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Innovate in India: Global Perspectives on the Continuing Evolution of India's IP Policy

Roy Kamphausen

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EXECUTIVE SUMMARY

This report details India's intellectual property (IP) and innovation policy environment and presents recommendations for how policymakers can enhance trading relationships through more robust IP protections.

MAIN ARGUMENT

As Prime Minister Narendra Modi faces monumental challenges in returning India to high rates of economic growth—including poor infrastructure, stultifying labor laws, an excessive regulatory bureaucratic regime, and limited FDI—he has notably prioritized the "Make in India" campaign to build up India's domestic manufacturing sector, engaging both indigenous and international firms in the process. But at a policy level, "Make in India" will depend on how quickly India can strengthen its IP regime as well. Stronger IP protection will reduce business uncertainty and increase investor confidence. Greater FDI will also lead to increased partnerships with foreign firms, and likely to substantially more tech transfers over time. Already, the benefits of greater IP protection are visible within parts of India: the states that protect IP best also have the highest rates of per capita GDP growth. Ultimately, India suffers more from lower IP protection—and would benefit more from a strengthened IP regime—than its foreign partners. Over the past year, the Modi administration has taken important first steps to address the country's IP policy challenges. However, more needs to be done.

POLICY IMPLICATIONS

- India's chief IP challenges are at the level of policy decision-making. Addressing those challenges, rather than focusing solely on strengthened enforcement regimes, is more likely to lead to successful outcomes.
- Collectively, India's IP policy challenges erode the confidence of foreign firms to invest in India. Dismissing IP concerns as a "sectoral issue" underestimates the chilling effect on foreign investment in India's economy, which could undermine the government's "Make in India" objectives.
- Stronger international business community support for India's IP reforms will contribute to improved "Make in India" results as more firms will invest and operate in India.
- As India further strengthens its IP legal regimes, capacity building in partnership with the international community will play an important role, such as in developing an IP court system or reducing regulatory backlogs.
- The U.S. and India need to bolster problem-solving mechanisms, on IP as well as on other issues, if broader aspirations for a deepened strategic relationship are to be realized.

In late January 2015, Barack Obama became the first U.S. president to be the guest of honor at the annual Indian Republic Day as well as the first U.S. president to visit India twice during his term in office. Just four months earlier, President Obama also met Indian prime minister Narendra Modi during the latter's visit to the United States in September 2014. In the short period between these visits, more than 30 bilateral agreements or high-level meetings were conducted between U.S. officials and their Indian counterparts.[1]

This level of exchange would not have been possible a year ago, given the highly polarized policy environment between the two countries in early 2014. Important sectors of U.S. industry were deeply frustrated at Indian policy on trade and investment issues, and key members of Congress argued that India was undermining the global trading system. In short, the Washington side of the political relationship was highly charged in ways that were not conducive to productive outcomes. India, for its part, was furious about the treatment of its deputy consul general in New York over allegations of visa fraud, an issue that cast a pall over bilateral relations. Moreover, lingering tensions connected to the United States' refusal to grant Modi a visa when he was chief minister of Gujarat in response to his perceived complicit role in the communal riots of 2002 loomed larger as his election to the prime minister's office seemed more likely. Other issues, such as perceived inequities over visa issuances, strained relations further.

Indian policy regarding the protection of intellectual property (IP) is one such issue that has been an ongoing challenge for U.S.-India relations, particularly over the past several years. At the level of trade, innovation, and intellectual property rights (IPR), 2014 began in a tough place. After months of strident public discourse in Washington, in April 2014 the U.S. trade representative (USTR) judged that India's policy and practice toward IPR protection warranted continued presence on the USTR 301 priority watch list that deems countries of IPR concern, although the USTR did not decide to downgrade India's designation to priority foreign country, as some in the United States had argued it should. However, the USTR, in view of the then pending election of a new governing party in India—the Bharatiya Janata Party (BJP)—announced a plan to initiate an out-of-cycle review (OCR) "to assess progress on engagement with the government of India on intellectual property rights (IPR) issues" in hopes that progress could be made with the new union government.[2] For their part, Indian policymakers strongly asserted that India's position was consistent with its obligations and vowed not to change policy course under pressure or meaningfully participate in the 301 OCR process.

As India's lengthy central election process played out, both sides seemingly took a break from engaging on IP issues, providing a chance to re-evaluate the trajectory of policy discourse in both countries over contentious but manageable issues. Additionally, while maintaining the position of the Singh administration that India's policies were fully in line with obligations to the World Trade Organization (WTO), Prime Minister Modi has nonetheless undertaken a number of noteworthy steps to address concerns about India's IP protections that emphasize his seriousness and desire to introduce business-friendly policies that encourage economic growth. These efforts bear further study. However, the international business community across many sectors continues to have

1 "U.S.-India Joint Statement—'Shared Effort; Progress for All,'" White House, Office of the Press Secretary, January 25, 2015, http://www.whitehouse.gov/the-press-office/2015/01/25/us-india-joint-statement-shared-effort-progress-all.

2 Office of the U.S. Trade Representative (USTR), "2014 Special 301 Out-of-Cycle Review of India," http://www.regulations.gov/#!documentDetail;D=USTR-2014-0020-0001.

great uncertainty about Indian IP policies, and this skepticism is negatively affecting decisions about investment and operation in the Indian market.

With this context in mind, the National Bureau of Asian Research (NBR) commenced a year-long study of India's IP and innovation policies, entitled "Innovate in India: Global Perspectives on the Continuing Evolution of India's IP Policy." This initiative was designed with a focus on three primary aims. First, it assesses the environment in India for IP protection in order to understand which sectors are affected by inadequate protections and at what cost; addresses whether a contagion effect is occurring; and examines the impacts of the Indian IP environment on other markets, including Japan and European Union (EU) countries.[3] Second, the initiative examines the potential impacts on the growth of India's domestic market and Indian companies, as well as the development trajectories of current innovation and IP policies. Third, the initiative provides government and business leaders in Washington, New Delhi, Brussels, and Tokyo with robust recommendations for bilateral and multilateral cooperation to improve Indian protections of IP and strengthen bilateral relations between India and its major trading partners, leading to the development of healthier markets.

In exploring these issues, NBR employed a multilayered methodology engaging several hundred policymakers, industry leaders, and researchers from India, the United States, and other countries across the Asia-Pacific and Europe over the course of 2014–15. Activities have included:

- *Interviews*. Nearly one hundred confidential interview sessions were conducted with stakeholders, including officials in the U.S., Indian, EU, and Japanese governments; scholars; thought leaders; industry association managers; and individual business representatives.
- *Targeted research papers*. Selected specialists and experts from India, Japan, and the EU have been commissioned to address specific dimensions of the challenge.
- *In-house research*. The project research team systematically examined available government, trade association, and private research to fundamentally understand the scale and scope of the problem and thoughtfully develop robust and effective policy recommendations.
- *Workshops*. Addressing key findings of in-house research and featuring select research papers, private workshops raised core questions and explored potential policy answers. The first two workshops were held in Tokyo (November 2014) and Brussels (February 2015), and a third workshop will be held in Seattle (April 2015).

This report presents key findings of this programming, while offering an overall assessment of India's innovation and IP environments within the context of overall bilateral relations. It further details specific sectors that are challenged by poor IP protection and the role that greater protection could play in the accomplishment of the Modi administration's economic agenda to foster growth, create jobs, and stimulate investment.

The report begins with a discussion of why the protection of IPR matters, especially in an Indian context. It next evaluates the issues raised by numerous business sectors and assesses some structural factors shaping concerns beyond those of individual sectors, which is followed by an analysis of the scale and scope of the problem of Indian IPR protections. The report then considers in turn India's development trajectory and priorities for the Modi administration, U.S. policy

[3] The term "contagion effect" refers to behavior that does not comply with the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) in one sector being replicated in another sector, or in other countries. In the worst-case scenario, states might collude with other states to attempt to change international norms regarding IP protections and market access issues.

perspectives, and international perspectives, including from Japan and the EU. It concludes with a summary of key findings and recommendations for policymakers.

As will be clear in the report, this study is neither an attempt to create an academic economic treatise on IP nor an effort to gloss over the real economic impacts of ineffective policy. Rather, the report seeks to solve real problems using best available applied research.

Why IPR? Implications for Economic Growth

Observers in both India and the United States have asserted that India's IP regime is hardly the most challenging or consequential issue that India needs to address.[4] They argue that the country's daunting infrastructure challenges, counterproductive and outdated labor laws, painfully slow bureaucratic process for approving new projects, land reform challenges, and suffocating limits on FDI raise more critical problems.[5] Simply put, according to this view, IP matters far less than these other factors.

However, this study takes a different viewpoint. A variety of scholarly sources conclude that a strong positive correlation exists between strengthened IP protections and increased technology transfer and FDI from developed countries into developing economies. This finding has clear implications for productivity and growth that could more broadly help Indian policymakers and industry leaders achieve their own goals. On this point, four studies bear highlighting. While not specifically concerned with the Indian context, these studies merit consideration by Indian policymakers nonetheless.

- The first, by Lei Yang and Keith Maskus, finds that greater IPR protection in a developing country would result in increased technology transfer through licensing. In particular, it notes that "stronger patent rights and trade secrets are likely to expand exports and improve welfare if domestic firms gain a more advanced ability to absorb and implement available international technologies."[6]
- A second study, published by the National Bureau of Economic Research (NBER), finds that higher rates of IPR protection "accelerate the rate at which multinational production is transferred," perhaps crowding out imitative activity but enhancing overall industrial development."[7]
- A third study, published by several of the same scholars engaged in the NBER study, uses firm data in sixteen countries over a seventeen-year period to find that "improvements in IPR result in real increases in technology transfer within multinational companies."[8]
- A fourth study, by Lee Branstetter and Kamal Saggi, addresses the interrelated questions of the effects of higher IPR on price and innovation and FDI flows in developing countries. The study concludes that stronger IPR discourages imitation and increases FDI so that production is

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4 Author's interview with a former senior U.S. trade official, Washington, D.C., November 2014.

5 See, for example, Arvind Panagariya, "What the Modi Government Must Do to Transform India into a Modern Economy" (speech presented at Columbia University School of International and Public Affairs, New York, September 15, 2014). Panagariya has been invited by Prime Minister Modi to be vice chairman of the new National Institution for Transforming India, a successor organization to the former national Planning Commission.

6 Lei Yang and Keith E. Maskus, "Intellectual Property Rights, Technology Transfer and Exports in Developing Countries," July 2008, 20.

7 Lee Branstetter, Raymond Fisman, C. Fritz Foley, and Kamal Saggi, "Intellectual Property Rights, Imitation, and Foreign Direct Investment: Theory and Evidence," National Bureau of Economic Research (NBER), Working Paper, April 2007.

8 Lee G. Branstetter, Raymond Fisman, and C. Fritz Foley, "Do Stronger Intellectual Property Rights Increase International Technology Transfer? Empirical Evidence from U.S. Firm-Level Panel Data," *Quarterly Journal of Economics* 121, no. 1 (2006): 323.

expanded. Although price effects are ambiguous, there is a net improvement in the purchasing power of the country as a result of stronger IPR.[9]

These findings support the practical policy work conducted by the U.S. Chamber of Commerce's Global Intellectual Property Center (GIPC) and the International Chamber of Commerce, among other groups. A GIPC report, using analysis by the Organisation for Economic Co-operation and Development (OECD), estimates that improvements in India's IP environment would have "positive and significant" effects on increased inward FDI at rates nearly three times the percentage of improvement in IP protections.[10]

For India's central government, developments at the state level are also key considerations. In an important paper from which this study draws, Amit Kapoor demonstrates the correlation in various Indian states between higher levels of innovation, as measured by the proxy of patent applications, and higher per capita GDP growth.[11] In another paper, a positive coefficient is found between higher levels of IPR protection and increased FDI.[12] While no specific studies on the correlation between increased IPR protection and more inward FDI in India have been undertaken, a parallel study with the Association of Southeast Asian Nations (ASEAN) suggests that while concern over IPR protection is not a major barrier to entry into a market, once local subsidiaries are formed, IPR protection becomes the most important concern for foreign companies.[13]

Taken together, these studies make a compelling case that stronger IPR protection will increase inward FDI, facilitate technology transfer, and support higher innovation rates. Moreover, a study by the USITC notes "increased IP protection in India would increase the export of more advanced high-technology products to India from the United States and other countries with IP-intensive goods, both because of increased consumer demand for such goods and because more advanced high-technology products would improve the ability of firms located in India to produce goods more efficiently."[14] It also notes "an improved IP environment would allow their parent companies to produce more advanced products in India, bolstering the competitiveness of the affiliates' products in the Indian marketplace."[15] These are all goals sought by the Indian government, suggesting that increased IPR protection will have salience in the Indian environment. The USITC

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9 Lee Branstetter and Kamal Saggi, "Intellectual Property Rights, Foreign Direct Investment, and Industrial Development," NBER, Working Paper, October 2009, 33–4.

10 "India: International Outlier on IP," U.S. Chamber of Commerce, Global Intellectual Property Center, July 2013, http://www.theglobalipcenter.com/wp-content/uploads/2013/07/India_Outlier_FIN.pdf. To be sure, there is not unanimity regarding the positive effects of IPR on investment and innovation. In one recent study, for example, the authors, speaking in general terms, found the "link between stronger IPR and innovation [as] ambiguous at best." See Giovanni Dosi and Joseph E. Stiglitz, "The Role of Intellectual Property Rights in the Development Process, with Some Lessons from Developed Countries: An Introduction," in *Intellectual Property Rights: Legal and Economic Challenges for Development*, ed. Mario Cimoli et al. (Oxford: Oxford University Press, 2014), 1–53. Another study notes that post–Uruguay Round trading agreements have actually worked at cross-purposes with developing innovation policies in technology-importing states. Patents, which ought to encourage technological invention that would not otherwise take place, often enable rent-seeking behaviors and near-monopoly positions of powerful multinationals, with the interests of technology-importing economies receiving insufficiently low priority. For more on this, see Hazel V.J. Moir and Ping-Kun Hsu, "Tailoring Patent Policy for Developing Economies," 4th Asia-Pacific Innovation Conference, National Taiwan University, College of Law, December 6–7, 2013, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2365761. This NBR Special Report, however, seeks to make useful contributions to a strengthened U.S.-India bilateral relationship and does not solve theoretical arguments about the relationship of IP to innovation.

11 Amit Kapoor, "IPR in India: Innovation and Competitiveness in India's Context," National Bureau of Asian Research (NBR), Working Paper (forthcoming).

12 Tatsuo Ushijima, "Patent Rights Protection and Japanese Foreign Direct Investment," *Research Policy* 42, no. 3 (2013): 738–48.

13 "Reforming Intellectual Property Systems for Promoting Foreign Direct Investment in ASEAN" (unpublished study), discussed in Toshiya Watanabe, "IPR Policy in India from the Viewpoint of Encouraging Manufacturing Innovation: Lesson from Japanese Experience," NBR, Working Paper (forthcoming).

14 U.S. International Trade Commission Report (USITC), *Trade, Investment, and Industrial Policies in India: Effects on the U.S. Economy* (Washington, D.C., December 2014), 39.

15 Ibid.

study adds that the effect on the U.S. macro economy of improved IP protection in India would be less than 10,000 jobs.[16] This not only reflects the relatively low starting point of U.S. exports to India but also strongly disputes a common criticism from India that increased IPR protection would disproportionately benefit the United States.

Specific Questions for IPR within India

To better understand the range of discussions occurring both within India and among foreign stakeholders, NBR conducted roughly one hundred interviews with leading specialists and policymakers from India, the United States, Japan, Belgium, and other sites across the Asia-Pacific and Europe. These interviews looked at the following sectors: biopharmaceuticals, manufacturing, film and entertainment, clean tech, software, and information and communications technology (ICT). In redressing IP protection issues, Indian, U.S., and foreign companies operating in affected sectors of the Indian economy have adopted a variety of approaches, depending on perceptions of progress over the past several years as well as the prospects that the Modi government might make important changes. Nonetheless, widespread concern with Indian policy and enforcement persists in U.S. industry. This section summarizes the project's principal interview findings in each sector.

Overview of Affected Sectors

Biopharmaceuticals. The crux of the issue for both drug makers and Indian policymakers is how to reduce the price of pharmaceuticals and offer Indian citizens access to essential drugs within the context of protected IP. Interviewees frequently mentioned that low IP protections worsen India's existing problem of access to affordable drugs. International drug firms believe that IP is made the scapegoat at the expense of innovation, and that this environment gives unfair competitive advantage to domestic generic producers.[17] India's current policies are seen as undercutting incentives needed to spur innovation. More fundamentally, how the Indian state conceives of providing access to medical care for Indian citizens sets the essential background and context for framing this issue. India spends relatively little on its public healthcare system, and availability of primary care providers is limited in many parts of the country, indicating that problems are far larger than availability of cheap medicines.[18]

Manufacturing. Key issues center on access to technology and the means employed by the Indian government to gain access to technology. Because India is not yet a major manufacturing state, a more basic concern is whether policies that have been employed in other sectors (e.g., compulsory licensing and local content requirements) might be applied more broadly to the manufacturing and clean-energy sectors, as is suggested by the national manufacturing policy. As India's manufacturing sector grows, the effects of these policies would become much more significant. But not all Western manufacturers have concerns about Indian IP. The auto industry and aviation sector, for example, have been supportive of the Indian market in public statements.

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16 USITC, *Trade, Investment, and Industrial Policies in India*, 89.

17 In the latest case, Gilead Science's application for a patent of the key compound in its hepatitis C drug Sovaldi was rejected by the Indian Patent Board in mid-January 2015 because it was judged not to demonstrate sufficient new efficacy. This decision was made despite the fact that Gilead had signed licensing agreements with seven Indian generics producers to make Sovaldi for export to other countries, a form of "managed competition."

18 Author's interview with U.S. government official, May 5, 2014.

Clean tech. The central issue in the clean-tech sector is that local content requirements are seen by foreign firms as a proxy for mandatory technology transfers, either through joint ventures or through the "onshoring" of manufacturing capacity in India. Industry representatives worry that some Indian policy approaches—especially those adopted in the implementation of the National Solar Mission and previously applied to biopharmaceuticals, such as the use of compulsory licenses—might soon be applied to enhanced manufacturing industries.

The United States has already lodged two WTO challenges against India's domestic content requirements for solar cells and solar modules. Still, as a number of U.S. and Indian industry groups have noted, the priority India places on developing renewable energy sources makes clean tech a field for both investment opportunity and collaboration between local and international suppliers.[19]

Film and entertainment. The central IP challenge in film and entertainment for both Indian and foreign filmmakers is related to enforcement. Both U.S. and Indian firms face common problems, especially with regard to unauthorized camcording of films to host on Internet sites. The industry has engaged in important capacity-building efforts with Indian counterparts, which thus far have yielded good results.

Software and ICT. The ICT sector faces serious challenges related to unlicensed software and other forms of piracy. Indian unlicensed software rates are still at 60%, a reduction of only 10% in seven years.[20] The previous United Progressive Alliance government had implemented a preferential market access policy that increased domestic content requirements in the ICT sector. Under pressure from the U.S. government, India revised the policy at the end of 2013 and no longer imposes domestic content requirements on ICT products in the private sector.

Challenges beyond Individual Sectors

A general impression that emerges from this brief consideration of affected sectors is that there are important elements of common concern. In particular, manufacturers worry that compulsory licenses and enhanced local content requirements might be paired with higher levels of expectation for innovation in patents, with devastating future impacts. Of special importance, all sectors describe real concerns with the Indian IP policy environment. As one interviewee put it, "We all have our concerns. We may take different approaches to addressing those concerns, but there is a high degree of commonality in our perspectives."[21]

A common challenge in all cases and sectors is that India's pre-patent process is protracted. Fully two-thirds of 290,000 cases await adjudication. As one interviewee described the situation, the country's relatively low number of patent examiners and huge backlog of applications are a policy issue to the extent that government resources could be more advantageously applied to address a common problem for both domestic and international companies.

Structural factors related to divergent views between the United States and India about obligations to the WTO and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) go beyond the affected sectors to shape India's fundamental understanding of IP protections. For instance, Indian policy leaders assert that India has broad authority to implement

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19 Sunil Wadhwa, "Clean Energy Development Imperatives of the Indian Economy," NBR (unpublished manuscript).

20 Business Software Alliance, "The Compliance Gap: BSA Global Software Survey," June 2014.

21 Author's interview, Washington, D.C., August 2014.

the use of compulsory licenses in far more circumstances than the very narrow set of applicable cases recognized by the United States and other countries.

Developed countries remain concerned about the contagion effect that an Indian industrial policy model might bring about in third countries. The USITC's report notes two such examples: First, in 2008 "the Philippines amended its patent law to add language similar to section 3(d) [of the Indian Patents Act]," in which "enhanced efficacy" becomes a further standard to be met before an additional patent for an existing patent can be granted. Second, in 2012, "Argentina issued resolutions that limit the patentability of derivatives of pharmaceutical products in much the same way as India."[22]

The Scale and Scope of the Problem

Understanding this breakdown of questions raised by a range of stakeholders, it is helpful to examine the current state of research on India's overarching IPR environment and the scale and scope of the challenges confronting industry and policy (keeping in mind the rapid pace of current developments in India's IPR regime over the past year). What emerges from an analysis of this work is that the present challenge from India's IPR regime, while imposing in certain sectors, is overall not that great, especially when compared with other major developing economies.[23] However, if there is not more harmonization of Indian policy with international practices, the long-term consequences of India's current policies will be significant.

Despite the Obama administration's goal of quintupling the size of total bilateral trade, much work remains to be done. Total bilateral trade in goods and private services between the United States and India was $93 billion in 2012, and U.S. direct investment in India totaled more than $28 billion in 2012.[24] The USITC judges that current low levels of IP protection in India, in combination with other factors, have had important detrimental impacts on U.S. trade. As noted in its recent study, the commission "estimates that if restrictive Indian measures related to tariffs and FDI were completely eliminated and standards of IP protection were made comparable to those in the U.S. and Western Europe, U.S. exports to India would rise by two-thirds. U.S. investment and foreign affiliate sales in India would roughly double."[25]

Studies of Indian IP Protections

A variety of sources can be used to judge the dimensions of Indian IP protections and how problematic the environment actually is for international business operating in India. U.S. government data, trade statistics, and data from international agencies were examined, and key findings from seven of these studies bear mention in particular.

USTR. In its April 2014 Special 301 Report, the USTR did not downgrade India from the "priority watch list" to a "priority foreign country," as was urged by some representatives from

22 USITC, *Trade, Investment, and Industrial Policies in India*, 150.

23 For more on these IP challenges, see Commission on the Theft of American Intellectual Property, "The Report of the Commission on the Theft of American Intellectual Property," NBR, May 2013, http://www.ipcommission.org/report/IP_Commission_Report_052213.pdf.

24 "India: U.S.-India Bilateral Trade and Investment," USTR, http://www.ustr.gov/countries-regions/south-central-asia/india.

25 The report further notes that "because India represents less than 2 percent of U.S. commercial engagement abroad, however, large increases in bilateral economic engagement translate into very small effects on the U.S. economy (a less than 0.05 percent increase in U.S. GDP and U.S. employment). Most of the economic gains would be captured by U.S. companies with foreign affiliates in India; the profits earned by affiliates of these firms would increase by over $20 billion, which is substantially higher than the estimated increase in U.S. GDP (about $1 billion)." See USITC, *Trade, Investment, and Industrial Policies in India*, 15–16.

the business and industrial sectors.[26] Instead, the United States initiated an out-of-cycle review of India's practices as a means to enhance engagement on areas of common interest, as well as to address issues of concern. While India has characterized such a review as an open-ended means of exerting pressure on a foreign government that has no legal basis in international law,[27] the USTR maintains that in the more than 40 instances in which such reviews have been conducted, not one has resulted in the further downgrading of a country's rating.[28] This record suggests that the USTR's call for enhanced engagement is actually supported by historical evidence. Despite India's rejection of the OCR process, New Delhi resumed its Trade Policy Forum with U.S. counterparts in November 2014. Five new working groups, including an important IPR working group, were initiated. The progress reached in enhancing engagement on issues of concern was judged as sufficient by the USTR to end the OCR after only two months.[29]

In his statement accompanying the release of the 2014 Special 301 Report, Ambassador Michael Froman noted that "shared values form the bedrock of the U.S.-India relationship" and both countries face shared challenges, such as "attracting domestic and foreign investment; strengthening our domestic manufacturing base; improving infrastructure, both physical and digital; providing safe and reliable healthcare to all, including those most vulnerable; increasing the supply of energy and reducing our dependence on fossil fuels."[30] In particular, the Special 301 Report "identifies opportunities for improved engagement on issues related to IP and access to medicines." Ambassador Froman added that "the United States recognizes the public health challenges that India faces, and looks forward to working with the Indian government to identify the range of ways in which these challenges can be addressed, including by adopting policies that support the innovation of life-saving medications and address obstacles its population faces in accessing quality health care."[31]

In addition, in February 2014 the USTR released its Notorious Markets List, which identified some Indian markets as problematic. Although no online marketplaces with origins traceable to India were listed out of 23 entries, 6 of 40 physical marketplaces on the global list are found in India. These markets feature pirated goods of both international and Indian origins. While the report makes clear that entries on the list neither represent legal findings nor capture a country's

26 At the time of this report going to press, submissions are ongoing for the 2015 Special 301 Report.

27 Commerce and Industry Minister Nirmala Sitharaman said in a written response to the Rajya Sabha (India's upper legislative house) on July 30, 2014, that "the Special 301 process is a unilateral measure taken by the U.S. under their Trade Act, 1974, to create pressure on countries to increase IPR protection beyond the Agreement on Trade Related IPRs. It is an extra territorial application of the domestic law of a country and is not tenable under the overall WTO regime." See Nirmala Sitharaman, "U.S. Opposition to Section 3(d) of the Indian Patent Act," Ministry of Commerce and Industry (India), Press Release, July 30, 2014, http://pib.nic.in/newsite/PrintRelease.aspx?relid=107612.

28 Author's interview with a U.S. government official, August 2014.

29 Ambassador Froman stated in January 2015 that "in November, I led a U.S. delegation to the U.S.-India Trade Policy Forum (TPF), the first TPF since 2010 and an important step in invigorating our bilateral relationship. The TPF provided the forum for the discussion of several key trade and investment issues, including intellectual property rights, agriculture, services, manufacturing and others. The meeting resulted in substantive work plans for regularized engagement across these priority issues. In advance of this meeting, India and the United States worked together to address outstanding concerns arising from the WTO Bali package which, with the support of the other WTO members, will now allow the Trade Facilitation Agreement to be fully implemented. For 2015, we are planning a significant ramp up of our engagement with India to strengthen our bilateral relationship and work to address outstanding concerns in a number of areas." For the full statement, see Michael Froman, statement to the Senate Committee on Finance, http://www.finance.senate.gov/imo/media/doc/SFC%20Trade%20Agenda%20Hearing%20-%20USTR%20Testimony.pdf.

30 Michael Froman, "The 2014 Special 301 Report and India," USTR, Tradewinds, April 30, 2014, https://ustr.gov/about-us/policy-offices/press-office/blog/2014/April/The-2014-Special-301-Report-and-India.

31 Ibid.

overall IP protection regime, the list does provide a sense of a country's approach to enforcement against pirated goods.[32]

National Intellectual Property Rights Coordination Center. The National Intellectual Property Rights Coordination Center describes itself as the "U.S. government's clearinghouse for investigations into counterfeiting and piracy—crimes that threaten the public's health and safety, [and] the U.S. economy." It notes only one case of trade-secret theft by an Indian national in the last two years.[33] By contrast, nearly twenty cases of IP misappropriation involving persons of Chinese origin were listed over a comparable period of time.

U.S. Customs and Border Protection. Items originating in India were approximately 1% of total items seized by U.S. Customs and Border Protection in 2013, according to its 2013 fiscal report.[34] By comparison, 68% of seized goods originated in mainland China, and another 25% originated in Hong Kong. While the percentage of total Indian-sourced goods seized remained roughly the same from 2012 to 2013, the manufacturer's suggested retail price of goods seized that were Indian in origin nearly tripled over this period. Interviewees said this number may be artificially low because the scale of Indian manufacturing is still quite small. When India becomes a more productive manufacturing country—a goal of the Modi administration's "Make in India" campaign to transform India into a global manufacturing center—the value of seizures will likely increase.[35]

U.S. Patent and Trade Office (USPTO). The only mention of India in the USPTO's *2014–2018 Strategic Plan* states that India, like China, faces ongoing significant challenges in "counterfeiting, piracy, and failure to respect IP Rights."[36] However, no unique plan for outreach to India is publicly available. Nonetheless, in interviews U.S. government officials note the active USPTO engagement and capacity-building efforts underway throughout India, which are reporting important progress in building greater capacity over time.

U.S. International Trade Commission. The USITC's section 332 report *Trade, Investment, and Industrial Policies in India: Effects on the U.S. Economy* addresses a range of the issues U.S. companies face in India. The study surveyed more than eight thousand U.S. companies (with a 47% response rate), and supplemented the survey with interviews and the application of a stylized economic model to demonstrate the effects of Indian IP policy, tariffs, and tax policies, among other issues. The study casts light on the generalized views of industry regarding India's trade, investment, and industrial policy environment (including IP) and concludes that the principal challenges U.S. companies face are related to central government policies. The USITC's report includes the following findings:

- IP is "very important" to the operations of more than two-thirds of U.S. companies engaged in India, and these companies generally rate the effect of IP barriers in India as "moderate."
- U.S. companies (as well as other foreign companies) exhibit uncertainty about the Indian policy and enforcement environment, especially regarding trade secrets and regulatory test data.

32 USTR, "2013 Out-of-Cycle Review of Notorious Markets," February 12, 2014, http://www.ustr.gov/sites/default/files/FINAL-PUBLISHED%202013_Notorious_Markets_List-02122014.pdf.

33 For more on the cases involving India, see the National Intellectual Property Rights Coordination Center website, http://www.iprcenter.gov/@@search?SearchableText=india.

34 U.S. Customs and Border Protection, "Intellectual Property Rights: Fiscal Year 2013 Seizure Statistics," Office of International Trade, 0204-0714, 2014, http://www.cbp.gov/sites/default/files/documents/ipr_annual_report_2013_072414%20Final.pdf.

35 For more on the "Make in India" vision, see http://www.makeinindia.com.

36 U.S. Patent and Trademark Office, *2014–2018 Strategic Plan* (Washington, D.C., February 2014), 5, http://www.uspto.gov/about/stratplan/USPTO_2014-2018_Strategic_Plan.pdf.

- The central government's "limits on patents for incremental innovation, compulsory license provisions, and onerous patent processes are a deterrent to U.S. companies, especially in IP-intensive industries."
- U.S. companies with patented technology fear they may be required to provide a license for that technology to an Indian competitor.
- Lengthy administrative and legal proceedings are costly in terms of time and financial resources.
- Some U.S. companies report substantial copyright and trademark infringement in India; companies in the content and media sectors note that piracy and counterfeiting are key impediments.
- As a result of local content requirements in the manufacturing of ICT and solar energy, a certain percentage of goods must be sourced locally.
- Over 60% of companies have made strategic changes in response to the range of taxes, FDI policies, and low IPR protections, most often directing fewer resources to the Indian market.[37]

The USITC report concludes that better IP protections in India would increase the technology embedded in exports to India and improve Indian companies' ability to use these imports. As the report was essentially a retrospective look at policies enacted before the Modi administration, congressional leaders have called on the USITC to produce a new section 332 report on the progress of the Modi government in improving India's IP environment, which would be conducted in spring 2015.[38]

Preliminary Conclusions

Several preliminary conclusions about the scale and scope of the problems with India's IP protection result from an analysis of data in the abovementioned studies.

First, poor Indian IP protection is not resulting in large-scale penetration of counterfeit or fraudulent Indian goods into the U.S. market. Even considering that U.S.-India bilateral trade is less than one-fifth of U.S.-China trade, the scale of Indian counterfeit goods is quite small. Interviewees noted that this is largely due to the relative weakness of India's manufacturing sector. As that sector becomes more important, counterfeit or pirated goods entering the U.S. market could increase. Moreover, while at present goods produced as a result of compulsory licenses or unfair patent revocations in India are not entering the U.S. market, concerns remain that Indian generic pharmaceuticals produced as a result of compulsory licenses might later legally enter the U.S. market in ways that undercut U.S. pharmaceutical sales, ultimately as a result of poor Indian IP protection.

Second, attempts to block entry of counterfeit Indian goods into the U.S. market or to prevent the use of U.S. financial institutions by Indian companies in order to bring about changed behavior on the part of Indian policy officials are unlikely to improve Indian IP protections and are probably not appropriate measures. For instance, recommendations from the "The Report of the Commission on the Theft of American Intellectual Property" to strengthen section 337 investigations or limit access to U.S. financial institutions by entities that are benefiting from

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37 USITC, *Trade, Investment, and Industrial Policies in India*, 5.

38 See the letter from Congressmen Dave Camp and Sander Levin of the House Ways and Means Committee and Senators Orrin Hatch and Ron Wyden to the chairman of the USITC on September 24, 2014, available at http://waysandmeans.house.gov/uploadedfiles/signed_itc_india_letter.pdf.

stolen IP would be ineffective to address government policy challenges in India and would likely weaken rather than strengthen the bilateral relationship.[39] Indian perspectives, reiterated often, are that Indian policies comply with both the WTO and the TRIPS Agreement. Given that the real problem is how Indian policy addresses IP protection, sanctioning behavior would be a mismatch of solution to problem. The chief challenge is that Indian policy diverges from that of the West, not that counterfeit goods are flooding U.S. markets and need to be stopped.

Third, India-sourced IP misappropriation is not as large in scale and scope as that originating from China. As one interviewee said, "China is much more pernicious than India in terms of willingness to steal IP."[40] Yet another interviewee and former U.S. trade official noted that "the intensity of congressional attention to Indian IP issues would suggest a problem far larger than that from China."[41] These insights hint that U.S. rhetoric about the Indian IP environment might be excessive relative to the size and scope of the problem at this time. What emerges from interviews and research, however, is a sense that Indian policymakers have seemed reluctant to make the policy and legal changes necessary to increase foreign investment into India, technology transfers, and business confidence. Such inaction has deeply frustrated U.S. officials, and this frustration to a great extent is compounded by concerns about India's future policy trajectory.

Fourth, if IP rights are not being granted or enforced due to prevailing industrial policy, then the potential for a much more pervasive impact on U.S. industry remains. Moreover, as the Indian economy is poised for rapid growth, the scale of the problem is likely to increase unless fundamental policy changes are undertaken. While the USITC's report notes that the current benefit to the U.S. economy would not be great if India undertook more fundamental IPR reforms, the longer-term consequences are perceived to be much larger, especially as India becomes a more significant manufacturing hub. These changes require a fundamental adjustment of mindset that would lead to greater policy innovation.

Finally, and perhaps most significantly, the impacts of poor Indian IP protections on India outweigh the negative impacts of those policies in the United States. India's relative importance to the U.S. economy is dwarfed by the importance of the United States to India as the latter's third-largest trading partner (when considering the EU as an aggregate trading entity).[42] Japan is poised to significantly increase its trading presence in India as well. In many respects, important dimensions of "Make in India" will hinge on the willingness of foreign firms to invest and manufacture in India. Without the sort of protections that are so essential to increased investment, the initiative's goals may founder.

These five conclusions should shape our understanding of both what the challenges are in Indian markets and how the United States, India, and others can move forward together in addressing these issues. Put differently, because the nature of the problem is policy-oriented, recommendations must address policy solutions foremost, with less emphasis on enforcement, for instance. These U.S. studies, while specifically addressing U.S. concerns, resonate in other markets as well. Interviews and workshops in both Brussels and Tokyo revealed strong agreement on these issues.

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[39] Commission on the Theft of American Intellectual Property, "The Report of the Commission on the Theft of American Intellectual Property."

[40] Author's interview with a U.S. government person, Washington, D.C., September 2014.

[41] Author's interview with a former U.S. trade official, Washington, D.C., July 2014.

[42] The USITC's report states that, despite rapid growth, "India accounts for 2 percent or less of total U.S. exports, foreign affiliate sales, and investment. Similarly, despite being the world's 10th-largest economy and 10th-largest importer, India was only the 18th-largest export market for the United States in 2013." See USITC, *Trade, Investment, and Industrial Policies in India*, 7.

India's Development Trajectory and the Modi Administration's Priorities

With the above assessment in mind, it is important to note the rapid speed at which developments have occurred over the past year and to what extent this suggests a revisiting of existing assessments of India's environment for IP protection and innovation. As noted earlier, many have hailed the election of Prime Minister Modi—who established an international reputation as business-friendly while chief minister of the state of Gujarat—as a promised new beginning in many aspects of Indian policy.

To be sure, Prime Minister Modi is a leader committed to the economic revitalization of India, an agenda that is anchored by the sweeping "Make in India" campaign. Certainly much of the recent progress on issues of IP and innovation in the context of bilateral relations can be attributed to the perspectives of the new government. From the outset, the Modi administration indicated a willingness to work with foreign business to ensure that the government's economic policies could produce win-win outcomes for both India and its trading partners. On the issue of IP, the administration has taken important first steps, noting the necessity of enacting a new national IP policy, a draft of which is out for comment; setting up a high-level IP think tank to develop recommendations; indicating plans to hire one thousand new patent examiners to deal with the backlog of cases; and reaching out to multinational companies to assure them that India is open for business. At the same time, Indian policymakers have made clear that they believe India's IP policies are fully compliant with the TRIPS Agreement, including the country's employment of compulsory licenses as well as its reluctance to patent additional innovations of existing patents (so-called "ever greening"), and unlikely to be revised by domestic regulation or legislation.

Economic Aims

As is well-known, part of Prime Minister Modi's electoral mandate is the imperative to rapidly return India to high rates of economic growth. After the significant economic reforms of the early 1990s, the pace of Indian growth had slowed dramatically by the last two years of the Singh administration. The scale of the problems was daunting. As one study notes, "the country has become a case study in missed opportunity.… In 2013, Indian labor productivity growth (2.4 percent) and GDP growth (4.4 percent) sank to their lowest levels in over a decade.… [I]n 1970, China's economy barely reached one-third of India's productivity levels; four decades later, Chinese productivity exceeded India's by 67 percent."[43]

Part of the problem has been that Indian policymakers have eschewed productivity-enhancing policies (such as spurring investment in capital equipment). Obstacles have included "byzantine regulations," a "complex regulatory environment," "restrictive foreign direct investment policies," and "restrictive tariffs."[44] In addressing these domestic challenges, Indian policymakers have often pursued "innovation mercantilist" policies, which as noted by Stephen Ezell have included "Preferential Market Access rules for government procurement of information technology products, local content requirements for solar energy installations, compulsory licensing of foreign

[43] Stephen Ezell, "Restore the Indian Economic Miracle by Attracting Foreign Investment," *Forbes,* April 30, 2014, http://www.forbes.com/sites/realspin/2014/04/30/restore-the-indian-economic-miracle-by-attracting-foreign-investment.

[44] Ibid.

biopharmaceutical intellectual property, and limits on foreign investment in retail—designed to promote domestic industries at the expense of global trade partners."[45]

In many ways attempting to replicate the amazing economic success that the state of Gujarat enjoyed while he was chief minister, Prime Minister Modi has made clear that he sees domestic reform to increase rates of economic development as his first priority in office. The policy challenges the Modi administration faces include:

- Creating over 100 million jobs in the next decade
- Providing medical care for a highly diverse, differentiated, and dispersed population
- Restoring high growth rates
- Streamlining the bureaucracy and increasing efficiency

Indeed, the BJP's election manifesto pledges to build an innovative economy that protects and cherishes IP: "We will embark down the path of IPRs and patents in a big way."[46] Goals articulated include:

- Encouraging and incentivizing private-sector investments—"both domestic and foreign, in science and technology and in high-end research aimed towards innovation"
- Creating an environment for transnational and interdisciplinary collaborative research, and establishing an IPR regime that "maximizes the incentive for generation and protection of intellectual property for all type of inventors"
- Transforming India into a "global manufacturing hub"

The manifesto proposes the following steps to achieve the goals:

- Ensuring that a "conducive, enabling environment is created, making 'doing business' in India easy"
- Prioritizing "cutting the red tape, simplifying the procedures and removing the bottlenecks"
- Building up "logistics infrastructure, including stable power"
- Moving toward "a single-window system of clearances both at the center and also at the state level through a hub-spoke model"
- Implementing a mechanism "that will ensure that the central and state governments work in close coordination and synergy while giving clearances to mega projects"
- Increasing the transparency and efficiency of "decision-making on environment clearances"
- Establishing world-class investment and industrial regions "as global hubs of manufacturing"

Upon assuming office in May 2014, Prime Minister Modi quickly reached out to business leaders and foreign governments in search of the large-scale development funds needed to improve India's infrastructure. India's revised budget—the first activity of any newly elected government in New Delhi—was eagerly anticipated as a measure of the administration's new direction and policies, which were expected to be business-friendly. However, as Pravakar Sahoo observed in a public interview commissioned for this project, the changes in the new budget were more evolutionary than revolutionary. While some limits on FDI were lifted in certain sectors, including defense and retail, fundamental changes were not announced. Nonetheless, increased FDI is a reflection

45 Ezell, "Restore the Indian Economic Miracle."

46 BJP, "Election Manifesto 2014," 30, http://bjpelectionmanifesto.com/pdf/manifesto2014.pdf.

of greater confidence on the part of foreign business and will be essential to achieving the rates of growth needed in India.[47] India's new budget, released in early March 2015, takes these steps further and makes important investments in Indian infrastructure and funding for legal reform around land and tax policies.

However, the impacts of these changes are likely to take time. Certainly, Prime Minister Modi's decision to scrap the Planning Commission was seen as a forward-leaning initiative within India and by foreign observers. Additionally, the administration has taken important steps to deal with both the substance of problems and the perceptions that India's bureaucracy is out of sync. These steps include efforts to court U.S. business before Modi's visit to Washington in September 2014 and to increase protection of IP, as will be discussed in the following subsection.

The Modi Administration on IP Protection

An important development endorsed by the Modi administration is a new national IPR policy. Managed under the auspices of the Ministry of Commerce and Industry's Department of Industrial Policy and Promotion, the objectives of the new IPR policy are to establish a dynamic, vibrant, and balanced IP system in India to promote the following objectives:

- Foster innovation and creativity in a knowledge economy
- Accelerate economic growth, employment, and entrepreneurship
- Enhance sociocultural development
- Protect public health, food security, and the environment, among other areas of socioeconomic importance

The policy prioritizes the pursuit of an innovative economy, with special strengths to be developed in manufacturing. To this end, it emphasizes educating Indian citizens and launching a marketing campaign to develop an IPR consciousness, in the process explicitly linking the IP policy slogan "Creative India; Innovative India" with "Make in India" and other national initiatives such as "Digital India," "Skill India," and "Smart Cities."[48] As an additional underpinning, the Modi administration established a think tank of prominent Indian IP specialists to draft the national IPR policy and make policy recommendations.[49]

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47 Pravakar Sahoo, "India's 2014 Budget: Enduring Challenges and New Responses: Interview with Pravakar Sahoo," interview by Ved Singh, NBR, July 16, 2014, http://www.nbr.org/research/activity.aspx?id=465.

48 Ministry of Commerce and Industry (India), "Confidential Draft IPR Policy," December 14, 2014, http://dipp.nic.in/English/Schemes/Intellectual_Property_Rights/IPR_Policy_24December2014.pdf.

49 See Ministry of Commerce and Industry (India), "DIPP Constitutes IPR Think Tank to Draft National Intellectual Property Rights Policy," Press Information Bureau, October 24, 2014. The specialists include Prabha Sridevan, retired chairperson of the Intellectual Property Appellate Board; Pratibha Singh, co-founder and senior advocate at Singh and Singh Law Firm LLP; Punita Bhargava, co-founder and advocate at Inventure IP; Unnat Pandit, deputy general manager at Cadila Pharmaceuticals; Narendra Sabharwal, the chair of the IPR Committee at the Federation of Indian Chambers of Commerce and Industry; and Rajeev Srinivasan, director of the Asian School of Business based in Kerala. Priorities for the IPR think tank include the following:

i. To draft national intellectual property rights policy
ii. To identify areas in the IPRs where study needs to be conducted and to furnish recommendations in this regard to the ministry
iii. To provide views on the possible implications of demands placed by the negotiating partners
iv. To keep the government regularly informed about the developments taking place in IPR cases which have an impact upon India's IPR Policy
v. To advise the government on best practices to be followed in trademark offices, patent offices and other government offices dealing with IPR in order to create an efficient and transparent system of functioning in the said offices
vi. To prepare periodic reports on best practice followed in foreign countries
vii. To highlight anomalies in the present IPR legislations and to advice possible solutions to the Ministry
viii. To give suggestions on the steps that may be taken for improving infrastructure in IP offices and tribunals
ix. To examine the current issues raised by industry associations and those that may have appeared in media and to give suggestions to the ministry on such issues.

However, India's IP problems are part of a larger set of issues that inhibit the development of an innovative economy. At the forefront are barriers to FDI that would provide the quantities of capital to leapfrog Indian development. As was noted in a research paper written for this initiative, "some of the factors that affect FDI inflow to India are inadequate infrastructure, inflexible labor markets, difficult land-acquisition procedures, lack of progressive FDI reforms, and lack of center-state coordination."[50] Moreover, the Modi administration faces a range of simultaneous challenges that form the context for all of its decisions: how to reinvigorate Indian growth, which will necessarily involve slashing bureaucracy and inefficient government redistributive programs; how to consolidate the BJP's ruling coalition and attract new members from constituencies that traditionally support redistributive policies, all in the pursuit of strengthening the party's position (currently at 25%) in the upper house (Rajya Sabha) when elections are next held in 2016; how to strengthen bilateral relations with fellow members of the South Asian Association for Regional Cooperation (SAARC) while also managing great-power relations with Russia and China; and how to develop new relationships with Japan and other East Asian states.

These priorities suggest that the United States needs to be cognizant of the many issues on the agenda for the Modi administration. As one prominent interviewee put it, "Mr. Modi's priorities are in Asia first, and he seeks prominent roles for India within Asia."[51] Despite a difficult personal history with the United States, Prime Minister Modi nonetheless seems prepared to push forward the bilateral relationship, albeit on his terms. However, as events following the arrest of an Indian consular official in New York in late 2013 demonstrated, the margin of error in the relationship is small.

The Modi administration must certainly consider the perspective that India's bilateral economic and trading relationships with the EU, Japan, and the United States matter more to India than to its respective partners. At a fundamental level, as India seeks incentives to turn "Make in India" into a productive reality, it needs to develop policies that promote foreign trade and investment. Designing effective policies for attracting greater foreign investment and manufacturing to India will make important strides toward achieving the Modi administration's economic goals, especially with regard to creating sustainable jobs for Indian citizens.

U.S. Perspectives on Engagement with India

Numerous interviewees stated that U.S. policy toward India during the Obama administration has shifted from benign neglect during the years of 2009–11 to a rush toward engagement in the last couple of years. Certainly, the emergence of Prime Minister Modi as an ambitious and energetic partner has sparked U.S. interest. But the absence of a lead official in the Obama administration who is responsible for India has contributed to the uneven periods of engagement and has had a negative impact on the United States' ability to push forward a bilateral agenda. While Secretary of State John Kerry may be willing, he has numerous other responsibilities, often of a crisis nature. Moreover, Washington took a very long time to nominate and confirm Richard Verma as ambassador to India, sending an unfortunately dysfunctional message about the importance of India to the United States in the process.

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50 Pravakar Sahoo, "Making India an Attractive Investment Destination: Analyzing FDI Policy and Challenges," NBR, Working Paper, December 2014, http://www.nbr.org/research/activity.aspx?id=504.

51 Interview with a former senior U.S. government official, Washington, D.C., September 2014.

After the second head-of-state meeting and President Obama's second visit to India in January 2015, it may well become the case that India policy is managed by the White House, as has happened in a variety of key bilateral relationships for the Obama administration. Although such a decision would bode well for the visibility of India-related issues for top policymakers, it could also prove a handicap on relations due to limited bureaucratic staffing and resources to carry out initiatives within the Executive Office of the President. Moreover, as the United States enters its next presidential election cycle, the attention devoted to foreign policy issues may well diminish. It is thus imperative that the U.S. government prioritize both paying high-level leadership attention to the relationship and establishing more durable midlevel contacts. Fundamental issues for the United States include how to change the tenor of its interactions with India in general but especially pertaining to trade and IP policy. Alyssa Ayres has captured well what interviewees conveyed, namely that the tone of bilateral dealings on this issue matters greatly:

> In 2013 the atmosphere deteriorated sharply when exasperated U.S. businesses, industry associations, and members of Congress began urging more aggressive action (against India). In 2014, the U.S. International Trade Commission held hearings on India at Congress's request, and the U.S. Trade Representative's office reviewed India for Special 301 Priority Foreign Country designation, with a further out-of-cycle review in the fall. This all-sticks, no-carrots approach has achieved little with India, which sees these processes as illegitimate and outside the WTO. Getting back on track with India will require something positive to collaborate on.[52]

Case Study: The WTO Trade Facilitation Agreement (TFA) and Perceived Implications

India's refusal to meet the legal protocol deadline for the WTO TFA in July 2014 caused U.S. trade leaders to question whether Prime Minister Modi would bring real change to India's international positions. Despite the obvious benefits the TFA would provide to developing countries,[53] India's position was couched in very real concerns about food security—regardless of assurances it may have received from the United States. India doubled down on a position Washington did not like, perhaps out of a desire for Prime Minister Modi to be seen as a champion of India's farmers and thus help the National Democratic Alliance garner more votes from a traditional United Progressive Alliance constituency in upcoming elections.[54]

While the issue was resolved in fairly short order, numerous American interviewees for this project, including former senior trade officials, were dismayed with India's decision. The residual effects could negatively influence perceptions going forward. Beyond the consequences of the decision for the international trading system, the issue does little to persuade observers that India does not have some outlier positions on international trade conventions.[55] To be sure, elected leaders must first and foremost represent their own domestic constituencies. However, reneging

52 Alyssa Ayres, "Bringing India Inside the Asian Trade Tent," Council on Foreign Relations, Policy Innovation Memorandum, no. 46, June 2014, http://www.cfr.org/india/bringing-india-inside-asian-trade-tent/p33173.

53 The International Chamber of Congress (ICC) asserts that the agreement would boost the global economy by $1 trillion over time and create an estimated 21 million jobs, including 18 million jobs in developing countries. In addition, the positive impact on small and medium-sized enterprises, reduced transaction costs in global supply chains, and provisions to reduce food wastage while waiting at borders would ultimately benefit the world's poorest populations. "Six Reasons to Save the TFA," ICC, July 29, 2014, http://www.iccwbo.org/News/Articles/2014/Six-reasons-to-Save-the-TFA.

54 M.K. Venu, "India's WTO Position Reflects Modi's Desire to Emerge as a Champion of Farmers," *Quartz India*, July 30, 2014, http://qz.com/241215/indias-wto-position-reflects-modis-desire-to-emerge-as-a-champion-of-farmers.

55 Arvind Subramanian, "India's WTO Problem: A Proposal," Ideas for India, July 31 2014, http://ideasforindia.in/article.aspx?article_id=324.

on an agreement reached by a previous government, even if only to make an adjustment on the timeline of a separate agreement, hurts India's reputation.

Views from the U.S. Congress

The Senate India Caucus, chaired by Senators Mark Warner and John Cornyn, seeks to build a constructive relationship with India, one that focuses on solving problems rather than dispensing rhetoric. Indicative of this approach, Senator Warner argued for the United States to pursue a "one-hundred-day agenda" immediately after the election of Modi as a way to build momentum. Reflecting the soundness of the caucus's recommendations, seven of twelve suggestions were adopted in part or full by leadership in the two countries.[56]

India figured prominently in a Senate Finance Committee hearing on President Obama's 2014 trade policy agenda held on May 1, 2014. In his opening statement, Senator Ron Wyden, chairman of the committee, discussed the technological changes and standards that countries like India and China now use to extract U.S. IP for use by their own domestic firms and referred to it as "a shakedown, plain and simple." Senator Orrin Hatch, ranking member on the committee, asserted his view that India's actions were clear violations of WTO obligations. Senator Bob Menendez also raised concerns about India's pharmaceutical patent violations and highlighted the USTR Special 301 Report released one day earlier, which included strong statements about the need for improved IP regimes.[57]

Nine months later, in January 2015, India was not mentioned in the opening statements of new Senate Finance Committee chairman Senator Hatch or ranking member Senator Wyden at a hearing on President Obama's 2015 trade policy agenda.[58] Although much progress has indeed been made in harmonizing U.S. and Indian views on IP protection, fundamental issues still remain, including reconciling Indian policies on compulsory licensing and additional innovation requirements for patents. At the end of the day, the two partners must continue to work hard to address those issues in ways that strengthen bilateral ties.

International Dimensions

The limitations of the current U.S. approaches to improving Indian IP protection underscore the need for an international and multilateral understanding of the issues. In interviews and workshops conducted for this study, perspectives from Japan and EU member countries offered both similarities and differences with U.S. and Indian views as well as opportunities for engagement.

Japan

Indian and Japanese cooperation is expected to accelerate under the leadership of Prime Ministers Modi and Shinzo Abe, who have reportedly established a warm personal relationship.

[56] "Sen. Warner Applauds Progress on U.S.-India Relations as Called for in His 'First 100 Days' Plan," website of Senator Mark Warner, September 12, 2014, http://www.warner.senate.gov/public/index.cfm/2014/9/sen-warner-applauds-progress-on-u-s-india-relations-as-called-for-in-his-first-100-days-plan.

[57] The full hearing and associated opening statements are available online. See "President Obama's 2014 Trade Policy Agenda," hearing before the United States Senate Committee on Finance, Washington, D.C., May 1, 2014, http://www.finance.senate.gov/hearings/hearing/?id=3064b778-5056-a032-523b-0d5505711ac5.http://www.finance.senate.gov/hearings/hearing/?id=3064b778-5056-a032-523b-0d5505711ac5.

[58] "President Obama's 2015 Trade Policy Agenda," hearing before the United States Senate Committee on Finance, Washington, D.C., January 27, 2015, http://www.finance.senate.gov/hearings/hearing/?id=5ef11836-5056-a032-5292-dc24774c7fe1.

Modi's September 2014 visit to Japan highlighted a range of cooperative agreements on infrastructure projects, energy cooperation, agriculture, and science and technology as well as significant commitments to FDI.[59] India remains the largest recipient of Japanese official development assistance.

Scholars from Japan noted that the relatively undeveloped economic relationship between Japan and India is due to a range of factors.[60] Perceived low rates of IPR protection were one factor suggested as limiting investment. Further, the low absorptive capacity of the Indian manufacturing sector is linked to a weak innovative economy in India. One scholar noted that strengthened absorptive capacity would lead to increased technology transfer from Japan, but to increase absorptive capacity, India would need to improve its educational system. In particular, it was noted that new partnerships between government-funded R&D and university research centers would help increase India's absorptive capacity.[61]

Other Japanese scholars argued that sectors hold differing views of India's IP environment. For example, the electronics sector is not deeply concerned with IP issues in India because it sees the patenting environment there merely as a platform to build a larger portfolio of international patents. By contrast, Japanese pharmaceutical companies express concerns about India that mirror the concerns of their U.S. counterparts. The scholars participating in this study asserted that India's use of local content requirements and compulsory licenses as a policy tool in a variety of sectors does not necessarily violate the TRIPS Agreement.[62]

Interviewees noted that there is not a strong interest in Japanese official circles at this time in addressing India's IP environment in a high-profile way. It was suggested that this reflects both an official desire to create new opportunities for Japanese business in India and subtle pressure on companies already in India to avoid raising problems. However, Japan has more than one thousand companies operating in India, including many in sectors such as pharmaceuticals and technology-intensive manufacturing that will potentially face the same problems encountered by U.S. and EU firms.

Workshop participants and interviewees in Japan also noted the dramatic and measureable improvements in Japanese drug regulatory reviews in recent years and suggested that this would be an area of great utility for India to explore. In addition, they noted that Japanese companies in sectors that rely on IP are more aware of challenges in India but are largely unwilling to take them on directly. In some cases, companies have chosen not to enter the Indian market rather than deal with the poor IP environment there, with some concluding that India has tried to use TRIPS in creative ways to gain foreign technology. Japanese pharmaceutical firms, in particular, have a real concern that Indian companies will use TRIPS as a shield and ignore the real IP issues. Meanwhile, in addressing the access-price dynamic, companies want to firmly avoid reference pricing in lesser developed markets.

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59 "Factsheet: India and Japan—Partners for Common Development," Ministry of External Affairs (India), September 1, 2014, http://www.mea.gov.in/bilateral-documents.htm?dtl/23967/Factsheet+India+and+Japan++Partners+for+Common+Development.

60 Bilateral total trade in goods and services in 2012 was just $18 billion and investment stock was at $12 billion.

61 Watanabe, "IPR Policy in India." Watanabe concludes that an Indian version of the U.S. Bayh-Dole Act, which apportions IP rights from government-sponsored research to universities, would make important contributions to the development of a more IPR-friendly environment in India. Watanabe, who has consulted with Indian policymakers, notes that India's Ministry of Commerce and Industry has already acknowledged the importance of such legislation.

62 Ryu Takabayashi and Christoph Rademacher, "A Japanese Perspective on Indian IP Law," NBR, Working Paper (forthcoming).

On the whole, however, Japanese scholars, legal experts, and policy and thought leaders appear eager to interact with their Indian counterparts, despite the concerns of Japanese officials and business leaders.

European Union

Despite the fact that it is India's largest trading partner,[63] the EU has taken a relatively quiescent posture on the country's IP environment. Interviewees suggested that this is a function of several factors:

- Bureaucratically, the euro crisis and the current focus on the Transatlantic Trade and Investment Partnership have prevented policymakers from committing more time and attention to building productive relationships with Asia in general and with India in particular. Indeed, the amount of attention policymakers can give to India is limited, especially considering that India accounts for only 2.1% of the EU's total trade.
- Interviewees revealed a degree of "India fatigue" in European official and policy circles. The lack of movement on negotiations for a free trade agreement (FTA)—first begun in 2007—due to India's unwillingness to compromise on tariffs for core EU interests has caused EU leaders to begin to lose interest in the process. Initial meetings between European Commission negotiators and their new Modi administration counterparts have not resulted in progress on IP issues.
- Workshop participants noted that there is considerable debate regarding the EU's own IP and innovation policy and how this should translate into bilateral relations with emerging economies such as India.
- A European Commission official commented that India is perceived in the commission as a negative factor for international trade. This perception is largely related to the importance that the EU places on multilateral solutions and the view that India blocked such efforts in the WTO—for example, through its failure to support the TFA in July 2014 after initially supporting the agreement.
- However, as a European Commission official noted, the EU has little choice but to engage with India due to the size of the market. This official emphasized that 90% of the EU's trade growth is from outside the EU.
- A 2014 study by the Europe India Chamber of Commerce and the European Business and Technology Centre did address inadequate IP protections as an overall challenge for European companies in India.[64] Interviewees noted concerns that IP positions might be watered down in negotiations for an FTA. Specifically, they confirmed what was rumored in 2013, namely that the European Commission had decided not to pursue an IPR chapter in then ongoing FTA negotiations in a futile effort to clinch a deal.

Individual member states vary in their approach, with the United Kingdom, France, and Germany having the most robust profiles with India. Moreover, according to interviewees, there is significant interest and support for NGO capacity-building efforts in India at the national level. Nonetheless, the apathy of official Europe toward India—however short-term this perspective might be—ought to be of concern to Indian policymakers. Diminished European interest could

[63] In 2013, the EU's percentage of India's total trade was 13%, whereas India was only the EU's tenth-largest trading partner at 2.1% of total trade. See "European Union, Trade with India, 2013," European Commission Directorate-General for Trade, http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113390.pdf.

[64] Adith Charlie, "European Companies in India: Reigniting Economic Growth," Europe India Chamber of Commerce and European Business and Technology Centre, May 2014.

have severe implications for India's "Make in India" campaign as well as broader economic development issues.

Other International Perspectives

International Chamber of Commerce. The International Chamber of Commerce notes a fundamental divergence between U.S. interpretations of TRIPS obligations and those of other countries, including India. So-called second-use patents—that is, patents for the new use of an existing compound—are strongly supported by the United States and most other major developed economies. But India, as well as members of the Andean Community and other nations, do not grant second-use patents, even if the tests of "novelty, inventive step, and industrial application" are met. Section 3(d) of the Indian Patents Act specifically defines a new use for a known substance as non-patentable.[65]

World Intellectual Property Organization (WIPO). WIPO's database details India's accomplishments in improving its IP environment, which is significant because of the importance placed on WIPO by India. For instance, WIPO notes that since joining the WTO in 1995, India has passed thirteen of the country's fourteen domestic laws establishing standards and enforcement on patents, trademarks, and copyright protections.[66]

These additional international views reinforce an important policy challenge for developed economies in dealing with India's innovation and IP policies: the lack of unanimity regarding what is permissible under the TRIPS Agreement creates hurdles for foreign business operating in India. It also suggests that solutions to the challenge must address policy-level decision-makers in effective ways that will lead to a convergence of views over time.

Key Findings

Overall, the interviews, essays, and workshops of this initiative suggest a number of key findings. This report finds that strengthened IPR protections in India will increase investor confidence and decrease market uncertainties; create a more hospitable environment for technological transfer, which is so essential for reforming India's manufacturing sector; and thus help achieve the ambitious "Make in India" economic agenda of the Modi administration. Indeed, "Make in India" is in many ways a vision in need of greater IPR protection. Policy changes to strengthen IPR would likely result in increased FDI and technology transfer, better access in the Indian market to new products and technologies, higher rates of innovation, and consequently more robust economic growth.

Beyond the technical benefits of greater protection of IPR, this study also finds that there are important intangible benefits as well. Strengthened IPR protections would enhance, and even accelerate, the achievement of the Modi administration's goals for economic reform and renewal. International partners whose financing and operational know-how are so essential to India's ambitious plans would be encouraged and reassured about India's policy trajectory. Finally, business communities in both the United States and India would be in a position to

[65] "The ICC Intellectual Property Roadmap: Current and Emerging Issues for Business and Policymakers," ICC, 2014, http://www.iccwbo.org/Products-and-Services/Trade-facilitation/IP-Roadmap.

[66] For a complete list of the main IP laws enacted by the Indian legislature, see "India," World Intellectual Property Organization, http://www.wipo.int/wipolex/en/profile.jsp?code=IN.

bolster an emerging strategic partnership rather than bemoaning circumstances that preclude deepened engagement.

But perhaps most importantly, this report notes that the future strength of the U.S.-India bilateral relationship is linked to both sides developing a way to deal with challenging issues. As one former U.S. government official recounted in an interview, the United States and India "do not have a problem-solving relationship to date."[67] Getting to a point where dealing with challenging issues does not derail the overall relationship is essential. Ultimately, strengthening the bilateral relationship must take a bottom-up approach by addressing and solving bilateral issues as they arise. Richard Ellings notes:

> If [concerns in the U.S.-India economic relationship] are addressed in ways that enhance each nation's interests in economic development, the United States and India are positioned to collaborate more effectively on a broader set of international political and security questions. But to do so, there first needs to be a policy context for understanding and framing the impasses on economic and trade issues in ways that can lead to fundamental breakthroughs…. The time is right to move the relationship forward, but achieving significant progress will require effective management of bilateral trade and economic policy issues, accompanied by strategic engagement on security and foreign policy fronts.[68]

In addition to these high-level findings, several other points raised in initiative discussions are worth mentioning. These pertain to key issues for Indian policy, international business concerns, the broader international impacts of Indian policies, and the outlook for U.S.-India ties, as noted in turn below.

Indian Policy

- A strengthened IP environment in India is a necessary precondition for the development of a more innovative economy and for welcoming increased inward FDI and technology transfer, factors that will contribute to higher levels of economic growth. Strong IP will benefit the "Make in India" campaign.
- Greater IPR protection in India disproportionately benefits Indian economic development, whereas poorer IPR protection disproportionately disadvantages the country. Making effective policy changes on this issue is thus an imperative.
- In this regard, the chief challenge for foreign partners is that Indian government IP policy is often inadequate, outdated, or poorly developed. This contrasts with other developing markets for foreign partners, which often present comparably more difficult enforcement challenges.
- Important developments have occurred and more are pending. The Modi administration, for example, has announced plans to implement a national IPR policy and employ more bureaucratic resources and personnel to reduce the backlog of patent applications. However, these developments serve to underscore the central issue: Indian policy needs adjustment. Although Modi has signaled his intent to make changes, the current industrial policy focus is misaligned with a global, innovative economy.

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67 Author's telephone interview with U.S. government official, December 2014.

68 Richard J. Ellings, "Strengthening the U.S.-India Relationship," NBR, Report, July 2014, http://www.nbr.org/research/activity.aspx?id=469.

- Recent increases by the Modi administration in allowable levels of FDI in certain sectors will have a positive impact and should be applauded.

International Business Concerns

- Experts disagree as to whether India's approaches to the patentability of additional innovations to products covered by existing patents, as well as compulsory licenses, are compliant with the TRIPS Agreement. However, what is clear is that its approaches to TRIPS compliance have created an environment of uncertainty for foreign business investing and operating in India.
- Collectively, India's IP policy challenges undermine the confidence of foreign firms to invest in India. Dismissing IP concerns as a "sectoral issue" underestimates the chilling effect on foreign investment in India's economy, which could undermine the government's "Make in India" objectives. This can be seen in a variety of sectors, such as manufacturing, clean tech, and biopharmaceuticals.
- In general, a broad-based assessment of the foreign business community reveals an ambivalence about market prospects in India. Firms see tremendous prospects in the Indian market, and are encouraged by recent developments, but at the same time remain deeply concerned about the trajectory of Indian policy and its implications. Some firms have set artificially low market expectations, while others have declined to send most advanced products to India, with so-called "delayed rates of introduction" effects.
- Individual sectors and industries face a variety of challenges in India's IP environment.
  - The biopharmaceutical sector must deal with policy regarding patents, especially compulsory licenses and the patentability of incremental changes in medicines. Indian policies are seen as being counter to U.S., EU, and Japanese policies that recognize the incentives needed to spur innovation.
  - The manufacturing sector must address technology-transfer requirements within the context of national industrial policy and the inclusion of provisions for compulsory licenses in India's national manufacturing policy.
  - The clean-tech and solar sectors must deal with local content requirements, which push for technology transfer in the context of joint arrangements and new domestic manufacturing facilities. Additionally, there is an emerging belief that the logic of Indian policy for using compulsory licenses in the pharmaceutical sector might be applied to advanced manufacturing as well.
  - The ICT sector faces high rates of unlicensed software and serious piracy challenges.
  - Copyright industries, such as publishing and entertainment, must deal with poor enforcement regimes, a problem that Indian companies share.
- A key sector of contention is pharmaceuticals. Companies perceive an arbitrary policy environment with regard to the use of compulsory licenses and "additional innovation requirements" under section 3(d) of the Indian Patents Act, conducted under the guise of increasing access to life-saving medicines for India's poor. While access (and therefore pricing) of medicines is an important consideration, an improvement in the delivery of healthcare services in India necessarily would require the commitment of greater government resources.[69]

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[69] For example, India's government spends only about 1% of GDP on healthcare, challenging the viewpoint that costly medicines are a singular factor keeping Indian citizens from better healthcare. Aditya Kalra, "India Slashes Health Budget, Already One of the World's Lowest," Reuters, December 23, 2014, http://in.reuters.com/article/2014/12/23/india-health-budget-idINKBN0K10Y020141223.

For their part, some pharmaceutical companies have indicated a willingness to explore creative pricing approaches, but more work must be done here.

Broader International Impacts

- International and multilateral perspectives will play an essential role. In some respects, the polarization of Indo-U.S. discourse on India's IP environment creates a window for European and Japanese stakeholders to provide useful perspectives.
- Numerous interviews revealed that India's IP issues are a much lower priority at official levels in both Japan and the European Commission than they are in the United States.
  - Following Prime Minister Modi's successful visit to Japan, Japan is cautiously optimistic that Japanese companies will not encounter IP challenges in the Indian market.
  - The European Commission has essentially postponed its own pursuit of an IP dialogue after the Modi administration indicated the necessity of pursuing domestic reforms first.
  - Nonetheless, important Indian trading partners who share the United States' views regarding India's IP and innovation environment ought to be encouraged to make constructive contributions to positive developments in India, including to capacity-building and policy harmonization initiatives.
  - Both Japanese and European interlocutors reported frustration with India's IP regime and hinted at the potential for longer-term disengagement from the Indian economy.
- In terms of the impact of Indian IP policies and practices on other developing economies, the evidence is more limited. A contagion effect, in which other countries adopt India's model, is not a widespread challenge, but India does advocate for views at the WTO based on a significantly different understanding of its TRIPS obligations from that of most developed economies.[70] This heightens the uncertainty of India's trading partners regarding the country's commitment to international trading regimes.
- Interviewees noted the absence of a broad middle-ground consensus in India about the benefits of free trade to the country's overall economic well-being.

The Importance of the U.S.-India Bilateral Relationship

- Interviewees made clear that the tone of policy dialogue in 2013–14 was not conducive to effective resolution of this essential bilateral foreign policy challenge. Too often, IP issues were approached as domestic U.S. and "inside the beltway" issues.
- Interviewees have emphasized that the fibers of bilateral relations at all levels in the U.S.-India context need to be thickened to begin to affect Indian policy. Multilevel, regular dialogue between U.S. and Indian counterparts represents a key variable in whether convergence in U.S. and Indian policy views occurs. The same holds true for India's bilateral relationships with the EU and Japan.
- In the last year, an expanding web of U.S.-Indian negotiating venues, invigorated by the two head-of-state visits and approximately 30 agreements reached in the interim, has set the scene for a deeper partnership that will address strategic issues. However, both governments must

[70] India is an influential contributor to the South Centre, according to U.S. government officials who were interviewed for this project. The South Centre is based in Geneva and is a strong contributor to the policy dialogue in WTO deliberations. The organization reflects, per its name, perspectives of the Global South. For more information on the South Centre, see http://www.southcentre.int/about-the-south-centre.

recognize that increasing the confidence of U.S. firms operating in India is a necessary component of an overall strengthening of the bilateral relationship and ought not be underestimated.

- U.S. support for India's broader development goals is critical as well. The daunting employment, infrastructure, and bureaucratic challenges that the Modi administration faces present important opportunities for the United States to engage New Delhi in ways that advance Indian efforts to achieve these goals.
- Interviewees emphasized that progress needs to be made on these issues in 2015 lest they become a draft on the bilateral relationship.

Recommendations for Public Policy

This report provides findings and analysis derived from interviews and commissioned research. It finds that multiple sectors are experiencing challenges in IP protection or enforcement in India. Moreover, there are different understandings about India's TRIPS obligations. The report concludes that policy solutions to these IP challenges are necessary and important to strengthen overall bilateral ties.

Consequently, in addressing these issues, the most effective strategies will likely be those that shape and change Indian policy rather than seek to strengthen enforcement or punish individual violators by limiting their access to markets and financial institutions. In general, interviewees made clear that policy changes and practical solutions ought to be considered together. Government-sponsored dialogue on innovation with private-sector participation is one useful recommendation. Interviewees assessed that public-private partnership engagement holds real promise as well.

Additionally, both the United States and India could take unilateral steps as demonstrations of good faith. The steps that were initiated by Prime Minister Modi before his visit to Washington in September 2014, such as creating a national IP policy and increasing the number of patent examiners, are encouraging. India might also declare a moratorium on new compulsory licenses for the pharmaceutical sector, just as it has recently declared that local content requirements only apply to 50% of the solar sector.

For their part, U.S. business leaders and policymakers might extend the period of calmer rhetoric on Indian IP issues. Despite not supporting Indian tactics that have delayed approval of the WTO's TFA, the United States did contribute to a workable solution. Such an approach that focuses on problem-solving rather than engaging in heated rhetoric is a good model going forward.

India

The recommendations for India are linked to the principal finding of this report that India still has outdated policies that are at cross-purposes with its goal of building a world-class innovative environment. In particular, these policies undermine efforts to attract the sorts of international investment and operations that will help achieve this goal. While the draft IP policy includes many desirable features, this report emphasizes several points for consideration and inclusion in the new Indian national IP policy.

- *Consider a hiatus in the employment of compulsory license*s. India views its policy regarding when and how to issue a compulsory license as TRIPS-compliant and its prerogative as a sovereign nation. Yet a self-imposed ban on employing this policy tool would not diminish Indian sovereignty and would help reduce the foreign business community's uncertainty in the Indian market.[71]

- *Engage in public-private dialogue on patent-efficacy requirements*. This recommendation assumes that Indian patent law is unlikely to be changed in response to pressure from abroad. Given that foreign firms report great uncertainty with regard to the application of section 3(d) of the Indian Patents Act, negotiated settlements are preferable outcomes, especially if they can be conducted before the public scrutiny of high-profile legal cases forecloses flexible outcomes.
- *Create IP courts*. While India has an Intellectual Property Appellate Board, no court dedicated to IP exists. Such an entity would improve the efficacy and timeliness of judicial decisions related to IP matters and increase investor confidence that IP cases would be heard promptly. The draft IPR policy endorses this recommendation. Japanese legal specialists expressed interest in collaborating with their Indian counterparts to make such a court a reality.
- *Pass a trade-secrets law*. India lags behind major industrial economies in this regard. While trade-secret theft from Indian sources is not a huge problem for foreign companies to date, passing such a law is one indicator of a proactive approach to IPR protection. Moreover, because the problem is not yet significant in India, domestic opposition is relatively low.
- *Pass regulatory data-protection rules*. Data exclusivity on clinical testing is an essential element in the development of an innovative economy. This is a difficult challenge, to be sure, but addressing it would constitute a very positive contribution to India's interaction with foreign firms and would set high standards for Indian firms.
- *Engage with Japan*. Japanese industry and government officials envision considerable scope for legal, professional, and judicial exchanges between Indian and Japanese counterparts in light of recent experience in these areas. Japanese interviewees noted dramatic and measurable improvements in Japanese drug regulatory reviews in recent years and suggested this would be an area of great utility for India to explore.
- *Pass an Indian version of the Bayh-Dole Act*. Such a law would both incentivize government-sponsored R&D and clarify who owns the IPR of inventions that might ensue. Japanese and EU officials strongly recommended this action. India could create a legislative framework that provides for enhanced cooperation between universities and the government, with clear expectations about who owns the IP of these collaborative efforts.
- *Strengthen the innovation ecosystem in India, including Human Resource Development IPR managers*. The improved capacity of officials designated to manage IPR portfolios is expected to help increase the absorptive capacity of India's manufacturing sector and thus attract more technology transfers from abroad, including Japan.[72]

The United States

The recommendations for the United States are linked to a second critical finding, namely that the tone and conduct of bilateral relations shape outcomes in important ways. Moreover, a strengthened role for the U.S. Congress would lend greater weight to issues of innovation and IP.

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71 Arvind Subramanian has argued for a "stay" on "government-initiated compulsory licenses" for drugs not on the World Health Organization's essential medicines list. See Arvind Subramanian, "Testimony: U.S.-India Intellectual Property Rights Issues: Comment on USTR Special 301 Review," March 7, 2014, 4, http://www.iie.com/publications/testimony/subramanian20140307.pdf.

72 Watanabe, "IPR Policy in India."

- *Push for immediate resolution of a bilateral investment treaty with India*. This step deserves top priority both on its own merits and for the message it conveys to India about the country's importance as a U.S. trading partner.
- *Reinvigorate capacity building in support of Indian healthcare reform and primary care support*. The joint statement resulting from President Obama's January 2015 visit to India notes that discussions of healthcare will be upgraded to a healthcare dialogue, and this initiative needs full support.[73] India faces a range of public health crises, including high incidence of waterborne illnesses, tuberculosis, diabetes, and other diseases. Cross-dimensional support for addressing these challenges cannot but help develop the sort of good will that will redound to the issues addressed in this report.
- *Consider raising the U.S. Patent and Trademark Office engagement with India to the level of the IP5*.[74] The resources and commitment that come with an IP5 designation merit consideration and support, especially when joined with effective USPTO programs already ongoing. Moreover, such a designation acknowledges the important legal frameworks that India has put in place for protecting patents.
- *Encourage public-private dialogue on pricing for pharmaceuticals*. Sponsored discussions with Indian government and industry can improve access for Indian citizens without undermining global prices. Potential models for how this might be achieved include setting standard drug prices, with subsequent courses of drugs provided at reduced prices (at the company's discretion), and ensuring that expensive private hospitals pay full price. Pricing case studies in different densely populated locations would be an important data point for launching discussions.[75]
- *Encourage more private-public dialogue and less public posturing*. In the solar space, the global good of enhanced use of renewable energy sources is hampered to some degree by ineffective Indian policy. In particular, Indian local content requirements await WTO dispute resolution. Collaborative and outcome-focused negotiations, as opposed to public posturing, might help avoid future WTO adjudication cases regarding local content requirements. Pre-clearing via public-private discussions what acceptable levels of government support measures might look like is one approach.
- *Establish a U.S.-India parliamentary exchange*. The importance of the U.S.-India bilateral relationship and the significant role that members of Congress can play in constructive interactions with their counterparts in the Indian parliament argue for the early passage of legislation to enact a formal parliamentary exchange. An important follow-on step would

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73 "U.S.-India Joint Statement: Shared Effort, Progress for All," White House, Office of the Press Secretary, January 25, 2015, https://www.whitehouse.gov/the-press-office/2015/01/25/us-india-joint-statement-shared-effort-progress-all.

74 The IP5 are the five largest IP offices in the world: the European Patent Office, the Japan Patent Office, the Korean Intellectual Property Office, State Intellectual Property Office of the People's Republic of China, and the U.S. Patent and Trademark Office. The IP5 together handle approximately 80% of the world's patent applications and 95% of all work carried out under the Patent Cooperation Treaty. For more on the IP5, see http://www.fiveipoffices.org/about.html.

75 USITC, *Trade, Investment, and Industrial Policies in India*, 155. Numerous cases suggest the importance of the issue. At the Organization of Pharmaceutical Producers of India conference held in October 2013, Christopher Viehbacher, the global CEO of Sanofi, pointed out "that the pharma industry's obligation extends much beyond other industries and includes providing quality healthcare at an affordable cost." Viehbacher said that new pricing models must be developed "to address the challenge of accessibility and affordability." GlaxoSmithKline CEO Andrew Witty has also advocated for "a tiered pricing mechanism, which includes offering exorbitantly priced lifesaving medicines at a fraction of the cost in developing countries like India." In 2008, Merck Sharp and Dohme Corp. introduced Januvia and Janumet (both anti-diabetes drugs) in India and adopted a differential pricing strategy. The drugs' prices in India are roughly one-fifth of their prices in the United States and some other regions. For more on Viehbacher's views and on tiered-pricing models, see "Tiered Pricing to Make Drugs Affordable: Sanofi CEO," *Times of India*, October 1, 2013, http://timesofindia.indiatimes.com/business/india-business/Tiered-pricing-to-make-drugs-affordable-Sanofi-CEO/articleshow/23327798.cms; Andrew Jack, "Flexible Pricing Pays Off for Drugs Groups," *Financial Times*, January 21, 2010, http://www.ft.com/intl/cms/s/0/a6daa476-06b8-11df-b426-00144feabdc0.html#axzz38JDOTgL6; and Shamnad Basheer, "Gauri Kamath on Drug 'Differential Pricing' in India," Spicy IP, June 30, 2008, http://spicyip.com/2008/06/gauri-kamath-on-drug-differential.html.

be to create an IPR working group as one of the areas on which the parliamentary exchange would focus.

- *Contribute to capacity building*. Programs that engage U.S., Indian, European, and Japanese legal professionals are highly cost-effective long-term mechanisms for capacity building that will help increase understanding and harmonization of perspectives. Congressional support for such programs, both rhetorical and via appropriations, would pay long-term dividends.[76]
- *Engage and foster competitive federalism*. As suggested by Indian observers, such an approach would be encouraged and funded by both U.S. and Indian governments to create local centers of IP excellence in India. These centers would be matched with counterparts nationwide to make awards and designate strong programs.

Conclusion

NBR launched this study of India IP and innovation policies in January 2014 at the nadir of bilateral interactions between the United States and India. This report presents the study's findings roughly a year later when relations are at a high point. The rapid improvement in bilateral ties, however, must be placed within an appropriate context.

Despite the progress in bilateral ties over the past year, including in Indian policies that affect foreign businesses operating in India, the rapid pace of change ought not obscure how much work remains to be done. The findings of this report suggest that caution is in order when making predictions about the future direction of India's IP policy.

Real obstacles do remain: the Indian market is fraught with challenges, new investment remains difficult, licensing and regulatory approvals are lengthy, and IP protections are inconsistent. The stakes will only continue to rise as high rates of Indian economic growth return and India seeks greater foreign engagement as part of the "Make in India" campaign. Indian policymakers should appreciate that the degree to which foreign companies will participate will in part reflect their confidence in Indian business policies, of which IP policy is an important dimension. Moreover, Indian policymakers would do well to appreciate the disproportionate costs that poor IP policies have for India, as well as the disproportionate benefits that India will receive by improving its IP policies.

The manner in which the United States and India address these challenges both reflects the tenor of the overall bilateral relationship and serves as a driver for its future direction. As the two countries develop better problem-solving practices and thus build a more strategically important relationship, they will do well to place importance on the tone and tenor of their discourse.

At its outset, this project prioritized finding productive ways to address real issues, but doing so in a way that strengthens bilateral ties. Looming challenges confront the U.S.-India relationship, and the above cautionary notes ought to be carefully considered when working to address them.

[76] The Center for Advanced Study and Research on Intellectual Property at the University of Washington School of Law is one such program that is highly effective.

NBR's Trade, Economic, and Energy Affairs Group

Fostering collaborative solutions to shared challenges in the Asia-Pacific

NBR's Trade, Economic, and Energy Affairs Group collaborates with a broad range of U.S. and Asian specialists from industry, research, and policy to conduct innovative research and convene high-level dialogues. Guided by an in-house research team and a select group of senior advisors, the group's research focuses on three broad areas: (1) energy security and policy, (2) energy and the environment, and (3) trade, investment, and economic engagement.

Highlighted initiatives include:

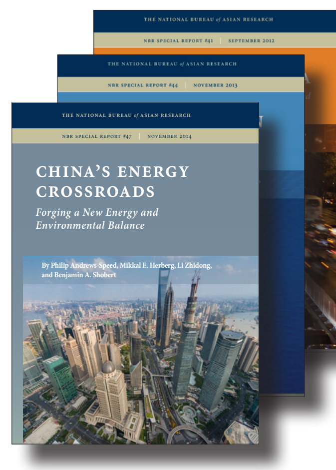
Pacific Energy Summit

As economies in the Asia-Pacific region continue to grow at astonishing rates, the Pacific Energy Summit aims to foster economic and energy security in the Asia-Pacific by developing practical solutions to the dual challenges of rising energy demand and global climate change. The annual, invitation-only Summit convenes 200 global leaders to articulate practical and tenable policy solutions to energy and environmental challenges.

PACIFIC
ENERGY SUMMIT

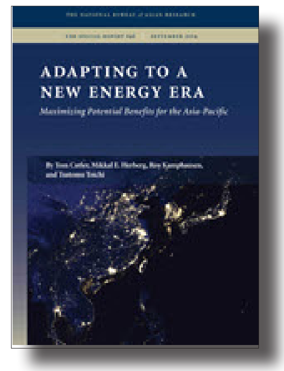
Energy Security Program

Dramatic developments are taking place in Asian energy markets, and these changes will affect the geopolitical situation in the Asia-Pacific region. Rising demand has led to increasing dependence on energy imports and a growing sense of energy insecurity among the major Asian powers. To address these issues, this initiative convenes senior policy and industry leaders and Asia energy specialists from across the region for high-level discussions on Asia's energy policies and their geopolitical implications. Experts share insights and recommendations through an invitation-only spring workshop; NBR's annual Energy Security Report, which compiles expert essays on each year's specific topic; and a public fall launch event.



Adapting to a New Energy Era

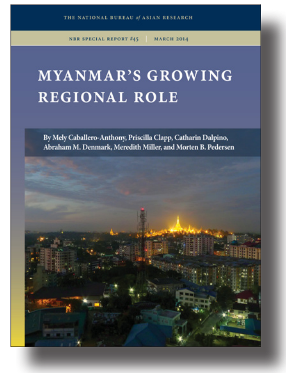
An unexpected boom in U.S. and Canadian production of shale gas and tight oil has accelerated an already steady decline in U.S. imports of Middle East oil and gas. At the same time, China, Japan, and the rest of Asia have emerged as major importers of oil and natural gas from the Persian Gulf. This initiative aims to provide in-depth and academically rigorous research into how the United States, Japan, and other countries can craft stronger diplomatic, strategic, and economic tools to support common energy security interests.



"NBR does a terrific job at getting great people, with great ideas, and making it into a process of dialogue and interaction that leads to recommendations that are very useful in the policymaking process."
— **Robert Hormats,** *Former Under Secretary of State for Economic Growth, Energy, and the Environment, Department of State, United States*

Myanmar's Growing Regional Role

Myanmar's recent domestic reforms and improved relations with the United States, European Union, Japan, and the Association of Southeast Asian Nations have opened the door for the country to be an important regional player. To better understand the challenges and opportunities presented by these shifting dynamics, this multi-year project brings together top experts from the United States, Myanmar, and the Asia-Pacific to deepen regional understanding. NBR's Myanmar initiative seeks to develop a comprehensive framework for the future of the country's engagement with partners in the region.



Innovation and IP Policy

Economies in the Asia-Pacific have shown unprecedented growth rates in recent years, and the United States aims to engage with the many burgeoning economies in the region. As India, China, and others work to further develop their economies, intellectual property and innovation policies have increasingly appeared in national and international discussions. To assess these key issues, NBR has developed projects looking at intellectual property protection and innovation policy development in the Asia-Pacific and how emerging players in the region continue to shape global discourse on the future of these policies.

Pacific Energy Forum

PACIFIC ENERGY FORUM

Broad and fundamental global energy shifts, along with rapidly evolving technologies and capabilities, suggest that Asia and North America need to fundamentally reconsider their current energy relationship. The Pacific Energy Forum gathers experts and leaders from Asia, the United States, and Canada to assess the key policy questions that will shape the future trans-Pacific energy relationship and enhance energy and environmental cooperation among key actors in the region.

For more information on these programs, please contact the Trade, Economic, and Energy Affairs group at eta@nbr.org.

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