing global powers as well as the other emerging and reemerging powers.

Advantage Brazil

Brazil is the fifth biggest country in area and population and the seventh largest economy in the world. It has a large and diverse base of agriculture, manufacturing, mineral wealth, services and exports. Brazil is blessed with mineral wealth and has large reserves of iron ore, tin, copper, bauxite, manganese and gold. Brazil also has 20% of the freshwater reserves of the world and the largest forest cover in Amazon – which contributes 20% of earth's oxygen. Brazil enjoys a moderate and agreeable climate. The country does not suffer from extreme heat or cold, nor is it vulnerable to extreme natural calamities. The rainfall is reasonable, and most of the agriculture is rain-fed, unlike India, which depends on irrigation and pumping of groundwater.

Brazil has a large and diverse industrial base and is a global leader in the research and production of ethanol, agricultural produce, medium-size aircraft (Embraer) and deep-sea drilling, among others. Brazilian companies such as JBS (the world's largest meat company), Brazil Foods, Petrobras, Vale, and Embraer are among the global leaders in their areas of operation.

Food and energy security

Brazil is an agricultural superpower. It is not only self-reliant in food security but has a surplus to export and be a global player. It is the world's largest exporter of beef, chicken, sugar, soya, orange juice, and coffee besides being a significant exporter of soya, maize, cotton, tobacco, bananas, pork and ethanol. The country can increase production and exports, and feed a few hundred

more million people in the world. With its advanced research and development, Brazil has brought under cultivation millions of hectares of arid land in Mato Grosso. The Brazilian climate and regional variations make it possible to grow crops throughout the year.

Brazil is also emerging as a global player in energy with significant exports of crude oil. With its leadership position in deep-sea drilling technology, Brazil will be able to exploit the large pre-salt reserves discovered in recent years. Brazil is also a pioneer and global leader in the use of sugar cane ethanol. Most of the new vehicles in Brazil have flex-fuel engines. Brazil is working with the US and a number of Latin American countries to standardize fuel ethanol production, use, and trading globally. Sugar cane ethanol is more fuel-efficient and environment-friendly than the corn ethanol used in the US. It is important to note that Brazil gets most of its energy from renewable sources, particularly hydroelectricity and ethanol. Unlike Brazil, the other emerging powers, namely China and India, will find their foreign policy constrained by their food and energy security concerns and their dependence on imports.

Free from threats

Despite having a border with ten out of the twelve South American countries, Brazil does not have any territorial disputes with its neighbors. Brazil does not face a hostile or unstable neighborhood like what India is burdened with and is lucky to be far from the global hotspots of tensions and problems. The Latin America region is free from nuclear arms, terrorism and threat of wars unlike parts of Asia, Africa and Eastern Europe. Brazil does not face any threat from terrorism. In contrast, the Western powers are vulnerable and going to be even more so in future, given the destabilization in countries such as Afghanistan, Iraq, Libya, Egypt and Syria and the growth of fundamentalist forces

such as Taliban, Al Qaeda and ISIS. Russia, China and India also have suffered due to terrorism and continue to face the risk of terrorist strikes.

Brazilians speak one language and follow one religion, and the country does not face any internal threat from fundamentalism or ethnic, linguistic or religious conflicts, unlike China, India and Russia. Even France, the UK, the US and Germany have to be on their guard against rising fundamentalism within their own countries.

The Brazilian spirit

With their blend of “coffee with milk” complexion and free mix of people of European, African (the largest outside Africa), Japanese (the largest outside Japan) and Arab origin, Brazil is a true melting pot. The Brazilians fit in easily with people around the world and get along happily with others. Brazil has an enviable soft power with its benign image of happy-go-lucky beach-going spirit, football, samba and Carnival.

The Brazilians did not even have to fight for their independence. The king himself declared independence from his own mother country Portugal and simply changed his title to King of Brazil. So the Brazilians do not have any bitterness or rancor against Portugal. They do not have to recall any fight for independence for national pride.

Many countries in the world have the figure of the “Father of the Nation”, usually a personality who liberated the country or fought for independence such as Simon Bolivar in the Andean countries and San Martin in Argentina. But Brazil has no such figure nor is there any hero-worship in the society. This makes the Brazilians pragmatic and open in their outlook.

A truly independent foreign policy

The victors of World War II and those who lost it have the burden of historical memory, which influences their foreign policy and global view. But Brazil does not have any scores to settle with other countries, nor does it have an agenda considered adversarial by others. Their rise as power will not be seen as a threat by any other country. On the contrary, Brazil has given comfort to other countries in the region through its active initiatives and participation in subregional and regional groups such as MERCOSUR, UNASUR and CELAC. The Brazilians are in an enviable position for not having “enemies” in their Strategic Defense Policy. Brazil is not perceived as an enemy by any other country either. In the absence of enemies, Brazil’s defense doctrine is based only on perceived “vulnerabilities.”

Brazil has one of the best diplomatic services in the world, admired for its professionalism and commitment. The Brazilian diplomats in the UN, WTO and other multilateral fora are known for their proactive roles. They have the freedom to judge issues based on pure merit, unlike the Indian diplomats who need to be constantly aware of potential implication of any UN resolution on Kashmir and other domestic issues of India as well as its mischievous neighbors. The Brazilians are neither on the side of agenda-pushing Western powers nor on the side of having to be defensive like India. They have the luxury of independent approach on many global issues without fear or other constraints.

While taking positions on regional and global issues, Indian foreign policy has to take into account many external and internal vulnerabilities and constraints such as the remittances and oil imports from Middle East, US tilt to Pakistan, Chinese and Pakistani threats as well as internal factors such as large Muslim population, the Kashmir issue and Tamil sensitivities on Sri Lanka.

Brazil has no such serious vulnerabilities or internal compulsions and therefore, can take bold and fearless stand on global issues. There are no foreign policy lobbies within Brazil similar to the lobbies of Israeli and Cuban emigrants which have distorted the US foreign policy and global strategy.

Brazilians fit naturally in the camp of the West. With a large number of people of European origin, Brazilians are basically rooted in Western values. They also get along culturally with the USA, which share a similar history. At the same time, Brazil is part of the developing world with its problems of poverty, among other issues. This makes Brazil feel part of the South and pursue South-South cooperation and solidarity. As an emerging power, it seeks to change the *status quo* of the global political and economic power equations, USA unilateralism and the Western powers overall domination.

Given their Western roots and Southern profile, Brazilians are comfortable in both camps. They are happy about the Indian-style arranged marriage of BRICS; the IBSA partnership which originated out of pure love and romance; as well as about the marriage of convenience in G20; besides their membership of regional groups such as MERCOSUR, UNASUR and CELAC.

Brazil is not particularly dependent upon one country or region for its trade. Foreign trade is well-diversified between EU, USA, China and MERCOSUR. The only dependence to some extent is on China, which is their largest trading partner.

Brazil as a role model and agenda setter

Brazil has successfully reduced poverty and inequality through its pioneering inclusive development policies such as *Bolsa Família*. This has become an inspiration for many other countries with

similar challenges. Additionally, the young Brazilian democracy has taken strong roots and become stable and mature.

Brazil has also played the role of agenda-setter in global issues such as “responsibility while protecting” to regulate humanitarian intervention, the Doha Round and, most recently, on the global governance of the internet. Brazil’s Amazon has a critical role in preventing global warming. The world needs the cooperation of Brazil to deal with the issues of climate change.

Challenges

Of course, Brazil has many serious challenges such as poverty, inequality, insecurity, drug trafficking, corruption, infrastructure, health care and education. A closer look at these issues makes Brazil look definitely as a developing country. But the problems of Brazil are solvable in the medium term, unlike some of the serious long-term developmental problems of huge magnitude faced by India.

India has the most challenging problem of providing food, education, healthcare and infrastructure for the 15 million additional population every year. Most of India’s energy is wasted in firefighting on the day-to-day issues of conflicts between communities and other such problems arising from the vast diversity of the country with 22 official languages.

Brazil is prepared to wait for its time

It is clear that Brazil has many distinct advantages over the other major powers and well qualified to be a global power. It is just a matter of time for Brazil to put its act together and claim its due place in the international stage. With its profile as a peaceful and benign power, without past sins or future threats, open and pragmatic approach in a non-prescriptive and non-polarizing way

and firm belief in a multipolar world and multilateralism, Brazil could make the UN better and the world safer as a global power and permanent member of the UN Security Council.

Conclusion

India views Brazil as an ideal strategic global partner. The two countries have common worldview and aspirations and face similar challenges. Both of them are role models for democracy in their respective regions. Over the years, India and Brazil have built up a rapport in working together in many global fora and multilateral negotiations. Now, India will wait for signals from the new Bolsonaro administration to revive their strategic partnership. Until then, India will focus more on economic diplomacy: Brazil is the biggest economy in Latin America and the largest trade partner of India in the region with a bilateral trade of US\$ 8.6 billion in 2017-2018.

Recently, Indian companies such as Sterlite, Sterling and Wilson have made entry into the infrastructure sector of Brazil with project contracts of over a billion dollars. Aditya Birla Group has announced an investment of US\$175 million in 2019 to expand the capacity of its aluminum plants in Brazil. Certainly, there is going to be more trade and investment between India and Brazil in the coming years.

INTRODUCTION

THE MAKINGS OF BRAZIL-INDIA STRATEGIC PARTNERSHIP AND THE 70 YEARS AHEAD

*Karin Costa Vazquez*¹

Brazil-India relations remain remarkably underexplored by academics and policy makers of the two countries. Existing literature comprises more on the multilateral fora in which both the emerging countries are its members than bilateral engagements. Indeed, Brazil and India have a history of political cooperation in multilateral fora since the 1960s. In 1964, the two countries jointly articulated positions at the United Nations Conference on Trade and Development and the G77. Three years later, Brazil and India condemned the enactment of the Non-Proliferation Treaty, calling it an attempt to ‘freeze’ the international power structure.

More recently, the two countries begin to converge in their interests as they slowly identify complementarities and share perceptions about the evolving international order. Brazil and India supported multipolarity and the formulation of an alternative

¹ Executive Director of the Center for African, Latin American and Caribbean Studies (CALACS), Assistant Dean for Global Engagement, and Associate Professor at O.P. Jindal Global University School of International Affairs, India. Fudan Scholar, Center for BRICS Studies at Fudan University, China.

discourse on development and global order as seen in the break of patents for the provision of generic drugs, the reform of the United Nations Security Council, the India, Brazil and South Africa (IBSA) Forum, and the Brazil, Russia, India, China and South Africa (BRICS) grouping.

The limited knowledge of Brazil-India relations is surprising given India's consistent economic growth rates (6.8-8.2% over the past three years) and its relative importance in global politics and economics. Brazil, in turn, has been historically among the most important trade partners of India in the entire Latin America and the Caribbean, with total flows amounting to US\$8,206 billion in 2018-2019 (approximately 21% of India's total trade flows in the region, according to the Ministry of Commerce of India).

Dismal until the early 2000s, bilateral relations gained new momentum with the establishment of the Brazil-India strategic partnership in 2006. Of all the countries in the Latin America and Caribbean region, Brazil remains India's only 'strategic partner' with some identified long-term complementarities, shared global vision and democratic values, and a commitment to foster economic growth with social inclusion for the welfare of their people. The two countries, however, have not yet developed clear strategies towards each other and stereotypes continue to reinforce the existing lack of knowledge between both societies.

The makings of Brazil-India strategic partnership

Starting in the 1990s, Brazil's foreign policy gradually began to look for new partnerships while maintaining more or less emphasis on traditional relations with the United States and Europe. Around the same time, India's economic liberalization process started to produce higher and sustained growth rates as well as potential for a stronger global presence. At the turn of the century, Brazil and

India started to share similar positions on a number of bilateral and global issues as reflected in the increase of high-level visits and trade flows between the two countries. This process culminated in 2006 with the signing of the Brazil-India strategic partnership and the placement of trade, agriculture, and science and technology at the core of bilateral relations. The strategic partnership also pointed the need to start a dialogue on regional and international issues like energy security and international terrorism, as well as to undertake closer coordination in international fora like the World Trade Organization and the United Nations Security Council.

A decade later, Prime Minister Narendra Modi and President Michel Temer agreed to scale-up Brazil-India strategic partnership during a bilateral meeting in Goa. In 2014, the Indian Ministry of External Affairs had set out on its agenda to improve New Delhi's ties with countries across the globe as the Modi government was keen to underscore its proactive foreign policy. Latin America offered an alternative source for India's demand for raw materials as well as new markets for value-added exports of Indian goods and services. Aside the economic argument, it was also in India's interest to reduce its dependency on West Asia for its energy security. On the Brazilian side, a set of macroeconomic measures combined with a foreign policy aimed at increasing economic and trade ties with other countries and blocs was expected to put Brazil back on an upward spiral after years of economic recession.

The resulting joint statement acknowledged that the decade-long strategic partnership had "opened a new phase" for India-Brazil relations. The document covered issues from trade to agriculture, science and technology to animal husbandry. It further elaborated upon the institutional mechanisms (i.e. commissions, committees and panels) for its implementation. The two countries also agreed to build a forward-looking relationship by deepening bilateral

relations and leveraging existing complementarities in areas like the production of pulses in Brazil, investment in the poultry sector in India, research and development of second-generation biofuels, and the joint development of chemical and biological products to make the treatment of tuberculosis, cancer and HIV/AIDS more affordable and accessible. Brazil and India further reaffirmed their commitment to “increase the participation of developing countries in the decision-making bodies of multilateral institutions” in reference to the UN Security Council reform.

The next 70 years of Brazil-India relations

Brazil-India strategic partnership has deepened with both countries cooperating within BRICS, IBSA, G4, G20, BASIC and the wider multilateral context of the United Nations. Yet, bilateral dialogue and cooperation still need to gain more density and autonomy. As Brazil and India celebrate 70 years of bilateral relations, this book has the twofold purpose of filling in the literature gap and contributing to mutual understanding while giving new impetus for bilateral relations from a scholarly standpoint. The chapters in this book build a narrative for the next 70 years of Brazil-India strategic partnership based on South-South cooperation, knowledge exchange, and people-to-people interaction.

Going forward, Brazil-India strategic partnership must stand on its own merit rather than becoming one's relationship with some developing country. The so-called 'Global South' continues to show signs of dynamism in global governance and intra-South trade continues to grow, proving that if the idea of South-South cooperation once sounded rhetorical; today, it looks realizable. In this regard, Brito, Jha and Sohal (Long-Lost Brothers in Arms? – Chapter 7) claim that by cooperating in the defense sector, Brazil and India could break ground on a tangible South-South agenda

that could have a far-reaching impact securing global commons and delivering peace and stability. Yet, many challenges remain regarding the implementation of a truly meritorious partnership. In “India, Brazil and the new ‘trans-regionalism’” (Chapter 8), Jha challenges the notion that Brazil and India have elevated their relations to a comprehensive strategic partnership in which countries complement each other in their aspirations to becoming influential stakeholders in the global architecture.

At a time when the world is witnessing the rise of China, its steadily growing presence and influence across Latin America and the Caribbean should be enough of an incentive to drive India to bolster its ties with countries in the region and Brazil in particular. Yet, Brazil and India have the opportunity to build an autonomous agenda on areas in which the two countries have made strides and could learn from each other. This is the case of peacekeeping operations and biotechnology, according to Aguilar (“Brazil-India relations and the UN peacekeeping operations” - Chapter 6) and Tripathy (“An account of Indo-Brazil approaches for regulating misappropriation of bio-based resources and associated traditional knowledge” - Chapter 5) respectively. In “Fiscal federalism, currency and banking of the poorest for sustainable and inclusive development: a research agenda for India and Brazil” (Chapter 3) Carvalho, Nicolini and Artioli further highlight the importance of knowledge exchange in Brazil-India relations by proposing an academic research agenda on themes for mutual economic and social development. These include India’s experience implementing the Goods and Services Tax (GST) and Brazil’s experience modernizing payment systems.

Realizing this potential will require people-to-people initiatives to complement traditional diplomatic channels. As Uebel argues in “Crossing *Artha*’: India – Brazil migration and

the possibilities for cooperation” (Chapter 1), historical migration flows between Brazil and India have owed economic, scientific and cultural innovation as well as the emergence of several enterprises. As it has been in the past, Uebel further points that human capital mobility will be fundamental for the future of bilateral relations. Mousinho (“Is renewable energy the way out for Brazil and India?” - Chapter 2) and Nascimento (“A brotherhood science diplomacy: India-Brazil cooperation in biotechnology” - Chapter 4) add that Brazil-India cooperation could involve greater engagement and dialogue with scholars, scientists and business people through the creation of networks connecting universities, non-governmental organizations and companies amongst themselves and with governments in fields like renewable energy, science and technology. Diplomacy should work in the institutional microenvironment, binding people in the two countries.

If Brazil-India partnership gained new impetus with the signing of the strategic partnership, the realization of its full potential remains a challenge. Reimagining Brazil-India relations with governmental and non-governmental actors and through mechanisms beyond traditional diplomacy is therefore necessary to advance a truly strategic partnership in the 70 years to come.

CHAPTER I

‘CROSSING ARTHA’: INDIA-BRAZIL MIGRATION AND THE POSSIBILITIES FOR COOPERATION

*Roberto Rodolfo Georg Uebel*¹

Several themes and cooperation agendas have emerged in the 70 years of Brazil and India diplomatic relations, from bilateral investment agreements to multilateral and multi-thematic forums. The historical and commercial relations between the two countries date back to the sixteenth century. While still colonies, Brazil and India’s history were intertwined by a common Portuguese ruler, as in the case of Goa. Multilateral and multi-thematic forums, such as the BRICS and its predecessors, IBSA and BASIC, synthesize and signal the leadership of the largest democracies in South America (Brazil) and in Asia (India) in the most diverse political, geopolitical and economic spheres of the post-Western world (STUENKEL, 2016).

In this context, an issue that has dominated policy makers and scholars debate in the last decade worldwide – international migration – is also present in the case of Brazil and India. Recent examples include the migration of Bengalis and Pakistanis to

1 Superior School of Advertising and Marketing and São Francisco de Assis University, Brazil.

India, and that of Venezuelans and Haitians to Brazil under similar conditions with regards to government action.² However, international migration as a theme of Brazil-India relations remains largely off the radar, except for a working group held during the BRICS Summit in 2015 (JAGRAN JOSH, 2015). Regarding the studies and debates on the presence of Indians in Brazil and of Brazilians in India, the literature does not provide references, despite the size of the expatriate community in the two countries and their influence on each other's economies.

This article discusses the migration flows between India and Brazil, the possibilities for cooperation arising from the movement of workers and human capital, and how bilateral agreements contribute to this agenda. As if these migration flows were *Artha* (अर्थ), from the Indian philosophy,³ this article presents a thematic cartography of migratory flows between the Brazil and India. It further discusses the notable and positive presence of Brazilians in India, mainly in Portuguese language teaching; and that of Indians in Brazil, who are promoting a spiritual and technological revolution in the country, from *yoga* to start-ups. The article concludes with a proposal of the policies and prospects for the next

2 In this case, similar conditions refer to the treatment of immigrants and refugees by the national governments of India and Brazil. Despite their ideological and political differences, there is a synergy that involves democratic, humanitarian and global issues in the treatment of migration by both governments. One example is the formulation of collective agendas that include the participation of NGOs, international organizations, religious entities and civil society. The legislative action on behalf of immigrant minorities and refugee groups resonates between the two countries, perhaps because of their desire to consolidate as exclusive regional players and obtain definitive seats in the United Nations Security Council.

3 The Sanskrit word *Artha* means 'that which one seeks.' Whatever activity and physical material a man needs to support life can be considered as *Artha*. *Artha*, in a broad sense, covers man's professional activities, job, business, wealth, property and all such earthly material helpful in maintaining his life. *Artha* applies to both an individual and a government. In an individual's context, *Artha* includes wealth, career, activity to make a living, financial security and economic prosperity. The proper pursuit of *Artha* is considered an important aim of human life in Hinduism. At government level, *Artha* includes social, legal, economic and worldly affairs. Proper *Arthashastra* is considered an important and necessary objective of government.

70 years of diplomatic relations between the largest democracies of South America and Asia.

Brazil-India cooperation agreements

During the 70 years of Brazil-India diplomatic relations, 55 bilateral agreements on trade, the creation of an India, Brazil, South Africa (IBSA) fund for combating poverty, and other areas were signed. Four areas account for more than 40% of these agreements, they are: education; technical cooperation; culture; and immigration. All of these areas offer possibilities for deepening Brazil-India relations as will be discussed later in this article. The table below summarizes the objective of the main agreements in each of the aforementioned areas and helps explain the flows between the two countries, especially those involving human capital and economic development.

Table 1: Main bilateral agreements related to migration flows

Area	Title of the agreement	Date of signature	Objective
Education	Exchange Programme between the Government of the Federative Republic of Brazil and the Government of the Republic of India for Cooperation in the Field of Education	01/02/2006	Exchange at university and pre-university levels; technical cooperation, work and study missions and technical visits; mobility between universities, research institutes, technical schools and institutions linked to secondary and elementary education in both countries; joint promotion of scientific, technical and cultural events. Priority areas: Mathematics; Engineering, IT and Computer Science; Biotechnology; Health; Technologies Appropriate for Sustainable Development; Education; Social Sciences and Transcultural Studies; Economics; History; Language and Literature.

Area	Title of the agreement	Date of signature	Objective
Technical Cooperation	Agreement between the Federative Republic of Brazil and the Republic of India on Scientific and Technological Cooperation	12/09/2006	Promote the development of cooperation in the field of science and technology, based on equality and reciprocal advantages. Priority areas: a) Biotechnology; b) Chemistry; c) Climate research; d) Maritime sciences; e) New materials; f) Mathematics; g) Physics; h) Sources of sustainable and renewable energy; i) Space; j) Industry-Research Partnership.
Culture	Cultural Cooperation Agreement between the Government of Brazil and the Government of India	23/09/1968	Interchange in the following fields: a) artistic representations; b) participation in international film festivals, of both countries; and c) films, documentaries, radio programs, television. The Government of India will facilitate and encourage the study of Brazilian history and literature in universities and higher education institutions in India, as well as facilitate and encourage the establishment of Brazilian study centres in its territory. The Government of Brazil will facilitate and encourage the teaching of Indian literature and history in universities and higher education institutions in Brazil, as well as facilitate and encourage the establishment of Indian study centres in its territory.
Mobility and Immigration	Memorandum of Understanding between the Ministry of Foreign Affairs of the Federative Republic of Brazil and the Ministry of Foreign Affairs of the Republic of India on the Establishment of Consultative Mechanism on Consular Matters and Mobility	16/07/2014	Exchange information on the experience of both countries with their nationals abroad, as well as on initiatives to support their respective expatriate communities. Exchange information on forms of relationship between government and diaspora, representation of nationals abroad, dialogue and representation mechanism for expatriate communities and use of new technologies and procedures to support them. Initiatives to facilitate the mobility of persons between the two countries, including exchange of information on the visa policy of each country.

Source: "Concórdia" System of International Acts of the Ministry of Foreign Affairs of Brazil.

As evidenced above, the possibilities for cooperation are multiple and address the priority development areas of both India and Brazil. These cooperation agreements have increasingly been reflected in the exchange of professionals between the two

countries as well as the mobility of students in higher education, especially of Brazilians in India. The presence of Indian laboratories in the Brazilian pharmaceutical market is also noteworthy, surpassing the participation of European laboratories in certain niches. It would not be wrong to say, therefore, that there is strong cooperation between Brazil and India in education, science and industry. This dynamic relies on both public and private sectors, relevant for win-win bilateral cooperation.

The cartography of Brazil-India migratory flows

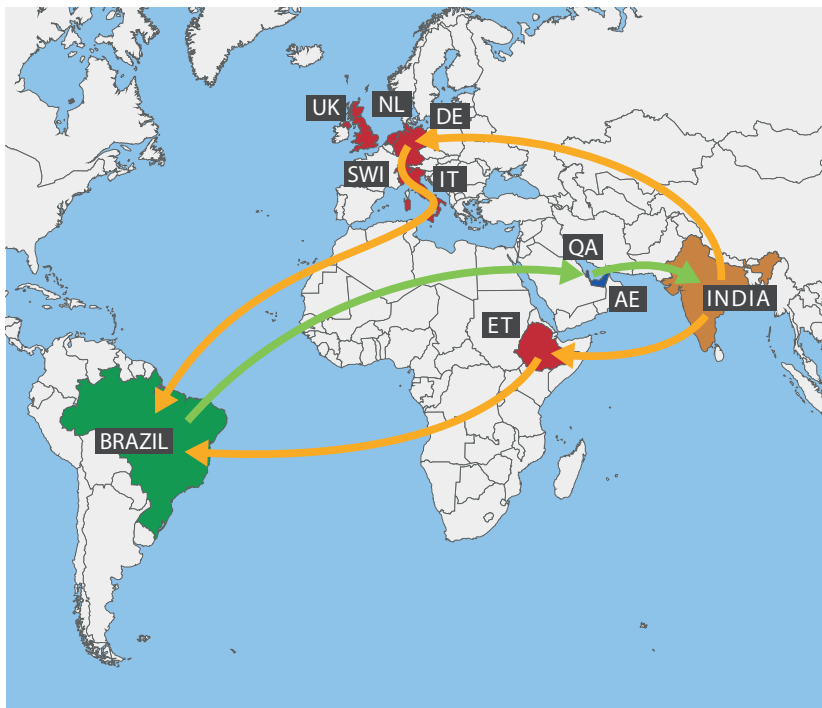
This section presents a thematic cartography of migratory flows between Brazil and India based on the data provided by the Brazilian Federal Police and the Embassy of Brazil in New Delhi, and complemented by information from India's Office of the Registrar General & Census Commissioner. This cartography is a result of the migratory phenomenon between the two countries and consolidates both the adoption of new spiritual practices and the insertion of Indian-managed start-ups in Brazil, as well as a timid but growing movement of Brazilians to India.

Between 2003 and 2017, the number of Indian immigrants in Brazil reached 19,000 individuals, making them among the twenty largest immigrant groups in the country. According to studies conducted by the aforementioned agencies, the Brazilian immigrants in India consists of approximately 5,000 individuals, one of the largest concentrations of Brazilians in Asia after Japan (100,00 individuals), Middle East (17,000 individuals) and China (16,000 individuals).

Indian migration to Brazil happens through two main routes: Ethiopia and Europe (mainly Germany, Italy, Netherlands, Switzerland, and the United Kingdom). Brazilians have preferred to migrate to India via Qatar and the United Arab Emirates due to

visa-free facilities and bilateral agreements. The map below shows the main routes used by Indian and Brazilian migrants. The lack of direct air connection between the two countries could be resolved by the two governments and airline companies in the coming years.

Figure 1 - Map of migratory flows and routes between India and Brazil



Elaborated by the author.

According to the Ministry of Foreign Affairs of Brazil, the Brazilian community residing in India:

[...] is in the vicinity of large urban centres. Many of the residents are women who have married Indians. There are also professionals in the technology and

entertainment sectors, international NGOs, among other corporate positions. The number of Brazilians has been increasing in the last decade. There is a significant floating population comprised of volunteers and people seeking spiritual experiences who often visit India. (MINISTRY OF FOREIGN AFFAIRS OF BRAZIL, 2017, our translation, adapted).

In the next two sections, we will discuss the immigration of Brazilians to India as well as Indians to Brazil, their contribution to prospects for promoting bilateral cooperation and to the local economy.

Brazilians in India: Portuguese teaching as a driving force for BRICS, IBSA and BASIC

“Goa: the state of India that has the face of Brazil” (GOVERNMENT OF BRAZIL, 2016) and “Goa, a little piece of Brazil in India” (KALSING, 2016) were the title of two articles published in the news portal of the Government of Brazil and the *Zero Hora* newspaper during the BRICS Summit held in the same city in 2016. The tenth most spoken language in the world and the official language of several countries across four continents, Portuguese has assumed increasing economic, cultural and geopolitical relevance in the field of international relations. It is also the only Latin language among the BRICS, IBSA and BASIC countries, thus bringing them closer to regions like Latin America and the Caribbean.

Portuguese language teaching figures among the main occupations held by Brazilians living in India. Since 2000, dozens of Brazilian immigrants have worked in Portuguese language teaching centres in India, such as the Camões Portuguese Language Centre in Goa. More than strengthening cultural ties, the 1,500 students

of Portuguese language in India (REVISTA MACAU, 2014) are part of a growing movement of scientific and academic rapprochement with other emerging powers like Brazil, like China, South Africa and Russia.

This cultural and educational geopolitics emerge as an experience of soft power and an alternative to the historical influence of Great Britain on India, in addition to giving life to bilateral agreements between India and Brazil since the 1960s. Learning Portuguese also offers Indian students the possibility to enter the labour market of one of the most dynamic regions of the world and promoting the so desired integration among the BRICS, BASIC and IBSA countries. On the Brazilian side, we will see in the next section how Indian immigration has contributed to the technological and spiritual revolution of the Brazilian society.

Indians in Brazil: from *yoga* to start-ups, spiritual and technological revolution

Since redemocratization and the liberalization of the Brazilian economy in the late 1980s, the country has observed an increasing annual inflow of immigrants from the most varied regions of the world reaching a population of two million individuals (UEBEL, 2017). Within this immigration wave, Indian nationals account for approximately 19,000 families mainly in the Southeast and South regions of Brazil and represent the 19th largest group of immigrants in the country and the third largest from Asia.

Along with these changes in immigration flows, innovation projects and spiritual and cultural practices gain more and more sympathizers in the Brazilian society; and it is precisely the Indian immigrants who spearhead this spiritual and technological revolution in the country.

The increase in the number of Indian spiritual and cultural practices sympathizers in Brazil is related to the assimilative character of the Brazilian society in relation to foreign cultures. In the last three decades, there has been a boom of cultural centers, restaurants and schools of Japanese, Chinese, Thai and other origins in Brazil. In this context, Indian immigrants have been instrumental in spreading *yoga* and Indian business mainly related to the immigration of technology professionals. Cultural phenomena, such as soap operas,⁴ books, and cinema, have also contributed to the increasing interest of the Brazilian society in India and its cultural, religious and spiritual practices.

Since 2010, Indian companies have been investing financial and human resources in Brazilian start-ups and fintechs, including the supply of skilled Indian workers and know-how from their headquarters mainly in Mumbai and Bangalore. Around 4.2 thousand technology and financial innovation companies have settled in major Brazilian urban centers like São Paulo and Belo Horizonte as well as small communities in the Amazon. Indo-Brazilian bilateral cooperation projects in the field of collaborative health, like the Practo (STARTUPI, 2016), have also been implemented.

The arrival of these Indian professionals also favored the emergence of enterprises that with time began to gain a more prominent space in the Brazilian society. These enterprises include Indian restaurants and dance schools, Buddhist and Hindu bookstores, and *yoga* centers. *Yoga* was particularly well received

4 In 2009, Brazilian TV broadcaster *Globo* produced and exhibited the soap opera "India: A Love Story" (re-exhibited again in 2015 and 2016) during its prime time, being one of the soap operas with the highest audience ratings in Brazilian television history. The story was set in India, with elements and characterizations of Hinduism, Buddhism and even Sikhism, and aroused the interest of the Brazilian population on India, as had happened in past soap operas with other foreign scenarios, like Morocco and Turkey.

in Brazil due to its similarities with the Spiritualism (*Espiritismo*)⁵ practice and its capacity to act as an alternative medicine (*Medicina alternativa*). There are about five million *yoga* practitioners in the country (AGÊNCIA ESTADO, 2008), and several training centers certified by Indian authorities across the national territory. Furthermore, *yoga* has also been the subject of hundreds of television documentaries and scientific research (MIRANDA, 2015).

The final statement of the BRICS Health Ministers meeting in Geneva in 2016, acknowledged “the value and importance of traditional and alternative systems of medicine as a means of achieving holistic healthcare, and the need of experience and knowledge-sharing for securing public health needs in this regard” (BRICS, 2016). The two seemingly antagonistic *Artha*, the economic and the philosophical, found in Brazil a collaborative synergy which has further promoted greater integration, including at the institutional level.

Final considerations

Migration flows have allowed economic, scientific and cultural innovation in both Brazil and India throughout the 70 years of diplomatic relations. These migration flows have also allowed the emergence of enterprises that were previously restricted to specific niches and have now gained acceptance and sympathy in both Indian and Brazilian societies, such as Portuguese language learning and *yoga* practice.

For the next seventy years, the outlook is positive for both Brazil and India, notably in three areas: a) the intensification of multi-thematic and multilateral agendas; b) the predominance of

5 A religion founded in France by Allan Kardec, which has a Christian base, as well as brings together elements of Buddhism, such as reincarnation. It is one of the most practiced religions in Latin America.

emerging powers in major global debates; c) the strengthening of research and joint investments in the fields of new technologies, sports and digital economy. Inevitably, these areas will be improved according to the intensity of migration flows between the two countries. Thus, far beyond capital and investments, human capital mobility between Brazil and India – that is, the exchange of skilled migrants, students, researchers and practitioners – is fundamental to the success of this outlook.

As mentioned in the first section, Brazil-India cooperation was boosted by the migration of professionals and students. These migration flows were enhanced by technical, cultural and educational cooperation agreements signed by the two countries. The exchange of professionals and practitioners of *yoga* and alternative medicine has gained new impetus within the BRICS bloc. There have also been efforts to enhance cooperation in higher education, notably graduate programmes in science, engineering, and international relations. However, the potentialities and cooperation arising from migration flows between the two countries do not follow a specific pattern or government agenda as, for example, in the case of Brazilians migrating to Australia or of Indians migrating to the United States.

If the synergy between Brasilia and New Delhi is perpetuated, the two countries are likely to jointly lead innovation, scientific and educational initiatives. The *Artha* of Brazil and India will definitely cross each other over the next decades.

References

AGÊNCIA ESTADO 2008, Mais de 5 milhões de brasileiros praticam ioga, estima entidade, Último Segundo, available at <<http://ultimosegundo.ig.com.br/brasil/mais-de-5-milhoes-de-brasileiros-praticam-ioga-estima-entidade/n1237691513830.html>>.

BRICS 2016, Joint Communiqué of the BRICS Member States on Health on the Sidelines of the 69th World Health Assembly May 24, 2016 (Tuesday), Geneva, *BRICS Information Centre*, available at <<http://www.brics.utoronto.ca/docs/160524-health.pdf>>.

GOVERNMENT OF BRAZIL 2016, Goa: o estado da Índia que tem a cara do Brasil, *Cultura*, available at <<http://www.brasil.gov.br/cultura/2016/10/goa-o-estado-da-india-que-tem-a-cara-do-brasil>>.

JAGRAN JOSH 2015, Joint Declaration of the Heads of the Migration Authorities of the BRICS countries released, 9 October, available at <<https://www.jagranjosh.com/current-affairs/joint-declaration-of-the-heads-of-the-migration-authorities-of-the-brics-countries-released-1444393116-1>>.

KALSING, J. 2016, Goa, um pedacinho de Brasil na Índia, *Zero Hora*, available at <<https://gauchazh.clicrbs.com.br/comportamento/viagem/noticia/2016/09/goa-um-pedacinho-de-brasil-na-india-7437996.html>>.

MINISTRY OF FOREIGN AFFAIRS OF BRAZIL 2017, India, Portal *Consular*. Available at <<http://www.portalconsular.itamaraty.gov.br/seu-destino/india>>.

MIRANDA, R.S. 2015, 'A tradição dos mantras no contexto do yoga integral (purna yoga): um estudo entre Brasil e Índia', Dissertation, João Pessoa: UFPB, available at <<http://tede.biblioteca.ufpb.br:8080/handle/tede/7893>>.

REVISTA MACAU 2014, 1.500 pessoas estudam português em Goa, *Revista Macau*, available at <<http://www.revistamacau.com/2014/06/02/1-500-pessoas-estudam-portugues-em-go/>>.

SHASHANK, N.D. 2016, Startup indiana de saúde inicia operação no Brasil, *Startupi*, accessed on 27 April 2018, available at <<https://>>

startupi.com.br/2016/03/startup-indiana-de-saude-inicia-operacao-no-brasil/>.

STUENKEL, O. 2016, *Post-Western world: how emerging powers are remaking global order*, Cambridge, Polity Press, UK.

UEBEL, R.R.G. 2017, 'International Migrations to Brazil in the 21st Century: Profile, Outlook and Trends', *Population Review*, vol. 56, no. 1, p. 68-101.



CHAPTER 2

IS RENEWABLE ENERGY THE WAY OUT FOR BRAZIL AND INDIA?

*Maria Cândida Arrais de Miranda Mousinho*¹

Brazil and India are considered developing countries and emerging leaders of the South (FARIA, 2010; VISENTINI, 2010). Their Gross Domestic Product (GDP) has substantially increased over the past twelve years, taking Brazil and India to the seventh and ninth place in world GDP ranking respectively. However, economic growth has also brought challenges for these countries: CO₂ emissions *per capita* grew 281% in Brazil and 493% in India; and energy consumption has more than doubled in recent years (WORLD BANK, 2016a, 2016b, 2016c, 2017a, 2017b, 2017c, 2017d). This is further aggravated by the continued growth in energy demand, particularly oil, until at least 2030 (IEA, 2006, 2007; EIA, 2016a, 2016b).

In order to grow, Brazil and India will have to deal not only with environmental issues, but also with economic inequality as a great number of people still live under the poverty line (CIA, 2017a, 2017b; UNDP, 2016). Dealing with both economic

¹ Federal Institute of Bahia, Brazil.

and environmental challenges depends on the efficient use of energy sources. Dialogue appears as a fundamental and strategic instrument to achieve this goal. South-South cooperation will be part of such strategy with Brazil and India emergence in global governance and economy (MILANI, 2012). It is not possible to address global political and economic issues or make decisions without considering these two countries, which are part of some of the most important dialogue groups and cooperative efforts of the South in the post-Cold War period (VISENTINI, 2010; FARIA, 2010).

Brazil and India have become relevant voices in decisions related to renewable energy, not only because of their substantial energy needs, but also because of their commitment to promoting renewable energy sources. One example of this commitment is the two countries' leadership in reducing greenhouse gas emissions. Brazil has created the Biofuture Platform to leverage biofuels markets. The platform has been ratified by 20 countries, including India. India has launched the International Solar Alliance with to promote solar energy in developing countries. The agreement has been ratified by 120 countries, including Brazil. It is worth noting that both developed and developing countries participate in both initiatives (INDIAN EMBASSY, 2017a; BRAZIL, 2016; BIOFUTURE PLATFORM, 2016; UNFCCC, 2015).

For Brazil and India to intensify their rapprochement in the energy sector, more focus is needed on a strategy of visibility and a search for greater leadership in the political scenario: this would enhance the status of the two countries before the international community, considering their unique traits, similarities and relevance in counterbalancing North-South relations.

The similarities between Brazil and India have created natural conditions of proximity. The two countries are: culturally diverse

democracies; leaders in their regions; among the ten largest economies in the world; and active in international politics. They also share similar economic and social challenges as well as views on a number of global issues by participating in joint groups such as BRICS, IBSA, G20, G4 (UNDP, 2016; INDIAN EMBASSY, 2017a; MRE, 2016; CIA, 2017a, 2017b and VISENTINI, 2010). Brazil and India have been investing in solar energy, hydropower, wind energy, and biofuels in terms of financial support and policies, especially in the past twenty years (MOUSINHO, 2017). In 2015, the foreign ministers of Brazil and India expressed their interest in strengthening cooperation in the area of renewable energy (MEA, 2017a). All these facts show the two countries are converging in the development of renewable energy.

In order to think about strategies that contribute to the intensification of Brazil-India bilateral relations in renewable energy, it is crucial for the two countries not only to conform to the requirements of the international community regarding climate change, but also to enhance joint expertise. The latter could be done through the promotion of scientific and technological partnerships that combine the two countries' individual potential, and develop their respective energy sectors, generating more jobs and income. Strategies that can help intensify Brazil-India relations in the field of renewable energy are presented in the next section.

Strengthening scientific and technological cooperation

Brazil and India can enhance cooperation in renewable energy to strengthen scientific and technological development in both countries. A scientific and technological data mapping² shows Brazil and India interest in hydropower, solar energy, and biofuels (MOUSINHO, 2018). The data collected points that: (1) Brazil has

2 Search on Web of Science (WoS) and European Patent Office (EPO).

a vocation in hydroelectricity and in biofuels; (2) India excels in solar energy; (3) hydroelectricity, biofuels, and solar energy are the three energy sources in which Brazil and India have published a significant number of scientific papers in collaboration with each another.

Although India has published more scientific papers on hydroelectricity than Brazil, Brazil has built world-class hydropower plants as early as the 1970s. India's largest hydroelectricity plant is six times smaller in terms of power generation capacity than Brazil's largest hydroelectricity plant, and took four times as much the time needed to make *Itaipu*. Not surprisingly, the largest number of patents in Brazil are on hydroelectric power, giving the country greater expertise in this area compared to India. Also, for the past 45 years the Brazilian electrical matrix has been essentially based on hydroelectricity, despite creating, as a downside of this experience, dependence on a source of energy conditioned to meteorological conditions and rainfall.

Concerning biofuels, India also has a more significant number of publications than Brazil. However, the scientific production on this type of renewable energy is the one that represents the most substantial volume of the scientific output in Brazil. With respect to the number of patents in biofuels, Brazil has proven superior to India. This is not by accident since the first renewable energy policy in Brazil was in the area of biofuel, 28 years before India established its first policy to promote renewable energies. The flex engine used in Brazil has global recognition and the software created in the country makes it possible for vehicles to run on alcohol, gasoline or any mixture of the two fuels. Brazil has also launched the biodiesel program, which contemplates the mixing of biodiesel in diesel oil, and the Biofuture platform to promote biofuels in the global market. In short, Brazil has more expertise than India in the area of biofuels.

Regarding India, the results of the scientific and technological data mapping show solar energy as the highlight. Approximately 84% of all scientific publications on solar energy in Brazil and India are by Indian authors. This energy source also concentrates the largest number of patents filed by India. This is due to the fact that India has set the goal of 100GW of solar installed capacity by 2022 to become a leader in this area. In addition, the Indian Government has been supporting the production of components and increasing investments in research and development in the field of solar energy. In 2013, India created the National Institute of Solar Energy to become one of the main solar energy research centers worldwide. Two years later, the country launched the Solar Alliance, bringing together several countries to promote solar energy.

With regards to partnerships in scientific production in the field of renewable energy, even though Brazil cooperates with fewer countries than India, Brazilian production is more internationalized than Indian production. Approximately 45% of Brazilian scientific output stems from scientific collaboration, while in India this percentage is as low as 29%.

Brazil is India's main partner in Latin America and India is Brazil's main partner in Asia. The two countries cooperate in publications on all types of renewable energy surveyed. Nonetheless, the representation of this partnership is still small. In percentage terms, the collaboration with India represents approximately 1% of the total Brazilian scientific production. For India, collaboration with Brazil represents approximately 0.5% of its scientific output on renewable energies. The main countries with which Brazil and India collaborate with are developed countries: Brazil's collaboration with the United States, for example, is greater than the partnership between Brazil and Latin American

countries. The United States is also India's largest partner in terms of scientific production.

There is more than one way to expand Brazil-India scientific cooperation in the field of renewable energy. The first one is by strengthening dialogue between the two countries in the area of solar and biofuel sources. The second one is by intensifying partnerships in scientific production. The third one is by developing bonds between the scientific communities of both countries and fostering means of collaboration among their research institutions. This could be done, for example, through the increase of joint projects financed by both governments and the private sector (i.e. companies that work or want to expand in the energy industry), with the creation of research centers focusing on Brazil-India cooperation in renewable energies.

Another way to expand Brazil-India scientific cooperation in the area of renewable energy is through the exchange of researchers. Given the potential of Brazil in the field of solar energy, Brazilian researchers could explore what has been developed at the National Institute of Solar Energy in India, which would be an important step to trigger new actions and partnerships between the two countries. Under the Biofuture initiative, created by Brazil and ratified by India and other countries, an international biofuel fund could be created to grant scholarships to researchers in Brazil and India and finance research related to second-generation biofuels, top-notch technologies in biofuels, and engine conversion. The joint action of Brazilian and Indian scientific communities can generate solutions that become reference and expand the development of innovative products through the creation of patents.

The creation of an integrated virtual research platform

Another strategy to expand Brazil-India cooperation in renewable energy is through the creation of an integrated virtual

platform connecting companies, universities, and government institutions. The idea of such research platform was first presented during the elaboration of the scientific and technological data mapping and after the 0.7% and 3.7% fall of Brazil and India, respectively, in the 2016 Nature Index.³ In the overall ranking, India is in a better position than Brazil, ranking 13th, while Brazil (the best position in Latin America) is in the 24th place (NATURE, 2016).

The main objective of the platform would be to share information about the energy, cultural and business profiles of the two countries connecting scientists, researchers, entrepreneurs and policymakers by engaging partner institutions (MOUSINHO, 2018). Sharing what is being jointly developed by Brazilian and Indian businesses would be equally relevant as it would help to create an interdisciplinary environment for the development of joint projects.

The virtual platform would also share the renewable energy policies that the two countries have been developing over the years; what has been done in relation to the scientific and technological production in the area of renewable energy including work in partnerships; share fellowship and joint research opportunities; and promote online courses as well as lectures especially in the renewable energy and cultural areas.

The intensification of the political dialogue on renewable energy between the ministries concerned

The prospects of success for cooperation in renewable energy depend on the process of dialogue and political collaboration in the construction of memoranda and agreements. But, of course, that alone is not enough. Thus, intensifying the political dialogue

3 The Nature Index highlights the countries which dominate research in the natural sciences.

between the Ministry of Mines and Energy of Brazil and the Ministry of New and Renewable Energies of India appears as fundamental to expand Brazil-India cooperation in renewable energy.

The idea is that Brazil and India can discuss the renewable energy policies that were created, developed and implemented through: the creation of a renewable energy agenda by the two countries; the hosting of video conferences and events in which each country would present their own policy experience; the discussion of policies successfully implemented as well as the challenges encountered; and the exchange of government officials to study these policy experiences *in loco* and to create opportunities for new initiatives.

The diffusion of technical knowledge may become the basis of new ideas, projects and possibilities for interaction in the field of renewable energy between Brazil and India. On the one side, the Brazilian example of implementation of biofuels policies can help India in the development and promotion of biofuels since this country is trying to increase the use of the renewable energy source. On the other side, considering its potential for the exploitation of solar energy, Brazil can benefit from the fact that India has been trying to become a world reference in the area of solar energy.

Final considerations

Undoubtedly, promoting cooperation in renewable energies between Brazil and India is more than a strategy of visibility and a search for greater leadership in the political landscape of the South. It is the possibility of seeking joint alternatives to meet the two countries' energy needs in face of requirements for CO₂ reduction, to increase their capacities in renewable sources in face of increasingly restricted use of fossil fuels, to exploit their

potential in renewable sources, and to enhance their expertise by promoting scientific and technological partnerships.

Meeting these demands would also contribute to strengthening bilateral trade. As Maurício Moreira (2011, p. 145) states, “cooperation creates new opportunities of trade.” It could be highlighted that energy interdependence between states requires cooperation between them. Investments in the field of renewable energies can undoubtedly lead to better interaction and integration into the global market, democratization, and access to more efficient energy sources and knowledge in the field of renewable energy. These factors can improve the quality of life of Brazilian and Indian people.

Considering their differences, be it the remarkable numeric discrepancy between their populations or the regional geopolitical scenarios they are part of, Brazil and India complex energy needs undoubtedly reflect their socioeconomic and environmental scenarios. In this web of interests and challenges, Brazil-India cooperation in renewable energy appears as an irrefutable element in the quest for knowledge, innovation, energy security and the improvement of energy consumption patterns in the two countries.

References

BIO FUTURE PLATFORM 2016, Viewed 11 April 2017, available at <<http://biofutureplatform.org/about/>>.

BRAZIL, COP 22 Inicia Regulamentação do Acordo de Paris, accessed on 11 April 2017, available at <<http://www.brasil.gov.br/meio-ambiente/2016/11/cop-22-inicia-regulamentacao-do-acordo-de-paris>>.

CENTRAL INTELLIGENCE AGENCY (CIA) 2017a, The World Factbook South America: Brazil, available at <<https://www.cia>>.

gov/library/publications/resources/the-world-factbook/geos/br.html>.

FARIA, FM 2010, 'BRICS: O Brasil E As Relações Comerciais Com Os Países Líderes Emergentes (China, Índia, Rússia E África Do Sul)', in ZHEBIT, Alexander (Org.), *Brasil – Índia – África do Sul: Emergência do Sul Global*, Gramma, Rio de Janeiro.

INDIAN EMBASSY 2017a, India - Brazil Relations. Available at <<http://indianembassy.org.br/indiabrasil/relacoes-bilaterais/>>.

INTERNATIONAL ENERGY AGENCY (IEA) 2007, *World Energy Outlook 2007*, China and India Insights, Paris, 674p.

INTERNATIONAL ENERGY AGENCY (IEA) 2006, *World Energy Outlook 2006*, IEA: Paris, 601p.

INTERNATIONAL SOLAR ALLIANCE (ISA) 2017, *Key Information about International Solar Alliance*, Gwal P, ISA 2017, available at <<http://isolaralliance.org/projects.html>>.

MILANI, C 2012, 'Aprendendo com a história: críticas experiência da cooperação norte e sul e atuais desafios a Cooperação Sul-Sul', *Caderno CRH*, Salvador, Vol. 25, p. 211-231.

MINISTRY OF FOREIGN AFFAIRS OF BRAZIL (MRE) 2016, 'Visita Do Presidente Da República À Índia – Goa, 17 De Outubro De 2016 – Comunicado Conjunto Brasil-Índia', available at <<http://www.itamaraty.gov.br/pt-br/notas-a-imprensa/14940-visita-do-presidente-da-republica-a-india-go-17-de-outubro-de-2016-comunicado-conjunto-brasil-india>>.

MOREIRA, MM (ed.) 2011. *Índia: Oportunidades, Lições e Desafios Para Economias do Brasil e da América Latina*. Banco Interamericano De Desenvolvimento, Estudos Especiais Sobre Comércio E Integração. Rio de Janeiro: Elsevier, 2011, 148p.

MOUSINHO, MCAM 2018, 'Cooperation in Renewable Energy: The challenge of Brazil and India in the multi-polarized world', Ph.D. Thesis, Federal University of Bahia (UFBA), Brazil, 299p.

MOUSINHO, MCAM; TORRES, EA; MELO, SAB, V DE; SAHOO, D & SILVA, M 2017, 'Provoking Energy Cooperation in the South Countries: Renewable Energy in Brazil and India', *International Journal of Energy Economics and Policy*, Vol. 7, No. 4, p. 269-274.

NATURE INDEX. 2016 Tables: Countries. United States, 2016. Available in: <<https://www.natureindex.com/annual-tables/2016/country/all>>. Accessed: No10 nov. 2017.

UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP) 2016, Human Development 2016. UNDP, Report No. 40, New York.

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC) 2015, India and France Launch International Solar Energy Alliance at COP21, Washington, available at <<https://unfccc.int/news/international-solar-energy-alliance-launched-at-cop21>>.

US ENERGY INFORMATION ADMINISTRATION (EIA) 2016a, *Country Analysis Brief: Brazil*, US Energy Information Administration, Brazil. Washington, accessed on 10 August 2017, available at <<https://www.eia.gov/beta/international/analysis.cfm?iso=bra>>.

US ENERGY INFORMATION ADMINISTRATION (EIA) 2016b, *Country Analysis Brief: India*, US Energy Information Administration, India, Washington, accessed on 10 August 2017, available at <<http://www.eia.gov/beta/international/analysis.cfm?iso=ind>>.

VISENTINI, PF 2010, 'A Dimensão Geoestratégica do IBAS', in ZHEBIT, ALEXANDER (Org.). *Brasil – Índia – África do Sul: Emergência do Sul Global*. Rio de Janeiro, Gramma.

WORLD BANK 2017a, *Energy Use (Kg Oil Equivalent Per Capita) Brazil*, World Bank, Washington, accessed on 27 July 2017, available at <<http://data.worldbank.org/indicator/eg.use.pcap.kg.oe?locations=br>>.

WORLD BANK 2017b *Energy Use (kg oil equivalent per capita) India*. Washington, 2017b. Available in: <http://data.worldbank.org/indicator/EG.USE.PCAP.KG.OE?locations=IN> Accessed: July 27th 2017.

WORLD BANK 2017c, *CO₂ Emissions (Metric Tons Per Capita) Brazil*, World Bank, Washington, accessed on 31 July 2017, available at <<https://data.worldbank.org/indicator/en.atm.co2e.kt?locations=br>>.

WORLD BANK 2017d, *CO₂ Emissions (Metric Tons Per Capita) India*, World Bank, Washington, accessed on 31 July 2017, available at <http://data.worldbank.org/indicator/en.atm.co2e.pc?locations=in&name_desc=false&view=chart>.

WORLD BANK 2016a, *Gross Domestic Product 2016*, World Bank, Washington, accessed on 31 July 2017, available at <<http://databank.worldbank.org/data/download/gdp.pdf>>.

WORLD BANK 2016b, *GDP Current (US\$) Brazil*, World Bank, Washington, accessed on 9 July 2017, available at <<http://data.worldbank.org/indicator/ny.gdp.mktp.cd?locations=br&view=chart>>.

WORLD BANK 2016c, *GDP Current (US\$) India*, 2016, World Bank, Washington, accessed on 8 July 2017, available at <<http://data.worldbank.org/indicator/ny.gdp.mktp.cd?locations=in&view=chart>>.

CHAPTER 3

FISCAL FEDERALISM, CURRENCY AND BANKING OF THE POOREST FOR SUSTAINABLE AND INCLUSIVE DEVELOPMENT: A RESEARCH AGENDA FOR INDIA AND BRAZIL

Carlos Eduardo Carvalho,¹ João Paulo Nicolini Gabriel,² Marcel Artioli³

Brazil and India share common aspirations, such as combating poverty and corruption; strengthening and simplifying the tax system and fiscal federalism; expanding and improving regulation of the banking system; including the poorest in the credit system; improving and streamlining payment systems; attracting foreign investments; and increasing their participation in global trade. The sharing of practices and policies related to good governance can unleash the capacity that these two countries have within the international order. As Jaguaribe (2005, p. 14-15) claimed, India and Brazil have great geopolitical potential due to their proportions, and it is up to them to develop effective strategies to take advantage of their capacities within the international arena.

1 Pontifical Catholic University of São Paulo, Brazil.

2 San Tiago Dantas Program on International Relations UNESP/UNICAMP/PUC-SP, Brazil.

3 San Tiago Dantas Program on International Relations UNESP/UNICAMP/PUC-SP, Brazil.

In 70 years of diplomatic relations, Brazil and India have developed a thriving partnership based on increased dialogue and coordination of actions in International Organizations, hoping to add to the global system measures based on their democratic ideals and structured under the eyes of two multiethnic nations (MINISTRY OF FOREIGN AFFAIRS OF BRAZIL, 2013). Even though the connections between Brasília and New Delhi have been described as ‘strategic partnership’ since 2006 and continue to strengthen, as the Annual Report of the Ministry of External Affairs of India (2018, p. 147) pointed out, there are still possibilities to be explored.

In 2017 there was a reinforcement of Indo-Brazilian ties through the signing of the Social Security Agreement, aimed at reducing the costs of its companies when doing business abroad, and the increase in trade flows compared to the previous year (47.32% in Brazilian exports to India and 18.65% of Indian exports to Brazil). Both countries have much to offer when they highlight their experiences in the field of fiscal reforms, combating corruption, and computerization, modernization, and solidification of their banking system structures. (MINISTRY OF DEVELOPMENT, INDUSTRY AND FOREIGN TRADE OF BRAZIL, 2018; MINISTRY OF EXTERNAL AFFAIRS OF INDIA, 2018, p. 147-149; MINISTRY OF EXTERNAL AFFAIRS OF INDIA, 2017).

More than in geopolitical aspects, Brasilia and New Delhi present the potential to mutually overcome their historical domestic adversities by sharing ideas and experiences. These two countries have developed policies, institutions, and governance in the fiscal and monetary areas that are of great relevance to inclusive and stable economic development, which are crucial to both.

In July 2017, the implementation of the Good and Service Tax (GST) in India sought to resolve federal impasses with what Brazil has been struggling for decades (REZENDE, 2009; VARSANO, 1996). Brazil and India are two democracies with complex federal systems, deriving mainly from the physical and demographic dimensions, but also from the difficulties to articulate interests and to trigger some political consensuses that allow adequate technical solutions. The introduction of the GST in India occurred by overcoming the historical difficulties of negotiation between the state governments and the Central government, something that still obstructs the consolidation of a comprehensive fiscal reform in Brazil.

Brazil was one of the first countries to adopt value-added taxation (VAT) in 1966. The tax reform carried out at the beginning of the military regime (1964-1985) not only sought to modernize the tax system and concentrate power in the Central Government (OLIVEIRA, 1991; REZENDE, 2009), but also raise the revenues of the states and thus retain their support. The Tax on the Movement of Goods (ICM in the Portuguese acronym) instituted cascading taxation to replace the old sales tax on the final consumer with the low collection and systematic evasion favored by the fragility of local supervision.

The new tax was administrated by the state governments and should have had a single rate nationwide. However, due to the foreseeable difficulties to collect final sales taxes and to inspect tax collection in states borders, tax collection was established at origin and production instead of consumption as in the old sales tax. The protests of the 'consumer' states, the most economically fragile, led to a protracted process of differentiating rates and collection rules among states to compensate for the lowest income units. Added to this was the absence of a federal body with

authority to coordinate and enforce national rules. The possibility of granting exemptions at source led the weaker states to offer tax concessions for companies to shift production to their limits, the so-called ‘fiscal war,’ where the advantage of the state that attracted the companies means loss of revenue for the whole of the public sector of the country (AFONSO & SERRA, 1999; PRADO & CAVALCANTI, 2001).

Resistance by the ‘producing’ states – that would lose revenue – and the ‘exporting’ states – that would lose their charges on the production of exported products – prevented the National Congress from reaching consensus on the approval of measures such as the unification of state taxes and tax collection at destination. The Central Government created specific taxes and charges, not shared with the states, which added to the ICM, and generated a high tax burden on companies in addition to difficulties to dispose exported products.

The Indian GST incorporated several measures proposed years before in Brazil. These measures include the simplification of the indirect taxes by reducing the ‘cascade taxation effect’ and the establishment of a national tax system orchestrated by the Central and State governments – a difficult task because passing an omnibus reform in India similar to that in Brazil, requires a national negotiation involving different parties and regional interests.

Initiated in 2014 with an unprecedented majority won by the Bharatiya Janata Party (BJP) in the lower chamber Lok Sabha, the government of Narendra Modi concluded the negotiations over the tax reform. The introduction of the GST in India had already been considered by previous governments interested in facilitating local business and attracting investments. But it was not until BJP

gained prominence and BJP allies took control over 18 states that negotiations concluded with the adoption of the GST in July 2017.

The Indian tax reform holds relevant references to the possibilities and difficulties in reforming the Brazilian tax system. International analysts have criticized Modi's eagerness to implement reforms in a short time span and consequently not pay due attention to the difficulties his people would have in computerizing the means of payment in transactions usually settled by paper money or putting in practice a national tax regime based on the simplification of the VAT applications of the Central government and the State governments through six tariff levels and exceptions.

Nevertheless, the Indian proposal was in line with Modi's strategy to improve the domestic business environment and rapidly proved to be an instrument to overcome fiscal warfare and logistical difficulties (JOSHI, 2017, p. 92-93; WORLD BANK, 2018). The adoption of a single tariff for most products and services would have the potential advantage of simplifying the system by reducing the costs of taxpayers' enforcement and compliance. But the wide range of fee levels is more in keeping with the heterogeneous society of that country and with the requisitions of different states, so that its model would be closer to the Brazilian reality.

It is worth remembering that India and Brazil experience the same context in terms of struggling against gangs and terrorism. The governments of the two countries strive to combat the financing of criminals (in India, especially terrorism) and corruption. In 2017, Modi made clear his mission: "Making India's corruption-free is an important task, and we are trying to provide impetus to it." (MODI, 2017). In Brazil, the 'Car-Wash' (*Lava Jato*

in Portuguese) operation has reached and punished important businessmen and politicians convicted of misusing public funds.

In Brazil, the combination of persistently high inflation and the development of banking practices, as discussed below, greatly reduced the practice of retaining paper money, even in licit, but not legalized, informal activities. The Brazilian informal sector almost always maintains regular relations with formal institutions (suppliers, providers of public infrastructure services) that operate with banks on a regular and exclusive basis. The retention of high sums in paper money is generally a strong indication of corruption, or illicit or criminal practices. Thus, the verification of organized crime mainly requires the analysis of banking operations to identify movements of substantial amounts of money incompatible with the financial capacity of those involved; in the same way as the absence of banking operations of individuals or companies with income or high equity. Informality is mainly faced by legal stimuli and facilitation so that small enterprises can more easily meet bureaucratic demands.

Despite the absence of reliable estimates, the falsification of banknotes in Brazil is considered frequent and is concentrated in the highest value banknotes, R\$ 50 and R\$ 100 (US\$ 15 to US\$ 30). However, at some point, this fake money ends up deposited in banks and are often reintroduced into circulation by manual withdrawals at ATMs. Identification, therefore, requires internal procedures of banks when processing deposits, in agencies or electronic terminals.

In India, the basic objectives of the monetary reform announced in November 2016 (ANAND & KUMAR, 2016) were to reorganize the circulating medium and to induct the use of banking networks for payments and operational procedures, by the people and by the formal and informal businesses. The high

volume of banknotes in circulation and the large number of fake bills were seen as a relevant piece in the financing of organized crime and terrorism.

It is important to remember that this measure was considered precipitous by several international analysts since many of the commercial exchanges carried out in India are traditionally settled with paper money. However, Modi stressed that such a measure was doubly aimed at curbing terrorist activity and assisting the automation of Indian payment system - in the words of the prime minister: “[T]he magnitude of cash flow is directly linked to the level of corruption” (MODI, 2016).

India’s monetary reform, implemented at the very beginning of 2017 through a drastic reduction in the volume of paper money in circulation, aimed to catalyze the banking of millions of citizens. The monetary reform also pointed to some peculiarities and significant differences with Brazil. In Brazil, high and persistent inflation combined with prolonged economic instability during the 1970s and 1980s led to the early computerization of the banking sector and the intensive use of ‘quasi-money’ - bank deposits with high liquidity and daily payment of interest - based on government bonds. For the Brazilian banks, these deposits allowed high gains due to the possibility of paying interest to depositors below the yield of public securities (CARVALHO, 2003). These profits increased inter-bank competition and encouraged banks to invest heavily in technology in the 1980s.

However, the experience highlighted the paradoxical nature of the Brazilian banking system. On the one hand, its technologically and operationally advanced nature increases resilience during acute crises and prolonged inflation periods as well as competitiveness compared to foreign banks. On the other hand, Brazilian banks

continue to charge high interest rates and has limited capacity to expand credit, particularly for small businesses.

The Brazilian banking system showed great resistance to the severe economic crisis of the 1980s and went through the turmoil of the period without widespread crises in the sector, unlike other Latin American countries (MORRIS *et al.*, 1990). Brazilian banks were able to take advantage of high inflation and instability to develop their operational capacity with the support of the Brazilian Central Bank and its policies to defend the national currency and the financial structure of the country.

The strengthening of the Brazilian banks in the midst of the crisis, however, did not reverse the financial exclusion of the population (CARVALHO, 2003; CARVALHO & ABRAMOVAY, 2004), nor did it lead to the reduction of interest rates on corporates and individuals. The issue has recently reemerged in the public debate after the maintenance of the interest rates charged by banks despite the sharp reduction in the central bank's interest rate in 2017. This has raised question marks on big banks' capacity to charge high spreads and hinder economic recovery after the 2015-2016 crisis.

The strengthening of the Brazilian banks did not generate sustained technological innovation capacity, despite government support. The demonetization process did not allow massive access to bank credit by the population either, despite the improvements in the Brazilian banking system and its regulatory framework.

The Brazilian experience points interesting lessons to India. India has gone through troubled times regarding the modernization of the banking system as the country transitions from an industrial society to a society based on technological innovations and knowledge diffusion. The need to improve India's banking system has become a subject of central importance to Indian authorities

and is often highlighted by the international press (ANTONY, SRIVASTAVA & AFONSO, 2018; SHARMA, 2018) mainly after the fraud scandal involving the famous Indian businessman from the jewelry company Nirav Modi.

Two events have led Brazil to successfully develop banking automation policies. First, the high and persistent inflation and prolonged economic instability have created favorable conditions for early development of banking automation such as high profitability and stimulus to massive investment in the IT sector. Second, Brazilian banks simultaneously pursued strategies which integrated user-producer linkages despite the absence of explicit policies aiming at user needs (CASSIOLATO, 2002). As a result, the public-private coalition of highly skilled technical professionals, government staff, and large financial conglomerates, formed a technology path where knowledge and local user linkages played an important role.

From a historical perspective, the technological trajectory would be the standard of normal activities supported by a technological paradigm and established to solve specific problems in a certain space of time. This path would be represented by the multidimensional and conflicting movement between possible choices, a conglomeration of probable technological directions, inserted in the uncertainties and instabilities of the capitalist dynamics (DOSI, 1982).

This process crystallized into an efficient banking automation system. In technical terms, the Brazilian banking system stands out by the client-bank integration facilitated by multiple banking access channels, and online services like funds applications and applications in banking deposit receipt (CDBs) (FONSECA *et al.*, 2010). This engendered security problems such as fraud and 'phishing' as well as solution-focused answers such as internet and

ATM specific passwords, and electronic tokens. Banking through mobile devices and biometric options are also being implemented as security solutions.

This is not to say that everything that was accomplished was desirable. The already concentrated banking system increased its influence even more in detriment of other areas of the Brazilian economy. Though major banks have stimulated the development and expansion of Brazilian IT firms, expenditures and investments in research and development (R&D) remained low and the expected spillover effect did not take place towards the economy. In other words, Brazilian concentrated and efficient banking automation system permitted the financial inclusion of millions of Brazilians, but it was not a turning point in terms of technological change and extensive and structural social transformation.

Even so, the Brazilian banking system presents a peculiar combination of high equity strength, high profitability and resilience to crises so that its supervision is highly developed, and the modernization of the sector is intense, as has been seen recently in the proposals of innovations to streamline the system's payments. This is of great importance to India as the emergence of disruptive technologies has brought new challenges to the agenda of combating the financing of terrorism. These user-based initiatives seem to be the trend in cryptocurrencies and their immanent blockchain technology or distributed-ledger technology (DLT), which may facilitate means of transferring resources with anonymity and will likely provide even more opportunities to enhance convenience and security, lower overall costs, and improve resilience (LÖBER & HOUBEN, 2018).

Final considerations

The magnitude and complexity of the issues discussed in this chapter deserve regular exchange of experiences and policy analysis by Brazilian and Indian researchers to subsidize public policies on matters like federal fiscal regimes, technological innovation, and banking automation. As Brazil and India increase their influence within the international scenario, possibilities for cooperation between academic sectors to broaden the regular exchange of experiences and the establishment of research networks gain new impetus.

This article proposes the development of a Brazil-India academic research agenda in economic and social development, and other fields in which the two countries have made noteworthy progress. Such academic research agenda would allow the two countries to learn from each other as well as understand the diversity of problems faced and the different strategies adopted to deal with them.

The authors of this article along with other scholars of the San Tiago Dantas Postgraduate Program in International Relations (Unesp, Unicamp, PUC-SP) further propose the creation of a research group on developing countries and emerging powers that contributes to the formation of an independent and international epistemological network on world affairs.

References

- AFONSO, J 1999, *Federalismo Fiscal à Brasileira: Algumas Reflexões*, *Revista do BNDES*, 12.
- ANAND, G & KUMAR, H 2016, 'Narendra Modi Bans India's Largest Currency Bills in Bid to Cut Corruption', *The New York Times*, 9 November, available at <<https://www.nytimes.com/2016/11/09/>

business/india-bans-largest-currency-bills-for-now-n-bid-to-cut-corruption.html>.

ANTONY, A, SRIVASTAVA, S & AFONSO, S 2018, 'Jeweler to Stars Accused of Massive India Bank Fraud', *Bloomberg*, 14 February, available at <<https://www.bloomberg.com/news/articles/2018-02-14/punjab-national-bank-drops-after-detecting-1-8-billion-fraud>>.

CARVALHO, C & ABRAMOVAY, R 2004, 'O difícil e custoso acesso ao sistema financeiro', in SANTOS, CA, (org.) *Sistema Financeiro e as Micro e Pequenas Empresas: Diagnósticos e Perspectivas*. Sebrae, Brasília, p. 17-54.

CARVALHO, C 2003, Bancos e inflação no Brasil, Comentários depois do Plano Real. In *V Congresso Brasileiro de História Econômica*, Caxambu: Associação Brasileira de Pesquisadores em História Econômica – ABPHE.

CASSIOLATO, J 2002, 'The user-producer connection in hi-tech', in Cassiolato, J & Schmitz, H, (ed.), *Hi-tech for industrial development: lessons from the Brazilian experience in electronics and automation*, Routledge, p. 53-89.

DOSI, G 1982, 'Technological paradigms and technological trajectories: a suggested interpretation of the determinants and directions of technical change', *Researchpolicy*, vol.11, no.3, p. 147-162.

FONSECA, C, MEIRELLES, F & DINIZ, E 2010, *Tecnologia bancária no Brasil: uma história de conquistas, uma visão de futuro*. São Paulo: FGV-RAE.

JAGUARIBE, H 2005, '*Urgências e perspectivas do Brasil*', Brasília: Instituto Rio Branco/Fundação Alexandre de Gusmão.

JOSHI, V 2017, 'India's long road - the search for prosperity', Oxford Press, New York.

LÖBER, K & HOUBEN, A, 2018, 'Committee on Payments and Market Infrastructures', *Markets Committee. Bank for International Settlements*, available at <<https://www.bis.org>>.

MINISTRY OF DEVELOPMENT, INDUSTRY AND FOREIGN TRADE OF BRAZIL 2018, *Comex Vis: Países Parceiros – Índia*, available at <<http://www.mdic.gov.br/comercio-exterior/estatisticas-de-comercio-exterior/comex-vis/frame-pais?pais=ind>>.

MINISTRY OF EXTERNAL AFFAIRS OF INDIA 2018, *Annual Report*, New Delhi, India.

MINISTRY OF EXTERNAL AFFAIRS OF INDIA 2017, *Social Security Agreement between India and Brazil*, available at <http://www.mea.gov.in/press-releases.htm?dtl/28182/Social_Security_Agreement_between_India_and_Brazil>.

MINISTRY OF FOREIGN AFFAIRS OF BRAZIL 2013, *Brasil & Índia: Parceria Estratégica entre democracias multiétnicas, multiculturais e multirreligiosas*, Brasília, Brazil.

MODI, N 2016, 'Full Text of Indian prime minister Narendra Modi's Speech on Replacing Largest Rupee Notes', *The Wall Street Journal*, available at <<https://blogs.wsj.com/indiarealtime/2016/11/08/full-text-of-indian-prime-minister-narendra-modis-speech-on-replacing-largest-rupee-notes/>>.

MORRIS, F 1990, 'Latin America's banking systems in the 1980s: A cross-country comparison', *World Bank Discussion Papers 81*, World Bank, Washington, p. 103.

OLIVEIRA, F 1991, 'A Reforma Tributária de 1966 e a Acumulação de Capital no Brasil', Oficina de Livros, Belo Horizonte.

PRADO, S & CAVALCANTI, CEG 2000, 'A guerra fiscal no Brasil', Fapesp, São Paulo and IPEA, Brasília.

REZENDE, F 2009, 'ICMS: como era, o que mudou ao longo do tempo, perspectivas e novas mudanças', *Cadernos Fórum Fiscal*, 10 junho.

SHARMA, M 2018, 'Let Bankers Run India's Banks', *Bloomberg*, 16 February, available at <<https://www.bloomberg.com/view/articles/2018-02-16/state-control-has-opened-india-s-banks-to-fraud>>.

TIME 2017, 'Read the Full Transcript of Indian prime minister Narendra Modi's Independence Day Speech', *Time*, available at <<http://time.com/4901564/narendra-modi-india-70-independence-day-speech/>>.

VARSAÑO, R 1996, 'A evolução do Sistema tributário brasileiro ao longo do século: anotações e reflexões para futuras reformas', *Texto para discussão 405*, IPEA, Brasília, p. 37.

VARSAÑO, R 1995, 'A tributação do comércio interestadual: ICMS atual versus ICMS partilhado', *Texto para discussão 382*. IPEA, Brasília, p. 17.

WORLD BANK 2018, '*Doing Business in India*', available at <<http://www.doingbusiness.org/data/exploreeconomies/india>>.

WORLD BANK 1990, '*Selected Issues of the Financial Sector*', report no. 7725, World Bank, Washington.

CHAPTER 4

A BROTHERHOOD SCIENCE DIPLOMACY: INDIA-BRAZIL COOPERATION IN BIOTECHNOLOGY

*Douglas Nascimento*¹

Brazil and India share structural similarities. Both countries have vast territories, multiethnic populations, and are politically organized along the lines of mass democracies – albeit in the process of solving serious social inequalities. In addition to the abundance of natural resources, the two emerging giants have a high degree of industrialization owed to import substitution policies carried out during the second half of the last century. This inward-looking orientation has created complex yet incomplete industrial bases, marked by the coexistence of production sectors with a high-level of technological development, with others whose incorporation of technology is still incipient.

This article draws attention to a sector in which India and Brazil, if considered individually, have the potential to reach high levels of technological development and productivity; and, if considered in partnership, meet all the necessary conditions

1 Ministry of Foreign Affairs, Brazil.

The opinions expressed in this work are solely the author's personal views and do not necessarily state or reflect those of the Brazilian government's foreign policy.

for auspicious bilateral cooperation: the biotechnology sector. Biotechnology integrates concepts of biology, chemistry, engineering, and informatics to extract from the living system's products and services to be applied in optimizing human health, animal health, agriculture, and the use of environmental resources and energy sources.

After brief comments on the general organization of the biotechnology sector in India and Brazil, this article will present how the biotechnology sector can serve as a substrate for broader adjustments in the diplomatic activity in the areas of Science, Technology, and Innovation (STI). The guidelines for forging lasting linkages between Indian and Brazilian institutions in the production microenvironment of these countries will constitute the concept of Brotherhood Science Diplomacy, whose determinants for empirical application will be addressed in the final considerations.

The biotechnology sector in India

Numerous regions in India have high levels of technological development. Delhi, Maharashtra and the Southern states, notably Karnataka, Andhra Pradesh and Tamil Nadu, are home to the country's top high-tech companies. These areas concentrate old industrial poles and a large number of colleges and research centers. The geographical distribution of the main players in the Indian biotechnology sector also follows this pattern of industrial and educational concentration. The most innovative biotechnology companies are in the aforementioned regions, in hubs such as Jogindernagar, Hyderabad, Visakhapatnam, Konark, Baroda, Midnapore, and Kochi (CRESCENZI & RODRIGUEZ-POSE, 2017).

The Indian biotechnology sector has had sustained growth in the last two decades. The country is currently ranked among the

top 12 biotechnology centers in the world and has about 800 fully functioning companies.² The success of the sector is boosted by the economic prosperity of the country, the population growth, the expected elevation of health conditions, and the massive public and private investments in biotech.³

Biopharmaceuticals are the main branch of the Indian biotechnology industry, responsible for 62% of the sector's income, mainly due to the country's significant participation in the global market for generic drugs. In addition to products for human health, bio-services (18%) and bio-agricultural products (15%) make up the main potential of the Indian industry in the area of Life Sciences. As discussed below, there is a complementarity between current technical capacities and future needs of the Indian and Brazilian biotechnology sectors.

The biotechnology sector in Brazil

Currently, Brazil has more than 300 biotechnology companies in full operation.⁴ As in India, there is a massive concentration of biotechnology ventures around the areas of greater industrial and educational development: the Southeast region, the country's economic center, concentrates about 80% of companies. The main biotechnology hubs are the cities of São Paulo, Campinas, São

2 Data on the Indian biotechnology sector used in this article are official indicators released by the Indian Ministry of Commerce and Industry, available in documents from the India Brand Equity Foundation.

3 The Indian government plans to raise the market value of the country's biotechnology industries from US\$ 11.7 billion in 2017 to about US\$ 100 billion by 2025. Achieving this goal depends on an annual investment of US \$ 5 billion in infrastructure, human capital, and research projects. The 22 percent increase in the public budget allocated to the National Biotechnology Department for the period 2017-2018 and the authorization of 100 percent of FDI to the sector through the automatic route seems to demonstrate political commitment to this goal.

4 The latest data compiled on the Brazilian biotechnology sector are available in the Brazil Biotech Map, 2011, published by the Brazilian Center for Research and Planning (CEBRAP) and the Brazilian Biotechnology Association (BRBIOTEC). In 2014, CEBRAP updated the number by pointing out the existence of 314 companies in full operation.

José dos Campos, Rio de Janeiro, and Belo Horizonte (BRAZIL BIOTECH MAP, 2011).

The potential for enhancing Brazilian productive capacity in biotechnology is significant. The country has one of the largest economies in the world; a population of more than 200 million inhabitants intensely demanding biological inputs in its universal public health system; the world's largest biodiversity reserve; and an internationally recognized system of research and education in High Sciences.

The Brazilian government has fostered the biotechnology sector, mainly through investments to consolidate a national industrial complex.⁵ The main niche of products in the Brazilian biotechnology market is in the human health sector, which accounts for 39.7% of companies, followed by environment and bioenergy (14.8%), animal health (14.3%) and agriculture (9.7%). Brazil is also a world leader in the production of bioplastics and biofuels from ethanol.

Brotherhood science diplomacy: in search of an innovative bilateral cooperation

The restrictions imposed by major powers on the transfer of technology to developing countries have compelled regional powers such as India and Brazil to forge alternative alliances with other emerging nations under the orientation of reciprocal gains instead of a logic of competition in a zero-sum game.

In the particular case of the Brazil-India cooperation in biotechnology, the partnership is even more feasible, since, as

5 An example of this is that in 2017, through the National Policy on Technological Innovation in Health, the historical practice of spending non-reimbursable resources on biotechnology projects was replaced by the offer of financing to partnerships between private and public entities, subject to the transfer of technology from the former to the latter.

previously seen, the starting point for interaction is a situation in which there is already a similarity of objectives and strategies to support the sector. Additionally, the biotechnology sector could serve as a substrate for the implementation of broader adjustments in the methods of conducting the general STI cooperation between India and Brazil. The proposed adjustments follow guidelines that bind them to an organic whole, here called Brotherhood Science Diplomacy.

The cornerstone of the concept of Brotherhood Science Diplomacy is that cooperation in biotechnology, in particular, and in Science, Technology and Innovation, in general, could go beyond the formal legal linkage between governments, to achieve direct and continuous contact between managers, professionals, and researchers in the production microenvironment of high technology. To this end, the primary role of science diplomacy agents is to gather two institutions (research institutes, companies, technological parks, funding agencies, among others), one Indian and one Brazilian, and make their communication so fluid and the level of mutual trust so high that these institutions could be considered sister institutions.

Hereafter, we present pairs of institutions in the biotechnology sector of India and Brazil that could be the focus of this diplomatic action of twinning. This list of possible partnerships is not exhaustive – and could be complemented or even replaced by options based on a better judgment of experts from both countries. The nature of this work is not informative but rather methodological. Its main objective is to spark reflection, through empirical examples, on ways to optimize the scientific cooperation between India and Brazil.

The first structural aspect of an approach for twinning Indian and Brazilian biotechnology institutions is the fact that any

initiatives, from the outset, must be designed under the umbrella of a broader concept of diplomacy. It is indubitable that actions aimed at strengthening India-Brazil relations, even at the micro-institutional level, are diplomatic initiatives. In qualifying them as diplomatic, however, does not mean that their implementation should be restricted to the exclusive action of the Indian and Brazilian Ministries of Foreign Affairs. Given the extent of the economic and social impacts of biotechnology discoveries, the participation of bureaucrats from government sectors other than foreign affairs, such as science and technology, industry, foreign trade, education, health, agriculture, among others, in the work of gathering institutions is as necessary as desirable.

The possibility of a partnership between the Brazilian Agricultural Research Corporation (EMBRAPA) and the Indian Agricultural Research Center (ICAR) can illustrate the need for a multidisciplinary approach to science diplomacy. EMBRAPA's agricultural biotechnology is largely responsible for the advancements that have made Brazil one of the world's most productive exporters of primary products. Despite the differences between Brazilian and Indian agriculture,⁶ the niche of hybrid seed, mainly the Genetically Modified Seeds (GMS), represents a point of contact between the two production systems. Through ICAR, the genetic engineering knowledge available to EMBRAPA could help India become one of the world's largest producers of transgenic rice and genetically modified vegetables, with a minimum of social impact in the Indian countryside.

The EMBRAPA-ICAR brotherhood must not emerge, as usual, from a decision of the top Brazilian and Indian governmental authorities, who, in a top-down manner, decide on the political

⁶ Brazilian agriculture is predominantly commercial, technology-intensive, and based on large properties. Indian agriculture, in its turn, is mainly focused on the domestic market, labor-intensive, and based on small familiar properties.

necessity of formalizing the partnership through cooperation agreements. Instead, it would be appropriate to designate, in each country, a technical group headed by a diplomat, but composed of civil servants from various areas of the government bureaucracy, for on-site visits to facilities and for meeting the main leaders and researchers of the respective institutions.

The opinions of these groups, on the Brazilian side and on the Indian side, would support the decision on the viability of the EMBRAPA-INCAR brotherhood. If the conclusions of the evaluations favor the partnership, it would be up to the chancelleries of both countries to approach, first, the bureaucrats of the technical evaluation groups and, then, the leaders of the institutions. If the conclusions of the evaluations proscribe the partnership, efforts would not be lost. Given the willingness for twinning and the information collected about the profile of potential partners, it would be up to the contralateral technical group to seek more suitable options for partnership.

This bottom-up approach may be slow, possibly requiring more time than desired by government leaders with temporary mandates. The allocation of people specifically to the task may also fluctuate in contexts of shortages of human resources. These shortcomings, nevertheless, could be minimized by prioritizing the technical evaluation of the most relevant entities for the country's economy and STI system, as well as by ensuring permanent civil servants as the members of the technical groups.

This domestic evaluation process is fundamental in ensuring mutual trust between representatives of biotechnology institutions, such as EMBRAPA and INCAR, and the members of national technical groups so that in the future trust could be transferred to the foreign technical group and institution. After approximating the interlocutors of both institutions, formalizing

the partnership via a Memorandum of Understanding (MoU) or any other legal instrument becomes a merely symbolic act.

After consolidating the brotherhood, representatives from sister institutions can engage in a direct, continuous, and dynamic dialogue. The exchange of visits by professionals, the participation of researchers in counterpart projects, the exchange of prototypes to be tested, the provision of technical and consulting services to the counterpart, among other forms of STI cooperation can, from that moment on, take place without the intermediation of the chancelleries, allowing technical groups to restrict their function to safeguarding the partnership in case of possible problems.

Twinning Indian and Brazilian institutions in the niche of biotechnology products focused on human health is also possible. India accounts for relevant part (8%, by volume) of the global generic drugs market. However, there is room for progress in vaccine fabrication and recombinant gene therapy, and the country has only marginal participation in the global market for industrial enzymes (useful in converting polluting chemical methods into sustainable production processes).

Brazil, for its turn, is at the frontier of knowledge in technologies for producing vaccines, industrial enzymes, biomarkers, and in the use of genetic engineering, mainly focused on meeting the demand of the national health system. Brazil is also one of the largest consumers of generic medicines in the world.

Therefore, India's need for innovation to expand exports perfectly matches Brazil's imperative of technological incorporation to meet growing domestic demand. A close contact between the Indian company Glenmark Pharmaceuticals, one of the world leaders in the production of generic medicines for emerging countries, and the Oswaldo Cruz Foundation (FIOCRUZ), a reference center in manufacturing biopharmaceuticals in Brazil,

could improve productive capacities of both institutions and help overcome shortages of the STI system of both countries. The same effect could be expected from a partnership between BIOCON, an innovative Indian company which fabricates medicines for the treatment of chronic diseases, such as diabetes, cancer and autoimmune diseases, and the Butantan Institute, a Brazilian nonprofit foundation focused on the manufacturing of immunobiological medicines for public health.

A closer relation between actors directly involved in the scientific and production microenvironment of biotechnology is also crucial for accelerating innovation in India and Brazil. A partnership between India's Biotechnology Park, in Lucknow (Uttar Pradesh), and the Brazilian Bio Park, in Toledo (Paraná), could replicate successful innovative solutions among them, and help startups scale their business models towards internationalization. Diplomatic efforts to mediate the twinning between the Bangalore Biotechnology Park, in Karnataka, and the Bio-Rio Park, in Rio de Janeiro, may achieve the same goal.

Productive innovation can also be driven by entities of different, yet complementary, natures. A partnership between the Brazilian-Argentinian Center for Biotechnology (CBAB), the most renowned teaching and research biotechnology institution in South America, and the Biotechnology Incubation Center of Hyderabad (Andhra Pradesh), an Indian incubator of innovative companies, can help convert scientific knowledge in Life Sciences into products and services for the biotechnology market of both sides. Likewise, transforming into sister institutions the Center for Cellular and Molecular Platforms (C-CAMP) of India, responsible for R&D in advanced technological platforms, and the Brazilian Industrial Research and Innovation Company (EMBRAPII), which shares financial risks with Brazilian startups, can foster

entrepreneurship in biological sciences and mutual exploration of markets.

Final considerations

In India and Brazil, bilateral cooperation with emerging countries for the endogenous development of productive capacity in high-technology sectors has proved to be a safer alternative, in the long-term, than waiting for a transfer of technology from developed countries. The proposed project of Brotherhood Science Diplomacy has attempted to present some possible adjustments in the diplomatic work so that the interest of India and Brazil in cooperating could be converted into concrete actions in the production microenvironment of high-technologies.

Framework agreements⁷ constitute only one first step towards the STI cooperation between two countries. The traditional approach to science diplomacy, characterized by colossal fairs, congresses, and joint commissions, and for abstract goals, should open space for a diplomacy that works in the institutional microenvironment, that binds people, and that celebrate success when the modest, but concrete, objective of joining a single double of Indian and Brazilian institutions is achieved. Brotherhood Science Diplomacy does not go without professional diplomats. Nevertheless, they should be focused on leading the process of developing mutual trust and commitment of individuals belonging to sister institutions rather than on preparing empty documents of cooperation.

Although it is possible to criticize the idealist component of a proposal focused on individuals and microstructures, it is argued

7 In 2006, India and Brazil signed the Agreement on Scientific and Technological Cooperation, in force since 2010. In 2012, the two countries expanded their net of cooperation in S&T through the Memorandum of Understanding between India and Brazil in Cooperation in Biotechnology. The MoU expired in 2017.

that the history of science itself demonstrates that the peer-review system and its implication on personal reputations constitute one of the most effective methods of social coercion and efficiency promotion, especially in personalistic societies such as India and Brazil. We hope that this success could spillover from science to science diplomacy.

References

CEBRAP & BRBIOTEC, 2011, Centro Brasileiro de Análise e Planejamento (CEBRAP). Associação Brasileira de Biotecnologia (BRBIOTEC). Brazil Biotech Map.

CRESCENZI, R & RODRÍGUEZ AP 2017, 'The geography of innovation in China and India', *International Journal of Urban and Regional Research*, vol. 41, no. 6, p. 1010-1027.

INDIAN BRAND EQUITY FOUNDATION 2018, *Indian Pharmaceutical Industry*, Sectoral Report, March, available at <<https://ibef.org/industry/biotechnology-india.aspx>>.



CHAPTER 5

AN ACCOUNT OF INDO-BRAZILIAN APPROACHES FOR REGULATING MISAPPROPRIATION OF BIO-BASED RESOURCES AND ASSOCIATED TRADITIONAL KNOWLEDGE

*Sunita Tripathy*¹

The World Intellectual Property Organization’s Inter-Governmental Conference (IGC) can be understood as an enabling measure contemplated under Article 41 of the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) which notes that the UN (including its specialized agencies) and States shall “promote respect for and full application of the provisions of this Declaration and follow up the effectiveness of this Declaration” (UNDRIP Art. 41). Objections on the provision for including the principle of Free, Prior and Informed Consent (FPIC) in respect of genetic resources, traditional knowledge and folklore (GRTKF) – which would in-effect allow indigenous communities to veto a national legislation or policy from applying to them have been quite contentious in the IGC (LANG, 2011) (FREDRICKS, 2016). In accepting the UNDRIP the United States of America noted that it (now) understands the FPIC principle to mean “to call for a process

1 Jindal Global Law School, O.P. Jindal Global University, India.

of meaningful consultation with tribal leaders, but not necessarily the agreement of those leaders, before the actions addressed in those consultations are taken” (Announcement of U.S. Support for the United Nations Declaration on the Rights of Indigenous Peoples Initiatives to Promote the Government-to-Government Relationship & Improve the Lives of Indigenous Peoples’ 2010) (RYSER, 2010). Canada, Australia, and New Zealand had also voted against the adoption of UNDRIP and have similarly endorsed it now with qualifying statements (UNDRIP Adoption and Voting record, September 2007). However, the two most biodiverse nations in the world, India and Brazil, have always sought to protect the rights of their indigenous people, the genetic resources, and the associated knowledge held by them. This article reflects on the approaches taken by India and Brazil towards protecting and utilizing GRTKF in a sustainable manner.

Preservation of biodiversity helps in maintaining the delicate balance in nature, while exploitation of indigenous knowledge for commercial purposes has a far-reaching impact on the overall equity, scientific development, and innovation. A consumer’s carbon footprint is no longer limited to her close surroundings, but may extend beyond national boundaries today. Similarly, abuse of the bio-resources and associated indigenous knowledge by corporations has deleterious effects at the macro-level. Several initiatives focus on conservation of the environment to prevent climate change but few discuss indigenous knowledge that can be tapped into and utilized for a sustainable future (BIOPROSPECTING/BIO-PIRACY AND INDIGENOUS PEOPLES, 1995). For instance, biodiversity prospecting which involves searching for, collecting, screening and deriving genetic materials from biological samples or flora and fauna that may have commercial use has emerged as an industry inflicting irreversible depletion of nature.

A study conducted by the U.S. National Cancer Institute, which screened over 35,000 plants and animals for anti-cancer compounds from 1956 to 1976 highlights the economic significance of associated indigenous knowledge. An evaluation of this project conducted later found that it could have been more successful in identifying anticancer compounds had it relied on traditional and folk medical know-how. (AXT *et al.*, 1993). Similarly, bio-piracy, a term used to describe the unjustified extraction of the environmental resources and indigenous knowledge for its economic exploitation and monopolization without due regard for the equitable distribution of its economic profit is rampant. These are categorized into the patenting of inventions that have been developed using biological resources or indigenous knowledge that is extracted illegally or without the requisite authorization from appropriate authorities, and which does not attribute any credit to the local communities that may have helped in such development in any manner called patent-based bio-piracy; the non-patent intellectual property rights (IPRs) for bio-based technologies developed in the same manner and finally the unauthorized extraction of bio-resources and indigenous knowledge without adequate benefit-sharing or attribution of any credit to local communities is known as 'misappropriation'.

Instances of bio-piracy and bioprospecting have been prevalent in India and Brazil (ROBINSON, 2010). The patent on the healing properties of *haldi* (turmeric), the *basmati* rice case, and the *neem* case of India are reminders (BALASUBRAMANIAN, 2017); while Brazil, which is home to one of the largest biological deposits with the dense tropical rainforest of Amazon encounters rampant misappropriation of resources such as *ayahuasca*. (CORREA, 2002). These unethical exploitations of biological resources and indigenous knowledge allow for the erosion of biodiversity, causing environmental hazards and must be checked

(BHATTACHARYA, 2014). Thus, the legal frameworks established for their protection ought to be robust.

Comprehending the international legal framework protecting biodiversity

The Convention on Biological Diversity, 1992 (CBD) which was the result of discussions at the United Nations Conference on Environment and Development in Rio de Janeiro is the main instrument towards an international strategy for sustainable development. India and Brazil are both signatories to the CBD. All signatory countries, undertake to establish national norms and ensure international cooperation to preserve and conserve biodiversity, its sustainable use, and the equitable distribution of the benefits arising from its use.

Principle 22 of CBD reads

Indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture, and interests and enable their effective participation in the achievement of sustainable development.

The CBD does not create a *sui generis* legal right for the protection of biodiversity or indigenous knowledge systems but acknowledges that a traditional understanding of patent rights may compromise the welfare of local communities that have been involved in the nurturing and preservation of these systems over centuries, once corporations appropriated them through legal means. Such communities are often culturally unaware of IPR instruments and may be stripped of their rightful claims if not especially accorded protection. Therefore, 'prior informed consent'

is the standard for ensuring a fair and equitable benefit sharing under the CBD.

It also recognizes the sovereignty of the country of origin over its biological resources and provides that whoever seeks access to such material shall have the responsibility to ensure that the said country must know in advance what will be done with the resource, and what benefits will be shared. Article 16.2 lays down that in addition to encouraging the access and benefit-sharing agreements for the protection of indigenous knowledge, IPRs may influence how new technologies are developed, transferred and used by source countries. Furthermore, Article 16.5 requires all signatories to develop national legislation in congruence with international law to ensure that IPRs are supportive and do not run counter to the objectives of the CBD.

The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization furthers the objectives of the CBD and provides the framework for the equitable sharing of benefits arising out of the utilization of genetic resources. It was adopted on 29 October 2010 in Nagoya, Japan with the aim to guide as per the protocols to be followed to allow access to genetic resources to developers by the source country so that benefit sharing is ensured. Article 15 of the Nagoya Protocol reads

All Parties to the Nagoya Protocol are obliged to take measures to provide that genetic resources utilized within their jurisdiction have been accessed in accordance with prior informed consent (PIC), and that mutually agreed terms (MAT) have been established, if such PIC and MAT are required by the domestic access and benefit sharing (ABS) legislation or regulatory requirements of the other Party.

Article 16 of the Nagoya Protocol lays down similar obligations as in Article 15, with a specific focus on indigenous knowledge associated with genetic resources. Thus the CBD and the Nagoya Protocol acknowledge that countries have sovereign rights over their natural resources.

The World Trade Organizations' Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), 1995, especially in Article 27, recognizes IPRs as private rights without any regard to the sovereign rights of countries. It also does not lay down any requirements for benefit sharing with the country of origin while ensuring that IPRs are protected harmoniously across national boundaries. More so, while CBD lays down prior informed consent requirements and involvement of indigenous communities before any IPRs can be granted; in the manner that the TRIPS deals with the grant of IPRs as private rights, none of these conditions is mandatory. Thus, there is an apparent conflict between TRIPS and CBD with regard to their legal mandate.

This conflict touches upon several aspects of international law. The CBD came into force in 1993 and TRIPS in 1995, and neither treaty is subject to the other. CBD affirms that it shall not affect the rights and obligations of any Contracting Party deriving from any existing international agreement (CBD Art. 22). As mentioned, TRIPS was not in existence at the time the CBD came into force. Therefore, the conflict subsists, and so does the confusion about how to reconcile it. In my view, IPRs in its current form is not the way to preserve biodiversity or to ensure equity in the manner that indigenous knowledge is used. Even with efforts to build capacity, indigenous knowledge as such is nurtured and developed over several centuries by communities passing it from one generation to another. It is impossible to identify rights holders, or 'actual' owners of such knowledge, even for national governments. On

that account, the rhetoric of preventing misappropriation fails, and may even exacerbate it, if not by international players, then by national governments to the detriment of communities in the face of economic gain. This is a tricky problem; however, its solution most definitely does not lie in IPRs as is. Both India and Brazil have repeatedly sought for validation of indigenous efforts in biodiversity conservation during the IGC meetings; perhaps a system that embraces elements of attribution may arguably be less detrimental and more suited for fostering bioscience innovations globally.

Biodiversity conservation and scientific innovation: solutions from India and Brazil

India ratified the CBD in 1994 and became a party to the Nagoya Protocol in 2014. Thereafter it formulated a 'National Policy and Macro-level Action Strategy on Biodiversity' (NPMASB) in 1999. The NPMASB was to help India work with its state and local governments, communities, industry and other interested parties in a coordinated manner so that benefits accruing from the utilization of its natural resources and indigenous knowledge would consequentially multiply. Then India took pro-active legislative steps to compliment the NPMASB (LAGUNA & LAMBA, 2013). It enacted the Plant Varieties Protection and Farmers' Rights Act 2001 (PVPFR), and Rules 2013 to ensure protection of plant breeders' rights over the new varieties and give farmers the entitlement to register them and also to save, breed, use, exchange, share or sell the new plant varieties developed, improved and maintained over many generations. Two amendments to the Patents Act of 1970 were also introduced in 2002 and 2005.

These prohibited patenting of plants, animals, and traditional knowledge. The amended patent laws required "mandatory disclosure of source and geographical origin of the biological

material in the specification when used in an invention” to check misappropriation. India proposed this regulatory strategy before the World Intellectual Property Organization and suggested that disclosure requirements are economically viable than the revocation of wrongly granted patents at a later date (WIPO, 2005). Biodiverse developing economies can thus avoid significant litigation costs and preempt biopiracy.

In 2002, the Biological Diversity Act came into force to ensure India’s compliance of the CBD. The Act regulates access to biological resources and indigenous knowledge to ensure equitable sharing of benefits arising out of their use. It mandated the implementation of its provisions through a three-tier institutional mechanism with the National Biodiversity Authority (NBA) at the apex, the State Biodiversity Board at the State level and the Biodiversity Management Committee that keeps an account of and maintains rosters of the flora and fauna indigenous to an area amongst other duties prescribed under the Act. Over time, tedious bureaucratic processes and discrepancies in the implementation of the Act are suspected of discouraging biodiversity-related research in India (THE HINDU, 2018). Foreign entities are reluctant to conduct business where the laws are imprecise and may lead them into criminal litigation due to systemic failures or delay in obtaining prior approval from the NBA. The government sought to reform the system by organizing National Biodiversity Congresses to further the goals of protection and sustainable use of GRTKF. As a result, India has established the Traditional Knowledge Database Library (TKDL), a database containing 34 million pages of information on approximately 2,260,000 traditional medicine formulae, managed by the Council of Scientific and Industrial Research (CSIR), and the Department of AYUSH (now the Ministry of AYUSH). This effort ensures that no patent granting authority issues erroneous patents based on India’s traditional knowledge. The reform has

been applauded as a defensive mechanism and emulated globally by biodiverse nations.

Brazil has also been facing severe hurdles while conserving the Amazon rainforest. In December 2016, its government amended its Constitution to freeze public spending in several areas, including biodiversity conservation for as long as the next twenty years (MAGALHÃES, 2017). This was a measure adopted to minimize its international debt and limit expenditure in all areas save those that are essential for the functioning of the State. Thus, prominent environmental agencies such as the Brazilian Institute of Environment and Renewable Natural Resources and the Chico Mendes Institute for Biodiversity Conservation had no funding. Recruiting staff for regulatory enforcements ceased, thus instances of land exploitation, wildlife trafficking, and biopiracy were on the rise (LE DUC, 1996). To counter such plight proactively, UN Framework Convention on Climate Change (UNFCCC) Conference of Parties (COP 21) met in Paris in 2015 and resolved that member States initiate a fund for Reduced Emission from Deforestation and forest Degradation (REDD Fund) to enable biodiverse countries like Brazil to conserve genetic reserves sustainably.

The Brazilian Biodiversity Law, that is, the Access and Benefits Sharing of Genetic Resources and Associated Traditional Knowledge 2015 (Law No. 13.123/2015) also compliments the above initiative by repealing the old law and ensuring clearer processes for access and benefit-sharing of bio-resources through a set of simple to follow protocols allowing for safe and monitored use of bio-resources. This reduces expenses as well as minimizes bureaucratic requirements that encourage compliance on the part of corporations and scientists. The new regime expedites the government approval process by requiring researchers to submit details regarding their research electronically (PINTO, 2016). It

also envisages a system where 1% of the total income generated from the sale of Brazilian bio-based products be payable to the government management fund utilized for projects that aim at environmental conservation, technology transfer, human resource training or the sustainable use of genetic resources (BIASI & EMRICH, 2016). Furthermore, as a practical measure, the law exempts small businesses and agricultural cooperatives from the mandatory compliance of benefit sharing agreements to allow them to research and explore the genetic resources and indigenous knowledge without monetary payouts.

Final considerations

The intellectual debate on traditional systems of medicine, agriculture, intangible cultural knowledge, and heritage requires a clearer understanding of the underlying cultural philosophy for protecting, preserving, and developing these systems (LESLIE, 1976). Such clarity will enable coexistence of the traditional and the modern in all appropriateness (SRINIVASAMURTHY *et al.*, 2001). Considering that all folk knowledge preserved in local and traditional practices qualify as indigenous knowledge (BRUSH, 1996); cases of misuse and misappropriation can be resolved when “every patent office in a Western country should insist that the patent applicant declare that the knowledge and resources used in a patent have been obtained lawfully and rightfully” (GUPTA, 1997). Lawful acquisition of knowledge and resource must mean that the prior informed consent of local communities and creative individuals has been ensured, assuming that the donor country has laws requiring such consent and approval. Thus, rightful acquisition involves an ethical inquiry into a corporation’s compensation protocols and practice.

In conclusion, it must be stated that both international and national legal frameworks must tackle the issue of

misappropriation of biogenetic resources and associated indigenous knowledge cautiously. There is a strong reason for governments of Brazil and India to consider moving beyond traditional IPRs to protect their biodiversity through right-based understandings of indigenous knowledge. The grant of private rights, as opposed to community rights, will only limit access to and erosion of bio-based resources, while still maintaining the rhetoric for its protection (UDGAONKAR, 2002 & CORPUZ, 2009). With the establishment of the TKDL, India is on the right path of conservation of its resources and should invest more in capacity building and projects endorsing attribution features. Brazil's new Biodiversity Law is a progressive one which allows for more straightforward implementation and compliance. These good practices must be promoted through international cooperation and confidence-building measures that conserve biodiversity and uphold indigenous right holder's interest all across the world.

The proposals made by both India and Brazil at various multilateral negotiations concerning GRTKF preservation and commercialization emphasize the advantage of involving indigenous communities as important stakeholders for sustainable development. At present, there seems to exist a divide between indigenous and modern systems of knowledge (AGRAWAL, 1995). The documentation of these knowledge systems is often absent, increasing difficulty in disseminating their benefits to users (ABBOTT, 2014). Incorporating GRTKF, existing community institutions, and appropriate indigenous technology into development projects can greatly increase their efficiency, effectiveness, and sustainability and at the same time, empower the communities towards healthier subsistence. A practical and long-term solution for safeguarding the interest of future generations lies in making systemic changes that align to such proposed measures.

References

ANON 2018, 'Is Biodiversity Treaty a Snag to Conservation Research?', *The Hindu*, 28 June, available at <<https://www.thehindu.com/sci-tech/energy-and-environment/is-biodiversity-treaty-a-snag-to-conservation-research/article24281377.ece>>.

ANON 2010, 'Announcement of U.S. Support for the United Nations Declaration on the Rights of Indigenous Peoples Initiatives to Promote the Government-to-Government Relationship & Improve the Lives of Indigenous Peoples', REDD-Monitor, available at <<http://www.redd-monitor.org/wp-content/uploads/2011/06/153239.pdf>>.

ABBOTT, R 2014, 'Documenting Traditional Medical Knowledge', WIPO, available at <http://www.wipo.int/export/sites/www/tk/en/resources/pdf/medical_tk.pdf>.

AGRAWAL, A 1995, 'Dismantling The Divide Between Indigenous and Scientific Knowledge', University of Florida, available at <https://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/4201/Dismantling_the_Divide.pdf?sequence=1&isAllowed=y>.

AXT, JR; CORN, ML; LEE, M & ACKERMAN, DM 1993, *Biotechnology, Indigenous Peoples, and Intellectual Property Rights, Congressional Research Service Report for Congress: Congressional Research Service*, available at <<https://www.hsdl.org/?view&did=717508>>.

BALASUBRAMANIAN, S 2017, 'India: Traditional Knowledge And Patent Issues: An Overview Of Turmeric, Basmati, Neem Cases', *Singh & Associates*, available at <<http://www.mondaq.com/india/x/586384/Patent/Traditional+Knowledge+And+Patent+Issues+An+Overview+Of+Turmeric+Basmati+Neem+Cases>>.

BHATTACHARYA, S 2014, 'Bioprospecting, bio-piracy and food security in India: The emerging sides of neoliberalism', *International Letters of Social and Humanistic Sciences*, vol. 23, p. 49-56.

BIOPROSPECTING/BIO-PIRACY AND INDIGENOUS PEOPLES 1995, ETC Group, available at <<http://www.etcgroup.org/content/bioprospectingbiopiracy-andindigenous-peoples>>.

BLASI, G & EMRICH, E 2016, 'Brazilian Biodiversity: Levelling the Genetics Resources Playing Field', *Life Sciences Intellectual Property Review*, available at < <https://www.lifesciencesipreview.com/contributed-article/brazilian-biodiversity-levelling-the-genetic-resources-playing-field>>.

BRUSH, SB 1996, '*Whose Knowledge, Whose Genes, Whose Rights? Valuing Local Knowledge. Indigenous People and Intellectual Property Rights*', Island Press, Washington D.C.

CONVENTION ON BIOLOGICAL DIVERSITY, *India – Overview*, available at <<https://www.cbd.int/countries/?country=in>>.

CORPUZ, JT 2009, 'International Bio-piracy Protocol: Protecting the Rights of Indigenous Peoples', *Global Policy Forum*, available at <<https://www.globalpolicy.org/social-and-economic-policy/global-public-goods-1-101/48675-international-biopiracy-protocol-protecting-the-rights-of-indigenous-peoples-.html>>.

CORREA, CM 2002, 'Protection and Promotion of Traditional Medicine: Implications for Public Health in Developing Countries', *South Centre*, Switzerland, available at <<http://apps.who.int/medicinedocs/pdf/s4917e/s4917e.pdf>>.

FREDRICKS, CF 2017, 'Operationalizing Free, Prior, and Informed Consent', *Colorado Law Scholarly Commons*, available at <<https://scholar.law.colorado.edu/articles/804>>.

GUPTA, VK 2011, 'Protecting India's Traditional Knowledge', *WIPO Magazine*, available at <http://www.wipo.int/wipo_magazine/en/2011/03/article_0002.html>.

LAGUNA, AF & LAMBA, P 2013, 'India – Efforts Taken to Protect Against the Bio-Piracy', *Translegal: One World One Firm*, blog post,

available at <<https://translegallc.wordpress.com/2013/03/08/indiaefforts-taken-to-protect-against-the-bio-piracy/>>.

LANG, C 2011, 'Manufacturing Consent: The U.S position on Free, Prior and Informed Consent', *REDD-Monitor*, available at <<http://www.redd-monitor.org/2011/06/02/manufacturing-consent-the-u-s-position-on-free-prior-and-informed-consent/>>.

LE DUC, JP 1996, 'Trafficking in animals and plants: a lucrative form of crime' *International Criminal Police*, p. 19-31.

LESLIE, CM 1976, *Asian Medical Systems: A Comparative Study*, Berkeley and Los Angeles, California.

MAGALHÃES, ALB 2017, 'Brazil: Biodiversity at risk from austerity law', *Nature*, vol. 542, pp. 295, available at <<https://www.nature.com/articles/542295e.pdf>>.

PINTO, DR 2016, 'Disclosure Requirements and Access Benefit Sharing: Overview of Recent Developments in Brazilian Biodiversity Legislation' *WIPO*, available at <http://www.wipo.int/edocs/mdocs/tk/en/wipo_ip tk_ge_16/wipo_ip tk_ge_16_presentation_8pinto.pdf>.

ROBINSON, DF 2010, *Confronting bio-piracy: challenges, cases and international debates*, London.

RYSER, RC 2010, 'US government on UNDRIP: Yes, but No', *The Center for World Indigenous Studies*, available at <<https://www.cwis.org/2010/12/us-government-on-undrip-yes-but-no/>>.

SRINIVASAMURTHY, TS *et al* 2003, 'Medicinal Plant Conservation and Sustainable Use Through Forest Gene Banks', *Indian For*, vol. 2, p. 129-179.

UDGAONKAR, S 2002, 'The recording of traditional knowledge: Will it prevent 'bio-piracy'?' *Current Science*, vol. 82, no. 4, p. 413-419.

UNITED NATIONS 2007, '*Declaration on the Rights of Indigenous People*', (Voting record), available at <<http://unbisnet.un.org:8080/ipac20/ipac.jsp?profile=voting&index=.VM&term=ares61295>>.

WORLD INTELLECTUAL PROPERTY ORGANIZATION 2005, '*Disclosure of Origin or Source of Genetic Resources and Associated Traditional Knowledge in Patent Applications*', Intergovernmental Committee On Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, available at <http://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_8/wipo_grtkf_ic_8_11.pdf>.



CHAPTER 6

BRAZIL-INDIA RELATIONS AND THE UN PEACEKEEPING OPERATIONS

*Sérgio Luiz Cruz Aguilar*¹

Over the past decades, peacekeeping has evolved to address changes in the patterns of conflict, the actors involved in violent processes, and the global and regional security structures that render conflict and peace operations more complex. The evolution of peacekeeping operations (PKOs) includes changes in its nature, structures, and objectives. Today, peacekeeping is tasked towards providing security to help civil reconstruction, demobilize armed groups and government forces, collect arms, assist refugees and Internally Displaced Persons (IDPs), organize elections, monitor human rights, support national dialogue and reconciliation, build administrative capacity and institutions, and restore the rule of law, to mention a few.

One of the changes in the attempts to manage or resolve conflicts relates to the United Nations Security Council (UNSC) authorization to the use of force to protect civilians under imminent threat of physical violence. Despite a few cases, such

1 São Paulo State University, Brazil.

as Congo and Cyprus in the 1960s, enforcement mandates became more common from the end of the 1990s. Presently, all robust peacekeeping operations are authorized to use force: the Central African Republic (MINUSCA), South Sudan (UNMISS), Abyei (UNISFA), Democratic Republic of Congo (MONUSCO), Mali (MINUSMA), Darfur (UNAMID) and Lebanon (UNIFIL). Understanding that the limited use of force is *sine qua non* of peacekeeping, operations vested with significant offensive forces could no longer be categorized as peacekeeping. In fact, contemporary UN PKOs gradually swapped their ‘blue berets’ (unarmed observers and police officers) for ‘blue helmets’ (armed troops) and, in some occasions, for ‘green helmets’ (national armies in coalitions with those willing), such as in Libya.

Brazil and India are celebrating 70 years of diplomatic relations. Both countries play an important role in the United Nations and have a history of participation in peacekeeping operations. Brazil and India accumulated knowledge in PKOs can be used to advance the relations between the two countries as well as to assist the UN strengthen peacekeeping and peacebuilding.

This article discusses Brazil and India participation in UN PKOs and how this experience can help advance the relations between the two countries. The article is divided into three sections. Firstly, a summary of the two countries’ participation in PKOs is introduced. Secondly, insights on the presence of Brazil and India in the political and operational levels of PKOs are presented. Thirdly, the article proposes measures that can support the advancement of Brazil-India relations in peacekeeping and peacebuilding.

Brazil and India's participation in field operations

Brazil was an early participant in international interventions. The country sent militaries and diplomats to the first peacekeeping mission, the United Nations Special Committee on the Balkans (UNSCOB), established in October 1947, to monitor Greece borders. Subsequently, the country sent troops to UNEF I (1956-1967) in the Sinai Peninsula, ONUC (1960-1964) in Congo², and OAS Inter-American Forces (1965-1966) in the Dominican Republic³. After almost 20 years far from the PKOs, Brazil returned to individual missions (in the late 1980s) and with armed troops in the UNMOZ (1994) in Mozambique, UNAVEM III (1995-1997) in Angola, and INTERFET (1999), UNTAET (1999-2002) and UNMISSET (2002-2005) in East Timor (AGUILAR, 2005).

Brazil engaged in Haiti (2004-2017) with the largest military contingent besides assuming the military component command of the United Nations Stabilization Mission in Haiti (MINUSTAH). In the aftermath of the January 2010 earthquake, a second battalion was sent to support international humanitarian efforts to assist the country (AGUILAR, 2014). Brazil has further extended its participation by sending a Navy frigate to the UN Interim Force in Lebanon (UNIFIL) from 2011 to present and provided the maritime Force Commander.

India started its engagement in the UN by playing an important role in the United Nations Temporary Commission on Korea (UNTCOK), a body that oversaw the elections in South Korea in May 1948 (PARAKATIL, 1975). In 1956, the country sent troops to UNEF in which, until 1967, eleven infantry battalions were deployed. Between mid-1960 and mid-1964, two successive

2 Brazil sent an Air Force Unit to ONUC.

3 Deployed by the Organization of American States (OAS).

Indian brigades were part of ONUC in Congo (NAMBIAR, 2014). It was the prelude to India's constant and great presence in UN PKOs. The country became one of the top contributors with troops, police officers, formed police units, experts on mission, military observers, and staff officers. Since 2005, India has maintained an average of over 8,000 peacekeepers in the UN PKOs (UN, DPKO, 2018).⁴ Beyond the presence in the field, Indian nationals occupied important positions within the UN hierarchy, especially during the Ban Ki-moon administration (LYNCH, 2011).

Brazil and India engagement in PKOs is the result of a combination of factors like internal interests - mainly from the armed forces - regional strategic interests, and the desire to be recognized as big international powers. However, the benefits of greater engagement in PKOs can be questioned. As countries like Brazil and, mainly, India take on more responsibilities in PKOs, they incur in higher financial commitments and personnel risks. In the meantime, PKOs are customarily approved and designed by the great powers.⁵ This situation led both countries to participate pro-actively in the discussions on matters relating to PKOs.

Brazil, India from the political to the operational level

At the political level, Brazil and India have joined forces along with Germany and Japan to bid for permanent seats at the UNSC and increase their participation in the UN decision-making process. Brazil and India economic and political influence has grown significantly in the last decades, reaching levels comparable to some UNSC permanent members. So did their contribution to the UN regular budget: Brazil is the eightieth highest contributor

4 The total of Indian peacekeepers in the UN PKOs per year was: 2005 – 7,284, 2006 – 9,484, 2007 – 9,357, 2008 – 8,693, 2009 – 8,757, 2010 – 8,691, 2011 – 8,115, 2012 – 7,839, 2013 – 7,849, 2014 – 8,139, 2015 – 7,798, 2016 – 7,710 and 2017 – 6,697 (UN, DPKO, 2018).

5 See Banerjee and Thakur, 2006; Sreenivasan, 2009; Aguilar, 2009.

to the UN regular budget, and India is the 21st (UN, 2019). Yet, the two countries have only figured among the elected non-permanent members in the organ where the main power remains in the hands of the P5 countries since the creation of the UN.

Within the UN headquarter (UNHQ) in New York, Brazil and India play an important role in PKOs. Brazilian and Indian diplomats are traditionally present on several UN committees that deal directly or indirectly with issues related to PKO's. Both countries actively participate in the Special Committee on Peacekeeping Operations (C34), presenting their position and helping the improvement of PKOs process and practices. Within the C34, India leads the non-aligned group while Brazil works with Argentina, Uruguay, and Mexico. The two countries have a number of points in common,⁶ including the use of force by the UN. It is realized that Brazil and India share the vision that force must be a part of a broad peace process, and used as a last resort when required to provide security to civilians under threat of physical violence.

In 2011, when the UNSC authorized 'all necessary measures' to protect civilians in Libya, Brazil and India abstained (UN, SC/10200, 2011). Soon after, the Brazilian government presented the concept of "Responsibility while Protect" in contrast to the "Responsibility to Protect" (R2P) norm shaped by the 'North,' which presented potential disastrous effects as NATO's intervention in Libya showed (UN, A/66/551-S/2011/701, 2011).

Within Brazil and India, participation in PKOs is seen as a valuable instrument of foreign policy and in the quest for a permanent seat at the UNSC, while the military establishment has underlined the professional benefits to itself from the peace operations. However, PKOs decision-making process and

6 Interview with Brazilian diplomat of Mission of Brazil to the United Nations.

its implications have been limited to a small diplomatic and government circle, mainly in the ministries of foreign affairs and the armed forces (notably the Army).

Being part of PKOs means translating political outputs coming from New York to operational actions on the field. Despite some concerns regarding imposing mandates, Brazilian troops used force in the first phase of the UN operation in Haiti. India also operated (and is operating) in numerous PKOs under the chapter VII of the UN Charter, such as in the DRC, South Sudan, and Lebanon. Brazil provided the largest military contingent to MINUSTAH during 13 years, and India is doing the same in MONUSCO (RDC). However, Indian troops in the UN's Congo missions (MONUC and MONUSCO) were accused of being engaged in sexual exploitation and abuse (UN probes..., 2008; DATT, 2012) and faced challenges like the fall of Goma (DRC) and the rebel group M23 (GOMA, 2012). Presence on the ground was criticized when troops invoked caveats and/or national directions to avoid risks and not engage in combat with armed groups.⁷ Despite the problems that India faces regarding the conduct of its troops on the ground, it is common understanding (within and outside the UN) that the country plays a relevant role in PKOs.

In fact, in the last years, Brazilian and Indian commitment to PKOs is part of an implicit division of labor: while enforcement operations tend to be conducted by countries from the 'Global North,' traditional peacekeeping operations are staffed by the 'Global South' (CHESTERMAN, 2004).⁸ At the same time, the DPKO seeks contributions from member states to generate the necessary force. Intrusive mandates increase the risk for troops on

7 See e.g., McGreal, 2015. The author referred to Indian forces in PKOs in Sierra Leone and the DRC.

8 In 2017, none of the permanent members of the Security Council was among the top ten troop-contributing countries for UN peacekeeping operations, and only China and France were in the top twenty.

the ground. Deployment in 'hard areas' implies that peacekeepers will take greater risk, and the mission would be costlier in terms of casualties and life losses. More robust operations lead to a need for expensive equipment such as the armored vehicles that the Brazilian troops used in Haiti and the helicopters that India deployed in the DRC. The more difficult force-generation process become within the UNHQ, the more likely the DPKO will need countries willing to put their troops in harm's way, such as India and Brazil.

Furthermore, Brazil and India's on the ground involvement in PKOs goes beyond the deployment of peacekeepers. This denotes the common position on the need to get involved in development projects in addition to PKOs. While Brazil executed quick impact projects in Port-au-Prince (AGUILAR, 2014), India acted in the same way in Eastern DRC.⁹ In Haiti, the rubbish-related project funded by the IBSA Fund (India, Brazil, and South Africa) was one of the most successful initiative, which aimed to collect and recycle solid waste for the production of fuel (briquettes) prepared with paper, cardboard and sawdust made of wood, and used by the community in residential and school kitchens. The initiative promoted the protection of the environment, improved sanitary control, created jobs, and reduced the use of coal for cooking (AGUILAR, 2014).

Brazil and India presence in PKOs also contributes to the enhancement of regional relations. For example, working together in PKOs has occasionally led to a rapprochement of Indian and Pakistani armies. The peace operation in Haiti favored a regional

9 In July 2010, Indian personnel in MONUSCO had completed 23 community support projects, including health care, sports facilities and road and bridge construction (NDTV, 2010).

orchestration, firstly in the Southern Cone, which then spread to countries in the South and Central America.¹⁰

Final considerations

Contributing to peacekeeping troops is a product of countries' self-interests. In the case of Brazil and India, part of these interests seems to be identical and include increasing the two countries participation in discussions and decisions within the UN. Brazilian and Indian positions regarding the main themes related to PKOs, such as use of force, protection of civilians, multidimensional and integrative approach of the current PKOs, sexual abuse and exploitation, budget, and reimbursement criteria, among others, can be further explored and add value to their contribution for the improvement of PKOs. Yet, if the two countries continue to contribute troops to UN peace missions, they will be bound by a combination of costs and benefits that must be factored in the decision-making process.

Brazil and India also agree that the quality of personnel-contributions is a critical element of peacekeeping success. They have thus established peacekeeping training centers known for having accumulated important knowledge that could be shared with other countries. Brazilian troops operated in urban environments against criminal gangs in Haitian *favelas*, and Indian troops performed tasks of civilian protection in an extremely volatile environment in South Sudan, to cite a few examples. This knowledge can be used by training centers to better prepare

10 The policy-strategic coordination mechanism to discuss issues regarding MINUSTAH was named '2 x n' where the number 2 indicates the representation of defense and foreign relations' areas and the letter 'n' means the number of countries that make up the mechanism. It was started in 2005 as a 2x4 (Argentina, Brazil, Chile and Uruguay) and latter incorporated representatives from Ecuador, Guatemala, Peru, Bolivia, and Paraguay, becoming known as 2x9 (Aguilar, 2014).

future peacekeepers and improve the doctrine on various types of operations.

Being part of PKOs means to translate political outputs coming from UNHQ to operational actions in the field. Thus, how Brazilian and Indian personnel involve themselves with PKOs translate to mandates, rules of engagement, operational orders and carry out actions on the field is important mainly today when the UN Secretary-General launched a new initiative to strengthen UN PKOs.¹¹

Finally, Brazil and India have the potential to build 'new' perspectives on peacekeeping and peacebuilding, not just replicate 'old' forms of interventions shaped and conducted by the powerful countries of the North. Peacekeeping operations are instruments of foreign policy used by national governments to increase international presence and participation in the global decision-making process. By enhancing the understanding of each other's political, strategic and operational positions on peacekeeping operations, the two countries could mutually improve their performance within the UN and, consequently, help the organization guarantee international security and stability.

When it comes to PKOs, Brazil and India can advance bilateral relations by sharing experiences and knowledge as well as working together within the UN, setting common positions. At the political and strategic level, this can be done through workshops involving diplomats, government officials, militaries, academics and practitioners from both countries to exchange experiences, discuss positions and map the road ahead for a more effective UN system. At the operational level, this could begin with the collaboration between Brazilian and Indian peacekeeping centers, the exchange of officers to retrieve negative and positive experiences and the

11 See UN, 2018.

exchange of best practices, which has the potential to improve the participation of both countries in PKOs.

References

AGUILAR, SLC 2014, 'As operações de paz como ferramenta para a construção da paz', in Salatini, Rafael, *Reflexões sobre a Paz*. Marília, Oficina Universitária, Cultura Acadêmica, São Paulo, p. 101-117.

AGUILAR, SLC 2014, *Gerenciamento de Crises: o terremoto no Haiti*, Porto de Ideias, São Paulo.

AGUILAR, SLC 2009, 'A Reforma da Organização das Nações Unidas', *Tensões Mundiais*, vol. 5 p. 13-37.

AGUILAR, SLC 2005, *Brasil em Missões de Paz*, Usina do Livro, São Paulo.

ANON 2012, Goma is Threatened as the International Community Fails DR Congo, viewed 12 March 2018, available at <<http://digitaldjeli.com/2012/goma-is-threatened-as-the-international-community-fails-dr-congo/>>.

BANERJEE, D & THAKUR, R. 2006, 'Is peacekeeping good for India? *The Indian Express*, viewed 15 March 2018, available at <<http://www.indianexpress.com/news/is-peacekeeping-good-for-india/11750/0>>.

BRITISH BROADCASTING CORPORATION (BBC) 2008, 'UN probes India 'abuses' in Congo', *BBC*, 13 August, viewed March 2018, available at <<http://news.bbc.co.uk/2/hi/africa/7557670.stm>>.

CHESTERMAN, S 2004, *The Use of Force in UN Peace Operations*, New York University School of Law, New York.

DATT, G 2012, 'Indian Army's shame? Accusations of 'sexual misconduct' at UN posting in Congo could dent army's honour' *Daily Mail London*, viewed 12 March 2018, available at <<http://>

www.dailymail.co.uk/indiahome/indianews/article-2237939/Indian-Arms-shame-Accusations-sexual-misconduct-UN-posting-Congo-dents-armys-honour.html>.

LYNCH, C 2011, 'India threatens to pull the plug on peacekeeping', *Foreign Policy*, v. 14, viewed 18 April 2018, <<http://foreignpolicy.com/2011/06/14/india-threatens-to-pull-plug-on-peacekeeping>>.

MCGREAL, C 2015, 'What's the point of peacekeepers when they don't keep the peace?'. *The Guardian*, viewed 15 March 2018, available at <<https://www.theguardian.com/world/2015/sep/17/unitednationspeacekeepersrwandabosnia>>.

NAMBIAR, S 2014, 'India and United Nations Peacekeeping Operations', *Ministry of Foreign Affairs*, India, viewed 10 April 2018, available at <<http://mea.gov.in/articles-in-indian-media.htm?dtl/22776/India+and+United+Nations+Peacekeeping+Operations>>.

NEW DELHI TELEVISION (NDTV) 2018, 'Indian to head UN's peacekeeping force in Congo', *New Delhi Television (NDTV)*, viewed 14 March 2018, available at <<https://www.ndtv.com/world-news/indian-to-head-uns-peacekeeping-force-in-congo-423338>>.

PARAKATIL, F 1975, *India and United Nations peacekeeping operations*, Chand and Co, New Delhi.

SREENIVASAN, T. P. 2009, 'India and the United Nations: more give than take', *India Quarterly*, vol. 65, p. 475.

UNITED NATIONS (UN) 2019, DPKO Contributors, viewed 15 March 2018, available at <<https://peacekeeping.un.org/en/troop-and-police-contributors>>.

UNITED NATIONS (UN) 2018, 'Assessment of Member States' contributions to the UN regular budget for 2019', ST/Adm/SER.B/992, 24 December 2018, New York.

UNITED NATIONS (UN) 2018 'Summary of Initiatives Undertaken by the Secretariat to Strengthen United Nations Peacekeeping', 28 March, New York.

UNITED NATIONS (UN) 2011 'Security Council Approves 'No-Fly Zone' over Libya, Authorizing 'All Necessary Measures' to Protect Civilians, by Vote of 10 in Favor with 5 Abstentions', SC/10200 (2011), New York, viewed 21 Feb 2014, available at <<https://www.un.org/press/en/2011/sc10200.doc.htm>>

UNITED NATIONS (UN) 2011, 'Letter dated 9 November 2011 from the Permanent Representative of Brazil to the United Nations addressed to the Secretary-General. Responsibility While Protecting: Elements for the Development and Promotion of a Concept', viewed 2015, available at <<http://undocs.org/A/66/551>>.

CHAPTER 7

LONG-LOST BROTHERS IN ARMS?

Carlos Timo Brito,¹ Viveka Nand Jha,² Ankita Sohal³

Brazil and India are both former colonies with immense territories, populations, and economic clout. Together, the two countries account for roughly 5% of the global gross domestic product and by 2050 they will represent 18% of the world economy (PwC, 2017). India and Brazil are also two of the biggest democracies in the world, with similar international aspirations. In social terms, both countries face daunting domestic challenges, such as poverty, inequality, and illiteracy. In cultural terms, there seem to be so many common traits between the two countries that they could almost be long-lost twins or brothers-in-arms.

More recently, bilateral, plurilateral, and multilateral advancements have led Brazil and India to an unprecedented international rapprochement. This includes a number of new agreements and partnerships in the public and private domains,

1 Ministry of Defense and University Centre of Brasília, Brazil.

2 Jindal School of Public Policy, O.P. Jindal Global University, India.

3 Jindal School of Public Policy, O.P. Jindal Global University, India.

as well as the BRICS, IBSA, G20, the World Trade Organization,⁴ and various forums within the United Nations. In short, the two rising powers have converged significantly in both political and economic terms (SAXENA, 2014; MARCHÁN, 2012). The duo has jointly championed South-South cooperation and, along with China, changed the configuration of polarity in contemporary international relations.

Yet cooperation within other important sectors, such as defense and security, is lagging behind. This suggests that a broader pattern of bilateral cooperation has yet to be reached. By way of example, India, despite having the fifth-largest defense budget in the world at US\$ 62 billion for the current fiscal year (THE ECONOMIST, 2018), and being the world's biggest arms importer for nearly a decade (BLANCHFIELD *et al.*, 2017), buys practically no arms and military equipment from Brazil (WEZEMAN *et al.*, 2018). This indicates that both countries have yet to identify a mutual interest in arms transfers, especially concerning Indian imports from Brazil. Bilateral cooperation does not only involve arms transfers, of course, but this particular model of bilateral relation is very relevant due to spill-over effects, complementarity, and interdependence (KINNE, 2017; KYTÖMÄKI, 2015; PARKER, 2008).

Essentially, a more profound Indo-Brazilian proximity has been hindered by several challenges, among which informational asymmetry, low understanding of each other's culture and intentions, red tape, and a lack of trust stand out (RIS, 2018; CHATURVEDI and MULAKALA, 2016; CHATURVEDI, 2015; CARDOZO, 2012; HAFFNER and MONTEIRO, 2011; HIRST, 2008; BASU, 2006). At the heart of such challenges are questions

4 For more examples of leadership by Brazil and India in the WTO, please refer to Efstathopoulos, C., 2012, "Brazil, India and the Doha development agenda," *Cambridge Review of International Affairs*, 25: 269-293.

of “what do we do?” and “how can we do it?” These questions are especially pertinent in Brasilia and New Delhi, where the main decision-makers, policymakers, and diplomats of both countries must, on the one hand, discuss, design and implement programs in light of shared gains, while also, on the other hand, doing it without alienating other partners in the international arena or jeopardizing pre-existing positive relations with third parties. Ultimately, such questions relate to the true potential – and desired benefits – of solid cooperation between Brazil and India in sectors beyond trade and global governance. More specifically, how can both countries reach out to one another to best provide their own national defense?

Existing and latent cooperation on defense-related matters between Brazil and India

Defense cooperation between India and Brazil is incipient at best. An *Agreement on Cooperation in Defense Matters* was concluded in New Delhi in 2003 and ratified by both governments in 2006. The agreement calls for mutual collaboration in several defense-related areas, such as research, acquisitions, procurement, and logistic support. Subsequently, a Defense Wing was established in the Embassy of India in Brasilia in December 2007, and Brazil opened its Defense and Air Attaché Office in New Delhi in April 2009. These are important developments in diplomatic terms, but they seem to have more symbolism than substance given that 15 years have already passed since the agreement was signed.

Mechanisms for broader bilateral cooperation already exist. Article 3 of the Agreement established a *Joint Defense Committee*, which seeks to explore possibilities for enhanced bilateral cooperation in defense. This encompasses a variety of common and complementary activities, for example, educational exchanges within military schools, joint training for peacekeeping

operations, military participation in simulations and training programs, mutual involvement in strategic projects, technology-related partnerships, sharing best practices, and high-level visits, among other initiatives. Four meetings have taken place in this committee between the two sides to date,⁵ but few developments seem to have been reached thus far. This calls for a new strategy (and renewed routine of joint work) in the Committee with a results-oriented mindset and an expanded common agenda, to improve international cooperation in the defense realm.

According to a recent technical report by the Brazilian Ministry of Defense (MD, 2017), India's defense sector has several relevant characteristics that justify Brazil's interest in increasing bilateral relations. These include Indian technological excellence in a number of areas, such as satellite development and launching, cruise and ballistic missile technology, nuclear submarines, and drones. The Brazilian interest in India, however, may go beyond receiving technology or exporting defense products; it could involve learning from India's experiences with reforming and modernizing its defense sector. In this vein, the defense industrial complexes in both countries appear to face very similar challenges: under-performance, excessive bureaucracy, complicated procurement processes, counterproductive regulations, and low private (national and international) investment (SMITH, 2018; IPEA, 2016). These similarities may create opportunities for learning from one another amid concomitant efforts to reform their respective defense sectors.

5 The 4th meeting was held in 2015 in Brazil and the 5th meeting was held in New Delhi in late 2017. Additionally, through the Committee, the Brazilian Ministry of Defense received a delegation from the High Naval Command Course of the Naval Warfare School of India in 2017 in order to exchange experiences in the area of military shipbuilding.

On the idiosyncrasies of international cooperation: what to do and how to do it?

Contrary to idealistic interpretations and popular belief, international cooperation is neither an altruistic nor a charitable set of actions; it cannot be reduced to “aid” or programmatic “partnerships.” Indeed, international cooperation often requires states and governments to engage in complex negotiations, bargains, and discussions in order for both sides to change their behavior. This involves hard work, political will, and most of all, aspiration for more strategic gains in various domains (political, economic, and social) in the wider international context. Herbert (1986) clarifies this by stating that, in practice, international cooperation involves coordinating policies, which is different from “harmony.” Cooperation, therefore, cannot simply be seen as a function of common interests; “it becomes instead a potential goal for states” (HERBERT 1986, p. 41). In fact, international cooperation is a “public good” that policymakers should strive to increase because it creates the potential for both states to make joint gains (KEOHANE, 1984). Understanding this challenge at the highest political and government levels, as well as producing concrete decision making in that direction, is the first step toward creating the necessary ecosystem for mutually beneficial international cooperation.

The second step is to bring on board both countries’ bureaucracies because they will be behind the actions that will allow bilateral cooperation to flourish. In the defense sector, both Brazil and India have knowledgeable, responsible, and committed civil servants and military personnel, thereby providing the necessary and desired human resources for the task. There is, however, a need for both countries to learn more about the specific agencies and their counterparts in the other country. Mapping

such agencies in both countries, and adapting their expectations, goals, and capabilities accordingly, should generate the necessary environment for greater rapprochement and cooperation.

The third step involves elaborating convergent public policies, programs, and projects at the various planning levels (strategic, tactical, and operational) while observing the proper stages of project development and management (initiation, design, planning, implementation, monitoring, evaluation, and termination). Although none of these factors alone assures success in international cooperation, it will, at the very least, improve countries' familiarity about one another, bringing both societies closer and creating a history from which to learn from when moving forward. In this vein, without neglecting any bilateral initiatives that are already underway, a further programmatic cooperative agenda in defense between India and Brazil could focus in five distinct areas, as discussed in the next paragraphs.

Firstly, India is one of the few developing countries to have an extremely advanced space program, and it is practically all nationalized. This is a clear area in which collaboration could generate mutual gains. In fact, Brazil and India already have the legal and institutional frameworks necessary to support further cooperation, especially the agreement involving the Indian Space Research Organization (ISRO), the Brazilian Space Agency (AEB), and the Brazilian National Institute for Space Research (INPE). The agreement emphasizes satellite projects, such as satellite tracking, launching, and development projects. Ground stations in Brazil (Alcântara and Cuiabá) have been providing tracking support for Indian satellites (Chandrayaan-I, Megha Tropiques, MOM, and ASTROSAT) on a commercial basis for almost a decade. Nonetheless, there is still room for improvement: Brazil has shown an interest in telemedicine and tele-education programs,

as well as scientist exchanges, whereas India has pushed for enhanced satellite programs linked to food safety, natural resource management, and disaster monitoring (SIDDIQUI, 2018; RIBEIRO & VASCONCELLOS, 2017; INPE, 2015).

Secondly, India has a sophisticated defense research network both inside and outside the government apparatus; the Defense Research and Development Organization (DRDO) and the Institute for Defense Studies and Analyses (IDSA) both catch the eye. DRDO, which is part of India's Ministry of Defense, is responsible for research on and development of new equipment. It has a network of 52 laboratories, covering aeronautics, armaments, electronics, and land-combat engineering (BANERJEE, 2018). IDSA is a highly productive non-partisan, autonomous think tank dedicated to policy-relevant research on defense and security. Such entities could well act as models or benchmarks for their Brazilian counterparts, especially the Pandiá Calógeras Institute, the Brazilian government's think tank, which has struggled to find its identity since its creation (ROCHA & CORTINHAS, 2013). Along with the Brazilian Association of Defense Studies and other public and private organizations,⁶ Brazil could team up with India's best research and analysis institutions in order to generate and disseminate data, information, and knowledge on defense- and security-related issues. Ultimately, the bilateral research cooperation would promote not only reciprocal understanding between the two countries but also foster national, regional, and international stability.

Thirdly, Brazil and India are active and perennial participants in peacekeeping missions under the auspices of the United Nations. Yet, they have seldom shared best practices and lessons learned

⁶ For example, the Superior War College (Escola Superior de Guerra – ESG) and the Department of Teaching (DEPEN/SESPED) within the Ministry of Defence, not to mention a plethora of research units in public and private institutions of higher education and the Brazilian armed forces.

in the field, even when acting in the same theatres of operations (such as Haiti). The Brazilian Peace Operations Joint Training Centre (CCOPAB, by its acronym in Portuguese) in Rio de Janeiro and the Centre for United Nations Peacekeeping (CUNPK) in Delhi could develop a more systematic program of joint courses, training, and related activities. As of today, the collaboration between the two centers seems to be irregular. This also applies to faculty and student exchanges between the two countries' military academies.

Fourthly, there seems to be much potential for convergence, collaboration, and integration at various levels and various projects in both countries' defense industries. For example, in the naval field, both countries have been developing Scorpène-class submarines under respective contracts signed with the French Naval Group (the former DCN-DCNS). The two countries could also find common ground in developing variants of the Gripen NG aircraft through triangular cooperation with the Swedish SAAB, the aircraft's manufacturer.⁷ Likewise, Brazil and India could partner in the development of airborne warning and control systems (AWACS), building on the indigenous airborne early warning and control system (AEW&C) manufactured by India's DRDO using modified Brazilian Embraer jets (THE INDIAN EXPRESS, 2018). Moreover, India is at the forefront of naval innovation with the Indian Naval Indigenization Plan (INIP) 2015-2030, which established a new phase of self-reliance by domestically manufacturing technologically advanced equipment (PARRIKAR, 2018). Curiously, India has also made substantial strides through co-production and co-development projects with foreign partners.

7 The Brazilian federal government and the Swedish SAAB signed a contract for the development and production of 36 aircrafts in 2014. The contract and its associated industrial cooperation (which includes technology transfer and offsets) came into effect in 2015, with the first deliveries expected in 2020. More recently, SAAB has reportedly expressed its intention to continue developing the maritime variant of the aircraft, with attention now being focused on a sale to India following Brazil's recent decision to axe its Sao Paulo aircraft carrier (Bharat Shakti 2017).

Brazil could draw important lessons from these Indian experiences – whether in terms of successes/failures, indigenization/foreign direct investment, or centralization/decentralization.

Fifth and lastly, the two countries could consider stimulating a number of strategic projects in the terrestrial, naval, aeronautical, and spatial segments through the creation of joint ventures. Both countries have considerable experience in creating this particular kind of enterprise with third parties, but an Indo-Brazilian joint venture in the defense sector has never materialized. Furthermore, both countries could benefit from a coordinated industrial mapping of needs and surpluses as a means to an eventual integration of production chains. Both countries currently do not seem to know exactly their capacities, qualities, and potentials for mutual supply and demand in terms of defense industrial outputs.

The ongoing initiatives and potential pathways for cooperation not only suggest that high-level Indo-Brazilian defense partnerships are possible, but also that there are already bilateral structural initiatives that they can build on. Both are large countries with considerable defense needs, whether is in terms of arms transfers, defense modernization, joint operations, and training, or technical exchanges. The main bilateral challenge faced by these two regional leaders is how to develop and grow the existing cooperative foundations. In other words, the main obstacles to advanced bilateral cooperation between Brazil and India in the defense sector lie within the domestic and foreign dynamics of the international cooperation itself.

For their own benefit, Brazil and India should expand their cooperation by increasing collaboration between their defense sectors, as well as other areas in which there are clear room for synergies (education, energy, and healthcare, to name a few); as Marchán (2012) notes, “where complementary, lessons from each

country's home-grown development strategies can be learned to help address each other's individual challenges" (p. 13). Accordingly, a fundamental component of international cooperation is the effective coordination of intragovernmental and intergovernmental policies through a decision-making process that takes into account potential partners' diffuse expectations (STEIN 1993; MILNER 1992). Specifically, international intergovernmental cooperation occurs when the policies effectively followed by one actor facilitate the realization of another actor's interests. As the late David Mitraný (1966) suggests, "(...) a successful collaboration in one particular technical field or functional area may lead to further collaboration in other related fields by means of the spill-over mechanism. Governments recognize the common benefits to be gained by such cooperative endeavors and allow for their further expansion" (VIOTTI & KAUPPI, 1993, p. 241).

Looking ahead and aiming at pragmatic, mutually beneficial results

Both countries are natural leaders in their respective regions and display enormous potential for complementarity. India is the world's largest democracy, an economic power, and a millennial society. Brazil is South America's most influential country, a rising economic power, and one of the world's biggest democracies. As a rising economic powerhouse and nuclear-armed state, India has emerged as an important regional power with a commitment to the security and development of its immediate neighbors through Project SAGAR (*Security and Growth for All in the Region*) (BANERJEE, 2018). Brazil, in its turn, has been an exponent of South American regional organizations such as UNASUR and MERCOSUR, and was at the forefront of the formation of the first nuclear-free zone in a densely populated region (through the *Treaty for the Prohibition of Nuclear Weapons in Latin America*

and the Caribbean – the Treaty of Tlatelolco). Accordingly, both countries are in favorable positions for not only establishing intense bilateral policy coordination but also promoting greater inter-regional cooperation.

Foreign policy and diplomacy are important tools for any country looking to establish good relations in the global arena, whether multilaterally or bilaterally. However, defense and military capacities are equally necessary for a foreign policy due to deterrence effects and practical ostensive actions, such as patrolling and monitoring international waters. In this regard, Brazil and India have extensive experience in contributing to multilateral efforts made by the United Nations, having provided blue helmets for peacekeeping operations and missions and participated in interregional naval exercises such as IBSAMAR.⁸ Both countries should engage in more consistent exchanges of experiences and best practices, as well as joint training and planning. The leadership of both countries should make efforts to stimulate mutual knowledge, collaboration, and coordination in various defense-related areas.

Moreover, Brazil and India can realistically innovate and create a benchmark in defense cooperation and military modernization, which includes “updating doctrines, training and restructuring of the defense forces and a supporting military industry” (BANERJEE, 2018, p. 23). Both countries have built solid institutional structures under the auspices of the agreement signed in 2003. Accordingly, the Ministries of Defense and national security advisers should meet regularly in order to stimulate and strengthen defense policy coordination with a focus on practical

8 The initiative has two main objectives: first, it seeks to increase the interoperability among the three navies and develop common understandings and procedures for maritime security operations; second, it looks to improve maritime security in the South Atlantic and Indian Ocean for the benefit of the global maritime community (Indian Navy 2018).

results. The defense attachés in Delhi and Brasília must improve their procedures, projects and programs that are being conducted with their counterpart's executive branches and armed forces. India, as the world's biggest arms importer, has the power to create favorable conditions for Brazilian defense products to enter the market. Brazil, in turn, can make preferential investments in the research, development, and production of tailor-made defense goods and services suitable to the needs and specificities of Indian buyers. India may figure as a preferential partner for Brazil's defense policy and strategy, as well as a model to draw lessons from, considering the rich Indian experience in reforming and modernizing its defense sector. Both countries need to learn how to do this whilst simultaneously preserving their own autonomy when acting in the main international forums.

Final considerations

In short, Brazil and India must seriously aim to maximize the benefits of complementary bilateral relations. By joining forces, the two countries could "break ground on a tangible South-South agenda that could have a far-reaching impact" (MARCHÁN, 2012).

Both countries already have institutional mechanisms at their disposal for enhancing bilateral cooperation in defense, involving not only arms and technology transfers, but also information sharing and joint research, development, and training. Such mechanisms should be put into concrete use as soon as possible.

Superior bilateral cooperation, with a focus on complementarity, will be key to sustaining and strengthening ties between the two giants. Due to their political, economic, social, and even military capabilities and resources, the two countries' international behavior should influence their neighbors' domestic and foreign policies, as well as the ambitions of extra-regional

powers with a stake in Asia and Latin America. In fact, there is evidence that both countries are poised to play a more active role in hegemonic stability in the near future, filling the gap left by the declining military capabilities of traditional U.S. allies (SCHWARTZ & WILSON, 2013).

Ultimately, Brazil and India – two newfound, long-lost brothers in arms – may find themselves securing global commons and delivering two rare (and valuable) global public goods: national, regional, and international stability and peace.

References

BANERJEE, D 2018, 'India Equips Itself to Deal with a More Dangerous Neighborhood', *Global Asia*, vol.13, no. 1, viewed 28 April 2018, available at <https://www.globalasia.org/v13no1/cover/india-equips-itself-to-deal-with-a-more-dangerous-neighborhood_dipankar-banerjee>.

BASU, V 2008, 'Time to Samba', *Institute for Defence Studies and Analysis (IDSA)*, viewed 10 March 2018, available at <https://idsa.in/idsastrategiccomments/TimetoSamba_VBasu_250506>.

BHARAT SHAKTI 2017, 'Saab shifts Gripen M focus from Brazil to India', *Bharat Shakti*, viewed 10 March 201, available at <<http://bharatshakti.in/saab-shifts-gripen-m-focus-from-brazil-to-india/>>.

BLANCHFIELD, K, WEZEMAN, P, & WEZEMAN, S, 2017, 'The state of major arms transfers in 8 graphics', *Stockholm International Peace Research Institute*, viewed 21 March 2018, available at <<https://www.sipri.org/commentary/blog/2017/state-major-arms-transfers-8-graphicspdf>>.

CARDOZO, S.A 2012, 'Brasil e Índia: identidades autonomistas e a reconfiguração da identidade sul. Campinas', *SP*, viewed 21 April

2018, available at <http://repositorio.unicamp.br/bitstream/REPOSIP/280960/1/Cardozo_SandraAparecida_D.pdf>.

CHATURVEDI, S & MULAKALA, A (Eds) 2016, *India's Approach to Development Cooperation*, Routledge Contemporary South Asia Series, Routledge.

CHATURVEDI S, 2015, *The Logic of Sharing: Indian Approach to South-South Cooperation*, Cambridge University Press, New Delhi.

EFSTATHOPOULOS, C 2012, 'Leadership in the WTO: Brazil, India and the Doha development agenda', *Cambridge Review of International Affairs*, vol. 25, no. 2, p. 269-293.

HAFFNER, J & MONTEIRO, A. H 2011, 'As relações econômicas entre Índia e Brasil: trajetória e perspectivas', In *Proceedings of the 3rd ENABRI 2011 3º Encontro Nacional ABRI 2011*, São Paulo viewed 20 April 2018, available at <http://www.proceedings.scielo.br/scielo.php?script=sci_arttext&pid=MSC000000122011000200032&lng=en&nrm=iso>.

HIRST, MN 2008, 'Brazil-India relations: a reciprocal learning process', *South Asian Survey*, 15(1), p. 143-164.

INDIAN NAVY 2018, 'India, Brazil and South African conduct Joint Naval Exercise at Goa - IBSAMAR-V', *Indian Navy*, New Delhi, India, viewed 2 March 2018, at <<https://www.indiannavy.nic.in/content/india-brazil-and-south-african-conduct-joint-naval-exercise-go-ibsamar-v>>.

INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS (INPE) 2015, 'INPE presta suporte ao lançamento de foguete indiano', *INPE*, viewed 28 March 2018, available at <http://www.inpe.br/noticias/noticia.php?Cod_Noticia=4080>.

INSTITUTO DE PESQUISA ECONÔMICA APLICADA (IPEA) 2016, 'Mapeamento da Base Industrial de Defesa', *IPEA*, Brasília, Brazil.

- KEOHANE, R 1984, *After Hegemony: Cooperation and Discord in the World Political Economy*. Princeton University Press, Princeton.
- KINNE, BJ 2017, Bilateral Defense Cooperation and the New Global Security Network.
- KINNE, BJ 2016, 'Agreeing to arm: Bilateral weapons agreements and the global arms trade', *Journal of Peace Research*, vol.53, no.3, p. 359-377.
- KYTÖMÄKI, E 2015, *The Arms Trade Treaty's Interaction with Other Related Agreements*, Chatham House, London.
- MARCHÁN, E 2012, 'India and Brazil: New Models for Cooperation', *Gateway House*, Indian Council on Global Relations, Mumbai.
- MINISTÉRIO DA DEFESA (MD) 2017, Brasília: Brazil. Nota Técnica No. 59/ASAO-CAE-EMCFA/ MD/2017.
- MILNER, H 1998, 'International Political Economy: Beyond Hegemonic Stability', *Foreign Policy* 110: 112-124.
- MITRANY, D 1966. *A Working Peace System*, Quadrangle Press, Chicago.
- PARKER, S 2008, *Implications of States' Views on an Arms Trade Treaty*, United Nations, Geneva.
- PARRIKAR, S 2018, 'Indian Naval Indigenisation Plan (INIP) 2015-2030', New Delhi, India. Available at <<https://www.indiannavy.nic.in/content/indian-naval-indigenisation-plan-inip-2015-2030>>.
- PwC, 2017, *The World in 2017*, PWC, available at <<http://www.pwc.com/gx/en/issues/economy/the-world-in-2050.html>>.
- RIBEIRO, R. & VASCONCELLOS, R, 2017, 'Comparative Perspective of the Brazilian and Indian Space Programs', *Astropolitics (The International Journal of Space Politics and Policy)*, vol. 15, no. 3, 217-234.

RESEARCH AND INFORMATION SYSTEMS FOR DEVELOPING COUNTRIES (RIS) 2018, *Proceedings of the Course on South-South Cooperation*, New Delhi, India.

ROCHA, AJR & CORTINHAS, J 2013, 'The Pandia Institute: Ideas and Dialogues to Improve Brazil's Defense System', *Denkwurdigkeiten, Journal der Politisch-Militärischen Gesellschaft*, no. 87 (December), p. 11-14.

SAXENA, P 2014, *India-Brazil Relations, Institute for Defence Studies and Analysis*, IDSA, Delhi: India, <https://idsa.in/background-er/IndiaBrazilRelations_210712>.

SCHWARTZ, L. & WILSON, P, 2013, "Think Different": Building security partnerships for the 21st Century: The Case of Brazil and India', *Denkwurdigkeiten, Journal der Politisch-Militärischen Gesellschaft*, no. 87 December, p. 1-11.

SIDDIQUI, R 2018, 'Latin American countries keen on launching satellites through ISRO', *Financial Express*, February 10, available at <<https://www.financialexpress.com/economy/latin-american-countries-keen-on-launching-satellites-through-isro/1060451/>>.

SMITH, J 2016. 'Waking the Beast: India's Defense Reforms Under Modi', *The Diplomat*, December 16, viewed 12 March 2018, available at <<https://thediplomat.com/2016/12/waking-the-beast-in-dias-defense-reforms-under-modi/>>.

STEIN, A 1993, 'Governments, economic interdependence, and international cooperation', *Behavior, society, and nuclear war*, 3, p. 241-324.

SIPRI 2018, 'Trends in International Arms Transfer: Fact sheet', *SIPRI*, Stockholm, Sweden, available at <https://www.sipri.org/sites/default/files/2018-03/fssipri_at2017_0.pdf>.

THE ECONOMIST 2018, 'Paper elephant: India spends a fortune on defence and gets poor value for money' *The Economist*, Print Edition of 28 March, available at <<https://www.economist.com/asia/2018/03/28/india-spends-a-fortune-on-defence-and-gets-poor-value-for-money>>.

THE INDIAN EXPRESS 2018, 'India's AWACS is low-cost, better than Pakistan's, says DRDO chief', *The Indian Express*, Published on 1 March, Express News Service, viewed 2 March 2018, available at <<http://indianexpress.com/article/india/indias-awacs-is-low-cost-better-than-pakistans-says-drdo-chief-5083268/>>.

VIOTTI, P & KAUPPI, M 1993, *International Relations Theory: Realism, Pluralism, Globalism*, Macmillan Publishing Company, New York.

WEZEMAN, P, FLEURANT, A, KUIMOVA, A. TIAN, N, & WEZEMAN, S, 2018, Trends in International Arms Transfers, 2017, SIPRI (Stockholm International Peace Research Institute).



CHAPTER 8

INDIA, BRAZIL AND THE NEW 'TRANS-REGIONALISM'

*Pankaj Jha*¹

Brazil and India, two countries separated by the latitudes and longitudes of the global geography, have come to terms with their regional challenges and acknowledged the need to address endemic problems inherited from the past. These include corruption, unemployment, food and water security as well as nascent governance institutions which are affected by political upheavals.

The post-independence phase, particularly for India, nurtured a unique set of elites which outlined the trajectory of the national development plan and foreign policy priorities. There is no denying the fact that the development strategy adopted was dependent on the resources (both human and natural), and the economic possibilities which existed with a given set of institutions, and economic growth opportunities under the Cold War shadow.

Vicissitudes at the global level over nearly seven decades have compelled, and at times, shaped this relationship. The platforms and the forums which brought the two countries on the same

1 Jindal School of International Affairs, O.P. Jindal Global University, India.

multilateral platform also helped in building understanding, articulating common stances and developing empathy for identical causes.

Within the multilateral institutionalism and the role played by regional institutions (MASHEVEKHI & ITO 2005), there have been structural changes (emergence of World Trade Organization) and the consolidation of new geopolitical constructs (Asia-Pacific, followed by Indo-Pacific). *A la carte* organizations such as IBSA and BRICS have cropped up in the last two decades and continue to grow in importance. These multilateral institutions which have been calibrated, retailed and developed were either meant to bring about changes or to create alternate multilateral institutional mechanisms, completely undermining the West-dominated multilateral discourse (IKENBERRY & J. LIM 2017).

The possibility of an Asian Monetary Fund was explored during the Asian financial crisis (1997-98), and very lately the emergence of Asian Infrastructure Investment Bank (AIIB) has been found clearly projecting an alternate discourse with regard to banking and financial institutions. The AIIB, which has more than 80 members, clearly projects high subscription to new organizations,² even though increased membership leads to decreasing marginal utility, in terms of decision making and building consensus (WESLEY (eds) 2003). This can be attributed to the theory that a larger number of members contribute to a wider matrix of issues leading to more discussion and differences, thereby difficulty in bringing consensus.³

2 Members and prospective members of the bank. Available at: <<https://www.aiib.org/en/about-aiib/governance/members-of-bank/index.html>>, accessed 30 Jun. 2018.

3 Consensus Decision Making. Available at: <<https://www.seedsforchange.org.uk/consensus>>, accessed 30 Jun. 2018.

Therefore, organizations such as the G77 (a coalition of developing nations under the UN aegis that evolved in 1964, germinating out of the Bandung Conference of 1955), have relatively low success rate despite having such a promising agenda. The G77 also instituted the Intergovernmental Group of Twenty-Four (G24)⁴ to streamline discussion and implementation of the objectives set out in the larger grouping. These included sustained growth, employment, and poverty eradication.

The evolution of the G20 (membership spanning world's most advanced and emerging economies) in which both India and Brazil are members is a result of the lessons drawn from larger institutions such as the G77. Despite criticisms, the UN is the only institution that can engage states like Iran, Cuba and North Korea, which are seen outside the west defined parameters of democracy and liberty (MAHBUBANI, 2013).

This article discusses how organizations have approximated India and Brazil and whether the new regionalism, which is trans-continental and also *a la carte* in nature, has brought diverse aspects into interaction at multilateral forums. While India and Brazil have been engaged in fostering cooperation in their regional theatres, cooperation between the two countries needs to adopt both the multilateral and bilateral lenses.

This article further highlights the areas that the two countries have cooperated as well as the areas that offer new horizons for further cooperation in the future. All in all, the article outlines the role played by the two countries in multilateral spheres. It then tones down to the bilateral engagements, with a focus on what the

4 (October 12, 2017) Intergovernmental Group of Twenty-Four on International Monetary Affairs and Development Communiqué. Available at: <<https://www.g24.org/wp-content/uploads/2017/10/G-24-2017-Fall-Meetings-Communique.pdf>>, accessed 30 Apr. 2018.

two countries can share in terms of best practices and how they can create a specialized cooperative platform.

Defining new ‘*a la carte institutionalism*’

Regionalism can be classified under three basic categories: open regionalism, closed regionalism, and *a la carte* institutions. There are five levels of regional cohesiveness or ‘regionness’. The degree of regionness can both increase or decrease depending on certain criteria. (LOMBARDE & SODERBAUM (eds) 2013). The first criteria is ‘*geographical and ecological component*’ demarcated by natural geographical barriers like ‘Africa south of Sahara’, the ‘Indian subcontinent’, the ‘Euro-Atlantic zone’ and the Eurasian region (LOMBARDE & SODERBAUM (eds) 2013).

The second criteria defines regions as social systems and highlights the trans-local relations based on the political, social, and cultural attributes of human interactions. These interactions symbolize a different but widely acknowledged regional complex. For instance, it can have a symbiotic relationship like a security complex, as in the case of Europe.

Under this edifice, the fundamental units are interdependent so that overall political stability of the regional system is assured through this security configuration. The internal system of this type of region, like the international system of which it forms part, is anarchic. The classic case is 19th century Europe. At this rather primitive level of organization, balance for power or some kind of ‘concert’ is the sole security guarantee. From a regionalist perspective security mechanism, and further regionalization is thus seen as a viable security strategy. The regional security complex must be

transformed into what has been described as a 'security community' (LOMBARDE & SODERBAUM (eds) 2013).

The third criteria refers to the economic, political, cultural, and military domains. The focused agenda defines the scope and the objective of the sectoral cooperation and also outlines different stages of regional cooperation. The myriad issues constitute collective complications or interests in the region. This includes issues such as refugees, human migration, trans-national criminals, drug trafficking and non-interference in domestic politics 'The genesis of regional organizations with specific purposes acts as a facilitator focused discussion and cooperation. In the absence of any organized regional collaboration, the concept of regionalism does not make much sense' (LOMBARDE & SODERBAUM (eds) 2013).

The fourth criteria is the germination of regional civil society, promoting social interaction, communication, deliberation and convergence of values, leading to the point of cultural standardization. Of course, 'the pre-existence of a common cultural convention across the region is vital, but culture has been continuously shaped and restructured' (LOMBARDE & SODERBAUM (eds) 2013). The case is that of ASEAN (Association of South-East Asian Nations) socio-cultural community.⁵ However, the significant element is the multidimensional quality of regional cooperation. The cooperating states together comprise a 'regional community' (LOMBARDE & SODERBAUM (eds) 2013).

The fifth criteria perceives regions as temporary political subjects with a distinctiveness, legality and edifice of decision-making. Crucial areas for regional intervention are conflict resolution (between and within former 'states') and welfare (in

5 ASEAN Socio-Cultural Community (ASCC) Available at: <<http://asean.org/storage/2012/05/7d-May-2017-Factsheet-on-ASCC.pdf>>, accessed 29 Jun. 2018.

terms of social security and regional balance)' (LOMBARDE & SODERBAUM (eds) 2013). The organizational evolution shows wider horizons and agendas as the current transformation of the European Community into a European Union shows. The ultimate outcome of this comprehensive level of regionalism could be a 'region-state', which in terms of scope can be compared to the classical empires, but in terms of political order constitutes a more voluntary evolution of sovereign national political units into a supranational community to which certain functions are transferred (LOMBARDE & SODERBAUM (eds) 2013).

Defying all the aspects of regionalism, the new regionalism is based on *A La Carte* institutions and their functional aspects. It addresses the issue of financial, economic cooperation and creates new possibilities of economic and financial cooperation. India and Brazil are demanding reforms in the UN Security Council and have sought representation at the high table along with the relevant powers. In his address at the Fortaleza Summit of BRICS, Narendra Modi sought reforms in the UN Security Council and the World Trade Organization. He opined, "we must seek urgent reforms of global institutions of governance like the UN Security Council and international financial institutions. We must help shape the WTO regime. An open trading regime is critical for strong, balanced and sustainable global economic growth. This must address the development aspirations of the developing world. It must also accommodate the special needs of the weak, especially in areas such as Food Security."⁶ The converging forums for both India and Brazil have been the BRICS and the G20, which shows the increasing relevance of the two countries.

6 Text of Prime Minister's statement at the Plenary Session of the 6th BRICS Summit: Inclusive Growth: Sustainable Solutions, Press Information Bureau, accessed 16 Jul 2014.

G20 and BRICS: providing the platform

In international discourse, the majority of countries maintain a critical balance between security and economics (ZUKROWSKA 1999). Security alliances such as NATO are still judged as relevant in select regional theaters, but strategic and defense cooperation agreements which are meant to address traditional security concerns, including maritime security, and non-traditional security challenges, are carefully defining new flexible cooperative structures. The security alliance has become, to a certain extent, a *passé*, while strategic partnerships and other flexible arrangements have become the preferred choice. This can be attributed to the increasing economic interdependence, which has become evident across the globe. The economic organizations and forums are also getting galvanized along the security lines, with the United States hesitantly withdrawing the Trans-Pacific Partnership, while China advocates the Free Trade Area of the Asia-Pacific (FTAAP) with markets and investment as the dividends of trade and regional economic agreements.

The converging forum which emerged for Brazil and India at the high table was the Group of Twenty (G20). The G20 has 'evolved as an international forum bringing leading industrialized and emerging economies together under one platform. The G20 represents more than four-fifths of global GDP and two-thirds of the world population'.⁷ Essential business negotiations are conducted in informal meetings and on the sidelines. In its initial phases, the finance ministers and the central bank governors of the G20 member states used to attend the Summits. Since 1999, 12 summit-level meetings were attended by heads of state/government and meant to address issues related to financial

7 (June 15, 2015) The Times of India G20 countries account for 85% of global GDP, 75% of world trade, available at <<http://timesofindia.indiatimes.com>>, accessed 31 Jul 2016.

governance, fiscal deficit management, tax regulation, climate finance, poverty alleviation, restructuring of international financial institutions, and free trade. In the last five years, the Summits have also addressed issues like social challenges, terrorism, migration, poverty, and climate change.

As emerging economies, India and Brazil have much to contribute to the forum in the financial aspects of international economic and financial institutions, as well as monetary and fiscal adjustments. While India is still in the developing phase, Brazil has reached satisfactory levels of manufacturing and tax regulation in conformity with international regulations. The two countries can share experiences in this regard and work together under the G20 framework to bring about synergies. There are other organizations (such as APEC) to which India is an aspiring member, but the lack of consensus and initiative from members has prevented entry to those bodies.

In contemporary discourse, the Washington system is being tested by the new nascent order being constructed around Beijing, posing new demands to post-Cold War trans-regional institutions such as the Asia-Pacific Economic Cooperation forum (APEC). 'Beyond the classic liberal faith that trade encourages peace, there is anticipation that increased contact and communication among Asian and Pacific nations can serve to create a Pan-Asian identity that will mitigate national and ethnic differences' (PYLE, 2003). Unfortunately, at times, interdependence does not translate into peaceful relations; it may aggravate conflict. The best example has been the US-Japan economic relations related to the TPP negotiations, which have been marked by serious friction and contention, despite significant security and economic interdependence (PYLE, 2003).

There have been debates about APEC being unable to perform as the regional agenda-setter (JHA, MISHRA & KHAN 2004). This was reinforced when ASEAN and its affiliate institutions gained traction both in terms of political discussion as well as economic integration. APEC, the brainchild of small and medium Asian powers to forestall great-power domination, has lagged behind in terms of political dialogue. However, in terms of business interactions and trade facilitation, it has been relatively successful. Besides, economic prosperity does not ensure security. Liberal proponents of APEC have anticipated that power politics are over, and the American security guarantee for the region will remain indefinitely (JHA, 2015). In 1994, the same middle-sized powers structured the ASEAN Regional Forum (ARF) to deliberate on traditional security matters; however, with ARF being a loose and informal organization, it failed to create a comprehensive understanding among regional players. In sum, an order built on APEC and ARF appears to be no less fragile than the Washington System (PYLE, 2003).

The formal guidelines for the acceptance of new members into regional institutions are important to the process of change and expansion because they not only establish the rules but are also important signals of the nature and parameters of the organization. The criteria an organization sets up for appraising applications of new members convey important messages about its rationale, its vision of the region and regionalism, its conception of its role in regional politics as well as more broadly (WESLEY, 2003). As Robert Keohane perceives, 'regional organizations differ in goals and intent from universal membership organizations by the very fact of their restricted membership; the restrictions they place on membership are a crucial part of the goods they offer their members. Institutions with restricted membership seek to achieve gains *vis-à-vis* outsiders (a function for which

there must be foreigners for exploitation) or to strengthen bonds of community' (KEOHANE, 1990). 'The criteria establishing eligibility for membership are determined by and are crucial to selecting the combination of states thought best to deliver the desired objectives of the regional organization' (WESLEY, 2003).

The Indo-Pacific as a geopolitical imagination is becoming increasingly pertinent, but for India to engage in any counter-China strategy is still a very premeditated and calibrated move. In addition to the TPP and the RCEP, there are a number of ongoing large-scale trade negotiations that include Asia-Pacific economies, including the ASEAN Economic Community (AEC), the Transatlantic Trade and Investment Partnership (TTIP) between the United States and the European Union, the Pacific Alliance which includes South American economies on the Pacific Rim, and the WTO Doha Round (FERGUSON, MCMINIMY & WILLIAMS 2015). If India decides to join the TPP, it will have to measure the advantages and disadvantages of the trading bloc. The TPP in its current form is quite dissimilar from its previous version when it comprised of New Zealand, Chile, Peru, Singapore, and Brunei. It has altered from a geo-economic to a geopolitical construct. Whether India will in the future subscribe to tough regulations put forward by the 12 TPP members (while the United States has withdrawn from the forum, it has shown intent in reconsidering its decision) is a matter of conjecture. Brazil, meanwhile, is also facing the same predicament. Maybe it is time for the two countries to analyze the advantages and disadvantages of joining such a group. If India and Brazil decide to join, it may face similar protests from domestic constituencies. Thus, it should also prepare itself to address and assuage domestic concerns.

Sensing the possibility of new trans-regionalism, BRICS found traction and also acceptance in the global community. BRICS

provided the necessary structural reforms that need to be brought about in the selective organization. Further, the institutionalization of the New Development Bank offers a new economic order which addresses problems and challenges faced by developing countries. PM Modi in a statement at the Plenary Session of the 6th BRICS Summit in Fortaleza said “our own greater good, however, lies more in deepening our bonds vertically. Therefore, I have spoken on decentralizing this powerful forum in our earlier deliberations. We must proactively move beyond being Summit-centric. We must champion sub-national level exchanges. Champion engagement between our States, cities, and other local bodies. BRICS should, in fact, be driven by ‘People to People’ contact. Our youth must take a lead in this”.⁸ He added “We should intensify our cooperation in confronting global challenges; like terrorism, cyber security and climate change. BRICS must also play a proactive role in shaping the global discourse on growth and development. This includes shaping the post-2015 Development Agenda to keep the central focus on tackling poverty.”⁹

Between the two countries, the ignorance with regard to societies, institutions and the cooperative spheres has been present. In the case of bilateral relationships, ignorance is never bliss. While multilateral trans-regional institutions have provided a platform, the events subsume the interaction between leaders. In such a context, it is important to outline possibilities and explore the utility of institutions to serve bilateral interactions.

8 (16 Jul 2016) Text of Prime Minister’s statement at the Plenary Session of the 6th BRICS Summit: Inclusive Growth: Sustainable Solutions. Press Information Bureau.

9 (16 Jul 2016) Text of Prime Minister’s statement at the Plenary Session of the 6th BRICS Summit: Inclusive Growth: Sustainable Solutions. Press Information Bureau.

Future Possibilities

Different regional networks have diverse strengths and inherent weaknesses in terms of economic systems, production networks, and varied costs of land, labor, capital, and entrepreneurship. With the Latin America and Caribbean as well as the South Asian regions this is clearly manifested in their economic systems and production patterns. The three stages of economic production in terms of primary, secondary and tertiary industries clearly show that the potential of any economic system depends on other attributes to elevate it into the secondary and tertiary levels of industrial development.

Within Latin America and South Asia, there are three processes which are acting in tandem. Firstly, there are transnational entrepreneurs and enterprises in the region as well as a potential pooling of resources and generation of production complementarities. A testament to this is the increasing intraregional trade. Further, the exports of mineral resources and raw materials would help in the short term, but in the long run, the countries would have to look for economies of scale by creating a value-added network in manufacturing.

Secondly, there are multilateral economic institutions such as the North America Free Trade Agreement (NAFTA) which includes Mexico, and MERCOSUR – a sub-regional grouping comprising Argentina, Brazil, Paraguay, Uruguay and Venezuela along with associate countries, namely, Bolivia, Chile, Peru, Colombia, Ecuador, and Suriname. In the case of South Asia, South Asia Free Trade Agreement (SAFTA) has not been gaining necessary traction and support.

Lastly, trilateral economic groupings, especially organizations from Africa, Latin America, and South Asia should be conceptualized. They can effectively act as the *rendezvous* point for value addition

networks as well as creating cost-effective production through integrated intra-regional cooperation. This kind of trilateral cooperation would also create economic complementarities and bolster South-South cooperation between South Asia, Africa, and Latin America.

India is also getting increasingly interested in exploring these economic networks and has been working to enhance the list of commodities to be traded with MERCOSUR bloc under the Preferential Trade Agreement (PTA) arrangement. Currently, the PTA covers over 450 tariff lines for each party. Further, India's efforts to have cost-effective and time-efficient production along with efficient utilization of human resources and capital would bring about synergies between the two sides. There is a need to launch a trilateral dialogue on trade and investment among Asia, Africa, and Latin America countries, creating the transcontinental dialogue on South-South cooperation. The Transatlantic Trade and Investment Partnership (TTIP) negotiations have come to terms with challenges inherent in the agreement. Therefore, as a result, alternative models should be explored. This should include establishing a trilateral process meant to remove barriers to trade and investment. This dialogue could initially find ways to harmonize existing free trade agreements, and then focus on how Latin American countries might connect to the arrangements emerging from the other negotiations. Eventually, this dialogue should focus on reducing US and EU agricultural subsidies that effectively restrict most important export sector from those markets.

As it has been explored in many regions across Asia and, in particular, in South Asia and Latin America, there is a need to identify trilateral pilot projects that will promote competitiveness and entrepreneurship. Although each region must address its own

competitiveness challenges, there are enormous opportunities to engage in discussions on infrastructure development, including the intraregional electrical grid, energy grid, and transoceanic connectivity corridors. These and many other interconnected projects should promote entrepreneurship and social development.

For the whole of Latin America and South Asia, there is a need for creating human capital, and for that not only quality education, but specialized skill development is required. India has already taken unique initiatives such as Start-Up India and Skill India programs. Perhaps the two sides can draw lessons and create synergies between similar initiatives. Poverty has been a major concern in many Latin America and Caribbean countries as well as in South Asia. The need is to create programs related to food security and also employment generation. International best practices in targeting poverty reduction, reducing infant mortality rate, and childhood development need to be evaluated. Latin America's innovative Conditional Cash Transfer (CCT) programs and India's primary education initiatives along with mid-day meal schemes need to be discussed. The childhood development programs are expected to help the promotion of young workforces in both the regions for the future.

Between India and Brazil, there is a need for collaborative work to spur innovation; for that there is a need to strengthen education and research linkages. Between the two countries, legal and institutional barriers should be reduced to facilitate crossover between universities and the private sector. International collaboration should be encouraged between researchers and initiate twinning programs as well as expand existing educational exchange programs. Facilitating educational exchange visas for both researchers and students from the region would benefit generations. Best practices in technical and vocational education

through online and non-traditional learning would help in skill development and technical expertise. Indian IITs are working out a program on video classes and tutorials. The same can be utilized for promoting basic technical education and understanding. One area which can help the two countries while utilizing the existing mechanisms is the forum of IBSA. The IBSA has been underutilized, and this needs more regular dialogue among members. Even the involvement of Germany as a formal member can be explored. As already stated, GIBSA is an informal forum for dialogue.

For select countries in the LAC region, including Brazil, management of energy and natural resources would help in creating large data related to global energy supplies and market demand. This could be a significant opportunity for North and South America, Asia as well as Europe. Being a major producer of energy, Latin America is considerably rich in oil and gas, thermal energy, hydro-electric power and biofuels. A stronger resource partnership between India and Brazil would provide a strategic boost for the relationship as the two sides in an evolving global economy seek to remain competitive. There is a need to launch a broad energy dialogue to address the shifting international energy landscape and to share best practices related to energy policy.

As the Paris Agreement on climate change obligations requires the cutting of carbon emissions, India and Brazil can work together to identify best practices related to environmental and safety regulations, state oversight, social compensation, and structured tax structure. This is important to ensure predictability, transparency, and the rule of law, while infusing regulated competition into the sector. The two countries need to categorize and classify potential collaborative projects in research and development (R&D) particularly related to medium-tech industry and developing infrastructure.

Faced with budgetary constraints, one way of leveraging R&D funding is through better institutional networks and cross-border cooperation. In this regard, South-South cooperation can help in building a stronger institutional framework for regular consultation and collaboration. Institutions such as Community of Latin American and Caribbean States (EU-CELAC) summit process and the Organization of American States (OAS) exist, but there should be more trilateral integration among other multilateral institutions which can participate as observers. India and Brazil have defined new regionalism and are partners in *a la Carte* regionalism, but it needs more substance to meet aspirations of the people in the two sides of the continental drift.

Final considerations

The new regionalism has defied the geographical boundaries and all parameters related to the regionness. In fact, the inclusion of India and Brazil through the institutional frameworks such as the G20 and BRICS have created new platforms for interaction and the involvement of important regional stakeholders into the new regionalism. While the G20 addresses issues such as financial and monetary reforms, the BRICS creates an alternative platform for development and growth through the collation of selected countries.

However, the two countries need to work on other possibilities, and this includes empowering the IBSA Summit with the participation of Germany and Japan to create an alternate forum which could be a collation of markets, capital, technology and create a new forum for North-South cooperation. The agenda and the pursuit as well as the larger agenda for this forum should be about technology, energy, climate change and also developing defense and maritime issues across the regions.

References

Intergovernmental group of twenty-four on international monetary affairs and development communiqué, viewed 12 October 2017, available at <<https://www.g24.org/wp-content/uploads/2017/10/G-24-2017-Fall-Meetings-Communique.pdf>>.

ASEAN SOCIO-CULTURAL COMMUNITY (ASCC), available at <<http://asean.org/storage/2012/05/7d.-May-2017-Factsheet-on-ASCC.pdf>>.

Consensus decision making. Available at <<https://www.seedsforchange.org.uk/consensus>>.

FERGUSON, IF, MCMINIMY, MA, & WILLIAMS BR, *The Trans-Pacific Partnership (TPP) Negotiations and Issues for Congress*, Congressional Research Service, Washington DC.

IKENBERRY, G., & J. LIM, D, 2017, '*China's emerging institutional statecraft The Asian Infrastructure Investment Bank and the prospects for counter-hegemony*'. Available at <<https://www.brookings.edu/wp-content/uploads/2017/04/chinas-emerging-institutional-statecraft.pdf>>.

INSTITUTE OF DEVELOPMENT AND STRATEGIC STUDIES, 'In A Transforming Economy,' *Institute Of Development And Strategic Studies*, Warsaw. Available at <<https://www.nato.int/docu/colloq/1999/pdf/269-283.pdf>>.

JHA, P 2015, '*India and APEC*, *Indian Foreign Affairs*, vol. 10, no. 2, p. 174-181.

JHA, P, MISHRA, R. & A. KHAN, S. *Special Report on India and APEC: Building the Case*. Indian Council of World Affairs, New Delhi.

KEOHANE, RO 1990, '*Multilateralism: An Agenda for Research*', *International Journal*, vol. 45, no. 4, *Multilateralism: Old & New*, p. 731-764.

LOMBARDE, PD & SODERBAUM, F, (1990-2000), *Regionalism Volume II: The New Regionalism*, edition 2013, Sage, London, p. 34-36.

MAHBUBANI, K 2013, 'Why the United Nations Is Kept Weak', available at <<https://www.theglobalist.com/why-the-united-nations-is-kept-weak/>>.

MASHAYEKHI, M & ITO, T, 2005, *Multilateralism and regionalism*, United Nations, New York.

Members and prospective members of the bank. Available at <<https://www.aiib.org/en/about-aiib/governance/members-of-bank/index.html>>.

PYLE, KB 2003, 'Regionalism in Asia: Past and Future', *Cambridge Review of International Affairs*, vol. 16, no. 1, p. 24.

Text of prime minister's statement at the Plenary Session of the 6th BRICS Summit: *Inclusive Growth: Sustainable Solutions*, Press Information Bureau, 16 July 2014.

Text of prime minister's statement at the Plenary Session of the 6th BRICS Summit: *Inclusive Growth: Sustainable Solutions*. Press Information Bureau, 16 July 2016.

Text of prime minister's statement at the Plenary Session of the 6th BRICS Summit: *Inclusive Growth: Sustainable Solutions*. Press Information Bureau, 16 July 2016.

The Times of India G20 countries account for 85 percent of global GDP, 75 percent of world trade, 15 June 2015, available at <<http://timesofindia.indiatimes.com>>.

WESLEY, M 2003, *The Regional Organizations of the Asia-Pacific: Exploring Institutional Change*, Palgrave Macmillan, New York.



Copyright © Fundação Alexandre de Gusmão



FUNDAÇÃO
ALEXANDRE
DE GUSMÃO

Follow our social media

@funagbrasil




Printing: Gráfica e Editora Ideal

Cover paper: cartão supremo 250g

Text block paper: pólen soft 80g

Typefaces: AaronBecker 16/22 and Warnock Pro 12 (titles);
Chaparral Pro 12 (texts)



Since the early 2000s, Brazil-India relations gained new impetus as seen in the increase of high-level visits and trade flows between the two countries. A landmark of this process was the signing of the Brazil-India strategic partnership in 2006. At the multilateral level, the two countries jointly articulated positions at the UNCTAD and the G77 and supported the formulation of an alternative discourse on development and global governance through the establishment of the IBSA Forum and the BRICS.

As Brazil and India begin to identify complementarities and share perceptions about the evolving international order, there is still an enormous potential to be explored on the road ahead.

This book offers a prospective view of academics and policy makers of the two countries on the potential for greater Indo-Brazilian collaboration in the areas of science, technology and innovation; defense; sustainable and inclusive development; renewable energy; multilateral cooperation; and people-to-people exchange.

After reaching the 70-Year landmark of diplomatic relations, dialogue and cooperation must gain more density and autonomy. Our scholars can assist policymakers to identify new opportunities for advancing bilateral relations by bringing fresh views and new perspectives.

Karin Costa Vazquez

ISBN 978-85-7631-789-0



9 788576 317890 >



www.funag.gov.br

