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## Background Note: Standard Essential Patents, Innovation and Competition: Challenges in India

Arpan Banerjee  
abanerjee@jgu.edu.in

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# BACKGROUND NOTE: STANDARD ESSENTIAL PATENTS, INNOVATION AND COMPETITION: CHALLENGES IN INDIA

*Arpan Banerjee\**

## INTRODUCTION

In September 2014, a few months after a landslide election victory, the Indian Prime Minister Narendra Modi announced the launch of “Make in India,” an ambitious program designed to turn India into a global manufacturing hub. One of the factors widely thought to be responsible for Modi’s victory was support from India’s “neo-middle class”—a young, newly-urbanized section of the electorate seeking employment and improved living standards but struggling amidst an economic downturn.<sup>1</sup> In a speech inaugurating Make in India, Modi linked the program with the aspirations of this section of society. Modi stated the need to elevate the status of the poor-to-middle class as fast as possible, noting that sixty-five percent of India’s population was aged thirty-five and below.<sup>2</sup> He declared that the “[s]traight answer” to achieve this goal would be to create jobs in the manufacturing sector.<sup>3</sup> He emphasized the importance of Foreign Direct Investment (FDI) for this purpose, terming FDI as both a “responsibility” and an “opportunity.”<sup>4</sup> But Modi conceded that India’s poor rank in the World Bank’s Ease of Doing Business Index—below 130 at the time—was an impediment and had to ideally rise to fifty.<sup>5</sup> Modi thus announced that the government would reduce bureaucratic obstacles faced by

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\* Alexander von Humboldt Foundation German Chancellor’s Fellow, Bucerius Law School, Hamburg (2016–17); Assistant Professor, Assistant Dean and Executive Director, Centre for Intellectual Property and Technology Law, Jindal Global Law School, India. The author would like to disclose that the Jindal Initiative on Research in IP and Competition (JIRICO) has received funding from Qualcomm, Incorporated. JIRICO also receives support from O.P. Jindal Global University (JGU), the parent university of JGLS. JIRICO was formally launched on December 18, 2015. JIRICO presently comprises eight faculty members of JGLS, along with a team of research fellows and research assistants. The author was a member of JIRICO during its inception but is no longer affiliated with JIRICO. The author would like to thank the members of JIRICO for their assistance in preparing this note.

<sup>1</sup> In the summer of 2014, India’s national elections were won, by a record margin, by the National Democratic Alliance, a coalition whose dominant member is the Bharatiya Janata Party (BJP). Under the leadership of Modi, the BJP alone secured enough seats to form a simple majority, the first time in history it had done so. It was also the first time in twenty-five years that India, accustomed to fragile coalition governments, had witnessed a single party winning a simple majority. See generally Christophe Jaffrelot & Gilles Verniers, *The Resistance of Regionalism: BJP’s Limitations and the Resilience of State Parties, in* INDIA’S 2014 ELECTIONS 28–45 (Paul Wallace ed., 2014); RAJDEEP SARDESAI, 2014: THE ELECTION THAT CHANGED INDIA (2015).

<sup>2</sup> Narendra Modi, Indian Prime Minister, Address at the New Delhi Launch of ‘Make in India’ Global Initiative (Sept. 26, 2014) (transcript available at <http://www.mea.gov.in/Speeches-Statements.htm?dtl/24033/English+rendering+of+Prime+Minister+Shri+Narendra+Modis+address+at+the+launch+of+Make+in+India+global+initiative>) [(hereinafter “*Speech by Narendra Modi*”).

<sup>3</sup> *Id.*

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

investors.<sup>6</sup> This has been a key focus of the initiative, and various measures have since been adopted.<sup>7</sup> Make in India was followed by the launch of two complementary schemes in 2015 and 2016 respectively: “Digital India” and “Start Up India.” The stated aim of the former is to transfer India into a “digitally empowered society and knowledge economy,”<sup>8</sup> with one of its pillars being the promotion of manufacturing in the electronics sector.<sup>9</sup> The stated aim of the latter includes “fostering entrepreneurship and promoting innovation.”<sup>10</sup>

Make in India and its allied schemes have yielded some dividends,<sup>11</sup> and India’s rank in the Ease of Doing Business Index recently jumped to 100.<sup>12</sup> Yet various challenges to Make in India exist. Crucially, automation technologies, such as 3D printing, threaten to displace millions of low-skilled jobs.<sup>13</sup> As automation is seen as less of a threat in displacing jobs in electronics manufacturing,<sup>14</sup> there is a case for arguing that a strong focus of Make in India should be the manufacture of electronic products like smartphones, tablets and semiconductors. Although India’s electronics industry is growing at a rapid rate, the industry

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<sup>6</sup> *Id.*

<sup>7</sup> Dept. of Indus. Policy & Promotion, Gov’t of India, *Central Government Initiatives: Actions Completed*, MAKE IN INDIA, <http://www.makeinindia.com/article/-/v/central-government-initiatives>.

<sup>8</sup> Ministry of Electrs. & Info. Tech., Gov’t of India, *Introduction*, DIGITAL INDIA, <http://digitalindia.gov.in/content/introduction>.

<sup>9</sup> Ministry of Electrs. & Info. Tech., Gov’t of India, *Electronics Manufacturing*, DIGITAL INDIA, <http://www.digitalindia.gov.in/content/electronics-manufacturing>.

<sup>10</sup> Dept. of Indus. Policy & Promotion, Gov’t of India, *Action Plan*, STARTUP INDIA, <http://startupindia.gov.in/actionplan.php>.

<sup>11</sup> For example, India has ranked 35 (up from 54) in the latest World Bank Logistics Performance Index (JEAN-FRANÇOIS ARVIS ET AL., *CONNECTING TO COMPETE: TRADE LOGISTICS IN THE GLOBAL ECONOMY 8* (2016), [https://wb-lpi-media.s3.amazonaws.com/LPI\\_Report\\_2016.pdf](https://wb-lpi-media.s3.amazonaws.com/LPI_Report_2016.pdf)). India has also ranked 39 (up from 55) in the latest World Economic Forum (WEF) Global Competitiveness Report; the report acknowledged “improvements across the board” and confirmed India as the fastest growing G20 economy (KLAUS SCHWAB ET AL., *THE GLOBAL COMPETITIVENESS REPORT 2016–2017* 7, 17–18 (2016), [http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017\\_FINAL.pdf](http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf) [hereinafter “Schwab et al., *Global Competitiveness Report*”]).

<sup>12</sup> Huizhong Wu, *India climbs global business ranking. But it's not that simple*, CNN (November 1, 2017, 5:29 AM), <http://money.cnn.com/2017/10/31/news/economy/india-ease-of-doing-business/index.html>.

<sup>13</sup> According to research by the World Bank, two-thirds of jobs in developing countries are susceptible to automation. A study by the International Labor Organization has identified 3D printing as a likely cause for future job losses. See WORLD BANK, *WORLD DEVELOPMENT REPORT 2016: DIGITAL DIVIDENDS* 129 (2016), <http://documents.worldbank.org/curated/en/896971468194972881/pdf/102725-PUB-Replacement-PUBLIC.pdf>; Jae-Hee Chang et al., *ASEAN in transformation: How technology is changing jobs and enterprises*, International Labor Office, Bureau for Employers’ Activities (ACT/EMP) Working Paper No. 10, July 2016, xx, xxii, [http://www.ilo.org/public/english/dialogue/actemp/downloads/publications/2016/asean\\_in\\_transf\\_2016\\_r1\\_tech\\_n.pdf](http://www.ilo.org/public/english/dialogue/actemp/downloads/publications/2016/asean_in_transf_2016_r1_tech_n.pdf). In the context of Make in India, it has been argued that automation poses a threat to Make in India, and India may not be able to replicate a China-like model of manufacturing-led growth and employment. See Vikram Mansharamani, *Modi’s mega “Make in India” will bring in lots of money but not enough jobs*, QUARTZ, Feb. 19, 2016, <http://qz.com/620145/modis-mega-make-in-india-will-brings-in-lots-of-money-but-not-enough-jobs>; Rishikesh T. Krishnan, *How automation could impact Make in India*, MINT (Nov. 24, 2015, 02:41 AM IST) <http://www.livemint.com/Opinion/jMq4U3RbrZy3X14ZYrRBfO/How-automation-could-impact-Make-in-India.html>.

<sup>14</sup> Research indicates that 3D printing is “much less prominent” in the electrical and electronic goods sector compared to some others, and that “[e]lectronics assembly is a very intricate process and cannot be mimicked perfectly by full automation. Chang et al., *supra* note 13, at 32 & 37.

is heavily reliant on foreign imports—a further reason to prioritize the area within Make in India.<sup>15</sup> However, India suffers from low technological preparedness and weak ICT infrastructure.<sup>16</sup> If India is to make improvements on this front, issues involving innovation and intellectual property (IP), such as technology transfer and licensing, are likely to assume much importance. In this regard, Make in India has identified IP as a key policy component,<sup>17</sup> Digital India has included “IP generation in the area of electronics” as an objective,<sup>18</sup> and Startup India has included the commercialization of IP in its agenda.<sup>19</sup> But none of the parameters in the Ease of Doing Business Index factor in the role of IP.<sup>20</sup> Thus, linking the success of Make in India with the Ease of Doing Business Index may neither capture the concerns of foreign investors heavily reliant on IP protection, nor reflect advancements in India’s IP system.

## I. IP ENVIRONMENT IN INDIA

Global assessments of India’s innovation environment have improved in recent years, but India is arguably an underachiever relative to its size and potential.<sup>21</sup> On the subject of IP

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<sup>15</sup> See generally, ERNST & YOUNG, TURNING THE “MAKE IN INDIA” DREAM INTO A REALITY FOR THE ELECTRONICS AND HARDWARE INDUSTRY (2016), [http://www.ey.com/Publication/vwLUAssets/ey-make-in-india-april-2016/\\$FILE/ey-make-in-india-april-2016.pdf](http://www.ey.com/Publication/vwLUAssets/ey-make-in-india-april-2016/$FILE/ey-make-in-india-april-2016.pdf).

<sup>16</sup> The WEF, amidst its positive observations, has cautioned that India’s “biggest relative weakness today is in technological readiness,” with a low percentage of the population enjoying access to the internet or mobile broadband (ranking India 102 and 107 respectively, out of 138 countries). See Schwab et al., *Global Competitiveness Report*, *supra* note 11, at 19 & 203.

<sup>17</sup> *Policies*, MAKE IN INDIA, <http://www.makeinindia.com/policies>.

<sup>18</sup> *Electronics Manufacturing*, DIGITAL INDIA, <http://www.digitalindia.gov.in/content/electronics-manufacturing>.

<sup>19</sup> See *Action Plan*, START UP INDIA, <http://startupindia.gov.in/actionplan.php>; see also *Scheme for Facilitating Start-Ups Intellectual Property Protection*, STARTUP INDIA, [http://startupindia.gov.in/uploads/pdf/SIPP\\_IPR\\_Scheme.pdf](http://startupindia.gov.in/uploads/pdf/SIPP_IPR_Scheme.pdf).

<sup>20</sup> The parameters measured are: i) Starting a business, ii) Dealing with construction permits, iii) Getting electricity, iv) Registering property, v) Trading across borders, vi) Enforcing contracts and vii) Resolving insolvency. World Bank, *Doing Business 2016*, *supra* note 12, at iii. According to the World Bank, “[d]oing Business covers a limited number of regulatory constraints. And it does not measure many aspects of the business environment that matter to firms, investors and the overall economy.” *Id.* at v.

<sup>21</sup> In 2014, Indian patent filers (resident and non-resident) ranked 14 worldwide. WIPO, WORLD INTELLECTUAL PROPERTY INDICATORS 41 (2015), [http://www.wipo.int/edocs/pubdocs/en/wipo\\_pub\\_941\\_2015.pdf](http://www.wipo.int/edocs/pubdocs/en/wipo_pub_941_2015.pdf). The Indian Patent Office registered the fastest growth in patent grants (82 percent higher than the previous year), and ranked seventh in terms of total patents granted. However, India still trailed the US and China significantly, with the latter seeing nearly forty times as many patent filers. *Id.* at 23. The WEF Global Competitiveness Report ranks India 29 out of 138 countries in the category of innovation, but India’s sub-rank under PCT patent applications per capita falls to 64 (compared to 33 for China, which has a larger population). SCHWAB et al., GLOBAL COMPETITIVENESS REPORT, *supra* note, 11 at 141, 201 (2016), [http://www3.weforum.org/docs/gcr/2015-2016/Global\\_Competitiveness\\_Report\\_2015-2016.pdf](http://www3.weforum.org/docs/gcr/2015-2016/Global_Competitiveness_Report_2015-2016.pdf). In the Global Innovation Index, a more comprehensive measure of innovation, India’s rank recently increased from 81 to 66—a huge improvement, but still a low rank overall. CORNELL UNIVERSITY, INSEAD &

laws, India has consistently ranked low in global indices.<sup>22</sup> However, the low ranks have much to do with issues surrounding pharmaceutical patent protection—in particular, a Supreme Court decision upholding curbs on incremental pharmaceutical inventions and another upholding the grant of a compulsory license on an expensive anti-cancer drug, which adversely impacted Novartis<sup>23</sup> and Bayer<sup>24</sup> respectively but aided Indian generic pharmaceutical companies. This makes the indices somewhat skewed.<sup>25</sup>

As scholars are increasingly pointing out, IP can be a misleading term, as it clubs disparate subjects like copyrights, patents, and trademarks together.<sup>26</sup> Countries can advocate different levels of protection with respect to different forms of IP, depending on national economic interest.<sup>27</sup> Even within the realm of patents, priorities of nations and corporations may vary across sectors. For example, Pfizer testified before the US Congress that the decisions in *Novartis* and *Bayer* “represent a further erosion of the overall IP environment in India, which should be of concern to other IP-reliant industries.”<sup>28</sup> In stark contrast, Boeing declared, in a representation before the US International Trade Commission, that Indian IP laws were not

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WIPO, THE GLOBAL INNOVATION INDEX 225 (2016), [http://www.wipo.int/edocs/pubdocs/en/wipo\\_pub\\_gii\\_2016.pdf](http://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2016.pdf).

<sup>22</sup> For example, the US Trade Representative (USTR) places India in a Priority Watch List of countries with weak IP laws, a list where India has consistently featured. USTR, SPECIAL 301 REPORT 38 (2016), <https://ustr.gov/sites/default/files/USTR-2016-Special-301-Report.pdf>. The US Chamber of Commerce’s Global Intellectual Property Centre (GIPC) ranks India’s IP regime 37 out of 38 major economies, considerably below other developing nations like China, South Africa, and Nigeria. GIPC, INFINITE POSSIBILITIES, U.S. CHAMBER INTERNATIONAL IP INDEX 11 (4th ed., 2016), [http://www.theglobalipcenter.com/wp-content/themes/gipc/map-index/assets/pdf/2016/GIPC\\_Index\\_2016\\_Final.pdf](http://www.theglobalipcenter.com/wp-content/themes/gipc/map-index/assets/pdf/2016/GIPC_Index_2016_Final.pdf). The TaylorWessing IP Index ranks India’s IP regime 40 among 43 major economies. TAYLORWESSING, GLOBAL INTELLECTUAL PROPERTY INDEX 8 (5<sup>th</sup> ed., 2016), <https://united-kingdom.taylorwessing.com/en/taylor-wessing-launches-fifth-gipi-report>.

<sup>23</sup> *Novartis AG v. Union of India*, A.I.R. 2013 S.C. 1311 (hereinafter “*Novartis*”).

<sup>24</sup> *Bayer v. Union of India*, A.I.R. 2014 Bom. H.C. 178, *upheld in Bayer v. India*, Special Leave Petition No. 30145/2014 (Supreme Court, Dec. 12, 2014) (hereinafter “*Bayer*”).

<sup>25</sup> See Arvind Subramaniam, *US-India Intellectual Property Rights Issues: Comment on USTR Special 301 Review*, PETERSON INSTITUTE OF INTERNATIONAL ECONOMICS (March 7, 2014), <https://piie.com/sites/default/files/publications/testimony/subramanian20140307.pdf>; see also Arvind Panagariya, *India Must Call the U.S.’ Bluff on Patents*, BUSINESS STANDARD (Mar. 4, 2014, 3:27 PM), [http://www.business-standard.com/article/opinion/arvind-panagariya-india-must-call-the-us-bluff-on-patents-114030401221\\_1.html](http://www.business-standard.com/article/opinion/arvind-panagariya-india-must-call-the-us-bluff-on-patents-114030401221_1.html).

<sup>26</sup> See, e.g., Mark Lemley, *Intellectual Property and Free Riding*, 83 TEX. L. REV. 1031 (2005), [https://1.next.westlaw.com/Document/I2451821036df11db8382aef8d8e33c97/View/FullText.html?transitionType=UniqueDocItem&contextData=\(sc.Default\)&userEnteredCitation=83+TEX+L.+REV.+1031](https://1.next.westlaw.com/Document/I2451821036df11db8382aef8d8e33c97/View/FullText.html?transitionType=UniqueDocItem&contextData=(sc.Default)&userEnteredCitation=83+TEX+L.+REV.+1031); Justin Hughes, *A Short History of Intellectual Property in Relation to Copyright*, 33 CARDOZO L. REV. 1293 (2012), [https://1.next.westlaw.com/Document/Ia705bae0904111e18b05fdf15589d8e8/View/FullText.html?transitionType=UniqueDocItem&contextData=\(sc.UserEnteredCitation\)&userEnteredCitation=33+CARDOZO+L.+REV.+1293](https://1.next.westlaw.com/Document/Ia705bae0904111e18b05fdf15589d8e8/View/FullText.html?transitionType=UniqueDocItem&contextData=(sc.UserEnteredCitation)&userEnteredCitation=33+CARDOZO+L.+REV.+1293).

<sup>27</sup> See Peter Yu, *Intellectual Property and the Information Ecosystem*, MICH. ST. L. REV. 1, 9 (2005), [https://1.next.westlaw.com/Document/I49f168914a6d11dba16d88fb847e95e5/View/FullText.html?transitionType=UniqueDocItem&contextData=\(sc.Search\)&userEnteredCitation=2005+Mich.+St.+L.+Rev.+1](https://1.next.westlaw.com/Document/I49f168914a6d11dba16d88fb847e95e5/View/FullText.html?transitionType=UniqueDocItem&contextData=(sc.Search)&userEnteredCitation=2005+Mich.+St.+L.+Rev.+1).

<sup>28</sup> Written Testimony of Roy F. Waldron Chief IP Counsel Pfizer, Inc. Before the United States House of Representatives Energy & Commerce Committee Subcommittee on Commerce, Manufacturing and Trade, June 27, 2013 5, <http://docs.house.gov/meetings/IF/IF17/20130627/101056/HHRG-113-IF17-Wstate-WaldronR-20130627.pdf>.

only adequate but even comparable to IP laws in developed nations.<sup>29</sup> The company stated that it had not encountered any cases of IP violation in India, and that it saw “minimal risk” of this happening in the future, its chief buyers being the government of India and reputed private Indian airlines.<sup>30</sup> The Chairman of Boeing subsequently met Modi during the latter’s visit to the US in September 2014.<sup>31</sup> In 2016, Boeing announced its support to Make in India and expressed interest in manufacturing aircrafts in India.<sup>32</sup> Clearly, the cause for these divergent developments is the fact that India is home to numerous low-cost generic drug companies that are in direct competition with Western companies, but does not have a low-cost domestic rival to the likes of Boeing and Airbus.

Thus, a better description of India’s innovation environment and IP law regime is perhaps this—India lags behind developed countries in innovation, but the Indian government is keen to improve its performance, to boost Make in India and allied initiatives. The government is inclined to protect foreign investors through strong IP laws, but less so in sectors where the interests of domestic businesses irreconcilably conflict with the interests of foreign businesses. Hence, the need for contextualised, empirically informed discussion becomes vital. Indian policymakers tend to be generalists rather than specialists, owing largely to the manner in which the Indian government recruits its administrative officials.<sup>33</sup> While launching Make in India, Modi conceded that there was little synchronisation between government policy and the views of industry and academia.<sup>34</sup> This amplifies the need for specialist intervention in Indian IP policy, from outside government.

To its credit, the Indian government, to complement Make in India, established a National IPR Think Tank composed of external experts, and tasked it with drafting a National IP Policy. The Think Tank was headed by Justice Prabha Sridevan, a former judge with considerable experience in IP matters. Its other members included Pratibha Singh (then a

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<sup>29</sup> *Statement to the US International Trade Commission by the Boeing Company*, Feb. 7, 2014.

<sup>30</sup> *Id.*

<sup>31</sup> *PM Modi's US visit: Boeing keen on greater engagement with India*, ECONOMIC TIMES (Sep. 29, 2014, 8:23 PM), [http://economictimes.indiatimes.com/articleshow/43821642.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](http://economictimes.indiatimes.com/articleshow/43821642.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst).

<sup>32</sup> *Not Just Assemble, Boeing Keen To 'Make In India' Super Hornet Fighters*, NDTV (Feb. 22, 2016, 6:02 PM), <http://www.ndtv.com/india-news/not-just-assemble-boeing-keen-to-make-in-india-super-hornet-fighters-1280039>.

<sup>33</sup> See Milan Vaishnav & Saksham Khosla, *The Indian Administrative Service Meets Big Data*, CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE (Sep. 1, 2016), <http://carnegieendowment.org/2016/09/01/indian-administrative-service-meets-big-data-pub-64457>; see also Jagdish Sagar, *Copyright: An Indian perspective*, in JAYASHREE WATAL & ANTONY TAUBMAN, *THE MAKING OF THE TRIPS AGREEMENT* 341 (“In India, the upper echelons of the civil service are notoriously ‘generalist.’”).

<sup>34</sup> *Speech by Narendra Modi*, *supra* note 2.

Senior Advocate and one of India’s best-known IP lawyers, now a judge of the Delhi High Court) and Narendra Sabharwal (former Deputy Director General of the World Intellectual Property Organisation (WIPO)). In December 2014, the Think Tank released a draft version of the Policy.<sup>35</sup> The Think Tank subsequently sought comments from the public. In 2016, the government released the final version of the Policy, which retained most parts of the draft Policy.<sup>36</sup> The draft Policy, referring to Make in India, had suggested that the government ought to “transform India into a world class manufacturing hub” by providing foreign investors a “strong, balanced, predictable and transparent IP regime”<sup>37</sup> This view was reiterated by the Indian Commerce Minister in her foreword to the final Policy.<sup>38</sup> If the Boeing and Pfizer examples are any indication, the government may only woo foreign investors in selective sectors, with sectors like pharmaceuticals an unlikely target.<sup>39</sup>

## I. ESTABLISHMENT OF JIRICO

In February 2015, the Centre for Intellectual Property and Technology Law (CIPTTEL) at Jindal Global Law School submitted detailed comments on the draft Policy, and was invited by the Think Tank to make a presentation. In mid-2015, soon after making its presentation, the members of CIPTTEL felt a need for greater research and policy deliberations in matters concerning the intersection of competition (antitrust) and patent law, particularly in the context of Standard Essential Patents (SEPs) in the ICT sector. A group of CIPTTEL members thus formed a separate research cluster, the Jindal Initiative on Research in IP and Competition (JIRICO). While rapidly emerging developments prompted the formation of JIRICO, certain observations in the draft Policy had also lent encouragement.<sup>40</sup>

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<sup>35</sup> NATIONAL IPR THINK TANK, DRAFT NATIONAL INTELLECTUAL PROPERTY RIGHTS POLICY 25, 28 (2014) (hereinafter “*Draft IP Policy*”), <http://pib.nic.in/newsite/PrintRelease.aspx?relid=110790>.

<sup>36</sup> GOVERNMENT OF INDIA, NATIONAL INTELLECTUAL PROPERTY RIGHTS POLICY (2016), [http://dipp.nic.in/sites/default/files/National\\_IPR\\_Policy\\_English.pdf](http://dipp.nic.in/sites/default/files/National_IPR_Policy_English.pdf) (hereinafter “*Final IP Policy*”).

<sup>37</sup> *Draft IP Policy*, *supra* note 35, at 27.

<sup>38</sup> *See Final IP Policy*, *supra* note 36 (foreword by Minister Nirmala Sitharaman).

<sup>39</sup> The Final Policy stated there ought to be a “focus on enhancing access to healthcare” and noted “the contribution on of the Indian pharmaceutical sector in enabling access to affordable medicines globally.” *Id.* at 1, 3. Incidentally, one of the members of the Think Tank was the IP counsel of the Indian generic pharmaceutical company Cadila.

<sup>40</sup> *Draft IP Policy*, *supra* note 35 at 25 (identifying the interface of competition and IP law as one of a handful of “important areas of study and research for future policy development” and calling on stakeholders to “[s]tudy the role of IPRs in setting standards in the various areas of technology; actively participate in standards setting processes at national, international and industry Standard Setting Organizations’ levels and to encourage the development of global standards that are influenced by technologies and IP generated in India.”).

In the field of ICT, Standard Setting Organizations (SSOs) like the International Telecommunications Union (ITU), Institute of Electrical and Electronics Engineers (IEEE), and European Telecommunications Standards Institute (ETSI) lay down technical standards that allow different devices from different manufacturers to be interoperable.<sup>41</sup> These standards make it possible, for example, to connect a computer to a Wi Fi network, or transfer data from different mobile phones on different networks. Fixing standards no doubt benefits consumers by precluding the cost of switching from one device to another. But it also means that manufacturers of devices that meet set standards are obliged to use technologies essential to those standards, which may be protected by SEPs.<sup>42</sup> SSOs generally require members to license SEPs on fair, reasonable and non-discriminatory (FRAND) terms.<sup>43</sup> However, in recent years, disputes have arisen worldwide on what exactly constitutes a FRAND/RAND obligation and how to enforce it. Increasingly, such disputes have seen the jurisdiction of competition authorities being invoked.

In developed economies, significant decisions on FRAND/RAND obligations were witnessed in cases like *Microsoft Corp. v. Motorola Mobility, Inc.*<sup>44</sup> (in the US) and *Huawei Technologies Co. Ltd v. ZTE Corp.*<sup>45</sup> (in the EU). Among emerging economies, major SEP-

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<sup>41</sup> See Mark Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CAL. L. REV. 1889, 1892–1901 (2002).

<sup>42</sup> Kassandra Maldonado, *Breaching RAND and Reaching for Reasonable: Microsoft v. Motorola and Standard-Essential Patent Litigation*, 29 BERKELEY TECH. L.J. 419, 428 (2014) (“Although adoption of an SSO standard is ‘voluntary’ in theory, actual market pressures tip the scales considerably towards compulsory adoption of SSO standards in practice. Implementation of some standards, such as the 802.11 WLAN Standard, is absolutely necessary to the commercial viability of certain products, even if the standard makes up only a small portion of the products.”).

<sup>43</sup> Jay Kesan & Carol Hayes, *FRAND's Forever: Standards, Patent Transfers, and Licensing Commitments*, 89 INDIANA L.J. 231, 233 (2014).

<sup>44</sup> 696 F.3d 872, (9th Cir. 2012). Microsoft and Motorola (now owned by Google) are both members of the IEEE and the ITU. Motorola owned the 802.11 standard in wireless communications and the H.264 standard in video compression technology, which they agreed to license on RAND terms. Microsoft Windows integrated the H.264 standard and the Xbox integrated both the H.264 and 802.11 standard. In 2010, Microsoft sued Motorola, in the Western District of Washington, alleging that Motorola had violated the RAND commitment by offering to license its SEPs at the rate of 2.25 percent of the price of the end product. Microsoft believed these terms to be unreasonable and breaching its commitment to the IEEE and ITU. In 2013, the court issued an opinion providing a methodology for calculating the RAND royalty rates, by recreating a hypothetical negotiation between parties. The court also limited the application of fifteen factors to determine a “reasonable royalty rate”—laid down in *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970)—in situations involving SEPs, distinguishing SEPs from patents. The court further addressed the problems of patent “hold-up” and “royalty stacking” by stating that hypothetical negotiation cannot take place in a vacuum. The implementers need to understand that they must take a license from multiple owners and not just one so that they will be in a position to fully implement the standard. The RAND royalty payment should be taken into account by keeping in mind the royalties payable to other holders of patents. The court concluded that the RAND royalty rate for Motorola’s video coding technology should be 0.555 cents per unit, and for its WiFi SEP 3.471 cents per unit. The court found Motorola to have breached its FRAND commitment and decided that it must pay damages of USD14.52 million to Microsoft. On appeal, the decision was upheld by the Court of Appeals for the Ninth Circuit.

<sup>45</sup> Case C-170/13, 2015. Huawei, a member of the ETSI, made a commitment to the ETSI to grant patent licenses (SEP for the 4G Long Term Evolution (LTE) standard) to third parties on FRAND terms. In the

related decisions have been delivered in China, two noteworthy examples being a case where a court found IDC to be seeking excessive licensing fees and ordered it to compensate Huawei, and a case where China's competition regulatory authority imposed a fine on Qualcomm for similarly charging excessive royalties.<sup>46</sup> India, though one of the world's largest telecommunications markets, has witnessed the emergence of FRAND jurisprudence only recently.<sup>47</sup>

Beginning in 2013, complaints were brought by three Indian mobile phone manufacturers—Micromax<sup>48</sup>, Intex,<sup>49</sup> and iBall<sup>50</sup>—against Ericsson before the Competition Commission of India (CCI) for abuse of dominance, with respect to 2G, 3G, and GSM technologies. The complainants alleged that Ericsson had been charging excessive royalty rates, in the absence of any alternate technology, based on the net selling price of the product, rather than the value of the technology used. The complainants also alleged that Ericsson was compelling potential licensees to sign non-disclosure agreements, only after which the terms of FRAND licenses would be disclosed, thereby allowing similarly placed parties to be charged different royalties. Furthermore, Ericsson was imposing certain jurisdictional clauses to

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meanwhile, ZTE was producing products and software using the standard without any license. The parties agreed upon the license of the SEP on FRAND terms. However, during negotiations, ZTE used the SEP without Huawei's consent. Both the parties failed to agree on terms, and an action for patent infringement was brought by Huawei before a German court. ZTE claimed an abuse of dominant position, contrary to Article 102 of the Treaty on the Functioning of the European Union. The court referred the case to the CJEU. The CJEU took the view that in order to prevent parties from seeking injunctive relief, the SEP holder and the implementers must comply with certain conditions. First, the SEP holder, prior to bringing an action against the alleged infringer, should alert the alleged infringer of the infringement by specifying the manner in which it has been infringed. Second, after the alleged infringer has expressed willingness to conclude a license, a written offer for a license, specifying the terms such as the royalties and the method of calculation, should be given. If the alleged infringer continues to use the SEP, then one can assume that the alleged infringer has not diligently responded to the offer in good faith and in accordance with recognized commercial practices. The CJEU also set limitations for the European Commission for investigating cases under the EU competition regime. The CJEU held that if an SEP holder makes a commitment to a standard-setting body to grant third parties FRAND licenses, it does not amount to an abuse of its dominant position if the SEP holder seeks an injunction.

<sup>46</sup> See Cui Guobin, *Standard Essential Patents and Injunctive Relief*, in PATENT LAW IN GREATER CHINA 340 (Stefan Luginbuehl & Peter Ganea eds., 2014); see also Yan Bing Li, *Antitrust Correction for Qualcomm's SEPs Package Licensing and Its Flexibility in China*, 47 INT. REV. OF INTEL. PROP. & COMPETITION L. 336 (2016).

<sup>47</sup> See SHUBHA GHOSH & D. DANIEL SOKOL, *FRAND in India* (Univ. of Fla. Levin College of Law, Legal Studies Research Paper Series Paper No. 16-46, 2016), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2718256](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2718256); see also KOREN W. WONG-ERVIN, DOUGLAS H. GINSBURG, BRUCE H. KOBAYASHI & JOSHUA D. WRIGHT, *FRAND in India: Complications and Quandaries in the ICT Sector: Competition Issues and Standard Essential Patents* (George Mason Univ. L. and Econ. Research Paper Series 16-32 2017), <http://ssrn.com/abstract=2821344>; KIRTI GUPTA, *FRAND in India: Emerging Developments* (Antitrust in Emerging and Developing Countries: Conference Papers 2016), <http://ssrn.com/abstract=2771465>.

<sup>48</sup> In Re: Micromax v. Telefonaktiebolaget LM Ericsson, Case No. 50/2013, Competition Commission of India, Nov. 11, 2013, [http://www.cci.gov.in/sites/default/files/502013\\_0.pdf?download=1](http://www.cci.gov.in/sites/default/files/502013_0.pdf?download=1).

<sup>49</sup> In Re: Intex v. Telefonaktiebolaget LM Ericsson, Case No. 76/2013, Competition Commission of India, Jan. 16, 2014, [http://www.cci.gov.in/sites/default/files/762013\\_0.pdf](http://www.cci.gov.in/sites/default/files/762013_0.pdf).

<sup>50</sup> In Re: Best IT World (India) Pvt Ltd v. Telefonaktiebolaget LM Ericsson, Case No.4/2015, Competition Commission of India, May 12, 2015, [http://www.cci.gov.in/sites/default/files/042015\\_0.pdf](http://www.cci.gov.in/sites/default/files/042015_0.pdf).

preclude parties from seeking redress in local courts. The CCI, in a preliminary order, ruled in favour of the complainants. The matter is pending investigation and a conclusive determination is awaited.

In a separate development, Ericsson instituted infringement proceedings against another Indian mobile phone manufacturer, Intex, before the Delhi High Court.<sup>51</sup> Ericsson claimed that Intex was an unwilling licensee—on the one hand engaging in correspondence with Ericsson (for over four years) and on the other initiating patent revocation proceedings and also approaching the CCI. The court held that Intex, apart from infringing Ericsson’s SEPs, had “prima facie acted in bad faith during the negotiations,” and “made contrary statements” in different fora to avoid the execution of a FRAND agreement.<sup>52</sup> Thus, the case illustrated that while there is a risk of SEP holders charging exorbitant royalties and undermining innovation, implementers can equally do so by avoiding a FRAND agreement while continuing to infringe SEPs. The case also left open a debate on whether checks ought to be placed on the jurisdiction of competition authorities.

Amidst these developments, JIRICO, to better define its research agenda, organized a “National Consultation Workshop on Standard-Setting & Innovation in The ICT Sector.” The workshop was held on December 19, 2015, in New Delhi. A day earlier, JIRICO had been formally launched at a dinner reception, attended by leading IP law firms in India. The reception included an interactive session with Nalin Kohli, a Supreme Court lawyer and National Spokesperson of the BJP, on Make in India. Kohli reiterated that the vision of Make in India was to “transform India into a global design and manufacturing hub and empower every citizen with access to digital services, knowledge and information,” with the ultimate goal of bridging India’s wealth divide.<sup>53</sup> Thus, at the JIRICO workshop, the underlying questions that confronted many speakers were these: considering the importance of ICT in Make in India, how should the Indian government frame a policy with respect to SEPs in the ICT sector? As SEP holders tend to be overseas companies, should the government attempt to harmonize their needs with those of domestic companies? Would an environment conducive to SEP holders encourage more foreign ICT companies to manufacture in India, and thus boost employment? And what about the consequence for consumers in India, and Digital India’s aim

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<sup>51</sup> Telefonaktiebolaget LM Ericsson v. Intex Techs., 6735 IA 2014 (2015) (India) <https://indiankanoon.org/doc/74163100/>.

<sup>52</sup> *Id.* at ¶¶ 141–42.

<sup>53</sup> “*Make in India, Digital India will Transform country*”, FIN. EXPRESS (Dec. 21, 2015, 9:12 AM) <http://www.financialexpress.com/economy/make-in-india-digital-india-will-transform-country/181926> (quoting Nalin Kohli).

of increasing ICT use among the public? Could unreasonable and discriminatory licensing result in higher prices for consumers and undermine the spread of ICT?

The speakers at the workshop included a number of leading academicians and experts. At the inaugural session, Justice Ravindra Bhat of the Delhi High Court, one of India's foremost IP judges and the guest of honour, remarked that it was "high time" for a discussion on SEP litigation in India. Justice Bhat stated that while SEP cases are witnessing a confluence between competition and IP, a basic principle of the latter remains the same, i.e. over-protection and under-protection are both inimical to innovation. Pratibha Singh, a special invitee, represented the National IPR Think Tank and summarized the major recommendations of the National IP Policy (then still in draft form). Singh declared that India was on the cusp of "a patent litigation boom," and that the next two decades would witness a heavy volume of patent litigation across sectors. On the subject of SEPs, Singh guessed that settled case law would begin to take shape within a couple of years. One of the challenges Singh identified was balancing the interests of parties in cases where negotiations over an SEP lasted for several years, while the SEP neared its expiry date.

The workshop consisted of three further sessions. The first of these, titled "Boosting the Innovation Climate in India" was moderated by Kailas Karthikeyan, an IP attorney at Microsoft. The session's participants were Akhil Prasad (Country Counsel of Boeing), Pravin Anand (Managing Partner of the specialist IP law firm Anand & Anand, and one of India's top IP lawyers), V. Lakshmikumaran (another eminent IP lawyer, and Managing Partner of the full-service law firm Lakshmikumaran & Sridharan), and Shamnad Basheer (a well-known academician and founder of the popular Spicy IP blog). Prasad reiterated Boeing's positive experience with Indian IP laws and distinguished Boeing's experiences from the pharmaceutical sector's experiences—a remark that was highlighted in media reports of the event.<sup>54</sup> Anand discussed the gap between China and India in innovation, and called for improvements to India's IP infrastructure. Lakshmikumaran focused on developments in open source innovation, warning that the lack of robust licensing conditions was causing numerous problems and leading to litigation. Basheer, in contrast, cautioned against the over-protection of IP and called for dominant IP narratives to be dismantled in India ("Break in India," punned Basheer).

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<sup>54</sup> *India Has Strong IPR Laws: Boeing*, BUS. STANDARD (Dec. 19, 2015), [http://www.business-standard.com/article/news-ians/india-has-strong-ipr-laws-boeing-115121900605\\_1.html](http://www.business-standard.com/article/news-ians/india-has-strong-ipr-laws-boeing-115121900605_1.html).

The next session was titled “IP, Competition and Innovation Challenges in the ICT Sector.” The session started with an address by another special invitee, Geeta Gouri, a former member of the CCI. Gouri remarked that the CCI’s preference for “economic activism” over “economic analysis” was not necessarily appropriate for the ICT sector. Quoting from an Organisation for Economic Cooperation and Development (OECD) report, Gowri stated that “in dynamic high technology industries . . . there can be temptation among enforcers to use competition law to protect companies that are failing or threatened by more efficient or innovative rivals.” The next half of the session was moderated by Sandeep Bhargava, Executive Vice President of Corporate Affairs and Public Policy, Vodafone India. Payal Malik, Associate Professor of Economics at the University of Delhi, gave an economic perspective to the interface between IP and Competition Law. She went on to establish her argument using the Schumpeterian idea of a positive linkage between technological innovation and economic growth of nations, where growth is not just based on capital accumulation but is also a function of the innovative capacity spurt by the appropriable knowledge and technological externality which comes through. Building on where Malik left off, Subhashis Gangopadhyay (a noted economist, and professor at Shiv Nadar University) stated that when one looks at the discourse that exists on innovation, competition policy, and law and regulation, there is too much focus on innovators and less focus on the consumers. The need of the hour is to encourage innovation that would benefit the consumers in the long run. Shubha Ghosh, Crandall Melvin Professor of Law at Syracuse University, used case law to illustrate that injunctive reliefs in the form of damages could have an anti-competitive effect. Ram Tamara, Vice President and Senior Economic Adviser at Nathan Associates, provided a practitioner’s perspective, pointing out that the concept of abuse of dominance is very different in the ICT sector compared to other sectors.

The final session, titled “Issues in Standardisation,” was moderated by Yogesh Pai, Assistant Professor at the National Law University, Delhi. The speakers at the session were two patent law scholars who have written extensively on SEPs (Jay Kesan, Professor at the University of Illinois College of Law and Kung Chung-Liu, Research Professor at the Institutum Iurisprudentiae, Academia Sinica, Taiwan), and two practitioners at opposite ends of the Ericsson cases (Sheetal Chopra, India Lead—IPR Advocacy, Ericsson India and J. Sai Deepak, then an Associate Partner at Saikrishna & Associates, lawyers for Micromax). Kesan provided an overview of the concept of FRAND, SEPs and the procedures followed by SSOs. Liu provided the East-Asian perspective on the regulation of SEPs, stating that lessons should be learned from the East-Asian ICT sector, which seeks a smooth licensing policy of SEPs. Sai

Deepak elaborated on the relationship between a patent holder and an implementer and the process of negotiations. Chopra discussed the problems arising from a patent hold out.

In the fast-paced world of IP law, workshops and conferences often become out of date as soon as they are over. In the present context, at least four major developments have occurred since the workshop. First, in early March, 2016, the Indian government released a discussion paper on SEPs and FRAND, and sought comments from the public.<sup>55</sup> The government sought comments on twelve questions, such as whether existing provisions in Indian patent legislation and competition legislation were sufficient to address SEP and FRAND disputes, whether injunctions were a suitable remedy in such disputes, what the role of Indian SSOs should be and whether the Indian government needed to frame guidelines for SSOs. A large number of industry bodies and academicians (including JIRICO) submitted comments on the paper.<sup>56</sup>

Second, in late March 2016, a single-judge bench of the Delhi High Court delivered a decision on the scope of the CCI's jurisdiction in the investigations against Ericsson. The judge upheld the CCI's jurisdiction to order the investigations against Ericsson, observing that, in cases seeking writs against authorities, "it is not open for this court...to supplant its views over that of the concerned authority; in this case the CCI."<sup>57</sup> However, the judge clarified that she was not passing any opinion on the merits of the complaints against Ericsson, and that "any arbitrary, unreasonable, capricious or malafide actions [by the CCI] would be subjected to judicial review."<sup>58</sup> The judge also found "considerable merit" in a submission by Ericsson that the CCI had not considered various contentious arguments advanced by Ericsson, though she did not direct the CCI to reconsider its view.<sup>59</sup>

Third, in August 2016, the Indian government released the final version of the National IP Policy. The final policy retained the draft Policy's suggestion of promoting research on the interface of competition and IP law, and examining issues relating to SEPs and FRAND.<sup>60</sup> The

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<sup>55</sup> DEP'T OF INDUS. POLICY & PROMOTION, STANDARD ESSENTIAL PATENTS, AND THEIR AVAILABILITY ON FRAND TERMS (2016), [http://dipp.nic.in/English/Discuss\\_paper/standardEssentialPaper\\_01March2016.pdf](http://dipp.nic.in/English/Discuss_paper/standardEssentialPaper_01March2016.pdf).

<sup>56</sup> Some of the submissions are available at Anubha Sinha, Nehaa Chaudhari & Rohini Lakshané, *Responses to the DIPP's Discussion Paper on SEPs and their Availability on FRAND Terms*, CTR. FOR INTERNET & SOC'Y (Apr. 23, 2016), <http://cis-india.org/a2k/blogs/responses-to-the-dipps-discussion-paper-on-seps-and-their-availability-on-frand-terms>.

<sup>57</sup> Telefonaktiebolaget LM Ericsson v. Competition Commission of India, W.P.(C.) No. 1006 of 2014, Del. H.C., 30 Mar., 2016, ¶ 208, [http://lobis.nic.in/d\\_dir/dhc/VIB/judgement/30-03-2016/VIB30032016CW4642014.pdf](http://lobis.nic.in/d_dir/dhc/VIB/judgement/30-03-2016/VIB30032016CW4642014.pdf).

<sup>58</sup> *Id.* at ¶ 210.

<sup>59</sup> *Id.* at ¶ 209.

<sup>60</sup> *Final IP Policy*, *supra* note 36, at 10, 15.

final policy also identified ICT as a “national priority area” and emphasized the need to encourage both Indian and foreign companies to create, protect and utilize their IP in India.<sup>61</sup>

Fourth, in September 2016, the Indian government announced the establishment of a Task Force on Innovation, comprising academicians, government officials and members of Indian industry. The Task Force was assigned the responsibility of, among other things, “suggest[ing] measures to enhance the innovation eco-system in India” with a view to improving India’s ranking in the Global Innovation Index, and examine ideas from the public on ways to inculcate “an innovation temperament in the country.”<sup>62</sup> Thus, in comparison with the National IPR Think Tank, whose mandate encompassed all forms of IP, the Task Force on Innovation was given a narrower agenda.

In keeping with the fast pace of developments, JIRICO has also organized events regularly. In April 2016, JIRICO organized a national moot court competition on the subject of SEPs in the ICT sector. The purpose of the event, which witnessed participation by students of India’s top-ranked law schools, was to generate interest on the subject among a younger audience. In September 2016, JIRICO organized an international conference, titled “Innovation for Shared Prosperity: Innovation, Intellectual Property, Competition and Standard Setting in the ICT Sector.” The conference witnessed participation from Members of Parliament, senior government officials, the Commissioner of the US International Trade Commission, and academicians from reputed institutions, such as the Max Planck Institute for IP and Innovation, Stanford University, Northwestern University, and Indiana University Bloomington (a long-time partner of Jindal Global Law School).

As JIRICO completes its second anniversary and continues to engage with policymakers, India still awaits clarity on several issues involving SEPs and FRAND. The author hopes that the proceedings of the workshop will continue to be relevant, and provide readers of *IP Theory* with a glimpse of the energy and excitement surrounding IP research in India at a crucial moment in the country’s economic rise. The author would like to thank all the attendees of the JIRICO National Consultation Workshop, and to thank Professor Mark Janis, Professor Mike Mattioli, and other members of the Center for Intellectual Property Research at Indiana University Maurer School of Law for their kind offer to publish the workshop proceedings in *IP Theory*.

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<sup>61</sup> *Id.* at 8.

<sup>62</sup> Order of the Department of Industrial Policy & Promotion, Sep. 16, 2016, [http://dipp.nic.in/sites/default/files/Order\\_Task\\_Force\\_Innovation\\_16092016.pdf](http://dipp.nic.in/sites/default/files/Order_Task_Force_Innovation_16092016.pdf).