



BROOKINGS
India Initiative

The Second Modi-Obama Summit:
Building the India-U.S. Partnership

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Table of Contents

Preface	1
Introduction	3
Geopolitics & Geoeconomics	
India and its South Asian Neighbors: Where does the U.S. fit in? <i>Teresita C. Schaffer</i>	7
Risky Business: The U.S. turns back to the Middle East <i>Tamara Wittes</i>	11
The U.S.-India Relationship and China <i>Tanvi Madan</i>	13
China's Economic Challenges: Implications for India and the U.S. <i>David Dollar</i>	17
China's Domestic Dynamics: Implications for India and the U.S. <i>Cheng Li</i>	19
India-U.S. Relationship: From Promise To Practice	
Economic Ties: A Window of Opportunity for Deeper Engagement <i>Eswar Prasad</i>	25
Intellectual Property Rights: Signs of Convergence <i>Subir Gokarn</i>	27
Strengthening India –U.S. Relations through Higher Education <i>Shamika Ravi</i>	31
Primary Education in India: Progress and Challenges <i>Urvashi Sahni</i>	35
Enhancing U.S.-India Defense Cooperation <i>Stephen Cohen & Michael O'Hanlon</i>	39
Strengthening Counter Terrorism Cooperation Against Growing Turmoil <i>Bruce Riedel</i>	43
Time to Act on U.S.-India Energy Cooperation <i>Charles Ebinger & Vikram Mehta</i>	47
Operationalizing U.S.-India Civil Nuclear Cooperation <i>Robert Einhorn & W.P.S. Sidhu</i>	51
India and Climate Change: Reversing the Development-Climate Nexus <i>Rahul Tongia</i>	54
Delivering on the Promise of India's Smart Cities <i>Amy Liu & Robert Puentes</i>	58
Biographies	62

Preface

Less than two months after their first summit in September 2014, Prime Minister Narendra Modi, in an unprecedented gesture, invited President Barack Obama to be the chief guest at India's 66th Republic Day on January 26, 2015. This is the first time an American president has been invited in this capacity. With his acceptance of that invitation, President Obama will become the first U.S. president to visit India twice during his time in office.

The Republic Day rendezvous sets the stage for the second Modi-Obama summit in less than six months. If the first summit was a leadership moment for India and the United States, then the second summit offers an opportunity to deepen the relationship further and take it to the next level. As the two leaders prepare to meet in New Delhi in January, the Brookings India Initiative, which consists of the Brookings India Centre in New Delhi and the India Project at Brookings in Washington DC, decided to focus on key issues that were highlighted in the September joint statement and are crucial to strengthening the bilateral relationship.

Taking advantage of the breadth of expertise available at Brookings and reflecting the interest in India among its scholars, this policy brief contains 16 memos by over twenty Brookings scholars. We have divided these memos into three sections. The introduction offers an overall perspective on the current state of the India-U.S. relationship. The next section presents “scene-setter” memos that offer glimpses of some crucial geopolitical and geoeconomic issues, their inclusion reflecting the fact that each country's perceptions and actions vis-à-vis these subjects will have implications for the other, as well as for the India-U.S. relationship. The third section covers a range of issues on which India and the U.S. are or need to be cooperating, including in the foreign, security, economic, energy, urban and social policy realms.

This briefing book is a follow-up to *The Modi-Obama Summit: A Leadership Moment for India and the United States*, which the Brookings India Initiative published for the first Modi-Obama summit in September 2014.

Brookings does not take institutional positions on policy issues and each memo in this policy brief solely reflects the views of the Brookings scholar(s) who authored it.

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Introduction: Building Up the India-U.S. Relationship

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When Prime Minister Narendra Modi and President Barack Obama met for their first summit in September 2014 in Washington DC, they had a crowded and diverse agenda ranging from terrorism to trade and a spate of other issues. This reflected the sheer breadth of the India-U.S. relationship, but the agenda also included many issues – such as the stalled civil nuclear deal – that remain unresolved and have become symptomatic of the drift in the relationship. And the shadow of the past threatened to cloud the prospects for the future.

The Modi-Obama Summit: A Leadership Moment for India and the United States, a briefing book with memos by our Brookings colleagues in New Delhi and Washington, issued on the eve of the first summit, highlighted some of the challenges and opportunities for both leaders and offered ways to move forward on a number of issues facing both countries.

Both leaders did seize the leadership moment that the first summit provided to give momentum and outline the future contours of the India-U.S. relationship. This was apparent in their joint *Washington Post* op-ed, “A Renewed U.S.-India Partnership for the 21st Century,” a vision statement and the ambitious joint declaration, which called for consultations on global and regional issues, as well as a bilateral focus on economic growth, energy and climate change, defense and homeland security, and high technology, space and health cooperation.

The New Delhi summit – their second in less than six months – is an ideal opportunity to build on that joint vision.

The India-U.S. relationship is evolving against the backdrop of growing global disorder. A recalcitrant Russia, a resurgent China and a fragile and vulnerable Afghanistan pose challenges to both India and the United States. Additionally a series of ‘black swan’ events – from the dramatic and brutal rise of Islamic State, to the precipitous fall in oil prices, and the inability to curtail the Ebola outbreak – revealed how ill prepared nations, including India and the United States, are to deal with them.

With the upheaval wrought by state and non-state actors to its west and inter-state tensions to its east, India sits at the epicenter of the unfolding geopolitical uncertainty; New Delhi might have no choice but to help manage the chaos and restore order regionally and globally for its own interest. There is growing recognition in the Modi government that the United States is probably the best partner to address these challenges and help India’s rise—despite the differences that persist between the two countries and the questions about reliability. The Obama administration, on its part, has repeatedly stated that even if India and the United States will not always be on the same page, India’s rise is in U.S. interest—not least because a strong, prosperous, inclusive India could help manage global and regional disorder.

Even before the second summit, a spate of high-level visits and consultations on trade disputes, intellectual property rights, defense cooperation, civil nuclear cooperation, clean energy and climate change, and infrastructure investment indicated the serious efforts that have been ongoing to clear the backlog of hurdles and pave the way for enhanced cooperation in the future. However, given the sheer complexity of some of these issues, coupled with the lack of trust between the two bureaucracies and the entrenched interests on both sides, it is unlikely that all of them will be resolved by the summit.

Nonetheless, it would be crucial for President Obama and Prime Minister Modi to ensure that despite this the relationship continues to deepen and widen.

This briefing book analyses some crucial geopolitical and geoeconomic issues that directly affect India and the U.S., as well as their relationship with each other. Additional memos examine the progress made in implementing elements in the joint declaration and focus on a range of issues on which India and the U.S. are or need to be cooperating, including in the foreign, security, economic, energy, urban and social policy realms.

However, a successful summit is only as good as the ability to deliver on the promises made. Here, both Prime Minister Modi and President Obama face challenges in their ability to deliver on potential summit commitments.



GEOPOLITICS AND GEOECONOMICS

India and its South Asian Neighbors: Where does the U.S. fit in?

TERESITA C. SCHAFFER

In seven months in office, Prime Minister Narendra Modi has established himself as a decisive player in his immediate region, willing to turn on the charm but determined to maintain India's primacy. His summits with the United States, Russia and the large East Asian powers have had a pronounced economic flavor, and Modi is encouraging these countries to compete with one another for India's favor. He has made himself the central personality in all these relationships.

The joint statement Modi and President Barack Obama released in Washington in September 2014 to serve as their agenda omits controversial issues that have driven U.S.-India relations for decades. Not a word about Pakistan; relatively few positive words on Afghanistan. These subjects, however, profoundly affect the international and regional context within which the two leaders are working to find the "sweet spot" in India-U.S. relations. The sharp deterioration in India-Pakistan ties since Modi visited Washington and the ongoing U.S. drawdown from Afghanistan complicates this task.

Like earlier Indian leaders, Modi sees no role for the United States in India-Pakistan relations, least of all on Kashmir. He considers Washington insufficiently sensitive to Indian concerns in Afghanistan. Obama's Republic Day visit is an opportunity to put the challenges posed by Pakistan and Afghanistan into the larger picture of India's regional and global leadership, and to reflect together on how India and the United States

can pursue the interests they share. This should extend as well to the rest of South Asia, where India and the United States should have an easier time developing common ground.

INDIA-PAKISTAN RELATIONS: FROM SLOW-MOVING TO BRITTLE

India-Pakistan relations have deteriorated dangerously since mid-summer 2014, the result of both the Modi government's policy and internal Pakistani politics. Frequent firing across the Line of Control and the international border between the two countries has largely erased a cease-fire that had held quite well for ten years. One compilation concluded that cease-fire violations were up 57 percent between January and November 2014 over the preceding year, and the most seriously affected sector of the border registered a 167 percent increase.

The Modi government's abrupt decision on August 19 to cancel talks between the Indian and Pakistani foreign secretaries played into this worsening situation. India's move was a response to Pakistan's decision to talk to Kashmiri separatists before the India-Pakistan meeting – as it had done before virtually every India-Pakistan negotiating session for years. Cancelling what Pakistan saw as routine talks reinforced its misgivings about the Modi government's intentions, largely wiping out the benefits from Modi's inaugural charm offensive.

Worst of all, in many ways, was the political confrontation that boiled over in Pakistan starting in mid-August. Pakistan's cricket-hero-turned-politician, Imran Khan, teamed up with a Canada-based cleric, Tahir-ul-Qadri, to stage a massive sit-in in the heart of official Islamabad alleging large-scale rigging of the elections over a year earlier. For weeks streets were blocked by containers and the protests were uninterrupted by the army (which had been asked to take over law and order in the capital). The sit-ins gradually fizzled, only to be revived in early December by a series of city-specific demonstrations. These in turn lost steam following the devastating Taliban attack on an army school in Peshawar on December 16 that killed 134 students. Prime Minister Nawaz Sharif remains in place, but much weakened; Imran Khan alternates between seeking talks with the government and planning new protests. The army, though not currently interested in taking power, is calling the tune on foreign and security policy.

Serious India-Pakistan progress requires strong governments in both Delhi and Islamabad. Pakistan's upheaval puts that virtually out of reach for now. The India-Pakistan trade opening initiative, once tantalizingly close, has all but disappeared from public discourse. The Modi government is strong and popular, though it faces a challenge from the upper house of parliament, which it does not control. Its decision to cancel the foreign secretary talks suggests that it expects to negotiate with Pakistan by levying demands rather than working out mutually agreeable terms. Even a more forthcoming approach, however, would get nowhere with a Pakistan government in such disarray.

AFGHANISTAN: AFTER THE U.S. DRAWDOWN

In their joint statement, Modi and Obama agreed on the importance of a sustainable political order in Afghanistan and promised to continue close consultations on Afghanistan's future. That is the easy part. Afghanistan's future will be a huge worry for both.

For the United States, the Bilateral Security Agreement signed on September 30 and handing over command on December 28 set the structure of its future presence. However, the fusion government that followed the months-long 2014 election took months to nominate a cabinet, and its members have not yet been confirmed by parliament. Its two principal figures, former political opponents, distrust one another. They lack a common approach to the Taliban – assuming that there are Taliban figures interested in working with them and capable of delivering their followers. The Afghan army gets reasonably good marks for combat performance, but is deficient in logistics and airlift, and the best means of providing U.S. support without a combat presence is still being worked out.

India's big concerns are whether Afghanistan can control the Taliban and what role Pakistan will play. Their nightmare is that Pakistan will facilitate the movement of an ever-larger array of terrorists bent on attacking India (as was the case the last time the Taliban controlled Afghanistan).

THE INDIAN OCEAN REGION:

India and the United States have a good track record of consultation on the Indian Ocean, and their common views figured in the September joint statement. The two navies have worked closely together. As China's presence becomes more prominent, the India-U.S. bond is likely to strengthen.

In Bangladesh, the two countries took very different approaches to the troubled election a year ago. India, concerned primarily about the opposition party's ties to Islamic fundamentalists, overtly supported Shaikh Hasina, who won a huge parliamentary majority in an election that her opponents boycotted. The United States initially distanced itself from Shaikh Hasina, to her dismay; it has since backed away from its call for new elections.

In Sri Lanka, Sirisena Maithripala's stunning electoral victory offers an opportunity to both countries to turn

around relationships that have shifted in unproductive directions. The task may be easier for India, where alarm bells went off when Chinese submarines called in Colombo in November 2014. For the United States the big issue had been the strong U.S. push for accountability for events at the end of Sri Lanka's long civil war in 2009, which the defeated Rajapaksa government vehemently opposed. From Washington's perspective a successful Indian "reset" will be good for Indian Ocean region stability and may help the U.S. improve at least the tone of its relationship with Colombo as well.

WHAT SCOPE FOR COOPERATION?

The omission of Pakistan from the Modi-Obama joint statement was not an accident. Indian leaders have chafed for decades at the very idea of an outsider having a role in its most painful bilateral relationship; Modi has strong views on the subject. This applies especially to Washington, with its sixty-year-old security relationship with Islamabad.

However, India and the United States share important interests in Pakistan and in Afghanistan. For both, the erosion of the Pakistan government's authority and ability to keep order is deeply troublesome. The army's decision to go into North Waziristan was well received in Washington, but for both the U.S. and India, its expanding role in governance poses problems. Both have a strong stake in the vigor and longevity of the anti-terrorism initiative on which the civilian government and the army now seem to agree. For both, chaos in Afghanistan has dangerous implications. And for both the political health of countries near the Indian Ocean, including Bangladesh and Sri Lanka, is of strategic importance.

President Obama's agenda includes plenty of issues where he will be advocating specific Indian actions. On these regional problems, however, a less prescriptive approach will be more productive. Obama should put these problems into the context of India's regional and global leadership. Maintaining and demonstrating India's primacy in South Asia and the Indian Ocean is perhaps the single most consistent master-theme in the foreign policy of independent India – and indeed it has its roots in the security policy of the British raj. This determination is close to Modi's heart.

Obama should draw out Prime Minister Modi's views on how India wants to use its leadership position: where trends in the region are likely to lead, how India can influence its closest neighbors in ways that advance the security interests India shares with the United States. On Pakistan and Afghanistan, the key is candor – and listening to India's views before offering U.S. suggestions. India's role as regional leader also provides the best frame for the two leaders' discussions on the larger region, and a "listening first" strategy may elicit ways that they can take advantage of the opportunity presented by the new Sri Lankan government.

Surprisingly, given India's commitment to regional pre-eminence, it has not always had clear answers to these questions – which makes it important to ask them. This type of dialogue can start to change the dynamic of how the United States and India address issues they have historically found awkward. It may also lead toward more concrete forms of cooperation that may mesh better with India's ambitions and capabilities.

Risky Business: The U.S. Turns Back to the Middle East

TAMARA COFMAN WITTES

Despite President Barack Obama's longstanding intention and preference, and despite the deep reluctance and war-weariness of the American public, he reversed his effort to "rebalance" America's foreign policy focus away from the Middle East, and in 2014 re-committed American blood and treasure to fight violent extremism in the heart of the Arab world. This reversal, barely two years after the United States had withdrawn its last soldiers from Iraq, was driven by a recognition that the spillover from the ongoing Syrian civil war could no longer be contained, and by the horrific video-broadcasts of the beheading of two American civilians by the so-called Islamic State group. But Obama's new commitment to the Middle East is fraught with uncertainties that are already provoking anxiety, both in the United States and in the region itself.

The first uncertainty is whether the military commitment of the cobbled together coalition, which includes the Arab Gulf states and Jordan along with France, the United Kingdom, Canada, Australia, and a number of European states, is sufficient to achieve the goals President Obama laid out in September 2014 – to degrade, defeat, and ultimately destroy the movement dubbed the Islamic State of Iraq and Syria, or ISIS. The United States has already sent more military advisers than initially planned to support a decimated and demoralized Iraqi army; U.S. officials also express doubts that sufficient "moderate" Syrian opposition forces can be trained and be fielded within the next year to help turn

the tide on that front. Given these limitations, do the U.S.-led coalition partners face a slippery slope toward putting their own troops on the ground? A recent poll by Brookings scholar Shibley Telhami suggests that the American people would not support this path.

A second uncertainty is whether, even if the military campaign succeeds, the necessary politics and diplomacy efforts will follow to restore stability in these two broken states. If Arabs and Kurds, with U.S. air support, successfully push back ISIS in Iraq, can Iraq's distrustful ethnic and sectarian groups work together well enough to keep the country in one piece? Prime Minister Haydar al-Abadi has introduced a National Guard proposal to the Iraqi parliament, but it is stalled. The majority Shi'a politicians are holding it up, but Sunni groups, fearing the resurgence of Shi'a militias, see the National Guard as a prerequisite for them to remain part of a Shi'a-dominated Iraqi state. Likewise, even if a moderate Syrian opposition successfully challenge both ISIS and the Bashar al-Assad regime in the bloody Syrian civil war, there's still little reason to believe that Iran and Russia would end their support for Assad, that Assad would agree to join a peace process that promises to end his reign in Damascus, or that Syria's fractious opposition factions could negotiate as a unit to achieve that goal.

The third uncertain component to the current environment is the recent horrific attacks in Paris, Nigeria and Yemen, which are a reminder that ISIS is only one di-

mension of a global threat from Islamist extremism. Indeed, while President Obama was persuaded that ISIS presented a sufficient threat to U.S. interests to justify a sustained military response, ISIS is only a symptom of the underlying breakdown in regional order. The upheaval in the Middle East has likewise generated newly assertive regional powers like Turkey, new opportunities for longstanding troublemakers like Iran, and bitter disputes amongst Arab states like Qatar and its Gulf neighbors.

And, of course, this disorder is itself the product of the long-gestating pressures that generated the Arab Spring – the rise of a massive, educated, but largely unemployed generation of youth whose expectations for themselves and their societies far exceeded the real opportunities they could obtain given the arbitrary, repressive, and kleptocratic leaderships that characterized the pre-revolutionary Arab state system. This generation, and its frustrations with existing political and social structures, remain. While Iraq and Syria may dominate the news, efforts to marginalize extremist movements like ISIS also demand and draw attention to other weak and failing states in the Arab world, to ungoverned spaces like the Sinai, the Sahara, and parts of the Horn of Africa, and to the need for more effective, responsive institutions of governance across the region.

Finally, the questions facing the reinvigorated American struggle against terrorism are not disconnected from other important dimensions of U.S. policy in the region – particularly the effort to prevent Iran from ac-

quiring nuclear weapons and the attempt to mitigate, if not resolve, the Israeli-Palestinian conflict. Does the regional disorder mean that these ongoing confrontations should be of lower priority for outside powers, such as the U.S. and India? Clearly, they still matter, but perhaps less for their own sakes than as catalysts for broader violence, or arenas in which the larger regional struggle for power plays out. Thus, existing conflict zones around Israel – Gaza, Lebanon, Sinai – are likely to become hotter to the extent that they become proxy battles amongst regional actors with different visions for the regional order they seek to create. In January 2015, twin suicide bombings in Tripoli, Lebanon claimed by Al Qaeda's Nusra Front underscored this point, while Egypt razed one of its own towns on the border with Gaza to try and weaken Hamas and contain the militant presence there. Likewise, America's regional partners watch warily as President Obama continues to pursue a nuclear deal with Iran and carefully suggests that such a deal could unlock Iran's reintegration into regional and international frameworks – a view that seems to underappreciate Iran's destabilizing behavior in Lebanon, Syria, Iraq, and Yemen, or its continued sponsorship of international terrorism. Given all these uncertainties, it's unsurprising that America's Middle Eastern allies, although reassured by Obama's anti-ISIS campaign, are already feeling anxious about the depth of Washington's commitment to their concerns, and about how they might restore regional stability without the heavy hand of a global hegemon. Settle in for a long and bumpy ride.

The U.S.-India Relationship and China

TANVI MADAN

The People's Republic of China has shaped the U.S.-India relationship since it came into existence in 1949. Fifty five years ago, for example, a senator from Massachusetts argued that there was a “struggle between India and China for the economic and political leadership of the East, for the respect of all Asia, for the opportunity to demonstrate whose way of life is the better.” He asserted that it was crucial that the U.S. help India win that contest with China. A few months later, that senator would be elected president. The man he defeated, Richard Nixon, had earlier also highlighted the importance of the U.S. helping India to succeed in the competition between the “two great peoples in Asia.” This objective was made explicit in Eisenhower and Kennedy administration documents, which stated that it was in American national interest to strengthen India—even if that country wasn't always on the same page as the U.S.

Today, both India and the U.S. have relationships with China that have elements of cooperation, competition and, potentially, conflict—though in different degrees. Each country has a blended approach of engaging China, while preparing for a turn for the worse in Chinese behavior. Each sees a role for the other in its China strategy. Each thinks a good relationship with the other sends a signal to China, but neither wants to provoke Beijing or be forced to choose between the other and China.

Each also recognizes that China—especially uncertainty about its behavior—is partly what is driving the India-U.S. partnership. Arguably, there have been three imperatives in the U.S. for a more robust relationship with India and for supporting its rise: strategic interest, especially in the context of the rise of China; economic interest; and shared democratic values. Indian policymakers recognize that American concerns about the nature of China's rise are responsible for some of the interest in India. New Delhi's own China strategy involves strengthening India both security-wise and economically (internal balancing) and building a range of partnerships (external balancing)—and it envisions a key role for the U.S. in both. Some Indian policymakers highlight another benefit of the U.S. relationship: Beijing takes Delhi more seriously because Washington does.

But India and the U.S. also have concerns about the other when it comes to China. Both sides remain uncertain about the other's willingness and capacity to play a role in the Asia-Pacific.

Additionally, Indian policymakers worry both about a China-U.S. condominium (or G-2) and a China-U.S. crisis or conflict. There is concern about the reliability of the U.S., with the sense that the U.S. will end up choosing China because of the more interdependent Sino-American economic relationship and/or leave India in the lurch.

Some in the U.S. also have reliability concerns about India. They question whether the quest for “strategic autonomy” will allow India to develop a truly strategic partnership with the U.S. There are also worries about the gap between Indian potential and performance. Part of the rationale for supporting India’s rise is to help demonstrate that democracy and development aren’t mutually exclusive. Without delivery, however, this rationale—and India’s importance—fades away.

As things stand, neither India nor the U.S. is interested in the other’s relationship with China being too hot or too cold—the Goldilocks view. For New Delhi, a too-cosy Sino-U.S. relationship is seen as freezing India out and impinging on its interests. It would also eliminate one of Washington’s rationales for a stronger relationship with India. A China-U.S. crisis or conflict, on the other hand, is seen as potentially destabilizing the region and forcing India to choose between the two countries. From the U.S. perspective, any deterioration in Sino-Indian relations might create instability in the region and perhaps force it to choose sides. Too much Sino-Indian bonhomie, on the other hand, would potentially create complications for the U.S. in the bilateral, regional and multilateral spheres.

However, both India and the U.S. do share an interest in managing China’s rise. Neither would like to see what some have outlined as President Xi Jinping’s vision of Asia, with a dominant China and the U.S. playing a minimal role. India and the U.S. recognize that China will play a crucial role in Asia—it is the nature of that role that concerns both countries. Their anxiety has been more evident since 2009, leading the two sides to discuss China—and the Asia-Pacific broadly—more willingly. They have an East Asia dialogue in place. There is also a trilateral dialogue with Japan and talk of upgrading it to ministerial level and including Japan on a more regular basis in India-U.S. maritime exercises.

The Obama administration has also repeatedly stated that it sees India as part of its “rebalance” strategy. In November 2014, President Obama, speaking in Aus-

tralia, stressed that the U.S. “support[ed] a greater role in the Asia Pacific for India.” The Modi government, in turn, has made the region a foreign policy priority. Prime Minister Modi has implicitly criticized Chinese behavior in the region (and potentially in the Indian Ocean), with his admonition about countries with “expansionist mindsets” that encroach on others’ lands and seas. In a departure from its predecessor, his government has shown a willingness to express its support for freedom of navigation in the South China Sea in joint statements with Vietnam and the U.S. In an op-ed, the prime minister also stated that the India-U.S. partnership “will be of great value in advancing peace, security and stability in the Asia and Pacific regions...” and, in September, President Obama and he “reaffirm[ed] their shared interest in preserving regional peace and stability, which are critical to the Asia Pacific region’s continued prosperity.”

RECOMMENDATIONS

- India and the U.S. should continue to strengthen their broader relationship (and each other); this will, in and of itself, shape China’s perception and options. But they should also continue to engage with Beijing—this can benefit all three countries and demonstrate the advantages of cooperation.
- The two countries should continue their consultations on China. The need to balance the imperatives of signaling Beijing, while not provoking it might mean that publicly India and the U.S. continue to couch these official discussions in terms of the Asia-Pacific (or sometimes the Indo-Pacific), but privately the dialogue needs to be more explicit. Both countries’ regional strategies aren’t all about China, but it features significantly—a fact that needs to be acknowledged.

This dialogue should be consistent and not contingent on Chinese behavior during a given quarter. It should perhaps include contingency planning. It might also be worth expanding or upgrading this dialogue beyond the foreign policy bureaucracies. In addition, there should be consideration of bringing in other like-minded

countries, like Australia and Japan. Furthermore, the two countries can also consult on the sidelines of—or prior to—regional summits.

- The U.S. should continue to support the development of India's relationships with its allies and countries in Southeast Asia. But while nudging and, to some extent participating in, the development of these ties, Washington should let them take shape organically. Relationships driven by—and seen as driven by—Delhi and Tokyo or Delhi and Canberra will be far more sustainable over the long term rather than partnerships perceived as driven by the U.S.
- New Delhi, in turn, has to show that it can walk the talk and follow through on its “Act East” policy—deepening both strategic and economic cooperation with the region. It will also need to move beyond its traditional aversion to all external powers' activity in South Asia and consider working with the U.S. on shaping the strategic and economic options available to India's neighbors (whose relations with China have expanded).
- There can be learning about China, including its domestic dynamics and actors, as well as perceptions and policies about it in the other country—and not just on the part of the governments. To the extent that competitive instincts will allow, the American and Indian

private sectors, for example, can discuss doing business in China, perhaps learning from each other's experiences. Or they can do this in the context of a Track-II India-U.S. dialogue about China that involves other stakeholders.

- There should also be consideration of an official China-India-U.S. trilateral dialogue, which could serve at least two purposes: provide a platform to discuss issues of common concern and show Beijing that India and the U.S. aren't interested in excluding it if it is willing to be part of the solution. It can also help allay Indian concerns about being left out of a “new kind of major power relationship” between the other two countries.

When it comes to China, however, India and the U.S. must have realistic expectations about the other. Every decision each country makes vis-à-vis China should not be seen as a zero-sum game. India shouldn't expect to be treated as an ally (with all the assurances that come with that) if it isn't one. And the U.S. has to recognize that India is likely to maintain other partnerships in its attempt to balance China—including one with Russia—that Washington might not like. Finally, it is important for policymakers and analysts in both countries to keep in mind that an India-U.S. strategic partnership solely based on China is neither desirable nor sustainable.

China's Economic Challenges: Implications for India & the U.S.

DAVID DOLLAR

China is undergoing a difficult structural adjustment in which it is trying to transform its growth model. China has grown well for three decades based on exports and investment. But this model naturally runs out of steam over time. Now that China is the largest exporter in the world, it is difficult for its exports to grow faster than the world market. Its investment rate has risen steadily, reaching nearly 50 per cent of the economy. The problem with investing at that rate is that excess capacity starts appearing throughout the economy. Such excess capacity is now visible in housing, heavy industry, and local government infrastructure. China has not just empty apartment buildings but whole empty cities. Heavy industrial sectors such as steel and cement operate at about half of their capacity. And the over-building of infrastructure is evident in the rapid run-up of local government debt that finances it. The Communist Party leadership recognizes the problem and in its Third Plenum resolution in November 2013, it set out the general outlines of a plan to rein in wasteful investment. As the investment rate comes down, China can continue to grow well (in the 6 to 7 per cent range) but it needs more productivity and innovation on the supply side and more household income and domestic consumption on the demand side.

Some of the key reforms that would assist in this transformation are: (1) relaxation of the hukou registration system that restricts mobility, especially of families moving from the countryside to cities; (2) financial liberalization so that market-determined interest rates

provide household savers a decent return and the cost of capital to firms and local governments is raised; (3) a market-determined exchange rate to strengthen incentives to produce for the domestic market; and (4) liberalization of service sectors, currently dominated by state enterprises and closed to foreign trade and investment. Of the Group of Twenty (G20) countries, China is the most closed to foreign investment in sectors such as financial services, telecom, logistics, and media. Other large emerging markets such as Brazil and India are much more open in these areas. Both India and the U.S. face the problem that they are relatively open to China's rapidly rising overseas investment, while China itself remains quite closed to inward investment in key sectors.

While the breadth of China's plan for reform is impressive, the old model and system have created powerful vested interests that oppose each individual reform so that implementation so far has been slow. Incumbent populations in major cities resist inflow of migrant families. State enterprises and local governments resist increases in the cost of capital that will make their debt burdens worse. Exporting firms and regions oppose exchange rate reform. And the big state-owned firms that have grown up behind protected walls in transport, finance, media, and telecom resist opening these sectors to domestic and international competition.

China's ability to successfully transform its growth model will provide benefits for the regional and global

economies. The slowdown in China's investment is already a factor in declining global prices for energy and minerals. China should continue to provide demand for energy and mineral exports, just not at the pace of the past. This lesser appetite for energy and minerals should lead to fewer price spikes for these commodities. China should become a more diversified importer. For example, 100 million Chinese traveled abroad last year, mostly to Asia. As the middle class expands, this demand for tourist services is likely to grow rapidly. What China spends abroad on tourism counts as an "import" in the balance of payments. Another positive aspect of China's transformation is that wages have been rising rapidly. As a result, China is losing its comparative advantage in the most labor-intensive manufacturing (footwear, clothing, electronic assembly) and these sectors are starting to move to lower-wage countries in South and Southeast Asia, boosting growth there. If China succeeds in raising domestic consumption, as it reins in investment, then its overall trade surplus – still large in the global context – should be stable or declining. Even so, it is likely to be a net supplier of capital to the world for some time. Hence, its interest in new institutions such as the Asian Infrastructure Investment Bank that will enable it to recycle its surpluses.

These positive developments are not inevitable. However, it is worth noting that no authoritarian country has reached high income (with the exception of the oil-rich states, which also have small populations). It is possible that China will not be able to achieve the kind of innovation-based growth it desires without political reform, and so far the new leadership has shown no interest in such reform. The new leadership has initiated a corruption crackdown on certain individuals but has shied away from systemic reforms such as asset and income disclosure, freedom of the press, and civil society activism. A China that fails in its reform will create various problems for the world economy. If investment is reined in but consumption does not rise to replace it then China's trade surplus will widen. In this case a market-determined exchange rate may well depreciate. Wage gains are likely to stagnate and China will fight to

hang onto to its share of labor-intensive sectors. With less impressive economic gains, the leadership may well turn to nationalism to maintain its legitimacy. This is already happening to some extent and has fueled Chinese adventurism in the region.

India and the U.S. have a shared interest in encouraging China to follow through on economic reform and opening up. This can be done through each country's bilateral dialogue with China, potential bilateral agreements such as the U.S.-China Bilateral Investment Treaty under negotiation, multilateral fora such as the G20 and the International Monetary Fund, and multilateral agreements such as an expanded Trans-Pacific Partnership.

Key topics for India-U.S. cooperation could include:

- China's highly restrictive regime for inward investment: both India and the U.S. are disadvantaged by a regime in which Chinese firms can freely invest abroad while China's own markets remain quite closed;
- Exchange rate management and reserve accumulation: most economists think that the Chinese exchange rate is currently close to equilibrium; however, if China's economy slows down much further there could be pressure to depreciate the currency in a way that would be destabilizing for the Asian economy; and
- Standards for the new institutions that will be funded primarily by China (Asian Infrastructure Investment Bank and perhaps the New Development Bank established by the Brazil, Russia, India, China and South Africa – BRICS – grouping). The extent to which these new institutions adhere to global norms on environmental, social, and fiduciary standards is yet to be determined. India is a member of the new institutions, and the U.S. so far is not. Still, both countries have an interest in ensuring that the new institutions have positive value added and do not undermine global standards that have been built up through decades of experience. The new institutions should complement the existing World Bank and Asian Development Bank, not seek to supplant them.

China's Domestic Dynamics: Implications for India & the U.S.

CHENG LI

China is again at crossroads in its domestic politics. After becoming party boss in 2013, President Xi Jinping surprised many people in China and around the world with his bold and vigorous anti-corruption campaign and his impressively quick consolidation of power.

Within two years, Xi's administration purged about 60 ministerial-, provincial- and senior military-level leaders on corruption charges, including ten members of the newly formed 18th Central Committee of the Chinese Communist Party (CCP). In 2013 alone the authorities handled 172,000 corruption cases and investigated 182,000 officials — the highest annual number of cases in 30 years.

In an even bolder move Xi purged three heavyweight politicians: former police czar Zhou Yongkang, who controlled the security and law enforcement apparatus for ten years; former Vice Chairman of the Central Military Commission Xu Caihou, who was in charge of military personnel affairs for a decade; and Ling Jihua, who was head of the General Office of the CCP Central Committee and oversaw all of the activities and document flow of the top leadership during the era of President Hu Jintao. These moves to clean up corruption in the party leadership have greatly bolstered public confidence and support for Xi.

Equally significant is the consolidation of Xi's personal power: he holds the top position in many leading

central groups, including important areas such as foreign affairs, financial and economic work, cyber security and information technology, and military reforms. Altogether, Xi occupies a total of 11 top posts in the country's most powerful leadership bodies.

Xi's ascent to the top leadership rung raises a critical question: will his ongoing concentration of power reverse the trend of collective leadership, which has been a defining characteristic of Chinese elite politics over the past two decades? In post-Deng China the party's top leaders, beginning with Jiang Zemin of the so-called third generation of leadership and followed by Hu Jintao of the fourth generation, were merely seen as "first among equals" in the Politburo Standing Committee (PSC), the supreme decision-making body in the country. Many observers argue that Xi's leadership — his style, decision-making process, and public outreach — represents the "reemergence of strongman politics."

But it is one thing to recognize Xi Jinping's remarkable achievements in consolidating power in just two years as the top CCP leader and quite another to conclude that he has become a paramount and charismatic leader in the manner of Mao Tse-Tung or Deng Xiaoping. The power and charisma of Mao grew out of his extraordinary leadership in revolution and war. On the other hand, despite his influence, Deng did not hold any leadership positions in the final ten years of his life except for the post of honorary chairman of the China Bridge Association. Therefore, the fact that Xi holds 11 leadership posts is not necessarily a sign of strength.

Moreover, Xi's concentration of power and strong political moves has more to do with the factional makeup of the PSC than with his authority and command. In the post-Deng era, two major political coalitions associated with former party bosses Jiang and Hu (who both still wield considerable influence) have been competing for power and influence. The former coalition was born in the Jiang era and is currently led by Xi. Its core membership consists of "princelings" — leaders born into the families of revolutionaries or other high-ranking officials. Both Jiang and Xi are princelings themselves.

The latter coalition, known as the Hu-Li camp, was previously led by Hu Jintao and is now headed by Premier Li Keqiang. Its core faction consists of leaders who advanced their political career primarily through the Chinese Communist Youth League, as did both Hu and Li. Leaders in this faction, known as *tuanpai*, usually have humble family backgrounds and leadership experience in less developed inland regions.

During the 2012 leadership transition, the Jiang-Xi camp won an overwhelming majority of seats on the PSC. It secured six of the seven spots, while only Li Keqiang now represents the Hu-Li camp on the PSC. This six-to-one ratio in favor of the Jiang-Xi camp is a very important political factor in the present-day Chinese leadership. It gives Xi tremendous power. It explains why he can implement new initiatives so quickly.

Yet, the five members of the PSC who are Xi's political allies are expected to retire, as a result of age limits, at the 19th National Party Congress in 2017. It will be very difficult, if not impossible, for the Jiang-Xi camp to maintain such an overwhelming majority in the next leadership transition because the Hu-Li protégés are far better represented in the current Central Committee — the pool from which members of the next Politburo and PSC are selected. The Hu-Li camp will not remain silent if Chinese elite politics returns to the Mao era of zero-sum games where the winner takes all. In fact, Xi's strong anti-corruption campaigns have already been widely perceived, rightly or wrongly, as being driven

primarily by factional politics; thus he has created many false friends and real enemies and an unpredictable and dangerous political situation for the country.

Though this relentless anti-corruption campaign has already changed the behavior of officials (the sale of luxurious cars and watches has dropped dramatically, for example), it risks alienating the officialdom—the very people on whom the system relies for effective functioning. Xi's actions also undermine vested interests in monopolized state-owned business sectors such as the oil industry, utilities, railways, telecommunication, and banking — the "pillar industries" of state power. As of 2015, China's flagship state-owned enterprises were required to cut the salaries of senior executives by as much as 40 percent. Meanwhile, a large scale reshuffling and retirement of senior military officers has been underway and this political move could be potentially very costly to Xi. His politically conservative approach, relying on tight political control and media censorship, has also alienated the country's intellectuals.

At the same time, Xi is very popular among three important groups in China. First, the general public applauds Xi's anti-corruption campaign, his decisive and effective leadership role, and his "Chinese dream" vision—defined as the rejuvenation of the Chinese nation and the opportunity to realize a middle-class lifestyle. Second, private entrepreneurs are beneficiaries of Xi's economic reform agenda, as he defines the private sector as the "decisive driver" of the Chinese economy. The ongoing financial reforms now give more loans to small and medium size private firms. And third, members of the military, particularly younger and lower level officers, are inspired not only by Xi's global feistiness and his nationalist spirit in confronting Japan and others but also by the new opportunities for promotion and prestige.

Apart from political elite infighting, there are many serious problems within China that could trigger a major international crisis: slowing economic growth, widespread social unrest, cyber system outage, and height-

ened Chinese nationalism particularly in the wake of escalating tensions over territorial disputes with Japan, some Southeast Asian countries and India. Taiwan's 2016 presidential election, in which the pro-independence party will likely win, might also instigate strong reactions on the mainland.

This does not necessarily mean that Xi intends to distract from domestic tensions with an international conflict; contemporary Chinese history shows that trying to distract the public from domestic problems by playing up foreign conflicts has often ended in regime change. Yet, Xi may be cornered into taking a confrontational approach in order to deflect criticism.

The broad public support that Xi has recently earned should allow him to concentrate on a domestic economic reform agenda and avoid being distracted by foreign disputes and tensions that could otherwise accompany the rise of ultra-nationalism. But one can also reasonably argue that Xi may use his political capital on foreign affairs, including a possible military conflict, which may help him build a Mao-like image and legacy.

Leaders in the United States and India should grasp the dynamics of Chinese domestic politics, especially elite cohesion and tensions. Three policy recommendations are in order. First, both the United States and India need to clarify to the Chinese public that they neither aim to contain China nor are they oblivious to China's national and historical sentiments; this will help reduce anxiety and possible hostility in their relationship with China. Second, while President Barack Obama and Prime Minister Narendra Modi should continue to cultivate personal ties with Xi, they should also develop broader contact with other prominent Chinese leaders. Enhanced contact with Chinese civilian and military policymakers can help the United States and India better understand the decision-making processes and domestic dynamics within China. Finally, a solid consensus amongst U.S. allies in the region could reassure China that the United States and India are not only firmly committed to their regional security framework in the Asia-Pacific, but that the two countries are also genuinely interested in finding a broadly acceptable agreement to the various disputes.



**INDIA-U.S.
RELATIONSHIP:
FROM PROMISE
TO PRACTICE**

Economic Ties: A Window of Opportunity for Deeper Engagement

ESWAR PRASAD

Prime Minister Narendra Modi's government has picked up the pace of domestic reforms and seems increasingly willing to engage with foreign partners of all stripes as part of its strategy to promote growth. Of these partners, the United States shares a considerable array of interests with India that provide a good foundation on which to build a strong bilateral economic relationship. The challenge remains that of framing these issues in a manner that highlights how making progress on them would be in the mutual interests of the two countries.

India's economic prospects have improved considerably since Modi took office. The economy has revived after hitting a rough patch in 2013-14, with GDP growth likely to exceed 6 percent in 2015, although the manufacturing sector continues to turn in a lackluster performance. Disciplined monetary policy has brought down inflation and the government seems committed to fiscal discipline even as revenue growth falters, while falling oil prices have helped to bring down the current account deficit. The government is moving ahead with labor market reforms, disinvestment from public sector enterprises, measures to promote financial inclusion, and reforms of the banking system. The pace and scope of reforms could certainly be improved but there is no mistaking the commitment of the government to a broad array of much-needed second generation market-oriented reforms.

Despite a weak external environment, the Indian economy seems poised to achieve higher growth in 2015

than last year. Indeed, in terms of positive growth momentum, the U.S. and India are the two bright spots among the Group of Twenty (G20) economies. This provides a propitious environment for the two countries to strengthen their bilateral economic ties.

An obvious dimension in which the two countries would benefit is providing broader access to each other's markets for both trade and finance. India is a rapidly growing market for high-technology products (and the technology itself) that the U.S. can provide while the U.S. remains the largest market in the world, including for high-end services that India is developing a comparative advantage in. Both of these dimensions of bilateral trade could fit into the rubric of Modi's "Make in India" campaign, turning that into a campaign to boost productivity in the Indian manufacturing and services sectors rather than have that slogan serve as a guise for protectionist measures that would not serve India well in the long run.

The two countries recently succeeded in negotiating an arrangement to address India's concerns about food security in the context of multilateral trade negotiations, helping to revive the stalled World Trade Organization trade facilitation agreement. This was an indication of the ability of the two sides to work together in dealing with important but complicated and contentious areas. The two countries could also work together to help India develop a property rights regime and a framework for dealing with patent issues in a way that makes progress on meeting concerns of both sides. This could serve

as a broader template for dealing with a key source of friction amongst other advanced and emerging market economies.

While India's trade regime has been liberalized considerably over the years, there are still some sectors, such as food distribution, where domestic policies related to subsidies and direct government involvement create barriers to trade. Bilateral discussions might help prod the Indian government to undertake reforms that would be good for the domestic economy, both directly and by promoting external trade and financial flows.

A bilateral investment treaty would help provide a framework for U.S. investors to share in different aspects of the Indian growth story and for Indian corporations that are eager to spread their wings into the United States. Investment barriers have been reduced on both sides, but there are still regulatory restrictions—such as the constraints on foreign direct investment in multi-brand retail in India – that could be brought down more quickly within such a framework to encourage rapid growth in bilateral investment flows. In this context, the announcement in the September 2014 joint declaration for setting up the Indo-U.S. Investment Initiative to be led by the “Ministry of Finance and the Department of Treasury, with special focus on capital market development and financing of infrastructure” is significant.

The recent approval of higher limits on foreign ownership in Indian firms, in sectors such as defense and insurance, along with broader easing of restrictions on foreign direct investment inflows, provides an excellent opportunity for U.S. investment in India. This could also provide a boost to the government's objective of reducing its share of ownership in public sector firms and financial institutions. Investment flows from the U.S. could have the twin benefits of helping the government secure a good price for its asset sales and simultaneously initiate the transfer of technology and expertise from the U.S. to India.

India needs better financial markets, including a more vibrant corporate bond market. This is an important priority for the new government, which recognizes the need to build a broader set of financing opportunities for Indian firms and entrepreneurs. U.S. investors who want to share in the India growth story would find this a suitable avenue for doing so and India would benefit from having a more stable source of long-term capital for its domestic financing needs, especially on items such as infrastructure that have a long gestation period. The U.S. could provide useful technical guidance on the soft infrastructure and regulatory frameworks that are necessary for developing a robust and stable corporate bond market.

The Reserve Bank of India has already signaled that financial development and inclusion, within the context of a strong regulatory regime, are important priorities for promoting stronger and more equitable growth in India. The government has put its weight behind the financial inclusion program, and an impressive number of Indian citizens have already signed up for bank accounts. Efficient and well-regulated financial markets that effectively channel domestic savings into productive investments are essential for India's growth and development. While the U.S. is hardly the paragon that it was once considered to be, there are still many aspects of financial market development and regulation where India has some important lessons to learn from the U.S.

India and the U.S. are natural allies but need a better foundation of trust to work together to promote their common interests, including in international forums. For its part, the U.S. must help build this trust by frontally addressing India's concerns in bilateral and multilateral discussions, and also by delivering on the Obama Administration's commitment to governance reforms that would give India and other emerging markets their due voice in international organizations and forums. The second Obama-Modi summit in January 2015 would be the logical venue to renew and operationalize these commitments.

Intellectual Property Rights: Signs of Convergence

SUBIR GOKARN

THE PRE-SUMMIT BACKDROP

Intellectual Property Rights (IPR) have been among the most contentious economic issues in the bilateral relationship between India and the United States. For several years, the U.S. has claimed that the Indian regulatory regime has been both weak and inadequately enforced. In a number of IPR domains, the contention has been that U.S. business interests are being harmed by unfair use of IPR on the part of Indian businesses. In its Special 301 Report for 2014, the Office of the United State Trade Representative (USTR) put India on its priority watch list and scheduled an Out-of-Cycle Review (OCR) for the fall of 2014.

India's position on this issue was that all IPR-related laws and regulations were entirely compliant with World Trade Organization (WTO) norms. India had taken many significant steps to amend its patent laws based on WTO norms. Consequently, the U.S. position that the regime be further changed so as to accommodate specific U.S. interests brought an unnecessary bilateral dimension to what was essentially a global rulebook, which both countries had signed on to. The OCR process was a provocation because it carried the threat of sanctions based on the recommendations of the report.

In short, the two countries went into the first summit between President Barack Obama and Prime Minister Narendra Modi in September 2014 in relatively antagonistic positions on this issue.

THE SEPTEMBER 2014 SUMMIT & AFTER

The summit clearly brought the two countries together on a whole range of issues. The joint declaration was seen as being highly co-operative and making a substantial statement on bilateral relations. It proposed concrete steps on a variety of fronts. On IPR, the declaration proposed the setting up of a high-level joint working group that would address the points of contention between the two sides. With this announcement, a potentially damaging stand-off was averted. Subsequent developments on both sides suggest that a number of convergent steps have been taken, consistent with the intent to seek co-operative rather than adversarial solutions.

On the Indian side, the Ministry of Commerce announced the setting up of a think tank on IPR issues. Chaired by a former judge, the mandate for this group was to review the entire existing framework and recommend changes that made it more relevant to the contemporary knowledge and technology context. The announcement did not specifically refer to the issues pending in the bilateral India-U.S. context. It emphasized a larger and very significant motivation: the need to stimulate and incentivize innovation in India. In effect, it opened up the question of whether the current regime was serving India's own interests; any resolution of bilateral issues through recommended changes would essentially be collateral benefits. This was an important signal that the government is open to reviewing policy

positions in an evolving economic environment. The added tangential benefit was the clear signal that the government was moving ahead in the spirit of the joint declaration. The final report of the group was expected in December 2014. However, it has not yet been made public.

On the U.S. side, the OCR was initiated in October, as per schedule. The report is not yet available on the USTR website. However, in mid-December, media reports indicated that the review had been concluded and that the broad assessment was that India had taken sufficient steps on a range of contentious issues. A report in the Business Standard of December 15, 2014 quotes the USTR report as lauding India's efforts for having a "meaningful, sustained and effective" dialogue on IPR issues. The story quoted a top U.S. official anonymously saying that the new government has taken some "baby steps towards improving the country's weak IPR laws".

An opportunity for face-to-face articulation of the post-summit positions was provided in November during the meeting of the India-U.S. Trade Policy Forum. The joint statement put out after the forum mentions co-operation on a variety of fronts - copyright issues, the leveraging of traditional medicine for affordable health care and the protection of trade secrets. It reinforces India's commitment to an innovation-friendly IPR regime and records the United States' agreement to support this process and share information. In his speech delivered at an event organized by the Federation of Indian Chambers of Commerce and Industry (FICCI) on the occasion of the Forum, Ambassador Michael Froman, USTR, also projected a positive U.S. view on India's steps towards reforming its IPR regime. He said that addressing patents, copyrights, trade secrets, piracy and so on were all critical to an effective IPR regime and that the U.S. had "great interest in the ongoing review of India's Intellectual Property Rights Policy".

ASSESSMENT AND NEXT STEPS

In sum, all the post-summit developments described above suggest that both countries have begun a process

of convergence towards some mutually acceptable middle ground. From the Indian perspective, it was important that any review of the current regime be seen as being motivated by national interests and not by pressure from the United States. This seems to have been accomplished and legitimately so. On many issues, piracy for instance, the interests of Indian producers are also adversely affected by regulatory lacunae and weak enforcement. The premise that the weaknesses in the current regime may be hindering innovation and creativity of domestic producers is entirely defensible. While audio and video piracy may be vivid examples of this, the fact is that it puts the entire range of innovative activity at risk.

From the U.S. perspective, the comments by Ambassador Froman and the stated tone of the OCR report suggest that India's efforts to initiate reforms in its IPR policy framework have significantly eased concerns. The expressions of support for the design of appropriate IPR frameworks in a range of fields, from copyright to medicine and beyond are accompanied by the recognition that knowledge and technology do have a critical role to play in inclusive growth and development. This is consistent with the larger national interest being the *raison d'être* for India's reform of its IPR regime.

All this represents a very good beginning to the resolution of the bilateral stresses on IPR issues. But, it is important to remember that it is just a beginning. To the extent that the U.S. pre-summit position was influenced by claims from several businesses that their interests were being hurt, potential frictions have not yet been completely pushed aside. Businesses will obviously respond to specific actions by the Indian government, either positively or negatively. In the latter instance, pressure on the U.S. government to curb its enthusiasm will re-emerge. By the same token, on the Indian side, any perception amongst domestic interests that the reforms being proposed are being done to satisfy U.S. demands will provoke immediate resistance and potentially thwart change, particularly if it requires legislative action.

This is the complex and uncertain backdrop to the functioning of the high level working group. To have a chance of effectiveness, it needs to base its approach on three considerations.

First, India's negotiating position must be based on a clear demonstration of protection and advancement of national interests, relating to both the innovation environment and the spread of benefits of technology.

Second, business interests on both sides need to be fully engaged in the process. They undoubtedly already are, but a continuous demonstration through the process that their interests are being helped or not being harmed will make the group's functioning that much smoother.

Third, on the larger technology for development, the principle of "eminent domain" – which essentially al-

lows the state to subordinate private property rights to the public interest in certain circumstances – must be given some space. In areas like health there is a welfare justification for making some options affordable, which would require capping the potential returns on IPR. Eminent domain is a well-established principle in U.S. jurisprudence. To the extent that it has a welfare-enhancing role in the IPR domain, the working group should explore it and seek to lay down some explicit boundaries.

To conclude, IPR is a domain that appears to have seen significant and positive movements from both India and the U.S. since the September 2014 summit. The considerations laid out above should enable the high level working group to reconcile both private and public interests in the two countries.

Strengthening India –U.S. Relations through Higher Education

SHAMIKA RAVI

Over the last decade, India has witnessed an explosion of aspiration among its large youth population and it is widely accepted that access to quality higher education – world class universities and a culture of academic excellence – is critical for social and economic upward mobility. India is, however, struggling to meet the educational expectations of its youth. College and university education remain off-limits to many talented Indian students.

Increased numbers of school graduates are opting for college education but the shortage of quality higher education institutions has led to unreasonable entrance requirements (very high cut off marks) and proliferation of dubious illegal institutions. Compared to China, access to higher education in India looks dismal. In 2000, the gross enrolment ratio in higher education was 8 percent in China and 10 percent in India (this measures the number of individuals going to college as a percentage of college-age population). In less than a decade, by 2008, Chinese higher education reforms ensured that their gross enrolment ratio rose to 23 percent while in India this rise was only marginal and the gross enrolment ratio rose to 13 percent. This reflects the extreme shortage as well as the slow pace of growth of the Indian higher education sector where India is rapidly falling behind its successful neighbor.

The United States remains the undisputed superpower in the higher education sector globally. It dominates all global rankings of universities, significantly ahead

of other countries including the United Kingdom and Germany. At the same time, not a single Indian university has featured in the top 200 lists by either the QS World University Ranking or the Times Higher Education rankings. India's best universities are Delhi, Hyderabad, Mumbai, Calcutta and Madras but none of them make it into the global rankings. The few IITs (Indian Institute of Technology) and IIMs (Indian Institute of Management) are centers of excellence in teaching but have low research productivity and are not universities.

It is estimated that today nearly 100,000 Indian students study in American Universities. These students advance innovation and research in U.S. universities and have the potential to make significant contributions when they return to India. Collaborations and partnerships between Indian and U.S. higher education institutions can produce advances in science, business, health, and agriculture among other sectors, while strengthening civil society in both countries. A natural area to strengthen India-U.S. ties, therefore, would be in the higher education sector. It makes economic and strategic sense for both India and the United States, which share common values of liberal plural democracy.

CRITICAL AREAS FOR COOPERATION

India can start by exploring ways to increase investment in the higher education sector and ensuring that the quality of curriculum and teaching is world class with an overriding objective of making higher education accessible to anyone with the talent for it.

1) **FINANCING:** This is a major bottleneck in the Indian higher education system. With pressures to cut fiscal deficits and tight central and state government budgets, there is an extreme shortage of resources that are necessary for expansion of access to higher education to all. While the Indian government has allowed foreign universities to open campuses in India, several regulatory constraints and maneuvering a cumbersome bureaucracy remain serious impediments. As a result not a single foreign university has made an independent entry into India.

2) **TEACHING QUALITY:** The quality of a higher education degree is only as good as its curriculum and the quality of the teachers. Universities are unable to compete with the rising private sector salaries and find it difficult to recruit and retain top quality teachers. This is an area where India can learn from the vast positive experience of the United States.

3) **RESEARCH:** Good quality independent research is the hallmark of any global university. It actively feeds into pedagogy through cutting edge curriculum, forms the basis for business development in the corporate sector, and can be the anchor for government policy making. Except for a handful of stand-alone research institutes, India lacks the culture of independent academic research and here again it can learn from the experience of the U.S. higher education system.

4) **GOVERNANCE:** for higher education institutions to thrive and compete globally in the three areas above, India must develop a robust governance structure for this sector. What aspects of the regulatory framework and accreditation system of the U.S. higher education sector make it flexible and innovative? This could be the most critical component where India can learn from the successes of the U.S. university system.

“CHALEIN SAATH SAATH”: STARTING WITH BABY STEPS

In September 2014, marking their first bilateral summit, Prime Minister Narendra Modi and President Barack

Obama committed themselves to a new mantra for 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, is meant to serve as a guide to boost cooperation between the two in various sectors, including higher education, over the next decade.

The U.S. Agency for International Development (USAID) is tasked with providing a range of high level analytical, diagnostic and organizational development services to support the efforts of the Ministry of Human Resource Development (MHRD) offsetting IITs. This will include faculty development, exchange programs and partnerships with leading U.S. higher education institutions. USAID is also going to boost the InSTEP project (India Support for Teacher Education Project) through three month customized training for over 100 Indian teacher-educators at Arizona State University. This would enable the teacher-educators to offer high quality training to Indian teachers back home, thereby raising the overall teaching quality.

Starting in 2012, both countries have pledged \$5 million to the 21st Century Knowledge Initiative, to support research and teaching collaboration in the fields of energy, climate change and public health. The Fulbright-Nehru program supports more than 300 scholars between the two countries. The U.S. government has re-launched the Passport to India initiative partnered with the Ohio State University. The main objective of this initiative is 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.

The U.S.-India Higher Education Dialogue creates opportunities for student mobility and faculty collaboration across the two countries. The government of India proposed several new ideas for faculty exchange through its Global Initiative of Academic Networks (GIAN) program where 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.

Given the gap between the quality of higher education in Indian institutions and the demands of the expanding job market, skilling has become a top priority for the new government. Employability is a key concern and several efforts are being made to encourage new certification programs, knowledge sharing and public-private partnerships between the two countries. There are significant potential gains to be made through the U.S. community colleges collaborating with Indian institutions to adopt models of best practices in skill development. There is an agreement between the All India Council of Technical Education and the American Association of Community College for curriculum development and adopting demands of the industry to train future workforce.

GOVERNANCE STRUCTURE OF INDIAN HIGHER EDUCATION IS KEY

Beyond the baby steps, the Indian higher education system has to prepare for a marathon, to fully meet the demands and aspirations of Indian youth. Most of the ideas highlighted for U.S.-India collaborations will re-

main token measures until the Indian higher education system undergoes a tectonic shift in governance structure. A few educational entrepreneurs might perhaps be able to realize the positive intended impact of these collaborative steps, but they are unlikely to be widespread until India brings about a change in the regulatory framework of its higher education sector.

Beyond the good intentions of the government, India has to develop an incentive structure within Indian universities that would welcome such collaborations with the U.S. universities. How can such collaborations be made sustainable, on their own account, without the government pushing it? Do the Indian universities have the flexibility to offer long-term positions to high quality foreign faculty? Would Indian universities accept course credits for students who spent semesters studying in universities that are incorporated under U.S. (foreign) regulations?

India is keen to have high quality foreign universities open campuses here, yet there is lack of clarity on whether their core product – a four-year undergraduate degree – would be recognized by the Indian higher education regulators. India needs to modernize its own higher education regulatory framework such that students and faculty can take maximum advantage from such collaborations with foreign institutions of higher learning. The overriding objective of these collaborations, from the Indian perspective, has to be to improve access to quality higher education for Indian students and to raise the research and teaching capacity of India's faculty pool.

Primary Education in India: Progress & Challenges

URVASHI SAHNI

In recent decades India has made significant progress on access to schooling and enrollment rates in primary education but dropout rates and low levels of learning remain challenges for the state and central government. As the U.S. has a longer history of public education than India, there are opportunities for India to learn from the successes and failures in the American education system and to collaborate in tackling shared challenges, such as the best use of technology in primary education.

Primary school enrollment in India has been a success story, largely due to various programs and drives to increase enrolment even in remote areas. With enrollment reaching at least 96 percent since 2009, and girls making up 56 percent of new students between 2007 and 2013, it is clear that many problems of access to schooling have been addressed. Improvements to infrastructure have been a priority to achieve this and India now has 1.4 million schools and 7.7 million teachers so that 98 percent of habitations have a primary school (class I-V) within one kilometer and 92 percent have an upper primary school (class VI-VIII) within a three-kilometer walking distance.

Despite these improvements, keeping children in school through graduation is still an issue and dropout rates continue to be high. Nationally 29 percent of children drop out before completing five years of primary school, and 43 percent before finishing upper primary school. High school completion is only 42 percent. This lands

India among the top five nations for out-of-school children of primary school age, with 1.4 million 6 to 11 year olds not attending school. In many ways schools are not equipped to handle the full population – there is a teacher shortage of 689,000 teachers in primary schools, only 53 percent of schools have functional girls' toilets and 74 percent have access to drinking water.

Additionally, the quality of learning is a major issue and reports show that children are not achieving class-appropriate learning levels. According to Pratham's Annual Status of Education 2013 report, close to 78 percent of children in Class III and about 50 percent of children in Class V cannot yet read Class II texts. Arithmetic is also a cause for concern as only 26 percent students in Class V can do a division problem. Without immediate and urgent help, these children cannot effectively progress in the education system, and so improving the quality of learning in schools is the next big challenge for both the state and central governments.

Improving learning will require attention to many things, including increasing teacher accountability. According to school visits teacher attendance is just 85 percent in primary and middle schools and raising the amount of time teachers spend on-task and increasing their responsibility for student learning also needs improvement. Part of this process requires better assessments at each grade level and more efficient monitoring and support systems. Overall, the public school system also needs a better general management system.

India also faces many challenges that could be tackled through the education system. For one, gender issues have come to the fore because of the spate of recent cases of violence against girls. Changing gender mindsets seems to be imperative and gender studies education is one way of doing so. Also India, along with most countries, is concerned with the future of the labor market and employability; Prime Minister Mr. Narendra Modi wants to emphasize skill development in order to make school education more practically relevant.

AREAS OF COLLABORATION

Many of India's concerns about education are shared by the U.S., such as ensuring quality, improving teacher capabilities, effective use of technology, and improving management systems. The U.S. and India can achieve better learning outcomes if they pool their experience and resources – both intellectual and economic.

LEVERAGING TECHNOLOGY: Both the U.S. and India are looking for solutions to provide high-quality learning opportunities to marginalized students. Technology has a lot of potential to improve education but how it can be implemented most effectively and in the case of India, most cost-effectively, still remains a question. There are several initiatives in India, by NGOs, like the Azim Premji Foundation & Digital Studyhall, and corporations like ILFS, Educom, Intel, Medialabs, to mention just a few, in content creation, teacher training and classroom learning. So far philanthropists and incubators are the ones who have helped to identify and scale best practices. A more officially driven effort is required to evaluate digital content and even more importantly to develop cost effective methods of making these available to teachers and students in areas where resources are scarce. Prime Minister Modi has shown a keen interest in this area, mentioning the need for 'digital classrooms' several times in his speeches in India and abroad. Given the issues of scale in terms of numbers and geography, which India needs to tackle in order to reach all her children and make sure they are learning effectively, technology definitely has an important role

to play. The U.S. and India could collaborate and work to understand together how technology might be leveraged to improve student learning, teacher training, monitoring and support, management of schools and the quality of learning, especially in remote districts. The U.S. already has much experience in providing technology to schools and India could learn from its successes and failures. Furthermore, collaboration with the U.S. could help promote research in this area and build the evidence base in India.

TEACHER EDUCATION: The lack of learning in India's schools call for changes to teacher education. A collaboration between American universities' schools of education with Indian teacher training institutes could help build capacity and upgrade teacher education both in terms of curriculum and pedagogy, which is much needed in Indian teacher education institutions like the District Institutes of Education and Training. Such collaborations could be facilitated through technology, collaborative research projects, teacher exchanges, and subsidized online courses for teachers in India by universities in the United States.

BUILDING GOOD ASSESSMENT SYSTEMS: Good assessments are useful at the classroom level for teachers to gauge their students' understanding and also to inform policy. The need for regular and useful assessments in India is something that Indian departments of education are focusing on at the central and state level. The U.S. could share lessons learned on how to make assessments as effective as possible in terms of assessment design, implementation and management of data.

GENDER STUDIES EDUCATION: The state of women in India has recently drawn a lot of attention and promoting gender equality through education has an important role to play. Boys and girls should be taught to think about gender equality from an early age and the curriculum should include gender studies with appropriate teacher training. The U.S. could share its experiences of promoting gender equality through schools and help advance both action and research.

SKILLS DEVELOPMENT: As making education more practically relevant to the labor market is a priority for Prime Minister Modi, there is much India can learn from experiences in the United States. A shared agenda of helping identify and implement improved ways to develop skills and competencies even at the school level could be an important area for collaboration.

RESOURCES: Currently spending on education is low in India, and stands at 3.4 percent of the GDP. The U.S. might be able to help make it more of a priority, and nudge the government to increase spending on education.

Enhancing U.S.-India Defense Cooperation

STEPHEN COHEN & MICHAEL O'HANLON

Great powers are often characterized by a worldview that is widely shared from generation to generation—a strategic culture, and a good deal of consistency in vision and strategic priorities. The present visions of the U.S. and Indian elites go back to roughly World War II. The United States sought—in that war and in the subsequent Cold War—to create a world order in which its economic and ideological interests would be protected; this vision was implemented through a strategy of alliance, institution-building and democracy-promotion. India – which became the world’s largest democracy when it became a republic in 1950 – saw a desirable world order as one in which colonialism was rooted out and replaced by a non-aligned block that would be free of Cold War pressures, allowing India to take its proper place as one of the great civilizational powers, even if its economic and military power measured in traditional terms might not immediately rival some of the other great powers. These visions were, in their historical context, like ships that pass in the night.

The implementation of each nation’s strategy after World War II led to friction, however. In America’s case, while India was the leading recipient of U.S. foreign aid, Pakistan was built up as a bulwark against Communist expansion—and defense ties with India only complicated relations with Pakistan. For India, the Non-Aligned Movement and the Soviet connection were ways of balancing U.S. regional influence in South

Asia and obtaining an alternative source of military hardware respectively.

Except for three occasions, the relationship was generally characterized by indifference. After the 1962 India-China war military ties and intelligence cooperation expanded, culminating in considerable grant of military assistance plus sales, and plans for a U.S.-provided air defense system. This dissipated when the United States took a neutral stance during the 1965 India-Pakistan war, and trended towards hostility when Washington seemingly threatened India during the 1971 India-Pakistan war. There began a period when India became totally dependent on the Soviet Union for major weapons systems. It also initiated a nuclear weapons program in this period.

A new period of strategic engagement began after the Soviet invasion of Afghanistan and there were discussions—albeit futile—of American technology sales to India, especially the development of a light combat aircraft. Americans had serious doubts about India’s technical capabilities; India had doubts about America as a reliable source of technology (in the end both were correct). However, India’s nascent nuclear weapon program intruded and both Indian and Pakistani nuclear and space programs fell under U.S. sanctions.

The U.S.-India nuclear agreement of 2005 was the third positive milestone; it started the process of resetting the

relationship. Since then – albeit fitfully – both sides have considered the possibility of long-term defense and military ties. Their motives were not symmetrical: the United States saw India as a stabilizing power, especially to India’s north and east and south (but not yet in Afghanistan), and India saw the United States as a source of advanced technology with which to develop its domestic industry.

The Joint Statement of September 30, 2014 by President Obama and Prime Minister Modi announced another new beginning. Like earlier statements, it placed defense cooperation – embodied in the Defense Trade and Technology Initiative (DTTI) – at or near the core of the relationship.

This time, however, three developments may make the promise of a transformed defense relationship more likely to be realized.

The first development is the arrival of a new defense leadership in both Washington and New Delhi. India’s new Minister of Defense, Manohar Parrikar is a member of Modi’s party, and himself a former chief minister. He was trained as a metallurgical engineer in one of India’s prestigious technical centers, the Indian Institute of Technology, Mumbai. His future counterpart, Dr. Ashton Carter, has considerable defense expertise including on matters related to South Asia. A few years ago Carter was the lead Department of Defense official who pushed to develop defense ties between Washington and New Delhi through the DTTI. As for Parrikar, although there were discussions about privatizing the defense sector for decades, he was the first Defense Minister to actually meet with private Indian firms that were trying to produce and sell weapons.

Second, a new realism may be creeping into Indian thinking regarding its overall strategic situation. Modi has, from his first days in office, demonstrated a keen interest in defense and military policy—going to sea on a carrier, witnessing a missile launch, and reviewing the troops. The appointment of Parrikar may indicate

that he is interested in reform, not just rhetoric. The mood of “getting real” regarding defense policy may be spreading. There are now many defense correspondents, as well as a lively think tank community. In addition, India’s parliamentary Committee on Defense has detailed the shortcomings of the military acquisition process. It pointed to substantial gaps between the defense ministry’s promises and its woeful performance. To informed opinion this comes as no surprise, but it was a rare critique of the woeful Defence Research and Defence Organization (DRDO), more notable for its self-promotion than the production of weapons. As if in response, Parrikar fired DRDO’s chief.

Third, India now sees its defense relationship with the United States as providing the technology that it lacks, and that other countries cannot provide. India is routinely described as the world’s largest arms market. This is true, but there is an irony: massive purchases are primarily a function of the nation’s inability to produce quality weapons on its own, as well as the absence of a system to establish defense priorities.

The following steps leading up to and beyond the second Obama-Modi summit can strengthen U.S.-India defense ties as well as the quality of defense policy making in each state:

- 1) Secretary-Designate Carter should, in his confirmation testimony, indicate that he would be eager to support joint India-U.S. studies that would bring together parliamentary committees to examine concerns common to the two countries. Senator McCain might just agree to this on the spot.
- 2) Ashton Carter can also announce support for the exchange of defense officials and bureaucrats, including military personnel and defense scientists, and defense contracts between private Indian and American firms. While not a formal ally, this is one area where India can be treated as such.
- 3) When thinking about expanding U.S.-Indian defense trade policy makers should consider the foreign subsidiaries of U.S. defense firms. In some cases the Japanese

or European branch of an American company—with its own ties to local suppliers and governments—may be better placed to expand defense trade with India than via the America-based headquarters.

4) India and the United States should look for new defense manufacturing projects that have not been publicly discussed. Here are several of varying complexity and technological sophistication:

- Both the American and Indian armies need new rifles, the technology is available to produce a reliable, modular, and advanced system that would have more range and firepower than present systems but also be simpler.
- Another medium technology project would be to sell to India the production line of the A-10 Warthog close-support aircraft, assuming the United States makes good on the Pentagon's preference to eliminate the A-10 from its inventory in the years ahead. India lacks a modern close-support aircraft, so this could be a win-win proposition. Improving this platform – a big ticket item compared to the co-development of the Javelin anti-tank missile – would be a good test of how the United States and India can work together on developing very good, but not necessarily cutting-edge or gold-plated, technology.
- The United States could allow private firms to sell electric-launch technology to India for a new generation of small Indian aircraft carriers and other platforms.
- There may be areas where cooperation is possible in intelligence, homeland security, and count-

er-terrorism capability as well, given the two nations' common concerns in this domain.

- After decades of viewing the Indian Navy as a virtual adjunct to the Soviet Navy at times, the United States now tends to see Indian naval power as a useful regional force vis-à-vis China and others; as such, cooperation on other elements of naval power may be feasible as well.

More generally, the two nations can play for the long term. There need not be any rush; indeed, no rush is desirable at a time when Washington is trying to stabilize relations with Pakistan and China while also viewing India strategically as its closest great-power friend in that broader region. U.S. and Indian strategic interests increasingly align, and can be expected to do so into the future. They can be developed slowly, so as not to get ahead of the politics, nationalism, pride or historical baggage. But that baggage is gradually dropping away, and the future is increasingly bright.

A common strategic vision between the U.S. and India is emerging. Washington views China with suspicion, but not outright hostility, it is wary of a militarily strong but politically chaotic Pakistan, and it sees India's own development, democracy and stability as highly desirable. The two countries disagree over a number of other issues (Iran, global warming, technology protection) and in various international fora, but these are "normal" differences, such as the U.S. has with long-time allies. Defense ties will grow as this common vision solidifies, and these will help dispel the misperceptions that developed over sixty years of mutual strategic irrelevance.

Strengthening Counter Terrorism Cooperation Against Growing Turmoil

BRUCE RIEDEL

President Barack Obama's Republic Day visit to India in January 2015, an unprecedented second trip in one presidency, comes as the terrorist threat in the subcontinent is evolving and there is growing turmoil particularly in Afghanistan and Pakistan. Multiple massacres in Pakistan and the transition in Afghanistan are challenging the counter terrorism infrastructures built over the last couple of decades. It is a fluid situation that Obama and Prime Minister Narendra Modi need to compare notes on and develop joint strategies.

Pakistan has long been both a sponsor of terrorism and a victim of terrorism but the balance seems to be shifting toward victimhood. Pakistan still sponsors the most dangerous terror group in South Asia, Lashkar e Tayyiba (LeT), which in May 2014 tried to disrupt Modi's inauguration by attacking the Indian consulate in Herat, Afghanistan just hours before his swearing-in ceremony. The Pakistani intelligence service, the Inter Services Intelligence (ISI) Directorate, continues to provide support to LeT and its leader Hafez Saeed lives freely in Lahore, Pakistan, with the ISI's protection. The ISI also remains the primary patron of the Afghan Taliban in its war with the North Atlantic Treaty Organization-led International Security Assistance Force.

But Pakistan has been shaken profoundly by a series of mass casualty terror attacks on its own citizens. On November 2, 2014 a suicide bomber killed 60 Pakistanis attending the regular evening ceremony at the Wagah border crossing with India. The Tehrik-i-Taliban Pakistan (TTP) claimed responsibility and said it was in retaliation for the army's Zarb e Azb counter terrorist operation in North Waziristan.

On December 16, 2014 seven members of the TTP attacked an army run school in Peshawar and killed 145 people including 132 school children. The attack prompted an unprecedented public outcry for the government and army to take concerted action to defeat the Taliban and to stop all terror attacks in the country. Not since the assassination of Benazir Bhutto in December 2007 has there been such a public outcry against terrorism. Prime Minister Nawaz Sharif and Chief of Army Staff (COAS) General Raheel Sharif promised collective action to destroy the Taliban and the army said it would no longer differentiate between good Taliban from bad Taliban. (In the past ISI considered good Taliban those that attacked NATO and Afghan government forces and bad Taliban were those that attacked Pakistan.)

Even al Qaeda's new franchise in the Indian subcontinent distanced itself from the school massacre saying, "our hearts are bursting with pain," and urging its Taliban allies to target soldiers in the future. Hafez Saeed took the tack of blaming India for the attack, claiming it was a conspiracy orchestrated by Modi and vowing revenge on India. Former dictator Pervez Musharraf also blamed India and Afghanistan for supporting the TTP.

It remains to be seen whether the Peshawar massacre and other atrocities will actually change the army's behavior toward terrorism. It is more likely than not that the ISI and the COAS will remain patrons of some terror groups for the foreseeable future even as they fight others. The civilian politicians may be more determined to end Pakistan's double policy but they have consistently failed to do so in the last decade.

The ISI is particularly determined to see if its Afghan proxies, the Quetta Shura and the Haqqani network, can exploit the end of NATO's combat presence in Afghanistan to gain control of significant parts of the country. Mullah Omar, the Taliban leader who is widely believed to be based in Karachi, has shown no interest in a political settlement and seems determined to try to resurrect his Islamic Emirate.

Two new players in the terror game emerged in 2014 with implications for India and the U.S. First is the al Qaeda franchise for the Indian subcontinent. Al Qaeda's leader Ayman Zawahiri announced its formation and declared war against India, Pakistan, Bangladesh, Burma and Afghanistan. His pronouncement was immediately followed by an attempt to hijack a Pakistani frigate with the intention of using it to attack U.S. Navy ships in the Arabian Sea. The plot included an unknown number of Pakistani naval officers recruited to help al Qaeda. Zawahiri remains hidden somewhere in Pakistan and continues to give lengthy audio messages to his followers.

The other newcomer is the Islamic State (IS), the heir to al Qaeda in Iraq, which proclaimed the creation

of a caliphate in summer 2014. Led by Abu Bakr al Quraishi al Hashemi al Baghdadi, also known as Caliph Ibrahim, the IS has attracted fighters from across the Islamic world to come and join it in Iraq and Syria. Several Indian Muslims have joined the IS and pro-IS propaganda has been distributed in India and Pakistan. Parts of the TTP have voiced support for Baghdadi. Al Qaeda has denounced the caliphate as illegitimate and renounced any connection to Baghdadi and his group. Zawahiri and Baghdadi are rivals for leadership of the global jihad and competing for the loyalty of jihadists around the world, including in South Asia.

Against this unfolding transition and turmoil Obama and Modi should reaffirm their commitment to closer counter terrorism and intelligence cooperation. Much has improved since 2008 when the U.S. and United Kingdom had intelligence on the Mumbai plot but failed to share it with India and failed to analyze it properly themselves. LeT is now a priority for both Washington and London. There is little evidence however in the public domain that any new substantial progress has occurred since Modi's September visit. Certainly none of the safe havens for terrorists in Pakistan have been dismantled. The two sides should provide a read out during the January visit on what has been accomplished in fulfilling the promises of the September 2014 joint statement. Obama should send his Central Intelligence Agency director to New Delhi to further improve cooperation, just as he did after the confirmation of Leon Panetta as director of the Agency in his first term.

Obama and Modi should also upgrade efforts to stabilize Afghanistan after the withdrawal of most NATO forces. Some limited steps have been done in the past in police training but more is necessary. India should consider sending military field hospitals and personnel to help the Afghan Army as it did in the Korean War in the 1950s to support the United Nations forces. It should also help train and equip the Afghan air force, an area that NATO has been remiss in addressing robustly. Obama should rescind his decision to withdraw all U.S. forces by 2017 and commit to a long-term advisory role.

Pakistan remains the heart of the issue. The U.S. just hosted a visit by COAS General Sharif and Indians will be interested in hearing American impressions of him (expect some cynicism about his commitment to fight terror, especially LeT). Obama and Modi should compare notes on Pakistan's support for terrorism. They should also address the blow back in Pakistan to the Peshawar massacre. They should encourage a no tolerance policy by Prime Minister Sharif while recognizing his limitations. They should look for opportunities to encourage Pakistan to take action against all groups, especially LeT. They should make clear that any substantial improvement in ties hinges on action on LeT, while also making clear that serious action to destroy the group will get Pakistan serious dividends.

But they should also plan for the worst. Another LeT attack on India is probably only a matter of time. The interception of a boat carrying arms on New Year's Day may have been a LeT plot. An attack during the President's visit is a very real possibility. President Clinton's visit in 2000 was marred by a major LeT attack on Sikhs in Kashmir. Washington and New Delhi should have some idea of what the potential consequences of such an attack might be. This is not a matter of ganging up on Pakistan or trying to pressure it in advance, rather it is prudent crisis planning and coordination. It might be wise to involve others, like the United Kingdom, in such discussions. If all this seems too sensitive for public officials, then it can be put in the hands of think tanks and former officials to study with a mandate to report to their governments.

Time to Act on U.S.-India Energy Cooperation

CHARLES EBINGER & VIKRAM MEHTA

With Brent crude prices in the high \$40s per barrel and West Texas Instrument (WTI) prices hovering around \$47 per barrel, India's energy policy, which has not been on a sustainable basis, has been given a new lease on life presenting unique opportunities for enhanced U.S.-India bilateral cooperation during President Barack Obama's forthcoming visit. The fall in oil prices since June 2014 has been staggering. With domestic crude oil production hovering around one million barrels per day (b/d) and imports at 3.2 million b/d the plummeting price of petroleum is saving India nearly \$3 billion per month in foreign exchange. India has also saved foreign exchange from falling prices for oil indexed prices for liquefied natural gas (LNG) as well as price softness in the coal market. The government has also received a revenue boost (of about \$11 billion) from the immediate decontrol of diesel and phase out of natural gas price controls as well as lower inflationary pressures. However, there is no cause to be sanguine. Indian companies have substantial oil trading and financial interests in Venezuela, Russia, Nigeria and the Gulf all of which are at risk with low oil prices. With prices yet to touch bottom, India's entire strategic and energy trading diplomacy may have to be reassessed.

Despite the profound nature of these developments, energy challenges are not new to India. Although India accounts for 17 percent of the global population, it possesses less than one percent of the world's oil and gas reserves and only 10 percent of global coal reserves.

With energy demand projected to double in the next decade, imports could rise from 30 percent of primary energy demand today to 50 percent by 2030 making India one of the most energy import dependent economies among the major global powers. India faces additional challenges: how to meet the energy needs of an expanding middle class; provide energy to an additional 300-500 million people who have no or only limited access to modern forms of energy; and simultaneously deal with the country's rising carbon-dioxide emissions. It is for this reason that India has to act fast to develop its estimated 63 trillion cubic feet (TCF) of shale gas resources with low water-based fracking technologies as well as develop its vast biomass, wind, solar, hydro, coal and nuclear power resources while making energy efficiency and conservation the centerpieces of all its energy policies. For these opportunities to be seized, India and the U.S. must be open to a more balanced relationship with each side being candid on what it can and cannot do as well as being realistic about the time frame in which major changes can be accomplished.

ENERGY DIALOGUE: PAST COOPERATION AND NEW OPPORTUNITIES

Since May 2005, the U.S. and India have engaged in a high level dialogue to promote increased trade and investment in the energy sector. The dialogue comprises of five working groups: oil & gas, coal, power & energy efficiency, new technologies & renewable energy, and

civil nuclear co-operation. Since its formation, a new working group on sustainability has been established.

LNG

During the President's visit, India will seek special exemption to import LNG from the U.S., though it is unclear why the Indian Government believes there are any real obstacles to buying LNG today, other than a cumbersome regulatory process. To date, the U.S. Department of Energy (DOE) has approved export of LNG from seven liquefaction terminals, for exports to countries with which the U.S. does not have a free trade agreement (FTA). Two of these permits include off-take agreements with Cheniere Energy of 3.5 million metric tons and Dominion Energy of 2.3 million metric tons with the Gas Authority of India Limited (GAIL.) These terminals are expected to be complete and in a position to export cargo by late 2016/early 2017. Despite the openness of the market, there is a perception that the US has too stringent a licensing process and that India would benefit from greater US export volumes since they would be cheaper than imports from elsewhere. Nothing could be further from reality. Only market forces will determine where LNG flows.

Shale Gas

The development of shale gas has been transformative for the U.S. domestic and international gas market. Nonetheless "fracking" remains extremely controversial, especially with new developments, such as New York State recently announcing a ban on fracking throughout the state despite the fact that it has some of the most prolific reserves in the nation. As fracking has progressed, concerns over water availability and contamination have ebbed as new technologies using far less or no water at all have begun to be developed. Additionally, the U.S. has a wealth of regulatory experience at the state level which could be shared with Indian counterparts. Already Indian companies – the Indian Oil Corporation, Reliance Industries, and Oil India – have stakes in US shale gas projects having invested in commercial fracking operations in both U.S. oil and

gas fracking technology. The U.S. government could sponsor a number of visits for high level Indian officials and commercial concerns to major fracking regions and help to establish interaction with local and state regulators to learn more about this technology.

Strategic Reserves

For some years India has contemplated developing strategic reserves. While the caverns have been dug, they have not been filled. With oil prices likely to drop further in the short run, now is the time for Delhi to begin fast tracking the process of filling its reserves. The U.S. has years of managing strategic crude oil reserves and this expertise could prove invaluable to India. Likewise, if India were to join the Organisation for Economic Co-operation and Development or seek an exemption allowing it to join the International Energy Agency (IEA) – with strong support from the U.S. – it would be eligible to join the IEA oil sharing mechanism, which could prove invaluable during a supply crisis. Membership though would also obligate India to fill its reserves and potentially in a supply crisis share them with other IEA states.

Nuclear Energy

Both President Obama and Prime Minister Narendra Modi have reaffirmed their interest in the implementation of the civil nuclear agreement. The deal, negotiated some years ago, was designed to promote the sale of U.S. reactor technology and then was left to flounder over a number of critical issues. Both leaders should remove the red tape and move to implement the agreement.

Carbon Capture, Utilization And Sequestration (CCUS)

India and the U.S. have a shared interest in further developing CCUS technology to help address the air quality problems that accompany abundant fossil fuel usage. Though in recent years natural gas has become more competitive price-wise as a fuel to generate electricity

in the U.S., it is important to note that until 2035 coal is expected to remain the dominant fuel. In India coal usage will continue to grow since it is available domestically (though India does also import coal), is a cheap resource, and much of India's existing electricity generation capacity is coal based. Given these facts, it is vital that both nations find ways to accelerate R&D into CCUS technology to prove that the technology is both technologically and commercially viable in order to offset further air quality contamination.

Clean Energy

Owing to the vital importance of increasing energy access, reducing greenhouse gas emissions, and improving resilience in the face of climate change, President Obama and Prime Minister Modi agreed to a new and enhanced strategic partnership on energy security, clean energy, and climate change in the September 2014 joint statement. They have pledged to strengthen and expand the highly successful U.S.-India Partnership to Advance Clean Energy (PACE) through a series of new programs

including a new Energy Smart Cities Partnership to promote efficient urban energy infrastructure; a scaling-up of renewable energy integration into India's power grid; cooperation in upgrading India's alternative energy institutes; development of new innovation centers and a host of other energy efficiency programs. Expansion of this program could yield benefits to both countries since the government of India under its Green Energy Mission has made solar and wind power development key priorities. The challenge however will be to pick the right technologies and to define clearly the level of support that the government should provide and what incentives might be put in place for the private sector to augment the government's involvement. The U.S. has tremendous experience in the financing of green energy investments and could share these with the Indian government and Indian entrepreneurs. It is also vital to determine the multiple incentives that may be required to reach the stated objectives of the overall Green Energy Mission including the level of investment in new engines, smart and efficient infrastructure, battery storage and to develop innovative financing schemes.

Operationalizing U.S.-India Civil Nuclear Cooperation

ROBERT EINHORN & W.P.S. SIDHU

U.S.-India civil nuclear cooperation, starting with the July 18, 2005 nuclear agreement and culminating in the formal 123-agreement bill approved by the U.S. Congress on September 28, 2008, was expected not only to become a springboard for extensive bilateral nuclear cooperation, including the sale of U.S. reactors to support India's ambitious nuclear power plans, but was also expected to mark an end to decades-old strategic mistrust between the two biggest democracies. It was also expected to end India's nuclear isolation and transform the existing global nuclear order – in line with President Barack Obama's Prague agenda and the nuclear security initiative. Yet, just as that agreement on the historically and politically fraught nuclear issue was seen as opening the door to a fundamentally strengthened U.S.-India relationship, the failure so far to follow through in the civil nuclear area has come to epitomize the bogging down of efforts over the last few years to elevate overall bilateral ties to a new level.

The current impasse in nuclear energy cooperation was discussed during Prime Minister Narendra Modi's September 2014 visit to Washington. The two sides agreed to establish a Contact Group “to realize their shared goal of delivering electricity from U.S.-built nuclear power plants to India”. Under the supervision of the top leadership, the Contact Group, consisting of U.S. and Indian government officials and nuclear industry representatives, has met more than twice in preparation for President Obama's trip to New Delhi in January

2015 in an effort to clear hurdles to the building of U.S. nuclear power plants in India.

While Westinghouse and General Electric have each received India's blessing to build two nuclear power reactors at designated sites – in Mithi Virdi in Gujarat and Kovvada in Andhra Pradesh respectively – and Westinghouse and the Nuclear Power Corporation of India Limited (NPCIL) have engaged in preliminary commercial negotiations, the path ahead to constructing those reactors will remain blocked unless two difficult issues can be resolved: (1) liability for nuclear reactor accidents and (2) arrangements for tracking and accounting of U.S.-supplied nuclear materials in India.

India's Civil Liability for Nuclear Damage (CLND) Act of 2010 appears to allow lawsuits to be brought against suppliers for nuclear reactor accidents, which the U.S. Government and U.S. companies, as well as many governments and companies around the world, regard as inconsistent with existing international norms – particularly the Convention for Supplementary Compensation for Nuclear Damage – that channel liability to nuclear plant operators. Despite protests from foreign governments and reactor vendors as well as from Indian equipment suppliers, the Indian government – reflecting domestic sensitivity over the 1984 Bhopal disaster, post-Chernobyl and post-Fukushima concern, and resistance to giving in to foreign pressure – has refused to alter the liability law.

In recent months, India has explored ways to overcome the liability impasse without changing its law. One element of a solution could be the creation of an insurance pool that would indemnify suppliers against liability. India's state-run reinsurer, General Insurance Corporation (GIC) Re, is currently developing a proposal for such an insurance fund and a related risk-informed premium to which suppliers and operators would contribute. Foreign private companies have so far been non-committal about this idea and presumably would find it acceptable only if they could recoup their contribution to the fund by charging more for their reactor supplies. Indian private companies are equally circumspect about the viability of an insurance pool.

A second element of a possible solution could be an authoritative clarification of a key provision of the liability law (section 46), which the Indian government interprets as not placing suppliers in jeopardy. To alleviate suppliers' concerns, such a clarification would have to be clearly seen as not subject to challenge by Indian courts.

Perhaps more difficult than the liability issue is the question of tracking and accounting of nuclear material supplied by the United States or produced in U.S.-supplied reactors. The United States maintains that the U.S.-India civil nuclear agreement calls for an "administrative arrangement" that would provide necessary information regarding the whereabouts of those nuclear materials. Washington argues that unless it knows where the materials are located, it will not be able to exercise the consent rights or meet the physical security requirements provided for in the agreement and, as a consequence, the U.S. Nuclear Regulatory Commission will probably not be willing to issue the licenses needed to go forward with nuclear reactor sales to India. The United States points out that it has tracking and accounting arrangements with most of its nuclear cooperation partners, including Euratom and Japan.

India has been unwilling to accept such an arrangement. It argues that tracking and accounting for nu-

clear materials "by flag" (i.e., by nationality) is not required by the U.S.-India agreement. It maintains that all nuclear material subject to the U.S.-India agreement will be covered by International Atomic Energy Agency (IAEA) safeguards and that the Agency's assurance that all the material is accounted for and devoted to peaceful purposes should be sufficient for the U.S. (as it was sufficient for Canada, which initially sought the kind of arrangement that Washington wants).

India objects to the additional expense and effort that would be required to set up and implement a tracking and accounting mechanism for U.S.-flagged material. Sensitive to perceived infringements of its nuclear sovereignty, it presumably also harbors resentment toward the greater intrusiveness that the United States requires of its nuclear cooperation partners.

If the two sides want U.S. reactor projects to proceed, they will need to find a compromise on this issue, with the U.S. settling for less detailed information than it would prefer and India recognizing that greater transparency is not as onerous and is consistent with widespread international practice, including among advanced nuclear energy powers.

Resolving the liability and tracking issues would not only remove key obstacles to implementing the U.S.-India civil nuclear agreement, it would also give a boost to the overall bilateral relationship. Given the mutual suspicions that persist in the bureaucracies of both countries, it is essential that agreement be pursued at the highest levels, which is why civil nuclear cooperation will remain on the summit agenda.

However, with more expert-level preparatory work required on both liability and tracking, it will not be possible to resolve outstanding civil nuclear issues at the upcoming Obama-Modi meeting in January. Still, the leaders can expedite the process by giving their governments guidance for reaching a solution. On the liability issue, the Contact Group should be directed to develop an insurance fund acceptable to suppliers, operators,

and other key stakeholders and to come up with an authoritative clarification of India's liability law that would be seen as reliably protecting suppliers from lawsuits. On the issue of tracking and accounting, the Contact Group should be instructed to draft an administrative arrangement that would meet U.S. legal requirements without placing an undue burden on India.

A separate but politically-related issue likely to be raised at the summit is India's membership in the multilateral export control groups, especially the Nuclear Suppliers Group (NSG). Since 2010, the United States has been committed to supporting and facilitating India's membership in these groups. President Obama reaffirmed that commitment in the Joint Statement issued at the Washington summit in September 2014: "The President affirmed that India meets MTCR [Missile Technology Control Regime] requirements and is ready for membership in the NSG. He supported India's early application and eventual membership in all four regimes."

India has made good progress in harmonizing its export controls with the guidelines and control lists of the four multilateral groups. But membership in the groups requires a consensus among its members and, in the NSG in particular, there is no consensus on admitting India. The United States has urged India to play a more active diplomatic role on its own behalf in persuading hold-outs to support its candidacy, while India has pressed

Washington to pursue the kind of all-out, high-level campaign used by the Bush Administration to gain a consensus in the NSG to permit nuclear cooperation with India even though it had not joined the Nuclear Non-Proliferation Treaty.

One approach might be to seek membership in the first instance of the multilateral groups other than the NSG where there is greater consensus on India's entry. Among them the MTCR, the Wassenaar Arrangement on Export Control for Conventional Arms and Dual-Use Goods and Technologies, and the Australia Group (that aims to curb exports that might contribute to chemical and biological weapon programs) are worth pursuing. India's bid for membership of these three groups might also contribute to building consensus for its membership of the NSG.

Although neither side has directly linked the membership issue to the implementation of the U.S.-India civil nuclear agreement, it is possible that a reinvigoration of the effort to gain Indian entry into the multilateral groups could facilitate solutions to the issues impeding bilateral nuclear cooperation.

On the other hand, an all-out effort by the U.S. might be more forthcoming if New Delhi was able to show significant movement on the civil nuclear deal. That in turn would provide a much-needed fillip to the bilateral strategic relationship.

India and Climate Change: Reversing the Development- Climate Nexus

RAHUL TONGIA

After the November 2014 joint U.S.-China announcement on climate change, all eyes turned towards India. What would India do? Would it sign a similar agreement, especially with the impending visit by President Barack Obama? Even if some agreement were signed, what would India promise?

Probably one of the best outcomes of the U.S.-China announcement was a de-coupling of India and China. There is no longer (and never really was) a “Chindia”, which portions of the U.S. press periodically blamed for global woes on climate and periodic surges in commodity prices. China and India are rather different, and recognizing the differences helps understand what would make sense from India’s perspective. China has already achieved over 98 percent electrification of homes, while India has at least a third of the population remaining (let alone the shortfalls of supply, leading to almost daily outages). China has had visible air pollution, and wants to move towards green power not just due to carbon, but other pollution as well. Also, given the U.S. is already party to some targets with the U.S.-China declaration, does a second joint declaration with India make sense?

The December 2014 Lima declarations, with Intended Nationally Determined Contributions (INDC), really

gave what many developing countries like India were asking for: no top-down obligations. But the flip side is they now have to come up with their plans and commitments.

A NEW PATH FORWARD – EMITTING TO DEVELOP AND IMPROVE

Developing countries often mention historical carbon emissions of the developed world, given the cumulative nature of carbon emissions (the half-life of carbon in the atmosphere is almost a century). Thus, instead of annual emissions, some in India and other developing regions want to use cumulative emissions as a metric. Additionally, in terms of per-capita emissions, India is meaningfully lower than China and far lower than the United States.

Even assuming that India isn’t to blame for the global climate change scenario, it has a key role to play for the future. What then? India has routinely held that it cannot sacrifice its development by restrictions on energy consumption.

Here the famous Kuznet’s Curve (an upside down smiley) is relevant. It posits that as countries become richer, pollution increases, and then when they are rich enough, pollution comes down. Is it possible to

swap the axes, and thus the mindset? Instead of starting with the premise that for a country to develop it has to emit, can we reframe it that emissions will occur whether there is development or not? Then the question becomes what to do with such emissions?

Thus, for India the issue might be not just how much it emits cumulatively, but how well off its people are on a measure of human development? If India develops more, it will have a right to emit slightly more, but such development must be done with far less emissions. And if it develops less, it must emit less, else it has squandered carbon.

Of course, geographic, climate, cultural, legacy, and other differences prevent an easy comparison between countries, but each country can use such a yardstick to figure out how much is enough or required. This is where India can benefit. Given India's development is occurring well after the U.S.'s development (or even China's), as well as the cumulative nature of emissions, its relatively delayed development might be a blessing in disguise since in the future, technologies for reduced carbon emissions will be much cheaper.

INDIA'S CHOSEN ACTION PLANS, AND GLOBAL SUPPORT

India has already taken action, on its own, in addition to the required INDC calculations. These include a very, very ambitious target for renewable energy, with a ~62% compound annual growth rate for solar power, to grow to 100,000 MW by 2022. This is especially stunning given that today the total capacity is only some 250,000 MW of electricity. Second, a number of states have announced low carbon roadmaps and action plans, or at least carried out analysis.

The US can contribute by helping states with funding and building human capacity. There can be city-to-city engagements, especially to learn new ideas and best practices (e.g., Los Angeles has made dramatic strides to reduce its carbon footprint). However, there is one

difference between U.S. efforts and Indian efforts at de-carbonizing. The U.S. mostly has gradual changes or retrofits to consider, while India's population is still growing, with attendant urbanization and sectorial shifts in the economy. India thus represents a new and large market for U.S. and global technology providers. To accelerate de-carbonization, India would benefit from state-of-the-art technologies at reasonable terms.

India also needs financing support, not money per se, but cheaper financing. One reason India's renewable energy (RE) power appears more expensive than some other countries is the high cost of capital; funding for RE projects in the U.S. is often at half the rate, and Abu Dhabi has funded their projects at around a quarter of Indian rates.

Lastly, India must improve the future energy mix towards lower-carbon options. On the supply side nuclear power is an option to consider. It has already acknowledged that its domestic three-phase plan will not suffice for its energy ambitions. India is now open to global technology, fuel, and capital, but many details (especially on liability, technology transfer, and financing) need to be worked out.

On the demand side, vehicular emissions (of local air pollutants and not just carbon) are a concern for India. This is where new technologies, including for electric vehicles, will be very important. Such a focus can synergize not just development and carbon concerns, but also align with India's desire to reduce petroleum import dependencies.

ALIGNING THE DESIRABLE WITH FEASIBLE

Climate discussions are often mired in complexity if not acrimony. Negotiations are the art of balancing the feasible and the desirable. First and foremost, no targets or goals will work if they cannot be achieved. It was easy for China to make some of its promise in part because they are already far along the energy and

development curve, and in part because its population growth rate is minimal (a few percent at most projected over 30 years). In the same period, India's population is projected to grow by 38%. The U.S. also has population growth rate projected, partly due to immigration, but the current per capita emissions (baseline) are at a very high rate, from which productivity and efficiency gains can suffice, especially given the high development and GDP. In contrast, India cannot ask people in the dark to cut down their emissions.

Just as one cannot determine the demand for a product without knowing its price, "feasible" also depends on the cost and effort. That is what translates to the

desirable part. India actually wants to do a lot towards climate change – it just has to be multi-dimensionally attractive. It's not clear if India wants the privilege of its own climate treaty. More than a new U.S.-India climate deal, the U.S. can encourage and help India achieve an ambitious INDC. This would strengthen the multi-lateral framework for Paris, and also encourage other nations to similarly be proactive in setting ambitious yet achievable targets. If some want a bilateral treaty for an emission reduction commitment, India could do so, but many targets are symbolic. India can make any agreement, but its actions should speak louder than its words.

Delivering on the Promise of India's Smart Cities

AMY LIU & ROBERT PUENTES

Within months of his election in May 2014, Prime Minister Narendra Modi made a bold commitment to build 100 smart cities throughout India. This centerpiece of his urban agenda aims to help rapidly developing satellite cities and major urban centers become the magnets of foreign investment and jobs and “symbols of efficiency, speed and scale.”

In their first meeting in September 2014, President Barack Obama agreed that U.S. industry will serve as lead partners with the prime minister in developing three of those cities—Ajmer (Rajasthan), Vishakhapatnam (Andhra Pradesh), and Allahabad (Uttar Pradesh).

This U.S.-India partnership on smart cities comes at a time when there is rising public and private sector interest in deploying big data, technology, and infrastructure to meet the demands of a rapidly-urbanizing globe. In India alone, the United Nations estimates there will be 400 million *additional* residents in cities by 2050 as rural areas lose 50 million persons. That pace of urbanization, coupled with pressures from climate change and fiscal stress, are creating demands for new, more efficient ways of operating. Thus, cities' ambitions to become “smarter” range from the use of information and digital infrastructure to manage the energy and water use in buildings to the creation of intelligent transport networks to minimize congestion.

For Modi and India's cities, the promise of this tech-savvy approach is greater livability, sustainability, and improved public accountability and performance. This modernization would also deliver jobs and attract new investment. For global firms providing smart city services, the benefit is entry and leadership in a rapidly growing market. By one estimate, the smart cities market is projected to hit \$1.5 trillion by 2020.

Despite this convergence, the smart cities movement is still a work in progress. The deployment of technology-driven solutions to urban challenges has failed to meet private industry's ambitions for efficient and effective uptake and public leaders' desires for local impact. Worse yet, a smart city is often whatever each company happens to be selling because cities are underprepared to be good business partners and navigators of the public interest. Partly as a result, most of the leading best practices are found in developed cities (though innovations are beginning to be tested and applied in developing cities like Nairobi).

Thus the United States and India have an opportunity, through this new partnership, to make the three cities the model for smart city development. It is time to demonstrate that a smart city can effectively leverage private investment and expertise while meeting the goals and aspirations of local residents and leaders. The good news is there are some emerging best practices to build upon.

The following are five principles that can serve as a framework for a U.S.-India partnership on smart cities:

A SMART CITY SHOULD BE ECONOMICAL- LY-DRIVEN, NOT TECHNOLOGY-DRIVEN

A technology-first approach to smart city development, without a clear map of a city's future direction, will often lead to new technology that will fail to result in sustained, community-wide change. Just as no business can expect to succeed without a business plan, no city can expect to maximize growth and investment without an economic plan. That means the first step requires sharp self-awareness: each Indian smart city should develop or update a strategic plan for growth, one that has clear goals toward job growth and productivity, economic inclusion, and sustainability and resilience. The plan would have assessed strengths and weaknesses, and generated strategies that leverage unique industry specializations, innovation, education and skills development, land and infrastructure, and governance and public services. Edmonton, Canada is a clear leader in this area, using technology programs throughout the six strategic plans contained in its City Vision 2040 effort to design and achieve the city's long-term economic strategy.

Such a comprehensive planning approach addresses a major flaw in the current market. The typical agenda is for private firms to approach cities with available solutions. However, both cities and firms often find this yields unsatisfying results, even though both agree the solutions could improve their cities. A November 2014 report from McKinsey on granular growth opportunities in India documented how the 29 states and their cities are experiencing different growth trajectories, with some distinctly high-performing and others less so. This reinforces that off-the-shelf technology solutions are not viable and will vary in each market. Only by first establishing a comprehensive economic vision can cities know what products and solutions to demand and what policies to adopt. Doing so will also create transparency of purpose that will lead to a growing marketplace for all parties.

This is not an inconsequential proposition for Indian cities which largely lack the civic infrastructure to construct such a modern planning framework. The Modi government, with U.S. industry, should provide resources, technical assistance, and/or private sector expertise to the smart cities, especially in more powerful states, to ensure that a vision and plan exists to guide technology investments and infrastructure.

EACH SMART CITY SHOULD HAVE A CHIEF INNOVATION OFFICER TO GUIDE AND CO- ORDINATE INVESTMENTS

Some cities have appointed smart city executives—whether known as chief technology, innovation, information, or sustainability officers—tasked with deploying new technology across departments while bringing in private-sector technology and expertise especially regarding physical development. These individuals typically report directly to city, state, or top regional leaders, and their directives often involve working alongside other agency's leadership or information technology managers. Having a single point of contact and expert on behalf of government also ensures that multiple smart city projects and investments are coordinated, aligned with the city's economic plan, and provides clarity for the private sector. Good examples exist in Barcelona, Amsterdam, and Philadelphia.

The Indian government should consider issuing a competitive challenge grant for which cities would apply for funding to hire a chief smart city officer. In 2013, the Rockefeller Foundation issued a similar challenge to cities to hire chief resilience officers.

SMART CITY DEVELOPMENT SHOULD FACIL- ITATE INDIA'S OWN TECHNOLOGY AND IN- NOVATION CAPABILITIES

While the initial aspiration might be to open up India's cities to investors and industry giants worldwide, such an injection of global high-tech prowess should lead to the growth of India's indigenous innovation and technology community. The establishment of state-of-the-

art smart cities throughout India is a ripe opportunity to develop a cluster of India-based innovation firms and private enterprises, rooted locally or nationally. Such firms could work alongside U.S. based businesses and experts or be subcontracted by government to help design, build, operate, and maintain the smart city systems that get created. With a high number of young workers in India, the smart cities initiative could also provide more training and job opportunities for young adults, many of whom naturally gravitate toward technology-based jobs. Copenhagen is one city reaping the economic rewards of its emphasis on sustainable development through business formation, firm expansion, job growth and private investment.

In this way, smart cities should not be treated as a one-time investment to do the same things better. Instead, they should be platforms to provide new services and facilitate the emergence of new innovation, industries and jobs. Toronto, arguably the smartest city in North America, is currently renewing its industrial waterfront to create a state-of-the-art IT hub. Waterfront Toronto will connect businesses and residents with Canada's first open-access, ultra-high-speed broadband community network. The fiber-optic network will provide users with unlimited access to Internet speeds up to 500 times faster than typical residential networks – and is expected to generate thousands of new 'knowledge' jobs.

THE SMART CITY PARTNERSHIP SHOULD RESULT IN NEW STATE OR NATIONAL ENABLING FRAMEWORKS TO SCALE INNOVATION AND FOREIGN INVESTMENT

Modi should work to achieve economies of scale from this initial smart city investment by making sure the best approaches are sustained and scaled in one city and then easily transferred to and replicated in others. In 2014, new specifications from the International Stan-

dards Organization established a new set of city performance indicators for smart cities and a universal approach for measuring them. Alongside the national government, states in India could be responsible for ensuring these standards are consistently applied in order to measure smart city effectiveness and compare Indian cities. Adoption of these new standards will help speed the absorption of cutting-edge investments and grow the size of the marketplace.

INDIA SHOULD ENSURE ITS SMART CITY PARTNERSHIP IS A PARAGON OF TRANSPARENCY AND CITIZEN ENGAGEMENT

The smart city initiative also has the potential to ameliorate India's reputation for corruption and inequality. While these are monumental challenges to overcome, smart city technologies are – at their heart – rooted in principles of transparent government and engaged citizenry. Experts at Harvard University show how advanced telecommunications technology can make cities and governments more responsive to public concerns by connecting residents, making information available in real time, and enabling citizen participation.

Indian leaders will need to define smart city efforts clearly through a "common language" and explore novel ways to galvanize public interest. Effective marketing will help educate citizens about new smart city improvements and their tangible costs and benefits. In short, greater transparency in new technologies and infrastructure overall will ensure that changes involve and benefit the community and builds support for similar upgrades in years to come.

With these principles in mind, the U.S. and India can act, not top-down but bottom-up, to deliver the true promise of smart cities – modern urban centers that create lasting economic opportunities and quality of life for the people of India.

Biographies

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