

BROOKINGS INDIA

India-U.S

Relations in Transition

June 2016

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About this Volume

This collection of short memoranda on India-U.S. relations has been written by experts from Brookings India and its affiliate, the Brookings Institution in Washington DC. The memos each represent the personal views of the authors and not the institutions themselves. They are meant to provide different, and sometimes differing, perspectives on how to make progress on some of the top issues on the India-U.S. agenda.

In the Introduction, I look at the highs and lows in relations since 1998 and the considerable progress made. In the first section on bilateral relations, **Teresita Schaffer** outlines the key strategic convergences and remaining obstacles to the India-U.S. security partnership. She suggests that the United States respect India's desire for strategic autonomy and that the two sides deepen their dialogue on Pakistan, Afghanistan, and the Middle East. **Joshua Meltzer** argues that India risks being left behind by recent mega-regional trade agreements. Among other measures, he recommends that India be included in the Asia-Pacific Economic Cooperation (APEC) forum and the Trade in Services Agreement (TiSA). **Darrell West** and **Hillary Schaub** recommend that differences over intellectual property be bridged through dialogue and by encouraging patenting that could benefit Indian innovators.

In the second section, covering areas of cooperation that could help accelerate India's development, **Shamika Ravi** argues that India's ailing higher education sector could benefit from longer tenures for U.S. faculty in the country, a greater emphasis on community college collaboration, and an overhaul of the regulatory bodies that oversee Indian tertiary education. **Kavita Patel** sees parallels between U.S. and Indian struggles to provide affordable access to healthcare, and suggests ways for India to learn from U.S. experiences in medical training, prevention and diagnosis, and telemedicine. **Vikram Mehta** describes the structural changes underway in the international energy market and argues that India can adopt American practices of deploying government resources to support energy-related innovations.

In the third section, on regional issues, **Joseph Liow** argues that India and the United States should continue to uphold the principles of freedom of navigation and spirit of the UN Convention of the Law of the Sea in the South China Sea, while building up the coast guard capabilities of Southeast Asian states. On Pakistan, **Steve Cohen** describes India and the United States' distinct challenges with that country, and suggests closer consultations on nuclear security, regional trade, and Afghanistan's future to mitigate the problem. On Afghanistan, **Michael O'Hanlon** suggests that the U.S. make a four year commitment to Afghanistan's security, while India and others contemplate ways to promote long-term cooperation.

Finally, because international relations almost never progress in a linear fashion, **Tanvi Madan** examines some of the high-impact but low-probability events that may affect the India-U.S. relationship in the future: so-called "black swans." These include various economic, security, and environmental shocks, regional conflicts, and state disintegration in regions where both the United States and India have interests.

- Dhruva Jaishankar

June 3, 2016



I. Looking Back: Highs, Lows, and Steady Progress

Dhruva Jaishankar

India and the United States have come a long way since 2008, the year that Barack Obama was elected U.S. President. Earlier that same year, Indian Prime Minister Manmohan Singh took the unusual step of putting the future of his government on the line over a matter of foreign policy – specifically, a civilian nuclear agreement with the United States. Dr. Singh barely survived a vote of no confidence in the Lok Sabha, India’s lower house of parliament. History might have proceeded very differently had he failed.

The years between 1998 and 2008 had been heady ones for India-U.S. relations. Following a brief period of U.S.-led sanctions following India’s 1998 nuclear tests, the two sides made efforts to turn a new page in their relationship. Indian Prime Minister Atal Bihari Vajpayee was swift in trying to assuage some of Washington’s concerns and described the two countries as “natural allies.” An intense period of negotiations on India’s nuclear status culminated in the historic visit of U.S. President Bill Clinton to India in 2000. Meanwhile, American concerns over Y2K – the Millennium bug – gave a boost to India’s nascent software industry, helping it to evolve into a global presence. The two countries were soon talking about collaboration on ballistic missile defence (BMD) and India went so far as to seriously contemplate sending troops to Iraq in 2003 to support the U.S.-led state-building efforts in that country. In 2005, the two countries signed a ten year defence framework agreement, and laid out the terms for a civilian nuclear agreement that would bring India into the global nuclear mainstream. Philip Zelikow, then Counselor at the U.S. State Department, said blandly that the United States’ “goal is to help India become a major world power in the 21st century...We understand

fully the implications, including military implications, of that statement.” Two years later, India and the United States – along with Australia, Japan, and Singapore – held large-scale multilateral naval exercises in the Bay of Bengal.

Initially, the post-2008 era looked likely to belie some of the more enthusiastic predictions that resulted from these developments. Just months before Barack Obama’s election, the United States experienced a financial crisis that had severely negative repercussions for its economy and affected its global credibility. In the aftermath, Washington made attempts at reaching an accommodation with a more confident China on Asian and global issues, much to India’s chagrin. U.S. counterterrorism imperatives in Afghanistan and Pakistan also defined the new administration’s approach to India’s neighbourhood, side-lining some of New Delhi’s concerns.

It was not just the United States that was economically weakened and distracted. After an initial resurgence following the Global Financial Crisis, India’s economy too began to slow, with growth tumbling between 2010 and 2012. Fiscal profligacy, bad loans, corruption scandals, and policy fluctuations deterred investment, and India adopted a more cautious approach in many of its foreign dealings, including with the United States. The low point arguably came in late 2013, when the detention of an Indian deputy consul general in New York by U.S. authorities resulted in a nasty public spat between the two governments. The incident, and its handling, was perhaps more of a symptom than a cause of the poor state of relations.

The last two years have seen a gradual upswing,

with particularly important strides on the security dimensions of the relationship. For Washington, the partnership with India is now an integral element of the U.S. rebalance to Asia. For New Delhi, the U.S. is a major source of technical, technological, and financial support to assist in India's domestic transformation. India is also less shy about considering opportunities to enhance the strategic partnership. Consultations and cooperation in Asia have improved, corresponding to a

clearer alignment of interests, although differences remain on many issues in South Asia and the Middle East. Yet for all the progress, the relationship still requires continuous tending in order to overcome hurdles and manage divergences. This will be particularly important as India, the United States, and the world experience important political, economic, social, and technological transitions over the coming years.

How Have India-U.S. Relations Changed Since 2008?

		2008	Present	% change
Economics and Trade	U.S. exports (goods) to India	\$17,844 million	\$21,718 million	22%
	Indian exports (goods) to the United States	\$20,731 million	\$42,449 million	105%
	U.S. exports (services) to India	\$10,043 million	\$17,222 million	71%
	Indian exports (services) to the United States	\$12,654 million	\$23,712 million	87%
	U.S. foreign direct investment to India	\$1,802 million	\$4,192 million	133%
	Indian foreign direct investment to the United States	\$2,820 million	\$7,823 million	177%
	Total U.S. natural gas exports	963 billion ft ³	1784 billion ft ³	85%
	Multinational corporation R&D centres in India	806	1031	28%
Defence and Technology	U.S. defence deliveries to India (previous 4 years)	\$178 million	\$2,820 million	1343%
	U.S. satellites launched by India (cumulative)	0	16	n/a
Society and Culture	Indian students in the United States	94,563	132,888	41%
	U.S. tourist arrivals in India	804,933	1,118,983	39%

Data compiled by Neha Aggarwal, Dhruva Jaishankar, Shruti Godbole, and Aditya Sharma. Sources: U.S. Department of Commerce, U.S. Energy Information Administration, Indian Space Research Organisation, Ministry of Commerce and Industry (India), Ministry of Tourism (India), Mint, Petersen Institute for International Economics, Stockholm International Peace Research Institute, The Wall Street Journal, and Zinnov. Notes: 'Present' data is from 2015, except R&D centres (2013); Indian goods exports, Indian FDI to US, Indian student, and U.S. tourist data (2014); and Indian satellite launch data, which includes planned launches for 2016-2017. Figures for U.S. defence exports are in 1990 U.S. dollars.

II. Security Ties

Teresita C. Schaffer

Security cooperation today includes both some of the most promising aspects of U.S.-India ties. For anyone who worked on U.S.-India relations before the big transformation took place at the end of the Cold War, this statement comes as a surprise.

India-U.S. security ties reflect two key strategic convergences. First, Indian and U.S. interests in the Indian Ocean and Asian security are broadly aligned. Both countries want constructive relations with China, neither wants China to be the dominant power in Asia, and both are wary of China's expanding presence in the Indian Ocean. Indian strategists generally refer to China as India's biggest strategic challenge, though this is a perspective the government prefers not to articulate publicly as policy. This U.S.-India policy alignment was best illustrated in the joint statement issued by President Barack Obama and Prime Minister Narendra Modi during Obama's visit to India in January 2015.

Second, India now sees its economy as a source of power. This gives Indian Ocean security a higher profile in India's strategic outlook. The U.S. role in the Indian Ocean and further east is now regarded as one of the ways of protecting India's economic future. India's economic surge starting in the 1990s changed maritime and naval issues from a backwater to one of the lead sectors of the U.S.-India security partnership, and the two countries have just begun an annual Maritime Security Dialogue. This fits in well with the Obama administration's "rebalance" to Asia, predicated on a network of strong partnerships around Asia, with India as a critical participant.

In keeping with their deepening strategic under-

standing, the United States and India in July 2015 extended their defence cooperation framework agreement for another ten years. Each successive agreement has expanded the areas for cooperation. This time, the list gave a higher profile to technology transfer and defence co-production, two critical Indian priorities. Remarkably, the proposed Logistics Support Agreement, normally a required feature of U.S. defence trade, which had been given up for dead about two years ago, was revived in a form more palatable to India when Secretary of Defense Ashton Carter visited India in April 2016. The two countries have been working toward projects on aircraft carrier design and operations and jet engine technology. U.S. manufacturers lost a bid to supply a large order of medium multi-role combat aircraft, but defence trade has increased, topping \$9 billion between 2008 and 2013.

At the same time, the two countries also have some important differences. Differing views on Pakistan limit the scope of the strategic conversation. For India, Pakistan is the source of its terrorism problem. For the United States, Pakistan is an important, albeit problematic, strategic partner, and a country the U.S. prefers to deal with quite separately from India. In contrast to the broad strategic understanding on China, there is a persistent sense in India that the United States does not fully appreciate India's concerns about Pakistan and Afghanistan.

The second major obstacle concerns the two countries' visions of their global role. For the United States, that role starts with leadership. Washington has an expansive view of where its interests are engaged. For India, the cardinal requirements of foreign and security policy are maintaining pre-

dominance in the immediate region and protecting “strategic autonomy,” thus avoiding excessive entanglement with powerful countries. This makes India ambivalent: enthusiastic about incorporating advanced U.S. technology into its defence setup and about keeping the U.S. friendly in the areas most important to Indian security, but wary of any visible alignment with U.S. policy. This also means that on defence trade, Indian and U.S. priorities are not always in sync: India wants the latest technology while the United States wants to build a defence relationship.

A third challenge is the mismatch between the two countries’ governmental structures dealing with defence. India’s defence purchasing procedures are designed to maximize domestic production and avoid any accusation of corruption – and if that means decisions take years, so be it. The U.S. defence sales arrangements are legally subject to Congressional approval requirements – and hence give rise to the Indian charge that the U.S. is an unreliable supplier. The Indian defence ministry is chiefly a budget-setting and administering organization, separated from the armed services by a firewall that the United States finds hard to understand. The U.S. Defense Department is joined at the hip with the armed forces, and its ways are similarly opaque to Indian observers.

The important parallels between Indian and U.S. national interests will keep pushing the two countries forward, despite these challenges. It will occasionally be a rocky ride. Two recommendations could help the two countries come closer to the potential for this important relationship:

- The United States must show respect for India’s standing as a nation whose civilization is still leaving its mark on the world, and whose commitment to strategic autonomy remains strong. This is the starting point for serious progress in any aspect of U.S.-India relations. Successful U.S. negotiators need to listen before delivering their talking points, and to understand India’s priorities – even if they do not share them. Grand public statements comparing U.S.-India ties with NATO, for example, are likely to be read as a challenge to India’s ability to set its own course.
- The two sides must deepen the U.S.-India dialogue on Pakistan, Afghanistan, and the Middle East. In the short term, the United States and India are unlikely to overcome their different perspectives on these regions. However, a serious dialogue, conducted with honesty and candour, can go a long way toward mitigating the “dialogue of the deaf” that all too often clouds their strategic conversation.

III. Economic and Trade Relations

Joshua P. Meltzer

The U.S.-India economic relationship remains under potential and it is unlikely that any significant progress will be made during the remainder of the Obama administration. India is the world's ninth largest economy but only the 18th largest export market for U.S. goods, behind Switzerland and the United Arab Emirates. This stands in contrast to progress across other areas of the U.S.-India relationship over the last decade. Moreover, the absence of Indian participation in the so-called mega-regional trade agreements (the Trans-Pacific Partnership Agreement (TPP), the Transatlantic Trade and Investment Partnership (TTIP) negotiations and the Trade in Services Agreement (TiSA) negotiations) that have been the focus for U.S. trade policy during the Obama administration will leave India worse off, diverting trade from India and making integration into global supply chains even more difficult.

Expanding the bilateral economic relationship and developing mechanisms to minimize the negative impact on India from its absence in these mega-regional FTAs should be a focus for the U.S. and India. Since independence from the British, India has been a relatively minor player in the international economy, reflecting India's orientation that placed a premium on developing domestic means of production. While one of the original parties to the General Agreement on Tariffs and Trade (GATT) 1948, India's record in multilateral trade negotiations has largely been obstructionist, and its FTAs have reflected low levels of ambition.

While India has been discarding non-alignment as an organizing foreign policy principle, its approach to trade has not fundamentally evolved. This is despite the aim of Prime Minister Narendra Mo-

di's 'Make in India' program to increase India's participation in global value chains – all of which presuppose increased levels of trade and foreign investment.

The U.S.-India economic relationship has also been riddled with challenges. The United States has had a range of market access issues as well as specific concerns over Indian protection of intellectual property rights. For India, greater access for its people to work in the U.S. market has been a key objective.

The U.S. and Indian governments are seeking to deepen economic cooperation in areas such as standards and services trade, however, there is little progress so far. Moreover, India's traditional defensiveness in trade negotiations has resulted in little appetite within the U.S. administration, Congress, and amongst business constituents to include India in the new mega-regional trade negotiations – particularly as India would be unable to meet the high standards being sought in these agreements. It also means that even less ambitious steps to grow the bilateral economic relationship have only tepid levels of support.

The failure to expand the bilateral economic relationship and the possible narrowing of India's global economic horizons due to its absence from the mega-regional FTAs is of concern. This is not only due to potential missed opportunities for growth and prosperity, but it will ultimately also undermine the United States' broader aim for India to play a greater leadership role in its region.

The following recommendations are aimed at expanding the bilateral economic relationship and

at supporting India's broader integration into the global economy.

- India is interested in joining the Asia-Pacific Economic Cooperation (APEC) forum and Obama during his visit to India in 2015 expressed support for this goal. As a non-binding economic forum, APEC would give India an opportunity to experiment with forms of trade liberalization and to familiarize itself with best-practices on economic integration in areas such as standards. APEC could also help India learn about the TPP - connecting APEC members' experiences with India's economic reforms. Obama should reaffirm his support for India's membership in APEC and work with India and other APEC economies to make this a reality.

- Access for Indian workers to the U.S. economy has been a key Indian trade goal. It has informed India's negotiating position at the WTO and more recently, India has sought WTO consultations with the United States which have so far failed to resolve the issues, likely leading India to seek WTO dispute set-

tlement, alleging the discriminatory treatment of India in terms of visa fees and the allocation of non-immigrant visas. The U.S. should consider establishing a regular bilateral dialogue with India on these issues.

- The United States is the world leader in services exports and runs a growing surplus in services trade. India also has an increasingly sophisticated services sector which supports a services trade surplus with the United States, worth almost \$5.8 billion in 2015. For instance, India is the largest exporter of computer and data processing services to the United States and India-based Tata Consultancy Services is the world's largest computer services firm. Yet India is not a party to the TiSA, which following its completion will result in Indian services exporters facing less favorable market access in key markets such as the United States, European Union, and Japan. The United States and India should establish a working group aimed at preparing India for eventual membership in TiSA, including consideration of the feasibility of a bilateral services agreement.

IV. Intellectual Property Rights

Darrell M. West and Hillary Schaub

Intellectual property is critical to the sustained growth of the economy. In the United States, according to a Commerce Department study, nearly 40 million American jobs are supported by intellectual property-intensive industries. They account for over \$5 trillion, or 34.8 percent of gross domestic product. Throughout his two terms, President Barack Obama has taken significant steps to improve intellectual property (IP) by issuing executive orders and recommendations. In 2011, the president signed the Leahy-Smith America Invents Act (AIA), which was designed to help make the U.S. patent system more efficient and reliable. Additionally, Obama established two intellectual property enforcement advisory committees designed to improve IP enforcement efforts. In 2013, he issued five executive actions and seven legislative recommendations designed to protect innovators from frivolous litigation and ensure the highest-quality patents. In his 2014 State of the Union address, Obama called for Congress to pass a patent reform bill that would allow U.S. businesses to focus on innovation, not needless litigation.

The government of India is a signatory on several international trade agreements and has taken steps towards strengthening IP by enacting legislation that protects intellectual property rights. India has made positive statements on the need to introduce a stronger IP environment and has undertaken IP reforms especially in the pharmaceutical industry. Despite these promising actions, India has remained at the bottom of the Global Intellectual Property Center (GIPC) index rankings, which measures performance on IP protection and enforcement. India lags behind other nations in formal patent filings. It averages around 9,500 filings per year, compared to 269,000 in the United

States. Unlike in the United States, there is insufficient economic encouragement of intellectual property in India and few incentives to innovate. The GIPC cites other major causes for concern like the troubling history and current practices of using compulsory licensing for commercial and non-emergency situations, the challenging enforcement environment, and high levels of physical and online piracy in India. The joint efforts of the United States and India on IP are encouraging, but there is plenty of room for improvement.

There are three recommendations we make to narrow differences on intellectual property rights between the United States and India:

- IP is an international issue, so it is critical to continue to keep the dialogue open between the United States and India through summits, forums, and task forces. There have been positive steps taken by Obama and Indian Prime Minister Narendra Modi, but progress needs to extend past the terms of individual leaders.
- Developing and enforcing domestic legislation for intellectual property protection is key. The GIPC recommends that India address online piracy and goods counterfeiting. It also suggests stronger IP enforcement through civil remedies and criminal penalties.
- To create a welcoming environment for innovators and encourage them to develop new products for the marketplace, the governments should encourage patenting so that Indian innovators could reap the financial awards resulting from their creativity.



V. Higher Education

Shamika Ravi

Over the past decade, college tuition fees in the United States have skyrocketed, making it extremely difficult for average Americans to invest in higher education. Within the same time frame, the country has fallen from being ranked number one in college degree attainment to number 12 globally. The rising costs of higher education has translated into a widening gap between the wealthiest and the poorest sections of American society. This is a stark indication of growing inequality of income and opportunity within the U.S. economy. Even among those who go on to complete a college degree, debt is a serious concern. Student loan debt has now surpassed credit card debt for the first time in the country. In response to this growing problem, President Barack Obama expanded federal support to help more students afford college education, while making calls to tackle rising college costs. He also set a new goal for the country: that by 2020, the United States would once again have the highest proportion of college graduates in the world.

In comparison, Indian students are faced with nearly infinite costs of higher education given the severe shortage of quality institutions in the country. These get reflected through unreasonable entrance requirements where students need to score 100 percent to get admission to some of the top colleges, and a very significant number of students opt to study abroad at much higher costs. The excess demand for higher education in India, with limited supply of quality institutions, has led to the proliferation of many dubious illegal institutions across the country. Compared to China, access to higher education in India looks dismal. In 2000, the gross enrolment ratio (which measures the

number of individuals going to college as a percentage of college-age population) was 8 percent in China and 10 percent in India. By 2008, Chinese higher education reforms ensured that their gross enrolment ratio rose to 23 percent while in India this rise was only marginal to 13 percent. This reflects the slow pace of growth of the Indian higher education sector. The problem takes on catastrophic proportion when viewed from the lens of India's demographic structure. Lack of access to higher education over the next two decades could quickly transform India's demographic dividend into a demographic disaster.

India and the United States already have several areas of collaboration in the higher education sector that could mutually benefit the two liberal democracies. In September 2014, marking their first bilateral summit, Prime Minister Modi and President Obama committed themselves to a new mantra for the India-U.S. relationship, "Chalein Saath Saath: Forward Together We Go." The joint declaration, endorsing the first vision statement for the strategic partnership between the two countries in various sectors, including higher education. The U.S. Agency for International Development (USAID) has been tasked with providing a range of high level analytical, diagnostic, and organizational development services to support the efforts of India's Ministry of Human Resource Development (MHRD). This includes faculty development, exchange programs, and partnerships with leading U.S. higher education institutions. The U.S. government re-launched the Passport to India initiative to work with the private sector to increase internship opportunities, service learning, and study abroad opportunities in India. This initiative is

also about to launch a massive open online course (MOOC) for American students who are keen to learn more about Indian opportunities.

Beyond these developments, the following steps can still be taken:

- The government of India proposed several new ideas for faculty exchange through its Global Initiative of Academic Networks (GIAN) program. The MHRD will create a channel for U.S. professors in science, technology, and engineering to teach in Indian academic and research institutions on short term exchanges. This would be a mutually beneficial collaboration if it were to allow faculty members from U.S. universities to spend six months of their sabbatical year in India. Indian academic institutions would gain tremendously from such visits, and such short term appointments should be facilitated and strongly advertised.

- Employability is a key concern and several efforts have been made to encourage new certification programs, knowledge sharing, and public-private partnerships between the two countries. Obama has put special emphasis on community colleges given their critical role as a gateway to economic opportunity for poor and middle class Americans. There are significant potential gains to be made through collaboration between U.S. community colleges collaborating and Indian institutions, which can adopt models of best practices in skill development. There is already an agreement between the All India Council of Technical Education (AICTE) and the American Association of Community College for curriculum development and adopting industry demands to train the future workforce.

- There are many new ideas that are being jointly explored between the two countries. Most of these ideas run the risk of remaining token measures until India brings about fundamental changes to the regulatory framework

of its higher education sector. Beyond good intentions, India will have to completely transform bodies such as the University Grants Commission (UGC), AICTE and the Medical Council of India (MCI) by making them more transparent, accountable and thereby more competent to regulate the higher education sector in the country.

From India's perspective, the overall objective of such bilateral collaboration has to be improvements in access to quality higher education for students and a greater capacity for research and teaching among faculty. Both are essential if India is to realize its promise of a demographic dividend.

VI. Healthcare

Kavita Patel

Among the shared challenges facing both India and the United States is the growing burden of healthcare. Both countries are facing unprecedented challenges in this field. India spends approximately 4-5% of its total GDP in healthcare and ranks a dismal 112 in the global health scorecard. The United States spends 17% of its GDP on healthcare – the highest per capita healthcare expenditure in the world – and still lags in outcomes compared to other developed countries.

President Barack Obama's Patient Protection and Affordable Care Act of 2010 was created with the aim and vision of providing affordable healthcare to the over 55 million uninsured individuals in the United States through state and federal subsidies and healthcare exchanges. Unfortunately, there have been setbacks to this expansion goal. The Supreme Court ruling allowing states to opt out of Medicaid expansion left large numbers of uninsured Americans still without any type of healthcare coverage. Despite what could reasonably be described as the most advanced healthcare system in the world, many Americans are still left outside peering in through the window at treatments they cannot afford.

On the other side of the world, Indian healthcare is plagued with everything from massive variances in quality, a disparity of availability from region to region, discordance between trained medical graduates, and a near-complete lack of preventative services. Although it has done an admirable job in restraining and containing outbreaks of several communicable diseases including polio, cholera, malaria, HIV/AIDS and tuberculosis, the challenges affecting a newly wealthy middle class with white collar jobs and sedentary lifestyles have

emerged. These include obesity, type 2 diabetes, hypertension, and atherosclerotic cardiovascular disease from smoking. Ironically enough, some of the best tertiary care centers (already certified by the Joints Commission International) in India offer relatively low-cost and high-quality services for many of those conditions at a fraction of U.S. costs. And yet, once again, the majority of Indians are left out, with even the relatively low pricing being affordable only for wealthier Indians or international patients visiting for medical tourism.

Under Prime Minister Narendra Modi, the Indian government promised significant changes under the aegis of National Health Assurance. Incorporating lessons from developed economies, it launched the National Health Policy (NHP). Under the NHP, newly enacted laws recognized health as a fundamental right of every citizen and incorporated additional sources of revenue for the states to deliver a variety of services. The central government also increased the states' share of revenue from 32% to 42%. Under the new revenue sharing arrangements, the central government transferred some of the preventive and welfare services to the states. The NHP involves both public and private sector partnership for full implementation, which are funded by the central government. NHP has created a transition guideline adapted from its previous incarnation as the National Rural Health Mission (NRHM). Under the roadmap of the NHP, primary care services rendered by government revenue schemes would enhance scopes of services to include both communicable and non-communicable diseases like hypertension, diabetes, and other preventative services. While the primary focus will still be in rural areas, due to higher urbanization, underserved urban areas are

now also receiving attention and resources from the NHP program.

With higher complex care to be mostly delivered through government-owned and -funded tertiary care hospitals, the linkage between secondary and tertiary care would enhance the ability to provide complete continuity of care. The biggest challenge for India is the dwindling number of allopathic medical doctors as well as their current concentration in wealthy urban areas. Partly, this challenge can be resolved by increasing the number of allopathic doctors and allowing mid-level and non-allopathic practitioners to practice in regions with severe shortages. Finally, with the ever-rising and escalating cost of drugs, the Indian government has started funding lists of essential drugs as well as diagnostic services to eliminate the huge burden of cost on poor families.

While the NHP is a very ambitious program, and some of its provisions have begun to be implemented, its success depends on cooperation from different state governments. With different regional political parties ruling in different states, the full implementation and realization of NHP in its current version may be hampered by the agenda of political interests, something similar to what the United States experienced with individual states denying Medicaid expansion, still leaving a large number of uninsured citizens without the possibility of healthcare coverage.

Both the United States and India have similarities and paradoxes in their healthcare systems. Economic shifts will change the nature of medicine in the coming century, and political stonewalling can hamper efforts to provide quality healthcare to all of their citizens. Enhanced cooperation that started with the first meeting between President Obama and Prime Minister Modi has brought in a new level of cooperation and collaboration between these two countries. However, cooperation could deepen in the following ways:

- Cooperation on evidence-based preventive services, that are currently non-existent in India, could help lead to early diagnoses and intervention.
- Ensuring greater accountability from healthcare providers can help reduce disparities in affordability and quality of care in India.
- Much like in the United States, mid-level provider education systems should be implemented in India to rapidly increase the size of the healthcare workforce to cater to rural and underprivileged communities.
- Benefiting from models developed in the United States, India can take steps to rapidly increase telemedicine access to provide specialists' services in underserved areas.

VII. Energy and Environment

Vikram S. Mehta

The energy market has undergone a major structural change since 2015. The most dramatic manifestations of this change are Saudi Arabia's decision to forego the role of "swing producer," the consequential drop in the price of oil, and the recent pronouncement in Saudi Arabia's "Vision 2030" to reduce its dependence on petroleum.

Underlying these developments are trends that are rippling across the broader energy market. The shale revolution in the United States transformed the supply side of the petroleum equation but it also brought into sharp relief the disruptive impact of technology. The disproportionate impact of the slowdown of the Chinese economy on the demand for oil highlighted the eastward tilt in the flow of petroleum but it also brought out the declining per capita consumption of fossil fuels in the Western economies. The consensus in Paris on containing emissions marked a global acknowledgement of the dangers of global warming but it also reflected a tightening of public sentiment and regulatory policy against fossil fuels and a shift in the conversation from peak oil (the finiteness of oil) to peak demand (should companies be permitted to monetise their discovered but not developed reserves of hydrocarbons?).

These changes suggest that the energy sector is headed towards an interesting crossroads. One direction will lead linearly towards a future in which fossil fuels will continue to dominate the energy basket. The low price of petroleum will dilute investor interest in renewable and clean energy and the large, youthful, and aspirational societies like India will continue to base their mobility infrastructure on gasoline and diesel. The other direction would lead towards a different future. This

pathway will be difficult to navigate: it will be twisted, the signposts will be blurred, and history will serve as an imperfect guide. But directionally, it will move the sector towards a future in which oil and gas remain within the interstices of the economic system but in increasingly smaller amounts. In time, these commodities lose their dominant position in the energy system.

Conventional wisdom holds that India will move down the former path. It has an abundance of coal, its industrial infrastructure is built on a fossil fuel energy system, it does not have the resources to develop an electric vehicle transportation system, and it can leverage its monopsonistic position to secure very favourable terms from Middle Eastern suppliers of oil and gas. However, conventional wisdom needs to be challenged. The World Health Organisation has ranked 13 Indian cities as amongst the 50 most polluted cities in the world. The Himalayan glaciers are receding, water tables are falling, and India's forest cover has been severely denuded. India is on an unsustainable economic trajectory. Discussions between the Indian prime minister and the U.S. president provide an opportunity to address this challenge directly.

An oft-cited claim is that the U.S. private sector has been behind most recent energy-related innovations. That is not the case. The support provided by the U.S. government has been crucial. The shale revolution might have still been in the making were it not for the seed funding provided by the Department of Energy to scientists and laboratories to work on the twin concepts of hydraulic fracturing and horizontal drilling, the technologies that unlocked the hydrocarbon molecules in the shale rocks. Similarly it was the Pentagon that first

triggered interest in robotic cars. They provided the initial sponsorships and prize money for innovators. And it was only following the success of these sponsorships that private companies like Google picked up the research baton regarding driverless cars. Currently, the Pentagon is one of the main drivers behind research to improve fuel efficiency, develop cleaner fuel blends, upgrade battery technology, and build smart distribution networks. It has allocated \$9 billion for research and development on these subjects over the next 5 years. The Pentagon is not motivated by scientific altruism. They are the amongst the largest consumers of liquid fuels (almost 90 million barrels per annum) in the United States and therefore have good reason to encourage the developments of a competitive and scalable alternative to liquid fuels for transportation.

India needs to take a leaf out of the U.S. experience. It has a clean energy fund, supported by a cess on the coal industry. The purpose of the fund is to finance clean energy research. In fact, the money is more often than not diverted towards other purposes. The Indian government needs to better understand the catalytic role played by the U.S. government in incentivising clean energy innovation, energy efficiency, and demand conservation. It should also see whether there is scope for deploying India's funds more purposefully through collaborative partnerships with U.S. scientists, laboratories, and public entities like the Pentagon.

VIII. The South China Sea

Joseph Liow

While a source of potential instability for the Asian region, the South China Sea disputes also offer an opportunity for greater cooperation between the United States and India in contributing to the management of regional order.

The United States has reiterated its neutrality on the matter of competing claims in the South China Sea. Nevertheless, by way of former Secretary of State Hillary Clinton's statement at the 2010 ASEAN Regional Forum meeting, the United States has also stated that the South China Sea is a matter of national interest. Specifically, the U.S. interest in the South China Sea is related to stability, freedom of navigation, and the right to lawful commercial activity in East Asia's waterways. The declaratory policy on the South China Sea has gathered strength with the Obama administration's strategy of a 'pivot' (or 'rebalance') to Asia. This declaratory policy has been accompanied by a deepening of U.S. diplomatic, military, and economic ties with key Southeast Asian claimant states, notably the Philippines and Vietnam. Unilaterally, the United States has also adopted a more robust position on the South China Sea. This is evident in its conduct of several high-profile freedom of navigation operations (FONOPs) after a hiatus of two years, designed to demonstrate the commitment of the United States to stability in the area.

While the South China Sea is a matter of national interest for the United States, its explicit interest is freedom of navigation and unimpeded commerce. Both of these are things China has guaranteed although, granted, both parties have still to arrive at agreement as to acceptable military activities under the rubric of freedom of navigation, especially in the South China Sea. Commerce however, has

little if anything to do with the concerns that both parties have. Underlying their differences on this matter is their competing interpretations of the United Nations Convention on the Law of the Sea (UNCLOS) in relation to military activities within a state's exclusive economic zone (EEZ). Whereas Washington has taken the position – despite not having ratified UNCLOS – that military activities in EEZs are permitted under the Convention, Beijing has opposed this.

India views the South China Sea as a secondary sphere of influence, the most important sphere being South Asia and the broader Bay of Bengal area. It also realizes that it does not have the naval capability to stake any kind of claim as a significant military power in the South China Sea. Increasing tensions in the South China Sea, however, are viewed as affording India certain benefits. First, China's assertiveness in the South China Sea belies China's "peaceful rise" narrative within Southeast Asia and this raises India's value as a strategic counterweight to China amongst both Southeast Asian states and the United States (as well as Japan, by proxy). Second, and related to the previous point, this allows India to exert some amount of strategic pressure on China in response to the latter's drive to bolster its strategic reach into the Bay of Bengal and the wider Indian Ocean region. In a nutshell, India considers the Indian Ocean region, and the Bay of Bengal specifically, as its sphere of influence. China's challenge to this Indian dominance has led India to make references to the South China Sea in joint statements with the United States and with several claimant and non-claimant ASEAN states. India views this as a low-cost and useful tit-for-tat strategy thus far.

India's relationship with Vietnam implicates India, to some extent, directly in the South China Sea dispute. India's state-owned ONGC started a joint oil exploration project in 1988 in Vietnam's territorial waters in the South China Sea. For a long time, China did not make any significant reference to this joint project. However, from the early 2000's China has objected to India's role in this venture. India has responded in two ways. First, it has asserted the right of its state-owned enterprise to carry out this venture as part of India's legitimate economic interests. Second, it has begun to sell patrol boats to Vietnam in order to bolster the latter's coast guard capability. India's warships have also made port calls to Vietnam and defended its right to do so. India has asserted that it will use its navy to defend installations related to this venture in the eventuality that these come under any threat. The Indian perception is that China will not risk an open confrontation.

The United States and India can take several steps to stabilize the South China Sea situation:

- India and the United States should continue to assert that both freedom of navigation and UNCLOS should be adhered to in the South China Sea. This should be done unilaterally but also bilaterally. Freedom of navigation operations by the United States should continue, and India should seriously consider the conduct of such operations as well.
- The United States should regularly reassure regional states of its commitment to the region. This is crucial because of prevailing anxieties in many Southeast Asian states that the United States may not be able to sustain the attention it accorded to the region under the rubric of the 'pivot.' Moreover, regional states are also fearful of a U.S.-China condominium in which the United States might be prepared to compromise Southeast Asian interests in exchange for Chinese compromise on a broad range of global issues that could conceivably involve global trade and finance, nuclear proliferation, and North Korea. The United States should bear such concerns in mind.

- For some time, India has consistently stated that the South China Sea dispute should be settled peacefully through negotiation. In April 2016, India, Russia and China released a joint statement which asserted that "all related disputes should be addressed through negotiations and agreements between the parties concerned." This was seen as a slight departure from the earlier Indian position and closer to the Chinese position against internationalization of the dispute. This interpretation has been disputed by India and they have re-asserted that their position is that the dispute should be resolved peacefully via a mechanism agreed to between the claimant states, which potentially allows ASEAN and the United States a role in managing the dispute.

- Both India and the United States can work together to build coast guard capabilities of claimant states, particularly Vietnam, to deal more effectively against non-traditional threats like piracy and terrorism.

IX. Pakistan

Stephen P. Cohen

India and the United States each have a Pakistan problem, but these are different. The United States tries to manage a troublesome and troubled former ally, which is important as much for its destructive and disruptive potential as for its positive accomplishments, such as intelligence cooperation. India's Pakistan problem is quite different. India has no credible response against low-level Pakistani-tolerated terrorism, and is wary of slipping into an open-ended conflict with Islamabad. India's long-term strategy is to isolate and squeeze Pakistan, the way the United States manhandled the Soviet Union. India would like to use its soft power and the support of other states—notably the United States—to effect a change in Pakistan's outlook; until now this strategy is mostly wishful thinking. Practically, Pakistan is also an internal political problem for India's Prime Minister Narendra Modi.

Modi's objective with the United States is to complete the erasure of Washington's historic downgrading of India to a second-rate or regional power. He stresses India's cultural greatness while touting its military capabilities and its economic potential. These, coupled with a stronger Indian-American presence, may—just possibly—alter U.S. policy regarding Pakistan. These factors have already persuaded many Americans to see India as a potential balancer of China.

But The United States is unlikely to be moved very far. While there is hope that Indian power might balance a potentially aggressive China, both Washington and New Delhi are also hedging their bets regarding Beijing. As for Pakistan, Washington does not want to see a new regional crisis—whether initiated from Pakistan (as in the recent past) or

New Delhi (as happened earlier).

Further, Pakistan is not a passive onlooker. It has an operational strategic code subscribed to by the military, key civilian elites, many academics, and a large part of the press. This involves the willful use of force, skilled diplomacy, and a pliable civilian government. It resembles, in many ways, the high point of the British Raj. Pakistani elites have an overall goal: to avoid becoming a “West Bangladesh” subservient to Indian power. The 1947 Partition, which pitted the Indian and Pakistani armies against each other, cripples any state that seeks regional hegemony. South Asia is now the world's third most violent region, partly because of this rivalry and also because the rivalry prevents regional integration on trade and economics.

But there are at least three steps that could help the United States and India address their respective Pakistan problems. They add up to a strategy which promotes the creation of a South Asia, that has room for both South Asian nuclear powers.

- The United States should re-open the Bonn process, and invite India, Pakistan, China and Iran as full partners in a discussion about Afghanistan's future. Both India and Pakistan have legitimate interests in Afghanistan. After the school massacre in Peshawar even the Pakistan army is aware of the costs of their policy of supporting the Taliban. And it is not in Indian interests to see Pakistan under the control of the Taliban or Islamic State.
- India could still do more to design a regional trade and transit agreement that would rebuild some of South Asia's regional identity,

including assurances that Pakistan would not be economically overwhelmed. While now euphoric about the China Pakistan Economic Corridor (CPEC), Islamabad must rebuild its regional connections to safeguard itself against the kinds of intrusions China has practiced elsewhere. This could be linked to a regional agreement on Afghanistan.

- Finally, both India and Pakistan can extend their earlier statement of “no attack” on nuclear facilities, and have their nuclear security centers jointly work on nuclear forensics and nuclear safety. In this matter, the United States could serve as a technical resource for further regional nuclear agreements.

It is not in Indian or U.S. interests to see Pakistan become either a radicalized Islamic state or a collapsed nuclear weapons state. Pakistan cannot be dismantled from the outside, but there can be a larger project—which would include many Pakistanis—to normalize it. India and Pakistan will not be allies, friends, or strategic equals, but a nightmare scenario in which Islamists gain control over even a few of Pakistan’s nuclear weapons—feared by many Americans—is not inevitable. Ships that pass in the night are preferable to ships that collide and sink in the night.

X. Afghanistan

Michael E. O'Hanlon

Afghanistan is not a major source of discord in the India-United States relationship. But nor is it a likely realm of great opportunity for collaboration. The main impediments to greater U.S.-Indian cooperation in Afghanistan are probably a combination of their modest expectations of what can positively be achieved, combined with an awareness that any Indian role (even in realms of development assistance and the like) will often be seen by Pakistanis as more nefarious, risking a backlash from Islamabad. But there is still a useful common agenda going forward.

As the Afghanistan war reaches its 15-year mark, it is important to note that President Barack Obama is the first two-term U.S. president ever to wage a single war in a single country for the entirety of his tenure in the White House. It has undoubtedly caused Obama considerable frustration, angst, and heartache throughout much of his presidency, even though he originally considered it a war of necessity and a noble cause. Results, alas, have been mediocre. The insurgency remains potent, and the government weak. More than 2,000 Americans have lost their lives there, most of them on Obama's watch. Obama struggled with his decisions to adopt a comprehensive and well-resourced counterinsurgency campaign for the country, generally employing such a strategy but always somewhat begrudgingly.

His ambivalence about the U.S. commitment, as reflected in frequent policy reviews that tended to publicly contemplate a possible U.S. withdrawal from the war before consistently discarding such an option, contributed to a tortured relationship with former Afghan President Hamid Karzai, and reinforced perceptions in Pakistan that the United

States was not really committed to the war. One would have thought that sustaining a NATO-based coalition of several dozen countries throughout eight years in office, surging to 100,000 U.S. troops in country by late 2010, and planning to leave 5,000 to 10,000 troops there even after Obama himself departs the White House would quiet any interpretations of alleged American irresoluteness. But they have not. Indeed, Pakistan's willingness to tolerate leadership groups for the Afghan Taliban widely known to take sanctuary on Pakistani soil – such as the Haqqani network, the Quetta Shura, and Peshawar Shura – continues to be a major albatross for leaders in Kabul, Washington, other NATO capitals, and beyond. While the Afghan government holds onto major cities, and while the quality of life for Afghan citizens is far better than in the 1980s or 1990s, the country's progress is fragile, and the Taliban has made some headway in regaining territory since the big NATO drawdowns of recent years.

Afghanistan is a country, and a subject, about which New Delhi and Washington have generally similar and compatible goals. They both seek a peaceful country, in the interests of contributing to a broader stability throughout the region. They are both generally uninterested in any "Great Game" that might play out among the major powers in Afghanistan—even though many Pakistanis doubt that India's interests are so benign, and some countries like Iran (as well as former Afghan President Karzai) doubt that U.S. purposes are quite so disinterested themselves. Neither sees Afghanistan as the likely centerpiece of any major regional economic strategy—though some Americans pay lip service to the idea of a "new silk road" running through Afghanistan and connecting east to west, whereas

some Indians more realistically hope that someday Afghanistan's agricultural potential can help provide more foodstuffs to the rest of South Asia.

Given the crossroads they find themselves at, the United States, other nations, and India could take the following three main steps:

- NATO should make a four-year commitment to Afghanistan's security, pledging to sustain deployed forces and aid levels at or near current levels, and to help the Afghan police and military as well as the rest of the Afghan government strengthen their own capacities. The United States in particular should avoid the tortured annual policy reviews combined with the frequent specter of potential NATO pull-outs that have typified the Obama years.

- Recognizing Pakistani sensitivities in regard to India's role in Afghanistan, even if those sensitivities sometimes verge on the paranoid, New Delhi should carefully calibrate its security role in Afghanistan, and should contribute to Afghan development primarily through multilateral mechanisms.

- Despite these constraints on short-term action, India and the United States can, to the extent Pakistan is willing, start to discuss longer-term regional cooperation that would involve ideas like expedited crossings of borders and free trade zones among key regional nations. The United States should also consider free-trade accords with the region's states, including Pakistan, someday. Conditions may not be ripe for such moves now, but by creating a positive vision along these lines, incentives may be gradually reshaped and recalibrated even within Pakistan—eventually helping persuade Islamabad to take stronger steps against the Taliban as well as anti-India groups like Lashkar-e-Taiba. The fact that such steps are overdue already should not discourage New Delhi and Washington from promoting them over the longer term.

XI. Looking Forward: Uncertainties and Black Swans

Tanvi Madan

U.S. Secretary of Defence Ashton Carter recently said that the U.S.-India defense partnership would become “an anchor of global security.” But in an increasingly uncertain world, the partnership between these two large and relatively stable democracies can also potentially be a critical anchor of stability more broadly. Here are some black swans—low-probability, high-impact and, in hindsight, predictable events—that could exacerbate regional and global uncertainty and instability, and affect both countries’ interests and, potentially, their relationship.

- ***Regional Assertiveness:*** What might be the impact of greater Chinese or Russian assertiveness—even aggression? How might Russian actions against Ukraine, Georgia, or even a NATO member change not just U.S. calculations, but India’s as well? How will it affect their bilateral relationship? What about a China-U.S. confrontation over Taiwan or in the South China Sea? Or Chinese action against a country like Vietnam, with which India has close ties and which the United States is increasingly engaging? What if there is a sudden or serious deterioration of the situation in Tibet, perhaps in the context of a leadership transition?

- ***Chaos in India’s West:*** What happens if there is political uncertainty in Saudi Arabia, a country with which the United States has close—albeit tense—ties, and which is India’s largest oil supplier and home to millions of Indian citizens? How will the United States and India react if Iran, after all, decides to acquire nuclear weapons? What about the chain reaction either of these scenarios would set off in

the Middle East? Closer to India, what if Afghanistan relapses into a total civil war? Or if there is a sharp downturn in stability within Pakistan, with the establishment challenged, the threat of disintegration, and challenges posed by the presence of nuclear weapons?

- ***Shocks to the Global Economy:*** What if a confluence of circumstance leads to a major spike in oil prices? What will the impact be of a major economic crisis in China, not just on the global economy or Chinese domestic stability, but also in terms of how Beijing might react externally? How will the United States and India deal with this scenario? And what if the eurozone collapses under the weight of refugee flows, Britain’s threatened exit, or national financial crises?

- ***The Epoch-Defining Security Shock:*** Both the United States and India have suffered major attacks relatively recently—the United States on September 11, 2001 and India on November 26, 2008. But what if there is another major terrorist attack in either country or on the two countries’ interests or citizens elsewhere? Or a major cyber incident that takes down critical infrastructure?

- ***Environmental Challenges:*** What if rising sea levels cause a catastrophe in Bangladesh resulting in thousands, if not hundreds of thousands, crossing over into India? And then there are the various climate change-related challenges that can perhaps be considered “white swans”—more-certain events, whose effects can be more easily estimated.

In addition, one could think of domestic black swans in each country and some in the bilateral context. These might include dramatic domestic political developments, or a spark causing a major backlash against immigrants in the United States or American citizens in India.

As the U.S.-India partnership has developed, and India's regional and global involvements have increased, the U.S.-India conversation—and not just the official one—has assumed greater complexity.

This will help the two countries tackle black swans in the future. So will the further institutionalization of discussions on global and regional issues of the sort already underway. Amid the day-to-day priorities, there should be room for discussing contingencies for black swans in dialogues between the U.S. Deputy Secretary of State and the Indian Foreign Secretary, in the two countries' dialogue on East Asia, and in discussions between the two policy planning units.



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Book and Cover designed by
Simran Kaur | The Graphic House