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Governance Innovation

CIGI Papers No. 199 – November 2018

How Trade Deals Extend the Frontiers of International Patent Law

Jean-Frédéric Morin and Dimitri Thériault



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About the Authors

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At CIGI, Jean-Frédéric is contributing to the ILRP's research themes on international intellectual property, and environmental and economic laws by building the TRade and ENvironment Database (TREND), sponsored by the Canadian Foundation for Innovation, CIGI and Laval University. This database will document institutional interactions among trade, investment and environmental institutions. It will enable Jean-Frédéric and other CIGI researchers to study the emergence, variation, diffusion, implementation and effectiveness of hundreds of different provisions found in thousands of multilateral, regional and bilateral agreements.

Before being invited to Laval, Jean-Frédéric was a professor at Université libre de Bruxelles from 2008 to 2014, and a post-doctoral researcher at McGill University from 2006 to 2008.

Jean-Frédéric has interdisciplinary training in law and political science, and has taught in law programs as well as in political science programs. He is currently conducting research in the fields of trade policy, investment law, global environmental politics, and international intellectual property law, with a particular interest in studying how transnational networks shape the interactions of international institutions. His recent publications have appeared in leading journals such as *International Studies Quarterly*, *European Journal of International Relations*, *Review of International Studies*, *European Journal of International Relations*, *International Studies Review*, *Global Governance*, and *Review of International Political Economy*.

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During his studies, Dimitri worked as a research assistant with Jean-Frédéric Morin, Canada Research Chair in International Political Economy. His main role was to provide statistical analysis and charts based on TREND. Currently, he is a briefing officer at Global Affairs Canada.

About the International Law Research Program

The International Law Research Program (ILRP) at CIGI is an integrated multidisciplinary research program that provides leading academics, government and private sector legal experts, as well as students from Canada and abroad, with the opportunity to contribute to advancements in international law.

The ILRP strives to be the world's leading international law research program, with recognized impact on how international law is brought to bear on significant global issues. The program's mission is to connect knowledge, policy and practice to build the international law framework — the globalized rule of law — to support international governance of the future. Its founding belief is that better international governance, including a strengthened international law framework, can improve the lives of people everywhere, increase prosperity, ensure global sustainability, address inequality, safeguard human rights and promote a more secure world.

The ILRP focuses on the areas of international law that are most important to global innovation, prosperity and sustainability: international economic law, international intellectual property law and international environmental law. In its research, the ILRP is attentive to the emerging interactions among international and transnational law, Indigenous law and constitutional law.

Executive Summary

Bilateral and regional trade deals frequently include patent provisions that go beyond the minimum requirement of the multilateral Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). They extend the scope of patentability and provide additional rights to patent holders. This paper systematically maps these “TRIPS-plus” agreements. Exploiting a new data set, 52 TRIPS-plus agreements are found to have been concluded between 1990 and 2017. The major proponents of these TRIPS-plus agreements on patents are the United States, followed by the European Union and the European Free Trade Association. Other technology-rich countries, such as Japan and Korea, have surprisingly few TRIPS-plus provisions on patent protection in their trade agreements. Few South-South trade agreements include TRIPS-plus provisions, but some include TRIPS-extra provisions on genetic resources and traditional knowledge. Having a clear picture of these TRIPS-plus agreements is essential as they can have important social and economic consequences, including for the development of innovations and access to technologies.

Introduction

This paper is one of the first attempts to systematically map key patent provisions in bilateral and regional preferential trade agreements (PTAs). Some of these provisions have important policy implications, including for the development of innovations and access to technologies. This paper shows their historical evolution and their geographical distribution.

The available literature has already reported that some PTAs offer a level of patent protection that

goes beyond the minimum requirements of TRIPS.¹ However, several questions still need more research and analysis. In particular, the number and scope of TRIPS-plus agreements are uncertain. It is also unclear if their conclusion is more frequent today than it was a decade ago. As well, the practices of several countries remain undocumented, beyond some well-known advocates and opponents of TRIPS-plus agreements.

This paper fills these gaps by relying on a recent data set of TRIPS-plus agreements (the T+TPA data set) introduced by Jean-Frédéric Morin and Jenny Surbeck.² This data set is based on an exhaustive collection of more than 600 PTAs concluded between 1947 and 2017.³ Among these PTAs, Morin and Surbeck identified 52 PTAs with significant TRIPS-plus provisions on patents.

The rest of this paper is divided into seven short sections. The first section describes the current state of multilateral negotiations over patent law. The second section describes eight categories of TRIPS-plus provisions on patents, while the third section presents their development over time. The next section identifies the key role played by the United States and by European countries in promoting TRIPS-plus agreements. The fifth section assesses the PTAs involving other technology-rich countries. The sixth section considers developing countries and their role in the diffusion of TRIPS-plus provisions on patents. The last section focuses on provisions that are of particular interest for

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- 1 The first publications on TRIPS-plus agreements include: F Abbott, “Intellectual Property Provisions of Bilateral and Regional Trade Agreements in Light of US Federal Law” (Geneva: International Centre for Trade and Sustainable Development & United Nations Conference on Trade and Development, 2006); C Fink & P Reichenmiller, “Tightening TRIPS: The Intellectual Property Provisions of Recent US Free Trade Agreements” (Washington, DC: World Bank, 2005); J Kuanpoth, “TRIPS-Plus Intellectual Property Rules: Impact on Thailand’s Public Health” (2006) 9:5 J World IP 573; J-F Morin, “Tripping up TRIPS Debates: IP and Health in Bilateral Agreements” in Y Gendreau, ed, *Intellectual Property: Bridging Aesthetics and Economics* (Montreal: Thémis, 2006) 323 [Morin, “Tripping up TRIPS Debates”]; D Price, “The US–Bahrain Free Trade Agreement and Intellectual Property Protection” (2004) 7:6 J World IP 829; P Roffe & C Spennemann, “The Impact of FTAs on Public Health Policies and TRIPS Flexibilities” (2006) 1:1–2 Intl J IP Mgmt 75; D Vivas-Eugui, *Regional and Bilateral Agreements and a TRIPS-Plus World: The Free Trade Area of the Americas* (Geneva: Quaker United Nations Office, 2003).
 - 2 Jean-Frédéric Morin & Jenny Surbeck, “Mapping the New Frontier of International IP Law: Introducing a TRIPS-Plus Dataset” (forthcoming). Agreements concluded after January 1, 2018, such as the new United States-Mexico-Canada Agreement, are not included in the data set.
 - 3 Andreas Dür, Leonardo Baccini & Manfred Elsig, “The design of international trade agreements: Introducing a new dataset” (2014) 9:3 Rev Intl Org 353. See updated data set at www.designoftradeagreements.org/.

developing countries. The conclusion identifies directions for future policy-oriented research.

From the Multilateral TRIPS to the Bilateral TRIPS-plus

Patent law is a contentious issue in trade negotiations. The United States, the European Union and other high-income countries consider the 1994 TRIPS Agreement of the World Trade Organization (WTO) to be outdated and insufficient. They are calling for the adoption of stronger and broader commitments on patent protection. This would allow them to exploit their technological advantage and ensure adequate global protection for their inventions. Taking a different view, several developing countries are opposed to TRIPS-plus provisions. They are keen on weaker patent protection, which facilitates the replication of foreign innovations, and allows them to develop their technological capacities and benefit from lower retail prices.

In the early 2000s, developing countries managed to make their voices heard in multilateral fora. They created strong coalitions, obtained the support of civil society organizations and blocked TRIPS-plus multilateral initiatives. At the WTO, strengthening patent protection was not on the agenda for the 2001 Doha Round. Instead, WTO members agreed on a mechanism to favour the exportation of generic drugs to countries lacking manufacturing capacities. Likewise, at the World Intellectual Property Organization (WIPO), debates shifted in favour of developing countries with the suspension of negotiations on the

Substantive Patent Law in 2006 and the adoption of the WIPO Development Agenda in 2007.⁴

Some high-income countries reacted to these obstructions at the multilateral level by promoting stronger patent protection in their PTAs. However, the TRIPS-plus provisions in PTAs have also become controversial. This is clearly illustrated by the renegotiation of the Trans-Pacific Partnership (TPP). After the US withdrawal from the TPP in 2017, the 11 remaining partners slightly revised the agreement and suspended TRIPS-plus provisions, which broadened the scope of patentability and extended patent duration. Since the United States was the main advocate of these provisions, other Asia-Pacific nations considered them as deal breakers that could be omitted from an agreement that no longer included the United States. The revised TPP, which included fewer TRIPS-plus provisions, was renamed the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). The next section presents some of the most controversial TRIPS-plus provisions included in PTAs over the last 25 years.

Eight Categories of TRIPS-plus Provisions

The TRIPS Agreement provides that WTO members must make patent protection for inventions that are new, involve an invention step and are capable of industrial application. Patents offer exclusive rights over the making, using, selling and importing of the patented invention for a duration of 20 years. The T+TPA data set identifies eight main categories of PTA patent provisions that go beyond these minimum requirements of the TRIPS

4 DJ Halbert, *Resisting Intellectual Property* (London: Routledge, 2005); L Helfer, "Regime Shifting: The TRIPS Agreement and New Dynamics of International Intellectual Property Lawmaking" (2004) 29:1 Yale J Intl L 1; A Kapczynski, "The Access to Knowledge Mobilization and the New Politics of Intellectual Property" (2008) 117 Yale LJ 804; C May & SK Sell, *Intellectual Property Rights: A Critical History* (Boulder, CO: Lynne Rienner Publishers, 2006); J-F Morin, "Paradigm Shift in the Global IP Regime: The Agency of Academics" (2014) 21:2 Rev Intl Pol Economy 275; V Muzaka, "Linkages, Contests and Overlaps in the Global Intellectual Property Rights Regime" (2011) 17:4 Eur J Intl Rel 755; S Sell & A Prakash, "Using Ideas Strategically: The Contest between Business and NGO Networks in Intellectual Property Rights" (2004) 48:1 Intl Studs Q 143.

Agreement.⁵ This section briefly presents these categories and their respective frequency to provide a better understanding of the T+TPA data set.

Four categories of TRIPS-plus provisions documented in the T+TPA data set relate to the scope of patentability: the requirement to make patent protection available for plants (found in 18 PTAs); the requirement to make patent protection available for animals (in seven PTAs); the patentability of new uses of known products (in eight PTAs); and the 12-month grace period in which a patentee may disclose the invention without the disclosure being considered as prior art to invalidate the patent on the basis of novelty (in 17 PTAs).

Other TRIPS-plus provisions concern patent duration. No fewer than 42 PTAs require the extension of the patent term when administrative procedures unduly delay the granting of the patent or the patented invention's market entry. In addition, 21 PTAs restrict the grounds on which patents can be revoked. These clauses limit the flexibility of patent duration that the TRIPS Agreement grants to WTO members.

Finally, two categories of TRIPS-plus provisions extend the rights conferred by a patent. The first includes a provision on exhaustion, which states that the rights conferred by a patent can only be exhausted once the protected product is sold either on the domestic market (four PTAs) or the regional market (four PTAs). The second limits the grounds on which a government can issue a compulsory licence to a generic producer (four PTAs). Both categories of TRIPS-plus provisions can potentially restrict access to patented medicines in developing countries. In fact, as the next section points out, they first emerged in PTAs at a time when access to medicines was the subject of intense debate in multilateral fora.

5 For the purpose of this analysis, TRIPS-plus provision on data protection, plant variety protection and enforcement of intellectual property rights were not considered, although they are closely related to patents.

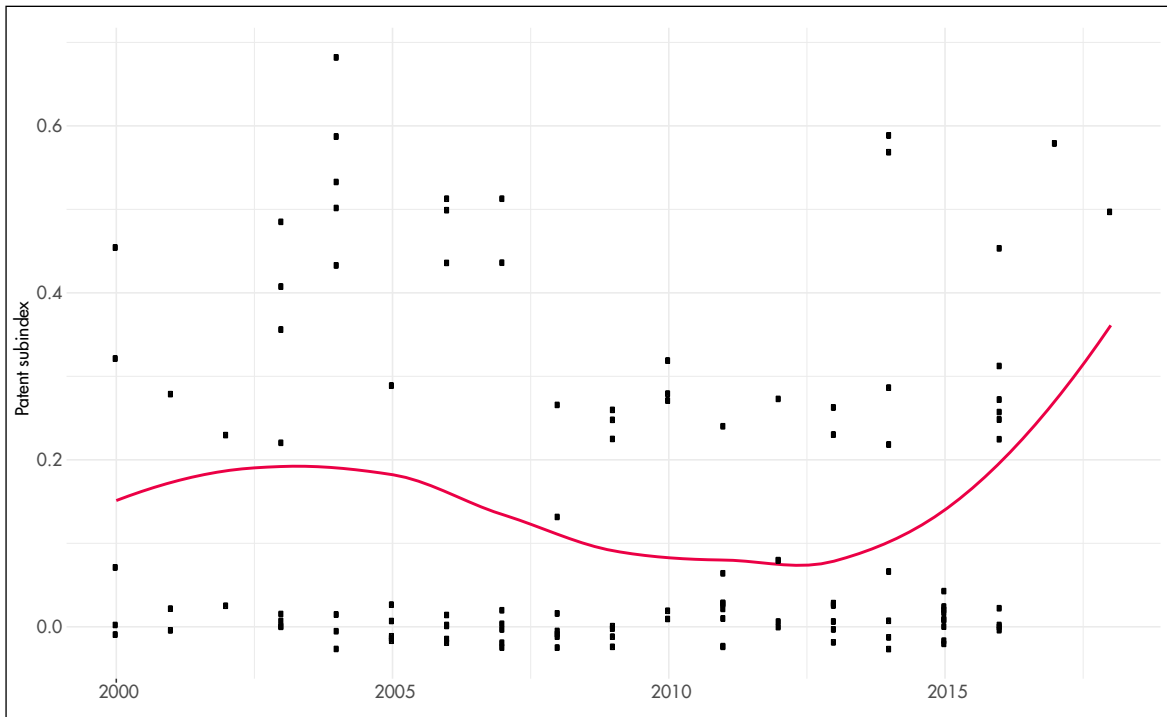
Two Waves of TRIPS-plus Agreements

Based on the T+TPA data set described above, an index of TRIPS-plus provisions on patents was created. This TRIPS-plus patent index combines the eight categories in four equally weighted dimensions: scope of protection (25 percent), duration of protection (25 percent), exhaustion (25 percent) and rights conferred (25 percent). Values for each PTA range between 0 (the absence of any TRIPS-plus provisions on patents) and 1 (maximum score for all dimensions). This aggregation of data facilitates the analysis of the frequency of these provisions.

Figure 1 shows how the TRIPS-plus patent index evolved from 2000 to 2018 in a nonparametric curve. Before 2000, only three PTAs included significant TRIPS-plus provisions on patents according to the T+TPA data set. In the early 2000s, when the controversy about access to patented medicines was raging at the WTO, some countries quietly started introducing TRIPS-plus provisions on patents in their PTAs.⁶ In the years between 2008 and 2013, the average PTA included comparatively fewer TRIPS-plus provisions on patents. Simultaneously, the controversial Anti-Counterfeiting Trade Agreement brought attention to the fact that PTAs were being used as a backdoor strategy to promote TRIPS-plus standards. Since 2014, the score on the TRIPS-plus patent index has been increasing again. This rise is largely driven by the recent conclusion of so-called “mega-deal PTAs” between countries within the Organisation for Economic Co-operation and Development; included in this category would be the TPP, the CPTPP and the EU-Canada Comprehensive Economic and Trade Agreement. But as the next section argues, historical variations in the TRIPS-plus patent index also depend on domestic factors.

6 Jakkrit Kuanpoth, “TRIPS-Plus Intellectual Property Rules: Impact on Thailand’s Public Health” (2006) 9:5 J World IP 573; Morin, *supra* note 1; Pedro Roffe & Christoph Spennemann, “The Impact of FTAs on Public Health Policies and TRIPS Flexibilities” (2006) 1:1–2 Intl J IP Mgmt; Frederick M Abbott, *The Doha Declaration on the TRIPS Agreement and Public Health and the Contradictory Trend in Bilateral and Regional Free Trade Agreements* (Geneva: Quaker United Nations Office, 2006); Carlos María Correa, “Implications of Bilateral Free Trade Agreements on Access to Medicines” (2006) 84:5 Bull WHO 399; J-F Morin, “The Life-Cycle of Transnational Issues: Lessons from the Access to Medicines Controversy” (2011) 25:2 Global Society 227.

Figure 1: Evolution of the TRIPS-plus Patent Index (2000–2018)



Source: T+TPA.

The Key Role of the United States, the European Union and the European Free Trade Association

The two waves of TRIPS-plus provisions illustrated in Figure 1 also coincide with fluctuations in the trade negotiation agendas set out by key players. The first wave of TRIPS-plus agreements, concluded between 2000 and 2008, include several PTAs negotiated by the United States. The George W. Bush administration received the Trade Promotion Authority from Congress in 2002 and considered the conclusion of PTAs as a central component of its overall foreign policy.⁷ All US PTAs systematically

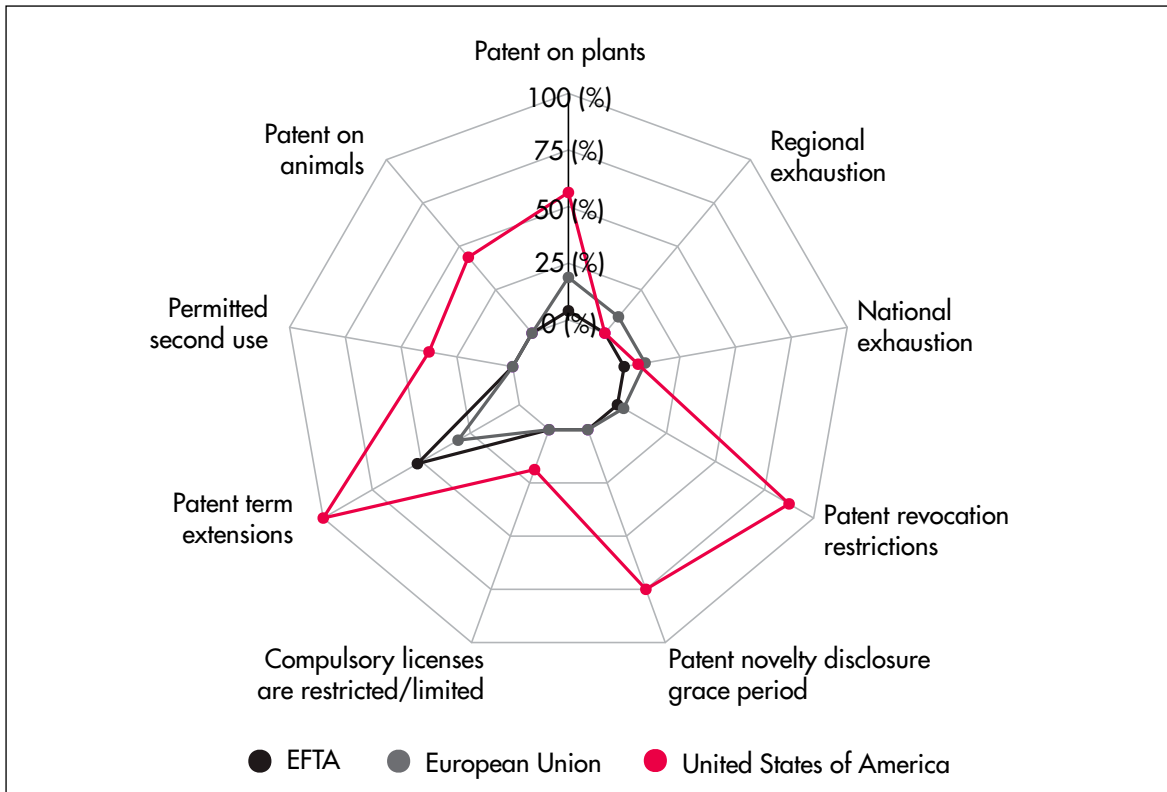
included TRIPS-plus provisions, as requested by Congress in the Trade Promotion Authority. In fact, the PTAs concluded by the United States with Australia (2004), Morocco (2004), Bahrain (2004), Central America (2004), Colombia (2006), Peru (2006) and Panama (2007) still have the highest score on the TRIPS-plus patent index.

The second wave of TRIPS-plus provisions can be attributed to the European Union rather than the United States. Following the Treaty of Lisbon and the revision of European trade policy, the European Union concluded PTAs with several countries, including Armenia, Canada, Colombia, Georgia, Korea, Moldova, Montenegro, Peru, Singapore and Ukraine. These agreements all include TRIPS-plus provisions. In the meantime, the Barack Obama administration was carrying out its “Asian pivot” and focusing its trade policy on the TPP.

Another key player in the promotion of TRIPS-plus provisions on patent protection is the European Free Trade Association (EFTA), which includes Iceland, Liechtenstein, Norway and Switzerland. While few EFTA agreements have a high score on the TRIPS-plus patent index, the EFTA has concluded several PTAs with a

⁷ The Trade Promotion Authority, also known as Fast Track, is a bill enacted by Congress that defines the requirements to the president for concluding PTAs. Under the Trade Promotion Authority, Congress votes on PTAs without the possibility of amending them.

Figure 2: Frequency of TRIPS-plus Provisions in US, EU and EFTA Agreements since 2000



Source: T+TPA.

moderate score. In total, the EFTA has concluded 13 PTAs with TRIPS-plus provisions on patents, which is more than the European Union.

By several accounts, the United States, followed by the EFTA and the European Union, are the three key driving forces of TRIPS-plus provisions on patents. They were the first to include TRIPS-plus provisions in their PTAs, and their PTAs have the highest number of TRIPS-plus provisions. In addition, they have concluded several TRIPS-plus PTAs and have the highest ratio of TRIPS-plus agreements across their portfolio of PTAs.

However, as Figure 2 suggests, the United States, the European Union and the EFTA do not have identical preferences. For example, the United States is more likely than its European counterparts to impose the patentability of animals. The EFTA insists on patent term extension more frequently than does the European Union. In turn, the European Union is more likely to restrict the possibility of an international exhaustion doctrine than either the United States or the EFTA. These variations in TRIPS-

plus preferences reflect the priorities and the domestic law of these key players. The following section shows that economic interests are not a perfect predictor of TRIPS-plus policies.

Other Technology-rich Countries

The United States, the European Union and the EFTA played a leading role in the promotion of TRIPS-plus provisions. This suggests that if a country relies heavily on technological innovation and stands to gain from strong patent protection abroad, it is more likely to include TRIPS-plus provisions on patent protection when negotiating PTAs. In order to test this hypothesis further, three different indicators were used to measure a country's interest in high international standards for patent protection: licensing revenues as

a percentage of GDP; domestic research and development expenditure (public and private) as a percentage of GDP; and the number of patent applications filed by residents, divided by GDP. For each PTA concluded since 2000, the value was examined that scored the most for each indicator in association with the contracting party. For example, in the case of the 2004 agreement between the United States and Morocco, US licensing revenue, research and development expenditure and the number of patent applications were considered because the United States achieved the highest scores for these indicators. The values for Morocco were lower and therefore not considered.

Bivariate and multivariate analyses were then run to test whether these indicators explain the score on the TRIPS-plus patent index for each PTA. As numerous agreements do not include any TRIPS-plus provisions on patents, these results should be interpreted with the utmost caution. Nevertheless, some preliminary evidence supports the hypothesis that when a country has high values for licensing revenue, research and development expenditure and for the number of patent applications relative to GDP, the greater the probability that its PTAs will include TRIPS-plus provisions on patent protection.

However, the results are significantly influenced by the PTAs concluded by the United States, the European Union and the EFTA. Indeed, most other countries that have a high score for licensing revenue, research and development expenditures, and patent applications do not include TRIPS-plus provisions on patents in their PTAs. In Japan and Korea, for example, innovation is an important part of the national economy. Their research and development expenditure accounts for more than three percent of their GDP, which is actually higher than that of the United States, the European Union and Switzerland. However, the PTAs they have signed with developing countries typically do not include TRIPS-plus provisions. Japan, in particular, has concluded fewer PTAs with TRIPS-plus provisions than a number of developing countries, including Chile, Vietnam and Honduras.

The Diffusion of TRIPS-plus Agreements

The United States, the European Union and the EFTA are by no means the only countries to include TRIPS-plus provisions on patents. Some PTAs concluded between countries that are net importers of technology also include TRIPS-plus provisions. A country with little endogenous interest in TRIPS-plus provisions may be required to implement TRIPS-plus provisions after concluding a PTA. It will then presumably have an incentive to replicate TRIPS-plus provisions in PTAs with other developing countries in order to level the regulatory playing field. For example, after signing the 1993 North American Free Trade Agreement, which included a number of TRIPS-plus provisions (although it predated the TRIPS Agreement), Mexico had incentives to include similar provisions in its other trade agreements. Thus, Mexico concluded PTAs that included NAFTA-like TRIPS-plus provisions with Bolivia, El Salvador, Guatemala and Honduras.⁸

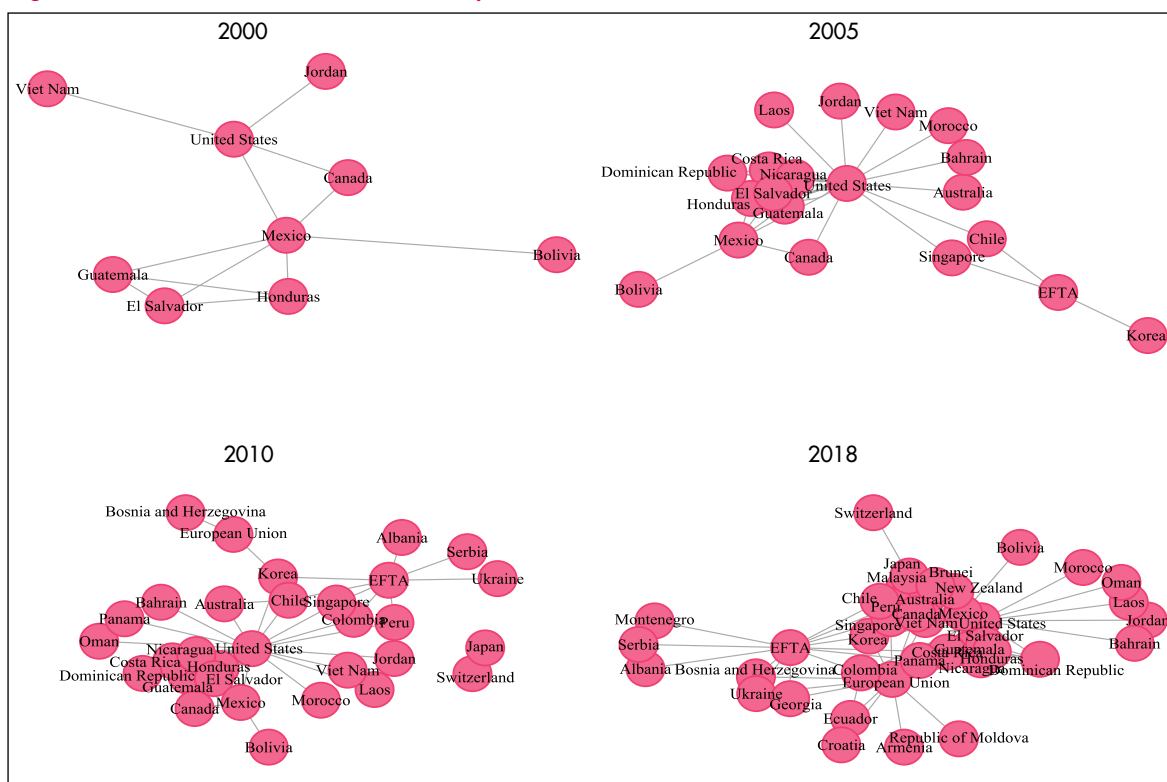
Figure 3 illustrates the progressive diffusion of TRIPS-plus provisions. Each node represents a country and each connection represents a PTA with TRIPS-plus provisions on patents. It reveals that the number of PTAs with TRIPS-plus provisions increases over time, but also that the number of signatories to these PTAs increases. There are significantly more countries in the network in 2018 than was the case in 2000.

TRIPS-extra Provisions on Traditional Knowledge and Genetic Resources

Some developing countries, especially in biodiversity-rich tropical regions, are concerned about the risk of biopiracy. They fear that

⁸ Mexico is not, however, consistent in this regard. It did not include TRIPS-plus provisions on patents in its PTAs with Ecuador (1993), Colombia-Venezuela (1994), Costa Rica (1994), Nicaragua (1997) and Chile (1998).

Figure 3: Networks of PTAs with TRIPS-plus Provisions on Patents (2000, 2005, 2010 and 2018)



Source: T+TPA.

foreign biotechnology and pharmaceutical companies might use patents to misappropriate their traditional knowledge (TK) and genetic resources (GR). Recent TRIPS-plus agreements requiring the patentability of plants and animals have exacerbated these concerns.

To counter this, several developing countries have included provisions relating to TK and GR in their PTAs.⁹ The provisions include: the duty to obtain the prior informed consent of the providers of TK and GR before accessing and using them; the commitment to share the benefits derived from the use of TK and GR with these providers; and the requirement to disclose the origin of TK and GR concerned by patent applications for inventions. These obligations can be expressed either in soft legal terms (“The parties acknowledge the importance of,” “should consider,” “may adopt,” and so on) or in hard legal terms (“The parties shall require,” “shall accord,” and so on).

9 Helfer, *supra* note 4; J-F Morin, “Rhetorical Discourses in International Patent Lawmaking: Property, Fairness, and Well-Being” (2008) 3:2 Asian J WTO & Intl Health L & Pol’y 505.

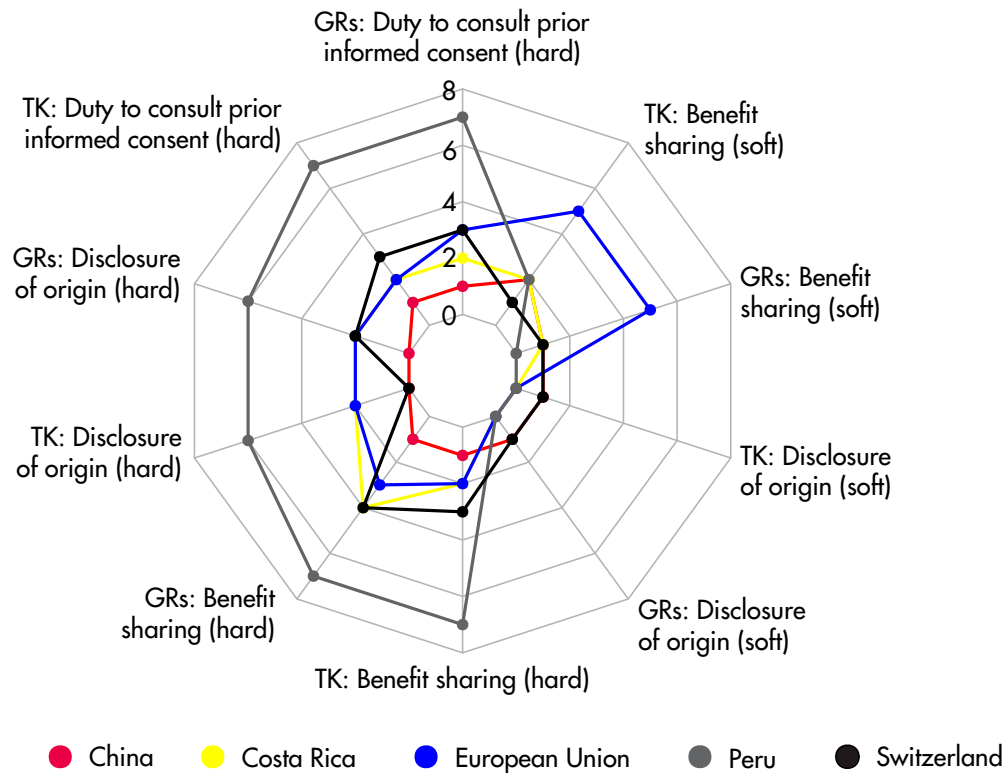
The TK and GR provisions can be qualified as “TRIPS-extra” because, in contrast with TRIPS-plus provisions, they do not build on a prior set of commitments included in the TRIPS Agreement.¹⁰ The TRIPS Agreement does not include any specific provisions on GR or TK, apart from the requirement to protect plant varieties by either patents or a *sui generis* system. The provisions for TK and GR constitute an addition to the set of intellectual property issues covered in the TRIPS Agreement.

The T+TPA data set documents these TRIPS-extra provisions in PTAs. In total, 25 PTAs cover TK and/or GR in their intellectual property chapters.¹¹

10 This distinction between WTO-plus and WTO-extra commitments was introduced by Henrik Horn, Petros C Mavroidis & André Sapir, “Beyond the WTO? An anatomy of EU and US preferential trade agreements” (2010) 33:11 World Economy 1565.

11 Similar provisions might be included in the PTA chapter devoted to environmental protection or in side letters focusing exclusively on TK and GR. These provisions would not be included in a T+TPA, which exclusively focuses on IP chapters. However, the TREND data set has collected information on obligations related to GR; see www.trend.ulaval.ca. See also J-F Morin & M Gauquelin, “Trade Agreements as Vectors for the Nagoya Protocol’s Implementation” CIGI, CIGI Papers No 115, 28 November 2016.

Figure 4: Number of PTAs with TRIPS-extra Provisions on TK and GR (China, Costa Rica, the European Union, Peru and Switzerland)



Source: T+TPA.

Provisions related to benefit sharing are slightly more frequent than those related to the prior informed consent principle and the disclosure of origin. In addition, the majority of TK and GR provisions express hard, binding commitments.

PTAs that include TK and GR protection often involve Latin American countries. For example, Colombia, Costa Rica, Panama and Peru have concluded several PTAs with provisions on TK and GR. As Figure 4 indicates, Peru is the leading country on these issues. It has signed the most PTAs with provisions on TK and GR. In addition, it has a clear preference for binding commitments on these matters. Peru has even included TRIPS-extra provisions on TK and GR in a number of PTAs that do not include TRIPS-plus provisions on patents.

Some Asian countries have also included TK and GR provisions in their PTAs. This is notably the case of China and Taiwan. Like Latin American countries, several Asian countries have tremendous cultural and biological diversity, as well as knowledge and resources relating to traditional medicines. Perhaps more surprisingly, the European Union and the EFTA have also signed a number of PTAs (eight and four, respectively) addressing TK and GR. Clearly, countries with a vibrant pharmaceutical industry and a modest degree of biological diversity are not precluded from including TRIPS-extra provisions on TK and GR in their PTAs.

Conclusion

The proliferation of TRIPS-plus and TRIPS-extra provisions in PTAs requires further research. At least three main areas of research would have clear added value for policy making.

The first involves exploring the domestic consequences of TRIPS-plus provisions on patent protection. As yet, it is unclear how far these commitments reflect pre-existing legal standards or whether they require domestic reforms.¹² In the latter case, it would be interesting to study if and how the reforms are being implemented. Developing countries that are compelled to implement TRIPS-plus obligations might take advantage of these legal reforms to include new exceptions and exclusions in their domestic legislation. Case studies might also be useful for investigating the social and economic consequences of implementing TRIPS-plus provisions.

A second stream of research concerns the global and strategic consequences of TRIPS-plus provisions. These consequences would include processes such as regulatory competition across countries with different standards, norm diffusion driven by the desire to level the playing field and the reverberation from bilateral initiative to multilateral negotiations.¹³ The existing literature also tends to portray developed and developing countries as antagonistic actors in international patent law making. It is time to debunk this apparent oversimplification. The pro-patent posture of some developing countries, the nuanced policy of some high-income

countries and the rise of emerging countries raise new questions that should be explored.¹⁴

A third avenue for future research concerns the potential alternative to existing TRIPS-plus provisions on patents. The current debate on international patent protection has focused on the flexibilities already provided in the TRIPS Agreement and on TRIPS-plus provisions. However, the example of TRIPS-extra provisions on TK and GRs shows that trade negotiators have the capacity to be creative and think outside the TRIPS box. Nothing precludes trade negotiators from addressing issues such as licensing pools, open science and scientific collaboration in their future PTAs. Provisions on these issues might actually do more for technological innovation than TRIPS-plus provisions on patents.

12 C Deere, *The Implementation Game: The TRIPS Agreement and the Global Politics of Intellectual Property Reform in Developing Countries* (Oxford, UK: Oxford University Press, 2008); J-F Morin & R Gold, "An Integrated Model for Legal Transplantation" (2014) 58:4 Intl Studs Q 781.

13 Helfer, *supra* note 4; J-F Morin, "Multilateralising TRIPS-Plus Agreements: Is the US Strategy a Failure?" (2009) 12:3 J World IP 175.

14 FM Abbott, CM Correa & P Drahos, eds, *Emerging Markets and the World Patent Order* (Cheltenham, UK: Edward Elgar, 2013); PK Yu, "From Pirates to Partners (Episode Two): Protecting Intellectual Property in Post-WTO China" (2006) 55:4 Am U L Rev 901; PK Yu, "The Middle Intellectual Property Powers" in R Peerenboom & T Ginsburg, eds, *Law and Development in Middle-income Countries* (Cambridge, UK: Cambridge University Press, 2012) 84; J-F Morin, O Serrano, M Burri & S Bannerman, "Rising Economies in the International Patent Regime: From Rule-Breakers to Rule-Changers and Rule-Makers" (2018) 23:3 New Political Economy 255.

About CIGI

We are the Centre for International Governance Innovation: an independent, non-partisan think tank with an objective and uniquely global perspective. Our research, opinions and public voice make a difference in today's world by bringing clarity and innovative thinking to global policy making. By working across disciplines and in partnership with the best peers and experts, we are the benchmark for influential research and trusted analysis.

Our research programs focus on governance of the global economy, global security and politics, and international law in collaboration with a range of strategic partners and support from the Government of Canada, the Government of Ontario, as well as founder Jim Balsillie.

À propos du CIGI

Au Centre pour l'innovation dans la gouvernance internationale (CIGI), nous formons un groupe de réflexion indépendant et non partisan doté d'un point de vue objectif et unique de portée mondiale. Nos recherches, nos avis et nos interventions publiques ont des effets réels sur le monde d'aujourd'hui car ils apportent de la clarté et une réflexion novatrice pour l'élaboration des politiques à l'échelle internationale. En raison des travaux accomplis en collaboration et en partenariat avec des pairs et des spécialistes interdisciplinaires des plus compétents, nous sommes devenus une référence grâce à l'influence de nos recherches et à la fiabilité de nos analyses.

Nos programmes de recherche ont trait à la gouvernance dans les domaines suivants : l'économie mondiale, la sécurité et les politiques mondiales, et le droit international, et nous les exécutons avec la collaboration de nombreux partenaires stratégiques et le soutien des gouvernements du Canada et de l'Ontario ainsi que du fondateur du CIGI, Jim Balsillie.

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