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NONCOMPETE CLAUSES: EMPLOYEE MOBILITY, INNOVATION ECOSYSTEMS, AND MULTINATIONAL R&D OFFSHORING

Grant R. Garber[†]

The business mantra of the twenty-first century—innovate or die—solemnly resonates amongst bedridden companies like AOL, MySpace, and Barnes & Noble.¹ In order to compete, companies need to be innovative, adaptable, and cognizant of game-changing technologies that stand to destabilize the pillars of incumbent firm success.² Yet spurring innovation³ within an established corporation is difficult, and innovation remains a “hit-or-miss proposition with more misses than hits at most companies.”⁴ One response to this challenge has been to offshore innovation activities to emerging markets, where cost savings and access to a throng of skilled talent ideally increase a firm’s ability to turn ideas into cash-generating products and services.⁵ Indeed, as of 2010, 11% of North American companies spent a quarter of their research and development (“R&D”) budget in emerging markets; this figure is expected to double by 2015.⁶

Although business innovation activities used to be concentrated in the United States, Europe, and Japan, the new rising powers of China, India, and Brazil are “encroaching on this ‘bastion’ of old powers.”⁷ As the global

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1. *Innovate or Die!*, FORBES (July 23, 2011, 3:05 PM), <http://www.forbes.com/sites/thesba/2011/07/23/innovate-or-die/>.

2. *Id.*

3. Throughout this Note, “innovation” refers to a corporation’s ability to turn ideas into cash-generating commercial products and services. See Vinod Baya & Alan Radding, *Several Technologies Help Raise the Innovation Performance of Enterprises*, PRICEWATERHOUSECOOPERS LLP, <http://www.pwc.com/us/en/technology-forecast/2011/issue2/features/powering-innovation-life-cycle.jhtml> (last visited Jan. 22, 2013).

4. *Id.*

5. *Ideas Economy: (Brazil) Innovation*, THE ECONOMIST (May 10, 2012), available at <http://www.economist.com/events-conferences/americas/brazil-innovation-2012>.

6. Joe Light, *More Companies Plan to Put R&D Overseas*, WALL ST. J., Feb. 22, 2011, <http://online.wsj.com/article/SB10001424052748703803904576152543358840066.html>.

7. *How Business Innovation Power is Shifting to Brazil and India*, INSTITUTE OF DEVELOPMENT STUDIES (Oct. 24, 2012), <http://www.ids.ac.uk/news/how-business-innovation-power-is-shifting-to-brazil-and-india>; Rasmus Lema, Ruy Quadros, and Hubert Schmitz, *Shifts in Innovation Power to Brazil and India: Insights from the Auto and Software Industries*,

economy shifts towards Chinese, Indian, and Brazilian markets, new techniques and ideas are consequently emerging in these regions.⁸ Locating innovation subsidiaries in emerging markets is still an infant phenomenon, but R&D subsidiaries are increasingly following manufacturing subsidiaries into emerging markets because firms stand to gain significant cost savings from utilizing the resources of these markets.⁹ Moreover, these emerging markets may benefit because foreign R&D investments have simultaneously been found to cause technology spillovers¹⁰ and positively promote regional economic growth.¹¹ As multinational firms continue to move R&D activities offshore, “China, India, and Brazil are becoming true centers of innovation and research.”¹²

From a legal perspective, this new trend poses a number of challenges, particularly with regard to the protection of trade secrets in the high-technology sector.¹³ In the high-tech sector, trade secrets are both highly valuable and hard to protect, especially because employees are becoming increasingly mobile, often leaving to work for competitor firms upon termination of their employment agreement.¹⁴ There is thus a fear that when employees leave a firm, they will take trade secrets with them.¹⁵

INSTITUTE OF DEVELOPMENT STUDIES (Feb. 2012), <http://www.ids.ac.uk/files/dmfile/RR73.pdf> (last visited Jan. 22, 2013).

8. Jules Gray, *IDS Suggests Brazil and India Lead Way in Innovation*, THE NEW ECONOMY, available at <http://www.theneweconomy.com/latest-news/brazil-and-india-lead-way-in-innovation> (last visited Jan. 22, 2013).

9. Nicolai Pogrebnyakov and Jonas Kristensen, *Building Innovation Subsidiaries in Emerging Markets: The Experience of Novo Nordisk*, 54 RES. TECH. MGMT. J. 4, 30–37 (2011). Moreover, placing R&D activities next to manufacturing facilities yields considerable synergies, with some companies experiencing 30–40% improvements in their time to market. See Simon Longbottom, *Moving Your R&D Offshore*, LONDON BUSINESS SCHOOL (2006), available at <http://bsr.london.edu/lbs-article/337/index.html> (last visited Jan. 22, 2013).

10. The term “spillover” broadly refers to externalities of economic activity. However, throughout this Note the term “spillover” refers specifically to the diffusion of knowledge between firms in a region.

11. Chun-Chien Kuo & Chih-Hai Yang, *Knowledge Capital and Spillover on Regional Economic Growth: Evidence from China*, 19 CHINA ECON. REV. 4 (2009); Yan Zhang, Haiyang Li, Yu Li, & Li-An Zhou, *FDI Spillovers in an Emerging Market: The Role of Foreign Firms’ Country Origin Diversity and Domestic Firms’ Absorptive Capacity*, 31 STRAT. MGMT. J. 969 (2010); Lei Zhu & Bang Nam Jeon, *International R&D Spillovers: Trade, FDI, and Information Technology as Spillover Channels*, 15 REV. OF INT’L ECON. 955 (2007).

12. Light, *supra* note 6.

13. Donald Dowling, *Global HR Hot Topic—July 2012: Non-Competes and Other Restrictive Covenants in the Cross-Border Context*, WHITE & CASE LLP (July 2012), <http://www.whitecase.com/hrhottopic-0712/>.

14. *Id.*

15. *Id.*

Consequently, employee mobility is a source of friction for most companies harboring high-value trade secrets.¹⁶

To combat the growing threat of trade secret misappropriation, many companies require their employees to sign post-employment noncompetition agreements (“noncompetes”) that restrict their ability to work for a competitor or to start their own firm.¹⁷ These restrictive covenants are becoming common; however, their enforcement varies by jurisdiction, both internationally and domestically within the United States.¹⁸ In implementing an enforcement regime, legislators must balance the competing interests of corporations seeking to protect trade secrets with the interests of employees in their freedom to work. However, balancing these interests has become increasingly controversial, especially in the midst of a global recession in which restricted employee mobility better serves corporations trying to fortify their intellectual property protection schemes while unrestricted mobility better serves employees trying to gain employment at firms with healthier growth trajectories.

Furthermore, a variety of reports over the past decade conclude that the inherent restriction of employee mobility associated with the enforcement of noncompete clauses negatively affects the development of innovation ecosystems.¹⁹ While the concept of an innovation ecosystem is multidimensional and dynamic, such a system is typically characterized by a network of interconnected public and private institutions within an economic system that directly contributes to the development and diffusion of new technologies.²⁰ The focus on knowledge production is not isolated to research and the supply of science and technology, instead, the innovation ecosystem concept shifts attention “towards the whole process of innovation, in which research is only one element.”²¹ Other significant elements include private companies, universities, research institutions, venture capital organizations, and a functioning intellectual property regime.²² The concept has gained popularity with policymakers over the past two decades and has been endorsed by a variety of agencies, including the

16. *Id.*

17. *Id.*

18. *Id.*

19. *Boosting Innovation: The Cluster Approach*, ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (1999).

20. *Id.*

21. *The ‘System of Innovation’ Approach, and Its Relevance to Developing Countries*, SCIENCE AND DEVELOPMENT NETWORK (Apr. 1, 2005) <http://www.scidev.net/en/policy-briefs/the-system-of-innovation-approach-and-its-relevanc.html>.

22. *Id.*

Organisation for Economic Co-Operation and Development (OECD) and the World Bank.²³ Accordingly, nations around the world are working to foster such innovation systems within their borders.²⁴

Given that there may be a negative correlation between enforcing noncompetes and the development of innovation ecosystems, some commentators argue that a region seeking to foster innovation should not enforce noncompetes. However, China, India, and Brazil—countries poised to be the world’s future hubs of innovation—differ significantly in their enforcement of noncompetes. This Note posits that China, India, and Brazil—as emerging economies that have yet to attain the innovation capabilities of the West—are each in a similar position in which they must continue to attract multinational companies in order to potentially reap the benefits of technology spillovers. At the same time, these countries must also promote the freedom of their citizens to compete against these multinationals in order to construct a domestic innovation ecosystem. Therefore, simply prohibiting the enforcement of noncompete agreements may not produce the most advantageous noncompete enforcement regime in each nation.

While the enforcement regime of noncompetes is but one factor in an abstruse equation, it is a significant factor that bears consideration for any region aiming to stimulate an innovation ecosystem. This Note examines the innovation environments and noncompete enforcement regimes of the three nations in light of research concerning the effects of noncompete enforcement. Moreover, the Note seeks to contribute to the discussion regarding the enforcement of noncompetes and, in particular, proposes that the nonenforcement of these clauses may be detrimental to the development of innovation ecosystems in emerging markets.

I. CHINA, INDIA & BRAZIL: THE FUTURE OF TECHNOLOGY INNOVATION?

Over the last decade, “emerging economies have become fertile sources for creativity and disruptive business models.”²⁵ China, India, and Brazil are no exception. Nonetheless, the three nations currently rank far below developed economies like the United States, Europe, and Japan with regard to their innovation capabilities.²⁶ Since one of the keys to long-term growth

23. *Id.*

24. *Id.*

25. *See Ideas Economy: (Brazil) Innovation, supra* note 5.

26. In 2012, China, India, and Brazil ranked thirty-fourth, sixty-fourth, and fifty-eighth, respectively. Soumitra Dutta, *The Global Innovation Index 2012*, INSEAD and WORLD

and economic wealth is indigenous innovation by a nation's domestic firms and its citizens, it is no surprise that China, India, and Brazil are striving to foster innovation ecosystems within their borders.²⁷ While this Note focuses on the role noncompete enforcement may have on promoting innovation in each nation, this Part introduces the innovation environments of China, India, and Brazil, highlighting government policies, foreign investment, current achievements, and future challenges with regard to the development of these systems within each nation.

A. CHINA

The People's Republic of China is the world's most populous nation and the world's second-largest economy in terms of nominal GDP.²⁸ It is also the world's fastest growing economy, with growth rates averaging 10% over the past thirty years.²⁹ However, China's growth is slowing; its energy and labor costs are rising, it is coated with pollution, and the government is "clearly unhappy with the long-term prospects of remaining 'factory to the world.'"³⁰

INTELLECTUAL PROPERTY ORGANIZATION, <http://www.globalinnovationindex.org/gii/main/fullreport/index.html> (last visited Jan. 22, 2013).

27. Joshua Kurlantzick, *The Rise of Innovative State Capitalism*, BLOOMBERG BUSINESSWEEK (June 28, 2012), <http://www.businessweek.com/articles/2012-06-28/the-rise-of-innovative-state-capitalism>; see also Gary Shapiro, *Can China Eclipse the U.S. on Innovation?*, FORBES (July 11, 2012, 9:20 AM), <http://www.forbes.com/sites/garyshapiro/2012/07/11/can-china-eclipse-the-u-s-on-innovation/>; Roben Farzad, *Are the BRIC Nations Cracking?*, BLOOMBERG BUSINESSWEEK (June 26, 2012), <http://www.businessweek.com/articles/2012-06-26/are-the-bric-nations-cracking#r=lr-fs>.

28. *The World Factbook: China*, CENTRAL INTELLIGENCE AGENCY (Jan. 2, 2013), available at <https://www.cia.gov/library/publications/the-world-factbook/geos/ch.html>.

29. *Report for Selected Countries and Subjects*, WORLD ECONOMIC OUTLOOK DATABASE, INTERNATIONAL MONETARY FUND (2011), available at http://www.imf.org/external/pubs/ft/weo/2011/02/weodata/weorept.aspx?sy=1980&ey=2016&sort=country&ds=.&br=1&pr1.x=40&pr1.y=0&c=924&s=NGDP_RPCH%2CPPPP&grp=0&a= (last visited Jan. 22, 2013).

30. *China's Five-Year Plan, Indigenous Innovation and Technology Transfers and Outsourcing*, UNITED STATES-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION (June 15, 2011), available at http://www.uscc.gov/hearings/2011hearings/transcripts/11_06_15_trans/11_06_15_final_transcript.pdf, pg. 71; see also Bob Davis and Tom Orlik, *China's Growth Continues to Slow*, THE WALL ST. J. (Oct. 18, 2012, 8:53 AM), available at <http://online.wsj.com/article/SB10000872396390444868204578063363516399122.html>.

The Article reports that growth

in China's gross domestic product fell to 7.4% in the third quarter [of 2012] compared with a year earlier . . . down from 7.6% in the second quarter and the weakest since the beginning of 2009. The seventh consecutive deceleration reflected a combination of weak demand from abroad, flagging investment at home, and insufficient spending by China's households to pick up the slack.

Id.

Eager to dawn a new economic era, China has realized that it must foster its domestic science and technology sector in order to continue its rapid growth.³¹ Accordingly, the nation has announced that it is determined to become an “innovation nation” and a world power in the science and technology field by the middle of the twenty-first century.³²

This goal has been reiterated in the nation’s twelfth Five-Year Plan (“FYP”) (2011–2015), which states that China seeks to increase R&D as a percentage of GDP, realize 3.3 patents per 10,000 people, and provide more sophisticated education with an emphasis on scientific achievement by 2015.³³ Indeed, the U.S.-China Economic and Security Review Commission reports that “[s]cientific development and a move up the value chain sits at the heart of the 12th FYP.”³⁴ In the plan, the Chinese government has endorsed the idea of modernizing the nation’s industrial structure with advanced technologies that create more jobs and have higher added value.³⁵ The government is attentive to the nation’s need to become indigenously innovate in order to sustain its growth and is aggressively pursuing policies that it hopes will encourage this innovation.

However, Chinese innovation is currently a “mixed bag.”³⁶ For instance, the National Bureau of Asian Research reports that “Chinese companies lack core technology, depend on foreign companies for crucial parts, are at the lower end or the middle range of the global industrial chain, rely on multinational companies for technological support and rely on the global sales chain.”³⁷ Critics further contend that although China’s “sweat produces many of the world’s goods, it is designers in Scandinavia and marketers in

31. *From Brawn to Brain*, THE ECONOMIST (Mar. 10, 2012), available at <http://www.economist.com/node/21549938>; see also John Foley, *Chinese Reforms Could Trigger Domino Effect*, THOMSON REUTERS (Nov. 5, 2012), available at <http://blogs.reuters.com/breakingviews/2012/11/05/chinese-reforms-could-trigger-domino-effect/>.

32. Yang Lei, *China Sets Goal for Developing Science, Technology in 15 Years*, GOV.CN (Feb. 9, 2006), http://www.gov.cn/english/2006-02/09/content_183774.htm.

33. Joseph Casey and Katherine Koleski, *Background: China’s 12th Five-Year Plan*, U.S.-CHINA ECONOMIC & SECURITY REVIEW COMMISSION 1, 8 (June 24, 2011), http://www.uscc.gov/researchpapers/2011/12th-FiveYearPlan_062811.pdf.

34. *Id.*

35. Ren Xianfang, *New Five-year Plan a Shift to Quality*, CHINA DAILY (Mar. 11, 2011, 10:25 AM), available at http://europe.chinadaily.com.cn/epaper/2011-03/11/content_12155002.htm.

36. See *supra* note 31.

37. Richard Suttmeier, Xiangkui Yao, and Alex Zixiang Tan, *China’s Post-WTO Technology Policy: Standards, Software, and the Changing Nature of Techno-Nationalism*, NATIONAL BUREAU OF ASIAN RESEARCH (May 2004), available at <http://www.nbr.org/publications/issue.aspx?id=61>; see also *China’s Five-Year Plan, Indigenous Innovation and Technology Transfers and Outsourcing*, *supra* note 30, at 72.

California who create and capture most of the value from those products.”³⁸ Nonetheless, the nation has shown a talent for process innovation, and Internet startups like Alibaba³⁹ and Tencent⁴⁰ “have had a genius for copying Western business models and adapting them to the Chinese market.”⁴¹

Moreover, companies like Huawei⁴², Lenovo,⁴³ and BYD⁴⁴ demonstrate that Chinese companies are capable of creating innovative, novel products, and services.⁴⁵ Yet commentators argue that this domestic innovation “is being strongly accelerated by China’s effective policy of acquiring technology through joint ventures with U.S. corporations.”⁴⁶ Since U.S. corporations are increasingly locating their R&D in China, “Chinese exports have acquired a competitive edge that would take much longer to produce by the actual development of superior productivity or might not occur at all.”⁴⁷ It is thus no surprise that the nation strongly encourages multinational corporations to create R&D centers within its borders.

However, China’s path to becoming a self-sustaining innovation hub is rife with challenges. For example, the nation’s twelfth FYP has received considerable scrutiny from abroad. Critics write that the Chinese “government thinks it can foster [indigenous innovation] by subsidising

38. *From Bravn to Brain*, *supra* note 31.

39. *Company Overview*, ALIBABA GROUP, http://news.alibaba.com/specials/about_alibaba/aligroup/index.html (last visited Feb. 23, 2013).

40. Margaret Rhodes, *For Fueling China’s Internet Boom—And Boldly Moving West*, FAST COMPANY, <http://www.fastcompany.com/most-innovative-companies/2012/tencent> (last visited Feb. 23, 2013).

41. *From Bravn to Brain*, *supra* note 31.

42. *Huawei Receives Innovation Awards for Contributions to CDMA Development*, HUAWEI (June 17, 2011), http://www.huawei.com/ilink/en/about-huawei/newsroom/press-release/archive/HW_093167?KeyTemps=CDMA,Award,Guangzhou.

43. *The World’s 50 Most Innovative Companies: Top 10 China*, FAST COMPANY, available at <http://www.fastcompany.com/most-innovative-companies/2012/industry/china> (last visited Jan. 22, 2013). (“China’s top-selling PC maker continuously outpaces its competition in speed, quality, and innovation (it unveiled the first-ever eye-controlled laptop in 2011).”).

44. *Id.* For instance:

The ever-innovative Chinese automobile company created the world’s first purely electric bus. BYD’s e-BUS 12 releases zero emissions, can go for more than 150 miles on a single charge, and uses solar panels located on the roof to convert solar energy into electricity. The buses have been tested in China, Southeast Asia, and Europe; Hertz car rentals will use the buses to transport passengers at LAX.

Id.

45. *Id.*

46. *China’s Five-Year Plan, Indigenous Innovation and Technology Transfers and Outsourcing*, *supra* note 30, at 109.

47. *Id.*

‘strategic’ industries and strong-arming foreign firms to transfer intellectual property to budding national champions.”⁴⁸ The complaint is not new and stems from sophisticated regulations of foreign investment during the 1990s through which access to the Chinese market was traded for technology transfer.⁴⁹ In 2011, China actually cut three of its indigenous innovation policies after major technology firms complained that they discriminated unfairly against foreign firms.⁵⁰ In contrast, domestic firms contend that “foreign firms ‘crowd out’ domestic firms in the market for highly skilled labor, monopolize technology standards, and thwart technology transfer and knowledge spillovers.”⁵¹ From a cultural perspective, Thomas Friedman argues that the “biggest thing preventing modern China from becoming an innovative society . . . is that it remains a very low-trust society.”⁵² Theoretically, a society can foster innovation only when its citizens trust one another to share ideas without the fear of having those ideas or subsequent creations stolen.⁵³ Corruption and a globally infamous reputation for IP theft will also prove problematic in encouraging foreign investment in R&D.⁵⁴

Furthermore, the nation has been pouring billions of dollars into R&D in order to stimulate indigenous innovation, yet the OECD reports that much of this investment is wasted on development and not research.⁵⁵ China’s state

48. *From Brawn to Brain*, *supra* note 31.

49. *Technology Transfer to China*, U.S. DEPARTMENT OF COMMERCE, <http://www.bis.doc.gov/defenseindustrialbaseprograms/osies/defmarketresearchrpts/techtransfer2prc.html> (last visited Feb. 23, 2013).

50. William Pentland, *China Pulls Back Indigenous Innovation Policies*, FORBES (July 3, 2011), <http://www.forbes.com/sites/williampentland/2011/07/03/china-pulls-back-indigenous-innovation-policies/>.

51. *China’s Five-Year Plan, Indigenous Innovation and Technology Transfers and Outsourcing*, *supra* note 30, at 72.

52. Thomas Friedman, *In China We (Don’t) Trust*, N.Y. TIMES (Sept. 11, 2012), available at http://www.nytimes.com/2012/09/12/opinion/friedman-in-china-we-dont-trust.html?_r=0.

53. *Id.*

54. *China: Intellectual Property Infringement, Indigenous Innovation Policies, and Frameworks for Measuring the Effects of the U.S. Economy*, U.S. INT’L TRADE COMM’N (2010), <http://www.usitc.gov/publications/332/pub4199.pdf>.

55. *From Brawn to Brain*, *supra* note 31; see also *China: Intellectual Property Infringement, Indigenous Innovation Policies, and Frameworks for Measuring the Effects of the U.S. Economy*, *supra* note 54.

China is implementing indigenous innovation policies These policies . . . aim to achieve several long-term goals . . . [including] building domestic research and development (R&D) capabilities to facilitate Chinese firms’ innovative capacity, limiting dependence on foreign technology and companies, and generally increasing the value that domestic companies add to China’s economy. The indigenous innovation

owned enterprises (“SOEs”), which as of 2011 accounted for about 50% of the nation’s GDP, may also prove troublesome.⁵⁶ While China is no longer a centrally planned economy, the dominance of state-owned enterprises arguably does not aid innovation because SOEs are sheltered from competition, which likely reduces incentives to be creative.⁵⁷ Yet proponents of state capitalism debate that it is a mistake to underestimate the innovative potential of SOEs, citing examples in India and Brazil in which the government promoted innovation in targeted sectors of the economy, producing world-class companies in the process.⁵⁸ Nevertheless, the influence of China’s SOEs will likely affect the country’s ability to develop domestic innovation because they harm both foreign and domestic private firms, which are perceived as an essential element of innovation ecosystems.⁵⁹

Despite these challenges, KPMG’s *Global Tech Innovation Survey 2012* found that a plurality (45%) of global executives polled believe China will be the next technology innovation center of the world by 2016, dethroning Silicon Valley.⁶⁰ While many remain skeptical, the past few decades have proven that China moves quickly and collectively to achieve the goals set in each of its FYPs, thus a domestically innovative China may be materializing on the horizon.

B. INDIA

The Republic of India is the second most populous country in the world and has the tenth-largest economy by nominal GDP.⁶¹ Like China, it has one of the world’s fastest growing economies—fueled by a rising consumer class, growing labor force, increased education levels, and significant foreign investments.⁶² Although the nation has distinguished itself as a strong

‘web of policies’ is expected to make it difficult for foreign companies to compete on a level playing field in China.

Id.

56. Bob Davis, *Just How Powerful Are China’s State-Owned Firms?*, WALL ST. J. (Oct. 26, 2011, 10:15 PM), <http://blogs.wsj.com/chinarealtime/2011/10/26/just-how-powerful-are-chinas-state-owned-firms/>.

57. Foley, *supra* note 31.

58. Kurlantzick, *supra* note 27.

59. *Not Just Tilting at Windmills*, THE ECONOMIST (Oct. 6, 2012), *available at* <http://www.economist.com/node/21564235>.

60. *China to Overtake Silicon Valley, Claims Report*, WALL ST. J. (June 27, 2012, 3:06 PM), <http://blogs.wsj.com/chinarealtime/2012/06/27/china-to-over-take-silicon-valley-claims-report/>; *see also* Shapiro, *supra* note 27.

61. *The World Factbook: India*, CENT. INTELLIGENCE AGENCY (Jan. 2, 2013), *available at* <https://www.cia.gov/library/publications/the-world-factbook/geos/in.html>.

62. *Id.*

destination for outsourcing, India is also gaining attention as a center for innovation.⁶³ The Indian government has prioritized domestic innovation, creating organizations and implementing a variety of policies designed to galvanize innovation within the nation.⁶⁴ Although small domestic firms are currently conducting novel research and developing new products, “the key driver of R&D activity in [India] is large multinationals.”⁶⁵ Indeed, approximately half of the world’s largest R&D spenders have centers in India.⁶⁶ Despite the government’s efforts and foreign investments, India currently ranks far behind China on the 2012 Global Innovation Index.⁶⁷

The Indian government has declared the years from 2010 to 2020 as the “Decade of Innovations.”⁶⁸ The main aim of “this declaration is to develop an innovation eco-system in the country to stimulate innovations and to produce solutions” for society, particularly with regard to healthcare, energy, urban infrastructure, water, and transportation.⁶⁹ The Ministry of Science and Technology promotes innovation through various schemes, including technology business incubators, research initiatives, and entrepreneurial programs.⁷⁰ In addition, the government’s Cluster Innovation Centre specifically seeks to redefine India’s innovation paradigm beyond R&D and is focused on building twenty innovation clusters across the country that will support the national innovation agenda.⁷¹

Moreover, proponents of India’s current innovation capabilities claim that the nation “has contributed significantly to innovation around the world, but in a distinctly invisible way—the contributions of India and Indians are encapsulated in millions of well-known products, but an Indian company name is not on any labels.”⁷² It is true that India has developed a highly

63. *India Innovation*, BLOOMBERG EXCHANGE, <http://bx.businessweek.com/india-innovation/> (last visited Jan. 22, 2013).

64. *India Innovation Portal*, GOV’T OF INDIA NAT’L INNOVATION COUNCIL, available at <http://innovation.gov.in/innovation/fetchAllHomeItems.action> (last accessed Jan. 22, 2013).

65. Shilpa Kannan, *R&D Gives India Its Big Boost in the Tech World*, BBC NEWS (June 6, 2012, 7:03 PM), <http://www.bbc.co.uk/news/business-18330837>.

66. *Id.*

67. Dutta, *supra* note 26.

68. Lok Sabha, *Decade of Innovation Press Release*, MINISTRY OF SCI. & TECH. (Mar. 10, 2010), http://www.dst.gov.in/whats_new/press-release10/pib_10-3-2010.htm.

69. *Id.*

70. *Id.*

71. *Decades of Innovation: 2010–2012 Roadmap*, CLUSTER INNOVATION CTR., available at <http://innovation.gov.in/innovation/inntoolkit/Cluster%20Innovation%20Centre/CIC.html> (last visited Feb. 20, 2013).

72. Nirmalya Kumar and Phanish Puranam, *India Inside: The Emerging Innovation Challenge to the West*, HARVARD BUS. REV. PRESS (2012).

skilled technical competency, but foreign multinationals are capturing much of the value of this workforce.⁷³ Nonetheless, “multinational corporations are helping the Indian cause by building R&D centers there . . . [which] should have the effect of seeding R&D work in India, as those who participated at the lowest levels grow into mature scientists and entrepreneurs who start their own companies—inside India.”⁷⁴

Indeed, India is currently producing visible contributions to worldwide innovation through distinctly Indian companies.⁷⁵ For example, Tata Motors revolutionized the global automobile market with its Tata Nano, a small passenger vehicle available to the nation’s burgeoning consumer market for a mere USD \$2,500.⁷⁶ Narayana Hrudayalaya Hospitals is also being heralded for its innovative methods of bringing medical care to the masses; the company now treats minor illnesses at patients’ homes to avoid crowding hospitals, and its operational efficiencies have reduced the cost of an open-heart surgery at one of its cardiac centers to less than USD \$2,000.⁷⁷ Both Tata Motors and Narayana Hrudayalaya Hospitals have taken advantage of opportunities within India for low-cost innovation.⁷⁸

These opportunities have been created by the nation’s rapid expansion which, in addition to many positive externalities, also resulted in vast income gaps, overpopulation, widespread corruption, and poor access to education and healthcare.⁷⁹ Consequently, advocates promoting innovation within India believe that domestic firms should focus on reverse innovation—innovation that is adopted first in the developing world.⁸⁰ The fundamental driver of reverse innovation is the “income gap that exists between emerging markets

73. Shilpa Kannan, *R&D Gives India Its Big Boost in the Tech World*, BBC NEWS (June 6, 2012), available at <http://www.bbc.co.uk/news/business-18330837>.

74. Kumar and Puranam, *supra* note 72.

75. *The World’s 50 Most Innovative Companies*, FAST COMPANY, available at <http://www.fastcompany.com/most-innovative-companies/2012/industry/india> (last visited Jan. 24, 2013).

76. *Top 10 India*, FAST COMPANY, available at <http://www.fastcompany.com/most-innovative-companies/2012/industry/india> (last visited Jan. 24, 2013).

77. Chuck Salter, *For Bringing Medical Care to the Masses*, FAST COMPANY, available at <http://www.fastcompany.com/most-innovative-companies/2012/narayana-hrudayalaya-hospitals> (last visited Jan. 24, 2013).

78. Jennifer Chu, *Building Innovation in India*, MIT (Sept. 26, 2011), available at <http://web.mit.edu/newsoffice/2011/india-conference-0927.html>.

79. *Id.*

80. *Vijay Govindarajan: How Reverse Innovation Can Change the World*, INDIA KNOWLEDGE@WHARTON (Mar. 29, 2012), available at <http://knowledge.wharton.upenn.edu/india/article.cfm?articleid=4678>.

and developed countries.”⁸¹ For example, Western solutions for polluted water, agriculture, overpopulation, access to education, and affordable healthcare are not necessarily applicable in a growing nation of over a billion people. There is thus an opportunity for domestic firms to innovate for India.⁸² However, critics argue that reverse innovation is not cutting-edge like the types of products and services coming from Silicon Valley, but instead is an application of technology to meet consumer needs specific to India.⁸³

Despite these opportunities, the nation will have many hurdles to overcome as it aims to enhance its innovation capability, including weak intellectual property protection regimes, low domestic consumption levels, a limited education system, and low levels of venture capital activity.⁸⁴ However, one of the largest challenges confronting India’s growth and domestic innovation potential is the nation’s slowing economy. While India faces an economic challenge similar to China, the nation has few solutions to rebound from an economic growth rate that is creeping along at its slowest pace in nine years.⁸⁵ With inflation at 7.6%, a rupee that is tumbling against the dollar, and government debt at an estimated 67.6% of GDP, foreign analysts are forecasting the nation is without “fiscal ammo” that would otherwise protect it from having to endure a slowdown.⁸⁶ Accordingly, the threat of a severe slowdown further underscores the nation’s need to become domestically innovative.

Many are skeptical of India’s potential for becoming an innovation hub in the near future. Moreover, critics believe India’s limitations lie not in its technical capabilities, but in its government officials.⁸⁷ Others note, however, that the nation’s innovation ecosystem has vastly improved and that the “ingenuity and innovativeness of India is all around us, and if we can channel

81. Vijay Govindarajan, *The \$2,000 Car*, HARVARD BUS. REV. (Mar. 12, 2012 10:26 AM), http://blogs.hbr.org/cs/2012/03/the_2000_car.html.

82. *Govindarajan: How Reverse Innovation Can Change the World*, *supra* note 80.

83. Rishikesh Krishna, *Silicon Valley to India: Build an Innovation Ecosystem and Good Things Will Come*, IVEY BUS. J. (2011), available at <http://www.iveybusinessjournal.com/topics/innovation/silicon-valley-to-india-build-an-innovation-ecosystem-and-good-things-will-come#.UNZvm280WSo>.

84. Kumar and Puranam, *supra* note 72.

85. Amol Sharma and Bob Davis, *China, India Grapple with Growth Challenges*, WALL ST. J. (July 8, 2012, 9:55 PM), <http://online.wsj.com/article/SB10001424052702304058404577496443063859250.html>

86. *Id.*

87. Kumar and Puranam, *supra* note 72.

that so it becomes repeatable, reliable, scalable, we may see India develop into a global innovation engine. But this will take time.”⁸⁸

C. BRAZIL

Brazil is the largest economy in Latin American, the sixth largest in the world, and the fifth most populous nation.⁸⁹ The nation’s technology sector is abuzz, attracting “venture capital funds to invest in local startups and luring foreign firms to its growing market.”⁹⁰ Its web and mobile startup ecosystem is booming and a bevy of foreign entrepreneurs and investors—Americans, Germans, Spaniards—are looking for opportunities to make money in Brazil.⁹¹ The main attraction for investors is a booming consumer market; the nation already spends \$13 billion a year online with just 40% of the country using the Internet.⁹² Indeed, Brazil “now boasts the second highest number of Facebook users after the United States.”⁹³ Accordingly, the Economic Commission for Latin American and the Caribbean (“ECLAC”) reported that “Brazil is the only country [in Latin America] that has positioned itself as a prime location for . . . transnationals seeking to internationalize their R&D activities.”⁹⁴ Nonetheless, domestic innovation within Brazil is still incipient.⁹⁵

88. Seema Singh, *Philips Wakes Up to Reverse Innovation*, FORBES (May 12, 2012), <http://forbesindia.com/blog/technology/philips-wakes-up-to-reverse-innovation/>; Seema Singh, *Science’s Second Coming to India*, FORBES (Mar. 3, 2012), <http://forbesindia.com/article/innovation-special/sciences-second-coming-to-india/32308/1>.

89. *The World Factbook: Brazil*, CENTRAL INTELLIGENCE AGENCY (Jan. 18, 2013), <https://www.cia.gov/library/publications/the-world-factbook/geos/br.html>.

90. Shasta Darlington, ‘Geeks on a Plane’ Flock to Brazil, CNN (May 22, 2012), http://articles.cnn.com/2012-05-22/tech/tech_innovation_geeks-plane-brazil_1_brazilian-economy-tech-companies-local-startups?_s=PM:TECH.

91. Katie Fehrenbacher, *10 Things to Know About Tech Startups in Brazil*, GIGAOM (May 17, 2012), available at <http://gigaom.com/2012/05/17/10-things-to-know-about-tech-startups-in-brazil/>.

92. *Brazil Tech Sector Aims Higher After Instagram*, THOMSON REUTERS (Apr. 23, 2012, 1:31 PM), <http://www.reuters.com/article/2012/04/23/internet-brazil-idUSL2E8FJG9W20120423>.

93. Darlington, *supra* note 90.

94. Álvaro Calderón, Miguel Pérez Ludeña, and Sebastián Vergara, *Foreign Direct Investment in Latin America and the Caribbean*, ECON. COMM’N FOR LATIN AMERICA AND THE CARIBBEAN (2011), <http://www.eclac.cl/publicaciones/xml/2/46572/2012-182-LIEI-WEB.pdf>.

95. *Innovation Promotion in Brazil*, WORLD INTELLECTUAL PROPERTY ORGANIZATION (Sept. 2010), available at http://www.wipo.int/wipo_magazine/en/2010/05/article_0005.html; *Innovation in Brazil*, BRITISH EMBASSY BRASILIA, <http://ukinbrazil.fco.gov.uk/en/about-us/working-with-brazil/science-innovation/innovation-in-brazil/> (last visited Jan. 24, 2013).

In January of 2012, Brazil's newly appointed minister of science, technology, and innovation commented that "[i]nnovation is not an option, it is imperative The future of [Brazil] depends on this creative effort."⁹⁶ In April of 2012, Secretary of State Hillary Clinton launched the Accelerating Market-Driven Partnerships ("AMP") initiative to promote investment in innovation in Brazil and to identify critical elements necessary to foster "the development of entrepreneurship and innovation ecosystems."⁹⁷ Throughout Brazil, important governmental and private-sector initiatives "are sprouting up, creating fresh opportunities to incubate the next generation of innovators and entrepreneurs."⁹⁸ Moreover, the Brazilian government has

underscored that to truly succeed as an international competitor the 'complexity of the entire innovation paradigm' requires governments to adopt a more holistic approach to public policy. That means increasing capital and labor mobility, public and private sector cooperation . . . [and that] support for the development of only science and technology, is not sufficient to create a virtuous circle of innovation.⁹⁹

Like China and India, Brazil is attentive to its need to become domestically innovative and is promoting policies to develop innovation systems within its borders, particularly those that promote the private sector's ability to increase human capital and generate goods with higher-added value.¹⁰⁰

These policies are attracting the attention of both foreign nations and corporations. According to Secretary Clinton, in 2011 trade between the United States and Brazil reached approximately \$75 billion, "with much of that in sectors driving innovation."¹⁰¹ The same year, China invested \$4.5

96. Luisa Massarani, *Innovation is 'Imperative,' Says Brazil Science Minister*, NATURE (Jan. 25, 2012), available at <http://www.nature.com/news/innovation-is-imperative-says-brazil-science-minister-1.9903>.

97. *Secretary Clinton Announces Launch of New Partnership to Drive Investment in Innovation*, U.S. DEPARTMENT OF STATE (Apr. 27, 2012), <http://www.state.gov/r/pa/prs/ps/2012/04/188848.htm>.

98. *Ideas Economy: (Brazil) Innovation*, *supra* note 5.

99. Ricardo Sennes, *Innovation in Brazil: Public Policies and Business Strategies*, WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS 1, 11 (2009), <http://www.wilsoncenter.org/sites/default/files/Innovation%20Public%20Private%20Strategies%20English.pdf> (last visited Feb. 22, 2013).

100. *Id.* at 25.

101. Andrew Rogers, *US Delegation to Discuss Support for Innovation Ecosystem*, BUS. NEWS AMERICAS USA (Apr. 17, 2012), <http://www.bnamericas.com/news/technology/us-delegation-to-discuss-support-for-innovation-ecosystem>.

billion in Brazil's technology sector.¹⁰² Microsoft has already opened three of its Advanced Technology Laboratories in the nation and has plans to invest \$100 million in a fourth laboratory that will specifically house the Bing search engine and a business accelerator for fifteen startups.¹⁰³ Cisco is planning strategic investments of over \$546 million to foster innovation and create a platform for high-tech entrepreneurship in Brazil.¹⁰⁴ IBM and GE already have research centers in Rio; Intel is en route.¹⁰⁵ Globally, 5% of the world's R&D projects flowed into Brazil in 2011.¹⁰⁶ More importantly, Western corporate R&D centers are reportedly "yielding substantial positive local impacts in terms of technology transfer, production capacity building and innovation [in Brazil]."¹⁰⁷ The continuation of this trend is exactly what Brazil needs to develop its domestic innovative capabilities.

Indeed, as foreign corporations and governments invest in Brazil's technology sector, some of the nation's firms are already making international headlines for their innovative capabilities. For example, in 2012 two Brazilian companies were ranked among the fifty most innovative companies in the world: Bug Agentes Biológicos,¹⁰⁸ which mass-produces wasps to combat threats to agricultural production; and Boo-box,¹⁰⁹ a novel advertising and social media player.¹¹⁰ São Paulo is ground zero for Brazil's tech sector, but Recife, Campinas, and Belo Horizonte have become smaller startup hubs.¹¹¹

102. *China Invests \$12.67 billion in Brazil*, ECON. TIMES (July 5, 2011, 5:16 PM), http://articles.economictimes.indiatimes.com/2011-07-05/news/29738779_1_brazil-accounts-chinese-investment-brazil-s-ministry.

103. *Microsoft to Invest in Brazil*, YAHOO! FINANCE (Nov. 9, 2012, 1:59 PM), <http://finance.yahoo.com/news/microsoft-invest-brazil-185912815.html>.

104. *Cisco Announces Strategic Investments in Brazil to Foster Innovation, Transformation and Socio-Economic Development*, CISCO (Apr. 2, 2012), <http://newsroom.cisco.com/press-release-content?type=webcontent&articleId=776598>.

105. *Microsoft to Invest in Brazil*, *supra* note 103.

106. Calderón, Ludeña, and Vergara, *supra* note 94, at 45.

107. *Id.*

108. David Lidsky, *Bug Agentes Biológicos*, FAST COMPANY, <http://www.fastcompany.com/most-innovative-companies/2012/bug-agentes-biologicos> (last visited Feb. 22, 2013); *see also A Empresa*, BUG AGENTES BIOLÓGICOS, <http://www.bugbrasil.com.br/empresa.asp> (last visited Feb. 22, 2013).

109. *Sobre a boo-box*, BOO-BOX, <http://boo-box.com/site/home/institutional> (last visited Feb. 22, 2013).

110. Ricardo Geromel, *Brazil's Top 10 Most Innovative Companies*, FORBES (Feb. 21, 2012), <http://www.forbes.com/sites/ricardogeromel/2012/02/21/brazils-top-10-most-innovative-companies/>.

111. Fehrenbacher, *supra* note 91.

Since 2003, over 30 million Brazilians have been lifted out of poverty, yet the nation still has many economic and societal issues to overcome.¹¹² Like other developing nations, poor access to healthcare and education, inadequate infrastructure, and crime make doing business in Brazil difficult.¹¹³ The nation also has a high tax rate in which it is not uncommon for a company to pay 100% in taxes on employee salaries and revenues.¹¹⁴ All employees also have to be members of unions.¹¹⁵ Furthermore, granting equity to new members of tech companies is legally very complicated, thus it is uncommon.¹¹⁶ Consequently, a blockbuster exit like the PayPal acquisition will not create a wave of angel investors that can seed venture capital organizations.¹¹⁷

Like China, Brazil's state-backed companies may also affect competitiveness within the nation, depending on their influence.¹¹⁸ Brazil, however, "is perhaps the best current example of how a state-capitalist system can build innovative industries."¹¹⁹ For example, Brazil has created internationally competitive firms in a range of high-tech industries by supporting certain industries when private capital was scarce.¹²⁰ Today, many of Brazil's state-backed companies have fared the global recession far better than multinationals because they can rely on government assistance.¹²¹ Nonetheless, the nation is struggling as it strives to maintain growth and economists are reiterating that "[i]nnovation is an urgent matter in Brazil."¹²²

Although Brazil will have many challenges to overcome as it attempts to build innovation ecosystems, the nation is starting to draw some of the world's attention away from China and India. However, some warn that Brazil's incipient startup ecosystem is growing too fast and evidences an impending bubble.¹²³

112. *The World Factbook: Brazil*, CENTRAL INTELLIGENCE AGENCY (Feb. 20, 2013), <https://www.cia.gov/library/publications/the-world-factbook/geos/br.html>.

113. *Id.*

114. Fehrenbacher, *supra* note 91.

115. *Id.*

116. *Id.*

117. *Id.*

118. *Id.*

119. Kurlantzick, *supra* note 27.

120. *Id.*

121. *Id.*

122. Vinod Sreeharsha, *Brazil Steps Up Investment in Overlooked Tech Start-Ups*, N.Y. TIMES (Dec. 5, 2012, 5:49 PM), <http://dealbook.nytimes.com/2012/12/05/brazil-steps-up-investments-in-overlooked-tech-start-ups/>.

123. Fehrenbacher, *supra* note 91.

II. THE HISTORY, ENFORCEMENT, AND SIGNIFICANCE OF NONCOMPETES

China, India, and Brazil will most likely need to increase their innovation capabilities by promoting domestic innovation in order to advance their economic development. While numerous factors contribute to the development of an innovation ecosystem, the remaining portions of this Note examine the role noncompete agreements may play in the development of these ecosystems within China, India, and Brazil. Section II.A, *infra*, provides an overview of noncompetes and the controversy surrounding their enforcement; Section II.B, *infra*, describes how noncompetes are enforced; and Section II.C, *infra*, synthesizes research regarding the effects of enforcing noncompetes within the high-technology sector.

A. OVERVIEW OF NONCOMPETE CLAUSES

Common types of restrictions against employees include noncompetition covenants, non-solicitation covenants, non-dealing covenants, non-poaching covenants, and garden leave clauses.¹²⁴ An employment-context covenant not to compete is a clause in an employment contract that expressly forbids an employee from competing with their employer upon termination.¹²⁵ Noncompetes are but one tool in an arsenal of intellectual property protections that corporations wield to safeguard their intangible property.¹²⁶ However, unlike patents or nondisclosure agreements, noncompetes do not aim to protect specific information.¹²⁷ Instead, they are largely designed to protect general knowledge and experience—gained by a former employee—from being utilized to advance competitor interests.¹²⁸

Dating back to 1414 England, restraints on trade were perceived as unenforceable.¹²⁹ However, by the nineteenth century the fall of guilds and the Industrial Revolution gave rise to the concept of trade secrets.¹³⁰ As companies consequently sought ways to protect this form of intellectual property, courts “were compelled to reconcile the perceived demands of

124. Gaurav Sharma, *Garden Leave Clause: Restrictive Covenant in Employment Contracts (with Special Reference to its Applicability in India)*, NATIONAL LAW UNIVERSITY, 5 (2012), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2141186.

125. *Id.*

126. *Id.*

127. Martha Lagace, *The Power of the Noncompete Clause*, HARVARD BUS. SCH. (Feb. 26, 2007), <http://hbswk.hbs.edu/item/5628.html>.

128. *Id.*

129. Matt Marx, Deborah Strumsky, & Lee Fleming, *Mobility, Skills, and the Michigan Experiment*, 55 J. MGMT. SCI. 6, 875, 876 (2009).

130. *Id.*

industrialization with the ideology of freedom of contract and the realities of factory work, and the corporate control of ideas with the ideology of free labor.”¹³¹ The law of restrictive covenants was thus adapted to prevent employees from using workplace knowledge.¹³² Today, noncompetes are widely enforced, primarily justified as a reasonable means to protect trade secrets.¹³³

Conceptually, noncompetes balance the opposing interests of employers and employees. Employers perceive noncompetes as valuable because they are a means to protect intangible investments in employees.¹³⁴ In contrast, employees disfavor noncompetes because they limit an employee’s ability to pursue various opportunities upon both voluntary and involuntarily termination.¹³⁵ Policymakers enforce noncompetes to the extent that these interests are balanced in a manner that is perceived fair to both parties.¹³⁶ However, the doctrine is imperfect and critics argue that noncompetes encapsulate the collision of employee freedom with corporate control of intellectual property.¹³⁷

Noncompetes have become increasingly controversial because the competing interests these devices balance have appreciated due to poor economic conditions, increased employee mobility, and the increasing value of trade secrets.¹³⁸ Primarily, opponents of noncompetes claim that noncompetes unfairly burden employees and allot employers too much bargaining power.¹³⁹ For example, in jurisdictions where noncompetes are more stringently enforced, employees risk having to take career detours or relocate in order to gain employment that is not in violation of their noncompete agreement.¹⁴⁰ Proponents nonetheless argue that noncompetes

131. Catherine Fisk, *Working Knowledge: Trade Secrets, Restrictive Covenants in Employment, and the Rise of Corporate Intellectual Property, 1800–1920*, 52 HASTINGS L.J. 2, 534 (2001).

132. *Id.*

133. *Id.*

134. Jacquelyn Gutc, *Non-compete Agreements May Restrict Employees’ Mobility, But Experts Say They Have Benefits*, WORCESTER BUS. J. (Sept. 3, 2012), available at <http://www.wbjournal.com/apps/pbcs.dll/article?AID=/20120903/PRINTEDITION/308309983/0/PRINTEDITION>.

135. *Id.*

136. *Id.*

137. Fisk, *supra* note 131.

138. Gutc, *supra* note 134.

139. Robert Shea and Scott Connolly, *Enforcing Noncompetition Agreements*, MORSE BARNES-BROWN PENDELTON, PC (June 2006), <http://www.mbbp.com/resources/employment/noncomps.html>.

140. Gutc, *supra* note 134.

are a “necessary evil” that provide employers with confidence that their trade secrets and investments in employee training are protected.¹⁴¹

B. ENFORCEMENT

Noncompete enforcement regimes vary around the world. For example, within the United States noncompete clause enforcement varies from state to state.¹⁴² Most states enforce noncompetes to some extent, with courts often employing a flexible, multi-factor test when deciding whether to uphold a noncompete clause.¹⁴³ However, in a small minority of states, including California, post-employment noncompetes are for the most part void.¹⁴⁴

Massachusetts’ position on noncompetes is “largely in line with the rest of the [United States] in viewing noncompetes as generally enforceable.”¹⁴⁵ In particular, courts will enforce a noncompete if: “(1) it is necessary to protect a legitimate business interest, (2) reasonably limited in time and geographic scope, (3) consonant with the public interest, and (4) supported by consideration.”¹⁴⁶ Legitimate business interests are typically recognized as “the protection of trade secrets, confidential information, and goodwill.”¹⁴⁷ Massachusetts, like many states, exemplifies the predominant view that an employee’s freedom to work can be reasonably impinged upon by an employer with a legitimate interest to protect.

Contrarily, California exemplifies the minority position and the opposite side of the spectrum on noncompete enforcement. In 1872, California adopted California Civil Code Section 1673, which generally prohibited noncompetition agreements.¹⁴⁸ The law has remained virtually unchanged

141. *Id.*

142. Jay Kesan and Carol Hayes, *The Law and Policy of Non-Compete Clauses in the United States and Their Implications*, UNIVERSITY OF ILLINOIS COLLEGE OF LAW (2011), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1948593.

143. *Id.*

144. Dowling, *supra* note 13.

145. Kesan and Hayes, *supra* note 142.

146. *Massachusetts Non-Compete Agreements in a Nutshell*, CONFORTO LAW GROUP, P.C. (Jan. 16, 2008), <http://www.confortolaw.com/2008/01/massachusetts-non-compete-agreements-in-a-nutshell/>; *see also* *Marine Contractors Co., Inc. v. Hurley*, 365 Mass. 280, 287 (1974), *Novelty Bias Binding Co. v. Shevrin*, 342 Mass. 714, 716 (1961); *Edwards v. Athena Capital Advisors, Inc.*, C.A. No. 07-2418-E, 2007 Mass. Super. LEXIS 378, 4–5 (Super. Ct. Aug. 7, 2007).

147. David Carr, *The Protection of Trade Secrets, Confidential Information and Goodwill: Drafting Enforceable Confidentiality, Non-Compete and Non-Solicitation Agreements: 10 Tricks and Traps*, AMERICAN BAR ASS’N (2002), <http://www.americanbar.org/content/dam/aba/migrated/labor/basics/tradesecrets/papers/carr.authcheckdam.pdf>.

148. David Trossen, *Edwards and Covenants Not to Complete in California: Leave Well Enough Alone*, 24 BERKELEY TECH. L.J. 539, 540 (2009).

and, today, California Business & Professional Code Section 16600 provides that “every contract by which anyone is restrained from engaging in a lawful profession, trade, or business of any kind is to the extent void.”¹⁴⁹ Beyond a few statutory exceptions, non-compete agreements in California are unenforceable.

Internationally, many noncompete enforcement regimes either apply reasonableness tests similar to the state of Massachusetts or largely hold noncompetes to be unenforceable like California.¹⁵⁰ In addition, many foreign jurisdictions either directly or indirectly require employees to be compensated during the noncompete period.¹⁵¹ Post-employment compensation can take a variety of forms, but it is justified as consideration given by the employee for agreeing to limit their freedom to work upon termination.¹⁵²

Lastly, the variation in enforcement of noncompetes creates conflict of laws issues as to which jurisdiction governs the noncompete.¹⁵³ To avoid these issues, many companies opt to include a choice of law clause in the employment agreement.¹⁵⁴ However, these clauses can be inadequate because noncompetes are evaluated in the jurisdiction where the employee breaches the noncompete, not the jurisdiction where the noncompete was drafted.¹⁵⁵ Therefore, practitioners advise employers to execute noncompete clauses that are in accord with the rules of the jurisdiction in which the employee is most likely to breach.¹⁵⁶

C. NONCOMPETE ENFORCEMENT: THE HIGH-TECHNOLOGY SECTOR, INNOVATION, AND SPILLOVERS.

Noncompete clauses in the high-technology industries are prevalent, with nearly 90% of technical workers having signed them in the United States.¹⁵⁷

149. CAL. BUS. & PROF. CODE § 16600 (2012).

150. Dowling, *supra* note 13.

151. *Id.*

152. *Id.*

153. Paulo McKeeby, *Solving the Multi-State Non-Compete Puzzle Through Choice of Law and Venue*, LAW.COM (Oct. 17, 2012), http://www.law.com/corporatecounsel/PubArticleCC.jsp?id=1202575160689&Solving_the_MultiState_NonCompete_Puzzle_Through_Choice_of_Law_and_Venue&slreturn=20121124011858.

154. *Id.*

155. *Id.*

156. *Id.*

157. Sampsa Samila and Olav Sorenson, *Noncompete Covenants: Incentives to Innovate or Impediments to Growth*, 57 MGMT. SCIENCE 3, 425, 425–37 (2011), available at <http://mansci.journal.informs.org/content/57/3/425.full.pdf>. (“In the United States nearly 90% of technical workers and upper-level management employees have signed noncompete agreements (Leonard 2001, Kaplan and Strömberg 2003).”).

The logic of the noncompete clause “reflects the limited useful life knowledge in high technology industries. Given the speed of innovation and the corresponding telescoping of product life cycles, knowledge more than a year or two old likely no longer has significant competitive value.”¹⁵⁸ Noncompetes thus function to help companies protect their human capital, intellectual property, and business relationships.¹⁵⁹ Restricting employee mobility ensures that employers realize the gains from their investments in employee training, R&D, and client development, which thereby promotes these productivity-enhancing activities.¹⁶⁰

Although courts may find an employer’s justification for enforcing a noncompete as reasonable, recent studies suggest that the mere enforcement of noncompetes has negative impacts on employee mobility, the creation of spinoffs, and knowledge spillovers. For example, there is evidence that nonenforcement of noncompetes increases employee mobility and that there are higher levels of mobility “among executives and technical workers in states with [nonenforcement] regimes.”¹⁶¹ The enforcement of noncompetes more significantly affects employees with technology-specific skills who are not widely marketable beyond direct competitors; indeed, these employees were found to be 16.2% less likely to change jobs when subject to noncompete enforcement.¹⁶² Employees with firm-specific human capital were 15.4% less likely to change jobs.¹⁶³ Furthermore, a recent study found that the enforcement of noncompetes may also prevent a former employee from launching their own organization, particularly if noncompetes bind potential hires with relevant experience in the industry.¹⁶⁴

The restriction of employee mobility is significant because employee mobility is a critical driver in promoting spinoff firms and spillovers. The term “spinoffs” in this context refers to independent firms formed by former employees of an existing entity, the parent company. Notably, former higher-level employees of a parent firm often form spinoffs by exploiting knowledge they learned while working at the parent firm.¹⁶⁵ Spinoffs are perceived as

158. Ronald Gilson, *The Legal Infrastructure of High Technology Industrial Districts: Silicon Valley, Route 128, and Covenants Not to Compete*, 74 NYU L. Rev. 3, 575, 603 (1999).

159. Samila and Sorenson, *supra* note 157, at 425–37.

160. April Franco and Matthew Mitchell, *Covenants Not to Compete, Labor Mobility, and Industry Dynamics*, 17 J. ECON. MGMT. STRAT. 3, 581, 581–06 (2008).

161. Samila and Sorenson, *supra* note 157, at 425–26.

162. Marx, Strumsky, and Fleming, *supra* note 129, at 887–88.

163. *Id.*

164. Samila and Sorenson, *supra* note 157.

165. Steven Klepper, *The Origin and Growth of Industry Clusters: The Making of Silicon Valley and Detroit*, J. URBAN ECON. 67, 15, 21 (2010).

desirable because they are integral to the formation of innovation ecosystems. For example, the development of Silicon Valley is attributed, in part, to spinoffs in the semiconductor industry.¹⁶⁶ Indeed, most Silicon Valley firms are connected to Fairchild Semiconductor, founded in 1957, “either as a spinoff of Fairchild, a spinoff of one of its spinoffs, or having a founder that at one point worked for Fairchild.”¹⁶⁷ Between 1957 and 1986, nearly all of the semiconductor entrants to Silicon Valley were spinoffs.¹⁶⁸ Importantly, these spinoffs typically do not stray geographically far from the parent company, thus as these new firms cluster, the potential for the development of an innovation ecosystem increases.¹⁶⁹

Employee mobility is also a significant factor in promoting spillovers. Knowledge that firms create is “tacit and embodied in individuals. The diffusion of these ideas across firms therefore depends on the movement of employees.”¹⁷⁰ Increasing employee mobility between firms thus promotes knowledge spillovers because ideas are more likely to disseminate when employees can freely transition between competing firms or start their own firms. Moreover, this diffusion of knowledge between firms may improve competitiveness in a region to the extent that firms benefit from ideas developed and paid for by competitors.¹⁷¹ For example, as leading firms lose knowledge to competitors, their competitive advantage erodes.¹⁷² Spillovers are desirable if they do indeed promote competition within a region since “a competitive environment pushes companies to innovate.”¹⁷³ Consequently, policymakers seeking to promote innovation within a region argue that the positive externalities attributed to spillovers justify not enforcing noncompetes.

These conclusions have particular significance when coupled with research regarding foreign investments in R&D facilities. Although empirical studies are mixed, foreign investments in R&D facilities can positively

166. *Id.* at 15.

167. *Id.* at 17.

168. Cristobal Cheyre, Steven Klepper, and Francisco Veloso, *Spinoffs and the Mobility of US Merchant Semiconductor Inventors*, STANFORD INST. FOR ECON. POL’Y RESEARCH 1, 3 (2012), available at http://siepr.stanford.edu/system/files/shared/jobhopping_v54.pdf.

169. *Id.* at 27.

170. Samila and Sorenson, *supra* note 157, at 425–37; see also Gilson, *supra* note 158, at 575–629.

171. Samila and Sorenson, *supra* note 157, at 425–37.

172. Juan Alcácer and Minyuan Zhao, *Local R&D Strategies and Multi-location Firms: The Role of Internal Linkages*, HARVARD BUS. SCH. 1, 1–4 (2010), <http://www.hbs.edu/faculty/Publication%20Files/10-064.pdf>.

173. Rachel Bradenburger, *Promoting Innovation through Competition*, DEP’T OF JUSTICE (Sept. 22, 2011), <http://www.justice.gov/atr/public/speeches/279093.pdf>.

contribute to spillovers in an emerging market, especially within that market's technology sector.¹⁷⁴ For example, developing countries often have relatively weak knowledge intensive sectors, thus the "entry of [foreign direct investment] has greater potential for vertical inter-firm linkages, diffusion of new knowledge and other spillovers with the host economy."¹⁷⁵ Consequently, the potential for foreign direct investment ("FDI") led spillovers to domestic firms will likely be higher in knowledge based sectors. More importantly, these spillovers may be more likely in an environment with a high labor turnover rate and unrestricted mobility.¹⁷⁶

Despite variances in methodology, there are two takeaways from the research in this area: (1) the enforcement of noncompete agreements negatively affects employee mobility, and (2) employee mobility is a key component with regards to promoting spinoffs and spillovers. Therefore, even though a region's ability to foster an innovation ecosystem and benefit from spinoffs and spillovers depends on a variety of factors, employee mobility is one of those factors. Since employee mobility is a function of a region's noncompete enforcement regime, such enforcement regimes likely have an impact on innovation within a regional economy. Even though the positive or negative effects of the noncompete enforcement regime may be negated by other externalities, the enforcement regime is nonetheless a significant consideration that policy makers should be mindful of when endeavoring to develop an innovation ecosystem.¹⁷⁷

174. Zhiqiang Liu, *Foreign Direct Investment and Technology Spillovers: Theory and Evidence*, J. DEV. ECON. 85, 176, 191–92 (2008); see also Holger Görg and David Greenaway, *Much Ado About Nothing? Do Domestic Firms Really Benefit From Foreign Direct Investment?*, THE WORLD BANK RESEARCH OBSERVER, 171, 189–90 (2004).

175. Nagesh Kumar, *Globalization and the Quality of Foreign Direct Investment*, OXFORD UNIVERSITY PRESS (2002).

176. David Kemme, Volodymyr Lugovskyy, & Deepraj Mukherjee, *Labor Mobility, Knowledge Transfer and Productivity Spillover of Multinationals: Evidence from Indian Firms*, UNIVERSITÀ DI PERUGIA (June 14, 2009), available at http://www.stat.unipg.it/aissec2009/Documents/papers/CI2_Kemme_Lugovskyy_Mukherjee.pdf.

177. Marc Muendler and James Rauch, *Employee Spinoffs and the Formation of Teams – Evidence from Brazil*, INT'L GROWTH CTR. (May 2011), available at http://www.theigc.org/sites/default/files/11_0270_muendler_policybrief_v2_2.pdf.

III. COMPARING THE ENFORCEMENT REGIMES OF CHINA, INDIA, AND BRAZIL

Innovation is the future.¹⁷⁸ At the country and company level, it is the basis for both job creation and gaining a competitive advantage.¹⁷⁹ The ability to invent and adapt “is the difference between a middle-income country reliant on technologies and services from abroad, and a wealthy one that makes its own fortune.”¹⁸⁰ Profound innovations surface when policymakers create a space that encourages people to engage in developing pioneering products and services.¹⁸¹ As exemplified by numerous countries and regions around the world, a good combination of “government policies and business strategies is central to the creation of an environment propitious to generate innovation.”¹⁸² Accordingly, China, India, and Brazil—countries that need to become domestically innovative in order to sustain growth—are each in the process of designing policies that will best promote the development of innovation ecosystems within their respective borders.

Employee mobility likely plays a significant role in the development of these ecosystems. Hence, some jurisdictions, like California, have found it beneficial to void noncompetes as a means to promote employee mobility. However, China, India, and Brazil are all in a position in which to promote domestic innovation, they most likely need to continue to attract foreign investments in R&D facilities in order to incentivize knowledge based spillovers and the creation of spinoffs. Since protecting intellectual property is vital for emerging countries seeking to attract this type of FDI, developing nations may seek to replicate the IP protection regimes of the developed nations to which tech-multinationals have grown accustomed.¹⁸³ Noncompete enforcement varies in developed nations, thus there are a variety of options. While nonenforcement may seem attractive given California’s renowned success in fostering Silicon Valley, policymakers are faced with a difficult analysis in China, India, and Brazil because these nations likely need to promote FDI in R&D facilities while simultaneously promoting policies that liberalize employee mobility. The two goals are not mutually exclusive and need to be balanced, with the ideal result being a

178. Hal Gregersen, *The Great Innovation Wall of China*, BLOOMBERG BUSINESSWEEK (May 9, 2012), <http://www.businessweek.com/articles/2012-05-09/the-great-innovation-wall-of-china#r=lr-fs>.

179. *Id.*

180. Foley, *supra* note 31.

181. Gregersen, *supra* note 178.

182. Sennes, *supra* note 99.

183. *Innovation Promotion in Brazil*, *supra* note 95.

spillover effect from the foreign R&D facilities that begets innovative domestic firms. This Part seeks to analyze and evaluate how China, India, and Brazil have elected to balance these interests and whether or not their regimes are attractive to foreign investment.

A. CHINA

In China, noncompete agreements are routinely used. The Labor Contract Law of the People's Republic of China, effectuated on January 1, 2008, regulates employee noncompete clauses.¹⁸⁴ Article 23 provides that an employer may stipulate a noncompetition clause within an employment contract or confidentiality agreement for employees with confidentiality obligations.¹⁸⁵ However, the employer is required to provide monthly compensation to the employee for the duration of the noncompete period.¹⁸⁶ Unless specified by local rules or regulation, the contracting parties can mutually agree to a reasonable amount of compensation.¹⁸⁷ If the employee violates the noncompete clause, they are liable for penalties for breach of contract.¹⁸⁸

Article 24 qualifies Article 23 by limiting the use of noncompete clauses to "senior [managers], senior technicians and other personnel who have the obligation to keep secrets in the entity."¹⁸⁹ It further states that the "range, geographical scope and time limit for limitation" are to be stipulated by the employer and the worker, but must not violate any law or regulation.¹⁹⁰ Moreover, under Article 24, noncompete clauses in China cannot exceed two years.¹⁹¹

China's noncompete regime appears to be more balanced than the regimes of its emerging market counterparts. While most employees within China cannot be restricted by noncompetes, senior management, technical personnel, and persons entrusted with trade secrets may be subject to the limitations imposed by a noncompete. The law thus promotes employee mobility for a majority of its citizens, but simultaneously caters to the concerns of corporate interests by permitting restrictions on "higher-value" employees.

184. *Labor Contract Law of the People's Republic of China*, INVEST IN CHINA (June 29, 2007), available at http://www.fdi.gov.cn/pub/FDI_EN/Laws/law_en_info.jsp?docid=82499.

185. *Id.*

186. *Id.*

187. *Id.*

188. *Id.*

189. *Id.*

190. *Id.*

191. *Id.*

Although China's new Labor Contract Law permits the use of noncompetes, Chinese courts are concerned about the relationship between noncompetition clauses and protecting an employee's legitimate interests. For example, according to the *Supreme People's Court Opinions on Several Issues Regarding the Implementation of the National Intellectual Property Strategy*, "courts are required to properly strike the balance between protection of trade secrets and freedom of employment."¹⁹² In balancing these interests, the government has already decided that noncompetes are unreasonable unless the parties to the agreement are senior and technical personnel, the individuals most likely to have access to sensitive information and trade secrets.¹⁹³ Moreover, the mandatory requirement for compensation during the noncompete period values an employee's interest in their right to work and likely discourages employers from indiscriminately executing noncompetes with employees since the post-employment costs can become significant.¹⁹⁴

Despite recognizing and protecting employee interests, China's enforcement regime is advantageous for multinationals as well because it provides guidelines on how to craft a noncompete that will be upheld by a Chinese court. Articles 23 and 24 thus resolve some of the contentious issues that arise in jurisdictions which enforce noncompetes more broadly. Although employers cannot freely subject all of their employees to noncompetes, their most valuable employees are restricted. Moreover, creative employers may find ways to strategically structure their management structure in China so that noncompetes may be enforced against a broader array of employees.

Although employers' interests may be protected by the employee class restriction proscribed by China's noncompete enforcement regime, this class distinction may have significant effects on the development of an innovation ecosystem in light of research that suggests spinoffs are primarily created by higher level employees of parent firms. The effect of employee mobility on the creation of innovation ecosystems may thus be diluted if the employees that most often aid in the development of these systems are restricted.

There are of course many other external factors that affect employee mobility. For example, the influence of SOEs and the prevalence of

192. J. Benjamin Bai and Guoping Da, *Strategies for Trade Secrets Protection in China*, 9 NW. J. TECH. & INTEL. PROP. 351 (2011), available at <http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1005&context=njtip>.

193. *Employee Non-Disclosure and Non-Competition Agreements*, CHINAHOT.COM, <http://resources.chinahot.com/for-employers/labor-force-management/employee-non-disclosure.html> (last visited Jan. 24, 2013).

194. *Id.*

corruption may encourage employees to remain in their current position given that the economic environment is not freely competitive, particularly when compared to the environment of the United States. Nevertheless, China's noncompete enforcement regime balances both the interests of employees and the interests of foreign multinationals fairly well.

B. INDIA

The Indian Contract Act of 1872 is the predominate source of law regulating contracts in India today and is applicable to every state within the nation except Kashmir and Jammu.¹⁹⁵ Section 27 of the Act provides that “[e]very agreement by which any one is restrained from exercising a lawful profession, trade or business of any kind, is to that extent void.”¹⁹⁶ Consequently, Indian courts have consistently refused to enforce post-termination noncompete clauses in employment contracts because they are a “restraint of trade.”¹⁹⁷

Section 27 is based upon the English common law doctrine of restraint of trade and “was enacted to encourage competition and [to] promote economic development”¹⁹⁸ at a time when Indian trade was in its infancy. The language of the section is wholly lifted from a New York draft code based upon the old English doctrine of restraint on trade, the exact same civil code that begot California's Section 16600.¹⁹⁹ Despite 140 years of economic development in India, judicial interpretations of Section 27 have not changed since the Act's inception.

India gives complete deference to employee interests with regards to its nonenforcement of noncompetes. The lack of an enforcement regime thus

195. Indian Contract Act, No. 9, INDIA CODE (1872), *available at* <http://chddistrictcourts.gov.in/THE%20INDIAN%20CONTRACT%20ACT.pdf>.

196. There is but one exception to Section 27, which concerns the sale of goodwill of a business:

One who sells the goodwill of a business may agree with the buyer to refrain from carrying on a similar business, within specified local limits, so long as the buyer, or any person deriving title to the goodwill from him, carries on a like business therein, provided that such limits appear to the Court reasonable, regard being had to the nature of the business.

Id.

197. Valérie Demont and Janaki Rege Catanzarite, *Non-Compete Clauses Are Unenforceable in India*, PEPPER HAMILTON LLP (Feb. 25, 2010), http://www.pepperlaw.com/publications_update.aspx?ArticleKey=1714.

198. Karandeep Makkar and Abhishek Kumar, *Enforceability of Non-Solicit, Non-Compete and Non-Disclosure Clauses in Light of Restraint of Trade Doctrine*, CORPORATE LAW ADVISER (Jan. 6, 2012), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2035377.

199. Trossen, *supra* note 148, 541; Makkar and Kumar, *supra* note 198.

enables employee mobility, but does not advance employer interests in protecting intangible property. Furthermore, multinationals are consistently incorporating noncompetes into employment contracts in India despite these clauses being invalid under Section 27.²⁰⁰ Proponents of stronger noncompete enforcement in India argue that if “India wants to grow as an emerging market and compete in the globalizing world, its legal system must keep pace with the fast-changing global business environment”²⁰¹ There is thus a concern that if India continues not to enforce noncompetes, multinationals will offshore R&D operations elsewhere.

However, multinationals clearly perceive India to be an advantageous destination for offshoring R&D operations.²⁰² If India can continue to attract foreign R&D investments without enforcing noncompetes, its enforcement regime may be best suited for fostering innovation ecosystems. Ultimately, technology companies that are able to compete in California may not be significantly deterred by India’s nonenforcement regime, given that both jurisdictions generally refuse to enforce noncompetes. Moreover, India’s lack of enforcement may prove advantageous for companies if employees transition between both foreign and domestic firms. For example, employees leaving Tata Motors for a foreign automotive firm with an R&D facility in India may aid that firm by diffusing knowledge learned at Tata. However, this type of benefit is unlikely to materialize until India fosters a substantial amount of domestically innovative firms.

Therefore, while India’s nonenforcement regime may be attractive in a developed nation, it is unclear whether it will support India in developing domestic innovation ecosystems. The nation’s lack of enforcement of noncompetes clearly does not incentivize foreign investment from firms with high value trade secrets; however, whether or not nonenforcement will disadvantage India relative to China or Brazil depends on the nation’s ability to attract foreign high-tech investment by other means. Given a variety of external concerns—from a sluggish economy to poor access to education—this ability may be tested in the near future.

200. Makkar and Kumar, *supra* note 198.

201. *Id.*

202. *R&D in India: The Curtain Rises, The Play Has Begun...*, KNOWLEDGE@WHARTON (Nov. 21, 2005), <http://knowledge.wharton.upenn.edu/article.cfm?articleid=1278&specialid=40>.

C. BRAZIL

Restrictive covenant law in Brazil is underdeveloped, but Brazilian courts do not expressly ban noncompetes.²⁰³ While there is no civil code regarding post-employment noncompetition, the right-to-work provision in the Brazilian Constitution “cast[s] a long shadow over the enforceability of post-term restrictive covenants.”²⁰⁴ Specifically, Article 5 of Title II provides that “the practice of any work, trade or profession is free, observing the professional qualifications which the law may establish.”²⁰⁵ Given that most companies do not intend to restrict a former employee’s constitutional right to work, noncompetes can be enforced in Brazil; indeed, there is a developing trend of courts upholding noncompetes, provided that the agreements are reasonable in their limitations.²⁰⁶

When evaluating noncompetes, Brazilian labor courts examine the reasonableness of the clause’s limitation of time, territory, core business, and financial compensation for the noncompetition period.²⁰⁷ While noncompetition compensation is not mandatory in Brazil, practitioners advise clients that such compensation tips the reasonableness evaluation in favor of the employer.²⁰⁸ Indeed, the predominate view in Brazil, “is that post-term non-competes are unconstitutional unless the employer pays enough to assuage the constitutional concern. Compensation amounts, though not fixed, may need to run about 50–60% of the final average pay.”²⁰⁹ Case law regarding post-employment noncompetes is scarce in Brazil, but Brazilian legislation does not restrict enforcement of noncompetes to certain classes of employees.²¹⁰

203. Dowling, *supra* note 13.

204. *Id.*

205. Constituição Federal [C.F.] [CONSTITUTION] art. 5. (Braz.) *available at* http://www.imprensaoficial.com.br/PortalIO/download/pdf/Constituicoes_declaracao.pdf (“Todos são iguais perante a lei, sem distinção de qualquer natureza, garantindo—se aos brasileiros e aos estrangeiros residentes no País a inviolabilidade do direito à vida, à liberdade, à igualdade, à segurança e à propriedade, nos termos seguintes: (XIII) é livre o exercício de qualquer trabalho, ofício ou profissão, atendidas as qualificações profissionais que a lei estabelecer.”); *see also Constitution of Brazil*, UNIVERSITY OF BRAZIL, *available at* <http://www1.umn.edu/humanrts/research/brazil-constitution.html> (last visited Feb. 22, 2013).

206. *Non-Competition*, LEX MUNDI (2012), *available at* www.lexmundi.com/Document.asp?DocID=3904.

207. Vilma Toshie Kutomi, *Labor and Employment Practice Group Non-Competition*, LEX MUNDI (2010), *available at* www.lexmundi.com/Document.asp?DocID=1487 (last visited Jan. 24, 2013).

208. Dowling, *supra* note 13; Kutomi, *supra* note 207.

209. Dowling, *supra* note 13.

210. Kutomi, *supra* note 207.

Brazil's noncompete enforcement regime is not as defined as that of China or India. However, Brazil occupies an interesting place on the spectrum of enforcement because theoretically any employee can be bound by a noncompete since the nation employs a reasonableness test in determining when to enforce a noncompete. Relative to China and India, Brazil thus gives the most deference towards employer interests in protecting trade secrets. Indeed, multinationals are continuing to include noncompetes in Brazilian employment contracts, but few have been litigated.²¹¹ Employers must thus draft noncompetes cautiously given a lack of precedent.

Despite a lack of formality, the nation's noncompete enforcement regime may prove advantageous for companies that strongly prefer to execute noncompete agreements with a variety of employees that may not fit within the classifications permitted by China. However, like China, Brazil does validate employee interests by requiring compensation during the noncompete period. To the extent employers are financially constrained, this cost limits their ability to enforce noncompetes as freely as they might otherwise in a regime that does not require compensation.

Since Brazil employs a reasonableness test that is used by many developed world jurisdictions, its enforcement regime may be best designed for attracting foreign investment. However, as noncompetes become more prevalent in Brazil, the nation's ability to innovate may be subdued if employees become increasingly less mobile as a result.

IV. CONCLUSION

As the twenty-first century progresses, governments around the world are seeking to foster innovation within their borders in order to compete on a global scale. While prior research suggests that regions seeking to foster innovation should not enforce noncompete agreements, this conclusion does not necessarily translate in the emerging nation context. As discussed in this Note, China, India, and Brazil are all creating policies to develop domestic innovation ecosystems. However, given that China, India, and Brazil likely need to continue to attract foreign R&D investments in order to become innovative, the nonenforcement of noncompetes likely does not promote this goal. A bevy of other economic and noneconomic factors contribute to

211. John Barry, Daniel Ornstein, and Yasmine Tarasewicz, *Tying and Untying the Knot: Non-Compete Agreements in the UK, EU and Latin America—How to Write Them; How to Fight Them*, PROSKAUER ROSE LLP (June 17, 2010), <http://www.internationallaborlaw.com/files/2012/10/Tying-and-Untying-the-Knot.pdf>.

regional economic growth, however, labor law matters.²¹² Therefore, policymakers in each of these nations should be cautious in the design of their noncompete enforcement regimes in order to strike a balance between employee and employer interests in order to foster domestic innovation while continuing to attract foreign investments. In striking this balance, moderate enforcement of noncompetes may be beneficial.

212. AnnaLee Saxenian, *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*, FIRST HARVARD UNIVERSITY PRESS (1996).

