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Using SDGs to Leverage National Intellectual Property Strategies

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Key Points

- As an international developmental framework, the United Nations Sustainable Development Goals (SDGs) create an opportunity to activate a development-oriented approach to domestic intellectual property (IP) strategies in general.
- Including consideration of the SDGs in IP domestic policy could lead to greater and more lasting success.
- Development intersects with IP policies as creativity and innovation are either fostered or frustrated by an economy's chosen development policy.
- A well-executed and effective IP strategy needs to be targeted at all aspects of development policy. This includes various communities, all types of institutions and social organizations. Even sectors that are not typically associated with an IP strategy, such as mining, can complement an IP development-oriented policy, impacting rural and smaller communities in Canada.

Introduction

IP rights are often presented as a contentious issue in the development discourse. Some view strong IP rights as an obstacle to domestic development by creating barriers to the use of intangible resources on favourable terms.[1] Others view IP rights as a means to foster growth in domestic industries, encourage innovation and protect foreign firms in high-infringement jurisdictions.[2] These differing global perspectives on whether and, if so, how, IP rights promote development in domestic and global economies often result in policies that are either conducive to development or are challenging as development aids. The SDGs make no explicit reference to IP. However, IP is implicit in either the achievement of the SDGs as a whole, or as an aspect of specific goals, such as innovation.[3] This policy brief deals with the relevance of the SDGs to the creation, use, protection and management of IP in developed economies. It discusses how the SDGs can be integrated with national IP and innovation strategies to create clarity

1 Carlos Correa, "The Current System of Trade and Intellectual Property" (2016) 7:1 EYIEL 175.

2 Keith E Maskus, "The Role of Intellectual Property Rights in Encouraging Foreign Direct Investment and Technology Transfer" (1998) 9:1 Duke J Comp & Intl L 109, online: <https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1243&context=djcil>.

3 UN, "Sustainable Development Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation", online: <https://sustainabledevelopment.un.org/sdg9>; UN, *Transforming our world: the 2030 Agenda for Sustainable Development*, online: <https://sustainabledevelopment.un.org/post2015/transformingourworld>.

About the Author

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in perspectives and sustainable synergies with diverse aspects of the economy. The policy brief discusses why and how the SDGs, especially those concerning innovation, industry, infrastructure and economic growth, are useful in leveraging national IP strategies as strong development-oriented tools. In this context, the policy brief also identifies shortfalls in Canada's IP strategy and makes recommendations on how best to create incentives for domestic industries and talent to pursue progressive goals.

Why Sustainable Development Matters to Canadian IP Strategy

IP strategies recognize the importance of the knowledge economy to innovation and economic growth. These strategies set out how the growth of IP-intensive industries will be fostered in jurisdictions and how IP can be valorized to become valuable assets in economies. If not grounded in a jurisdiction's larger developmental objectives, a national IP strategy is less likely to be successful. Although IP is an agent of innovation, an economy's IP policy may, at times, deter development rather than aiding developmental objectives.

In 2018, Canada's federal government introduced its national IP strategy,[4] which focuses on specific pillars of a national IP strategy.[5] As an international developmental framework, the SDGs create an opportunity to activate a development-oriented approach to Canada's IP strategy.

The SDGs bring a fresh perspective to the IP and development discourse. They cover issues that were not covered by the World Intellectual Property

4 Government of Canada, News Release, "Government of Canada launches Intellectual Property Strategy" (26 April 2018), online: <www.canada.ca/en/innovation-science-economic-development/news/2018/04/government-of-canada-launches-intellectual-property-strategy.html>.

5 A national IP strategy may have four or five pillars that focus on IP commercialization, technology transfer, IP awareness and outreach, access to IP legal services and IP enforcement. Canada's IP strategy is focused on IP commercialization, technology transfer, IP awareness and outreach, and access to IP legal services. See Government of Canada, *Intellectual Property Strategy*, online: <www.ic.gc.ca/eic/site/108.nsf/eng/home>.

Organization's (WIPO's) Development Agenda.[6] The 2030 Agenda is more expansive in its mandate than the UN Millennium Development Goals (MDGs).[7] IP is relevant to the achievement of each SDG, from eliminating hunger to building stable, successful partnerships for SDG targets.[8] This adds a new dialogue in the IP and development discourse, encompassing how IP rights could be used to foster growth, inclusiveness and sustainability for all economies. In this context, development is defined as the mobilization of resources to achieve societal, economic and human empowerment, thereby impacting the well-being of economies.[9] Development, therefore, is a process and an outcome. How to achieve development is just as relevant as the attainment of development goals. What the SDGs do to the development dialogue is to bring specificity to the notion of development by pinpointing, through indicators, what development should look like in practice. Creativity and innovation are either fostered or frustrated by an economy's chosen development policy. The ability of a federal IP strategy to further developmental goals depends on finding workable synergies between these two frameworks. Creating a strong link between IP strategies and the SDGs could promote more successful and lasting results.

From IP Strategy Projections to Actual Outcomes: Considerations and Challenges

The presence of an IP strategy does not mean that it is effective at what it sets out to accomplish, or that its targets are aligned with its economies' needs. Relevant indicators used to measure an economy's level of innovation include IP filings, the extent of focus on education, and scientific and technical publications.[10]

Switzerland is the global leader in innovation. Innovation is an aspect of development. Is the Swiss approach a model for other developed economies, including Canada? Switzerland's first-place position as the global leader in innovation is no surprise when analyzing two dimensions of its jurisdiction: its constitution and its well-executed IP strategy. Its constitution makes specific reference to a commitment to economic development[11] initiatives as a means of dealing with unemployment and inflation, and identifies agriculture as an important focus of productivity. Switzerland's IP and innovation strategy emphasizes agricultural development, ingeniously applying geographical indications (GIs) to various product formats. These constitutional tenets help in setting a favourable framework for an economy's IP strategy, thereby impacting outcome.

The "Swissness" branding platform[12] is used to inform various branches of IP that include trademarks, patents and GIs. An integrated cross-sectoral approach to the creation, development and commercialization of IP is observable in the country's IP strategy. The Swissness brand is enforced in foreign countries partially with the help of Switzerland's overseas embassies, which inform alleged infringers of their actions. Whether domestic stakeholders can effectively enforce their proprietary rights in foreign jurisdictions will impact on the stability and sustainability of IP-intensive industries. This aspect of IP governance is often ignored in national IP strategies, or is limited to combatting domestic infringements. If IP enforcement is not taken seriously in foreign jurisdictions, the very sustainability of the protected product is compromised with consequent spillover effects on relevant sectors, people's livelihoods and the broader economy.

6 The Development Agenda was a WIPO-initiated project that sought to integrate a development perspective into global IP law and governance.

7 The UN MDGs were eight development-oriented goals geared toward developing and least developed countries, with the objective of elevating their development status by 2015. See UN, "We Can End Poverty: Millennium Development Goals and Beyond 2015", online: <www.un.org/millenniumgoals/>.

8 UN, "Sustainable Development Goals", online: <https://sustainabledevelopment.un.org/sdgs> [UN, "SDGs"].

9 Mario Cimoli et al, eds, *Intellectual Property Rights: Legal and Economic Rights for Development* (Oxford, UK: Oxford University Press, 2014).

10 Soumitra Dutta, Bruno Lanvin & Sacha Wunsch-Vincent, eds, *Global Innovation Index 2018: Energizing the World with Innovation* (Geneva: Cornell University, INSEAD & WIPO, 2018), online: <www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2018.pdf>.

11 *Switzerland's Constitution of 1999 with Amendments through 2002*, art 100, online: <www.constituteproject.org/constitution/Switzerland_2002.pdf>.

12 Swiss Federal Institute of Intellectual Property, "The 'Swissness' legislation", online: <www.ige.ch/en/law-and-policy/national-ip-law/indications-of-source/swiss-indications-of-source.html>.

One IP commercialization mechanism increasingly chosen by jurisdictions is to promote economic growth and productivity through patent or innovation boxes.[13] A jurisdiction may opt to include patent or innovation boxes as an aspect of its IP strategy. A patent box is a fiscal initiative created to encourage IP-intensive investments in a jurisdiction by providing lower corporate tax rates to income from qualifying patents traceable to research and development (R&D) conducted in the jurisdiction. For example, a federal patent box that wants to foster growth in its robotics and automation industries may choose to tax such industries at eight percent as opposed to the general corporate tax rate of 15 percent. Potential development-related spillover benefits may include increased high-quality employment and a more diversified economy.

When an IP strategy is disconnected from its national economic reality, there is significant risk that the strategy will have minimal impact on developmental objectives. For example, in the United Kingdom, early policies to establish a patent box were not successful, as very few industries filed patent applications. Innovations tied to domestic patent inventions and IP commercialization did not increase significantly, possibly due to the cost of patent filings or domestic aptitude to develop patent-oriented inventions.[14]

A too narrowly focused patent box may also run afoul of developmental objectives. This may occur if there are no R&D credit incentives to complement prospective investments. A fiscal incentive that is directed solely at buttressing specific knowledge-based industries may miss the mark and allocate fewer resources to other vital or promising sectors that are outside the purview of the patent box program. Since patent boxes are restricted to functionally equivalent patents,[15] without additional innovation incentivization, some industries in IP-intensive sectors may actually lose the incentive for innovation. The creative (copyright industries other than those focused on algorithms) and GI industries are two IP dimensions that, by definition, are legally excluded from a patent box, but which arguably should also receive targeted monetary and fiscal credits to bolster industry investments in IP. Another form of proprietary rights that may have patentable qualities, but are likely an unsuitable candidate for patent boxes, are trade secrets. Trade secrets bear some similarity to patents, as they may aim to protect a technical process in manufacturing, or a novel method in the compilation of data toward technical or industrial uses. Yet trade secrets would not be functionally equivalent to patents under patent box rules, as their objective is to safeguard confidential proprietary information, which, if disclosed, takes away the right holder's competitive advantage in consumer markets.[16]

As one of its primary foci, Canada's federal IP strategy envisions the creation of an IP marketplace that connects academic IP research output with industry sectors. There should be strong connections between the rationale for creating an IP marketplace and a jurisdiction's economic realities. If not conceptualized from tenets of an economy's developmental objectives and balanced by the academic institution's own IP policies,[17] and without a strong development focus for a particular marketplace, this approach may lead to fluctuating or inconsistent compensation for researchers and inventors, an over-concentrated focus on supporting specific IP industries at the expense of others and the introduction of anti-competitive practices in research collaborations.

13 Robert D Atkinson & Scott Andes, *Patent Boxes: Innovation in Tax Policy and Tax Policy for Innovation* (Washington, DC: Information Technology and Innovation Foundation, 2011), online: <www.itif.org/files/2011-patent-box-final.pdf?_ga=2.108075584.393366550.1533245436-130025894.1532477814>.

14 Karl Barnfather, "Patent filings: the truth behind the data", *The Engineer* (19 June 2018), online: <www.theengineer.co.uk/patent-filings-data/>.

15 Organisation for Economic Co-operation and Development, *Action 5: Agreement on Modified Nexus Approach for IP Regimes* (2015), online: <www.oecd.org/ctp/beps-action-5-agreement-on-modified-nexus-approach-for-ip-regimes.pdf>.

16 Andrea Contigiani, David H Hsu & Iwan Barankay, "Trade secrets and innovation: Evidence from the 'inevitable disclosure' doctrine" (2018) 39:11 Strategic Management J 2921.

17 University technology transfer offices usually have their own firm-level IP strategy that helps in creating, developing, commercializing and managing IP. For example, one of the IP strategies of a university technology transfer office may include deciding which outside entities to partner with to monetize IP-based inventions developed by university start-up companies.

Making the Grade: Bolstering IP Strategies with SDGs

The recommendations below discuss how the deployment of the SDG framework can bring effectiveness and resilience to Canada's national IP strategy.

IP strategies are more likely to be effective if they are integrated with each other. Some common denominator should be identifiable in each strategy that can be used to create synergies with the overall strategy. For example, a jurisdiction may leverage its patent box initiative with its strategy on academic IP research output. This impacts two pillars of an IP strategy: IP commercialization and collaborations between industry and university IP output. By offering a greater tax incentive to IP-intensive firms that undertake their R&D projects in collaboration with university technology offices, an integrated IP strategy offers a development-oriented solution to national IP governance.

There is a level of interconnectedness between the different SDGs. As an example, decent work and economic growth in economies are relevant to another development goal:[18] building resilient infrastructure and promoting inclusive and sustainable industrialization and innovation. The significance of these to the workings of IP strategies should not be trivialized. Advanced technological devices and services are now commonplace in most economies, including Canada. There is also an interest in developing innovative products and services, and in luring IP-intensive industries to the Canadian economy. Federal plans to create an IP marketplace that connects academia's IP inventions with relevant industries is a step toward innovation, but not a fulfillment of innovation. Sustainable innovation needs wide-scale participation from diverse sectors, groups and interests, each able to coalesce around the common goal of promoting a strong, innovation-based economy. Inclusivity and diversity should be central themes in how a Canadian IP marketplace is constructed and operated. When only specific industries drive university IP output, the risk of IP over-concentration in a few areas may harm the sustainability of IP firms and university technology transfer offices in the long run.

A development-oriented approach to a federal IP marketplace may include the use of an independent body to govern its operation. The governing body may practise progressive development initiatives such as encouraging participation from colleges and smaller universities and adapting policies that minimize the dominance of a few industry players in the marketplace.

Decent work and economic growth are a combined objective of the SDGs.[19] This objective calls for a balancing approach in which one theme cannot supersede the other. Policy makers should be wary of initiatives that promote one theme while impairing advancements in the other. For example, interest in artificial intelligence and robotic industries may promote new IP-intensive businesses, but jeopardize the availability of decent work for individuals. This does not resonate well with an effective development policy. To mitigate negative outcomes, an IP strategy that incentivizes emerging technology industries should include precautionary policies to mitigate widespread job loss in its economy. This may take the form of collaborations with provincial and federal labour ministries and other government and quasi-government bodies to equip workers with alternative skills and education relevant to the workforce.

A well-executed and effective IP strategy should consider targeting a variety of sectors where there is potential for enhanced economic development. Consider, for example, the mining sector in Canada. Canada has one of the largest mining sectors in the world and ranks among the top five producers of several minerals and metals. The mining sector is a major contributor to Canada's GDP.[20] In a global context, IP intersects with the mining industry in several ways. Mining firms produce the minerals and metals used in the manufacture of smartphones, hybrid cars, wind turbines, computers and other technology devices. Patented and trademark-protected devices are used in the extraction and processing of these materials. The mining sector is likely to benefit from finding less onerous ways of

18 UN, "SDGs", *supra* note 8, SDG 9.

19 *Ibid*, SDG 8.

20 Mining Association of Canada, *Facts & Figures 2017: Facts and Figures of the Canadian Mining Industry*, online: <https://mining.ca/wp-content/uploads/dlm_uploads/2019/02/Facts-and-Figures-2017.pdf>.

performing complex tasks. IP may drive innovation in the development and use of advanced analytic techniques and robotics to improve extraction and production processes of mining firms. IP may also directly arise from the mining product itself, such as bauxite,[21] which has a traceable and unique relationship with its place of origin, suggesting potential GI-intensive industries. Canada's IP strategy should not lose sight of how IP innovations may drive productivity, job creation, and job and product diversification in mining communities and regions. This links to SDGs 8 and 9.

A progressive Canadian IP strategy should also address how to encourage the growth of domestic fifth-generation (5G) mobile technology firms in a global market space. 5G and the Internet of Things are inescapable developments in Canadian and global societies. 5G brings technology companies and the telecommunications industry together by making it possible for wireless devices to connect more easily and quickly without relying on traditional infrastructure. Encouraging open and collaborative platforms to drive R&D in domestic 5G technology is likely to help Canada stay in the game in the technology age. Companies such as Ericsson and Qualcomm have already started manufacturing 5G-based products, including mobile phones and sensor-based devices that are programmable by 5G wireless connections. Governments need to invest in science, technology and education to support achieving technological innovation and SDG 10 (reducing inequalities by creating more work opportunities for all individuals),[22] SDG 5 (achieving equality for women and girls),[23] and SDG 9 (building an innovative society with strong industries and infrastructure).[24]

Many domestic IP firms hope to become major global businesses. IP enforcement helps domestic firms to survive and prosper in export markets. There is a connection between IP enforcement in foreign jurisdictions and sustaining innovation and economic growth in the domestic market. Prioritizing IP enforcement in Canada's free trade agreements is one way of achieving this.

21 Bauxite is used to make products such as automobiles, aircrafts, cans and steel. Globally, Australia, Brazil, China, Guinea, India and Jamaica are the major bauxite-producing countries.

22 UN, "SDGs", *supra* note 8, SDG 10 (Reduced Inequalities).

23 *Ibid*, SDG 5 (Gender Equality).

24 *Ibid*, SDG 9 (Industry, Innovation and Infrastructure).

Conclusion

The SDGs provide ideas for how to formulate, operate and govern national IP strategies to achieve the most beneficial societal impact. Canada's IP strategy could benefit from applying the SDG lens to broaden and deepen the connections between social, economic and environmental goals, and IP rights.

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