



create

U.S. Chamber International IP Index • Sixth Edition • February 2018



GIPC
GLOBAL INNOVATION POLICY CENTER



The U.S. Chamber of Commerce's Global Innovation Policy Center (www.theglobalipcenter.com) is working around the world to champion intellectual property rights as vital to creating jobs, saving lives, advancing global economic growth, and generating breakthrough solutions to global challenges.

The U.S. Chamber of Commerce is the world's largest business federation representing the interests of more than 3 million businesses of all sizes, sectors, and regions, as well as state and local chambers and industry associations.



This report was conducted by Pugatch Consilium (www.pugatch-consilium.com) a boutique consultancy that provides evidence-based research, analysis, and intelligence on the fastest growing sectors of the knowledge economy. Authors of this report are Meir Pugatch, Rachel Chu, and David Torstensson.

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1. Foreword



A spark of creativity can happen anywhere at any time. New songs, movies, and TV shows; new medicines, treatments, and cures; new fashion trends and new technology; even new businesses and industries – everything begins with an idea.

But a great idea can only go so far. A great idea requires significant time and resources and ultimately market power to transform into a product with the power to change lives. A great idea needs an environment that encourages and incentivizes creators to bring their imaginations to life.

Here, Intellectual property protections play a critical role. They give tangible value to ideas and empower people to earn a livelihood off of their creativity. They fuel economic growth, job creation, and access to creative and innovative output.

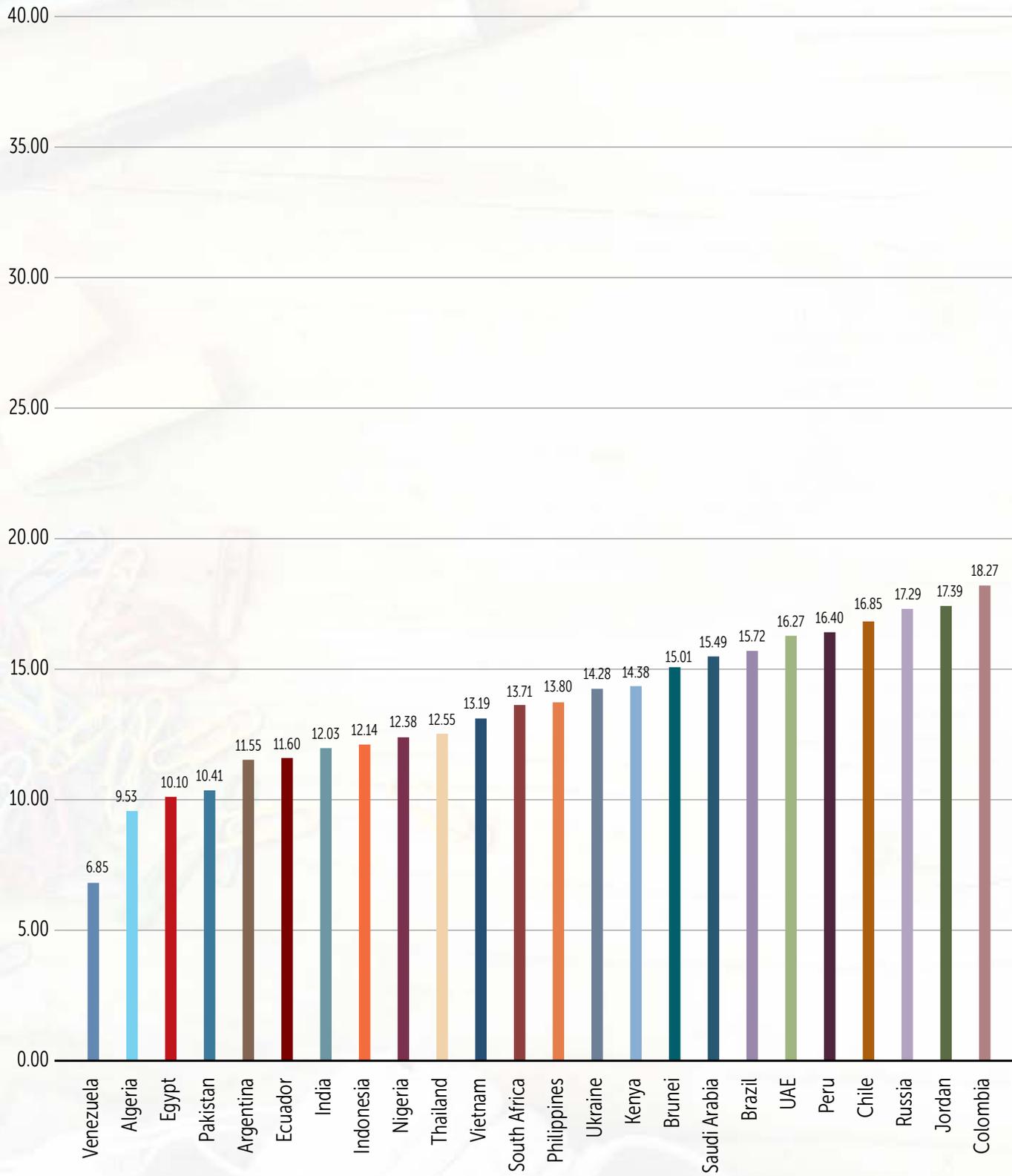
Intellectual property protections beckon: Imagine it, and it can be so.

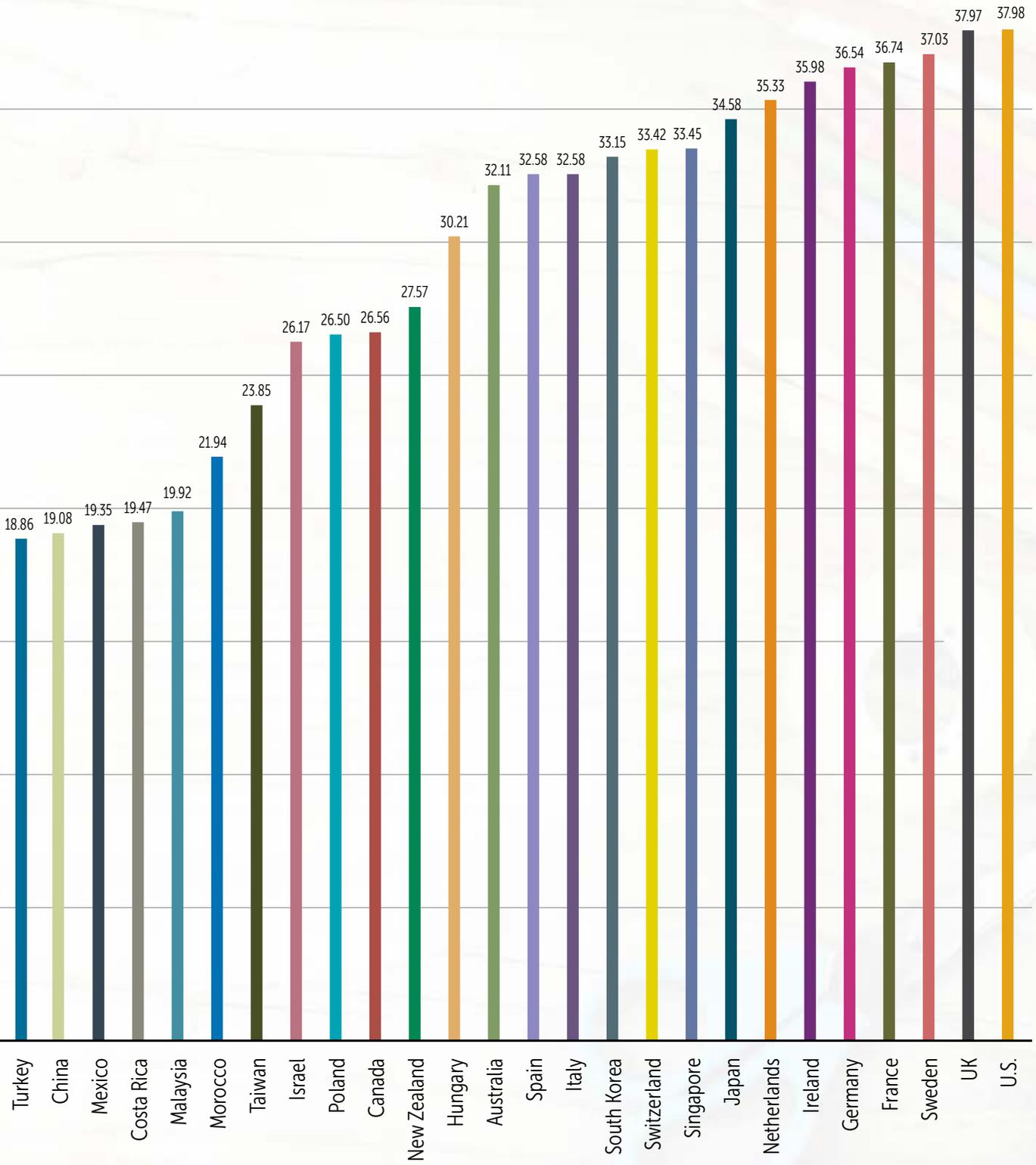
The U.S. Chamber International IP Index, with its 40 discrete indicators covering policy, law, regulation, and enforcement, seeks to answer one simple question: Does a given economy's intellectual property system provide a reliable basis for investment in the innovation and creativity lifecycle?

Because with a strong intellectual property system, there's no limit to what we might create next.

David Hirschmann
President and CEO
Global Innovation Policy Center
U.S. Chamber of Commerce

2018 Overall Scores





Economic Benefits of Improving IP Protection

Findings from 23 Correlations

Inputs	2016	2017	2018	Economies with robust IP protection (scoring above the median of the Index) on average tend to experience the following benefits compared with economies scoring below the median
Financial Resources				
Research and development (R&D) expenditure	.75	.70	.71	36% more likely to have in-house support by adequate investment for an idea or discovery
Access to venture capital and private equity funds	.81	.77	.79	42% more likely that an idea or discovery will be supported by venture capital and private equity
Foreign direct investment (FDI) attractiveness	.78	.78	.80	53% more attractive to FDI due to better macroeconomic indicators
Biomedical FDI	.68	.67	.72	15 times more clinical trial activity
Enabling Conditions				
Human capital	.80	.82	.82	Over 6 times more highly skilled researchers in a given labor force
Increase in high-value jobs	.80	.72	.67	Percentage of high-value workforce almost doubled
Access to advanced technologies	.83	.83	.81	26% more likely to benefit from access to latest technologies
Network readiness	.82	.82	.83	37% more likely to fully leverage information and communications technology (ICTs)
Access to licensed music outlets	n/a	.78	.79	Likely to provide up to 3 times wider access to new music through legitimate and secure platforms
Consumption of audiovisual content	.79	.73	.72	Likely to generate nearly 3 times more theatrical screenings of feature films
Access to video content	.64	.61	.66	Generates twice as many video-on-demand and streaming services
Outputs	Coefficient			Benefits from IP rights
	2016	2017	2018	
Competitiveness				
Economic competitiveness	n/a	n/a	.79	Economy 20% more competitive
Overall business environment	.77	.80	.78	Roughly 60% more receptive to entrepreneurship
Ability to incorporate new technologies and improve processes	n/a	n/a	.80	24% more agile at incorporating new technologies and improving processes
Value Added and Creativity				
Growth of high-tech sectors	.77	.80	.75	Production of up to 80% more knowledge and technology outputs
Added value of licensed software	.85	.85	.82	Twice the contribution to gross domestic product (GDP)
Online creativity	.81	.85	.84	Generates almost 3 times more online content
Innovation output	.85	.88	.86	75% more knowledge-based, technological, and creative outputs
Inventive activity	n/a	n/a	.68	Over 500 more high-value inventions
Biotech innovation	.83	.77	.78	Twice as likely to provide environments that are conducive for biotech innovation
Development of biotech therapies	n/a	.70	.75	Roughly 12 times more clinical research on biologic therapies
Cutting-edge clinical trial	n/a	.73	.76	21 times more early-phase clinical trials
Creative outputs	.80	.86	.85	62% more likely to have larger and more dynamic content and media sectors

2. Executive Summary

The sixth edition of the U.S. Chamber International IP Index “Create” is a blueprint for countries seeking to become true knowledge-based economies through an effective intellectual property (IP) architecture. Every individual economy represents a blank canvas, with policymakers using broad strokes in the form of IP policy to paint their country’s innovative and creative futures.

The Index benchmarks economies using 40 indicators in eight categories. New indicators in the areas of commercialization and systemic efficiency provide a more complete, bottom-to-top picture of the investments countries are making in support of domestic innovation and creativity. The 2018 Index includes five new economies – Costa Rica, Ireland, Jordan, Morocco, and the Netherlands – bringing the total number of economies benchmarked to 50.

Key Findings

Recognizing the benefits that robust IP systems provide, the majority of economies benchmarked in the Index took steps to strengthen their IP framework. Significant, positive developments include:

- The **U.S.**, **UK**, and **EU** economies remain atop the global IP rankings. In particular, the U.S. and the UK rank so closely together in the 2018 Index that it has

become clear the countries stand side-by-side as global leaders in IP protection and enforcement.

- Throughout 2017, courts utilized recent legislative changes to bolster protection for copyrighted content online. In **Australia**, the federal court applied the 2015 Copyright Act in five landmark cases to secure injunctions against Internet service providers (ISPs) hosting pirated content. A number of EU economies – including **Ireland**, **Italy**, and **Sweden** – and the **UK** also applied existing legislation and judicial precedents to block access to pirate websites, marking a significant step forward in anti-piracy efforts across the continent.
- The majority of the economies benchmarked in the Index are building more effective foundations for IP policy. **Indonesia**, **Thailand**, and **Vietnam** each have long-standing programs to enhance coordination among government agencies responsible for IP enforcement.
- In **India**, the July 2017 Guidelines on the Examination of Computer-Related Inventions significantly improved the patentability environment for technological innovations. Additionally, the government created IP awareness workshops and technical training

programs for enforcement agencies, implementing key deliverables of the National Intellectual Property Rights Policy. However, India's score continues to suggest that additional, meaningful reforms are needed to complement the Policy.

- A number of countries introduced policies to enable innovators and creators to utilize IP as an economic and commercial asset and encourage legitimate technology transfer. In **Malaysia**, the government placed an emphasis on encouraging the dissemination of IP as an asset in successive national innovation plans. In **Saudi Arabia**, technology transfer framework underpinned the growth of technology startups and national research centers.

In some countries, the results were mixed, with significant steps forward in some areas and steps back in others. Challenges include:

- While the **U.S.** remains at the top of the 2018 Index rankings, innovators and creators face a challenging environment for protecting their IP under current U.S. law. The U.S. strengthened border enforcement efforts through the Trade Facilitation and Trade Enforcement Act; however, U.S. patentability standards and patent opposition procedures continue to create uncertainty for rightsholders.
- **China** adopted proposals to strengthen biopharmaceutical innovation through its patent linkage opinion and expanded regulatory data protection proposal, yet IP-intensive industries continue to face significant market access barriers.

- Throughout 2017, obstacles to securing effective patent protection for innovative products emerged in a number of key global markets, which undermines the fair value of innovative biopharmaceutical products. In the **EU**, the supplementary protection certificate (SPC) manufacturing exemption for European generic and biosimilar manufacturers undermines existing IP protection for innovative biopharmaceuticals. Additionally, both the **Australian** and **Saudi Arabian** governments weakened their patent enforcement mechanisms through Australia's market-sized damages policy and Saudi's 2017 approval of a competing generic product for a medicine with a valid patent.

- **South Africa** published a draft IP policy that includes proposals to weaken patent protection, expand the use of compulsory licensing, and replicate the recommendations of the United Nations High Level Panel on Access to Medicines Report. The proposed recommendations are at odds with South Africa's goal of attracting greater biopharmaceutical investment and transitioning toward a knowledge-based economy.

- The Supreme Court of **Canada** overturned the long-standing patent utility doctrine in its June 2017 decision in *AstraZeneca Canada Inc. v. Apotex Inc.* Yet, despite this positive landmark ruling and a strong Federal Court decision on digital rights management, the Canadian government's insistence on suspending many of the IP provisions in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership

(CPTPP) among the 11 remaining negotiating countries calls into question the government's commitment to embracing more effective IP policies.

Statistical Support for Importance of Strong IP Policies

An updated Statistical Annex provides empirical evidence across 21 specific metrics to illustrate the importance of strong IP policies to the achievement of socio-economic goals. Notably, innovative output, access to innovation, and job creation in knowledge-intensive industries all show a consistently strong correlation to IP system strength without regard to size, region, or level of development.

Conclusion

Economies flourish and the public prospers when governments recognize the value of placing a robust IP system at the core of their legislative, regulatory, and judicial frameworks. The Index provides a blueprint for creating innovative and creative sectors through an effective IP architecture.



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3. The Tenets of Create

Human beings are the source, subject, and audience for creativity; its reason for being and its sustaining force. Creative works are an extension of their creators, the brave reveal of the innermost self.

From cave art to Confucius, there is a long history of human creative expression. Some choose to consider this evidence that no law is needed to sustain creativity. But the question is not whether any creative expression will occur in the absence of law recognizing creators' rights in that expression. The question is: How can we use law recognizing creators' rights to encourage optimal creative expression?

For more than three hundred years, countries have been concluding that they can and should support creativity. National laws, global treaties, trade agreements, and the Universal Declaration of Human Rights all recognize the right and value of protecting creators and their works.

The U.S. Chamber International IP Index analyzes the economic and policy conditions that factor into the success or failure of creative enterprises. The sixth edition of the Index, like those editions before it, demonstrates that efforts to provide adequate and effective protection for creative expression are consistently rewarded with a profusion of movies, music, art, software, books, and other

creative output. The industries that have developed around creativity employ millions people and add billions of dollars to national economies.

The success of creative industries factors into such diverse considerations as positive national identity, cohesive governance, and economic competitiveness. Some aspects of creative expression are particular to certain regions or countries. Expression that reflects a local culture may not have a foreign audience, making the creators of those works particularly vulnerable to a lack of domestic support. A country risks losing its voice in the multinational din if it fails to adequately support its own creative industries. Other expression may instantly attract a worldwide following, and thus depend upon strong cross-border systems of protection. And sometimes, these lines meld as a form of expression in a traditionally local style crosses into the global mainstream.

Whatever the environment, providing a legal architecture that encourages and protects creators will inspire more creativity than if no such system exists, or if such system is inadequate to the task. Thus, the Index is calibrated to evaluate the most relevant aspects of a national intellectual property system's ability to support dedicated creators.



The marketplace and the laws of countries can and do acknowledge and accommodate the shared human contribution to all creative work. The scope of intellectual property is limited, not only in time but in reach.

The copyright concept is sufficiently versatile to both spur creativity and engender derivative works. Copyright does not protect mere ideas, *de minimis* uses are not infringing, and so on. An efficient marketplace can and has created efficient licensing systems to allow derivative uses while still respecting the rights and interests of the creators of existing works.

A strong patent system encourages inventors to commit to inventive activity with a period of exclusivity – but only in exchange for public disclosure of that activity in the interest of future follow-on invention. Similarly, an effective trademark system requires trademark creators to demonstrate actual use or a real intent to use their creations in commerce.

Intellectual property systems represent this principle of balance: respect and support for current and future creators. But any system that indulges copiers to the detriment of creators, no matter how sympathetic the use, will harm that society and dampen its creative capacity. Unfortunately, this scenario is playing out in markets around the world.

This Index, like its prior editions, is intended to be a roadmap to a better future. Each benchmark is an articulation of the most important components of a pro-creativity system. They are the guideposts to a more secure environment for creative development, job creation, and economic growth.

The rankings in the Index should serve to prioritize for policymakers where changes are most urgently needed to improve the environment for the dedicated pursuit of creativity and the dynamic businesses and economic activity it engenders.

Create is about the authors, artists, researchers, scientists, designers, and coders. And Create is about the policy choices that inspire them.

4. 2017—The Year the World Turned Upside Down?

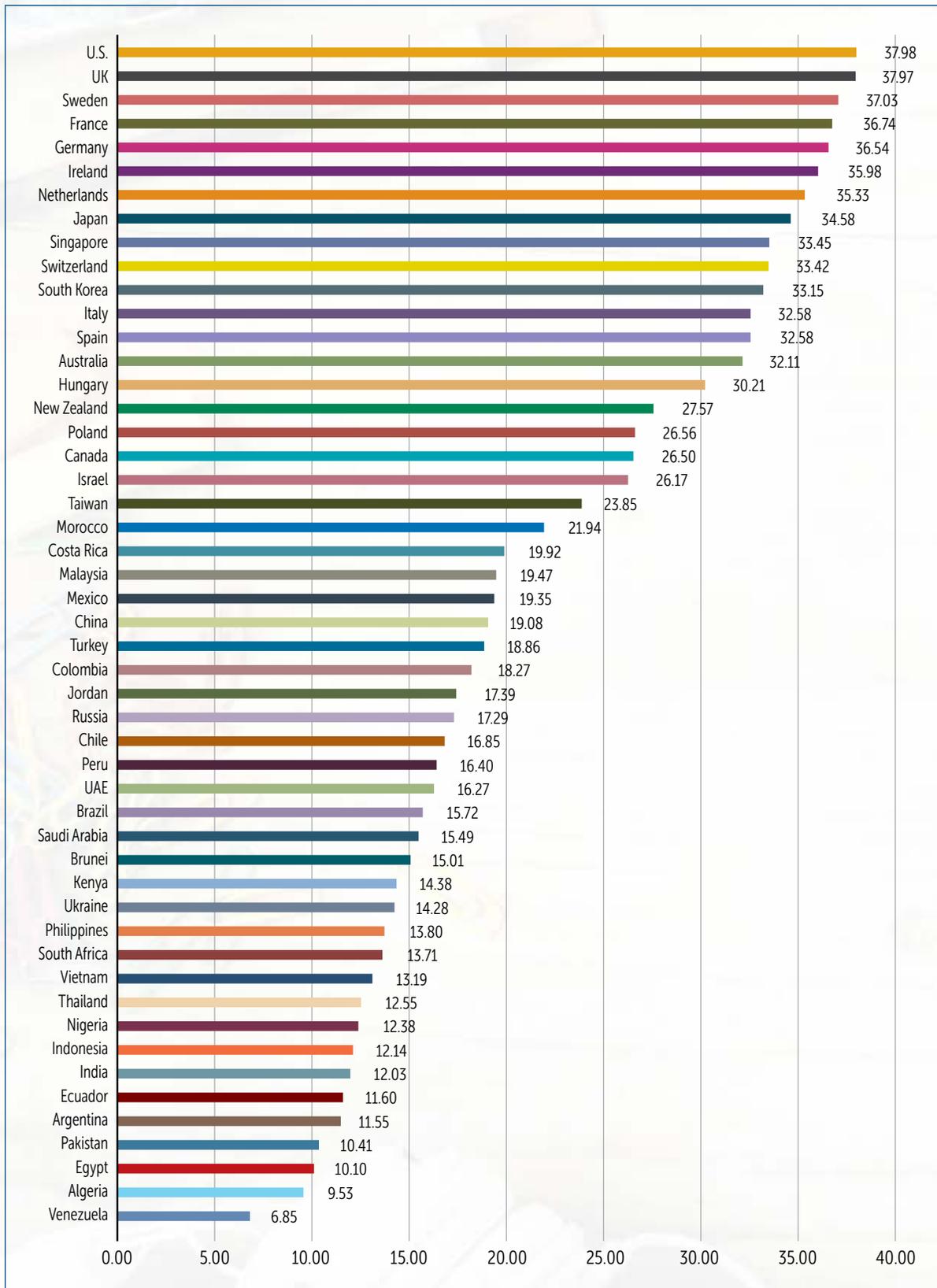
Economic stability; policy uncertainty?

Following the financial crisis in 2009, global growth has been in line with its long-term average of 3.5–4%.ⁱ The International Monetary Fund (IMF) estimates that the global economy should continue to grow between 3.7 and 3.8% per year until 2022. Since 2015, the Eurozone has grown by close to 2% per year, compared with negative growth in 2 of the 3 preceding years. Similarly, economic recovery in the U.S. looks to be well established. The world's major stock market indices also illustrate an upward trend. The All-Country World Index (a composite of about 2,490 shares in about 50 economies) and the Dow Jones and S&P 500 indices hit all-time highs during 2017. The Nikkei 225 has exceeded the levels of the early 2000s and, even in the face of the huge uncertainty over Brexit, the FTSE 100 Index is close to an all-time high.ⁱⁱ

Notwithstanding this macroeconomic success, one would assume, judging solely by the international public policy space, that the global economy is teetering on the brink of a recession. This is particularly the case in the IP space, where a number of economies have veered away from long-held principles related to IP-driven innovation and creativity. Although most of these shifts are the result

of long-term structural changes and trends in national politics and economics, 2017 may nevertheless turn out to be a tipping point. The results of the sixth edition of the International IP Index show that traditional world leaders on the provision and enforcement of IP rights seem to be ceding their leadership.

Figure I: U.S. Chamber International IP Index 2018, Overall Scores



Challenges in the United States and the European Union

As IP-intensive and high-tech industries have become more important to national economic output in the U.S. and European Union (EU) member states, IP protection has been a priority for successive governments in both jurisdictions.

In a 2012 study, the Economics and Statistics Administration and the United States Patent and Trademark Office (USPTO) assert that IP-intensive industries make a large contribution to U.S. gross domestic product (GDP) and employment. In total, these industries directly and indirectly account for more than 40 million jobs, or 27% of total U.S. employment.ⁱⁱⁱ

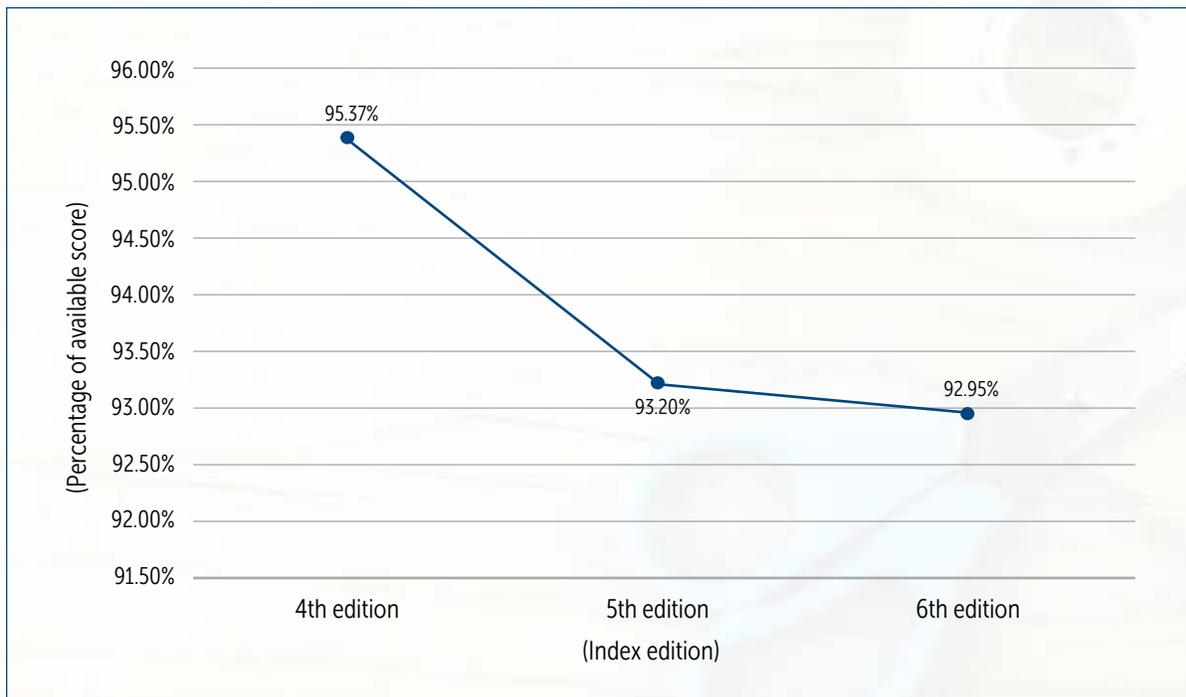
Similarly, the European Patent Office (EPO) and the EU Intellectual Property Office have found that the European economy is heavily dependent on IP-intensive industries. In the

latest of two studies carried out since 2013, they find that over 40% of the EU's economic activity is generated by IP-intensive industries.^{iv} And these industries employ 82 million people, accounting for almost 40% of employment in the EU.

Over the past three decades, the EU and the U.S. have been strong, consistent proponents of setting and strengthening international standards of IP protection through their own laws and regulations and through new trade agreements. For rights holders around the world, these efforts have been critical in establishing a minimum floor for the protection and enforcement of IP rights.

Although not perfect, the U.S. has consistently been the highest-performing economy in the Index. However, over the past 3 editions, America's performance has weakened.

Figure II: Percentage of available score for the U.S., third to sixth edition of the Index



What has happened to weaken the U.S. position?

On the one hand, the U.S. is performing better in some areas of the Index today than it did a few years ago. For example, significant progress has been made over the past few years in strengthening border enforcement efforts. In 2016, the Trade Facilitation and Trade Enforcement Act and amendments to Customs and Border Protection regulations added new measures to expand communication and cooperation with rights holders in order to strengthen customs authorities' ability to act expeditiously against imported and in-transit counterfeit and pirated goods at the U.S. border. The laws include requirements for customs authorities to disclose information to rights holders based on suspected infringing goods and to do so earlier in the process than previously existed in law. It also provides for *ex ante* information sharing and support from rights holders, building on existing platforms for e-recording of IP rights and product identification information. Amendments to the Customs and Border Protection regulations that implement aspects of the new law, were issued in 2017. The amendments enhance rights holders' ability to donate technologies or to provide training and other support to customs officials to enable accurate and speedy identification of infringing goods. As a result, the score for the U.S. for this indicator rises to a full point.

But in other areas, American leadership has become much less pronounced.

In Category 1: Patents, Related Rights, and Limitations, the U.S. has dropped its ranking in successive editions of the Index. This change is primarily driven by relative weakness in patentability requirements and patent opposition (indicators 2 and 8).

For the former, the patentability of basic biotech inventions was compromised by the Supreme Court decisions in the 2013 *Molecular Pathology v. Myriad Genetics* and 2012 *Prometheus Laboratories, Inc v. Mayo Collaborative Services* cases. The rulings raised uncertainties over the patentability of DNA molecules that mimic naturally occurring sequences as well as other patented products and technologies isolated from natural sources. In 2017, interpretation of the recent Supreme Court decisions in *Myriad*, *Mayo*, and *Alice Corp vs. CLS Bank International* by lower courts and guidance from the USPTO remained inconsistent and difficult to apply. There is considerable uncertainty for innovators and the legal community, as well as an overly cautious and restrictive approach to determining eligibility for patentable subject matter in areas such as biotech, business method, and computer-implemented inventions. This seriously undermines the longstanding world-class innovation environment in the U.S. and threatens the nation's global competitiveness. As a result, in 2017, a number of legal societies and industry groups called for legislative reform of Section 101 of the U.S. Patent Act, citing the need for clarity on patentability in a wider, legislative context rather than in highly specific guidelines and case law.

With respect to opposition proceedings, despite the best intentions of new opposition mechanisms introduced in the America Invents Act, the ease of challenging patents during the post-grant period, particularly through *inter partes* review, has led to a high volume of trials (particularly for life sciences claims) and a disproportionate rate of rejections. Concerns have also been raised over a perceived reduced opportunity to amend claims in opposition proceedings and a lower burden of proof

for opposing parties than in district court proceedings. As such, the opposition system in the U.S. provides a channel for bad faith actors and injects a great deal of cost and uncertainty for patent owners compared with other post-grant opposition systems.

Are EU member states positioning themselves to close the gap?

Unfortunately, the IP policy environment in the EU, particularly for Category 1: Patents, Related Rights, and Limitations, is moving in the wrong direction. In October 2015, the European Commission (EC) released its report *Upgrading the Single Market: More Opportunities for People and Business*, which details the overarching initiative to reform and deepen the single market with the purpose of spurring economic growth and job creation and reducing administrative burdens. The report identified two key challenges: the need to address the ambiguity formed in the ongoing process of creating an EU-wide unitary patent system and the lack of a conforming mechanism for supplementary protection certificates (SPCs). While emphasizing the benefits of a unitary SPC title, the EC also announced its intention to explore options for recalibrating certain elements of this IP right. One such option put forth by the EC is to provide European manufacturers of generic drugs and biosimilars with an SPC manufacturing exemption that would “create thousands of high-tech jobs in the EU and many new companies.” Regrettably, the EC appears to have lost sight of the fact that IP incentives, such as SPC protection, have been central to the success of Europe’s research-based biopharmaceutical industry. In 2016, industry estimates suggested that this sector generated some 745,000 direct jobs (with over 113,000 employed directly in innovative research and development [R&D])—a

growth of 33% since 2000. Furthermore, the European research-based biopharmaceutical industry generated more than EUR238 billion in pharmaceutical production in 2015 and made investments of EUR33.5 billion in R&D activities across the EU. Recent studies find that the adoption of such a measure would lead to a loss of between 4,500 and 7,700 direct jobs in the industry, with an additional loss of between 19,000 and 32,000 indirect jobs.^v It would also result in a loss of between EUR215 million to EUR364 million in R&D investment.

Many troubling assumptions underlie the commission’s proposal. One running assumption about the potential gains to European generic manufacturers appears to be based on the number of direct and indirect jobs that may be created, which was largely overestimated. In fact, when parameters of economic uncertainty are taken into consideration, the estimate of the number of direct and indirect jobs created is not statistically distinguishable from zero.

Another assumption about the potential gains to European generic manufacturers is that there is an actual market demand for European generic manufacturers’ products. Yet it is unclear what this market is or where the demand for generic medicines produced in Europe would come from. In all likelihood, generic follow-on products are already on the market in many of these potential markets and, critically, being produced by local manufacturers that are often preferred partners in local drug procurement. And for those markets where equivalent protection mechanisms are in place, it is highly unlikely that an SPC exemption would grant the European generic and biosimilar manufacturers an exclusive status for early market entry of their products across the globe. In fact, an EU

SPC exemption will invite other economies to consider the question: “If the European Union is weakening IP standards to benefit their domestic industries, why shouldn’t we?” In essence, this proposal could inspire a race to the bottom in weakening global IP standards.^{vi}

Still mixed results: Brazil, Russia, India, China, and South Africa (BRICS) and IP rights

An underlying assumption in much of the thinking on national economic development is that as economies grow and their economic models change—with more complex and high-tech, innovation-based sectors accounting for a growing share of output—the legal environment should mirror these developments. Since Goldman Sachs economist Jim O’Neil coined the phrase in 2001, the world has been waiting for the BRIC economies (and South Africa) to fully emerge and modernize their economies. Yet, according to Index data in this edition and in previous editions, only China has shown real—albeit incremental—signs of positive reform efforts. China’s score has increased again this year, and China has been a consistent performer across all six editions of the Index. The challenges rights holders face in China are enormous—not least with respect to market access, commercialization of IP, physical counterfeiting, and online piracy—but unlike many of its peers, China is making concrete progress in building a 21st century national IP environment.

For example, in 2017, China made noteworthy progress in the life sciences space. China’s central government issued State Council Opinions on Deepening Regulatory Reforms to Encourage Drug and Medical Device Innovation. In relation to patent enforcement,

the opinion confirms the strengthening of the existing patent linkage mechanism in China (based on the existing Drug Registration Regulations) proposed earlier in 2017. In addition, Article 18 of the opinion explicitly expands regulatory data protection (RDP) to cover not only innovative drugs (with no requirement that these be limited to those first launched in China, as in the existing mechanism), but also biologics, orphan drugs, and pediatric drugs. This represents an important improvement in the scope of RDP protection, which is currently unclear and often misinterpreted by authorities. Also, Article 17 in the opinion announces a pilot program of patent term restoration for a select number of innovative drugs (not specified) that face approval delays due to clinical trials and market authorization review.

Still, other facets of China’s IP environment need improvement. For instance, China’s design patent system is out of sync with other economies’ systems and presents several often-dichotomous challenges for multinational technology companies. First, the system tends to favor local entities at the expense of multinational rights holders. The law provides limited criteria for obtaining design protection, and no substantive review takes place, leading to many low-value patents and a high rate of invalidations. According to local legal experts, this trend has also led to a growing incidence of design patent trolls. At the same time, while the law does require absolute (worldwide) novelty, it does not provide a one-year grace period between disclosure abroad and the filing date, as is practice in many other economies. Also, no protection is currently provided for unregistered designs or for partial designs (although the latter is included in proposed patent amendments). Finally, infringement of protected designs is widespread in China. Altogether, the system

poses significant barriers to obtaining and ensuring effective design protection and creates additional costs and uncertainty for multinational companies. The system also presents difficulties for companies seeking protection for trade dress within the design patent system (on top of other challenges with trade dress protection in China, including fragmented protection afforded piecemeal through various laws). But Chinese courts do not necessarily rule in favor of domestic companies in relation to design and trademark protection. For instance, in 2017, the Beijing IP court ruled that Apple Inc. did not infringe on Chinese company Shenzhen Baili's design patent for smartphones. In a separate case, the court awarded record damages to athletic company New Balance for infringement of its logo by three local companies.

For the other BRIC economies, developments on the IP front during 2017 were more mixed.

On the one hand, Brazil substantially reformed its technology licensing environment, a major step forward in reducing red tape and encouraging innovation and investment. Traditionally, significant regulatory and formal requirements in Brazil have limited the attractiveness of licensing and widespread technology transfer. For example, to become effective and binding on third parties, licensing agreements were required to be published in the Brazilian Patent Office's (INPI's) *Official Gazette*. Agreements were also required to gain official approval from the INPI with limitations on fees and payments between the contracting parties. Exclusive licensing agreements were subject to more onerous publication requirements than nonexclusive licenses, making the process more time consuming. The process changed in 2017 when the INPI announced through Rule 70 that it will no

longer take an active role in the framing and approval of licensing agreements. Instead, the new rule suggests that the agency will operate merely as an agency of recordation. If this rule is successfully implemented and if the net effect of such implementation is positive, it would represent a significant improvement in the technology transfer environment in Brazil.

However, in other areas, rights holders continue to experience significant challenges. The INPI announced in July 2017 that it would introduce a simplified procedure for granting patent applications. The new draft procedure (Norma) would allow for the processing and issuing of patents within a 90-day window. In one sense, any efforts to reduce the INPI's backlog are welcome, as this long-standing problem presents a significant curtailment and barrier to rights holders' exploitation of their IP. The current backlogs range from 10 to 13 years depending on the field of technology, with applications in the biopharmaceutical and ICT fields traditionally being the worst affected. And these efforts build on international patent prosecution efforts from 2016 and 2017, with the U.S., Japan, and other offices, aimed at streamlining and expediting the prosecution process. But unfortunately, the draft procedure (which at the time of research was still under public consultation) has from the outset excluded biopharmaceutical patents, which historically have suffered significant delays in patent prosecution.

Conversely, a new interagency ordinance clarifies and institutionalizes the Brazilian National Health Surveillance Agency's (ANVISA's) role in evaluating biopharmaceutical patent applications. As noted in previous editions of the Index, ANVISA has traditionally had the right to provide prior consent to biopharmaceutical

patents that are being examined by the INPI. Consequently, decisions on whether to grant a patent have been based on examination not solely by patent specialists and officials at the INPI, but also by ANVISA. This has in effect meant a requirement of dual examination, a violation of the TRIPS Agreement. The exact meaning and nature of ANVISA's right to prior consent has never been fully defined and has frequently been questioned in court. However, the publication of Interagency Ordinance 1 in April 2017 clarified the relationship and interaction between ANVISA and the INPI in the patent review process. Following the INPI's notification, Article 2 of the ordinance moves ANVISA's examination to earlier stages in the application to initiate the procedure for prior consent. ANVISA will analyze applications in light of public health, and opinions about patentability may be binding on the INPI only in cases where ANVISA concludes that a severe public health risk exists as prescribed under Article 4 of the regulation. Article 5 specifically mentions drugs "of interest to the drug policies and pharmaceutical assistance of the Public Healthcare System (SUS)." The new rules attempt to clarify, with caveats, the extent of ANVISA's role in providing opinions on patentability, with INPI leading the bulk of the examination. Finally, Article 9 of the ordinance calls for the establishment of an "Interagency Policy Group" between ANVISA and INPI for the "harmonization of understandings between the agencies." It remains to be seen whether this interaction will further facilitate or restrict the biopharmaceutical patentability process.

In an effort to comprehensively reform and modernize its national IP environment, South Africa published a *Draft Intellectual Property Policy of the Republic of South Africa Phase I*. This is the first document in what is to be a series of policy documents addressing all

major IP laws in South Africa. The Phase I document focuses on patents (primarily for biopharmaceuticals) and related IP rights. It is a positive step that the government of South Africa recognizes the need to reform its national IP environment and understands the value of consulting all stakeholders in that process. Unfortunately, like its preceding 2016 document, "Intellectual Property Consultative Framework" (also published by the Department of Trade and Industry), the *Draft Intellectual Property Policy* focuses on the means by which South Africa could circumvent IP rights rather than on the manner in which intellectual property rights can function as an industrial asset in the country. It focuses on expanding the use of compulsory licensing as a public policy tool (1) to "progressively realize the right to have access to health care services" in South Africa, and (2) as a basis for South African manufacturing and exports to Africa. TRIPS Article 31, including the amendments introduced in the 2001 Doha Ministerial Declaration, and the subsequent General Council decision that allows the export of medicines produced under a compulsory license (outlined in Paragraph 6), form the legal grounds for compulsory licensing for medicines. The chairman's statement accompanying the General Council decision (concerning Paragraph 6 of the Doha Declaration) underscores that these provisions are not in any way intended for industrial or commercial objectives, and, if used, should be aimed solely at protecting public health. In addition, Article 31 and the Doha Declaration suggest that compulsory licensing represents a "measure of last resort"—intended primarily for public health and humanitarian emergencies such as pandemics, and to be used only after all other options for negotiating pricing and supply

have been exhausted. The draft policy also proposes to introduce heightened standards of patentability, the use of parallel importation, and a pre- and post-grant opposition mechanism. None of these proposed policies act as an incentive to invest, innovate, or create new products and technologies in South Africa. In this sense, it is unlikely that any of these policies—independently or in aggregate—will help South Africa “transition towards a knowledge economy” as the draft policy hopes.

All quiet on the trade front?

Although signaled throughout the 2016 U.S. presidential campaign, the decision by the U.S. to withdraw as a contracting party to the Trans-Pacific Partnership (TPP) came as a shock to the state of global trade negotiations. The withdrawal has created considerable uncertainty about the future of the agreement and about trade relations in general. In a November 2017 inter-ministerial statement, the remaining 11 contracting parties confirmed that the TPP was being substantively renegotiated as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). While some elements of the previously agreed upon and ratified TPP have been left relatively unchanged, key cutting-edge components of the IP chapter have been suspended. As noted in last year’s edition and featured analysis of the TPP and TRIPS treaties, if implemented in full, the TPP’s IP provisions, although not perfect, would lead to a considerable improvement in most of the contracting parties’ national IP environments. In this sense, the suspension of the IP provisions marks a setback for international IP standards.

New Zealand is one of a handful of economies that had introduced and passed implementing

legislation for the TPP. The Trans-Pacific Partnership Agreement Amendment Act received royal assent in 2016. The act contains a number of important new laws that potentially strengthen New Zealand’s national IP environment, including the introduction of a term of patent restoration for pharmaceutical products and an extension of the copyright term. However, the act and relevant amendments to underlying legislation (including the Patents Act and Copyright Act) have not come into effect. In fact, it is unlikely that this act will ever come into effect. Comments by Prime Minister Jacinda Ardern and press reports in New Zealand suggest that the CPTPP would require new implementing legislation and would be subject to parliamentary review and a vote. Furthermore, in November 2017, Prime Minister Ardern was cited as stating that New Zealand would work to ensure that the suspended IP chapter of the original TPP text stays suspended.

Similarly, it is unclear how other major ongoing trade negotiations will affect the international IP environment.

Originally negotiated in the early 1990s, the North American Free Trade Agreement (NAFTA) predates even the TRIPS Agreement and, as such, several provisions regarding the protection and enforcement of IP rights could be updated and modernized. But it remains unclear whether the current renegotiation between the U.S., Canada, and Mexico will lead to an agreement that incorporates such changes. During the initial stages of negotiations, Canadian resistance to an ambitious IP chapter appeared to be an obstacle to setting a strong regional and international benchmark.

It is also possible that the Economic Partnership Agreement between the EU and

Japan announced in July 2017 could become a model agreement. The final text is currently being negotiated; the official overview (“EU-Japan EPA—The Agreement in Principle”) does include a dedicated chapter on IP rights.

Rays of light? How more effective copyright enforcement is (finally!) taking place in a growing number of Index economies

Category 2: Copyright, related rights, and limitations has traditionally been one category in which countries consistently perform poorly. Regardless of income level, the majority of economies in the Index have struggled with persistently weak copyright environments. It is striking that economies with otherwise highly competitive and sophisticated national IP environments, including Switzerland and Sweden, maintain notable gaps with respect to both the availability of copyrights and their enforcement. And while challenges persist—as discussed below, the majority of economies score less than 50% on this category—2017 did see some notable achievements.

Australia’s Copyright Amendment (Online Infringement) Act 2015 (Section 115a) provides for injunctive relief that allows courts to require Internet service providers (ISPs) to disable access to foreign-hosted sites (or “online locations”) whose primary purpose is to infringe copyright. The provision has been applied in at least five landmark cases since its introduction. In 2016, Federal Court decisions regarding Roadshow Film (representing major international film studios) and Foxtel (a pay TV provider) successfully secured injunctions against a number of ISPs, requiring them to disable access to The Pirate Bay and other websites whose primary function is facilitating infringement. In relation to the issue of “mirror”

sites of disabled infringing sites, the court ruled that rolling injunctions were possible but not automatic; courts must supervise injunctions that disable mirror or proxy sites. Reports suggest that ISPs in Australia are responsive to a second round of orders. Additional cases based on Section 115a occurred in 2017, among them those brought by Universal Music Australia, Village Roadshow, and Foxtel, resulting in the disabling of more than 65 sites determined to be conducting or facilitating “flagrant” copyright infringement and more than 340 alternative domain names. Local analysis suggests that these sites hosted a majority of copyright-infringing traffic in Australia. A 2017 study by INCOPRO found that of 5 sites with access disabled in December 2016, site traffic fell by over 70% in the 3 months following the order to disable access. Even when considering the use of proxies or mirror sites to access the sites, the combined use of the sites dropped by 60% during the period. The study also noted a fall in use of the top 50 copyright-infringing sites in Australia.

The EU’s E-Commerce Directive (2000/31/EC), Articles 12–14, combined with the Copyright Directive (2001/29/EC), Article 8(3), enable a court or administrative authority to require ISPs to terminate or prevent copyright infringement by third parties that use their services and lay out the basis for injunctive-type relief against infringing websites in EU member states (while still providing a safe harbor for ISPs). Recent case law from the Court of Justice of the European Union (CJEU) in 2017 (including Case C-610/15, Brien/Ziggo) suggests that this provision extends to disabling access to torrent websites, which are viewed by the CJEU as falling under the umbrella of a “communication to the public” per EU copyright law.

Ireland implemented the above provisions in Statutory Instruments No. 68/2003 and No. 59/2012, permitting rights holders whose copyright or related rights have been infringed by users of an ISP's service to apply to the High Court for an injunction against the ISP. In a number of recent cases, Irish courts have provided injunctive-style relief to rights holders on the above legislative basis. In 2014, in *EMI Records Ireland v. UPC Communications Ireland*, the High Court granted an injunction against The Pirate Bay on the basis that the ISPs were seen as the conduit for illegal activity. In 2017, the High Court issued several orders for injunctions requiring at least eight ISPs to disable access to a number of file-sharing sites offering illegal downloading and streaming. In addition, on the basis of S.I. 59/2012 and Irish case law, a kind of graduated response or "three strikes" system for ISPs has been developed for sending warning letters to end users of infringing content or platforms and disabling access entirely. These types of injunctions against ISPs are permitted if the ISPs offer no response after three notices from rights holders identifying broadband subscribers engaged in infringement of copyright. Industry reports suggest that only some ISPs disable access to infringing content or act on notices voluntarily; however, ISPs are considered to be responsive to court orders.

Italy's Communications Regulatory Authority (AGCOM) can receive complaints from rights holders and order ISPs to remove or prevent access to illegally published content. According to AGCOM, about 60% of cases initiated in the past year (mainly concerning large-scale violations) resulted in AGCOM ordering the disabling of access to relevant websites. For foreign-hosted sites, AGCOM ordered the relevant domestic ISP ("conduit provider") to disable Italian users' access to

these sites. An additional 34% of cases were resolved with ISPs voluntarily disabling access to (or removing) infringing material; this reportedly represents a 7% increase compared with the previous year. Considering the use of the system from its introduction to date, a local third-party analysis indicates that from mid-2014 to mid-2017, AGCOM received about 730 notices of infringing websites and has elected to process approximately 60% of these, with 65% of those processed resulting in disabling access to the sites. In addition, jurisprudence from Italian courts (including the 2016 Court of Rome decision in *Break Media v. Reti Televisive Italiane*) has established the responsibility of ISPs, when notified or otherwise made aware of copyright-infringing content online, to remove access to such content.

And in Sweden, courts finally ruled in favor of rights holders by establishing a responsibility for ISPs to take action against infringing activity online. This follows the 2016 judgment in the case against Swedish ISP giant *Bredbandsbolaget*, which significantly weakened Swedish antipiracy efforts. The decision established a precedent that ISPs in Sweden have no obligation to disable access to pirate websites unless they provide "direct assistance" to the primary infringers, with Stockholm's District Court refusing an injunction against *Bredbandsbolaget* to disable access to two torrent sites (including The Pirate Bay). The court's decision was based on an evaluation of Sweden's implementation of the EU's InfoSoc Directive (Article 8.3) and on the complicity concept within the Penal Code (Article 53b). Notably, the court provided for a narrow scope of protection for Swedish rights holders under the terms of Article 8(3) of the InfoSoc Directive, according to which EU member states shall make available injunctions against intermediaries used by third parties to

infringe IP rights. The court concluded that, although Swedish law is phrased in a more restrictive way than the EU Directive, Swedish law still complies with the directive given that the possibility of injunction is not illusory. In February 2017, the newly established Swedish Patent and Market Court of Appeal (*Patent-och marknadsöverdomstolen*) overturned this decision. The court ruled that *Bredbandsbolaget* should not only disable access to the torrent websites in question but should also pay damages of SEK500,000 (about USD60,000). The ruling cannot be appealed and is likely to set an important precedent and lead to stronger application of existing laws and enforcement against online piracy.

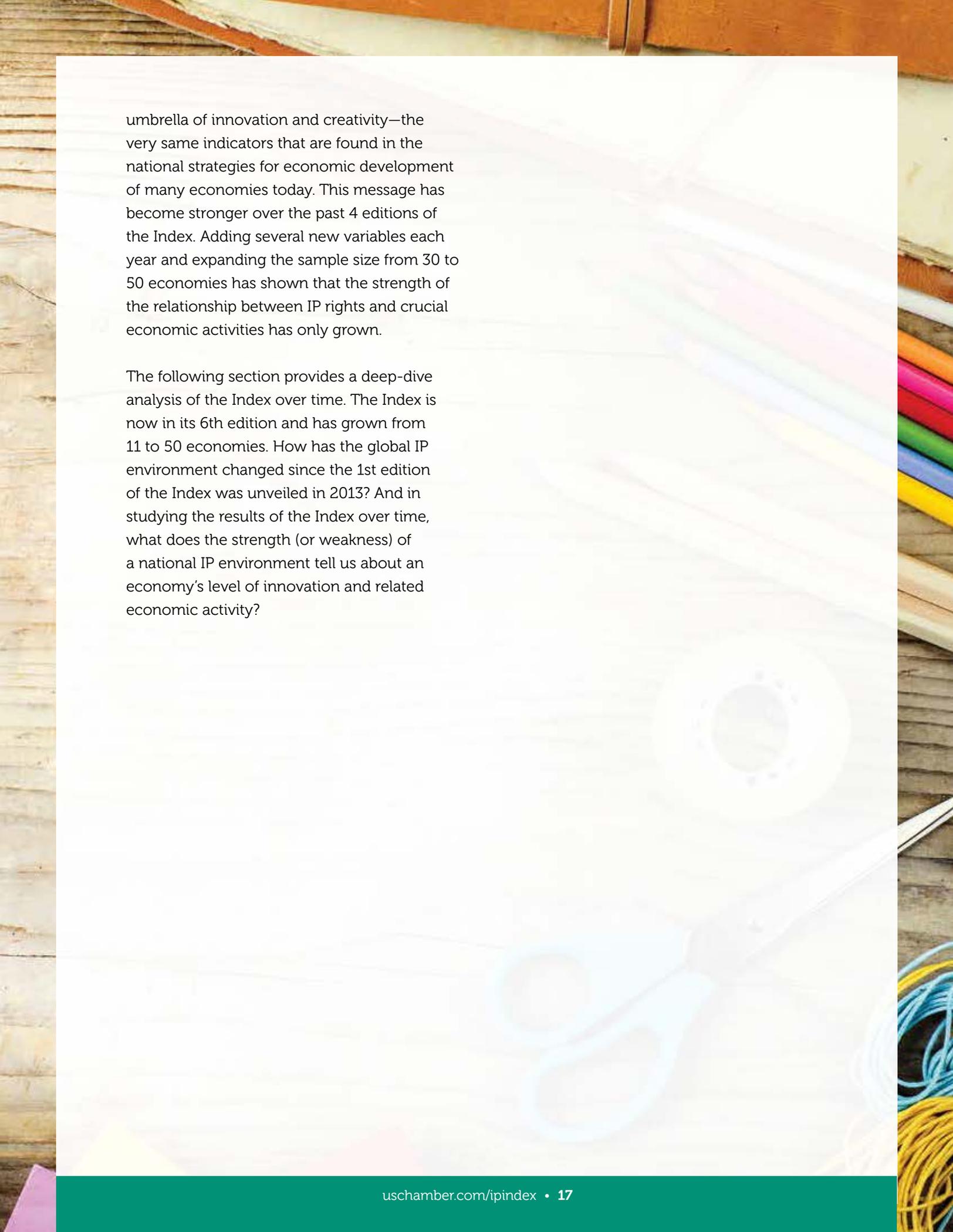
2017: An outlier year or a taste of what's to come?

Recent policy downgrades in the U.S. and EU with respect to Category 1: Patents, Related Rights, and Limitations are reversible. American and European rights holders may in the coming years see improvement in the policy environment. However, there is a danger that the damage has already been done. The U.S. and EU are two long-standing models for other economies, and the actions they take are frequently used as a basis for justifying actions in other economies. For instance, on the issue of introducing a manufacturing and export exemption for biopharmaceutical products under a restored period of patent protection (SPC protection in the EU), economies such as Australia, Israel (which already has in place a similar exemption), and Canada are to varying degrees broaching the subject. Canada has now introduced a new regulatory scheme that allows for the restoration of any patent term lost during the regulatory review process for innovative biopharmaceutical products. While overall this is an improvement in Canada's

biopharmaceutical IP environment, this step forward is diluted by the provisions of the law, which restrict eligibility requirements and create an export claw-out through Section 115(2), effectively undermining the Certificate of Supplementary Protection if the activity is for the purposes of exports.

Loosening standards for IP protection is a slippery slope. Following on proposals for an SPC export exemption, there are now calls to extend the concept of an export exemption to the entire basic 20-year term of patent protection. This would allow follow-on product manufacturers to export their products as early as the product originator's market entry into markets where the product is not patent protected.^{vi} In fact, rather than benefiting domestic industries, it is more likely that these policies will inspire other economies to embrace similar provisions, resulting in a general deterioration of international standards of IP protection.

The deterioration of international standards of IP protection would be unfortunate—for the EU, the U.S., Canada, and the world's multitude of aspiring emerging economies. Since 2014, the Index has included a dedicated Statistical Annex that explores the relationship between national IP environments and the development of innovative and competitive economies by comparing Index scores with a wide range of economic variables using correlations analysis (statistical measures of the likelihood of two elements occurring together).^{viii} Taken together and measured over time, the correlations included in these annexes present a clear picture: IP protection is conducive to the aspirations of governments around the world. A robust national IP environment correlates strongly with a wide range of macroeconomic indicators that fall under the



umbrella of innovation and creativity—the very same indicators that are found in the national strategies for economic development of many economies today. This message has become stronger over the past 4 editions of the Index. Adding several new variables each year and expanding the sample size from 30 to 50 economies has shown that the strength of the relationship between IP rights and crucial economic activities has only grown.

The following section provides a deep-dive analysis of the Index over time. The Index is now in its 6th edition and has grown from 11 to 50 economies. How has the global IP environment changed since the 1st edition of the Index was unveiled in 2013? And in studying the results of the Index over time, what does the strength (or weakness) of a national IP environment tell us about an economy's level of innovation and related economic activity?



create

5. National IP Environments and Related Economic Activity—What Have We Learned over Six Editions of the Index?

Moving ahead or standing still?

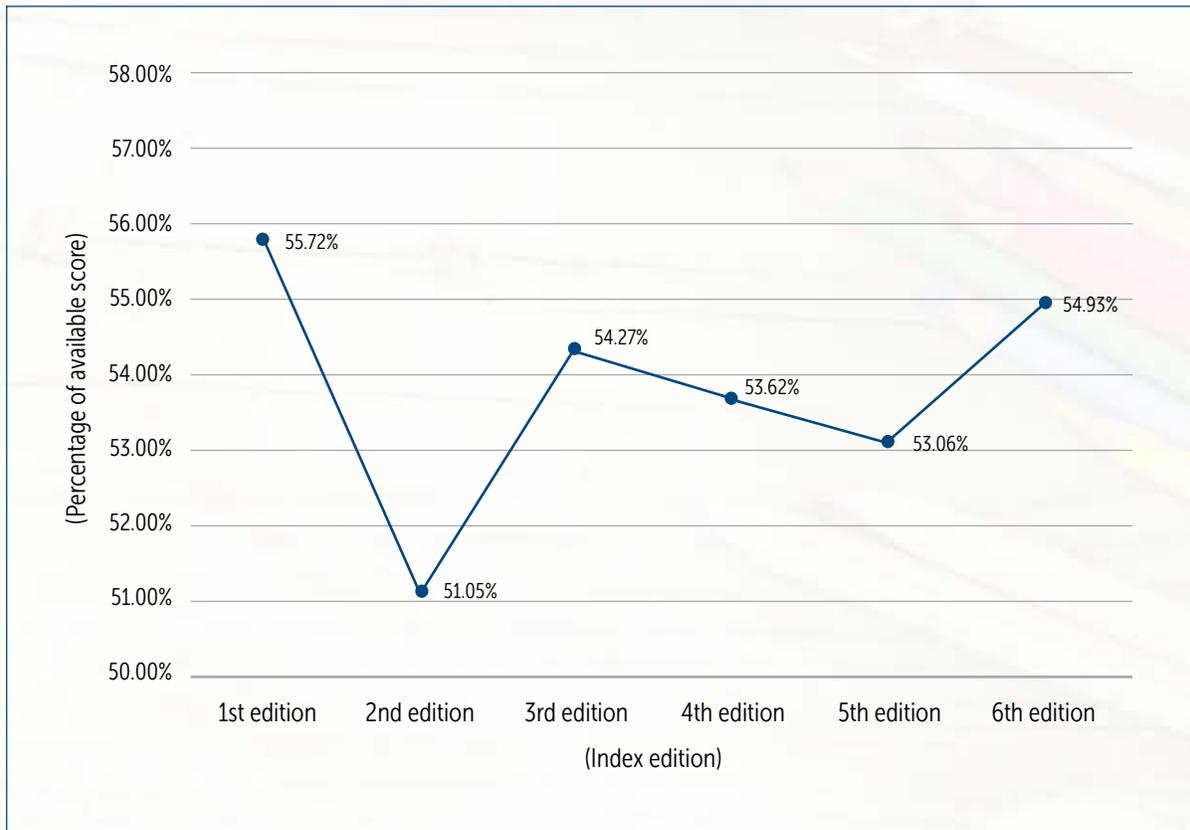
While the primary purpose of the IP Index has always been to measure and benchmark the strength of the national IP environments in the economies sampled, a secondary function of the Index is to serve as a proxy for the state of the global environment. What does the global IP environment look like today and how does this compare with when the Index was first launched?

Indeed, looking at the movement of the aggregated scores of the Index over time gives a sense of how the global IP environment has evolved and what some of the underlying factors shaping this movement are, positive or negative.

To begin, we can calculate the overall total score of all sampled economies vis-à-vis the maximum available total score in the Index. Although not controlling for changes in the composition of the Index with respect to the number of economies sampled or the addition of new indicators, the total aggregated results do provide a good starting point as a snapshot

and point of comparison. Figure III shows the composite score of the economies sampled as a percentage of the maximum score for each of the six editions of the Index.

Figure III: Overall total score, percentage of available score, first to sixth edition of the Index

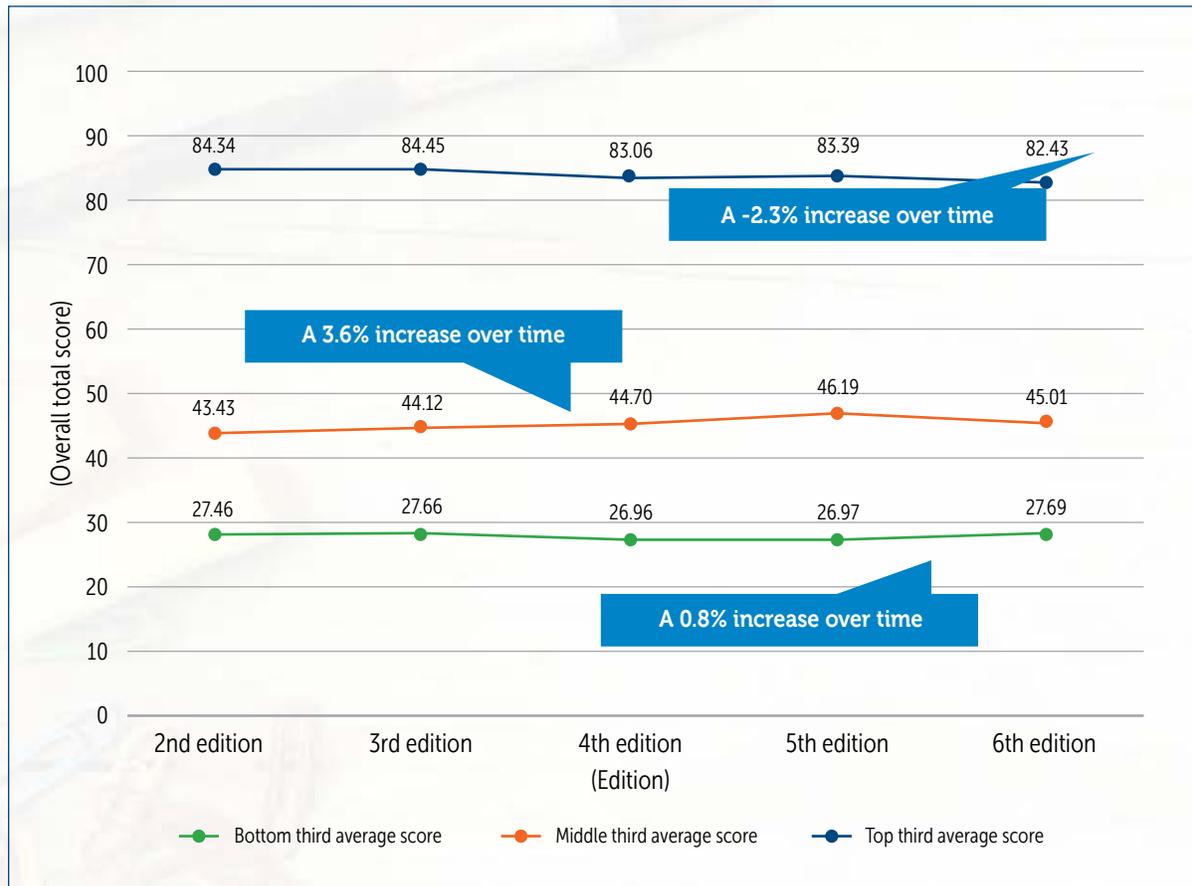


So, is today's global IP environment better or worse than when the Index was first launched?

Comparing the starting point in 2012 with the latest edition in 2018, there has been a negative movement of 0.79%. So, on the face of it, the global IP environment today is slightly worse off than it was 6 years ago. Indeed, looking from edition to edition, the movement has been more pronounced, with a steep drop recorded in the 2nd edition followed by a gradual climb and settling in between the 53% and 55% range for the past 4 editions of the Index. Yet the aggregated score can take us only so far. To gain a slightly deeper perspective on the positive or negative movement of groups of economies, we can

examine these aggregated changes in the context of top versus middle versus bottom performers on the Index. Figure IV shows the composite score of the economies over the 6 editions of the Index based on overall average performance on the Index for each group of economies.

Figure IV: Overall total score, percentage of available score, second to sixth edition of the Index



Studying the economies sampled since the 2nd edition (the 1st edition consisted only of 11 economies, so it has been excluded from this comparison) it is clear that the different groups have performed remarkably differently. The top Index performers have experienced an overall decrease in performance over time. This trend is consistent from edition to edition across all editions. In contrast, the middle performers (primarily upper-middle-income economies) have seen their average score increase year by year, with the only decrease in average score presenting from the 5th to the 6th edition. This positive movement has been substantial, with an average score rise of almost 4% from

the 2nd to the 6th edition. Unfortunately, the bottom performers have not seen a noticeable improvement. Their IP environment has, on average, stood still since the 2nd edition of the Index.

Yet not all of this movement can be attributed to individual changes in the environment of the sampled economies. As mentioned, in addition to changes in the IP environment, two methodological factors potentially affect this movement: the number of economies sampled and the addition of new indicators to the Index.

The 1st edition of the Index mapped and compared the national IP environments in 11 economies; today, the Index covers 50 economies. That is a sizable increase. Depending on the strength of the national IP environment of those economies added, the overall results of a given edition of the Index can move up or down. If a large number of economies with relatively strong IP environments are added, then the overall composite score will move up regardless of what has changed in the underlying global environment. The same logic applies if most economies added in a given year have relatively weaker environments.

Similarly, the 1st edition of the Index consisted of 25 indicators; today the total number of indicators measured is 40. Over the course of the next few pages, we will attempt to control for these changes and provide more sophisticated comparisons. But first, it is worth identifying a fundamental fact that the aggregated comparison shows: If the indicators included in the Index represent a gold standard for the protection and enforcement of IP rights (regardless of whether there are 25 or 40 indicators), then a global score of between 51% to 56% demonstrates the large amount of work to be done to give rights holders the protections they need. Indeed, reviewing the scores of each of the 45 economies that have been included in 2 or more editions of the Index reinforces this impression. Table I shows that for the vast majority of economies, the IP environment has either weakened or stood still.

Table I: Up or down? Change over time for 45 Index economies included in a minimum of 2 editions of the Index

	Patents, Related Rights, and Limitations	Copyrights, Related Rights, and Limitations	Trademarks, Related Rights, and Limitations	Trade Secrets and Market Access	Enforcement	International Treaties
Algeria	Orange	Orange	Orange	Orange	Green	Orange
Argentina	Orange	Orange	Red	Green	Red	Orange
Australia	Red	Orange	Orange	Orange	Green	Orange
Brazil	Orange	Orange	Orange	Red	Red	Orange
Brunei	Orange	Orange	Orange	Orange	Red	Orange
Canada	Green	Green	Orange	Orange	Green	Green
Chile	Red	Red	Orange	Orange	Red	Orange
China	Green	Orange	Green	Orange	Green	Orange
Colombia	Red	Orange	Orange	Orange	Green	Orange
Ecuador	Green	Orange	Red	Green	Orange	Green
Egypt	Orange	Orange	Orange	Orange	Green	Orange
France	Orange	Orange	Orange	Orange	Green	Orange
Germany	Orange	Orange	Orange	Orange	Green	Orange
Hungary	Orange	Orange	Orange	Orange	Green	Orange
India	Green	Orange	Green	Green	Red	Orange
Indonesia	Red	Green	Orange	Orange	Red	Orange
Israel	Green	Orange	Orange	Orange	Green	Orange
Italy	Green	Green	Orange	Orange	Green	Orange
Japan	Orange	Green	Orange	Orange	Orange	Green
Kenya	Orange	Orange	Orange	Orange	Red	Orange
Malaysia	Orange	Green	Orange	Red	Green	Orange
Mexico	Red	Green	Green	Red	Red	Orange
New Zealand	Orange	Orange	Orange	Orange	Green	Orange
Nigeria	Orange	Orange	Green	Red	Red	Green
Pakistan	Orange	Orange	Orange	Orange	Green	Orange
Peru	Red	Orange	Orange	Red	Green	Orange
Philippines	Orange	Orange	Orange	Orange	Green	Orange
Poland	Orange	Green	Orange	Orange	Green	Orange
Russia	Orange	Orange	Orange	Red	Orange	Orange
Saudi Arabia	Red	Orange	Orange	Orange	Green	Orange
Singapore	Orange	Green	Orange	Red	Green	Orange
South Africa	Orange	Orange	Orange	Red	Red	Orange
South Korea	Green	Orange	Orange	Red	Green	Green
Spain	Green	Green	Orange	Orange	Green	Orange
Sweden	Orange	Green	Orange	Red	Red	Orange
Switzerland	Orange	Orange	Orange	Orange	Green	Orange
Taiwan	Green	Green	Orange	Red	Green	Orange
Thailand	Orange	Orange	Orange	Orange	Green	Orange
Turkey	Red	Green	Green	Orange	Orange	Orange
UAE	Orange	Green	Green	Green	Green	Orange
UK	Orange	Green	Green	Red	Green	Orange
Ukraine	Green	Green	Orange	Red	Red	Green
U.S.	Red	Green	Green	Orange	Green	Orange
Venezuela	Orange	Orange	Orange	Orange	Green	Orange
Vietnam	Orange	Orange	Orange	Green	Green	Orange

■ Category score deteriorated
 ■ Category score did not change
 ■ Category score improved

Comparing apples to apples and oranges to oranges: Controlling for the addition of new economies and indicators

One of the primary challenges in making comparisons over time lies in the composition of the Index and, specifically, the growth in the number of economies sampled. In the following pages, we try to control for this

variable by isolating and tracking a subgroup of economies—the 25 economies included in the 2nd edition of the Index. Thus, we can track movement over time on a like-for-like basis. How have these economies performed vis-à-vis the Index and each other over the course of the past 5 years? Table II shows the 25 economies sampled from the 2nd edition of the Index.

Table II: 25 economies sampled from the 2nd edition by original World Bank Income group^{ix}

Lower-middle-income countries	Upper-middle-income countries	High-income countries
India	Argentina	Australia
Indonesia	Brazil	Canada
Nigeria	China	Chile
Ukraine	Colombia	France
Vietnam	Malaysia	Japan
	Mexico	New Zealand
	South Africa	Russia
	Thailand	Singapore
	Turkey	United Arab Emirates (UAE)
		United Kingdom (UK)
		United States (U.S.)

Source: World Bank (2013)

First, it is worth analyzing the category-by-category movement; this analysis shows how the Index scores for these 25 economies have changed over the course of the 5 editions

sampled. For which categories has there been positive movement and for which categories has there been a regression?

Figure V: Overall percentage movement, 25 economies, 2nd to 6th edition of the Index, category by category

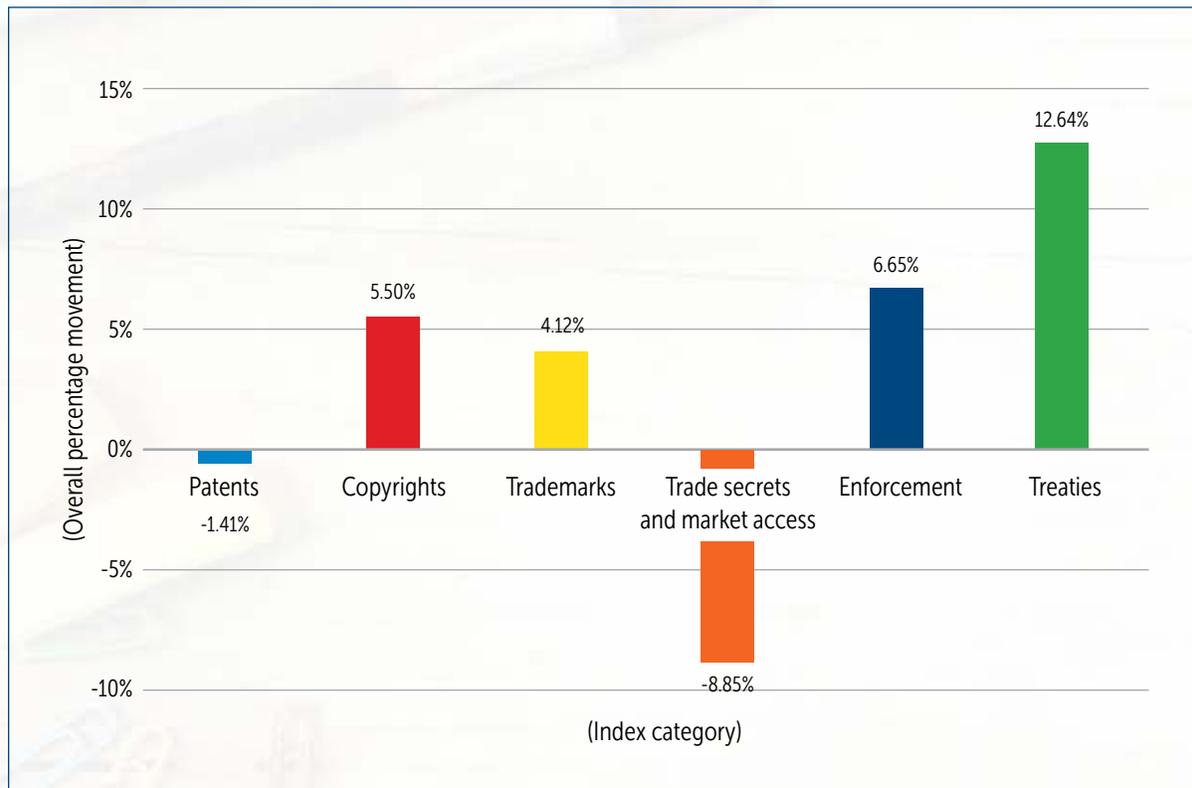


Figure V shows the percentage movement on a category-by-category basis for the 6 major categories of the Index for these 25 economies.

As Figure V shows, there has been considerable movement both overall and within each of the categories of the Index. Significantly, there is no clear pattern that the overall IP environment in these 25 economies is moving in the same direction, positive or negative. For example, in the Patents, Related Rights, and Limitations category, there has been an overall drop of close to 1.5%. As noted over the course of the past 5 editions of the Index, many of these 25 economies have seen a weakening of environment related to the ability of rights holders to register and

enforce their patent rights. And this is not a phenomenon dependent on income or level of economic development. In fact, the U.S. and other high-income economies have seen their scores drop in this category. A sharp drop has also occurred in the Trade Secrets and Market Access category. This drop is primarily driven by an increasing number of (primarily middle-income) economies erecting localization barriers and conditioning market access on the sharing or divulging of IP.

On the positive side, there has been an improvement in IP environments relating to copyright, trademarks, enforcement, and, most substantially, international treaties. Strong improvements have occurred in copyright and enforcement, with scores increasing by

5.5% and 6.65%, respectively. Looking back over the past 5 editions of the Index, many of the 25 sampled economies have introduced new copyright laws including digital rights management (DRM) and technological protection measures (TPM). Online enforcement has also improved in many of these economies, and many economies have introduced stronger border measures against trade in counterfeit goods. Still, this notable improvement should be tempered with the fact that, historically, these have been the two weakest categories in the Index; consequently, there has been ample room for progress.

Finally, in the International Treaties category, the rise in average score has been dramatic at 12.64%. As noted above, although the international trading environment remains uncertain at this point, it is clear from a longer-term perspective (and from the

perspective of the Index) that many economies are signing up for and committing to these international best practices.

The second methodological challenge to making comparisons over time concerns the growth of the number of indicators included in the Index. The 6th edition consists of 40 indicators in total, compared with 25 indicators in the first edition. To account for this growth, we have isolated a set of indicators that have been included in the Index since the 1st edition and can be tracked for the 25 sampled economies. How have these indicators changed over time and what does that reveal about the environment that they measure?

Figures VI and VII show the movement for 6 core indicators relating to the protection and enforcement of patents and copyrights for the 25 economies sampled.

Figure VI: Overall percentage movement, 25 economies, 2nd to 6th edition of the Index, core indicators, Category 1: Patents, Related Rights, and Limitations

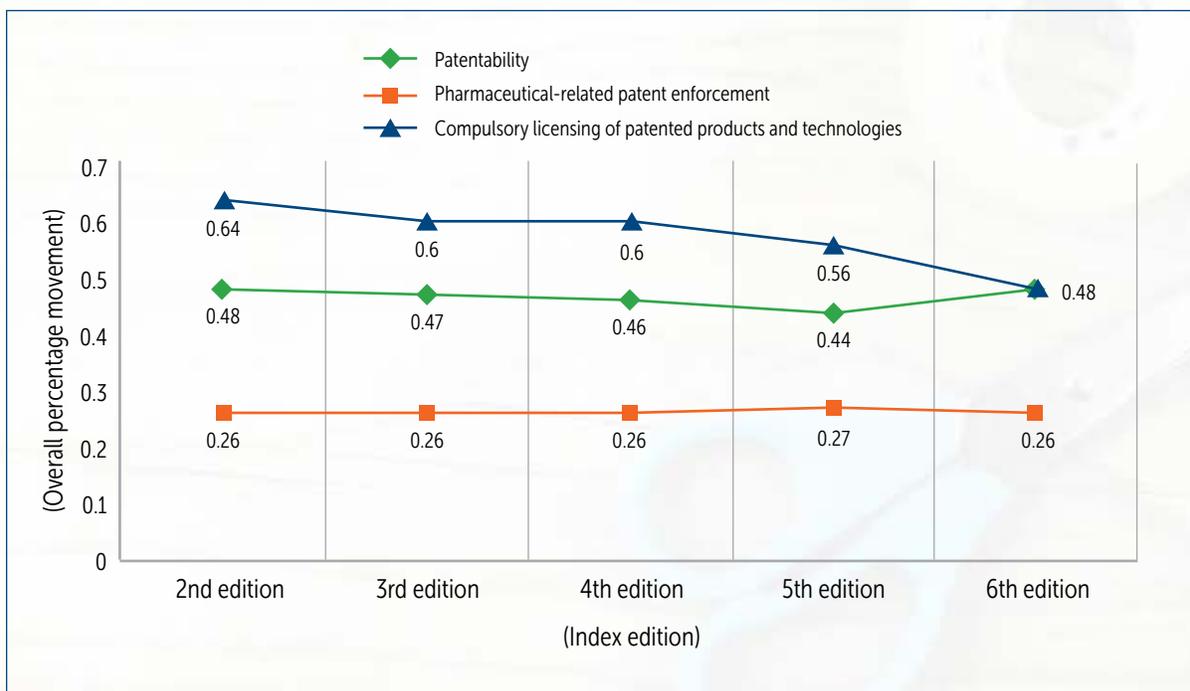


Figure VII: Overall percentage movement, 25 economies, 2nd to 6th edition of the Index, core indicators, Category 2: Copyrights, Related Rights, and Limitations

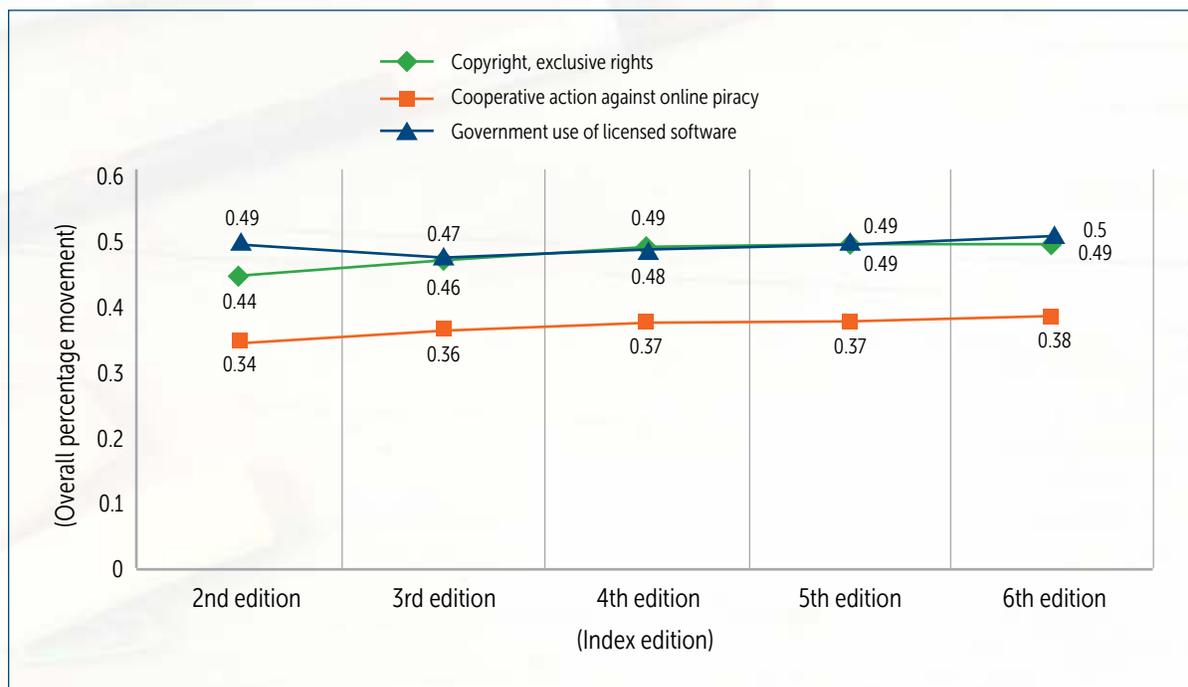


Figure VI shows that the patenting environment, as represented by 3 core indicators, has deteriorated or stood still. Patentability standards have worsened for the past 5 editions of the Index, with a substantial increase presenting only from the 5th to 6th edition, an increase that brings the overall levels back to where they were in 2013. For the indicator that measures compulsory licensing, scores have decreased significantly, with a 25% weakening of the environment in the 25 economies measured. More and more economies are embracing compulsory licensing as a health policy tool as opposed to an emergency measure in the face of a public health crisis. Patent enforcement relating to pharmaceuticals—weak from the beginning at just over a quarter of the available score—has essentially stood still, illustrating the significant challenges rights holders face in effectively enforcing their pharmaceutical patents in the 25 economies sampled.

Conversely, in Figure VII, the sampled copyright indicators show, by and large, positive movement. The availability and enforcement of basic exclusive rights has improved by over 10%. Online enforcement has similarly improved as a result of greater cooperative action against online piracy and, specifically, the adoption of notification and takedown mechanisms in many of the 25 economies sampled. Still, for at least the latter, the starting point was very low at 34%. The use of licensed software by government has improved slightly by 2%.

The following subsection shifts to study the relationship between these changes over time and economies' level of innovation and related economic activity. Have changes to national IP environments affected economic outputs and levels of innovation and related economic activity in the 25 economies sampled, and if so, how?

National IP environments and economic activity: Why IP protection matters

As mentioned previously, since the third edition of the Index, each Index has been accompanied by a Statistical Annex that measures the relationship between the strength of the national IP environment and levels of economic activity. Specifically, these annexes include a set of correlations of Index scores (aggregated as well as isolated by category and industry sector) with economic outputs. Based on these correlations and the above analysis, this subsection examines how economies have performed over time. Have the levels of economic activity changed as the related IP environment in the economies sampled has strengthened or weakened? The following two case studies examine this relationship to help illustrate general and sector-specific environmental trends.

Case study I: The biopharmaceutical sector

The biopharmaceutical sector is one of the most research-intensive industries in the world; it invests significantly more in R&D in absolute terms and on a per employee basis than any other industry. Host countries that develop, launch, and access innovative medical technologies also experience huge socioeconomic benefits, including increased levels of economic activity, job creation, access to new medicines, creation of knowledge-intensive sectors, and the construction of a high-tech capacity. Many, if not all, emerging and developed economies consider developing a competitive life sciences and biopharmaceutical sector a national strategic priority. Not least, this perspective has been visible in numerous strategy documents published by various governments over

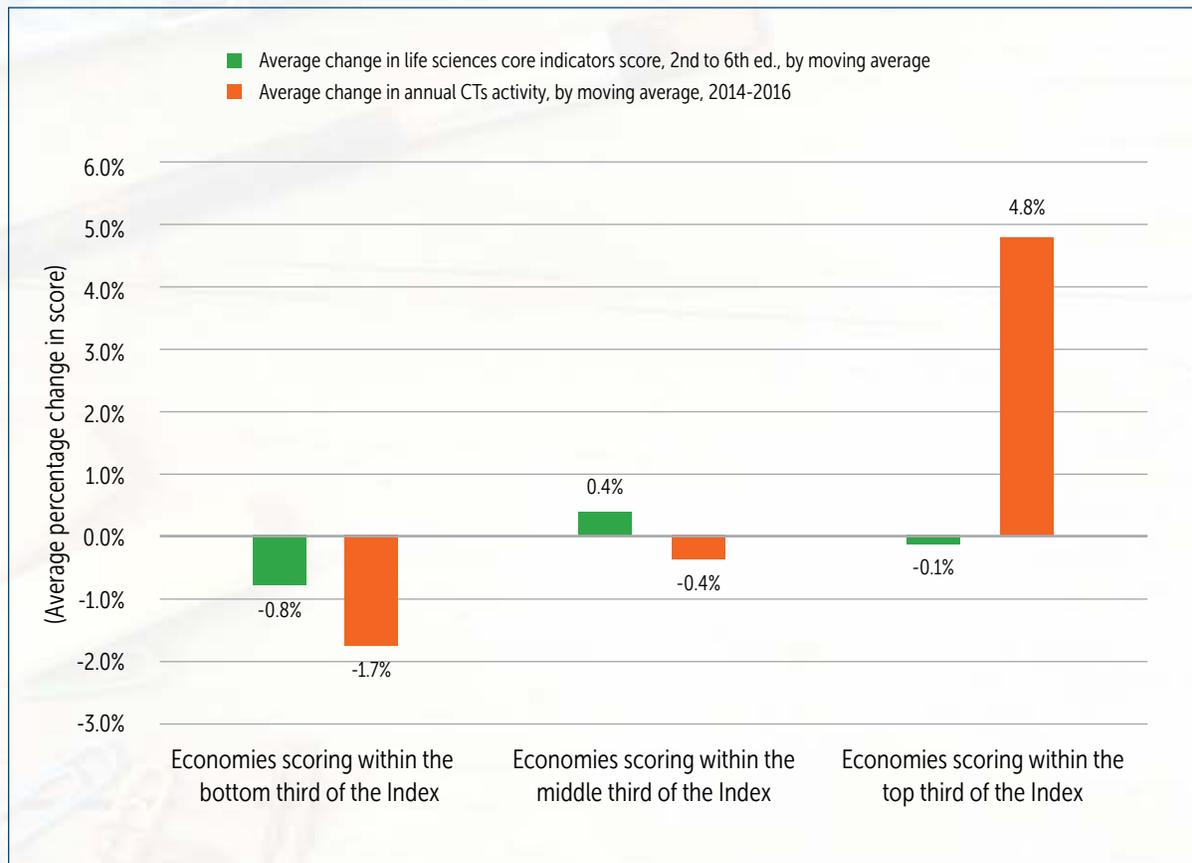
the past several years that lay out strategic targets and policies for building up domestic innovative biopharmaceutical sectors. Yet while the list of economies attempting to grow this sector is increasing, few are having much tangible success.

Success in high-tech industries—including the biopharmaceutical industry—is not easy or preordained. A number of important factors are required to have any chance of success, including the right human capital and R&D infrastructure. One such factor at the heart of the biopharmaceutical sector is the protection of IP.

The accompanying Statistical Annex includes three separate correlations that measure the relationship between biopharmaceutical-related IP rights benchmarked in the Index and rates of clinical research, as represented by the number of total clinical trials, early-phase clinical trials, and clinical trials on biologics. Both in aggregate and individually, the results of these correlations suggest a strong link and relationship between levels of biopharmaceutical IP protection and clinical research. A similar conclusion can be drawn when studying this relationship over a longer period.

Figure VIII shows the percentage change in scores on the life sciences core indicators of the 25 economies first mapped in the 2nd edition of the Index over time compared with changes in the level of clinical research during the same period.

Figure VIII: Biopharmaceutical IP rights and clinical research



As Figure VIII illustrates, economies in the bottom third of the Index saw a decrease of 0.8% in their biopharmaceutical indicator scores. During the same period, these economies also saw a drop in clinical research levels. Economies in the middle third—where the biopharmaceutical IP environment strengthened slightly—experienced a small drop in clinical research levels. Conversely, in economies in the top third of the Index with already strong IP environments, rates of clinical research grew by close to 5%. This movement suggests that a strong biopharmaceutical IP environment is a prerequisite for achieving and sustaining high levels of clinical research.

Case study II: Innovation output in the BRIC

Encouraging innovation and the development of high-tech industries has long been on the policy agenda in Brazil, Russia, India, and China—the original BRIC economies. In Brazil, important government institutions and agencies such as the Brazilian Development Bank (BNDES), and the Brazilian Innovation Agency (FINEP) have been supporting innovation and investment in Brazil since the 1970s. China has a long-standing commitment to transforming its economy from an industrial and manufacturing base to an innovation base. Every year, the Chinese government commits vast resources to building a strong R&D capacity both generally and sector specifically.

Similarly, India and Russia have made innovation central to economic policymaking.

While investments in R&D infrastructure and human capital have been increasing in all four economies, less attention has been paid to the IP environment. In fact, the IP environment in Brazil, India, and Russia has either stood still or deteriorated since 2013. Critically, so has their innovation output.

An important measure of innovation-related activity (included in the accompanying Statistical Annex) is the Global Innovation Index's Innovation Output subindex. This subindex is an aggregate measure that looks at a wide variety of indicators reflecting

knowledge creation and development, including intangible assets, research publications, and high-tech production. The analysis in the Statistical Annex finds that innovation output and strong IP protections display a strong correlation. Economies with robust IP regimes experience significantly more knowledge-based, technological, and creative outputs than economies whose IP regimes trail behind. A similar conclusion can be drawn when analyzing the BRIC economies and their performance in the Global Innovation Index over time.

Figure IX shows the innovation output in the four BRIC economies from 2012 to 2017. Over a similar period, Figure X shows each economy's Index score for patent-related indicators.

Figure IX: Global innovation output, 2012–17, Global Innovation Index

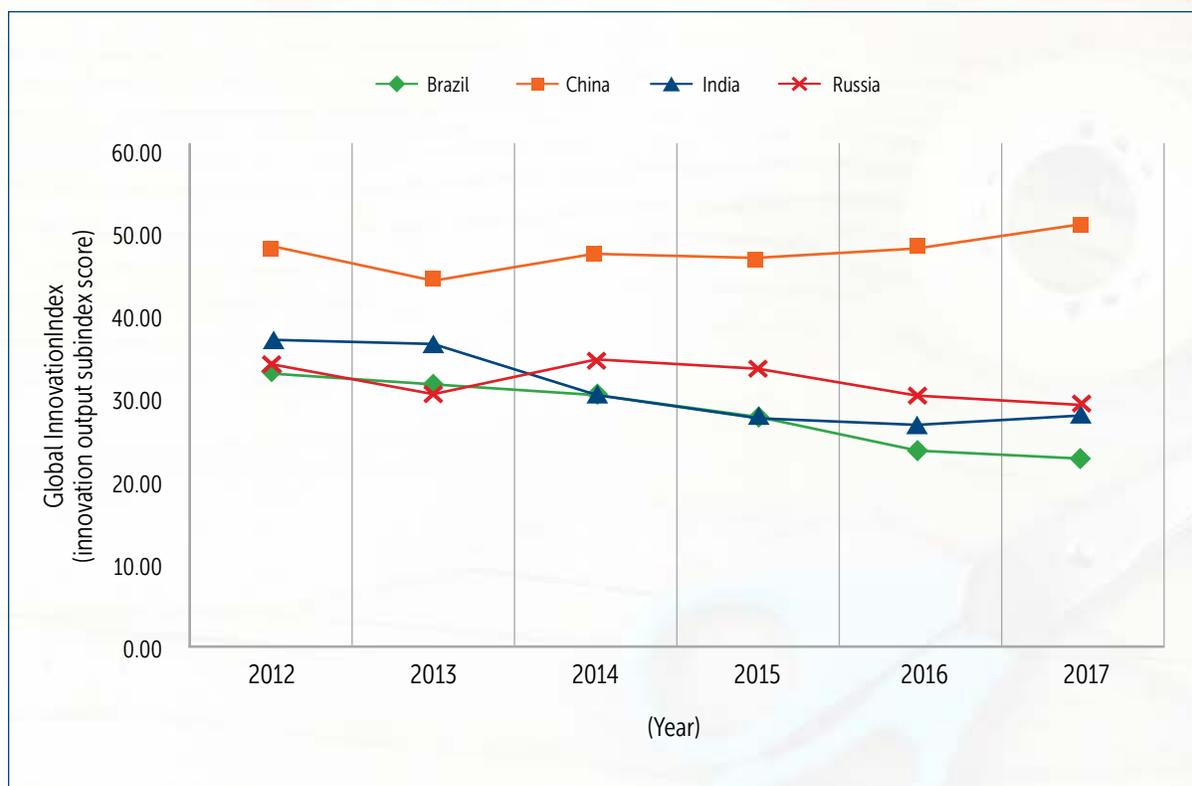
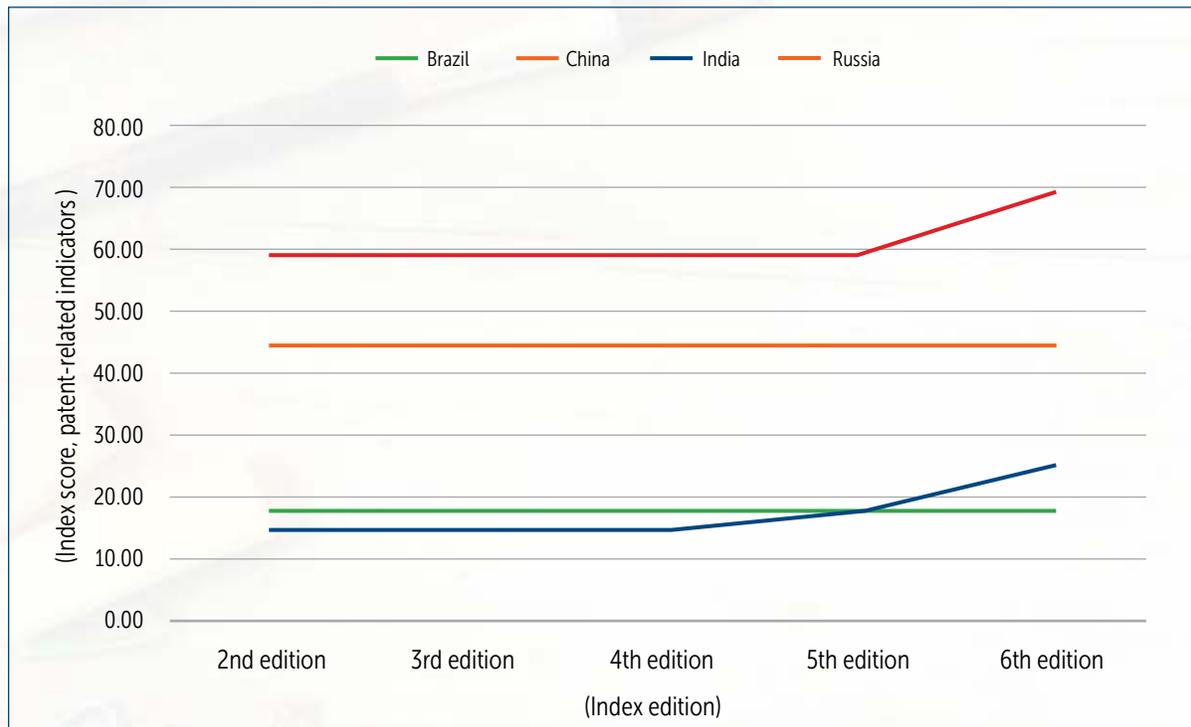


Figure X: Index, percentage of available score, BRIC economies, second to sixth edition of the Index



As Figures IX and X suggest, over the period studied, all economies except China experienced a decrease in their innovation output as measured by the Global Innovation Index. During the same period, the IP environment in China improved. In fact, China's patenting environment as measured in the Index saw a slight improvement, and similarly its innovation output saw an improvement over time.

Section summary: Standing still is not an option

The IP policy environment is not static and, as the preceding analysis suggests, economies have within their power the ability to reform and improve their national IP environments. Some economies are forging ahead while others are standing still

and losing competitiveness. Reviewing the results of the Index over time—in aggregate and isolated for a subset of economies—it is clear that innovators around the world still face significant challenges in protecting their IP assets. Yet as the economic analysis suggests, inaction on IP rights policy is damaging in itself. To generate the type of economic development that, by and large, most economies—whether high, middle, or low income—wish to achieve, building and maintaining sound IP legal and regulatory framework is essential. Doing nothing is a recipe for stagnation.

Having examined the results of the Index over time, we now present the full results of the sixth edition. How have economies performed this year? And what are the major trends that stand out in the IP policy space?

6. Overview of the Sixth Edition

Now in its sixth edition, the U.S. Chamber's International IP Index continues to provide an important industry perspective on the IP standards that influence both long- and short-term business and investment decisions. The Index is a unique and continuously evolving instrument. It not only assesses the state of the international IP environment, but also provides a clear road map for any economy that wishes

to be competitive in the global 21st century knowledge-based economy. Large, small, developing, or developed—economies from across the world can use the insights about their own national IP environments as well as those of their neighbors and international competitors to improve their own performance and better compete at the highest levels for global investment, talent, and growth.

Table III: Sixth edition Index economies by World Bank region^{xi}

Asia	Latin America and the Caribbean	Africa and the Middle East	Europe and Central Asia	North America
Australia	Argentina	Algeria	France	Canada
Brunei	Brazil	Egypt	Germany	U.S.
China	Chile	Israel	Hungary	
India	Colombia	Jordan	Ireland	
Indonesia	Costa Rica	Kenya	Italy	
Japan	Ecuador	Morocco	Netherlands	
Malaysia	Mexico	Nigeria	Poland	
New Zealand	Peru	Saudi Arabia	Russia	
Pakistan	Venezuela	South Africa	Spain	
Philippines		UAE	Sweden	
Singapore			Switzerland	
South Korea			Turkey	
Taiwan			UK	
Thailand			Ukraine	
Vietnam				

Source: World Bank (2017)

What's new in the sixth edition?

More economies included

The Index continues to grow and now covers 50 economies. Together, these economies represent both a geographical cross-section of the world and the vast majority of global economic output.

The new economies included in the sixth edition of the Index are Costa Rica, Ireland, Jordan, Morocco, and the Netherlands.

As Table III shows, the Index includes economies from all major regions of the world and is truly a global measure.^x

In addition to geographic diversity, the Index also contains economies from a broad spectrum of income groups as defined by the World Bank. Table IV provides an overview of all 50 economies sampled in the 6th edition of the Index according to income group as defined by the World Bank.

Table IV: Sixth edition Index economies by World Bank Income group^{xii}

Lower-middle-income economies	Upper-middle-income economies	High-income economies	High-income OECD Members
Egypt	Algeria	Brunei	Australia
India	Argentina	Saudi Arabia	Canada
Indonesia	Brazil	Singapore	Chile
Jordan	China	Taiwan	France
Kenya	Colombia	UAE	Germany
Morocco	Costa Rica		Hungary
Nigeria	Ecuador		Ireland
Pakistan	Malaysia		Israel
Philippines	Mexico		Italy
Ukraine	Peru		Japan
Vietnam	Russia		Netherlands
	South Africa		New Zealand
	Thailand		Poland
	Turkey		South Korea
	Venezuela		Spain
			Sweden
			Switzerland
			UK
			U.S.

Source: World Bank (2016)

New categories and indicators

A significant new feature of the 6th edition of the Index is the addition of six new indicators, bringing the total number of indicators included in the Index to 40. The 5th edition's "Discrimination/restrictions on the use of brands in packaging of different products" (indicator 16) has been removed and is no longer measured in the Index. Consequently, the maximum possible score on the Index has increased from 35 to 40.

These new indicators cover important evolving areas of IP rights, such as injunctive-style relief through the disabling of infringing content online, as well as the practical operation of a given national IP system. As the Index evolves, it is only natural that a greater focus be placed on the operational aspects of a national IP system. The new indicators seek to measure

national efforts at coordinating IP rights enforcement, awareness-raising activities, the existence of stakeholder consultation mechanisms during the IP law and regulation-making process, participation in international efforts to harmonize and accelerate patent prosecution, and the extent to which relevant institutions in a given economy are actively engaged in capacity building and training on how to use IP as a commercial and economic asset.

With the addition of these new indicators, the Index also features two new categories:

- Category 5: Commercialization of IP Assets
- Category 7: Systemic Efficiency

Table V provides a summary of the six new indicators and the Index categories to which they have been added.

Table V: New indicators added in 2018

Index Category	New Indicator
Category 1: Patents, Related Rights, and Limitations	Membership in Patent Prosecution Highways (PPHs)
Category 2: Copyrights, Related Rights, and Limitations	Expeditious injunctive-style relief and disabling of infringing content online
Category 5: Commercialization of IP Assets	IP as an economic asset
Category 7: Systemic Efficiency	Inter-governmental coordination of IP rights enforcement efforts
	Consultation with stakeholders during IP policy formation
	Educational campaigns and awareness raising

The new indicators are defined and described in full in the Methodology section of the Annex at the back of this report. Next is a summary overview of each new indicator and what it seeks to measure.

The first new indicator relates to participation in international efforts to harmonize and accelerate patent prosecution. Specifically, the indicator measures whether an economy's relevant IP or patent office has joined international efforts toward streamlining and improving patent prosecution by securing membership in a Patent Prosecution Highway (PPH).

The second new indicator covers the enforcement of copyright online. Given the growth in online piracy globally, it is critical that new mechanisms are made available that enable rights holders to effectively enforce their copyright. This indicator measures the existence and extent of an official national government or judicial injunctive-relief-type enforcement mechanism available to rights holders on request. Given the scale and speed of online infringement, the mechanism should provide for the effective and timely disabling of access to websites whose primary function is to provide access to infringing content online, whether a national or foreign source.

The third new indicator relates to the extent to which a given national IP environment recognizes the value of IP as an asset and encourages its commercialization. Specifically, the indicator seeks to measure the extent to which relevant institutions (including, for example, public and private institutions for higher education and national IP offices) in an economy are actively engaged in capacity building. Examples of capacity building include offering academic (university/tertiary level)

courses on the commercialization and use of IP as an economic asset as well as training programs hosted or facilitated by national IP offices. This indicator—together with indicators relating to IP-based barriers to market access and licensing activity—constitutes a new category within the Index, Category 5: Commercialization of IP Assets.

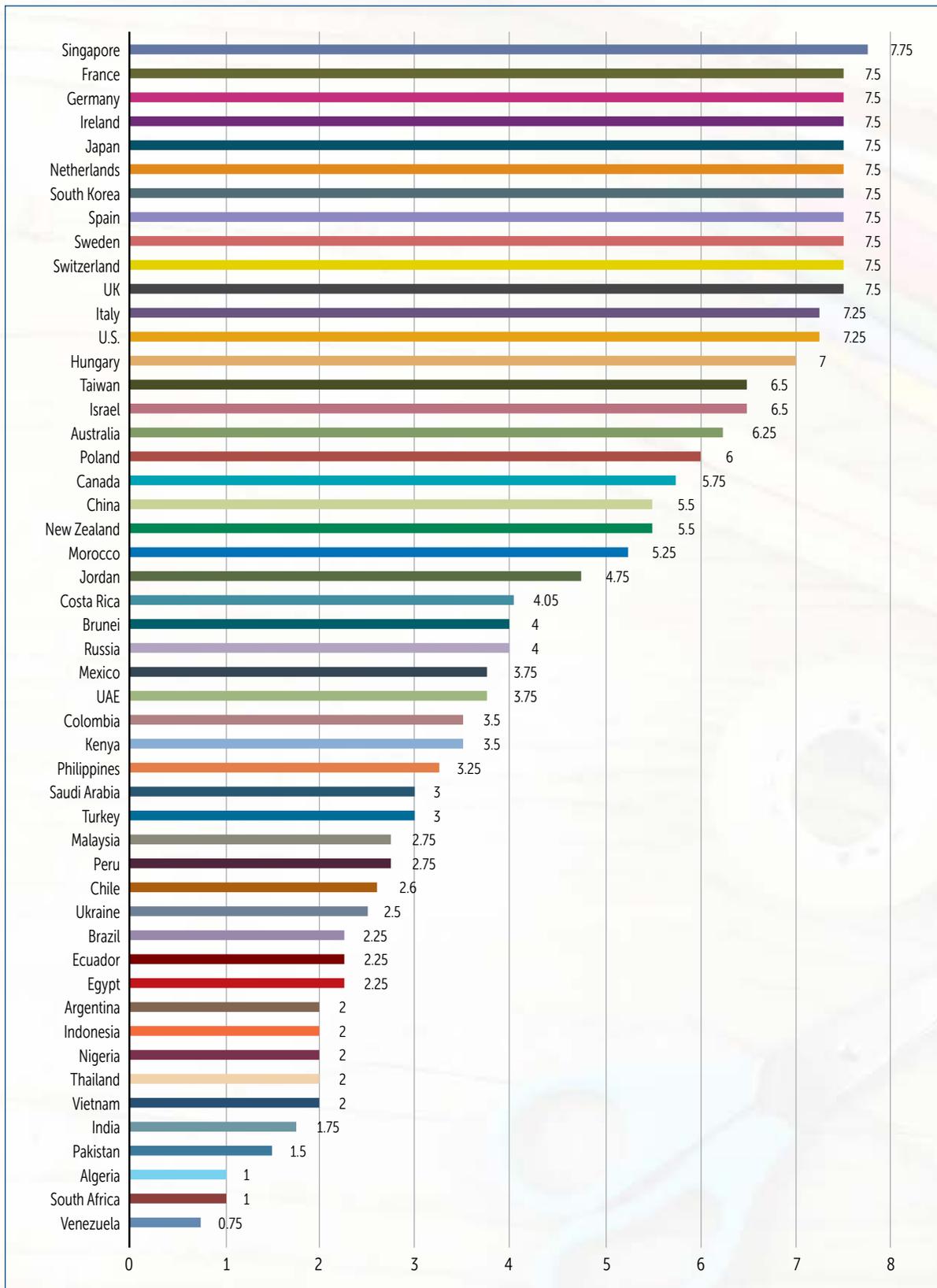
The final three new indicators included in the Index together create a new category, Category 7: Systemic Efficiency. The purpose of this category is to measure how a national IP system actually works. The category considers different aspects of the operations of an IP system, including the existence of coordinated efforts at IP rights enforcement at the national government level; the extent to which stakeholders (public, private, national, and international) have the right and opportunity to contribute comments and submissions on proposed changes to IP laws and regulations; and the extent to which national governments engage in educational campaigns and awareness raising on the positive socioeconomic impact of IP rights, using the IP system, and the negative impact the infringement of these rights has on creators, innovators, and the national economy.

Index category scores

Category 1: Patents, Related Rights, and Limitations

Figure XI summarizes the total scores for Category 1. This category measures the strength of an economy's environment for Patents, Related Rights, and Limitations. The category consists of 8 indicators, with a maximum possible score of 8.

Figure XI: Scores, Category 1: Patents, Related Rights, and Limitations



The overall results for Category 1: Patents, Related Rights, and Limitations show a clear group of high-performing economies, all with a score above 6 (or 75%) of the maximum available score for this category. In all, 18 of the 50 sampled economies achieve a score of 6 or above in this category. The addition of new indicators in the past 2 years has allowed EU economies and Singapore to rise to the top. The latter is now ranked number 1 in the world, narrowly edging out a group of EU member states, Switzerland, Japan, and Korea, all tied for 2nd place with a score of 7.5. As discussed previously, the U.S. is no longer a global leader in this category of the Index. It is notably behind the top performers owing to uncertainty over patentability standards and a relatively low score for opposition proceedings.

In a positive move, Canada's score has increased substantially in this category. As detailed in previous editions of the Index, since the early to mid-2000s, Canadian Federal Courts have issued a growing number of decisions on the basis of patent utility in relation to pharmaceutical patents. In a high percentage of these cases, courts ruled that pharmaceutical patents were invalid, even though the medicines were found to be safe and effective by Health Canada and were being used by hundreds of thousands of Canadian patients. The Canadian standard of utility established through this expanding case law differed from international standards and from practices of patent offices in the U.S. and EU. Specifically, the Canadian utility test was accompanied by a heightened evidentiary burden, requiring innovators to demonstrate the effectiveness of a pharmaceutical in light of the court's subjective construed "promise." In November 2016, the Supreme Court of Canada heard oral arguments in the long-running case *AstraZeneca Canada Inc. v. Apotex Inc.*, and

in June 2017, the court handed down a final judgment that roundly rejected the promise doctrine. The judgment stated that the promise doctrine "is unsound" and is "an interpretation of the utility requirement that is incongruent with both the words and the scheme of the Patent Act," and that "promises are not the yardstick against which utility is to be measured." The decision marks a watershed in Canadian pharmaceutical patent jurisprudence and should reverse what has been a decade-and-a-half-long negative trend.

While the top half of performers in this category is dominated by high-income Organization for Economic Co-operation and Development (OECD) economies, a number of middle-income economies do relatively well in this category. For example, China continues to be the highest-ranked middle-income economy in this category and the highest ranked of the BRICS. China's score is tied with New Zealand, which continues to display fundamental weaknesses in its patenting environment. Looking at the BRICS more broadly, the relative and absolute poor performance of Brazil, India, and South Africa is striking; all three countries are at the bottom of this category. (That said, these countries did show individual positive initiatives, including India's work to address patent pendency with 459 additional appointments of patent examiners.) New additions Morocco and Jordan stand out as scoring quite well on this category, with Morocco scoring just behind China. Morocco's and Jordan's strength in this category is largely a result of long-standing free trade agreements (FTAs) with the U.S.

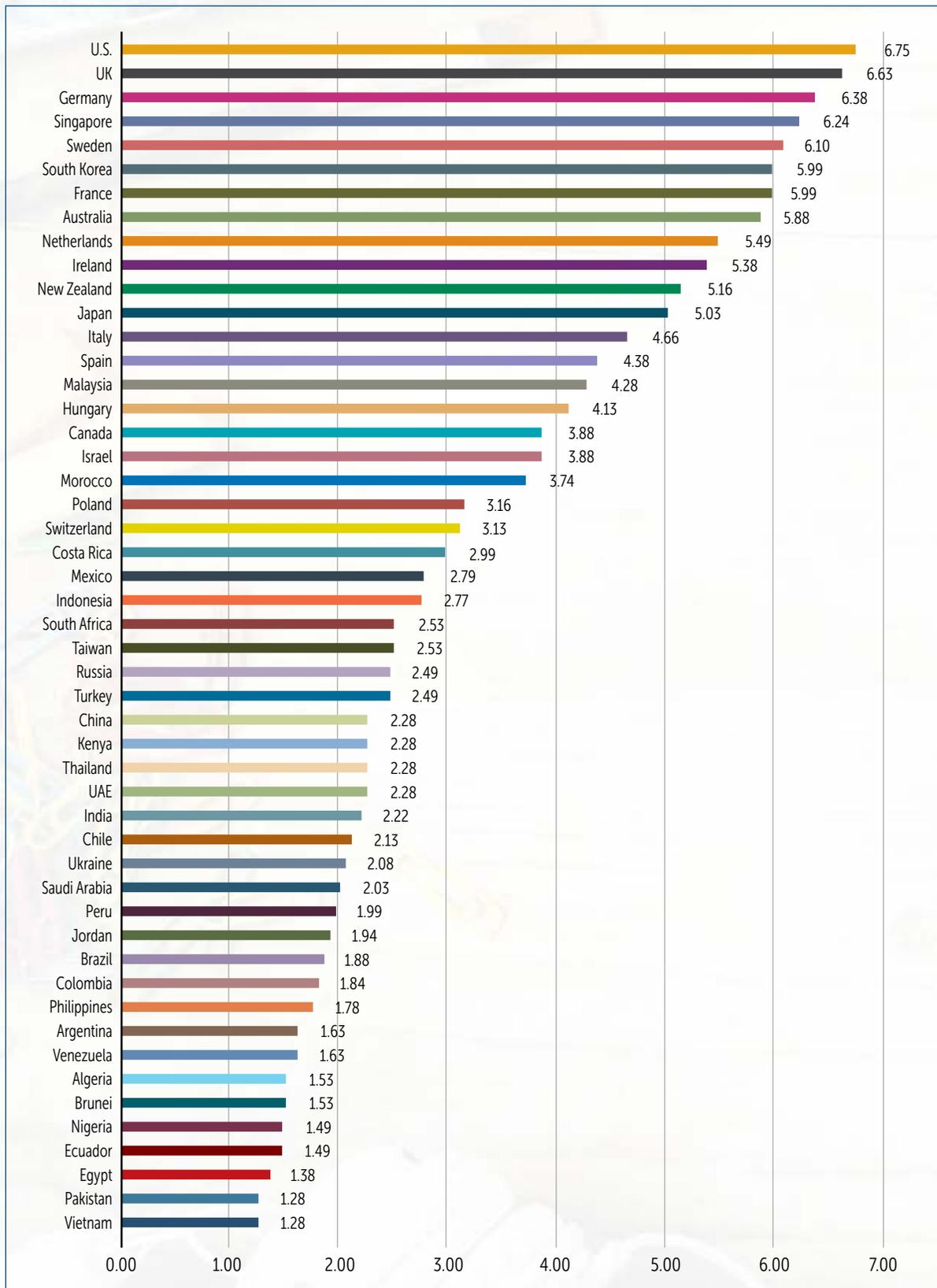
Although it is still at the bottom of the category, in a positive move this year, India finally introduced new pro-innovation

guidelines for the patenting of computer-implemented inventions (CIIs). The new July 2017 revised “Guidelines for Examination of Computer Related Inventions (CRIs)” significantly improves the patenting environment for CIIs in India. Unlike previous drafts of the guidelines, there is no requirement for hardware innovation. Local legal analysis suggests that although they do not carry the force of primary or secondary legislation, these new guidelines should lead to more certainty for innovators in the computer software space.

Category 2: Copyrights, Related Rights, and Limitations

Figure XII summarizes the total scores for Category 2. This category measures the strength of an economy’s environment for Copyrights, Related Rights, and Limitations. The category consists of 7 indicators, with a maximum possible score of 7.

Figure XII: Scores, Category 2: Copyrights, Related Rights, and Limitations



The results for Category 2: Copyrights, Related Rights, and Limitations show how challenging the environment is for creators in the vast majority of sampled economies. Only 21 of the 50 economies sampled (just over 40%) achieve a score of half or more of the maximum available score in this category. And almost 45% of the sampled economies (22 out of 50) fail to reach a score of one-third of the maximum score available, with Russia, Turkey, South Africa, and Taiwan just barely achieving this score. In fact, most economies in the Index fail to have in place effective and modern legal mechanisms to combat online piracy and copyright infringement. These difficulties are not concentrated in middle-income and emerging economies. Rather, many high-income and OECD economies struggle with protecting copyright and offering rights holders effective remedies to infringement.

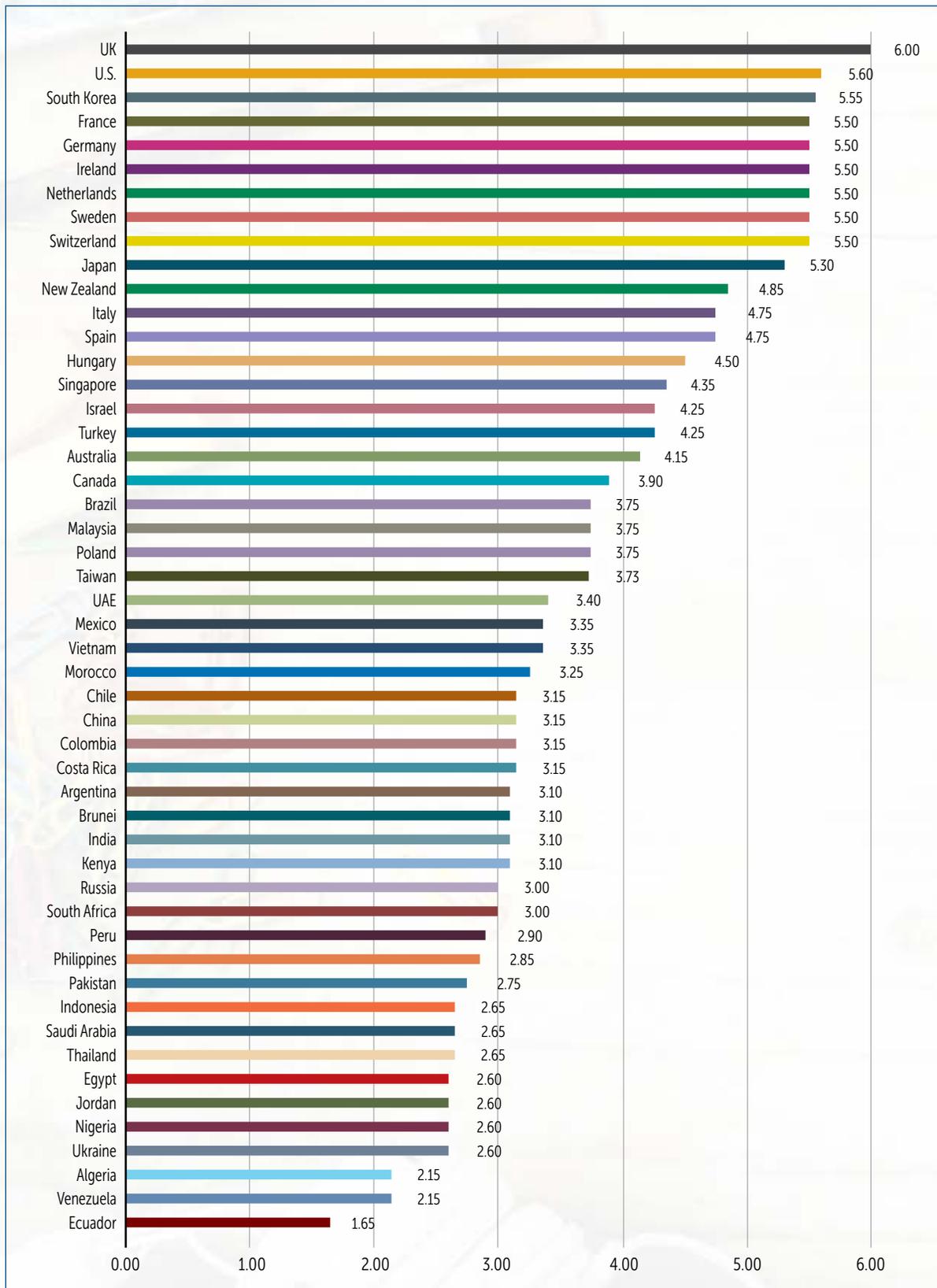
As has been noted in past editions, economies that struggle in this area otherwise have a highly competitive and standard-setting IP environment. For example, the copyright regime in Switzerland (particularly with regard to online piracy) trails behind Switzerland's otherwise world-class national IP environment, reflecting legislative weakness and concerns over a lack of enforcement. The Swiss government has long acknowledged this problem and in 2014 announced an ambitious reform plan that follows the recommendations made by the Swiss Working Group on Copyright. Yet at the time of research, no draft amendments had been published or released, and public statements by the Swiss Federal Institute of Intellectual Property in 2017 suggest that, despite some progress, significant challenges remain. For example, there will be no requirement or option for the disabling of access to illegal content under the proposed legislative

amendments. Similarly, these amendments will not include any notification mechanism to suspected infringers. Instead, the primary means of enforcement will be through targeting Internet service providers that will be obliged to remove infringing content and keep it off their servers. This is a positive development, but because these proposed new laws would apply only to Swiss providers, it is unclear the extent to which this new obligation and enforcement mechanism would address the majority of copyright-infringing material available in Switzerland, which, like in most economies, emanates from outside Switzerland. Furthermore, under these proposed amendments it is likely that illegal content currently being hosted in Switzerland will simply migrate to another jurisdiction but continue to offer infringing content to Swiss consumers.

Category 3: Trademarks, Related Rights, and Limitations

Figure XIII summarizes the total scores for Category 3. This category measures the strength of an economy's environment for Trademarks, Related Rights, and Limitations. The category consists of 6 indicators, with a maximum possible score of 6.

Figure XIII: Scores, Category 3: Trademarks, Related Rights, and Limitations



Most economies sampled in the Index offer basic forms of trademark protection. Generally, challenges persist in the enforcement of trademark rights for both traditional forms of infringement and violations that occur via online merchants and auction sites. There are, however, a few notable exceptions, most conspicuously, Ecuador. In October 2016, Ecuador's National Assembly passed the *Código Orgánico de Economía Social del Conocimiento, la Creatividad y la Innovación (Código Ingenios)*. The legislation touches on all facets of IP rights, R&D, and innovation. As noted in the previous edition of the Index, many of the provisions of this new law conflict with Ecuador's old Intellectual Property Law and its international treaty obligations, including the TRIPS agreement and the European Union's Trade Agreement with Colombia and Peru, to which Ecuador finally acceded in November 2016. In a highly unusual step, the *Código Ingenios* has introduced limits on the number of trademark renewal periods. Under Article 365, the term of protection for trademarks has been amended with renewal periods limited to two renewals. This stands in contrast to TRIPS Article 18, which states that "the registration of a trademark shall be renewable indefinitely." Ecuador is the only economy included in the Index that fails to provide rights holders with this most basic form of protection.

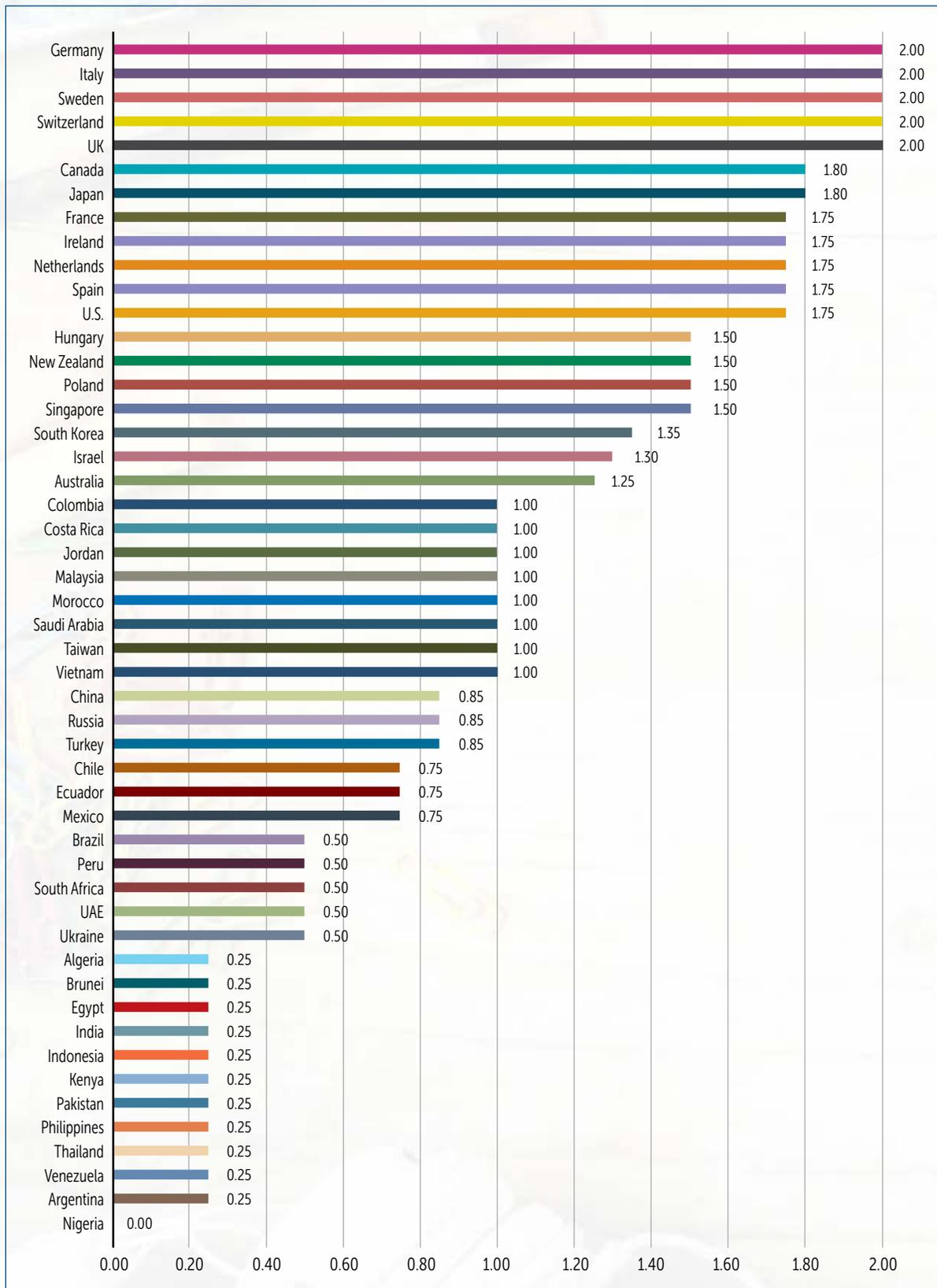
As in many jurisdictions, rights holders in India have long struggled with lack of clarity on the protection for well-known marks, and case law offers sometimes conflicting judgments. To provide more clarity, since 2003, the Office of the Controller General of Patents, Designs and Trade Marks (CGPDTM) has compiled a list of marks that it recognizes as well-known. This list has grown to close to 100 marks and includes international brand names such as Philips, Intel, Pepsi, Toshiba, Honda, and Mars. Unfortunately,

this list does not include many marks that by any reasonable standard would be considered well-known. Recognizing this, the CGPDTM issued a new set of Trade Mark Rules in May 2017. Rule 124 allows individuals and entities to apply directly to the Registrar to receive official recognition for their marks as being "well-known." Still, the associated guidelines would benefit from further clarity on what constitutes supporting evidence. Specifically, according to the guidelines, a determining factor for the Registrar would be the availability of court judgments in India that recognize the applying mark as well-known. This would be a narrow basis on which a determination could be made, as the majority of well-known marks globally have yet to be determined as being well-known in an Indian court of law. Hopefully, in 2018, it will be clarified that an Indian court judgment is not a prerequisite or determining factor for receiving recognition as a well-known mark. Separately, the CGPDTM has reduced trademark pendency to 1 month and has eased the procedure for filing applications by reducing the number of associated forms from 74 to 8.

Category 4: Trade Secrets and Related Rights

Figure XIV summarizes the total scores for Category 4. This category measures the strength of the environment for Trade Secrets and Related Rights. In previous editions, this category contained indicators about localization and licensing barriers, but those indicators have been moved to a new category, Category 5: Commercialization of IP Assets. In addition to covering the protection of trade secrets, this category now covers regulatory data protection (RDP) term (indicators 22 and 23), which was moved from Category 1: Patents, Related Rights, and Limitations. Category 4 now consists of 2 indicators, with a maximum possible score of 2.

Figure XIV: Scores, Category 4: Trade Secrets and Related Rights



The protection of trade secrets is an evolving field. Many economies do not have specific trade secret legislation in place; instead, they rely on laws relating to employment contracts and the disclosure of confidential information. The average score on this indicator is just over 0.53. Yet the importance of trade secrets as a form of IP protection is growing. Increasingly, businesses and rights holders around the world are relying on trade secrets protection to protect their most valuable assets. Major jurisdictions are recognizing this, and both the EU and U.S. have introduced new forms of protection in the past few years.

In the U.S., the Defend Trade Secrets Act was signed into law in 2016. The new law introduces a federal civil remedy for rights holders affected by trade secrets theft (on top of existing state-level rights of action). Available remedies include damages for actual losses, with higher damages for willful infringement, injunctive relief, and seizures (in extreme situations). Relief is also provided for threatened misappropriation if there is clear evidence of a threat. These new federal civil remedies complement existing federal criminal penalties and multiple statutes in various states. The new framework aids in enhancing protection of trade secrets across the U.S.

In the EU, the Trade Secret Directive sets common minimum standards and a common trade secret definition for all member states. The directive initiates secondary liability claims and protection of confidentiality during legal procedures. EU member states have until mid-2018 to amend their relevant national laws and regulations to be fully compliant with this directive.

RDP is a sector-specific type of trade secrets protection. The subject matter

of pharmaceutical RDP (RDP is, in many economies, also available for agrochemical and veterinary products) is the data gathered in the process of drug development and marketing approval. Each proposed new medicine must undergo a complex and lengthy process of selection, testing, and development to make it safe for human use and effective for treatment. Under Article 39.3 of the TRIPS agreement, the World Trade Organization (WTO) requires that member states protect these data from “unfair commercial use.”^{xiii} RDP allows the data owner to prevent third parties, such as generic manufacturers or biosimilar companies, from utilizing these data to manufacture a follow-on product or obtain marketing approval for a fixed period. It is aimed at protecting and safeguarding the proprietary know-how and information included in drug marketing registration files against any type of unfair commercial use. In contrast to other industries, the trade secrets and data generated by a biopharmaceutical innovator in the pursuit of developing a new product or technology are (prior to the product being allowed to enter a given market) required to be deposited with a governmental/regulatory body for evaluation. Compared with the form of protection provided by patents, RDP is not as comprehensive, mainly because it does not legally prevent other companies from generating their own registration data. The originator may not prevent marketing approval for “newcomers” by invoking RDP; rather, the marketing of the applied-for product may be prevented only if there is a valid patent on the relevant product.

RDP is of particular importance to biologics. Biologic medicines and technologies are increasingly being used in the treatment of patients with the most difficult conditions and in cutting-edge medical research.

Biotechnologies are often part of the discovery, clinical, and premarketing studies on traditional small molecule drugs. This includes biotech processes such as pharmacogenetics, gene sequencing, and diagnostics through the identification of biomarkers. And the path to new types of clinical and therapeutic environments based on the personalization of medicines and medical treatments is in large measure based on advances in biotechnology. The centrality of biotechnologies and biologic processes to medical research can be seen in the number and type of biopharmaceutical products being approved today. In 2015, the U.S. Food and Drug Administration approved a record 45 new molecular entity (NME) and biologics license application (BLA) products, the highest rate over the past decade.^{xiv} Significantly, a growing portion of these approvals was for biologic medicines and therapies. While many of the mechanisms to protect biologic innovations, such as patent protection, are the same as for chemical entities, given the nature and composition of biologic medicines, RDP is critical in providing full protection and exclusivity. In this sense, the layer of protection and market exclusivity that RDP provides is not in addition to an existing patent term; RDP simply acts as an insurance mechanism to run concurrently with any existing exclusivity provided by patent protection.

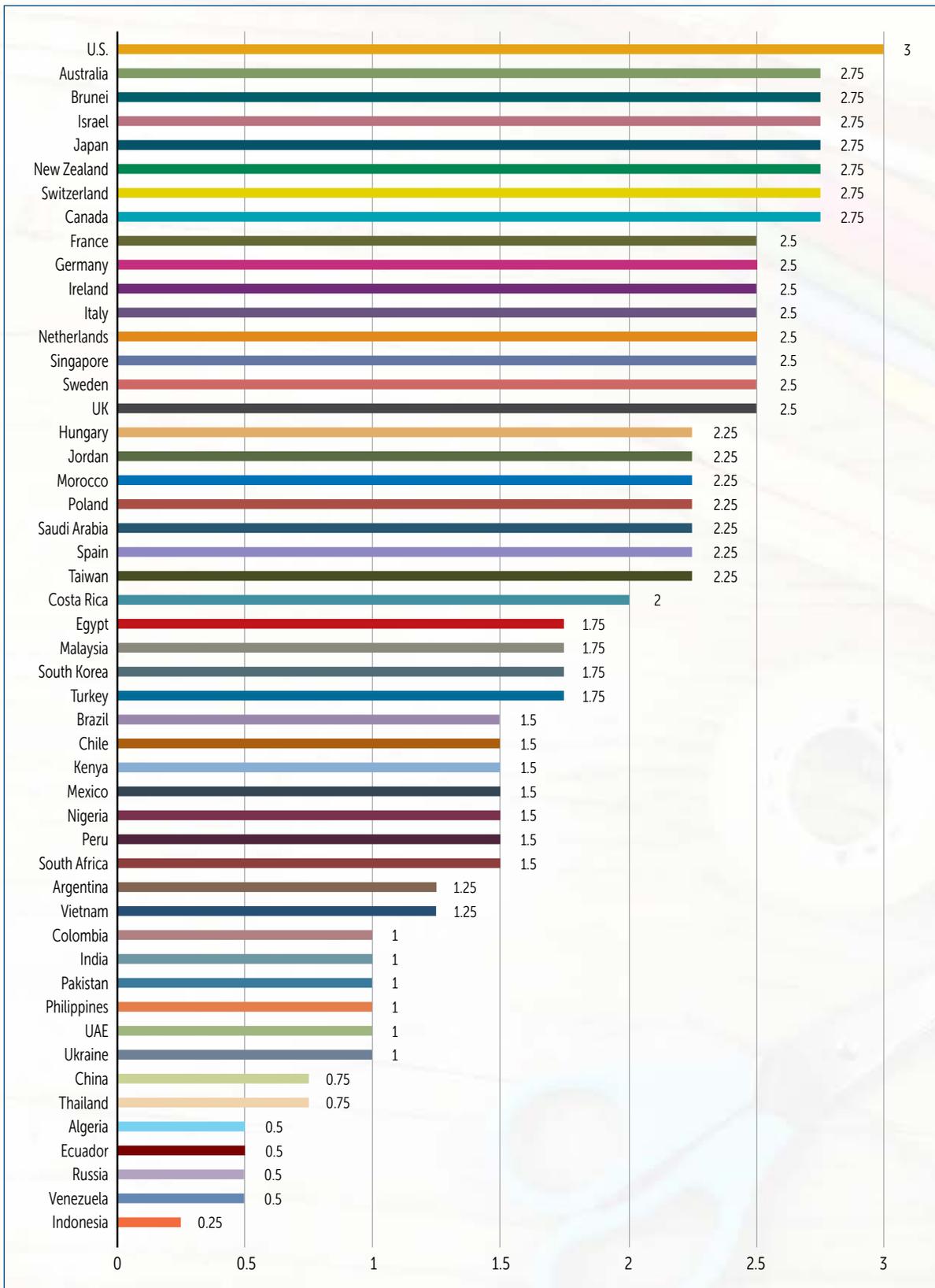
RDP legislation in the U.S. provides a 5-year period of exclusivity, that is, 5 years will elapse between the approval of the original new chemical entity (NCE) drug and the approval of a generic version that is based on the abbreviated new drug application procedure. The U.S. has a separate and distinct term of protection for biologics, providing 12 years of data protection (i.e., 12 years until a biosimilar can be approved), with no filing of biosimilar

applications for the first 4 years and an extra 6 months (added to both the 4 years and the 12 years) for submission of studies on pediatric use.^{xv} The EU has a similar length of protection. RDP legislation in the EU provides a total term of protection of 10 years according to an 8+2 formula, with an additional year of protection for new indications of existing products. This period of protection is also provided to biologics. This is the baseline term of protection used in the Index. Outside the U.S. and EU, most economies provide a significantly shorter period of protection. Canada and Japan provide slightly shorter terms of protection at 8 years, while in Australia and Singapore the term of protection is only 5 years for both chemical entities and biologics. Many emerging markets, including Brazil, India, and South Africa, do not offer a term of RDP at all.

Category 5: Commercialization of IP Assets

Figure XV summarizes the total scores for Category 5: Commercialization of IP Assets. This category is a new addition to the Index. It consists of 3 indicators, with a maximum possible score of 3. The 3 indicators together seek to measure the extent to which a given national IP environment recognizes the value of IP as an asset and encourages the commercialization of IP regardless of its national origins. Barriers to market access and regulatory and administrative barriers to the commercialization of IP assets (indicators 24 and 25) were included in preceding editions of the Index. IP as an economic asset is a new indicator this year (indicator 26).

Figure XV: Scores, Category 5: Commercialization of IP Assets



Many more economies are directly or indirectly introducing policies that make it more difficult to access their respective markets or commercialize IP, either by creating localization barriers and making access to their market contingent on the sharing of IP and/or proprietary technologies with local entities or by imposing restrictions on licensing activity. Economy examples include Algeria, China, Indonesia, Russia, Thailand, and Turkey, which all have intensified these efforts over the past few years.

In 2017, a number of other economies with less restrictive policies looked to introduce policies that would raise barriers to commercialization activities, especially in the realm of licensing.

For example, in Taiwan, the Fair Trade Commission (TFTC) announced in October 2017 that it planned to fine one standard-essential patent (SEP) holder, Qualcomm, a record TWD23.4 billion (USD74 million)—reportedly the highest amount ever issued by the TFTC—and require it to amend previous contracts to remove customer information-sharing clauses. A final decision had not yet been issued at the time of research. Following the announcement, the Ministry of Economic Affairs, which oversees trade, foreign direct investment, and IP protection, publicly stated it was concerned with the fine, citing lack of congruence with long-term national investment and industrial development goals. Taiwan is home to several major chip and smartphone makers. Similar to the Korean FTC's decision to fine Qualcomm in late 2016, it is not clear if the decision and size of the fine accurately reflect the value and scope of the company's licensing agreements and contribution to the technology and innovation sector in Taiwan. The decision may discriminate against foreign SEP holders,

particularly in sectors where domestic companies have a strong stake, and may be unduly weighted toward licensees. Ultimately, the TFTC's decision introduces substantial uncertainty about a patent owner's ability to negotiate terms of licensing and undermines the innovation environment in Taiwan in both the ICT sector and other important high-tech sectors in the economy.

Similarly, in Japan, the Ministry of Economy, Trade and Industry (METI) in April 2017 issued *The Intellectual Property System for the Fourth Industrial Revolution*. The report is the result of joint efforts between METI, the Japan Patent Office (JPO), and other government entities to host expert discussions over the course of 2016/17 on ways to improve Japan's IP system in light of the emergence of new disruptive technologies. The study group examined future challenges and proposed potential adjustments to the IP framework for technological developments, including the Internet of Things, artificial intelligence, robotics, and other cutting-edge industries that are loosely labeled as a "Fourth Industrial Revolution." One key subject discussed in the broad-ranging report is the licensing terms and conditions of SEPs. Specifically, the report identifies that the emergence and broader use of new technologies (including the Internet of Things) will foster greater use of SEPs, but will also create a growing number of potential legal disputes that hold up the development and use of new technologies and industries. The report notes that the complexities and costs of negotiations and potential legal battles are expected to increase as more fields use technologies (such as autonomous cars) that include SEPs. Addressing this issue, the report proposed the implementation of two new types of administrative procedures aimed at expediting resolutions and reducing

litigation costs in patent disputes. Under the first procedure, in cases where no agreement between the parties is reached, an administrative committee appointed by the JPO would determine the amount of royalties. Under the second pathway, which is designated for private companies, when no agreement is reached between parties, the dispute would be managed by a dedicated organization—although the specifics are currently unclear.

Most rights holders—including many holders of SEPs—would agree that there are growing challenges in this field. As more actors enter the marketplace and create products that depend on SEPs, negotiating license terms that are agreeable to all parties becomes more challenging. Equally, increased levels of litigation and involvement of nonpracticing entities in this field are distinct concerns in a growing number of jurisdictions. Yet it is not clear that the best solution to these problems, as the report put forward, should lay with a government-mandated and -provided forum that determines contractual terms, including rates of royalties and licensing fees. At the time of research, the proposed dispute resolution process after a lengthy public consultation appears to have been placed on hold by the Japanese authorities. In September 2017, the JPO issued a new public consultation on the creation of a set of guidelines for licensing negotiations involving SEPs. Although part of the proposed skeleton for these guidelines did include general ideas for calculating royalty rates, it did not include any reference to the previously proposed dispute resolution process overseen or imposed by the Japanese government.

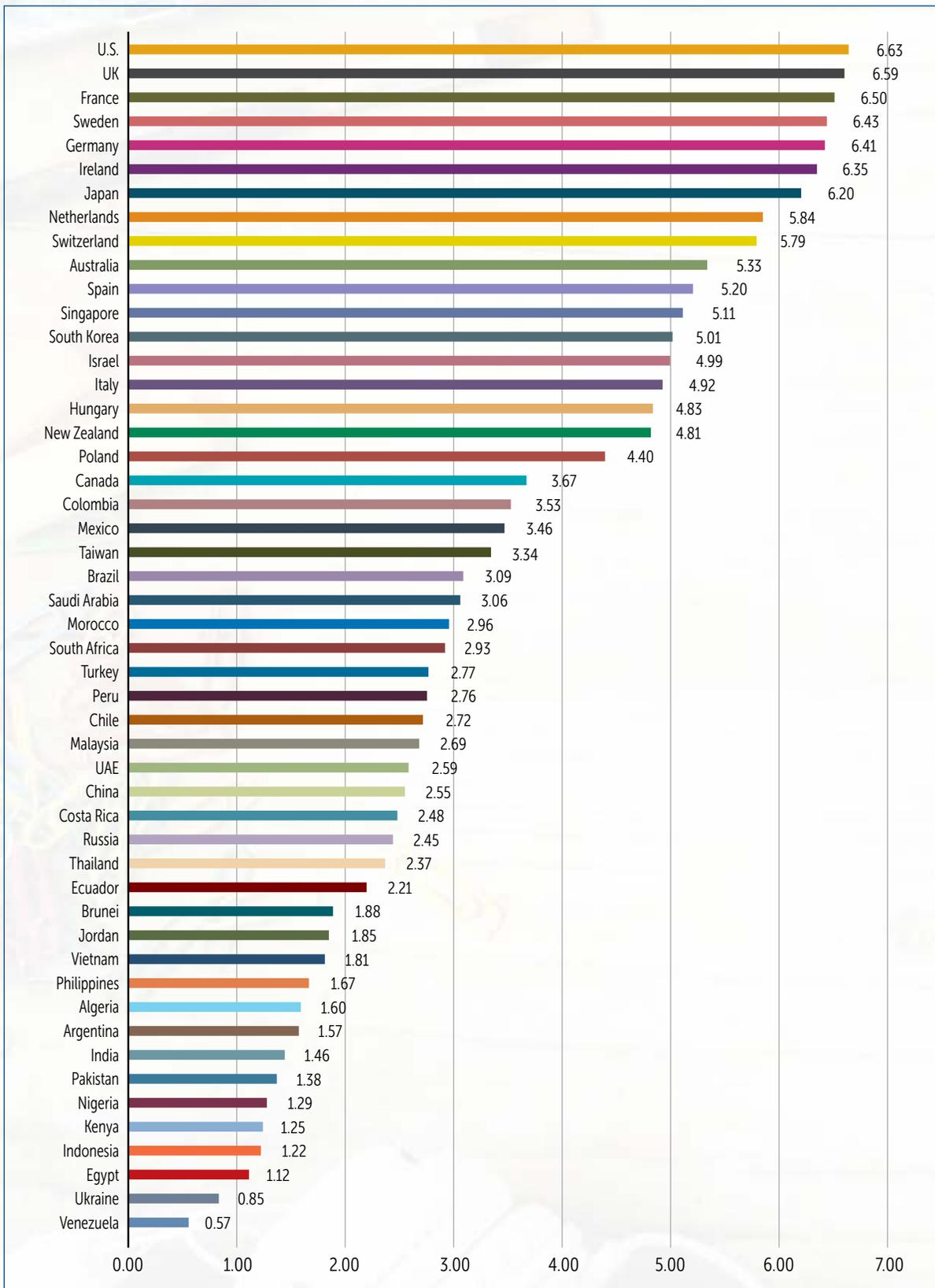
Complementing these two older indicators, IP as an economic asset (indicator 26) seeks to

measure not only the extent to which IP as an asset is recognized within a given economy, but the extent to which public and private institutions (including universities and national IP offices) are actively engaged in capacity building and training on how to use IP as a commercial and economic asset. On this indicator, economies tend to do much better. Even economies with relatively challenging IP environments, including Argentina, Brunei, Egypt, India, Nigeria, Pakistan, Thailand, and Ukraine, have made concerted practical efforts to enable the commercialization and use of IP as an economic asset. Although a national technology transfer framework is not always in place, universities in these economies tend to have functioning technology transfer policies and offices in place, and often, the national IP offices are actively engaged in capacity building and enabling the commercial use of IP.

Category 6: Enforcement

Figure XVI summarizes the total scores for Category 6: Enforcement. This category measures the prevalence of IP rights infringement; the criminal and civil legal procedures available to rights holders; and the authority of customs officials to carry out border controls and inspections. The category consists of 7 indicators, with a maximum possible score of 7.

Figure XVI: Scores, Category 6: Enforcement



A majority of the sampled economies in the Index struggle in this category. 60% of the 50 economies included failed to achieve a score of half of the maximum available score. And 16 of the 50 economies failed to achieve a score of one-third on this category. As has been noted in past editions of the Index, building a strong and effective national IP environment is not only about putting laws on the books but also ensuring that they are fully enforced.

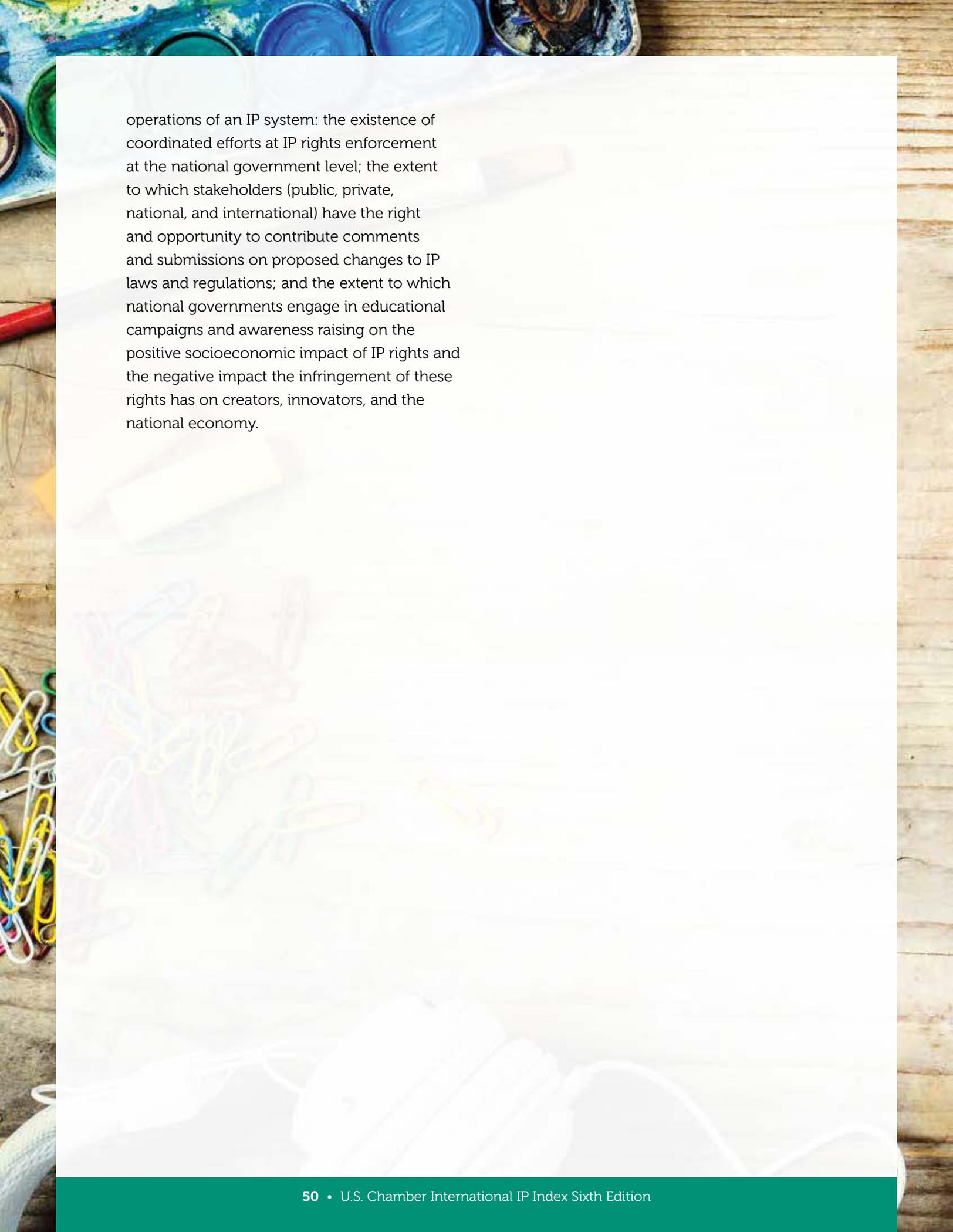
Many economies struggle with effective border measures and transparency and public reporting by customs authorities of trade-related IP infringement (indicators 32 and 33). In many economies, customs officials are not given *ex officio* powers to seize suspected goods, and in some cases where they do have this power, in practice they do not use it or the power is restricted only to goods that are destined for the domestic market and not in transit. For example, under Mexico's Customs Law (Article 148), customs officials cannot act *ex officio* against suspected infringing goods. They may take action only based on an order from the Mexican Institute of Industrial Property (IMPI) or the Attorney General, which should be requested or filed by a rights holder. Efforts to enhance collaboration with rights holders in order to streamline the issuing of such orders have increased in recent years. A system for recording registered IP rights and rights holder contact information with customs exists; this system aims to speed up notification of rights holders of potentially infringing goods (so that rights holders can begin legal action and obtain a seizure order). However, at least one to two additional steps remain in the process that would not exist if customs authorities were empowered to conduct *ex officio* seizures based on this recordation system. This has important implications for the speed of seizures, with

reports indicating that administrative orders for seizing counterfeit goods are often delayed and these goods are permitted to enter the market. Also, action against in-transit or transshipped goods has been suspended since 2011 and reportedly has not been reinstated.

In contrast, other economies in 2017 have taken steps to empower customs officials to conduct seizures on their own and to enhance identification of these goods by removing red tape and introducing platforms for communication and cooperation with rights holders. These initiatives aid in expediting action against counterfeit and pirated goods, making the action taken more effective. In Pakistan, 2017 implementing regulations, the Customs Rules 2001, were amended to include the addition of a chapter on the enforcement of IP rights. Chapter 28 of the new rules confirms *ex parte* powers for customs officials and for the Directorate of IPR Enforcement (within the Federal Board of Revenue) in the seizure of infringing goods under the Copyright Ordinance (1962) and Trademarks Ordinance (2001). The rules also contain a system for recording rights and communicating with rights holders about the seizure of the goods and subsequent action. Unfortunately, the new provisions are limited to imported goods only. No specific provisions address the treatment of in-transit goods.

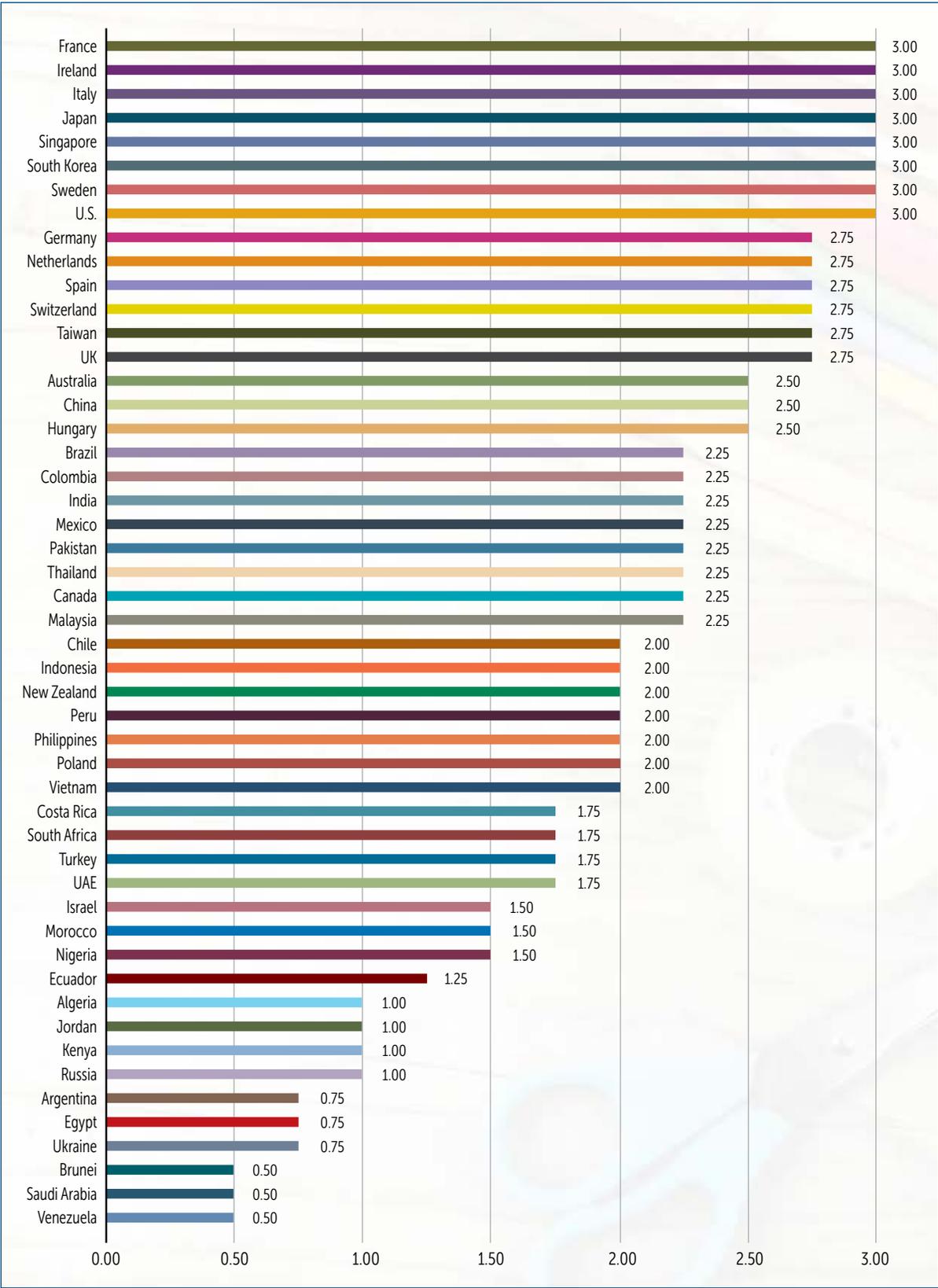
Category 7: Systemic Efficiency

Figure XVII summarizes the total scores for Category 7: Systemic Efficiency. This is a new category with new indicators. It consists of 3 indicators, with a maximum possible score of 3. The purpose of this category is to measure the manner in which a national IP system actually works. It includes indicators that examine different aspects of the



operations of an IP system: the existence of coordinated efforts at IP rights enforcement at the national government level; the extent to which stakeholders (public, private, national, and international) have the right and opportunity to contribute comments and submissions on proposed changes to IP laws and regulations; and the extent to which national governments engage in educational campaigns and awareness raising on the positive socioeconomic impact of IP rights and the negative impact the infringement of these rights has on creators, innovators, and the national economy.

Figure XVII: Scores, Category 7: Systemic Efficiency



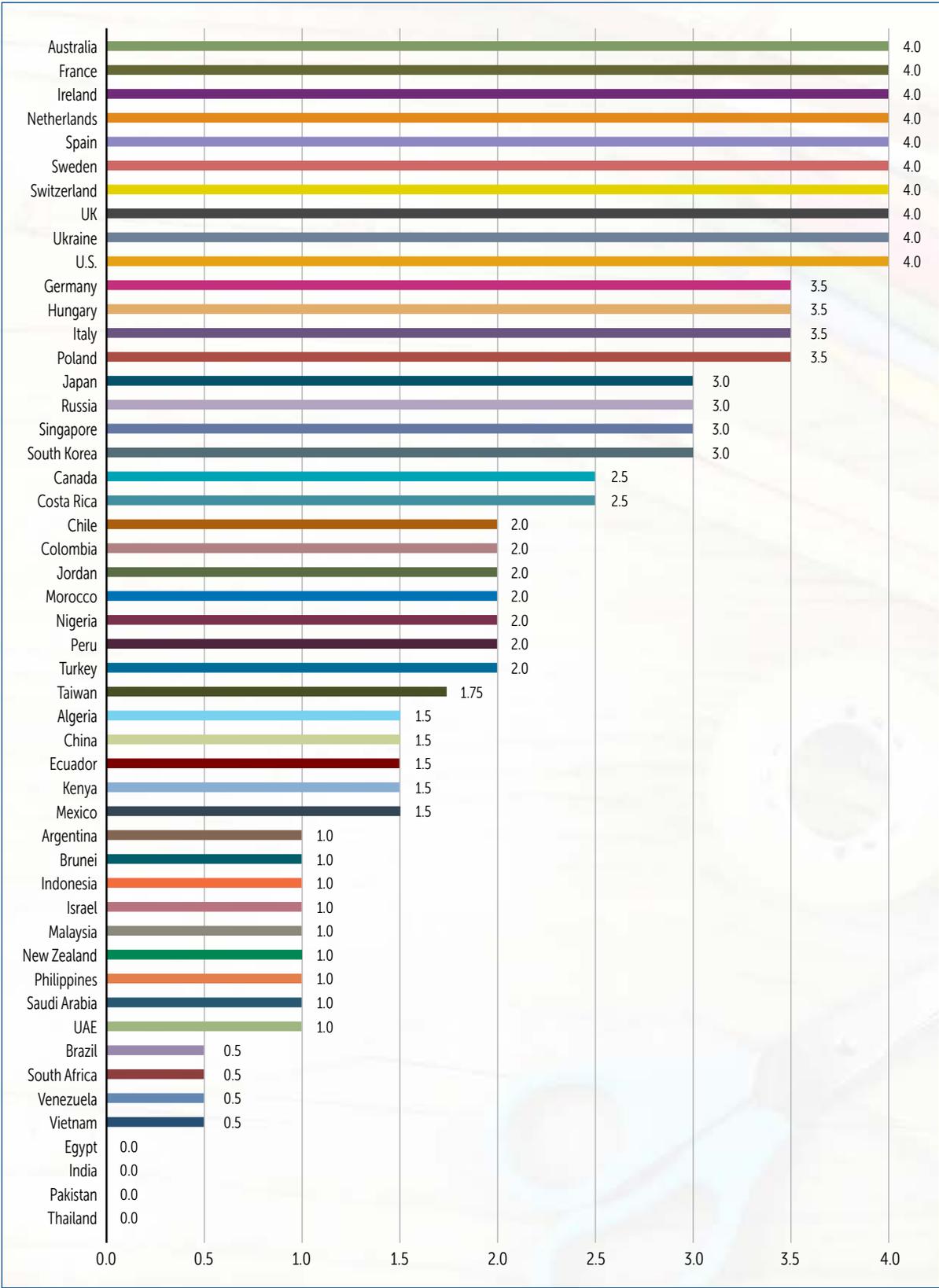
The majority of sampled economies do quite well in this category. Close to three-quarters of the economies achieve a score of 1.75 (58.3%), which is very high compared with performance in other categories or on the Index in general. Most economies have in place educational campaigns on the positive socioeconomic impact of IP rights and the negative impact infringement has on creators, innovators, and the national economy. For example, in what is otherwise a very challenging environment for IP rights holders, India has demonstrated a long-standing and clear commitment to increasing awareness of the importance of IP rights and respect for creators and innovators. Awareness raising and education efforts form a central part of the *National Intellectual Property Rights (IPR) Policy*. Specifically, the Department of Industrial Policy and Promotion has launched a 3-year national campaign—“Creative India, Innovative India!”—and has created the Cell for IPR Promotion and Management to spearhead its implementation. Some key features of this multifaceted and comprehensive initiative include IP awareness workshops and seminars in collaboration with industry organizations, academic institutions, and other stakeholders; technical training and capacity building with key enforcement agencies; and a broad public-awareness-raising campaign on the ill effects of counterfeiting and piracy that targets even school-aged children. In addition to this campaign, other long-standing initiatives are in place. For example, the Rajiv Gandhi National Institute of Intellectual Property Management is a national center of excellence for IP rights training, management, research, and education. The institute conducts programs for the wider public as well as technical training for IP professionals, examiners, and academic researchers.

Pakistan first established central and regional IPR Enforcement Coordination Committees in 2006, and the government has continued to create more regional committees through 2017. The committees are led by the Intellectual Property Organisation of Pakistan (IPO-Pakistan) and include a number of relevant departments and agencies, including the District Police, Federal Investigative Agency, Pakistan Customs, Judiciary, and Pakistan Electronic Media Regulatory Authority. The committees, which meet at least annually, also include a number of private sector organizations. The committees reportedly focus on increasing police raids and court convictions as well as improving awareness of the importance of IP protection. For its part, IPO-Pakistan conducts a substantial number of activities per year aimed at raising awareness about IP rights among students, businesses, attorneys, and the wider public. These include, for instance, seminars at universities for students and small and medium-sized enterprises (SMEs) on the value of IP for economic development and the need to protect IP rights.

Category 8: Membership in and Ratification of International Treaties

Figure XVIII summarizes the total scores for Category 8: Membership in and Ratification of International Treaties. This category measures whether an economy (1) is a signatory of and (2) has ratified/acceded to international treaties on the protection of IP. The category consists of 4 indicators, with a maximum possible score of 4.

Figure XVIII: Scores, Category 8: Membership in and Ratification of International Treaties



Being a contracting party to key international IP treaties reflects a given economy's broader participation in the international IP community and its embrace of the highest IP standards. Remarkably, less than half of the 50 economies achieve a score of 50% or more of the total available score for this category. In fact, 8 economies score a 0 or 0.5, because they are not fully contracting parties to any of the treaties included in this category. Just as for Categories 2 and 5, the lack of participation and membership in international treaties is not limited to emerging or middle-income economies. Quite a few high-income and OECD economies score poorly in this category. For example, Israel, New Zealand, and the UAE achieve a score of only 1.

The withdrawal by the U.S. as a contracting party to the TPP in early 2017 has created considerable uncertainty about the future of the agreement. In November 2017, an inter-ministerial statement by the remaining contracting parties—Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam—confirmed that the TPP was being substantively renegotiated as the CPTPP. While some elements of the previously agreed upon and—in some cases—ratified TPP have been kept, key cutting-edge components of the IP chapter have been suspended. Because the TPP is no longer in effect and the text of the CPTPP is still being negotiated, the score on indicator 40 has decreased for a handful of economies.

7. Economy Overviews

Introduction

This section provides an overview and analysis of each individual economy's score on all 40 indicators.

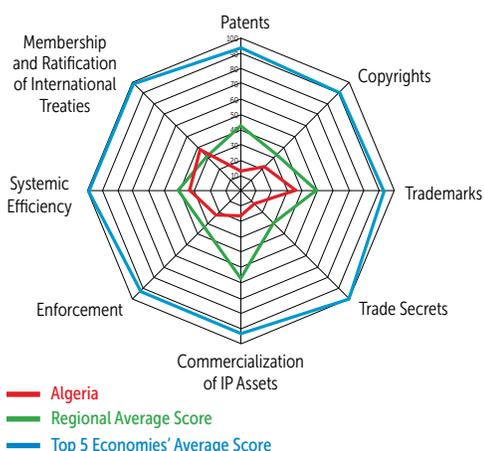
In addition to the total score and overall rank vis-à-vis the other economies included in the Index, each economy overview includes two figures. The first figure displays each economy's performance relative to the top five performers in each category of the Index. The second figure displays each economy's overall score compared with the median overall score and regional average for that particular economy. Also included is a summary of key

areas of strengths and weaknesses in the national IP environment for each individual economy. Specific challenges, debates, and issues relating to the most important recent developments under each category are discussed in more detail in a separate subsection titled "Spotlight on the National IP Environment."

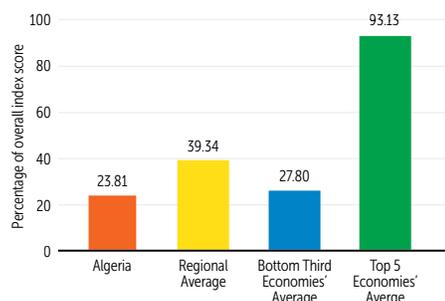
For economies included in previous editions of the Index, an additional discussion is included titled "Past Editions versus Current Scores," in which the economy's score in the preceding editions is discussed and contrasted with its current score.

ALGERIA

Rank 49 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Basic framework for IP protection in place
- ✓ Contracting party to World Intellectual Property Organization (WIPO) Internet Treaties and Patent Law Treaty and Beijing Treaty in 2017
- ✓ Some coordination of IP enforcement

KEY AREAS OF WEAKNESS

- ✗ Difficult localization policies in place with import substitution bans and local ownership requirements—these have only intensified in 2017
- ✗ Key IP rights missing and challenging patent enforcement environment
- ✗ Major holes in copyright framework
- ✗ High rates of piracy
- ✗ Not a WTO member or TRIPS signatory

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1
2. Patentability requirements	0
3. Patentability of computer-implemented inventions (CIIs)	0
4. Pharmaceutical-related patent enforcement and resolution mechanism	0
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0
6. Patent term restoration for pharmaceutical products	0
7. Membership in Patent Prosecution Highways (PPHs)	0
8. Patent opposition	0
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.53
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0
12. Availability of frameworks that promote cooperative action against online piracy	0
13. Scope of limitations and exceptions to copyrights and related rights	0.5
14. Digital rights management (DRM) legislation	0
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.25
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.25
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.25
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0
20. Industrial design term of protection	0.4
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.25
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0
25. Regulatory and administrative barriers to the commercialization of IP assets	0.25
26. IP as an economic asset	0.25
Category 6: Enforcement	
27. Physical counterfeiting rates	0.43
28. Digital/online piracy rates	0.17
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.25
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.25
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.5
35. Consultation with stakeholders during IP policy formation	0
36. Educational campaigns and awareness raising	0.5
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1
38. Singapore Treaty on the Law of Trademarks	0
39. Patent Law Treaty	0.5
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0
TOTAL	9.53

Spotlight on the National IP Environment

Past Editions versus Current Scores

Algeria's overall score has decreased from 27% (9.34 out of 35) in the 5th edition of the Index to 23.81% (9.53 out of 40) in the 6th edition. This drop in score reflects a weak performance in the new indicators added.

Area of Note

Algeria continued to present a challenging environment to rights holders in 2017, with no major positive IP rights reform efforts undertaken or announced by the Algerian government. The 2017 Finance Law did not amend the long-established 51-49 policy, which limits foreign investment to a minority stake (49% or below) in any industrial sector. The effect of this requirement is to impose a *de facto* localization requirement for foreign firms wishing to operate in Algeria directly or through licensing agreements. Although at the time of research it had not been published, press reports on the draft 2018 Finance Law suggest that it too would not contain any major changes to existing localization policies. In fact, during 2017, many such policies were strengthened. For example, in July it was announced that a further 24 consumer goods products (primarily foodstuffs but also industrial use goods) had been added to the official list of banned products. This adds to the many hundreds of goods (primarily medicines) already banned.

Commercialization of IP Assets

26. IP as an economic asset: Algeria has launched a number of efforts in the past few years that aim to improve the level of exploitation of IP as an economic asset. The public sector supports several technology and science parks, chief among them *Technopole* of Sidi Abdallah. The Algerian government has also partnered with the World Intellectual Property Organization (WIPO) to develop technology transfer capabilities. Most recently, the Algerian National Institute of Industrial Property (*Institut National Algérien de la Propriété Industrielle*) announced in December 2016 that the Algerian government would create a national technology transfer office. This office will link existing patented technologies with interested commercial partners and improve the basis for domestic technology exploitation, innovation, and economic development. At the subnational level, there are a few examples of research institutes and universities developing a technology transfer capacity. For instance, the University of Science and Technology Houari Boumediene has a dedicated office for “valorization” activities. Coupled with deep, structural reforms to Algeria's national IP environment, efforts like these can enable Algeria to diversify its economy and experience stronger sustained levels of innovation and high-tech economic outputs.

Systemic Efficiency

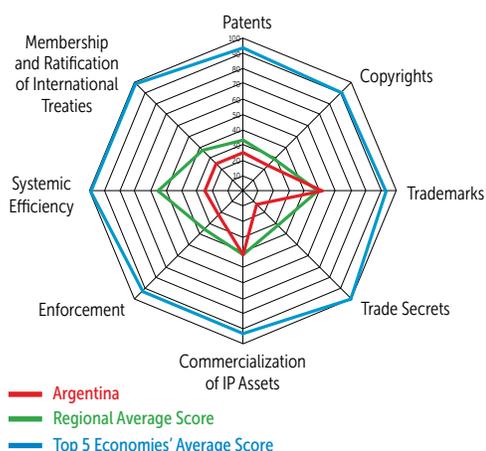
34. Inter-governmental coordination of IP rights enforcement efforts; and 36. Educational campaigns and awareness raising: The enforcement of IP rights has long been fraught in Algeria. Rights holders face issues with both access to and effective use of administrative and judicial remedies. Rates of counterfeiting and piracy remain high. The estimated level of software piracy has remained steady at over 80% for almost a full decade. Although overall enforcement remains challenging, Algerian authorities have over the past few years launched a number of promising initiatives. In 2012–13, the National Office of Copyright (*L'office national des droits d'auteur et des droits voisins*, ONDA) initiated a wide-ranging antipiracy campaign. It included public awareness raising and the seizure and destruction of pirated content. As part of the campaign, in 2012, ONDA signed a cooperation agreement with the Directorate General for National Security (*Direction Général de Surêté Nationale*). This agreement aimed to deepen the coordination mechanisms established by the 2003 Ordinance 05-03. Under this ordinance, ONDA officials retain the right to take active enforcement measures against suspected counterfeiting activities. There have also been examples of direct cooperation on enforcement and awareness-raising activities between the Algerian authorities and the private sector. For example, in 2014, Microsoft signed a Memorandum of Understanding (MOU) with ONDA with respect to both awareness raising and cooperation on enforcement.

Membership in and Ratification of International Treaties

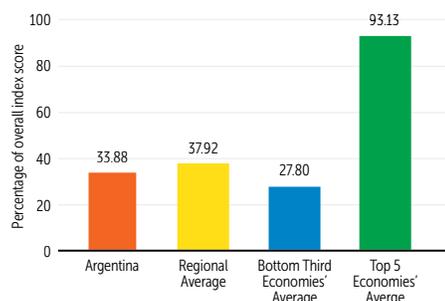
Algeria scores low in its participation in and ratification of international treaties because it has not ratified the Patent Law Treaty, is not party to the Singapore Treaty on the Law of Trademarks, and has not concluded an FTA with substantial IP provisions. Algeria is currently not a member of the World Trade Organization and not a signatory of the TRIPS agreement. However, in a positive step that displays a commitment to the international IP community, in July 2017, Algeria acceded and is now a contracting party to the Beijing Treaty on Audiovisual Performances. The Beijing Treaty is not currently in force and participation in it is not measured in the Index.

ARGENTINA

Rank 46 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Basic framework for IP protection
- ✓ Efforts to strengthen international cooperation on IP
- ✓ Ongoing streamlining of administrative and enforcement bodies
- ✓ Improvements to government transparency and cooperation with stakeholders

KEY AREAS OF WEAKNESS

- ✗ Key life sciences IP rights missing and patent enforcement environment challenging
- ✗ Gaps in the legal framework for enforcing copyrights online, though important instances of judicial action exist
- ✗ Persisting high rates of counterfeiting and piracy
- ✗ Judicial procedure slow and court decisions nontransparent/deterrent

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1
2. Patentability requirements	0.25
3. Patentability of computer-implemented inventions (CIs)	0.25
4. Pharmaceutical-related patent enforcement and resolution mechanism	0
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0
6. Patent term restoration for pharmaceutical products	0
7. Membership in Patent Prosecution Highways (PPHs)	0.5
8. Patent opposition	0
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.63
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expeditious injunctive-style relief and disabling of infringing content online	0.5
12. Availability of frameworks that promote cooperative action against online piracy	0
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.5
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.25
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.6
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.5
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.25
25. Regulatory and administrative barriers to the commercialization of IP assets	0.5
26. IP as an economic asset	0.5
Category 6: Enforcement	
27. Physical counterfeiting rates	0.26
28. Digital/online piracy rates	0.31
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.50
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.25
35. Consultation with stakeholders during IP policy formation	0.25
36. Educational campaigns and awareness raising	0.25
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1
38. Singapore Treaty on the Law of Trademarks	0
39. Patent Law Treaty	0
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0
TOTAL	11.55

Spotlight on the National IP Environment

Past Editions versus Current Scores

Argentina's overall score has decreased slightly from 29% of the total possible score (with a score of 10.05 out of 35) in the 5th edition of the Index to 28.8% (11.55 out of 40) in the 6th edition. This drop in score reflects a weak performance on many of the new indicators.

Patents, Related Rights, and Limitations

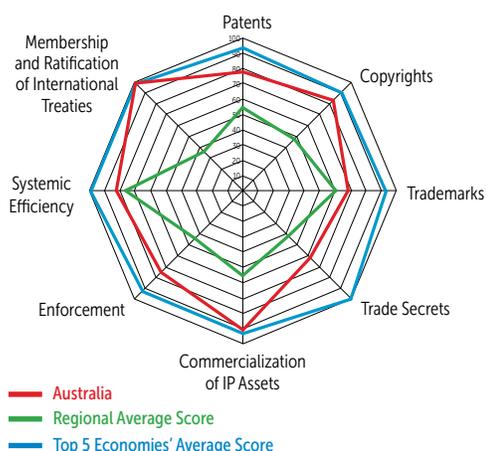
2. Patentability requirements; and 7. Membership in Patent Prosecution Highways (PPHs): Although the patenting environment is still highly challenging for innovators, the Argentine government is taking steps to streamline the patenting process. A substantial backlog of patent applications has existed at the patent office, the *Instituto Nacional de La Propiedad Industrial* (INPI), for several years (recent studies report 21,000 pending applications and the average time to grant for pharmaceutical, chemical, and biotech patents is said to be about 8–9 years). Argentina has recently created expedited procedures for patent applications already issued elsewhere, is hiring more patent examiners, and is working with WIPO to digitize its patent services. Resolution 56/2016, in effect since late 2016, lays the basis for Argentina's participation in PPH agreements with other economies' patent offices. In 2017, Argentina initiated PPHs with the USPTO and the JPO. The INPI also signed an MOU on bilateral cooperation with the European Patent Office (EPO) that focuses on enhancing patent examiners' expertise in the areas of patent procedures and search and examination. As a result, Argentina's score rises by 0.25 for Indicator 2. Nevertheless, patentability restrictions discussed in previous editions of the Index remain a serious and long-standing issue in Argentina, in particular concerning pharmaceutical products and processes. As of the time of research, innovators face difficulty securing a number of types of pharmaceutical patents, including compositions, dosages, salts, esters, ethers, polymorphs and analogous processes, pro-drugs, and Markush-type patent claims.

Systemic Efficiency

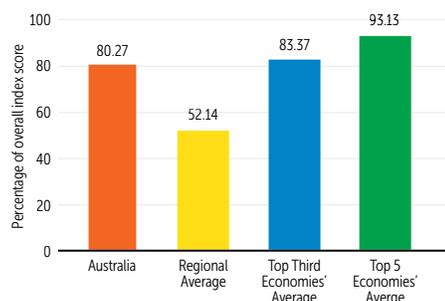
35. Consultation with stakeholders during IP policy formation: Currently, there is no legislative requirement for government agencies to hold public consultations on rule making in Argentina. Recently, the Argentine government, led by the Office of the President, has promoted greater use of public consultation, although these efforts remain inconsistent and nonbinding. Individual agencies conduct various forms of public consultations, including making drafts available to the public or stakeholders and establishing platforms for receiving feedback. In 2016, the new Macri government created a Ministry of Modernization that is responsible for promoting a more transparent public sector administration. As part of this, the ministry is in charge of supporting public consultations by other ministries and agencies. In addition, as part of Argentina's bilateral Commercial Dialogue with the U.S., Argentina established a plan to enhance public-private sector consultation, transparency, and information sharing. On a related note, in 2016, Argentina introduced for the first time a law on access to public information. The law, which entered into force in 2017, guarantees access to all government-held information and is expected to improve transparency among public institutions.

AUSTRALIA

Rank 14 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Biopharmaceutical IP rights available in law (with room for improvement, e.g., RDP)
- ✓ Legal framework permitting disabling of foreign-hosted infringing websites
- ✓ Relatively low counterfeiting and piracy rates (although still problematic)
- ✓ Civil and procedural remedies available

KEY AREAS OF WEAKNESS

- ✗ Pre-grant patent opposition system introduces significant delays to patent grants
- ✗ Gaps in enforcement, including for life sciences patents
- ✗ Some uncertainty about implementation of the Productivity Commission's recommendations on IP

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.75
3. Patentability of computer-implemented inventions (CIIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	0.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.63
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	1.00
11. Expedient injunctive-style relief and disabling of infringing content online	1.00
12. Availability of frameworks that promote cooperative action against online piracy	0.50
13. Scope of limitations and exceptions to copyrights and related rights	1.00
14. Digital rights management (DRM) legislation	1.00
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.75
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	1.00
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.75
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.50
20. Industrial design term of protection	0.40
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.75
23. Regulatory data protection (RDP) term	0.50
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	1.00
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.78
28. Digital/online piracy rates	0.80
29. Civil and procedural remedies	1.00
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.75
31. Criminal standards including minimum imprisonment and minimum fines	0.75
32. Effective border measures	0.50
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.75
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.75
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	1.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	32.11

Spotlight on the National IP Environment

Past Editions versus Current Scores

Australia's overall score rose from 77% of the total possible score (with a score of 27.07 out of 35) in the 5th edition of the Index to 80% (32.11 out of 40) in the 6th edition. This increase mainly reflects strong performance on the new indicators.

Area of Note

In 2017, the government of Australia issued its response to the Productivity Commission's 2016 review and recommendations on IP. The government has committed to consulting further on certain recommendations, developing implementing legislation for some recommendations in the next few years, and rejecting or not commenting on other recommendations. For example, in the context of patents, the government supports the commission's recommendations to align patent standards with the European Patent Office (EPO) and to enhance considerations of technical features, but it rejected the recommendation to raise and accelerate the growth of patent renewal fees. In the context of copyrights, the government did not respond to the recommendation to reduce the term of copyright and said it will review and consult on the need for new exceptions for technological protection measures (TPMs) and the introduction of a fair use exception to copyright. How the government's response will be interpreted and implemented, and ultimately affect the IP environment in Australia, remains to be seen and should be monitored.

Patents, Related Rights, and Limitations; and Enforcement

4. Pharmaceutical-related patent enforcement and resolution mechanism; 29. Civil and procedural remedies; and 30.

Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement:

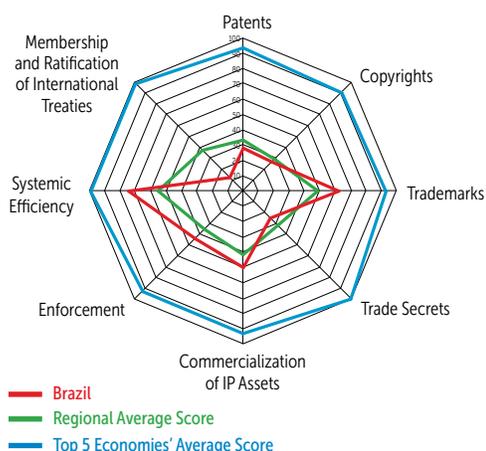
Although a limited notification system for patent holders exists under the Therapeutic Goods Act, in practice, patent holders are not made aware of potentially infringing follow-on products in advance of their approval by the Therapeutic Goods Administration. Because Australia's Pharmaceutical Benefit Scheme (PBS) imposes automatic and irreversible price cuts on medicines as soon as competing versions enter the market, there is a strong incentive for generic companies to launch at risk, and innovator companies must pursue preliminary injunctions to resolve patent disputes. At the same time, since 2012, Australia's Department of Health has pursued market-sized damages (on top of those sought by the generic company) aimed at compensating the PBS for any higher price paid for a patented medicine during the period of a provisional enforcement measure, but there is no corresponding mechanism to compensate innovators for the above-mentioned losses if an infringing product is launched prematurely. Australia's market-size damages policy unfairly tips the scales in commercial patent disputes and creates an inappropriate conflict of interest by permitting the same government that examined and granted a patent to seek damages if that patent is later ruled invalid or not infringed. It exposes innovators to additional, unquantifiable, and significant compensation claims that were not agreed on at the time provisional enforcement measures were granted. This system continues to impose significant risks and uncertainty for innovator companies, with new measures in the 2017 Federal Budget that would increase the price reduction for products with generic competitors from 16% to 25%. In *Commonwealth of Australia v. Sanofi* (2017) FCA 382, the government is pursuing compensation related to losses incurred by the PBS due to an interim injunction and subsequent invalidation of Sanofi's patent in *Apotex v. Sanofi-Aventis* (2009) FCAFC 134. The landmark case has led to additional risks and costs for life sciences innovators and uncertainty about the ability to obtain due process in enforcement of patents in Australia. In one positive development, a 2017 Federal Court decision (in *Bayer Pharma v. Generic Health* [2017] FCA 250) provides a benchmark for damages awards for life sciences innovators that are successful in patent infringement proceedings. In the case, the judge awarded damages based on the lost sales of all infringing generic products (assuming that every generic purchased would have been an originator) and may act in the future as disincentive for generic companies to launch at risk.

Copyrights, Related Rights, and Limitations

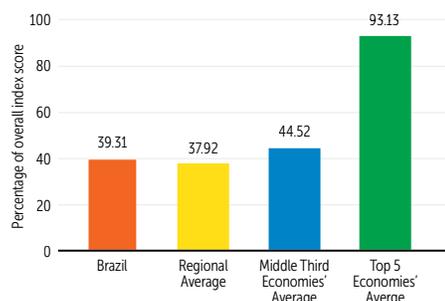
11. Expedient injunctive-style relief and disabling of infringing content online: Australia's Copyright Amendment (Online Infringement) Act 2015 (Section 115a) provides for injunctive relief that allows courts to require ISPs to disable access to foreign-hosted sites (or "online locations") whose primary purpose is to infringe copyright. The provision has been applied in at least 5 landmark cases since its introduction. In 2016, Federal Court decisions regarding Roadshow Film (representing major international film studios) and Foxtel (a pay TV provider) successfully secured injunctions against a number of ISPs, requiring them to disable access to The Pirate Bay and other websites whose primary function is found to be facilitating infringement. In relation to the issue of "mirror" sites of disabled infringing sites, the court ruled that rolling injunctions were possible but not automatic; courts must supervise injunctions disabling mirror or proxy sites. Reports suggest that ISPs in Australia are responsive to a second round of orders. Additional cases based on Section 115a occurred in 2017, among them those brought by Universal Music Australia, Village Roadshow, and Foxtel, resulting in the disabling of more than 65 sites determined to be conducting or facilitating "flagrant" copyright infringement and more than 340 alternative domain names. Local analysis suggests that these sites represented a majority of copyright-infringing traffic in Australia. A 2017 study by INCOPRO found that of 5 sites with access disabled in December 2016, site traffic fell by over 70% in the 3 months following the order to disable access. Even when considering the use of proxies or mirror sites to access the illegal sites, the combined use of the sites dropped by 60% during the same period. The study also noted a fall in use of the top 50 copyright-infringing sites in Australia.

BRAZIL

Rank 33 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Positive reform and rollback of long-standing barriers to licensing and commercialization activities in 2017
- ✓ 10-year minimum term of patent protection in place for administrative delays

KEY AREAS OF WEAKNESS

- ✗ Key life sciences IP rights missing and challenging patentability environment
- ✗ Patentability barriers still in place through ANVISA review of biopharmaceutical applicants
- ✗ Relatively high estimated levels of software piracy

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.00
3. Patentability of computer-implemented inventions (CIs)	0.25
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.50
8. Patent opposition	0.50
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.63
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expeditious injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.00
13. Scope of limitations and exceptions to copyrights and related rights	0.50
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.25
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.50
23. Regulatory data protection (RDP) term	0.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.75
25. Regulatory and administrative barriers to the commercialization of IP assets	0.25
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.56
28. Digital/online piracy rates	0.53
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.25
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.50
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.75
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.50
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	0.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.50
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	15.72

Spotlight on the National IP Environment

Past Editions versus Current Scores

Brazil's overall score has increased from 38% (13.23 out of 35) in the 5th edition to 39% (15.72 out of 40) in the 6th edition. This increase in score mainly reflects a relatively strong performance in the new indicators and the removal of administrative barriers to licensing and commercialization of IP assets.

Patents, Related Rights, and Limitations

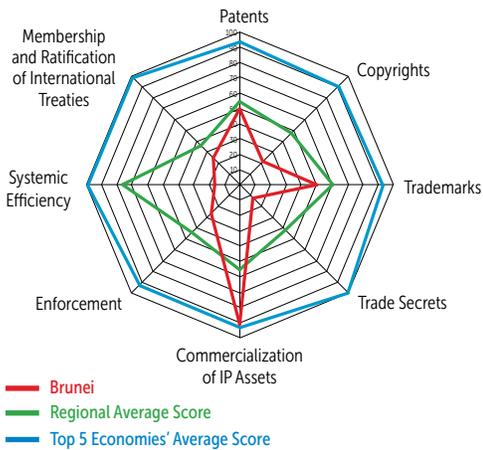
2. Patentability requirements: In 2017, Brazilian authorities took a number of actions that affected the domestic patenting environment. In a positive step, the Brazilian Patent Office (INPI) announced in July that it would introduce a simplified procedure for granting patent applications. The new draft procedure (*Norma*) would allow for the processing and issuing of patents within a 90-day window. Any efforts to reduce the INPI's backlog are welcome, as this long-standing problem presents a significant curtailment and barrier to rights holders' exploitation of their IP. The current backlogs range from 10 to 13 years depending on the field of technology, with applications in the biopharmaceutical and ICT fields traditionally being the worst affected. These efforts build on international patent prosecution efforts from 2016 and 2017 with the U.S., Japan, and other offices, aimed at streamlining and expediting the prosecution process, albeit for a select few technologies. Unfortunately, the draft procedure (which at the time of research was still under public consultation) has from the outset excluded biopharmaceutical patents, which historically have suffered significant delays in patent prosecution. But a new interagency ordinance clarifies and institutionalizes the Brazilian National Health Surveillance Agency's (ANVISA's) role in evaluating biopharmaceutical patent applications. As noted in previous editions of the Index, ANVISA has traditionally had the right to provide prior consent to biopharmaceutical patents that are being examined by the INPI. Consequently, decisions on whether to grant a patent have been based on examination not solely by patent specialists and officials at the INPI, but also by ANVISA. This has in effect meant a requirement of dual examination, in turn violating the TRIPS Agreement. The exact meaning and nature of ANVISA's right to prior consent has never been fully defined and has frequently been questioned in court. As a step in the right direction, the publication of the Interagency Ordinance in April 2017 clarified the relationship and interaction between ANVISA and the INPI in the patent review process. Following the INPI's notification, Article 2 of the ordinance moves ANVISA's role to earlier stages in the patent application to initiate the procedure for prior consent. ANVISA will analyze applications in light of public health, and opinions regarding patentability may be binding on INPI only in cases where ANVISA concludes that a severe public health risk exists as prescribed under Article 4 of the regulation. Article 5 further mentions drugs "of interest to the drug policies and pharmaceutical assistance of the Public Healthcare System (SUS)." The new rules attempt to clarify, with caveats, the extent of ANVISA's role in providing opinions on patentability, with the INPI leading the bulk of the examination. Article 9 of the ordinance calls for the establishment of an "Interagency Policy Group" between ANVISA and the INPI for the "harmonization of understandings between the agencies." It remains to be seen whether this interaction will further facilitate or restrict the biopharmaceutical patentability process.

Commercialization of IP Assets

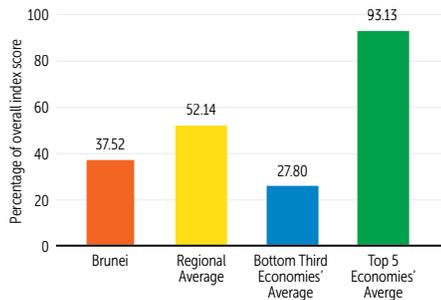
25. Regulatory and administrative barriers to the commercialization of IP assets: In 2017, Brazil's environment for the commercialization of IP assets saw a positive change of direction. Traditionally, significant regulatory and formal requirements were in place that limited the attractiveness of licensing and widespread technology transfer. For example, to become effective and binding on third parties, licensing agreements were required to be published in the INPI's *Official Gazette*. Agreements were also required receive approval from the INPI, with limitations on fees and payments between the contracting parties. Exclusive licensing agreements were subject to more onerous publication requirements than nonexclusive licenses, making the process more time consuming. This changed in 2017 when the INPI announced through Rule 70 that it would no longer take an active role in the framing and approval of licensing agreements. Instead, the new rule suggests that the agency will operate merely as an agency of recordation. If the rule is implemented and, in fact, the net effect of the rule is positive, it would represent a significant improvement in the technology transfer environment in Brazil. As a result of this new change, Brazil's score on this indicator has increased.

BRUNEI

Rank 35 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ 2017 accession to WIPO Internet treaties
- ✓ Major IP reforms in past few years including establishing IP Office (BrulPO)
- ✓ Removed from Special 301 Report

KEY AREAS OF WEAKNESS

- ✗ Life sciences IP rights lacking
- ✗ Regulatory data protection not available
- ✗ Compulsory license framework overly broad
- ✗ Limited framework for addressing online piracy and circumvention devices
- ✗ High software piracy rates—66% in latest estimates

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.75
3. Patentability of computer-implemented inventions (CIs)	0.75
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	0.00
8. Patent opposition	0.50
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.53
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.00
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.25
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.00
20. Industrial design term of protection	0.60
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	1.00
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.54
28. Digital/online piracy rates	0.34
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.25
31. Criminal standards including minimum imprisonment and minimum fines	0.50
32. Effective border measures	0.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.25
35. Consultation with stakeholders during IP policy formation	0.00
36. Educational campaigns and awareness raising	0.25
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	15.01

Spotlight on the National IP Environment

Past Editions versus Current Scores

Brunei's overall score has decreased from 41% (14.18 out of 35) in the 5th edition to 38% (15.01 out of 40) in the 6th edition. This decrease in score mainly reflects a weak performance on the new indicators added.

Commercialization of IP Assets

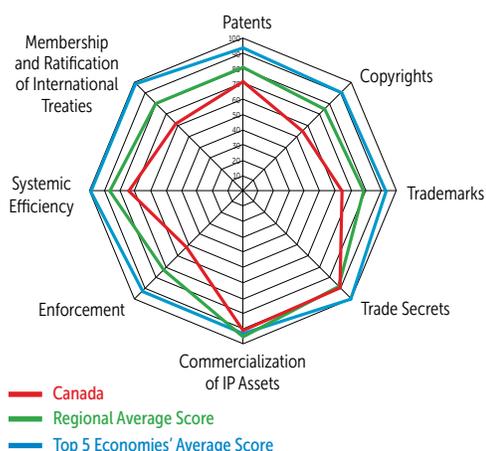
26. IP as an economic asset: Brunei has for many years sought to diversify its economy from natural resources toward other areas of economic activity. In particular, the government of Brunei has invested in developing a high-tech capacity with a focus on knowledge-intensive sectors. As part of its overall national economic development plan, the Brunei Economic Development Board (the national investment promotion agency) has included "Technology and Creative Industry" as one of five key areas for national development. Brunei has recognized the link between the protection of IP and economic and technological development. Since its inception in 2013, the Brunei IP Office has as part of its mission conducted awareness-raising activities on the value of IP and its use as an economic asset. The office regularly conducts workshops, clinics, and seminars for local practitioners and stakeholders; these efforts include capacity building with local patent lawyers. In addition, most major higher education institutions have both IP policies and technology transfer offices in place. For instance, the University of Brunei Darussalam has a long-standing IP policy in place that provides a clear framework for the development and commercialization of IP assets. As of 2014, the university was the largest domestic holder of patents in Brunei, with a total patent portfolio of 26 filed patents. WIPO statistics show that the university is the top filing entity in Brunei for patent cooperation treaty (PCT) patent applications, with two applications filed in 2015.

Membership in and Ratification of International Treaties

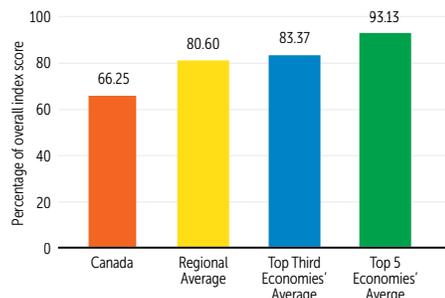
The withdrawal by the U.S. as a contracting party to the TPP in early 2017 has created considerable uncertainty about the future of the agreement. In a November 2017 inter-ministerial statement, the remaining contracting parties—Brunei included—confirmed that the TPP was being substantively renegotiated as the CPTPP. Although some elements of the previously agreed on and—in some cases—ratified TPP have been kept, the majority of the IP chapter has been suspended. Because the CPTPP is still being negotiated, Brunei's score has decreased on indicator 40. In February 2017, Brunei acceded to both the WIPO Copyright Treaty and the Phonograms Treaty. This marks a clear intention to uphold international standards of copyright protection.

CANADA

Rank 18 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Supreme Court judgment on utility doctrine finally aligns Canada's patentability environment with international standards
- ✓ Significant damages awarded in precedent-setting Federal Court case with regard to Canada's DRM provisions

KEY AREAS OF WEAKNESS

- ✗ CETA amendments to Patent Act introducing patent term restoration includes restrictive eligibility requirements as well as an export claw-out, which effectively undermines pharmaceutical exclusivity
- ✗ Lack of border measures for in-transit goods and limited transparency and information available from Canadian Customs on seizure statistics

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.75
3. Patentability of computer-implemented inventions (CIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.25
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	0.75
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.63
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.50
11. Expedient injunctive-style relief and disabling of infringing content online	0.25
12. Availability of frameworks that promote cooperative action against online piracy	0.25
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	1.00
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	1.00
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.75
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.75
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.40
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.75
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	1.00
23. Regulatory data protection (RDP) term	0.80
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	1.00
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.66
28. Digital/online piracy rates	0.76
29. Civil and procedural remedies	0.50
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.50
31. Criminal standards including minimum imprisonment and minimum fines	0.50
32. Effective border measures	0.50
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.25
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.50
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.50
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	26.50

Spotlight on the National IP Environment

Past Editions versus Current Scores

Canada's overall score has increased substantially from 61.3% (21.44 out of 35) in the 5th edition to 66% (26.5 out of 40) in the 6th edition. This reflects a strong performance on the new indicators and a number of precedent-setting court judgments relating to patentability and copyright enforcement.

Patents, Related Rights, and Limitations

- 2. Patentability requirements:** As detailed in previous editions of the Index, since the early to mid-2000s, Canadian Federal Courts have issued a growing number of decisions based on patent utility in relation to pharmaceutical patents. In a high percentage of these cases, courts have ruled pharmaceutical patents invalid, even though the medicines were found to be safe and effective by Health Canada and were being used by hundreds of thousands of Canadian patients. The Canadian standard of utility established through this expanding case law differed from international standards and from practices of patent offices in the U.S. and the EU. Specifically, the utility test was accompanied by a heightened evidentiary burden, requiring innovators to demonstrate the effectiveness of a pharmaceutical in light of a court's subjective construed "promise." The test raised significant uncertainty as to how much information needed to be disclosed in patent applications, discriminated against pharmaceutical patents, and placed Canada's standards for patentability outside international norms. In November 2016, the Supreme Court of Canada heard oral arguments in the long-running case *AstraZeneca Canada Inc. v. Apotex Inc.* In June 2017, the Court handed down the final judgment, which roundly rejected the promise doctrine. The judgment stated that the promise doctrine "is unsound" and is "an interpretation of the utility requirement that is incongruent with both the words and the scheme of the Patent Act," and that "promises are not the yardstick against which utility is to be measured." The decision marks a watershed in Canadian pharmaceutical patent jurisprudence and should reverse what has been a decade-and-a-half-long negative trend. Because of this decision, Canada's score has increased for this indicator.

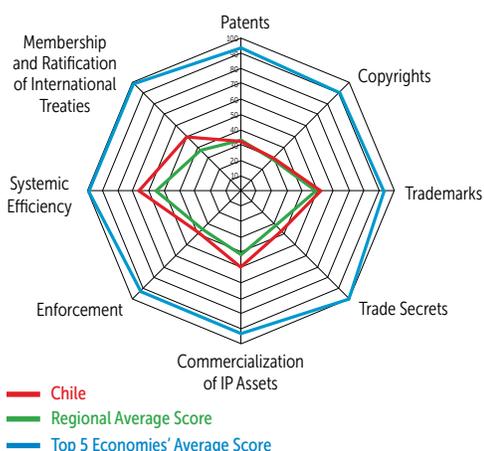
- 6. Patent term restoration for pharmaceutical products:** Following the implementation of the Comprehensive Economic and Trade Agreement (CETA), Canada has introduced a new regulatory scheme that allows for some compensation for delays in obtaining marketing approval for biopharmaceutical products. The relevant amendments made to the Patent Act (Sections 106–134) and implementing regulations published in the Canada Gazette provide a maximum restoration period of two years through a Certificate of Supplementary Protection (CSP) mechanism. Although overall this positive step improves Canada's biopharmaceutical IP environment, significant areas of concern remain. First, under Section 116(4), the Canadian government retains the right to reduce the term of protection at its discretion. Specifically, this subsection states that "the Minister may, if he or she is of the opinion that that person's [the rights holder's] failure to act resulted in a period of unjustified delay in the process of obtaining the authorization for sale, reduce the term of the certificate when issuing it by the amount of that period." No further definition of what constitutes an "unjustified delay" has been provided in any of the relevant regulations, which leaves a broad scope for interpretation with the Canadian government. Moreover, the implementing regulations contain a "Timely Submission Requirement" that sets a timeline for the submission of CSP applications based on the regulatory status of a given product in a set of "prescribed economies." Thus, the availability of a CSP is being made contingent on early market entry. Equally troublingly, the law also contains an export claw-out, with Section 115(2) effectively exempting the infringement of CSP protection if the activity is for the purpose of export. It is unfortunate that the law has undermined a positive and necessary incentive by limiting the actual protection afforded with these additional requirements and exemptions.

Copyrights, Related Rights, and Limitations

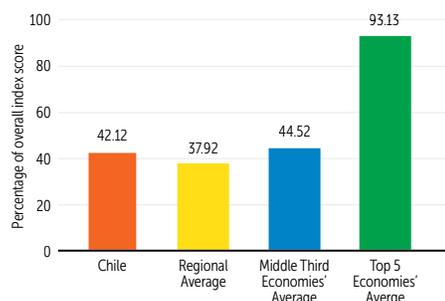
- 14. Digital rights management (DRM) legislation:** Canada's 2012 copyright amendments introduced new legislation that prohibits the use, distribution, manufacture, and importation of circumvention devices. This legislation significantly strengthened the legal framework and mechanisms available for the protection of copyright in Canada, as illustrated by the country's high score on this indicator. However, as noted in previous editions of the Index, enforcement of these provisions (as well as copyrights in general) has been a long-standing problem in Canada. Industry reports have suggested that circumvention devices and modification software have remained available in Canada, particularly for video games. In 2017, the Federal Court issued a precedent-setting case in *Nintendo of America Inc. v. Jeramie Douglas King and Go Cyber Shopping Ltd.* Significantly, not only did the court find that willful and pervasive infringement had taken place, but the judge awarded Nintendo over CAD12 million in damages, of which CAD1 million were punitive damages. The ruling summed up the seriousness of the offence, stating that "the Respondent has shown callous disregard for the Applicant's rights ... knowingly and deliberately sold circumvention devices, and promoted such activities to its customers." This judgment marks an important victory for rights holders in Canada and will act as a real deterrent to future infringing activities. Because of this decision, Canada's score has increased for this indicator.

CHILE

Rank 30 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Efforts to improve enforcement through coordination, international cooperation, and pending IP reform
- ✓ Commitment to improve IP environment through international trade agreements
- ✓ Efforts to streamline IP registration
- ✓ Promotion of IP commercialization

KEY AREAS OF WEAKNESS

- ✗ Patchy patent protection for pharmaceuticals, including obstacles to patentability, lack of effective patent enforcement, and overly wide basis for compulsory licenses
- ✗ High levels of counterfeiting and piracy
- ✗ Lack of sufficient framework to tackle online piracy, although some success in disabling access to sites
- ✗ Criminal enforcement problematic for copyright piracy

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.25
3. Patentability of computer-implemented inventions (CIs)	0.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	0.60
7. Membership in Patent Prosecution Highways (PPHs)	0.50
8. Patent opposition	0.25
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.63
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expeditious injunctive-style relief and disabling of infringing content online	0.50
12. Availability of frameworks that promote cooperative action against online piracy	0.00
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.00
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.50
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.40
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0.50
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.25
25. Regulatory and administrative barriers to the commercialization of IP assets	0.50
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.54
28. Digital/online piracy rates	0.43
29. Civil and procedural remedies	0.50
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.25
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.25
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.50
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.75
35. Consultation with stakeholders during IP policy formation	0.50
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	16.85

Spotlight on the National IP Environment

Past Editions versus Current Scores

Chile's overall score has dropped slightly, falling from 43% of the total possible score (15.14 out of 35) in the 5th edition to 42% (16.85 out of 40) in the 6th edition. This drop reflects the introduction of price considerations as a basis for compulsory licensing of medicines as well as a lack of change in other challenging areas of the IP system. Chile had a relatively strong performance on the new indicators.

Patents, Related Rights, and Limitations

5. Legislative criteria and active use of compulsory licensing of patented products and technologies: In 2017, the Chilean Chamber of Deputies passed a bill that directed the Ministries of Economy and Health to issue compulsory licenses for medicines based on broad grounds that go beyond international standards, including price considerations, and to import less-expensive generic versions of medicines. The government is reportedly considering compulsory licenses for the prostate cancer drug Xtandi and hepatitis C drug Sovaldi. Even the threat and discussion of using compulsory licensing on the grounds of drug prices significantly undermines the life sciences IP environment in Chile and erodes confidence in the country's innovation system.

Commercialization of IP Assets

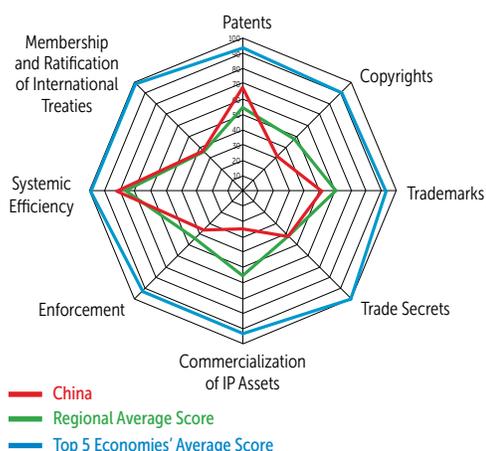
26. IP as an economic asset: The Chilean IP office, INAPI, operates a dedicated platform that promotes the use of IP in technology transfer. The InapiProyecta has a dual function of providing resources on the commercialization and valuation of IP assets and creating a network and portal for the exchange of knowledge between research and business entities. The project stems from a partnership between the EU and the Chilean government and is aimed at leveraging IP for entrepreneurship and economic development in Chile. The project's IP Classroom provides materials and courses on IP management. Technology transfer offices in the major universities in the country also hold regular seminars and courses on leveraging IP assets for students with technical backgrounds.

Systemic Efficiency

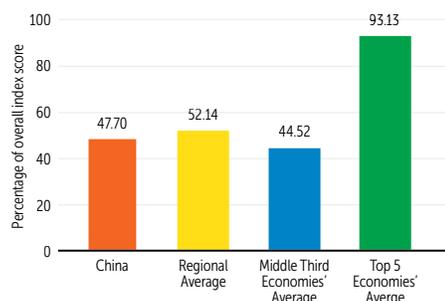
34. Inter-governmental coordination of IP rights enforcement efforts: An Inter-Ministerial Committee of Experts on IP was established in 2005 within the General Directorate of International Economic Relations. Still operating today, it is composed of several ministries and government agencies, including the Ministries of Economy, Culture, Education, Health, Agriculture, and Foreign Affairs. The committee focuses on IP policy from an international trade perspective in terms of coordinating Chile's negotiating position and fulfilling its international commitments in trade agreements. Hence, it is somewhat limited in terms of the partners and the issues it covers, including enforcement activities on the ground.

CHINA

Rank 25 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Patent and copyright reform extends protection and strengthens enforcement
- ✓ Growing recognition and upholding of IP rights across different levels of government and enforcement agencies
- ✓ Strong efforts to raise awareness of and leverage value of IP rights in academic and private spheres

KEY AREAS OF WEAKNESS

- ✗ Level of IP infringement remains high
- ✗ Interpretation of IP laws can be fragmented and out of sync with international standards
- ✗ Ability to secure adequate remedies for infringement remains a challenge in many cases
- ✗ Barriers to market access and commercialization of IP
- ✗ Insufficient legal safeguards, particularly for trade secrets, remain an obstacle.

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.75
3. Patentability of computer-implemented inventions (CIIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	0.25
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.53
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.50
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.50
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.50
20. Industrial design term of protection	0.40
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.25
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0.60
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.00
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0
28. Digital/online piracy rates	0.30
29. Civil and procedural remedies	0.50
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.50
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	1.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	1.00
35. Consultation with stakeholders during IP policy formation	0.50
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.50
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	19.08

Spotlight on the National IP Environment

Past Editions versus Current Scores

China's overall score rose from 42% (with a score of 14.83 out of 35) in the 5th edition to 48% (19.08 out of 40) in the 6th edition, due to the country's strong performance on most of the new indicators as well its enhancement of key IP protections for the life sciences.

Patents, Related Rights, and Limitations

- 2. Patentability requirements:** In 2017, new patent examination guidelines from the State Intellectual Property Office (SIPO) came into effect. Among other elements, the guidelines aim to address existing uncertainty in SIPO guidance and practice about the ability to submit post-filing experimental data to fulfill sufficiency of disclosure requirements for life sciences patents. The guidance permits experimental data after the filing date if the data support a technical effect disclosed in the initial application. While this is a positive development (and China's score for this indicator rises 0.25), some limitations remain. The allowance of post-filing data is only for the element of nondisclosure and not for other aspects of patentability. In addition, the language of the guidelines could be interpreted to require that the exact technical effect of the invention be disclosed in the initial claim, although this is not necessarily known prior to the development of the experimental data. It is therefore important to monitor guideline implementation. In addition, the new guidelines do not exclude business methods from patentability if they have technical features and meet other patentability criteria. The guidelines also clarify that patentable subject matter can include an invention relating to a computer program (such as an apparatus claim that includes a computer program as one aspect or a computer program linked to a storage or computer-readable medium).
- 4. Pharmaceutical-related patent enforcement and resolution mechanism; 6. Patent term restoration for pharmaceutical products; and 23. Regulatory data protection (RDP) term:** In October 2017, the central government issued State Council Opinions on Deepening Regulatory Reforms to Encourage Drug and Medical Device Innovation, which confirmed the strengthening of the existing patent linkage mechanism in China (based on the existing Drug Registration Regulations) proposed earlier in 2017. Article 16 provides for the notification of patent holders of applications of relevant follow-on drugs (in comparison to the publishing of applications under the existing system) within a set period. It also specifically permits the initiation of patent disputes once the patent holder is made aware of the application (instead of forcing patent holders to wait until the follow-on drug is marketed). Moreover, the measure indicates that approval of the follow-on product will not take place if, "within a certain period of time," a patent dispute is not yet resolved. Following that period, the China Food and Drug Administration (CFDA) can approve the product for marketing. Importantly, however, and in contrast to earlier CFDA proposals in 2017, the period for notifying the patent holder as well as the period for staying the approval is not provided in the opinion (the CFDA proposal specified this period as 24 months). It is encouraging that a CFDA speech made following the issuing of the opinion indicates that the intention is to resolve patent disputes before the marketing of follow-on drugs. On this basis, China's score for Indicator 4 rises by 0.5. While these are important developments, it is crucial that the CFDA follow up with implementing legislation that includes the specific period proposed earlier in 2017 and confirms the duty and mechanisms for notification of patent holders and the staying of market approval. It is also important to implement the marketed drug list (or "Orange Book") identified in Article 15. In addition to strengthening patent linkage, Article 18 of the opinion explicitly expands RDP to cover not only innovative drugs (with no requirement that these be limited to those first launched in China, as in the existing mechanism) but also biologics, orphan drugs, and pediatric drugs. This represents an important improvement in the scope of RDP protection, which is currently unclear and often misinterpreted by authorities. However, in contrast to the draft circular issued by the CFDA earlier in 2017, which specified a 10-year term for biologics, orphan drugs, and those modified for pediatric use (as well as an additional 3 years for new indications), the opinion does not include a specific period. In addition, in Article 17, the opinion announces a pilot program of patent term extension for a select number of innovative drugs (not specified) that face approval delays due to clinical trials and market authorization review. Until specific terms are indicated for both RDP and patent term restoration, China's score will remain the same for these indicators.

Trademarks, Related Rights, and Limitations

- 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks; and 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights:** Chinese patent law provides for general exclusive rights for design patent holders, but in a number of respects, the design patent system is out of sync with other economies' systems and presents several often-dichotomous challenges for companies. The law provides limited criteria for obtaining design protection and no substantive review takes place, leading to many low-value patents and a high rate of invalidations. According to local legal experts, this trend has also led to a growing incidence of design patent trolls. At the same time, while the law does require absolute (worldwide) novelty, it does not provide a one-year grace period between disclosure abroad and the filing date, as is practice in many other economies. In addition, no protection is currently provided for unregistered designs or for partial designs (although the latter is included in proposed patent amendments). Finally, infringement of protected designs is widespread in China. Altogether, the system creates significant barriers to obtaining and ensuring effective design protection, as well as additional costs and uncertainty. It also presents difficulties for companies seeking protection for trade dress within the design patent system (on top of other challenges for trade dress protection in China, including fragmented protection afforded piecemeal

through various laws). However, there are some positive examples of rights holders achieving effective address. For example, in 2017, the Beijing IP court ruled that Apple Inc. did not infringe on the Chinese company Shenzhen Baili's design patent for smartphones, and it awarded record damages to athletic company New Balance for infringement of its logo by three local companies. Still, incidences of bad faith trademark filing appear to be worsening and a backlog still exists of decades of abusive filings. The courts' and trademark office's efforts to address the problem may yield benefits, but so far, the tide of new filings and the resolution of old cases is an insurmountable problem for true brand development in China.

- 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods:** In 2017, positive developments occurred in terms of public-private partnerships for addressing the online sale of counterfeit good. Building on an existing private sector effort, the Ministry of Commerce has partnered with the parent company of China's leading online marketplace, Alibaba, in the "Cloud Sword Alliance," an operation aimed at leveraging the company's anticounterfeiting technology and big data to identify counterfeit goods online and improve information available to local authorities and investigations. In 2017, as part of the Ministry of Commerce of the People's Republic of China (MOFCOM) partnership, the scope of the operation nearly tripled, from five provincial governments to 13. Because of this unprecedented effort to address the challenge of counterfeit goods available online, China's score for this indicator rises by 0.25. Nevertheless, to effectively identify and address online counterfeiting and to ensure relevant authorities act upon information identified, the operation should continue to involve rights holders.

Trade Secrets and Related Rights

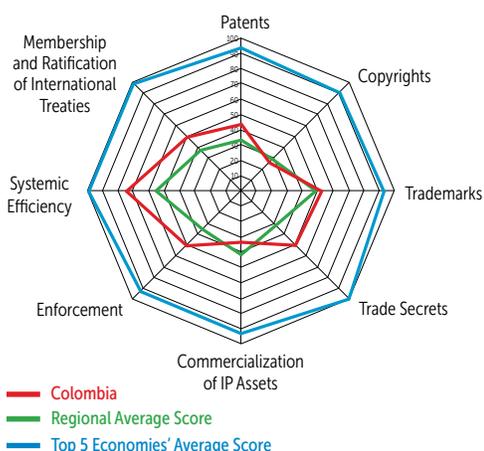
- 22. Protection of trade secrets:** Although the Chinese government recognizes the need to strengthen the protection of IP, insufficient safeguards remain an obstacle for foreign companies. China recently amended its Anti-Unfair Competition Law (AUCL), but only devotes one article to trade secrets protection. Regrettably, this can lead to a 'one-size-fits-all' enforcement approach that may not best suit all rights conferred within the law. Moreover, under the existing legal framework, foreign companies must confront the unaddressed difficulties associated with the right to discovery, burden of proof, and protection of business confidential evidence in any alleged trade secret misappropriation litigation. Consequently, foreign companies struggle to effectively guard their tangible technology and intangible knowledge against trade secret misappropriation.

Commercialization of IP Assets

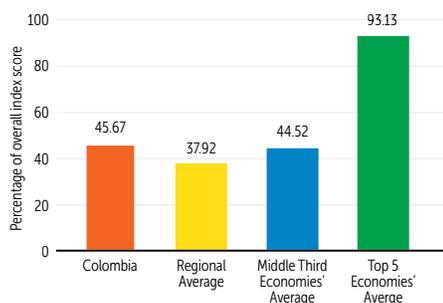
- 25. Regulatory and administrative barriers to the commercialization of IP assets:** Technology companies continue to face a growing number of regulatory and procedural barriers and inflexible terms to licensing in China that impede technology flows and R&D cooperation. In general, licensing agreements must receive government approval. In addition, technology import/export regulations involve discriminatory conditions for foreign licensors, including indemnification of Chinese licensees against third-party infringement and transfer of ownership of future improvements on a licensed technology to the licensee (whereas a Chinese IP owner is able to negotiate different terms), which restrict the ability of foreign companies to negotiate licensing and technology contracts on market terms and to fully commercialize their technology in China.

COLOMBIA

Rank 27 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Patent office efforts to streamline procedures
- ✓ Basic legal framework for major IP rights
- ✓ IP enforcement framework includes civil and criminal remedies and recently strengthened border measures
- ✓ Efforts to coordinate interagency IP enforcement and raise public/stakeholder engagement on IP policymaking and education

KEY AREAS OF WEAKNESS

- ✗ Key life sciences IP rights missing, including patent term restoration and mechanisms for early patent dispute resolution
- ✗ Use of the international compulsory license regime to leverage price reductions for biopharmaceuticals
- ✗ Persisting gaps in copyright framework, specifically in the context of the online environment, although reform is currently under discussion
- ✗ Inadequate/delayed prosecution of and penalties for IP infringement

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.50
3. Patentability of computer-implemented inventions (CIs)	0.50
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.25
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	0.25
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.84
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.00
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.00
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.50
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.40
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.50
23. Regulatory data protection (RDP) term	0.50
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.25
25. Regulatory and administrative barriers to the commercialization of IP assets	0.25
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.53
28. Digital/online piracy rates	0.50
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.50
31. Criminal standards including minimum imprisonment and minimum fines	0.50
32. Effective border measures	0.75
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.50
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.50
35. Consultation with stakeholders during IP policy formation	0.75
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	18.27

Spotlight on the National IP Environment

Past Editions versus Current Scores

Colombia's overall score rose slightly from 43% of the total possible score in the 5th edition (with a score of 15.22 out of 35) to 45.5% (18.27 out of 40) in the 6th edition. This reflects a strong performance in many of the new indicators in the 6th edition. Still, over the past 2 years the IP policy environment in Colombia has become much more challenging, particularly for the biopharmaceutical sector. In 2016, the Ministry of Health and the Colombian government actively considered issuing a compulsory license on the oncology drug Glivec on the grounds of high prices. Subsequently, the Colombian government issued a "Declaration of Public Interest" via Resolution 2475 and committed to unilaterally reducing the price of Glivec by about 45%. On November 22, 2016, the National Commission of Prices of Medicines and Medical Devices (*Comisión Nacional de Precios de Medicamentos y Dispositivos Médicos*) issued Circular No. 3 of 2016, which defines the general pricing methodology applicable to all drugs under a public interest declaration. In contrast to the existing price-setting methodology—whereby the average price is calculated from a group of 17 economies—public interest medicines are subjected to the lowest price available, including prices of follow-on products. In effect, this practice all but nullifies any existing IP protection and is highly questionable in light of Colombia's obligations under TRIPS and the U.S.-Colombia Trade Promotion Agreement. Shortly after the issuance of Circular No. 3, in December 2016, the National Pricing Commission issued Circular No. 4 of 2016, which set the price of Glivec at about 44% of its former price. Subsequently, in April 2017, the Colombian government issued Decree No. 670, which regulates the use of the public interest measure. The decree requires any declaration of public interest to be issued by an interinstitutional technical committee composed of representatives from the Ministry of Commerce, Industry, and Tourism; the National Planning Department; and the Ministry of Health. Thus, the IP environment for biopharmaceuticals in Colombia remains highly uncertain.

Enforcement

32. Effective border measures: In 2016–17, Colombia took steps to strengthen customs officials' ability to act on their powers to seize suspected infringing goods (both imports and in-transit) *ex officio*. Building upon Decree 4540/2006, Decree 390 of 2016 empowers customs officials to act against infringing goods and modernizes and aligns Colombian customs rules with international standards. Decree 390 creates a registry of rights holders and products aimed at accelerating proceedings in customs enforcement, in particular for communications with rights holders in the case of *ex officio* suspension of the release of goods. A newly created *Journal of Customs Activity* reports that this registry currently contains over 4,500 trademarks and 350 rights holders. Reports from the *Dirección de Impuestos y Aduanas Nacionales* (DIAN) in 2017 suggest that customs authorities are implementing the new system to act on suspect cargo (including merchandise that is missing trademarks) and to communicate with relevant rights holders and judicial authorities. In addition, Colombia joined the IPM (Interface Public-Members), the international database of IP-protected products and information-sharing platform for customs authorities and rights holders. Access to this database helps enable officials from DIAN to quickly check the authenticity of goods and act on suspect goods. Because of the above improvements and initial implementation, Colombia's score for this indicator rises by 0.25.

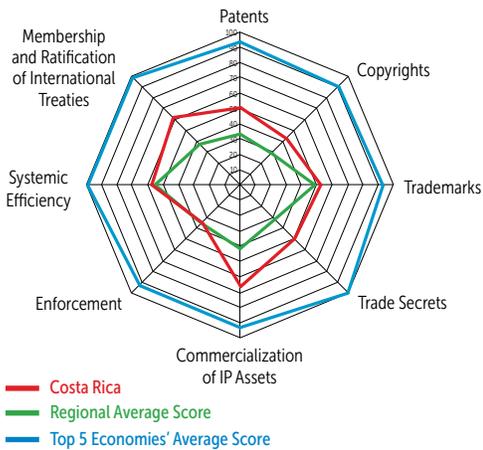
Systemic Efficiency

35. Consultation with stakeholders during IP policy formation: Updating existing regulations (including Decree 1081 of 2015) on the rights of citizens and public interest groups to participate in the development of regulations, Decree 270 of 2017 from the Office of the President requires that draft regulations be published online for at least 15 calendar days. It also mandates that the issuing agency provide opportunities, including via online platforms, for participation by and submissions from the public. In addition, government agencies should provide a publicly available report/summary of responses received from the consultation. A number of departments and agencies, including those in the IP policy space, release drafts of legislative and regulatory amendments and provide stakeholders the chance to comment, but not always consistently or with adequate time frames or a wide enough inclusion of the relevant public.

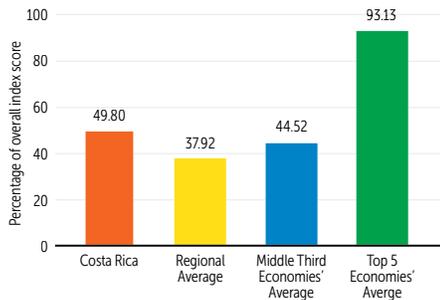
36. Educational campaigns and awareness raising: A number of Colombian government agencies, including the patent office, are engaged in awareness-raising activities. For example, the patent office's "IP Classroom" provides online and in-person courses, capacity-building workshops, and free seminars across the country for a range of audiences, including academia, SMEs, civil servants, students, and the wider public. IP Classroom courses aim to strengthen knowledge about IP protection and the use of IP for research and commercial purposes. Sector-specific campaigns include an antipiracy campaign launched by the National Television Authority in partnership with the Attorney General targeting both enforcement officials and the public. The campaign aims to raise awareness of the criminal nature and consequences of online piracy. The Attorney General and DIAN, along with the private sector, also held a public education campaign on software piracy, the importance of avoiding illegal vendors, and the need to respect copyright.

COSTA RICA

Rank 22 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Patent framework in line with international standards, with some exceptions
- ✓ Certain elements of an advanced online copyright regime in law
- ✓ Fundamentals of trademark protection available in law
- ✓ Customs authorities empowered to address various types of infringing goods *ex officio*
- ✓ Ongoing efforts to raise awareness of IP rights

KEY AREAS OF WEAKNESS

- ✗ Delays and significant lack of implementation of online copyright regime
- ✗ Gaps in effectiveness of life sciences IP rights
- ✗ System of enforcement of IP rights slow and lacking effectiveness
- ✗ Inadequate penalties for IP infringement

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.50
3. Patentability of computer-implemented inventions (CIs)	0.75
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.25
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	0.30
7. Membership in Patent Prosecution Highways (PPHs)	0.00
8. Patent opposition	0.25
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.74
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.25
12. Availability of frameworks that promote cooperative action against online piracy	0.25
13. Scope of limitations and exceptions to copyrights and related rights	0.50
14. Digital rights management (DRM) legislation	0.50
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.50
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.40
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.50
23. Regulatory data protection (RDP) term	0.50
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.75
25. Regulatory and administrative barriers to the commercialization of IP assets	0.75
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.57
28. Digital/online piracy rates	0.41
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.50
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.50
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.50
35. Consultation with stakeholders during IP policy formation	0.50
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.50
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	19.92

Spotlight on the National IP Environment

Copyrights, Related Rights, and Limitations

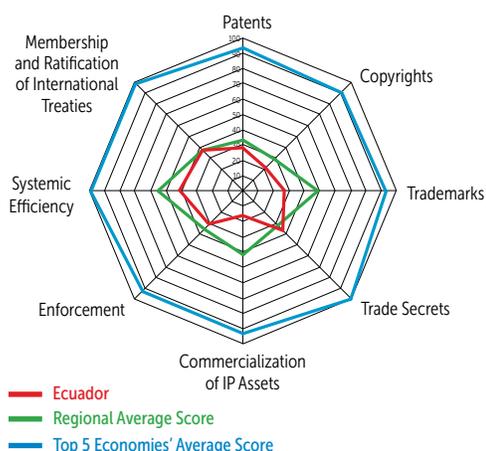
11. Expedient injunctive-style relief and disabling of infringing content online; and 12. Availability of frameworks that promote cooperative action against online piracy: As part of its compliance with Costa Rica's commitments in the Dominican Republic-Costa Rica FTA (CAFTA-DR) agreement, Decree 36,880 (COMEX-JP, 2011) introduced both a private cooperative mechanism and a judicial mechanism for removing access to infringing websites and content. The decree provides for limited liability for ISPs that take action in response to notification by rights holders of copyright infringement by their users or on their networks or services. Specifically, it provides for a mechanism whereby rights holders can notify ISPs of allegedly infringing users or sites, following which ISPs must notify infringers. However, the period for notification is long—the ISP has 30 days to notify the infringer and the infringer has an additional 15 days to remove the material or challenge the request. Hence, the notification process takes 45 days, a lengthy period considering the speed of online access to content. If the content is not voluntarily removed within that period, the ISP is entitled to take measures on its own to take down or disable access to the infringing content. In practice, according to rights holders' reports, ISPs show limited responsiveness to rights holder notification. Decree 36,880 also provides a judicial mechanism for removing infringing material and disabling access to infringing sites once ISPs and infringers have been notified. In these cases, judicial authorities are entitled to order the takedown of an account, to take any reasonable measure to take down or disable access to the identified infringing content, or to take any other action deemed necessary. These measures can be ordered solely as a compensatory measure, as a preliminary injunction, or as a final measure. Evidence to date suggests that such decisions by courts in Costa Rica are very infrequent. Copyright piracy is a serious concern in Costa Rica, particularly in terms of the presence of notorious sites that provide access to blatantly infringing content. Two of the largest infringing file-sharing websites worldwide, The Pirate Bay and Kickasstorrents, are operating under a Costa Rican country top-level domain.

Enforcement

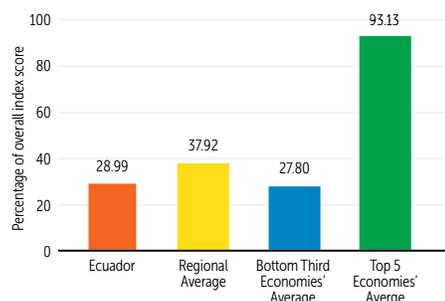
29. Civil and procedural remedies; 30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement; 31. Criminal standards, including minimum imprisonment and minimum fines; and 32. Effective border measures: The Law on Procedures for the Enforcement of Intellectual Property Rights of 2000 (last amended in 2010) provides for preliminary measures against all major types of IP infringement—for example, injunctive relief and seizure of goods—but, it lacks deterrent remedies and penalties for IP infringement. For instance, gaps exist in relation to remedies for deliberate or willful infringement and penalties are relatively low. Based on 2008 amendments, the law does provide for preestablished damages (in Article 40bis) for both copyright and trademark infringement. In practice, significant delays in the judicial system are perceived by local legal experts as hampering the effectiveness of legal actions, even with the addition of personnel in recent years. For example, despite doubling staff during the period, a 2015 report suggests that the rate of completed court cases in Costa Rica was less than half in 2015 compared to 2013. In addition, there is a lack of knowledge about IP protection in courts and among customs authorities. However, Costa Rica has taken some steps to improve the effectiveness of its IP enforcement system: the number of ongoing criminal investigations has increased and the Economic Crimes Prosecutor has assumed competence for IP cases. Relatively strong border measures are also available in Costa Rica, including the *ex officio* seizure of both imported and in-transit goods suspected to be infringing IP rights, although some barriers exist with regard to the effectiveness of these measures (such as the lack of a formal recording system and relatively short time frames for rights holder notification).

ECUADOR

Rank 45 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ New 5-year term of RDP defined in 2016 law *Código Ingenios*
- ✓ Limited re-criminalization of IP rights through 2016 criminal law amendments
- ✓ Member of PPH

KEY AREAS OF WEAKNESS

- ✗ *Código Ingenios* limits the number of renewable periods for trademark registrations, in violation of the TRIPS Agreement
- ✗ *Código Ingenios* imposes new limits on patentability and increase the scope of nonpatentable subject matter
- ✗ Persistently high levels of piracy

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.50
3. Patentability of computer-implemented inventions (CIIs)	0
4. Pharmaceutical-related patent enforcement and resolution mechanism	0
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0
6. Patent term restoration for pharmaceutical products	0
7. Membership in Patent Prosecution Highways (PPHs)	0.5
8. Patent opposition	0.25
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.74
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expeditious injunctive-style relief and disabling of infringing content online	0
12. Availability of frameworks that promote cooperative action against online piracy	0
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	0
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.25
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.25
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.40
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0.50
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0
25. Regulatory and administrative barriers to the commercialization of IP assets	0.25
26. IP as an economic asset	0.25
Category 6: Enforcement	
27. Physical counterfeiting rates	0.39
28. Digital/online piracy rates	0.32
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.25
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.50
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.25
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.25
35. Consultation with stakeholders during IP policy formation	0.25
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0
39. Patent Law Treaty	0
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.5
TOTAL	11.60

Spotlight on the National IP Environment

Past Editions versus Current Scores

Ecuador's overall score decreased from 30% (10.59 out of 35) in the 5th edition to 29% (11.60 out of 40) in the 6th edition. This reflects a weak performance in many of the new indicators and the implementation of several negative aspects of the 2016 *Código Ingenios*.

Area of Note

In October 2016, Ecuador's National Assembly passed the *Código Orgánico de Economía Social del Conocimiento, la Creatividad y la Innovación (Código Ingenios)*. The legislation touches on all facets of IP rights, R&D, and innovation. As noted in previous editions of the Index, many of the provisions of this new law conflict with Ecuador's old Intellectual Property Law and its international treaty obligations, including the TRIPS agreement and the European Union's Trade Agreement with Colombia and Peru (to which Ecuador acceded in November 2016). At the time of research surrounding the 5th edition of the Index, the *Código Ingenios* had not officially become law, and Ecuador's score on the 5th edition of the Index was unaffected. This year, the new law has been fully accounted for and is reflected in Ecuador's scores.

Patents, Related Rights, and Limitations

- 2. Patentability requirements:** Like other member states of the Andean Community trading bloc, Ecuador's IP laws are subject to decisions made by the community. With respect to IP protection and patentability standards in particular, many of these decisions have long stood outside established international norms. For example, Andean Decision 486, which established the Common Industrial Property Regime, explicitly restricts second use patent claims for biopharmaceuticals. Although Ecuador is a member of the Andean Community, its main IP law (the Intellectual Property Act) had not included these provisions. However, the new *Código Ingenios* both restricts patentable subject matter and explicitly disallows second use claims. Article 268 increases the scope of nonpatentable subject matter and Article 274 eliminates any patentability of second use inventions for biopharmaceuticals. Paragraph 5 excludes second uses of known substances as described by the Andean Decision. Paragraph 3 excludes any "new form of a substance, including salts, esters, ethers, complexes, combinations and other derivatives." This precludes the patentability of new products wherein known substances are combined to increase efficacy or safety of treatment, which is a key part of incremental medical innovation. Given the centrality of incremental innovation to the life sciences sector—consider the evolution of antiretroviral medicines from multiple daily doses to a single pill—it is difficult to see how further restricting the patenting environment will help Ecuador achieve its goal to inspire innovation-driven economic development.
- 7. Membership in Patent Prosecution Highways (PPHs):** Although Ecuador is not a member of either the Global Patent Prosecution Highway or the IP5 PPH, it is a member of the regional Latin American cooperation effort PROSUR. Launched in 2016, this initiative includes a pilot PPH between the contracting offices. Members of the initiative include Argentina, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, and Uruguay and, from 2017, Costa Rica. For a region that has long been plagued by long patent office backlogs, this development should help inventors register their rights more quickly and give consumers better access to new technologies and products.

Trademarks, Related Rights, and Limitations

- 16. Trademarks term of protection (renewal periods):** In an unusual step, the *Código Ingenios* has introduced limits on the number of trademark renewal periods. Under Article 365 the term of protection for trademarks has been amended, with renewal periods limited to two renewals. This stands in contrast to TRIPS Article 18, which states that "the registration of a trademark shall be renewable indefinitely." As a result, Ecuador's score on this indicator has dropped.

Trade Secrets and Related Rights

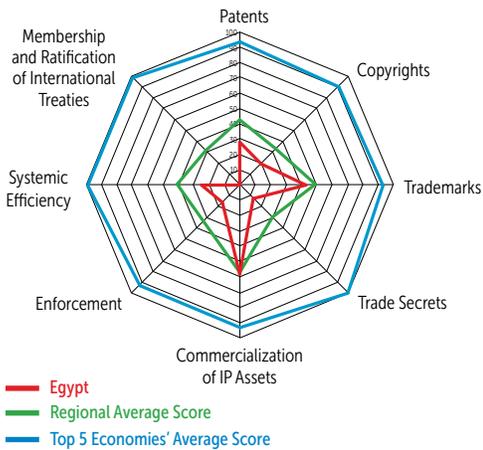
- 23. Regulatory data protection (RDP) term:** In a positive move, the *Código Ingenios* has introduced a defined term of protection for submitted biopharmaceutical test data during the market authorization approval process. Until now, Ecuador did not provide an effective term of regulatory data protection. Although Article 191 of the Intellectual Property Law provided a basis for the protection of submitted biopharmaceutical test data, no term of protection was specified in this legislation. Now, Article 509 of the *Código Ingenios* clearly defines a five-year term of regulatory data protection. As a result, Ecuador's score on this indicator has increased.

Membership in and Ratification of International Treaties

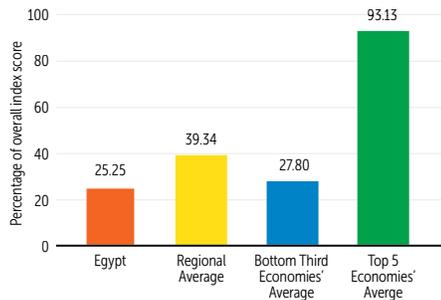
Ecuador scores relatively low in its participation in and ratification of international treaties because it is not a contracting party to the Patent Law Treaty or the Singapore Treaty on the Law of Trademarks. Ecuador is a signatory of and has acceded to the WIPO Internet Treaties. In November 2016, Ecuador formally acceded to the EU's Trade Agreement with Colombia and Peru. This treaty is in provisional application, with full implementation by the contracting parties in process. As mentioned, a number of provisions included in the *Código Ingenios* appear to contradict both the letter and spirit of the agreement, and it is difficult to envision this treaty being implemented without future substantial changes to Ecuador's IP laws. Nevertheless, the accession to this treaty has increased Ecuador's score in this category.

EGYPT

Rank 48 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ PPH in place with the JPO since 2015
- ✓ Relative freedom to patent CILs
- ✓ Strong push from government to raise awareness about counterfeit products, particularly medicines

KEY AREAS OF WEAKNESS

- ✗ Limited framework for protection of life sciences IP rights
- ✗ Gaps in copyright law and framework, particularly for protection of content online
- ✗ High levels of piracy
- ✗ Challenging enforcement environment and lack of border measures
- ✗ Limited participation in international IP treaties

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.25
3. Patentability of computer-implemented inventions (CILs)	0.50
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.50
8. Patent opposition	0.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.38
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.00
13. Scope of limitations and exceptions to copyrights and related rights	0.50
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.00
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.25
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.25
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.60
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.25
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.75
25. Regulatory and administrative barriers to the commercialization of IP assets	0.50
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.23
28. Digital/online piracy rates	0.39
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.00
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.25
35. Consultation with stakeholders during IP policy formation	0.25
36. Educational campaigns and awareness raising	0.25
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	0.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	10.10

Spotlight on the National IP Environment

Past Editions versus Current Scores

Egypt's overall score decreased from 27% (9.38 out of 35) in the 5th edition of the Index to 25% (10.10 out of 40) in the 6th edition of the Index, mainly as a result of the country's weak performance in many of the 6th edition's new indicators.

Patents, Related Rights, and Limitations

4. **Pharmaceutical-related patent enforcement and resolution mechanism:** As noted in the 5th edition of the Index, there is currently no mechanism that links the market authorization of a follow-on biopharmaceutical product with the exclusivity status of the reference product. Industry reports suggest that since 2013, a number of follow-on products have been granted market authorization by health authorities even though the reference products are under patent protection. Given the difficulties in enforcing IP rights through the Egyptian court system, the lack of a linkage mechanism means rights holders have a very limited ability to protect and defend their IP against infringement.

7. **Membership in Patent Prosecution Highways (PPHs):** Although Egypt is not a member of either the Global Patent Prosecution Highway or the IP5 PPH, the Egyptian Patent Office (EGPO) and Japan Patent Office (JPO) have had in place a PPH since 2015. Hopefully, other offices in Africa will follow the EGPO's leadership on this account. In 2017, the initiative was extended for an additional three years.

Commercialization of IP Assets

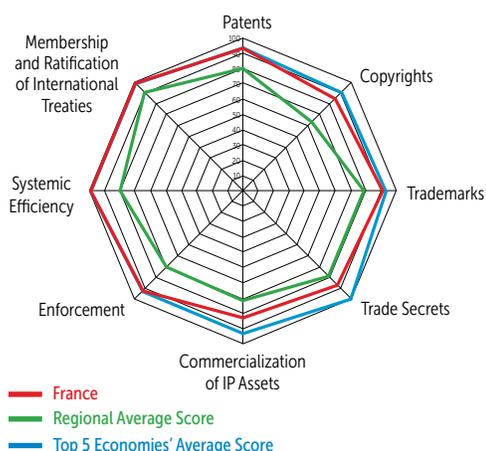
26. **IP as an economic asset:** The Egyptian government has a long-standing commitment to developing and harnessing the ICT sector. Since 2003, the Ministry of Communications and Information Technology (MCIT) has issued periodic plans and national strategies relating to the development of this sector. Promotion and use of IP as an asset has been part of the ministry's mandate for some time. For example, the Information Technology Industry Development Agency (part of the Ministry of Communications and Information Technology) directly supports and sponsors the filing of patents for CIIs in Egypt and abroad and provides technical workshops, assistance, and awareness-raising activities throughout Egypt. In 2016, specialized IP units held a number of workshops and seminars with public prosecutors and court officials and directly engaged in enforcement activities via technical assistance reports to the judiciary. More broadly, several national research institutes, including the Innovation and Invention Development Agency under the Academy of Scientific Research and Technology, are engaged in technology development and transfer. A number of Egyptian universities, such as Alexandria University and American University in Cairo, also have technology transfer offices in place. Further, the MCIT has targeted universities for its IP workshops and outreach activities.

Systemic Efficiency

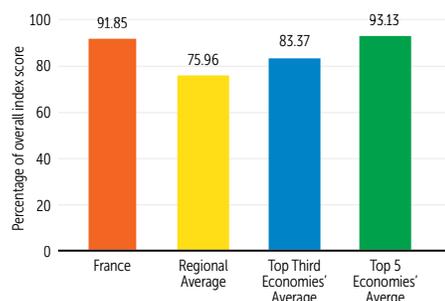
36. **Educational campaigns and awareness raising:** Although the IP enforcement environment in Egypt remains problematic (this is particularly the case for copyright and trademarks), both public and private sector entities have a strong track record for engaging in sustained awareness-raising activities in key sectors. For example, since 2010, Egyptian authorities have run a number of awareness campaigns about counterfeit and substandard medicines. The latest, launched in 2015, was a joint initiative between the Egyptian pharmaceutical industry and the Ministry of Health and national pharmacists' association. Counterfeit medicines are estimated to constitute roughly 2% of the total national supply chain; consequently, they represent a significant public health risk.

FRANCE

Rank 4 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Injunctive relief available and in use through court orders for the disabling of infringing content online
- ✓ Strong and sophisticated national IP environment

KEY AREAS OF WEAKNESS

- ✗ EU Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to France's and the EU's research- and IP-based biopharmaceutical industry
- ✗ Relatively high estimated software piracy rates for a high-income OECD economy at 34%

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	1.00
3. Patentability of computer-implemented inventions (CIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	1.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.74
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.75
11. Expeditious injunctive-style relief and disabling of infringing content online	1.00
12. Availability of frameworks that promote cooperative action against online piracy	0.75
13. Scope of limitations and exceptions to copyrights and related rights	1.00
14. Digital rights management (DRM) legislation	1.00
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.75
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	1.00
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	1.00
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.50
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	1.00
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.75
23. Regulatory data protection (RDP) term	1.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.75
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.84
28. Digital/online piracy rates	0.66
29. Civil and procedural remedies	1.00
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	1.00
31. Criminal standards including minimum imprisonment and minimum fines	1.00
32. Effective border measures	1.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	1.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	1.00
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	1.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	36.74

Spotlight on the National IP Environment

Past Editions versus Current Scores

France's overall score has increased from 88.2% (30.87 out of 35) in the 5th edition of the Index to 92% (36.74 out of 40) in the 6th edition. This reflects a strong performance in the six new indicators.

Patents, Related Rights, and Limitations

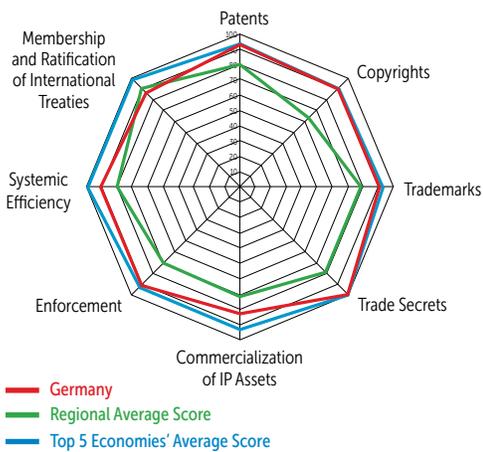
6. Patent term restoration for pharmaceutical products: In October 2015, the European Commission (EC) released its report *Upgrading the Single Market: More Opportunities for People and Business*, which details the overarching initiative to reform and deepen the single market with the purpose of spurring economic growth, creating jobs, and reducing administrative burdens. The report identified the need to address the ambiguity formed by the ongoing process of creating an EU-wide unitary patent system and identified the lack of a conforming mechanism for supplementary protection certificates (SPCs). While emphasizing the benefits of a unitary SPC title, the EC also announced its intention to explore options for recalibrating certain elements of this IP right. One such option put forth by the EC is to provide European manufacturers of generic drugs and biosimilars with an SPC manufacturing exemption that would "create thousands of high-tech jobs in the EU and many new companies." Unfortunately, the EC appears to have lost sight of the fact that IP incentives, such as SPC protection, have been central to the success of Europe's research-based biopharmaceutical industry. In 2016, industry estimates suggested that this sector generated some 745,000 direct jobs (with more than 113,000 persons employed directly in innovative R&D)—a growth of 33% since 2000. Furthermore, the European research-based biopharmaceutical industry generated more than EUR238 billion in pharmaceutical production in 2015, as well as investments of some EUR33.5 billion in R&D activities across the EU. Many troubling assumptions underlie the commission's proposal. One running assumption about the potential gains to European generic manufacturers is that there is an actual market and demand for European generic manufacturers' products. Yet it is not at all clear what this market is or where the demand for generic medicines produced in Europe would come from. In all likelihood, generic follow-on products are already on the market in many of these economies and, critically, being produced by local manufacturers that are often preferred partners in local drug procurement. And for those markets where equivalent protection mechanisms are in place, it is highly unlikely that an SPC exemption would grant the European generic and biosimilar manufacturers an exclusive status for early market entry of their products across the globe. In fact, an EU SPC exemption will invite other economies to consider the question: "If the European Union is weakening IP standards to benefit their domestic industries, why shouldn't we?" In essence, this proposal could inspire a race to the bottom in weakening global IP standards. Moving forward with an SPC exemption would result in EU member states, France included, seeing a score reduction to 0 on this indicator.

Copyrights, Related Rights, and Limitations

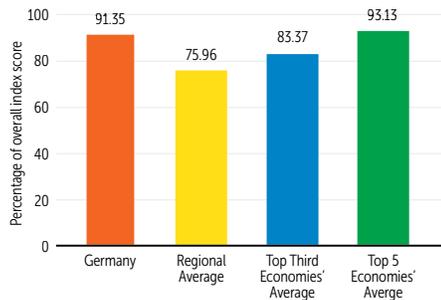
11. Expeditious injunctive-style relief and disabling of infringing content online: The EU's E-Commerce Directive (2000/31/EC), Articles 12–14, combined with the Copyright Directive (2001/29/EC), Article 8(3), enable a court or administrative authority to require ISPs to terminate or prevent copyright infringement by third parties using their services and lay the basis for injunctive-type relief against infringing websites in EU member states (while still providing a safe harbor for ISPs). Recent case law from the Court of Justice of the European Union (CJEU) (including Case C-610/15, *Brien/Ziggo*) suggests that this provision extends to disabling access to torrent websites, which are perceived by the CJEU under the umbrella of a "communication to the public" per EU copyright law. In France, injunctive relief has been available for a number of years. Since 2014, access to close to 20 suspected websites (including The Pirate Bay) has effectively been disabled. Furthermore, in December 2017, a new court ruling ordered the disabling of access (and deindexing via Web searches) to a number of suspected websites. Overall, rights holders are increasingly able to seek redress via the French courts.

GERMANY

Rank 5 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Advanced and sophisticated national IP environment
- ✓ Sector-specific IP rights, such as regulatory data protection and patent term restoration, in place
- ✓ Membership in all major international PPH tracks through the national patent office and the EPO

KEY AREAS OF WEAKNESS

- ✗ EU Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to Germany's and EU's research- and IP-based biopharmaceutical industry
- ✗ Damages awarded historically low
- ✗ Patent Law Treaty signed but not ratified

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	1.00
3. Patentability of computer-implemented inventions (CIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	1.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.63
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	1.00
11. Expedient injunctive-style relief and disabling of infringing content online	1.00
12. Availability of frameworks that promote cooperative action against online piracy	1.00
13. Scope of limitations and exceptions to copyrights and related rights	0.75
14. Digital rights management (DRM) legislation	1.00
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	1.00
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	1.00
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	1.00
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.50
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	1.00
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	1.00
23. Regulatory data protection (RDP) term	1.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.75
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.88
28. Digital/online piracy rates	0.78
29. Civil and procedural remedies	1.00
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.75
31. Criminal standards including minimum imprisonment and minimum fines	1.00
32. Effective border measures	1.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	1.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.75
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	0.50
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	36.54

Spotlight on the National IP Environment

Past Editions versus Current Scores

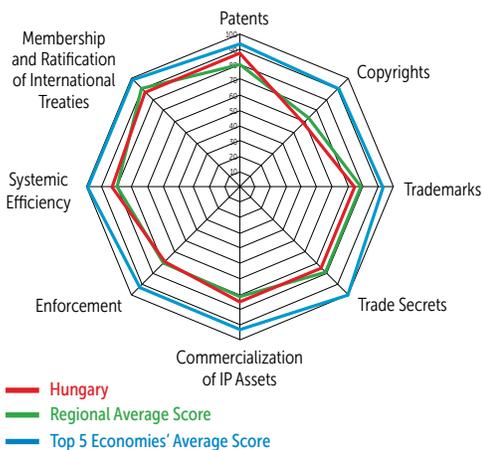
Germany's overall score has seen a marginal improvement, rising from 91.2% (31.92 out of 35) in the 5th edition of the Index to 91.4% (36.54 out of 40) in the 6th edition. This reflects a strong performance in the new indicators.

Patents, Related Rights, and Limitations

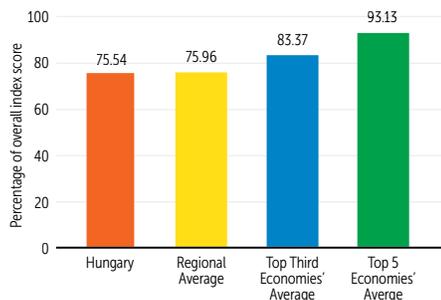
- 5. Legislative criteria and active use of compulsory licensing of patented products and technologies:** A ruling this year by the German Federal Supreme Court has stirred interest among compulsory licensing advocates. The court affirmed a temporary compulsory license that allows Merck to continue the distribution in Germany of Isentress (raltegravir), a new class of antiretroviral particularly effective for children under age 12, pregnant women who need prophylactic treatment, and long-term patients. Importantly, Isentress is used to reduce the virus load in the body, so the chances of transmission are significantly diminished. The patentee, Shionogi & Co., obtained a European patent in 2012 which covers the antiviral compound raltegravir. In response, Merck filed an opposition with the EPO while attempting to obtain a worldwide license from Shionogi. Factoring in the pending opposition at the EPO, Merck offered Shionogi USD10 million for a worldwide license, which Shionogi rejected as too low. In turn, Merck successfully applied for a compulsory license at the German Federal Patent Court under Section 85 of the German Patent Law. The grant was based on two grounds: (1) Merck tried in good faith to negotiate a license with Shionogi on reasonable terms based on market variables present at the time, and (2) lives were at stake without a compulsory license. Independent expert testimony confirmed that no alternative therapies existed to replace raltegravir without potential lifelong side effects and disadvantageous drug interaction due to the exchange, especially in the particularly vulnerable subset patient population. Experts also noted that withdrawing raltegravir from the market would increase the viral load in these patients and, consequently, increase the likelihood of infection to others. While the terms of the compulsory license (market based) were to be considered during later proceedings, the Board of Appeals of the EPO found Shionogi's underlying patent invalid, rendering moot such hearings. Notably, this compulsory license was predicated on two fundamental grounds: good faith attempts to negotiate a license, and casualties in the absence of a compulsory license. Critically, the price of the product was never factored into the equation.
- 6. Patent term restoration for pharmaceutical products:** In October 2015, the European Commission (EC) released its report *Upgrading the Single Market: More Opportunities for People and Business*, which details the overarching initiative to reform and deepen the single market with the purpose of spurring economic growth, creating jobs, and reducing administrative burdens. The report identified the need to address the ambiguity formed by the ongoing process of creating an EU-wide unitary patent system and identified the lack of a conforming mechanism for supplementary protection certificates (SPCs). While emphasizing the benefits of a unitary SPC title, the EC also announced its intention to explore options for recalibrating certain elements of this IP right. One such option put forth by the EC is to provide European manufacturers of generic drugs and biosimilars with an SPC manufacturing exemption that would "create thousands of high-tech jobs in the EU and many new companies." Unfortunately, the EC appears to have lost sight of the fact that IP incentives, such as SPC protection, have been central to the success of Europe's research-based biopharmaceutical industry. In 2016, industry estimates suggested that this sector generated some 745,000 direct jobs (with more than 113,000 persons employed directly in innovative R&D)—a growth of 33% since 2000. Furthermore, the European research-based biopharmaceutical industry generated more than EUR238 billion in pharmaceutical production in 2015, as well as investments of some EUR33.5 billion in R&D activities across the EU. Many troubling assumptions underlie the commission's proposal. One running assumption about the potential gains to European generic manufacturers is that there is an actual market and demand for European generic manufacturers' products. Yet it is not at all clear what this market is or where the demand for generic medicines produced in Europe would come from. In all likelihood, generic follow-on products are already on the market in many of these economies and, critically, being produced by local manufacturers that are often preferred partners in local drug procurement. And for those markets where equivalent protection mechanisms are in place, it is highly unlikely that an SPC exemption would grant the European generic and biosimilar manufacturers an exclusive status for early market entry of their products across the globe. In fact, an EU SPC exemption will invite other economies to consider the question: "If the European Union is weakening IP standards to benefit their domestic industries, why shouldn't we?" In essence, this proposal could inspire a race to the bottom in weakening global IP standards. Moving forward with an SPC exemption would result in EU member states, Germany included, seeing a score reduction to 0 on this indicator.
- 7. Membership in Patent Prosecution Highways (PPHs):** The German Patent and Trade Mark Office participates in the Global PPH pilot. Germany is also a member of the EPO, which in turn is a member of the IP 5 PPH. The EPO has additional PPH agreements with the Australian Patent Office, Canadian Intellectual Property Office, State Intellectual Property Office of the People's Republic of China, Israel Patent Office, Japan Patent Office, Korean Intellectual Property Office, Mexican Institute of Industrial Property, Intellectual Property Corporation of Malaysia, Intellectual Property Office (Philippines), Russian Federal Service for Intellectual Property (Rospatent), Intellectual Property Office of Singapore, and the U.S. Patent and Trademark Office.

HUNGARY

Rank 15 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Fairly strong and sophisticated IP system conferred through EU membership
- ✓ Sector-specific IP rights in place

KEY AREAS OF WEAKNESS

- ✗ EU Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to Hungary's and EU's research- and IP-based biopharmaceutical industry
- ✗ Challenging enforcement environment—particularly for online and digital content
- ✗ Consultation mechanisms in place but time offered to make submissions relatively short

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.75
3. Patentability of computer-implemented inventions (CIIs)	0.75
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	1.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.63
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.50
11. Expeditious injunctive-style relief and disabling of infringing content online	0.75
12. Availability of frameworks that promote cooperative action against online piracy	0.50
13. Scope of limitations and exceptions to copyrights and related rights	0.75
14. Digital rights management (DRM) legislation	0.50
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.50
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.75
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.50
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.75
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.50
23. Regulatory data protection (RDP) term	1.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.75
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.71
28. Digital/online piracy rates	0.62
29. Civil and procedural remedies	0.50
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.50
31. Criminal standards including minimum imprisonment and minimum fines	0.50
32. Effective border measures	1.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	1.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	1.00
35. Consultation with stakeholders during IP policy formation	0.75
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.50
39. Patent Law Treaty	1.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	30.21

Spotlight on the National IP Environment

Past Editions versus Current Scores

Hungary's overall score has increased from 73% (25.39 out of 35) in the 5th edition of the Index to 76% (30.21 out of 40) in the 6th edition. This reflects a strong performance in the new indicators added.

Patents, Related Rights, and Limitations

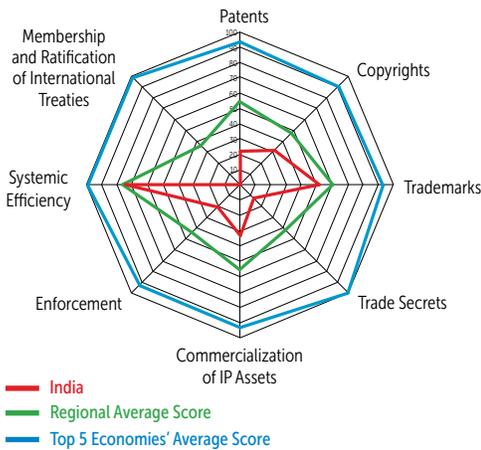
6. Patent term restoration for pharmaceutical products: In October 2015, the European Commission (EC) released its report *Upgrading the Single Market: More Opportunities for People and Business*, which details the overarching initiative to reform and deepen the single market with the purpose of spurring economic growth, creating jobs, and reducing administrative burdens. The report identified the need to address the ambiguity formed by the ongoing process of creating an EU-wide unitary patent system and identified the lack of a conforming mechanism for supplementary protection certificates (SPCs). While emphasizing the benefits of a unitary SPC title, the EC also announced its intention to explore options for recalibrating certain elements of this IP right. One such option put forth by the EC is to provide European manufacturers of generic drugs and biosimilars with an SPC manufacturing exemption that would "create thousands of high-tech jobs in the EU and many new companies." Unfortunately, the EC appears to have lost sight of the fact that IP incentives, such as SPC protection, have been central to the success of Europe's research-based biopharmaceutical industry. In 2016, industry estimates suggested that this sector generated some 745,000 direct jobs (with more than 113,000 persons employed directly in innovative R&D)—a growth of 33% since 2000. Furthermore, the European research-based biopharmaceutical industry generated more than EUR238 billion in pharmaceutical production in 2015, as well as investments of some EUR33.5 billion in R&D activities across the EU. Many troubling assumptions underlie the commission's proposal. One running assumption about the potential gains to European generic manufacturers is that there is an actual market and demand for European generic manufacturers' products. Yet it is not at all clear what this market is or where the demand for generic medicines produced in Europe would come from. In all likelihood, generic follow-on products are already on the market in many of these economies and, critically, being produced by local manufacturers that are often preferred partners in local drug procurement. And for those markets where equivalent protection mechanisms are in place, it is highly unlikely that an SPC exemption would grant the European generic and biosimilar manufacturers an exclusive status for early market entry of their products across the globe. In fact, an EU SPC exemption will invite other economies to consider the question: "If the European Union is weakening IP standards to benefit their domestic industries, why shouldn't we?" In essence, this proposal could inspire a race to the bottom in weakening global IP standards. Moving forward with an SPC exemption would result in EU member states, Hungary included, seeing a score reduction to 0 on this indicator.

Systemic Efficiency

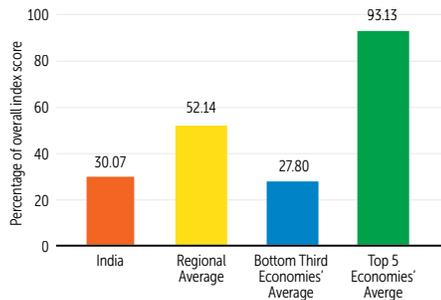
35. Consultation with stakeholders during IP policy formation: Public consultation on all draft legislation in Hungary is required by the 2010 "Law on the Participation of the Community in the Preparation of Laws." This law defines both the need for and format of a consultation period. However, empirical analysis shows that although consultations take place, they can be short, and the time allowed for the submission of comments can at times be exceedingly short. A 2015 report by the Corruption Research Center Budapest (supported by the EU Commission's Representation in Hungary) found that the average number of days a consultation was open was between 4 and 8 days, based on a review of over 200 draft pieces of primary and secondary legislation in the period 2011–14. In a handful of cases, the deadline for making public submissions was the same day as the publication of the draft bill. Consultation with all relevant stakeholders is vital in the development of new primary and secondary legislation. Hungary should be commended for having an established standard and operating procedure. However, consultations are effective only if stakeholders are practically and effectively allowed to make submissions within a reasonable time frame.

INDIA

Rank 44 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Revised July 2017 "Guidelines for Examination of Computer Related Inventions (CRIs)" significantly improves the patenting environment for CIs
- ✓ Injunctive relief available against copyright-infringing websites
- ✓ New trademark guidelines should make it easier for well-known marks to be recognized and receive protection
- ✓ Launch of the Scheme for IPRs Awareness to meet the commitment to IP education and awareness included in the National IPR Policy

KEY AREAS OF WEAKNESS

- ✗ Limited framework for protection of life sciences IP
- ✗ Patentability requirements outside international standards
- ✗ Lengthy pre-grant opposition proceedings
- ✗ Previously used compulsory licensing for commercial and nonemergency situations
- ✗ Limited participation in international IP treaties
- ✗ No participation in international PPH tracks

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.00
3. Patentability of computer-implemented inventions (CIs)	0.75
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.00
8. Patent opposition	0.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.47
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.75
12. Availability of frameworks that promote cooperative action against online piracy	0.25
13. Scope of limitations and exceptions to copyrights and related rights	0.00
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.25
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.25
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.60
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.25
25. Regulatory and administrative barriers to the commercialization of IP assets	0.25
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.29
28. Digital/online piracy rates	0.42
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.00
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.25
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.25
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	0.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	12.03

Spotlight on the National IP Environment

Past Editions versus Current Scores

India's overall score has increased substantially from 25% (8.75 out of 35) in the 5th edition of the Index to 30% (12.03 out of 40) in the 6th edition. This reflects a relatively strong performance in the new indicators as well as positive reform efforts on patentability of CIIs and registration procedures for well-known marks.

Patents, Related Rights, and Limitations

3. Patentability of computer-implemented inventions (CIIs): The revised July 2017 "Guidelines for Examination of Computer Related Inventions (CRIs)" significantly improves the patenting environment for CIIs in India. Unlike previous drafts of the guidelines, there is no requirement for hardware innovation. Local legal analysis suggests that although they do not carry the force of primary or secondary legislation, these new guidelines should create more certainty for innovators in the computer software space. Future editions of the Index will monitor the extent to which these guidelines are being applied in practice and the extent to which patents are being granted for qualifying inventions. Because of these new guidelines, India's score has increased on this indicator.

Copyrights, Related Rights, and Limitations

11. Expedient injunctive-style relief and disabling of infringing content online: In an otherwise challenging copyright environment in India, a positive trend has emerged over the past few years: Rights holders are increasingly able to defend and enforce their copyrights through injunctive relief. Since 2012, there have been a number of cases in which access to websites offering pirated and infringing content—including notorious international sites like The Pirate Bay—has been disabled through court orders. Injunctions have been issued by both the High Court of Delhi and High Court of Bombay, with the Department of Telecommunications instructing Indian ISPs to carry out the order. Although the case law and procedures are still evolving (particularly with regard to disabling access to specific URLs versus entire websites), this is nevertheless a positive development that will hopefully act as a strong deterrent against online piracy in India. Indeed, as noted in previous editions of the Index, Indian rights holders suffer as much at the hand of online piracy as do foreign entities. In fact, one of the major cases brought to the High Court involved the illegal broadcasting of Indian cricket matches on nonsanctioned websites.

Trademarks, Related Rights, and Limitations

17. Ability of trademark owners to protect their trademarks: requisites for protection: Like many jurisdictions, rights holders in India have long struggled with lack of clarity on the protection of well-known marks, with case law offering sometimes conflicting judgments. To provide more clarity, since 2003, the Office of the Controller General of Patents, Designs and Trade Marks (CGPDTM) has compiled a list of marks that it recognizes as well-known. This list has grown to close to 100 marks and includes international brand names such as Philips, Intel, Pepsi, Toshiba, Honda, and Mars. Unfortunately, this list is not exhaustive and does not include many marks that by any reasonable standard would be considered well-known. Recognizing this, the CGPDTM issued a new set of Trade Mark Rules in May 2017. Rule 124 allows individuals and entities to apply directly to the Registrar to receive official recognition for their marks as "well-known." Still, the associated guidelines would benefit from further clarity on what constitutes supporting evidence. Specifically, according to the guidelines, a determining factor for the Registrar would be the availability of court judgments in India that recognize the applying mark as well-known. This would be a narrow basis on which a determination could be made, as the majority of well-known marks globally have yet to be determined as being well-known in an Indian court of law. Hopefully, in 2018, it will be clarified that an Indian court judgment is not a prerequisite or determining factor for receiving recognition as a well-known mark. On this basis, India's score for this indicator has increased. In a broader positive step that affects not only well-known marks but all registrations, the CGPDTM has reduced trademark pendency to 1 month and has eased the procedure for filing applications by reducing the number of associated forms from 74 to 8.

Commercialization of IP Assets

26. IP as an economic asset: Indian policymakers have long recognized the economic potential of IP as an asset. Successive government strategies—whether sector specific or more general—have highlighted the need for more effective technology transfer mechanisms and routes for commercializing IP. For instance, two of the seven objectives of the *National Intellectual Property Rights (IPR) Policy* deal with the generation and commercialization of IP assets. Similarly, the *National Biotechnology Development Strategy 2015–2020* focuses on increasing technology transfer capacities by creating a Technology Development and Translation network across the country with a global partnership that includes 40 new bio-incubators, 5 new bio-clusters, 150 technology transfer offices, and 20 bio-connect offices in research institutes and universities. There is also a long-standing effort to introduce a national technology transfer framework. Since the mid-2000s, the Indian government has intermittently explored developing its own private-public technology transfer framework, the "Protection and Utilisation of Public Funded Intellectual Property Bill," first introduced in 2008. Yet despite these efforts, technology transfer activities remain fairly limited. Relatively few Indian universities have functioning technology transfer offices. The institutions with the most advanced and developed technology transfer capabilities are the Indian Institutes for Technology, with the institutes in Madras and Mumbai having technology and start-up incubators in place. WIPO statistics suggest that

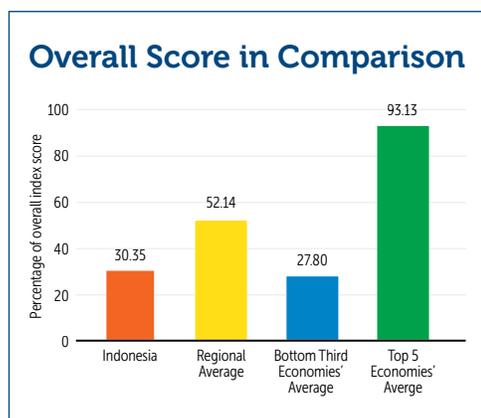
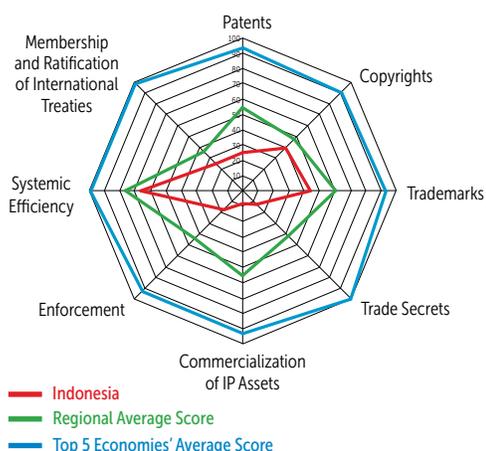
patenting by Indian public research organizations (PROs) and universities is still quite limited. In 2016 India had no university among the top 50 Patent Cooperation Treaty (PCT) applicants for universities. In 2013, a total of 55 PCT patent applications were made by Indian universities and 104 by PROs, most of which came from the Council of Scientific and Industrial Research. This compares with 3,920 applications by U.S. universities, which were the largest source of patenting applications by all universities globally, and 829 PCT applications from PROs in France, which filed the most applications globally in 2013.

Systemic Efficiency

36. Educational campaigns and awareness raising: The government of India has a clear commitment to increasing awareness of the importance of IP rights and respect for creators and innovators. Awareness-raising and education efforts form a central part of the *National Intellectual Property Rights (IPR) Policy*. Specifically, the Department of Industrial Policy and Promotion has launched a three-year national campaign—“Creative India, Innovative India!”—and has created the Cell for IPR Promotion and Management to spearhead its implementation. Some key features of this multifaceted and comprehensive initiative include IP awareness workshops and seminars in collaboration with industry organizations, academic institutions, and other stakeholders; technical training and capacity building with key enforcement agencies; and a broad public awareness-raising campaign on the ill effects of counterfeiting and piracy that targets even school-aged children. In addition to this campaign, other long-standing initiatives are in place. For example, the Rajiv Gandhi National Institute of Intellectual Property Management is a national center of excellence for IP rights training, management, research, and education. The institute conducts programs for the wider public as well as technical training for IP professionals, examiners, and academic researchers.

INDONESIA

Rank 43 / 50



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ PPH in place with the JPO
- ✓ Administrative relief available for copyright infringement online
- ✓ Good Cabinet-level coordination and coordinating framework for IP enforcement

KEY AREAS OF WEAKNESS

- ✗ Heightened efficacy requirement targeting biopharmaceutical patents
- ✗ Localization barriers in place including 2016 patent law that includes requirement for technology transfer of all patented technologies and processes in Indonesia
- ✗ History of using compulsory licensing for commercial and nonemergency situations
- ✗ Challenging copyright environment with high levels of piracy
- ✗ Limited participation in international IP treaties

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.00
3. Patentability of computer-implemented inventions (CIIIs)	0.25
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.50
8. Patent opposition	0.25
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.52
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.75
12. Availability of frameworks that promote cooperative action against online piracy	0.50
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.25
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.25
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.25
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.40
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.00
26. IP as an economic asset	0.25
Category 6: Enforcement	
27. Physical counterfeiting rates	0.31
28. Digital/online piracy rates	0.16
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.00
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.25
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	1.00
35. Consultation with stakeholders during IP policy formation	0.75
36. Educational campaigns and awareness raising	0.25
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	12.14

Spotlight on the National IP Environment

Past Editions versus Current Scores

Indonesia's overall score has increased from 27.5% (9.64 out of 35) in the 5th edition of the Index to 30% (12.14 out of 40) in the 6th edition. This reflects a relatively strong performance in the new indicators.

Patents, Related Rights, and Limitations

7. Membership in Patent Prosecution Highways (PPHs): Although Indonesia is not a member of either the Global PPH or the IP5 PPH, the Directorate General of Intellectual Property Rights and Japan Patent Office (JPO) have in place a PPH. The initiative began in 2016 for a three-year trial period.

Copyrights, Related Rights, and Limitations

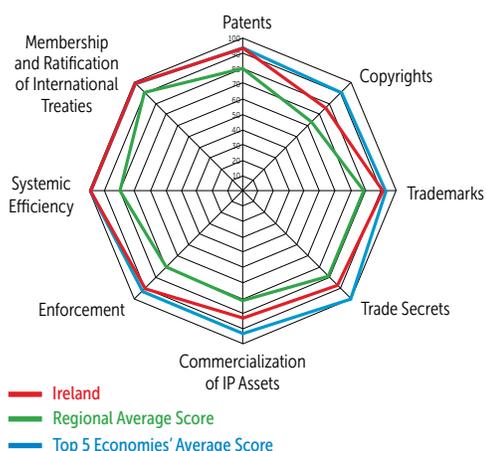
11. Expedient injunctive-style relief and disabling of infringing content online: As noted in previous editions of the Index, amendments to the Copyright Act in 2014 introduced a new ministerial notification system on online infringement that grants the Ministry of Communication and Informatics the power to disable access to infringing websites. While these powers had been in existence since the late 2000s, it was unclear the extent to which they applied to potential online acts of copyright infringement. The Directorate General of IP operates an online notification system through which rights holders can file a notice of infringement and request that access to suspect websites be disabled. Since its implementation in 2015, the system has been widely used by both local and international rights holders. Local press reports and industry sources suggest that access to between 250 and 300 infringing websites has been effectively disabled. Although the scale of copyright piracy (both physical and online) remains an immense challenge to rights holders in Indonesia, together with other initiatives—including the 2017 launch of an "Infringing Website List" in a partnership between the Indonesian government and private sector rights holders—these legislative and regulatory developments and their continued enforcement and application is a significant achievement.

Systemic Efficiency

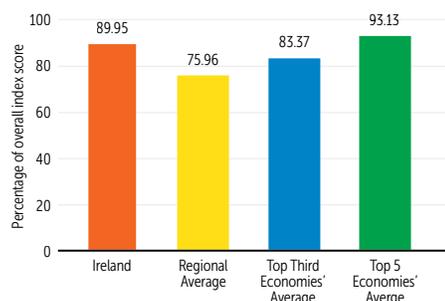
34. Inter-governmental coordination of IP rights enforcement efforts: For the past decade, Indonesia has had in place a dedicated cross-ministerial group on the enforcement of IP rights. Presidential Decree No. 4 of 2006 established a National IP Taskforce charged with coordinating the enforcement of IP rights in Indonesia across the government. The task force is charged with forming policies and measures for enforcing IPRs, promoting IP education in government agencies, and fostering cooperation to combat IPR infringement across the government's main enforcement divisions, including police, judiciary, and customs. The task force is made up of Cabinet-level officials, including the ministers of industry, trade, finance, foreign affairs, justice, and home affairs; the attorney general; and other senior-level government officials. The task force reports directly to the president. As mentioned, given the scale of the enforcement challenge in Indonesia, having an effective body of this kind is critical in setting a national enforcement strategy and executing the strategy across government.

IRELAND

Rank 6 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Fairly robust protection of patents, trademarks, and industrial designs, including sector-specific rights
- ✓ Judicial mechanism for notifying online copyright infringers and disabling access to infringing content online
- ✓ Efforts to promote IP as an economic asset and raise awareness of IP importance
- ✓ Judicial system considered to be relatively efficient

KEY AREAS OF WEAKNESS

- ✗ EU Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to Ireland's and EU's research- and IP-based biopharmaceutical industry
- ✗ Room for improvement in cooperation between rights holders and ISPs (although rising)
- ✗ No specialist IP courts (although Commercial Court seen as effective)
- ✗ Relatively high rates of online piracy

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	1.00
3. Patentability of computer-implemented inventions (CIIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	1.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.63
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.75
11. Expedient injunctive-style relief and disabling of infringing content online	1.00
12. Availability of frameworks that promote cooperative action against online piracy	0.75
13. Scope of limitations and exceptions to copyrights and related rights	0.75
14. Digital rights management (DRM) legislation	0.75
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.75
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	1.00
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	1.00
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.50
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	1.00
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.75
23. Regulatory data protection (RDP) term	1.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.75
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.92
28. Digital/online piracy rates	0.68
29. Civil and procedural remedies	1.00
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	1.00
31. Criminal standards including minimum imprisonment and minimum fines	0.75
32. Effective border measures	1.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	1.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	1.00
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	1.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	35.98

Spotlight on the National IP Environment

Patents, Related Rights, and Limitations

6. Patent term restoration for pharmaceutical products: In October 2015, the European Commission (EC) released its report *Upgrading the Single Market: More Opportunities for People and Business*, which details the overarching initiative to reform and deepen the single market with the purpose of spurring economic growth, creating jobs, and reducing administrative burdens. The report identified the need to address the ambiguity formed by the ongoing process of creating an EU-wide unitary patent system and identified the lack of a conforming mechanism for supplementary protection certificates (SPCs). While emphasizing the benefits of a unitary SPC title, the EC also announced its intention to explore options for recalibrating certain elements of this IP right. One such option put forth by the EC is to provide European manufacturers of generic drugs and biosimilars with an SPC manufacturing exemption that would “create thousands of high-tech jobs in the EU and many new companies.” Unfortunately, the EC appears to have lost sight of the fact that IP incentives, such as SPC protection, have been central to the success of Europe’s research-based biopharmaceutical industry. In 2016, industry estimates suggested that this sector generated some 745,000 direct jobs (with more than 113,000 persons employed directly in innovative R&D)—a growth of 33% since 2000. Furthermore, the European research-based biopharmaceutical industry generated more than EUR238 billion in pharmaceutical production in 2015, as well as investments of some EUR33.5 billion in R&D activities across the EU. Many troubling assumptions underlie the commission’s proposal. One running assumption about the potential gains to European generic manufacturers is that there is an actual market and demand for European generic manufacturers’ products. Yet it is not at all clear what this market is or where the demand for generic medicines produced in Europe would come from. In all likelihood, generic follow-on products are already on the market in many of these economies and, critically, being produced by local manufacturers that are often preferred partners in local drug procurement. And for those markets where equivalent protection mechanisms are in place, it is highly unlikely that an SPC exemption would grant the European generic and biosimilar manufacturers an exclusive status for early market entry of their products across the globe. In fact, an EU SPC exemption will invite other economies to consider the question: “If the European Union is weakening IP standards to benefit their domestic industries, why shouldn’t we?” In essence, this proposal could inspire a race to the bottom in weakening global IP standards. Moving forward with an SPC exemption would result in EU member states, Ireland included, seeing a score reduction to 0 on this indicator.

Copyrights, Related Rights, and Limitations

11. Expedient injunctive-style relief and disabling of infringing content online; and 12. Availability of frameworks that promote cooperative action against online piracy: The EU’s E-Commerce Directive (2000/31/EC), Articles 12–14, combined with the Copyright Directive (2001/29/EC), Article 8(3), enable a court or administrative authority to require ISPs to terminate or prevent copyright infringement by third parties using their services and lay the basis for injunctive-type relief against infringing websites in EU member states (while still providing a safe harbor for ISPs). Recent case law from the CJEU (including Case C-610/15, *Brien/Ziggo*) suggests that this provision extends to disabling access to torrent websites, which are perceived by the CJEU under the umbrella of a “communication to the public” per EU copyright law. Ireland implemented the above provisions in Statutory Instruments No. 68/2003 and No. 59/2012, permitting rights holders whose copyright or related rights have been infringed by users of an ISP’s service to apply to the High Court for an injunction against the ISP. In a number of recent cases, Irish courts have provided injunctive-style relief to rights holders on the above legislative basis. In 2014, in *EMI Records Ireland v. UPC Communications Ireland*, the High Court granted an injunction against The Pirate Bay on the basis that the ISPs were seen as the conduit for illegal activity. In 2017, the High Court issued several orders for injunctions requiring at least eight ISPs to disable access to a number of file-sharing sites that offered illegal downloading and streaming. In addition, on the basis of S.I. 59/2012 and Irish case law, a kind of graduated response or “three strikes” system for ISPs has been developed for sending warning letters to end users of infringing content or platforms and disabling access entirely. These types of injunctions against ISPs are permitted if the ISP offers no response after three notices from rights holders identifying broadband subscribers engaged in infringement of copyright. Industry reports suggest that only some ISPs disable access to infringing content or act on notices voluntarily; however, ISPs are considered to be responsive to court orders.

Trade Secrets and Related Rights

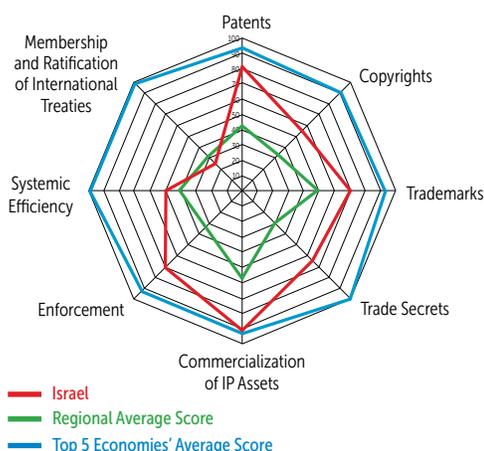
22. Protection of trade secrets: Ireland has not yet implemented the EU Trade Secrets Directive (2016/943). Currently, trade secrets protection is available under confidentiality and contract law, but Ireland does not have any explicit statutory basis for the protection of trade secrets. Civil remedies are available for trade secrets infringement to the extent they occur as breaches of nondisclosure, confidentiality, and other business agreements (although criminal sanctions are not). In practice, a substantial body of case law (as well as reliance on United Kingdom case law on the matter) upholds the protection of trade secrets. In 2017, the Department of Business, Enterprise and Innovation (DBEI) held a public consultation on the transposition of the EU Trade Secrets Directive, and it has until 2018 to transpose the directive into domestic regulation.

Systemic Efficiency

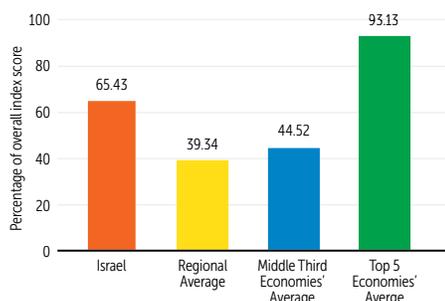
36. Educational campaigns and awareness raising: The DBEI has made IP education a priority over the past several years. For example, it recognizes IP awareness raising as a key objective in its Statement of Strategy 2017–19 and identifies plans to reinforce existing initiatives. These include the Student Enterprise Awards and the BT Young Scientist program, both aimed at increasing IP awareness among secondary students, and the VIP4SME project, which aims to foster greater IP knowledge among SMEs and offers them an IP “toolkit.” DBEI has also committed to raising the number of IP-related events, such as seminars, exhibitions, and clinics, targeting the public at large. Relevant nongovernmental campaigns aimed at increasing IP awareness include the “Thank You for Buying Your Ticket” program launched by LoveMovies.IE and the “Get It Right” program designed in collaboration with ISPs to educate consumers about illegal file sharing. In a survey and study published by the European Union Intellectual Property Office (EUIPO) in 2017, “European Citizens and Intellectual Property: Perception, Awareness, and Behavior,” Ireland rates highly in terms of consumers’ perception of the importance of IP protection, in line with or above the EU average.

ISRAEL

Rank 19 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Israeli Patent Office an active participant in all major PPH tracks
- ✓ Ministry of Justice consultation on reforming patent opposition proceedings would have a positive effect on a long-standing challenge to inventors
- ✓ Life sciences IP rights reform efforts have considerably strengthened Israel's IP environment
- ✓ New industrial design law passed in 2017

KEY AREAS OF WEAKNESS

- ✗ Current pre-grant patent opposition proceedings are characterized by long delays to patent prosecution
- ✗ Unclear the extent to which current RDP applies to large molecule products
- ✗ Online copyright framework lacking—limited notice and takedown and no DRM laws
- ✗ Limited participation in international IP treaties

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	1.00
3. Patentability of computer-implemented inventions (CIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	0.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.63
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.50
11. Expedient injunctive-style relief and disabling of infringing content online	0.50
12. Availability of frameworks that promote cooperative action against online piracy	0.25
13. Scope of limitations and exceptions to copyrights and related rights	1.00
14. Digital rights management (DRM) legislation	0.00
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	1.00
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.75
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.75
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.00
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.75
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	1.00
23. Regulatory data protection (RDP) term	0.30
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	1.00
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.78
28. Digital/online piracy rates	0.71
29. Civil and procedural remedies	0.75
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.75
31. Criminal standards including minimum imprisonment and minimum fines	0.75
32. Effective border measures	0.75
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.50
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.25
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	0.25
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	0.50
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.50
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	26.17

Spotlight on the National IP Environment

Past Editions versus Current Scores

Israel's overall score has increased from 64% (22.27 out of 35) in the 5th edition of the Index to 65% (26.17 out of 40) in the 6th edition. This reflects a strong performance in the new indicators as well as the introduction of a new design law with a longer term of protection and stronger exclusive rights.

Patents, Related Rights, and Limitations

- 7. Membership in Patent Prosecution Highways (PPHs):** Israel was one of the first economies to implement a PPH by initiating a pilot program with the USPTO in July 2011, followed by full implementation of the cooperative agreement a year later. Since then, the Israeli Patent Office (ILPO) has initiated additional pilot programs with the European Patent Office (EPO) as well as patent offices in Japan, Canada, Denmark, Finland, Spain, and China. The ILPO has also adopted the unified Common PPH Request Form issued during late 2014 by the Five IP Offices Forum. The ILPO is a member of the Global PPH.

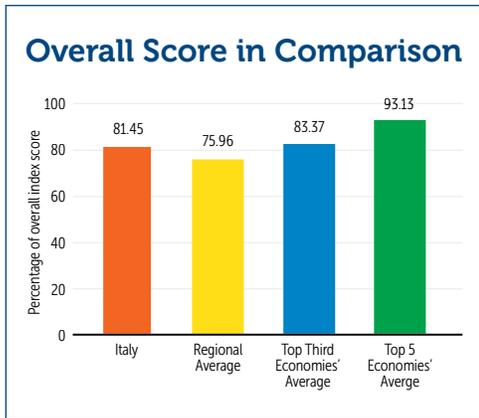
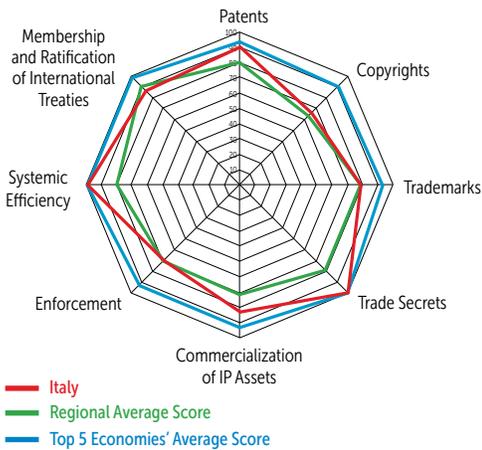
- 8. Patent opposition:** As noted in previous editions of the Index, Israeli patent law provides for a pre-grant form of opposition to pending patent applications whereby oppositions by third parties may be submitted during the process of public scrutiny. This practice often leads to considerable delay in patent prosecution. A recent study by the ILPO finds that the duration of oppositions in Israel is triple that of the corresponding proceedings in Europe and 6 times longer than the corresponding proceedings in the U.S. The study finds that the average duration of an opposition in Israel is about 2.5–4 years (depending on whether the opposition includes a motion to amend the patent specification) and about 6 years when involving litigation. Like other studies conducted in other jurisdictions on the effects of pre-grant opposition proceedings—including, for example, Australia—the ILPO's report finds that certain sectors are targeted more frequently than others, including, for example, biopharmaceuticals. Furthermore, the study finds that more than 60% of oppositions are eventually abandoned prior to the evidentiary stage. This suggests that the pre-grant opposition system may be abused intentionally. As noted in previous editions of the Index, in 2016, the Ministry of Justice published a public call for comments and suggestions about its intention to review the existing pre-grant system. During that year, the Ministry of Justice also commissioned the Israeli Academy of Sciences and Humanities to conduct a study on the ILPO's activities' and procedures' impact on R&D and economic activity in Israel. According to the academy's recommendations, "a review of patent opposition proceedings (pre-grant vs. post-grant) is especially desirable."

Trademarks, Related Rights, and Limitations

- 20. Industrial design term of protection; and 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights:** Israel passed a new design law (Designs Law, 1176-2017) in 2017 that will enter into force in August 2018. Through this legislation, Israel fulfills the conditions of the Hague Agreement concerning the International Registration of Industrial Designs, which provides protection of industrial designs in all member economies under a single registration. The new law increases the term of protection from 15 to 25 years and gives courts the authority to award statutory damages of up to ILS100,000 (about USD26,300) in cases of infringement. Rights holders will also be able to seek remedy in the form of injunctive relief, including seizures and destruction of infringing goods. Furthermore, the owner of a registered design may request customs detention of infringing goods suspected of importation for commercial purposes. An intentional infringement of a registered design for commercial purposes under the new law constitutes a criminal offense punishable by a fine of up to ILS226,000 (about USD59,500) for individuals or ILS452,000 (about USD119,000) for corporations. The law also provides protection for unregistered industrial designs. The term of protection is 3 years and unregistered designs have the same rights to potential damages claims. As a result, Israel's score on these indicators has increased.

ITALY

Rank 12 / 50



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Fairly advanced national IP framework
- ✓ Major life sciences IP rights in place
- ✓ Administrative and judicial mechanisms for addressing online copyright infringement
- ✓ Public consultation during policy formation and efforts to raise awareness of IP importance present

KEY AREAS OF WEAKNESS

- ✗ EU Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to Italy's and the EU's research- and IP-based biopharma industry
- ✗ Some remaining gaps in copyright legislation, including uncertainties over copyright exceptions
- ✗ Relatively high level of physical counterfeiting and online piracy
- ✗ Delays and uneven level of expertise vis-à-vis IP rights within the judicial system

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.75
3. Patentability of computer-implemented inventions (CIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	1.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.66
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.50
11. Expedient injunctive-style relief and disabling of infringing content online	1.00
12. Availability of frameworks that promote cooperative action against online piracy	0.75
13. Scope of limitations and exceptions to copyrights and related rights	0.50
14. Digital rights management (DRM) legislation	0.50
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.75
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.75
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.75
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.50
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.75
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	1.00
23. Regulatory data protection (RDP) term	1.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.75
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.62
28. Digital/online piracy rates	0.55
29. Civil and procedural remedies	0.75
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.50
31. Criminal standards including minimum imprisonment and minimum fines	0.50
32. Effective border measures	1.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	1.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	1.00
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	0.50
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	32.58

Spotlight on the National IP Environment

Past Editions versus Current Scores

Italy's overall score has increased from 79% of the total possible score (with a score of 2773 out of 35) in the 5th edition of the Index to 81.5% (32.58 out of 40) in the 6th edition. This increase reflects a strong performance on the new indicators.

Patents, Related Rights, and Limitations

6. Patent term restoration for pharmaceutical products: In October 2015, the European Commission (EC) released its report *Upgrading the Single Market: More Opportunities for People and Business*, which details the overarching initiative to reform and deepen the single market with the purpose of spurring economic growth, creating jobs, and reducing administrative burdens. The report identified the need to address the ambiguity formed by the ongoing process of creating an EU-wide unitary patent system and identified the lack of a conforming mechanism for supplementary protection certificates (SPCs). While emphasizing the benefits of a unitary SPC title, the EC also announced its intention to explore options for recalibrating certain elements of this IP right. One such option put forth by the EC is to provide European manufacturers of generic drugs and biosimilars with an SPC manufacturing exemption that would “create thousands of high-tech jobs in the EU and many new companies.” Unfortunately, the EC appears to have lost sight of the fact that IP incentives, such as SPC protection, have been central to the success of Europe's research-based biopharmaceutical industry. In 2016, industry estimates suggested that this sector generated some 745,000 direct jobs (with more than 113,000 persons employed directly in innovative R&D)—a growth of 33% since 2000. Furthermore, the European research-based biopharmaceutical industry generated more than EUR238 billion in pharmaceutical production in 2015, as well as investments of some EUR33.5 billion in R&D activities across the EU. Many troubling assumptions underlie the commission's proposal. One running assumption about the potential gains to European generic manufacturers is that there is an actual market and demand for European generic manufacturers' products. Yet it is not at all clear what this market is or where the demand for generic medicines produced in Europe would come from. In all likelihood, generic follow-on products are already on the market in many of these economies and, critically, being produced by local manufacturers that are often preferred partners in local drug procurement. And for those markets where equivalent protection mechanisms are in place, it is highly unlikely that an SPC exemption would grant the European generic and biosimilar manufacturers an exclusive status for early market entry of their products across the globe. In fact, an EU SPC exemption will invite other economies to consider the question: “If the European Union is weakening IP standards to benefit their domestic industries, why shouldn't we?” In essence, this proposal could inspire a race to the bottom in weakening global IP standards. Moving forward with an SPC exemption would result in EU member states, Italy included, seeing a score reduction to 0 on this indicator.

Copyrights, Related Rights, and Limitations

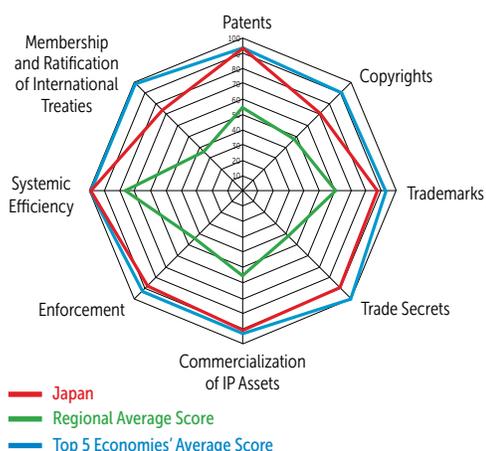
11. Expedient injunctive-style relief and disabling of infringing content online; and 12. Availability of frameworks that promote cooperative action against online piracy: The EU's E-Commerce Directive (2000/31/EC), Articles 12–14, combined with the Copyright Directive (2001/29/EC), Article 8(3), enable a court or administrative authority to require ISPs to terminate or prevent copyright infringement by third parties using their services and lay the basis for injunctive-type relief against infringing websites in EU member states (while still providing a safe harbor for ISPs). Recent case law from the CJEU (including Case C-610/15, *Brien/Ziggo*) suggests that this provision extends to disabling access to torrent websites, which are perceived by the CJEU under the umbrella of a “communication to the public” per EU copyright law. Italy has implemented these provisions using a combined administrative and judicial mechanism. As discussed in previous editions of the Index, the Italian Communications Regulatory Authority (AGCOM) is empowered to receive complaints from rights holders and order ISPs to remove or prevent access to illegally published content. According to AGCOM, about 60% of cases initiated in the past year (mainly concerning large-scale violations) resulted in AGCOM ordering the disabling of access to relevant websites. In the context of foreign-hosted sites, AGCOM ordered the relevant domestic ISP (“conduit provider”) to disable Italian users' access to infringing sites. An additional 34% of cases were resolved with ISPs voluntarily disabling access to (or removing) infringing material; this reportedly represents a 7% increase compared with the previous year. Considering the use of the system from its introduction to date, a local third-party analysis indicates that from mid-2014 to mid-2017 AGCOM received about 730 notices of infringing websites and has elected to process approximately 60% of these, with 65% of those processed resulting in the disabling of access to the sites. In addition, jurisprudence from Italian courts has established the responsibility of ISPs to remove access to copyright-infringing content online when made aware of it (including the 2016 Court of Rome decision in *Break Media v. Reti Televisive Italiane*).

Systemic Efficiency

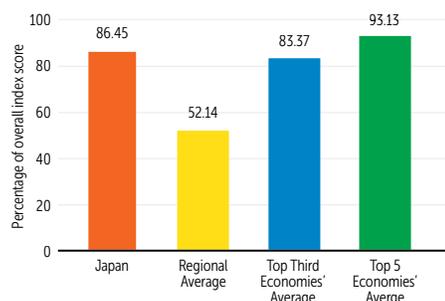
35. Consultation with stakeholders during IP policy formation: In 2017, the Ministry for Public Administration and Simplification issued Directive 2/2017 on Guidelines on Public Consultation in Italy (OJ No. 163). The directive mandates government ministries and agencies to comply with the accompanying guidelines, which require regular and systematic public consultation in the policymaking process in line with several principles, including transparency, impartiality, timeliness, and other elements. The guidelines are to be developed further in 2017–18 with additional best practices and recommendations for implementation. Efforts to standardize and streamline consultations with citizens, stakeholders, and civil society organizations on parliamentary measures are also underway. Though improvements are needed, in general, public consultations are carried out on legislative and regulatory draft measures, including IP-related legislation like the AGCOM Regulations on Copyright, by a range of ministries and agencies in Italy. This includes consultations on both domestic legislation as well as EU-level legislation, which are made available by relevant domestic ministries.

JAPAN

Rank 8 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Has signed and acceded to all international IP treaties included in the Index
- ✓ Strong, sophisticated national IP environment in place with relevant IP rights and protection available for all major IP rights categories

KEY AREAS OF WEAKNESS

- ✗ 2017 proposal by Ministry of Economy, Trade and Industry study group for introducing a government-mandated and -provided forum that determines contractual terms, including rates of royalties and licensing fees for SEPs, raises considerable uncertainty about licensing environment in Japan

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	1.00
3. Patentability of computer-implemented inventions (CIIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	1.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.53
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	1.00
11. Expeditious injunctive-style relief and disabling of infringing content online	0.50
12. Availability of frameworks that promote cooperative action against online piracy	0.50
13. Scope of limitations and exceptions to copyrights and related rights	0.75
14. Digital rights management (DRM) legislation	0.75
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	1.00
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	1.00
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	1.00
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.50
20. Industrial design term of protection	0.80
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	1.00
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	1.00
23. Regulatory data protection (RDP) term	0.80
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	1.00
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.88
28. Digital/online piracy rates	0.82
29. Civil and procedural remedies	0.75
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.75
31. Criminal standards including minimum imprisonment and minimum fines	1.00
32. Effective border measures	1.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	1.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	1.00
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	1.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	34.58

Spotlight on the National IP Environment

Past Editions versus Current Scores

Japan's overall score has decreased from 89% (31.29 out of 35) in the 5th edition of the Index to 86% (34.58 out of 40) in the 6th edition. This is primarily driven by the suspension of the IP provisions of the TPP treaty and the resulting decrease in the score for Indicator 40.

Commercialization of IP Assets

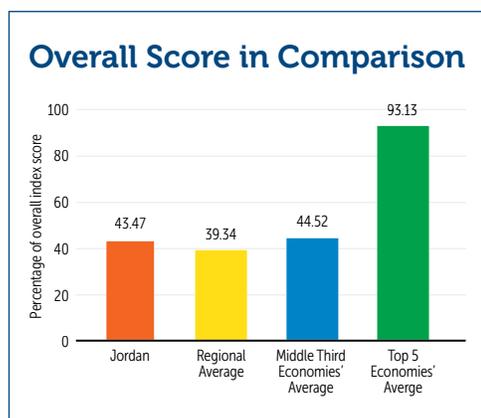
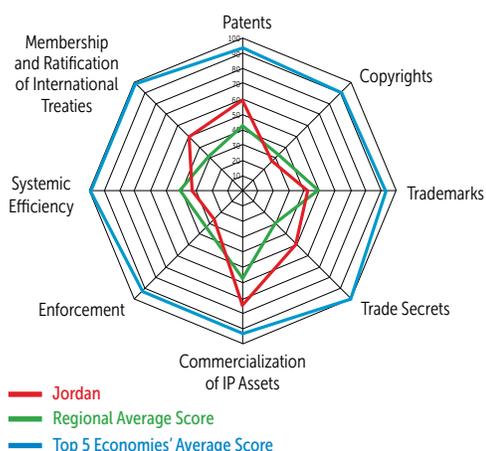
25. Regulatory and administrative barriers to the commercialization of IP assets: The Japanese Ministry of Economy, Trade, and Industry (METI) in April 2017 issued *The Intellectual Property System for the Fourth Industrial Revolution*. The report is the result of joint efforts between METI, the Japan Patent Office (JPO), and other government entities to host expert discussions over the course of 2016/17 on ways to improve Japan's IP system in light of the emergence of new disruptive technologies. The study group examined future challenges and proposed potential adjustments to the IP framework for technological developments including the Internet of Things, artificial intelligence, robotics, and other cutting-edge industries that are loosely labeled as a "Fourth Industrial Revolution." One key subject discussed in the broad-ranging report is the licensing terms and conditions for SEPs. Specifically, the report identifies that the emergence and broader use of new technologies (including the Internet of Things) will foster greater use of SEPs, but will also create a growing number of potential legal disputes that hold up the development and use of new technologies and industries. The report notes that the complexities and costs of negotiations and potential legal battles are expected to increase as more fields use technologies (such as autonomous cars) that include SEPs. Addressing this issue, the report proposed the implementation of two new types of administrative procedures aimed at expediting resolutions and reducing litigation costs in patent disputes. Under the first procedure, in cases where no agreement between the parties is reached, an administrative committee appointed by the JPO would determine the amount of royalties. Under the second pathway, which is designated for private companies, when no agreement is reached between parties, the dispute would be managed by a dedicated organization—although the specifics are currently unclear. Yet it is not clear that the best solution to these problems, as the report put forward, should lay with a government-mandated and -provided forum that determines contractual terms, including rates of royalties and licensing fees. At the time of research and after a lengthy public consultation, the proposed dispute resolution process appears to have been placed on hold by the Japanese authorities. In September 2017, the JPO issued a new public consultation on the creation of a set of guidelines for licensing negotiations involving SEPs. Although part of the proposed skeleton for these guidelines did include general ideas for calculating royalty rates, it did not include any reference to the previously proposed dispute resolution process overseen or imposed by the Japanese government. As a world leader in innovation and in the protection of IP, the ideas proposed and actions taken by Japan have global repercussions. While Japan's score on this indicator remains unchanged, these developments will be followed closely by over the course of 2018.

Membership in and Ratification of International Treaties

Since it was first included in the second edition of the Index, Japan has stood out as one of the few developed high-income economies that scored low on its participation in and ratification of international treaties. This fundamentally changed in 2016 as Japan signed and acceded to both the Patent Law Treaty and the Singapore Treaty on the Law of Trademarks. In July 2017, the EU and Japan announced that they had reached agreement on the principles of a new Economic Partnership Agreement. While the final text is currently being negotiated, the official overview ("EU-Japan EPA—The Agreement in Principle") includes a dedicated chapter on IP rights. In November 2016, the lower house of the Japanese Diet voted to ratify the Trans-Pacific Partnership treaty. The withdrawal by the U.S. as a contracting party to the TPP in early 2017 has created considerable uncertainty about the future of the agreement. In a November 2017 inter-ministerial statement, the remaining contracting parties—Japan included—confirmed that the TPP was being substantively renegotiated as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). Although some elements of the previously agreed on and—in many cases, like Japan—ratified TPP have been kept, the majority of the IP chapter has been suspended. Because the text of the CPTPP is still being negotiated, Japan's score has decreased on Indicator 40.

JORDAN

Rank 28 / 50



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Basic legal framework for major IP rights
- ✓ Sector-specific IP rights introduced as a result of 2001 U.S. FTA
- ✓ 5-year term of RDP for pharmaceuticals provided
- ✓ Strong DRM framework

KEY AREAS OF WEAKNESS

- ✗ High levels of copyright infringement, particularly online
- ✗ Estimated software piracy rate at 66%
- ✗ Uncertainty as to the actual availability of the full term of RDP protection—eligibility contingent on global launch and registration in Jordan within 18 months
- ✗ Uncertainty over availability of patents for CILs

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.50
3. Patentability of computer-implemented inventions (CILs)	0.25
4. Pharmaceutical-related patent enforcement and resolution mechanism	1.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	0.00
8. Patent opposition	0.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.44
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.00
13. Scope of limitations and exceptions to copyrights and related rights	0.50
14. Digital rights management (DRM) legislation	0.50
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.25
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.25
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.25
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.60
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.25
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.50
23. Regulatory data protection (RDP) term	0.50
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	1.00
26. IP as an economic asset	0.25
Category 6: Enforcement	
27. Physical counterfeiting rates	0.41
28. Digital/online piracy rates	0.44
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.25
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.25
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.25
35. Consultation with stakeholders during IP policy formation	0.25
36. Educational campaigns and awareness raising	0.50
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	17.39

Spotlight on the National IP Environment

Patents, Related Rights, and Limitations

- 3. Patentability of computer-implemented inventions (CIIs):** There is a degree of uncertainty as to the availability of patent protection of CIIs in Jordan. Article 3 of the Patent Law (Law 32 1999) reflects standard TRIPS criteria that patent protection should be available for inventions that are new, inventive, and capable of industrial application. Similarly, Article 4 (which outlines areas excluded from patent protection) does not explicitly exclude computer software or implemented inventions. The relevant patent regulations are also silent on the patentability of CIIs, and there is no officially published patent manual or set of guidelines by the Industrial Property Protection Directorate (Jordan's equivalent of a patent office). To some extent, this is understandable. The directorate is a relatively small office and has a limited number of examiners, and some of the search and examination is carried out with the assistance of WIPO. In practice, the evidence shows that patents are available for some computer-related inventions. WIPO statistics show computer-related patents made up only a small number (5.8%) of total patent applications in Jordan between 2001 and 2014.
- 4. Pharmaceutical-related patent enforcement and resolution mechanism; and 6. Patent term restoration for pharmaceutical products:** The 2001 U.S.-Jordan FTA considerably strengthened Jordan's national IP environment, particularly for the life sciences sector. The agreement introduced a linkage mechanism—Articles 4(19) and 4(23b)—whereby Jordanian drug regulatory authorities are required to notify patent holders of any received application for follow-on products. No follow-on products are to be approved for market while a reference product's patent is in force. Similarly, under Article 4(23a), Jordanian authorities are required to “make available an extension of the patent term to compensate the patent owner for unreasonable curtailment of the patent term as a result of the marketing approval process.”

Copyrights, Related Rights, and Limitations

- 10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking); 12. Availability of frameworks that promote cooperative action against online piracy; and 14. Digital rights management (DRM) legislation:** The Jordanian Copyright Act provides basic exclusive rights. Articles 8 and 9 define rights holders' exclusive rights and rights to exploit their creative work. The law does not include specific reference to the Internet or mechanisms that address online infringement. No notice and takedown system is in place, making online infringement difficult for rights holders to effectively counter. As part of the 2001 U.S.-Jordan FTA, Jordan did introduce relevant DRM and technological protection measure (TPM) legislation. Article 55 of the Copyright Act clearly outlaws the use, sale, manufacture, and distribution of circumvention devices. But, as in many other economies in the Middle East, the scale of both physical and online copyright infringement is substantial. A 2015 article on media piracy in Jordan published in the *International Journal of Engineering Science* included two separate surveys of Internet users. While the sample size was relatively small (less than 200 respondents), both surveys found a high number of Jordanian Internet users are engaged in some sort of infringing activity, including the downloading of pirated music, film, and software. Of those respondents who spent the most time on the Internet per day (estimated at 4 hours or more), close to 70% said they engaged in some form of infringing activity. Similarly, looking at software piracy, latest estimates suggest that 56% of software in Jordan is pirated.

Trade Secrets and Related Rights

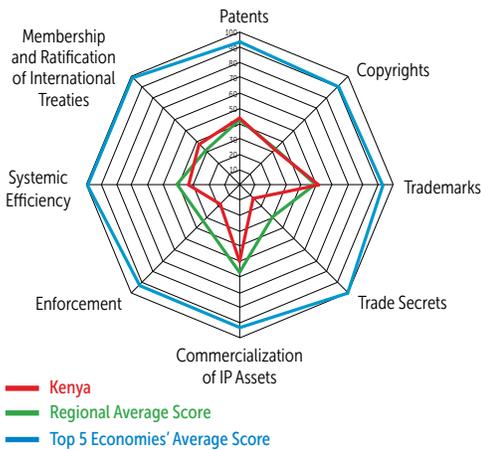
- 23. Regulatory data protection (RDP) term:** The Trade Secrets and Unfair Competition Law (Law No. 15 2001) provides specific protection for submitted clinical research data as part of a biopharmaceutical market registration application. Article 8 of the law provides a clear and unambiguous term of protection of 5 years from the date of approval and states that relevant Jordanian authorities shall protect submitted test data “from the unclassified commercial use, through preventing any other person who did not obtain the applicant approval from depending thereon for marketing his pharmaceuticals and products except after 5 years as of the date of the applicant obtaining any approval for marketing his products.” The existence of this RDP is a positive feature of Jordan's national IP environment. However, some uncertainty exists as to the actual availability of the full term of this protection. Evidence suggests that the Jordan Food and Drug Administration (JFDA) has since 2009 effectively reduced the availability of the 5-year term of protection by using a restrictive definition to determine when a product becomes eligible for protection. Under a circular issued in June 2009, eligibility was restricted to products introduced onto the Jordanian market within 18 months of global launch. In this sense, RDP is not offered to all new products introduced in Jordan. Rather, the offered protection depends on when products were launched globally. This practice significantly weakens the actual exclusivity being offered to pharmaceutical innovators. RDP is an essential IP right for the life sciences sector—in particular for biologics—providing a tangible incentive to the investment and research required to develop new drugs and medical technologies. Should the practice continue, leaving rights holders unable to secure an effective 5-year term of protection for new products entering the Jordanian market—regardless of when a product was first launched globally—Jordan's score on this indicator will be reduced to 0.

Membership in and Ratification of International Treaties

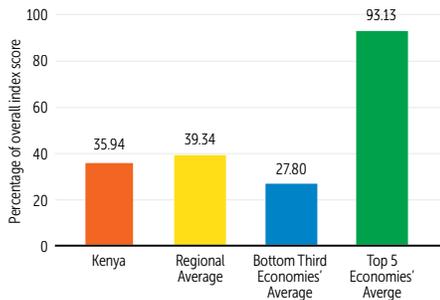
While Jordan is not a contracting party to the Patent Law Treaty or the Singapore Treaty on the Law of Trademarks, in 2004, it acceded to the WIPO Internet Treaties. The 2001 U.S.-Jordan FTA contains a separate and distinct IP chapter. As mentioned, over the past 16 years, this agreement has significantly strengthened the national IP environment in Jordan.

KENYA

Rank 36 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ IP leader among African economies, for instance in new online IP registration system
- ✓ Basic IP framework in place, including a number of sector-specific rights
- ✓ Dedicated IP bodies and enforcement agencies, with demonstrated efforts to address IP infringement (though fragmentation occurs and much more action is needed)
- ✓ Recent efforts to improve knowledge and frameworks for proper use and commercialization of IP assets

KEY AREAS OF WEAKNESS

- ✗ Weak and backlogged judicial system with notable deficiencies in criminal enforcement
- ✗ Important gaps in copyright protection, particularly in the digital space
- ✗ Scope of trademark protection limited in legislation and in practice
- ✗ Legislative and resource barriers to border enforcement

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.50
3. Patentability of computer-implemented inventions (CIIs)	0.25
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.00
8. Patent opposition	0.75
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.53
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.00
13. Scope of limitations and exceptions to copyrights and related rights	0.50
14. Digital rights management (DRM) legislation	0.50
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.50
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.25
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.60
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.50
25. Regulatory and administrative barriers to the commercialization of IP assets	0.50
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.26
28. Digital/online piracy rates	0.24
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.00
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.25
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.25
35. Consultation with stakeholders during IP policy formation	0.25
36. Educational campaigns and awareness raising	0.50
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	0.50
38. Singapore Treaty on the Law of Trademarks	0.50
39. Patent Law Treaty	0.50
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	14.38

Spotlight on the National IP Environment

Past Editions versus Current Scores

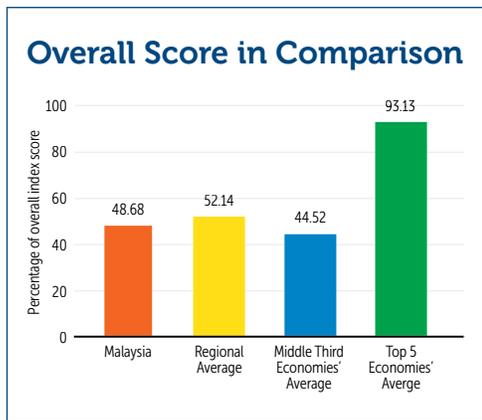
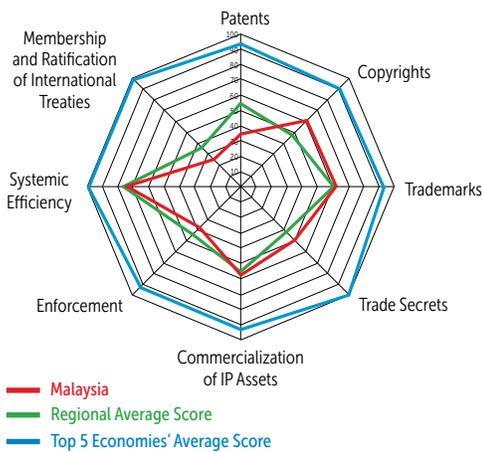
Kenya's overall score has decreased from 40% (13.95 out of 35) in the 5th edition of the Index to 36% (14.38 out of 40) in the 6th edition. This reflects a mixed performance in the new indicators added in the 6th edition.

Systemic Efficiency

- 26. IP as an economic asset:** The Science, Technology, and Innovation Act of 2013 requires universities and research institutions to establish IP policies and technology transfer offices. Analysis by the Kenyan Industrial Property Institute indicates that only a small number of universities have implemented the law; still, the universities that have implemented the law tend to provide for ownership of IP rights by universities and supply incentives for universities to secure protection for inventions created through university funding in a timely manner; for instance, the University of Nairobi has introduced such an IP policy. Many university policies also provide for ownership by inventors in instances where the university opts not to obtain protection for the invention. In addition, several universities, such as the Centre for Intellectual Property and Information Technology Law at the Strathmore University and the Technical University of Kenya's Centre for Entrepreneurship, Innovation, and Technology Transfer, provide courses on protecting and managing IP assets. Nevertheless, local analysis suggests that there is a need for greater training and knowledge concerning the commercialization of IP assets. In addition, Kenya enacted in 2017 the Moveable Property Security Rights Act, which, among other initiatives, allows IP rights to be viewed and used as a security for obtaining financing, an important step in leveraging IP as an economic asset.
- 36. Educational campaigns and awareness raising:** Kenyan IP agencies, in partnership with the private sector, carry out some educational campaigns and awareness-raising initiatives covering a range of IP rights, though more work is needed. The Kenya National Innovation Agency, established as part of the Science, Technology, and Innovation Act of 2013, is the public body in charge of creating public awareness concerning IP. For instance, in 2016–17, it launched a National Innovation Recognition Award aimed at promoting the development of innovative capacity in key sectors through, among other things, the creation and use of IP. In 2016, the Kenya Copyright Board (Kecobo) launched a campaign in partnership with BSA | The Software Alliance (BSA) targeting illegal software use. The campaign involved a monthlong amnesty for individuals and companies to replace illegal software with licensed programs and worked to improve knowledge about the benefits and importance of using licensed software. In addition, in 2017, Kecobo, the Ministry of Education, and the Police and Anti-Counterfeiting Agency, in partnership with industry organizations, launched an antipiracy campaign targeting book piracy. Kenya has very high rates of book piracy, estimated at about one in three books. The Anti-Counterfeit Agency also holds regular campaigns and promotional exhibits at relevant forums to increase awareness of the scope and effects of counterfeit products, including fake medicines.

MALAYSIA

Rank 23 / 50



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Intellectual Property Corporation of Malaysia (MyIPO) has PPH agreements in place with both the EPO and JPO
- ✓ Strong focus by Malaysian government on IP as a commercial asset and technology transfer

KEY AREAS OF WEAKNESS

- ✗ Government use license (the equivalent of a compulsory license) issued in 2017 for sofosbuvir, a new breakthrough medicine to treat Hepatitis C
- ✗ *De facto* RDP full term of protection is not offered to new products
- ✗ Patent term restoration not allowed
- ✗ *Ex officio* powers not used by customs officials

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	1.00
3. Patentability of computer-implemented inventions (CIIs)	0.25
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.50
8. Patent opposition	0.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.53
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.75
11. Expedient injunctive-style relief and disabling of infringing content online	0.50
12. Availability of frameworks that promote cooperative action against online piracy	0.75
13. Scope of limitations and exceptions to copyrights and related rights	0.50
14. Digital rights management (DRM) legislation	0.75
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.50
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.50
23. Regulatory data protection (RDP) term	0.50
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.25
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.47
28. Digital/online piracy rates	0.47
29. Civil and procedural remedies	0.50
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.50
31. Criminal standards including minimum imprisonment and minimum fines	0.50
32. Effective border measures	0.25
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.75
35. Consultation with stakeholders during IP policy formation	0.75
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	19.47

Spotlight on the National IP Environment

Past Editions versus Current Scores

Malaysia's overall score has decreased from 49.1% (17.19 out of 35) in the 5th edition of the Index to 48.7% (19.47 out of 40) in the 6th edition. This reflects a mixed performance in the new indicators as well as the suspension of the IP provisions of the TPP treaty and uncertainty over the IP chapter, if any, in the CPTPP. Moreover, the issuing of a compulsory license in 2017 has greatly damaged Malaysia's national IP environment and risks undermining much of the progress made since 2004, the last time the government issued a similar license.

Patents, Related Rights, and Limitations

- 5. Legislative criteria and active use of compulsory licensing of patented products and technologies:** On September 20, 2017, Malaysia issued a government use license (the equivalent of a compulsory license) for sofosbuvir, a new breakthrough medicine to treat Hepatitis C. Malaysia last issued a compulsory license in 2004 for the importation of generic antiretroviral (ARV) medicines. In a statement accompanying the decision, the Ministry of Health (MOH) made clear that the decision to issue a compulsory license was driven primarily by the cost of the medicine: "The decision to initiate the Rights of Government was made after the MOH efforts to be included in the Medicine Patent Pool (MPP) and price negotiations with patent holder were unsuccessful [sic]. Through the implementation of The Rights of Government, *the cost of treatment will be lower and more patients can be treated*" [emphasis added]. Cost is not a relevant justification or basis for compulsory licensing under the TRIPS Agreement. TRIPS Article 31, including the amendments introduced in the 2001 Doha Ministerial Declaration, and the subsequent General Council decision that allows the export of medicines produced under a compulsory license (outlined in Paragraph 6), form the legal grounds for compulsory licensing for medicines. The chairman's statement accompanying the General Council decision (concerning Paragraph 6 of the Doha Declaration) underscores that these provisions are not in any way intended for industrial or commercial objectives, and, if used, should be aimed solely at protecting public health. In addition, Article 31 and the Doha Declaration suggest that compulsory licensing represents a "measure of last resort"—intended primarily for public health and humanitarian emergencies such as pandemics, and to be used only after all other options for negotiating pricing and supply have been exhausted. It is unlikely that the issuing of a compulsory license as a basis for price negotiation with a research-based manufacturer will help advance Malaysia's long-state ambitions to transform its economy to focus on high-tech industries and innovation.
- 7. Membership in Patent Prosecution Highways (PPHs):** Although Malaysia is not a member of either the Global PPH or the IP5 PPH, MyIPO does have PPH agreements in place with both the EPO and the JPO. Launched in 2014, the PPH program between MyIPO and the JPO is the older of the two pilot programs. In 2016, the EPO and MyIPO announced their intention to launch a comprehensive PPH pilot program. The program came into effect in July 2017.

Commercialization of IP Assets

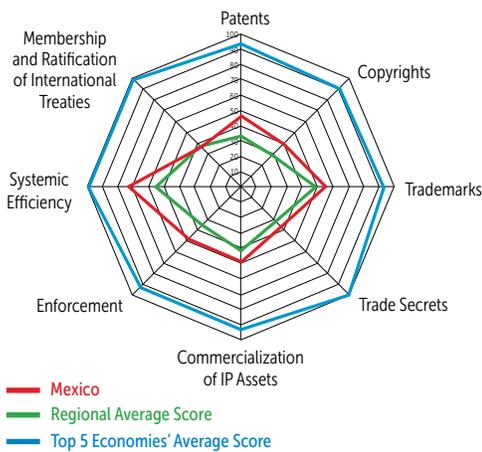
- 26. IP as an economic asset:** Malaysian policymakers are increasingly recognizing IP as an economic asset. Successive national innovation plans and strategies have identified the need to further build and encourage the commercial use and dissemination of IP as an asset. For instance, the 11th 5-year plan (2015–20) pledged to create a Research Management Agency and to "encourage local and international collaborations for technology transfer, including strategic alliances between MNCs and SMEs." MyIPO runs an IP Academy with a range of training programs and capacity-building activities. Other government departments also have IP training programs in place. For example, in 2013, MyIPO and the Multimedia Development Corporation of Malaysia developed an IP valuation training program targeting SMEs. The purpose of the program is to provide real-world training on IP valuation, contract negotiation, managing of IP assets, and related commercialization activities. Malaysia does not have in place a specific technology transfer law akin to the U.S. Bayh-Dole framework. Instead, technology transfer at universities and public research institutions is steered by internal guidelines (often developed together with the main funder of the program, the Malaysian government) and two government regulations: the 1999 Government Circular and the 2009 Intellectual Property Policy. While the former by and large vests IP ownership with the Malaysian government, the latter policy vests ownership with the recipient of the relevant funding. As a result, under this policy, publicly funded innovators and creators are able to retain ownership of their creations. Some evidence suggests that patenting rates by Malaysian universities has increased since the introduction of the 2009 Intellectual Property Policy.

Membership in and Ratification of International Treaties

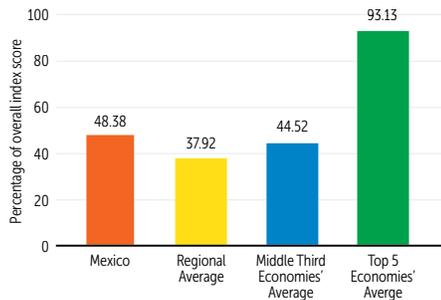
While Malaysia is not a contracting party to the Patent Law Treaty or the Singapore Treaty on the Law of Trademarks, it acceded to the WIPO Internet Treaties in 2014. It is also one of the negotiating parties to the TPP. The withdrawal by the U.S. as a contracting party to the TPP in early 2017 has created considerable uncertainty about the future of the agreement. In a November 2017 inter-ministerial statement the remaining contracting parties—Malaysia included—confirmed that the TPP was being substantively renegotiated as the CPTPP. Although some elements of the previously agreed on and—in some cases—ratified TPP have been kept, the majority of the IP chapter has been suspended. Because the text of the CPTPP is still being negotiated, Malaysia's score has decreased on Indicator 40.

MEXICO

Rank 24 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Standard exclusive rights for patents and trademarks
- ✓ Efforts to ease ability to commercialize IP assets and develop public-private partnerships, particularly for public research organizations and universities
- ✓ Dedicated endeavor to streamline IP review process and criminal justice system and to meet international standards
- ✓ Efforts to increase awareness of importance of IP rights

KEY AREAS OF WEAKNESS

- ✗ Partial and ambiguous protection of IP in certain aspects for life sciences
- ✗ Lack of sufficient framework to promote action against online piracy (with some improvements)
- ✗ Significant gaps in application of remedies, such as severe delays and difficulty securing adequate damages
- ✗ Inadequate border measures for trade-related infringement of IP rights

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.50
3. Patentability of computer-implemented inventions (CIIIs)	0.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.25
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.50
8. Patent opposition	0.50
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.79
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.25
12. Availability of frameworks that promote cooperative action against online piracy	0.00
13. Scope of limitations and exceptions to copyrights and related rights	0.50
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.75
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.60
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.50
23. Regulatory data protection (RDP) term	0.25
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.50
25. Regulatory and administrative barriers to the commercialization of IP assets	0.50
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.48
28. Digital/online piracy rates	0.48
29. Civil and procedural remedies	0.50
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	1.00
31. Criminal standards including minimum imprisonment and minimum fines	0.75
32. Effective border measures	0.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.25
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.50
35. Consultation with stakeholders during IP policy formation	0.75
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.50
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	19.35

Spotlight on the National IP Environment

Past Editions versus Current Scores

Mexico's overall score has remained virtually unchanged, rising from 48.2% of the total possible score (with a score of 16.87 out of 35) in the 5th edition of the Index to 48.3% (19.35 out of 40) in the 6th edition. This is a result of a mixed performance on most of the new indicators, the suspension of the IP provisions of the TPP, and uncertainty over the IP chapter, if any, in the CPTPP.

Copyrights, Related Rights, and Limitations

- 14. Digital rights management (DRM) legislation:** Circumvention of TPMs is a widespread and growing challenge in Mexico. Mexican law does not adequately protect against circumvention of TPMs, both in terms of the act of circumvention as well as the production, distribution, and use of circumvention devices. A legal basis for TPM protection exists in the Criminal Code but does not effectively address unauthorized circumvention, because it is limited to covering production of circumvention devices—and local production at that (despite the majority of these devices being imported). However, in a landmark case in 2017, a Mexico City court decided in favor of the cable services provider Cablevisión concerning a major brand of video-streaming devices, Roku. In the case, the court determined that the device was widely used to access pirated content from the largest Mexican TV network, Televisa, as well as from Netflix, HBO, Amazon, ESPN, and others. The order prohibited importation and distribution of the devices. On this basis, Mexico's score for this indicator rises by 0.25.
- 15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software:** Over the past few years, Mexican government departments and agencies have been gradually expanding and ensuring their use of licensed software. Many agencies have secured the Verafirm Certification indicating adoption of best practices in software asset management, including licensing of software. In addition, in late 2016, the Mexican IP Office (IMPI) received the M100 award from Microsoft Mexico for certifying that 100% of the software used in the agency is licensed. On this basis, Mexico's score for this indicator rises by 0.25. Nevertheless, industry reports suggest that sales and use of unlicensed software is still widespread among the public and businesses in Mexico.

Enforcement

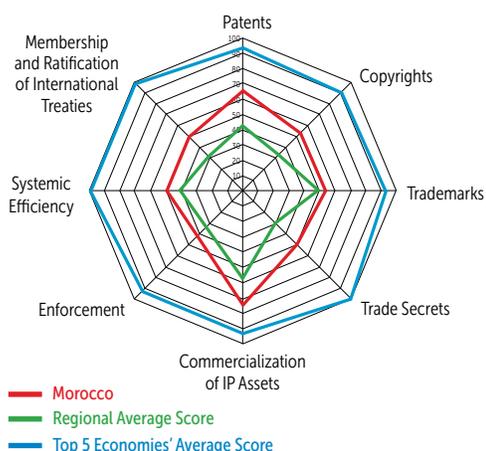
- 29. Civil and procedural remedies:** Although the Industrial Property Law and Copyright Law provide for administrative and civil remedies, including provisional measures, damages, and seizure of goods, in practice, it is very difficult to secure remedies for infringement of patents, copyrights, trademarks, industrial designs, and other rights. Under Mexican law, there is a multilayer system for enforcement, which begins with an administrative action by the IMPI, and then moves to the courts. Altogether the process is very complex, costly, and lengthy for rights holders and often does not result in effective enforcement. For example, in order to secure provisional measures from the IMPI, such as preventing marketing and obtaining seizure of infringing goods, rights holders must first seek an administrative action, which takes on average three to six years to complete and requires the rights holder to post a bond to cover potential damages to the defendant. Defendants are in turn permitted to post a counter-bond and lift the preliminary measure, and the IMPI can raise the level of the bond throughout the proceedings should it deem such an action necessary. Following the closure of the administrative proceeding (including up to three appeals) in order to secure damages, rights holders must open a civil case, which itself can take on average three to six years or more. Despite the cost put forth, rights holders report that injunctions, seizures, and other measures are often not issued or enforced in relation to IP rights. All told, rights holders face a long path to recovering costs and securing compensation for infringement of IP rights. This represents a serious barrier to the protection of IP rights in Mexico.
- 32. Effective border measures:** Under Mexican customs law (Article 148), customs officials cannot act *ex officio* against suspected infringing goods. They may take action only based on an order from the Mexican Institute of Industrial Property (IMPI) or the Attorney General, which should be requested or filed by a rights holder. Efforts to enhance collaboration with rights holders in order to streamline the issuing of such orders have increased in recent years. A system for recording registered IP rights and rights holder contact information with customs exists; this system aims to speed up notification of rights holders of potentially infringing goods (so that rights holders can begin legal action and obtain a seizure order). However, at least one to two additional steps remain in the process that would not exist if customs authorities were empowered to conduct *ex officio* seizures based on this recordation system. This has important implications for the speed of seizures, with rights holders reports indicating that administrative orders for seizing counterfeit goods are often delayed and these goods are permitted to enter the market. Also, action against in-transit or transshipped goods has been suspended since 2011 and reportedly has not been reinstated. It is important that *ex officio* powers for customs authorities, as well as an explicit extension of inspection and seizure of in-transit goods, are included in customs law reforms.

Membership in and Ratification of International Treaties

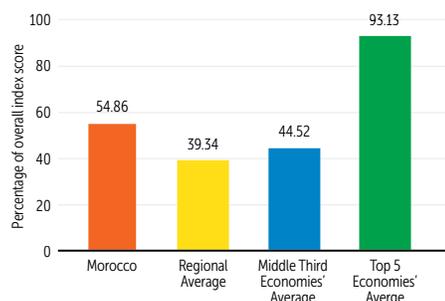
Mexico has signed and ratified the WIPO Internet Treaties. Mexico is not a contracting party to the Patent Law Treaty, and has only signed, but not ratified, the Singapore Treaty on the Law of Trademarks. The withdrawal by the U.S. as a contracting party to the TPP in early 2017 has created considerable uncertainty about the future of the agreement. In a November 2017 inter-ministerial statement the remaining contracting parties—Mexico included—confirmed that the TPP was being substantively renegotiated as the CPTPP. Although some elements of the previously agreed on, and—in some cases—ratified, TPP have been kept, the majority of the IP chapter has been suspended. Because the text of the CPTPP is still being negotiated, Mexico's score has decreased on Indicator 40.

MOROCCO

Rank 21 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Fairly well developed national IP system—highest-performing middle income economy in Index
- ✓ Strong protection for patents and related rights
- ✓ U.S.-Morocco FTA and agreements with EU have encouraged Morocco to strengthen IP environment and related standards
- ✓ PPH in place with Spain and Moroccan IP Office (OMPIC) offers validation of all EPO-registered patents

KEY AREAS OF WEAKNESS

- ✗ Challenging enforcement environment: high rates of physical counterfeiting and online piracy
- ✗ Software piracy rate estimated at 65%
- ✗ Some uncertainty over practical availability of patents for CILs

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.75
3. Patentability of computer-implemented inventions (CILs)	0.50
4. Pharmaceutical-related patent enforcement and resolution mechanism	1.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	0.50
7. Membership in Patent Prosecution Highways (PPHs)	0.50
8. Patent opposition	0.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.74
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.50
11. Expeditious injunctive-style relief and disabling of infringing content online	0.50
12. Availability of frameworks that promote cooperative action against online piracy	0.50
13. Scope of limitations and exceptions to copyrights and related rights	0.50
14. Digital rights management (DRM) legislation	0.50
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.50
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.25
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.25
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.50
23. Regulatory data protection (RDP) term	0.50
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.75
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.36
28. Digital/online piracy rates	0.35
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.50
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.50
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.75
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.50
35. Consultation with stakeholders during IP policy formation	0.50
36. Educational campaigns and awareness raising	0.50
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	21.94

Spotlight on the National IP Environment

Patents, Related Rights, and Limitations

- 2. Patentability requirements; 3. Patentability of computer-implemented inventions (CIIs); and 7. Membership in Patent Prosecution Highways (PPHs):** Moroccan patent law, by and large, conforms to international standards of patentability. The Industrial Property Law (Law No. 17-97 on the Protection of Industrial Property) is clear that patents are available for inventions that are novel, include an inventive step, and are capable of industrial application. Articles 24–26 provide the scope for second-use pharmaceutical claims. Regarding CIIs, Article 23 of the 2014 Industrial Property Law includes clear and unambiguous language allowing the patenting of CIIs. While computer programs per se are not patentable, inventions that are implemented through the use of a computer program and that achieve a technical effect are. However, the extent to which patents for CIIs are practically allowed remains unclear. WIPO statistics show that between 2001 and 2015, CIIs were not in the top 10 fields of technology patented in Morocco. Although Morocco is not a member of either the Global Patent Prosecution Highway or the IP5 PPH, the Intellectual Property Corporation of the Moroccan Office of Industrial and Commercial Property does have a PPH agreement in place with the Spanish Patent and Trademark Office—the PPH-Moittainai pilot program—which commenced on June 1, 2016. Furthermore, since 2015, the OMPIC has offered a validation service of European patents. Under this agreement between the EPO and the OMPIC, all qualifying patents filed directly with the EPO or through the PCT route in Europe are eligible for registration in Morocco.
- 6. Patent term restoration for pharmaceutical products:** Morocco is one of the few economies in Africa and the Middle East to provide a clearly defined term of patent restoration for pharmaceutical products. As part of the U.S.-Morocco FTA (signed in 2004), Morocco agreed to introduce a number of biopharmaceutical-specific IP rights, including patent term restoration. Articles 17.2–17.5 of the Industrial Property Law provide a maximum of 2.5 years of restoration for any exclusivity lost during the process of market authorization. Morocco receives a score of 0.5 on this indicator, as the maximum term of restoration provided is exactly half of the 5-year benchmark used by the Index.

Enforcement

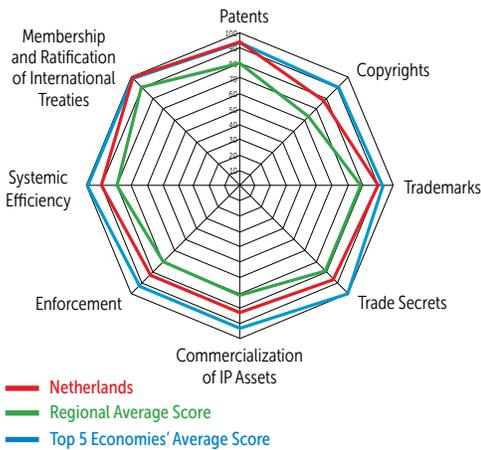
- 32. Effective border measures; and 33. Transparency and public reporting by customs authorities of trade-related IP infringement:** Morocco's IP laws provide border officials with *ex officio* powers to take action against suspected infringing goods. Article 176.4 of the IP Law provides clear and unambiguous powers for customs authorities to act and suspend suspected trademark infringing goods aimed at the Moroccan domestic market and in transit. Similarly, Articles 61.1–61.4 of the Law on Copyright and Related Rights provide customs officials with the same authority. The Customs and Excise Administration (*Administration des Douanes et Impôts Indirects*) publishes an annual report detailing the administration's activities. Included in these reports is a summary of anticounterfeiting action taken by the agency. These reports have been published yearly since 2005. The 2016 report states that 2.25 million counterfeit articles were seized compared with 1.23 million in 2015. These reports, however, do not include details on counterfeit goods' economies of origin.

Membership in and Ratification of International Treaties

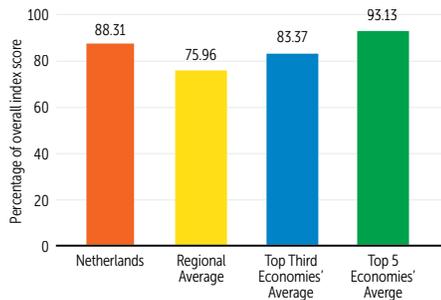
While Morocco is not a contracting party to the Patent Law Treaty or the Singapore Treaty on the Law of Trademarks, in 2011 it acceded to the WIPO Internet Treaties. The 2004 U.S.-Morocco FTA contains a separate and distinct IP chapter. This agreement has been pivotal in strengthening Morocco's national IP environment, including for biopharmaceuticals and copyright-related industries.

NETHERLANDS

Rank 7 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Advanced and sophisticated national IP environment
- ✓ Sector-specific IP rights in place
- ✓ 2017 Hague District Court decision provides rights holders injunctive relief against copyright infringement
- ✓ Membership in all major international PPH tracks through EPO

KEY AREAS OF WEAKNESS

- ✗ EU Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to Netherlands' and EU's research- and IP-based biopharmaceutical industry

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	1.00
3. Patentability of computer-implemented inventions (CIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	1.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.74
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.75
11. Expedient injunctive-style relief and disabling of infringing content online	1.00
12. Availability of frameworks that promote cooperative action against online piracy	0.75
13. Scope of limitations and exceptions to copyrights and related rights	0.75
14. Digital rights management (DRM) legislation	0.75
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.75
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	1.00
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	1.00
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.50
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	1.00
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.75
23. Regulatory data protection (RDP) term	1.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.75
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.83
28. Digital/online piracy rates	0.76
29. Civil and procedural remedies	1.00
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.75
31. Criminal standards including minimum imprisonment and minimum fines	0.50
32. Effective border measures	1.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	1.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	1.00
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	1.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	35.33

Spotlight on the National IP Environment

Patents, Related Rights, and Limitations

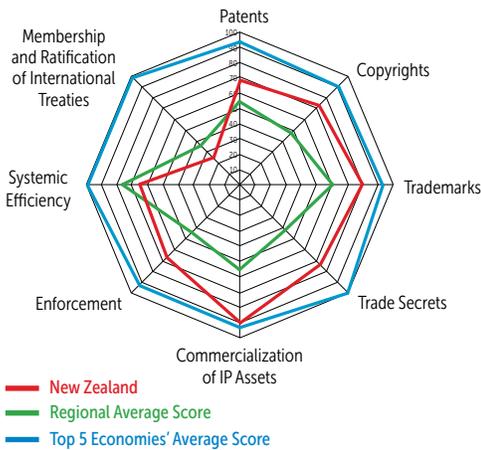
6. Patent term restoration for pharmaceutical products In October 2015, the European Commission (EC) released its report *Upgrading the Single Market: More Opportunities for People and Business*, which details the overarching initiative to reform and deepen the single market with the purpose of spurring economic growth, creating jobs, and reducing administrative burdens. The report identified the need to address the ambiguity formed by the ongoing process of creating an EU-wide unitary patent system and identified the lack of a conforming mechanism for supplementary protection certificates (SPCs). While emphasizing the benefits of a unitary SPC title, the EC also announced its intention to explore options for recalibrating certain elements of this IP right. One such option put forth by the EC is to provide European manufacturers of generic drugs and biosimilars with an SPC manufacturing exemption that would “create thousands of high-tech jobs in the EU and many new companies.” Unfortunately, the EC appears to have lost sight of the fact that IP incentives, such as SPC protection, have been central to the success of Europe’s research-based biopharmaceutical industry. In 2016, industry estimates suggested that this sector generated some 745,000 direct jobs (with more than 113,000 persons employed directly in innovative R&D)—a growth of 33% since 2000. Furthermore, the European research-based biopharmaceutical industry generated more than EUR238 billion in pharmaceutical production in 2015, as well as investments of some EUR33.5 billion in R&D activities across the EU. Many troubling assumptions underlie the commission’s proposal. One running assumption about the potential gains to European generic manufacturers is that there is an actual market and demand for European generic manufacturers’ products. Yet it is not at all clear what this market is or where the demand for generic medicines produced in Europe would come from. In all likelihood, generic follow-on products are already on the market in many of these economies and, critically, being produced by local manufacturers that are often preferred partners in local drug procurement. And for those markets where equivalent protection mechanisms are in place, it is highly unlikely that an SPC exemption would grant the European generic and biosimilar manufacturers an exclusive status for early market entry of their products across the globe. In fact, an EU SPC exemption will invite other economies to consider the question: “If the European Union is weakening IP standards to benefit their domestic industries, why shouldn’t we?” In essence, this proposal could inspire a race to the bottom in weakening global IP standards. Moving forward with an SPC exemption would result in EU member states, Netherlands included, seeing a score reduction to 0 on this indicator.

Copyrights, Related Rights, and Limitations

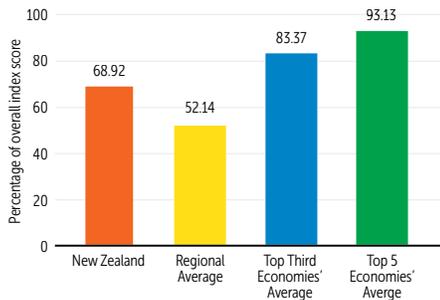
11. Expeditious injunctive-style relief and disabling of infringing content online: The EU’s E-Commerce Directive (2000/31/EC), Articles 12–14, combined with the Copyright Directive (2001/29/EC), Article 8(3), enable a court or administrative authority to require ISPs to terminate or prevent copyright infringement by third parties using their services and lay the basis for injunctive-type relief against infringing websites in EU member states (while still providing a safe harbor for ISPs). Recent case law from the CJEU (including Case C-610/15, *Brien/Ziggo*) suggests that this provision extends to disabling access to torrent websites, which are seen by the CJEU as falling under the umbrella of a “communication to the public” per EU copyright law. One of the key cases in question, *Brien/Ziggo*, is a Dutch case. In 2012, the Dutch copyright foundation BREIN filed suit in the District Court of the Hague to order Dutch ISPs (*Ziggo* and *XS4ALL*) to disable access to The Pirate Bay’s IP addresses. The court granted the order for these and other ISPs. During the course of 2014, the ISPs filed an appeal. The Court of Appeal disagreed with the lower court’s ruling, assessing that The Pirate Bay was not making infringing content “available to the public.” The following year, BREIN appealed this judgment to the Dutch Supreme Court (*Hoge Raad*). The Supreme Court noted that it believed the Court of Appeal erred in its interpretation and stayed proceedings pending a prejudicial judgment from the CJEU. In September 2017, following a fresh lawsuit from BREIN, the District Court handed down a new judgment ordering the disabling of access to The Pirate Bay. At the time of research, the Supreme Court had not given a final judgment on this case, but it is not expected to rule differently from the recent ruling by the District Court.

NEW ZEALAND

Rank 16 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Copyright (Infringing File Sharing) Amendment Act and corresponding regulation provide relatively strong framework against online piracy

KEY AREAS OF WEAKNESS

- ✗ Practical application and net effect of Copyright (Infringing File Sharing) Amendment Act has been mixed at best—few cases have been heard by Copyright Tribunal and most have been dismissed on technicalities
- ✗ New Zealand's implementation of TPP laws has been suspended as the TPP is being renegotiated

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.75
3. Patentability of computer-implemented inventions (CIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	0.25
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.66
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.75
11. Expedient injunctive-style relief and disabling of infringing content online	0.25
12. Availability of frameworks that promote cooperative action against online piracy	0.75
13. Scope of limitations and exceptions to copyrights and related rights	1.00
14. Digital rights management (DRM) legislation	1.00
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.75
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	1.00
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	1.00
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.50
20. Industrial design term of protection	0.60
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.75
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	1.00
23. Regulatory data protection (RDP) term	0.50
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	1.00
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.74
28. Digital/online piracy rates	0.82
29. Civil and procedural remedies	1.00
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.75
31. Criminal standards including minimum imprisonment and minimum fines	0.75
32. Effective border measures	0.25
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.50
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.50
35. Consultation with stakeholders during IP policy formation	0.75
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	0.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	27.57

Spotlight on the National IP Environment

Past Editions versus Current Scores

New Zealand's overall score has increased marginally from 68.7% (24.05 out of 35) in the 5th edition of the Index to 68.9% (27.57 out of 40) in the 6th edition. While New Zealand performed well on the new indicators, it struggled against the suspension of the IP provisions of the TPP treaty and uncertainty over the IP chapter, if any, in the CPTPP.

Area of Note

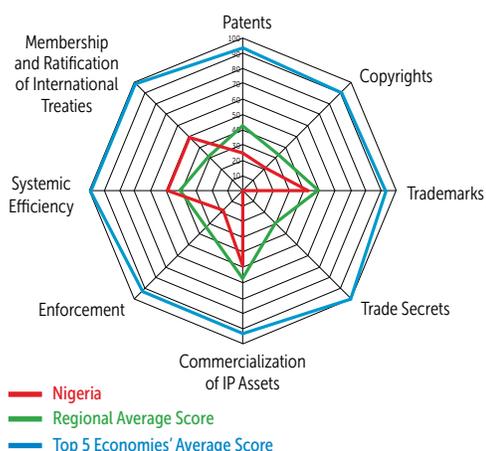
New Zealand is one of the negotiating parties to the Trans-Pacific Partnership. The withdrawal by the U.S. as a contracting party to the TPP in early 2017 has created considerable uncertainty about the future of the agreement. In a November 2017 inter-ministerial statement the remaining contracting parties—New Zealand included—confirmed that the TPP was being substantively renegotiated as the CPTPP. Although some elements of the previously agreed on and ratified TPP have been kept, the majority of the IP chapter has been suspended. Because the text of the CPTPP is still being negotiated, New Zealand's score has decreased on Indicator 40. New Zealand is one of a handful of economies that had introduced and passed implementing legislation for the TPP. The Trans-Pacific Partnership Agreement Amendment Act received royal assent in 2016. The act contains a number of important new laws that potentially strengthen New Zealand's national IP environment, including the introduction of a term of patent restoration for pharmaceutical products and an extension of the copyright term. However, the act and relevant amendments to underlying legislation (including the Patents Act and Copyright Act) have not come into effect. In fact, it is unlikely that this act will ever come into effect. Comments by Prime Minister Jacinda Ardern and press reports in New Zealand suggest that the CPTPP would require new implementing legislation and would be subject to parliamentary review and a vote. Furthermore, in November 2017, Prime Minister Ardern was cited as stating that New Zealand would work to ensure that the suspended IP chapter of the original TPP text stays suspended.

Copyrights, Related Rights, and Limitations

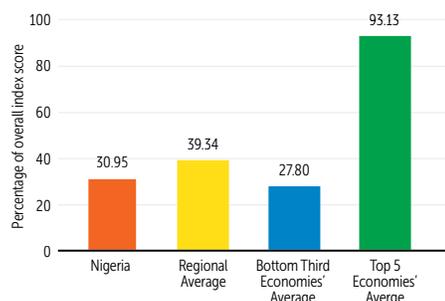
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking): In 2011, New Zealand introduced a graduated response scheme through the Copyright (Infringing File Sharing) Amendment Act, further outlined in the Copyright (Infringing File Sharing) Regulations. Specifically, this scheme amended the Copyright Act and introduced a mechanism whereby rights holders can notify Internet protocol address providers (IPAPs) about a suspected infringement; IPAPs are then obliged to pass on a "Detection Notice" directly to the account holder/suspected infringer. Under the terms of the regulations, continued suspected infringement can result in two further notices being issued and the rights holder ultimately being able to apply to the Copyright Tribunal for compensation of up to NZ\$15,000. The rights holder can also apply for a court order for the alleged infringer's Internet access to be suspended for a period of up to 6 months. While a positive step when it was introduced, today the overall effectiveness of the legislation is questionable. The number of cases filed before the tribunal has steadily decreased and one major association, Recorded Music New Zealand, has reportedly reduced the number of notices sent out due to the high cost (there is a NZ\$25 charge for each notification and an additional NZ\$200 charge to file a complaint with the Copyright Tribunal for each case) and stopped filing cases before the tribunal. In total, there have been 23 decisions made by the Copyright Tribunal since the introduction of the notification system. There have been no decisions made in 2016 and, at the time of research, none in 2017. The latest decision by the tribunal is from February 2015 in the case *Recorded Music NZ Limited v. Telecom NZ*. Emblematic of many of the previous decisions by the tribunal, this application was dismissed on a technicality; the notices sent to the accused account holder did not contain a sufficient amount of information about the relevant laws and legal process. The tribunal noted that it "appreciates the difficulty that this [the basis of the decision] may cause for rights owners, who of course are not responsible for sending infringement notices, yet who bear the consequences of any errors in those notices that cause them to be invalidated. Still, there is no practical or effective remedy to what has become widespread copyright infringement in New Zealand through file sharing. Polls consistently show a high proportion of Internet users in New Zealand engaging in infringing activities online. A 2015 Colmar Brunton poll of young Internet users shows close to 50% engaged in the illegal streaming of television programming. Similarly, in a 2016 survey by Ernest & Young on online consumer behavior in a number of Asia Pacific economies, 58% of respondents in New Zealand admitted to illegal downloading and streaming.

NIGERIA

Rank 42 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Ratified the WIPO Internet Treaties in 2017
- ✓ Despite overall challenging environment, ongoing enforcement efforts by the NCC are encouraging

KEY AREAS OF WEAKNESS

- ✗ Overall weak and limited legal and regulatory framework with major forms of IP rights not in place
- ✗ Enforcement challenges persist—no national coordination; only ad hoc efforts
- ✗ Persistently high rates of physical and growing online piracy

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.00
3. Patentability of computer-implemented inventions (CIIs)	0.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.00
8. Patent opposition	0.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.74
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expeditious injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.25
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.00
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.00
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.25
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.00
20. Industrial design term of protection	0.60
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.25
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.00
23. Regulatory data protection (RDP) term	0.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.75
25. Regulatory and administrative barriers to the commercialization of IP assets	0.25
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.34
28. Digital/online piracy rates	0.20
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.00
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.25
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.25
35. Consultation with stakeholders during IP policy formation	0.75
36. Educational campaigns and awareness raising	0.50
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	1.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	12.38

Spotlight on the National IP Environment

Past Editions versus Current Scores

Nigeria's overall score has decreased marginally from 31.3% (10.97 out of 35) in the 5th edition of the Index to 31% (12.38 out of 40) in the 6th edition. This reflects a mixed performance on the new indicators.

Systemic Efficiency

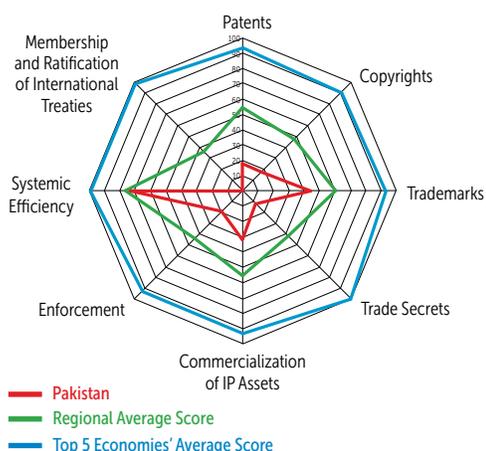
34. Inter-governmental coordination of IP rights enforcement efforts; and 36. Educational campaigns and awareness raising: As noted in past editions of the Index, the enforcement environment in Nigeria is highly challenging. Rates of physical counterfeiting and online piracy remain high and public awareness of the value of IP remains low. The Nigerian Copyright Commission (NCC) continues to be an active voice of the importance of protecting copyright and fighting piracy. In 2017, the agency continued with its enforcement activities, including arrests, seizures, and antipiracy operations. The NCC is also responsible for a number of awareness-raising activities, including media campaigns, educational activities, and local workshops. Specific events in 2017 include an antipiracy forum on book piracy with publishers and book retailers and lectures on copyright to law students from Ahmadu Bello University. Its enforcement activities in the 1st half of the year included the confiscation of more than 1.2 million counterfeit articles and the arrest of 48 suspected infringing individuals. With respect to the national coordination of enforcement, there is no institutionalized national or strategic interagency coordination. Past efforts have been ad hoc and have included joint efforts between the NCC and customs authorities, for example.

Membership in and Ratification of International Treaties

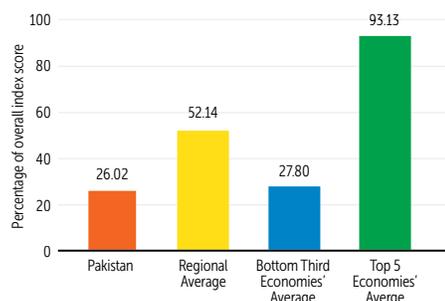
In a positive move, Nigeria ratified the WIPO Internet Treaties in 2017. Nigeria first signed these treaties in 1997. The ratification of the WIPO Internet Treaties shows Nigeria's commitment to upholding the highest standards of protection and enforcement of copyright and related rights. Future editions of the Index will closely monitor new developments with respect to changing Nigerian law and practice to conform with these treaties. Nigeria is also a signatory to and has ratified the Patent Law Treaty. Nigeria is not a contracting party to the Singapore Treaty on the Law of Trademarks and has not concluded a major FTA post-TRIPS membership that includes substantial provisions on IP rights.

PAKISTAN

Rank 47 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Basic IP protection available in legislation (with exceptions particularly for sector-specific rights)
- ✓ Introduction of specialized IP courts and capacity building
- ✓ Greater efforts at public education, modernization of IP laws, and enhancement of coordination among enforcement agencies

KEY AREAS OF WEAKNESS

- ✗ Significant discrepancy between IP rights in law and level of practical enforcement
- ✗ Enforcement often arbitrary and nondeterrent (though efforts to improve are underway)
- ✗ High counterfeiting and piracy rates

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.25
3. Patentability of computer-implemented inventions (CIIs)	0.25
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.00
8. Patent opposition	0.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.53
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expeditious injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.00
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.00
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.25
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.25
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.25
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.00
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.25
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.25
25. Regulatory and administrative barriers to the commercialization of IP assets	0.25
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.22
28. Digital/online piracy rates	0.16
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.00
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.50
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.75
35. Consultation with stakeholders during IP policy formation	0.50
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	0.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	10.41

Spotlight on the National IP Environment

Past Editions versus Current Scores

Pakistan's overall score has increased from 24% of the total possible score (with a score of 8.37 out of 35) in the 5th edition of the Index to 26% (10.41 out of 40) in the 6th edition. This is mainly due to a strong performance on some of the new indicators added in the 6th edition.

Commercialization of IP Assets

26. IP as an economic asset: A number of nascent public and private efforts promote and enable greater use of IP as an economic asset in Pakistan. For example, the Pakistan Intellectual Property Organization (IPO) and the Higher Education Commission of Pakistan have partnered with WIPO on establishing Technology and Innovation Support Centers (TISCs) in local universities. WIPO's TISC program and network provides information, training, and other services on the use of IP rights, including technical tools and strategies for IP management, licensing, and valuation. Workshops were held in 2017 to build awareness of the program in a number of higher education and R&D institutions in Pakistan. IPO reports that nearly 30 universities are slated to join the TISC network yet.

Enforcement

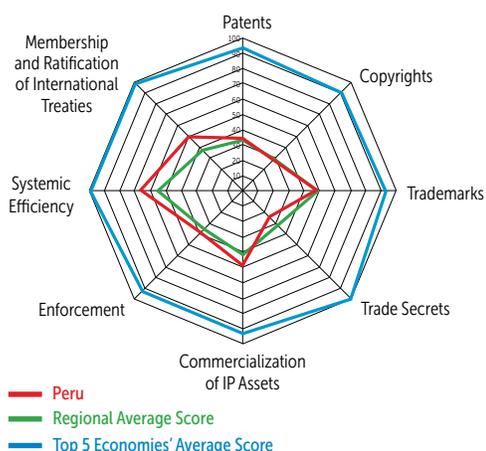
32. Effective border measures: The Customs Act 1969 provides customs officials with the authority to inspect and seize counterfeit and pirated goods. In 2017, implementing regulations, the Customs Rules 2001, were amended to include the addition of a chapter on the enforcement of IP rights. Chapter 28 of the new rules confirms *ex parte* and *ex officio* powers for customs officials and the Directorate of IPR Enforcement (within the Federal Board of Revenue) in the seizure of infringing goods under the Copyright Ordinance (1962) and Trademarks Ordinance (2001). It also includes a system for recording rights and communicating with rights holders about the seizure of the goods and subsequent action. The new provisions are limited to imported goods only. No specific provisions address the treatment of in-transit goods. Recent evidence suggests that customs officials act *ex officio* to seize suspected counterfeit goods, including unlabeled goods for which the intent to place false marks domestically is presumed. Given the above regulatory development and evidence, Pakistan's score for this indicator increases by 0.25.

Systemic Efficiency

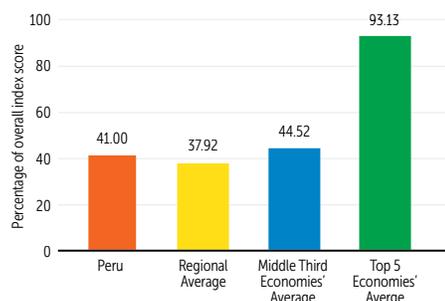
34. Inter-government coordination of IP rights enforcement efforts; and 36. Educational campaigns and awareness raising: Pakistan has established central and regional IPR Enforcement Coordination Committees. These committees have been in place in Islamabad, Karachi, and Lahore since 2006 and as of 2017, several more regions have been added. The committees are led by the Pakistan IPO and include a number of relevant departments and agencies, including the District Police, Federal Investigative Agency, Pakistan Customs, Judiciary, and Pakistan Electronic Media Regulatory Authority. The committees, which meet at least annually, also include a number of private sector organizations. The committees reportedly focus on increasing police raids and court convictions as well as improving awareness of the importance of IP protection (with the IPO leading this effort). For its part, the IPO conducts a substantial number of activities per year aimed at raising awareness about IP rights among students, businesses, attorneys, and the wider public. These include, for instance, seminars at universities for students and SMEs on the value of IP for economic development and the need to protect IP rights.

PERU

Rank 31 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Basic IP protections available (though with gaps in sector-specific provisions)
- ✓ Standard legal framework for IP enforcement, with some improvements to application under new IP courts
- ✓ Border measures provided for in legislation
- ✓ Efforts to coordinate IP rights enforcement across government agencies and to raise awareness of the importance of IP protection

KEY AREAS OF WEAKNESS

- ✗ Limited patentability and lack of effective IP protection for life sciences
- ✗ Rudimentary digital copyright regime (with some exceptions)
- ✗ High rates of counterfeiting and piracy
- ✗ Gaps in IP enforcement on the ground

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.25
3. Patentability of computer-implemented inventions (CIIIs)	0.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.50
8. Patent opposition	0.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.74
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.00
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.50
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.25
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.25
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.40
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0.25
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.75
25. Regulatory and administrative barriers to the commercialization of IP assets	0.25
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.39
28. Digital/online piracy rates	0.37
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.25
31. Criminal standards including minimum imprisonment and minimum fines	0.50
32. Effective border measures	0.50
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.50
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.75
35. Consultation with stakeholders during IP policy formation	0.50
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	16.40

Spotlight on the National IP Environment

Past Editions versus Current Scores

Peru's overall score has remained the same at 41% of the total possible score, although its score increased from 14.34 (out of 35) in the 5th edition of the Index to 16.40 (out of 40) in the 6th edition. This primarily reflects a mixed performance on the new indicators.

Patents, Related Rights, and Limitations

7. Membership in Patent Prosecution Highways (PPHs): Peru's patent office, Peruvian National Institute for the Defense of Competition and Intellectual Property Protection (INDECOPI), is not a member of the Global PPH or the IP5, but it has signed a PPH with the Spanish Patent and Trademark Office. The PPH, signed in 2016, is planned for two years, with automatic renewal every two years. The Peruvian IP Office also has regional and bilateral PPH agreements within Latin America.

Enforcement

32. Effective border measures: Peru allows customs officials to initiate border measures *ex officio* with respect to goods imported, exported, and in transit through implementing provisions in the Trade Protection Agreement with the U.S. Supreme Decree No. 059-2017-PCM which, among other elements, seeks to streamline these procedures and enhance their effectiveness by improving communication regarding suspected infringing goods held by customs officials. Specifically, the measure introduces the use of email communication and a set time frame for communication with rights holders and owners of suspect goods as well as provisions for discarding the goods. Although the Peruvian customs authority, SUNAT, is active in the seizure of counterfeit and pirated goods, more robust implementation of the above measures is needed. Rates of counterfeiting remain very high in Peru—some of the highest in the world.

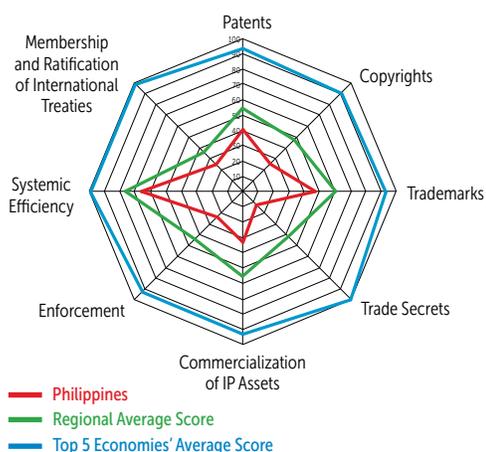
Systemic Efficiency

34. Inter-government coordination of IP rights enforcement efforts: Peru has an interagency committee focused on anticounterfeiting and piracy, particularly at the border. The *Comisión de Lucha contra los Delitos Aduaneros y la Piratería* (CLCDAP) consists of 16 government ministries and departments, including the Ministries of Production; Economy and Finance; Trade and Tourism; Internal Affairs; and Defense, as well as the Commission of Tax Administration and the General Prosecution Office. The commission also includes representatives from relevant industry associations. Evidence to date suggests that while the commission is active, greater coordination and involvement from the judiciary, prosecutors, and police is needed, as is better targeting of priority areas within key sectors.

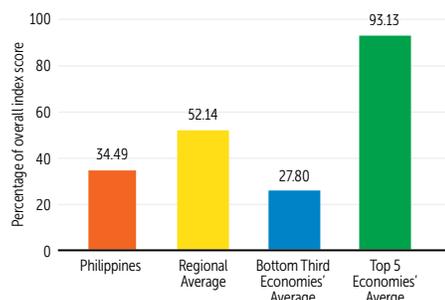
36. Educational campaigns and awareness raising: For the past several years, INDECOPI and other IP-related agencies have introduced a range of campaigns aimed at raising awareness of the importance of IP protection. For example, since 2013, INDEPCOP has operated the campaign *Compra legal, compra original* targeting digital piracy and counterfeiting. In 2016, the CLCDAP, together with INDECOPI and SUNAT, launched the IP awareness-raising campaign *Yo Decido, Yo Respeto: Rechazo al Contrabando y Respeto a la Propiedad Intelectual*, which is aimed at young students. The campaign seeks to raise awareness concerning the negative effects of purchasing counterfeit goods (including drugs and fashion items) and using pirated content. The CLCDAP and the Ministry of Education are also reportedly working on a framework agreement to include similar materials in high-school-level curricula.

PHILIPPINES

Rank 38 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Most basic IP rights provided for in legislation (though missing certain key sector-specific rights)
- ✓ Growing specialization and capacity building, such as in administrative IP courts
- ✓ Streamlining of IP registration system
- ✓ Heightened efforts to promote coordination with rights holders and government agencies and public awareness about enforcement of IP
- ✓ Ongoing focus on improving IP protection and enforcement (including through the new IPR Action Plan)

KEY AREAS OF WEAKNESS

- ✗ Loopholes, red tape, and nondeterrent remedies in IP legislation and in courts
- ✗ Significant gaps in life sciences- and content-related IP rights
- ✗ Online piracy rampant, with digital piracy largely unaddressed
- ✗ Limits in trademark protection; mixed enforcement outcomes

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.50
3. Patentability of computer-implemented inventions (CIIs)	0.50
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.25
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.50
8. Patent opposition	0.50
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.53
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.00
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.50
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.00
20. Industrial design term of protection	0.60
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.25
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.25
25. Regulatory and administrative barriers to the commercialization of IP assets	0.25
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.34
28. Digital/online piracy rates	0.33
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.25
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.25
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.75
35. Consultation with stakeholders during IP policy formation	0.50
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	13.80

Spotlight on the National IP Environment

Past Editions versus Current Scores

The Philippines' overall score has increased from 33.7% (with a score of 11.78 out of 35) in the 5th edition of the Index to 34.5% (13.80 out of 40) in the 6th edition. This reflects a relatively strong performance on most of the new indicators.

Patents, Related Rights, and Limitations

7. Membership in Patent Prosecution Highways (PPHs): Though not a member of the Global PPH, the Intellectual Property Office of the Philippines (IPOPHL) has entered into several PPHs with established patent offices worldwide. Most recently, in 2017, a 3-year pilot PPH with the EPO commenced. On the IPOPHL's side, the agreement covers all technologies and 200 applications per year (divided equally by half year). The IPOPHL also has PPHs with the JPO (since 2012) and the USPTO (since 2013).

Commercialization of IP Assets

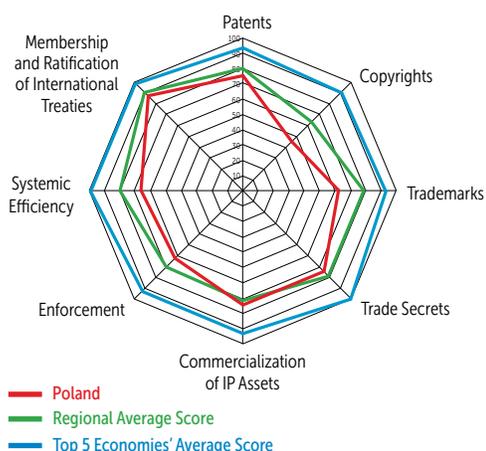
26. IP as an economic asset: A culture of technology transfer and IP commercialization is growing in the Philippines. Since 2009, the Philippines has had Bayh-Dole-style legislation in place (Technology Transfer Act 10055 of 2009) that makes universities and R&D institutions the default owners of IP rights arising from publicly funded research. Still, a 2014 study of the "Innovation Ecosystem" in the Philippines found a lack of confidence by companies in the licensing and commercialization of IP rights and some gaps in conditions for transfer of know-how between universities and the private sector. However, over the past few years a number of initiatives have helped strengthen the technology transfer system in the Philippines. For instance, the U.S.-Philippines partnership in the Science, Technology, Research, and Innovation for Development Program—which aims to "harness the intellectual capital of the country's higher education system to sustainably and efficiently support Philippine prosperity"—involves development of technology transfer offices at 10 Philippine universities and regular industry-academia workshops on technology development, including use of IP rights to support translation of R&D into relevant products. The IPOPHL has also partnered with WIPO to establish Innovation and Technology Support Offices (including patent libraries) within universities, which provide IP valuation services and training on IP management and entrepreneurship. A number of initiatives have also taken place at individual universities, such as a 4-day workshop on ownership and leveraging of IP at Western Mindanao State University and courses on management and enforcement of IP rights at Ateneo de Manila University.

Systemic Efficiency

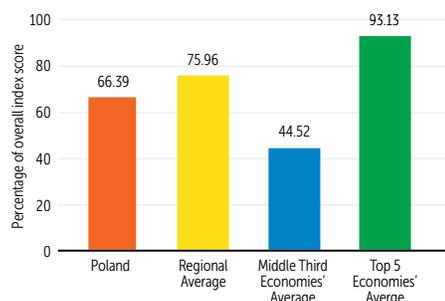
34. Inter-governmental coordination of IP rights enforcement efforts: Sections 5 and 7 of the IP Code require the IPOPHL to coordinate with other government agencies and the private sector to carry out enforcement activities. The National Committee on IP Rights, created through Executive Order No. 736 in 2008, is an interagency body aimed at strengthening IP protection and enforcement, led by the IPOPHL and its dedicated IP Rights Enforcement Office. The National Commission on Indigenous Peoples (NCIPR) comprises 12 agencies, including the Department of Trade and Industry, the Department of Justice, Customs, the National Police, the National Bureau of Investigation, the Optical Media Board, the Food and Drug Administration, and the National Telecommunications Commission. The NCIPR also coordinates with the judiciary. The NCIPR holds regular meetings with member agencies and IP owners. The Philippine government's IPR Action Plan 2017–2022 continues to prioritize the NCIPR and coordination of enforcement efforts by scaling up the budget and resources for the administration and operational capacity of NCIPR.

POLAND

Rank 17 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Legal framework for IP protection largely aligned with EU standards
- ✓ Certain sector-specific IP rights available (including for life sciences)
- ✓ Standard legal measures for trademark and industrial design protection in place
- ✓ Increasing efforts to enhance IP policy coordination and public engagement

KEY AREAS OF WEAKNESS

- ✗ EU Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to Poland's and EU's research- and IP-based biopharmaceutical industry
- ✗ Gaps in the online copyright protection, including an effective notice and takedown system, though a basis for injunctive-style relief exists
- ✗ Relatively high levels of online piracy in comparison with other high-income economies
- ✗ Judicial enforcement sluggish, with lack of attention to cases of IP infringement, red tape, and generally nondeterrent penalties

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.50
3. Patentability of computer-implemented inventions (CIs)	0.25
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.25
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	1.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.66
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.75
12. Availability of frameworks that promote cooperative action against online piracy	0.50
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.50
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.50
23. Regulatory data protection (RDP) term	1.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.75
25. Regulatory and administrative barriers to the commercialization of IP assets	0.75
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.63
28. Digital/online piracy rates	0.52
29. Civil and procedural remedies	0.50
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.50
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	1.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	1.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.50
35. Consultation with stakeholders during IP policy formation	0.50
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	0.50
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	26.56

Spotlight on the National IP Environment

Past Editions versus Current Scores

Poland's overall score has remained the same in the 6th edition of the Index as in the 5th edition, at 66% of the total possible score (with a score of 26.56 out of 40). This mainly reflects a mixed performance on the new indicators.

Patents, Related Rights, and Limitations

6. Patent term restoration for pharmaceutical products: In October 2015, the European Commission (EC) released its report *Upgrading the Single Market: More Opportunities for People and Business*, which details the overarching initiative to reform and deepen the single market with the purpose of spurring economic growth, creating jobs, and reducing administrative burdens. The report identified the need to address the ambiguity formed by the ongoing process of creating an EU-wide unitary patent system and identified the lack of a conforming mechanism for supplementary protection certificates (SPCs). While emphasizing the benefits of a unitary SPC title, the EC also announced its intention to explore options for recalibrating certain elements of this IP right. One such option put forth by the EC is to provide European manufacturers of generic drugs and biosimilars with an SPC manufacturing exemption that would "create thousands of high-tech jobs in the EU and many new companies." Unfortunately, the EC appears to have lost sight of the fact that IP incentives, such as SPC protection, have been central to the success of Europe's research-based biopharmaceutical industry. In 2016, industry estimates suggested that this sector generated some 745,000 direct jobs (with more than 113,000 persons employed directly in innovative R&D)—a growth of 33% since 2000. Furthermore, the European research-based biopharmaceutical industry generated more than EUR238 billion in pharmaceutical production in 2015, as well as investments of some EUR33.5 billion in R&D activities across the EU. Many troubling assumptions underlie the commission's proposal. One running assumption about the potential gains to European generic manufacturers is that there is an actual market and demand for European generic manufacturers' products. Yet it is not at all clear what this market is or where the demand for generic medicines produced in Europe would come from. In all likelihood, generic follow-on products are already on the market in many of these economies and, critically, being produced by local manufacturers that are often preferred partners in local drug procurement. And for those markets where equivalent protection mechanisms are in place, it is highly unlikely that an SPC exemption would grant the European generic and biosimilar manufacturers an exclusive status for early market entry of their products across the globe. In fact, an EU SPC exemption will invite other economies to consider the question: "If the European Union is weakening IP standards to benefit their domestic industries, why shouldn't we?" In essence, this proposal could inspire a race to the bottom in weakening global IP standards. Moving forward with an SPC exemption would result in EU member states, Poland included, seeing a score reduction to 0 on this indicator.

Copyrights, Related Rights, and Limitations

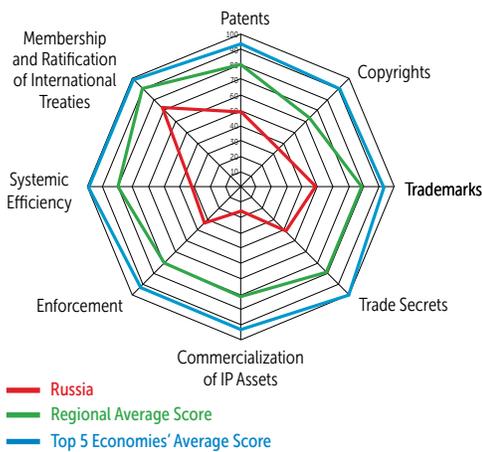
11. Expedient injunctive-style relief and disabling of infringing content online: The Polish Act on Providing Services by Electronic Means (2002), which implements the E-Commerce Directive, provides limited liability for persons (including ISPs) that disable access to infringing stored data when a court or "other competent authority" has ordered it. The same mechanism exists if the ISP is made aware of the infringing stored data through a formal notice. There have been some, but not many, instances of courts enforcing this provision. For example, a landmark 2015 Krakow District Court decision (IX GC 791/12) required a major ISP/peer-to-peer (P2P) hosting platform, chomikuj.pl, to disable access to copyright-infringing content. The decision went even further than the Electronic Services Act, requiring the ISP to regularly monitor for infringing content and disable access to it. The basis for this level of involvement by an ISP was cited as the result of this particular ISP's focus on promoting file sharing (hence, not acting solely as a hosting provider). Initially, the ISP refused to disable access to notices deemed "not credible," as required under Polish law, when requested by rights holders. The court required the ISP to respond in the future (and pay damages for not responding to rights holder notices previously) as well as conduct the above-mentioned regular monitoring. Nevertheless, it is important to distinguish the above actions with other types of site disabling efforts by the Polish government, such as efforts related to threats to national security and potentially illegal gambling platforms, which are not necessarily conducted in a transparent manner.

Systemic Efficiency

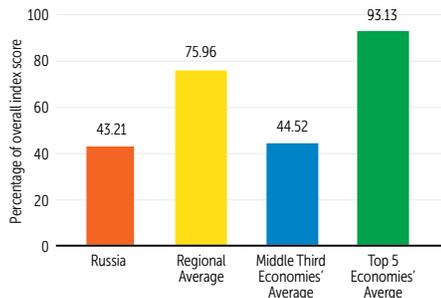
35. Consultation with stakeholders during IP policy formation: A number of Polish laws provide the legal basis requiring government ministries to publish draft laws and regulations and provide opportunity for public engagement, including the Ordinance of the Council of Ministers of August 22, 2011, on the reporting of interest in works on draft normative acts and draft laws (Journal of Laws No. 181, item 1080), and the Regulation of the Minister of Interior and Administration of January 18, 2007, on the Public Information Bulletin (Journal of Laws No. 10, item 68). Over the past few years, Poland has taken steps to improve the level of public participation in policymaking, including under the EU's Better Regulation program. This includes the creation of an online consultation portal where the public at large can review and comment on proposed legislation. The OECD reports that the platform has been used widely by a number of government agencies. Nevertheless, its analysis suggests that actual participation can sometimes be limited, especially in the past few years, and that time frames for response are often insufficient.

RUSSIA

Rank 29 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ New copyright reform passed—strengthens rights holders' ability to request the disabling of access to infringing material online
- ✓ ROSPATENT has in place numerous PPHs and is a full participant in the Global PPH
- ✓ Full participant in international IP treaties

KEY AREAS OF WEAKNESS

- ✗ Increasingly punitive localization requirements targeting biopharmaceutical sector
- ✗ Government efforts through the Federal Antimonopoly Service (FAS) to use compulsory licenses as cost-containment measure targeting biopharmaceuticals intensified

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.25
3. Patentability of computer-implemented inventions (CIIs)	0.25
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	0.50
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.74
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.50
11. Expeditious injunctive-style relief and disabling of infringing content online	0.50
12. Availability of frameworks that promote cooperative action against online piracy	0.50
13. Scope of limitations and exceptions to copyrights and related rights	0.00
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.00
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.25
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.25
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.00
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0.60
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.25
26. IP as an economic asset	0.25
Category 6: Enforcement	
27. Physical counterfeiting rates	0.32
28. Digital/online piracy rates	0.38
29. Civil and procedural remedies	0.50
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.25
31. Criminal standards including minimum imprisonment and minimum fines	0.00
32. Effective border measures	0.50
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.50
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.25
35. Consultation with stakeholders during IP policy formation	0.50
36. Educational campaigns and awareness raising	0.25
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	1.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	17.29

Spotlight on the National IP Environment

Past Editions versus Current Scores

Russia's overall score has decreased from 44.4% (15.53 out of 35) in the 5th edition of the Index to 43.2% (17.29 out of 40) in the 6th edition. This reflects a relatively weak performance on the new indicators added.

Patents, Related Rights, and Limitations; and Commercialization of IP Assets

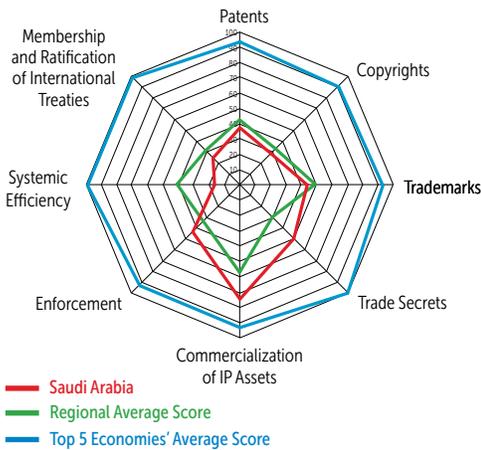
- 5. Legislative criteria and active use of compulsory licensing of patented products and technologies; and 24. Barriers to market access:** As noted in previous editions of the Index, in its efforts to diversify and modernize its economy the Russian government has increasingly focused on erecting localization barriers and mandatory localization requirements for foreign entities to access the Russian market. A number of industries and sectors (in particular biopharmaceuticals and other high-technology industries) have been targeted with requirements and preferences for local production and manufacturing. These efforts intensified in 2017. The FAS has proposed to amend the Civil Code to allow for the greater use of compulsory licensing for biopharmaceutical products. In July the head of the FAS, Igor Artyemyev, stated it was only a matter of time before the government would formally begin to use this tool. The underlying reason behind much of this effort is to reduce public expenditure on drugs and increase domestic Russian manufacturing capacity. Yet neither the cost of medicines nor domestic industrial policy are relevant justifications or basis for compulsory licensing under the TRIPS Agreement. TRIPS Article 31, including the amendments introduced in the 2001 Doha Ministerial Declaration, and the subsequent General Council decision that allows the export of medicines produced under a compulsory license (outlined in Paragraph 6), another of form the legal grounds for compulsory licensing for medicines. The chairman's statement accompanying the General Council decision (concerning Paragraph 6 of the Doha Declaration) underscores that these provisions are not in any way intended for industrial or commercial objectives, and if used, should be aimed solely at protecting public health. In addition, Article 31 and the Doha Declaration suggest that compulsory licensing represents a "measure of last resort"—intended primarily for public health and humanitarian emergencies such as pandemics, and to be used only after all other options for negotiating pricing and supply have been exhausted. Localization efforts also intensified for other sectors. The New Digital Society Strategy 2017–30 (approved in May 2017) contains a number of localization policies, including the location of databases and data within Russia and online payments to be made through Russian payment systems. Further restrictions have also been put in place for foreign ownership of online content providers.
- 7. Membership in Patent Prosecution Highways (PPHs):** The Russian Federal Service for Intellectual Property (ROSPATENT) has long been engaged in international efforts to accelerate patent prosecution. ROSPATENT was one of the first offices to partner with the USPTO on a PPH in 2011. In addition, as of 2017, ROSPATENT has in place a PPH with the EPO. ROSPATENT is also a member of the Global Patent Prosecution Highway.

Copyrights, Related Rights, and Limitations

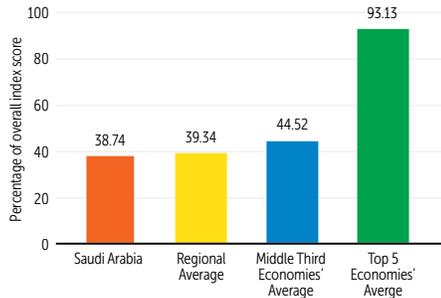
- 10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking); 11. Expedient injunctive-style relief and disabling of infringing content online; and 12. Availability of frameworks that promote cooperative action against online piracy:** As noted in previous editions of the Index, over the past half decade, Russia has introduced and implemented a range of new laws and regulations to help combat the country's high level of online infringement. Russia passed in 2013 a number of amendments to the Civil Code Part IV, which included a notice and takedown provision with regard to the responsibilities of "information intermediaries" with an obligation to act on a notice of infringement from a rights holder. These amendments also included the introduction of interim judicial measures, designating the Moscow City Court as the first instance of such application and giving it the power to issue temporary injunctions. Furthermore, a rights holder could also apply to the Federal Service for Supervision in the Sphere of Telecom, Information Technologies, and Mass Communication (the ROSKOMNADZOR) for the enforcement of these provisions. Specifically, ROSKOMNADZOR was given the power to issue notices to the hosting service provider requiring (1) notification to the alleged infringer and (2) if no action is taken, the restriction of access to the alleged infringing material. In 2017, further legislative changes were introduced to strengthen rights holders' ability to request the disabling of access to infringing material online. Specifically, there were a number of important amendments to the Law on Information, Information Technologies, and Information Protection. These amendments include a ban on so-called mirror sites that infringe copyrighted content. Rights holders now have the option of notifying the Ministry of Communications, which has two days to order the hosting provider to disable access to the site. Furthermore, Internet mediators (including search engines) are now obliged to remove links to sites that have been found to host illegal content. These are positive developments and show how Russian authorities are actively seeking to address the challenge of online piracy. The Index will closely monitor the application of these new requirements and the extent to which rights holders are in practice able to restrict the illegal accessing of their content.

SAUDI ARABIA

Rank 34 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Strong and sustained focus by Saudi authorities and institutions to encourage IP commercialization and technology transfer
- ✓ *Ex officio* authority in place for customs officials

KEY AREAS OF WEAKNESS

- ✗ Pharmaceutical patent protection and linkage mechanism in effect suspended through Saudi Food and Drug Authority (SFDA) actions in 2017
- ✗ Significant gaps in copyright framework—chiefly relating to protection online
- ✗ Increasing number of localization requirements
- ✗ Industry reports of a lack of practical availability of RDP—indirect reliance has been allowed when reviewing follow-on products
- ✗ Limited participation in international IP treaties

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.50
3. Patentability of computer-implemented inventions (CIs)	0.75
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.00
8. Patent opposition	0.75
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.53
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expeditious injunctive-style relief and disabling of infringing content online	0.25
12. Availability of frameworks that promote cooperative action against online piracy	0.00
13. Scope of limitations and exceptions to copyrights and related rights	0.50
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.25
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.25
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.40
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.25
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.50
23. Regulatory data protection (RDP) term	0.50
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.50
25. Regulatory and administrative barriers to the commercialization of IP assets	1.00
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.55
28. Digital/online piracy rates	0.51
29. Civil and procedural remedies	0.50
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.00
31. Criminal standards including minimum imprisonment and minimum fines	0.50
32. Effective border measures	0.50
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.50
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.00
35. Consultation with stakeholders during IP policy formation	0.25
36. Educational campaigns and awareness raising	0.25
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	0.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	1.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	15.49

Spotlight on the National IP Environment

Past Editions versus Current Scores

Saudi Arabia's overall score has decreased substantially from 46% (15.98 out of 35) in the 5th edition of the Index to 39% (15.49 out of 40) in the 6th edition. This reflects a weak performance on the new indicators and the Saudi FDA effectively overriding Saudi Arabia's pharmaceutical patent linkage regime by approving for market a follow-on product for a medicine under a registered patent. In a positive move Saudi Arabia did open a new IP office, the Saudi Intellectual Property Authority, providing an overall strategic direction and coordinating IP policy.

Patents, Related Rights, and Limitations

4. Pharmaceutical-related patent enforcement and resolution mechanism: Saudi Arabia introduced a patent linkage system in 2013. Under Circular Letter No. 7448, the Saudi FDA requires follow-on generic applicants to submit a letter from the Saudi Patent Office and/or the Gulf Cooperation Council Patent Office indicating that no registered patent exclusivity is or will be in place for the relevant reference product at the time of marketing approval. In 2017, the SFDA effectively overrode Saudi Arabia's linkage regime by approving for market a follow-on product to Daclatasvir, a medicine under a registered patent held by Bristol-Myers Squibb. This is a highly negative development for Saudi Arabia and runs counter to the goals and general principles of both the Vision 2030 and National Transformation Program 2020. As a result, Saudi Arabia has dropped by a full point on this indicator.

Copyrights, Related Rights, and Limitations

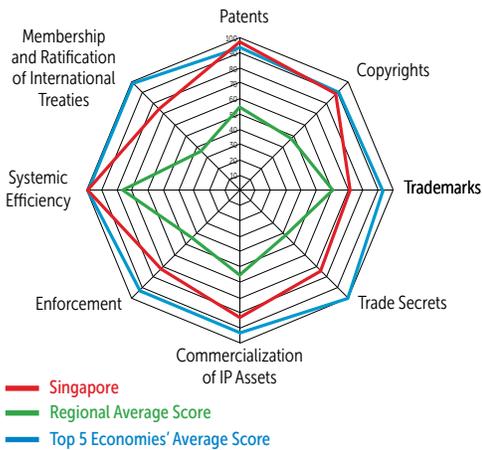
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking); 11. Expedient injunctive-style relief and disabling of infringing content online; and 12. Availability of frameworks that promote cooperative action against online piracy: As noted in previous editions of the Index, Saudi copyright law provides for basic exclusive rights and protection of creative works. Article 9 of the Copyright Law Royal Decree No. M/41 includes a reference to the exclusive right to communication of a given work to the public "via any possible means." However, no specific law or regulation is in place that provides a notification and takedown mechanism for infringing online content or any similar legal framework that specifically addresses the issue of online infringement. Disabling of access to Web content, including copyright-infringing content, takes place sporadically by the Ministry of Culture and Information. No official or public guidelines are in place. Physical and online piracy remain a significant challenge to rights holders in Saudi Arabia. Industry reports suggest that 90% of music and film content in Saudi Arabia is pirated. The estimated rate of software piracy by the BSA is 49%, virtually unchanged from the 2009 estimated rate of 51%.

Commercialization of IP Assets

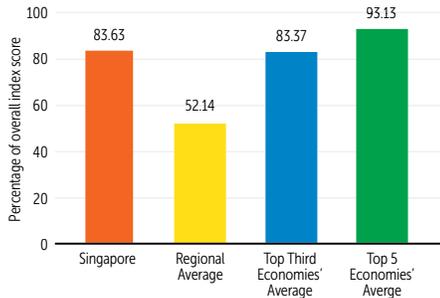
26. IP as an economic asset: Technology transfer has been a key part of Saudi Arabia's science and technology framework since the early 2000s and the 2002 National Policy for Science and Technology. There are several key initiatives, most notably the government-owned Technology Development and Investment Company, which is tasked with developing and launching industrial opportunities aligned with the national research center priorities as joint ventures with international technology companies. There is also the 2014 Saudi Arabia Advanced Research Alliance, a public-private collaboration among the main entities working on innovation aimed at supporting commercialization of new technologies. This alliance created Technovia, a venture dedicated to building a pipeline of commercialization opportunities. The King Abdulaziz City for Science and Technology (KACST) is the main government research institution charged with managing public research funding and runs a network of national research centers, including the Joint Center of Integrated Bio-Nanotechnology (carrying out basic research) and the National Center for Biotechnology (officially established in 2011) that performs applied research in molecular biology, microbiology, tissue culture, cancer research, pharmaceutical industries, and bioinformatics labs. Within KACST, various entities and programs address tech transfer, including the KACST Industrial Innovation and Development Institute, which is tasked with linking research output and industry, and leading technology transfer activities and infrastructure. The institute specifically provides legal and financial support to domestic inventors registering their patents both locally and internationally. Saudi inventors also receive funding to transfer their technology, manufacture prototypes, conduct laboratory experiments, and obtain commercial investment. There is also the BADIR Program for Technology Incubators. Under this framework, 7 technology incubators have been launched to support early-stage technology projects with commercial potential. More broadly, all main universities in Saudi Arabia have a tech transfer office and clear IP policies in place that grant IP ownership to the research entity. As a marker of its success, Saudi Arabia is one of the few emerging markets whose universities are among the top 50 registrants of PCT patent applications globally.

SINGAPORE

Rank 9 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Advanced national IP framework in place
- ✓ Active participant in efforts to accelerate patent prosecution—the Intellectual Property Office of Singapore (IPOS) has a number of PPHs in place and is a member of the Global PPH

KEY AREAS OF WEAKNESS

- ✗ Estimated software piracy has decreased from 35% in 2009 to 30%—but is still quite high for a high-income economy
- ✗ Lack of transparency and data on customs seizures of IP-infringing goods

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	1.00
3. Patentability of computer-implemented inventions (CIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	1.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	0.75
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.74
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.75
11. Expedient injunctive-style relief and disabling of infringing content online	1.00
12. Availability of frameworks that promote cooperative action against online piracy	1.00
13. Scope of limitations and exceptions to copyrights and related rights	1.00
14. Digital rights management (DRM) legislation	0.75
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	1.00
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	1.00
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.75
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.60
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.75
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	1.00
23. Regulatory data protection (RDP) term	0.50
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.75
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.66
28. Digital/online piracy rates	0.70
29. Civil and procedural remedies	1.00
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	1.00
31. Criminal standards including minimum imprisonment and minimum fines	0.75
32. Effective border measures	0.75
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.25
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	1.00
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	33.45

Spotlight on the National IP Environment

Past Editions versus Current Scores

Singapore's overall score has increased from 82% (28.62 out of 35) in the 5th edition of the Index to 84% (33.45 out of 40) in the 6th edition. This reflects a strong performance in the new indicators added.

Patents, Related Rights, and Limitations

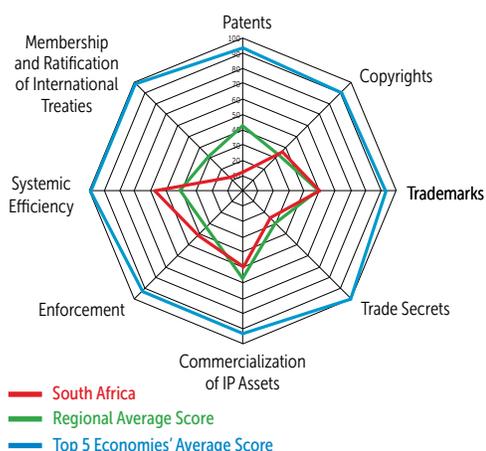
7. Membership in Patent Prosecution Highways (PPHs): Singapore has a number of cooperation agreements and PPHs in place. IPOS is a member of the Global PPH. IPOS also has separate PPH agreements in place with China, Mexico, and the European Patent Office.

Copyrights, Related Rights, and Limitations

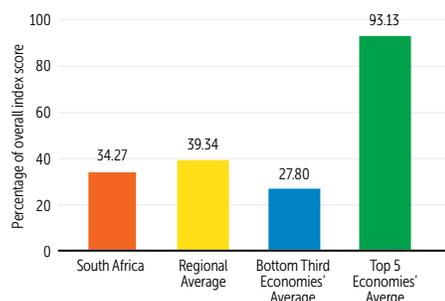
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking); 11. Expedient injunctive-style relief and disabling of infringing content online; and 12. Availability of frameworks that promote cooperative action against online piracy: As noted in previous editions of the Index, Singapore in 2014 passed amendments to its Copyright Act strengthening rights holders' recourse mechanisms against online piracy. These changes aimed to provide a more direct mechanism for rights holders against "flagrantly" infringing sites. These amendments provide rights holders with an avenue to apply directly to the High Court for an injunction "requiring the network service provider to take reasonable steps to disable access to the flagrantly infringing online location." The legislation contains a nonexhaustive list of conditions and factors the High Court may consider when determining whether flagrant infringement is taking place. These factors include whether the main purpose of the "online location" is to infringe copyright, whether circumvention instructions are included on the site, and "whether the owner or operator of the online location demonstrates a disregard for copyright generally." In February 2016, the High Court issued its first order under these amendments ordering all of Singapore's major ISPs to disable access to piracy website Solarmovie.ph. The application was made by industry association Motion Picture of America and its member companies. Local legal analysis suggests that the relatively short time span of two months from application to the High Court to the actual the issuing of the order presents what could be a practical and workable mechanism to reduce the availability of pirated content in Singapore. Additionally, in August 2017, the High Court rejected a request by Hong Kong-based TV operator PCCW Media to disable access to the website Dramanice on grounds that it was illegally streaming content. While there appears to be little doubt that the website in question was providing access to infringing content, the court's dismissal was largely on procedural grounds. Specifically, the court argued that the application needed to be made by the actual copyright holder—which, in this case, PCWW was not. While ultimately a blow to the rights holder, it is unlikely that this decision will become indicative of a wider trend, and thus Singapore's score on related indicators remains unchanged.

SOUTH AFRICA

Rank 39 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Relatively low level of software piracy—33% in 2015—compared with other African economies

KEY AREAS OF WEAKNESS

- ✗ *New Draft Intellectual Property Policy* does not fundamentally address South Africa's gaps in IP protection—focus is not on innovation and development of new IP in South Africa but expert existing developed IP through compulsory licenses, parallel imports, and restricting patentability of pharmaceuticals
- ✗ Weak protection for patents and related rights
- ✗ Difficult enforcement environment

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.00
3. Patentability of computer-implemented inventions (CIIIs)	0.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.00
8. Patent opposition	0.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.53
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.50
11. Expedient injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.50
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.50
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.25
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.50
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.25
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.50
23. Regulatory data protection (RDP) term	0.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.50
25. Regulatory and administrative barriers to the commercialization of IP assets	0.50
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.51
28. Digital/online piracy rates	0.67
29. Civil and procedural remedies	0.50
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.25
31. Criminal standards including minimum imprisonment and minimum fines	0.50
32. Effective border measures	0.50
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.25
35. Consultation with stakeholders during IP policy formation	0.75
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	0.50
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	13.71

Spotlight on the National IP Environment

Past Editions versus Current Scores

South Africa's overall score has decreased from 36% (12.7 out of 35) in the 5th edition of the Index to 34% (13.71 out of 40) in the 6th edition. This reflects a weak performance on the new indicators.

Area of Note

In July 2016, the Department of Trade and Industry (DTI) released the document "Intellectual Property Consultative Framework." The stated purpose of the framework is "not to prescribe South Africa's IP policy position, but to put forward the perspective of the DTI in a consultative instrument to facilitate what will be continuous engagement with governmental partners and society at large." The framework has been followed by the publication of the *Draft Intellectual Property Policy of the Republic of South Africa Phase I*. This is the first document in what is to be a series of policy documents addressing all major IP laws in South Africa. The Phase I document focuses on patents (primarily for biopharmaceuticals) and related IP rights. It is a positive step that the government of South Africa recognizes the need to reform its national IP environment and the value of consulting all stakeholders in that process. Unfortunately, like its preceding framework document, the *Draft Intellectual Property Policy* focuses on ways in which South Africa could better exploit existing and developed forms of IP rather than on the manner in which intellectual property can be created, commercialized, and turned into an industrial asset in the country. It focuses on expanding the use of compulsory licensing as a public policy tool (1) to "progressively realize the right to have access to health care services" in South Africa, and (2) as a basis for South African manufacturing and exports to Africa. TRIPS Article 31, including the amendments introduced in the 2001 Doha Ministerial Declaration, and the subsequent General Council decision that allows the export of medicines produced under a compulsory license (outlined in Paragraph 6), form the legal grounds for compulsory licensing for medicines. The chairman's statement accompanying the General Council decision (concerning Paragraph 6 of the Doha Declaration) underscores that these provisions are not in any way intended for industrial or commercial objectives, and, if used, should be aimed solely at protecting public health. In addition, Article 31 and the Doha Declaration suggest that compulsory licensing represents a "measure of last resort"—intended primarily for public health and humanitarian emergencies such as pandemics, and to be used only after all other options for negotiating pricing and supply have been exhausted. The draft policy also proposes to introduce heightened standards of patentability, the use of parallel importation, and a pre- and post-grant opposition mechanism. None of these proposed policies act as an incentive or make it easier to invest, innovate, or create new products and technologies in South Africa. In this sense, it is unlikely that any of these policies—independently or in aggregate—will help South Africa "transition towards a knowledge economy" as the draft policy hopes.

Copyrights, Related Rights, and Limitations

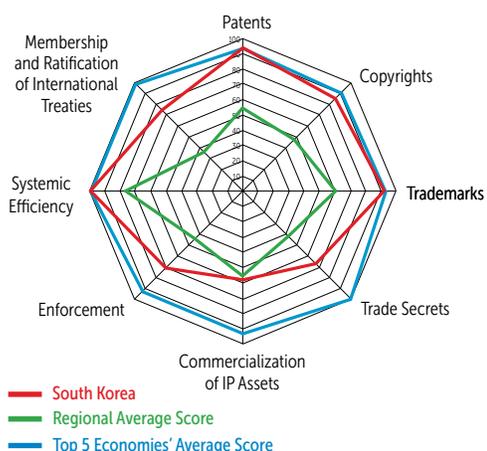
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking); 13. Scope of limitations and exceptions to copyrights and related rights; and 14. Digital rights management legislation: As mentioned in previous editions of the Index, South Africa is currently engaged in reforming its copyright law. Draft Copyright Act amendments were published in 2015 and made open to public consultations. These amendments have now been revised and a new set of amendments was published by the DTI in May 2017. On the positive side, these amendments would strengthen and reinforce important aspects of South Africa's legal framework, including the protection for DRM and TPMs. There is no provision in the existing Copyright Act regarding DRM or TPMs. However, Chapter 12 of the Electronic Communications and Transactions Act (ECTA) does contain a number of provisions that could be interpreted as pertaining to TPMs. Specifically, Section 86 prohibits the "production, sale, design, distribution or possession of any device, including a computer program or a component, which is designed primarily to overcome security measures for the protection of data." The proposed 2017 amendments contain a fairly robust set of draft sections corresponding with those already contained in ECTA. However, a number of areas are still marked by uncertainty. Specifically, the proposed amendments would introduce a system of "fair use" exceptions to copyright. There has for many years been a lack of clarity in South Africa on what constitutes infringement of copyright and what is fair reproduction and use, with no relevant definition in the current Copyright Act. While the amendments are a positive step, many of the proposed exceptions are quite broad. There are also issues relating to state ownership of copyright. Under the proposed amendments the South African Government would retain copyright "on every work which is eligible for copyright and which is made by, funded by or under the direction or control of the state." It is unclear how this proposed section would interact with, for example, publicly funded academic research or state-commissioned cultural programming. It remains to be seen whether the academic researcher or creator of a given work would retain any rights or if all rights would automatically vest with the state funding entity.

Commercialization of IP Assets

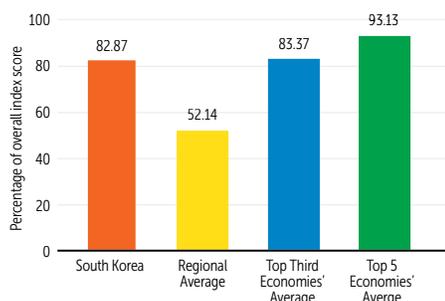
24. Barriers to market access: As mentioned in previous editions of the Index, the South African government has for many years focused on developing its domestic economy through a range of localization policies. These policies are both general and industry- and sector-specific. For example, South Africa has long-standing local content requirements for certain sectors, including broadcasting. Within public procurement, significant local content requirements have been in place since 2011 for a host of specially designated sectors, ranging from automotive (buses) and set-top boxes to clothing and furniture. Local content requirements range from 10% to 100% depending on the industry. More generally, the National Industrial Participation Programme (NIP) has been in place since the late 2000s. The NIP provides that foreign suppliers awarded government contracts, within a month of signing a contract with the procuring entity, sign an obligation agreement in which they commit to local economic activities. The ultimate purpose of the NIP is to build local capacity and partnering between local South African companies and international industry leaders. Unfortunately, both the *Draft Intellectual Property Policy* and proposed copyright amendments contain significant localization components. As a result, South Africa's score has decreased by 0.25 on this indicator.

SOUTH KOREA

Rank 11 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Patenting standards generally in line with international best practices
- ✓ Generally strong online/digital copyright protection (with important exceptions, including software)
- ✓ Relatively robust legal framework for trademark and design protection
- ✓ Membership in Global PPH and IP5
- ✓ New post-grant patent opposition mechanism to streamline patent office

KEY AREAS OF WEAKNESS

- ✗ Remaining hurdles in application of civil remedies (with efforts to improve underway)
- ✗ Not a contracting party to the Patent Law Treaty, although some elements contained in the treaty are reflected in the Korean Patent Act
- ✗ Some barriers to market access that discriminate against foreign IP owners

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	1.00
3. Patentability of computer-implemented inventions (CIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	1.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.74
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	1.00
11. Expedient injunctive-style relief and disabling of infringing content online	1.00
12. Availability of frameworks that promote cooperative action against online piracy	1.00
13. Scope of limitations and exceptions to copyrights and related rights	0.75
14. Digital rights management (DRM) legislation	1.00
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.50
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	1.00
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.75
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	1.00
20. Industrial design term of protection	0.80
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	1.00
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.75
23. Regulatory data protection (RDP) term	0.60
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.50
25. Regulatory and administrative barriers to the commercialization of IP assets	0.50
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.61
28. Digital/online piracy rates	0.65
29. Civil and procedural remedies	0.75
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.75
31. Criminal standards including minimum imprisonment and minimum fines	1.00
32. Effective border measures	1.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.25
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	1.00
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	33.15

Spotlight on the National IP Environment

Past Editions versus Current Scores

South Korea's overall score has increased from 81% of the total possible score (with a score of 28.31 out of 35) in the 5th edition of the Index to 83% (33.15 out of 40) in the 6th edition. This is the result of a strong performance on the new indicators as well as the entry into force of a new post-grant patent opposition system (though in other areas, such as barriers to commercialization of IP assets, Korea saw a deterioration).

Copyrights, Related Rights, and Limitations

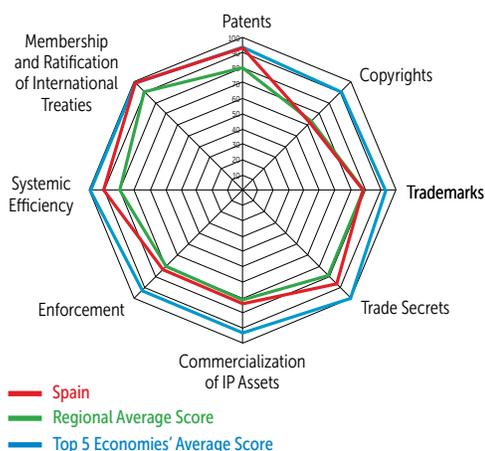
11. Expedient injunctive-style relief and disabling of infringing content online: Korea has in place an administrative mechanism for responding to rights holders' requests for removing access to infringing content online. The legal basis is found in Article 102(2) of the Korean Copyright Act, which provides limited liability for ISPs that respond to a court or related administrative body order to delete or disable access to infringing content. This order comes from the Korean Communication Standard Commission but is based on a request from the Korean Copyright Commission (which in turn responds to rights holder notices of infringing content and sites). Industry reports suggest that, as of 2017, access to more than 400 infringing websites has been disabled in Korea under this mechanism. A 2016 study by the Motion Picture Association found on average a 90% drop in visits to disabled sites within three months of an order to disable access. In addition, the data suggested a 15% drop in visits to infringing websites and 50% reduction for P2P sites following three instances of disabling a given site. However, it should be noted that site disabling at the request of the Korea Communications Standards Commission is not always used transparently or independently, with some concerns over censorship from civil society organizations reported.

Commercialization of IP Assets

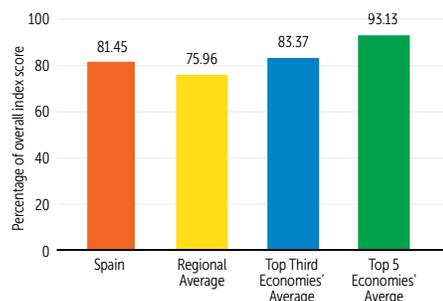
25. Regulatory and administrative barriers to the commercialization of IP assets: In 2016, the Korean Fair Trade Commission (KFTC) issued updated "Guidelines on the Unfair Exercise of IP Rights." Overall the guidelines view the "abuse of licensing" including in the licensing of standard essential patents (SEPs), as an exceptional occurrence, and limit its application. However, a major KFTC decision in late 2016 has introduced a great deal of uncertainty for patent owners and casts doubt on whether the balanced approach to patent licensing for which the guidelines seem to call will actually be observed in Korea. In December 2016, the KFTC issued a ruling fining one U.S. patent holder, Qualcomm, a record amount globally – KRW1.03 trillion (USD912.34 million) – for claimed violations of Korea's competition law in connection with Qualcomm's patent licensing and modem chip sales practices. The KFTC's order also required Qualcomm to deviate from normal industry practice and offer licenses for SEPs to suppliers of modem chips and to amend existing terms/re negotiate licenses with device (i.e., smartphone) makers. In 2017, the Seoul High Court denied a request to stay the KFTC ruling (though as of the time of research it had not decided on overturning KFTC decision). Overall, the KFTC decision suggests an unprecedented approach to regulating SEP licensing, including by applying domestic competition law to decide that the principle of licensing SEPs on fair, reasonable and non-discriminatory terms (known as FRAND terms) extends beyond the commitment actually made by the SEP owner and encompasses a broader obligation. The KFTC's order also has a potentially-sweeping global effect in that it would apply not only to patents issued to Qualcomm by the Korean government, but also to patents granted by the United States, China, European jurisdictions, and other nations around the world. By seeking to regulate patent rights well beyond its own borders, the KFTC decision is inconsistent with important principles of international comity and the well-accepted principle that each nation retains the freedom to regulate IP rights within its own territory. Overall, the decision against Qualcomm indicates a heavy-handed approach to dictating the scope of licensing that does not adequately recognize the value of SEPs in technology markets and creates an uncertain environment for patent holders operating in Korea (particularly foreign patent holders). For this reason, Korea's score for this indicator has dropped by 0.25.

SPAIN

Rank 13 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Standard IP rights in legislation, including many sector-specific rights
- ✓ Efforts to strengthen and modernize patent and copyright frameworks, and growth of implementation
- ✓ Civil and criminal reform enhances remedies available for IP infringement
- ✓ Active public awareness campaigns and engagement efforts

KEY AREAS OF WEAKNESS

- ✗ EU Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to Spain's and EU's research- and IP-based biopharmaceutical industry
- ✗ Counterfeiting and piracy levels remain high compared with other EU economies
- ✗ Online copyright regime displays important gaps in legislation (including in terms of ISP liability and exceptions to copyright)
- ✗ Enforcement operations still face some delays and lack of deterrence, though improvements are visible

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	1.00
3. Patentability of computer-implemented inventions (CIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	1.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.63
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.50
11. Expedient injunctive-style relief and disabling of infringing content online	0.75
12. Availability of frameworks that promote cooperative action against online piracy	0.50
13. Scope of limitations and exceptions to copyrights and related rights	0.75
14. Digital rights management (DRM) legislation	0.75
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.50
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.75
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.75
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.50
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.75
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.75
23. Regulatory data protection (RDP) term	1.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.75
25. Regulatory and administrative barriers to the commercialization of IP assets	0.75
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.64
28. Digital/online piracy rates	0.56
29. Civil and procedural remedies	0.75
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.50
31. Criminal standards including minimum imprisonment and minimum fines	0.75
32. Effective border measures	1.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	1.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.75
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	1.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	32.58

Spotlight on the National IP Environment

Past Editions versus Current Scores

Spain's overall score has increased from 79% of the total possible score (with a score of 27.48 out of 35) in the 5th edition of the Index to 81.45% (32.58 out of 40) in the 6th edition. This is the result of a strong performance on the new indicators as well as some improvements to the patent and copyright environment.

Patents, Related Rights, and Limitations

- 2. Patentability requirements:** Spain's patent law provides for standard patentability criteria of novelty, inventive step, and industrial application and is considered to be fairly pro-technology in the context of biotechnology, life sciences, and computer-related inventions, though some exceptions exist. In relation to life sciences inventions, patent amendments that entered into force in 2017 fill in legislative gaps concerning the ability to patent new therapeutic applications for already known substances and compositions. In addition, more generally, formal substantive examination will be required and a post-grant opposition system for national-level filings has been introduced. As a result, Spain's score for this indicator has risen by 0.25.

- 6. Patent term restoration for pharmaceutical products:** In October 2015, the European Commission (EC) released its report *Upgrading the Single Market: More Opportunities for People and Business*, which details the overarching initiative to reform and deepen the single market with the purpose of spurring economic growth, creating jobs, and reducing administrative burdens. The report identified the need to address the ambiguity formed by the ongoing process of creating an EU-wide unitary patent system and identified the lack of a conforming mechanism for supplementary protection certificates (SPCs). While emphasizing the benefits of a unitary SPC title, the EC also announced its intention to explore options for recalibrating certain elements of this IP right. One such option put forth by the EC is to provide European manufacturers of generic drugs and biosimilars with an SPC manufacturing exemption that would "create thousands of high-tech jobs in the EU and many new companies." Unfortunately, the EC appears to have lost sight of the fact that IP incentives, such as SPC protection, have been central to the success of Europe's research-based biopharmaceutical industry. In 2016, industry estimates suggested that this sector generated some 745,000 direct jobs (with more than 113,000 persons employed directly in innovative R&D)—a growth of 33% since 2000. Furthermore, the European research-based biopharmaceutical industry generated more than EUR238 billion in pharmaceutical production in 2015, as well as investments of some EUR33.5 billion in R&D activities across the EU. Many troubling assumptions underlie the commission's proposal. One running assumption about the potential gains to European generic manufacturers is that there is an actual market and demand for European generic manufacturers' products. Yet it is not at all clear what this market is or where the demand for generic medicines produced in Europe would come from. In all likelihood, generic follow-on products are already on the market in many of these economies and, critically, being produced by local manufacturers that are often preferred partners in local drug procurement. And for those markets where equivalent protection mechanisms are in place, it is highly unlikely that an SPC exemption would grant the European generic and biosimilar manufacturers an exclusive status for early market entry of their products across the globe. In fact, an EU SPC exemption will invite other economies to consider the question: "If the European Union is weakening IP standards to benefit their domestic industries, why shouldn't we?" In essence, this proposal could inspire a race to the bottom in weakening global IP standards. Moving forward with an SPC exemption would result in EU member states, Spain included, seeing a score reduction to 0 on this indicator.

Copyrights, Related Rights, and Limitations

- 11. Expedient injunctive-type relief and disabling of infringing content online:** Spain has both administrative and judicial mechanisms for issuing injunctive-type relief for infringing content online as part of its implementation of the EU E-Commerce Directive. As discussed in the previous edition, the Intellectual Property Commission may receive notices from copyright owners and determine which should be sent on to relevant ISPs, which then should either disable the identified content within 72 hours of notice or bring the case before a court. Over the past few years, Spanish courts have issued a number of orders to ISPs in relation to sites linking to pirated content, including The Pirate Bay. According to data published by the Spanish IP Commission, as of Q3 2017, the Commission has addressed about 52% of the roughly 540 notices concerning infringing content since its inception (the remainder are said to be incomplete requests). Of the notices addressed, about 80 were addressed voluntarily by ISPs, and 40 were addressed based on an order from the Commission. These notices applied to about 220 sites. Courts are also active in disabling access to infringing websites. For example, in a 2017 case (STC No. 24/2017), the Commercial Court of A Coruña granted an order against the owner of the linking site Rojadirecta.es, which provided unauthorized access to sports events broadcast by Movistar (a domestic TV distributor). Still, given the rate of piracy in Spain, more action is required and with greater speed.

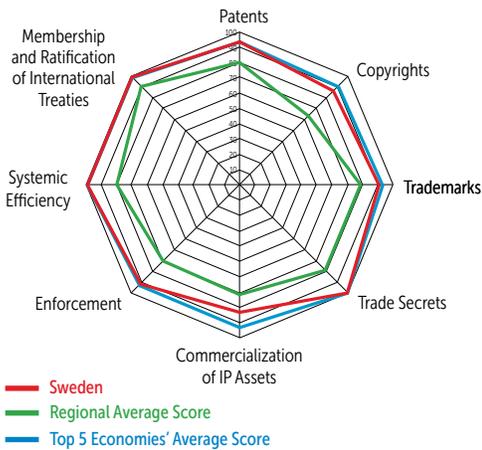
13. Scope of limitations and exceptions to copyrights and related rights: Since 2012, Spain's system of remuneration for private copying has been out of sync with EU law in terms of the source of compensation. Instead of a levy- or user-based system, the Spanish model has relied on taxes and resulted in a substantial decrease in compensation for private copying (by some estimates resulting in a drop from EUR115 million to EUR5 million). In late 2016, the CJEU ruled that the system was in violation of EU Directive 2001/29/CE and, based on this ruling in 2017, the Spanish government issued Royal Decree-Law 12/2017 (which entered into force in 2017). The law re-introduces the levy-based model and establishes that compensation is paid by economic agents involved in making available devices and equipment capable of making private copies of copyrighted works, including importers, manufacturers, and distributors. This measure closes one important gap in the framework for exceptional use of copyright framework in Spain, and thus Spain's score on this indicator has risen by 0.25.

Enforcement

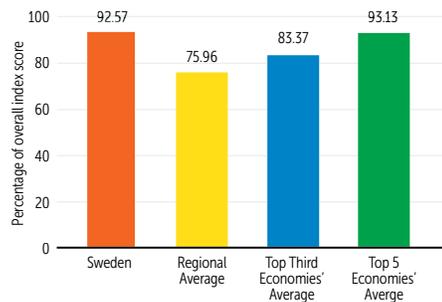
29. Civil and procedural remedies; 30. Preestablished damages and/or mechanisms for determining the amount of damages generated by infringement; and 31. Criminal standards including minimum imprisonment and minimum fines: As discussed in the previous edition, enforcement through the courts in Spain is considered to be relatively slow, such that by the time decisions are issued, the relevance of the ruling may be limited and ineffective. Standard remedies and penalties are available, though damages awarded are often low relative to other EU member states. Still, IP specialization is growing, especially under the new Spanish Patent Law, which entered into force in 2017. The new law modifies the rules on jurisdiction and case allocation among national courts and expands the number of courts considered competent to hear IP (patent) cases from 3 (Madrid, Valencia, and Barcelona) to all municipal seats of Spain's autonomous communities. This aims to improve expertise and resources for IP cases across the country and ease backlogs. In 2017, the new patent law led to the introduction of an improved system for calculating damages, such that they can be calculated as a lump sum that "at least" covers the hypothetical royalty had a licensing agreement been sought. A landmark copyright case in late 2016 sets an important precedent in the prosecution of sites providing access to blatantly infringing material and the level of criminal penalties available to rights holders. In Decision 920/2016, the Spanish Supreme Court convicted the owners of a website providing unauthorized links to copyrighted publications. The court ordered 6 years of imprisonment (with 3 of these applicable to the IP offense and 3 to wider criminal charges), among the highest penalty issued by a Spanish court in relation to IP infringement. On this basis, Spain's score rises by 0.25 on Indicator 31.

SWEDEN

Rank 3 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ New specialized IP appeal court provided pivotal ruling in long-running *Bredbandsbolaget* case—verdict provides rights holders recourse mechanisms for copyright infringement online
- ✓ Strong and sophisticated national IP environment

KEY AREAS OF WEAKNESS

- ✗ EU Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to Sweden's and EU's research- and IP-based biopharmaceutical industry
- ✗ Comparatively high levels of online piracy; new enforcement mechanisms may help

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	1.00
3. Patentability of computer-implemented inventions (CIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	1.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.60
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.75
11. Expedient injunctive-style relief and disabling of infringing content online	1.00
12. Availability of frameworks that promote cooperative action against online piracy	0.75
13. Scope of limitations and exceptions to copyrights and related rights	1.00
14. Digital rights management (DRM) legislation	1.00
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	1.00
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	1.00
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	1.00
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.50
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	1.00
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	1.00
23. Regulatory data protection (RDP) term	1.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.75
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.89
28. Digital/online piracy rates	0.79
29. Civil and procedural remedies	0.75
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	1.00
31. Criminal standards including minimum imprisonment and minimum fines	1.00
32. Effective border measures	1.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	1.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	1.00
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	1.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	37.03

Spotlight on the National IP Environment

Past Editions versus Current Scores

Sweden's overall score has increased substantially from 88.5% (30.99 out of 35) in the 5th edition of the Index to 92.6% (37.03 out of 40) in the 6th edition. This reflects a strong performance in the new indicators and positive developments with respect to the availability of recourse mechanisms for copyright infringement online.

Patents, Related Rights, and Limitations

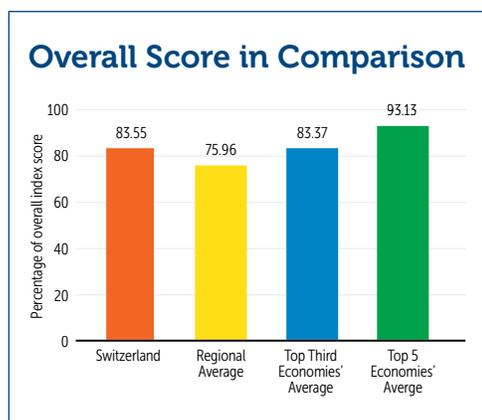
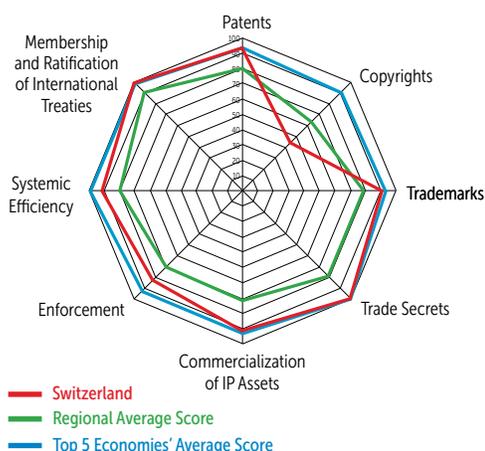
6. Patent term restoration for pharmaceutical products: In October 2015, the European Commission (EC) released its report *Upgrading the Single Market: More Opportunities for People and Business*, which details the overarching initiative to reform and deepen the single market with the purpose of spurring economic growth, creating jobs, and reducing administrative burdens. The report identified the need to address the ambiguity formed by the ongoing process of creating an EU-wide unitary patent system and identified the lack of a conforming mechanism for supplementary protection certificates (SPCs). While emphasizing the benefits of a unitary SPC title, the EC also announced its intention to explore options for recalibrating certain elements of this IP right. One such option put forth by the EC is to provide European manufacturers of generic drugs and biosimilars with an SPC manufacturing exemption that would "create thousands of high-tech jobs in the EU and many new companies." Unfortunately, the EC appears to have lost sight of the fact that IP incentives, such as SPC protection, have been central to the success of Europe's research-based biopharmaceutical industry. In 2016, industry estimates suggested that this sector generated some 745,000 direct jobs (with more than 113,000 persons employed directly in innovative R&D)—a growth of 33% since 2000. Furthermore, the European research-based biopharmaceutical industry generated more than EUR238 billion in pharmaceutical production in 2015, as well as investments of some EUR33.5 billion in R&D activities across the EU. Many troubling assumptions underlie the commission's proposal. One running assumption about the potential gains to European generic manufacturers is that there is an actual market and demand for European generic manufacturers' products. Yet it is not at all clear what this market is or where the demand for generic medicines produced in Europe would come from. In all likelihood, generic follow-on products are already on the market in many of these economies and, critically, being produced by local manufacturers that are often preferred partners in local drug procurement. And for those markets where equivalent protection mechanisms are in place, it is highly unlikely that an SPC exemption would grant the European generic and biosimilar manufacturers an exclusive status for early market entry of their products across the globe. In fact, an EU SPC exemption will invite other economies to consider the question: "If the European Union is weakening IP standards to benefit their domestic industries, why shouldn't we?" In essence, this proposal could inspire a race to the bottom in weakening global IP standards. Moving forward with an SPC exemption would result in EU member states, Sweden included, seeing a score reduction to 0 on this indicator.

Copyrights, Related Rights, and Limitations

10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking); 11. Expedient injunctive-style relief and disabling of infringing content online; and 12. Availability of frameworks that promote cooperative action against online piracy: As noted in previous editions of the Index, last year's judgment in the case against Swedish ISP giant *Bredbandsbolaget* significantly weakened Swedish antipiracy efforts. The decision established a precedent that ISPs in Sweden have no obligation to disable access to pirate websites unless they provide "direct assistance" to the primary infringers, with Stockholm's District Court refusing an injunction against *Bredbandsbolaget* to disable access to two torrent sites (including The Pirate Bay). The court's decision was based on an evaluation of Sweden's implementation of the EU's InfoSoc Directive (Article 8.3) and on the complicity concept within the Penal Code (Article 53b). Notably, the court provided for a narrow scope of protection for Swedish rights holders under the terms of Article 8(3) of the InfoSoc Directive, according to which EU member states shall make available injunctions against intermediaries used by third parties to infringe IP rights. The court concluded that, although Swedish law is phrased in a more restrictive way than the EU Directive, it still complied with it. In February 2017, the newly established Swedish Patent and Market Court of Appeal (*Patent- och marknadsöverdomstolen*) overturned this decision. The Court ruled that *Bredbandsbolaget* should not only disable access to the torrent websites in question but also pay damages of SEK500,000 (about USD60,000). The ruling cannot be appealed and is likely to set an important precedent and lead to stronger application of existing laws and enforcement against online piracy. As a result of this decision, Sweden's score on related indicators has increased. Still, as noted in previous editions, for a developed high-income economy, Sweden experiences a remarkably high level of online piracy. Coinciding with the judgment in the *Bredbandsbolaget* case in February 2017, Swedish media consulting firm *Mediavision* released the results of a survey of online piracy in Nordic economies. The survey found that Sweden's rates of online piracy were about double the rates of neighboring Finland and Denmark, which have stronger enforcement measures in place. Over two-thirds of Swedish young men ages 15–24 admitted to having accessed online pirated content over the surveyed period. The Index will continue to monitor developments in Sweden.

SWITZERLAND

Rank 10 / 50



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Strong and sophisticated national IP environment
- ✓ Strong patent rights and enforcement environment
- ✓ Founding member of EPO and full participant in PPH initiatives

KEY AREAS OF WEAKNESS

- ✗ Proposed changes to copyright law does not fundamentally address issue of online infringement
- ✗ Overly broad interpretation of limitations and exceptions for copyright
- ✗ Crucial gaps in enforcement and prosecution of online copyright infringement

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	1.00
3. Patentability of computer-implemented inventions (CIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	1.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.63
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.50
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.50
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	1.00
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	1.00
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	1.00
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.50
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	1.00
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	1.00
23. Regulatory data protection (RDP) term	1.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	1.00
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.77
28. Digital/online piracy rates	0.77
29. Civil and procedural remedies	0.75
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.75
31. Criminal standards including minimum imprisonment and minimum fines	0.75
32. Effective border measures	1.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	1.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	1.00
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	1.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	33.42

Spotlight on the National IP Environment

Past Editions versus Current Scores

Switzerland's overall score has decreased from 85% (29.86 out of 35) in the 5th edition of the Index to 83.5% (33.42 out of 40) in the 6th edition. This reflects a mixed performance in the new indicators, particularly with respect to the protection of copyright online.

Patents, Related Rights, and Limitations

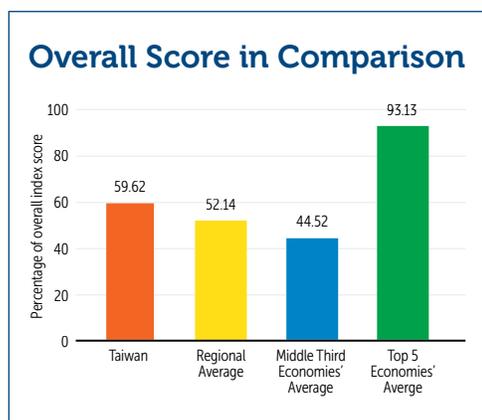
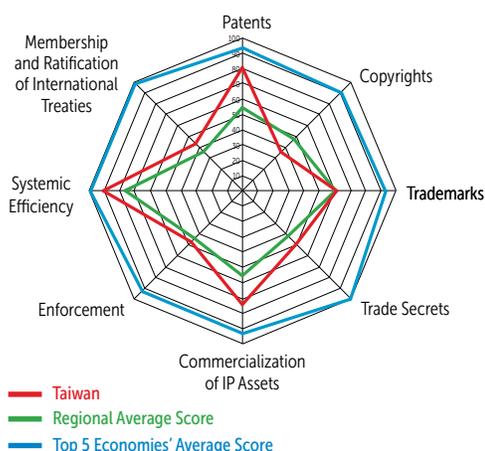
7. Membership in Patent Prosecution Highways (PPHs): Switzerland has a strong and supportive environment for patenting. This includes full membership in international efforts toward the harmonization and expediting of the patenting process, with Switzerland being a founding member of the EPO and, through its membership, a full party to the IP5 initiative.

Copyrights, Related Rights, and Limitations

10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking): As noted in previous editions of the Index, the copyright regime in Switzerland (particularly regarding online piracy) trails behind Switzerland's otherwise world-class national IP environment, reflecting legislative weakness and concerns over a lack of enforcement. The Swiss government has long acknowledged this problem and in 2014 announced an ambitious reform plan that follows the recommendations made by the Swiss Working Group on Copyright. Yet at the time of research, no draft amendments had been published or released, and public statements by the Swiss Federal Institute of Intellectual Property in 2017 suggest that, despite some progress, significant challenges remain. For example, there will be no requirement or option for the disabling of access to illegal content under the proposed legislative amendments. Similarly, these amendments will not include any notification mechanism to suspected infringers. Instead, the primary means of enforcement will be through targeting Internet service providers that will be obliged to remove infringing content and keep it off their servers. This is a positive development, but because these proposed new laws would apply only to Swiss providers, it is unclear the extent to which this new obligation and enforcement mechanism would address the majority of copyright-infringing material available in Switzerland, which, like in most economies, emanates from outside Switzerland. Furthermore, under these proposed amendments it is likely that illegal content currently being hosted in Switzerland will simply migrate to another jurisdiction but continue to offer infringing content to Swiss consumers.

TAIWAN

Rank 20 / 50



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Patent framework in line with international standards, with recent improvements to the grace period
- ✓ Ongoing trade secret protection reform
- ✓ Evidence of legitimate software procurement from some government agencies
- ✓ Though facing political hurdles to becoming a contracting party, has in many cases implemented provisions in key international IP treaties

KEY AREAS OF WEAKNESS

- ✗ Important gaps in digital copyright regime
- ✗ Relatively high rates of online piracy and physical counterfeiting
- ✗ Some uncertainty in technology-licensing environment
- ✗ Though improving, judicial enforcement of IP rights requires additional strengthening

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	1.00
3. Patentability of computer-implemented inventions (CIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.25
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	0.50
8. Patent opposition	0.75
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.53
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.25
12. Availability of frameworks that promote cooperative action against online piracy	0.25
13. Scope of limitations and exceptions to copyrights and related rights	0.50
14. Digital rights management (DRM) legislation	0.50
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.25
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.50
20. Industrial design term of protection	0.48
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.75
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.50
23. Regulatory data protection (RDP) term	0.50
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.50
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.45
28. Digital/online piracy rates	0.64
29. Civil and procedural remedies	0.50
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.25
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.50
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.75
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.75
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	0.75
38. Singapore Treaty on the Law of Trademarks	0.50
39. Patent Law Treaty	0.50
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	23.85

Spotlight on the National IP Environment

Past Editions versus Current Scores

Taiwan's overall score has increased from 59% of the total possible score (20.59 out of 35) in the 5th edition of the Index to 60% (23.85 out of 40) in the 6th edition. This is mainly a result of a relatively strong performance on most of the new indicators as well as some improvements in the ease of patenting and software licensing.

Commercialization of IP Assets

25. Regulatory and administrative barriers to the commercialization of IP assets: In October 2017, the Taiwanese Fair Trade Commission (TFTC) announced that it had fined a U.S. patent holder, Qualcomm, a record TWD23.4 billion (USD774 million) – reportedly the highest fine ever assessed by the TFTC. Following this announcement, Taiwan's Ministry of Economic Affairs, which oversees trade, foreign direct investment, and IP protection, publicly expressed its concerns with the investigation and the resulting fine, citing lack of congruence with long-term national investment, and industrial development goals. Moreover, three of the TFTC's seven Commissioners published strong dissenting opinions to underscore substantial factual, legal, and procedural defects in the Commission's investigation and decision, including that the decision appears to improperly seek to protect "competitors, not competition." Taiwan is home to several major chip and smartphone makers, and this decision appears to benefit these domestic competitors at the expense of a U.S. IP right holder. As such, the TFTC's decision introduces substantial uncertainty for foreign patent owners operating in Taiwan and undermines the innovation environment in Taiwan, in the ICT sector and in other important high-tech sectors in the country.

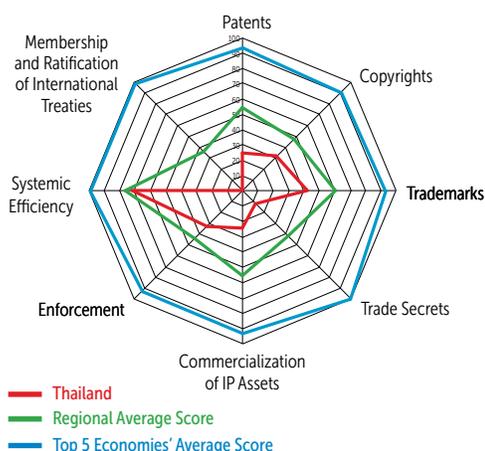
26. IP as an economic asset: Since 2005, the Taiwan Intellectual Property Training Academy (TIPA), led by the Taiwanese IP Office (TIPO) and the National Taiwan University, has provided training to IP professionals at a number of universities across Taiwan. The goal of TIPA is to promote IP protection in order to encourage the growth of the knowledge-based economy in Taiwan, including for specific sectors. TIPA targets SMEs and R&D institutions as well as academic, technology transfer, and legal professionals. Courses include IP management practice and commercialization strategies for all major types of IP rights.

Systemic Efficiency

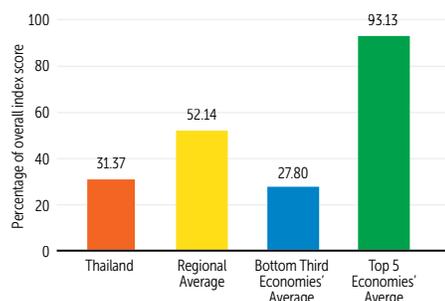
36. Educational campaigns and awareness raising: TIPO and other government agencies carry out a wide range of public-awareness-raising initiatives each year. For example, in 2017, TIPO carried out workshops at leading technology companies to promote proper protection of trade secrets and collaboration with law enforcement agencies. It also launched domestic radio, online, and social media campaigns on respecting online copyrights and provided outlets for legal downloads of music, movies, and publications. In addition, TIPO's IPR on Campus Task Force conducted numerous outreach activities at universities and schools on digital copyright protections, building on related efforts by the Ministry of Education throughout the year. Moreover, TIPO offers regular briefings and seminars on using licensing software in SMEs and government agencies.

THAILAND

Rank 41 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Prioritization of greater enforcement, awareness, and use of IP within wider development plan
- ✓ U.S. memorandum of understanding (MOU)
- ✓ Basic level of protection and registration system in place for copyrights, trademarks, and designs, including recent membership in Madrid Protocol
- ✓ Efforts to adjust copyright legislation to new technological developments
- ✓ Number of enforcement campaigns in 2017

KEY AREAS OF WEAKNESS

- ✗ Inadequate patent protection, gaps in patentability, and severe patent backlogs (though in 2017, there were efforts to accelerate procedures and boost resources)
- ✗ Life sciences IP rights inconsistent with TRIPS, including new trade/competition law violation as basis for compulsory licensing
- ✗ Incomplete digital copyright regime and hurdles to/lack of clarity on effective implementation (though injunctive relief mechanism now available)
- ✗ Barriers to market access for patent holders
- ✗ Very high physical counterfeiting and digital piracy rates
- ✗ Overall weak IP rights enforcement due to delays, lack of resources, and nondeterrent sentences

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.25
3. Patentability of computer-implemented inventions (CIIs)	0.25
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.50
8. Patent opposition	0.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.53
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.50
12. Availability of frameworks that promote cooperative action against online piracy	0.00
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.50
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.25
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.25
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.40
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.00
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.31
28. Digital/online piracy rates	0.31
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.00
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.50
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.75
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	1.00
35. Consultation with stakeholders during IP policy formation	0.50
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	0.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	12.55

Spotlight on the National IP Environment

Past Editions versus Current Scores

Thailand's overall score has increased from 27% of the total possible score (with a score of 9.53 out of 35) in the 5th edition of the Index to 31% (12.55 out of 40) in the 6th edition. This reflects a relatively strong performance on the new indicators. In a positive development, and in light of the relative progress Thailand has made over the past few years on IP issues, the Office of the United States Trade Representative (USTR) in 2017 moved Thailand from the Special 301 Priority Watch List to the Watch List.

Copyrights, Related Rights, and Limitations

11. Expedient injunctive-style relief and disabling of infringing content online: Amendments to the Computer Crime Act enacted by the Legislative Assembly in December 2016, which entered into effect in 2017, provide for a mechanism for requiring ISPs to disable access to IP-infringing sites. Under the mechanism, the Ministry of Digital Economy and Society (MDES) may file a motion for a permanent injunction for disabling access to websites with IP-infringing content (defined as computer data that are a criminal offense against IP). Implementation of the mechanism is ongoing, but it is thought that MDES will be notified by IP owners of infringing content and then send a request for injunctive relief to a court. If an injunction is granted, MDES would order the ISP to disable access to the site. There are some important limitations to the new mechanism. Given the dual administrative and judicial nature of the mechanism and the MDES' central role on both "ends" of the mechanism, the rules, timing, and enforcement methods for the mechanism will be heavily reliant on MDES. In addition, the amendments limit the mechanism to infringing sites located in Thailand, and so, depending on implementation, may not address foreign-hosted sites, which represent the majority of copyright-infringing sites in Thailand. (There is a possible route for disabling foreign-hosted sites through rights holder motion to a court under 2015 amendments to the Copyright Act. However, it is not a strong basis since foreign-hosted sites are not explicitly mentioned and rights holders have limited success in obtaining these types of orders.) Nevertheless, the amendments provide important legislative grounds for a combined administrative and judicial ability to provide remedies to content owners. In 2017, MDES issued a Ministerial Notification on the procedures to disable access to online infringing content/activities, enabling MDES officials to remove access to "illegal data" or order ISPs to do so pursuant to a court order implementing the new mechanism. In addition, the Thai IP office (DIP) has reportedly assigned staff to receive rights holder notices.

Commercialization of IP Assets

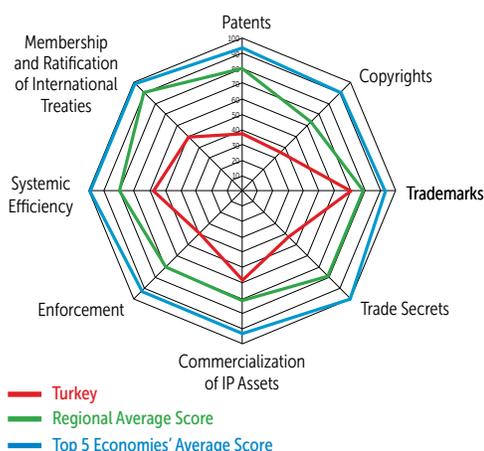
26. IP as an economic asset: Led by DIP, efforts to promote wider use of IP rights by businesses have grown substantially in recent years. A new unit of DIP, the IP Innovation Driven Enterprise Center, which began operations in 2017, provides, among other elements, advisory services for SMEs in relation to managing IPRs, protecting IP globally, and identifying opportunities for leveraging new areas. Workshops in Bangkok and across the country took place throughout 2017. DIP programs also aim to link inventors and investors and provide IP valuation. DIP holds various other capacity-building workshops targeting entrepreneurs in different sectors. For example, in 2017 DIP, MDES, and the Ministry of Commerce partnered with software industry groups for a seminar, "Turn Up Business with IP," promoting SMEs' use of IP and technology for product development and for growing international competitiveness.

Systemic Efficiency

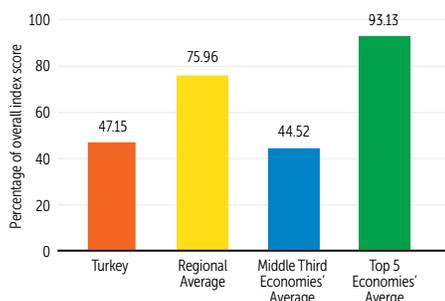
34. Inter-governmental coordination of IP rights enforcement efforts: Thailand has a dedicated platform for coordinating enforcement of IP rights across government agencies in Thailand. The National IP Center for Enforcement (NICE), established in 2013, was created to promote cooperation among about 25 government agencies that cover enforcement of IP rights. Led by DIP, NICE focuses on operations aimed at serious offenders. In 2016, Thailand introduced a follow-on platform, the Subcommittee on IPR Enforcement, which brings together 16 of these agencies as well as industry groups, including the Thai FDA, National Science and Technology Development Agency, Pharmaceutical Research and Manufacturers Association (PReMA), IP Association of Thailand, Fair Trade Area Watch, and Thai Pharmaceutical Manufacturers Association. Led by the Internal Security Operations Command, the subcommittee focuses on IP policy as well as enforcement. Efforts in the area of enforcement include planning measures and overseeing operations based on regular meetings among participating agencies.

TURKEY

Rank 26 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Greater alignment of IP legal framework for major IP rights with EU standards, including via new IP law
- ✓ Basic general remedies and penalties for IP infringement available in legislation
- ✓ New technology transfer and licensing framework
- ✓ Active promotion of importance of IP protection and use as an economic asset among public/SMEs

KEY AREAS OF WEAKNESS

- ✗ Relatively weak protection and enforcement of life sciences patents not addressed in new IP law
- ✗ Introduction of ambiguous grounds for compulsory licensing
- ✗ Opaque online copyright environment and overly broad copyright exceptions
- ✗ High counterfeiting and online piracy rates
- ✗ Gaps in practical judicial recourse and border control

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.50
3. Patentability of computer-implemented inventions (CIIs)	0.50
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.50
8. Patent opposition	0.50
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.74
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.25
12. Availability of frameworks that promote cooperative action against online piracy	0.25
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.50
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.75
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.75
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0.60
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.25
25. Regulatory and administrative barriers to the commercialization of IP assets	0.75
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.35
28. Digital/online piracy rates	0.42
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.25
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.50
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.75
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.50
35. Consultation with stakeholders during IP policy formation	0.50
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.50
39. Patent Law Treaty	0.50
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	18.86

Spotlight on the National IP Environment

Past Editions versus Current Scores

Turkey's overall score has increased from 45% of the total possible score (15.8 out of 35) in the 5th edition of the Index to 47% (18.86 out of 40) in the 6th edition. This is mainly a result of the introduction of the new IP law. Turkey also performed relatively well on some of the new indicators.

Area of Note

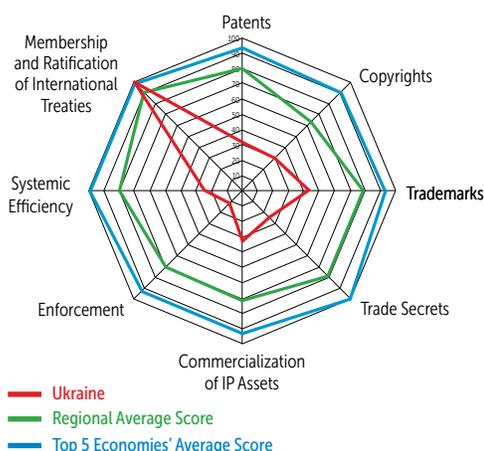
The Turkish Parliament passed the new Industrial Property Law (No. 6769) in late 2016. The law consolidates measures on the enforcement of major IP rights (excluding copyrights and related rights) into one law and under one agency, the new Turkish Patent and Trademark Institution. The new law involves a number of new measures that strengthen the IP system and harmonize it with EU standards. These include the introduction of a post-grant patent opposition system. Under the new system, an opposition may be filed within 6 months of the grant of a patent. Remaining issues that are expected to be resolved as the new system is implemented (and will be monitored for the next edition of the Index) include the ability to amend claims and the timing/coordination of invalidation and opposition proceedings. In addition, the new IP law expands protection available to well-known trademarks. Specifically, it provides for both absolute and relative grounds for refusal of registrations in relation to an unregistered, well-known mark. The former was provided under the previous law (and addresses same or similar marks) but the addition of relative grounds represents an enhanced level of protection, particularly for marks involving likelihood of confusion or risk of dilution. The law also enhances the ability to protect against unused trademarks, enabling applicants for a trademark to request proof of use of a conflicting mark within the past 5 years, and expands trademark offenses to include acts such as providing services, importing or exporting, and distributing (beyond simply manufacturing and selling). In relation to design rights, the new IP law aligns a number of aspects of Turkish law on designs protection with the EU Community Designs Regulation, including adding a 3-year term of protection for unregistered designs (applicants) and specifying that the scope of protection be limited to visible parts of a product. The new IP law also strengthens the technology transfer framework in Turkey. Under the law, assets developed by researchers at universities are owned by the university, with one-third of proceeds directed to inventors for publicly funded projects. The ability to better leverage university resources for patent applications is expected to support an increase in the rate of licensing of IP in Turkey as well as income from licensing to universities. Nevertheless, in one negative development, Article 29 of the IP law broadens the basis for issuing compulsory licenses to cases in which a third party claims that the patented invention is not meeting the needs of the national market. The language lacks details or definition of what needs of the market are, and risks being interpreted overly widely, creating a great deal of uncertainty for patent holders. On this basis, although the new IP law has led to a rise in score on several indicators, the score for Indicator 5 drops to 0.

Copyrights, Related Rights, and Limitations

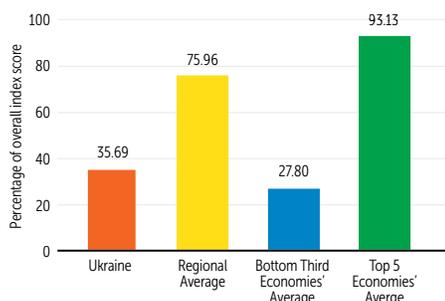
11. Expedient injunctive-style relief and disabling of infringing content online; and 12. Availability of frameworks that promote cooperative action against online piracy: Turkish copyright law lacks a clear obligation for ISPs to expeditiously cooperate with rights holders when they have knowledge of infringement without an official order from a prosecutor's office or court. However, a basic notice and takedown mechanism, whereby rights holders may notify ISPs and, if they do not receive response to said notification, may pursue a takedown through the courts, is present in Additional Article 4 of the Copyright Law. A requirement for ISPs to respond to a court's order to address infringing content is also present in Additional Article 4 of the Copyright Law. The Internet Law (No. 5651) also provides for the takedown or disabling of access to websites for matters of "national security, restoration of public order and prevention of crimes," which can include copyright and trademark infringement. Under the law, courts may issue orders for service or hosting providers to disable access to sites infringing the law. Law 5651 also established a central body of ISPs (Association of Access Providers), which is required to respond to courts' orders and may also receive notices of violation from the private sector. Industry reports suggest that having such a "one-stop shop" for submitting notices or directing orders has aided to growth in responsiveness by ISPs in the past year, including responsiveness to notices from copyright holders. As a result, the score for Indicator 12 rises by 0.25. In addition, some sites, such as The Pirate Bay, have been disabled under court order in the past. Nevertheless, the Association of Access Providers and the Internet Law tend to be employed more frequently for political-related site disabling. Copyright amendments introduced in 2016 and under discussion in 2017 would establish, among other elements, a new Center for Combating Digital Violations within the Ministry of Tourism and Culture. The new center, if implemented, is intended to act as a copyright-focused body for handling rights holder notices.

UKRAINE

Rank 37 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Efforts to align IP legislation to EU standards and implement the Deep and Comprehensive Free Trade Area (DCFTA)
- ✓ Emphasis on strengthening online copyright environment in the area of cooperative action against online piracy
- ✓ Contracting party to certain key international IP treaties
- ✓ Some focus on commercialization of IP assets in university programs

KEY AREAS OF WEAKNESS

- ✗ Generally poor environment for IP enforcement online (inaction and lengthy, nondeterrent proceedings)
- ✗ Rudimentary framework for trademarks and design protection does not provide guarantees against unfair use (with exceptions)
- ✗ High rates of counterfeiting and piracy—among the top worldwide—and currently little effort to combat such rates
- ✗ Gaps in customs activities, notably lack of effective procedures for destruction of counterfeits
- ✗ Leadership vacuum on IP administration, enforcement, and promotion

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.00
3. Patentability of computer-implemented inventions (CIIs)	0.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.25
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	0.00
8. Patent opposition	0.25
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.58
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.25
13. Scope of limitations and exceptions to copyrights and related rights	0.50
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.25
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.25
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.00
20. Industrial design term of protection	0.60
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.25
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.00
23. Regulatory data protection (RDP) term	0.50
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.25
25. Regulatory and administrative barriers to the commercialization of IP assets	0.25
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.17
28. Digital/online piracy rates	0.18
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.00
31. Criminal standards including minimum imprisonment and minimum fines	0.25
32. Effective border measures	0.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.25
35. Consultation with stakeholders during IP policy formation	0.25
36. Educational campaigns and awareness raising	0.25
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	1.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	14.28

Spotlight on the National IP Environment

Past Editions versus Current Scores

Ukraine's overall score has dropped from 40% of the total possible score (14.06 out of 35) in the 5th edition of the Index to 36% (14.28 out of 40) in the 6th edition. This decrease reflects a relatively weak performance on the new indicators.

Area of Note

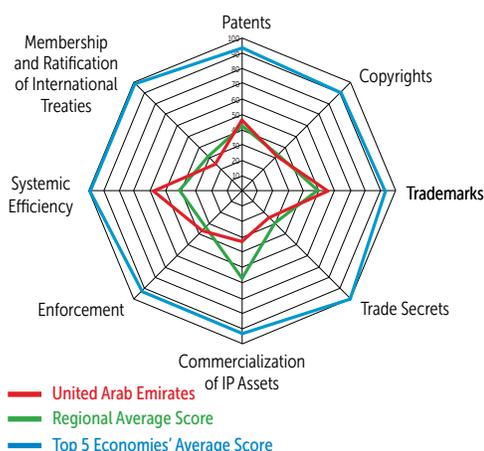
Ukraine adopted proposals for revamping the current IP administrative structure and introducing a more independent and better-staffed National Agency for IP (NAIP) to replace the State IP Service. At the time of research, the State IP Service had been liquidated and transferred to the Ministry of Economic Development and Trade, but the NAIP had yet to be established.

Copyrights, Related Rights, and Limitations

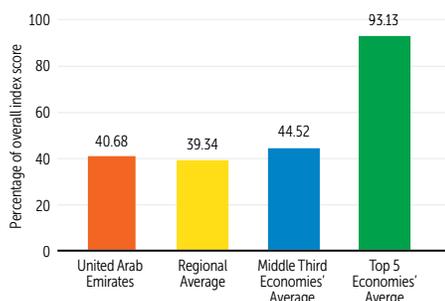
11. Expedient injunctive-style relief and disabling of infringing content online; and 12. Availability of frameworks that promote cooperative action against online piracy: As mentioned in the previous edition, Ukraine adopted copyright amendments in 2016 within the Law on State Support for Cinematography, Bill 3081d. The bill notably introduced a notice and takedown system whereby a rights holder may send a notice of infringing content to an ISP, which has 48 hours to disable the content. However, the provisions entailed a very in-depth process requiring complex documentation. The bill also introduced a liability clause safeguarding ISPs that take down the designated content within 48 hours of receipt. Nevertheless, in late 2016, the president of Ukraine vetoed Bill 3081d and sent it back to legislators for additional amendments. The amended draft was adopted by Verkhova Rada, the unicameral parliament of Ukraine, in March 2017 and signed into law and adopted in April 2017. In some respects, the amended provisions add additional steps and delays to the process, but they raise the bar in other respects. Under the new measure, the rights holder must first send a takedown notice directly to a site owner, and if the infringing content is not removed within 48 hours, the rights holder may then send the notice to the ISP (which has 24 hours to send a notice to the site owner and 48 hours to disable access). The provisions are applicable to piracy related to music, audiovisual works, computer programs, media broadcasts, and phonograms. As in the previous version, the law still includes website and ISP liability (civil and administrative) for third-party infringements. Also, the documentation needed to require ISP response remains complex and arbitrary (and ISPs can refuse to comply if these criteria are not met in their view). In addition, rights holders can face liability if supposedly false statements are included in the notice. Still, the new version of the law provides for greater liability for repeat infringing sites (specifically, if they allow infringing material to be accessible again with a 3-month period). The law also concentrates jurisdiction for online IP infringement cases in Kyiv courts in order to consolidate and build IP expertise. Thus far, rights holders report that ISPs are largely inactive and uncooperative in relation to rights holder notices. There is also delay and inaction when it comes to courts pursuing unresponsive ISPs or ordering ISPs to disable access to infringing sites. For example, fewer than 5 criminal cases on sites infringing copyright were opened in 2016 and no verdicts were delivered. This is particularly detrimental, because Ukraine hosts some of the most widely used and largest sites providing access to infringing content worldwide. Court-ordered or voluntary takedown of infringing content has been less effective than closures and other actions taken by police against infringing sites.

UNITED ARAB EMIRATES

Rank 32 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Basic IP protections in place
- ✓ Relatively strong framework for enforcement of IP rights
- ✓ Increasing administrative and judicial capacity for IP enforcement
- ✓ Enhanced anticounterfeiting efforts, including criminal penalties
- ✓ Awareness-raising and capacity-building efforts on importance and value of IP rights

KEY AREAS OF WEAKNESS

- ✗ Crucial gaps in protection for life sciences patents, notably in relation to patent enforcement by regulatory authorities, RDP, and patent term restoration
- ✗ Copyright regime fails to address growing piracy levels
- ✗ Partial protection under the current trademark and design framework in need of updating
- ✗ Gaps in customs measures and civil remedies for infringement

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.50
3. Patentability of computer-implemented inventions (CIIs)	0.50
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.00
8. Patent opposition	0.25
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.53
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.50
11. Expedient injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.00
13. Scope of limitations and exceptions to copyrights and related rights	0.50
14. Digital rights management (DRM) legislation	0.50
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.25
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.50
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.75
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.25
20. Industrial design term of protection	0.40
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.50
23. Regulatory data protection (RDP) term	0.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.50
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.43
28. Digital/online piracy rates	0.66
29. Civil and procedural remedies	0.75
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.00
31. Criminal standards including minimum imprisonment and minimum fines	0.50
32. Effective border measures	0.25
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.25
35. Consultation with stakeholders during IP policy formation	0.50
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	16.27

Spotlight on the National IP Environment

Past Editions versus Current Scores

The UAE's overall score has decreased from 44% of the total possible score (15.24 out of 35) in the 5th edition of the Index to 41% (16.27 out of 40) in the 6th edition. Though the UAE's score rose in relation to civil remedies available for infringement, the overall decrease in score is a result of a mixed performance on the new indicators as well as the regulatory approval of a follow-on biopharmaceutical product in violation of the UAE's regulatory patent enforcement mechanism.

Patents, Related Rights, and Limitations

4. Pharmaceutical-related patent enforcement and resolution mechanism: As mentioned in a previous edition of the Index, Ministry of Health Decree 404 provides for an early patent adjudication mechanism for pharmaceuticals. Under the system, the Ministry of Health will deny marketing approval for a product that infringes on a patent existing either in the UAE or in the economy from which the product has been imported. Officials are to either reject an application or hold the application in abeyance until patent protection has expired. However, recently the UAE government approved two generic versions of a pharmaceutical product that was still on patent in the economy of origin. This development seriously undermines the life sciences IP environment in the UAE, since patents on the majority of pharmaceutical products are not protected in the UAE, but rather protection is based on foreign patents. On this basis, the score for this indicator has fallen by 0.5

Commercialization of IP Assets

24. Barriers to market access: A draft investment law discussed in the previous edition of the Index remains under consideration in 2017. The law would remove the 49% foreign equity cap in certain sectors where further investment and technology are needed. In addition, the new Commercial Companies Law passed in 2017 retains the 49% limit. The new law also appears to be more restrictive, with Article 10 granting the Cabinet of Ministers the right, upon the recommendation of the Ministry of Economy, to limit certain sectors to UAE nationals only.

Enforcement

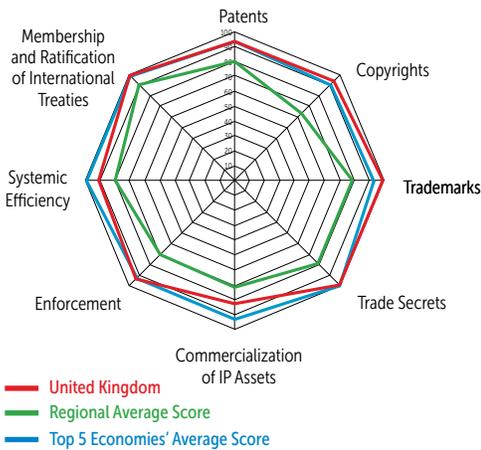
29. Civil and procedural remedies: As mentioned in the previous edition of the Index, the first dedicated IPR Court Circuit was set up in 2016 at the Abu Dhabi Court of First Instance. The increased specialization is expected to expedite the handling of litigation before the courts and has the potential to increase the availability of effective civil remedies, such as injunctions, which are currently rarely secured. In 2017, local analysis suggested that IP cases before the Abu Dhabi IP court are being processed more quickly than before the court was introduced. First instance decisions are issued in about 6 months (cutting the time in half), with reportedly higher levels of expertise. On this basis, the score for Indicator 29 has risen by 0.25.

31. Criminal standards including minimum imprisonment and minimum fines: The UAE discussed implementation of the Gulf Cooperation Council (GCC) Trademark Law in 2017 though implementation had not occurred at the time of research. The law raises penalties for engaging in counterfeiting very substantially from the current level under UAE law of a maximum of one year imprisonment and a fine of USD2,275 to a maximum of three years imprisonment and a fine of USD267,000. Penalties rise to a fine of USD26,000 and a one-year prison term for knowingly selling counterfeit goods. A new domestic law, the Anti-Commercial Fraud Law (Federal Law No. 19, passed in late 2016), raises penalties for selling counterfeit goods even further than the GCC law. The new UAE law provides for imprisonment of up to two years and fines of up to AED1,000,000 (USD275,000) for selling and dealing in counterfeit goods (with the maximum penalties reserved for pharmaceutical and food goods). Implementation of the GCC Trademark Law in the UAE as well as application of the new Anti-Commercial Fraud Law would likely lead to a rise in the UAE's score for this indicator in future editions of the Index.

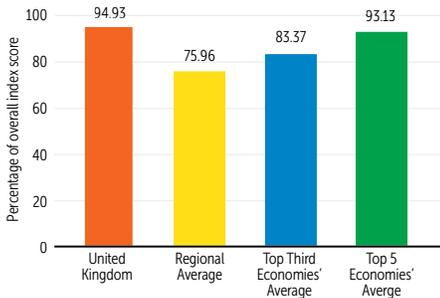
32. Effective border measures: Implementation of the GCC Trademark Law would strengthen the legal basis for *ex officio* action by customs officials in the UAE as well as action against in-transit goods (the latter does not currently exist). Specifically, Article 38 of the GCC law authorizes customs to act on their own initiative to seize suspected infringing goods that are imported, exported, or in transit. Currently, the UAE remains a central hub for transshipment of counterfeit goods.

UNITED KINGDOM

Rank 2 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Strong and sophisticated national IP environment
- ✓ A model for injunctive-style relief for rights holders when battling online infringement
- ✓ Overall strong cross-sectoral enforcement environment highlighted by the work of a specialist crime unit and cross-industry and government cooperation

KEY AREAS OF WEAKNESS

- ✗ Uncertainty over Brexit and impact on UK's national IP environment and existing EU laws and standards
- ✗ EU Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to the UK's and EU's research- and IP-based biopharmaceutical industry

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	1.00
3. Patentability of computer-implemented inventions (CIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.50
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	1.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.63
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	1.00
11. Expedient injunctive-style relief and disabling of infringing content online	1.00
12. Availability of frameworks that promote cooperative action against online piracy	1.00
13. Scope of limitations and exceptions to copyrights and related rights	1.00
14. Digital rights management (DRM) legislation	1.00
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	1.00
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	1.00
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	1.00
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	1.00
20. Industrial design term of protection	1.00
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	1.00
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	1.00
23. Regulatory data protection (RDP) term	1.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.75
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.81
28. Digital/online piracy rates	0.78
29. Civil and procedural remedies	1.00
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	1.00
31. Criminal standards including minimum imprisonment and minimum fines	1.00
32. Effective border measures	1.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	1.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	1.00
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	1.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	37.97

Spotlight on the National IP Environment

Past Editions versus Current Scores

The UK's overall score has increased from 92.5% (32.39 out of 35) in the 5th edition of the Index to 94.9% (37.97 out of 40) in the 6th edition. This reflects a strong performance on the new indicators.

Area of Note

Following the June 2016 referendum, the UK and EU remain in negotiations over the terms of their relationship. Article 50 of the Lisbon Treaty was triggered early in 2017, meaning that if no agreement between the EU and UK has been reached by the first quarter of 2019, UK membership in the EU will effectively end and trading between the two parties will revert to rules under the WTO. It was announced in late 2017 that a two-year transition period will likely follow the 2019 deadline and that the EU and UK are currently negotiating the terms of their future trading relationship. While it is not expected that the UK's exit from the EU (regardless if it is a "soft" or "hard" exit) will affect the level of protection granted under the current British IP system, as noted in last year's Index, there is not a great deal of detail regarding what administrative and legal frameworks will replace current EU-level regulations in the UK. The Index will monitor this process over the next year.

Patents, Related Rights, and Limitations

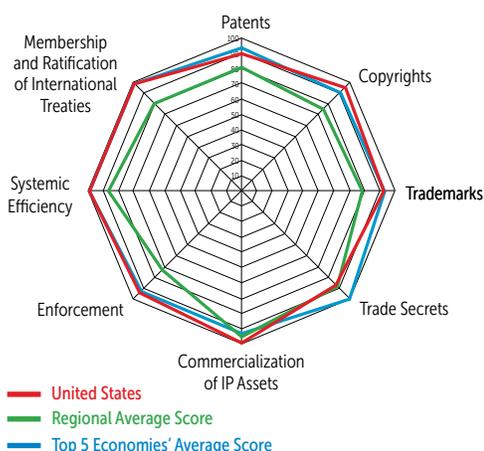
6. Patent term restoration for pharmaceutical products: In October 2015, the European Commission (EC) released its report *Upgrading the Single Market: More Opportunities for People and Business*, which details the overarching initiative to reform and deepen the single market with the purpose of spurring economic growth, creating jobs, and reducing administrative burdens. The report identified the need to address the ambiguity formed by the ongoing process of creating an EU-wide unitary patent system and identified the lack of a conforming mechanism for supplementary protection certificates (SPCs). While emphasizing the benefits of a unitary SPC title, the EC also announced its intention to explore options for recalibrating certain elements of this IP right. One such option put forth by the EC is to provide European manufacturers of generic drugs and biosimilars with an SPC manufacturing exemption that would "create thousands of high-tech jobs in the EU and many new companies." Unfortunately, the EC appears to have lost sight of the fact that IP incentives, such as SPC protection, have been central to the success of Europe's research-based biopharmaceutical industry. In 2016, industry estimates suggested that this sector generated some 745,000 direct jobs (with more than 113,000 persons employed directly in innovative R&D)—a growth of 33% since 2000. Furthermore, the European research-based biopharmaceutical industry generated more than EUR238 billion in pharmaceutical production in 2015, as well as investments of some EUR33.5 billion in R&D activities across the EU. Many troubling assumptions underlie the commission's proposal. One running assumption about the potential gains to European generic manufacturers is that there is an actual market and demand for European generic manufacturers' products. Yet it is not at all clear what this market is or where the demand for generic medicines produced in Europe would come from. In all likelihood, generic follow-on products are already on the market in many of these economies and, critically, being produced by local manufacturers that are often preferred partners in local drug procurement. And for those markets where equivalent protection mechanisms are in place, it is highly unlikely that an SPC exemption would grant the European generic and biosimilar manufacturers an exclusive status for early market entry of their products across the globe. In fact, an EU SPC exemption will invite other economies to consider the question: "If the European Union is weakening IP standards to benefit their domestic industries, why shouldn't we?" In essence, this proposal could inspire a race to the bottom in weakening global IP standards. Moving forward with an SPC exemption would result in EU member states, the UK included, seeing a score reduction to 0 on this indicator.

Copyrights, Related Rights, and Limitations

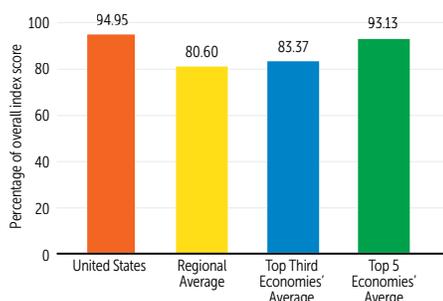
11. Expedient injunctive-style relief and disabling of infringing content online: As with the broader enforcement of IP rights, the UK provides a strong model for rights holders seeking redress for online infringement. Since 2011, injunctions have been made available for the disabling of access to infringing content online, and there is now a substantial case law around the operation of this mechanism. Access has been successfully disabled to a number of infamous international sites, including The Pirate Bay. The English Premier League (EPL) is one of many rights holders to have recently successfully taken action against copyright infringement under this route. The ability to effectively address and neutralize the live illegal streaming of sports matches is critical for sports leagues across the world. Over the course of 2017, the EPL successfully filed for injunctions that enable UK ISPs to disable access to illegally live-streamed game action. Significantly, these injunctions include the responsibility to disable access immediately during the course of a game. These developments strengthen what is already a robust IP enforcement environment in the UK.

UNITED STATES

Rank 1 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Key IP rights, including sector-specific rights, in place
- ✓ Largely supportive technology transfer and commercialization environment (though some recent uncertainty exists concerning SEP licensing)
- ✓ Generally deterrent IP enforcement framework
- ✓ Actively engaged in inter-governmental coordination and public awareness raising and engagement on IP

KEY AREAS OF WEAKNESS

- ✗ Patent opposition system adds substantial costs for innovators
- ✗ Uncertainty over patentability for high-tech sectors
- ✗ Need to update and provide a targeted legal basis for addressing online piracy

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.75
3. Patentability of computer-implemented inventions (CIIs)	1.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	1.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	1.00
6. Patent term restoration for pharmaceutical products	1.00
7. Membership in Patent Prosecution Highways (PPHs)	1.00
8. Patent opposition	0.50
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	1.00
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	1.00
11. Expedient injunctive-style relief and disabling of infringing content online	0.75
12. Availability of frameworks that promote cooperative action against online piracy	1.00
13. Scope of limitations and exceptions to copyrights and related rights	1.00
14. Digital rights management (DRM) legislation	1.00
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	1.00
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	1.00
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	1.00
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	1.00
20. Industrial design term of protection	0.60
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	1.00
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	1.00
23. Regulatory data protection (RDP) term	0.75
Category 5: Commercialization of IP Assets	
24. Barriers to market access	1.00
25. Regulatory and administrative barriers to the commercialization of IP assets	1.00
26. IP as an economic asset	1.00
Category 6: Enforcement	
27. Physical counterfeiting rates	0.80
28. Digital/online piracy rates	0.83
29. Civil and procedural remedies	1.00
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	1.00
31. Criminal standards including minimum imprisonment and minimum fines	1.00
32. Effective border measures	1.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	1.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	1.00
35. Consultation with stakeholders during IP policy formation	1.00
36. Educational campaigns and awareness raising	1.00
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	1.00
38. Singapore Treaty on the Law of Trademarks	1.00
39. Patent Law Treaty	1.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	1.00
TOTAL	37.98

Spotlight on the National IP Environment

Past Editions versus Current Scores

The United States' overall score has risen from 93% (with a score of 32.62 out of 35) in the 5th edition of the Index to 95% (scoring 37.98 out of 40) in the 6th edition. This results from improvements in the enforcement of IP rights at the border as well as a strong performance in most of the new indicators. Notwithstanding this, the U.S. faces a growing level of uncertainty for innovators, particularly in relation to patent protection and technology licensing.

Patents, Related Rights, and Limitations

- 2. Patentability requirements:** In 2017, interpretation of the recent Supreme Court decisions in *Myriad*, *Mayo*, and *Alice* by lower courts and guidance from the USPTO remained inconsistent and difficult to apply. There is considerable uncertainty for innovators and the legal community, as well as an overly cautious and restrictive approach to determining eligibility for patentable subject matter in areas such as biotech, business methods, and computer-implemented inventions. This seriously undermines the long-standing world-class innovation environment and threatens the nation's global competitiveness. As a result, in 2017, a number of legal societies and industry groups called for legislative reform of Section 101 of the U.S. Patent Act, citing the need for clarity on patentability in a wider, legislative context rather than in highly specific guidelines and case law.
- 8. Patent opposition:** The patent opposition system in the U.S. continues to involve a great deal of cost and lack of predictability for patent owners compared with other post-grant opposition systems. As discussed in the previous edition of the Index, the most commonly used post-grant opposition mechanism in the U.S. is the *inter partes* review (IPR), which occurs before the specialized Patent Trial and Appeals Board (PTAB) within the USPTO. Despite the best intentions of the IPR system (established in 2011 under the America Invents Act) to ease opposition proceedings, the system has led to a disproportionately high rate of trials and rejections, and as a result, appeals and additional proceedings. A third-party analysis of PTAB data in 2017 suggests that only about 5–15% of cases end with all claims being considered patentable. While it is unclear whether this reflects challenges within the IPR process or wider challenges in examination and prosecution, it is clear that innovators face significant uncertainty about the process and outcomes, leading to additional litigation, costs, and risks. The Supreme Court is considering the constitutionality of the IPR process in the case *Oil States Energy Services, LLC v. Green Energy Group, LLC*; a decision is not expected until 2018.

Copyrights, Related Rights, and Limitations

- 11. Expedient injunctive-style relief and disabling of infringing content online:** While various legal bases for injunctive-type relief against infringing content online exist and are being used, each has important limitations, and in comparison with other economies, the U.S. lacks a specific and effective basis for disabling access to infringing websites (both foreign and domestic). Among other pieces of legislation, the Digital Millennium Copyright Act (DMCA)/Copyright Act Section 512 enables federal courts to require ISPs to disable access to infringing websites; however, in order to do so, secondary liability of the ISP must be established—a threshold that is difficult and costly to achieve. In contrast, for instance, injunctive-type relief in the UK is available as long as ISPs have *knowledge* of infringement by their users. A second basis for injunctive-type relief for rights holders in the U.S. is available under Federal Rules of Civil Procedure 65(d)(2), which is a general measure authorizing federal courts to issue injunctions to infringing parties as well as to “other persons who are in active concert or participation with them.” Given that Rule 65 is not directed specifically at IP rights or the online environment, and therefore lacks key definitions about ISPs and the level of engagement required to establish participation, courts are reluctant to use it as a basis for injunctive-type relief for copyright owners (though it has been previously applied in cases of infringing domain names and trademark-related cases). Nevertheless, copyright-related case law on the basis of Rule 65 is growing. In *Arista Records LLC v. Vita Tkach et al* (2015), a disabling injunction was issued against an IP address directing service, which was determined to have engaged in “active participation” in that it had blatant knowledge that the user (Grooveshark) was a notoriously infringing website. Case law in 2017 further distinguishes between the legal thresholds of an ISP's liability for and knowledge of infringement and substantiates the threshold of knowledge as a potential basis for issuing injunctive relief. For example, in relation to *Arista Records v. Vasilenko et al*, the court ruled that DMCA safe harbors do not apply to non-parties (therefore, not held liable) that may be “in active concert or participation” under Rule 65. However, greater clarity and jurisprudence is needed in order for Rule 65 to become a more effective and expeditious mechanism for recourse for rights holders.

Trademarks, Related Rights, and Limitations

- 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks:** In the past few years, the U.S. has made significant efforts to more effectively address the sale of counterfeit goods online through increased cooperation between rights holders and online service providers, including online marketplaces and social media. Social media platforms like Facebook and Instagram have dedicated portals for rights holders and consumers to report posts and advertisements for fake goods that the companies review and address. There is also a rise in cooperative efforts with ISPs to de-prioritize sites linking to counterfeit goods, including in search result rankings, and to reduce financing available to rogue advertising. In turn, some brand owners report increased confidence in U.S.-based ISPs' ability to address fake goods on their networks or platforms.

Commercialization of IP Assets

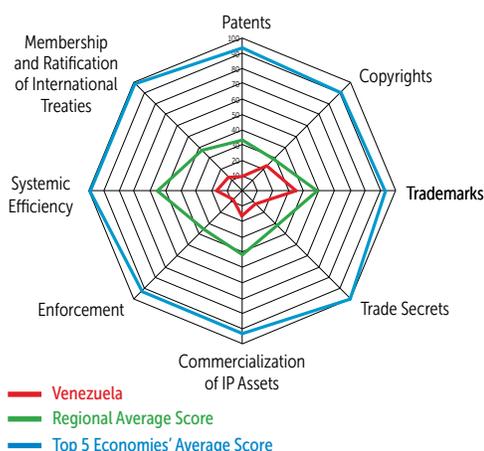
25. Regulatory and administrative barriers to the commercialization of IP assets: Actions by antitrust authorities in the U.S. in 2017 introduce significant uncertainty in relation to the ability of patent holders to set licensing terms independently within the context of FRAND. These actions threaten to undermine incentives and guarantees for innovators both in the U.S. and internationally. In 2017, the Federal Trade Commission (FTC) initiated an antitrust lawsuit against chipmaker Qualcomm for refusal to license its standard essential patents on FRAND terms in its device-level royalty models. Notably, this action seems to run contrary to the U.S. position on wider antitrust guidelines (prepared by the FTC and the Antitrust Division of the Department of Justice) for the licensing of IP rights (issued in early 2017), which do not include as an antitrust violation refusal to license SEPs under FRAND terms. This comes alongside an industry-wide debate and judicial activity involving handset makers, chipmakers, and others in the wireless technology space about device-level licensing models. It is crucial that within the context of FRAND compliance, licensing rates can reflect the value of SEPs and that rights holders are shielded from third-party or predetermined estimations of this value without due process for both rights holder, and licensees.

Enforcement; and Systemic Efficiency

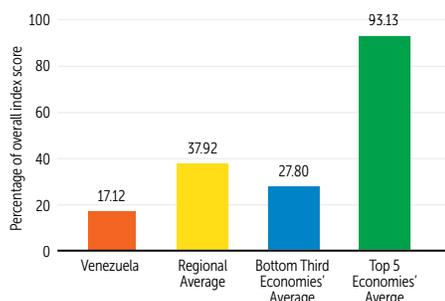
32. Effective border measures; and 34. Inter-government coordination of IP rights enforcement efforts: There has been significant progress in strengthening border enforcement efforts in the U.S. In 2016, the Trade Facilitation and Trade Enforcement Act was signed into law. The new measure aims to expand communication and cooperation with rights holders in order to strengthen customs authorities' ability to act expeditiously against imported and in-transit counterfeit and pirated goods at the U.S. border. The law includes requirements for customs authorities to disclose information to rights holders based on suspected infringing goods and to do so earlier in the process than previously existed in law. It also provides for *ex ante* information sharing and support from rights holders, building on existing platforms for e-recordation of IP rights and product identification information. Amendments to the Customs and Border Protection regulations that implement aspects of the new law were issued in 2017. The amendments enhance rights holders' ability to donate technologies or to provide training or other support to customs officials for their products and brands to enable accurate and speedy identification of infringing goods. As a result, the score for the U.S. for this indicator rises to a full point. The Office of the IP Enforcement Coordinator (IPEC) and interagency committees support strong border enforcement, and their collective efforts are global models for the coordination of national IP enforcement. IPEC and its partner agencies actively promote and support a wide range of regular information sharing, strategy planning, cooperative enforcement actions and campaigns, and public awareness-raising initiatives across various aspects of IP enforcement, including border control.

VENEZUELA

Rank 50 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Basic copyright, trademark, and industrial design frameworks in place
- ✓ Dedicated (though limited) anticounterfeiting effort
- ✓ Indication of greater interest in international collaboration on IP
- ✓ Awareness-raising and capacity-building efforts on importance and use of IP rights

KEY AREAS OF WEAKNESS

- ✗ Very weak patent framework, with sector-specific patents and other IP rights not available
- ✗ Major holes in copyright protection, notably in the digital sphere
- ✗ Trademark legislation does not directly address unregistered marks, with limited recognition of well-known marks
- ✗ Enforcement generally poor; penalties either insufficient or draconian; administrative inaction
- ✗ Government interference and regulatory barriers to commercialization of IP assets

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	0.50
2. Patentability requirements	0.00
3. Patentability of computer-implemented inventions (CIIs)	0.25
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.00
8. Patent opposition	0.00
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.63
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.00
12. Availability of frameworks that promote cooperative action against online piracy	0.25
13. Scope of limitations and exceptions to copyrights and related rights	0.25
14. Digital rights management (DRM) legislation	0.00
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.25
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.25
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.25
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.00
20. Industrial design term of protection	0.40
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.25
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.25
23. Regulatory data protection (RDP) term	0.00
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.00
26. IP as an economic asset	0.50
Category 6: Enforcement	
27. Physical counterfeiting rates	0.20
28. Digital/online piracy rates	0.12
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.00
31. Criminal standards including minimum imprisonment and minimum fines	0.00
32. Effective border measures	0.00
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.00
35. Consultation with stakeholders during IP policy formation	0.00
36. Educational campaigns and awareness raising	0.50
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	0.50
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.00
TOTAL	6.85

Spotlight on the National IP Environment

Past Editions versus Current Scores

Venezuela's overall score has decreased from 20% of the total possible score (6.88 out of 35) in the 5th edition of the Index to 17% (6.85 out of 40) in the 6th edition. The fall in score primarily results from a relatively weak performance on some of the new indicators; still, some positive developments were visible in relation to awareness raising, capacity building, and international cooperation in 2017.

Area of Note

Though the IP environment in Venezuela remains highly challenging in many respects, in a positive development in 2017, the IP office in Venezuela, the Autonomous Service of Industrial Property (SAPI), made efforts to increase Venezuela's participation in international forums on IP. For example, SAPI held events promoting WIPO's World IP Day for the 1st time in 18 years. In addition, SAPI signed an MOU with Mexico's IP office, the IMPI. As part of the MOU, SAPI committed to participating in a patent review and management service provided by the IMPI to patent offices in Central America, CADOPAT. The service supports patentability studies, international searches on state of the art, and other aspects of patent examination. SAPI has said the MOU is aimed at streamlining and strengthening review procedures for patents, trademarks, industrial designs, and other IP rights.

Commercialization of IP Assets

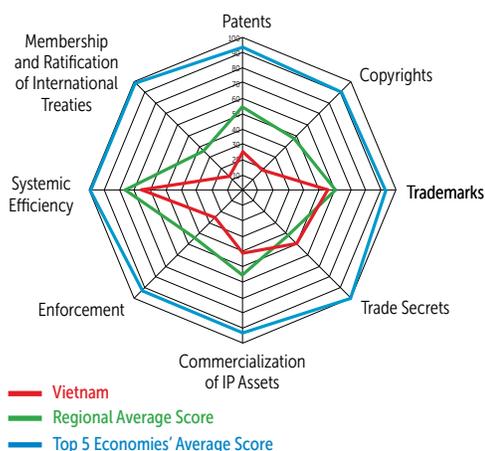
26. IP as an economic asset: SAPI hosts training programs for entrepreneurs on leveraging IP rights. For instance, SAPI collaborates with a wider initiative, Corpojuventud, that provides capacity building and resources for students and entrepreneurs to commercialize innovative and creative endeavors. SAPI also holds workshops with SMEs in established industries, such as food production, tourism, and services, to promote the use of IP rights and raise productivity and innovation. Major universities in the country also provide training and coursework on management and valuation of IP, sometimes in partnership with SAPI. For example, in 2017, in partnership with the University of Los Andes' Center for Intellectual Property Research, SAPI hosted a course titled "The Creative Economy and Intellectual Property," which aimed to strengthen knowledge of the role of copyright and related rights in the creative economy. It is hoped that such efforts by the government and research institutions will continue to grow in scope and frequency in order to build a culture and more systemic framework for commercializing IP assets.

Systemic Efficiency

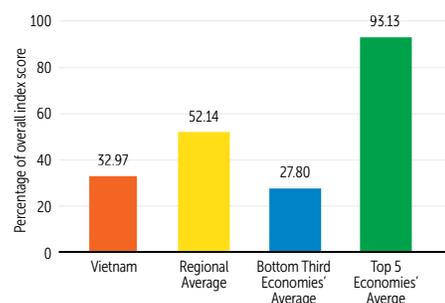
36. Educational campaigns and awareness raising: SAPI conducts a number of initiatives and workshops promoting the importance of IP rights among innovators and the wider public. For example, in 2017, it conducted a workshop for artists and content creators on the value of copyright protection and how to register artistic works. In 2016, it hosted a National Fair of Intellectual Property open to the public. The fair sought to improve knowledge about the manner in which IP rights support innovation and creativity, with an aim to increase respect for IP protection.

VIETNAM

Rank 40 / 50



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Basic IP protections and enforcement framework in place, with stronger penalties for commercial scale infringement
- ✓ Development of national IP strategy
- ✓ Growing integration into international IP platforms
- ✓ Long-standing effort to coordinate IP enforcement
- ✓ Active promotion of IP rights awareness (though more is needed)

KEY AREAS OF WEAKNESS

- ✗ Inadequate protection of life sciences patents, with challenging enforcement environment
- ✗ Gaps in copyright protection, including lack of measures to address online infringements
- ✗ Very high physical counterfeiting rates and rampant online infringement
- ✗ Enforcement generally poor; penalties insufficient in practice; administrative inaction

INDICATOR	SCORE
Category 1: Patents, Related Rights, and Limitations	
1. Patent term of protection	1.00
2. Patentability requirements	0.25
3. Patentability of computer-implemented inventions (CIIs)	0.00
4. Pharmaceutical-related patent enforcement and resolution mechanism	0.00
5. Legislative criteria and active use of compulsory licensing of patented products and technologies	0.00
6. Patent term restoration for pharmaceutical products	0.00
7. Membership in Patent Prosecution Highways (PPHs)	0.50
8. Patent opposition	0.25
Category 2: Copyrights, Related Rights, and Limitations	
9. Copyright (and related rights) term of protection	0.53
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)	0.25
11. Expedient injunctive-style relief and disabling of infringing content online	0.25
12. Availability of frameworks that promote cooperative action against online piracy	0.00
13. Scope of limitations and exceptions to copyrights and related rights	0.00
14. Digital rights management (DRM) legislation	0.25
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software	0.00
Category 3: Trademarks, Related Rights, and Limitations	
16. Trademarks term of protection (renewal periods)	1.00
17. Ability of trademark owners to protect their trademarks: requisites for protection	0.25
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks	0.50
19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods	0.50
20. Industrial design term of protection	0.60
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights	0.50
Category 4: Trade Secrets and Related Rights	
22. Protection of trade secrets	0.50
23. Regulatory data protection (RDP) term	0.50
Category 5: Commercialization of IP Assets	
24. Barriers to market access	0.00
25. Regulatory and administrative barriers to the commercialization of IP assets	0.50
26. IP as an economic asset	0.75
Category 6: Enforcement	
27. Physical counterfeiting rates	0.34
28. Digital/online piracy rates	0.22
29. Civil and procedural remedies	0.25
30. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement	0.25
31. Criminal standards including minimum imprisonment and minimum fines	0.50
32. Effective border measures	0.25
33. Transparency and public reporting by customs authorities of trade-related IP infringement	0.00
Category 7: Systemic Efficiency	
34. Inter-governmental coordination of IP rights enforcement efforts	0.75
35. Consultation with stakeholders during IP policy formation	0.50
36. Educational campaigns and awareness raising	0.75
Category 8: Membership in and Ratification of International Treaties	
37. WIPO Internet Treaties	0.00
38. Singapore Treaty on the Law of Trademarks	0.00
39. Patent Law Treaty	0.00
40. At least one free trade agreement (FTA) with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership	0.50
TOTAL	13.19

Spotlight on the National IP Environment

Past Editions versus Current Scores

Vietnam's overall score has increased from 30% of the total possible score (with a score of 10.34 out of 35) in the 5th edition of the Index to 33% (13.19 out of 40) in the 6th edition. This increase reflects 2017 amendments to the Criminal Code as well as a strong performance on some of the new indicators.

Enforcement

31. Criminal standards including minimum imprisonment and minimum fines: In 2017, the National Assembly passed implementing legislation and amendments to the 2015 Penal Code that are expected to enter into force in 2018. This legislation closes some important loopholes in the current legal basis for the prosecution net of penalties for IP infringement. Resolution No. 41 and Law 12/2017 expand criminal liability for IP infringement from individual to corporate liability (in other words, entities with commercial aspects) and set higher penalties. The 2015 Penal Code linked commercial-scale infringement with a set level of profit. The new amendments distinguish between these two, making it easier to penalize commercial-scale and repeat offenders, even if there is not a profit motive. The new law defines a "commercial scale" of copyright infringement (either a profit of VND50 million to VND300 million [USD2,000–USD13,000] or activities incurring damages of VND100 million to VND500 million [USD4,500–USD22,000]). The new law also establishes the fines for repeat offenders at VND300 million to VND1 billion (USD13,000–USD44,000); for entities considered to be "corporate," the fine is raised to VND5 billion (USD220,000) and/or prison of three years. Easing criminal prosecution for commercial-scale infringement and raising penalties will help improve rights holders' ability to secure remedies for IP violations.

Commercialization of IP Assets; and Systemic Efficiency

26. IP as an economic asset; and 36. Educational campaigns and awareness raising: A number of initiatives are in place in Vietnam for promoting the commercialization of IP assets and for raising general public awareness of the importance of IP rights. The Vietnamese IP Research Institute within the Ministry of Science and Technology (MOST) provides IP management training courses for businesses on creating, acquiring, protecting, exploiting, and managing IP rights. In addition, a new WIPO-funded initiative over the period 2018–22 (which already began in 2017) includes an advanced training course on technology transfer for universities and research institutes. The course focuses on IP valuation strategies and tech transfer policymaking. As part of the initiative, the Vietnamese patent office, NOIP, has created a network of 20 technology and innovation support centers at universities and research institutes, which will participate in the course. In Decision No. 1062/QĐ-TTg (from 2016), the prime minister approved a program on intellectual asset development (for 2016–20) aimed at raising awareness of IP and supporting leveraging of IP; the program is expected to reach over 100 high-tech companies and organizations in Vietnam. Additionally, throughout the past decade, NOIP, MOST, and the Copyright Bureau within the Ministry of Culture and Tourism (MCST) have held regular workshops and seminars for civil servants, enforcement officials, businesses, and students and conducted targeted IP-focused campaigns. For example, Vietnam executed a one-month MOST campaign in partnership with the BSA on software piracy. As another avenue for awareness raising, NOIP regularly publishes handbooks and promotional audiovisual material.

34. Inter-government coordination of IP rights enforcement efforts: A long-standing platform for coordinating IP enforcement exists in Vietnam. Action Program No. 168, first introduced in 2006 for the period 2006–10 and reinstated in subsequent years, established a joint program for information exchange and coordination on inspections and handling of infringement and on educational initiatives and cross-agency training. Program 168 involves a large number of entities—nine ministries and agencies involved in IP enforcement, including MOST, MCST, the Ministries of Agriculture; Finance; Industry and Trade; Public Security; and Information and Communications; and the Supreme People's Court. Program 168 is credited with promoting the development of legislative and regulatory measures supporting enforcement of IP rights and harmonization and integration into international platforms over the past several years. Nevertheless, officials still note room for improvement in information sharing and coordination of activities in a timely manner to truly enhance the effectiveness of enforcement efforts. There is also opportunity to increase the level of participation from rights holders as well as education of SMEs in Vietnam on IP rights and enforcement.

Appendix: Methodology, Sources, and Indicators Explained

The Index consists of 40 indicators across 8 separate categories:

- i) Patents, Related Rights, and Limitations;
- ii) Copyrights, Related Rights, and Limitations;
- iii) Trademarks, Related Rights, and Limitations;
- iv) Trade Secrets and Related Rights;
- v) Commercialization of IP Assets;
- vi) Enforcement;
- vii) Systemic Efficiency; and
- viii) Membership in and Ratification of International Treaties.

As in previous editions these categories are used for ease of organizing the Index and have no statistical impact on weightings or an economy's overall score in the Index. Each indicator is explained in more detail below.

The table below lists all 40 indicators that together make up the Index.

International IP Index: Categories and Indicators

Category 1: Patents, Related Rights, and Limitations

1. Patent term of protection
2. Patentability requirements
3. Patentability of computer-implemented inventions
4. Pharmaceutical-related patent enforcement and resolution mechanism
5. Legislative criteria and active use of compulsory licensing of patented products and technologies
6. Patent term restoration for pharmaceutical products
7. Membership in Patent Prosecution Highways (PPHs)
8. Patent opposition

Category 2: Copyrights, Related Rights, and Limitations

9. Copyright (and related rights) term of protection
10. Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)
11. Expeditious injunctive-style relief and disabling of infringing content online
12. Availability of frameworks that promote cooperative action against online piracy
13. Scope of limitations and exceptions to copyrights and related rights
14. Digital rights management legislation
15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software

Category 3: Trademarks, Related Rights, and Limitations

16. Trademarks term of protection (renewal periods)
17. Ability of trademark owners to protect their trademarks: requisites for protection
18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks
19. Availability of frameworks that promote action against online sale of counterfeit goods
20. Industrial design term of protection
21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights

Category 4: Trade Secrets and Related Rights

22. Protection of trade secrets
23. Regulatory data protection (RDP) term

Category 5: Commercialization of IP Assets

24. Barriers to market access
25. Regulatory and administrative barriers to the commercialization of IP assets
26. IP as an economic asset

Category 6: Enforcement

- 27. Physical counterfeiting rates
- 28. Software piracy rates
- 29. Civil and procedural remedies
- 30. Preestablished damages and/or mechanisms for determining the amount of damages generated by infringement
- 31. Criminal standards including minimum imprisonment and minimum fines
- 32. Effective border measures
- 33. Transparency and public reporting by customs authorities of trade-related IP infringement

Category 7: Systemic Efficiency

- 34. Coordination of IP rights enforcement efforts
- 35. Consultation with stakeholders during IP policy formation
- 36. Educational campaigns and awareness raising

Category 8: Membership in and Ratification of International Treaties

- 37. WIPO Internet Treaties
- 38. Singapore Treaty on the Law of Trademarks
- 39. Patent Law Treaty
- 40. At least one free trade agreement with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership

Scoring Methodology

As in previous editions of the Index, each indicator can score values between 0 and 1 and the cumulative score of the Index ranges from a minimum of 0 to a maximum of 40. Indicators can be scored using three distinct methods: binary, numerical, and mixed.

When an indicator is of a binary nature, each indicator is assigned either the value 0—if the particular IP component does not exist in a given economy—or 1—if the particular IP component does exist in a given economy.

Numerical indicators are those indicators that, for example, measure terms of exclusivity or are based on a quantitative source. Terms of exclusivity are calculated by dividing the actual term of exclusivity of each relevant indicator by a standard baseline. For example,

the standard baseline used for the copyright term is 95 years, which is the term provided in the U.S.^{xvi} Thus, the numerical formula for this subcategory is “*n years of basic copyright term/95.*” If an economy has a copyright term of 95 years, the value it scores on this indicator is 1. If it has a copyright term of less than 95 years, then the value is less than 1. Details about the individual baselines used for different types of IP rights are provided below.

Where there are no adequate baselines and the legislative or regulatory existence of an indicator is not sufficient to determine its actual use or application, the score for that indicator will be mixed. The final score for that indicator will be based on an even split between the following:

- i) Primary and/or secondary legislation (regulation) in place; and

- ii) The actual application and enforcement of that primary and/or secondary legislation.

Mixed indicators are the majority of indicators used in the Index, with 31 of the 40 indicators being mixed. Of the remaining 9 indicators, 8 are numerical and only 1 is binary. The use of mixed indicators provides greater flexibility when scoring and allows the Index to more effectively accommodate “gray areas” in economy performance for a given indicator. Specifically, it is possible to assign a partial score, rather than only 0 or 1.

Five possible scores are available within a mixed indicator: 0, 0.25, 0.5, 0.75, and 1. The range of scores available for mixed indicators means that greater nuance can be used when individual indicators are scored; the practical end result is that economies can receive partial scores for an indicator, which in some cases are a better approximation of their given reality.

Last, there are also a few instances in which rather than the *de jure* and *de facto* existence of a single element, a mixed indicator is split between two separate elements. For example, in Category 8: Membership and Ratification of International Treaties, the indicators are measured by the signature and ratification or accession to a given international treaty. Thus, 0.5 is given for being a signatory of a treaty and 0.5 for ratifying or acceding to that treaty.

Baselines Used

When possible, the Index uses baseline values, measures, and models. These values are based on best practices regarding terms of protection, enforcement mechanisms (*de jure* and *de facto*), and/or model pieces of primary or secondary legislation that can be

found at the national and international level. Where no adequate baselines are found in international law or treaties, the baselines and values used are based on what rights holders view as an appropriate environment and level of protection.

IP Rights Baselines

Baselines	Baseline in Years	Legislation Model
Basic patent protection	20	TRIPS
Copyrights	95	U.S.
Trademarks	10	WIPO
Regulatory data protection	10	EU
Patent term restoration	5	EU/U.S.
Design rights	25	EU

Measuring Counterfeiting and Piracy

Indicators 27 and 28 of the Index measure rates of physical counterfeiting and software piracy, respectively. Measuring piracy and counterfeiting presents a number of challenges.

First, illegal activities are inherently difficult to measure and quantify with a high level of accuracy. Estimates will out of necessity be based on variables such as physical seizures and surveys. This is particularly the case for online piracy.

Second, studies of rates of piracy and counterfeiting often are either economy-specific (focusing on one or a relatively small sample of economies) or global. The result is a

relative paucity in the number of studies that measure and compare levels of piracy and counterfeiting with a sample of economies sufficient enough to make large-scale comparisons empirically robust.

Last, because measures of piracy and counterfeiting are inexact, estimates of their economic impact can vary widely depending on the methodology and data samples used.^{xvii}

Up until its fourth edition, the Index had relied on two main sources for measuring piracy and counterfeiting:

- The OECD's General Trade-Related Index of Counterfeiting of Economies (GTRIC-e), which measures the relative rates of physical counterfeiting (the latest year for which data are available is 2013);^{xviii} and
- Software piracy rates compiled by the Business Software Alliance (BSA) (2016 being the latest survey).^{xix}

These sources are both robust and internationally recognized measures. Furthermore, they cover a large sample of economies, providing a sound basis for both cross- economy comparisons and long-term use within the Index. And both the BSA software piracy rates and the GTRIC-e Index are numerical measures and can be transposed into two respective scores.

Still, there are caveats with the use of these measures, in particular the GTRIC-e.

First, the GTRIC-e Index measures the relative rates of physical counterfeiting and is based on international trade statistics and customs interception data. Crucially, the GTRIC-e does not take into account or measure domestically produced products or pirated

digital products. The practical result is that a number of economies with relatively low levels of customs interception of counterfeit goods, yet high levels of domestically produced counterfeit goods or high levels of online piracy, can rank quite well within the GTRIC-e. These results may not present an accurate reflection of their overall piracy and counterfeiting environment.

To address this challenge, the 4th edition of the Index incorporated a new proprietary Global Measure of Physical Counterfeiting. The U.S. Chamber of Commerce and Pugatch Consilium have developed this measure to provide a new global measure of physical trade-related counterfeiting. This measure of physical counterfeiting is also used for this 6th edition of the Index and provides the basis for the score on indicator 27.

The measure provides a total and per economy estimate of rates of physical trade-related counterfeiting for each of the 50 economies included in the Index. The full details about the building of the model, methodology, and sources used, as well as an assessment of the wider threat of physical counterfeiting, is provided in the report *Measuring the Magnitude of Global Physical Counterfeiting*, available on the U.S. U.S. Chamber of Commerce website.

In brief, the methodology of the Global Measure of Physical Counterfeiting builds on that developed by the OECD and the GTRIC-e. To obtain a unique estimate for each of the 50 economies included, the Global Measure of Physical Counterfeiting uses a proprietary metric that applies 3 weighted factors in order to provide a holistic take on the propensity for counterfeiting in the selected economies.

The first factor is the scores for the indicators within Category 6: Enforcement. These include the following:

- The existence of civil and procedural remedies, including injunctions, damages for injuries, and destruction of infringing and counterfeit goods, as well as their effective application;
- The existence of preestablished damages and/or mechanisms for determining the amount of damages generated by infringement;
- Criminal standards (including minimum imprisonment and minimum fines) in place and their application;
- Effective border measures (measured by the extent to which goods in transit suspected of infringement may be detained or suspended, as well as the existence of *ex officio* authority); and
- Transparency and public reporting by customs authorities of trade-related IP infringement.

In an effort to better capture the level of counterfeiting taking place within a given economy, for this edition of the Index the weight of this factor has been increased to 50% of the score for indicator 27.

The second factor is the OECD's GTRIC-e benchmark discussed in detail above.

The third factor is the rate of corruption within an economy, as measured by Transparency International's Corruption Perceptions Index 2016.^{xx} This measurement is based on the assumption that a strong relationship exists between corruption and counterfeiting; that is, authorities in economies that struggle with corruption tend to also overlook or place less emphasis

on combating criminal activities, including counterfeiting.

Together, these two factors constitute the remaining 50% of the score for indicator 27.

The BSA survey expresses an economy's software piracy rate as a percentage. Within the Index, the reverse of the BSA software piracy percentage is used as the score for indicator 28; the higher the BSA software piracy rate is in an economy, the lower its score on the Index. For example, if economy X has an estimated software piracy rate of 90% according to the BSA, it receives a score of 0.10 for indicator 28 within the Index.

Sources

Scoring in the Index is based on both qualitative and quantitative evidence. To provide as complete a picture of an economy's IP environment as possible, this evidence is drawn from a wide range of sources. All sources used are publicly available and are free and accessible to all. The following is an outline of the different types of sources used.

Government

Sources from government branches and agencies include the following:

- Primary legislation;
- Secondary legislation (regulation) from executive, legislative, and administrative bodies;
- Reports from parliamentary committees and government agencies, including patent or intellectual property offices as well as enforcement agencies; and
- Internal departmental guidelines, policies, assessments, and audits.

Legal

Sources from judicial authorities and legal practitioners include the following:

- Court cases and decisions;
- Legal opinions written by judges; and
- Legal analysis and opinions written by legal practitioners.

International Institutions and Third Parties

These sources include the following:

- Data, studies, and analysis from international organizations such as the OECD, WTO, and WIPO;
- Publicly available reports, studies, and government submissions by industry organizations; and
- Reports from non-governmental organizations and consumer organizations.

Academic

Academic sources include the following:

- Academic journals; and
- Legal journals.

News

News sources include the following:

- Newspapers;
- News websites; and
- Trade press.

In addition to the above listed resources, over the course of the past few years, more and more governments and economies have started to make submissions directly to the GIPC and U.S. Chamber of Commerce. These submissions include everything from updates on legislative and regulatory initiatives to details about various government policies,

such as antipiracy initiatives as well as data and statistics on anticounterfeiting and activities to fight online piracy.

The U.S. Chamber of Commerce welcomes these submissions and endeavors to use them together with all other available information to provide the most accurate as possible depiction of the national IP environment in each of the economies sampled.

We wish to thank the governments and economies that have made these submissions and welcome all economies covered in the Index to consider doing so. The only criteria we use—just as for all resources used in the Index—is that the sources and materials submitted to us need to be publicly available and in the public domain.

Indicators Explained

This section explains how each indicator in the Index is measured and scored.

Category 1: Patents, Related Rights, and Limitations

The indicators included in this category relate to patent protection and related rights and limitations.

1. **Patent term of protection** – Measured by the basic patent term offered in the TRIPS Agreement. This is a numerical indicator.
2. **Patentability requirements** – The extent to which patentability requirements are in line with international standards of novelty, inventive step, and industrial applicability.^{xxi} Measured by (1) existing *de jure* patentability guidelines and regulations and (2) *de facto* standards established through the application of these guidelines

and regulations through the examination process and judicial review. This is a mixed indicator.

3. Patentability of computer-implemented inventions – Measured by the extent to which primary and/or secondary legislation explicitly allows for the patentability of CII. This is a mixed indicator.

4. Pharmaceutical-related patent enforcement and resolution mechanism – Measured by the existence of primary and/or secondary legislation (such as a regulatory mechanism) that provides a transparent pathway for adjudication of patent validity and infringing issues before the marketing of a generic or biosimilar product. This score is evenly divided between the existence of relevant primary and/or secondary legislation and its application and enforcement. If no legislation is in place, the maximum score that can be achieved is 0.5 and is based on the extent to which *de facto* practices are in place that achieve a similar result. This is a mixed indicator.

5. Legislative criteria and active use of compulsory licensing of patented products and technologies – Measured by the extent to which primary and/or secondary legislation on the use of compulsory licensing (on the basis of the essential facilities doctrine) and its application and enforcement is transparent and consistent with the following criteria: (1) the issuing should exclude any requirement for domestic manufacturing; (2) the issuing should not apply to patented innovations that have not yet reached the market; (3) in the case of biopharmaceutical products, compulsory

licensing under the framework of TRIPS provisions on public health should not be used for commercial purposes, such as for price negotiations or in support of domestic industries; and (4) adequate and well-defined recourse mechanisms should be in place for parties affected by the issuing of the license. This is a binary indicator.

6. Patent term restoration for pharmaceutical products – Measured by the current baseline rate of five years used in the U.S. and EU. This protection is aimed at restoring the patent term granted to innovative pharmaceutical products, due to the prolonged research, development, and regulatory approval periods of such products. This category does not include other forms of patent term restoration that are granted on the basis of prolonged examination periods. This is a numerical indicator.

7. Membership in Patent Prosecution Highways (PPHs) – Measured by whether an economy's relevant IP or patent office has joined international efforts toward streamlining and improving patent prosecution by membership in PPHs. Given the three main tracks of international PPH (PPH, Global Patent Prosecution Highway, and IP5 Patent Prosecution Highway), economies are scored differently depending on their level of participation and membership in the different tracks. Economies that are members of either (or both) the Global Patent Prosecution Highway or IP5 Patent Prosecution Highway will receive a full score of 1. Economies that are members of a PPH or have bilateral and multilateral agreements to this effect will receive a score of 0.5.

8. **Patent opposition** – Measured by the availability of mechanisms for opposing patents in a manner that does not delay the granting of a patent (in contrast to a right of opposition before the patent is granted) and ensures fair and transparent opposition proceedings. This is a mixed indicator.

Category 2: Copyrights, Related Rights, and Limitations

The indicators included in this category relate to copyright protection and related rights and limitations.

9. **Copyright (and related rights) term of protection** – Measured by the baseline term of protection not referencing the variable of the length of the author's life, which is the term of 95 years afforded in the U.S.. Terms of protection are measured as the minimum term allowed by copyright law. Where different minimum terms of protection are used for different forms of copyright, all terms are added together and divided by 95. This is a numerical indicator.

10. **Legal measures that provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking)** – Measured by the extent to which economies (1) have in place laws and procedures that provide necessary exclusive rights and (2) apply these laws to prevent, deter, and remedy online infringement of copyright and related rights. This is a mixed indicator.

11. **Expeditious injunctive-style relief and disabling of infringing content online** – Measured by the existence and extent of an official national government administrative

or judicial injunctive relief enforcement mechanism available to rights holders upon sufficient showing. The mechanism should provide for the effective and timely disabling of access to websites whose primary function is to offer infringing content online, whether from a national or foreign source. Such a mechanism should be based on a clear, transparent, expeditious, and standardized procedure and include due process protections. This is a mixed indicator.

12. **Availability of frameworks that promote cooperative action against online piracy** – Measured by the existence of clear standards for the limitation of liability for copyright and related rights infringement by ISPs that expeditiously remove infringing material upon obtaining knowledge of it, in the context of an overall system that does not unduly burden ISPs, promotes cooperation between them and rights holders to address online piracy, and respects and protects users' rights. This is a mixed indicator.

13. **Scope of limitations and exceptions to copyrights and related rights** – Measured by the extent to which exceptions and limitations are consistent in text and in application with the three-step test originating in the Berne Convention (Berne three-step test).^{xxii} The score for this indicator is evenly divided between legislation and application in the court system. This is a mixed indicator.

14. **Digital rights management legislation** – Measured by the extent to which (1) economies have passed primary and/or secondary legislation relating to DRM and technological protection measures and (2)

this legislation is applied. This is a mixed indicator.

15. **Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software**
– Measured by the extent to which (1) policies and guidelines are in place that stipulate use of only licensed proprietary software and (2) these policies and guidelines are applied. This is a mixed indicator.

Category 3: Trademarks, Related Rights, and Limitations

The indicators in this category relate to trademark protection, design rights, and related rights and limitations.

16. **Trademarks term of protection (renewal periods)** – Measured by the renewal term of protection being offered; the baseline term is 10 years as provided by the Singapore Treaty on the Law of Trademarks. This is a numerical indicator.
17. **Ability of trademark owners to protect their trademarks: requisites for protection**
– Measured by the extent to which existing laws and regulations and/or *de facto* practices allow for trademark protection through the use of the mark, regardless of whether the trademark owner registers the mark. This is a mixed indicator.
18. **Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks**
– Measured by the extent to which economies (1) have in place laws and procedures that provide necessary causes of action to address violations

of a trademark owner's rights (such as infringement of registered trademarks, unfair competition, false designation of origin, false advertising, dilution of famous trademarks, cybersquatting, and violation of rights associated with a corresponding trade dress), which create a likelihood of public confusion as to source, sponsorship, or affiliation; and (2) apply these laws to prevent, deter, and remedy infringement of trademarks and related rights. This is a mixed indicator.

19. **Availability of frameworks that promote action against online sale of counterfeit goods** – Measured by the existence of clear rules and standards for the expeditious removal of trademark infringing material by online service providers upon learning of the infringement, in the context of an overall system that does not unduly burden such providers, promotes cooperation between them and rights holders to address the infringement of trademark rights, and respects and protects consumers' rights. This score is evenly divided between the existence of relevant primary and/or secondary legislation and its application and enforcement. In the absence of a legal or regulatory framework, a score of up to 0.5 can be allocated based on the existence and effectiveness of voluntary industry standards and practices in place. This is a mixed indicator.^{xxiii}
20. **Industrial design term of protection**
– Measured by the maximum term of protection being offered (including renewable periods); the baseline term is 25 years, which is the maximum term afforded in the European Union. This is a numerical indicator.

21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights – Measured by the extent to which economies (1) have in place laws and procedures that provide necessary exclusive rights (including making, marketing, trading, and use of an industrial design); and (2) apply these laws to prevent, deter, and remedy infringement of industrial design rights. This is a mixed indicator.

Category 4: Trade Secrets and Related Rights

The indicators in this category relate to trade secrets and related rights and limitations.

22. Protection of trade secrets – Measured by the existence of (1) legislation that offers protection for trade secrets or confidential business information and (2) the application of this legislation in the court or law enforcement system. Economies that do not have legislation in place but in which trade secrets and confidential information are effectively protected through other mechanisms can receive a maximum score of 0.5. Model legislation is TRIPS (Article 39(1)) and (2)). This is a mixed indicator.

23. Regulatory data protection (RDP) term – Measured by the optimal desired term, which is the term of exclusivity used by the EU for new biopharmaceutical products containing new active ingredients regardless of molecular size and/or complexity.^{xxiv} This is a numerical indicator.

Category 5: Commercialization of IP Assets

The indicators in this category seek to measure the extent to which a given national IP environment recognizes the value of IP as an

asset and encourages the commercialization of IP regardless of its national origins.

24. Barriers to market access – The extent to which laws and regulations or *de facto* practices do not make access to an economy's market contingent on the sharing and/or disclosure of intellectual property and know-how with a local or domestic entity. This indicator is measured by the extent to which (1) existing laws and procedures do not make market access contingent on the sharing or disclosure of intellectual property and know-how; and (2) the application of such laws or in the absence of such laws the existence of *de facto* practices and standards that achieve a similar effect. This is a mixed indicator.

25. Regulatory and administrative barriers to the commercialization of IP assets – The extent to which regulatory and/or administrative mechanisms allow IP owners the "freedom to operate" as part of their commercialization and exploitation activities. This would include the avoidance of barriers or undue burdens on interacting parties in the following areas:

1. "Blanket" requirements for forced disclosure of technologies without the consent of the IP owner;
2. Governmental preapproval for any licensing agreement between parties;
3. Predetermined licensing terms, including FRAND, for proprietary technologies that have not been part of any standard-setting process (so-called market-driven *de facto* standards, as opposed to *de jure*, formally created standards);
4. Restrictions on commercializing IP by public research organizations, academia, public hospitals, and the

- like; and
5. Discriminatory conditions affecting the licensing of technologies by foreign IP owners.

This is a mixed indicator.

26. **IP as an economic asset** – Measured by the extent to which relevant institutions (including public and private institutions for higher education and national IP offices) in a given economy are actively engaged in capacity building and training on how to use IP as a commercial and economic asset. Examples of capacity building include academic (university- or tertiary-level) courses on the commercialization and use of IP as an economic and financial asset as well as national IP offices hosting and/or engaging in similar training programs. This is a mixed indicator.

Category 6: Enforcement

The indicators in this category measure the prevalence of IP rights infringement, the criminal and civil legal procedures available to rights holders, punishment rates, the authority of customs officials to carry out border controls and inspections, and the transparency of customs authorities.

27. **Physical counterfeiting rates** – Measured by estimated rates of general trade-related physical counterfeiting using the U.S. Chamber's Global Measure of Physical Counterfeiting. This is a numerical indicator.
28. **Software piracy rates** – Measured by rates of software piracy. This is a numerical indicator.
29. **Civil and procedural remedies** – Measured by (1) the existence of civil and procedural

remedies, including injunctions, damages for injuries, and destruction of infringing and counterfeit goods; and (2) their effective application. This indicator also reflects administrative enforcement measures where applicable. This is a mixed indicator.

30. **Preestablished damages and/or mechanisms for determining the amount of damages generated by infringement** – This is a mixed indicator.

31. **Criminal standards including minimum imprisonment and minimum fines** – Measured by the extent to which (1) actual legislation is in place and (2) it is applied (i.e., where reliable source material is available, the actual level of prosecution, and penalties applied). Model legislation includes TRIPS, Article 61. This is a mixed indicator.

32. **Effective border measures** – Measured by the extent to which goods in transit suspected of infringement may be detained or suspended. This indicator also measures the extent to which border guards have the *ex officio* authority to seize suspected counterfeit and pirated goods without complaint from the rights holder. This is a mixed indicator.

33. **Transparency and public reporting by customs authorities of trade-related IP infringement** – The extent to which customs authorities in a given economy publish statistics and data on trade-related IP infringement. This indicator measures (1) the extent to which data are published on a regular and systematic basis and (2) the level of detail of these data. This is a mixed indicator.

Category 7: Systemic Efficiency

The indicators in this category seek to measure the manner in which a national IP system actually works.

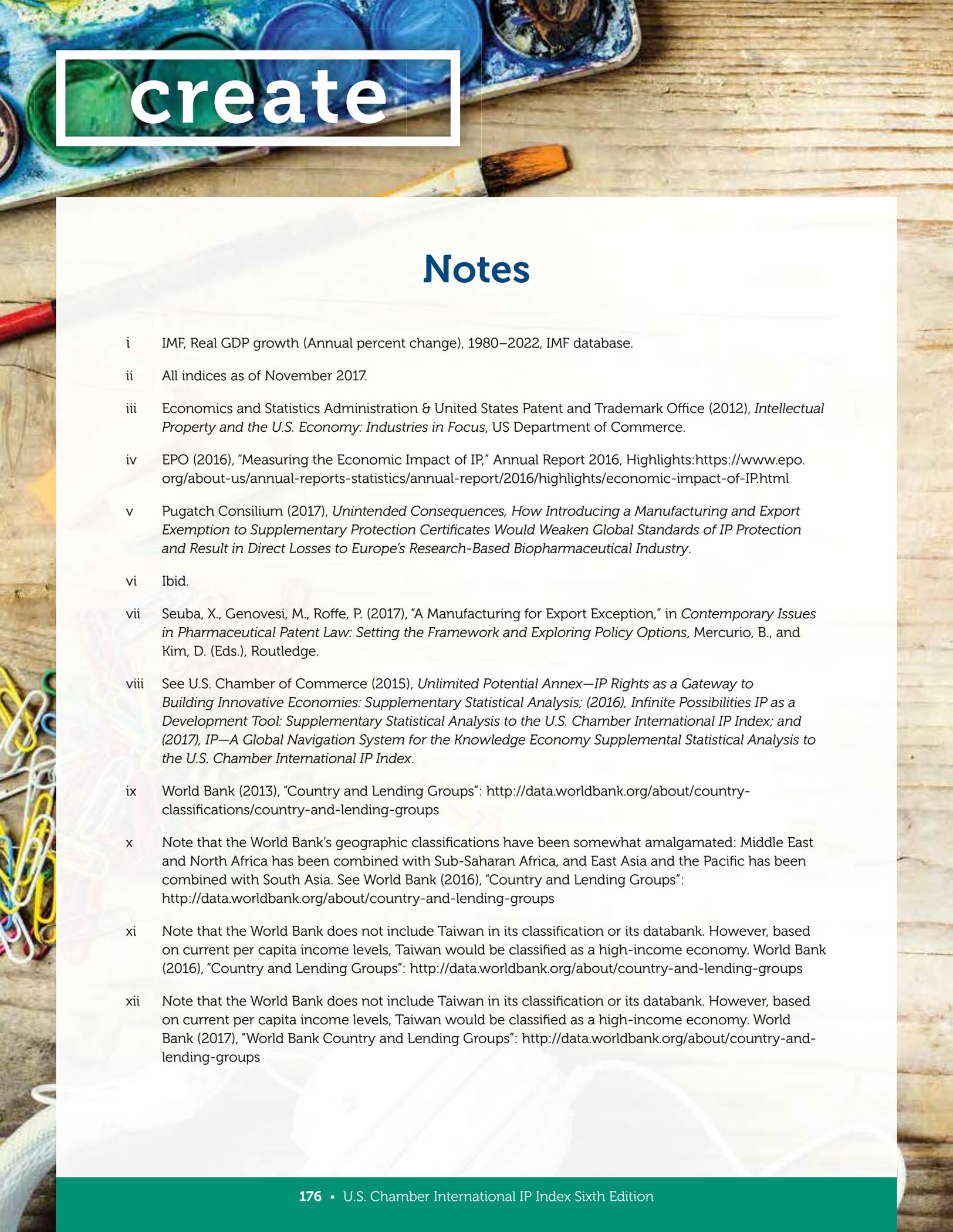
- 34. Coordination of IP rights enforcement efforts** – Measured by the existence of coordinated efforts at IP rights enforcement at the national government level. This indicator measures the extent to which a national government institution or formalized structure is in place that provides intergovernmental coordination to national IP enforcement efforts. This is a mixed indicator.
- 35. Consultation with stakeholders during IP policy formation** – Measured by the extent to which stakeholders (public, private, national, and international) have the right and opportunity to contribute comments and submissions on proposed changes to IP laws and regulations made by a given economy's national government. This is a mixed indicator.
- 36. Educational campaigns and awareness raising** – Measured by the extent to which national governments engage in educational campaigns and awareness raising on the positive socioeconomic impact of IP rights and the negative impact the infringement of these rights has on creators, innovators, and the national economy. The indicator also measured the extent to which these campaigns and awareness-raising efforts (if in place) are systematic and sustained efforts. This is a mixed indicator.

Category 8: Membership in and Ratification of International Treaties

The indicators in this category measure

whether an economy is (1) a signatory of and (2) has ratified or acceded to international treaties on the protection of IP. Indicators 37–39 are measured using WIPO as a source. The following treaties each make up one indicator:

- 37. WIPO Internet Treaties** – These consist of the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty. Respectively, they cover and clarify the use of copyright in a digital environment and the moral and economic rights of performers and producers of phonograms. This is a mixed indicator.
- 38. Singapore Treaty on the Law of Trademarks** – This is a mixed indicator.
- 39. Patent Law Treaty** – This is a mixed indicator.
- 40. At least one free trade agreement with substantive and/or specific IP provisions such as chapters on IP and separate provisions on IP rights provided it was signed after WTO/TRIPS membership** – This is a mixed indicator.



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Notes

- i IMF, Real GDP growth (Annual percent change), 1980–2022, IMF database.
- ii All indices as of November 2017.
- iii Economics and Statistics Administration & United States Patent and Trademark Office (2012), *Intellectual Property and the U.S. Economy: Industries in Focus*, US Department of Commerce.
- iv EPO (2016), “Measuring the Economic Impact of IP,” Annual Report 2016, Highlights: <https://www.epo.org/about-us/annual-reports-statistics/annual-report/2016/highlights/economic-impact-of-IP.html>
- v Pugatch Consilium (2017), *Unintended Consequences, How Introducing a Manufacturing and Export Exemption to Supplementary Protection Certificates Would Weaken Global Standards of IP Protection and Result in Direct Losses to Europe’s Research-Based Biopharmaceutical Industry*.
- vi Ibid.
- vii Seuba, X., Genovesi, M., Roffe, P. (2017), “A Manufacturing for Export Exception,” in *Contemporary Issues in Pharmaceutical Patent Law: Setting the Framework and Exploring Policy Options*, Mercurio, B., and Kim, D. (Eds.), Routledge.
- viii See U.S. Chamber of Commerce (2015), *Unlimited Potential Annex—IP Rights as a Gateway to Building Innovative Economies: Supplementary Statistical Analysis*; (2016), *Infinite Possibilities IP as a Development Tool: Supplementary Statistical Analysis to the U.S. Chamber International IP Index*; and (2017), *IP—A Global Navigation System for the Knowledge Economy Supplemental Statistical Analysis to the U.S. Chamber International IP Index*.
- ix World Bank (2013), “Country and Lending Groups”: <http://data.worldbank.org/about/country-classifications/country-and-lending-groups>
- x Note that the World Bank’s geographic classifications have been somewhat amalgamated: Middle East and North Africa has been combined with Sub-Saharan Africa, and East Asia and the Pacific has been combined with South Asia. See World Bank (2016), “Country and Lending Groups”: <http://data.worldbank.org/about/country-and-lending-groups>
- xi Note that the World Bank does not include Taiwan in its classification or its databank. However, based on current per capita income levels, Taiwan would be classified as a high-income economy. World Bank (2016), “Country and Lending Groups”: <http://data.worldbank.org/about/country-and-lending-groups>
- xii Note that the World Bank does not include Taiwan in its classification or its databank. However, based on current per capita income levels, Taiwan would be classified as a high-income economy. World Bank (2017), “World Bank Country and Lending Groups”: <http://data.worldbank.org/about/country-and-lending-groups>

- xiii WTO, TRIPS Agreement, Part II—Standards concerning the availability, scope and use of Intellectual Property Rights, Section 7: Protection of undisclosed information, Article 39(3).
- xiv U.S. Food and Drug Administration (2016), "Novel Drugs Summary 2015," January: <http://www.fda.gov/Drugs/DevelopmentApprovalProcess/DrugInnovation/ucm474696.htm>
- xv In the period following passage of the legislation, there was some debate on the issue—President Obama issued a proposal to cut the period to 7 years. In response, a bipartisan group of at least 50 members of Congress sent the president a letter urging him to maintain the 12-year period set out in the legislation. See MedPage Today (2011), "Lawmakers Defend Biologics' 12-Year Exclusivity," October 18: <http://www.medpagetoday.com/Washington-Watch/Washington-Watch/29108>
- xvi Many economies have a copyright term that is measured by the life of an author plus an additional number of years. Given the difficulties in measuring and estimating an average life of an author, and thus an average term of protection, this indicator uses only minimum terms, which are applied in lieu of the life of the author plus an additional number of years (i.e., in cases where the rights holder is unknown or has already died). Accordingly, 95 years is the minimum term applied in U.S. law.
- xvii These difficulties in measuring piracy are particularly pronounced for online piracy. No comprehensive studies exist that measure and compare rates of online piracy for a large sample of economies. Consequently, the indicators measuring piracy and counterfeiting in the Index are primarily based on physical piracy and counterfeiting, with the data from the BSA being based on both physical and digital software piracy. Nevertheless, a number of academic and industry-supported studies measure rates of online piracy and its economic impact either on a global basis or for a few large economies. For example, a 2011 study commissioned by NBCUniversal and produced by Envisional found that 23% of global Internet traffic was estimated to be infringing in nature. Similarly, a 2011 report by Frontier Economics estimated the total value of counterfeit and pirated products in 2008 and forecast for 2015 to be \$455–\$650 billion and \$1,220–\$1,770 billion, respectively. Out of this total, digitally pirated products were estimated at \$30–\$75 billion in 2008 and forecast to be \$80–\$240 billion in 2015. Furthermore, this report found that online piracy in the U.S. made up a large share of this digital piracy figure. For 2008, the report estimated that \$7–\$20 billion worth of digitally pirated recorded music was consumed in the U.S., with an additional \$1.4–\$2 billion of digitally pirated movies also consumed. Last, the vast majority of academic papers and economic analyses have found that online piracy and file sharing has had a negative impact on media sales, including music. For details, see Envisional (2011), *Technical Report: An Estimate of Infringing Use of the Internet* (Cambridge), p. 2; Frontier Economics (2011), *Estimating the Global Economic and Social Impacts of Counterfeiting and Piracy* (London), pp. 56–8; and Smith, M. D. & Telang, R. (2012), *Assessing the Academic Literature Regarding the Impact of Media Piracy on Sales* (Social Science Research Network).
- xviii OECD (2016), *Trade in Counterfeit and Pirated Goods*, pp. 110–1.
- xix Business Software Alliance (BSA) (2016), *Seizing Opportunity through License Compliance: BSA Global Software Survey*, May 2016.
- xx Transparency International, *Corruptions Perceptions Index 2016*: <https://www.transparency.org/research/cpi/overview>
In previous editions the measure relied on the Global Corruption Barometer, an additional research tool produced by Transparency International. However, the Barometer has not been updated since 2013, hence the change to the Corruption Perceptions Index.
- xxi International best practices are defined here as those principles established in TRIPS Article 27: "Subject to the provisions of paragraphs 2 and 3, patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application."

- xxii The Berne three-step test generally requires that limitations and exceptions to copyrights should be (1) confined to special cases, which (2) do not conflict with a normal exploitation of the work, and (3) do not unreasonably prejudice the legitimate interests of the rights holder (TRIPS Agreement, Article 13).
- xxiii Examples of voluntary and industry-based standards include those standards and policies used in the U.S. and elsewhere by providers such as eBay. The latter has a system in place—the Verified Rights Owner Program—that allows rights holders to protect their intellectual property through a process of notification and takedown in which eBay is notified of the infringement and promptly removes the material from its website. Full details about the system are available at <http://pages.ebay.com/vero/intro/index.html>
- xxiv Half (0.5) of the available score is based on the term available for biologics or large-molecule compounds. If a country's relevant legislation or regulation either *de jure* or *de facto* does not cover such compounds, then the maximum score that can be achieved in this indicator is 0.5. The baseline numerical term used is that by the EU of 10 years (8+2) of marketing exclusivity.



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