



GIPC
GLOBAL INNOVATION POLICY CENTER

Inspiring Tomorrow

U.S. Chamber International IP Index | 7th Edition

February 2019



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 and David Torstensson.

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1. FOREWORD



The last two centuries have seen a radical and unforeseen transformation in the quality and longevity of human life.

As we are caught up in the challenges facing the environment, we often fail to recognize how far we have come.

In the words of Harvard psychologist Steven Pinker:

“As we care about more of humanity, we’re apt to mistake the harms around us for signs of how low the world has sunk rather than how high our standards have risen.”

We are at a turning point in history. Innovations in agriculture, manufacturing, health care, and technology coupled with an increasing abundance of creative work have lengthened and enriched our lives. These innovations reach every corner of the globe. We must harness the power of this rapid technological acceleration to address the world’s challenges and ensure that fewer and fewer of the world’s citizens are left behind.

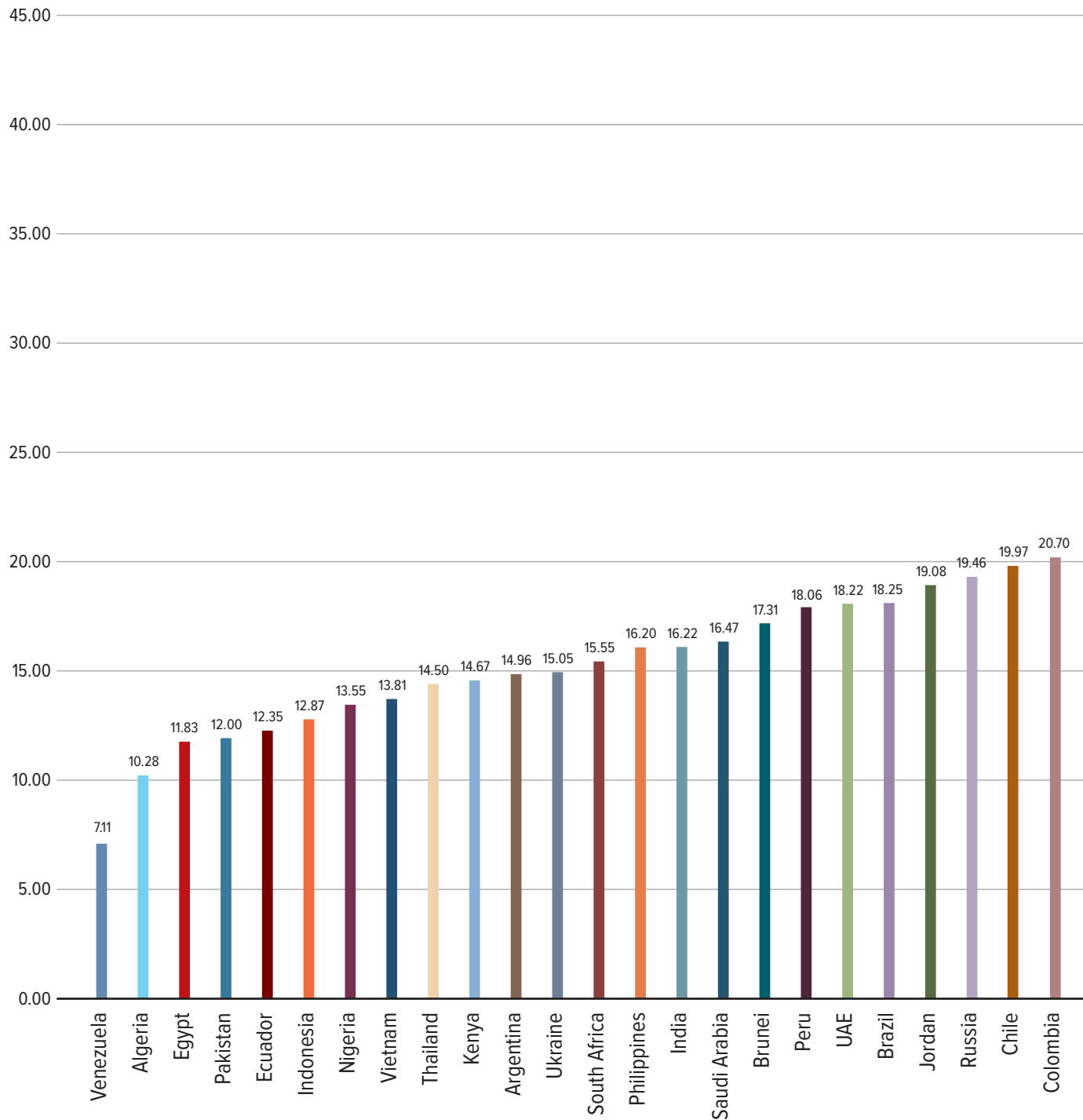
With this 7th edition, the U.S. Chamber International IP Index: Inspiring Tomorrow shows how intellectual property (IP) systems have been a driving force behind this transformation. Effective IP protections create a climate that drives the world’s innovators and creators to pursue a better tomorrow. Indeed, IP-driven innovation and creativity have ensured that our standards continue to rise.

Consistent with its work on the Index, the U.S. Chamber of Commerce celebrates the ways that incentivizing investment in innovation has underpinned the hard won achievements in this age of IP-led technological advancement.

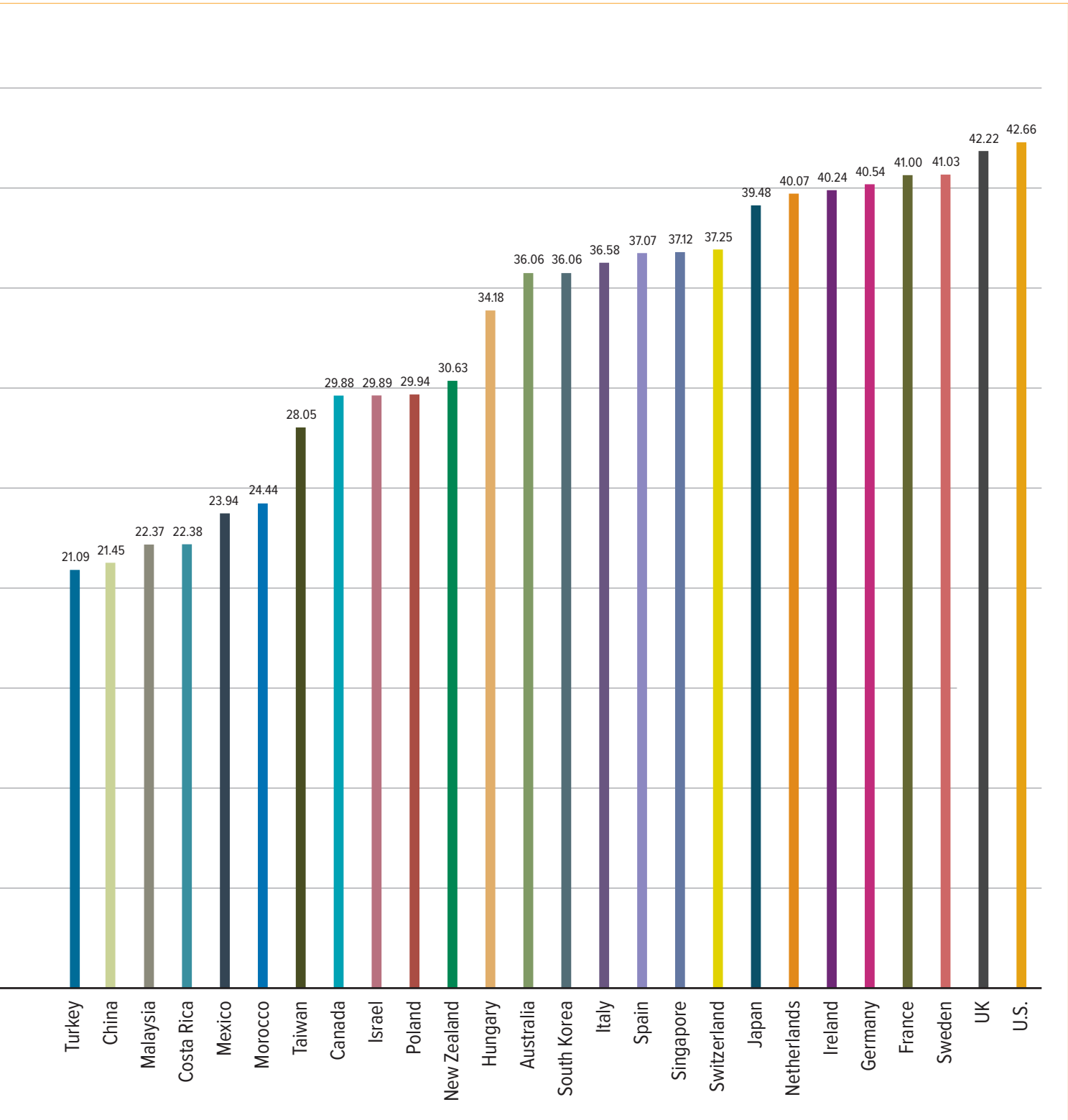
Business leaders know from experience that what can’t be measured can’t be improved. Through the Index, we are measuring the global commitment to IP-led innovation and creativity. And through our Fair Value for Innovation platform, we are quantifying how far we have come. By harnessing the power of robust IP protection, we inspire the world’s innovators and creators to lead us to a better tomorrow.

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

2019 Overall Scores



U.S. Chamber International IP Index 7th Edition



ECONOMIC BENEFITS OF IMPROVING IP PROTECTION

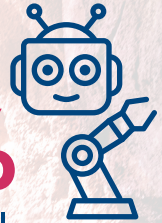
Economies are
26% more competitive



Share of workforce employed in knowledge-intensive sectors is 67% higher

TWICE
as likely to produce and export complex, knowledge-intensive products

55%
more likely to adapt to sophisticated, state-of-the-art technology



53%
more likely to employ **high-skilled and high-paid workers**

53%
more likely to experience **increased R&D activity**

30%
more likely to attract venture capital and private equity funds



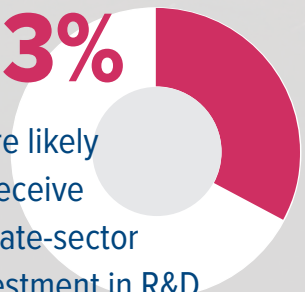
Over 500 more high-value inventions

per million population



Over 4 times more
online and mobile content generated

33%
more likely to receive private-sector investment in R&D activities



39% more likely
to attract foreign investment



19 times more
early-phase clinical trials



2. EXECUTIVE SUMMARY

In a remarkably short time viewed in a historical context, the lives of billions of people worldwide have been transformed for the better through innovation and creativity. Intellectual property (IP) systems have been the driving force behind this transformation, providing a legal framework of rights and responsibilities that has inspired the world's innovators and creators to envision a better tomorrow and empowered them to secure it.

As governments increasingly invest in a legal and regulatory framework that embraces robust IP protection and enforcement, they empower the next

generation of innovation, fuel the creation of 21st century content, and create true knowledge-based economies. The 7th edition of the Index tells a story of investment in strong IP systems, even while populist resistance continues to pose threats to the reliability of core IP rights in major markets.

The 2019 U.S. Chamber International IP Index creates a roadmap for countries that aspire to foster economic growth and global competitiveness through stronger IP. Now in its 7th edition, the Index benchmarks the IP framework in 50 global economies.



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

The Index evaluates the IP infrastructure in each economy based on 45 unique indicators, which are critical to the growth of effective IP systems. The indicators span 8 categories of IP protection:

patents, copyrights, trademarks, trade secrets, commercialization of IP assets, enforcement, systemic efficiency, and membership and ratification of international treaties.

New indicators

Global technology transfers are crucial drivers of innovation. To facilitate technology diffusion and access to innovative products and technologies, countries must have supportive and efficient IP frameworks for market entry and licensing of rights. The Index includes four new indicators on commercialization of IP assets and market access that shed light on factors that either disrupt or facilitate technology transfer in global markets:

- Barriers to technology transfer
- Registration and disclosure requirements of licensing deals
- Direct government intervention in setting licensing terms
- Tax incentives for the creation of IP assets

Moreover, the Index includes two new indicators on trade secrets and systemic efficiency to bolster the Index coverage in those categories.

- Protection of trade secrets (Criminal Sanctions)
- Targeted incentives for the creation and use of IP assets for small and medium-sized enterprises (SMEs)

Key Developments

- **IP was at the center of global trade disputes:** Ongoing IP challenges are at the heart of the current trade dispute between **China** and the U.S. highlighting the importance of IP to the two largest economies in the world. The trade dispute brought much-needed attention to long-standing issues that create significant challenges for IP-intensive industries globally.

- **Developing countries are on the move:**

Recognizing the benefits of robust IP protection, a number of developing economies implemented reforms to bolster IP protection.

- In Asia, **India's** score improved, climbing eight places in the rankings from 44th in 2018 to 36th in 2019. While broader challenges remain, the increase is a result of specific reforms that better align India's IP environment with the international IP system, including its accession to the WIPO Internet Treaties, the agreement to initiate a Patent Prosecution Highway (PPH) with Japan, a dedicated set of IP incentives for small business, and administrative reforms to address the patent backlog.
- In Latin America, the government of **Brazil** utilized programs and incentives to help SMEs create and register IP assets, serving as a model for how countries can leverage IP. In **Argentina**, the government introduced reforms to streamline the patenting process, increase international cooperation on IP, and bolster transparency and stakeholder engagement. As a result, Argentina's overall score increased by 15% and improved in the rankings from 46th in 2018 to 40th in 2019.

- **Governments continue to undermine the reliability of patents:**

Several governments have undertaken measures that reduce the reliability of patents as a vehicle for return on investment.

- In Latin America, the governments of **Chile**, **Colombia**, and **Peru** are considering utilizing compulsory licenses on Hepatitis C medicines to address price concerns. Compulsory licenses undermine legal certainty and jeopardize the availability of future innovative medicines in the region.
- In **Russia**, the government issued a compulsory license on an innovative biopharmaceutical product as a mechanism

to address economic concerns around the cost of medicines. In addition, the government continues to utilize localization requirements to further its industrial policy agenda.

- **USMCA raised the bar for IP in free trade agreements:** The U.S.-Mexico-Canada Agreement (USMCA) includes provisions to help harmonize and strengthen IP protection across North America.
 - The agreement includes a number of provisions that lay the foundation for 21st century IP protection, including a 10-year term of regulatory data protection for biologics, more effective trade secrets protection, and stronger enforcement mechanisms against counterfeit goods, including those in-transit.
 - As the U.S. looks to additional trade negotiations with the UK, Japan, and the EU, future agreements should address the areas where the USMCA falls short of the Index standard on indicators covering secondary liability, statutory damages obligations, and requirements for injunctive-style relief.
- **The U.S. Patent and Trademark Office introduced reforms to address patent uncertainty:** While the **United States** previously ranked 12th in patents due to ongoing unpredictability around the validity of patents, the U.S. is now tied for 2nd place alongside a number of EU countries and Japan. The improvement is a result of U.S. Patent and Trademark Office (USPTO) reforms, which amount to a modest course correction while creating greater certainty around the *inter partes* review (IPR) process. This should help to reduce unpredictability in the patent opposition system in the U.S.

The 2019 Index also illustrates the benefits a country can receive when governments invest in a more effective IP framework. The 7th edition of the Index builds upon past findings and includes 10 new variables that demonstrate the relationship between a robust IP system and a number of socioeconomic benefits, including the following:

- Increased global trade and investment
- The creation of an innovation-driven economy through more high-skilled workers and increased R&D activity
- Greater competitiveness of human capital
- Stronger global competitiveness
- Increased production and export of knowledge-intensive products, among other findings.

Conclusion

The data in the U.S. Chamber International IP Index, now in its 7th edition, continue to point to a direct linkage between the strength and enforceability of a country's IP rights and its ability to capitalize on domestic innovative and creative capacity, as well as to access the world's innovations. Starting from a low global IP standard, progress has been slow and inconsistent. Yet there are obvious green shoots, seen most clearly in the adoption of broader measures to improve the systemic efficiency of IP rights administration and the ability of IP owners to leverage their rights to finance innovative and creative activities. Notwithstanding continued political threats to undermine IP rights for populist purposes, there is evidence that the world is becoming an IP believer, inspired by the possibility of a better tomorrow.

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3. OVERVIEW OF THE 7TH EDITION

Now in its 7th 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 intellectual property (IP) environment, but it also provides a clear road map for any economy that wishes to be competitive in the 21st century knowledge-based global economy. Large or small, developing or developed, economies from around the world can utilize 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.

Economies included

The latest edition of the Index covers 50 economies. Together, these economies represent both a geographical cross-section of the world and the vast majority of global economic output, contributing over 90% of global Gross Domestic Product.

As Table 1 shows, the Index includes economies from all major regions of the world and is truly a global measure.¹

Table 1: 7th edition Index economies by World Bank region

| 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 (2018)

In addition to geographic diversity, the Index also contains economies from a broad spectrum of income groups as defined by the World Bank. Table 2 provides

an overview of all 50 economies sampled in the 7th edition of the Index according to income group as defined by the World Bank.

Table 2: 7th edition Index economies by World Bank income group

| Lower-Middle-Income Economies | Upper-Middle-Income Economies | High-Income Economies | High-Income Organisation for Economic Co-operation and Development (OECD) Members |
|--------------------------------------|--------------------------------------|------------------------------|--|
| Egypt | Algeria | Argentina | Australia |
| India | Brazil | Brunei | Canada |
| Indonesia | China | Saudi Arabia | Chile |
| Kenya | Colombia | Singapore | France |
| Morocco | Costa Rica | Taiwan | Germany |
| Nigeria | Ecuador | UAE | Hungary |
| Pakistan | Jordan | | Ireland |
| Philippines | Malaysia | | Israel |
| Ukraine | Mexico | | Italy |
| Vietnam | Peru | | Japan |
| | Russia | | Netherlands |
| | South Africa | | New Zealand |
| | Thailand | | Poland |
| | Turkey | | South Korea |
| | Venezuela | | Spain |
| | | | Sweden |
| | | | Switzerland |
| | | | UK |
| | | | U.S. |

Source: World Bank (2018)

What’s new in the 7th edition?

New categories and indicators

As in the 6th edition of the Index, a significant new feature of the 7th edition is the addition of 6 new indicators, bringing the total number of indicators included in the Index to 45. (Indicator 25, regulatory and administrative barriers to the commercialization

of IP assets from previous editions has been removed and broken up into 3 new indicators.)

Consequently, the maximum possible score on the Index has also increased from 40 to 45.

Table 3 provides a summary of the 6 new indicators and the Index categories to which they have been added.

Table 3: New indicators added in 2019

| Index Category | New Indicator |
|---|---|
| Category 4: Trade Secrets and the Protection of Confidential Information | <p>1 new indicator:</p> <ul style="list-style-type: none"> - Protection of trade secrets (criminal sanctions) |
| Category 5: Commercialization of IP Assets and Market Access | <p>4 new indicators:</p> <ul style="list-style-type: none"> - Barriers to technology transfer - Registration and disclosure requirements of licensing deals - Direct government intervention in setting licensing terms - Tax incentives for the creation of IP assets |
| Category 7: Systemic Efficiency | <p>1 new indicator:</p> <ul style="list-style-type: none"> - Targeted incentives for the creation and use of IP assets for small and medium-sized enterprises (SMEs) |

The Annex at the end of this report fully defines and describes the new indicators. Below is a summary overview of each new indicator and what it seeks to measure.

The new indicator added to Category 4: Trade Secrets and the Protection of Confidential Information measures the existence of legislation that provides criminal sanctions for the misappropriation, improper acquisition, use, or disclosure of trade secrets or

confidential business information and the application of this legislation and effective access to these remedies.

The four new indicators added to Category 5: Commercialization of IP Assets and Market Access measure the presence of barriers and incentives for the commercialization and licensing of IP assets. These include barriers to technology transfer; registration and disclosure requirements of licensing agreements; direct government intervention in setting licensing

terms; and the existence of tax incentives for the creation and commercialization of IP assets.

The final indicator added to Category 7: Systemic Efficiency seeks to measure the extent to which a given economy's national IP system provides special incentives to small and medium-sized enterprises (SMEs) for the creation, registration, and use of IP assets. Examples of such incentives include fast-track registration procedures, reduced filing fees, and technical assistance targeting SMEs. This is a mixed indicator.

4. THE GLOBAL IP ENVIRONMENT IN 2018

At the top of the agenda: How discussions about the protection of IP shaped international relations in 2018

The protection of IP lies at the heart of the current trade dispute between the United States and China.

The combination of China's rapid economic growth development, the integration of the global economy, and profound technological changes has brought international IP policy to the forefront. Chinese policymakers have long recognized the need to shift domestic economic activity away from low added-value industrial production into higher-value knowledge creation and high-tech, advanced manufacturing and Research & Development. Successive Chinese administrations have emphasized the need for investing in Research & Development capacity, technology development, and human capital to incentivize innovation. Specific policies and plans range from the "Five-Year Plans" to plans for "Science and Technology Development" to the more recent "Made in China 2025." Underlying many of these policies and plans is a focus on local technology acquisition and development. This focus has manifested itself in mandatory and coercive localization and partnering requirements. Since the mid-2000s, China has introduced and implemented a range of policies making access to the Chinese market conditional on the sharing of technology and IP with domestic entities. These policies include the transfer of proprietary technologies in procurement, joint ventures, and standardization processes; local manufacturing requirements; and limitations on investment by foreign entities, without guarantee they will be protected from unauthorized disclosure, duplication, distribution, and use. Although some policies have been revoked, many of these policies are still in place and continue to be introduced.

As the Index has described over the past half-decade, these policies violate established international principles of free and fair trade.

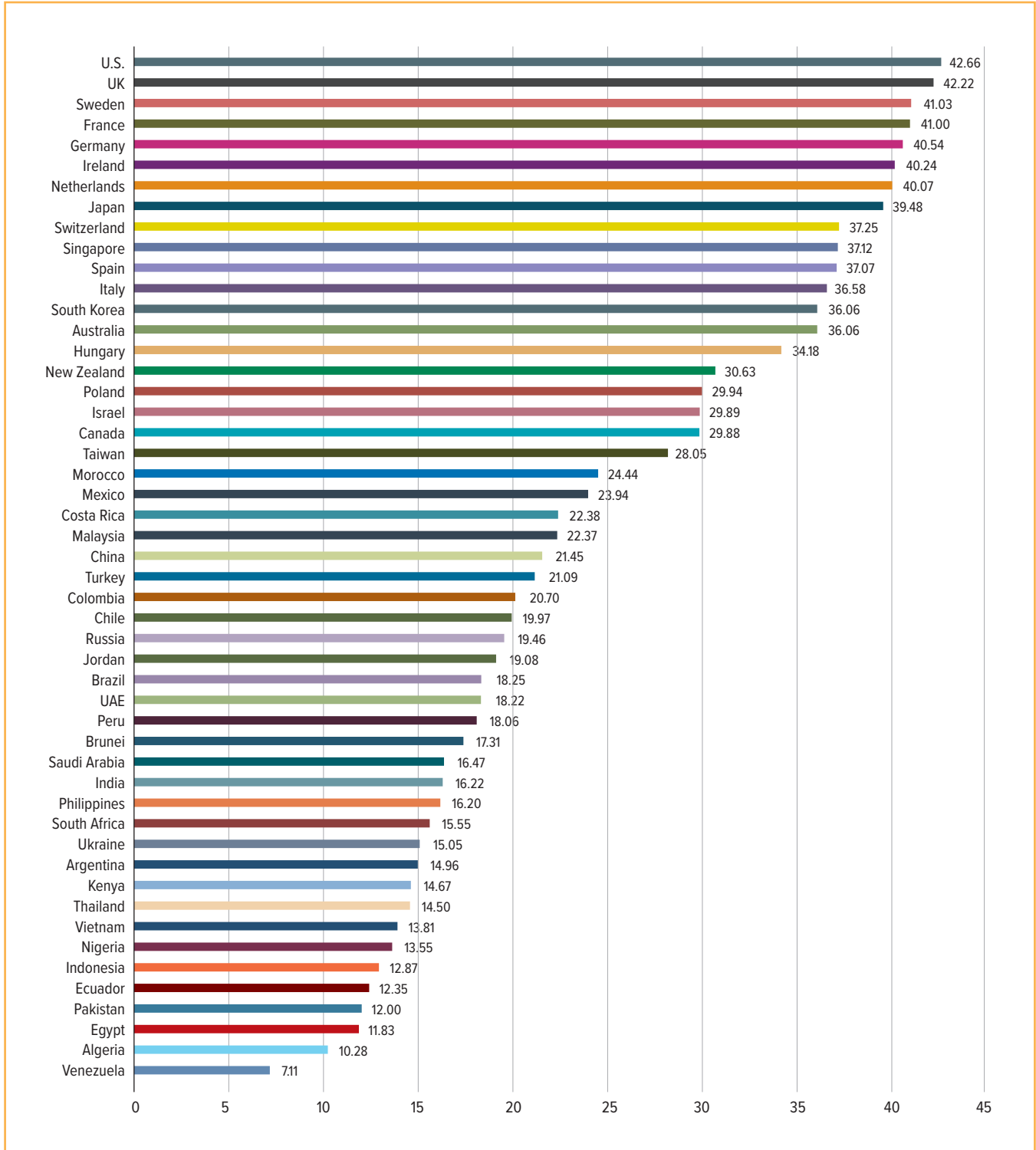
In the long run, the policies are also unlikely to help China develop its own technological and advanced R&D capacity. Indeed, it is clear from the accumulated work and evidence of the Index and its sister publications that China stands the best chance of achieving its social and economic objectives not through intensified policies of local content requirements and technology acquisition—surreptitious or overt—but through focusing on transparency, fair trade, and nondiscriminatory pro-innovation reforms.

The results of the 7th edition of the Index bear this out.

The 7th edition of the Index: Overall results and analysis

How have economies fared in this edition of the Index? And what do the results of the 7th edition tell us about the state of the global IP environment? Figure 1 shows the overall results for the 7th edition of the Index.

Figure 1: U.S. Chamber International IP Index 2019, overall scores



U.S. Chamber International IP Index 7th Edition

What is perhaps most striking about the overall results of the 7th edition is the substantial movement of economies up and down the overall standings

and rankings of the Index. Table 4 compares all 50 economies' performance in the 6th edition and the 7th edition standardized to a percentage.

Table 4: Change in overall score and rank, 6th edition versus 7th edition

| | 6th Ed. | 7th Ed. | Change in Overall Score | Change in Rank |
|-------------|---------|---------|-------------------------|----------------|
| U.S. | 94.95 | 94.80 | -0.16% | 0 |
| UK | 94.93 | 93.82 | -1.17% | 0 |
| Sweden | 92.57 | 91.18 | -1.50% | 0 |
| France | 91.85 | 91.10 | -0.81% | 0 |
| Germany | 91.35 | 90.09 | -1.37% | 0 |
| Ireland | 89.95 | 89.42 | -0.59% | 0 |
| Netherlands | 88.31 | 89.04 | 0.82% | 0 |
| Japan | 86.45 | 87.73 | 1.48% | 0 |
| Switzerland | 83.55 | 82.78 | -0.92% | 1 |
| Singapore | 83.63 | 82.49 | -1.37% | -1 |
| Spain | 81.45 | 82.38 | 1.13% | 2 |
| Italy | 81.46 | 81.29 | -0.21% | 0 |
| South Korea | 82.87 | 80.13 | -3.31% | -2 |
| Australia | 80.27 | 80.13 | -0.17% | 1 |
| Hungary | 75.54 | 75.96 | 0.56% | 0 |
| New Zealand | 68.92 | 68.07 | -1.24% | 0 |
| Poland | 66.39 | 66.53 | 0.21% | 0 |
| Israel | 65.43 | 66.42 | 1.52% | 1 |
| Canada | 66.25 | 66.40 | 0.23% | -1 |
| Taiwan | 59.62 | 62.33 | 4.56% | 0 |
| Morocco | 54.86 | 54.30 | -1.01% | 0 |
| Mexico | 48.38 | 53.20 | 9.95% | 2 |
| Costa Rica | 49.80 | 49.73 | -0.13% | -1 |
| Malaysia | 48.68 | 49.70 | 2.1% | -1 |
| China | 47.70 | 47.67 | -0.07% | 0 |
| Turkey | 47.15 | 46.87 | -0.61% | 0 |
| Chile | 42.12 | 44.38 | 5.37% | 2 |

Table 4: Change in overall score and rank, 6th edition versus 7th edition, *continued*

| | 6th Ed. | 7th Ed. | Change in Overall Score | Change in Rank |
|--------------|----------------|----------------|--------------------------------|-----------------------|
| Colombia | 45.67 | 45.99 | 0.7% | 0 |
| Russia | 43.21 | 43.24 | 0.05% | 0 |
| Jordan | 43.47 | 42.40 | -2.48% | -2 |
| Brazil | 39.31 | 40.56 | 3.18% | 2 |
| UAE | 40.68 | 40.49 | -0.46% | 0 |
| Peru | 41.00 | 40.13 | -2.11% | -2 |
| Brunei | 37.52 | 38.46 | 2.50% | 1 |
| Saudi Arabia | 38.74 | 36.60 | -5.51% | -1 |
| India | 30.07 | 36.04 | 19.89% | 8 |
| Philippines | 34.49 | 36.00 | 4.38% | 1 |
| South Africa | 34.27 | 34.56 | 0.85% | 1 |
| Ukraine | 35.69 | 33.44 | -6.29% | -2 |
| Kenya | 35.94 | 32.60 | -9.30% | -4 |
| Thailand | 31.37 | 32.22 | 2.71% | 0 |
| Argentina | 28.88 | 33.24 | 15.08% | 6 |
| Vietnam | 32.97 | 30.69 | -6.93% | -3 |
| Nigeria | 30.95 | 30.11 | -2.72% | -2 |
| Indonesia | 30.35 | 28.60 | -5.77% | -2 |
| Ecuador | 28.99 | 27.44 | -5.36% | -1 |
| Pakistan | 26.02 | 26.67 | 2.48% | 0 |
| Egypt | 25.25 | 26.29 | 4.10% | 0 |
| Algeria | 23.81 | 22.84 | -4.11% | 0 |
| Venezuela | 17.12 | 15.80 | -7.73% | 0 |

Almost half the Index economies (23 out of 50) have seen their scores and national IP environments changed, as defined as a positive or negative movement of 2% or more. Relatively few economies have stood still, as defined by a movement of less than 0.5%. Of note is that 11 economies have experienced substantial movement, as defined by a positive or negative movement of 5%. The most substantial movement can be seen from **India**, which has surged almost 20% and climbed 8 places in the IP Index rankings from 44th to 36th. As is discussed below in its Economy Overview, India has taken several noteworthy steps to improve its IP system in 2018 and also performed well on the new indicators included in the Index this year. Substantial challenges persist, particularly regarding India's patenting and IP enforcement environments. Nevertheless, this improvement is a real accomplishment, and Indian policymakers should be congratulated on their successful efforts in 2018. Equally, both **Argentina** and **Mexico** saw substantial increases of 15% and 9.95%, respectively, driven primarily by an overall strong performance on the new indicators. On the other hand, **Kenya, Venezuela, Vietnam, Ukraine, Indonesia, Saudi Arabia,** and **Ecuador** all saw a 5% drop or more. The main drivers for this vary from economy to economy, but none of these 7 economies performed well on the new indicators added to the Index. And continued developments related to localization and local content policies and negative changes to the legal environment in Vietnam, Saudi Arabia, Venezuela, and Ecuador contributed to their slide.

Still on top? EU member states and the United States

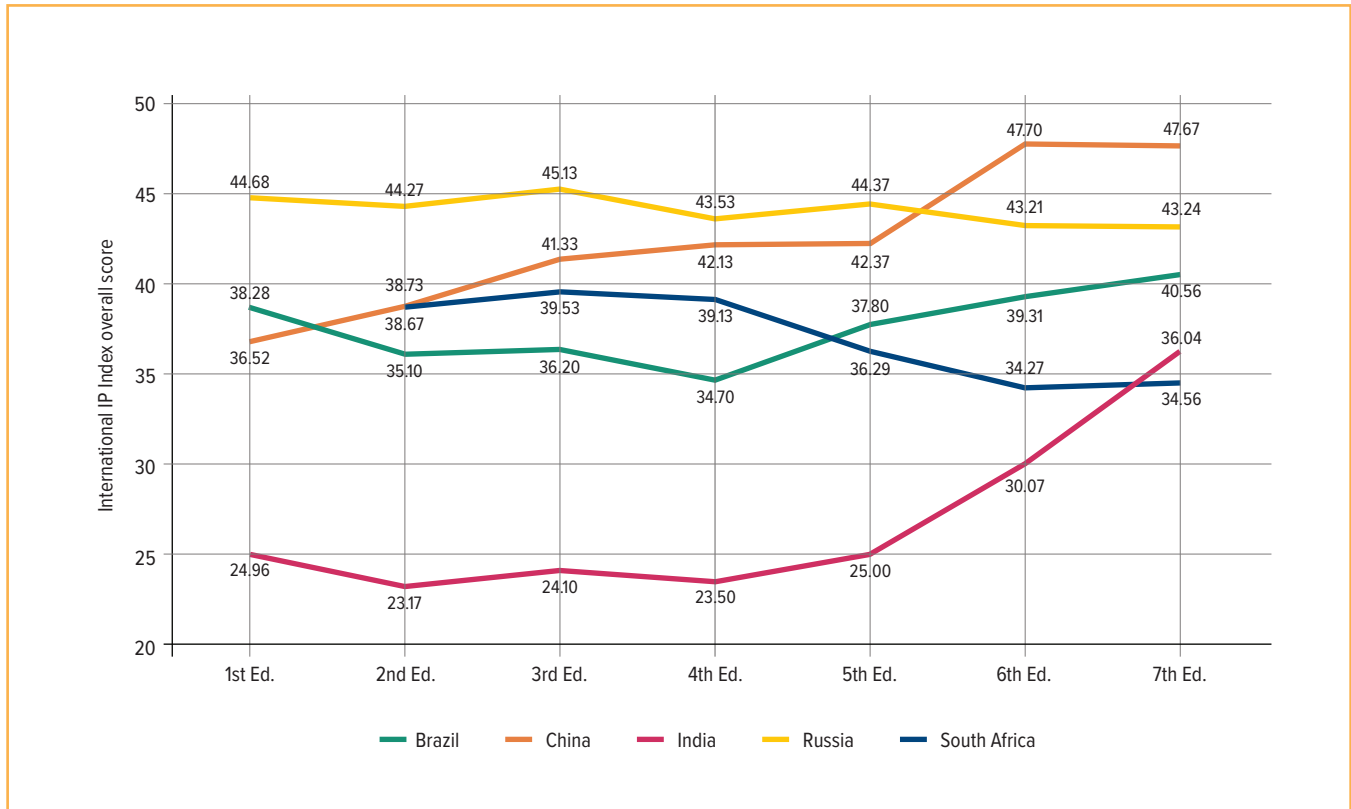
Looking at the top of the sample, not much has changed from past editions of the Index. The top 10 remains the same, with the only change in ranking being **Switzerland** moving up from 10th to 9th, displacing **Singapore**. Score-wise, the **UK, Sweden, France, Germany,** and **Ireland** all saw their scores

drop. In large measure, this was due to a mixed performance on the new indicators included in the Index. Conversely the U.S. saw its lead over its competitors increase. It had a strong performance on the new indicators and also, as discussed below in its Economy Overview, saw an increase in score as a result of policy reforms to its patent opposition regime.

Pulling ahead, standing still, and regressing: How the BRICS are moving in different directions and at different speeds

One of the recurring themes of the Index over the years has been the relatively weak performance of the BRICS economies (**Brazil, Russia, India, China,** and **South Africa**). Despite their growing global economic importance, stated emphasis on structural reforms, and changing the composition of their economies to more strongly focus on knowledge creation and innovation-driven growth, their Index scores barely moved. Apart from China, whose score rose notably between 2012 and 2016 throughout the first four editions of the Index, the BRICS essentially stood still with their percentage scores virtually unchanged. However, as Figure 2 shows there was a real and sustained divergence of movement over the past three editions of the Index from 2017 to 2019.

Figure 2: Overall total score, percentage of available scores, first to 7th edition of the Index, BRICS



What stands out from Figure 2 is how **China** and **India** have surged over the past two editions of the Index. India in particular has seen a remarkable increase from the 5th edition to the 7th edition of the Index, rising from 25% of the available score to over 36% in the 7th edition. What's driving this? A combination of real IP reforms on the ground and a strong overall performance on many of the new indicators included in the Index over the past two editions. In 2018, key developments in India include its accession to the World Intellectual Property Organization (WIPO) Internet Treaties and the agreement on a patent prosecution highway (PPH) with Japan.

As noted above, China stands at a crossroads. On the one hand, rights holders have seen real and substantial improvements to the national IP environment over the course of the past seven years. Meaningful changes have been made to the Chinese legal code, and enforcement efforts, although still facing a daunting challenge, have improved. Yet, in key areas relating to technology transfer, licensing, and localization requirements, Chinese policy remains more or less wedded to a backward-looking agenda. For China to take the next leap on the Index, its government must implement further policy changes in these critical areas.

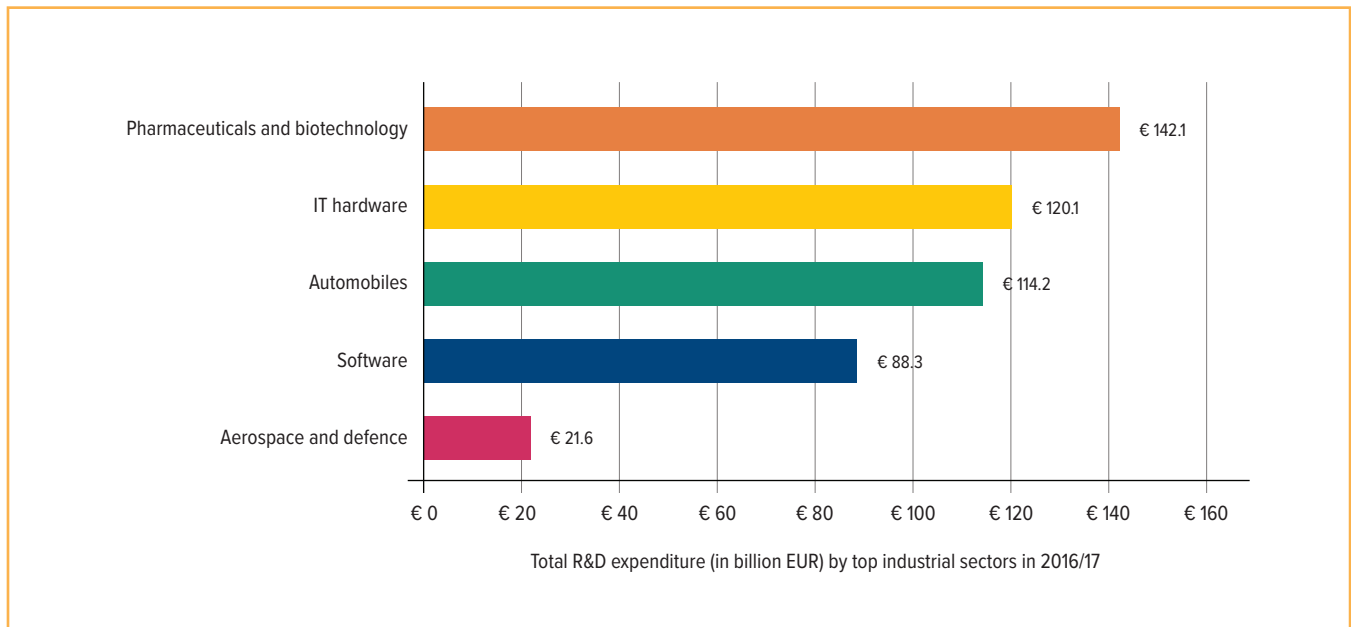
Looking at the other BRICS, **Brazil** and **Russia** have largely stood still over the past 7 years. As the largest economy in Latin America, Brazil has the potential to be a driver of regional IP policy and knowledge creation. Russia’s policy environment is dominated by an over-arching protectionism and drive toward mandatory localization. There have been pockets of reform and sustained efforts—see, for example, in the enforcement of copyright online—but overall, Russia’s IP environment remains relatively weak by international standards. Indeed, stripping out its high performance on Category 8: Membership in and Ratification of International Treaties, Russia’s overall performance sinks considerably. **South Africa**, like Brazil, remains largely a story of possibility. As the largest economy in Africa, it too has the potential to become a regional leader in IP policy. Unfortunately, South Africa’s government policy discussions (including the 2018 *IP Policy*) have focused primarily on ways in which the

country could better access existing and developed forms of IP rather than on the way its IP can be created, commercialized, and become an industrial asset.

Growing headwinds: Zooming in on the biopharmaceutical sector

The biopharmaceutical sector is one of the most R&D-intensive sectors in the world. The industry invests significantly more in R&D in absolute terms and as a percentage of sales than any other. Figure 3, from the EU’s 2017 Industrial R&D Investment Scoreboard (which measures the total amount of corporate R&D spending by the top companies in the world) shows that the biopharmaceutical sector spent over EUR140 billion in corporate R&D in 2017. This was well ahead of the second and third largest spenders in the technology hardware and equipment industry and automotive industry and

Figure 3: 2017 EU Industrial Investment Scoreboard, top industrial sectors, total R&D expenditure, billions EUR²

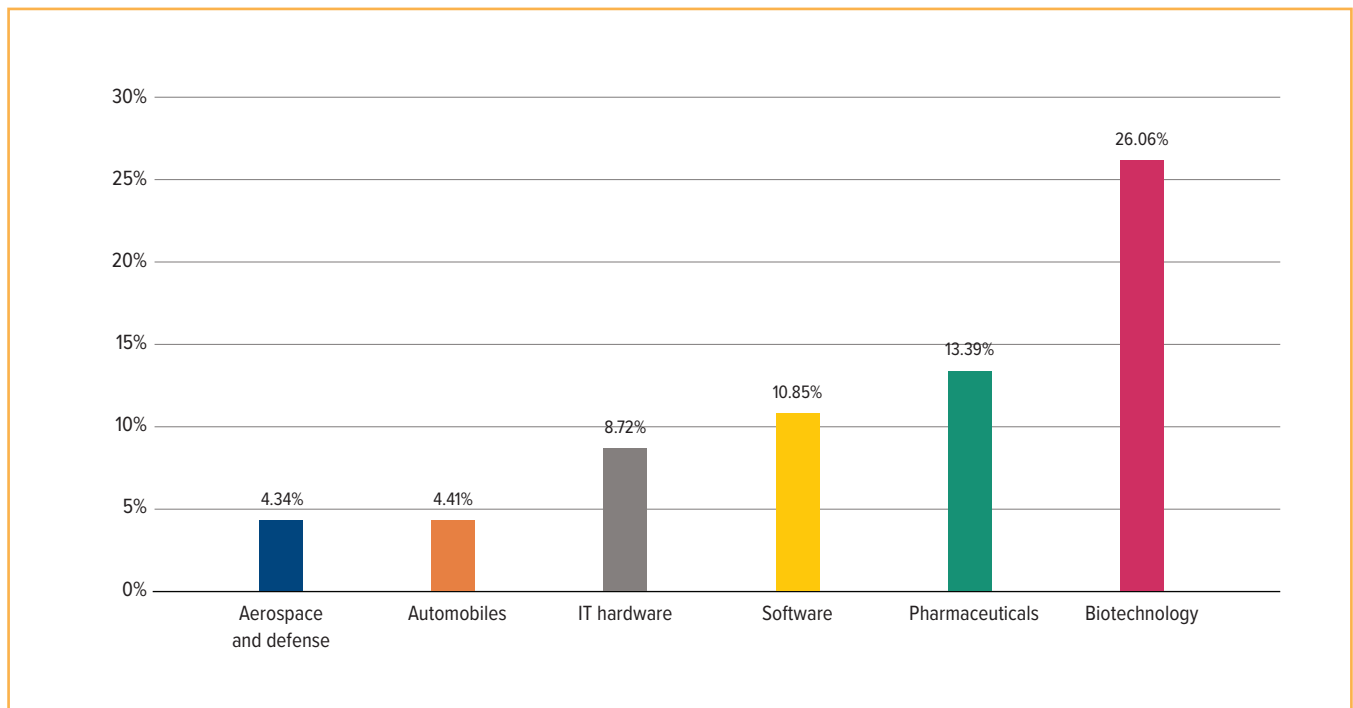


Sources: European Commission (2017). The above EUR sums correspond to USD at current exchange rates (December 2018) to USD161.977, USD136.9, USD130.74, USD100.645, and USD24.62, respectively, for the industries listed above.

Similarly, looking at R&D intensity (i.e., the percentage of sales invested in research), the pharmaceutical and biotechnology industries stand out. As Figure

4 illustrates, R&D intensity in both industries is considerably higher than other industries.

Figure 4: 2017 EU Industrial Investment Scoreboard, top industrial sectors, R&D intensity, select industries³



Source: European Commission (2017)

What's driving this R&D investment?

In short, innovation. Developing new medicines is a long-term, high-risk, resource-intensive process. The fixed costs in terms of laboratory, research facilities, and researchers are high. Compared with many other high-tech industries—for example, computer software—developing the next ground-breaking treatment for cancer or Alzheimer's disease requires more than just a laptop and a great idea. As medicines become more targeted and technically sophisticated, the cost of development rises dramatically. In 1979, the total cost of developing and approving a new drug stood

at USD138 million. Almost 25 years later, in 2003, this figure was estimated at USD802 million.⁴ In 2012, the total cost of drug development was estimated to be approximately USD1.5 billion.⁵ Research from Tufts University in 2016 suggests that it costs USD2.6 billion, on average, to develop a new drug.⁶

International experience and the basic economics of the biopharmaceutical industry show how critical IP rights are to incentivizing and supporting research and development of new medical technologies and products.⁷ In particular, patents and other forms of exclusivity for biopharmaceuticals, such as regulatory

data protection (RDP) and special exclusivity incentives for the protection and production of orphan drugs, enable research-based companies to invest vast sums in R&D and the discovery of new drugs, products, and therapies. On average, only 1 to 2 of every 10,000 synthesized, examined, and screened compounds in basic research will successfully pass through all stages of R&D and go on to become a marketable drug. IP rights provide a limited-term market exclusivity that gives firms sufficient time to recoup R&D investments made ahead of competition from additional market entrants that bore none of the costs of early-stage investment, research and development, and product commercialization. Many drugs and therapies may not have been discovered without the legal rights provided to innovators through IP laws.

Despite this evidence and a direct link between biopharmaceutical innovation and IP protection, economies around the world are actively reducing, overriding, or eliminating these incentives and rights. Interestingly, the weakening of the principle of IP rights is taking place in some of those economies that have benefited **the most** from clear and unambiguous IP protection.

Most striking of all is that the **European Commission** has introduced a legislative proposal to provide European manufacturers of generic drugs and biosimilars with a supplementary protection certificate (SPC) manufacturing exemption.⁸ The overriding purpose of the proposal is to provide European manufacturers of generic drugs and biosimilars a competitive advantage by weakening IP protection for innovators.⁹ Unfortunately, the Commission appears to have lost sight of the fact that IP rights, including SPC protection, have been central to the success of Europe's research-based biopharmaceutical industry. As an industry, the research-based biopharmaceutical sector is one of Europe's biggest success stories. European biopharmaceutical companies are some of the largest, most innovative, and successful in the

world. Not only does this industry have a long track record of producing life-saving medical innovations that have been, or are currently being, used by millions of patients around the world, but it is also an engine of economic growth in the EU. Figures from the European Federation of Pharmaceutical Industries and Associations show that the European research-based industry provided nearly 740,000 direct jobs (with over 113,000 in high-skill R&D jobs), over EUR33.5 billion in R&D investments, and over EUR238 billion in production in 2015 alone.

Many troubling assumptions underlie the Commission's proposal. The proposal assumes that there is an actual market and demand for European generic manufacturers. Yet, what this market is or where the demand for generic medicines produced in Europe would come from is not at all clear. The markets that per definition will be targeted by European generic manufacturers under an SPC exemption are economies that do not provide IP protection and exclusivity for products under SPC protection in the EU for which the SPC exemption would apply. 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. 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. Instead of benefiting the European generics industry, it is much more likely that we will see a contagion of policies to undermine IP protection if other economies emulate Europe. This could result in a race toward the bottom in weakening global IP standards. In the end, this policy may end up providing a minimum benefit for European generic manufacturers but have a negative impact on the research-based industry.

Similarly, **South Korea** a country that has had a fairly robust and consistent IP rights framework in place over the past few years, introduced measures that weaken biopharmaceutical IP protection in 2017 - 2018. Specifically, recent decisions by the Intellectual Property Trial and Appeal Board of the Korean Intellectual Property Office and the Patent Court considerably curtail patent term restoration for biopharmaceuticals. These decisions are based on a strict interpretation of the relevant term restoration regulations that limits its application to only the approved drug product itself and not to the patented invention. This opens the way to the marketing (during the extension term) of follow-on, patent-infringing products based on a different form of the same ingredient.

Outside the OECD and in emerging markets, many economies are also embracing weakening standards of IP protection for biopharmaceuticals.

In the Middle East, the relevant authorities in both the **UAE** and **Saudi Arabia** have, in effect, decided to override patent protection established by law in both economies. In 2017, the Saudi Food and Drug Authority effectively overrode the country's patent linkage regime by issuing a market approval for a follow-on product to Daclatasvir, a medicine under a registered patent held by Bristol-Myers Squibb.¹⁰ This followed similar actions taken in 2016 when two generic versions of Gilead's sofosbuvir (a breakthrough medicine to treat hepatitis C) were approved within the five-year data exclusivity window of the products (first marketed in 2014).¹¹ Similarly, in the past few years, authorities in the UAE have authorized generic versions of products that were 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 protection is mostly based on foreign patents.

In another negative development over the past few years, more economies are attempting to use compulsory licensing, or threats of compulsory licensing, to further health policy and improve access to medicines.

As noted in last year's edition of the Index, in September 2017, **Malaysia** issued a government use license (the equivalent of a compulsory license) for sofosbuvir. In an accompanying statement to the decision, the Ministry of Health made clear that the purpose of the compulsory license was to lower the cost of treatment.¹² The Ministry made the announcement despite the fact that the manufacturer of the drug had already announced plans to include the country in its voluntary license scheme.¹³ Similarly, over the past several years, the IP environment in Colombia has become much more challenging for the research-based biopharmaceutical sector, as a drive toward lowering health spending lead to the curtailment of IP rights. In 2016, the Colombian Ministry of Health 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%. In effect, this practice all but nullifies any existing IP protection and is highly questionable under Colombia's obligations under Trade-Related Aspects of Intellectual Property Rights Agreement and the U.S.-Colombia Trade Promotion Agreement.

In March 2018, **Chilean** Minister of Health announced support for the issuing of a compulsory license for hepatitis C drugs for public health reasons.¹⁴ The determination of a public health justification (Resolution No. 339¹⁵) followed a second vote by the Chamber of Deputies in January 2018 requesting the government use a compulsory license for drugs formulated with sofosbuvir.

Similarly, in **Peru**, the proposal to issue a compulsory license for the HIV drug atazanavir currently sits before the Peruvian Congress, having received approval by the Congressional Health Commission.¹⁶

Most recently, in **Russia**, the use of compulsory licenses for biopharmaceuticals has fused with localization requirements and wider industrial policy. Key policy initiatives include the Strategy for Innovative Development of the Russian Federation 2020, the State Coordination Program for the Development of Biotechnology (BIO 2020), the Strategy of Development of the Pharmaceutical and Medical Industries, the New Digital Society Strategy 201730, and the National Economic Security Strategy 2017. Localization and import substitution policies that actively discriminate against foreign entities and favor domestic Russian companies have been a major part of these efforts. While covering most parts of the economy, there has been a sustained focus on high-tech sectors such as aerospace and nuclear energy, nanotechnology, medical technologies, information and communications technology (ICT), and alternative fuels.

The requirements and intensity of these policies have varied from sector to sector, with the government targeting both the ICT and biopharmaceutical sectors. Data localization requirements for technology companies have been in place for a long time and have intensified over the past few years. For biopharmaceuticals, these localization policies have intersected with IP policy and broader health policy on the pricing and procurement of medicines. This has created a highly challenging environment for industry as it is difficult to meet industry-specific requirements for local manufacturing; procurement preferences for locally produced products; local clinical trials and R&D requirements; and, increasingly, the use and threat of compulsory licenses as public health policy. Members of the Russian Parliament (the Duma), the federal government, and the judiciary are increasingly

viewing compulsory licensing as a legitimate policy for achieving industrial and public finance goals. The Russian Federal Antimonopoly Service (FAS) has been particularly active. In 2016, the FAS proposed utilizing a compulsory license scheme to reduce prices of certain high-cost specialty medicines. According to the proposed amendments to the Competition Act and the Civil Code, “threats to the individual and the rights of citizens to health protection and medical care” would justify the overriding of IP rights and the issuing of compulsory licenses. In 2017, the head of FAS, Igor Artemyev, stated it was only a matter of time before the government would formally begin to use this tool. Subsequently, in 2018, a Russian court issued the first court-ordered biopharmaceutical compulsory license. In July, the Moscow Arbitration Court granted a compulsory license to local manufacturer Nativa for Celgene’s Revlimid. The compulsory license required Celgene to license one of its patents for the production of a product in which a dependent patent was to be used by Nativa. Without a license the use of this patent would constitute infringement of Celgene’s patent. Critically, the court considered the lower cost of the product by Nativa to be economically advantageous. Nativa also has a number of other pending lawsuits involving similar dependent patents against originator products, and so with this decision the scope for the issuing of further licenses has now been heightened significantly.

Unfortunately, the net effect of these policies is to undermine the economic conditions that facilitate innovation, R&D, and investment. Using compulsory licensing, in particular, as an industrial and health policy tool is not only outside international norms but ultimately self-defeating: over time it will hollow out the IP environment and reduce the opportunities for future innovation—biopharmaceutical or otherwise—in a given economy. Critically, the negative effect will be the same on domestic as on foreign innovators. As the accompanying Annex demonstrates, there is a

clear and direct correlation between the strength of IP protection and rates of biopharmaceutical innovation, including clinical research. Economies that wish to develop a high-tech biopharmaceutical capacity are unlikely to reach this goal through policies that curtail, weaken, or eliminate IP protection for biopharmaceuticals.

International trade agreements and IP protection in 2018: One step forward, one step back

Historically, trade agreements have been fundamental in setting international standards for the protection and enforcement of IP rights. TRIPS, the North American Free Trade Agreement and numerous U.S.- and EU-led bilateral agreements have helped improve the global IP environment and set a floor for rights holders around the world.

It has been almost a quarter of a century since the conclusion of the Uruguay Round. While the Doha Round had the potential to become a truly global trade agreement, it has been effectively shelved since 2015. Thus, new bi- and pluri-lateral agreements become increasingly important in setting international IP standards. Several international trade agreements have been concluded, or are currently being negotiated, that contain substantial IP provisions. The Trans-Pacific Partnership (TPP) as agreed to in 2015 contained a high-standard IP chapter, which was equivalent to many of the standards as captured in the indicators used in the Index. Similarly, the EU-Canada Comprehensive Economic and Trade Agreement (CETA) provided the promise of finally bringing much of Canada's national IP environment into the modern era and aligning it with international best practices and other developed OECD economies. More recently, the United States-Mexico-Canada Agreement (USMCA), the EU-Japan Economic Partnership Agreement, and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) have all included IP chapters.

Unfortunately, not all these treaties have lived up to their expectations or contain the same high standards of IP protection. For example, with the withdrawal of the U.S. as a contracting party to the TPP in early 2017, there has been considerable uncertainty about the future of the agreement. In November 2017, the remaining contracting parties confirmed in an inter-ministerial statement that the governments planned to substantively renegotiate the TPP agreement and rebrand it as the CPTPP. In March 2018, the final agreement was signed and the full text released. And while the text of the CPTPP retains important aspects of the TPP's IP provisions, including, for example, provisions relating to trade secrets and border enforcement, numerous critical provisions have been suspended. They include provisions relating to patentable subject matter, biopharmaceutical-specific IP rights such as regulatory data protection, and copyright protection and enforcement, as well as protections relating to satellite and cable signals. The result is that the CPTPP is substantively weaker than the TPP and does not conform to the modern standards of other post-TRIPS international trade agreements. Similarly, rights holders have expressed concerns over the implementation of critical aspects of the CETA pertaining to the enforcement of biopharmaceutical patents and effective restoration of patent exclusivity lost during market authorization proceedings for which the Canadian government has already devised an export waiver.

On the other hand, the USMCA offers a compelling alternative, improving on what was negotiated in the TPP to truly set a new global floor for the protection and enforcement of IP rights.

Setting a new standard: How the United States-Mexico-Canada Agreement could set a global benchmark for IP protection

NAFTA entered into force on January 1, 1994. At the time, it was widely considered as the first international

trade agreement that included specific obligations to protect IP rights.¹⁷ Indeed, the NAFTA IP chapter was the precursor to the TRIPS Agreement—considered by many to be the most comprehensive and ambitious multilateral agreement ever reached in the IP domain¹⁸ which was signed in 1995 and has been ratified by 164 economies. For a quarter of a century, NAFTA has stood as a model for a regional trade agreement. However, the economic relationships between nation-states are fundamentally different today than they were in the early and mid-1990s. Dramatic changes in technology and the structure and integration of the global economy require future trade agreements to be more comprehensive and detailed than preceding trade agreements.

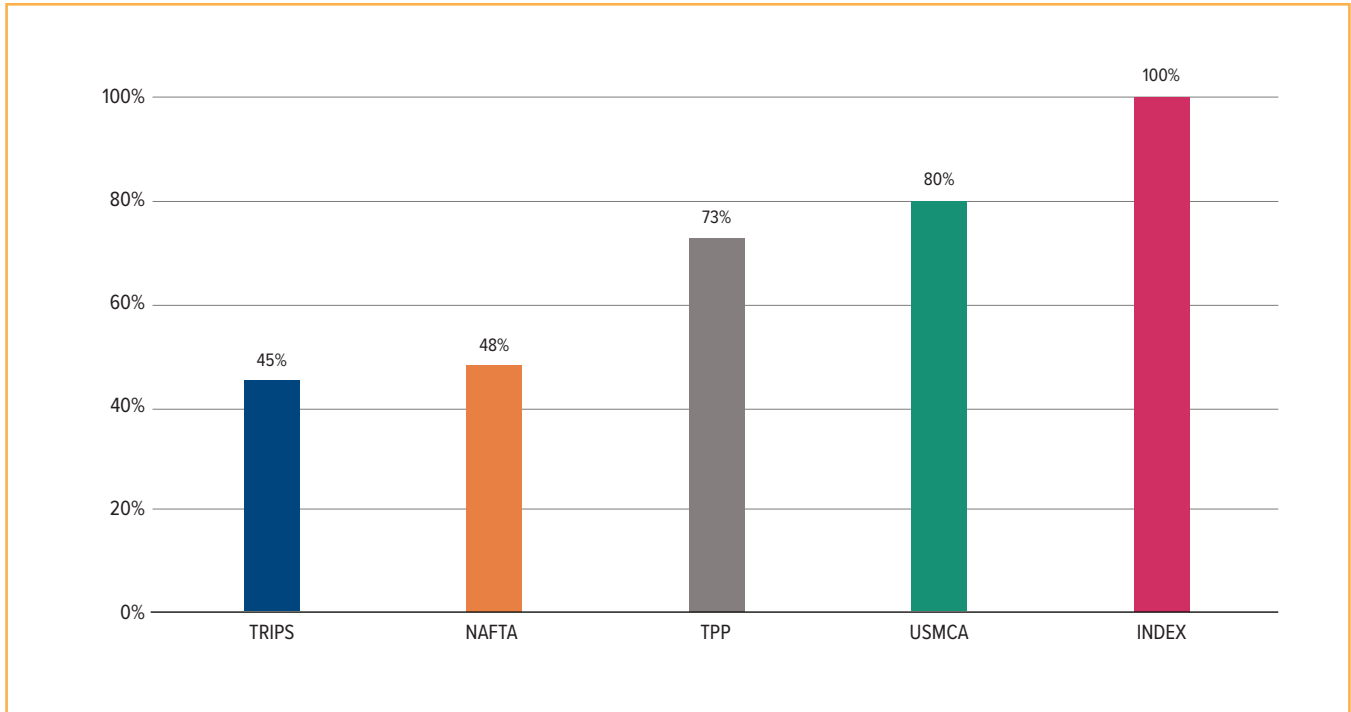
Chapter 20 of the USMCA has the potential to set a new global IP standard. It includes 21st century IP provisions, such as the following:

- Stronger pharmaceutical-related IP protection, including regulatory data protection terms of 5 years for new chemical entities and 10 years for biologics
- More effective trade secret protection, including criminal sanctions
- *Ex officio* border enforcement against all suspected counterfeit goods, including in-transit goods
- Some strengthened copyright provisions, including a longer term of protection, digital rights management (DRM)/technological protection measures (TPM), and exceptions and limitations limited to the long-standing, internationally recognized three-step test

To illustrate the strength of the USMCA's IP chapter, we have benchmarked the agreement against relevant indicators from the Index, similar to how we benchmarked TRIPS and TPP treaties vis-à-vis the Index in 2016.¹⁹ It is worth noting that the

purpose of this exercise is to **approximate** the strength of the USMCA relative to the Index. The discussion is not intended to provide a **definitive** score, as there are methodological challenges that make such conclusions difficult. Nevertheless, it is useful to assess how the provisions of the USMCA compare to the indicators included in the Index and calculate an approximate Index score. To generate an Index approximation for the USMCA (with the Index constituting a full 100% score), it is assumed for methodological purposes that the USMCA will be the minimum IP law in force and that the contracting parties have implemented the principles and rules in the USMCA in full. As the Index has detailed since 2012, this has not always been the case. In both Canada and Mexico, rights holders have faced and continue to face key challenges related to the availability and enforcement of many IP rights defined in NAFTA. In Canada, for example, this has included the patentability of biopharmaceutical innovation and a judicially established doctrine of utility. From the mid-2000s, Canadian Federal Courts issued a high number of decisions on the basis of patent utility in relation to biopharmaceutical patents. In June 2017, the Canadian Supreme Court rejected this so-called promise doctrine, stating that it “is unsound” and “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.”) In that light, all the provisions in the USMCA that may be considered equivalent to the indicators in the Index have been isolated and translated into scores. The research reveals that the USMCA's IP-related provisions are a significant improvement over NAFTA, TRIPS, and the original TPP agreement. Figure 5 shows the results of this exercise.

Figure 5: Comparing TRIPS, NAFTA, TPP, and the USMCA with the Index

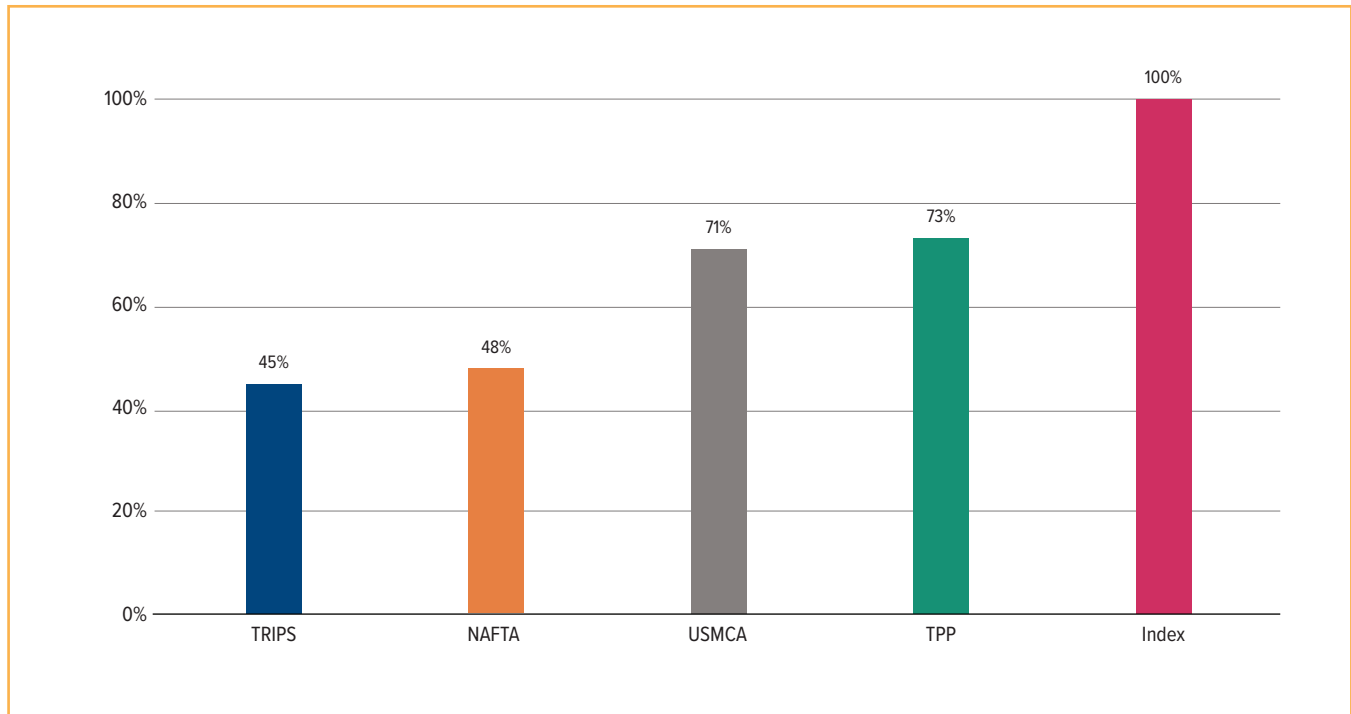


As this comparison shows, the USMCA comes the closest in achieving an IP standard that is comparable to the Index.

Nevertheless, some elements are still missing. Specific areas of the Agreement that could be strengthened include: online copyright protection; a defined term of patent term restoration for biopharmaceutical products (the Index uses a term of 5 years); and rules relating to online trademark protection, including clear requirements and standards for the expeditious removal of trademark-infringing material by online service providers.

However, the biggest threat to the USMCA in establishing a strong global baseline for IP protection lies in its exclusion of a whole swathe of the Canadian economy. Under Article 32.6 of the Agreement, Canada's cultural industries have received an exception. The article states, "This Agreement does not apply to a measure adopted or maintained by Canada with respect to a cultural industry." What this will mean in practice remains unclear. As is illustrated in Figure 6, if this cultural exception is utilized, this would result in a nearly 10% drop in the USMCA's Index score and would make the USMCA a weaker agreement than the TPP.

Figure 6: Canadian cultural industries exception drags the USMCA below the TPP



From the descriptive to the prescriptive: Why the strength of a national IP environment matters

Why do the results of the Index matter? What difference does it make if a given economy has a weak, medium, or strong national IP environment? Critics allege that the protection of IP is not as important to incentivizing innovation and economic development as R&D spending or rates of human capital. Simply put, the protection of IP matters a great deal.

Since 2015, the Index has included a *Statistical Annex* that illustrates the strong correlation between the strength of the national IP environment and different types of economic activity, including rates of R&D spending, innovation, technology creation, and creativity. The most up-to-date data on the benefits

of IP protection reveal that IP rights are a critical instrument for economies seeking to enhance access to innovation, grow domestic innovative output, and enjoy the dynamic growth benefits of an innovative economy. Conversely, weak IP protection stymies long-term strategic aspirations related to innovation and development.

The following section provides a snapshot of some of this work and its application to three different areas: (1) readiness for the fourth industrial revolution, (2) the creative economy, and (3) licensing and technology transfer.

5. IP RIGHTS AND ECONOMIC ACTIVITY

Ready for the next revolution? Correlating readiness for the 4th Industrial Revolution and the protection of IP

Today's global economy is interlinked, interdependent, and open for business in a way that was impossible logistically, politically, or financially a generation ago. Indeed, the sum of the technological, cultural, political, and socio-economic changes of the past three decades amounts to what is truly a paradigm shift. In 1990, the Internet was not a commercially or publicly available entity. The Soviet Union, although crumbling, was still the world's second most important geopolitical bloc and one of its largest economies. The value of world trade in goods in 1990 was an estimated USD3.5 trillion.²⁰ Today, the value of global trade in goods is roughly 5 times that amount, and this is not counting trade in services, which has grown exponentially over the past two decades.²¹ In 1990, it cost a residential U.S. AT&T customer USD5.53 to place a 3-minute long distance telephone call to Japan and USD4.61 for the same three minutes to Colombia.²² Today, those calls can be made for pennies or for free over the internet. Just-in-time manufacturing and the use of international supply chains was not industry standard and the basis for much of modern commerce. Today, artificial intelligence is used everywhere from the cloud to autonomous vehicles to smartphones to the identification of cancer cells; nanotechnology and digital fabrication are applied in material and biomedical sciences; and quantum computing technologies enable Big Data analysis to be used on everything from drug development to market analysis to the prediction of consumer preferences.

These new technologies are already challenging “traditional” business models across the globe by increasing global integration of value chains

and enhancing consumer engagement, customer expectations and experience, and product durability. They are also fundamentally changing production models by requiring extensive use of knowledge and skills, a complex infrastructure, and an enabling environment for R&D collaboration and investments. The sum of all these changes is what Professor Klaus Schwab—founder and executive chairman of the World Economic Forum—has termed the “Fourth Industrial Revolution.” In Professor Schwab's words, not only are the technologies of the Fourth Industrial Revolution new but the speed at which change is happening is truly unique and characterized by “a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres.”²³

In the face of such upheaval, how do policymakers and governments around the world prepare themselves and their economies to succeed?

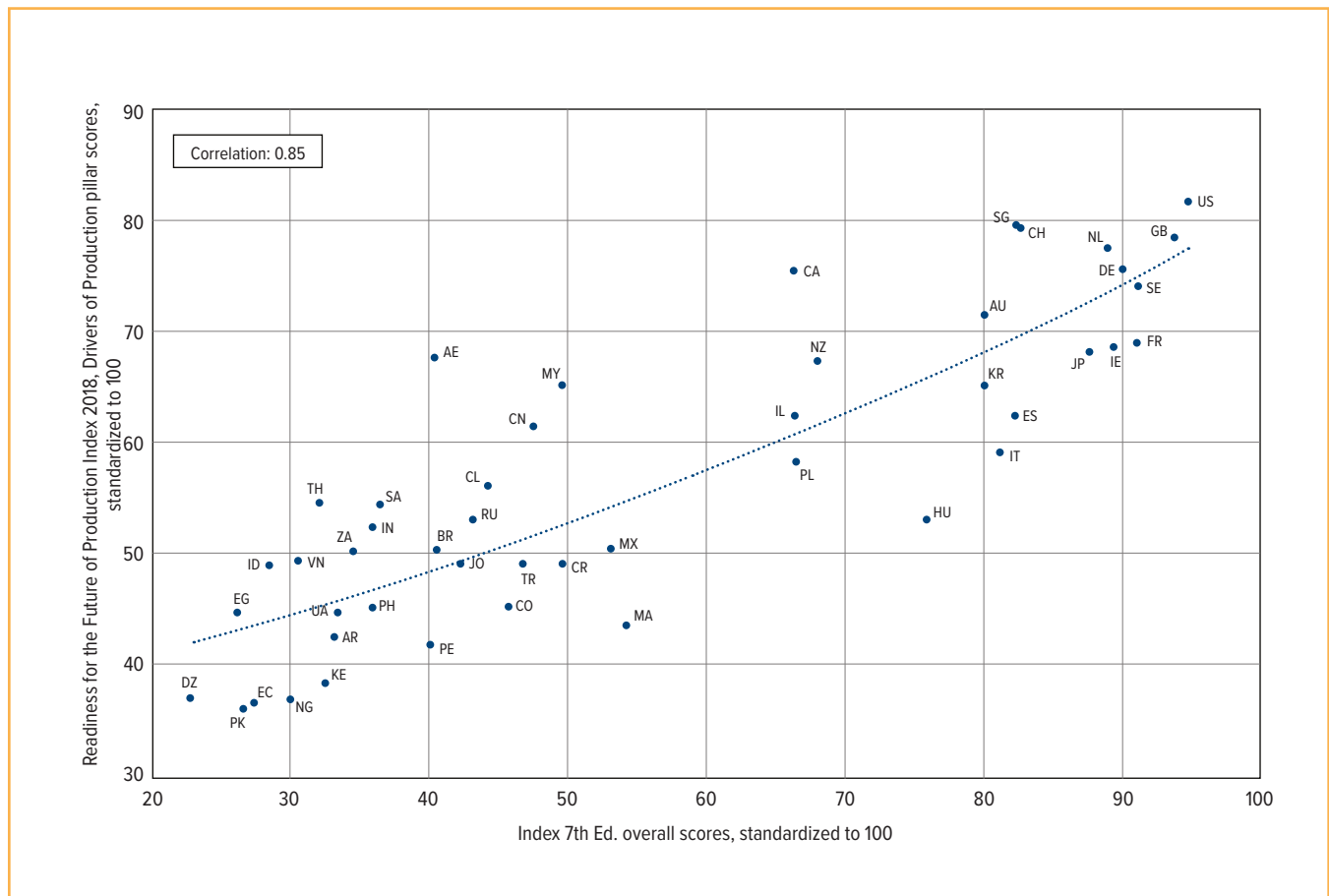
Last year, the World Economic Forum published the 1st edition of the *Readiness for the Future of Production Report*—a global metric covering 100 economies and comprised of 59 indicators that gauge economies' current production capabilities and the existence and levels of drivers of production that position economies to capitalize on the Fourth Industrial Revolution. These indicators—which together constitute a Readiness for the Future of Production Assessment” —include the overall quality of ICT and R&D infrastructure, innovation capacity, venture capital activity, international openness, and quality of human capital.²⁴ The Readiness for the Future of Production Assessment results reveal that some economies are better positioned to seize these opportunities and gain competitiveness in new data-driven, knowledge-intensive global value chains.

Over the past 4 editions, the Index's *Statistical Annex* has shown the strong, direct, and statistically significant relationship between IP protection and innovation—ranging from attractiveness to venture capital and R&D investments to a magnitude of innovative activities, outputs, and early adoption of technologies. It is therefore useful to explore the association between the overall strength of economies' IP environments and

economies' preparedness for the future of production. Are economies with a stronger national IP environment more or less likely to succeed in the face of the Fourth Industrial Revolution?

Figure 7 shows the results of the correlation between overall Index scores and the overall results of the Readiness for the Future of Production Assessment.

Figure 7: Association between the Index scores and the Readiness for the Future of Production Assessment, Drivers of Production pillar scores²⁵

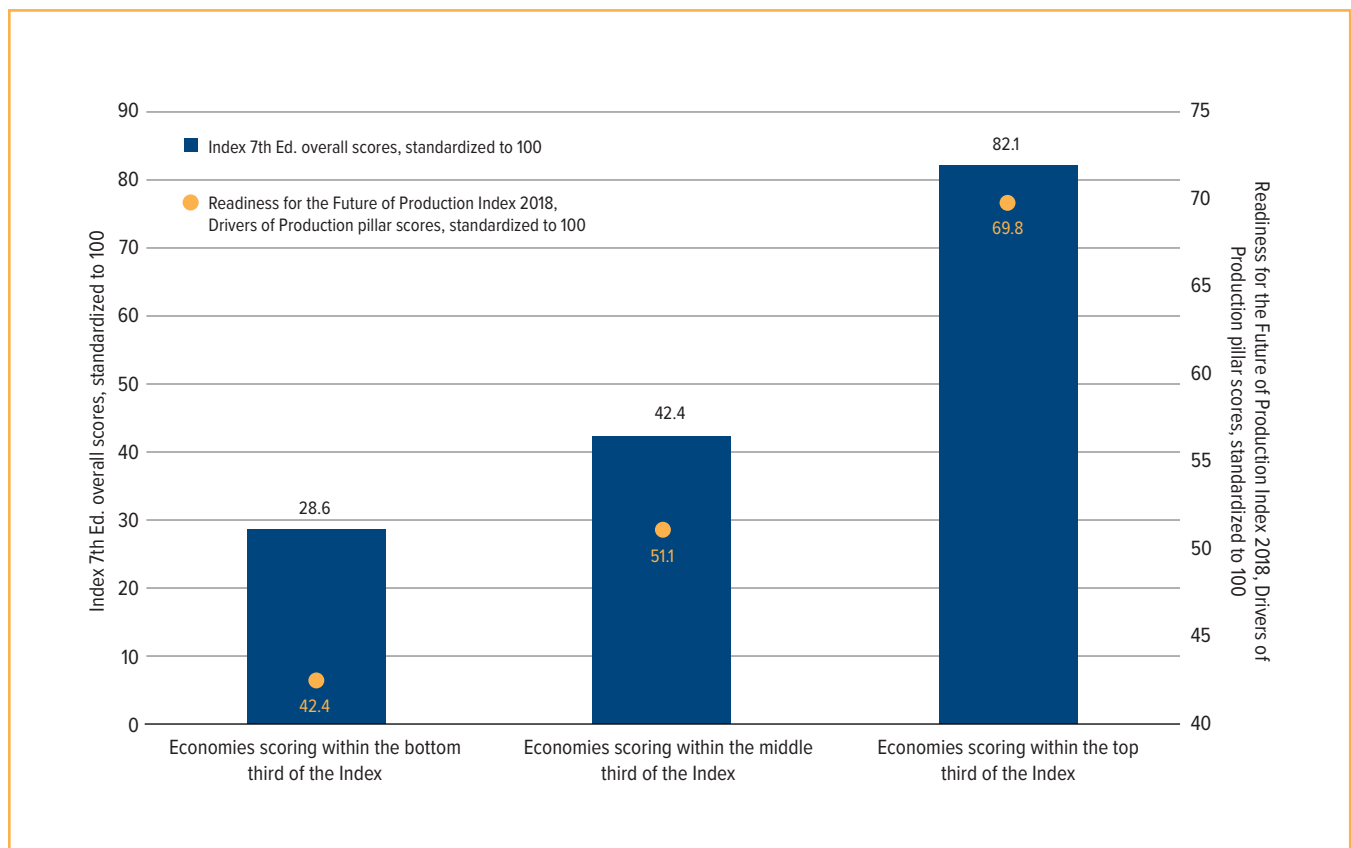


Sources: World Economic Forum (2018); Global Innovation Policy Center (2019)
Data NA for Brunei, Taiwan, and Venezuela

The Readiness for the Future of Production Assessment's Drivers of Production pillar scores—gauging economies' performance in key sectors and themes that enable economies to capitalize on emerging technologies in order to compete in future production systems—display a very strong association with the Index scores. Economies that are judged as being ready to compete and have success during the Fourth Industrial Revolution by and large also have strong national IP environments in place. In fact, a positive stepwise improvement can be seen across

both measures. As Figure 8 illustrates, economies with robust IP environments (scoring in the top third of the Index) are on average 37% more likely to secure new growth opportunities and be ready for the Fourth Industrial Revolution compared with economies whose IP environments require improvement (scoring in the middle third of the Index). The economies with the most effective IP protection are in turn 20% more competitive and better positioned for taking advantage of technological shifts compared with economies scoring in the bottom third of the Index.

Figure 8: Association between the Index scores and the Readiness for the Future of Production Assessment 2018, Driver of Production pillar scores: Division by thirds in Index scores

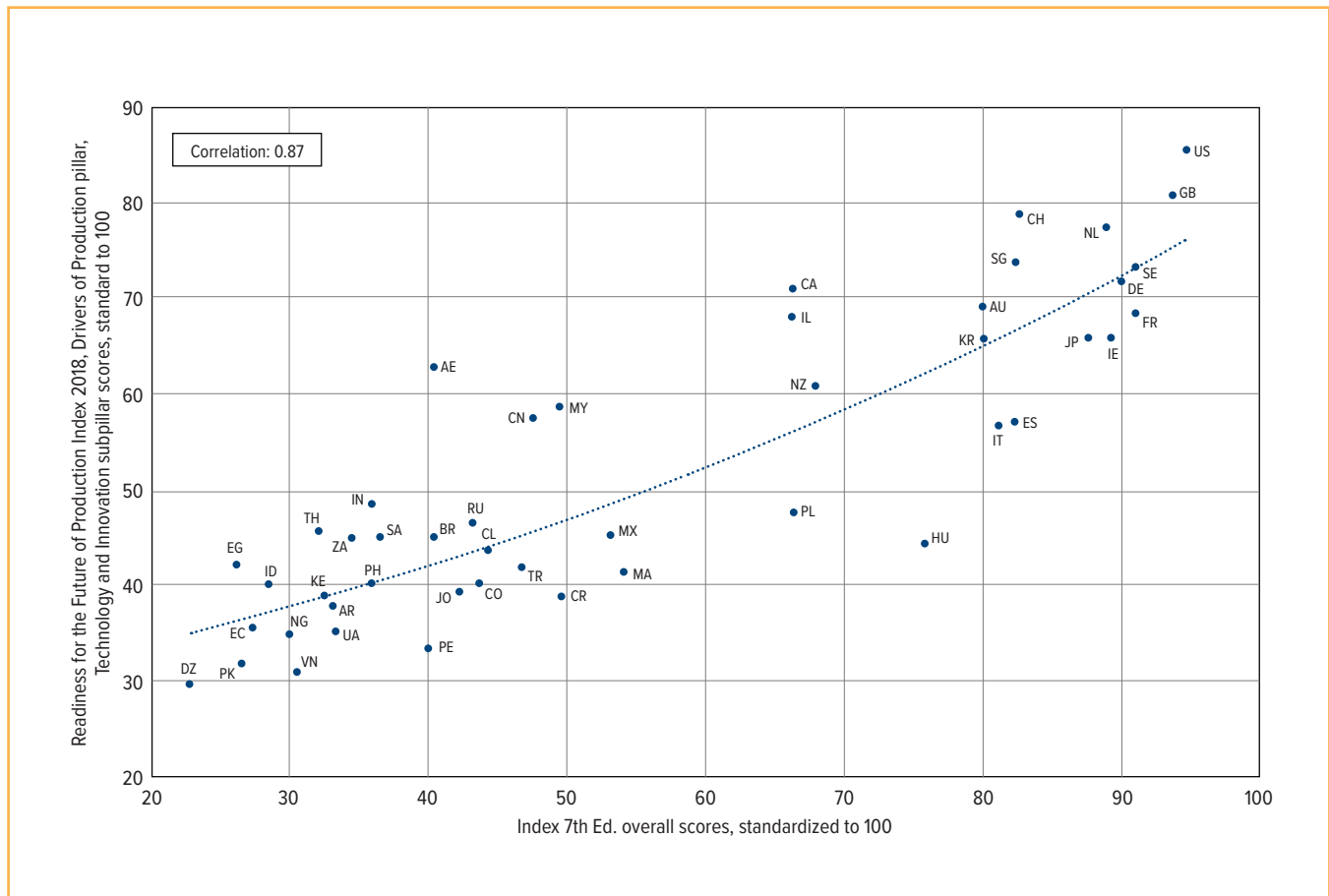


Sources: World Economic Forum (2018); GIPC (2019)

The strength of this relationship is also clear when looking at some of the subcategories of the Readiness for the Future of Production Assessment. For example, as Figures 9 and 10 show, regarding both the

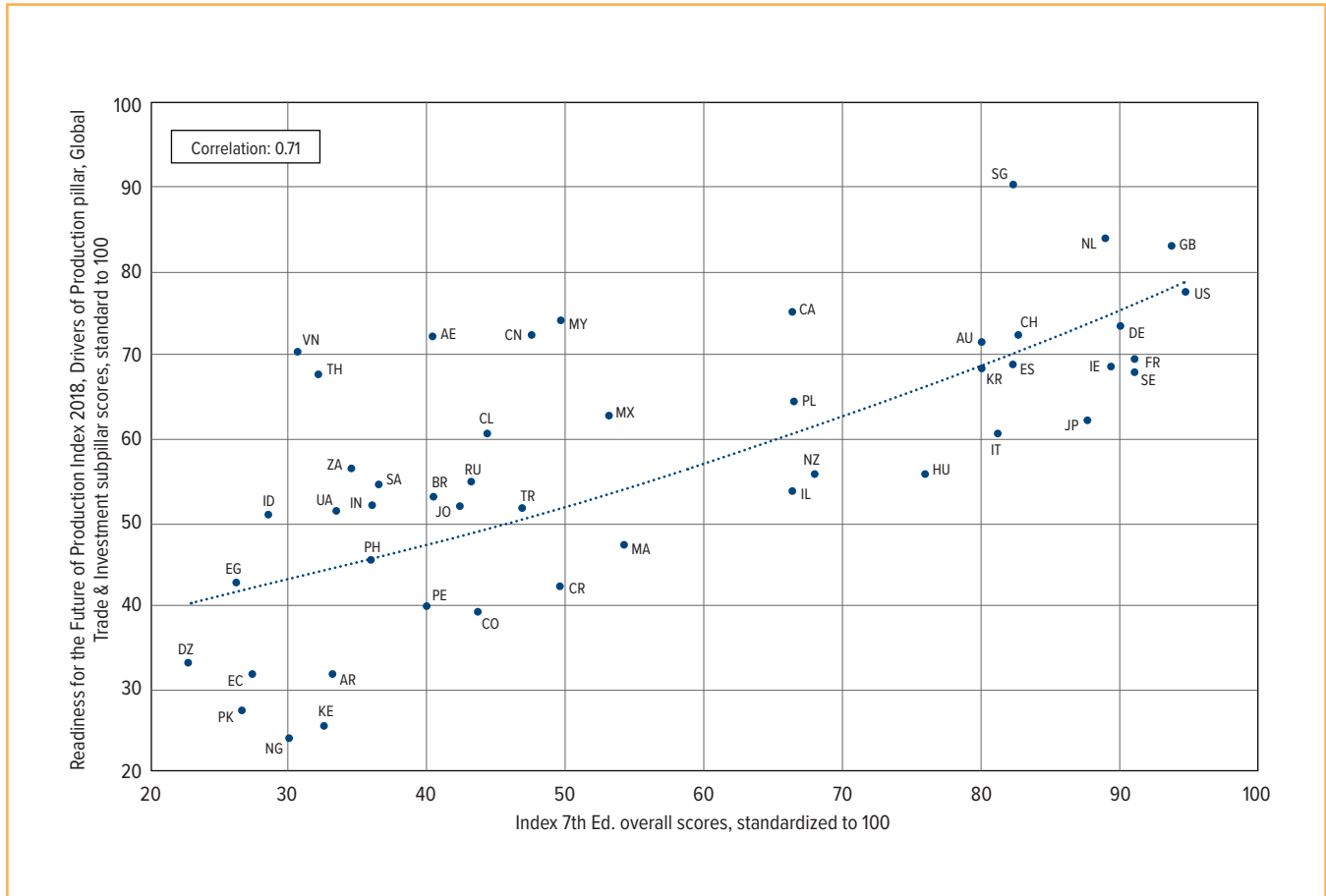
Technology & Innovation subpillar score and Global Trade & Investment subpillar score, there is a strong to very strong correlation between Index scores and scores on both subpillars.

Figure 9: Association between the Index scores and the Readiness for the Future of Production Index, Drivers of Production pillar, Technology & Innovation subpillar scores²⁶



Sources: World Economic Forum (2018); GIPC (2019)
Data NA for Brunei, Taiwan, and Venezuela

Figure 10: Association between the Index scores and the Readiness for the Future of Production Index, Global Trade & Investment subpillar scores²⁷



Sources: World Economic Forum (2018); GIPC (2019)
Data NA for Brunei, Taiwan, and Venezuela

The Readiness for the Future of Production’s Technology & Innovation subpillar measures how advanced, digitally secure, and globally connected and interoperable the production system is a critical element for economies’ ability to foster and commercialize innovative technologies in their production systems. The Index shows a very strong correlation of 0.87 to the Technology & Innovation subpillar scores, indicating that economies’ technological capabilities and capacity for innovation is strongly linked to the strength of their national IP

environments. Similarly, the Readiness for the Future of Production’s Global Trade & Investment subpillar, which measures economies’ levels of openness to international trade and availability of capital directed to production-related development, shows a strong relationship (at a correlation strength of 0.71) to the Index scores.

Having examined the Fourth Industrial Revolution and its relationship to the Index scores, this section now shifts focus to a different set of sectors that together

constitute a growing share of global economic output: the creative economy.

Creative Economy Spotlight

Mapping the creative economy

Until recently, the concept of the creative economy was not broadly appreciated or studied. In both academic and policy circles there was a limited interest and understanding of the economic contribution of creativity and the growing importance of this sector. However, during the late 1990s and early 2000s, several works appeared that attempted to conceptualize, study, and understand the creative economy and its constituents.²⁸ In academia the most famous work is perhaps that by Richard Florida, who developed ideas about the links between thriving cities and rates of creativity, social tolerance, and culture in the early 2000s. Later, he and his research team sought to more systematically measure these traits at a national level in the Global Creativity Index.²⁹

Similarly, during this time, governments began to more methodically analyze the creative economy and its contributions to national economic output. In 1998, the UK government's Department of Culture, Media and Sport (DCMS) published "Creative Industries Mapping Document 1998."³⁰ This document sought to understand the breadth and spread of the creative industries as well as their economic activity in the UK. The document emanated from the desire of the new Labour Government under Tony Blair to focus on the creative sector and industries, measuring performance as well as understanding what policies could be put in place to encourage further growth. The DCMS study was in many ways path-breaking and was replicated by governments at all levels around the world. Hong Kong, New Zealand, Singapore, and Australia all carried out similar exercises attempting to measure and quantify the size and contributions of the creative economy within their respective jurisdictions.

International institutions such as the United Nations Conference on Trade and Development and WIPO have also placed a greater emphasis on the study and definition of the creative economy over the past 2 decades. UNCTAD—which began focusing on the creative economy in the mid- to late 2000s—published the *Creative Economy Report 2008*, a comprehensive analysis of the creative economy from an international and economic development perspective.³¹ This study was followed up in 2010 with the *Creative Economy Report 2010*, which updated much of the data used in the 2008 report and sharpened the focus on developing and emerging economies.³² The latest edition in this series, *Creative Economy Outlook and Country Profiles: Trends in International Trade in Creative Industries*, was published in 2016.³³ In the early 2000s, WIPO began to study the creative economy but under the rubric of "copyright-based industries." In 2003, it published the *Guide on Surveying the Economic Contribution of the Copyright-Based Industries*, which was followed by several country-specific assessments of the economic contributions of these industries.³⁴ This Guide was revised and updated in 2015. So far, WIPO and member economies have produced studies in 42 economies, many of which are middle- and low-income economies.

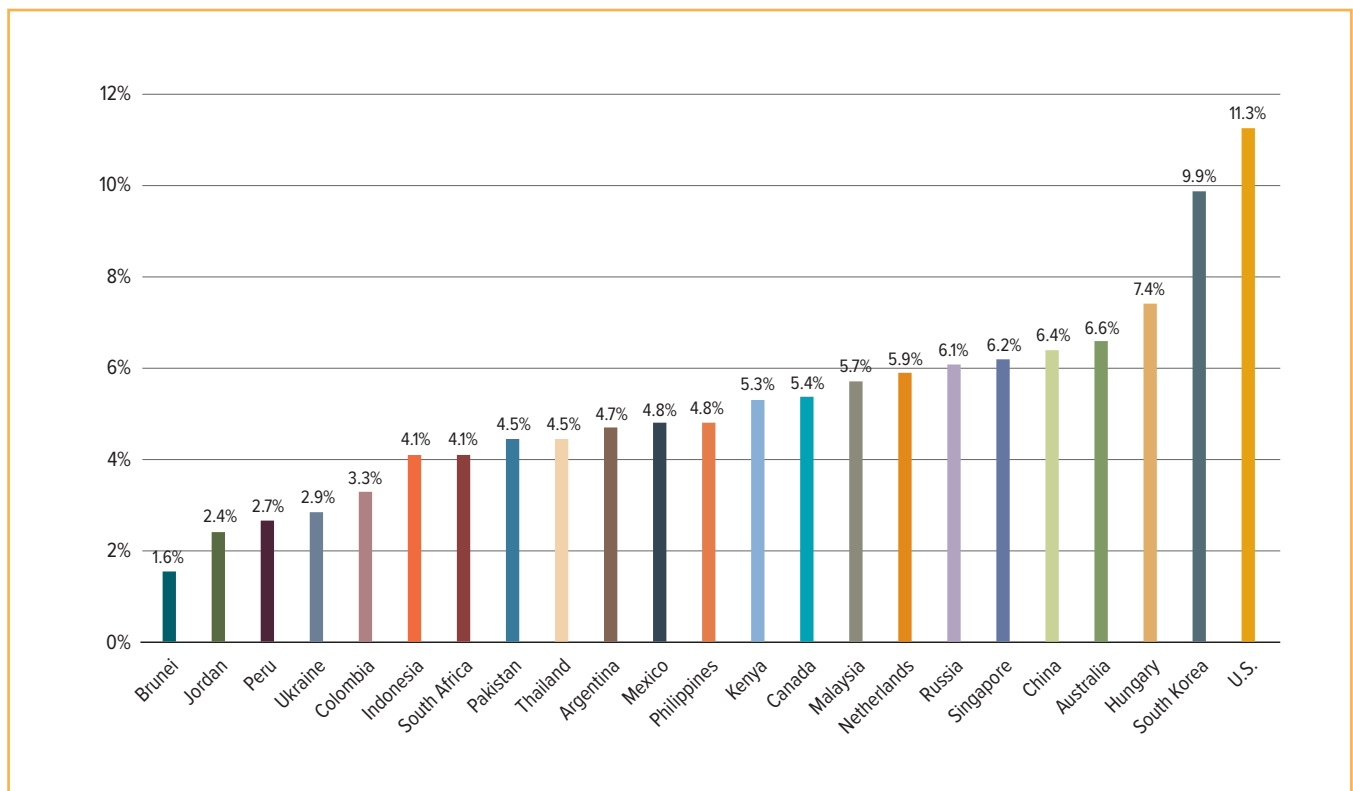
Is the creative economy the economy of the future?

In its 2008 report, UNCTAD described the creative economy and the creative industries as a "leading component of economic growth, employment, trade, innovation and social cohesion in most advanced economies" and as "emerging high-growth areas of the world economy."³⁵ Similarly, WIPO described the creative economy, and specifically copyright, as "a powerful source of economic growth, creating jobs and stimulating trade."³⁶

Looking at some of the major headline data affirms these statements, the size and value of the creative economy is perhaps best captured in its contribution to national GDP. While there are limitations with this measure—such as the lack of granularity regarding the exact composition of the creative economy in a given economy—it provides an easy-to-understand baseline. As mentioned, since the early 2000s, WIPO has helped a growing number of economies perform studies

estimating the economic contribution of their domestic copyright-based industries to national GDP. It is clear from these data that the copyright industries make up a significant portion of national economic output around the world. Figure 11 shows the estimated percentage contribution of the copyright-based industries (as defined by WIPO) to GDP for the 23 Index economies for which WIPO studies have been carried out.

Figure 11: Percentage contribution of copyright-based industries to GDP, selected WIPO economy studies 2004–2013³⁷



Sources: World Economic Forum (2018); GIPC (2019)
Data NA for Brunei, Taiwan, and Venezuela

What stands out in Figure 11 is the wide range of estimated contribution to GDP. On the one hand, in economies like South Korea and the U.S., the copyright industries are real engines of economic activity, accounting for roughly 10% of national output. Conversely, on the other end of the spectrum, economies such as Jordan, Brunei, the Ukraine, and Peru generate a much smaller share of their economic output from these industries. (As is detailed below, within this context the effective protection and enforcement of copyright and related rights play an important role in helping stimulate this activity. Economies with stronger copyright protection and enforcement tend, on average, to also see higher levels of creative outputs.)

The importance of the creative economy is also illustrated by the strong growth in the international trade of creative goods and services. The most recent data from UNCTAD show how creative goods and services constitute a substantial—and growing—share of global trade. In 2015, UNCTAD estimated that the total value of creative goods—a category of goods that includes everything from clothes, furniture, and arts and crafts to video games, cinema, and books—exported globally was just under USD510 billion.³⁸ In 2002, this value was less than USD200 billion. Significantly, quite a few low- and middle-income economies have successfully built themselves into world-leading producers and exporters of creative goods. For example, in 2012, China exported over USD150 billion of creative goods, nearly one-third of the global total.³⁹ Impressively, this had grown from a base value of just over USD38 billion in 2003. Similarly, other economies, such as India, Taiwan, Thailand, and Malaysia, have also seen impressive growth during the same time period. Yet, digging a little deeper into these data, it is not clear if the majority of these goods entail a particularly high level of creativity or innovation. In China, for example, historically most creative goods exported are from the Design category of UNCTAD's

goods classification. In 2012, this category amounted to more than USD105 billion of the over USD150 billion—70%—in total creative goods exported from China.⁴⁰ According to UNCTAD's classification system, Design is by far the largest category or subgroup of creative goods, containing 102 codes or types of goods.⁴¹ Some of the most notable codes include Fashion, Interior, and Jewelry and include goods such as “handbags, belts, accessories ... furniture (living room, bedroom, kitchen, bathroom), tableware, table linen, wallpaper.”⁴² Unlike for many other creative goods or services there is no clear evidence that the majority of these goods were *created* domestically or within the borders from which they were exported. Instead, it is likely that these goods were created in other economies but *manufactured* for export in these economies. Consequently, exporting a large amount of creative goods from the Design category is not necessarily indicative of high levels of creativity, technical complexity, or economic added value.

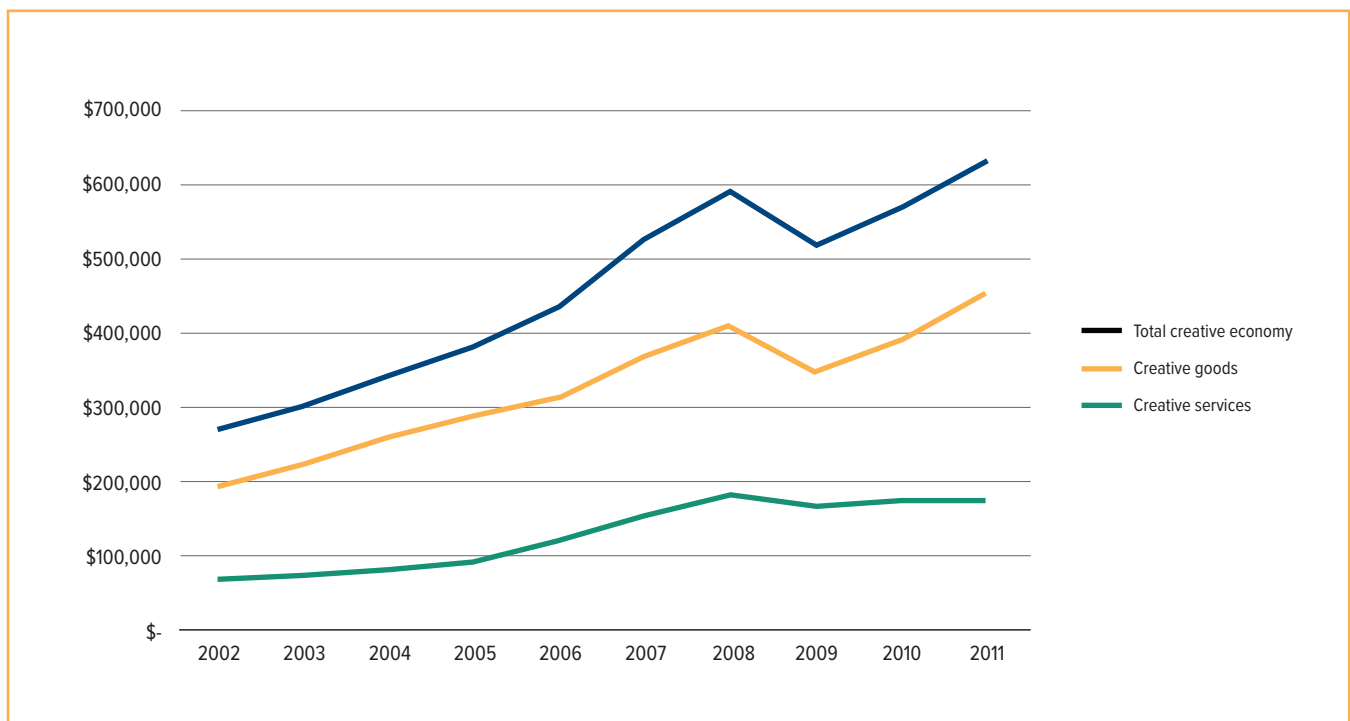
But what about creative services?

Measuring the trade in creative services is a relatively recent phenomenon. Creative services—as measured by both UNCTAD and WIPO—include services ranging from advertising and marketing to R&D services, engineering, recreational and cultural services, architectural services, and audiovisual services. While UNCTAD does not disaggregate or categorize creative services to the same detailed level as the creative goods category, the available data still offer good insight into the size and contribution of these services to global trade, especially when examined next to the data for creative goods. Unfortunately, as of 2012 UNCTAD no longer collects and publishes data on creative services. The latest year for which figures are available for both creative goods and services is 2011, when the total value of global trade in creative goods and services was an estimated USD631 billion.⁴³ While trade in creative services was growing rapidly—exports

of creative services had grown by close to 250% from a value of USD72 billion in 2002 to a total of over USD177 billion in 2011—the largest proportion of this global trade consisted of creative goods exports,

which were valued at USD454 billion in 2011.⁴⁴ Figure 12 shows the growth of both creative goods exports globally and creative services between 2002 and 2011.

Figure 12: Values and shares of total creative economy, creative goods and creative services exports, annual, USD at current prices and current exchange rates in millions, 2002–2011⁴⁵



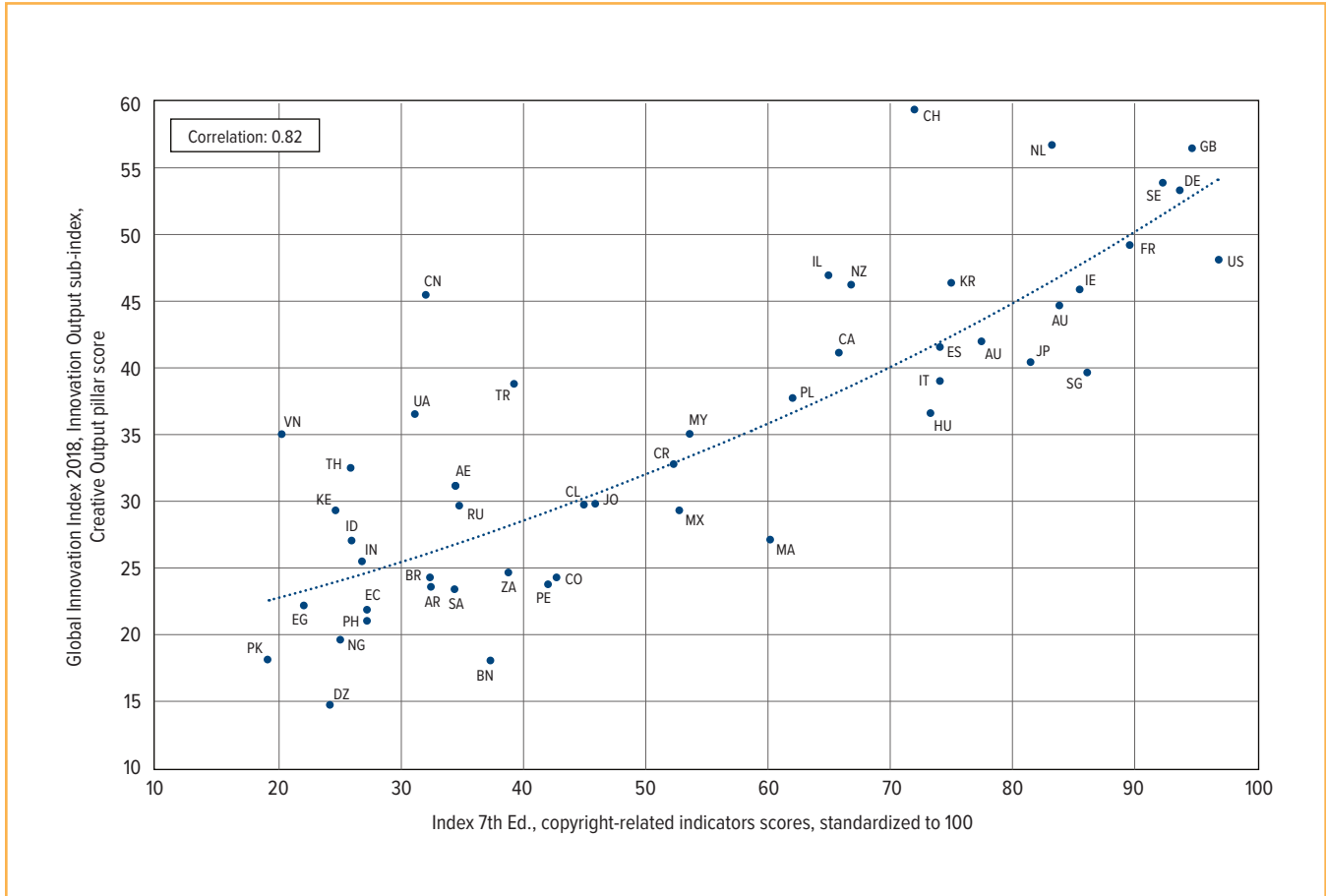
Source: UNCTAD statistics, Values and shares of creative goods, exports, annual, 2002–2011

Creative outputs and IP protection: A symbiotic relationship?

Since 2015, the Index’s *Statistical Annex* has included several correlations examining the relationship between creative outputs and the strength of protection and enforcement for copyright and related rights. These correlations strongly suggest that the availability and application of copyright are critical

to stimulating creativity and creative output. Figure 13 shows the relationship between the protection and enforcement of copyright and related rights and creative output as measured by the Global Innovation Index (GII). Creative outputs measured by the GI include exports of creative services, entertainment, media and ICT spending, and local creation of webpages and audiovisual content.

Figure 13: Association between Index copyright-related indicators scores and the Global Innovation Index, Innovation Output subindex, Creative Output pillar scores⁴⁶

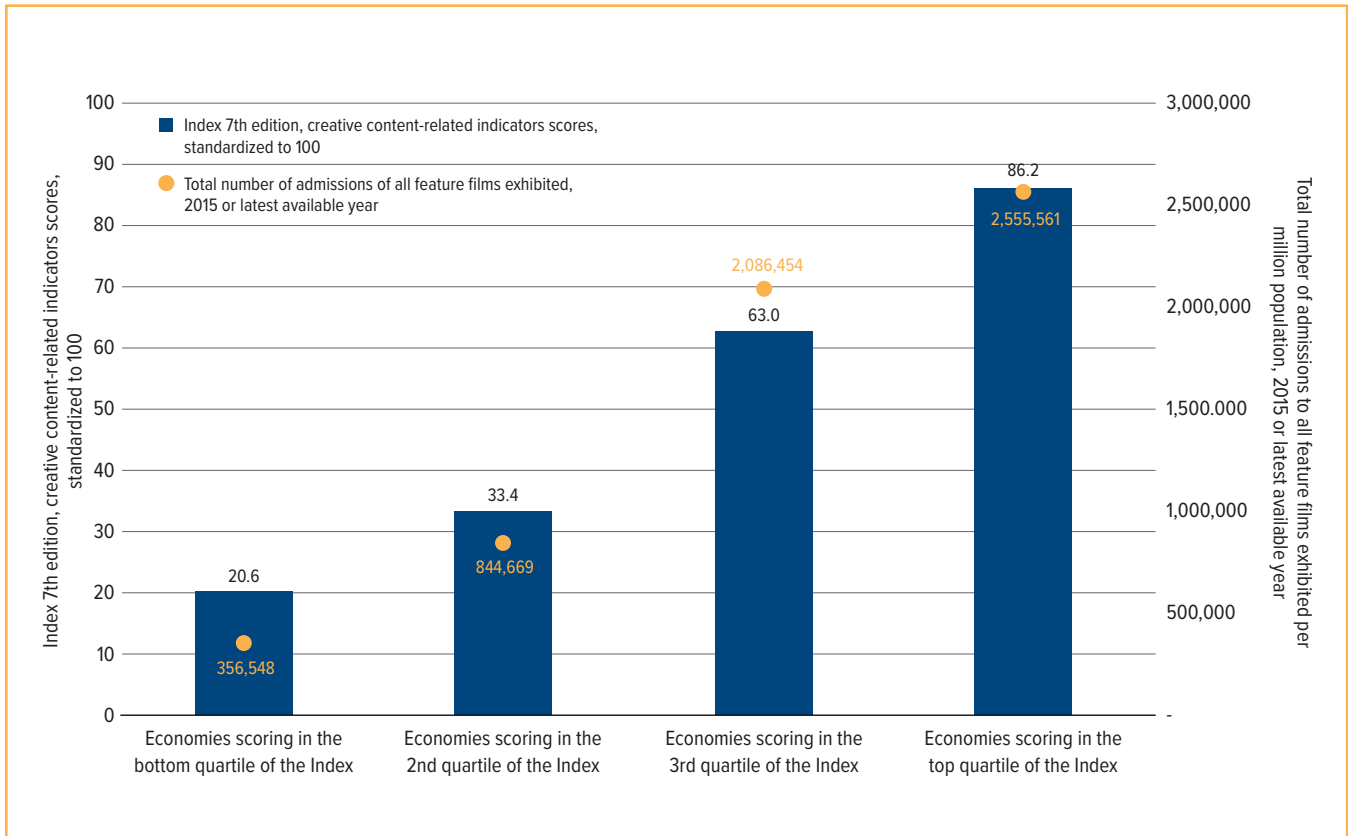


Sources: Cornell/INSEAD/WIPO (2018); GIPC (2019)
Data NA for Taiwan and Venezuela

As Figure 13 suggests, economies with a stronger IP environment tend also to see higher levels of creative outputs. Economies scoring above the median on the Index’s copyright-related indicators are 64% more likely to see higher levels of creative outputs than economies scoring in the bottom half of the Index.

Rates of movie theater admissions and copyright protection show similar results. Economies where film content can be, and is, protected through copyright and related rights tend also to see higher per capita rates of theater admissions. Figure 14 shows the results of this correlation for 2019.

Figure 14: Association between Index creative content-related indicators scores and the number of admissions to all feature films exhibited per million population⁴⁷

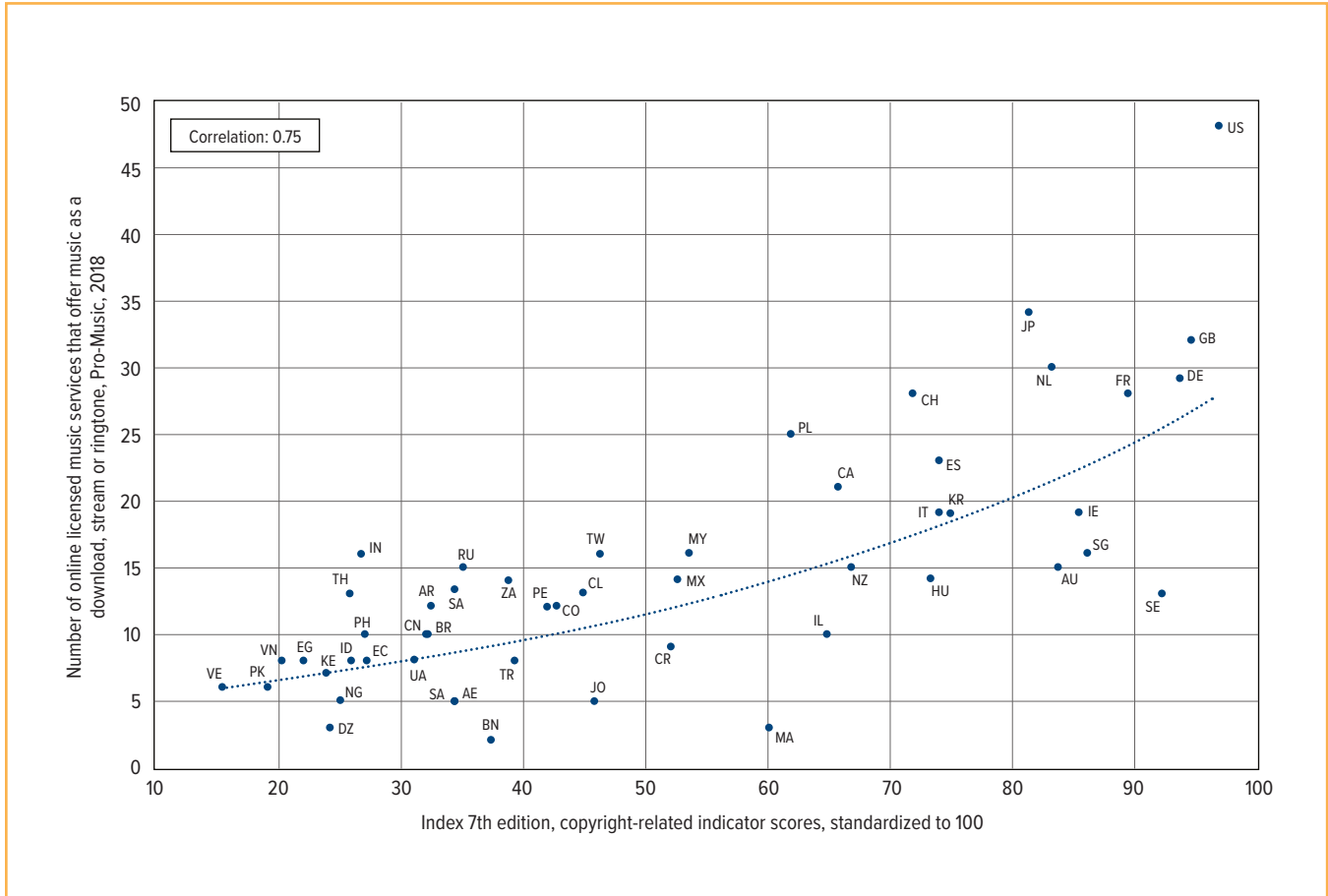


Sources: World Economic Forum (2018); GIPC (2019)

The Index creative content-related indicators scores display a strong correlation of 0.72 to theater screenings of feature films per million population. Consumers in economies in the top half of the Index are nearly 3 times more likely to go to a movie theater than consumers in economies scoring below the median.

Last, looking at the volume of legitimate online music outlets, there is a strong association between the protection and enforcement of copyright and related rights and the number of legitimate online music outlets. Figure 15 shows the results of this correlation for the 50 Index economies.

Figure 15: Association between the Index copyright-related indicators scores and volume of licensed online music services⁴⁸



Sources: Pro-Music.org (2018); GIPC (2019)

As Figure 15 shows, there is a strong correlation of 0.75 between Index copyright-related indicators scores and the number of online licensed music services as measured by Pro-Music.org, indicating that access to

legitimate music content and streaming services is greater where robust IP policies, specifically strong copyright protection, are in place.

Getting in the way: How barriers to licensing are holding back innovation and economic activity

This year, the Index includes 3 new indicators relating to the commercialization of IP assets. The new metrics measure barriers to technology transfer (indicator 26), registration and disclosure requirements of licensing deals (indicator 27), and direct government intervention in setting licensing terms (indicator 28). These three indicators replace what was a larger indicator (indicator 25) in previous editions. These new indicators allow us to better examine more facets of the environment for technology transfer, licensing, and the commercialization of IP assets in a given economy.

Driving innovation: Tech transfer and licensing

New technologies can contribute to economic activity only if they are successfully developed into real-life, useful products that can be commercialized in the marketplace. A brilliant invention or technology that sits on the proverbial shelf is unlikely to be economically productive. Technology transfer and licensing are critical mechanisms for commercializing and transferring research from public and governmental bodies to private entities and private-to-private entities for the purpose of developing usable products and commercially available technologies. They also provide a significant and distinct contribution to the economic strength and well-being of the economies in which they take place. For universities and public research organizations the transfer process enables them to obtain access to commercial research funds, state-of-the-art equipment, and cutting-edge technologies, while allowing industry to benefit from the extensive knowledge and ingenuity of academic researchers. For less developed economies, international licensing of technology can provide the basis for local technological development and building a more sophisticated absorptive capacity. Global technology flows and the commercialization of IP assets are thus crucial drivers of innovation. Through licensing, technology is transferred to other actors (public and

private) and eventually to the public in the form of new products. In other words, licensing facilitates technology diffusion by making usable technologies and content widely available. However, licensing and technology transfer rely on a supportive and efficient regulatory environment and IP frameworks that minimize red tape, facilitate market-based partnerships, and uphold the integrity of partnerships.

Many governments—in developed and developing economies alike—understand this and dedicate significant resources to enhance innovation and technological development and transfer. Innovation-led growth is a strategic and, in many cases, existential goal for many economies. In the Gulf, both **Saudi Arabia** and the **UAE** are betting on becoming 21st century knowledge-intensive, high-tech economies in order to reduce their dependency on oil. **Turkey** has set a target of becoming 1 of the 30 most innovative nations by 2023.⁴⁹ **Malaysia** has recognized the capacity to translate innovation into wealth as one of the game changers needed to achieve high-income status by 2020.⁵⁰ Similarly, **Colombia** aims to become 1 of the 3 most competitive economies in Latin America by 2032 through exporting high-added-value goods and innovation.⁵¹ The BRIC economies have all made innovation-driven growth a strategic priority. In **Brazil**, several important government institutions and agencies, such as the Brazilian Development Bank and the Brazilian Innovation Agency, have been supporting innovation and investment in Brazil since the 1970s and successive governments have promoted innovation laws and national policies.⁵² Similarly, both **India** and **Russia** have launched general and sector-specific initiatives. Perhaps most ambitious of all is **China**. Over the past 2 decades, China has made massive gains in terms of its science, technology, and innovation capacity, and is today the world's number 1 producer of undergraduates with degrees in science and engineering.⁵³ Among more mature economies, innovation is central to economic policy. For decades, innovation has been at the top of the EU's policy

agenda, first with the Lisbon Agenda and more recently with initiatives such as Horizon 2020 and Innovation Union. Similarly, in the U.S., support for innovation has been part and parcel of government policy for decades both at the federal and state levels. In Asia, too, innovation-driven growth is an integral part of public decision making, with perhaps the best examples being in **South Korea, Singapore, and Japan.**

Yet, in many respects, economies are failing to provide the necessary regulatory and IP-specific infrastructure to help incentivize and better facilitate domestic and cross-border licensing and technology transfer. In some cases, governments are doing the exact opposite by imposing new and additional hurdles and barriers. The purpose of the three new licensing and technology transfer indicators added to the Index this year is to attempt to better measure and quantify these barriers.

Unleashing or impeding technology diffusion?

One of the most significant barriers to all facets of licensing and technology transfer—domestic and cross-border—is direct government intervention and setting of licensing terms. Such intervention consists of a centralized, top-down approach that seeks to mandate when and how licensing and technology transfer take place. These interventions can involve burdensome and costly administrative procedures or comprise legal rules and policies that discriminate against rights holders. The manner and extent of these interventions vary from economy to economy, but they often involve the mandatory disclosure and review of all licensing agreements by a government authority. Usually, this review includes setting contractual terms (including royalty rates) and, in some cases, coercing licensors into sharing their technology with local partners.

Arguably, no economy is more concerned with technology transfer and generating domestic innovation than **China.** But China's model has diverged from international standards through direct government intervention and the use of coercive

licensing and other barriers. As noted, rights holders in China face a growing number of regulatory and procedural barriers and inflexible terms to licensing that impede technology flows and R&D cooperation. In general, licensing agreements must receive government approval. In addition, China restricts the ability of foreign IP rights holders to freely negotiate market-based contractual terms in licensing and other technology-related contracts concerning the transfer of technology to China. The Technology Import/Export Regulations involve discriminatory conditions for foreign licensors. The regulations include 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 can negotiate different terms. This restricts the ability of foreign companies to negotiate licensing and technology contracts on market terms and to fully commercialize their technology in China. Under the Joint Venture regime, licenses and tech transfer contracts cannot last more than 10 years, after which the licensee retains the right to use the transferred technology, although this might still be under a term of exclusivity. More recently, the Working Measures for Outbound Transfer of Intellectual Property Rights, which were adopted in 2018, tighten the scrutiny on outbound transfer of technology and IP. Both the U.S. and the EU have filed complaints with the World Trade Organization (WTO) against China over its technology licensing practices.

Like China, **Indonesia** has in place substantial barriers to both licensing and technology transfer. While investment and technology transfer have become a clear priority for the Indonesian government over the past several years, it has largely relied on restrictive measures that have made the investment climate increasingly complex and difficult. In 2016, the Indonesian Parliament (People's Representative Council) passed a new wide-ranging patent law (Law 13 2016). While aiming at strengthening Indonesia's innovation infrastructure and encouraging more high-

tech economic development through the creation and use of new technologies, overall, the law did not improve what was already a challenging patenting environment. Article 20 of the law seemed to make the granting of a patent conditional on localizing manufacturing and/or R&D in Indonesia. Specifically, it mandated that all patent rights holders “make” the patented product or process within Indonesia. Subsection (2) of this article stated that this production should support Indonesia’s industrial and development policies, specifically the “transfer of technology, investment absorption and/or employment.” No further details were provided about the meaning or legal definition of “make” in this context. In July 2018, the government published long-awaited Patent Regulations aimed at explaining what Article 20 means in practice. While maintaining these localization requirements, the new regulations do provide the possibility of indefinitely postponing them. More broadly, in 2014, Indonesia adopted a new industrial law (3/2014) aimed at fostering growth by developing local production capabilities. The law specifically targeted the localization of production, use of domestic products, implementation of national standards, and greater power to restrict imports and exports. Additionally, a comprehensive trade law (7/2014) passed in 2014 reiterated the top-down approach to achieving investment. The law outlined the government’s broad powers to oversee trade in order to protect domestic interests. Protective measures in place spanned from requirements to partner with Indonesian companies to local content and technology transfer requirements, restrictions on imports and exports, and equity ownership limitations in certain sectors.

The biopharmaceutical sector has arguably been the most drastically targeted by the Indonesian authorities. Decree 1010/2008 requires companies to set up a manufacturing plant or partner with an existing local manufacturer and transfer know-how and other commercially sensitive information in order to receive market authorization. In addition, products with patent

expirations of more than 5 years (or off-patent products that have been imported into the country for more than 5 years) must be produced locally. Under Decree 1799/2010, the manufacturing requirement was relaxed slightly, permitting domestic labeling and packaging activities to qualify as domestic production, but recent actions, including the local content policies as part of health system and procurement reforms, have created more uncertainty. As a result, these localization policies heavily influence the technology transfer and licensing environment, and there are considerable barriers to the practical execution of licensing agreements and effective technology transfer for foreigners as well as Indonesians. To begin with, to be valid and legally recognized, licensing agreements for all major IP rights must be registered with the Indonesian IP authorities. As part of this registration, rights holders must submit the fully executed licensing contract. Unless registered with the relevant authorities, licensing agreements have no legal standing vis-à-vis third parties. All licensing agreements are also subject to review by the Indonesian authorities. Article 78 of the Patent Act is clear that any licensing agreement should not adversely affect the Indonesia economy or national interest. Failure to fulfill these criteria will result in the authorities refusing registration, thereby rendering the agreement legally void and unenforceable versus third parties. Last, unlike most other jurisdictions, Indonesia requires the registration of licensing agreements regarding trade secrets. Despite their inherently confidential nature, the licensing and licensed transfer of trade secrets are subject to the same requirements as all other IP rights, including registration and official publication.

Like both China and Indonesia, **Nigeria** has in place significant barriers to both technology transfer and licensing activities. The National Office for Technology Acquisition and Promotion oversees all technology transfer and licensing between Nigerian entities and foreign licensors. The agency has the power to evaluate and approve or disapprove technology transfer

agreements, including evaluating royalty amounts. The agency, for example, sets and approves royalty rates for all major forms of IP licensing. Royalty rates vary from 0.5% up to 5% of net sales depending on the technology and type of IP right. Furthermore, Section 23(6) of the Patents and Designs Act provides a broad and unclear remit for the Nigerian government to cancel any foreign royalty payments and licensing contracts on the ground of national interest and economic development.

Other economies also have in place substantial hurdles for licensing activity.

Like other member states of the Andean Community trading bloc, **Ecuador's** IP laws are subject to decisions made by the Community. Andean Decision 291 provides an overview of requirements for licensing technologies. Article 12 states that the respective national authorities must record and evaluate all licensing activity. Specifically, Community members shall “evaluate the effective contribution of the imported technology by estimating the probable profits or the price of the goods that incorporate technology, or through other specific methods of quantifying the effect of the imported technology.” As a fellow Andean Community member, **Colombia** also has in place substantial barriers to licensing and technology transfer, including government review of licensing contracts and terms and conditions.

How do we measure barriers to licensing? Case study: Registration requirements for licensing deals

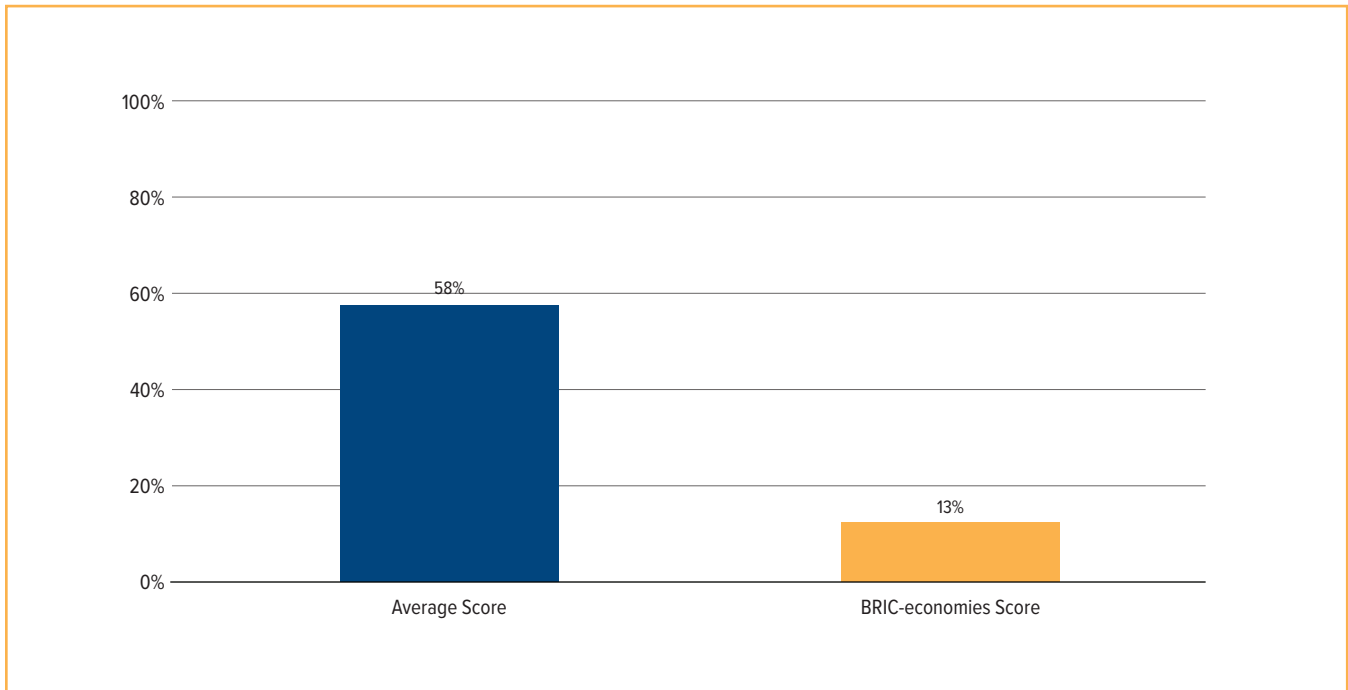
Fundamentally, the new Index indicators relating to licensing and technology transfer seek to investigate the degree to which the rules and regulations in a given economy impede and place a restriction on licensing parties' economic freedom and freedom to operate. As described above, this can range from direct government regulation of licensing terms to registration and disclosure requirements of licensing transactions. Looking at the latter, a surprisingly large

number of economies require licensing agreements to be recorded and registered with national IP offices. The reasons for this requirement vary, ranging from the relatively innocuous, whereby registration and recording is a way of ensuring third-party awareness and clarity on legal licensing rights in case of future disputes, to the more intrusive, whereby registration requirements are part of a broader effort of governments to impose control and direct oversight of licensing terms. Registration requirements are not contingent on or related to an economy's overall level of development; both developed OECD economies and emerging markets have these requirements in place.

To measure and provide a quantitative score on this indicator, the Index examines the extent to which registration requirements impose a burden on or act as a barrier to the licensing parties. The most intrusive requirements are when full licensing terms and agreements must be disclosed, and governments retain the right to review, approve, and/or amend contractual terms. In other cases, there is a registration requirement and either the entire executed contract or critical aspects of it, including potentially commercially confidential information such as royalty rates, must be disclosed. In other cases, the registration requirement is fairly straightforward and requires minimum documentation or disclosure of contractual terms.

Looking at the 50 economies sampled in the Index, the vast majority have in place some form of registration requirement—only 9 out of the 50 economies mapped did not have a registration requirement in place. But most economies do not have overly burdensome registration requirements. However, there are some important exceptions. For instance, comparing the average score of the BRIC economies with the total economy sample shows just how significant and intrusive existing requirements are. Figure 16 shows the average percentage score on this indicator for BRIC economies versus the average score for all other economies.

Figure 16: Registration and disclosure requirements of licensing deals, average score all other economies and average score BRIC economies (indicator 27)



Impeding licensing: Does it really matter?

Impeding licensing activity is not cost-free. Just like with other impediments to the protection of IP, the restriction of licensing hurts all parties, from licensors to licensees to the domestic economy in which the licensing is being restricted. The purpose of this subsection is to look at some of the international data on licensing flows. What does empirical evidence indicate about the impact of technology diffusion regimes that seek to manipulate the licensing process and prioritize local entities, and ones that make licensing overly difficult or insecure? Have these controls on licensing led to increased rates of diffusion of technologies?

International in-licensing rates

One proxy for technology flows, particularly of the most high-value assets, is to look at rates of international

trade in charges for the use of IP (including royalties and license fees). Various measures exist, but one measure that captures inflows of technology and different types of IP assets is the World Bank's indicator on payments by residents to nonresidents for the use of IP rights.⁵⁴ The World Bank defines these charges for the use of IP as

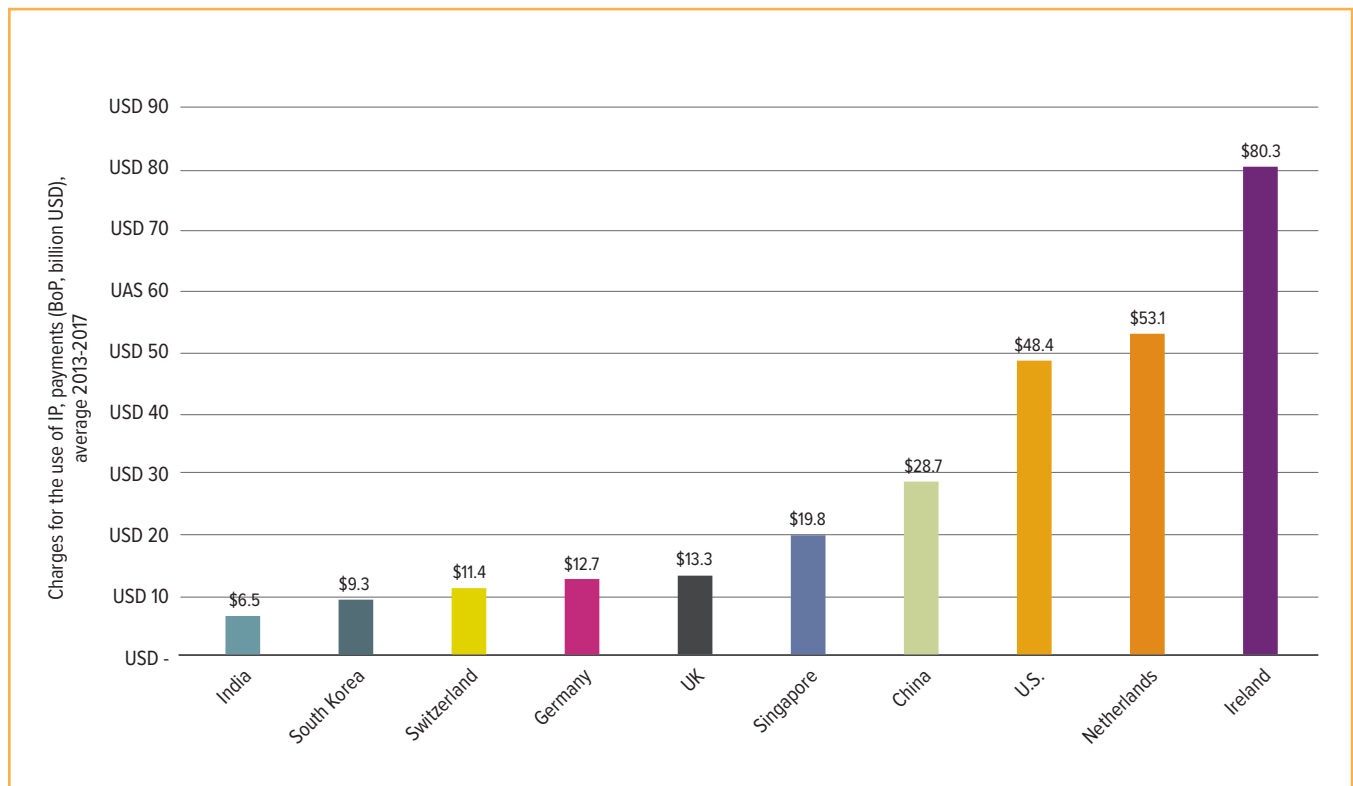
“payments and receipts between residents and non-residents for the authorized use of proprietary rights (such as patents, trademarks, copyrights, industrial processes and designs including trade secrets, and franchises) and for the use, through licensing agreements, of produced originals or prototypes (such as copyrights on books and manuscripts, computer software, cinematographic works, and sound recordings) and related rights (such as for live performances and television, cable, or satellite broadcast).”

The statistics are based on the International Monetary Fund's *Balance of Payments Statistics Yearbook* and data files. These charges thus include all manner of IP rights that could and are licensed internationally. While other global and economy-specific measures exist (some of which complement this analysis and are used below), the World Bank's data provide consistent and global coverage, making them a relatively good proxy for levels of technology transfer and licensing activities.

Like with all data, there are a few important caveats to bear in mind. First, the World Bank's data do not

provide a breakdown on the type of IP or licensing agreement. They do not show the specific types of IP rights being licensed and transferred. Second, the total value of licensing, which does not necessarily reflect volume, is measured. In some cases—and economies—very high-value one-off licensing transactions can thus potentially skew numbers. Last, in terms of economy coverage, data are available for only 26 of the 50 Index economies. Still, despite all these caveats, these data do provide a good proxy and approximation of global in-licensing flows.

Figure 17: Charges for the use of IP, payments (Balance of Payments billion USD), average 2013–2017, select Index economies, World Bank



Source: World Bank (2018)

To begin with, it is worth looking at the overall levels of licensing flows globally and the top destinations. Overall total payments for the use of intellectual property in the 26 Index economies measured has increased substantially over the past half-decade, from just under USD250 billion in 2013 to just under USD320 billion in 2017, an increase of 29%.⁵⁵ Figure 17 shows the total value in aggregated overall payments (in billion USD) for the use of intellectual property on a rolling average between 2013 and 2017 for the top 10 economies out of the 26 Index economies sampled.

As Figure 17 shows, of the 26 Index economies sampled, Ireland, the Netherlands, and the U.S. are the largest recipients on an aggregated basis for licensed technology. Together these 3 economies

make up almost 60% of the total value of all 26 Index economies. The strong performance of smaller economies (in addition to Ireland and the Netherlands) such as Singapore and Switzerland also stands out. Despite their relatively small size—in terms of both population and economic output—these economies are highly integrated into the global economy and benefit from high rates of in-licensing. But these are total aggregated figures that have not been standardized for population to show the actual intensity of licensing taking place. For example, as the world’s 2nd largest economy, China is in 4th place with just under USD30 billion on an aggregated basis. Yet, as Table 5 shows, adjusted on a per capita basis China’s performance is much weaker.

Table 5: Charges for the use of IP, payments (BoP, million USD), avg. 2013-2017 per million population (avg. 2013-2017), select Index economies, World Bank

| | | | |
|-------------|-------------|--------------|---------|
| Ireland | \$14,580.85 | Thailand | \$61.05 |
| Singapore | \$3,760.52 | Argentina | \$50.70 |
| Netherlands | \$2,757.76 | Malaysia | \$47.50 |
| Switzerland | \$1,504.92 | Russia | \$45.82 |
| Sweden | \$360.47 | South Africa | \$34.32 |
| South Korea | \$192.71 | Brazil | \$25.34 |
| UK | \$183.23 | China | \$17.25 |
| Hungary | \$176.57 | Colombia | \$10.18 |
| Australia | \$151.24 | Indonesia | \$6.85 |
| Israel | \$138.08 | Ecuador | \$4.77 |
| US | \$132.99 | India | \$3.93 |
| Germany | \$131.25 | Egypt | \$2.61 |
| Chile | \$86.17 | Mexico | \$2.07 |

As Table 5 illustrates, when adjusting for population and measuring the actual intensity of in-licensing activity, the most licensed-to economies are the smaller ones: Ireland, Singapore, the Netherlands, Switzerland, and Sweden.

What explains this?

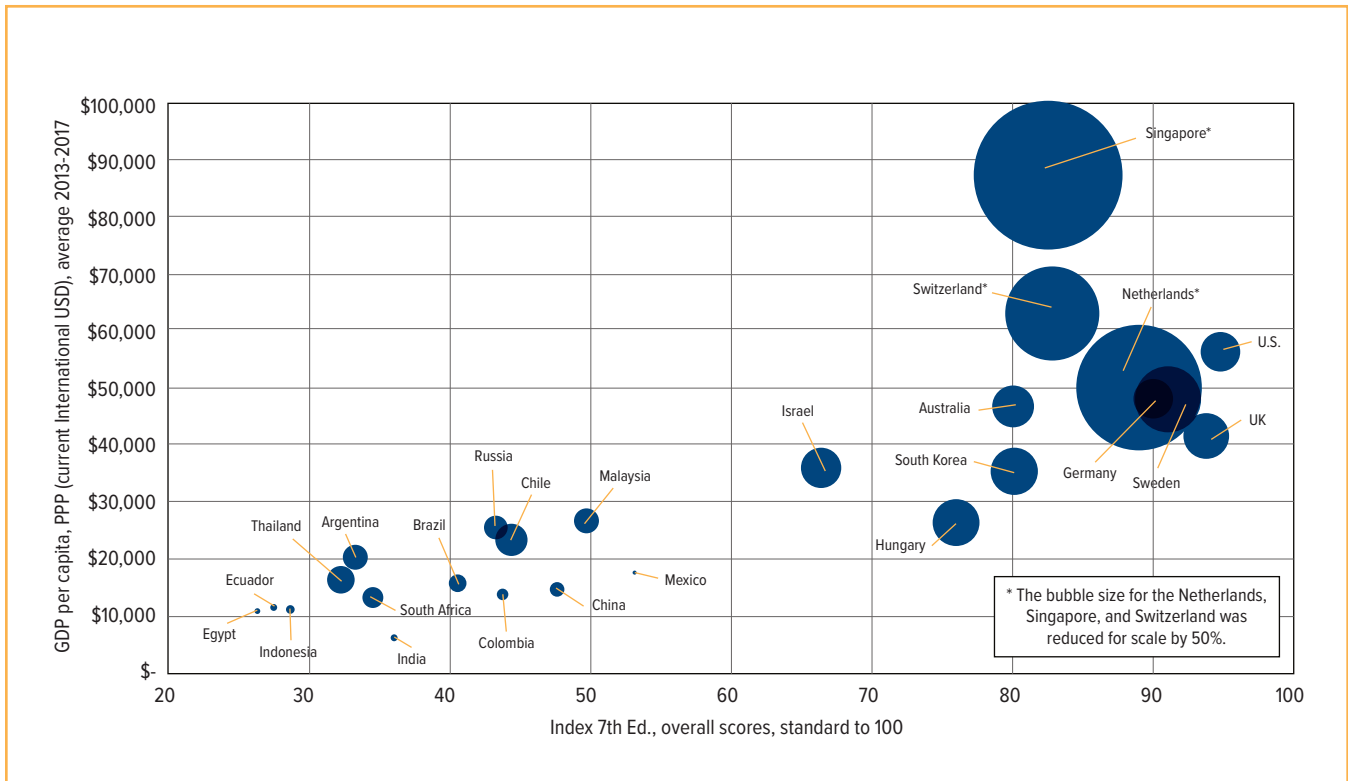
As with all types of economic activity there is never one explanation. There are a multitude of different drivers and factors that affects decisions on licensing a given technology into any jurisdiction. These factors range from the micro and firm level—does the given licensor have a commercial interest or pre-existing affiliation in a given jurisdiction?—to the macro, where market size, consumer purchasing power, and ease and attractiveness of doing business are among the chief considerations. For example, the Irish economy has transformed itself over the past two decades into a high-tech hub and home to some of the world's leading technology and innovation-based companies. Among other factors, including high levels of human capital and EU membership, Ireland also has a highly attractive corporate tax regime.

Yet, looking at this from the Index's perspective, what stands out is that many of the most attractive economies have strong national IP environments and achieve high scores on the Index. Figure 18 seeks to better examine this relationship. It looks in more depth at licensing rates in comparison to economies' overall IP environment as measured by the Index and income level as measured by GDP per capita at purchasing power parity (PPP).⁵⁶

Looking at Figure 18, a few things stand out. First, economies with the highest rates of in-licensing activity (as represented by the size of bubbles) are also those that achieve high overall scores on the IP Index. As mentioned, economies like Ireland, Singapore, the Netherlands, the U.S., Germany,

Sweden, and Switzerland all have high levels of per capita in-licensing and also have strong national IP environments. Conversely, despite their market size and strong economic growth, economies such as China, Brazil, Mexico, Indonesia, India, Russia, and Argentina have much lower levels of per capita in-licensing and also substantially weaker IP environments. Of note is that per capita income does not seem to be the driving factor in determining rates of in-licensing activity. For example, economies such as Hungary and Israel have rates of per capita incomes comparable to lower-performing economies such as Malaysia, Chile, and Russia, which all have per capita incomes at PPP between USD20,000 and USD25,000. Yet their national IP environments, as measured on the Index, are far weaker.

Figure 18: In-licensing rates, in relation to national IP environment, and income: Index 7th edition overall scores versus GDP per capita average 2013–2017, USD PPP; bubble size displays charges for use of IP, payments per million population (average 2013–2017)



Sources: World Economic Forum (2018); GIPC (2018)
Data NA for Brunei, Taiwan, and Venezuela

Digging deeper: Examining international licensing through the lens of American multinationals

As mentioned above, a major drawback of the World Bank’s in-licensing data is that they are not broken down by type of IP right, nor do they provide details of the affiliation of the licensing parties.

Why is this important?

To begin with, understanding what types of IP rights are being licensed into a given economy provides insight into the level of technology and know-how the licensor is willing to share. Licensing the use

of an established brand and trademark is different from licensing the use of an industrial process or manufacturing method through a patent or trade secret. The more valuable and difficult to protect the IP, the more circumspect licensors are likely to be regarding where and to what entities they are willing to license the use of their IP. All other things being equal, it is fair to assume that if a country has a weaker national IP environment and high regulatory and administrative barriers to entry, then there is an accompanying higher risk of licensed IP being infringed, misappropriated or, in the case of trade secrets, revealed. Because of this, licensors will be less likely to engage in licensing

activity with that given entity or in that given jurisdiction. Conversely, where protection is stronger and there is less risk that the licensed IP will be infringed, misappropriated, or misused, there is a stronger base for licensors to engage.

What does the evidence available suggest?

The U.S. Bureau of Economic Analysis (BEA) collects and houses data on the international trade in goods and services. These data include detailed accounts of international services, including charges for the use of intellectual property. Unlike the data collected by the World Bank, the BEA's statistics provide much more granularity and detail on the transactions. Specifically, they provide a breakdown of licensing activity by type of intellectual property into six distinct categories of IP:

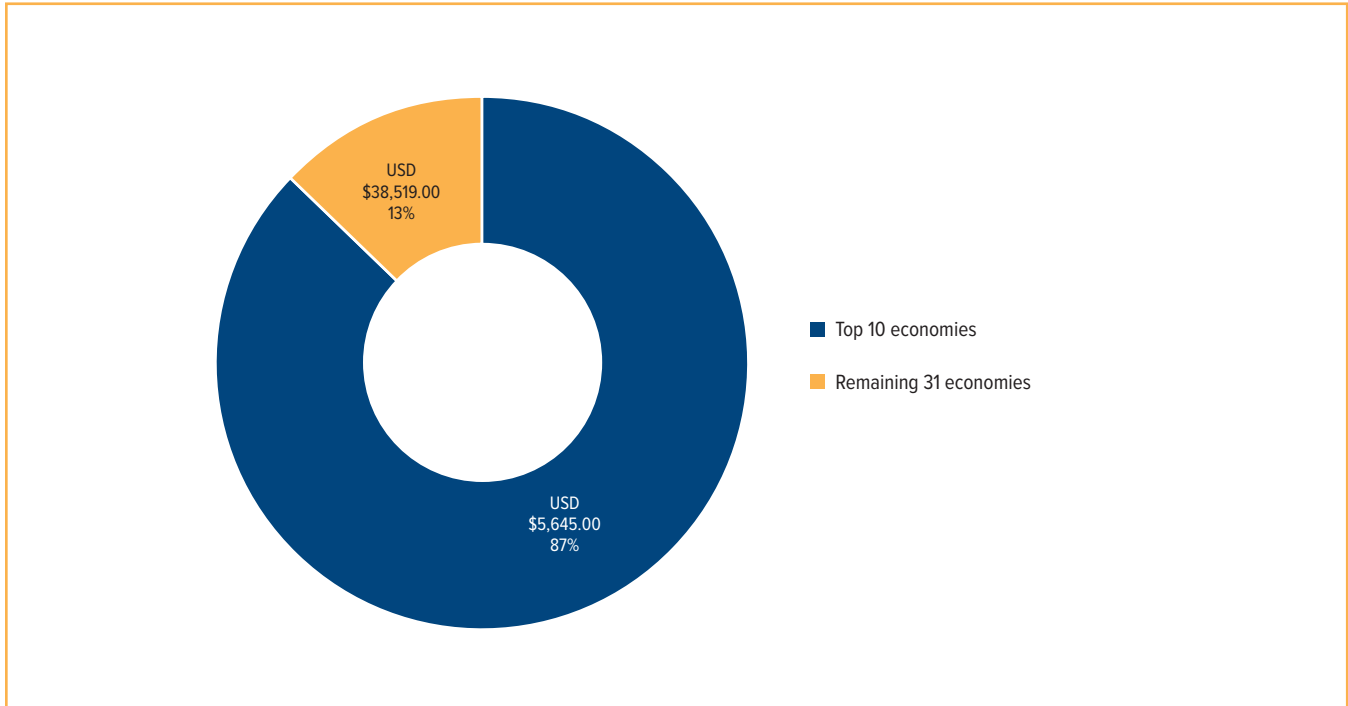
1. Industrial processes
2. Computer software
3. Trademarks
4. Franchise fees
5. Audiovisual and related products (this category contains three subcategories: movies and television programming, books and sound recordings, and broadcasting and recording of live events)
6. Other intellectual property

Using these data it is possible to distinguish between the different types of IP that are being licensed by American licensors. Zooming in on the first category of IP rights, industrial processes, it is possible to get a sense of the extent to which U.S. firms are licensing out the secrets to their industrial prowess, namely those related to the production of industrial goods. The BEA defines rights related to industrial processes and products as “license fees, royalties, and other fees received or paid for the sale or purchase, right to use, or right to reproduce or distribute intellectual property, including patents, trade secrets, and other proprietary rights, that are used in connection with, or related to,

the production of goods.” It is useful to examine the volume of licensing of industrial processes within the Index economies.

Looking at 2017, data are available for 42 of the 50 Index economies. What stands out most starkly is how the vast majority of licensing of industrial processes measured in terms of value are concentrated in a select number of markets. In 2017, this totaled close to USD45 billion, but, as Figure 19 shows, the vast majority—close to 90%—of this licensing went to 10 of the 42 Index economies for which data are available.

Figure 19: Exports of industrial processes, U.S. to foreign-based entities, 41 Index economies, 2017, USD millions

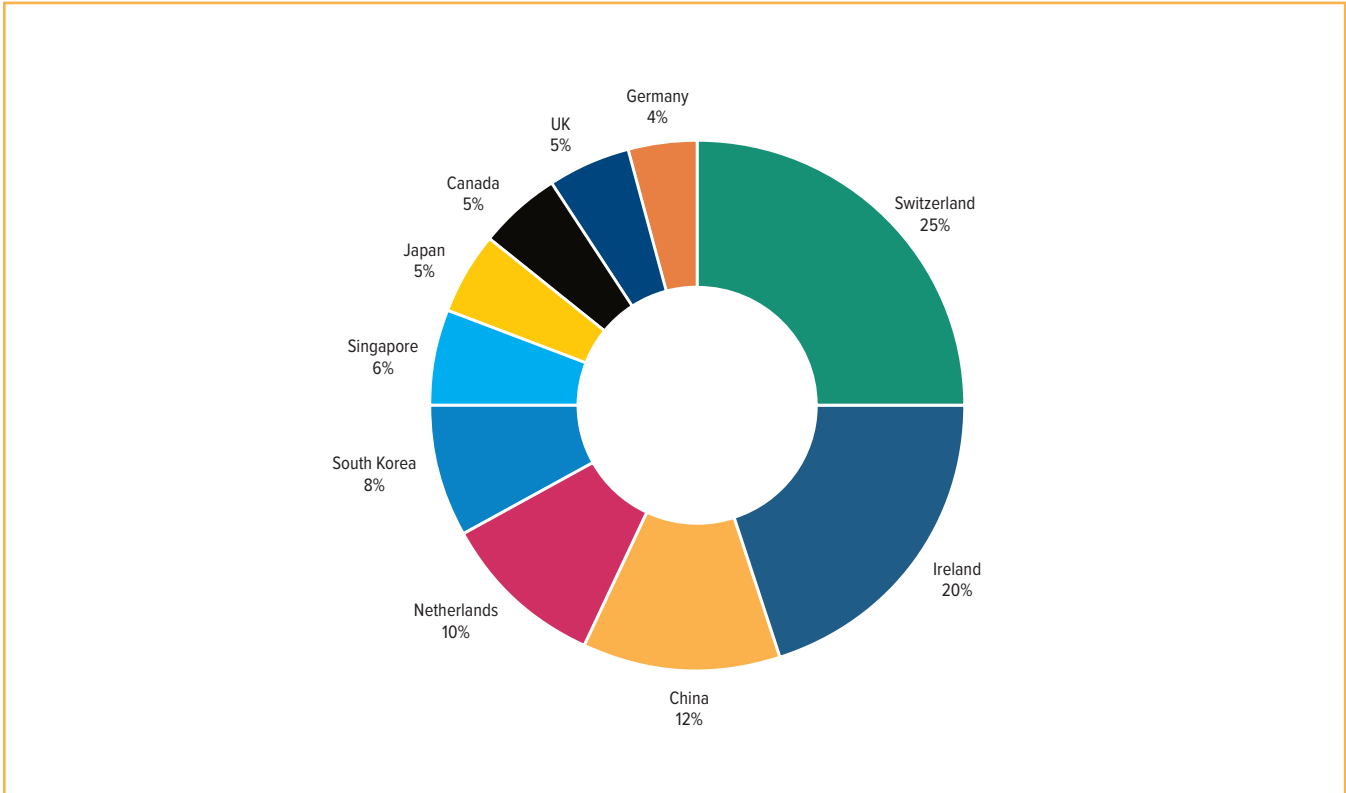


Of the top 10 economies only 1, China, was a middle-income economy. All other economies were high-income, developed, and, bar Singapore, OECD economies. Figure 20 shows the percentage breakdown among the top 10 economies.

Interestingly, as with the results for the World Bank in-licensing data, the overwhelming majority of these 10 economies have very strong national IP environments. Except for Canada and China, all 10 achieved an overall score of over 80% on the 7th edition of the Index. It is worth asking why in-licensing and knowledge transfer from the U.S. to these 2 economies is so low. China and Canada are the United States' 2 largest trading partners, together accounting for close to 30% of American total trade in 2018 per

the latest data from the Census Bureau.⁵⁷ China is the largest market in the world and for most goods and services and is projected to account for a growing share of future global growth. It is thus of strategic interest to most, if not all, of American multinationals to have a considerable footprint in China. Similarly, one would assume Canada's long-standing history with, geographic proximity to, and close relationship with the U.S. would result in a higher rate of in-licensing. Yet, looking at rates of industrial processes licensing, China and Canada together accounted for less than that of Ireland. Both economies also have considerably weaker IP environments: Canada has the weakest among all high-income OECD economies in the Index, and China's score, while improving, is still below 50% of the available maximum.

Figure 20: Exports of industrial processes, U.S. to foreign-based entities, top 10 Index economies, 2017, percentage of total



Summing up: Why IP rights matter

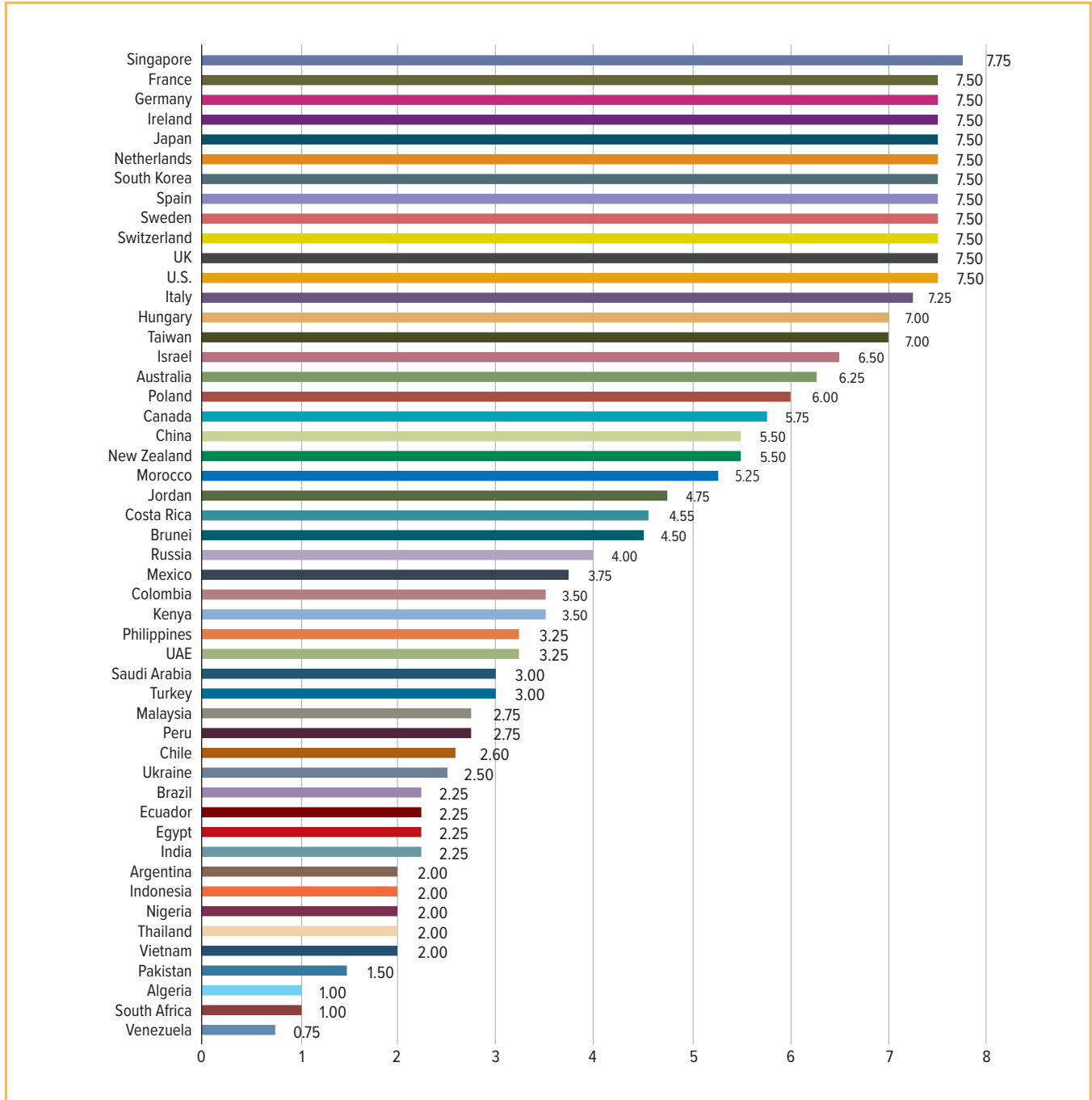
Theoretical arguments over the role and importance of IP rights to socio-economic outputs are being displaced by empirical and statistical evidence and real-world experiences of creators and innovators around the world. Intellectual property has little to no economic utility unless it can be protected, commercialized, and turned into an asset. As the preceding section and the accompanying *Statistical Annex* demonstrate, for all economies—emerging

and developed alike—the creation of new forms of intangible assets and IP drives innovation, technological advances, and ultimately economic development and growth.

Having discussed the relationship between the provision and protection of IP rights and economic activity, the next section shifts back to focusing on the results of the 2019 International IP Index.

6. INDEX CATEGORY-BY-CATEGORY SCORES

Figure 21: Scores, Category 1: Patents, Related Rights, and Limitations



Category 1: Patents, Related Rights, and Limitations

Figure 21 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.

The overall results from Category 1 show a clear group of high-performing economies, all with a score of over 6, or 75%, of the maximum available score of 8. In all, 18 of the 50 sampled economies achieve a score of 6 or above in this category. Similar to last year, **Singapore** is ranked number 1 narrowly ahead of a group of **EU** member states, **Switzerland, Japan, South Korea,** and the **U.S.**, all of which are tied for 2nd place at a score of 7.5. The U.S. saw a score increase of 0.25 for Category 1 because of policy reforms to its patent opposition regime, with the U.S. Patent and Trade Organization (USPTO) introducing several important changes in 2018. In April, USPTO Director Andre Iancu stated that the reform of *inter partes* review (IPR) proceedings was one of the agency's "highest priorities," and it was considering "how and when we institute proceedings, the standards we employ during the proceedings, and how we conduct the overall proceedings. The goal, with whatever action we take, is to increase predictability of appropriately-scoped claims." Following these remarks, important reforms at the USPTO have been announced that collectively should improve the predictability of the review process. Specifically, these include (1) changing the patent claim construction standard used, moving away from the broadest reasonable interpretation standard to the so-called *Phillips* standard, which is the claim construction standard used by federal courts since the mid-2000s; (2) a new Trial Practice Guide; and (3) Standard Operating Procedure (SOP) changes. Using the *Phillips* standard will align IPR proceedings with the same claim construction standards that are used in patent infringement proceedings at U.S. district

courts. There will thus no longer be a discrepancy and difference in the claim construction standard used within the Patent Trial and Appeal Board (PTAB) proceedings and that used in the judiciary. The new Trial Practice Guide clarifies the grounds on which a review may be initiated. And the changes to both SOP 1 and SOP 2 seek to streamline how judges are assigned, the composition of panels, and the way precedent-setting opinions are set. Specifically, SOP 2 sets up a Precedential Opinion Panel, headed by the USPTO director. SOP 2 states that this panel "will be used to establish binding agency authority concerning major policy or procedural issues, or other issues of exceptional importance in the limited situations where it is appropriate to create such binding agency authority through adjudication before the Board." These are important changes, and it is hoped that they will provide a greater balance in the U.S. patent opposition system and address the concerns of some industry sectors regarding the unpredictability and uncertainty of the past few years.

In other economies, rights holders continue to face a challenging patenting environment.

In **Brazil**, there are long-standing issues across the board, with basic patent-related rights not in place and standards of patentability outside of international norms. For instance, through Article 229-C of the Industrial Property Law 9.279 (*Lei da Propriedade Industrial*), the Brazilian National Health Surveillance Agency (ANVISA) has the right to provide prior consent to biopharmaceutical patents examined by the Brazilian Patent Office (INPI). In effect, this has meant a dual examination of all applications, in turn violating the TRIPS Agreement. As a step in the right direction, the publication of the April 2017 Interagency Ordinance clarified the relationship between ANVISA and INPI in the patent review process. ANVISA will analyze applications in light of public health, and opinions about patentability may be binding on the

INPI only in cases in which ANVISA concludes that a severe public health risk exists as prescribed under Article 4 of the ordinance. In September 2018, this new working arrangement was tested, and the INPI approved a patent for sofosbuvir despite ANVISA's objections. Unfortunately, only a few days after the patent was granted, a Brazilian federal court suspended it based on a lawsuit filed by a coalition led by Marina Silva, one of the leading candidates in the then presidential election. In his judgment, Judge Rolando Valcir Spanholo argued that the INPI failed in its duty to review the patent application within the broader context of the social and economic interests of Brazil and ordered the agency to reassess the application. In an encouraging interview with *IP-Watch* on September 27, 2018, Luiz Otávio Pimentel, head of the INPI, termed the lawsuit as "the most important case in recent years," stressing that the decision to grant a patent for the drug in Brazil over the outcries of activists was purely "a technical decision without interference." While the case remained pending at the time of research, it also remains to be seen how the prior consent issue will be put into practice in other cases. Nonetheless, the larger point persists that patent protection for biopharmaceuticals in Brazil is not generally straightforward or consistent with global norms. On a more positive note, 2018 also saw the introduction and further implementation of measures to bolster the INPI's administrative performance and processing efficiency. This includes measures such as digitizing office documents, simplifying examination procedures, and instituting a telework program for examiners. Brazil has successfully reduced the trademark backlog and industrial design backlog. However, the patent backlog remains a challenge, although INPI aims to reduce the backlog by 30% over the next year. Over the longer term, the INPI plans to hire additional examiners, increase office productivity, and encourage international cooperation through its different PPH agreements to increase its capacity to address the annual demand for the examination of applications.

A notable number of economies saw changes relating to the enforcement of pharmaceutical patents (indicator 4).

On a positive note, both **China** and **Taiwan** are in the process of implementing so-called linkage mechanisms. As a first step in establishing a linkage mechanism, the Chinese FDA issued the "China Marketed Chemical Drug Catalogue," a Chinese version of the American "Orange Book," which contains information on both generic and patented products approved in China. In addition to these steps, China is in the process of amending its patent law and has the opportunity to add the necessary provisions to implement patent linkage. Whether the latest draft amendments include the necessary provisions is unclear. Lack of protection from generic competitors is the main obstacle for life sciences companies willing to enter the Chinese market. In Taiwan, provisions on patent linkage were promulgated by the president at the beginning of 2018. According to the new Article 48 of the Pharmaceutical Affairs Law, the new drug applicant (with consent from the relevant patent holder or exclusive licensee) is required to list patent information with the Ministry of Healthcare and Welfare (MOHW) within 45 days of receiving drug approval. The generic applicant has to declare that the product does not infringe patented drugs and notify the new drug approval holder (and patentee or exclusive licensee) and the MOHW within 20 days of receiving notice that the innovator's marketing approval has been completed for review. The introduction of a linkage system will confirm China and Taiwan's commitment to strengthening their national IP environments for biopharmaceuticals and the life sciences.

Progress was not as even in other economies.

In fact, **Canada** took steps backward when it comes to indicator 4. In Canada, the government amended the relevant secondary legislation, the Patented Medicines (Notice of Compliance) (PMNOC) Regulations, to

comply with Canada's commitments under the CETA. Unfortunately, the amendments have not effectively addressed long-standing deficiencies in Canada's linkage regulations. The old PMNOC procedures did not provide patent holders (a "first person") with a right of appeal, and the judicial proceedings determining the merits of the disputed patent or patents was a summary, not full, process. This limited the rights of the patent holder and availability of the full term of protection. The recent amendments have replaced summary proceedings with the possibility to bring fully fledged judicial actions, but the procedural complexity is likely to result in cases not being resolved before the end of the 24-month stay. Similarly, the issue of so-called Section 8 damages persists. Generic or biosimilar producers are entitled to claim damages when infringement is not found. The approach taken by Canadian courts accounts for a disproportionate, almost punitive, liability exposure to patentees. Specifically, in 2015, the Supreme Court of Canada upheld the verdict in 2 important 2014 Federal Court of Appeal rulings concerning the methodology for determining damages under Section 8 of the PMNOC. These rulings (and their affirmation by the Supreme Court) have established a judicial precedent whereby an innovator drug company could be held to pay damages to multiple manufacturers of a follow-on generic drug product that together exceed the size of a total hypothetical generic market. Under the new amended PMNOC regulations, there is no end for a Section 8 damage period, potentially enabling generic producers to claim undefined and unlimited future losses.

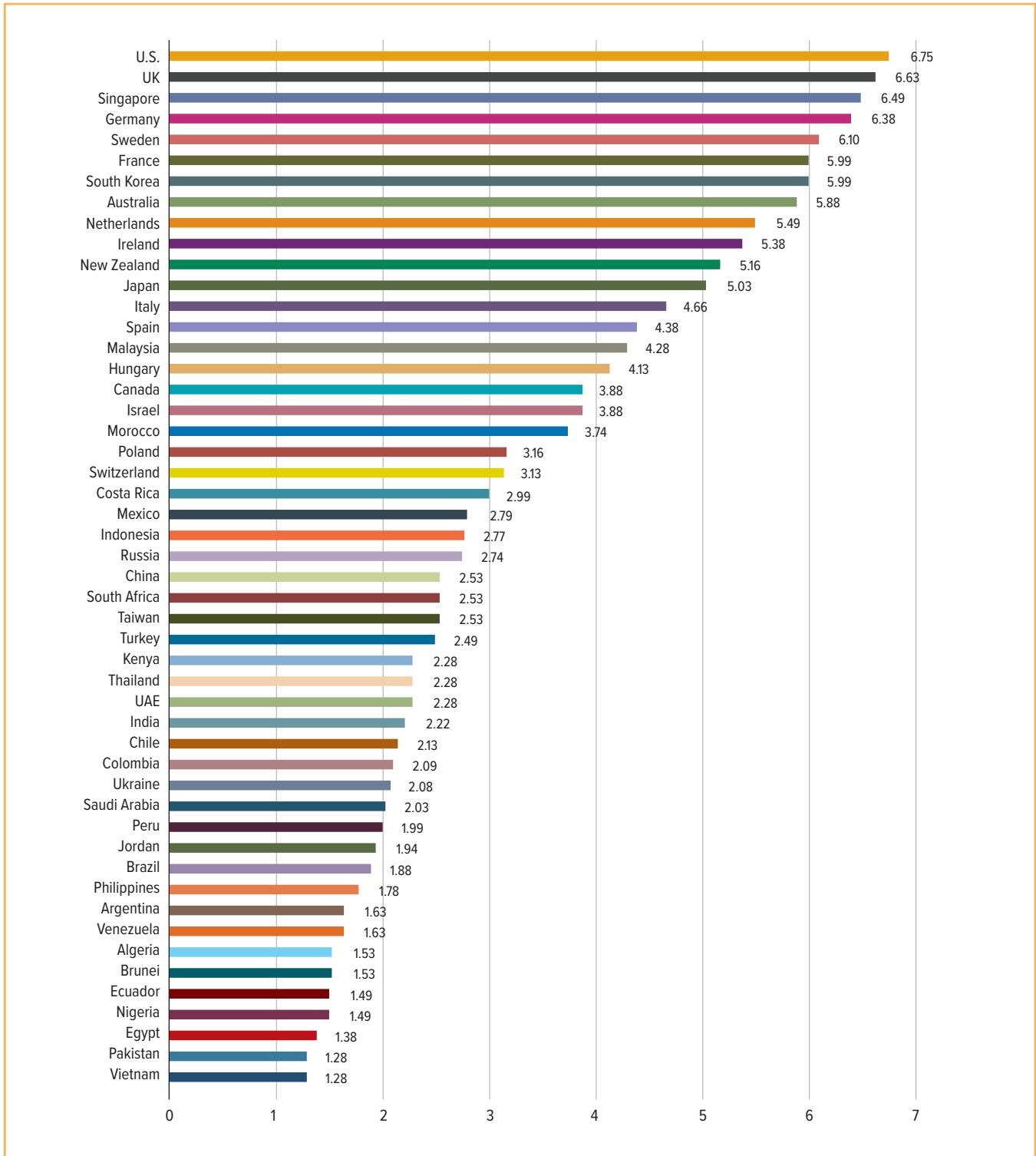
On a positive note, India's score increased on the patent prosecution highway metric (indicator 8) because of the announcement of a pilot patent prosecution highway with Japan. This is a significant step for helping innovators and inventors in both economies. PPH initiatives facilitate increased cooperation between IP offices and represent one of the most tangible ways in which the administration

and functioning of the international IP system can be improved and harmonized, which benefits inventors and rights holders around the world. Up until this announcement, India did not have a functioning PPH with any major IP office, so this is a major step forward and results in a 0.5 increase in the score on this indicator. There was also an indication to amend the Patent Rules, 2003, to allow for expedited examination of applications from participating patent offices.

Category 2: Copyrights, Related Rights, and Limitations

Figure 22 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 22: Scores, Category 2: Copyrights, Related Rights, and Limitations



As in years past, the results for Category 2 show how challenging the environment is for creators and copyright holders in the vast majority of sampled economies. 31 of the 50 economies sampled fail to reach 50% of the available score. The situation is particularly dire in relation to online enforcement. Looking at the scores for expeditious injunctive-style relief and disabling of infringing content online (indicator 11) and availability of frameworks that promote cooperative action against online piracy (indicator 12), it is clear that in a large number of economies creators have limited and often no effective legal recourse to protect their rights online. For both indicators, 36% (18 out of 50) of the sampled economies achieve a score of 0. These include **Algeria, Brazil, Brunei, Colombia, Ecuador, Jordan, Peru, the Philippines, and the UAE.** Overall, very few economies have in place functioning systems for injunctive-style relief or notification mechanisms. Notably, this is not a problem confined to emerging markets.

As has been noted in previous editions, **Switzerland's** copyright regime is weaker than its otherwise world-class national IP environment, reflecting legislative weakness as well as concerns over a lack of enforcement. To address these concerns, in November 2017, the Swiss Federal Council (*Bundesrat*) approved new draft copyright amendments. At the time of research, the Federal Assembly (*Schweizer Parlament*) was reviewing the amendments. The law is expected to be passed in 2019. While the Swiss government should be commended for finally taking legislative action and addressing a long-standing weakness in its national IP environment, the proposed amendments are quite narrow and only partially address the problem of online infringement in Switzerland. The primary means of enforcement will be through targeting internet hosting service providers that will be obliged to both remove infringing content and keep it off their servers. Specifically, the draft legislation puts in place a requirement for a “stay down” mechanism whereby hosting services must ensure that infringing content

is not made accessible again after a notification of infringement has been made and acted on. But the draft legislation does not include any requirement or option for the disabling of access to illegal content—foreign or Swiss based—under the proposed legislative amendments. It is likely that illegal content that is currently being hosted in Switzerland will simply migrate to another jurisdiction but continue to offer infringing content to Swiss consumers.

Nevertheless, there are examples of economies taking a more active stance on online infringement.

While online infringement remains pervasive, over the past half-decade, **Russian** authorities have introduced and implemented a range of new laws and regulations to help combat the high levels of online infringement. In 2013, the Russian government passed a number of amendments to the Civil Code Part IV, including a notice and takedown provision regarding 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 with 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. In 2017, additional legislative changes were introduced to strengthen rights holders’ ability to request the disabling of access to infringing material online. Specifically, a number of important amendments were made to the Law on Information, Information Technologies and Information Protection. These amendments included 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 efforts intensified in 2018. Specifically, reports indicate that ROSKOMNADZOR is actively monitoring online infringement and developing a database of infringing content. Internet mediators—including internet service providers (ISPs) and search engines—are required to link to this database. When the database is updated with new infringing sites, mediators are obliged to update their own access-disabling protocols. These efforts have so far been voluntary and have included discussions between rights holders and internet mediators, with potential further legislative action reserved for 2019. More broadly, the authorities have taken action against noncomplying internet mediators through both fines and potential disabling of access to relevant websites and links.

Like Russia, **China** faces enormous challenges regarding online infringement. Still, in 2018, the government instituted a number of positive initiatives and there were a number of positive court decisions against copyright infringers. At the request of the National Copyright Administration of the People's Republic of China, 15 video-sharing online platforms stepped up their enforcement efforts and disabled access to over 570,000 infringing videos, some of which were hosted by overseas servers. In addition, at the request of the China Audio-Video Copyright Association, karaoke owners reportedly banned over 6,000 copyright-infringing songs from their business. Additionally, Lego registered an important victory in a copyright court case against 4 domestic infringers and was awarded USD650,000 in damages by the court.

Both **Singapore** and **Australia** maintained their global leadership in online copyright enforcement. In Australia, 2018 saw the continued use of Section 115a of the Copyright Amendment (Online Infringement) Act 2015, which allows courts to require ISPs to disable access to foreign-hosted sites (or “online locations”) whose primary purpose is to infringe copyright. In

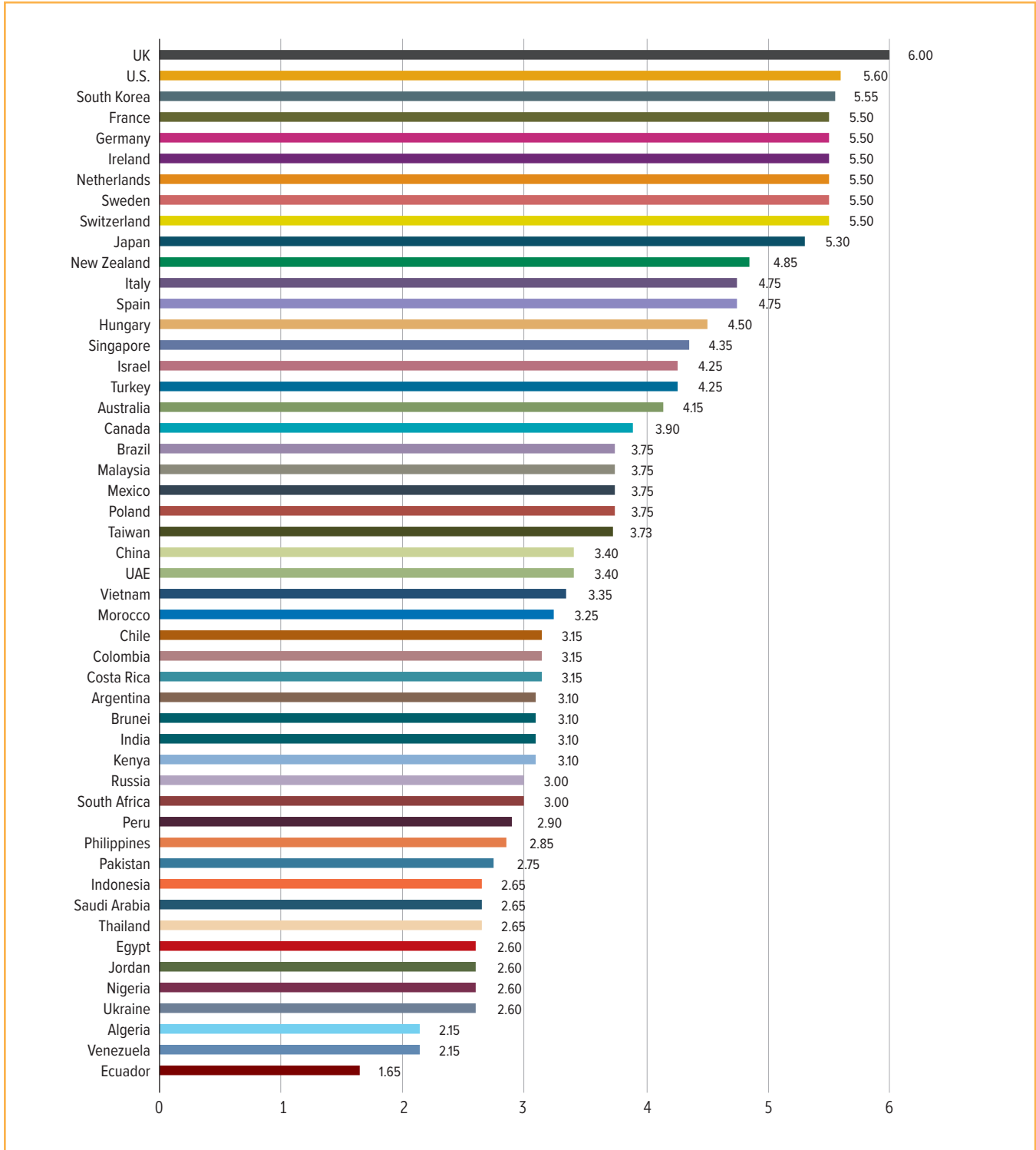
a landmark ruling in *Roadshow Films Pty Limited v Telstra Corporation Limited*, the federal court granted an injunction to disable access to online locations that, unlike websites containing illegal content, provided access to illegal streaming of hundreds of paid TV channels accessible through set-top boxes. Yet, there is still room for improvement. Evidence submitted by the Australian Film & TV Bodies in 2018 in response to a government-initiated public consultation process on the overall effectiveness of Section 115a shows that the average time frame between filing date and judgment is 225 days, significantly long compared with the UK (77 days) and Portugal (27 days).

In 2014, Singapore passed amendments to its Copyright Act strengthening rights holders' recourse mechanisms against online piracy. The purpose of these changes was to provide a more direct mechanism for rights holders against “flagrantly” infringing sites; 2018 saw further developments relating to this law. In May, the High Court ordered internet service providers to disable access to another 53 websites after a new request from the Motion Picture Association of America. In October, the High Court issued a so-called dynamic order whereby rights holders can notify ISPs directly if the targeted infringing sites have taken counter-measures. This greatly reduces the administration of the system and improves the overall effectiveness of the orders. Finally, in November, the High Court issued another order to disable access to internet-based applications providing infringing content to set-top boxes. There has been an explosion in the growth and use of such boxes in Asia, and Singapore in particular.

Category 3: Trademarks, Related Rights, and Limitations

Figure 23 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 23: 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 concerning both traditional forms of infringement as well as violations occurring through online merchants and auction sites. As more consumers access and use the internet, online commerce is growing in popularity. In 2017, total e-commerce sales worldwide were estimated at USD2.3 trillion, up by close to 25% from 2016.⁵⁸ E-merchants and online platforms such as eBay, Amazon, Alibaba, Mercado Libre, and others today account for a growing share of global retail sales. Unfortunately, as online shopping becomes more popular and widespread so too does the proliferation and sale of counterfeit goods. For example, a number of online merchants—including some of the biggest in the world, such as DHGATE.com, Indiamart, and Taobao—are included in the United States Trade Representative’s (USTR) annual Notorious Markets Lists. Few economies have in place effective mechanisms to combat the increased sale of counterfeit goods through these online auction houses and merchants. There are private initiatives—such as eBay’s Verified Rights Owner Program—in which online merchants have in place measures to combat the sale of counterfeit goods. There are also some examples of jurisdictions where relevant legislation or case law has established an obligation for online merchants to take down IP-infringing material upon notification by a rights holder. For example, in the 2011 case *L’Oréal SA and others v eBay International AG and others*, Case C-324/09, the European Court of Justice established principles and obligations regarding the E-Commerce Directive and online auction houses. Overall, the mechanisms in place are outweighed by the sheer quantity of counterfeit goods available online. This is particularly the case in Asia. However, in 2018, there were some new positive developments in the region.

Home to the largest online market in the world, **China** has long wrestled with how to address the sale of counterfeit goods online. However, a new E-commerce

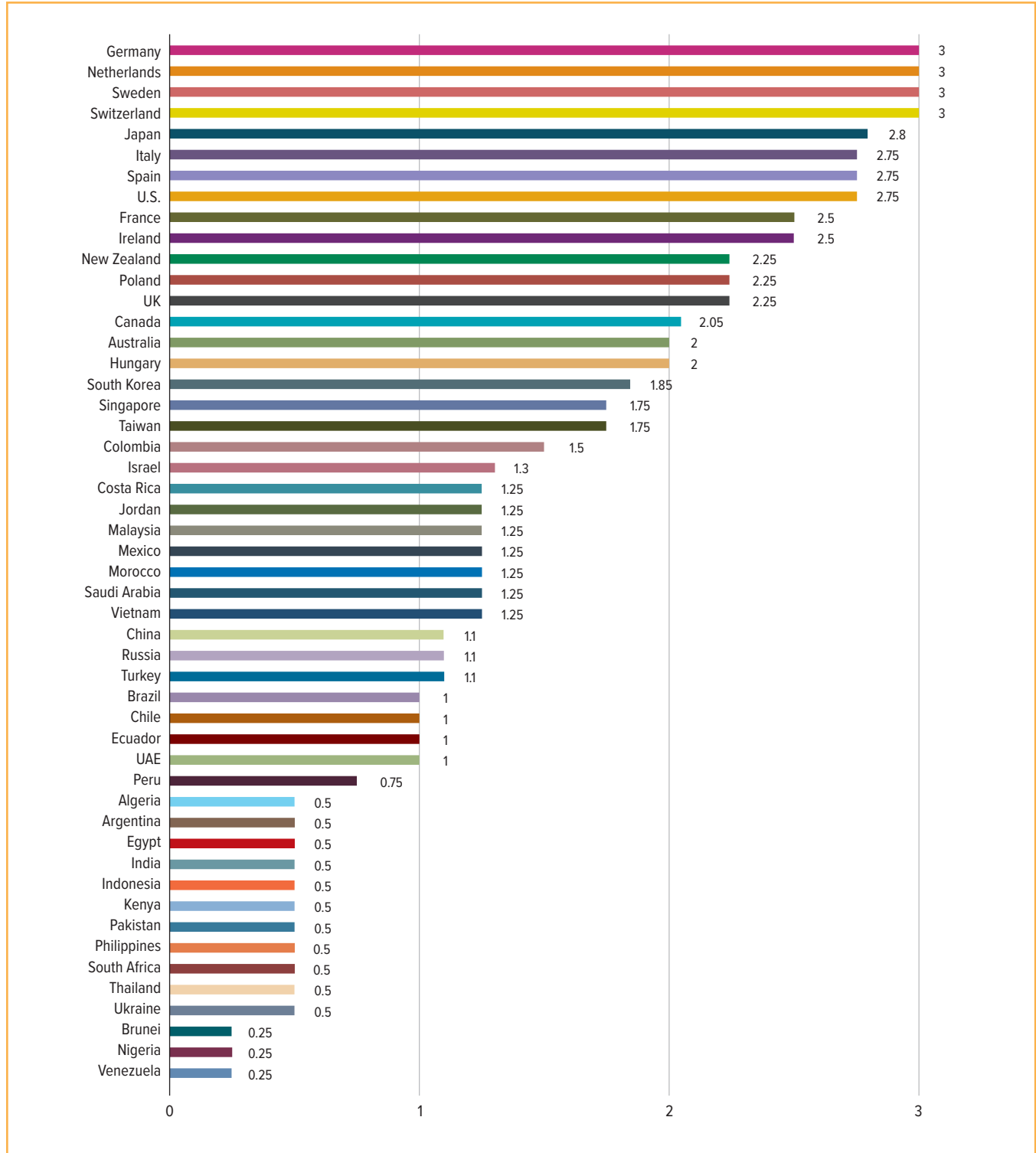
Law will enter into force in January 2019. Under the new legislation, e-commerce platforms that fail to take “necessary measures” against infringing goods sold on their website of which “they are or should be aware” will incur a fine of up to CNY2,000,000 (approximately USD300,000). According to examples previously given by the Beijing High Court, this could cover cases where information on infringing products was listed in the main pages of the seller’s website or where the price is unreasonably lower than the market price for a well-known product.

Category 4: Trade Secrets and the Protection of Confidential Information

Figure 24 summarizes the total scores for Category 4. This category measures the strength of an economy’s environment for Trade Secrets and the Protection of Confidential Information. This category contains one new indicator: Protection of trade secrets (criminal sanctions) (indicator 23). This indicator seeks to measure the existence of legislation that provides criminal sanctions for the misappropriation or improper acquisition, use, or disclosure of trade secrets or confidential business information, and the application of this legislation and effective access to these remedies.

In addition to the protection of trade secrets, this category measures the existence of a regulatory data protection term of protection. In total, the category consists of 3 indicators, with a maximum possible score of 3.

Figure 24: Scores, Category 4: Trade Secrets and the Protection of Confidential Information



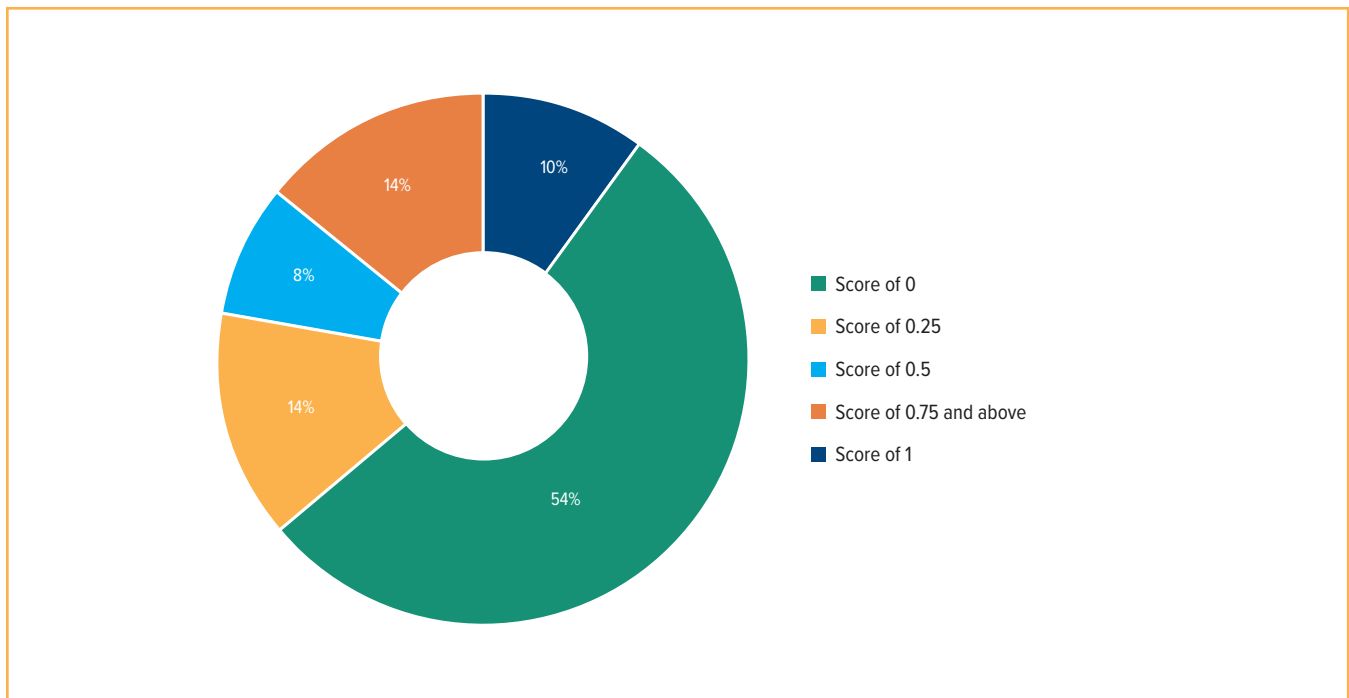
Many economies do not have specific trade secret legislation in place but instead rely on laws relating to employment contracts and disclosure of confidential information. This gap is pronounced related to criminal sanctions. Competition between nations is increasingly becoming economic and technological in nature and blurring the lines between state actors and corporate entities. This is especially the case in economies that have a heavy and pervasive state involvement in the private sector. Under these circumstances, a given rights holder that has been the victim of trade secret theft is very limited in the type of legal actions it can take. Many economies—including developed OECD members—do not have statutory criminal sanctions in place for the theft and misappropriation of trade secrets. For example, while the Trade Secret Directive sets common minimum standards and a common trade secret definition for all EU member states, it does not include or cover criminal sanctions. The result is that

some member states, such as **Germany** and **Sweden**, have in place fairly robust criminal sanctions against trade secret theft and misappropriation while others do not. Indeed, overall, most economies included in the Index perform poorly on this indicator:

- Of the 50 economies sampled, 32, or 64%, achieve a score of 0.25 or 0.
- Five economies, or 10%, have no relevant legal provisions, and there is no evidence of criminal prosecution taking place.
- Only 7 economies, or 14% of the sample, achieve a score of 1 with relevant trade secret criminal sanctions in place and evidence of prosecution and enforcement.

Figure 25 shows the overall performance on this indicator for all economies included in the Index.

Figure 25: Indicator 23: Protection of trade secrets (criminal sanctions), overall scores, all 50 Index economies



This poor performance is not correlated with stage of economic development. Many high-income OECD members have limited or no criminal sanctions in place relating to trade secrets. For instance, the **UK** does not provide trade secret-specific criminal provisions. Criminal sanctions can be found in other parts of the legal code, such as the Theft Act, Computer Misuse Act, Fraud Act, and Serious Crime Act. However, these are patchwork and contain inherent workarounds or limitations when applied in the context of trade secrets. For example, while the Theft Act criminalizes the stealing of property, relevant case law has established that intangible property (such as trade secrets) does not constitute property for the purposes of the Theft Act. There is also a requirement under the Theft Act to prove the permanent deprivation of property; copying a computer file containing a trade secret would not per se involve the removal of any real property. Similarly, criminal sanctions can be provided under the Fraud Act, such as “fraud by false misrepresentation; fraud by failing to disclose information; and fraud by abuse of position.” However, per definition, these acts are prosecutable only if they involve fraud. Criminal charges can also be brought under the Computer Misuse Act, under which it is an offense to gain “unauthorized” access to information contained in a computer. But this, per definition, involves accessing information from a computer and would not apply to theft of physical documents or plans. Policymakers have long recognized this current lacuna in UK criminal law. In 1997, the Law Commission (which conducted an in-depth review of trade secret protection in the UK) found, “At present the criminal law gives no specific protection to trade secrets. In particular, trade secrets cannot, in law, be stolen: they do not constitute ‘property’ for the purpose of the Theft Act 1968” and recommended that “the unauthorised use or disclosure of a trade secret should, in certain circumstances, be an offence.”

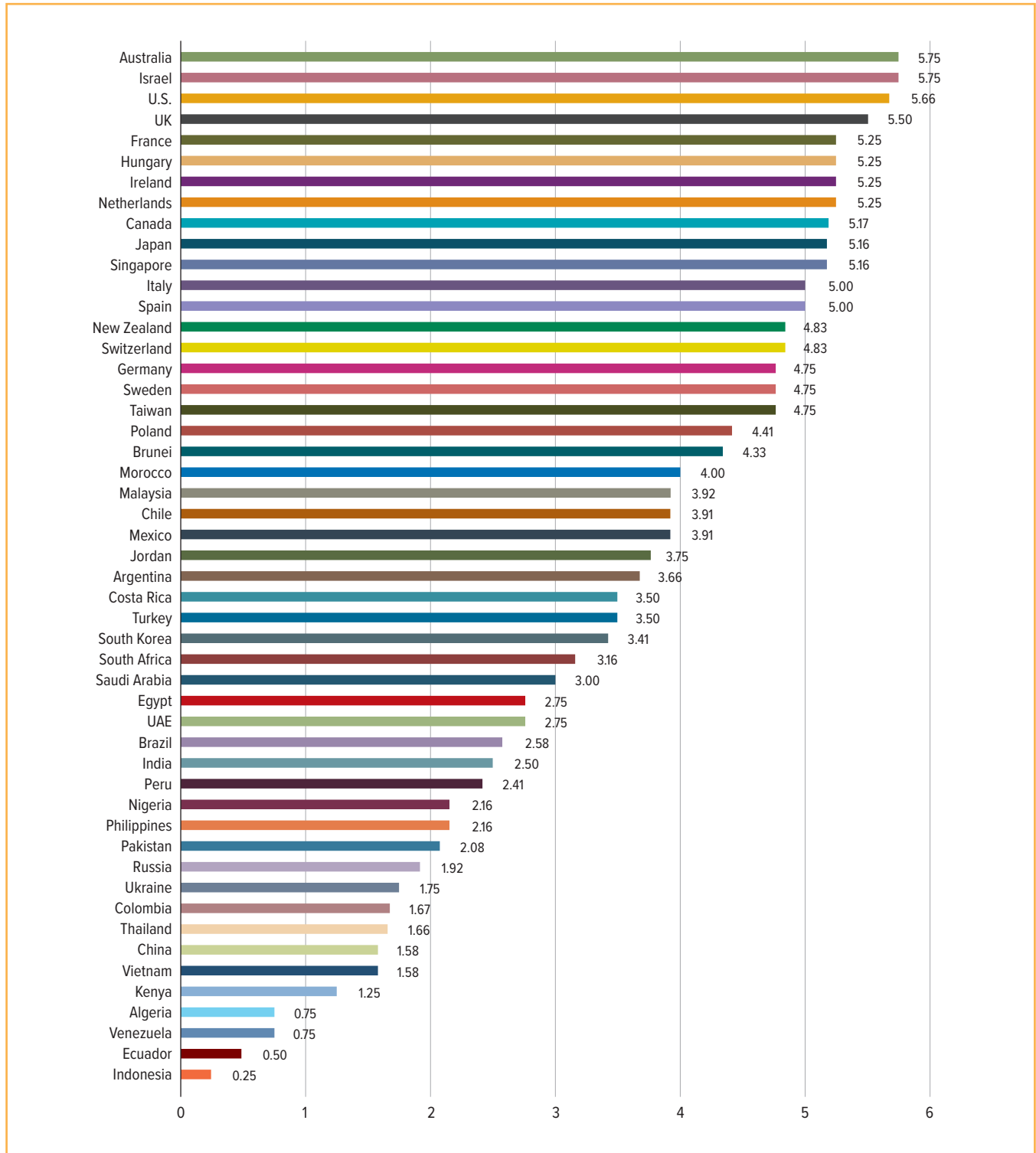
Conversely, other legal jurisdictions take the theft and misappropriation of trade secrets very seriously and have strong criminal sanctions in place. For example, in the **U.S.**, statutory law provides clear and specific criminal sanctions relating to the theft and misappropriation of trade secrets. The 1996 Economic Espionage Act (Chapter 90 of Title 18 of the U.S. Code, “Protection of Trade Secrets”) provides criminal sanctions for the theft and misappropriation of trade secrets. The law provides for prison terms of up to 10 years and fines up to USD5 million or 3 times the value of the stolen trade secret to the organization; the 2016 Defend Trade Secrets Act strengthened these fines. There is also strong evidence that federal prosecution of trade secret theft under the Economic Espionage Act has increased under both the Obama and Trump administrations. Domestic legal analysis estimates that under the Obama administration, prosecution of criminal violation of trade secret law grew by approximately 20%: from 7.2 cases per year in 1996–2009 to 8.6 cases per year in 2009–2016. Given increasing rates of global economic integration and the growth of both direct and indirect state-sponsored economic and industrial espionage, cases have become more focused on corporate malfeasance involving corporate defenders as well as foreign nationals. The growth in prosecution rates seems largely to have held steady under the first half of the Trump administration’s first term, with an estimated 9 new cases prosecuted in 2017.

Likewise, in **Switzerland**, the law provides clear and strong criminal sanctions relating to the theft and misappropriation of trade secrets. Both the Criminal Code and Unfair Competition Act provide for criminal sanctions for certain types of illegal acts pertaining to trade secrets, including the betrayal of trade secrets and industrial espionage. Swiss prosecutors actively pursue cases of alleged industrial espionage and trade secret violation.

Category 5: Commercialization of IP Assets

Figure 26 summarizes the total scores for Category 5. This category measures the strength of an economy's environment for Commercialization of IP Assets. It has been substantially expanded, with 4 new indicators added. (Indicator 25, regulatory and administrative barriers to the commercialization of IP assets, from previous editions has been broken up into 3 new indicators.) The category now consists of 6 indicators with a maximum possible score of 6. The 4 new indicators measure the presence of barriers to and incentives in place for the commercialization and licensing of IP assets, ranging from barriers to technology transfer and registration and disclosure requirements of licensing agreements to direct government intervention in setting licensing terms and the existence of tax incentives for the creation and commercialization of IP assets.

Figure 26: Scores, Category 5: Commercialization of IP Assets



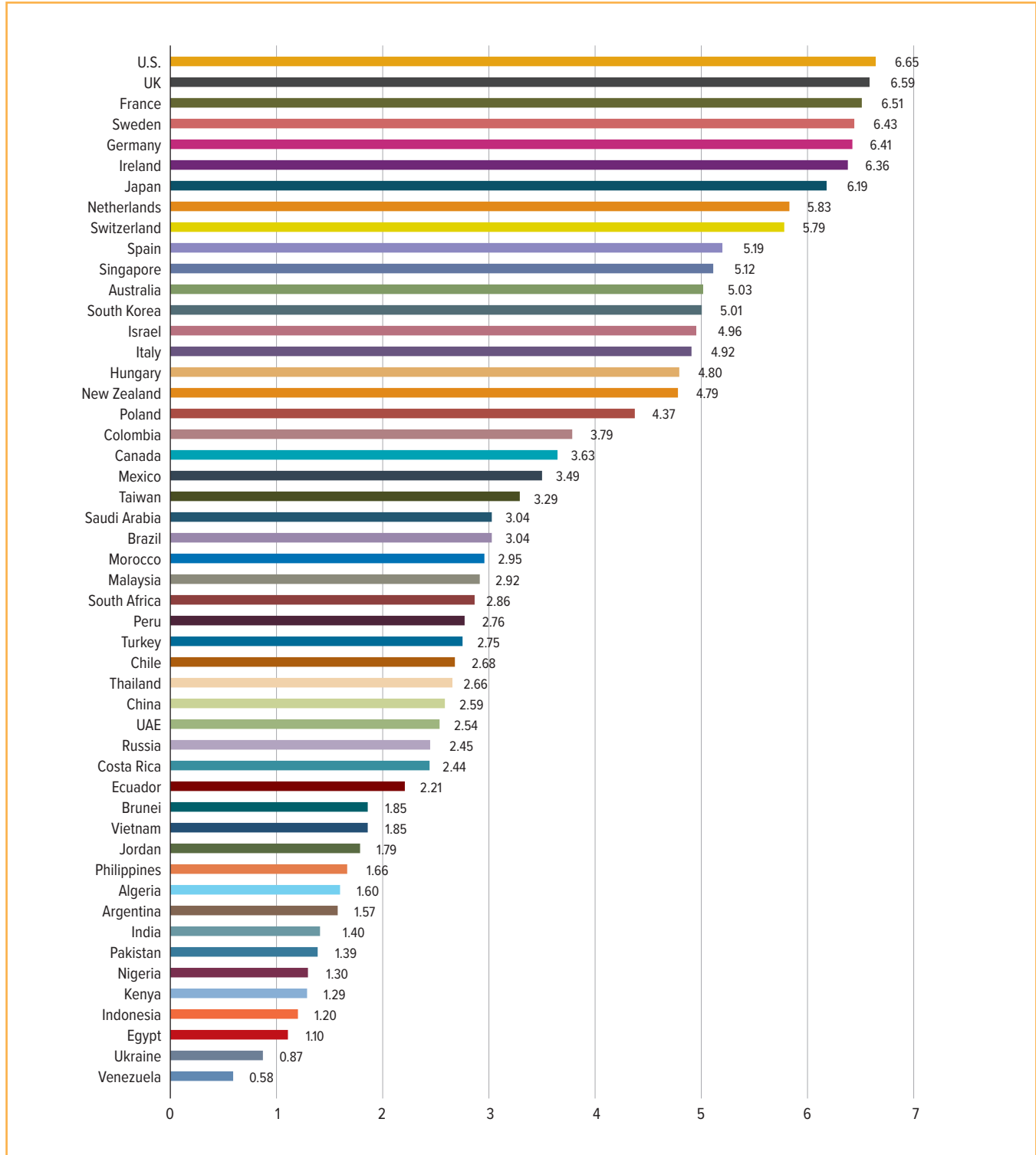
As the top performer in this category, **Israel** lives up to its moniker of being a “start-up” nation. Because Israel has been a vibrant high-tech hub for many years, its government is committed to fostering domestic high-tech and innovative industries. Israel has an established technology transfer framework, having had nearly 20 tech transfer offices and companies present at its major universities and research institutions for over 50 years. Israeli institutions are consistently included among the top 50 Patent Cooperation Treaty patenting universities worldwide according to WIPO. Israel’s technology transfer model is similar to the American Bayh-Dole framework but based on largely independent and corporate-style offices heavily focused on generating royalties and creating new companies. On the whole, this model has been widely successful. Technology transfer offices in Israel are quite active, with an estimated average of 150 new licensing deals, 15 start-ups, and NIS1.5 billion (USD400 million) in royalties per year. Indeed, 2 technology transfer offices in Israel, Yissum (Hebrew University) and Yeda (Weizmann Institute), rank among the top tech transfer offices worldwide. The Israeli example shows that with the right policies in place, even small economies with limited natural resources can become world-class hubs for technological development and activity.

Unfortunately, as detailed in Section 4, many more economies are directly or indirectly introducing policies that make it more difficult to access their respective markets or commercialize IP. This takes place through localization barriers and making access to their respective markets contingent on the sharing of IP and/or proprietary technologies with local entities or imposing restrictions on licensing activity. For example, **Algeria, China, Indonesia, Russia, Thailand,** and **Turkey** all make use of and have intensified these efforts over the past few years.

Category 6: Enforcement

Figure 27 summarizes the total scores for Category 6. This category measures an economy’s 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 27: Scores, Category 6: Enforcement

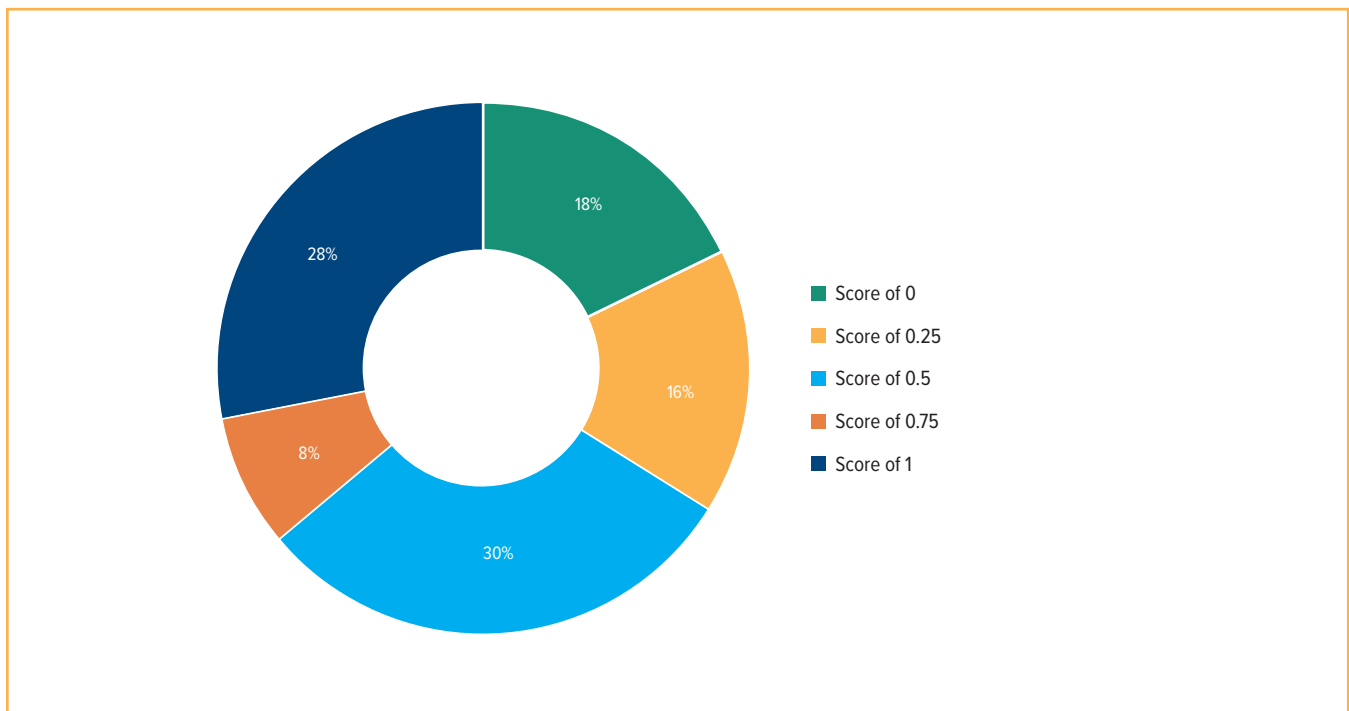


As in years past, a clear majority of the sampled economies in the Index struggle in this category. One area in particular where many economies struggle is effective border measures (indicator 36). In many economies, customs officials are not given *ex officio* powers to seize suspected goods. In some cases in which they do have this power, in practice they do not use it or the power is restricted to only goods that are destined for the domestic market and are not in-transit.

Looking at the overall performance of the 50 sampled economies, 17 fail to achieve a score over 0.25 and 9 economies have a score of 0. Figure 28 shows the overall performance on this indicator.

Despite the overall poor performance on this indicator, there were some positive economy-level developments in 2018.

Figure 28: Indicator 36: Effective border measures, overall scores, all economies



In **Malaysia**, greater clarity was brought to the rights of Malay customs authorities to act against infringing goods. Under the Trademark Act, the Royal Malaysian Customs Department (RMC) has *ex officio* powers to act against suspected infringing goods. Act 70(o) states explicitly that “any authorised officer may detain or suspend the release of goods which, based on prima facie evidence that he has acquired, are counterfeit trade mark goods.” Unfortunately, this *ex officio* power does not extend to goods in-transit. In fact, any border enforcement action against goods in-transit has been marred by a high degree of uncertainty. To begin with, Section s70d(8) of the Trademark Act excludes seizure of goods in-transit. There has also been the added dimension of free trade zones and the interaction between the Free Zones Act and relevant IP rights legislation. In many economies—not just Malaysia—goods in-transit and goods passing through free trade zones are generally not subject to detainment and seizure. However, the ruling in a long-running trademark infringement case between Philip Morris and an Egyptian tobacco manufacturer, *Philip Morris Brands Sari v Goodness for Import and Export & Ors*, may change this precedent. The case dates back to 2011 and the RMC’s detainment of a shipment of tobacco products from Vietnam destined for Egypt. The detained shipment of cigarettes branded “Malimbo” bore a striking resemblance to Philip Morris’ “Marlboro” brand. After numerous appeals and procedural judgments, the Malaysian High Court has issued a final decision in favor of Philip Morris. The decision placed perpetual mandatory injunctions for the trademark infringement and ordered the RMC to destroy the infringing products at the owner’s expense. Most important, from an IP policy perspective, the case provides a strong precedent for the RMC to take action against suspected infringing goods even if they are in-transit. In closing, the judgment stated, “This judgment sends a clear message that Malaysian ports, airports and territory cannot be used to transit goods by any mode which infringe Malaysian registered trade

marks or which constitute the subject matter of a tort of passing off (actionable in Malaysia).”

Likewise, in **Thailand**, new legislation will allow Thai customs officers to more effectively act against suspected infringing goods. Enacted in November 2017, the new Customs Act BE 2560 brought clarity to the customs regime by repealing the previous act dating back to 1926. The new act raised penalties for the importation of counterfeit goods to a maximum of 10 years of imprisonment and/or a fine of up to THB400,000 (approximately USD14,200) and expanded them to in-transit and transshipment goods, as well as “attempting” to import. Since passing the reform, the first seizures of counterfeit goods in-transit was registered in 2018.

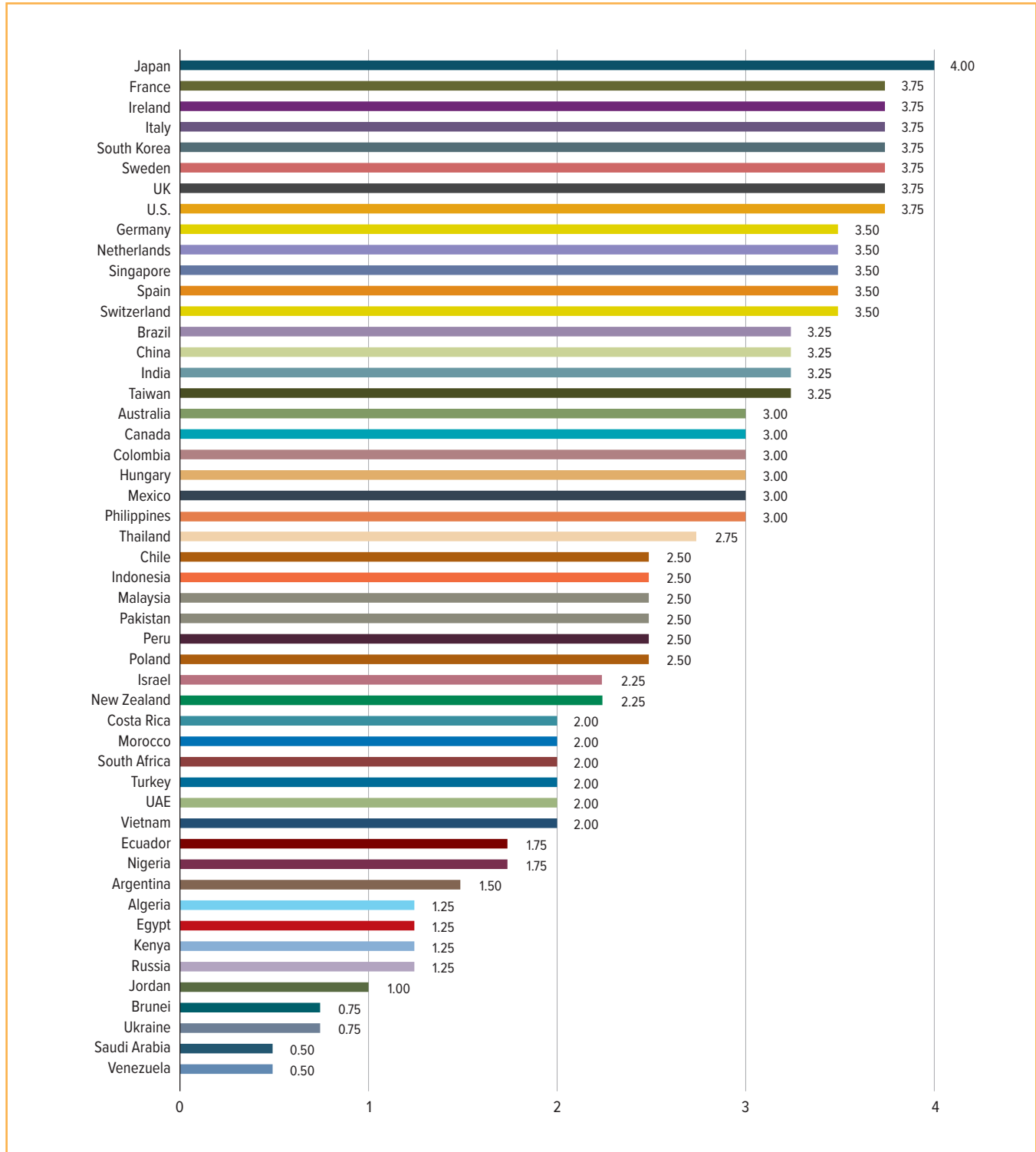
A growing challenge— Enforcing design rights at the border

As the global economy becomes more connected and inter-linked, the spread and availability of counterfeit goods is also increasing. In 2016, the OECD estimated that the international trade in counterfeit and pirated goods represented almost half a trillion USD, the equivalent of 2.5% of global trade. Customs and enforcement data from around the world reveal that a large portion of counterfeit goods are designed goods. This includes different types of clothing and apparel, watches, sunglasses, handbags, and similar accessories. While many customs authorities have experience dealing with traditional trademark and copyright enforcement—and in many economies offer rights holders the ability to record their rights with national customs authorities—this option is not always available related to design rights. The EU is one of the few jurisdictions where it is possible to file a request for customs action in individual member states as well as all member states specifying that both registered and unregistered design rights can be protected. As the circulation of counterfeit designed goods shows no signs of abating, more customs jurisdictions should examine their procedures and find ways to more actively recognize and incorporate ways of working with rights holders on enforcing design rights.

Category 7: Systemic Efficiency

Figure 29 summarizes the total scores for Category 7. This category measures an economy's Systemic Efficiency. One new indicator has been added to this category this year: targeted incentives for the creation and use of IP assets for SMEs (indicator 41). This indicator seeks to measure the extent to which a given economy's national IP system provides special incentives for SMEs for the creation, registration, and use of IP assets. Examples of such incentives include fast-track registration procedures, reduced filing fees, and technical assistance targeting SMEs. This category now consists of 4 indicators, with a maximum possible score of 4.

Figure 29: Scores, Category 7: Systemic Efficiency



As in the previous edition, the majority of sampled economies do quite well in this category. Only 12 economies fail to achieve a score of 2 (or 50%) or above. In this respect, many economies are attempting to put in place a strong support system for their national IP environments. Indeed, many economies perform better on this category than in other parts of the Index.

For example, **Kenya**, which otherwise saw its overall score decline this year, saw an increase related to the coordination of IP rights enforcement efforts (indicator 38). In 2018, the government created an Inter-Agency Anti-Illicit Trade Executive Forum as part of its efforts to enhance manufacturing under the president's Big 4 Agenda. The forum brings together public and private actors across all IP-related areas with a broad scope, including enforcement authorities such as customs, police, intelligence services, and the Asset Recovery Agency. The government also created a corresponding Technical Working Group, tasked with devising a National Strategy on Combating Illicit Trade as well as coordinating enforcement of laws to combat illicit trade.

Similarly, **Argentina** introduced positive reforms regarding transparency and stakeholder engagement. In line with the broader efforts led by the Office of the President to promote the greater cross-governmental use of public consultations, the government has created a number of online platforms for engagement and consultation. This includes the platform *Justicia 2020* hosted by the Ministry of Justice, on which the Argentinian Copyright Office and the Ministry of Culture launched a public consultation on copyright reform in 2017. Similarly, the Office of the President runs a platform, *Consulta Publica*, that hosts public consultation on a wide range of topics.

This positive momentum also holds true for this year's new indicator measuring support for SMEs (indicator 41). While **Brazil** and **India** remain in the lower half of the Index's rankings generally, on this indicator they are world leaders. In Brazil, the INPI has a suite of programs

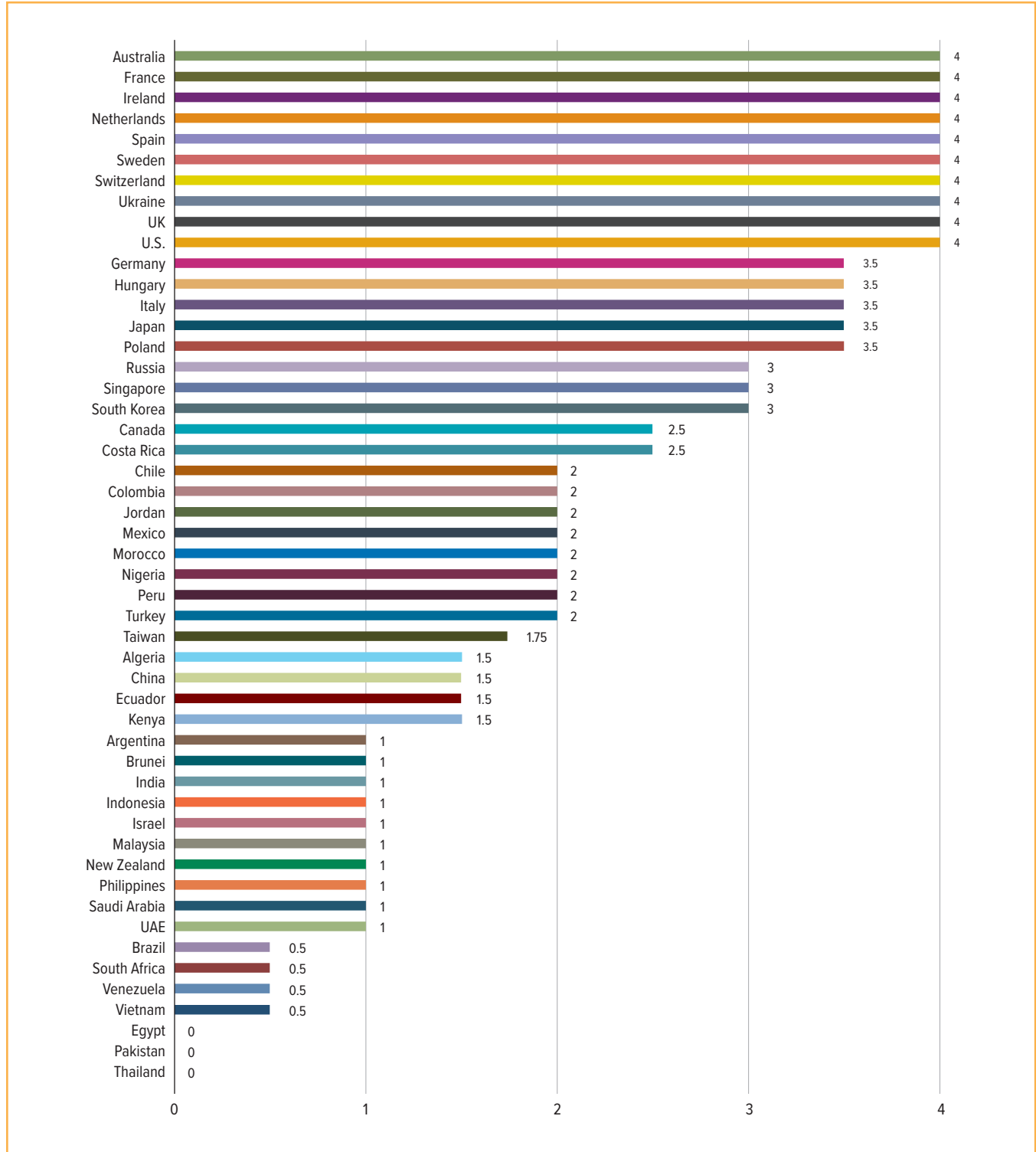
and incentives dedicated to helping SMEs register and use IP assets. Since 2016, the agency has had in place the Micro or Small Entities Examination Prioritization Pilot Project (MPE Patents Pilot Project). The program provides priority review for microenterprises and small businesses and was reauthorized in February 2018 through INPI Resolution No. 211. Furthermore, the INPI also provides technical assistance and advice through its academy program and educational programs. Finally, SMEs and microenterprises are eligible for an up to 60% reduction in filing and processing fees for patents. Likewise, India is one of the Index's leading economies when it comes to providing targeted incentives to SMEs. Expedited review for patent filings, reduced filing fees, and technical assistance are all available to Indian SMEs and start-ups. Under the Startup Standup India initiative, the Office of the Controller General of Patents, Designs, and Trade Marks is running a program called the Scheme for Facilitating Start-Ups Intellectual Property Protection.

There are also examples of traditional Index top performers that performed well on this indicator. For example, in **Japan**, the Japan Patent Office (JPO) provides reduced fees for SMEs and individuals (up to two-thirds of registration costs), priority review (accelerated examination system), and technical assistance. The latter is provided through SME-specific outreach and education programs. This includes the Regional Bureaus of Economy, Trade and Industry, which offers advisory services relating to all aspects of IP rights, including application procedures and registration. There are also designated JPO support staff to help SMEs understand and effectively file new applications.

Category 8: Membership in and Ratification of International Treaties

Figure 30 summarizes the total scores for Category 8. This category measures an economy's Membership in and Ratification of International Treaties. The category consists of 4 indicators, with a maximum possible score of 4.

Figure 30: Scores, Category 8: Membership in and Ratification of International Treaties



Being a contracting party to key international IP treaties is a reflection of a given economy's broader participation in the international IP community and embracing of the highest IP standards. Remarkably, 22 out of the 50 economies sampled fail to achieve a score of 2 (or 50%). 7 economies are not fully contracting parties to any of the treaties included in this category. 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 out of 4.

On a positive note, **India**, which consistently has been at the bottom of this category, acceded to the WIPO Internet Treaties in 2018.

7. ECONOMY OVERVIEWS

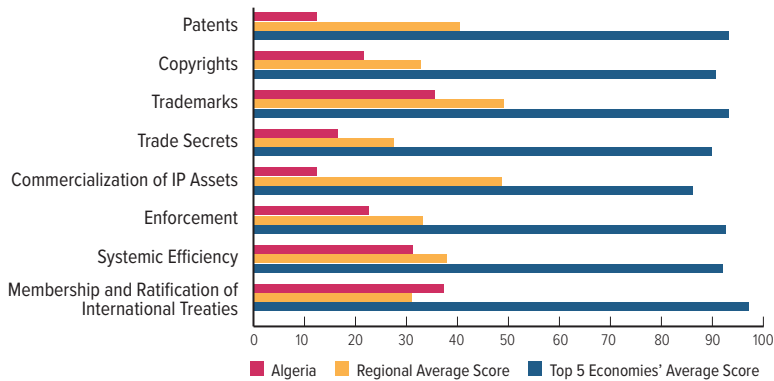
Introduction

This section provides an overview and analysis of each individual economy's score on all 45 indicators.

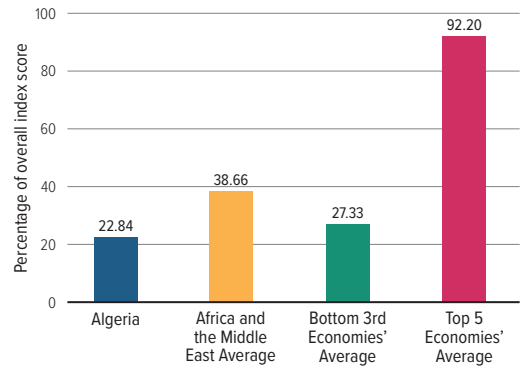
In addition to the total score and overall rank vis-à-vis the other economies included in the Index, each economy overview includes two figures. The first figure displays each economy's performance relative to the top five performers in each category of the Index. The second figure displays each economy's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

ALGERIA RANK 49/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Basic framework for IP protection in place
- ✓ Contracting party to WIPO Internet Treaties, 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
- ✗ Weak patenting environment with basic rights missing
- ✗ Major holes in copyright framework—limited coverage and applicability of existing framework to online environment
- ✗ High rates of piracy
- ✗ Not a WTO member or TRIPS signatory

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 1.00 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.50 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.00 | 14. Digital rights management (DRM) legislation | 0.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.25 |
| 8. Patent opposition | 0.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.25 |
| Category 2: Copyrights, Related Rights, and Limitations | | 1.53 | |
| 9. Copyright (and related rights) term of protection | 0.53 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 20. Industrial Design Term of Protection | 0.40 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 0.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.25 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 0.50 | | |
| 22. Protection of trade secrets, civil remedies | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.25 |
| 24. Regulatory data protection (RDP) term | 0.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.00 |
| Category 5: Commercialization of IP Assets | 0.75 | Category 7: Systemic Efficiency | 1.25 |
| 25. Barriers to market access | 0.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.50 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.00 | 39. Consultation with stakeholders during IP policy formation | 0.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.25 | 40. Educational campaigns and awareness raising | 0.50 |
| 28. Direct Government intervention in setting licensing terms | 0.25 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.25 |
| 29. IP as an economic asset | 0.25 | Category 8: Membership and Ratification of International Treaties | 1.50 |
| 30. Tax incentives for the creation of IP assets | 0.00 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 1.60 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 31. Physical counterfeiting rates | 0.42 | 44. Patent Law Treaty | 0.50 |
| 32. Digital/online piracy rates | 0.18 | 45. 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 |
| 33. Civil and procedural remedies | 0.25 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.25 | | |
| TOTAL 10.28 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Score

Algeria's overall score has decreased from 23.82% (9.53 out of 40) in the 6th edition of the Index to 22.84% (10.28 out of 45) in the 7th edition. This score drop reflects a weak performance on many of the new indicators.

Commercialization of IP Assets and Market Access

25. Barriers to market access: Algeria continued to present a challenging environment for rights holders in 2018. Specifically, the Algerian government's commitment to mandatory localization policies intensified. These policies permeate all levels of economic and industrial policymaking, including for IP rights, and remain the guiding principle for virtually all Algerian government policy. The 2018 Finance Law did not amend the long-established 51–49 principle, which limits foreign investment to a minority stake (49% or below) in any industrial sector. As noted in past editions of the Index, the net effect of this requirement is to impose a *de facto* localization requirement for foreign firms that wish to operate in Algeria directly or through licensing agreements. Additional

localization requirements were imposed in 2018. For example, while earlier this year import licenses were suspended for some 850 products (including cell phones, machinery, and automobiles), the Lower House of the Algerian Parliament endorsed the government's plan to replace this import ban on some products with custom duties that range between 30% and 200%. Additional tax increases under the 2018 Finance Law targeted imports and foreign technology, including a 1% "solidarity contribution" on imported goods and a 2% withholding tax on foreign companies' revenues from imported goods and services intended for establishing and operating mobile and satellite telecommunications networks.

30. Tax incentives for the creation of IP assets: Algeria does not provide any R&D or IP-specific tax incentives. Some incentives, including exemptions from income and corporation tax, are available for industrial production, but these are general and not aimed at high-tech or IP-intensive industries. More broadly, Algerian tax law and administration is heavily geared toward localizing production and economic activity, with mandates and requirements in place for local reinvestment.

Systemic Efficiency

41. Targeted incentives for the creation and use of IP

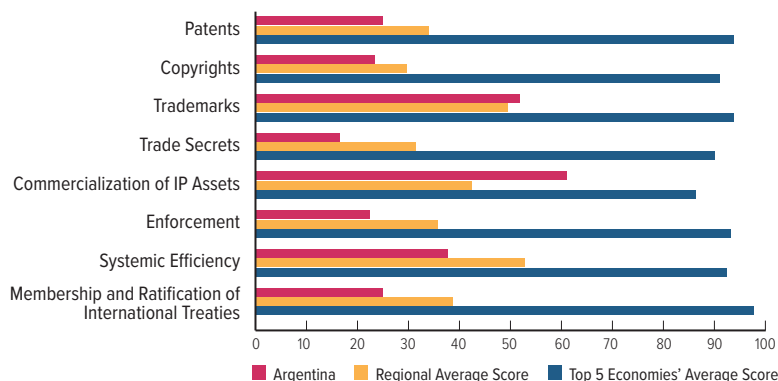
assets for SMEs: The Algerian National Institute of Industrial Property does not offer any special incentives in the form of fast-track registration procedures or reduced filing fees for registering IP. The institute does support the registration and commercialization of IP assets by academic researchers, research institutes, and SMEs through its *Centres d'appui à la technologie et à l'innovation* (CATI) network of support centers. These support centers—48 in total as of 2018—offer researchers and institutions technical support and expertise on the registration and commercialization of IP. In 2018, new support centers were announced in partnership with the Center for Research in Biotechnology and the Semiconductor Technology Research Center for Energy. The CATI concept was developed by WIPO through its Technology and Innovation Support Centers (TISC) in 2009/10 and, as of 2017, over 71 economies (including Algeria) had established or were seeking to establish local TISC offices.

Membership in and Ratification of International Treaties

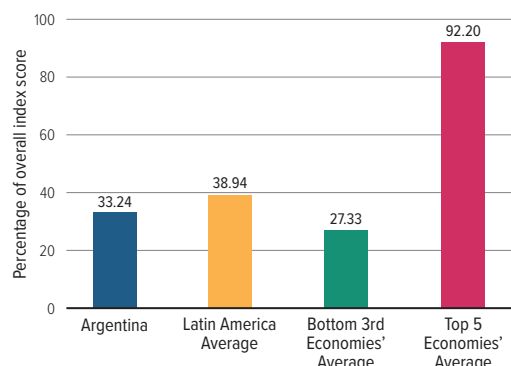
Algeria scores low in its participation in and ratification of international treaties because it has not ratified the Patent Law Treaty, it is not party to the Singapore Treaty on the Law of Trademarks, and it has not concluded a free trade agreement (FTA) with substantial IP provisions. Algeria is currently not a member of the World Trade Organization and not a signatory of the TRIPS Agreement. However, Algeria showed its commitment to the international IP community by acceding and becoming a contracting party to the Beijing Treaty on Audiovisual Performances. At the time of research, the treaty had not been ratified and is not in force. Participation in it is not measured in the Index. Finally, Algeria is a contracting party to the African Continental Free Trade Area, signed by 44 African countries in March 2018. The agreement is a first step in establishing an ambitious pan-African free trade area. The signed agreement is a framework agreement with deeper discussions and chapters (including on IP rights) to be discussed in the future.

ARGENTINA RANK 40/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Basic framework for IP protection
- ✓ Pronounced efforts over the past few years to strengthen international cooperation on IP, including through PPHs and, in 2018, the introduction of the Cooperative Patent Classification system
- ✓ Ongoing streamlining of administrative and enforcement bodies
- ✓ Improvements to government transparency and cooperation with stakeholders continued in 2018

KEY AREAS OF WEAKNESS

- ✗ Key life sciences IP rights missing
- ✗ Biopharmaceutical patentability standards remain outside international standards
- ✗ Gaps in the legal framework for enforcing copyright online, although some important instances of judicial action exist
- ✗ Persistently high rates of piracy, including physical counterfeiting
- ✗ Limited protection for trade secrets

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 2.00 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.25 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.25 | 14. Digital rights management (DRM) legislation | 0.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 3.10 | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 0.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 1.63 | |
| 9. Copyright (and related rights) term of protection | 0.63 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 0.50 | | |
| 22. Protection of trade secrets, civil remedies | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.50 |
| 24. Regulatory data protection (RDP) term | 0.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.00 |
| Category 5: Commercialization of IP Assets | 3.66 | Category 7: Systemic Efficiency | 1.50 |
| 25. Barriers to market access | 0.25 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.25 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.50 | 39. Consultation with stakeholders during IP policy formation | 0.50 |
| 27. Registration and disclosure requirements of licensing deals | 0.75 | 40. Educational campaigns and awareness raising | 0.25 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.50 |
| 29. IP as an economic asset | 0.50 | Category 8: Membership and Ratification of International Treaties | 1.00 |
| 30. Tax incentives for the creation of IP assets | 0.66 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 1.57 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 31. Physical counterfeiting rates | 0.24 | 44. Patent Law Treaty | 0.00 |
| 32. Digital/online piracy rates | 0.33 | 45. 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 |
| 33. Civil and procedural remedies | 0.25 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.00 | | |
| TOTAL 14.96 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Score

Argentina's overall score has increased from 28.87% (11.55 out of 40) in the 6th edition of the Index to 33.24% (14.96 out of 45) in the 7th edition. This reflects a relatively strong performance on the new indicators added and a score increase on indicator 39.

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 firm steps to streamline the patenting process and improve administration. A substantial backlog of patent applications has existed at the patent office, the *Instituto Nacional de La Propiedad Industrial* (INPI), for several years; the average time to grant for pharmaceutical, chemical, and biotech patents is reportedly still about 8 to 9 years. Argentina 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 a memorandum of understanding (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. These efforts to improve the administration of the INPI continued in 2018. Specifically, the agency signed an additional MOU with the EPO in February for the introduction of the Cooperative Patent Classification (CPC). Developed by the EPO and the USPTO, the CPC has been operational since 2013 and is becoming the international standard for patent classification, with an increasing number of patent offices around the world making use of it. The INPI and Argentine government are to be commended for their work on improving the functioning of their IP system and better aligning the patent office's administration with international standards.

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,

major gaps exist in the legal framework for enforcing copyrights, including the lack of clear guidance on ISP liability and of notice and takedown provisions. This holds true for 2018. The lack of ISP liability—already affirmed by the Supreme Court in 2014 (*Rodriguez v Google case*)—has been reaffirmed in the *Gimbutas v Google* case of September 2017. Since 2016, two draft laws have been submitted to introduce a new antipiracy regime (Bill 942 and Bill 5771). Both drafts, however, fall short of international standards. According to the drafts, ISPs would be under no obligation to supervise internet content and would not be held responsible for copyright infringement unless they refused to comply with a judicial order asking them to remove the infringing content. In addition, the scope of Bill 5771 is limited to “flagrantly illegal content,” such as content that facilitates crime, endangers human life, or advocates national or racial hate.

Trademarks, Related Rights, and Limitations and Design Rights

18. Legal measures available that provide necessary exclusive rights to redress the unauthorized uses of trademarks:

Law 27,444 enacted in June 2018 that implements Decree 27/2018 aims to simplify administrative procedures and grants broader powers to the INPI to resolve trademark disputes. First, it reduces from 12 to 3 months the compulsory mediation period in trademark opposition procedures. At the end of the 3-month term, the INPI will decide on the merits of the opposition, and both parties will have a month to appeal the decision to the Federal Court of Appeals. While the INPI will now be charged with handling oppositions, nullity cases will continue to be resolved in a judicial setting. The simplification of the opposition proceedings has the potential to reduce both registration deadlines and costs, avoiding the expenses linked to mandatory mediation or court procedures. Yet,

the new procedures will also add to the already substantial workload on the INPI, which might result in further delays if no new resources are added.

Commercialization of IP Assets and Market Access

27. Registration and disclosure requirements of licensing deals: Per Resolution 117/2014, registration of IP licenses and technology transfer agreements is voluntary and aimed only at providing greater juridical certainty, notably regarding the date the agreement is executed. Yet, registration does entail some tax advantages. As per Article 93 of the Income Tax Law, registration allows the licensee to deduct royalties paid to the licensor as business expenses as part of calculating income tax liability. Also, the licensee will benefit from a lower tax withholding rate of between 21% and 28% (which can be lowered to as little as 10% if a double taxation agreement is in place with the licensor’s country of origin) instead of 31.5%. According to Article 8 of Law 22,426, upon registration companies need to provide information on the relevant technology or brand, the number of staff employed by the recipient, and an estimate of the payments to be made.

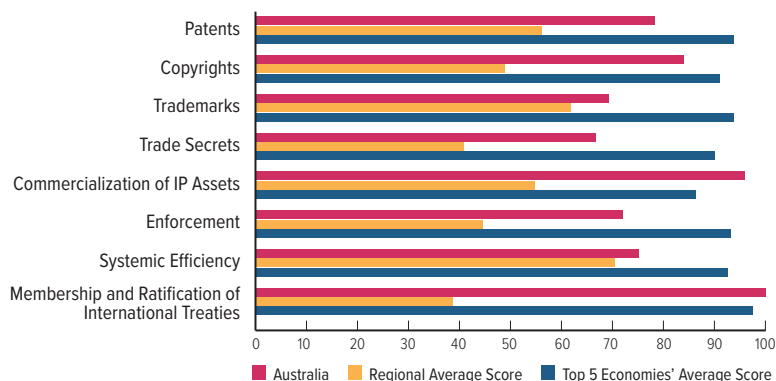
Systemic Efficiency

39. Consultation with stakeholders during IP policy

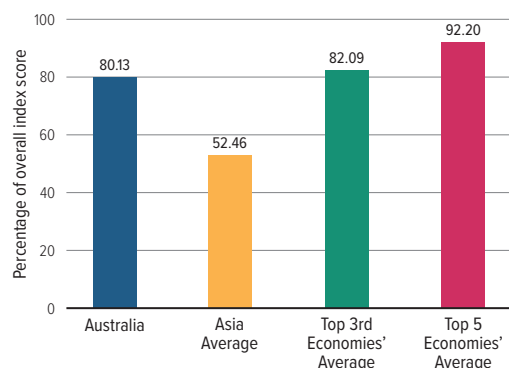
formation: In line with the broader efforts led by the Office of the President to promote the greater cross-governmental use of public consultations, the government has over the past few years created a number of online platforms for engagement and consultation. This includes the platform *Justicia 2020*, hosted by the Ministry of Justice, where the Argentinian Copyright Office and the Ministry of Culture launched a public consultation on copyright reform in 2017. Similarly, the Office of the President runs a platform, *Consulta Publica*, that hosts public consultations on a wide range of topics. Because of these efforts, the score for indicator 39 has increased by 0.25.

AUSTRALIA RANK 13/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Global leader on copyright enforcement in the online space
- ✓ Established system of injunctive relief that permits the disabling of foreign-hosted infringing websites
- ✓ National Security Legislation Amendment (Espionage and Foreign Interference) 2018 introduces stiff penalties for industrial espionage on behalf of a foreign state entity
- ✓ No administrative or regulatory burdens in place that hinder licensing activity

KEY AREAS OF WEAKNESS

- ✗ Pre-grant patent opposition system introduces significant delays to patent grants
- ✗ Gaps in enforcement, including for life sciences patents
- ✗ Australian linkage regime is deficient both substantively and procedurally—creates uncertainty for biopharmaceutical innovators

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 6.25 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.50 |
| 2. Patentability requirements | 0.75 | 13. Scope of limitations and exceptions to copyrights and related rights | 1.00 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 1.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 1.00 |
| 8. Patent opposition | 0.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.75 |
| Category 2: Copyrights, Related Rights, and Limitations | | 5.88 | |
| 9. Copyright (and related rights) term of protection | 0.63 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.50 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 1.00 | 20. Industrial Design Term of Protection | 0.40 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 1.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.50 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 2.00 | | |
| 22. Protection of trade secrets, civil remedies | 0.75 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.75 |
| 23. Protection of trade secrets, criminal standards | 0.75 | 36. Effective border measures | 0.50 |
| 24. Regulatory data protection (RDP) term | 0.50 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.50 |
| Category 5: Commercialization of IP Assets | 5.75 | Category 7: Systemic Efficiency | 3.00 |
| 25. Barriers to market access | 1.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.75 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 1.00 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 1.00 | 40. Educational campaigns and awareness raising | 0.75 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.50 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 4.00 |
| 30. Tax incentives for the creation of IP assets | 1.00 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 5.03 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 31. Physical counterfeiting rates | 0.71 | 44. Patent Law Treaty | 1.00 |
| 32. Digital/online piracy rates | 0.82 | 45. 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 |
| 33. Civil and procedural remedies | 1.00 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.75 | | |
| TOTAL 36.06 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Score

Australia's overall score has decreased marginally from 80.27% (32.11 out of 40) in the 6th edition of the Index to 80.13% (36.06 out of 45) in the 7th edition. This score reflects that Australia's overall performance on the new indicators is roughly in line with its overall performance on the Index.

Area of Note

Australia is in the final stages of implementing the results of a long-running review of its IP system through the work of the Productivity Commission, which published its full review and recommendations in December 2016. In 2018, the Intellectual Property Laws Amendment Bill 2018 (Productivity Commission Response Part 1 and Other Measures) received Royal Assent and, at the time of research, a consultation was underway for a second bill, the Intellectual Property Laws Amendment Bill (Productivity Commission Response Part 2 and Other Measures). The pending legislation includes some important potential changes to Australia's IP environment, including aligning standards with the EPO,

abolishing innovation patents, and updating standards for government use of inventions. Notably, the passed and proposed legislation does not include the commission's recommendations for providing any export exemption for biopharmaceuticals (a so-called SPC waiver) or reducing the copyright term.

Patents, Related Rights, and Limitations

4. Pharmaceutical-related patent enforcement and resolution mechanism: As noted in previous editions, Australia's pharmaceutical linkage mechanism has several deficiencies. The system lacks an automatic stay (as provided by, for example, Hatch-Waxman in the U.S.) and instead gives patent holders interlocutory injunctive relief through a court of competent jurisdiction. In an attempt to balance the interests of innovators and generic producers, the Australian system added both a certification from the generic producer (Section 26B) of invalidity and/or noninfringement, and a certification from the patent holder (Section 26C) that the infringement proceedings are in good faith, have reasonable prospects of success, and will be conducted without unreasonable delay. However,

penalties for providing false or misleading information are disproportionately higher for a 26C Certificate (patent holder) than for a 26B Certificate (generic producer). Additionally, patent holders are not made aware consistently and on a timely basis of potentially infringing follow-on products in advance of their approval by Australian drug regulators in the Therapeutic Goods Administration. Rather than notifying patent holders, generic manufacturers summarily certify their belief that their products do not infringe enforceable patents. In turn, patent holders are informed only after the follow-on products have been approved. There are also strong commercial incentives for generic manufacturers to launch at risk due to the structure of the Australian health care system. Specifically, because Australia's Pharmaceutical Benefit Scheme imposes automatic and irreversible price cuts on medicines as soon as competing versions enter the market, generic companies have a strong incentive to launch at risk, forcing innovator companies to pursue preliminary injunctions to resolve patent disputes. These incentives are likely to become even stronger because the National Health Amendment (Pharmaceutical Benefits—Budget and Other Measures) Act 2018 increases the price reduction for products with generic competitors from 16% to 25%. 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 Pharmaceutical Benefit Scheme 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. The application of market-sized damages exposes innovators to additional, unquantifiable, and significant compensation claims that were not agreed on at the time provisional enforcement measures were granted and continues to impose risk and uncertainties for innovative biopharmaceutical companies in Australia.

Copyrights, Related Rights, and Limitations

11. Expedient injunctive-style relief and disabling of infringing content online: Maintaining Australia's global leadership in this area of copyright enforcement, 2018 saw the continued use of Section 115a of the Copyright Amendment (Online Infringement) Act 2015, which allows

courts to require ISPs to disable access to foreign-hosted sites (or "online locations") whose primary purpose is to infringe copyright. In a landmark ruling in *Roadshow Films Pty Limited v Telstra Corporation Limited*, the federal court granted an injunction to disable access to online locations that, unlike websites containing illegal content, provided access to the illegal streaming of hundreds of paid TV channels accessible through set-top boxes. Yet, there is still room for improvement. Evidence submitted by the Australian Film & TV Bodies in 2018 in response to a government-initiated public consultation process on the overall effectiveness of Section 115a shows that the average time frame between filing date and judgment is 225 days, significantly longer compared with the UK (77 days) and Portugal (27 days).

Trade Secrets and the Protection of Confidential Information

23. Protection of trade secrets (criminal sanctions):

Australia does not provide trade secret-specific statutory criminal sanctions for the theft or misappropriation of trade secrets. Historically, criminal sanctions are available but only under specific circumstances of misappropriation. For example, offenses under Section 477.1 under the Criminal Code, Division 476, Computer Offences (Unauthorised Access, Modification or Impairment with Intent to Commit a Serious Offence), provides penalties of 5 or more years' imprisonment and is considered a serious offense. But this rule applies only within the context of computer-related offenses. On a positive note, legislation passed in 2018 will address some of these deficiencies, particularly in relation to state-sponsored economic and industrial espionage. The National Security Legislation Amendment (Espionage and Foreign Interference) 2018 introduces stiff penalties for industrial espionage on behalf of a foreign state entity. Specifically, Section 92A, Theft of Trade Secrets Involving Foreign Government Principal, introduces a 15-year imprisonment term for trade secret theft on behalf of a foreign government. The Australian government should be commended for taking such strong action against the growing threat of international industrial espionage.

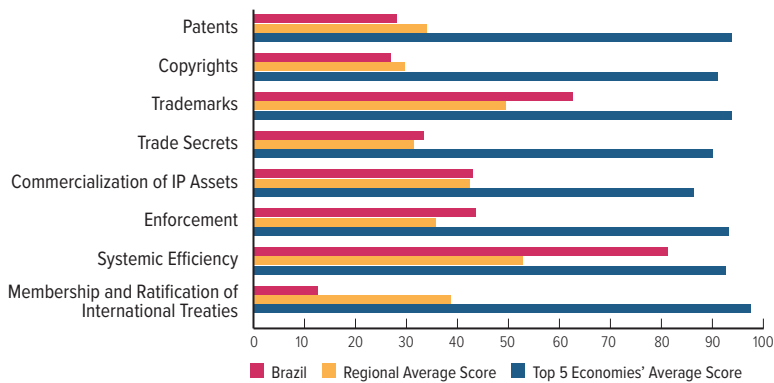
Membership in and Ratification of International Treaties

45. At least one post-TRIPS free trade agreement with substantive IP provisions and chapters in line with international best practices as captured in modern post-TRIPS U.S. and EU FTAs:

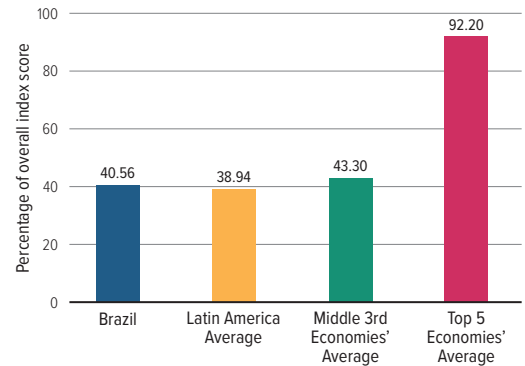
Australia is one of the contracting parties to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership. In March 2018, the final agreement was signed and full text released. The text of the CPTPP retains important aspects of the TPP's IP provisions, including, for example, provisions relating to trade secrets and border enforcement. However, numerous critical provisions have been suspended, including for patentable subject matter, biopharmaceutical-specific IP rights such as regulatory data protection, and copyright protection and enforcement, as well as protections relating to satellite and cable signals. While Australia is one of the economies that has ratified the agreement, the CPTPP does not conform to the modern standards of other post-TRIPS international trade agreements.

BRAZIL RANK 31/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Positive reform and roll-back of long-standing barriers to licensing and commercialization activities in 2017
- ✓ Global leader in administrative incentives for SMEs to register their IP, including expedited patent examination, reduced filing fees, and technical assistance
- ✓ 10-year minimum term of patent protection in place for administrative delays

KEY AREAS OF WEAKNESS

- ✗ Key life sciences IP rights missing; challenging patentability environment
- ✗ Ongoing uncertainty on how the prior consent issue between INPI and ANVISA with regard to biopharmaceutical patent applications will play out
- ✗ Limited participant in international IP efforts—not a fully contracting party to any of the treaties included in the Index

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 2.25 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.50 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.25 | 14. Digital rights management (DRM) legislation | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| 8. Patent opposition | 0.50 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 1.88 | |
| 9. Copyright (and related rights) term of protection | 0.63 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 20. Industrial Design Term of Protection | 1.00 |
| 11. Expeditive injunctive-style relief and disabling of infringing content online | 0.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.50 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 1.00 | | |
| 22. Protection of trade secrets, civil remedies | 0.50 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.50 | 36. Effective border measures | 0.50 |
| 24. Regulatory data protection (RDP) term | 0.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.75 |
| Category 5: Commercialization of IP Assets | 2.58 | Category 7: Systemic Efficiency | 3.25 |
| 25. Barriers to market access | 0.75 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.50 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.50 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.00 | 40. Educational campaigns and awareness raising | 0.75 |
| 28. Direct Government intervention in setting licensing terms | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 1.00 |
| 29. IP as an economic asset | 0.50 | Category 8: Membership and Ratification of International Treaties | 0.50 |
| 30. Tax incentives for the creation of IP assets | 0.33 | 42. WIPO Internet Treaties | 0.00 |
| Category 6: Enforcement | 3.04 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 31. Physical counterfeiting rates | 0.51 | 44. Patent Law Treaty | 0.50 |
| 32. Digital/online piracy rates | 0.53 | 45. 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 |
| 33. Civil and procedural remedies | 0.25 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.25 | | |
| TOTAL 18.25 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Brazil's overall score has increased from 39.30% (15.72 out of 40) in the 6th edition to 40.55% (18.25 out of 45) in the 7th edition. This reflects a relatively strong performance on many of the new indicators added to the Index, including indicator 41.

Patents, Related Rights, and Limitations

2. Patentability requirements: As has been discussed in previous editions of the Index, Brazil has long-standing issues across the board, with basic patent-related rights not in place and standards of patentability outside international norms. For instance, through Article 229-C of the Industrial Property Law 9.279 (*Lei da Propriedade Industrial*), the Brazilian National Health Surveillance Agency (ANVISA) has enjoyed the right to provide prior consent to biopharmaceutical patents examined by the Brazilian Patent Office (INPI). In effect, this required a dual examination of all applications, in turn violating the TRIPS Agreement. As a step in the right direction, the publication of the April 2017

Interagency Ordinance clarified that ANVISA will analyze applications in light of public health, and that opinions about patentability may be binding on the INPI only in cases in which ANVISA concludes that a severe public health risk exists as prescribed under Article 4 of the regulation. In September 2018, this new working arrangement was tested when the INPI approved a patent for sofosbuvir despite ANVISA's objections. A few days after the patent was granted, a Brazilian federal court suspended it based on a lawsuit filed by a coalition led by Marina Silva, one of the leading candidates in the then presidential election. In his judgment, Judge Rolando Valcir Spanholo argued that the INPI had failed in its duty to review the patent application within the broader context of the social and economic interests of Brazil and ordered the agency to reassess the application. In an encouraging interview with *IP-Watch* on September 27, 2018, Luiz Otávio Pimentel, head of the INPI, termed the lawsuit as "the most important case in recent years," stressing that the decision to grant a patent for the drug in Brazil over the outcries of activists was purely "a technical decision without interference." The lawsuit remains pending, and it remains to be seen how the prior consent

issue will be put into practice in other cases. Nonetheless, the larger point persists that patent protection for biopharmaceuticals in Brazil is not generally straightforward or consistent with global norms.

7. Membership in Patent Prosecution Highways (PPHs):

Brazil is not a participant in the IP5 PPH nor a member of the Global PPH. The INPI does, however, have a pilot PPH program in place with both the USPTO and the JPO. A memorandum of understanding was signed with the USPTO in 2015 and the pilot commenced in 2016. Similarly, the PPH with Japan has been in place since 2017. Unfortunately, both programs are limited to certain arts. The PPH with the USPTO is open only for petrochemicals and related fields and the program with the JPO targets the ICT sector. Brazil is also an active participant in the Latin American PROSUR initiative.

Trade Secrets and the Protection of Confidential Information

22. Protection of trade secrets (civil remedies); and 23.

Protection of trade secrets (criminal sanctions): In Brazil, confidential information and trade secrets are primarily protected through the Industrial Property Law 9.279 (*Lei da Propriedade Industrial*) and Labor Code (*Consolidação das Leis do Trabalho*). Article 195 of Law 9.279 defines what constitutes “crimes of unfair competition,” including obtaining, divulging, exploiting, and utilizing confidential knowledge and/or information and data that can be considered a trade secret. The law provides for both criminal sanctions and civil remedies. Article 482 of the Labor Code defines “breach of company secrecy” as grounds for employment termination. Importantly, and unlike other jurisdictions, including many high-income OECD economies, the Industrial Property Law provides and explicitly defines the need for and use of private court proceedings regarding trade secret and confidential information litigation. Article 206 of the law states that “in the event that information disclosed in court ... is characterized as confidential, whether industrial or trade secret, the judge shall order that the proceedings be held in camera, and the other party shall be prohibited from using such information for other purposes.” However, as with other forms of IP rights, rights holders in Brazil face significant challenges in

practically enforcing their rights, given long-standing judicial delays and backlog. The new Civil Procedure Code (*Código de Processo Civil*) enacted in 2015 and in force since mid-2016 has alleviated some of the pressure points within the judicial process, but rights holders continue to face long wait times for court action. And while available, criminal sanctions are relatively weak—Article 195 of the Industrial Property Law provides a maximum penalty of between three months’ to one year’s imprisonment or a fine.

Commercialization of IP Assets and Market Access

27. Registration and disclosure requirements of licensing deals:

As noted in previous editions of the Index, 2017 saw a positive change of direction in Brazil’s environment regarding the commercialization of IP assets. Traditionally, significant regulatory and formal requirements have been in place that limit 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 to be approved by the INPI, with limitations on fees and payments between the contracting parties. Exclusive licensing agreements were subject to more onerous publication requirements than non-exclusive licenses, making this process more time-consuming. This changed in 2017 when the INPI announced through Rule 70 that the agency would no longer take an active role in framing and approving licensing agreements. Instead, the new rule suggests that the agency will operate as an agency of recording. As noted last year, this positive step forward suggests that there will be less direct government intervention and setting of licensing terms and conditions in Brazil. Unfortunately, the rules that accompany the administration of the INPI’s new recording process are, from a rights holder’s perspective, unnecessarily bureaucratic and burdensome. For instance, under Rule 199, complete licensing contracts must be submitted to the INPI. Contracting parties are also required to submit the total value of a licensing agreement as well as issued invoices.

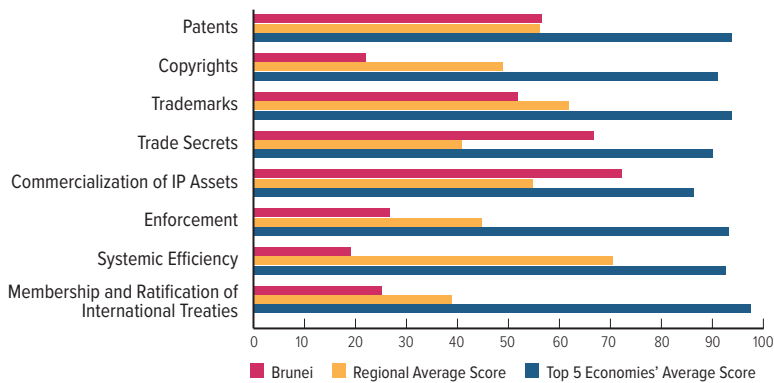
Systemic Efficiency

41. Targeted incentives for the creation and use of IP

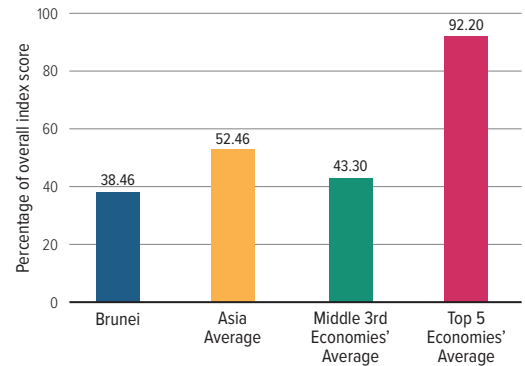
assets for SMEs: The INPI has a suite of programs and incentives dedicated to helping SMEs register for and use IP assets. Since 2016, the agency has had in place the MPE Patents Pilot Project (*Proyecto Piloto Patente MPE*). The program provides priority review for microenterprises and small businesses and was reauthorized in February 2018 through INPI Resolution No. 211. Furthermore, the INPI also provides technical assistance and advice through its academy program and educational programs. Finally, SMEs and microenterprises are eligible for an up to 60% reduction in filing and processing fees for patents.

BRUNEI RANK 34/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ 2017 accession to WIPO Internet Treaties
- ✓ Major IP reforms in the past few years, including establishing an IP office (BrulPO)
- ✓ Removed from Special 301 Report
- ✓ New PPH agreement in place with Japan
- ✓ No fundamental administrative or regulatory barriers in place to execute licensing agreements

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—64% in latest estimates
- ✗ Limited incentives in place for the creation and use of IP assets for SMEs

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 4.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.75 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.75 | 14. Digital rights management (DRM) legislation | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| 8. Patent opposition | 0.50 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 1.53 | |
| 9. Copyright (and related rights) term of protection | 0.53 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 20. Industrial Design Term of Protection | 0.60 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 0.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.50 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 0.25 | | |
| 22. Protection of trade secrets, civil remedies | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.50 |
| 23. Protection of trade secrets, criminal standards | 0.00 | 36. Effective border measures | 0.00 |
| 24. Regulatory data protection (RDP) term | 0.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.00 |
| Category 5: Commercialization of IP Assets | 4.33 | Category 7: Systemic Efficiency | 0.75 |
| 25. Barriers to market access | 1.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.25 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.50 | 39. Consultation with stakeholders during IP policy formation | 0.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.75 | 40. Educational campaigns and awareness raising | 0.25 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.25 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 1.00 |
| 30. Tax incentives for the creation of IP assets | 0.33 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 1.85 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 31. Physical counterfeiting rates | 0.49 | 44. Patent Law Treaty | 0.00 |
| 32. Digital/online piracy rates | 0.36 | 45. 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 |
| 33. Civil and procedural remedies | 0.25 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.25 | | |
| TOTAL 17.31 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Score

Brunei's overall score has increased from 37.52% (15.01 out of 40) in the 6th edition to 38.46% (17.31 out of 45) in the 7th edition. This reflects a relatively strong performance on the new indicators added to the Index and a score increase on indicator 7.

Patents, Related Rights, and Limitations

7. Membership in Patent Prosecution Highways (PPHs):

Although Brunei is not a member of either the Global PPH or the IP5 PPH, the Brunei IP Office (BrulPO) and Japan Patent Office (JPO) have in place a patent prosecution highway under the JPO's PPH+ program. This positive feature of Brunei's national IP environment marks another step in the development of BrulPO's institutional and technical capacity. As a result, the score on this indicator has increased by 0.5.

Commercialization of IP Assets and Market Access

27. Registration and disclosure requirements of licensing deals; and 28. Direct government intervention in setting

licensing terms: Licensing activity in Brunei is not limited or directly regulated or supervised by relevant IP laws or BrulPO. Patent rights are by statute defined as a form of personal property free to be handled, transferred, and disposed of. Section 42(1) of the 2011 Patents Order states that "any patent or application for a patent is personal property (without being a thing in action), and any patent or any such application and rights in or under it may be transferred, created or granted in accordance with this section." With respect to licenses, subsection (4) further states that "a licence may be granted under any patent or any such application for working the invention which is the subject of the patent or the application ... and any such licence or sub-licence shall vest by operation of law in the same way as any other personal property and may be vested by an assent of personal representatives [sic]." Government authorities do not generally set or approve licensing terms. An exception is for licenses of right when a given rights holder explicitly allows the patent authorities to, under specific circumstances, set commercial terms. Specifically, under subsection (3), Section 55 (3) of the Patents Order, the registrar has the authority to set the

final commercial conditions for licensing the patent if the potential licensor and licensee fail to reach an agreement. However, to take full legal effect against third parties, licenses should be registered with BrulPO. Registration requirements are not overly onerous or intrusive.

30. Tax incentives for the creation of IP assets: Brunei does not have any IP-specific tax incentives in place. Expenditure on R&D is deductible under s11(c) of the Income Tax Act, which includes “expenditure incurred on research and development undertaken directly ... [and/or] payments made by that person to an approved research and development company for undertaking on his behalf research and development related to that trade or business.” Similarly, under certain conditions, companies that qualify as pioneer industries under the Investment Incentives Order 2001 can deduct expenses relating to R&D.

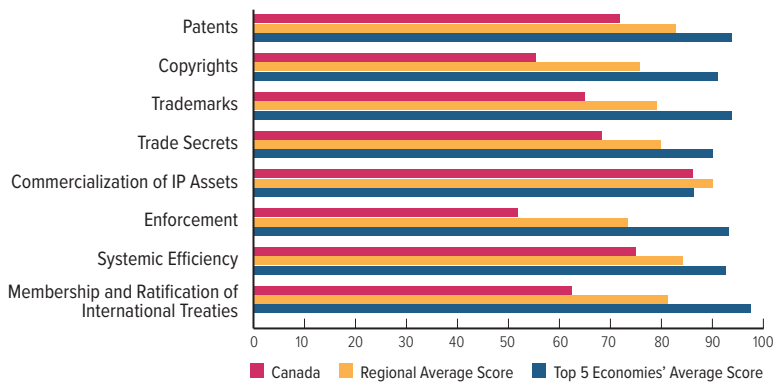
Membership in and Ratification of International Treaties

45. At least one post-TRIPS free trade agreement with substantive IP provisions and chapters in line with international best practices as captured in modern post-TRIPS U.S. and EU FTAs:

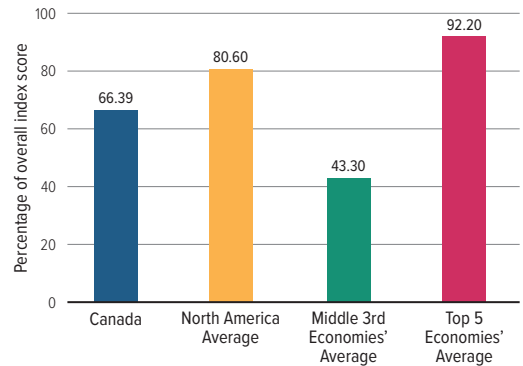
U.S. and EU FTAs: Brunei is one of the contracting parties to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership. In March 2018, the final agreement was signed and the full text released. The text of the CPTPP retains important aspects of the TPP’s IP provisions, including, for example, provisions relating to trade secrets and border enforcement. However, numerous critical provisions have been suspended, including for patentable subject matter, biopharmaceutical-specific IP rights such as regulatory data protection, and copyright protection and enforcement, as well as protections relating to satellite and cable signals. As a result, the CPTPP does not conform to the modern standards of other post-TRIPS international trade agreements and no score has been allocated to Brunei under this indicator. The CPTPP is undergoing public consultation and discussion with all contracting parties—Brunei included—and legislative amendments are being considered where required. At the time of research, Brunei had not ratified the agreement.

CANADA RANK 19/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Full implementation of IP provisions in the USMCA would materially improve Canada's national IP environment and Index score
- ✓ 2017 Supreme Court judgment on utility doctrine finally aligns Canada's patentability environment with international standards
- ✓ Implementing CETA legislation in place in several areas, including patent term restoration
- ✓ Significant damages awarded in precedent-setting 2017 federal court case with regards to Canada's DRM provisions

KEY AREAS OF WEAKNESS

- ✗ CETA amendments to Patent Act introducing patent term restoration include restrictive eligibility requirements and an export claw-out, which effectively undermines pharmaceutical exclusivity
- ✗ Deficiencies in pharmaceutical patent enforcement remain unaddressed in new PMNOC Regulations
- ✗ Limited transparency and information available from Canadian customs on seizure statistics

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 3.90 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.25 |
| 2. Patentability requirements | 0.75 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 1.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 0.25 | 15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software | 1.00 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.75 |
| 8. Patent opposition | 0.75 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.75 |
| Category 2: Copyrights, Related Rights, and Limitations | | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 9. Copyright (and related rights) term of protection | 0.63 | 20. Industrial Design Term of Protection | 0.40 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.50 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.75 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 0.25 | | |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 2.05 | |
| 22. Protection of trade secrets, civil remedies | 1.00 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.50 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.50 |
| 24. Regulatory data protection (RDP) term | 0.80 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.25 |
| Category 5: Commercialization of IP Assets | | 5.17 | |
| 25. Barriers to market access | 1.00 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.75 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.50 |
| 27. Registration and disclosure requirements of licensing deals | 1.00 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 40. Educational campaigns and awareness raising | 0.75 |
| 29. IP as an economic asset | 0.75 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 30. Tax incentives for the creation of IP assets | 0.67 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 3.63 | |
| 31. Physical counterfeiting rates | 0.60 | 42. WIPO Internet Treaties | 1.00 |
| 32. Digital/online piracy rates | 0.78 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 33. Civil and procedural remedies | 0.50 | 44. Patent Law Treaty | 0.50 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.50 | 45. 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 29.88 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Score

Canada's overall score has increased marginally from 66.25% (26.5 out of 40) in the 6th edition to 66.4% (29.88 out of 45) in the 7th edition. This change reflects that Canada's performance on the new indicators is roughly in line with its overall performance on the Index.

Area of Note

In April 2018, the Canadian federal government launched a new Intellectual Property Strategy. The strategy aims to improve Canada's IP environment and make it easier for innovators and businesses to register, use, and commercialize IP assets. The program focuses on three main areas of action—IP Awareness and Education, Strategic IP Tools for Growth, and IP Legislation. The Canadian government should be applauded for its efforts and focus on IP. However, as the Index has pointed out for many years, for a high-income, developed OECD economy, Canada has a relatively weak national IP environment and remains behind global leaders as measured by its Index score. This is

particularly the case for biopharmaceutical-related IP rights, copyright enforcement, and border measures. For example, regarding the sale of counterfeit and pirated goods, Pacific Mall, Markham, Ontario, was again listed on the USTR's *Out-of-Cycle Review of Notorious Markets*. Similarly, online piracy continues to present a challenge to Canadian rights holders, as copyright piracy that takes place over set-top box technology continues to grow. As discussed above, the recently signed USMCA contains several positive provisions that would improve Canada's IP environment in many of these areas. Yet, the agreement also contains specific exceptions for Canada that raise uncertainty over its actual impact on Canada's IP environment. In particular, the agreement provides an exception for Canada's cultural industries. It is unclear what this will mean in practice.

Patents, Related Rights, and Limitations

4. Pharmaceutical-related patent enforcement and resolution mechanism: As has been noted in previous editions of the Index, Canada's pharmaceutical linkage system has several long-standing deficiencies. In 2017, the government amended the relevant secondary legislation,

the Patented Medicines (Notice of Compliance) Regulations (PMNOC), to comply with Canada's commitments under the CETA. Unfortunately, the amendments have not effectively addressed these deficiencies. The old PMNOC procedures did not provide patent holders (a "first person") with a right of appeal, and the judicial proceedings determining the merits of the disputed patent or patents was a summary, not full, process. This limited the rights of the patent holder and availability of the full term of protection. While the new amendments have replaced summary proceedings with the possibility to bring fully fledged judicial actions, procedural complexity is likely to result in cases not being resolved before the end of the 24-month stay period. Furthermore, while the Canadian linkage regime provides a register akin to the U.S. "Orange Book," listing requirements mean fewer patents can be included. Specifically, the number of patents eligible is limited by timing requirements and the fact that late listing is not possible. Where infringement is not found, a generic or biosimilar producer is entitled to claim damages (so-called Section 8 damages). Yet, the approach taken by Canadian courts has established a disproportionate, almost punitive, liability exposure to patentees. Specifically, in 2015, the Supreme Court of Canada upheld the verdict in two important 2014 Federal Court of Appeal rulings concerning the methodology for determining damages under Section 8 of the PMNOC. These rulings (and their affirmation by the Supreme Court) have established a judicial precedent whereby an innovator drug company could be held to pay damages to multiple manufacturers of a follow-on generic drug product that together exceed the size of a total hypothetical generic market. Furthermore, under the new amended provisions described above, there is no end for the Section 8 damage period, enabling generic producers to potentially claim undefined and unlimited future losses.

Trade Secrets and the Protection of Confidential Information

24. Regulatory data protection (RDP) term: As noted in previous editions of the Index, in 2014, Canada amended its Food and Drugs Act to enact Bill-C17 ("Vanessa's Law"), which includes broad provisions that allow the health minister to disclose confidential business information, including trade secrets, submitted to Health Canada as part of the regulatory approval process for pharmaceutical and medical device products. In 2015, the government released

official guidelines to this law. These guidelines maintain the broad and sweeping powers of the legislation. Specifically, Section 211.2 includes the power to disclose confidential business information (CBI) —including data submitted as part of an application for market and regulatory approval of medicines and medical technologies—to any person without notifying the owner of that information in cases where the health minister believes there is a "serious risk of injury to human health." While the guidelines include reference to Canada's international treaty obligations (specifically TRIPS and NAFTA) and state that "any disclosure of CBI ... in relation to new chemical entities needs to be compliant" with Canada's commitments under both these treaties, questions remained about what type of information would be disclosed and under what circumstances. Using its authority under Vanessa's Law, Health Canada in late 2017 released new proposed regulations on the release of submitted clinical test data: Regulations Amending the Food and Drug Regulations and Medical Devices Regulations—Public Release of Clinical Information in Drug Submissions and Medical Device Applications. The stated purpose of these draft regulations is to "enable independent analysis that will have widespread benefits throughout the health system, and lead to greater accountability for Health Canada and product sponsors." Under its Regulatory Impact Analysis Statement, Health Canada issued a proposal to model the release of clinical information on the process followed by the European Medicines Agency (EMA), including the use of redactions for information deemed to be commercially confidential. The issue of protecting CBI is critical. Considering the vast financial resources and extensive time needed to acquire and prepare clinical trials data for registration, these data can be viewed as proprietary know-how that belong to biopharmaceutical companies and are protected under RDP. Indeed, under Article 39.3 of the TRIPS Agreement, the WTO requires that member states protect this data from "unfair commercial use ... [and] against disclosure." The EMA worked closely with relevant stakeholders to develop a step-by-step review process whereby commercial confidential information would be protected and not part of the disclosure mechanism. While the EMA also believed the release of clinical test data would benefit the broader health research community—including academics and patients—so far the majority of interest in accessing this data has come from industry. In

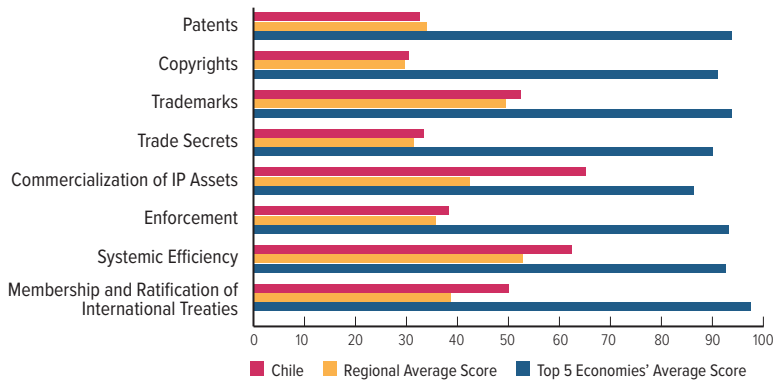
its first report on the implementation of the policy on the publication of clinical data published in July 2018, the EMA found through an online survey that just under two-thirds of surveyed users came from the pharmaceutical industry or related fields. Only 14% were academic or scientific researchers and 8% were patients. When asked why they were accessing the data, industry responses included to “benchmark against other companies (e.g., for product development, report writing and transparency)” and “being aware of competitors’ activities.”

Membership in and Ratification of International Treaties

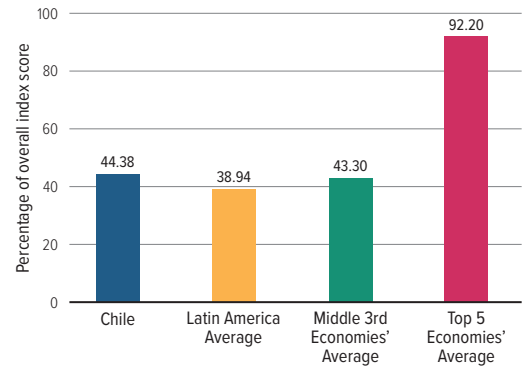
43. Singapore Treaty on the Law of Trademarks: Over the past few years, Canada has introduced several administrative, regulatory, and legal changes to its trademark regime, to better align the Canadian trademark environment with international standards and to allow Canada to join the Singapore Treaty on the Law of Trademarks, the Madrid Protocol, and the Nice Agreement. This continued in 2018 with the introduction and passing into law of Bill C-86, the Budget Implementation Act, 2018, No. 2, which received royal assent in December 2018. The Canadian Intellectual Property Office has publicly stated that it plans to have implemented all necessary administrative and legal changes to allow Canada to accede to these treaties by the second half of 2019. The accession to the Singapore Treaty would raise Canada’s score on this indicator by 1 full point.

CHILE RANK 28/50

Category Scores



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 the IP environment through international trade agreements
- ✓ Efforts to streamline IP registration
- ✓ Promotion of IP commercialization

KEY AREAS OF WEAKNESS

- ✗ Threat of issuing a compulsory license (CL) based on cost considerations for HCV drugs persisted in 2018
- ✗ Patchy patent protection for biopharmaceuticals, including obstacles to patentability, lack of effective patent enforcement, and overly wide basis for CLs
- ✗ High levels of counterfeiting and piracy for an OECD economy—55% estimated software piracy
- ✗ Lack of sufficient framework to tackle online piracy, although there has been some success in disabling access to sites
- ✗ Criminal enforcement problematic for copyright piracy

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 2.60 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.25 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.00 | 14. Digital rights management (DRM) legislation | 0.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.60 | 3.15 | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 0.25 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 2.13 | |
| 9. Copyright (and related rights) term of protection | 0.63 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 1.00 | | |
| 22. Protection of trade secrets, civil remedies | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.25 |
| 24. Regulatory data protection (RDP) term | 0.50 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.50 |
| Category 5: Commercialization of IP Assets | 3.91 | Category 7: Systemic Efficiency | 2.50 |
| 25. Barriers to market access | 0.25 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.75 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.75 | 39. Consultation with stakeholders during IP policy formation | 0.50 |
| 27. Registration and disclosure requirements of licensing deals | 0.75 | 40. Educational campaigns and awareness raising | 0.75 |
| 28. Direct Government intervention in setting licensing terms | 0.75 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.50 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 2.00 |
| 30. Tax incentives for the creation of IP assets | 0.66 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 2.68 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 31. Physical counterfeiting rates | 0.48 | 44. Patent Law Treaty | 0.00 |
| 32. Digital/online piracy rates | 0.45 | 45. 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 |
| 33. Civil and procedural remedies | 0.50 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.25 | | |
| TOTAL 19.97 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Chile's overall score has increased from 42.12% (16.85 out of 40) in the 6th edition to 44.37% (19.97 out of 45) in the 7th edition. This reflects a relatively strong performance on the new indicators added to the Index.

Patents, Related Rights, and Limitations

2. Patentability requirements; and 7. Membership in Patent Prosecution Highways (PPHs): Chile's National Institute of Industrial Property (INAPI) is asserting its role as one of the most efficient IP offices in Latin America. In 2018, INAPI became the second Latin American IP office (together with the Brazilian National Institute of Industrial Property) designated as a PCT International Search Authority and International Preliminary Examining Authority; it provides search services for 12 Latin American countries. This is expected to further increase the rate of PCT applications, which already grew by 20% in 2017. Also, from January 2018, all INAPI's internal procedures have been digitalized, and a PPH with the Chinese patent office entered into force.

5. Legislative criteria and active use of compulsory licensing of patented products and technologies:

Only a few days before the end of her mandate, the outgoing minister of health declared that there were sufficient public health reasons to support the issuing of compulsory licenses for certain Hepatitis C drugs (Resolution No. 399 of March 9, 2018). In January 2018, the Chamber of Deputies approved a resolution that requested the use of compulsory licenses for drugs formulated with sofosbuvir. Subsequently, in March 2018, in response to a request presented by some patient groups and parliamentarians, the minister of health issued Resolution 399, which discusses the public health justification for a compulsory license. A third resolution by the Chamber of Deputies with the same request was approved in June 2018. On August 28, 2018, the new Minister of Health issued Resolution 1165 rejecting the patentee's challenge to Resolution 399/2018.

Commercialization of IP Assets and Market Access

26. Barriers to technology transfer: IP ownership of publicly funded research has been the most contentious issue in the run-up to the approval of the law that creates

a new Ministry of Science, Technology, Knowledge, and Innovation (Bulletin 11.101-19). The compromise reached risks hindering—more than incentivizing—tech transfer activities. At present, the law foresees that if IP stemming from projects funded under the National Fund for Scientific and Technological Development (FONDECYT) is patented, researchers must return the totality of public funds received. However, the provision is reportedly regarded as outdated and is not implementable. New provisions foresee that reimbursement will still be required when IP is commercialized. In addition, the provisions entitles the government to recover 5% of future resulting revenues. The provision risks unduly burdening universities (the main recipients of FONDECYT funds), where currently about 90% of Chile's R&D activity takes place.

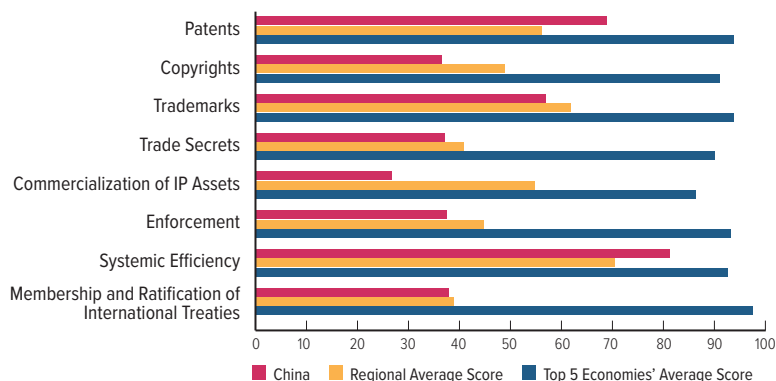
Membership in and Ratification of International Treaties

45. At least one post-TRIPS free trade agreement with substantive IP provisions and chapters in line with international best practices as captured in modern post-TRIPS U.S. and EU FTAs:

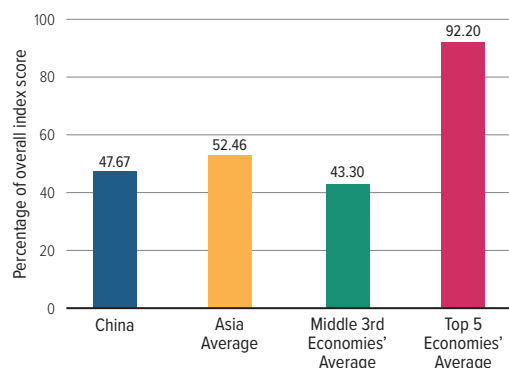
Chile is one of the contracting parties to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership. In March 2018, the final agreement was signed and full text released. The text of the CPTPP retains important aspects of the TPP's IP provisions, including, for example, provisions relating to trade secrets and border enforcement. However, numerous critical provisions have been suspended, including for patentable subject matter, biopharmaceutical-specific IP rights such as regulatory data protection, and copyright protection and enforcement, as well as protections relating to satellite and cable signals. The result is that the CPTPP does not conform to the modern standards of other post-TRIPS international trade agreements. The CPTPP is undergoing public consultation and discussion with all contracting parties—Chile included—and legislative amendments are being enacted where required. At the time of research, Chile had not ratified the agreement.

CHINA RANK 25/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Stronger pharmaceutical patent enforcement regime being implemented through a new patent linkage mechanism for biopharmaceuticals
- ✓ New E-commerce Law provides a new legal framework for online notification systems—strengthening China's environment regarding the sale of counterfeit goods online
- ✓ Strong efforts to raise awareness and leverage the value of IP rights in academic and private spheres

KEY AREAS OF WEAKNESS

- ✗ Significant barriers to technology transfer, market access, licensing, and the effective commercialization of IP remain in place
- ✗ Direct government intervention in licensing agreements and requirements of technology transfer as a basis for market access
- ✗ Despite improved enforcement efforts, levels of IP infringement remain high
- ✗ Interpretation of IP laws can be fragmented and out of sync with international standards

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 5.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.50 |
| 2. Patentability requirements | 0.75 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| 8. Patent opposition | 0.25 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 2.53 | |
| 9. Copyright (and related rights) term of protection | 0.53 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.75 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.50 | 20. Industrial Design Term of Protection | 0.40 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 0.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.25 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 1.10 | | |
| 22. Protection of trade secrets, civil remedies | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.00 |
| 24. Regulatory data protection (RDP) term | 0.60 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 1.00 |
| Category 5: Commercialization of IP Assets | 1.58 | Category 7: Systemic Efficiency | 3.25 |
| 25. Barriers to market access | 0.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 1.00 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.50 | 39. Consultation with stakeholders during IP policy formation | 0.50 |
| 27. Registration and disclosure requirements of licensing deals | 0.00 | 40. Educational campaigns and awareness raising | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 0.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 1.50 |
| 30. Tax incentives for the creation of IP assets | 0.33 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 2.59 | 43. Singapore Treaty on the Law of Trademarks | 0.50 |
| 31. Physical counterfeiting rates | 0.00 | 44. Patent Law Treaty | 0.00 |
| 32. Digital/online piracy rates | 0.34 | 45. 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 |
| 33. Civil and procedural remedies | 0.50 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.50 | | |
| TOTAL 21.45 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

China's overall score decreased marginally from 47.70% (19.08 out of 40) in the 6th edition to 47.66% (21.45 out of 45) in the 7th edition. This reflects, on the one hand, a weak performance on the new indicators added to the Index and, on the other hand, score increases on indicators 10 and 19.

Area of Note

After undergoing a general restructuring, the State Intellectual Property Office of China was renamed the China National Intellectual Property Administration (CNIPA). The CNIPA is run by China's new market regulator, the State Administration for Market Regulation, and its mandate has been extended to include trademarks. Copyrights will continue to fall under the remit of the National Copyright Authority of China, which falls within the Propaganda Department.

Patents, Related Rights, and Limitations and Trade Secrets and the Protection of Confidential Information

4. Pharmaceutical-related patent enforcement and

resolution mechanism; 6. Patent term restoration for pharmaceutical products; and 24. Regulatory data protection (RDP) term:

As noted in previous editions of the Index, Chinese regulatory authorities have committed to introducing a patent linkage mechanism for biopharmaceuticals. As a first step in the process, the China Food and Drug Administration (CFDA) has issued the "China Marketed Chemical Drug Catalogue" (a Chinese version of the "Orange Book"), which contains information on both generic and patented products approved in China. At the time of research, no further implementing act or regulations had been issued. China's draft amendments to its Patent Law did not reference patent linkage and, therefore, cast doubts on the realization of substantial reform in this area. During 2018, the State Council also announced plans for a potential regime of patent term restoration up to 5 years as well as changes to the existing RDP term. The draft Pharmaceutical Data Exclusivity Implementing Rules raise regulatory data protection to a term of 12 years for new biologics and 6 years for new chemical entities (NCEs) from global launch if the application is based on domestic clinical trials (or multicenter trials that include China). If a drug is first

approved overseas, drug lag times will be deducted from the term of protection. In cases of applications based on overseas clinical data, protection will be limited to 3 years for biologics and 1.5 years for NCEs. The introduction of both a term of patent restoration and a potential extension to data exclusivity are positive. However, conditioning these incentives on local R&D and first market approval in China risks undermining their overall effectiveness and is inconsistent with international best practices.

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 China, 2018 saw positive initiatives and court decisions against copyright infringers. At the request of the National Copyright Administration of the People's Republic of China, 15 video-sharing online platforms stepped up their enforcement efforts and disabled access to over 570,000 infringing videos, some of which were hosted by overseas servers. Also, at the request of the China Audio-Video Copyright Association, karaoke owners reportedly banned over 6,000 copyright-infringing songs from their business. Additionally, Lego registered an important victory in a copyright court case against four domestic infringers and was awarded USD650,000 in damages. As a result, the score for this indicator has increased by 0.25.

Trademarks, Related Rights, and Limitations

19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods: From January 2019, when the new E-commerce Law entered into force, e-commerce platforms that fail to take "necessary measures" against infringing goods sold on their website of which "they are or should be aware" will incur a fine of up to CNY2,000,000 (approximately USD300,000). According to examples previously given by the Beijing High Court, this could cover cases where information on infringing products was listed in the main pages of the seller's website or where the price is unreasonably lower than the market price for a well-known product. As a result, the score for this indicator has increased by 0.25.

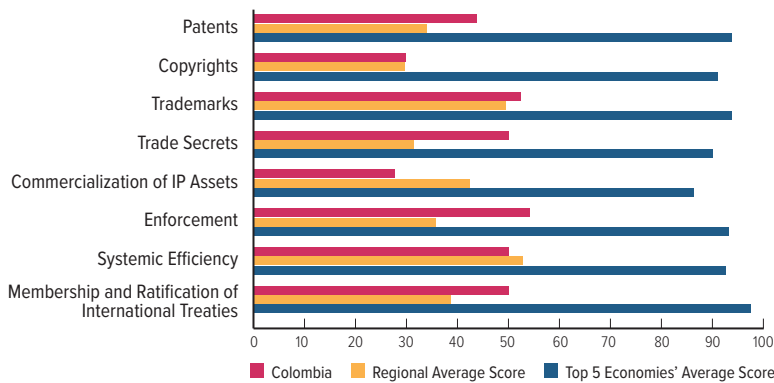
Commercialization of IP Assets and Market Access

25. Barriers to market access; 26. Barriers to technology transfer; 27. Registration and disclosure requirements of licensing deals; and 28. Direct government intervention in setting licensing terms: As noted in previous editions of the Index, rights holders 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, China imposes restrictions on the rights of foreign IP rights holders to freely negotiate market-based contractual terms in licensing and other technology-related contracts concerning the transfer of technology to China. The 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. Under the Joint Venture regime, licenses and tech transfer contracts cannot last more than 10 years, after which the licensee retains the right to use the transferred technology, although this might still be under a term of exclusivity. More recently, the Working Measures for Outbound Transfer of Intellectual Property Rights adopted in 2018 tighten the scrutiny on outbound transfer of technology and IP. In the context of standards setting, there is also a trend toward greater administrative involvement in determining patent licensing terms and the ability to secure relief from infringement. The National Security Law, Cybersecurity Law, Security Assessments for Network Products and Services, and a number of standards (e.g., secure and controllable standard) all have product reviews that require IP disclosure. Both the U.S. and the EU have filed their own complaints with the WTO against China over its technology licensing practices.

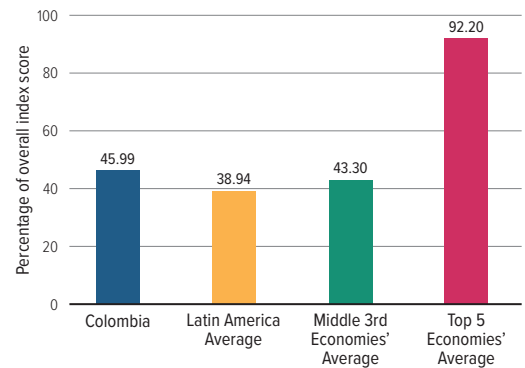
30. Tax incentives for the creation of IP assets: While Chinese tax law offers both an R&D tax deduction and a reduced rate of taxation related to high technology, it also features local content requirements and requirements for technology sharing. It allows a 175% super deduction for qualified R&D expenses; until July 2018, this rate applied to SMEs only, whereas the rate for bigger businesses was 150%. A patent box-style program, the High and New-Technology Enterprise (HNTE) Program, reduces China's general corporate tax rate from 25% to 15% for eligible HNTEs. However, eligibility requirements state that Chinese companies (or subsidiaries) need to own the IP rights of the core technology used in their products. Until 2016, companies could grant their Chinese subsidiary a five-year exclusive license instead of full IP ownership, but this possibility no longer exists. Eligibility restrictions also include Chinese R&D spending and employment criteria.

COLOMBIA RANK 27/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ 2018 copyright reforms strengthen provisions relating to DRM and available civil remedies
- ✓ Targeted incentives in place for the creation and use of IP assets for SMEs—this includes reduced filing fees and technical assistance
- ✓ Efforts to coordinate interagency IP enforcement and raise public/stakeholder engagement on IP policymaking and education

KEY AREAS OF WEAKNESS

- ✗ Substantial barriers in place for licensing activities, including direct government intervention and review of technology transfer and licensing agreements
- ✗ Key life sciences IP rights missing, including patent term restoration and mechanisms for early patent dispute resolution
- ✗ Use of compulsory license regime to leverage price reduction for biopharmaceuticals
- ✗ Uncertainty over availability of RDP
- ✗ Inadequate/delayed prosecution of and penalties for IP infringement

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 3.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.50 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.50 | 14. Digital rights management (DRM) legislation | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 3.15 | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 0.25 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 2.09 | |
| 9. Copyright (and related rights) term of protection | 0.84 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 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 | 0.50 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 1.50 | |
| 22. Protection of trade secrets, civil remedies | 0.50 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.50 |
| 23. Protection of trade secrets, criminal standards | 0.50 | 36. Effective border measures | 0.75 |
| 24. Regulatory data protection (RDP) term | 0.50 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.50 |
| Category 5: Commercialization of IP Assets | | 1.67 | |
| 25. Barriers to market access | 0.25 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.25 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.50 |
| 27. Registration and disclosure requirements of licensing deals | 0.00 | 39. Consultation with stakeholders during IP policy formation | 0.75 |
| 28. Direct Government intervention in setting licensing terms | 0.00 | 40. Educational campaigns and awareness raising | 1.00 |
| 29. IP as an economic asset | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 30. Tax incentives for the creation of IP assets | 0.67 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 2.00 | |
| 31. Physical counterfeiting rates | 0.52 | 42. WIPO Internet Treaties | 1.00 |
| 32. Digital/online piracy rates | 0.52 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 33. Civil and procedural remedies | 0.50 | 44. Patent Law Treaty | 0.00 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.50 | 45. 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 20.70 | | | |

Spotlight in the National IP Environment

Past Editions versus Current Scores

Colombia's overall score increased from 45.67% in the 6th edition (18.27 out of 40) to 45.99% in the 7th edition (20.70 out of 45). This reflects, on the one hand, a weak performance on the new indicators added to the Index and, on the other hand, score increases on indicators 14 and 33.

Copyrights, Related Rights, and Limitations and Enforcement

14. Digital rights management (DRM) legislation; and 33. Civil and procedural remedies: In July 2018, President Santos signed Law 1915, which updates the legal framework on copyright and related rights. The law, dubbed *Ley Lleras 6.0*, brings the Colombian copyright regime more in line with international standards. Specifically, the law establishes provisions regarding technological protection measures, more clearly spells out copyright limitations and exceptions, strengthens some enforcement measures, and makes statutory damages available for copyright infringement. Article 12 provides for civil responsibility and

interim relief to the copyright holder for violation of TPMs, as well as criminal sanctions with imprisonment from 4 to 8 years. Until now, DRM measures were mentioned only in the Criminal Code, and violation of the measures were punishable only by a fine. Concerning enforcement, the law introduces the possibility of statutory damages for copyright infringement, including circumvention of TPMs (Article 32). The government will release specific regulations on these statutory damages by July 2019. The law also clarifies and strengthens existing provisions that enable judges to order the confiscation and destruction of infringing products, extending it to DRM circumvention devices (Article 31). At present, destruction rarely takes place. Last, the law also specifies the scope of rights and takes into account the challenges of the digital environment extending these rights to the internet. It also increases the term of protection for legal entities from 50 to 70 years from publication (Article 11) and establishes a regime for the use of orphan works (Article 18). Because these amendments entered into force, the scores of indicators 14 and 33 have increased.

Trade Secrets and the Protection of Confidential Information

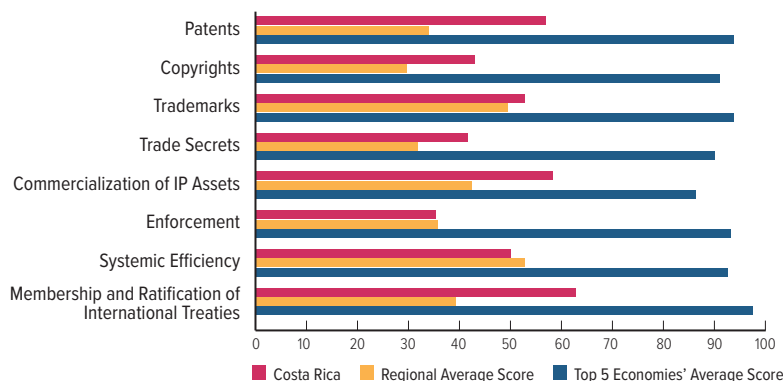
24. Regulatory data protection term: Decree 2085 of 2002 provides for a five-year period of regulatory data protection for both pharmaceuticals and agrochemicals. Industry reports in 2018 suggested that RDP has not been granted to some products despite the existence of this legislation. As noted in past editions of the Index, a degree of uncertainty exists about the application of RDP to biologics. Decree 1782, signed in September 2014, which modifies the registration process for biological medicines, does not discuss regulatory data protection for biologics. It is unclear whether five years of protection is available and consistently afforded to biologic products.

Commercialization of IP Assets and Market Access

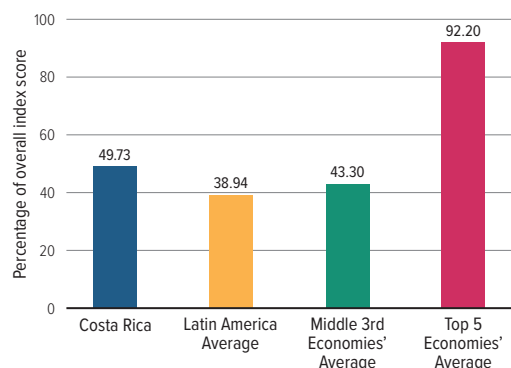
41. Targeted incentives for the creation and use of IP assets for SMEs: Colombia has in place a suite of programs and incentives dedicated to helping SMEs register and use IP assets. This includes reduced filing fees for the registration of IP rights for micro and small enterprises. Several technical assistance programs are also in place, including direct collaboration with the national association for SMEs, *Asociación Colombiana de Medianas y Pequeñas Empresas*.

COSTA RICA RANK 23/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Member of the regional PROSUR PPH initiative
- ✓ Patent framework in line with international standards, with some exceptions
- ✓ Some elements of an advanced online copyright regime in law
- ✓ Customs authorities empowered to address various types of infringing goods *ex officio*
- ✓ Ongoing efforts to raise awareness and utilization of IP rights

KEY AREAS OF WEAKNESS

- ✗ No significant R&D or IP-based tax incentives in place
- ✗ Delays and significant lack of implementation of online copyright regime
- ✗ Gaps in effectiveness of life sciences IP rights
- ✗ System of enforcement of IP rights is slow and lacks effectiveness
- ✗ Inadequate penalties for IP infringement

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 4.55 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.25 |
| 2. Patentability requirements | 0.50 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.50 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.75 | 14. Digital rights management (DRM) legislation | 0.50 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.30 | 3.15 | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 0.25 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 2.99 | |
| 9. Copyright (and related rights) term of protection | 0.74 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 1.25 | | |
| 22. Protection of trade secrets, civil remedies | 0.50 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.50 |
| 24. Regulatory data protection (RDP) term | 0.50 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.00 |
| Category 5: Commercialization of IP Assets | 3.50 | Category 7: Systemic Efficiency | 2.00 |
| 25. Barriers to market access | 0.75 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.50 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.50 | 39. Consultation with stakeholders during IP policy formation | 0.50 |
| 27. Registration and disclosure requirements of licensing deals | 0.75 | 40. Educational campaigns and awareness raising | 0.75 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.25 |
| 29. IP as an economic asset | 0.50 | Category 8: Membership and Ratification of International Treaties | 2.50 |
| 30. Tax incentives for the creation of IP assets | 0.00 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 2.44 | 43. Singapore Treaty on the Law of Trademarks | 0.50 |
| 31. Physical counterfeiting rates | 0.52 | 44. Patent Law Treaty | 0.00 |
| 32. Digital/online piracy rates | 0.42 | 45. 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 |
| 33. Civil and procedural remedies | 0.25 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.50 | | |
| TOTAL 22.38 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Costa Rica's overall score decreased marginally from 49.80% (19.92 out of 40) in the 6th edition to 49.73% in the 7th edition (22.38 out of 45). This reflects, on the one hand, a mixed performance on the new indicators added to the Index and, on the other hand, a score increase on indicator 7.

Patents, Related Rights, and Limitations

7. Membership in Patent Prosecution Highways (PPHs):

Costa Rica is not a member of the Global PPH or the IP5. However, since the end of 2017, Costa Rica has participated in an operational PPH program through the Regional Cooperation System on Industrial Property, PROSUR. PPH initiatives and increased cooperation between IP offices are one of the most tangible ways in which the administration and functioning of the international IP system can be improved and harmonized, helping inventors and rights holders around the world. As a result of this initiative, Costa Rica's score has increased by 0.5 on this indicator.

Commercialization of IP assets and Market Access

27. Registration and disclosure requirements of licensing

deals: According to the Patent Law, patent and design licenses must be registered at the National Registry to be opposable to third parties. The Trademark Law states explicitly that registration is not required for the licensee to "assert rights over the mark." Yet, registration is recommended in practice. According to the National Registry's Guide to Registry Qualification, only general disclosure requirements—not the full text of a licensing contract—are needed for registration.

Enforcement

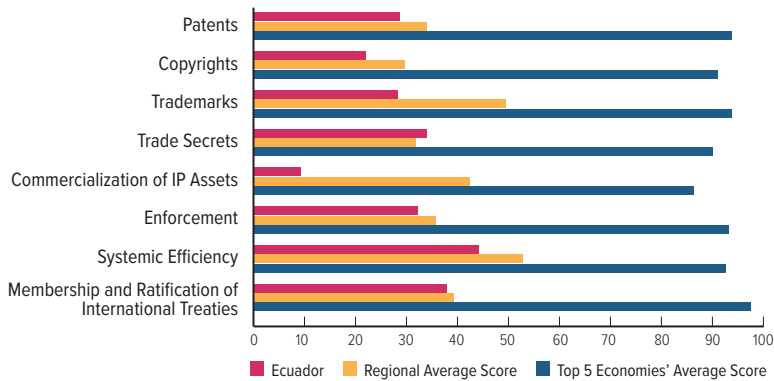
35. Criminal standards, including minimum imprisonment

and minimum fines: Costa Rica has taken some steps to improve the effectiveness of its IP criminal enforcement system. As reported in last year's edition, the economic crimes prosecutor has assumed competence and responsibility for IP cases. During 2017, the prosecutor investigated 96 IP cases, up from 78 cases in 2016, 64 in 2015, and 58 in 2014. Raids were carried out with the support of the Judicial Investigation Agency and the Fiscal

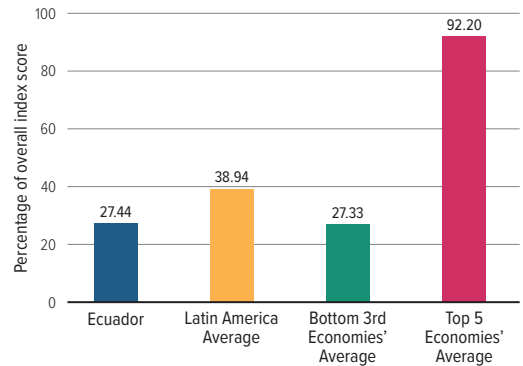
Control Police. Also, a growing number of investigations became formal cases in 2017, although the share of cases dismissed remains high. Law No. 19.407 to Improve the Fight Against Illicit Trade reduced the threshold from USD50,000 to USD5,000 for applicability of prison terms. Longer prison terms (5 to 15 years) are available for illicit trade of goods that affect human life, animal and plant health, the environment, and national security. Smuggling of goods worth less than USD5,000 is punished with a 12-month jail period. Through Executive Order No. 3841, the government declared that fighting illegal trade is a matter of public interest. The order also created the public–private alliance called the Joint Commission Against Illicit Trade in Costa Rica, which gives the private sector a voice in public policymaking. However, despite these growing enforcement efforts, more measures are required to obtain long-term improvements in Costa Rica’s IP environment.

ECUADOR RANK 46/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

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

KEY AREAS OF WEAKNESS

- ✗ Substantial barriers in place for licensing activities, including direct government intervention and review of technology transfer and licensing agreements
- ✗ Key life sciences IP rights missing, including patent term restoration and mechanisms for early patent dispute resolution
- ✗ Use of compulsory license regime for biopharmaceuticals as basis for cost containment and industrial policy
- ✗ *Código Ingenios* limits the number of renewal periods for trademark registrations, in violation of the TRIPS Agreement
- ✗ *Código Ingenios* imposes new limits on patentability and increasingly restricts the types of patentable subject matter
- ✗ Persistently high levels of piracy—estimated 68% software piracy rate

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 2.25 | |
| 1. Patent term of protection | 1.00 | 11. Expeditious injunctive-style relief and disabling of infringing content online | 0.00 |
| 2. Patentability requirements | 0.50 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 0.00 | 14. Digital rights management (DRM) legislation | 0.25 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 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 |
| 6. Patent term restoration for pharmaceutical products | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 16. Trademarks term of protection (renewal periods) | 0.00 |
| 8. Patent opposition | 0.25 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.25 |
| Category 2: Copyrights, Related Rights, and Limitations | | 1.65 | |
| 9. Copyright (and related rights) term of protection | 0.74 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | | |

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------------|--|-------------|
| 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 | 33. Civil and procedural remedies | 0.25 |
| 20. Industrial Design Term of Protection | 0.40 | 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.25 |
| 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.50 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| Category 4: Trade Secrets and Related Rights | 1.00 | 36. Effective border measures | 0.50 |
| 22. Protection of trade secrets, civil remedies | 0.25 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | Category 7: Systemic Efficiency | 1.75 |
| 24. Regulatory data protection (RDP) term | 0.50 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.25 |
| Category 5: Commercialization of IP Assets | 0.50 | 39. Consultation with stakeholders during IP policy formation | 0.25 |
| 25. Barriers to market access | 0.00 | 40. Educational campaigns and awareness raising | 0.75 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.25 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.50 |
| 27. Registration and disclosure requirements of licensing deals | 0.00 | Category 8: Membership and Ratification of International Treaties | 1.50 |
| 28. Direct Government intervention in setting licensing terms | 0.00 | 42. WIPO Internet Treaties | 1.00 |
| 29. IP as an economic asset | 0.25 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 30. Tax incentives for the creation of IP assets | 0.00 | 44. Patent Law Treaty | 0.00 |
| Category 6: Enforcement | 2.21 | 45. 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 |
| 31. Physical counterfeiting rates | 0.39 | | |
| 32. Digital/online piracy rates | 0.32 | | |
| TOTAL 12.35 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Ecuador's overall score decreased from 28.99% (11.60 out of 40) in the 6th edition to 27.44% (12.35 out of 45) in the 7th edition. This was primarily driven by a weak performance on the new indicators included in the Index.

Commercialization of IP Assets and Market Access

26. Barriers to technology transfer; 27. Registration and disclosure requirements of licensing deals; and 28. Direct government intervention in setting licensing terms: Technology transfer and the creation, dissemination, commercialization, and eventual export of knowledge-created products and services is an important part of the *Código Orgánico de Economía Social del Conocimiento, la Creatividad y la Innovación (Código Ingenios)*, an ambitious suite of laws passed by the Ecuadorian National Assembly in 2016. Article 276 of the law's IP chapter provides a clear distribution of rights and royalties related to any innovations

made at universities, higher education institutes, and public research organizations (PROs). Prior to the *Código Ingenios*, the major universities and PROs had individual tech transfer frameworks, including, for example, such institutes as the Ministry of Higher Education, Science, Technology and Innovation and the National Planning Secretariat. Unfortunately, the clarity on the economic rights of publicly funded inventors found in the *Código Ingenios* is not matched by an accompanying ease of doing business regarding rights holders' abilities to negotiate and execute licensing agreements. Like other member states of the Andean Community trading bloc, Ecuador's IP laws are subject to decisions made by the Community. Andean Decision 291 provides an overview of requirements for licensing technologies. Article 12 states that all licensing activity should be recorded and evaluated by the respective national authorities. Specifically, Community members shall "evaluate the effective contribution of the imported technology by estimating the probable profits or the price of the goods that incorporate technology, or through

other specific methods of quantifying the effect of the imported technology.” Article 299 of the *Código Ingenios* transposes this requirement, stating that licensing contracts shall not be registered unless they are in compliance with Community provisions. In addition to the *Código Ingenios*, Ecuador has also embarked on a high-profile initiative to build a *Yachay* “City of Knowledge” *Yachay* in rural Ecuador. According to the government’s website, the city will be centered around a “University of Experimental Technological Research . . . [which] shall be linked to public and private research institutes, technology transfer centers, high technology companies, and the agricultural and agro industrial communities of Ecuador, in this way comprising the first Latin American hub of knowledge.” The project was launched in 2013 by former president Rafael Correa. In 2017, the research publication *Science* reported that several prominent academic staff had been fired and the university was facing substantial budget cuts.

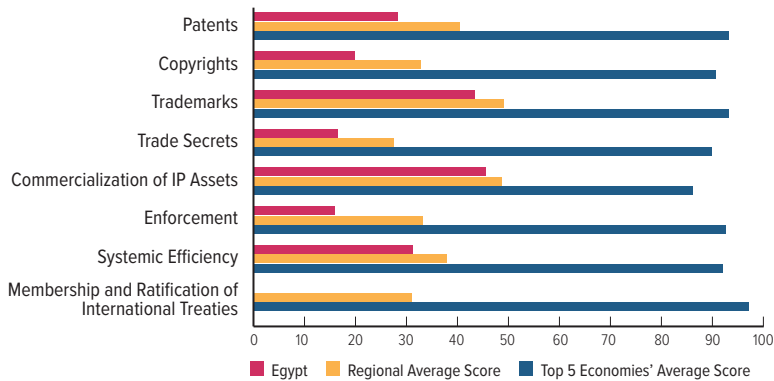
30. Tax incentives for the creation of IP assets: Ecuador does not provide general R&D or IP-specific tax deductions, credits, or incentives. Science- and technology-based incentives are available for investment in special economic zones (*Zonas Especiales de Desarrollo Económico*), as are other tax and investment incentives.

Systemic Efficiency

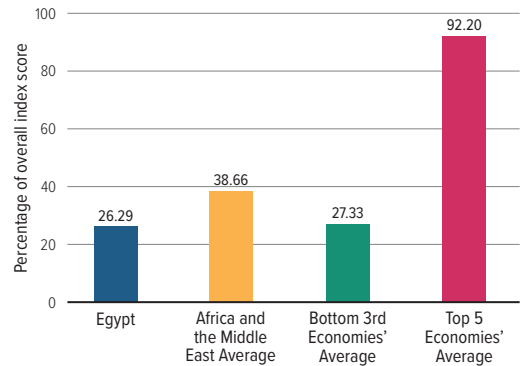
41. Targeted incentives for the creation and use of IP assets for SMEs: The new Ecuadorian IP Office SENADI (*Servicio Nacional de Derechos Intelectuales*) states that assisting SMEs is one of its core institutional policies. In April 2018, President Lenin Moreno established the agency through executive decree. The agency describes itself as a “revolutionary institution that promotes intellectual property in Ecuador, as a tool to achieve the ‘sumak kawsay or good living.’” At the time of research, there was no outlined program or special technical assistance for SMEs published or available on the new agency’s website. SENADI (and its precursor the Ecuadorian Intellectual Property Institute) provides reduced filing fees to SMEs, universities, and individuals. There is currently no special priority or fast-track review of IP registration for SMEs.

EGYPT RANK 48/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Since 2015, a PPH has been in place with the JPO
- ✓ Relative freedom to patent CILs and support from government agencies
- ✓ Relatively strong push from the government to raise awareness about counterfeit products, particularly medicines

KEY AREAS OF WEAKNESS

- ✗ Limited framework for the protection of life sciences IP rights
- ✗ Gaps in copyright law and framework, particularly regarding the protection of content online
- ✗ High levels of piracy—the BSA estimated a 59% software piracy rate
- ✗ Challenging enforcement environment and lack of border measures
- ✗ Limited participation in international IP treaties

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 2.25 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.25 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.50 |
| 3. Patentability of computer-implemented inventions (CILs) | 0.50 | 14. Digital rights management (DRM) legislation | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.25 |
| 8. Patent opposition | 0.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.25 |
| Category 2: Copyrights, Related Rights, and Limitations | | 1.38 | |
| 9. Copyright (and related rights) term of protection | 0.38 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 20. Industrial Design Term of Protection | 0.60 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 0.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.25 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 0.50 | | |
| 22. Protection of trade secrets, civil remedies | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.00 |
| 24. Regulatory data protection (RDP) term | 0.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.00 |
| Category 5: Commercialization of IP Assets | 2.75 | Category 7: Systemic Efficiency | 1.25 |
| 25. Barriers to market access | 0.75 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.25 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.50 | 39. Consultation with stakeholders during IP policy formation | 0.25 |
| 27. Registration and disclosure requirements of licensing deals | 0.50 | 40. Educational campaigns and awareness raising | 0.25 |
| 28. Direct Government intervention in setting licensing terms | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.50 |
| 29. IP as an economic asset | 0.50 | Category 8: Membership and Ratification of International Treaties | 0.00 |
| 30. Tax incentives for the creation of IP assets | 0.00 | 42. WIPO Internet Treaties | 0.00 |
| Category 6: Enforcement | 1.10 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 31. Physical counterfeiting rates | 0.19 | 44. Patent Law Treaty | 0.00 |
| 32. Digital/online piracy rates | 0.41 | 45. 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 |
| 33. Civil and procedural remedies | 0.25 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.00 | | |
| TOTAL 11.83 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Egypt's overall score increased from 25.25% (10.10 out of 40) in the 6th edition to 26.29% (11.83 out of 45) in the 7th edition. This was primarily driven by an above-average performance on the new indicators added to the Index.

Trade Secrets and the Protection of Confidential Information

22. Protection of trade secrets (civil remedies); and

23. Protection of trade secrets (criminal sanctions):

Egyptian law provides statutory protection for undisclosed information. Articles 55–61 of Book One of Law 82, Law on the Protection of Intellectual Property Rights, defines undisclosed information and provides a range of penalties for its illicit acquisition and misappropriation. Article 55 defines undisclosed information and Article 58 defines what constitutes unfair commercial practices and the illicit acquisition and misappropriation of undisclosed information. However, unlike many other jurisdictions, Egyptian law puts a firm onus on the proprietor and/or owner of the undisclosed

information to have in place adequate safeguards against the acquisition of the information. When no such adequate safeguards are judged to have been in place, the owner or proprietor of the undisclosed information is potentially held to also be liable for any illicit acquisition and misappropriation. Article 57 states that “the person who is lawfully in control of such [undisclosed] information shall not be exempt from liability when others infringe the information, unless he proves that he has exerted reasonable and adequate efforts to preserve such information.” As with other forms of IP infringement, enforcement of rights pertaining to undisclosed information remains a challenge in Egypt. The U.S. Commerce Department, International Trade Administration has in the past noted the difficulty rights holders have in enforcing their rights pertaining to undisclosed information. Penalties are quite low, with a maximum fine of EGP10,000–50,000 for first-time offenders (about USD500–2,700 at current exchange rates). And while a positive feature of Egyptian trade secrets law is that criminal sanctions are in place, they are relatively low. Article 61 of Law 82 states that punishment for the illicit acquisition and misappropriation of undisclosed information shall be

“imprisonment for a period of not more than two years and a fine of not less than 50,000 pounds and not more than 100,000 pounds.” The law does not include any minimum prison terms and the imprisonment is applicable only to repeat offenders.

Commercialization of IP Assets and Market Access

26. Barriers to technology transfer: As noted in previous editions of the Index, the Egyptian government and numerous research institutions and institutes of higher education are engaged in technology transfer activities. 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) both directly supports and sponsors the filing of patents for computer-implemented inventions (CIs) in Egypt and abroad and provides technical workshops, assistance, and awareness-raising activities around Egypt. In 2016, specialized IP units held several workshops and seminars with public prosecutors and court officials and directly engaged in enforcement activities through technical assistance reports to the judiciary. More broadly, several national research institutes are engaged in technology development and transfer, including the Innovation and Invention Development Agency under the Academy of Scientific Research and Technology. Several Egyptian universities, such as Alexandria University and American University in Cairo, also have technology transfer offices in place. The MCIT has also targeted universities for its IP workshops and outreach activities. While there is no national tech transfer law or regulatory framework, existing national legislation does provide some uncertainty and potential legal impediments to effective international technology transfer. Specifically, Law 17 of the 1999 Egyptian Trade/Commercial Law includes a chapter on technology transfer. Chapter 1 and Articles 72–87 stipulate specific requirements of any technology transfer agreement executed within Egypt or between foreign and Egyptian entities. There are several onerous provisions, including Article 79, which includes a domestic hiring/labor usage requirement. Similarly, Article 87 states that any dispute shall be settled in Egypt according

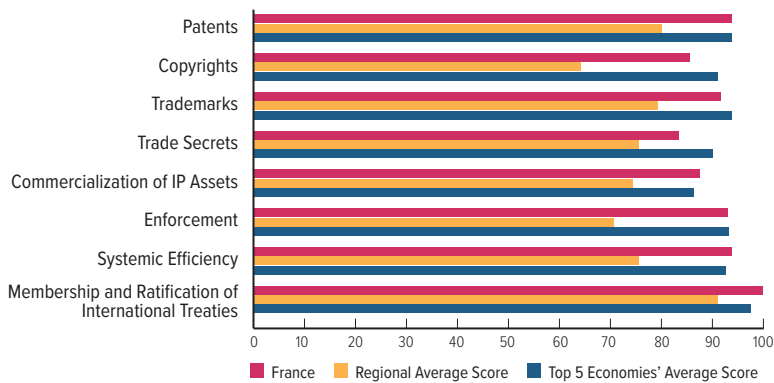
to Egyptian law and arbitration procedures. Contracts and dispute settlement procedures that stipulate otherwise “shall be null and invalid.” While there is limited evidence that these provisions have been applied in practice, the existence of this legislation does raise the level of uncertainty and acts as a *de facto* impediment to licensing activities and effective international technology transfer.

Membership in and Ratification of International Treaties

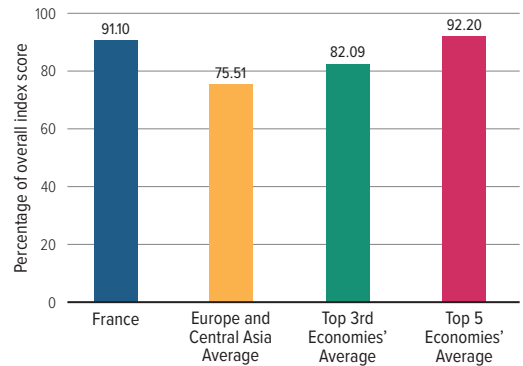
Egypt is not a contracting party to any of the IP treaties included in the Index. The 2001 EU-Egypt Association Agreement contains limited reference to IP rights. On a positive note, Egypt is a contracting party to the African Continental Free Trade Area, signed by 44 African countries in March 2018. The agreement is a first step in establishing an ambitious pan-African free trade area. The signed agreement is a framework agreement, with deeper discussions and chapters (including on IP rights) to be discussed in the future.

FRANCE RANK 4/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Generous R&D and IP-specific tax incentives in place through an R&D tax credit and special patent box tax rate (maximum of 17%) on income derived from qualifying licensing income and/or the sale of the patent or patentable technology
- ✓ 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

- ✗ Registration requirements for licensing agreements
- ✗ European 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 biopharma industry

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 7.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.75 |
| 2. Patentability requirements | 1.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 1.00 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 1.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 5.50 | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 1.00 |
| Category 2: Copyrights, Related Rights, and Limitations | | 5.99 | |
| 9. Copyright (and related rights) term of protection | 0.74 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 1.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.75 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.50 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 2.50 | | |
| 22. Protection of trade secrets, civil remedies | 0.75 | 35. Criminal standards including minimum imprisonment and minimum fines | 1.00 |
| 23. Protection of trade secrets, criminal standards | 0.75 | 36. Effective border measures | 1.00 |
| 24. Regulatory data protection (RDP) term | 1.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 1.00 |
| Category 5: Commercialization of IP Assets | 5.25 | Category 7: Systemic Efficiency | 3.75 |
| 25. Barriers to market access | 1.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 1.00 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 1.00 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.50 | 40. Educational campaigns and awareness raising | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 4.00 |
| 30. Tax incentives for the creation of IP assets | 1.00 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 6.51 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 31. Physical counterfeiting rates | 0.83 | 44. Patent Law Treaty | 1.00 |
| 32. Digital/online piracy rates | 0.68 | 45. 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 |
| 33. Civil and procedural remedies | 1.00 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 1.00 | | |
| TOTAL 41.00 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

France's overall score has decreased slightly from 91.85% (36.74 out of 40) in the 6th edition to 91.10% (41.0 out of 45) in the 7th edition. This reflects a mixed performance on the new indicators added to the Index.

Commercialization of IP Assets and Market Access

26. Barriers to technology transfer: France has introduced a range of technology transfer and innovation laws and policies over the past 20 years to encourage the development and commercialization of new technologies. These include the 1999 Law on Innovation and Research (*Loi sur l'innovation et la recherche*), 2010 Investments for the Future Program (*Programme d'Investissements d'Avenir*), and the founding and regulations guiding the French National Research Agency (*l'Agence nationale de la recherche*). Traditionally, French research and technology creation has been concentrated in public research organizations. For the sixth year in a row, the French Alternative Energies and Atomic Energy Commission

(*Commissariat à l'énergie atomique et aux énergies alternatives*) was the top PCT applicant in the government and public research organizations category in WIPO's *Patent Cooperation Treaty Yearly Review 2017*, with 329 published applications. Of the top 10 PCT applicants among government and PROs, 3 came from France.

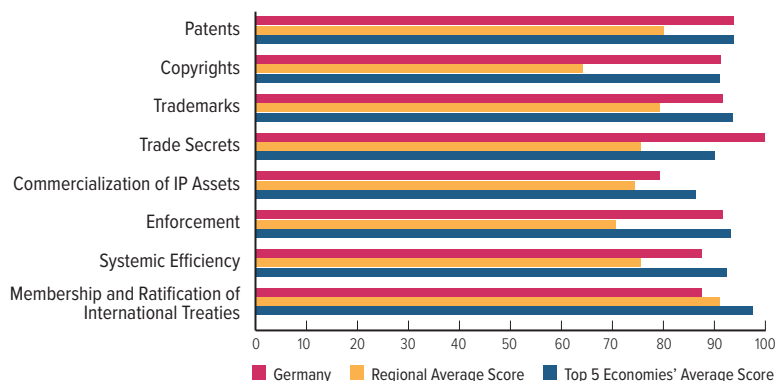
27. Registration and disclosure requirements of licensing

deals: French law requires the registration of licensing agreements to be held effective against third parties for most major forms of IP rights, including patents, trademarks, and design rights. For example, Article L613-9 of the Intellectual Property Code clearly states that "to have effect against others, all acts assigning or modifying rights deriving from a patent application or a patent must be entered in a register, known as the National Patent Register, kept by the National Institute of Industrial Property." Unlike many other jurisdictions, French IP authorities do require the submission of a signed contract by both the licensor and the licensee (or their designated parties). It is possible to submit an extract or truncated version of the licensing agreement.

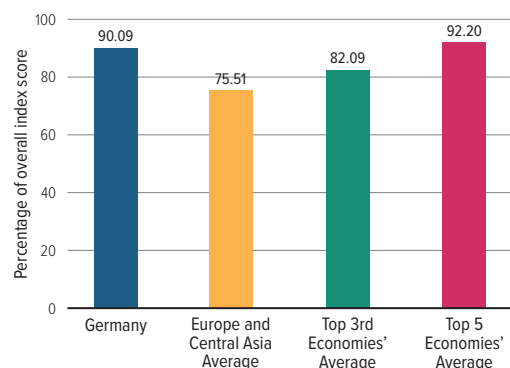
30. Tax incentives for the creation of IP assets: French tax law offers relatively generous R&D and IP-specific incentives. Corporate R&D expenses are fully tax deductible, and there is a tax credit equal to 30% of the first EUR100 million of qualifying R&D expenditure incurred. The rate is reduced to 5% for qualifying expenditure over EU1,000 million. In addition, there is an SME-specific extension of the R&D tax credit—the innovation tax credit. This 20% credit targets late-stage development and commercialization, including the development of pilot models and prototypes that would normally not qualify under the standard R&D deduction. Finally, there is a special patent box tax rate (maximum of 17%) on income derived from qualifying licensing income and/or the sale of a patent or patentable technology. Like in many other economies with a patent box scheme, French tax authorities are reviewing the current regime’s compliance with the OECD’s Base Erosion and Profit Shifting Project and specifically the adoption of a nexus approach to patent boxes.

GERMANY RANK 5/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Advanced and sophisticated national IP environment
- ✓ Sector-specific IP rights in place
- ✓ Membership in all major international PPH tracks through the national patent office and the EPO

KEY AREAS OF WEAKNESS

- ✗ Unlike most OECD economies, Germany has no R&D or IP-specific tax incentives in place
- ✗ European Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to Germany's and the EU's research- and IP-based biopharma industry
- ✗ Patent Law Treaty signed but not ratified

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 7.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 1.00 |
| 2. Patentability requirements | 1.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.75 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 1.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 5.50 | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 1.00 |
| Category 2: Copyrights, Related Rights, and Limitations | | 6.38 | |
| 9. Copyright (and related rights) term of protection | 0.63 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 1.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 1.00 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.50 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 3.00 | | |
| 22. Protection of trade secrets, civil remedies | 1.00 | 35. Criminal standards including minimum imprisonment and minimum fines | 1.00 |
| 23. Protection of trade secrets, criminal standards | 1.00 | 36. Effective border measures | 1.00 |
| 24. Regulatory data protection (RDP) term | 1.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 1.00 |
| Category 5: Commercialization of IP Assets | 4.75 | Category 7: Systemic Efficiency | 3.50 |
| 25. Barriers to market access | 1.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.75 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 1.00 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 1.00 | 40. Educational campaigns and awareness raising | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 3.50 |
| 30. Tax incentives for the creation of IP assets | 0.00 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 6.41 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 31. Physical counterfeiting rates | 0.86 | 44. Patent Law Treaty | 0.50 |
| 32. Digital/online piracy rates | 0.80 | 45. 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 |
| 33. Civil and procedural remedies | 1.00 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.75 | | |
| TOTAL 40.54 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Germany's overall score has decreased from 91.4% (36.54 out of 40) in the 6th edition to 90.09% (40.54 out of 45) in the 7th edition. This reflects a weaker than expected performance on some of the new indicators added to the Index, including indicator 30.

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); and 12. Availability of frameworks that promote cooperative action against online piracy: As noted in previous editions of the Index, the protection of online content in Germany is relatively strong. The Copyright Act provides authors with exclusive rights of reproduction, distribution, and exhibition. Regarding online infringement, Article 101 gives rights holders the option to request that an ISP disclose the name and address of a subscriber suspected of infringing copyright. As in other EU member

states, German law has implemented the E-Commerce Regulations 2002 (European Commission Directive) and applicable requirements of expeditious removal of any infringing material once an ISP has been notified or has received knowledge of any illegal activity. A long-running court case between music producer Frank Peterson and YouTube looks to set another important precedent. The dispute began over 10 years ago, with Peterson alleging that 36 music clips he has produced and claims to own the rights to have been uploaded and viewed on YouTube. The gist of the dispute is the extent to which YouTube, and by extension other internet intermediaries, can be held liable for the posting of infringing content on its platform. Peterson has argued that YouTube does have this responsibility and is liable for damages as it is indirectly profiting from the uploads through viewership, consequently depriving content creators and rights holders, such as Peterson, from licensing income. The case has been running through the lower German courts over the past decade, with 2 judgments issued in 2010 and 2015, respectively, by the Hamburg District Court and Court of Appeal. In September 2018, the highest relevant court of law in Germany, the Federal Court

of Justice (*Bundesgerichtshof*), was expected to issue a definitive ruling. Instead, the court asked the European Court of Justice (ECJ) to examine the issue, specifically the meaning of Directive 2001/29/EC on the harmonization of certain aspects of copyright and related rights in the information society, Directive 2000/31/EC on electronic commerce, and Directive 2004/48/EC on the enforcement of intellectual property rights. Given the current discussions and negotiations between the European Parliament and European Commission on a wide-ranging copyright directive (Copyright in the Digital Single Market)—the latest vote in the European Parliament approving a set of amendments was held in September 2018—and the expected finalization of this directive in 2019, there is some uncertainty as to when the ECJ will issue its opinion.

Commercialization of IP Assets and Market Access

27. Registration and disclosure requirements of licensing

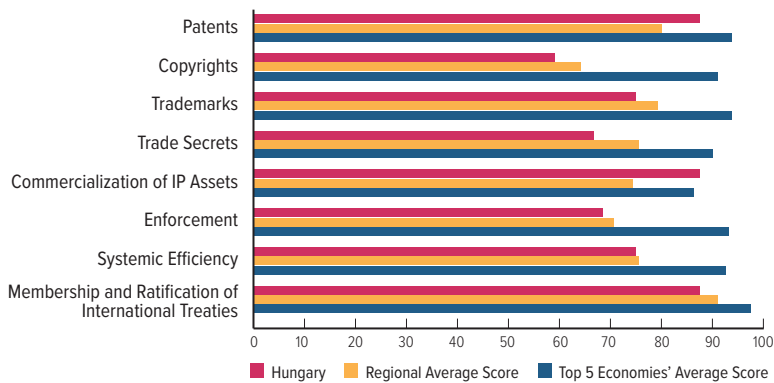
deals: German law does not require the registration of licensing agreements. Contracts for the licensing of patents, trademarks, and other forms of IP rights can be executed freely and are governed by relevant contract law. Until 2016, some uncertainty existed about how European Community Marks would be treated in infringement cases. There are stark differences between member states on the registration requirement. Unlike Germany, most EU member states, including France, Italy, and Spain, have a registration requirement in place for a license to take effect against third parties. In 2015, the Higher Regional Court of Dusseldorf referred a dispute to the ECJ for clarification on this rule. The court judged clearly and decisively that there was no requirement under the relevant regulations that a rights holder needed to register a Community Mark for it to take legal effect against third parties, stating that “the licensee may bring proceedings alleging infringement of a Community trade mark which is the subject of the license, although that license has not been entered in the Register of Community trade marks.”

30. Tax incentives for the creation of IP assets: German tax law does not offer any R&D-based or IP-specific incentives. Instead, German R&D incentives are focused on non-repayable R&D grants. These grants normally make up 50% of a given project, with higher levels available for

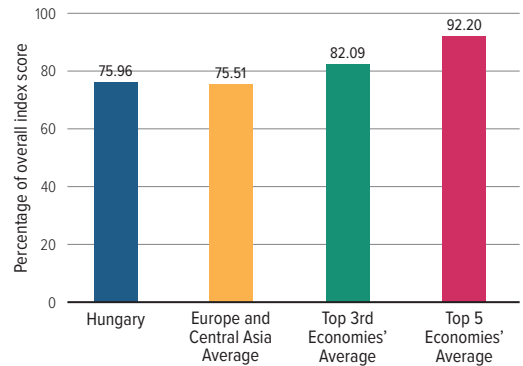
SMEs. Applications are made directly to the German federal government, which is now concentrating its R&D efforts and grants through the national innovation plan High Tech Strategy 2025 (*Hightech Strategie 2025*). Similar R&D grant schemes are available at the provincial and regional level, with industry focus and eligibility requirements varying among jurisdictions.

HUNGARY RANK 15/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Transposed the EU Trade Secrets Directive into Hungarian law in a new trade secrets law, Act LIV of 2018 on the Protection of Trade Secrets
- ✓ Generous R&D and IP-specific tax incentives in place
- ✓ Fairly strong and sophisticated IP system conferred through EU membership
- ✓ Sector-specific IP rights in place

KEY AREAS OF WEAKNESS

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

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 7.00 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.50 |
| 2. Patentability requirements | 0.75 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.75 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.75 | 14. Digital rights management (DRM) legislation | 0.50 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| 8. Patent opposition | 1.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.75 |
| Category 2: Copyrights, Related Rights, and Limitations | | 4.13 | |
| 9. Copyright (and related rights) term of protection | 0.63 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.50 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.50 | 20. Industrial Design Term of Protection | 1.00 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 0.75 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.75 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 2.00 | |
| 22. Protection of trade secrets, civil remedies | 0.75 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.50 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 1.00 |
| 24. Regulatory data protection (RDP) term | 1.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 1.00 |
| Category 5: Commercialization of IP Assets | | 5.25 | |
| 25. Barriers to market access | 1.00 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.75 | 38. Inter-governmental coordination of IP rights enforcement efforts | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 1.00 | 39. Consultation with stakeholders during IP policy formation | 0.75 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 40. Educational campaigns and awareness raising | 0.75 |
| 29. IP as an economic asset | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.50 |
| 30. Tax incentives for the creation of IP assets | 1.00 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 4.80 | |
| 31. Physical counterfeiting rates | 0.66 | 42. WIPO Internet Treaties | 1.00 |
| 32. Digital/online piracy rates | 0.64 | 43. Singapore Treaty on the Law of Trademarks | 0.50 |
| 33. Civil and procedural remedies | 0.50 | 44. Patent Law Treaty | 1.00 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.50 | 45. 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 34.18 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Hungary's overall score has increased from 75.54% (30.21 out of 40) in the 6th edition to 75.96% (34.18 out of 45) in the 7th edition. This reflects both a relatively strong performance on the new indicators added to the Index as well as a rise in score on indicator 23.

Trade Secrets and the Protection of Confidential Information

22. Protection of trade secrets (civil remedies); and 23. Protection of trade secrets (criminal sanctions): In August 2018, Hungary transposed the EU Trade Secrets Directive into Hungarian law in a new trade secrets law, Act LIV of 2018 on the Protection of Trade Secrets. The new law replaces preexisting legislation and provides a much clearer and stronger definition of trade secrets. The old legislation formed part of the Hungarian Civil Code and trade secrets were not treated as an IP right as such. The new law largely adopts the text of the EU directive. As a result of the transposition, Hungary's score on this indicator has

increased by 0.25. Regarding criminal law, the Trade Secrets Directive does not provide specific criminal sanctions. Preexisting law in Hungary through the Hungarian Criminal Code provides a limited set of sanctions for trade secret theft. Specifically, article 413 of the code applies only to a narrow subset of secrets that relate to financial and banking services and insurance. A more general clause is available in Section 422, which covers the theft and illicit acquisition of trade secrets and unlawful acquisition of trade secrets. However, the criminal code does not cover instances in which the relevant information was not unlawfully obtained, such as through prior employment.

Commercialization of IP Assets and Market Access

30. Tax incentives for the creation of IP assets: Hungarian tax law provides both a generous R&D tax credit and IP-specific tax incentives in the form of a patent box. The R&D incentive consists of a 200% super deduction, which can be claimed on qualifying expenditure carried out during the course of an entity's normal business activities. The patent box regime is based on a pre-tax profit deduction. Specifically, 50% of qualifying income (primarily licensing or

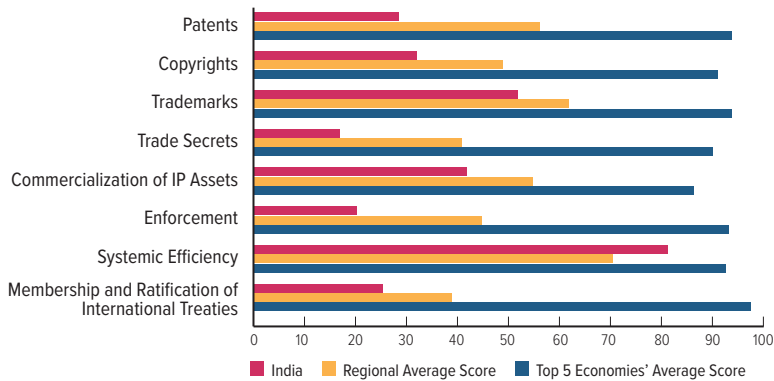
royalty income derived from the IP asset) can be applied and deducted with respect to an entity's corporate income tax liability.

41. Targeted incentives for the creation and use of IP

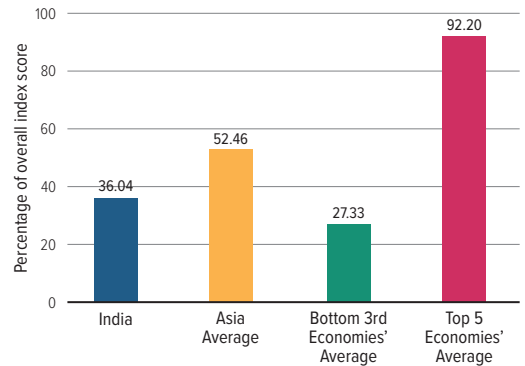
assets for SMEs: The Hungarian IP Office (HIPO) provides relatively few incentives or special assistance for SMEs. Unlike many IP and patent offices, the HIPO does not offer reduced filing fees or expedited review for applications from SMEs. Likewise, there is no systematic educational or technical assistance program that specifically targets SMEs and entrepreneurs. In the mid-2000s, WIPO and the then Hungarian Patent Office (*Magyar Szabadalmi Hivatal*) produced the *Intellectual Property for Business* series. These publications were designed specifically to help SMEs and small-scale entrepreneurs and inform them about the benefits and practical use of IP rights in their businesses. A Hungarian version of two brochures were produced and are still available. Because Hungary is a member of the EPO, Hungarian rights holders and inventors can, however, access the full suite of EPO educational programs, technical assistance, and special incentives. To begin with, the EPO provides a 30% reduction in fees to SMEs, individuals, and universities for patent filing and examination. A broad range of technical assistance and IP education is available for SMEs and businesses. For example, the European Patent Academy provides expert speakers and advice, including in relation to portfolio management and IP valuation, and a range of online training materials, webinars, and educational tools. Since 2016, the EPO has also offered a revised accelerated prosecution procedure (PACE). The PACE program does not target SMEs specifically but is open to all applicants.

INDIA RANK 36/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Accession to WIPO Internet Treaties shows India's recognition of international standards of copyright protection
- ✓ New pilot PPH program with the JPO is a positive step
- ✓ Generous R&D and IP-based incentives
- ✓ Global leader in targeted administrative incentives for the creation and use of IP assets for SMEs
- ✓ Strong awareness-raising efforts on the negative impact of piracy and counterfeiting

KEY AREAS OF WEAKNESS

- ✗ Barriers to licensing and technology transfer, including strict registration requirements
- ✗ Limited framework for the protection of biopharmaceutical IP rights
- ✗ Patentability requirements outside international standards
- ✗ No RDP available or patent term restoration for biopharmaceuticals
- ✗ Lengthy pre-grant opposition proceedings
- ✗ Previously used compulsory licensing for commercial and non-emergency situations

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 2.25 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.25 |
| 2. Patentability requirements | 0.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.00 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.75 | 14. Digital rights management (DRM) legislation | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| 8. Patent opposition | 0.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.25 |
| Category 2: Copyrights, Related Rights, and Limitations | | 2.22 | |
| 9. Copyright (and related rights) term of protection | 0.47 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 20. Industrial Design Term of Protection | 0.60 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 0.75 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.50 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 0.50 | | |
| 22. Protection of trade secrets, civil remedies | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.25 |
| 24. Regulatory data protection (RDP) term | 0.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.00 |
| Category 5: Commercialization of IP Assets | 2.50 | Category 7: Systemic Efficiency | 3.25 |
| 25. Barriers to market access | 0.25 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.25 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.50 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.00 | 40. Educational campaigns and awareness raising | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 0.25 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 1.00 |
| 29. IP as an economic asset | 0.50 | Category 8: Membership and Ratification of International Treaties | 1.00 |
| 30. Tax incentives for the creation of IP assets | 1.00 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 1.40 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 31. Physical counterfeiting rates | 0.23 | 44. Patent Law Treaty | 0.00 |
| 32. Digital/online piracy rates | 0.42 | 45. 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 |
| 33. Civil and procedural remedies | 0.25 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.00 | | |
| TOTAL 16.22 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

India's overall score has increased substantially from 30.07% (12.03 out of 40) in the 6th edition to 36.04% (16.22 out of 45) in the 7th edition. This reflects both a relatively strong performance on the new indicators added to the Index and a score increase on indicators 7 and 42.

General Comments

As has been noted in previous editions of the Index, the past few years has seen the Government of India (GOI) take steps to improve its national IP environment. These efforts continued in 2018 and progress has been made on several important areas measured by the Index. Of note are greater efforts to align and incorporate India's IP environment with the international IP system. The September 2018 accession to the WIPO Internet Treaties and subsequent agreement with the Japanese Patent Office on a pilot PPH both stand out. The Index captures these positive and concrete steps taken. The GOI also invested considerable energy into decreasing pendency rates for patent and trademark

applications. More staff have been hired and resources invested into modernizing and improving the administrative capacities of the Office of the Controller General of Patents, Designs and Trademarks (CGPDTM). The GOI announced in August 2018 that the application backlog had been reduced. For patents, this meant a significant decrease from over 200,000 pending applications in March 2017 to just over 155,000 applications by end of June 2018. For trademarks, a backlog of over 450,000 applications remained.

Patents, Related Rights, and Limitations

7. Membership in Patent Prosecution Highways (PPHs): In late 2018, Indian and Japanese authorities agreed to begin a PPH program in the first quarter of 2019. This is a significant step to support innovators and inventors in both economies. Because of this initiative, India's score has increased by 0.5 on this indicator. PPH initiatives and increased cooperation between IP offices is one of the most tangible ways in which the administration and functioning of the international IP system can be improved and harmonized to help inventors and rights holders. Until this announcement, India did not have a functioning PPH with any major IP office. The pilot

program is set to target certain arts and fields of technology. At the time of research, the identity of these fields had not been made public. However, IP-intensive industries hope that, over time, the PPH can be expanded to cover most arts and major fields of technology.

Commercialization of IP Assets and Market Access

27. Registration and disclosure requirements of licensing

deals: Registration of patent licenses is mandatory under the Patent Act. Articles 68 and 69 outline the basis and requirements of registration. As part of these requirements, rights holders must submit all details of a given licensing agreement, including the fully executed contract. Contract details and commercially sensitive information will be kept confidential only upon request from the registering parties. The failure to register a license may result in the agreement being null and void. Specifically, Indian case law suggests that licenses not registered in the prescribed manner are invalid. For example, in the 2009 *National Research Development ... v M/S Abs Plastics Limited*, the Delhi High Court held the issue to be clear cut: “It is obvious that since this license agreement between the parties was not a registered agreement, this had no validity in the eyes of law.” There is also the issue of Form 27 for patents, which requires that patent holders annually provide information on the extent to which a granted patent has been worked by patentees and licensees. Part of the submission and documentation submitted pertains to the patent’s value and commercial scale. There is much uncertainty about what the office will choose to disclose, as publication of Form 27 is at the authority’s discretion; fines for noncompliance remain high. In March 2018, the GOI invited stakeholder feedback and is currently considering potential reassessments to the procedure.

30. Tax incentives for the creation of IP assets: Indian tax law provides both a generous R&D tax credit and IP-specific tax incentives in the form of a patent box. The R&D tax incentive ranges from a 100% to 150% super deduction, depending on the type of qualifying expenditure and industry sector. The patent box regime taxes licensing income and royalties at a 10% rate.

Enforcement

33. Civil and procedural remedies; and 35. Criminal standards, including minimum imprisonment and minimum fines: Rights holders continue to face real challenges in enforcing their IP rights in India. India has high rates of substandard and counterfeit medicines, online and physical piracy, and counterfeiting. One area of growing concern has been the long pendency times in the Indian court system. In June 2018, it was reported that over 30 million (3.3 crore) civil and criminal cases were pending in India, of which 40% were more than 5 years old. It was estimated that commercial disputes had risen from over 17,000 cases in 2015 to about 40,000 in 2017. The GOI has long recognized this challenge, particularly its negative impact on business disputes and IP rights holders. In 2015/16, the Commercial Courts, Commercial Division and Commercial Appellate Division of High Courts Act, 2015 was signed into law; it includes specific amendments to the Civil Procedure Code. Fundamentally, the purpose of the act is to improve the overall commercial environment in India by making it easier and quicker to solve business-related disputes. Specific reforms include an increased emphasis on solving disputes quickly and efficiently, streamlining commercial disputes, and ensuring a relevant level of expertise at the presiding court level. Additional amendments were introduced in 2018 to improve the legislation and decrease pendency rates by expanding the types of cases that can be heard, reducing the value threshold for commercial disputes, and introducing mediation proceedings. An important feature of the original act was the introduction of the option of summary proceedings. Order XIII A, subsection 2 allows for the application for a summary judgment. Indian case law on summary judgments is still evolving; however, recent cases have created some uncertainty on how summary judgments will be made. Subsection 2 of the order states that “an applicant may apply for summary judgment at any time after summons has been served on the defendant,” yet in the recent *Skechers USA Inc v Pure Play Sports* case, the judge decided to move ahead with a summary judgment. Expediting litigation and dispute resolution is a positive policy goal; the GOI, courts, and legal community should be applauded for recognizing this long-standing issue and moving forward with relevant reforms. However, a clear and

fair process that is uniformly followed must also be in place so that the format of summary judgments is not applied in cases where a full trial is necessary.

Systemic Efficiency

41. Targeted incentives for the creation and use of

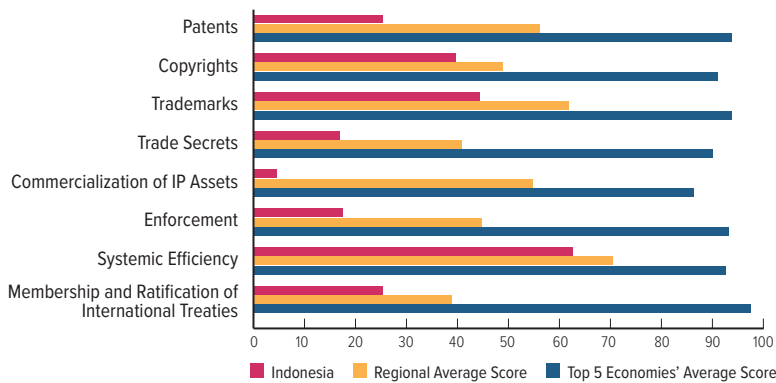
IP assets for SMEs: India is one of the Index's leading economies for providing targeted incentives to SMEs. Expedited review for patent filings, reduced filing fees, and technical assistance are all available to Indian SMEs and start-ups. Of particular note is a new program for start-ups under the GOI's Startup Standup India initiative. Part of this program is the Scheme for Facilitating Start-Ups Intellectual Property Protection, which is run by the Office of CGPDTM.

Membership in and Ratification of International Treaties

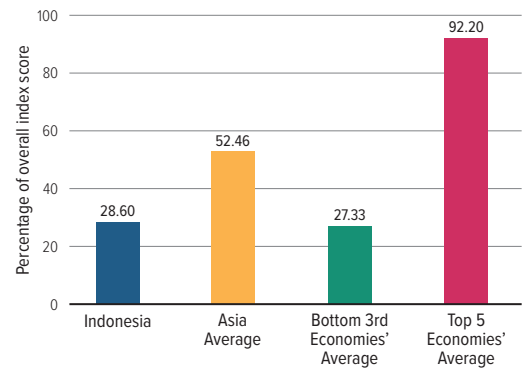
42. WIPO Internet Treaties: India acceded to both the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty in September 2018. As a result, the score on this indicator has increased by 1.

INDONESIA RANK 45/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ 2018 Patent Regulations provide relief from the general technology transfer and localization requirement of the 2016 Patent Act
- ✓ 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

- ✗ Lack of clarity around implementation of Article 20 workaround for technology transfer and localization requirements creates uncertainty for rights holders
- ✗ Significant barriers in place for licensing and commercialization of IP assets, including technology transfer
- ✗ Biopharmaceutical patentability standards outside international norms
- ✗ History of using compulsory licensing for commercial and non-emergency situations
- ✗ Challenging copyright environment with high levels of piracy
- ✗ Limited participation in international IP treaties

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 2.00 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.50 |
| 2. Patentability requirements | 0.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIs) | 0.25 | 14. Digital rights management (DRM) legislation | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.25 |
| 8. Patent opposition | 0.25 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.25 |
| Category 2: Copyrights, Related Rights, and Limitations | | 2.77 | |
| 9. Copyright (and related rights) term of protection | 0.52 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 20. Industrial Design Term of Protection | 0.40 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 0.75 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.50 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 0.50 | |
| 22. Protection of trade secrets, civil remedies | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.25 |
| 24. Regulatory data protection (RDP) term | 0.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.00 |
| Category 5: Commercialization of IP Assets | | 0.25 | |
| 25. Barriers to market access | 0.00 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.00 | 39. Consultation with stakeholders during IP policy formation | 0.75 |
| 28. Direct Government intervention in setting licensing terms | 0.00 | 40. Educational campaigns and awareness raising | 0.25 |
| 29. IP as an economic asset | 0.25 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.50 |
| 30. Tax incentives for the creation of IP assets | 0.00 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 1.20 | |
| 31. Physical counterfeiting rates | 0.28 | 42. WIPO Internet Treaties | 1.00 |
| 32. Digital/online piracy rates | 0.17 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 33. Civil and procedural remedies | 0.25 | 44. Patent Law Treaty | 0.00 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.00 | 45. 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 12.87 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Indonesia's overall score has decreased from 30.35% (12.14 out of 40) in the 6th edition to 28.60% (12.87 out of 45) in the 7th edition. This reflects a weak performance on the new indicators added to the Index.

Patents, Related Rights, and Limitations

2. Patentability requirements: As discussed previously in the Index, in 2016, the Indonesian Parliament (People's Representative Council) passed a new wide-ranging patent law (Law 13 2016). While it aimed to strengthen Indonesia's innovation infrastructure and encourage more high-tech economic development through the creation and use of new technologies, overall the law did not improve what was already a challenging patenting environment. The law introduced new restrictions on patentability for biopharmaceuticals together with provisions that expanded the potential use of parallel importation. More broadly, Article 20 of the law seemed to make the granting of a patent conditional on localizing manufacturing and/or

R&D in Indonesia. Specifically, it mandated that all patent rights holders "make" the patented product or process within Indonesia. Subsection (2) of this article stated that this production should support Indonesia's industrial and development policies, specifically the "transfer of technology, investment absorption and/or employment." No further details were provided about the meaning or legal definition of "make" in this context. For many years, Indonesia has had in place several mandatory localization requirements that target certain industrial sectors (most notably, the biopharmaceutical sector), but this new requirement broadened this to any patented technology. In July 2018, long-awaited Patent Regulations were published that aim to provide clarity on what Article 20 means in practice. On the one hand, the regulations affirm the meaning and intent of the original act that the "making" of a patent is an obligation on the part of a given rights holder to make products or use processes in Indonesia and that this must support technology transfer, investment, and/or employment. Upholding the sweeping localization requirements of the original law is not only firmly outside international standards but is likely to do

very little to encourage and incentivize the transfer of new technologies or foreign direct investment into Indonesia. On a more positive note, the regulations do provide the possibility of indefinitely postponing these requirements. Article 3 of the regulations allows patent holders to apply to “postpone” the production or use of the patent in Indonesia for up to five years. Article 6 also provides that this five-year postponement may be extended “with reasons.” At the time of research, it was not clear what this application process would look like, what the government authorities will accept as reasons for granting postponement, and how in practice rights holders will be able to avoid these, in effect, localization requirements. At best, these regulations and the original provisions of the Patent Law simply add an additional bureaucratic layer to doing business in Indonesia. At worst, they add a potentially crippling level of uncertainty and further disincentivize the use of the Indonesian patent system as a basis for protecting IP assets.

Commercialization of IP Assets and Market Access

26. Barriers to technology transfer; 27. Registration and disclosure requirements of licensing deals; and 28. Direct government intervention in setting licensing terms:

While investment and technology transfer have become a clear priority for the government over the past several years, it has largely relied on restrictive measures that have made the investment climate increasingly complex and difficult. As discussed, the changes to the Patent Law and 2018 Patent Regulations are only the most recent examples. In 2014, Indonesia adopted a new industrial law (3/2014) aimed at fostering growth by developing local production capabilities. The law specifically targeted localization of production, use of domestic products, implementation of national standards, and greater power to restrict imports and exports. A comprehensive trade law (7/2014) reiterated the top-down approach to achieving investment, outlining the government’s broad powers to oversee trade to protect domestic interests. Protective measures included requirements to partner with Indonesian companies, local content and technology transfer requirements, restrictions on imports and exports, and equity ownership limitations in certain sectors. Over the years, the biopharmaceutical sector has been especially targeted with local manufacturing and/or local partnering requirements to receive market authorization. These general and sector-specific localization

policies and mandates heavily influence the technology transfer and licensing environment. Technology transfer and commercialization of publicly funded research remain relatively limited. Some state-funded universities (including the *Institut Pertanian Bogor* and *Universitas Indonesia*) have clear IP rights policies in place that encourage IP protection. While ownership of the invention remains with the government and university, at the former researchers and inventors are provided with a guaranteed royalty rate of 40%. Yet, there are considerable barriers to the practical execution of licensing agreements and effective technology transfer for foreigners as well as Indonesians. To begin with, to be valid and legally recognized, licensing agreements for all major IP rights must be registered with the Indonesian IP authorities. As part of this registration, rights holders must submit the fully executed licensing contract. Unless registered with the relevant authorities, licensing agreements have no legal standing vis-à-vis third parties. For example, Article 79(2) of the 2016 Patent Act states that “where a licensing agreement is not recorded at the Directorate General ... said licensing agreement will not have legal effects on a third party.” Even more onerously, all licensing agreements are subject to review by the Indonesian authorities. Article 78 of the Patent Act is quite clear that any licensing agreement should not adversely affect the Indonesia economy or national interest or “contain restrictions which obstruct the ability of the Indonesian people to master and develop technology in general and in connection with the Patented Invention in particular.” If these criteria are not fulfilled, the authorities will refuse registration and thereby render the agreement legally void and unenforceable versus third parties. Finally, unlike most other jurisdictions, Indonesia requires the registration of licensing agreements with respect to trade secrets. Despite the confidential nature of this form of IP protection, the licensing and licensed transfer of trade secrets are subject to the same requirements as all other IP rights, including registration and official publication.

Systemic Efficiency

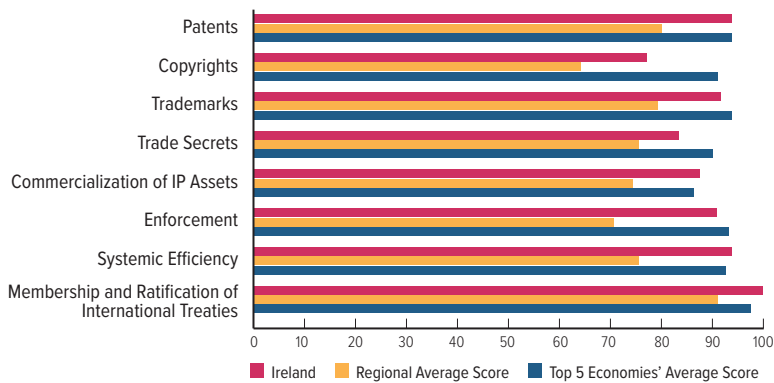
41. Targeted incentives for the creation and use of IP assets for SMEs:

On a positive note, the Indonesian IP Office (*Direktorat Jenderal Kekayaan Intelektual*) offers reduced patent fees for “micro, small-scale enterprises, educational institutions and Government R&D.” There is also

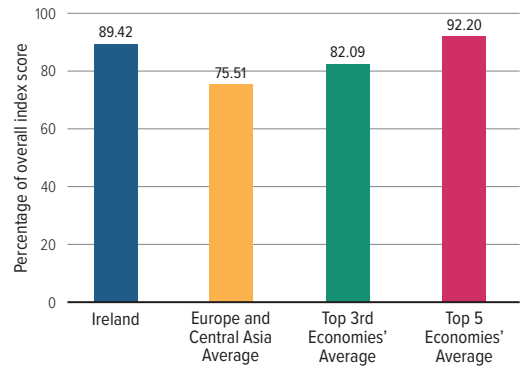
a growing appreciation in the agency that IP generated and developed by SMEs should be registered and protected to be better utilized as an economic asset. Specifically, public reports have cited senior officials in the directorate stating that they wished banks and financial institutions would show a greater willingness to accept IP assets as collateral for financing. Such pronouncements followed by policy action are essential to helping Indonesia's entrepreneurs and businesses. Intellectual property has little to no economic utility unless it can be protected, commercialized, and turned into an asset. Outside these statements, there is no evidence that the IP Office will provide deeper, SME-specific technical assistance or guidance. The IP Office does not provide an expedited review path for registration applications from SMEs.

IRELAND RANK 6/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ 2018 transposition of EU Trade Secrets Directive through EU (Protection of Trade Secrets) Regulations 2018 (No. 188 of 2018)
- ✓ Generous R&D and IP-specific tax incentives
- ✓ Strong and advanced IP system with robust protection of all major IP rights, including sector-specific protection
- ✓ Judicial mechanism for notifying online copyright infringers and disabling access to infringing content online

KEY AREAS OF WEAKNESS

- ✗ Licensing registration requirements
- ✗ European Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to Ireland's and the EU's research- and IP-based biopharma industry

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 7.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.75 |
| 2. Patentability requirements | 1.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.75 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 0.75 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 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 | Category 3: Trademarks, Related Rights, and Limitations | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 1.00 |
| Category 2: Copyrights, Related Rights, and Limitations | | 5.50 | |
| 9. Copyright (and related rights) term of protection | 0.63 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 1.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.75 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.50 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 2.50 | | |
| 22. Protection of trade secrets, civil remedies | 1.00 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.75 |
| 23. Protection of trade secrets, criminal standards | 0.50 | 36. Effective border measures | 1.00 |
| 24. Regulatory data protection (RDP) term | 1.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 1.00 |
| Category 5: Commercialization of IP Assets | 5.25 | Category 7: Systemic Efficiency | 3.75 |
| 25. Barriers to market access | 1.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 1.00 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 1.00 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.50 | 40. Educational campaigns and awareness raising | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 4.00 |
| 30. Tax incentives for the creation of IP assets | 1.00 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 6.36 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 31. Physical counterfeiting rates | 0.90 | 44. Patent Law Treaty | 1.00 |
| 32. Digital/online piracy rates | 0.71 | 45. 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 |
| 33. Civil and procedural remedies | 1.00 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 1.00 | | |
| TOTAL 40.24 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Ireland's overall score has decreased from 89.95% (35.98 out of 40) in the 6th edition to 89.42% (40.24 out of 45) in the 7th edition. While the score decreased marginally, Ireland performs relatively well on the new indicators added to the Index and their score also increased on indicator 22.

Copyrights, Related Rights, and Limitations

13. Scope of limitations and exceptions to copyrights and related rights; and 14. Digital rights management legislation: The Higher Chamber (the *Seanad*) is considering amendments to the Copyright and Related Rights Act 2000 aimed at updating the copyright legislative framework for the digital era and improving enforcement. Importantly, the Copyright and Other Intellectual Property Law Provisions Bill 2018 makes the violation of TPMs a criminal offense. The bill also extends copyright exceptions by implementing most optional exceptions to copyright permitted by Directive 2001/29/EC. Regarding enforcement, the bill extends the jurisdiction of circuit and district courts to

include IP claims to improve access to justice for lower-value IP infringement that would be too expensive to prosecute before the High Court.

Trade Secrets and the Protection of Confidential Information

22. Protection of trade secrets (civil remedies): Ireland transposed the EU Trade Secrets Directive by way of Statutory Instrument. The European Union (Protection of Trade Secrets) Regulations 2018 (No. 188 of 2018) came into effect on June 9, 2018. If a trade secret is unlawfully acquired, used, or disclosed, the regulations provide civil measures and remedies. Prior to the transposition of the directive, there was no statutory law in Ireland with rights holders relying on case law. As a result, the score on this indicator has increased by 0.25.

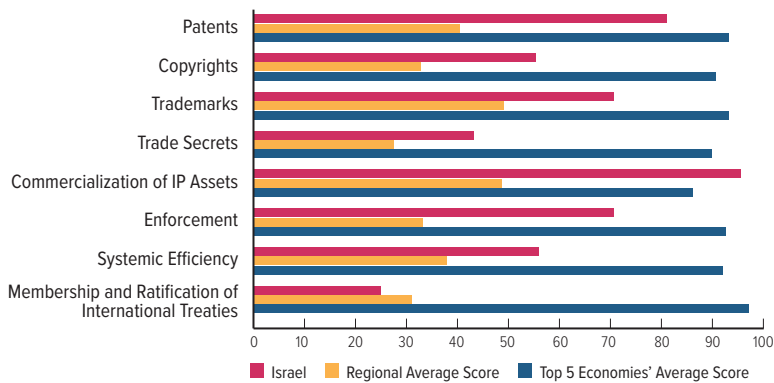
Commercialization of IP Assets and Market Access

27. Registration and disclosure requirements of licensing deals: To be valid and legally recognized, licensing agreements for patents and trademarks must be registered with the Irish IP authorities. As part of this registration

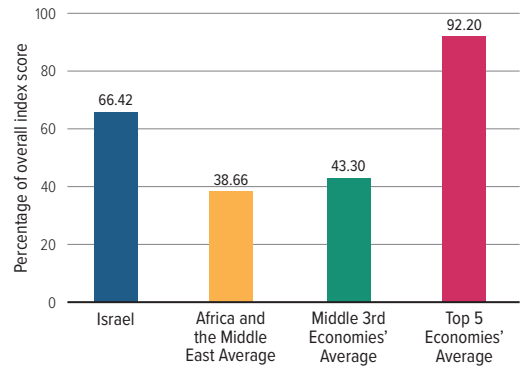
process, rights holders must submit the fully executed licensing contract. Local legal analysis suggests that unless registered with the relevant authorities, licensing agreements have limited standing vis-à-vis third parties and damages can be sought only if the disputed interest in the IP right has been registered.

ISRAEL RANK 18/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Global leader on technology transfer and international licensing activity—no administrative or regulatory barriers in place
- ✓ Generous R&D and IP-specific tax incentives in place
- ✓ Israeli Patent Office is an active participant in all major PPH tracks
- ✓ 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 Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 6.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.25 |
| 2. Patentability requirements | 1.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 1.00 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 0.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.75 |
| 8. Patent opposition | 0.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.75 |
| Category 2: Copyrights, Related Rights, and Limitations | | 3.88 | |
| 9. Copyright (and related rights) term of protection | 0.63 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.50 | 20. Industrial Design Term of Protection | 1.00 |
| 11. Expeditive injunctive-style relief and disabling of infringing content online | 0.50 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.75 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 1.30 | |
| 22. Protection of trade secrets, civil remedies | 1.00 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.75 |
| 23. Protection of trade secrets, criminal standards | 0.00 | 36. Effective border measures | 0.75 |
| 24. Regulatory data protection (RDP) term | 0.30 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.50 |
| Category 5: Commercialization of IP Assets | | 5.75 | |
| 25. Barriers to market access | 1.00 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 1.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.50 |
| 27. Registration and disclosure requirements of licensing deals | 1.00 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 40. Educational campaigns and awareness raising | 0.25 |
| 29. IP as an economic asset | 0.75 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.50 |
| 30. Tax incentives for the creation of IP assets | 1.00 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 4.96 | |
| 31. Physical counterfeiting rates | 0.73 | 42. WIPO Internet Treaties | 0.50 |
| 32. Digital/online piracy rates | 0.73 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 33. Civil and procedural remedies | 0.75 | 44. Patent Law Treaty | 0.50 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.75 | 45. 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 29.89 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Israel's overall score has increased from 65.43% (26.17 out of 40 in the 6th edition to 66.42% (29.89 out of 45) in the 7th edition. This reflects a relatively strong performance on the new indicators added to the Index and a score increase on indicator 38.

Copyrights, Related Rights, and Limitations

10. Legal measures that provide necessary exclusive rights preventing infringement of copyrights and related rights (including Web hosting, streaming, and linking);

11. Expedient injunctive-style relief and disabling of infringing content online; and 14. Digital rights management legislation: The protection of copyright online has long been a challenge for rights holders in Israel. There is no specific legal framework in place regarding notice and takedown mechanisms or other administrative or regulatory mechanisms to effectively enforce copyright and related rights in the online environment. Over the past two years, the Ministry of Justice has developed legislation

that amends the Copyright Act and Ordinance to address many of these gaps and strengthen copyright protection in Israel. The proposed bill expands the definition of indirect infringement of copyrights to include infringements by enabling online access (e.g., by placing hyperlinks) to infringing content; it also provides a mechanism to expedite the process for obtaining a court order to disable access to infringing websites. Additionally, the proposed bill includes a legal mechanism to expose the identity of the person responsible for an infringing website and proposes an increase in criminal sanctions from one to three years prison. The Israeli Parliament (*Knesset*) introduced the bill in late 2017. At the time of research, the bill still had not been passed into law. But even with these proposed amendments, significant gaps remain in Israel's copyright framework. The proposed bill does not prohibit the circumvention of DRM technologies, rendering Israel an international outlier regarding DRM legislation. Although Israel became a signatory to the WIPO Copyright Treaty in 1997, to date, Israel has not ratified the agreement.

Commercialization of IP Assets and Market Access

26. Barriers to technology transfer: Technology transfer is well established in Israel; for more than 50 years, over 10 tech transfer offices and companies have been present at the major universities and research institutions. Israeli institutions are consistently included among the top 50 PCT patenting universities worldwide according to WIPO. Israel's technology transfer model is similar to the American Bayh-Dole framework but based on largely independent and corporate-style offices heavily focused on generating royalties and creating new companies. On the whole, this model has been widely successful. Technology transfer offices in Israel are quite active; by some estimates, they generate an average of 150 new licensing deals, 15 start-ups, and NIS1.5 billion (USD400 million) in royalties per year. Indeed, 2 technology transfer offices in Israel, Yissum (Hebrew University) and Yeda (Weizmann Institute), are ranked among the top tech transfer offices worldwide.

30. Tax incentives for the creation of IP assets: Israeli tax law provides both generous R&D and IP-specific incentives. Article 20a of the Income Tax Law allows for a deduction of R&D-related expenses (excluding state-provided grants) from the annual tax payments. Under the Law for Encouraging Capital Investments, the annual base revenues can be reduced by 10% per fiscal year if the R&D-related expenses were 7% or more of the base revenues and additional tax benefits are given to R&D-based companies for mergers, sale of equity, and more. In mid-2017, the Israeli government introduced the Innovation Box Regime, which includes a reduced withholding tax of 4% and a reduced corporate income tax rate of 6% on IP-based income and on capital gains from the future sale of IP for companies with global consolidated revenue of over ILS10 billion (USD2.5 billion); a 12% tax rate applies for global consolidated revenue below ILS10 billion.

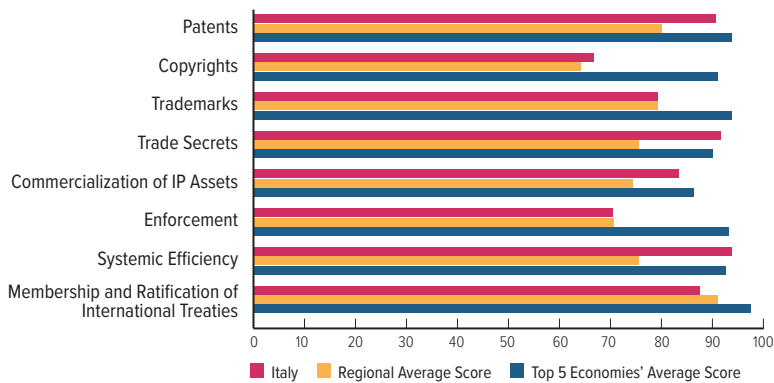
Systemic Efficiency

38. Coordination of IP rights enforcement: Israel does not have in place a national body or cross-agency authority that coordinates the government's IP enforcement activities. However, 2018 saw a significant increase in coordinated efforts to enforce IP rights. For example, a covert investigation carried out by the enforcement unit

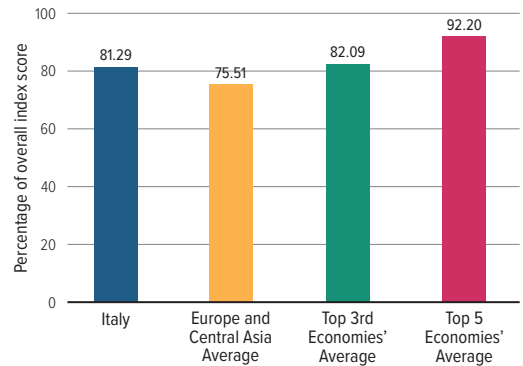
within the Tax Authority in collaboration with the Customs & VAT investigations body, the Money Laundering Prohibition Division within the Ministry of Justice, and the Foreign Operations Coordination Unit uncovered an Israeli-based network that produced and illegally distributed anabolic steroids and counterfeit drugs around the world. Additional coordinated enforcement efforts leading to arrests and seizures of counterfeit drugs, liquor, and other goods were also on display between the Enforcement Division within the Ministry of Health, the Customs Authority, and the Economic Crimes Unit within the police. On the civil side, the Special Unit for Civil Enforcement within the State Attorney's Office and the Central Bank of Israel collaborated in filing a civil prosecution in parallel to a criminal conviction of two individuals charged with counterfeiting bank notes and infringing copyright owned by the Bank of Israel. As a result of this increased coordination, the score on this indicator has increased by 0.25.

ITALY RANK 12/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Generous R&D and IP-specific tax incentives in place
- ✓ 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

- ✗ Registration requirements for licensing agreements
- ✗ European 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

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 7.25 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.75 |
| 2. Patentability requirements | 0.75 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.50 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 0.50 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.75 |
| 8. Patent opposition | 1.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.75 |
| Category 2: Copyrights, Related Rights, and Limitations | | 4.66 | |
| 9. Copyright (and related rights) term of protection | 0.66 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.50 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.50 | 20. Industrial Design Term of Protection | 1.00 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 1.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.75 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 2.75 | | |
| 22. Protection of trade secrets, civil remedies | 1.00 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.50 |
| 23. Protection of trade secrets, criminal standards | 0.75 | 36. Effective border measures | 1.00 |
| 24. Regulatory data protection (RDP) term | 1.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 1.00 |
| Category 5: Commercialization of IP Assets | 5.00 | Category 7: Systemic Efficiency | 3.75 |
| 25. Barriers to market access | 1.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 1.00 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.75 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.50 | 40. Educational campaigns and awareness raising | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 3.50 |
| 30. Tax incentives for the creation of IP assets | 1.00 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 4.92 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 31. Physical counterfeiting rates | 0.60 | 44. Patent Law Treaty | 0.50 |
| 32. Digital/online piracy rates | 0.57 | 45. 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 |
| 33. Civil and procedural remedies | 0.75 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.50 | | |
| TOTAL 36.58 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Italy's overall score has decreased slightly from 81.45% (32.58 out of 40) in the 6th edition to 81.29% (36.58 out of 45) in the 7th edition. This reflects a mixed performance on the new indicators added to the Index.

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):

On September 12, 2018, the European Parliament adopted a new Copyright Directive intended to update copyright rules for the digital era. According to Article 13, platforms that actively organize and promote content (e.g., music or other copyrighted material) must have permission from copyright holders and pay them for using their content. Platforms must "sign fair and appropriate licensing agreements with right holders." If this is not possible, platforms must collaborate with copyright holders to stop users from uploading copyrighted content. Commercial platforms will have to filter

user content, for which they will be directly liable, to prevent unauthorized uses of copyrighted materials. The provision also includes safeguards to ensure that the unjustified removal of noninfringing material is addressed through effective and expeditious mechanisms (Article 13, Section 2b). The other most debated provision of the directive, Article 11, creates a "neighboring right" (also called "ancillary copyright" or "publisher's right") that enables publishers to grant authorization to search sites and news aggregators before these outlets use their content, including snippets or links, and to receive payment for it. This "link tax" aims to ensure that authors and artists receive recognition and payment for their work. At the time of research, closed-door compromise negotiations were ongoing between Parliament and the council, before Parliament takes a final vote on the text.

11. Expeditious injunctive-style relief and disabling of infringing content online: The Italian Communications Regulatory Authority (AGCOM) Rule 490/13/CONS, adopted in October 2018, strengthens the agency's power to fight the most damaging online violations. AGCOM will now be able

to ask ISPs to implement notice and stay-down measures, and to issue preliminary injunctions that disable access to infringing websites within three days upon receiving notification from the right holder, including “dynamic injunctions” that address alias sites. In April 2018 (in a case involving Mondadori SPA and the main national ISPs), the Court of Milan defined the requirement to disable access to current and future domain names as “the most appropriate technical measures” to prevent copyright infringement.

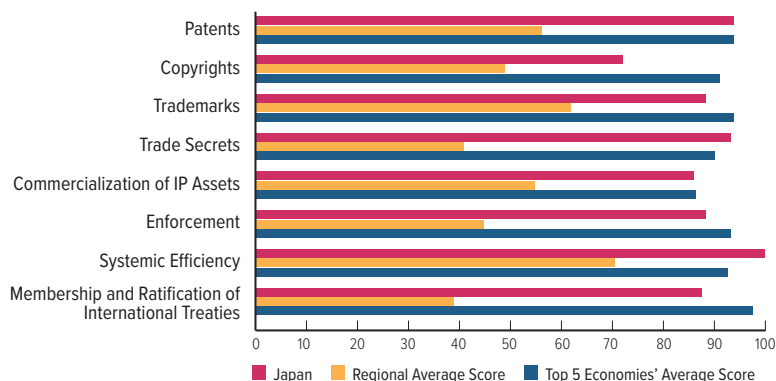
Trade Secrets and the Protection of Confidential Information

22. Protection of trade secrets (civil remedies); and 23.

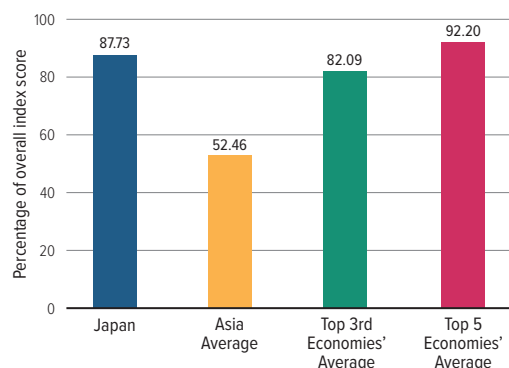
Protection of trade secrets (criminal sanctions): Recent judicial decisions and implementation of the Trade Secret Directive (2016/943/EC) further strengthen the protection afforded to trade secrets in Italy. Legislative Decree 63/2018 entered into force on June 22, 2018; it introduces procedural improvements and certainty to both the civil and criminal trade secrets regimes. For instance, Article 4 of the decree (amending Article 99 of the IP Code) now also considers unlawful the conduct of potential infringers who, at the time of the acquisition, use, or disclosure, should have been aware that the trade secrets were unlawfully obtained (directly or indirectly) by a third party. The decree also modifies the Italian Criminal Code (Article 623) to increase penal sentences for trade secret violations when the crime has been carried out by means of ICT instruments. Article 623 provides a prison sentence up to two years for the unlawful disclosure of trade secrets to obtain (or allow third parties to obtain) profits. In a recent case on stolen commercial secrets, the Court of Brescia granted an injunction that prevented the defendant from selling the products at issue, and corroborated the injunction with a EUR20,000 penalty per each day of delay in complying with the measure.

JAPAN RANK 8/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Global leader with respect to targeted administrative incentives for the creation and use of IP assets for SMEs
- ✓ “Economic Partnership Agreement” signed with EU—agreement includes a substantial IP chapter
- ✓ New licensing guidelines published by the JPO provide a balanced approach to licensing terms and conditions for SEPs
- ✓ Japan 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

- ✗ No IP-specific tax incentives in place, such as a patent box regime
- ✗ Remedies against online copyright infringement remain underdeveloped compared with other OECD economies

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 7.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.50 |
| 2. Patentability requirements | 1.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.75 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 0.75 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 5.30 | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 1.00 |
| Category 2: Copyrights, Related Rights, and Limitations | | 5.03 | |
| 9. Copyright (and related rights) term of protection | 0.53 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 1.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 1.00 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.50 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 2.80 | | |
| 22. Protection of trade secrets, civil remedies | 1.00 | 35. Criminal standards including minimum imprisonment and minimum fines | 1.00 |
| 23. Protection of trade secrets, criminal standards | 1.00 | 36. Effective border measures | 1.00 |
| 24. Regulatory data protection (RDP) term | 0.80 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 1.00 |
| Category 5: Commercialization of IP Assets | 5.16 | Category 7: Systemic Efficiency | 4.00 |
| 25. Barriers to market access | 1.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 1.00 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 1.00 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.75 | 40. Educational campaigns and awareness raising | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 1.00 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 3.50 |
| 30. Tax incentives for the creation of IP assets | 0.66 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 6.19 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 31. Physical counterfeiting rates | 0.85 | 44. Patent Law Treaty | 1.00 |
| 32. Digital/online piracy rates | 0.84 | 45. 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 |
| 33. Civil and procedural remedies | 0.75 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.75 | | |
| TOTAL 39.48 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Japan's overall score has increased from 86.45% (34.58 out of 40) in the 6th edition to 87.73% (39.48 out of 45) in the 7th edition. This reflects a strong performance on the new indicators added to the Index and an increase in score on indicator 45.

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 has been noted in previous editions of the Index, online piracy (in particular of manga and anime) is an area of real concern to Japanese authorities. As part of a broad coalition of industry and content creators, in 2014, the Japanese Ministry of Economy, Trade, and Industry (METI) announced it would “monitor and remove illegally

uploaded copies” of both anime and manga content through the Manga-Anime Guardians Project. These initiatives carried through to subsequent years. Initial reports from METI suggested that a significant drop in pirated anime and manga materials had been achieved—close to 1 million infringing copies and online files were removed and/or deleted, corresponding to an estimated 70% of all illegal anime and manga content online. Unfortunately, the pirating has continued. Facing this growing challenge, over the past 18 months, the Japanese authorities have announced new legislative and enforcement efforts. At the end of 2017, the proprietors of infringing sites were arrested. The government has zeroed in on the potential for introducing emergency enforcement measures to disable access to infringing websites and potential new copyright amendments in 2019 to more effectively combat online piracy. To date, the government has reached an agreement with internet mediators on disabling access to so-called leech websites, that is, aggregation websites that provide hyperlinks to infringing materials and webpages. The government also plans to present new Copyright Act revisions to the Japanese Diet in 2019. As noted in previous

editions of the Index, Japan provides for a relatively limited notice and takedown mechanism. Under the Law Concerning the Limits of Liability for Damages of Specified Telecommunications Service Providers and the Right to Request Disclosure of Identification Information of the Senders (Law No. 137), Japanese ISPs have an obligation to act on possible infringement upon notification from a rights holder. However, unlike many other economies' notice and takedown systems, under Law No. 137, ISPs must inform the alleged infringer of the allegation of infringement prior to any takedown of the infringing material. Upon notification, the alleged infringer then has 7 days to respond to the allegation. Only upon the expiration of the 7 days, if no response from the alleged infringer has materialized, can the ISP take down the alleged material. Similarly, no comprehensive system of injunctive-style relief is in place. Individual ISPs have taken action and disabled access to infringing content only on a voluntary basis. To strengthen Japan's copyright environment and protect the rights of its many creators and artists, manga and otherwise, the government should address both these issues and introduce a more effective system to disable access to illegal and copyright-infringing content.

Commercialization of IP Assets and Market Access

28. Direct government intervention in setting licensing

terms: As discussed in previous editions of the Index, an area of growing interest to Japanese industrial and competition policy has been the centrality of Standard and Essential Patents (SEPs) to future innovation and economic growth. In 2017, METI issued *The Intellectual Property System for the Fourth Industrial Revolution*. This report examined future challenges and proposed potential adjustments to the IP framework for technological developments that include the Internet of Things, artificial intelligence, robotics, and other cutting-edge industries that are loosely labeled as a "Fourth Industrial Revolution." One key area discussed in the report was licensing terms and conditions for SEPs. Specifically, the report identified that the emergence and broader use of new technologies (including the Internet of Things) will result in a greater utilization of SEPs and an increase in the number of potential legal disputes that could hold up the development and use of these new technologies and industries. The

report rightly noted that the complexities and costs of negotiations and potential legal battles will increase as more fields utilize 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, the amount of royalties would be determined by an administrative committee appointed by the Japanese Patent Office. Under the second pathway for private companies, a dedicated organization would manage the disputes where the parties did not reach an agreement, although the specifics for this process were unclear. Many rights holders expressed deep concern over this policy and its potential for direct government intervention and management of this negotiating process. To address these concerns and settle on a finalized comprehensive government policy on the issue, in June 2018, the JPO released the document *Guide to Licensing Negotiations Involving Standard Essential Patents*. The Guide is a thorough and detailed discussion of the complexities of the negotiation process and the legitimate challenges that face both the implementer and the SEP holder. Critically, the *Guide* is not prescriptive and does not provide a set formula for how negotiations should proceed or how fair, reasonable, and nondiscriminatory terms (FRAND) and royalty rates should be published: "This *Guide* is not intended to be prescriptive, is in no way legally binding, and does not forejudge future judicial rulings. It is intended to summarize issues concerning licensing negotiations as objectively as possible based on the current state of court rulings, the judgment of competition authorities, and licensing practices, etc." With respect to determining FRAND rates, the *Guide* wisely recognizes that there is no magic formula and each negotiation is separate and unique: "This *Guide* presents factors to be considered when determining a reasonable royalty, not 'recipes' which can be used to automatically calculate an appropriate royalty. ... Given the diversity of SEP licensing negotiations and of the circumstances in which the parties to such negotiations are placed, a solution has to be worked out in each particular case." This is an evolving field of policy and jurisprudence for a subject matter that is deeply complex but also critical to future global innovation and prosperity.

The JPO should be commended for taking a thoughtful and balanced approach to this issue.

Systemic Efficiency

41. Targeted incentives for the creation and use of IP

assets for SMEs: Japan is one of the Index's leading economies for providing targeted IP incentives for SMEs. The JPO provides reduced fees for SMEs and individuals (up to two-thirds of registration costs), priority review ("accelerated examination system"), and technical assistance. The JPO provides the assistance through SME-specific outreach and education programs. This includes the Regional Bureaus of Economy, Trade and Industry, which offer advisory services relating to all aspects of IP rights, including application procedures and registration. Also, designated JPO support staff are able to help SMEs understand and effectively file new applications.

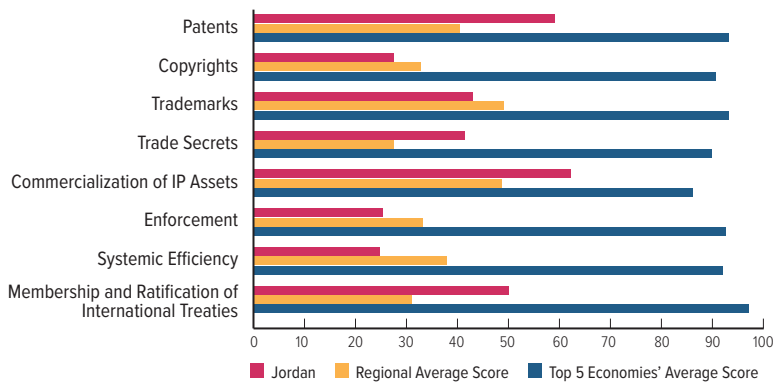
Membership in and Ratification of International Treaties

45. At least one post-TRIPS free trade agreement with substantive IP provisions and chapters in line with international best practices as captured in modern post-TRIPS U.S. and EU FTAs:

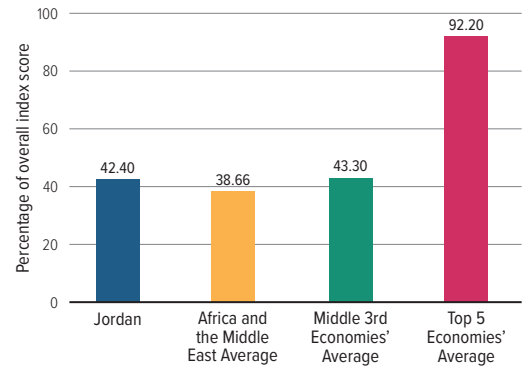
U.S. and EU FTAs: On July 17, 2018, the European Commission and Japan signed the Economic Partnership Agreement. This agreement includes a substantial IP chapter. The partnership document is awaiting ratification by both parties. As a result of signing the agreement, Japan's score on this indicator has increased by 0.5.

JORDAN RANK 30/50

Category Scores



Overall Score in Comparison



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

- ✗ No R&D or IP-specific tax incentives in place
- ✗ No targeted incentives for the creation and use of IP assets for SMEs
- ✗ High levels of copyright infringement—particularly online
- ✗ Uncertainty about 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 Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 4.75 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.50 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.50 |
| 3. Patentability of computer-implemented inventions (CILs) | 0.25 | 14. Digital rights management (DRM) legislation | 0.50 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 1.00 | 15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software | 0.25 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.25 |
| 8. Patent opposition | 0.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.25 |
| Category 2: Copyrights, Related Rights, and Limitations | | 1.94 | |
| 9. Copyright (and related rights) term of protection | 0.44 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 20. Industrial Design Term of Protection | 0.60 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 0.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.25 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 1.25 | |
| 22. Protection of trade secrets, civil remedies | 0.50 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.25 |
| 24. Regulatory data protection (RDP) term | 0.50 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.00 |
| Category 5: Commercialization of IP Assets | | 3.75 | |
| 25. Barriers to market access | 1.00 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.50 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.25 |
| 27. Registration and disclosure requirements of licensing deals | 1.00 | 39. Consultation with stakeholders during IP policy formation | 0.25 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 40. Educational campaigns and awareness raising | 0.50 |
| 29. IP as an economic asset | 0.25 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.00 |
| 30. Tax incentives for the creation of IP assets | 0.00 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 1.79 | |
| 31. Physical counterfeiting rates | 0.34 | 42. WIPO Internet Treaties | 1.00 |
| 32. Digital/online piracy rates | 0.45 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 33. Civil and procedural remedies | 0.25 | 44. Patent Law Treaty | 0.00 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.25 | 45. 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 19.08 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Jordan's overall score has decreased from 43.47% (17.39 out of 40) in the 6th edition to 42.40% (19.08 out of 45) in the 7th edition. This reflects a relatively weak performance on the new indicators added to the Index.

Trade Secrets and the Protection of Confidential Information

23. Protection of trade secrets (criminal sanctions): The Trade Secrets and Unfair Competition Law of 2000 (Law 15) provides protection for trade secrets and confidential information. The law provides a relatively detailed definition of trade secrets and confidential information. Article 4 defines a trade secret as something that is not generally known, that retains value because it is secret, and that the owner or proprietor of the secret has taken reasonable steps to maintain the secrecy of. The Jordanian legal definition does not place the onus on the proprietor or owner to prove that theft or misappropriation has taken place, nor does it place an excessive burden on maintaining

the confidentiality of the trade secret. Article 6 provides definitions of offenses, including illicit access to and misappropriation of trade secrets, and Article 7 allows offended parties to seek compensation and damages. However, there is no corresponding definition of criminal conduct, sanctions, or penalties. Potential general sanctions are available for disclosure of a trade secret under the Penal Code Article 355. While primarily applying to secrets obtained in an official capacity, subsection 3 of this article also includes penalties for an individual who "by virtue of his profession is aware of the secret and revealed it without a legitimate reason." Jordanian case law is very limited for both civil and criminal offenses and provides little guidance on the application of these laws.

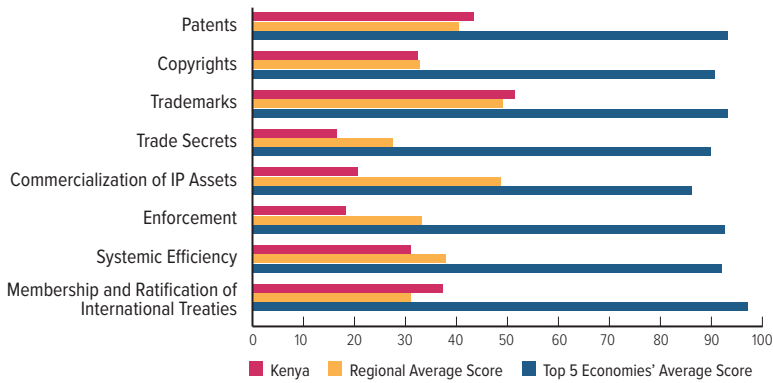
Commercialization of IP Assets and Market Access

26. Barriers to technology transfer: Technology transfer activities in Jordan are rudimentary. However, there are some positive examples through EU-supported initiatives, such as the ongoing Support to Research, Technological Development, and Innovation program (now in its second phase). The program seeks to increase the "contribution

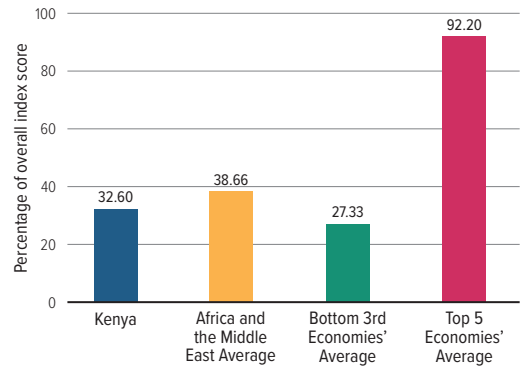
of Jordan's research and technological development and innovation sectors to Jordan's economic growth and employment." It focuses on four key areas: water, energy, health, and food. Reports suggest the program has had a positive impact on technology transfer and commercialization, with some patenting activity coming out of the program. For example, there has been an increase in the number of universities and research institutes with functioning technology transfer offices (TTOS). This includes a network of TTOs including the University of Jordan, Jordan University for Science and Technology, Yarmouk University, Mut'ah University, Jerash University, and the National Centre for Agricultural Research and Extension. Despite this progress, several barriers remain. For example, key institutions such as Jordan University and Jordan University of Science and Technology do not have strong incentives in place for technology transfer and commercialization activities. Both institutions place restrictions on additional income as well as any activity outside the university that must receive approval from the president of the institution.

KENYA RANK 41/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ 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 (although 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

- ✗ Barriers in place for licensing and technology transfer
- ✗ No R&D or IP-specific tax incentives in place
- ✗ No targeted incentives for the creation and use of IP assets for SMEs
- ✗ Weak and backlogged judicial system with notable deficiencies in criminal enforcement
- ✗ Important gaps in copyright protection, particularly in the digital space
- ✗ Legislative and resource barriers to border enforcement

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 3.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.50 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.50 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.25 | 14. Digital rights management (DRM) legislation | 0.50 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 3.10 | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 0.75 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 2.28 | |
| 9. Copyright (and related rights) term of protection | 0.53 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 0.50 | | |
| 22. Protection of trade secrets, civil remedies | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.00 |
| 24. Regulatory data protection (RDP) term | 0.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.25 |
| Category 5: Commercialization of IP Assets | 1.25 | Category 7: Systemic Efficiency | 1.25 |
| 25. Barriers to market access | 0.50 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.50 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.25 | 39. Consultation with stakeholders during IP policy formation | 0.25 |
| 27. Registration and disclosure requirements of licensing deals | 0.00 | 40. Educational campaigns and awareness raising | 0.50 |
| 28. Direct Government intervention in setting licensing terms | 0.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.00 |
| 29. IP as an economic asset | 0.50 | Category 8: Membership and Ratification of International Treaties | 1.50 |
| 30. Tax incentives for the creation of IP assets | 0.00 | 42. WIPO Internet Treaties | 0.50 |
| Category 6: Enforcement | 1.29 | 43. Singapore Treaty on the Law of Trademarks | 0.50 |
| 31. Physical counterfeiting rates | 0.28 | 44. Patent Law Treaty | 0.50 |
| 32. Digital/online piracy rates | 0.26 | 45. 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 |
| 33. Civil and procedural remedies | 0.25 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.00 | | |
| TOTAL 14.67 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Kenya's overall score has decreased from 35.94% (14.38 out of 40) in the 6th edition to 32.60% in the 7th edition (14.67 out of 45). This reflects a weak performance on the new indicators added to the Index.

Copyrights, Related Rights, and Limitations

12. Availability of frameworks that promote cooperative action against online piracy: The National Assembly is currently considering Copyright (Amendment) Bill 2017, which would improve the enforcement of copyright online in Kenya. The bill provides for a notice and takedown system whereby ISPs would need to remove or limit access to copyright-infringing material within 48 hours from receiving notification from the rights holder. Failure to comply would result in a fine or even imprisonment. The bill also defines clear limits for ISP liability. For instance, ISPs should not in any way modify or promote infringing material, nor should they have knowledge of its existence. The Index will monitor these developments and any final legislation.

Trademarks, Related Rights, and Limitations

17. Ability of trademark owners to protect their trademarks—requisites for protection: Section 15A of the Trademark Law provides for the protection of well-known marks. Yet, in a May 2018 judgment in Sony Corporation v Sony Holding Limited, the High Court of Kenya raised uncertainty about what constitutes “well-known” in Kenya. Sony opposed the registration of the Kenyan “Sony Holding” trademark in eight product categories. The High Court considered that the risk of confusion was real (and thus refused to register the competing marks) but only regarding the classes where Sony already had a trademark registration. In essence, the court disagreed with Sony Corporation that its “Sony” trademark was well-known in Kenya, claiming that the Japanese manufacturer failed to provide enough evidence to support its claim that it was indeed a well-known mark.

Commercialization of IP Assets and Market Access

27. Registration and disclosure requirements of licensing deals; and 28. Direct government intervention in setting licensing terms: According to the IP Act, rights holders must

submit all license contracts related to patented technology to the Kenya Industrial Property Institute (KIPI) for registration in the patent register. The license is void if the KIPI refuses registration (Article 68). The KIPI has much leeway and can deny registration if it considers the contract harmful to the economic interest of Kenya, including, for instance, through “disproportionate” royalties (Article 70). In addition, the registration procedure requires the submission of the executed contract and any related documentation necessary to understand it. Article 70 provides guarantees about the confidentiality of the content of these documents.

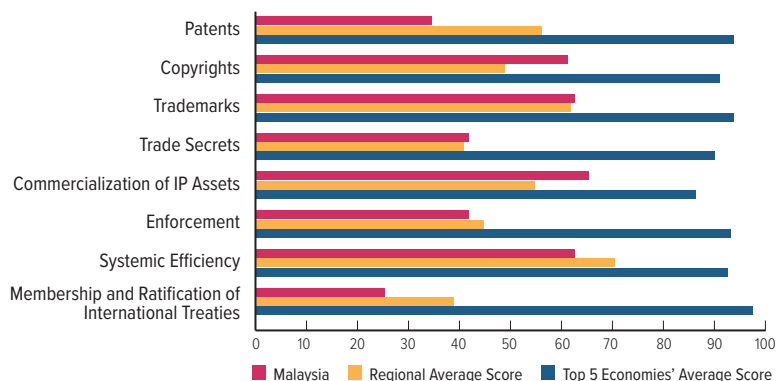
Systemic Efficiency

38. Intergovernmental coordination of IP rights

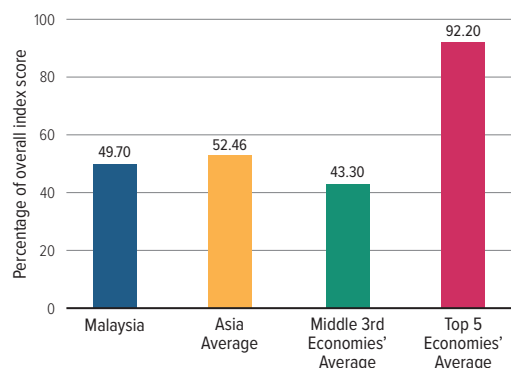
enforcement efforts: As part of efforts to enhance manufacturing under the president’s “Big 4 Agenda,” the government in 2018 created an Inter-Agency Anti-Illicit Trade Executive Forum. The forum brings together public and private actors across all IP-related areas with a broad scope, including enforcement authorities such as customs, police, the intelligence services, and the Asset Recovery Agency. The government created a corresponding Technical Working Group under the forum, tasked with devising a National Strategy on Combating Illicit Trade as well as coordinating the enforcement of laws to combat illicit trade.

MALAYSIA RANK 24/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ New case law that strengthens the customs enforcement environment against infringing goods in-transit
- ✓ Generous R&D and IP-specific tax incentives in place
- ✓ Intellectual Property Corporation of Malaysia (MyIPO) has PPH agreements in place with both the EPO and the JPO
- ✓ Strong focus by the 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 offered

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 2.75 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.75 |
| 2. Patentability requirements | 1.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.50 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.25 | 14. Digital rights management (DRM) legislation | 0.75 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| 8. Patent opposition | 0.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 4.28 | |
| 9. Copyright (and related rights) term of protection | 0.53 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.75 | 20. Industrial Design Term of Protection | 1.00 |
| 11. Expeditive injunctive-style relief and disabling of infringing content online | 0.50 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.50 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 1.25 | |
| 22. Protection of trade secrets, civil remedies | 0.50 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.50 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.50 |
| 24. Regulatory data protection (RDP) term | 0.50 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.00 |
| Category 5: Commercialization of IP Assets | | 3.92 | |
| 25. Barriers to market access | 1.00 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.75 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.75 |
| 27. Registration and disclosure requirements of licensing deals | 1.00 | 39. Consultation with stakeholders during IP policy formation | 0.75 |
| 28. Direct Government intervention in setting licensing terms | 0.00 | 40. Educational campaigns and awareness raising | 0.75 |
| 29. IP as an economic asset | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.25 |
| 30. Tax incentives for the creation of IP assets | 0.67 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 2.92 | |
| 31. Physical counterfeiting rates | 0.43 | 42. WIPO Internet Treaties | 1.00 |
| 32. Digital/online piracy rates | 0.49 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 33. Civil and procedural remedies | 0.50 | 44. Patent Law Treaty | 0.00 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.50 | 45. 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 22.37 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Malaysia's overall score has increased from 48.68% (19.47 out of 40) in the 6th edition to 49.70% (22.37 out of 45) in the 7th edition. This reflects a relatively strong performance on the new indicators added to the Index and a score increase on indicator 36.

Enforcement

36. Effective border measures: Under the Trademark Act, the Royal Malaysian Customs Department (RMC) has *ex officio* powers to act against suspected infringing goods. Act 70(o) states explicitly that “any authorised officer may detain or suspend the release of goods which, based on prima facie evidence that he has acquired, are counterfeit trade mark goods.” Unfortunately, this *ex officio* power does not extend to goods in-transit. In fact, any border enforcement action against goods in-transit faces a high degree of uncertainty. To begin with, Section s70d(8) of the Trademark Act excludes seizure of goods in transit: “Where an authorised officer has been notified by the Registrar, he

shall take the necessary action to prohibit any person from importing goods identified in the notice, not being goods in transit, and shall seize and detain the identified goods.” There has also been the added dimension of free trade zones, and the interaction between the Free Zones Act and relevant IP rights legislation. In many economies—not just Malaysia—goods in-transit and goods passing through free trade zones are generally not subject to detainment and seizure. However, the ruling decision in the long-running trademark infringement case between Philip Morris and an Egyptian tobacco manufacturer, *Philip Morris Brands Sari v Goodness for Import and Export & Ors*, may change this. The case dates back to 2011 and the RMC's detainment of a shipment of tobacco products from Vietnam destined for Egypt. The detained shipment of cigarettes branded “Malimbo” bore a striking resemblance to Philip Morris' “Marlboro” brand. After numerous appeals and procedural judgments, the Malaysian High Court has now issued a final decision in favor of Philip Morris. The decision placed perpetual mandatory injunctions for trademark infringement and ordered the RMC to destroy the infringing products at the owner's expense. Most important, from an IP policy

perspective, the case provides a strong precedent for the RMC to take action against suspected infringing goods, even if they are in transit. In closing, the judgment stated, “This judgment sends a clear message that Malaysian ports, airports and territory cannot be used to transit goods by any mode which infringe Malaysian registered trade marks or which constitute the subject matter of a tort of passing off (actionable in Malaysia).” As a result of the strengthening of the enforcement environment against infringing goods in transit, the score on this indicator has increased by 0.25.

Commercialization of IP Assets and Market Access

30. Tax incentives for the creation of IP assets: Malaysia offers a number of general and industry-specific R&D tax incentives. General R&D incentives available include the Investment Tax Allowance and R&D super deductions. The Investment Tax Allowance can take several forms, including a 50% tax allowance on capital expenditures for 10 years for companies that perform in-house R&D and a 100% tax allowance on capital expenditures for 10 years for R&D service providers. On top of these tax allowances, the government offers a 200% super deduction on noncapital expenditures for companies that conduct in-house R&D, donations to research institutes, and the registration of patents, trademarks, and licenses overseas if the company promotes an exported product. In addition, the minister of finance has the ability to grant Pioneer Status to domestic companies in desirable sectors and industries. Companies that receive this designation pay no income tax on statutory income for 5 years and this benefit can be extended for an additional 5 years. Currently, no patent box or IP-specific tax incentives are in place.

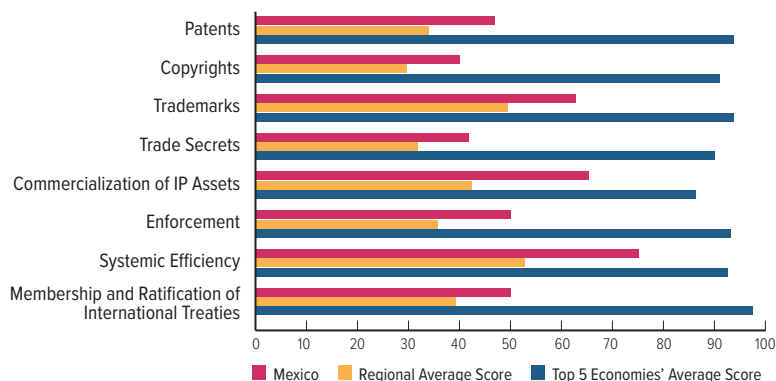
Membership in and Ratification of International Treaties

45. At least one post-TRIPS free trade agreement with substantive IP provisions and chapters in line with international best practices as captured in modern post-TRIPS U.S. and EU FTAs: Malaysia is one of the contracting parties to the CPTPP. In March 2018, the final agreement was signed and full text released. The text of the CPTPP retains important aspects of the TPP’s IP provisions, including, for example, provisions relating to trade secrets and border enforcement. However, numerous critical provisions have been suspended, including for patentable subject matter,

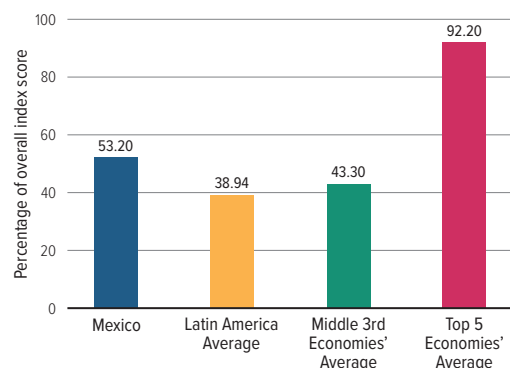
biopharmaceutical-specific IP rights such as regulatory data protection, and copyright protection and enforcement, as well as protections relating to satellite and cable signals. The CPTPP is undergoing public consultation and discussion in all contracting parties—Malaysia included—on legislative amendments are taking place where required. At the time of research, Malaysia had not ratified the agreement and the newly elected government had raised some uncertainty about whether Malaysia would ratify the agreement without substantial changes. In September 2018, Prime Minister Tun Dr Mahathir Mohamad publicly stated that the government was still examining the “pros and cons” of the CPTPP. Because the CPTPP does not conform to the modern standards of other post-TRIPS international trade agreements, Malaysia will not receive an increase in score if the government moves forward with ratifying the agreement.

MEXICO RANK 22/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Full implementation of IP provisions in the USMCA would materially improve Mexico's national IP environment and Index score
- ✓ Term of protection for industrial design rights extended to 25 years
- ✓ Efforts to ease the ability to commercialize IP assets and develop public-private partnerships, particularly for public research organizations and universities
- ✓ Dedicated endeavor to streamline the IP review process and criminal justice system and harmonize to international standards
- ✓ Efforts to increase awareness of importance of IP rights

KEY AREAS OF WEAKNESS

- ✗ Partial and ambiguous protection for life sciences IP
- ✗ Gaps in laws and enforcement against online piracy
- ✗ Significant gaps in the application of remedies, such as severe delays and difficulty securing adequate damages
- ✗ Inadequate border measures for trade-related infringement of IP rights

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 3.75 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.50 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.50 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.00 | 14. Digital rights management (DRM) legislation | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| 8. Patent opposition | 0.50 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 9. Copyright (and related rights) term of protection | 0.79 | 20. Industrial Design Term of Protection | 1.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.50 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 0.25 | | |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 1.25 | |
| 22. Protection of trade secrets, civil remedies | 0.50 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.75 |
| 23. Protection of trade secrets, criminal standards | 0.50 | 36. Effective border measures | 0.00 |
| 24. Regulatory data protection (RDP) term | 0.25 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.25 |
| Category 5: Commercialization of IP Assets | | 3.91 | |
| 25. Barriers to market access | 0.50 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.50 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.50 |
| 27. Registration and disclosure requirements of licensing deals | 0.75 | 39. Consultation with stakeholders during IP policy formation | 0.75 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 40. Educational campaigns and awareness raising | 1.00 |
| 29. IP as an economic asset | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 30. Tax incentives for the creation of IP assets | 0.66 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 2.00 | |
| 31. Physical counterfeiting rates | 0.48 | 42. WIPO Internet Treaties | 1.00 |
| 32. Digital/online piracy rates | 0.51 | 43. Singapore Treaty on the Law of Trademarks | 0.50 |
| 33. Civil and procedural remedies | 0.50 | 44. Patent Law Treaty | 0.00 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 1.00 | 45. 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 23.94 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Mexico's overall score has increased markedly from 48.38% (19.35 out of 40) in the 6th edition to 53.20% (23.94 out of 45) in the 7th edition. This is driven by both a strong performance on the new indicators added to the Index and score increases on indicators 20 and 45.

Trademarks, Related Rights, and Limitations

17. Ability of trademark owners to protect their

trademarks—requisites for protection: Amendments to the Law on Industrial Property, presented in May and adopted in August 2018, update and improve the Mexican regime for trademark protection. For instance, it is now possible to register “nontraditional” trademarks such as trade dress, holographic signs, sounds, and smells (and these marks will benefit from a 10% discount on registration fees), and bad faith is explicitly incorporated as grounds for opposition and invalidation. The new provisions also strengthen opposition procedures, making them binding on the Mexican Institute of Industrial Property.

20. Industrial design term of protection: Amendments to the Law on Industrial Property published on March 12, 2018, extend the period of protection for industrial designs from 15 to 25 years, bringing the Mexican term of protection in line with international standards and the benchmark used in the Index. The new provision applies also to designs granted before the amendment and still in force. Finally, amendments clarify the criteria to determine novelty of industrial designs and provide for faster examination. As a result, the score for this indicator has increased from 0.6 to 1.

Commercialization of IP Assets and Market Access

30. Tax incentives for the creation of IP assets: Mexico reintroduced an R&D tax incentive scheme in 2017, after it had abolished a volume-based tax credit in 2008. Under the new scheme, Mexico provides a 30% tax credit for qualified incremental R&D expenditure, with a MX\$50 million cap per taxpayer. The Interinstitutional Government Committee governs the credits and the National Science and Technology Council (CONACYT) manages them. A recipient can be held liable for the amount of the tax credit if it fails to comply with applicable requirements, to allow

CONACYT to perform technical visits to monitor authorized projects, and to complete the project's closing process. This could potentially hinder the applicant's possibilities of being awarded the R&D tax credit in the future. No patent box or other IP-related scheme is in place.

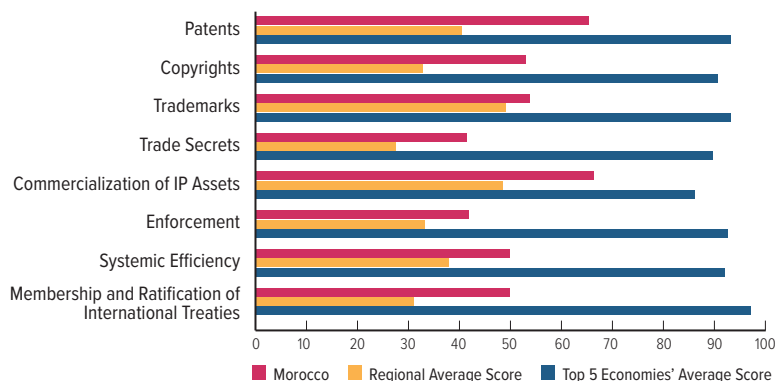
Membership in and Ratification of International Treaties

45. At least one post-TRIPS free trade agreement with substantive IP provisions and chapters in line with international best practices as captured in modern post-TRIPS U.S. and EU FTAs:

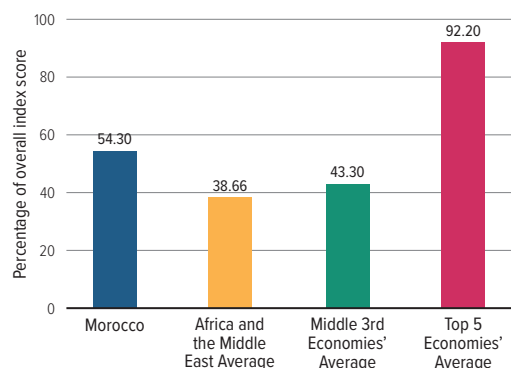
TRIPS U.S. and EU FTAs: Mexico is one of the contracting parties to the CPTPP, which will entered force on December 30, 2018. In March 2018, the final agreement was signed and full text released. The text of the CPTPP retains important aspects of the TPP's IP provisions, including provisions relating to trade secrets and border enforcement. However, numerous critical provisions have been suspended, including for patentable subject matter, biopharmaceutical-specific IP rights such as regulatory data protection, and copyright protection and enforcement, as well as protections relating to satellite and cable signals. While Mexico was the first country to ratify the agreement in April 2018, the CPTPP does not conform to the modern standards of other post-TRIPS international trade agreements. Therefore, no score has been allocated to Mexico for its accession to this treaty. However, Mexico is also a contracting party to the United States-Mexico-Canada-Agreement. Negotiations for the USMCA were concluded and signed in late 2018. If implemented in full, the IP provisions of the USMCA would substantively strengthen Mexico's national IP environment and Index score. Specific areas of improvement would include a longer and more clearly defined term of biopharmaceutical RDP of 5 years for new chemical entities and 10 years for biologics; more effective trade secret protection, including criminal sanctions; *ex officio* border enforcement against all suspected counterfeit goods, including goods in-transit; and strengthened copyright provisions. Because Mexico became a contracting party to the USMCA, its score has increased by 0.5 on this indicator.

MOROCCO RANK 21/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

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

KEY AREAS OF WEAKNESS

- ✗ Challenging enforcement environment: high rates of physical counterfeiting and online piracy
- ✗ The BSA estimated a software piracy rate of 64%
- ✗ Some uncertainty over the practical availability of patents for CIIIs

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 5.25 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.50 |
| 2. Patentability requirements | 0.75 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.50 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.50 | 14. Digital rights management (DRM) legislation | 0.50 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.50 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.25 |
| 8. Patent opposition | 0.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 3.74 | |
| 9. Copyright (and related rights) term of protection | 0.74 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.50 | 20. Industrial Design Term of Protection | 1.00 |
| 11. Expeditive injunctive-style relief and disabling of infringing content online | 0.50 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.25 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 1.25 | |
| 22. Protection of trade secrets, civil remedies | 0.50 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.50 |
| 24. Regulatory data protection (RDP) term | 0.50 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.75 |
| Category 5: Commercialization of IP Assets | | 4.00 | |
| 25. Barriers to market access | 1.00 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.75 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.50 |
| 27. Registration and disclosure requirements of licensing deals | 0.75 | 39. Consultation with stakeholders during IP policy formation | 0.50 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 40. Educational campaigns and awareness raising | 0.50 |
| 29. IP as an economic asset | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.50 |
| 30. Tax incentives for the creation of IP assets | 0.00 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 2.95 | |
| 31. Physical counterfeiting rates | 0.34 | 42. WIPO Internet Treaties | 1.00 |
| 32. Digital/online piracy rates | 0.36 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 33. Civil and procedural remedies | 0.25 | 44. Patent Law Treaty | 0.00 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.50 | 45. 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 24.44 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Morocco's overall score has decreased from 54.86% (21.94 out of 40) in the 6th edition to 54.30% (24.44 out of 45) in the 7th edition. This is primarily due to a mixed performance on the new indicators added to the Index.

Area of Note

Since March 2015, the Moroccan Office of Industrial and Commercial Property (OMPIC) has offered a validation service of European patents. Under an agreement with the EPO, all qualifying patents filed directly with the EPO or through the PCT route in Europe are eligible for registration in Morocco. Patent applicants can designate Morocco together with EU countries, and EPO patents have the same legal effect as a national patent and are subject to Moroccan law. The number of European patent applications designating Morocco has doubled since 2015 to reach an average of 2,000 applications a year. In 2018, the EPO president; the Moroccan minister for industry, investment, trade and the digital economy; and OMPIC's

director-general discussed the strategic importance of this initiative to Morocco's economic development agenda and innovation policy agenda. All parties emphasized the success of the validation process and its importance to Morocco's competitiveness. The director-general stated that "co-operation with the EPO is a win-win situation, as the validation system shows ... Moroccan patents gain in quality, and OMPIC's examiners focus on improving national industry's utilisation of the patent system."

Commercialization of IP Assets and Market Access

26. Barriers to technology transfer: There are no direct, formal legal barriers in place for either domestic or international technology transfer. Innovation and improving technology creation and output is at the heart of the government's economic agenda and has been so for a number of years. The National Innovation Strategy (2009) places a heavy emphasis on entrepreneurship, start-ups, and technology transfer. Several government and private–public partnerships have been set up and are operating, including the Morocco Information Technology Company (which runs a large technopark in Casablanca)

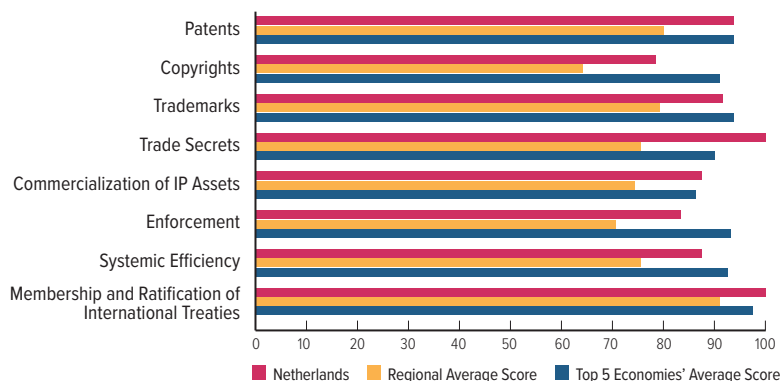
and dedicated investment funds such as the Maroc Numeric Fund that invests in start-ups. Several universities have functioning technology transfer programs and international research partnerships in place. This includes Cadi Ayyad University, which has a valorization program in place and takes part in the U.S.-Tunisia-Morocco Partnership for the Promotion of Technology Innovation and Commercialization Strategies in Engineering Research and Education, a program supported by the U.S. State Department.

27. Registration and disclosure requirements of licensing

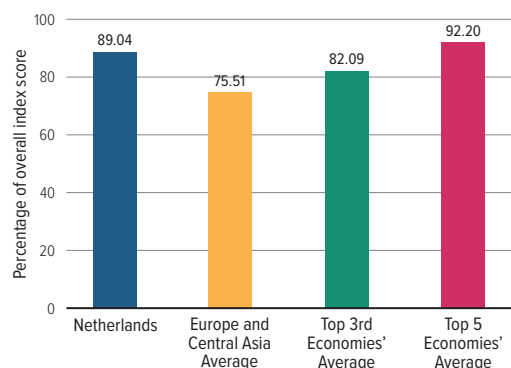
deals: Articles 56–59 of the Industrial Property Act state that licenses for patents shall be recorded with a National Register to be valid: “To be binding on third parties, any acts which transfer, amend or affect the rights deriving from a patent application or a patent must be entered in a register.” Similar requirements are in place for trademarks under Sections 156–58. This registration requirement is not overly intrusive or burdensome and is relatively straightforward. The relevant forms for patent and trademark registration (*Forms B4 and M4, respectively, Formulaire pour la demande d’inscription[s] des actes affectant la propriété ou la jouissance des droits*) provide a number of options for the supporting documentation rights holders must submit with the license registration. This includes an original copy of the contract or a signed extract of the relevant sections.

NETHERLANDS RANK 7/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ 2018 transposition of EU Trade Secrets Directive improves Dutch trade secret environment
- ✓ Generous R&D and IP-specific tax incentives in place
- ✓ Advanced and sophisticated national IP environment
- ✓ Sector-specific IP rights in place
- ✓ Membership in all major international PPH tracks through the EPO

KEY AREAS OF WEAKNESS

- ✗ Registration requirements in place for licensing agreements
- ✗ European Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to the Netherlands' and the EU's research- and IP-based biopharma industry

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 7.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.75 |
| 2. Patentability requirements | 1.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.75 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 0.75 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 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 | Category 3: Trademarks, Related Rights, and Limitations | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 1.00 |
| Category 2: Copyrights, Related Rights, and Limitations | | 5.49 | |
| 9. Copyright (and related rights) term of protection | 0.74 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 1.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.75 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.50 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 3.00 | |
| 22. Protection of trade secrets, civil remedies | 1.00 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.50 |
| 23. Protection of trade secrets, criminal standards | 1.00 | 36. Effective border measures | 1.00 |
| 24. Regulatory data protection (RDP) term | 1.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 1.00 |
| Category 5: Commercialization of IP Assets | | 5.25 | |
| 25. Barriers to market access | 1.00 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 1.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.50 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 40. Educational campaigns and awareness raising | 0.75 |
| 29. IP as an economic asset | 0.75 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 30. Tax incentives for the creation of IP assets | 1.00 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 5.83 | |
| 31. Physical counterfeiting rates | 0.80 | 42. WIPO Internet Treaties | 1.00 |
| 32. Digital/online piracy rates | 0.78 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 33. Civil and procedural remedies | 1.00 | 44. Patent Law Treaty | 1.00 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.75 | 45. 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 40.07 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

The Netherlands' overall score has increased from 88.31% (35.33 out of 40) in the 6th edition to 89.04% (40.07 out of 45) in the 7th edition. This reflects both a strong performance on the new indicators added to the Index and an increase in score on indicator 22.

Copyrights, Related Rights, and Limitations

11. Expedient injunctive-style relief and disabling of infringing content online: As noted in previous editions of the Index, Articles 12-14 of the EU's E-Commerce Directive (2000/31/EC) and Article 8(3) of the Copyright Directive (2001/29/EC) enable a court or administrative authority to require ISPs to terminate or prevent copyright infringement by third parties that use their services. The directives also 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, BREIN/Ziggo) suggests that this provision extends disabling

access to torrent websites that fall under the umbrella of a "communication to the public," per EU copyright law. One of the key cases in question is the Dutch case *Stichting BREIN v Ziggo*. In 2012, BREIN filed suit in the District Court of the Hague to order ISPs (Ziggo & XS4ALL) to disable access to the Pirate Bay's IP addresses. The court granted the order for these and other ISPs. In 2014, the ISPs filed an appeal with the Court of Appeal in the Hague. The court disagreed with the ruling, judging 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. There were a number of developments in this case in 2018. In January 2018, the district court expanded the order to disable access to the Pirate Bay to include 5 more ISPs. In June 2018, the Supreme Court decided to send the case back to the Amsterdam Court of Appeal for

reconsideration. While this decision raises some uncertainty regarding the final outcome of this particular case, given the CJEU's very clear guidance in 2017, it is highly unlikely that the legal situation in the Netherlands should materially change. Notably, over the past 18 months, the disabling of access to the Pirate Bay has had a tangible effect on illegal streaming in the Netherlands. In the 2 months that followed the September 2017 order to disable access to the website, BREIN reported that Web traffic and the number of unique visitors to the Pirate Bay in the Netherlands had fallen by 40%.

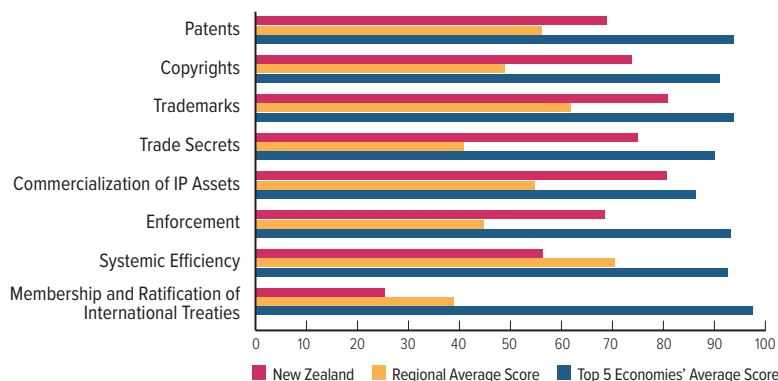
Trade Secrets and the Protection of Confidential Information

22. Protection of trade secrets (civil remedies): In 2018, the Netherlands transposed the EU Trade Secrets Directive. The Dutch Lower House passed the legislation in April and the Senate passed it in October 2018. The new legislation largely mirrors that of the EU directive, including in relation to trade secret definitions and court protective orders. This new legislation improves the Dutch trade secret environment, which had previously been spread over several different pieces of legislation. It is now uniform and in line with EU standards. As a result, the score for this indicator has increased by 0.25.

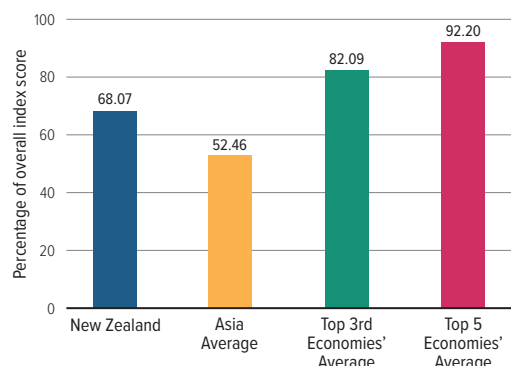
Commercialization of IP Assets and Market Access

30. Tax incentives for the creation of IP assets: Dutch tax law offers both a general R&D tax incentive as well as an "Innovation Box" incentive with reduced rates of royalties for IP developed in the Netherlands. The R&D tax credit is available for qualifying expenditure on applied scientific research and the development of new technologies and products. The Dutch Innovation Box provides an effective corporate income tax rate of 7% on any income derived from qualifying innovations. As in many other jurisdictions, since 2017, the Innovation Box regime has been amended by the Dutch tax authorities to incorporate and better reflect the OECD's Base Erosion and Profit Sharing recommendation and the nexus-based approach.

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Fairly sophisticated national IP environment with strengths across most categories of the Index
- ✓ No significant barriers or restrictions on licensing activity and technology transfer

KEY AREAS OF WEAKNESS

- ✗ Practical application and net effect of Copyright (Infringing File Sharing) Amendment Act has been mixed at best, with few cases heard by Copyright Tribunal and most being dismissed on technicalities—2018/19 MBIE review of Copyright Act will include examining online enforcement
- ✗ No patent term restoration in place for biopharmaceuticals
- ✗ Limited membership in international IP treaties
- ✗ Limited R&D tax incentives

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 5.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.75 |
| 2. Patentability requirements | 0.75 | 13. Scope of limitations and exceptions to copyrights and related rights | 1.00 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 1.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 1.00 |
| 8. Patent opposition | 0.25 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 1.00 |
| Category 2: Copyrights, Related Rights, and Limitations | | 5.16 | |
| 9. Copyright (and related rights) term of protection | 0.66 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.50 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.75 | 20. Industrial Design Term of Protection | 0.60 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 0.25 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.75 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 2.25 | |
| 22. Protection of trade secrets, civil remedies | 1.00 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.75 |
| 23. Protection of trade secrets, criminal standards | 0.75 | 36. Effective border measures | 0.25 |
| 24. Regulatory data protection (RDP) term | 0.50 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.50 |
| Category 5: Commercialization of IP Assets | | 4.83 | |
| 25. Barriers to market access | 1.00 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 1.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.50 |
| 27. Registration and disclosure requirements of licensing deals | 0.75 | 39. Consultation with stakeholders during IP policy formation | 0.75 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 40. Educational campaigns and awareness raising | 0.75 |
| 29. IP as an economic asset | 0.75 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.25 |
| 30. Tax incentives for the creation of IP assets | 0.33 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 4.79 | |
| 31. Physical counterfeiting rates | 0.70 | 42. WIPO Internet Treaties | 0.00 |
| 32. Digital/online piracy rates | 0.84 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 33. Civil and procedural remedies | 1.00 | 44. Patent Law Treaty | 0.00 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.75 | 45. 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 30.63 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

New Zealand's overall score has decreased from 68.92% (27.57 out of 40) in the 6th edition to 68.07% (30.63 out of 45) in the 7th edition. This is primarily driven by a relatively mixed performance on the new indicators added to the Index.

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: In June 2017, New Zealand's Ministry of Business, Innovation and Employment (MBIE) announced that it would launch a review of the Copyright Act. This comes on the heels of the MBIE's 2016 report *Copyright and the Creative Sector*. The purpose of the review is to hold a broad and lengthy consultation with the public and

key stakeholders to identify how the act is meeting New Zealand's objectives and what potential areas are ripe for reform. In November 2018, the MBIE released the document Issues Paper Review of the Copyright Act 1994, a detailed overview of the review process and issues the MBIE has identified as the most pressing areas in need of potential reforms. Significantly, the Issues Paper includes an in-depth discussion about enforcement, the changing nature of copyright enforcement on the internet, and the challenges rights holders face in New Zealand. 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, rights holders can apply to the Copyright Tribunal for compensation of up to NZ\$15,000 and a court order to suspend the alleged infringer's Internet access for a period of up to six months.

While the legislation was a positive step forward when it was introduced, today its overall effectiveness is questionable. As the Issues Paper rightly notes, the tribunal “is no longer being used by copyright owners.” Since its inception, the number of cases filed before the tribunal has steadily decreased, with many industry associations discontinuing the filing of notices. ISPs have also sent incorrect notices to suspected infringing parties that have invalidated the notices. The *Issues Paper* recognizes these problems, and the MBIE is seeking input on how it can improve the regime. More broadly, Paragraphs 507–511 of the Issues Paper bring up the possibility of considering additional enforcement measures, such as the disabling of access through an injunctive-style relief program. The MBIE notes the growing use of this mechanism internationally and asks for feedback on its potential use in New Zealand. The *Issues Paper* is under public consultation until April 2019.

Systemic Efficiency

41. Targeted incentives for the creation and use of IP assets for SMEs: New Zealand does not provide a huge amount of targeted incentives to SMEs, such as reduced registration fees or expedited applications for SMEs. There is no evidence that systematic technical assistance, advice, or education has been provided specifically to SMEs by the Intellectual Property Office of New Zealand. Callaghan Innovation (New Zealand’s innovation agency) provides some advisory services to all New Zealand businesses engaged in innovation and technological development. With respect to IP rights, the agency runs Innovation IP, a program aimed at matching businesses with IP specialists. The program is described as giving “innovative and ambitious New Zealand businesses the knowledge, capability and confidence to leverage their intellectual property (IP) and intellectual assets for accelerated business growth.” However, the details of the program suggest that it is neither free (Callaghan Innovation co-funds the advisory services only up to 40% of the total cost) nor aimed specifically at SMEs.

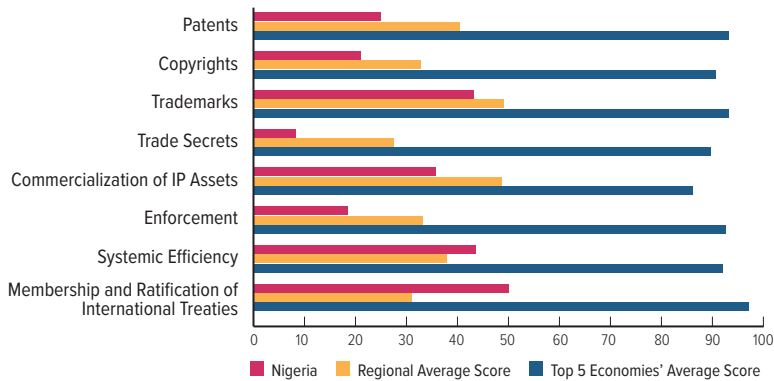
Membership in and Ratification of International Treaties

New Zealand is one of the contracting parties to the CPTPP. In March 2018, the final agreement was signed and the full text released. The text of the CPTPP retains important

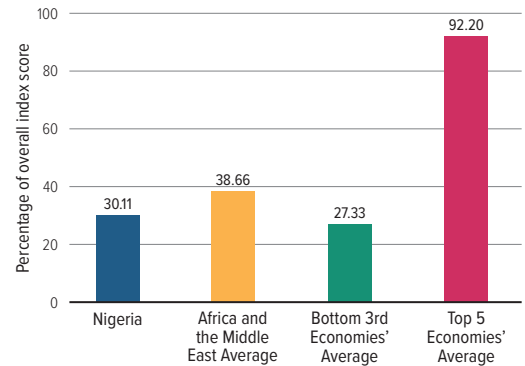
aspects of the TPP’s IP provisions, including provisions relating to trade secrets and border enforcement. However, numerous critical provisions have been suspended, including for patentable subject matter, biopharmaceutical-specific IP rights such as regulatory data protection, and copyright protection and enforcement, as well as protections relating to satellite and cable signals. The result is that the CPTPP does not conform to the modern standards of other post-TRIPS international trade agreements and no score has been allocated to New Zealand under this indicator. New Zealand’s Parliament has introduced new amending legislation that would ratify and implement the agreement. The bill (Trans-Pacific Partnership Agreement [CPTPP] Amendment Bill) was at the time of research being debated in Parliament and had reached the Select Committee stage of the legislative process. The draft implementing legislation does contain some important changes to New Zealand’s IP environment, including strengthening border measures by providing for clear *ex officio* authority for customs officials to take action against suspected infringing goods, in-transit and otherwise.

NIGERIA RANK 44/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Ratified the WIPO Internet Treaties in 2017
- ✓ Despite an 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
- ✗ Software piracy estimated at 80% by the BSA
- ✗ Localization barriers and restrictions in place on technology transfer and licensing activities
- ✗ NOTAP oversees all technology transfer and licensing between Nigerian entities and foreign licensors and has the power to evaluate and approve or disapprove technology transfer agreements, including evaluating royalty amounts

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 2.00 | |
| 1. Patent term of protection | 1.00 | 11. Expeditious injunctive-style relief and disabling of infringing content online | 0.00 |
| 2. Patentability requirements | 0.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.25 |
| 3. Patentability of computer-implemented inventions (CIs) | 0.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 0.00 | 14. Digital rights management (DRM) legislation | 0.00 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | 15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software | 0.00 |
| 6. Patent term restoration for pharmaceutical products | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 0.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.25 |
| Category 2: Copyrights, Related Rights, and Limitations | | 1.49 | |
| 9. Copyright (and related rights) term of protection | 0.74 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | | |

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------------|--|-------------|
| 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.00 | 33. Civil and procedural remedies | 0.25 |
| 20. Industrial Design Term of Protection | 0.60 | 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.00 |
| 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| Category 4: Trade Secrets and Related Rights | 0.25 | 36. Effective border measures | 0.00 |
| 22. Protection of trade secrets, civil remedies | 0.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | Category 7: Systemic Efficiency | 1.75 |
| 24. Regulatory data protection (RDP) term | 0.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.25 |
| Category 5: Commercialization of IP Assets | 2.16 | 39. Consultation with stakeholders during IP policy formation | 0.75 |
| 25. Barriers to market access | 0.75 | 40. Educational campaigns and awareness raising | 0.50 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.25 |
| 27. Registration and disclosure requirements of licensing deals | 0.25 | Category 8: Membership and Ratification of International Treaties | 2.00 |
| 28. Direct Government intervention in setting licensing terms | 0.00 | 42. WIPO Internet Treaties | 1.00 |
| 29. IP as an economic asset | 0.50 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 30. Tax incentives for the creation of IP assets | 0.66 | 44. Patent Law Treaty | 1.00 |
| Category 6: Enforcement | 1.30 | 45. 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 |
| 31. Physical counterfeiting rates | 0.35 | | |
| 32. Digital/online piracy rates | 0.20 | | |
| TOTAL 13.55 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Nigeria's overall score has decreased from 30.95% (12.38 out of 40) in the 6th edition to 30.11% (13.55 out of 45) in the 7th edition. This is primarily driven by a relatively weak performance on the new indicators added to the Index.

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); and 12. Availability of frameworks that promote cooperative action against online piracy: As noted in previous editions of the Index, Nigeria's Copyright Act provides rights holders with fairly general and basic exclusive rights, and there are currently limited references to the online space in copyright and related law, including the 2015 Cybercrime Bill. For example, there is no provision in the Copyright Act or other relevant legislation instituting

a notice and takedown mechanism. Part 3, Section 11 of the *2008 Guidelines for the Provision of Internet Service*, published by the Nigerian Copyright Commission (NCC), provides some protection for copyrighted content online. The guidelines include a notice and takedown mechanism, safe harbor provisions for ISPs, and a general obligation of ISPs to disconnect subscribers upon notification that subscribers are using the "services contrary to the requirements of these Guidelines or other applicable laws or regulation." However, critically, it has never been clear what practical force these guidelines have or their effective application, as they do not carry the force of statutory law. More broadly, piracy is widespread and rights holders face significant challenges in enforcing their rights. Despite the efforts by the NCC over the past half-decade to amend the Copyright Act, there has been no legislative action. With last year's accession to the WIPO Internet Treaties, there is now an added sense of urgency to amend Nigeria's copyright laws to bring them in line with Nigeria's international obligations. In June 2018, the Federal Executive

Council (Nigeria's Cabinet) approved a draft copyright bill. At the time of research, the legislation was with Nigeria's parliament, the National Assembly. Draft versions available for public review include only limited reference to copyright protection extending to the internet as well as a rudimentary notification and safe harbor regime for internet service providers. Specifically, the Senate amendments state, "Any work published on the internet including images, sound, print, photo, music, email, web page and links in which copyright subsists is protected in accordance with the provisions of this Act." The Index will continue to monitor the legislative process in 2019.

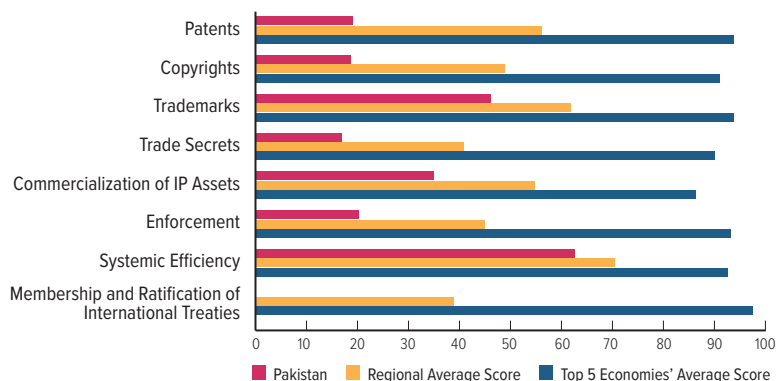
Commercialization of IP Assets and Market Access

26. Barriers to technology transfer; and 28. Direct government intervention in setting licensing terms:

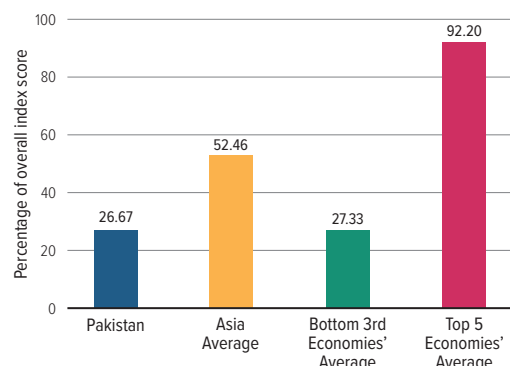
Nigeria has in place significant barriers to both technology transfer and licensing activities. The National Office for Technology Acquisition and Promotion (NOTAP) oversees all technology transfer and licensing between Nigerian entities and foreign licensors. The agency has the power to evaluate and approve or disapprove technology transfer agreements, including evaluating royalty amounts. NOTAP, for example, sets and approves royalty rates for all major forms of IP licensing. Set royalty rates vary from 0.5% to 5% of net sales depending on the technology and type of IP rights. Furthermore, Section 23(6) of the Patents and Designs Act provides a broad and unclear remit for the Nigerian government to cancel any foreign royalty payments and licensing contracts on the grounds of national interest and economic development. The act states, "The Minister, if he is satisfied that it is in the interest of Nigeria and its economic development to do so, may by order in the Federal Gazette provide that contracts under subsection (1) of this section (or any specified class thereof) shall, in so far as they involve the payment of royalties outside Nigeria, be invalid without the approval of such authority as may be specified in the order."

PAKISTAN RANK 47/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Basic IP protection available in legislation
- ✓ Introduction of specialized IP courts and capacity building
- ✓ Greater efforts to improve public education, modernize IP laws, and enhance coordination among enforcement agencies

KEY AREAS OF WEAKNESS

- ✗ Limited sector-specific IP protection available
- ✗ Significant discrepancy between IP rights in law and level of practical enforcement
- ✗ Enforcement often arbitrary and nondeterrent (although efforts to improve are underway)
- ✗ High counterfeiting and piracy rates—latest BSA estimate puts software piracy at 83%

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 1.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.25 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.25 | 14. Digital rights management (DRM) legislation | 0.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.25 |
| 8. Patent opposition | 0.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.25 |
| Category 2: Copyrights, Related Rights, and Limitations | | 1.28 | |
| 9. Copyright (and related rights) term of protection | 0.53 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 20. Industrial Design Term of Protection | 1.00 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 0.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.25 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 0.50 | |
| 22. Protection of trade secrets, civil remedies | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.50 |
| 24. Regulatory data protection (RDP) term | 0.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.00 |
| Category 5: Commercialization of IP Assets | | 2.08 | |
| 25. Barriers to market access | 0.25 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.25 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.75 |
| 27. Registration and disclosure requirements of licensing deals | 0.50 | 39. Consultation with stakeholders during IP policy formation | 0.50 |
| 28. Direct Government intervention in setting licensing terms | 0.25 | 40. Educational campaigns and awareness raising | 1.00 |
| 29. IP as an economic asset | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.25 |
| 30. Tax incentives for the creation of IP assets | 0.33 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 1.39 | |
| 31. Physical counterfeiting rates | 0.22 | 42. WIPO Internet Treaties | 0.00 |
| 32. Digital/online piracy rates | 0.17 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 33. Civil and procedural remedies | 0.25 | 44. Patent Law Treaty | 0.00 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.00 | 45. 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 12.00 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Pakistan's overall score has increased from 26.02% (10.41 out of 40) in the 6th edition to 26.67% (12.0 out of 45) in the 7th edition. This reflects an above-average performance on the new indicators added to the Index.

Commercialization of IP Assets and Market Access

26. Barriers to technology transfer; and 29. IP as an economic asset: Technology transfer and patenting activities in Pakistan are nascent but slowly developing. The National University of Science and Technology (NUST) signed the first-ever IP licensing agreement from a Pakistani university to transfer its IP to an industry partner in 2018. With financial support from the Higher Education Commission, several universities have adopted IP policies and established Offices of Research, Innovation and Commercialisation (ORICs) for technology transfer and IP management. However, important shortcomings affect tech transfer capacities. This includes limited levels of collaboration between academia and industry;

ORICs' mandate going beyond commercialization; and the lack of a clear, national IP transfer framework. The government is taking steps to better connect research and industrial entities. For example, the Intellectual Property Organization of Pakistan (IPO-Pakistan) envisages plans to set up Technology Innovation Support Centers within the Science, Technology and Innovation Park, the country's first technology park, which was recently created by the Council of Scientific and Industrial Research. IPO-Pakistan also recently signed a memorandum of understanding with the Punjab Information Technology Board to promote cooperation in the commercialization of inventions, mostly through awareness-raising events.

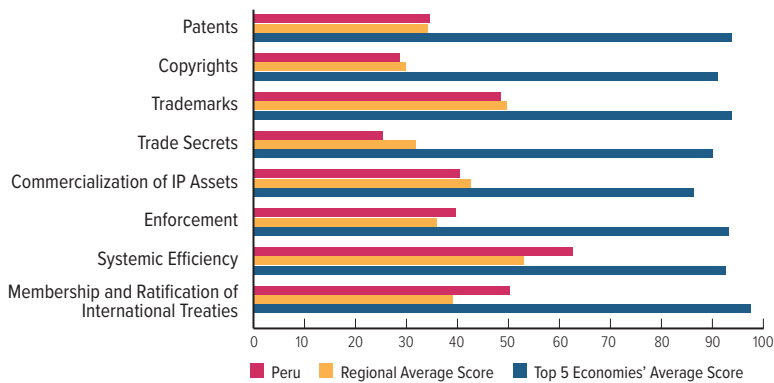
28. Direct government intervention in setting licensing terms: The State Bank of Pakistan must register and approve licensing fees paid to foreign license owners. To comply with the State Bank's recordation requirements, royalties cannot exceed a rate of 5% of net sales for an initial period of five years. In addition, repatriation of profits usually requires prior approval by the Board of Investment and the State Bank of Pakistan.

Membership in and Ratification of International Treaties

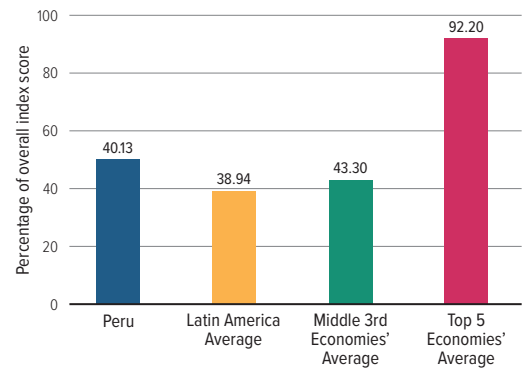
IPO-Pakistan has presented plans to improve Pakistan's investment climate by acceding to various international IP treaties. Specifically, the office has set the goal to accede to the Madrid Protocol by March 2019 and the Patent Cooperation Treaty by July 2020. While the Index does not directly measure membership in these treaties, Pakistan's accession to both would be a positive step and would better align Pakistan's national IP environment with international standards and is to be encouraged.

PERU RANK 33/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Basic IP protections available
- ✓ Border measures provided for in legislation
- ✓ Efforts to coordinate IP rights enforcement across government agencies and to raise awareness on the importance of IP protection

KEY AREAS OF WEAKNESS

- ✗ Government is actively considering a compulsory license for biopharmaceuticals on the basis of cost
- ✗ Administrative and regulatory barriers in place for licensing and technology transfer
- ✗ 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 Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 2.75 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.25 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.00 | 14. Digital rights management (DRM) legislation | 0.50 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.25 |
| 8. Patent opposition | 0.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 1.99 | |
| 9. Copyright (and related rights) term of protection | 0.74 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 20. Industrial Design Term of Protection | 0.40 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 0.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.50 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 0.75 | |
| 22. Protection of trade secrets, civil remedies | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.50 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.50 |
| 24. Regulatory data protection (RDP) term | 0.25 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.50 |
| Category 5: Commercialization of IP Assets | | 2.41 | |
| 25. Barriers to market access | 0.75 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.75 |
| 27. Registration and disclosure requirements of licensing deals | 0.25 | 39. Consultation with stakeholders during IP policy formation | 0.50 |
| 28. Direct Government intervention in setting licensing terms | 0.25 | 40. Educational campaigns and awareness raising | 0.75 |
| 29. IP as an economic asset | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.50 |
| 30. Tax incentives for the creation of IP assets | 0.66 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 2.76 | |
| 31. Physical counterfeiting rates | 0.38 | 42. WIPO Internet Treaties | 1.00 |
| 32. Digital/online piracy rates | 0.38 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 33. Civil and procedural remedies | 0.25 | 44. Patent Law Treaty | 0.00 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.25 | 45. 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 18.06 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Peru's overall score has decreased from 41.00% (16.4 out of 40) in the 6th edition to 40.13% (18.06 out of 45) in the 7th edition. This reflects a relatively weak performance on the new indicators added to the Index.

Patents, Related Rights, and Limitations

5. Legislative criteria and active use of compulsory licensing of patented products and technologies:

In May 2017, the Peruvian Congress Health Committee approved a declaration of public interest on BMS's atazanavir product. However, the full Congress has not yet approved the declaration. As in other economies considering the use of compulsory licenses, the cost of medication has figured heavily in the Peruvian debate. Yet, 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 subsequent General Council decision allowing 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, it is expected that they would be aimed solely at protecting public health. In addition, Article 31 and the Doha Declaration suggests 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.

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: The Copyright Act and associated laws

provide for a basic framework of general exclusive rights. Despite its obligation to do so under Article 29(b)(ix) of the U.S.-Peru Free Trade Agreement, Peru has yet to introduce a notice and takedown mechanism to combat infringing content online. Similarly, Peru does not have in place an established and clear system of injunctive-style relief whereby ISPs can disable infringing content through administrative or judicial relief. On a positive note, Peruvian authorities have acted against infringing sites, but only on an ad hoc basis. For example, the National Institute for the Defense of Free Competition and the Protection of Intellectual Property (INDECOPI) suspended access to the infringing website Foxmusica. This was a welcome effort and INDECOPI should be commended for taking action against this service provider. However, one service provider is only the tip of the iceberg. To aid rights holders and more effectively tackle online piracy in Peru, rights holders hope that such ad hoc efforts can be developed into something more systematic and long lasting. The Index will continue to monitor these efforts in 2019.

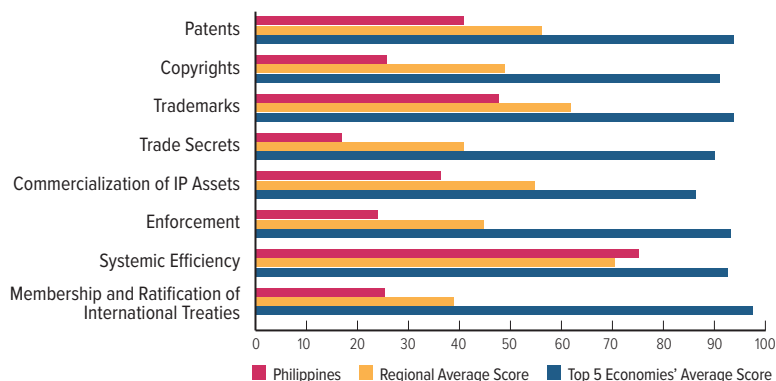
Systemic Efficiency

41. Targeted incentives for the creation and use of IP

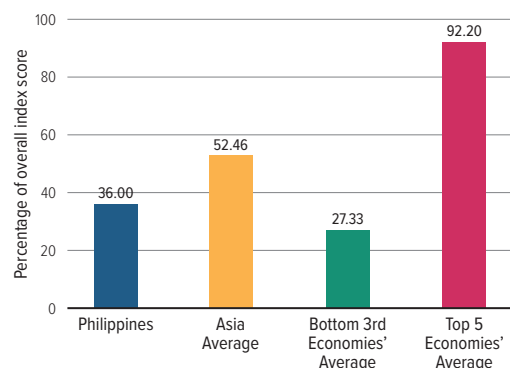
assets for SMEs: Supreme Decree No. 092-2018-PCM provides for trademark registration at no cost and through an accelerated, simplified three-month procedure for micro and small enterprises, business associations, cooperatives, and local organizations. While there is no similar mechanism for patent applications, INDECOPI has been active in helping businesses identify patentable potential and thus add value to their business, in cooperation with the Innovate Peru Program of the Ministry of Production (*Ministerio de la Producción*).

PHILIPPINES RANK 37/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Fast-track procedure for trademark registration scheduled to be introduced by IPOPHIL
- ✓ Draft amendments to IP Code would strengthen criminal sanctions
- ✓ R&D tax incentives in place
- ✓ Most basic IP rights provided for in legislation
- ✓ Growing specialization and capacity building, such as in administrative IP courts

KEY AREAS OF WEAKNESS

- ✗ Barriers in place for licensing and technology transfer
- ✗ Significant gaps in life sciences and content-related IP rights
- ✗ Online piracy rampant, with digital protection largely unaddressed
- ✗ Software piracy estimated at 64% by the BSA

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 3.25 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.50 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.50 | 14. Digital rights management (DRM) legislation | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| 8. Patent opposition | 0.50 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 1.78 | |
| 9. Copyright (and related rights) term of protection | 0.53 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 20. Industrial Design Term of Protection | 0.60 |
| 11. Expeditive injunctive-style relief and disabling of infringing content online | 0.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.25 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 0.50 | | |
| 22. Protection of trade secrets, civil remedies | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.00 |
| 24. Regulatory data protection (RDP) term | 0.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.25 |
| Category 5: Commercialization of IP Assets | 2.16 | Category 7: Systemic Efficiency | 3.00 |
| 25. Barriers to market access | 0.25 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.75 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.25 | 39. Consultation with stakeholders during IP policy formation | 0.75 |
| 27. Registration and disclosure requirements of licensing deals | 0.25 | 40. Educational campaigns and awareness raising | 0.75 |
| 28. Direct Government intervention in setting licensing terms | 0.25 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 29. IP as an economic asset | 0.50 | Category 8: Membership and Ratification of International Treaties | 1.00 |
| 30. Tax incentives for the creation of IP assets | 0.66 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 1.66 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 31. Physical counterfeiting rates | 0.30 | 44. Patent Law Treaty | 0.00 |
| 32. Digital/online piracy rates | 0.36 | 45. 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 |
| 33. Civil and procedural remedies | 0.25 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.25 | | |
| TOTAL 16.20 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

The Philippines' overall score has increased from 34.49% (13.8 out of 40) in the 6th edition to 36.00% (16.2 out of 45) in the 7th edition. This reflects an above-average performance on the new indicators added to the Index.

Trademarks, Related Rights, and Limitations

17. Ability of trademark owners to protect their trademarks—requisites for protection:

The Philippines Patent Office (IPOPIL) plans to implement a fast-track procedure for trademarks whereby registration will happen automatically if IPOPIL does not receive an opposition within 30 days from publication of the trademark application. This Joint Examination Track procedure will not apply to cases where there is likelihood of confusion with an identical or similar mark. Implementing Memorandum Circular No. 008 from October 2018 states that mediation is now compulsory for all administrative complaints for IP violations, *inter partes* cases, and issues related to tech transfer payments or copyright licensing terms. At present,

more than half the cases referred for mediation refuse such procedure. The measure is intended to speed up IP dispute resolution, in particular for trademark opposition proceedings, which constitute the bulk of the referred cases and are reportedly slow.

Enforcement

35. Criminal standards, including minimum imprisonment and minimum fines; and 38. Coordination of IP rights enforcement efforts:

Pending amendments to the IP Code recognize the need to boost IP enforcement through a variety of measures, including deterrent penalties and an increased focus on online commerce. The draft IP Code doubles both the imprisonment period and fines for those found selling counterfeits and infringing copyright laws, with even harsher punishment for violations committed using e-commerce platforms and violations that endanger public health. At present, the act of selling, distributing, reproducing, and advertising counterfeit goods is punished with imprisonment of 2 to 5 years and a fine of approximately USD900 to USD3,800. Positively, provisions on copyright infringement also include contributory

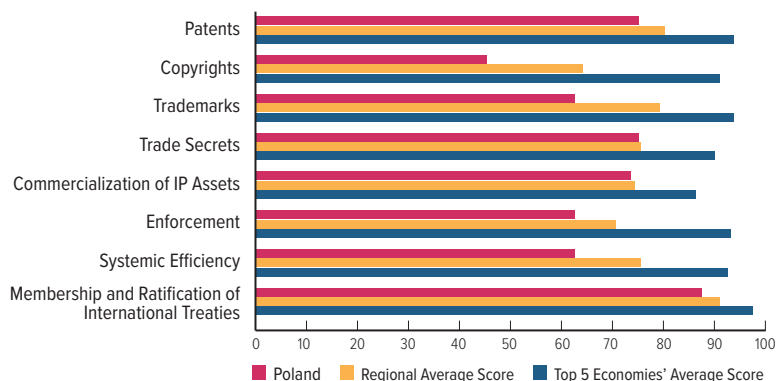
infringement (secondary liability) and the option to collect statutory damages. Finally, the draft IP Code would also extend IPOPHIL's mandate to formally include enforcement functions, such as receiving and reviewing complaints from rights holders; initiating investigations; and coordinating activities, such as raids and seizures, by law enforcement agencies. These positive steps will help tackle the growing problem of piracy and counterfeiting in the Philippines.

Membership in and Ratification of International Treaties

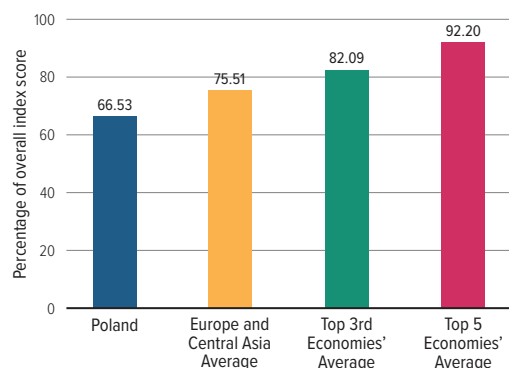
The Philippines is not an active participant in international IP treaties. The Philippines is not a contracting party to the Singapore Treaty on the Law of Trademarks or the Patent Law Treaty and has not concluded a post-TRIPS FTA with substantive IP provisions. It is a contracting party to the WIPO Internet Treaties.

POLAND RANK 17/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ 2018 transposition of EU Trade Secrets Directive harmonizes Polish trade secret law with EU standards
- ✓ Legal framework for IP protection largely aligned with EU standards
- ✓ Certain sector-specific IP rights available (including for life sciences)

KEY AREAS OF WEAKNESS

- ✗ European Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to Poland's and the EU's research- and IP-based biopharma industry
- ✗ Gaps in online copyright protection, including an effective notice and takedown system, although a basis for injunctive-style relief exists
- ✗ Relatively high levels of online piracy in comparison with other high-income economies

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 6.00 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.50 |
| 2. Patentability requirements | 0.50 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.25 | 14. Digital rights management (DRM) legislation | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 3.75 | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 3.16 | |
| 9. Copyright (and related rights) term of protection | 0.66 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 0.75 | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 2.25 | |
| 22. Protection of trade secrets, civil remedies | 0.75 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.50 | 36. Effective border measures | 1.00 |
| 24. Regulatory data protection (RDP) term | 1.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 1.00 |
| Category 5: Commercialization of IP Assets | | 4.41 | |
| 25. Barriers to market access | 0.75 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.75 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.50 |
| 27. Registration and disclosure requirements of licensing deals | 0.50 | 39. Consultation with stakeholders during IP policy formation | 0.50 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 40. Educational campaigns and awareness raising | 1.00 |
| 29. IP as an economic asset | 0.75 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.50 |
| 30. Tax incentives for the creation of IP assets | 0.66 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 3.50 | |
| 31. Physical counterfeiting rates | 0.58 | 42. WIPO Internet Treaties | 1.00 |
| 32. Digital/online piracy rates | 0.54 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 33. Civil and procedural remedies | 0.50 | 44. Patent Law Treaty | 0.50 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.50 | 45. 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 29.94 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Poland's overall score has increased slightly from 66.39% (26.56 out of 40) in the 6th edition to 66.53% (29.94 out of 45) in the 7th edition. This reflects a fairly strong performance on the new indicators added to the Index and a score increase on indicator 22.

Trade Secrets and the Protection of Confidential Information

22. Protection of trade secrets (civil remedies); and 23. Protection of trade secrets (criminal sanctions): Until 2018, trade secrets in Poland were protected through the Unfair Competition Law as well as labor law regulations. Remedies for trade secret infringement included both civil and criminal liability, but court procedures were reportedly long and tended to adjudicate the lowest penalties available. In September 2018, Poland transposed the EU Trade Secrets Directive when a bill amending the Act on Combatting Unfair Competition took force. The new legislation incorporates the directive into Poland's trade secret laws and harmonizes

Polish law with that of other member states. While the directive does not cover criminal proceedings, the new Polish legislation does. Specifically, it extends criminal liability to the breach of confidentiality in the course of legal proceedings. It also adds penalties for the acquisition of trade secrets, previously limited to disclosure only. It remains to be seen if these improvements will be enough to make it easier for trade secret owners to enforce their rights in Poland. At present, the practical availability of trade secret protection is limited because of difficulties proving damages, resulting in low damage awards. Nevertheless, because of the transposition of the Trade Secrets Directive into Polish law, the score on indicator 22 has increased by 0.25.

Commercialization of IP Assets and Market Access

30. Tax incentives for the creation of IP assets: To increase the attractiveness of carrying out R&D activities in Poland, the government increased existing R&D tax incentives in 2018. Starting from January 2018, the rate of the R&D super deduction increased from 150% to 200% of qualifying costs. Furthermore, the granting of so-called R&D Center status entitles companies to a super deduction of

250% on qualifying expenses. Eligible costs include salaries, depreciation/amortization of assets, and subcontracting; the costs of laboratory equipment other than fixed assets were added in 2018. In addition, the government published draft legislation on an “Innovation Box” in August 2018. The proposed box reduces the tax on income derived from qualified intellectual property rights to a 5% rate. The relief would last throughout the duration of the legal protection of eligible IP rights. If enacted, such an innovation box scheme would raise the score on this indicator from 0.66 to 1.

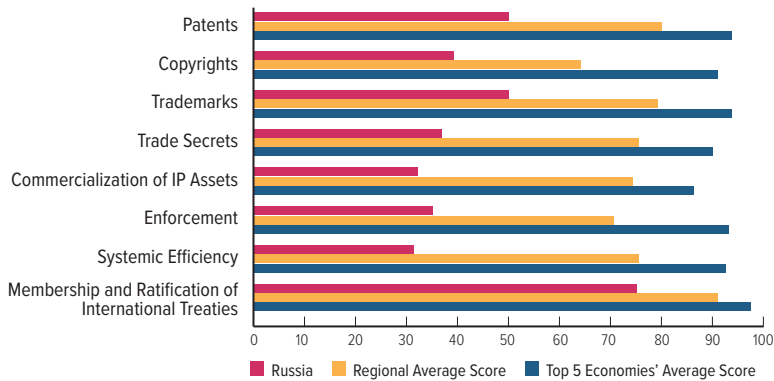
Systemic Efficiency

41. Targeted incentives for the creation and use of IP

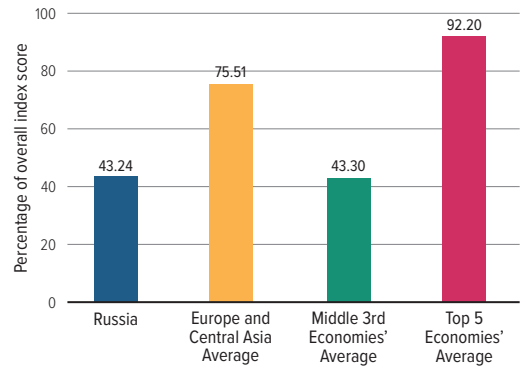
assets for SMEs: The Patent Office of the Republic of Poland (PPO) provides relatively few incentives or special assistance for SMEs. The PPO does not offer reduced filing fees or expedited review of applications from SMEs, and there is no systematic educational or technical assistance program specifically targeting SMEs and entrepreneurs. Because Poland is a member of the EPO, Polish rights holders and inventors can access the full suite of EPO educational programs, technical assistance, and special incentives. The EPO provides a 30% reduction in fees to SMEs, individuals, and universities for patent filing and examination. A broad range of technical assistance and IP education is available for SMEs and businesses. For example, the European Patent Academy provides expert speakers and advice, including in relation to portfolio management and IP valuation, and a range of online training materials, webinars, and educational tools. Since 2016, the EPO has also offered a revised accelerated prosecution procedure (PACE). The PACE program does not target SMEs specifically but is open to all applicants.

RUSSIA RANK 29/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Improved copyright enforcement—ROSKOMNADZOR is reported to be actively monitoring online infringement and developing a database of infringing content
- ✓ Past few years have seen new copyright laws passed, which 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

- ✗ Use and threat of compulsory licenses and the overriding of IP rights as public health policy
- ✗ Administrative and regulatory barriers in place for licensing activities—including direct government intervention
- ✗ Increasingly punitive localization requirements that target ICT and the biopharmaceutical sector
- ✗ Data localization requirements for technology companies have been in place for a long time and have intensified over the past few years
- ✗ For biopharmaceuticals, industrial localization policies have fused together with IP policy and broader health policy on the pricing and procurement of medicines

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 4.00 | |
| 1. Patent term of protection | 1.00 | 11. Expeditious injunctive-style relief and disabling of infringing content online | 0.75 |
| 2. Patentability requirements | 0.25 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.50 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.25 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 0.00 | 14. Digital rights management (DRM) legislation | 0.25 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 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 |
| 6. Patent term restoration for pharmaceutical products | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 0.50 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.25 |
| Category 2: Copyrights, Related Rights, and Limitations | | 3.00 | |
| 9. Copyright (and related rights) term of protection | 0.74 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.50 | | |

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------------|--|-------------|
| 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.00 | 33. Civil and procedural remedies | 0.50 |
| 20. Industrial Design Term of Protection | 1.00 | 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.25 |
| 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.50 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.00 |
| Category 4: Trade Secrets and Related Rights | 1.10 | 36. Effective border measures | 0.50 |
| 22. Protection of trade secrets, civil remedies | 0.25 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.50 |
| 23. Protection of trade secrets, criminal standards | 0.25 | Category 7: Systemic Efficiency | 1.25 |
| 24. Regulatory data protection (RDP) term | 0.60 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.25 |
| Category 5: Commercialization of IP Assets | 1.92 | 39. Consultation with stakeholders during IP policy formation | 0.50 |
| 25. Barriers to market access | 0.00 | 40. Educational campaigns and awareness raising | 0.25 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.25 |
| 27. Registration and disclosure requirements of licensing deals | 0.50 | Category 8: Membership and Ratification of International Treaties | 3.00 |
| 28. Direct Government intervention in setting licensing terms | 0.00 | 42. WIPO Internet Treaties | 1.00 |
| 29. IP as an economic asset | 0.25 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 30. Tax incentives for the creation of IP assets | 0.67 | 44. Patent Law Treaty | 1.00 |
| Category 6: Enforcement | 2.45 | 45. 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 |
| 31. Physical counterfeiting rates | 0.32 | | |
| 32. Digital/online piracy rates | 0.38 | | |
| TOTAL 19.46 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Russia's overall score has remained relatively unchanged, increasing marginally from 43.21% (17.29 out of 40) in the 6th edition to 43.24% (19.46 out of 45) in the 7th edition. This reflects, on the one hand, a relatively weak performance on the new indicators added to the Index and, on the other hand, a score increase on indicator 11.

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

5. Legislative criteria and active use of compulsory licensing of patented products and technologies; and 25. Barriers to market access: As has been detailed in previous editions of the Index, Russian industrial and economic policy over the past decade has increasingly been driven by an effort to localize industrial production and R&D. Key policy initiatives include the Strategy for Innovative Development of the Russian Federation 2020, the State Coordination

Program for the Development of Biotechnology, the Strategy of Development of the Pharmaceutical and Medical Industries, the New Digital Society Strategy 2017–30, and the National Economic Security Strategy 2017. A major part of these efforts has been localization and import substitution policies that actively discriminate against foreign entities and favor domestic Russian companies. While covering most parts of the economy, the policies have focused on high-tech sectors such as aerospace and nuclear energy, nanotechnology, medical technologies, ICT, and alternative fuels. The requirements and intensity of these policies have varied from sector to sector with the ICT and biopharmaceutical sectors being particularly targeted. Data localization requirements for technology companies have been in place for a long time and have intensified over the past few years. For biopharmaceuticals, industrial localization policies have fused together with IP policy and broader health policy on the pricing and procurement of medicines. The result is a highly challenging environment that targets the industry

with requirements for local manufacturing; procurement preferences for locally produced products; local clinical trials and R&D requirements; and, most recently, the use and threat of compulsory licenses and the overriding of IP rights as public health policy. Members of the Russian Parliament (the Duma), the federal government, and the judiciary are increasingly viewing compulsory licensing as a legitimate policy for achieving industrial and public finance goals. The Russian Federal Antimonopoly Service (FAS) has been particularly active. In 2016, the agency proposed a compulsory license scheme as a method to reduce prices for certain high-cost specialty medicines. According to the proposed amendments to the Competition Act and the Civil Code, “threats to the individual and the rights of citizens to health protection and medical care” would justify the issuing of compulsory licenses. In 2017, 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. Subsequently, in 2018, the first court-ordered biopharmaceutical compulsory license was issued. In July, the Moscow Arbitration Court granted a compulsory license to local manufacturer Nativa for Celgene’s Revlimid. The compulsory license was for Celgene to license one of its patents for the production of a product in which a dependent patent was to be used by Nativa. Without a license, the use of this patent would constitute infringement of Celgene’s patent. Critically, the lower cost of the product by Nativa was considered by the court to be economically advantageous. Nativa also has a number of other pending lawsuits involving similar “pending patents” against originator products, so the scope for issuing further licenses has now been heightened significantly. Compulsory licensing as an actively used tool in Russian industrial and health policy is not only outside international norms but is self-defeating: over time, it will hollow out the Russian IP environment and incentives for future innovation, biopharmaceutical and otherwise. Critically, the negative effect will be the same on Russian as on foreign innovators.

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, Russia has introduced and implemented a range of new laws and regulations over the past half-decade to help combat the country’s high level of online infringement. In 2013, the government passed a number of amendments to the Civil Code Part IV, including a notice and takedown provision regarding 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 with 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, additional legislative changes were introduced to strengthen rights holders’ ability to request the disabling of access to infringing material online through amendments to the Law on Information, Information Technologies and Information Protection. These amendments included a ban on so-called “mirror sites” that infringe copyrighted content; mirror websites are essentially replicas of sites that have been taken down or that access to has been disabled. 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 efforts have intensified in 2018. Specifically, ROSKOMNADZOR is reported to be actively monitoring online infringement and developing a database of infringing content. Internet mediators (including ISPs and search engines) are required to link to this database, and as it is updated with new infringing sites mediators are obliged to update their own access-disabling protocols. To date, these efforts have been voluntary and have included discussions between

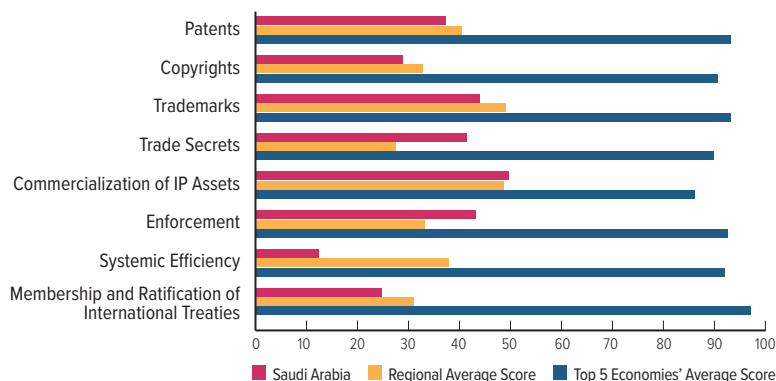
rights holders and internet mediators, with potential further legislative action reserved for 2019. More broadly, the authorities have taken action against noncomplying internet mediators through both fines and potential disabling of access to relevant websites and links. As a result of these stronger enforcement efforts, the score for indicator 11 has increased by 0.25.

Commercialization of IP Assets and Market Access

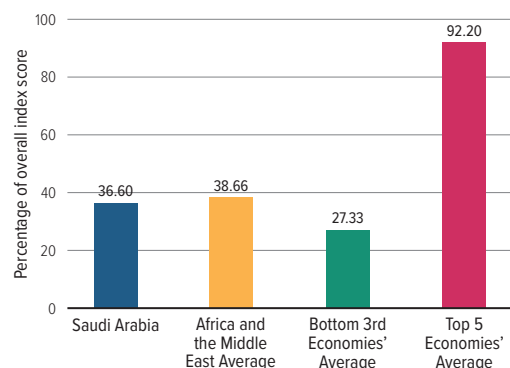
30. Tax incentives for the creation of IP assets: Russian tax law offers a generous 150% R&D tax deduction on qualifying expenses. This is available both generally and for targeted industries. In addition, entities operating in Special Economic Zones (such as the Skolkovo Innovation Centre) may qualify for additional tax credits and benefits, including VAT exemption, profit tax exemption, a reduced rate of social security contributions, and property tax exemptions. Adopted on December 29, 2015, Federal Law 396 introduces further tax breaks for investors in the innovation sector. Until 2023, investors will not be taxed for revenues arising from sales of certain types of shares, bonds, and stakes in innovative Russian companies. However, no IP-specific tax incentives, such as a patent box, are available.

SAUDI ARABIA RANK 35/50

Category Scores



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 (FDA) actions in 2017
- ✗ Significant gaps in the 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 Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 3.00 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.50 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.50 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.75 | 14. Digital rights management (DRM) legislation | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.25 |
| 8. Patent opposition | 0.75 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 2.03 | |
| 9. Copyright (and related rights) term of protection | 0.53 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 20. Industrial Design Term of Protection | 0.40 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 0.25 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.25 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 1.25 | | |
| 22. Protection of trade secrets, civil remedies | 0.50 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.50 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.50 |
| 24. Regulatory data protection (RDP) term | 0.50 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.50 |
| Category 5: Commercialization of IP Assets | 3.00 | Category 7: Systemic Efficiency | 0.50 |
| 25. Barriers to market access | 0.50 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.00 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.75 | 39. Consultation with stakeholders during IP policy formation | 0.25 |
| 27. Registration and disclosure requirements of licensing deals | 0.50 | 40. Educational campaigns and awareness raising | 0.25 |
| 28. Direct Government intervention in setting licensing terms | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.00 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 1.00 |
| 30. Tax incentives for the creation of IP assets | 0.00 | 42. WIPO Internet Treaties | 0.00 |
| Category 6: Enforcement | 3.04 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 31. Physical counterfeiting rates | 0.51 | 44. Patent Law Treaty | 1.00 |
| 32. Digital/online piracy rates | 0.53 | 45. 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 |
| 33. Civil and procedural remedies | 0.50 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.00 | | |
| TOTAL 16.47 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Saudi Arabia's overall score has decreased from 38.74% (15.49 out of 40) in the 6th edition to 36.60% (16.47 out of 45) in the 7th edition. This reflects a weak performance on the new indicators added to the Index.

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 (GCC) 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. As discussed in previous editions of the Index, the Saudi FDA has effectively overridden Saudi Arabia's linkage regime by approving for market a follow-on product to Daclatasvir, a medicine under a registered patent held by BMS. This is a highly negative development that undermines

confidence in Saudi Arabia's national IP environment and the ability for innovators to maintain basic patent protection. More broadly, it runs counter to the goals and general principles of Saudi Arabia's economic policy as outlined in both the *Vision 2030 and National Transformation Program 2020*. At the time of research, the issue had not been rectified or addressed by Saudi authorities.

Trade Secrets and the Protection of Confidential Information

23. Protection of trade secrets (criminal sanctions): Trade secrets are protected through the 2005 Regulations for the Protection of Confidential Commercial Information. These regulations provide a relatively detailed definition of trade secrets and confidential information. Article 1 defines a trade secret as something that is not generally known, that retains value because it is secret, and that the owner or proprietor of has taken reasonable steps to maintain the secrecy of. The Saudi legal definition does not place the onus on the proprietor or owner to prove that theft or misappropriation has taken place, nor does it place an excessive burden on maintaining the confidentiality of the trade secret. Article 3

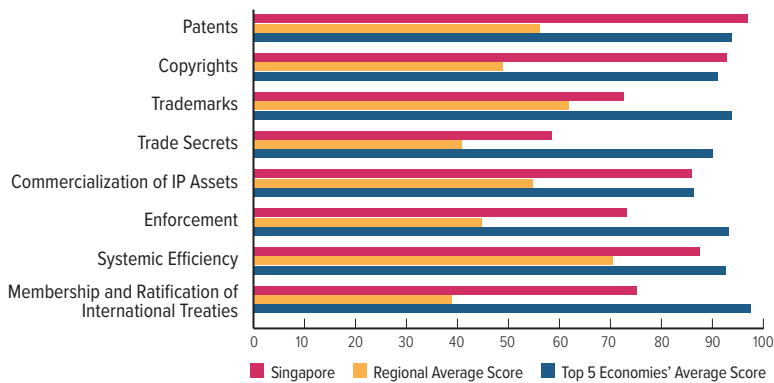
provides definitions of offenses, including the illicit access to and misappropriation of trade secrets, and Article 8 allows the offending party to seek compensation and damages. There is, however, no corresponding definition of criminal conduct, sanctions, or penalties for the illicit access to and misappropriation of a trade secret. The 2007 Anti Cyber Crime Law includes potential avenues for criminal prosecution. Article 3 provides a maximum sentence of one year's imprisonment and fines for the offense of "spying on, interception or reception of data transmitted through an information network or a computer without legitimate authorization." Similarly, Article 5 provides a maximum sentence of four years and a fine for potential cyber theft, including the "unlawful access to computers with the intention to delete, erase, destroy, leak, damage, alter or redistribute private data."

Systemic Efficiency

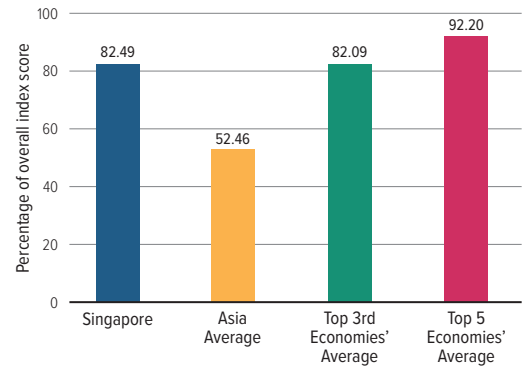
41. Targeted incentives for the creation and use of IP assets for SMEs:

Saudi IP authorities do not offer any reduced fees for the registration of trademark or patent applications. The GCC Patent Office offers reduced fees but only for individuals, not SMEs. There is no evidence of specific technical support provided to SMEs by the Saudi Patent Office, the GCC Patent Office, or the new Saudi IP Agency. King Abdullah University of Science and Technology and King Abdulaziz City for Science and Technology (KASCT) provide a number of programs and support for innovators, including SMEs. However, this support is not within the specific context of IP development but more broadly in terms of economic development and innovation. This includes, for example, the SMEs Support Initiative run by KACST. This program "aims to provide a range of technical services starting from full technical upgrading of small and medium factories, in order to improve their level, qualify them to contribute to local content, and develop the quality and quantity of their products."

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Advanced national IP framework in place
- ✓ Global leader in online copyright enforcement—precedent-setting court cases in 2018 ordered dynamic disabling of infringing content and pirated content over set-top boxes
- ✓ Singapore is an active participant in efforts to accelerate patent prosecution—the IPOS has several 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 27% today—but is still high for a developed high-income economy
- ✗ Lack of transparency and data on customs seizures of IP-infringing goods

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 7.75 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 1.00 |
| 2. Patentability requirements | 1.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 1.00 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 0.75 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 1.00 |
| 8. Patent opposition | 0.75 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.75 |
| Category 2: Copyrights, Related Rights, and Limitations | | 6.49 | |
| 9. Copyright (and related rights) term of protection | 0.74 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 1.00 | 20. Industrial Design Term of Protection | 0.60 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 1.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.75 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 1.75 | |
| 22. Protection of trade secrets, civil remedies | 1.00 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.75 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.75 |
| 24. Regulatory data protection (RDP) term | 0.50 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.25 |
| Category 5: Commercialization of IP Assets | | 5.16 | |
| 25. Barriers to market access | 1.00 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 1.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.75 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 40. Educational campaigns and awareness raising | 1.00 |
| 29. IP as an economic asset | 0.75 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.50 |
| 30. Tax incentives for the creation of IP assets | 0.66 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 5.12 | |
| 31. Physical counterfeiting rates | 0.64 | 42. WIPO Internet Treaties | 1.00 |
| 32. Digital/online piracy rates | 0.73 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 33. Civil and procedural remedies | 1.00 | 44. Patent Law Treaty | 0.00 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 1.00 | 45. 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 37.12 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Singapore's overall score has decreased from 83.63% (33.45 out of 40) in the 6th edition to 82.49% (37.12 out of 45) in the 7th edition. This reflects, on the one hand, a mixed performance on the new indicators added, with Singapore underperforming its Index average on several new indicators. On the other hand, Singapore saw a score increase on indicator 10 as a result of stronger copyright enforcement.

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, in 2014, Singapore passed amendments to its Copyright Act that strengthen rights holders' recourse mechanisms

against online piracy. The amendments 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 non-exhaustive 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, or "whether the owner or operator of the online location demonstrates a disregard for copyright generally." In response to an application by the Motion Picture Association of America (MPAA), the High Court issued its first order under these amendments ordering all of Singapore's major ISPs to disable access to the piracy website Solarmovie.ph in 2016. In May 2018, the High Court ordered ISPs to disable access to another 53 websites after a new request from the MPAA. In October 2018, this order was followed up with the issuing of a so-called dynamic order from the High Court

whereby rights holders can notify ISPs directly if counter-measures have been taken by the targeted infringing sites. This greatly reduces the administration of the system and improves the overall effectiveness of the orders. Finally, in November, the High Court issued another order to disable access to internet-based applications providing infringing content to set-top boxes. There has been an explosion in the growth and use of such boxes in Asia, and Singapore in particular. As a result of these greater enforcement efforts and the improved practical ability of rights holders to more effectively fight online piracy in Singapore, the score for indicator 10 has increased by 0.25.

Commercialization of IP Assets and Market Access

30. Tax incentives for the creation of IP assets:

Singaporean tax law offers a generous capped R&D tax credit of up to 400% on qualifying R&D expenditure. The majority of this relief is available on R&D performed in Singapore. Singapore also has an “angel investors tax deduction” program that provides a tax deduction for 50% of the qualifying investment amount. The government also plans to introduce an OECD BEPS compliant IP-specific tax incentive provisionally titled the Intellectual Property Development Incentive. With the introduction of such an incentive, Singapore’s score would increase to 1 on this indicator.

Systemic Efficiency

41. Targeted incentives for the creation and use of

IP assets for SMEs: The Intellectual Property Office of Singapore (IPOS) does not offer reduced fees or expedited review specifically for SMEs. However, Singapore does have a pronounced, substantial, and systematic approach to helping SMEs with technical assistance. IPOS offers an IP Business Clinic and an IP Legal Clinic, both of which include a complementary session with a professional services provider paid for by IPOS and both of which are targeted for businesses. IPOS also offers the IP ValueLab service. This comprehensive service aims to help businesses maximize the commercial potential and use of their IP. Additionally, until 2018, IPOS offered direct assistance with obtaining financing and loans through the IP Financing Scheme, whereby businesses were able to obtain debt-based financing by using IP as collateral. The scheme ran from

2014 to 2018. IPOS is currently in the process of replacing it with a new equity-based financing scheme based on a venture capital and private equity model of investment.

SOUTH AFRICA RANK 38/50



Strengths and Weaknesses

| KEY AREAS OF STRENGTH | KEY AREAS OF WEAKNESS |
|--|--|
| <ul style="list-style-type: none"> ✓ Basic IP framework in place ✓ Relatively low level of software piracy—32%—compared with other African economies | <ul style="list-style-type: none"> ✗ Finalized <i>IP Policy Phase I</i> does not fundamentally address South Africa’s gaps in IP protection—policy focuses on use of existing developed IP through CLs, parallel imports, and restricting patentability of pharmaceuticals ✗ New copyright amendments create uncertainty for rights holders through existing “fair use” definitions ✗ Major gaps in laws and enforcement across all categories of the Index |

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 1.00 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.50 |
| 2. Patentability requirements | 0.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.00 | 14. Digital rights management (DRM) legislation | 0.50 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 3.00 | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 0.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 2.53 | |
| 9. Copyright (and related rights) term of protection | 0.53 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.50 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 11. Expeditive injunctive-style relief and disabling of infringing content online | 0.00 | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 0.50 | | |
| 22. Protection of trade secrets, civil remedies | 0.50 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.50 |
| 23. Protection of trade secrets, criminal standards | 0.00 | 36. Effective border measures | 0.50 |
| 24. Regulatory data protection (RDP) term | 0.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.00 |
| Category 5: Commercialization of IP Assets | 3.16 | Category 7: Systemic Efficiency | 2.00 |
| 25. Barriers to market access | 0.50 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.25 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.50 | 39. Consultation with stakeholders during IP policy formation | 0.75 |
| 27. Registration and disclosure requirements of licensing deals | 0.75 | 40. Educational campaigns and awareness raising | 0.75 |
| 28. Direct Government intervention in setting licensing terms | 0.25 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.25 |
| 29. IP as an economic asset | 0.50 | Category 8: Membership and Ratification of International Treaties | 0.50 |
| 30. Tax incentives for the creation of IP assets | 0.66 | 42. WIPO Internet Treaties | 0.50 |
| Category 6: Enforcement | 2.86 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 31. Physical counterfeiting rates | 0.43 | 44. Patent Law Treaty | 0.00 |
| 32. Digital/online piracy rates | 0.68 | 45. 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 |
| 33. Civil and procedural remedies | 0.50 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.25 | | |
| TOTAL 15.55 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

South Africa's overall score has increased from 34.27% (13.71 out of 40) in the 6th edition to 34.56% (15.55 out of 45) in the 7th edition. This reflects an above-average performance on the new indicators added to the Index.

Area of Note

In 2018, the South African government released the long-awaited document Intellectual Property Policy of *The Republic of South Africa Phase I (the IP Policy)*. This is the first in a series of policies; this document concentrates on patents and biopharmaceutical 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. However, the *IP Policy* (as preceding draft policies and related documents) focuses primarily on ways in which South Africa could better access existing and developed forms of IP rather than on the manner in which IP can be created, be commercialized, and become an industrial asset in

South Africa. For all economies—emerging and developed alike—what drives innovation, technological advances, and, ultimately, economic development and growth is the creation of new forms of intangible assets and IP. Yet the *IP Policy* is silent on this. Instead, it proposes to introduce new standards of patentability, change the existing framework for the issuing and use of compulsory licenses, introduce the use of parallel importation for medicines, and introduce a new pre- and post-grant patent opposition mechanism. A great deal of uncertainty remains about what specifically these policy changes will amount to. For example, on the issue of patentability criteria, the *IP Policy* states that TRIPS Article 27.1 (and related articles) “gives a country such as South Africa the flexibility to interpret and implement the patentability requirements in a manner consistent with its constitutional obligations, developmental goals, and public policy priorities. Amongst other things, this would include the adoption of patentability criteria that address the country’s public health and environmental concerns, as well as industrial policy objectives.” But the *IP Policy* is silent on what these “constitutional obligations, developmental goals, and public policy priorities ... [and] concerns” are.

Defining patentability under such broad policy terms and goals certainly seems to be outside the scope of existing international practices as used, for example, in Europe or the U.S. Similarly, regarding the issue of compulsory licensing, it is unclear exactly what the purpose of the new IP Policy is. The *IP Policy* states that “in order to promote the sustainability of supply, it is important to ensure that a workable compulsory licensing system is in place to achieve affordability of essential goods, and restrain anti-competitive practices, as the need arises. One such instrument recognized by international law is compulsory licensing.” TRIPS Article 31, including the amendments introduced in the 2001 Doha Ministerial Declaration, and subsequent General Council decision that allows the export of medicines produced under a compulsory license (outlined in Paragraph 6), form the international 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, it is expected that they would solely be aimed at protecting public health. And Article 31 and the Doha Declaration suggests 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 unclear how both “sustainability of supply” and “affordability” are related to such public health or national emergencies. Overall, it is difficult to see how this new *IP Policy* provides real-world incentives or will make it easier to invest in, innovate, and create new products and technologies in South Africa. In this sense, it is unlikely that any of the outlined policies—independently or in aggregate—will help South Africa “transition towards a knowledge economy” as the *IP Policy* hopes.

Copyrights, Related Rights, and Limitations

13. Scope of limitations and exceptions to copyrights and related rights: Earlier this year, the members of the Portfolio Committee on Trade and Industry of the South African Parliament requested comments on the proposed revisions to the Copyright Act, 1978, via the Copyright Amendment Bill of 2017. South Africa’s initiative to update its copyright

laws to bring them in line with global treaties is a step in the right direction. However, the benefits of this copyright are negated, particularly for international film producers, by provisions of the bill that allow unlimited parallel importation of all copyright works. The bill also contains a robust set of draft sections corresponding with those already contained in the Electronic Communications and Transactions Act. However, several areas are still marked by uncertainty. Specifically, the proposed amendments introduce a system of “fair use” exceptions to copyright. For many years, there has been a lack of clarity in South Africa on what constitutes infringement of copyright and what is fair reproduction and use, with no relevant full definition in the current Copyright Act. In the current bill, the newly introduced Sections 12A, B, and C will significantly negate the exclusive rights of copyright owners and imperil the legitimate markets for creative works. Exceptions and limitations to copyright should be considered against the three-step test embodied in the Berne Convention and the WTO TRIPS Agreement. In December 2018, South Africa’s National Assembly approved a redrafted version of the bill that features stronger copyright protections but preserves some fair use exceptions, such as in copyright works, educational and academic activities, protection of computer programs, libraries, archives, museums, and galleries. Next, the bill will go to the National Council of Provinces and then be signed by the president, likely in 2019.

Commercialization of IP Assets and Market Access

26. Barriers to technology transfer; and 28. Direct government intervention in setting licensing terms:

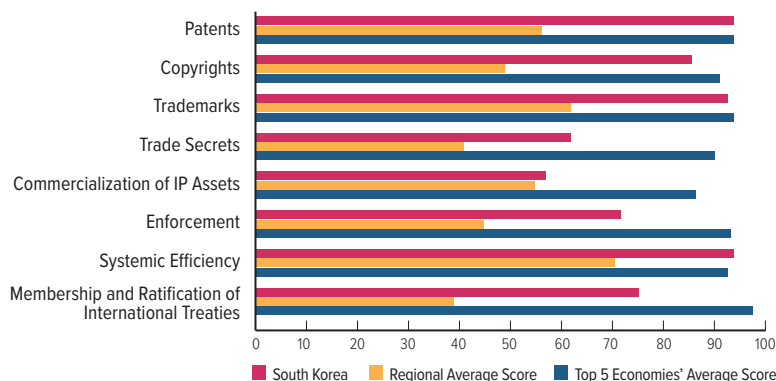
As a step in the right direction, South Africa introduced a national technology transfer framework in 2008. The Intellectual Property Rights from Publicly Financed Research and Development Act established the parameters by which publicly funded research can be commercialized and, crucially, where ownership over the generated IP resides. The act aims to stimulate research and the commercialization of publicly funded research. Broadly speaking, the act and its accompanying regulations establish the principle that the recipient will retain IP generated through publicly funded research. However, Section 11 of the act imposes restrictions on licensing transactions, including reserving the right for the South African government to

directly intervene and cancel agreements. It also contains a number of localization components and restrictions and geographical limitations on the use of the licensed technology. Still, there are signs that the legislation has stimulated some technology transfer. The Department of Science and Technology published the South African National Survey of Intellectual Property and Technology Transfer at Publicly Funded Research Institutions in April 2017, which showed a notable uptick in patenting, licensing deals executed, company spin-offs, and commercialization activities in South Africa since the introduction of the legislation in 2008. The report also shows the scope of opportunity to make this growing dynamic more commercially attractive.

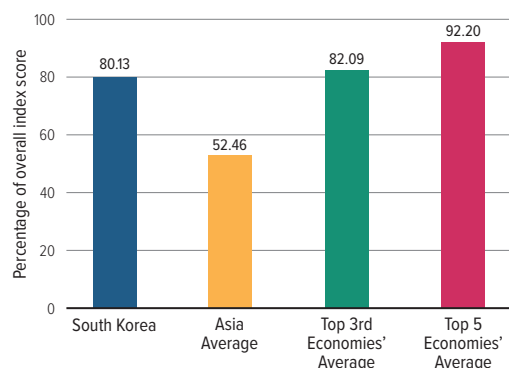
30. Tax incentives for the creation of IP assets: South African tax law offers a generous R&D tax credit of up to 150% on qualifying R&D expenditure and accelerated asset relief. No IP-specific tax incentives, such as a patent box, are available.

SOUTH KOREA RANK 13/50

Category Scores



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 and new post-grant opposition mechanism help streamline patent office administration
- ✓ KIPO provides SMEs with a variety of educational and technical assistance programs as well as a right to reduced filing fees

KEY AREAS OF WEAKNESS

- ✗ Hurdles remain in the application of civil remedies (with efforts to improve underway)
- ✗ Not a contracting party to the Patent Law Treaty
- ✗ Some barriers to market access discriminate against foreign IP owners
- ✗ Onerous licensing registration requirements

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 7.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 1.00 |
| 2. Patentability requirements | 1.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.75 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 1.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 1.00 |
| 8. Patent opposition | 1.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.75 |
| Category 2: Copyrights, Related Rights, and Limitations | | 5.99 | |
| 9. Copyright (and related rights) term of protection | 0.74 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 1.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 1.00 | 20. Industrial Design Term of Protection | 0.80 |
| 11. Expeditive injunctive-style relief and disabling of infringing content online | 1.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 1.00 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 1.85 | | |
| 22. Protection of trade secrets, civil remedies | 0.75 | 35. Criminal standards including minimum imprisonment and minimum fines | 1.00 |
| 23. Protection of trade secrets, criminal standards | 0.50 | 36. Effective border measures | 1.00 |
| 24. Regulatory data protection (RDP) term | 0.60 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.25 |
| Category 5: Commercialization of IP Assets | 3.41 | Category 7: Systemic Efficiency | 3.75 |
| 25. Barriers to market access | 0.50 | 38. Inter-governmental coordination of IP rights enforcement efforts | 1.00 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.75 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.25 | 40. Educational campaigns and awareness raising | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 3.00 |
| 30. Tax incentives for the creation of IP assets | 0.66 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 5.01 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 31. Physical counterfeiting rates | 0.58 | 44. Patent Law Treaty | 0.00 |
| 32. Digital/online piracy rates | 0.68 | 45. 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 |
| 33. Civil and procedural remedies | 0.75 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.75 | | |
| TOTAL 36.06 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

South Korea's overall score has decreased from 82.87% (33.15 out of 40) in the 6th edition to 80.13% (36.06 out of 45) in the 7th edition. This reflects a relatively weak performance on the new indicators added to the Index.

Commercialization of IP Assets and Market Access, Systemic Efficiency

27. Registration and disclosure requirements of licensing deals:

The registration of executed licensing agreements is mandatory in Korea. Articles 1010 of the Patent Act and 56 of the Trademark Act state that registration with the Korean Intellectual Property Office (KIPO) is required for the grant or transfer of exclusive licenses to come into effect, even though the licensor and the licensee have executed a contract. An unregistered exclusive license may still have the effect of a non-exclusive license. However, non-exclusive licensees have no legal standing right to initiate infringement procedures against third parties unless the licensees are registered. The registration procedure is

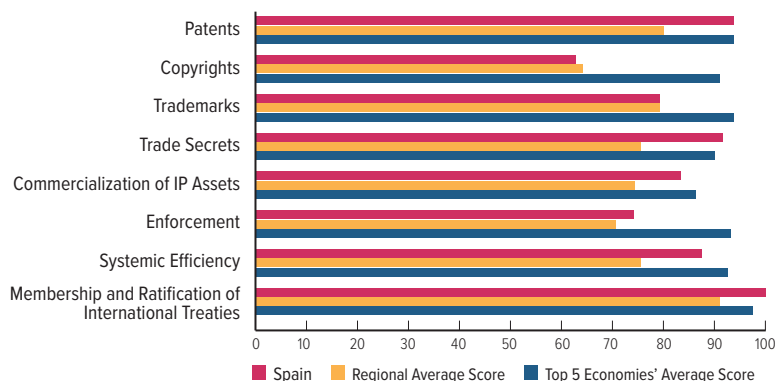
reportedly burdensome and requires the disclosure of the IP license contract.

30. Tax incentives for the creation of IP assets: 41.

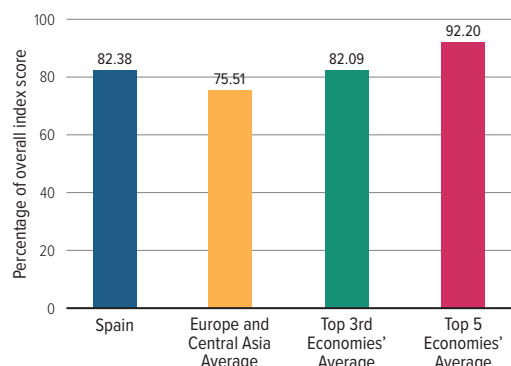
Targeted incentives for the creation and use of IP assets for SMEs: KIPO provides SMEs with a variety of educational and technical assistance programs; reduced filing fees are available. Korea has also put in place a unique trial fast-track system for cases where SMEs are an applying party. As reported in KIPO's Annual Report 2017, over 50% of fast-track trials involved SMEs as of December 2017. Technical assistance programs include support to export-oriented SMEs in developing and exploiting their IP rights, with the goal to foster "Global IP Star" companies. Since the launch of the Global IP Star program in 2010, 1,454 promising SMEs have received assistance; 288 in 2017 alone. KIPO also supports the transfer of first-class patented technologies from public to private entities through events and initiatives such as the Public Technology Roadshow and the IP utilization network. Other recent initiatives include a *Guidebook for SMEs' IP Business Cycle*.

SPAIN RANK 11/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ As an EU member state, Spain has an advanced IP system
- ✓ Sector-specific rights in place and enforced
- ✓ Efforts to strengthen and modernize patent and copyright frameworks, including with respect to online copyright enforcement
- ✓ Civil and criminal reforms enhance remedies available for IP infringement
- ✓ Active public awareness campaigns and engagement efforts

KEY AREAS OF WEAKNESS

- ✗ European Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to Spain's and the EU's research- and IP-based biopharma industry
- ✗ Counterfeiting and piracy levels remain high compared with other EU economies—software piracy estimated at 42%
- ✗ Online copyright regime has some gaps, including in ISP liability and online protection

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 7.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.50 |
| 2. Patentability requirements | 1.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.75 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 0.75 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 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 | Category 3: Trademarks, Related Rights, and Limitations | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.75 |
| Category 2: Copyrights, Related Rights, and Limitations | | 4.38 | |
| 9. Copyright (and related rights) term of protection | 0.63 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.75 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.50 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.50 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 0.75 | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 2.75 | | |
| 22. Protection of trade secrets, civil remedies | 0.75 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.75 |
| 23. Protection of trade secrets, criminal standards | 1.00 | 36. Effective border measures | 1.00 |
| 24. Regulatory data protection (RDP) term | 1.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 1.00 |
| Category 5: Commercialization of IP Assets | 5.00 | Category 7: Systemic Efficiency | 3.50 |
| 25. Barriers to market access | 0.75 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.75 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.75 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.75 | 40. Educational campaigns and awareness raising | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 4.00 |
| 30. Tax incentives for the creation of IP assets | 1.00 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 5.19 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 31. Physical counterfeiting rates | 0.61 | 44. Patent Law Treaty | 1.00 |
| 32. Digital/online piracy rates | 0.58 | 45. 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 |
| 33. Civil and procedural remedies | 0.75 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.50 | | |
| TOTAL 37.07 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Spain's overall score has increased, rising from 81.45% (32.58 out of 40) in the 6th edition to 82.38% (37.07 out of 45) in the 7th edition. This was driven by a strong performance on the new indicators added to the Index.

Copyrights, Related Rights, and Limitations

11. Expeditious injunctive-style relief and disabling of infringing content online: Enforcement efforts against online piracy expanded in 2018. In February, a Spanish court ordered ISPs to disable access to 2 major piracy websites with audiences across most Spanish-speaking countries (HDFull and Repelis—the latter is labeled a “Notorious Market” by the USTR). Later that month, the Civil Guard’s Department of Telematic Crimes disabled access to 23 websites dealing with pirated movies, TV shows, music, and video games under the framework of operation “Cascada.” In June, the conclusion of 3 operations led to the disabling of access to 49 highly frequented piracy websites and to the arrest of 3 of their administrators. One of the main

Spanish-speaking piracy organizations (linked to the domain *descargasmix.com*) was dismantled in cooperation with Argentine authorities. Since 2016, when access to the first piracy website was disabled under Spain’s amended Copyright Act, Spain has increased antipiracy enforcement efforts, although these efforts were primarily driven through a court order served on ISPs. Administrative cases are initiated by the Second Section of the Intellectual Property Commission that considers the websites’ audience share, number of works, or business model. Through this body, in June 2018, the Ministry of Culture exercised for the first time its prerogative under Article 195 of the IP Law to issue administrative fines against pirate websites, ordering the owner of the domain *x-caleta.com* to pay a fine of EUR375,000.

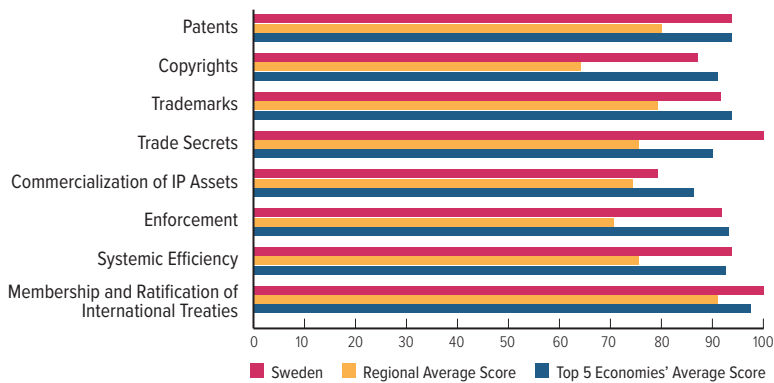
Trade Secrets and the Protection of Confidential Information

22. Protection of trade secrets (civil remedies); and 23. Protection of trade secrets (criminal sanctions): At the time of research, a Business Secret Bill transposing the Trade Secrets Directive had been approved by the

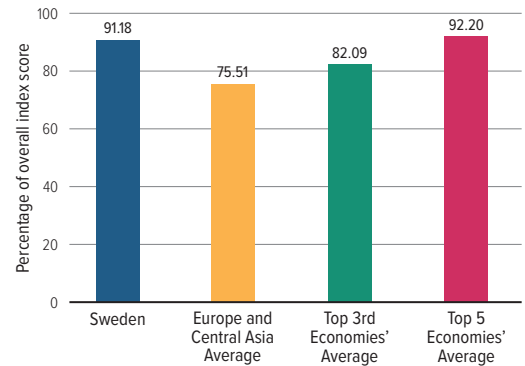
government but was still awaiting parliamentary approval. The bill largely conforms with the EU Trade Secrets Directive, including introducing a more explicit definition of what constitutes a trade secret. Difficulties in proving the “secret” character of the information in question has historically constituted the main reason why Spanish rights holders have failed to enforce their rights in litigation. The adoption of a clearer definition of how to qualify for trade secret protection thus has the potential to improve the actual use and availability of protection. The new bill would also provide a higher level of legal certainty regarding the unlawful acquisition of trade secrets and damages. The Index will continue to monitor these developments in 2019.

SWEDEN RANK 3/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Strong and sophisticated national IP environment
- ✓ Online copyright enforcement improving over past few years with stronger police enforcement and precedent-setting court decisions on ISP responsibility
- ✓ IP appeal court provided pivotal ruling in long-running *Bredbandsbolaget* case—verdict provides rights holders recourse mechanisms for copyright infringement online

KEY AREAS OF WEAKNESS

- ✗ No R&D or IP-specific tax incentives in place
- ✗ European Commission proposal to introduce an SPC exemption for exports of biopharmaceuticals poses significant risk to Sweden's and EU's research- and IP-based biopharma industry

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 7.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.75 |
| 2. Patentability requirements | 1.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 1.00 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 1.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 1.00 |
| 8. Patent opposition | 1.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 1.00 |
| Category 2: Copyrights, Related Rights, and Limitations | | 6.10 | |
| 9. Copyright (and related rights) term of protection | 0.60 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.50 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.75 | 20. Industrial Design Term of Protection | 1.00 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 1.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 1.00 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 3.00 | | |
| 22. Protection of trade secrets, civil remedies | 1.00 | 35. Criminal standards including minimum imprisonment and minimum fines | 1.00 |
| 23. Protection of trade secrets, criminal standards | 1.00 | 36. Effective border measures | 1.00 |
| 24. Regulatory data protection (RDP) term | 1.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 1.00 |
| Category 5: Commercialization of IP Assets | 4.75 | Category 7: Systemic Efficiency | 3.75 |
| 25. Barriers to market access | 1.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 1.00 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 1.00 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 1.00 | 40. Educational campaigns and awareness raising | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 4.00 |
| 30. Tax incentives for the creation of IP assets | 0.00 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 6.43 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 31. Physical counterfeiting rates | 0.87 | 44. Patent Law Treaty | 1.00 |
| 32. Digital/online piracy rates | 0.81 | 45. 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 |
| 33. Civil and procedural remedies | 0.75 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 1.00 | | |
| TOTAL 41.03 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Sweden's overall score has decreased from 92.57% (37.03 out of 40) in the 6th edition to 91.18% (41.03 out of 45) in the 7th edition. This was primarily driven by a weak performance on indicator 30.

Trade Secrets and the Protection of Confidential Information

22. Protection of trade secrets (civil remedies); and 23.

Protection of trade secrets (criminal sanctions): In July 2018, the Swedish Parliament passed a new trade secret law (*Lag (2018:558) om företagshemligheter*), which transposes the EU Trade Secret Directive into Swedish law. Prior to this, Sweden already had fairly comprehensive trade secret legislation in place but this new law harmonizes Swedish legislation with European standards. As part of the legislative package, existing criminal provisions relating to trade secrets were also strengthened. The law provides fines and imprisonment sentencing of two to six years depending on the severity of the crime. From the 1990s until the 2018 law,

Sweden had criminal sanctions in place for trade secret theft. The new law clarifies and builds on existing sentencing provisions.

Commercialization of IP Assets and Market Access

27. Registration and disclosure requirements of licensing deals:

License agreements for patents and trademarks can be registered with the Swedish Patent and Registration Office (*Patent och registreringsverket, PRV*), but registration is not required to take legal effect against third parties. Recordal is relatively straightforward and not onerous; an extract of the licensing agreement can be submitted with the required registration forms.

30. Tax incentives for the creation of IP assets: Swedish tax law does not offer any targeted R&D or IP-specific tax incentives. There is no general R&D tax incentive or patent or IP box incentive. Instead, the Swedish tax code offers a complex tax credit for social security charges relating to R&D staff. These charges can be reduced by about 10% per qualifying employee.

Enforcement

35. Criminal standards including minimum imprisonment and minimum fines:

In January 2017, the Swedish government requested a special expert investigation into the potential strengthening of criminal sanctions against copyright and trademark infringement. The final report and recommendations of this investigation (*Grovt upphovsrättsbrott och grovt varumärkesbrott*) were presented to the Ministry of Justice in early 2018. The report recognizes the socio-economic importance of copyright- and trademark-dependent industries, but also the real challenges that these industries face due to large-scale, commercial piracy and infringement. The report recommends strengthening criminal sanctions in Sweden by introducing a new category of criminal sanctions for serious criminal copyright and trademark infringement. These sanctions would include a lengthier prison sentence of up to six years. The report also recommends making it easier for public prosecutors to initiate criminal proceedings and for investigators to seize intangible assets such as domain names during the course of a criminal investigation. These statutory changes are currently under review and are tentatively scheduled to be introduced in mid-2019.

Systemic Efficiency

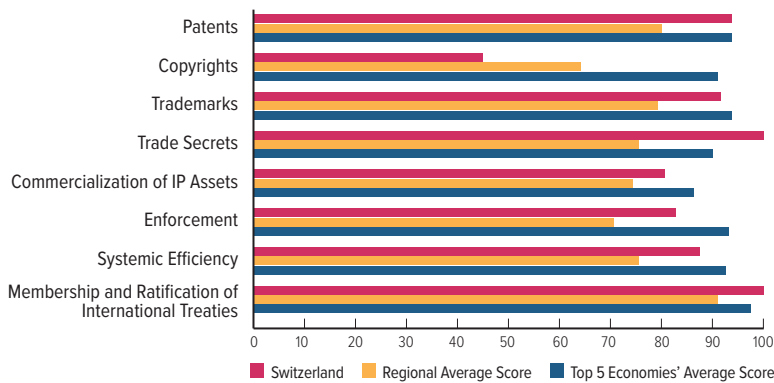
41. Targeted incentives for the creation and use of IP assets for SMEs:

PRV offers online educational and IP training courses (free of charge) for the general public, including SMEs. The agency also offers bespoke, expert-guided technical training courses on all major forms of IP rights for businesses and business users. However, these courses are not free of charge; at the time of research, they were priced at SEK6,900 plus VAT (circa USD750) per delegate. The agency does not offer any reduced filing fees for SMEs or expedited review. However, registration and processing times for both trademarks and patents is generally very fast. A patent, for example, can be filed and granted within 8–12 months. Because Sweden is a member of the EPO, Swedish rights holders and inventors are able to access the full suite of EPO educational programs, technical assistance, and special incentives. The EPO provides a 30% reduction in fees to SMEs, individuals, and universities for patent filing and examination. A broad range of technical assistance and IP education is available for SMEs and

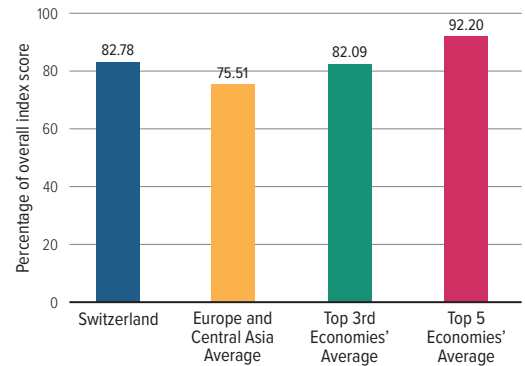
businesses. For example, the European Patent Academy provides expert speakers and advice, including in relation to portfolio management and IP valuation, as well as a host of online training materials, webinars, and educational tools. Since 2016, the EPO also offers a revised accelerated prosecution procedure (PACE). The PACE program does not target SMEs specifically but is open to all applicants.

SWITZERLAND RANK 9/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Strong and sophisticated national IP environment
- ✓ Strong patent rights and enforcement environment
- ✓ Switzerland is a founding member of EPO and a full participant in PPH initiatives

KEY AREAS OF WEAKNESS

- ✗ Proposed changes to copyright law only partially address issues of online infringement—they do not include the option of disabling access to infringing content online or content hosted by foreign sites
- ✗ Overly broad interpretation of limitations and exceptions for copyright
- ✗ Crucial gaps in enforcement and prosecution of online copyright infringement
- ✗ Limited R&D and IP-specific tax incentives in place

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 7.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.50 |
| 2. Patentability requirements | 1.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 0.50 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 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 | Category 3: Trademarks, Related Rights, and Limitations | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 1.00 |
| Category 2: Copyrights, Related Rights, and Limitations | | 3.13 | |
| 9. Copyright (and related rights) term of protection | 0.63 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 1.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.50 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 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 | 1.00 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 3.00 | | |
| 22. Protection of trade secrets, civil remedies | 1.00 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.75 |
| 23. Protection of trade secrets, criminal standards | 1.00 | 36. Effective border measures | 1.00 |
| 24. Regulatory data protection (RDP) term | 1.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 1.00 |
| Category 5: Commercialization of IP Assets | 4.83 | Category 7: Systemic Efficiency | 3.50 |
| 25. Barriers to market access | 1.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 1.00 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 1.00 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.75 | 40. Educational campaigns and awareness raising | 0.75 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 4.00 |
| 30. Tax incentives for the creation of IP assets | 0.33 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 5.79 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 31. Physical counterfeiting rates | 0.75 | 44. Patent Law Treaty | 1.00 |
| 32. Digital/online piracy rates | 0.79 | 45. 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 |
| 33. Civil and procedural remedies | 0.75 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.75 | | |
| TOTAL 37.25 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Switzerland's overall score has decreased from 83.55% (33.42 out of 40) in the 6th edition to 82.77% (37.25 out of 45) in the 7th edition. This was driven primarily by a mixed performance on the new indicators added to the Index.

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, the copyright regime in Switzerland is weaker than Switzerland's otherwise world-class national IP environment due to legislative weaknesses and a lack of enforcement. The Swiss government has long recognized this problem and announced an ambitious reform plan following the recommendations by the Swiss Working Group on Copyright

(AGUR12) in 2014. The Swiss Federal Department of Justice and Police (*Eidgenössische Justiz- und Polizeidepartement*) has been working on amendments to the copyright law since 2015. In late 2017, new draft amendments were finally published and an announcement made that copyright reforms would finally go ahead. These amendments were approved by the Swiss Federal Council (*Bundesrat*) in November 2017 and were at the time of research being reviewed in the Federal Assembly (*Schweizer Parlament*). The law is expected to be passed in early 2019. The Swiss government should be commended for finally taking legislative action and addressing a long-standing weakness in its national IP environment. On the positive side the amendments require ISPs to both remove and keep infringing content off their servers. Draft Article 39d inserts a legal obligation on the part of internet hosting services to act against infringing content upon notification. Specifically, the draft legislation puts in place a requirement for a "stay down" mechanism whereby hosting services must ensure that infringing content is not made accessible again after a notification of infringement has been made and acted on. However, the draft legislation does not include any

requirement or option for the disabling of access to illegal content under the proposed legislative amendments. It is also unclear what the legal consequences, if any, will be for internet hosts that fail to comply with the conditions of Article 39d or under what circumstances a refusal to comply with the law is acceptable.

Trade Secrets and the Protection of Confidential Information

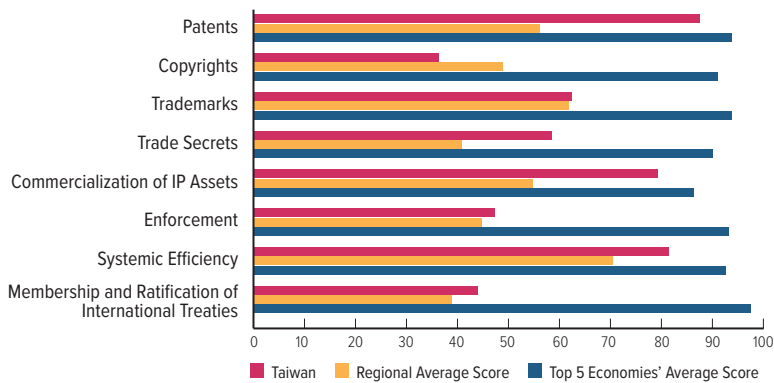
23. Protection of trade secrets (criminal sanctions): Swiss law provides clear and strong criminal sanctions relating to the theft and misappropriation of trade secrets. Both the Criminal Code and Unfair Competition Act provide for criminal sanctions for certain types of illegal acts pertaining to trade secrets including the betrayal of trade secrets through industrial espionage. Swiss prosecutors actively pursue cases of alleged industrial espionage and trade secret violation.

Commercialization of IP Assets and Market Access

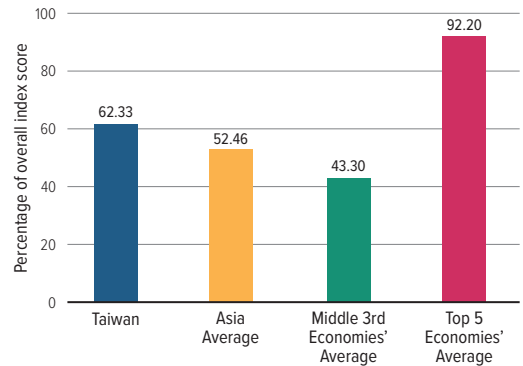
30. Tax incentives for the creation of IP assets: Currently, Swiss tax law provides only limited incentives. There is no general, federal R&D tax credit available and only a regional patent box is in place in the Canton of Nidwalden. However, legislative proposals have been introduced to revamp Switzerland's R&D tax code through the introduction of both an R&D super deduction and a patent box regime based on OECD guidelines. The R&D tax deduction would be up to 150% on qualifying expenditure. The proposed patent box would be at the cantonal level and provide up to 90% in relief on any qualifying income generated from IP-based assets. The Federal Assembly adopted the proposal on September 29, 2018. However, before the Federal Council can set a definitive date of entry into force (currently scheduled for January 1, 2020), it is likely that the approval of the Swiss electorate will also become necessary in a referendum. Such a vote is likely to be held in the first half of 2019.

TAIWAN RANK 20/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ New pharmaceutical linkage regime introduced—strengthens protection and enforcement of biopharmaceutical IP rights
- ✓ Term of protection for industrial design rights extended from 12 to 15 years in 2018
- ✓ Patent framework in line with international standards, with recent improvements to the grace period
- ✓ Although facing political hurdles to becoming a contracting party, Taiwan has in many cases implemented the provisions of several 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

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 7.00 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.25 |
| 2. Patentability requirements | 1.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.50 |
| 3. Patentability of computer-implemented inventions (CIs) | 1.00 | 14. Digital rights management (DRM) legislation | 0.50 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 0.75 | 15. Clear implementation of policies and guidelines requiring that any proprietary software used on government ICT systems should be licensed software | 0.25 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 3.73 | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 0.75 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 2.53 | |
| 9. Copyright (and related rights) term of protection | 0.53 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.50 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 0.25 | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 1.75 | | |
| 22. Protection of trade secrets, civil remedies | 0.50 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.75 | 36. Effective border measures | 0.50 |
| 24. Regulatory data protection (RDP) term | 0.50 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.75 |
| Category 5: Commercialization of IP Assets | 4.75 | Category 7: Systemic Efficiency | 3.25 |
| 25. Barriers to market access | 1.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.75 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.75 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.75 | 40. Educational campaigns and awareness raising | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.50 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 1.75 |
| 30. Tax incentives for the creation of IP assets | 1.00 | 42. WIPO Internet Treaties | 0.75 |
| Category 6: Enforcement | 3.29 | 43. Singapore Treaty on the Law of Trademarks | 0.50 |
| 31. Physical counterfeiting rates | 0.38 | 44. Patent Law Treaty | 0.50 |
| 32. Digital/online piracy rates | 0.66 | 45. 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 |
| 33. Civil and procedural remedies | 0.50 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.25 | | |
| TOTAL 28.05 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Taiwan's overall score has increased from 59.62% (23.85 out of 40) in the 6th edition to 62.33% (28.05 out of 45) in the 7th edition. This was driven by both a relatively strong performance on the new indicators added to the Index as well as score increases on indicators 4 and 20.

Patents, Related Rights, and Limitations

4. Pharmaceutical-related patent enforcement and resolution mechanism:

At the beginning of 2018, provisions on patent linkage were promulgated by the Taiwanese president. The introduction of a linkage system confirms Taiwan's commitment to strengthen its national IP environment for biopharmaceuticals and the life sciences. As a result of these efforts, the score for this indicator has increased by 0.5.

Trademarks, Related Rights, and Limitations

20. Industrial design term of protection: Draft amendments to the Patent Law propose to increase the term of protection

for design patents from 12 to 15 years, which would raise Taiwan's score on this indicator from 0.48 to 0.6.

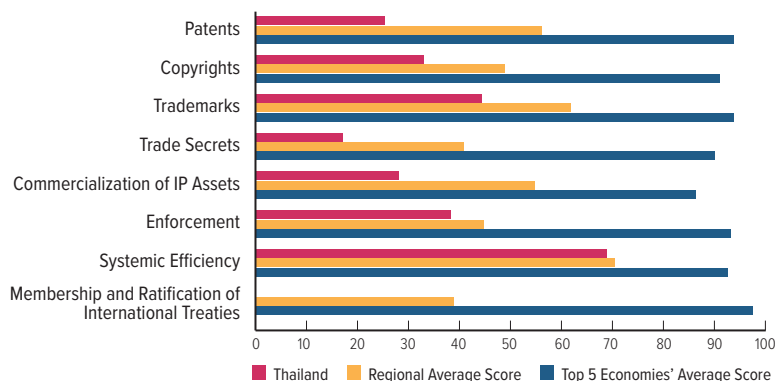
Systemic Efficiency

41. Targeted Incentives for the creation and use of IP

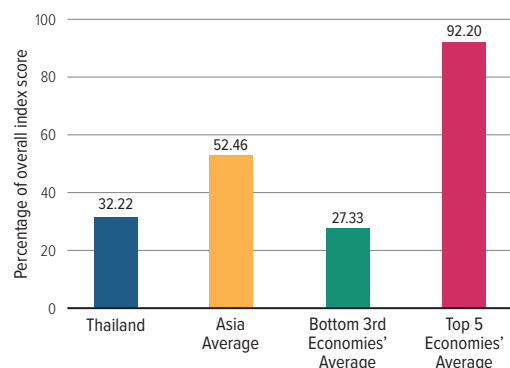
assets for SMEs: The Taiwan Intellectual Property Office (TIPO) offers reduced fees and technical assistance to SMEs. Fast-track examinations are not available to SMEs per se, but they are available to select technological areas, including green technologies and applications whose inventions are already exploited commercially. IP awareness classes are organized by the TIPO and held at individual SMEs as well as industrial parks.

THAILAND RANK 42/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ New Customs Act has resulted in greater anticounterfeiting efforts against infringing goods in-transit
- ✓ Proposed copyright amendments would address many of the existing deficiencies and weaknesses in Thai copyright law
- ✓ Thailand moved from the Priority Watch List to the Watch List on USTR's Special 301 Out-of-Cycle Review—driven by stronger enforcement and coordination within the Thai government
- ✓ Basic level of protection and registration system in place for copyrights, trademarks, and designs, including recent membership in the Madrid Protocol

KEY AREAS OF WEAKNESS

- ✗ Inadequate patent protection, gaps in patentability, and severe patent backlogs (though governments introduced measures in 2017 to accelerate procedures and boost resources)
- ✗ Life sciences IP rights inconsistent with TRIPS
- ✗ Incomplete digital copyright regime and hurdles to/lack of clarity on effective implementation (although an injunctive relief mechanism is now available)
- ✗ Barriers to market access for patent holders
- ✗ High physical counterfeiting and digital piracy rates—software piracy estimated at 64%

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 2.00 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.25 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.25 | 14. Digital rights management (DRM) legislation | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 2.65 | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 0.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.25 |
| Category 2: Copyrights, Related Rights, and Limitations | | 2.28 | |
| 9. Copyright (and related rights) term of protection | 0.53 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 0.50 | |
| 22. Protection of trade secrets, civil remedies | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.75 |
| 24. Regulatory data protection (RDP) term | 0.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.75 |
| Category 5: Commercialization of IP Assets | | 1.66 | |
| 25. Barriers to market access | 0.00 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.25 | 38. Inter-governmental coordination of IP rights enforcement efforts | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.00 | 39. Consultation with stakeholders during IP policy formation | 0.50 |
| 28. Direct Government intervention in setting licensing terms | 0.00 | 40. Educational campaigns and awareness raising | 0.75 |
| 29. IP as an economic asset | 0.75 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.50 |
| 30. Tax incentives for the creation of IP assets | 0.66 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 2.66 | |
| 31. Physical counterfeiting rates | 0.32 | 42. WIPO Internet Treaties | 0.00 |
| 32. Digital/online piracy rates | 0.34 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 33. Civil and procedural remedies | 0.25 | 44. Patent Law Treaty | 0.00 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.00 | 45. 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 14.50 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Thailand's overall score has increased from 31.37% (12.55 out of 40) in the 6th edition to 32.22% (14.5 out of 45) in the 7th edition. This was driven by both a relatively strong performance on the new indicators added to the Index and a score increase on indicator 36.

Copyrights, Related Rights, and Limitations

11. Expedient injunctive-style relief and disabling of infringing content online; 12. Availability of frameworks that promote cooperative action against online piracy; and 14. Digital rights management legislation:

On January 31, 2018, the Department of Intellectual Property (DIP) tabled amendments to the Copyright Act aiming to step up online copyright protection and prepare Thailand's accession to the WIPO Internet Treaties. The amendments include the creation of a notice-and-takedown scheme, the definition of liability for service providers, and remedies for the circumvention of technological measures. At present, under Section 20.3 of the Computer Crime Act

2017, copyright holders need to submit a complaint to the DIP, which conducts preliminary investigations and then passes the case on to the Ministry of Digital Economy and Society. With the minister's approval, the copyright holder can request a competent court to issue a disabling order. Because of this convoluted process, the procedure does not practically provide timely redress for copyright infringement. Recognizing this challenge, the proposed amendments would instead enable copyright holders to make their takedown requests directly to ISPs, whose timely response will protect them from liability. The proposed amendments would also criminalize the manufacture, sale, rental, or importation of circumvention devices. At the time of research, the Thai government had not published a revised version of the proposal. These amendments are a positive step forward and address many of the legal weakness in Thailand's copyright environment. The Index will continue to monitor these legislative developments in 2019.

Commercialization of IP Assets and Market Access

27. Registration and disclosure requirements of licensing deals; and 28. Direct government intervention in setting licensing terms:

According to Section 41 of the Patent Act, patent licenses must be registered with the DIP. On receipt of an application for registration, the DIP examines the license to ensure that it does not contain any anticompetitive provisions, which would bar the agreement from registration. Section 39 of the Patent Act and corresponding regulations define provisions that constitute unfair restriction to competition. Ministerial Regulation No. 25 differentiates between actions that are entirely prohibited (“black list”) and others that may be prohibited (“grey list”), such as imposing higher royalty rates than usual or rates that are higher than those agreed with other licensees. Section 69 of the Trademark Act requires trademark licenses to also be registered with the DIP. The agency can refuse to register an agreement if it is viewed to confuse or mislead the public or is contrary to public order, morality, or public policy. Unregistered patent and trademark licenses are considered void and with limited legal standing under Section 152 of the Civil and Commercial Code as well as relevant case law. For instance, in a 2016 case, the Thai Bankruptcy Court ruled that the trademark owner had no right to request compensation for a breach of a license agreement since the license was not registered. This registration requirement and lack of legal standing for unregistered licensing agreements unduly restrict rights holders’ freedom to operate. Current proposed draft Patent Act amendments recognize this burden and turn the obligation to record patent licenses into a voluntary system. If approved, these amendments would potentially raise the score for indicator 27.

Enforcement

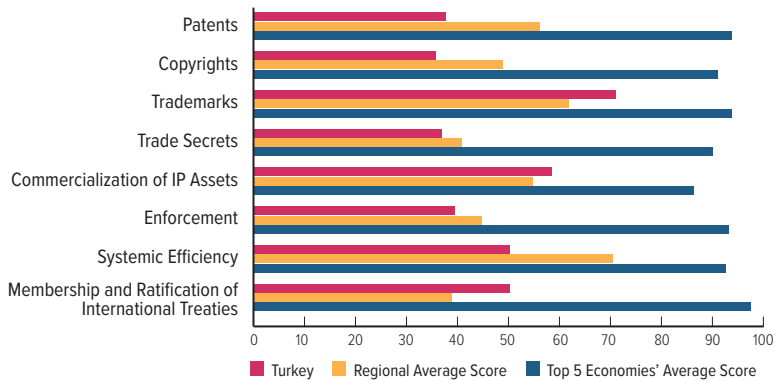
36. Effective border measures: The new Customs Act BE 2560 passed in November 2017 brought greater clarity to the Thai customs regime by repealing the preceding act dating back to 1926. The new act raises penalties for the import of counterfeit goods to a maximum of 10 years of imprisonment and/or a fine of up to THB400,000 (approximately USD14,200). Critically, these penalties and criminal provisions were expanded to also apply to in-transit and transshipment goods, as well as “attempting” to import. Since the reform passed, the first seizures of counterfeit

goods in-transit were registered in 2018. As a result, the score for indicator 36 has increased by 0.25.

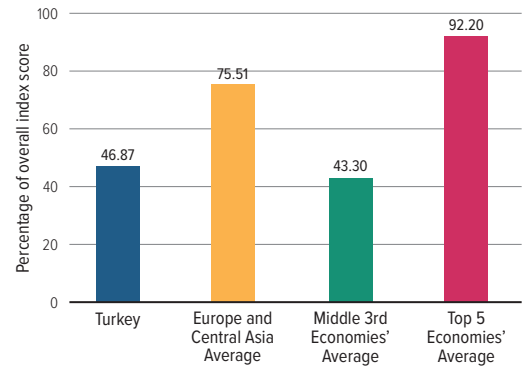
38. Coordination of IP rights enforcement efforts: In 2018, Thailand was moved from the Priority Watch List to the Watch List on the United States Trade Representative’s Special 301 Out-of-Cycle Review. When describing why it made this decision the USTR rightly emphasized Thailand’s sustained and systematic efforts on cross-governmental coordination and enforcement. Thailand has a dedicated platform for coordinating enforcement of IP rights across government agencies and is, in this respect, a global leader. The National IP Center for Enforcement (NICE), established in 2013, was created to promote cooperation across government agencies that cover enforcement of IP rights. Led by the DIP, the 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 government agencies as well as industry groups, including the Thai FDA, National Science and Technology Development Agency, the Pharmaceutical Research and Manufacturers Association, 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 and enforcement. Efforts in the area of enforcement include planning measures and overseeing operations based on regular meetings among participating agencies. The import of this national enforcement effort is highlighted by the fact that senior Thai government officials, including the prime minister and deputy prime minister, are engaged and active participants.

TURKEY RANK 26/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Turkey has over the years sought to align its national IP environment with EU standards
- ✓ Active promotion of importance of IP protection and use as an economic asset among public/SMEs
- ✓ Generous R&D and IP-specific tax incentives in place

KEY AREAS OF WEAKNESS

- ✗ Key gaps persist in copyright environment and patent protection and enforcement
- ✗ For biopharmaceuticals, industrial localization policies have fused together with IP policy and broader health policy on the pricing and procurement of medicines
- ✗ High counterfeiting and software piracy rates—56% in latest BSA estimates

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 3.00 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.25 |
| 2. Patentability requirements | 0.50 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.50 | 14. Digital rights management (DRM) legislation | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.75 |
| 8. Patent opposition | 0.50 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 2.49 | |
| 9. Copyright (and related rights) term of protection | 0.74 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 20. Industrial Design Term of Protection | 1.00 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 0.25 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.75 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 1.10 | | |
| 22. Protection of trade secrets, civil remedies | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.50 |
| 24. Regulatory data protection (RDP) term | 0.60 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.75 |
| Category 5: Commercialization of IP Assets | 3.50 | Category 7: Systemic Efficiency | 2.00 |
| 25. Barriers to market access | 0.25 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.50 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.50 | 39. Consultation with stakeholders during IP policy formation | 0.50 |
| 27. Registration and disclosure requirements of licensing deals | 0.50 | 40. Educational campaigns and awareness raising | 0.75 |
| 28. Direct Government intervention in setting licensing terms | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.25 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 2.00 |
| 30. Tax incentives for the creation of IP assets | 1.00 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 2.75 | 43. Singapore Treaty on the Law of Trademarks | 0.50 |
| 31. Physical counterfeiting rates | 0.31 | 44. Patent Law Treaty | 0.50 |
| 32. Digital/online piracy rates | 0.44 | 45. 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 |
| 33. Civil and procedural remedies | 0.25 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.25 | | |
| TOTAL 21.09 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Turkey's overall score has decreased from 47.15% (18.86 out of 40) in the 6th edition to 46.87% (21.09 out of 45) in the 7th edition. This was driven by a mixed performance on the new indicators added to the Index.

Patents, Related Rights, and Limitations

7. Membership in Patent Prosecution Highways: After the Turkish Patent Institute (Türk Patent) launched its first PPH collaboration with the Spanish Patent and Trademark Office in 2017, a PPH pilot program with the JPO started in April 2018, with no agreed end date. PPH initiatives and increased cooperation between IP offices are one of the most tangible ways in which the administration and functioning of the international IP system can be improved and harmonized to help inventors and rights holders around the world.

Commercialization of IP Assets and Market Access

30. Tax incentives for the creation of IP assets: Turkey has in place a number of generous R&D incentive

programs and tax benefits. There is a general R&D super deduction for qualifying expenditure depending on the size of the company; smaller companies qualify for the larger deduction. There is also an 80%–95% reduced rate of tax withholding for personnel involved in R&D activity. In addition, government grants are not considered as income. There are also increased incentives within Turkish Technology Development Zones, including all profits derived from qualifying R&D expenditure being exempt from income and corporation tax until 2023. Additional tax incentives are in place for staff working within qualifying entities in so-called Development Zones. Last, Turkey offers a patent box-style incentive reducing by 50% tax liability on any income derived from qualifying inventions and software.

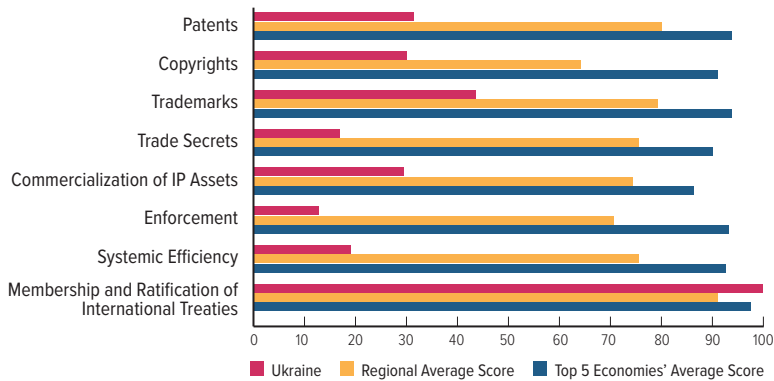
Systemic Efficiency

41. Targeted incentives for the creation and use of IP assets for SMEs: Turkey does not offer a huge range of incentives for SMEs. There are no reduced fees or expedited review mechanisms specific to SMEs. In September 2018, Türk Patent decreased most of its office fees for patents, trademarks, and designs by 25% as part

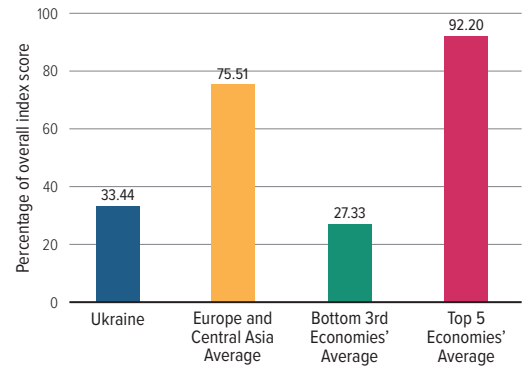
of a support package launched by the Ministry of Industry and Technology to boost R&D and technology development of local business. But these reductions were general and not SME-specific. Technical assistance and support services are provided by the Small and Medium Enterprises Development Organization, which provides grants for IP costs, in addition to coordinating technology development centers and virtual incubators. As reported in its latest activity report, since 2007, Türk Patent also runs an SME-specific support program (the Hezarfen program) to ensure effective use of IP rights by SMEs.

UKRAINE RANK 39/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Efforts to align IP legislation to EU standards and implement DCFTA
- ✓ New first-instance court for IP matters (the High Court) set up in 2017—should help improve consistency and expertise within judiciary
- ✓ Contracting party to all international IP treaties included in the Index

KEY AREAS OF WEAKNESS

- ✗ Major gaps across all categories of the Index—both a lack of relevant IP laws and weak enforcement
- ✗ High rates of counterfeiting and piracy, among the top worldwide
- ✗ 80% software piracy rate in BSA latest estimates
- ✗ High rates of physical counterfeiting—key transit point for counterfeiting entering EU
- ✗ Gaps in customs activities, notably lack of effective procedures for destruction of counterfeits

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 2.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.25 |
| 2. Patentability requirements | 0.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.50 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.00 | 14. Digital rights management (DRM) legislation | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| 8. Patent opposition | 0.25 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.25 |
| Category 2: Copyrights, Related Rights, and Limitations | | 2.08 | |
| 9. Copyright (and related rights) term of protection | 0.58 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 20. Industrial Design Term of Protection | 0.60 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 0.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.25 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 0.50 | |
| 22. Protection of trade secrets, civil remedies | 0.00 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.25 |
| 23. Protection of trade secrets, criminal standards | 0.00 | 36. Effective border measures | 0.00 |
| 24. Regulatory data protection (RDP) term | 0.50 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.00 |
| Category 5: Commercialization of IP Assets | | 1.75 | |
| 25. Barriers to market access | 0.25 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.25 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.25 |
| 27. Registration and disclosure requirements of licensing deals | 0.50 | 39. Consultation with stakeholders during IP policy formation | 0.25 |
| 28. Direct Government intervention in setting licensing terms | 0.25 | 40. Educational campaigns and awareness raising | 0.25 |
| 29. IP as an economic asset | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.00 |
| 30. Tax incentives for the creation of IP assets | 0.00 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 4.00 | |
| 31. Physical counterfeiting rates | 0.17 | 42. WIPO Internet Treaties | 1.00 |
| 32. Digital/online piracy rates | 0.20 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 33. Civil and procedural remedies | 0.25 | 44. Patent Law Treaty | 1.00 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.00 | 45. 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 15.05 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Ukraine's overall score has decreased from 35.70% (14.28 out of 40) in the 6th edition to 33.44% (15.05 out of 45) in the 7th edition. This was driven by weak performance on the new indicators added to the Index.

Commercialization of IP Assets and Market Access

26. Barriers to technology transfer: Ukrainian academic and publicly funded research rarely reaches the commercialization stage due to both structural and legislative barriers. Traditionally, the focus of academia has been on basic research, with limited incentives to move toward innovation-related activities. As a result, links with the private sector are weak and demand for IP produced by universities and PROs from industry is generally limited. From a formal legal perspective, IP ownership provisions are scattered across various laws and remain unclear and ambiguous. This hinders the creation of IP and its effective use and transfer. To tackle these shortcomings, the government has launched initiatives such as the

Innovations Development Platform, an agency on incubations of innovative industrial projects. In 2017, it also created the National Council for Science and Technology Development, an advisory body composed of representatives from the scientific community and the private sector. The same year, Ukraine's first innovation park (UNIT.City) was launched in Kiev.

Enforcement

33. Civil and procedural remedies: In 2017, a first-instance court for IP matters (the High Court) was announced. The court will be located in Kiev and will consist of 21 judges. It will have an appeal chamber, and the Supreme Court of Ukraine will be the highest possible level of appeal. The High Court's jurisdiction will reportedly be limited to civil disputes and exclude IP criminal cases. The decision to set up a specialized IP court is a welcome step in improving judicial enforcement in Ukraine. It will hopefully raise the expertise of judges and overall levels of judicial consistency. At present, court decisions are often contradictory and based on a case-by-case approach, resulting in great uncertainties for rights holders.

35. Criminal standards including minimum imprisonment and minimum fines; and 36. Effective border measures:

In 2016, the provision on criminal sanctions for trademark infringement, including imprisonment, confiscation, and destruction of counterfeit goods, was repealed from the Criminal Code, leaving fines as the only available remedy. Fines currently range from UAH17,000 to UAH255,000 (about USD600–9,000). In the 2 biggest seizures during the first half of 2018, both offenders were fined the minimum possible amount. The cases concerned seizures of 4,400 pairs of shoes worth over an estimated 1 million UAH (about USD36,000) and 417 pairs of headphones worth UAH104,000 (USD3,700). Although the number of seizures has reportedly increased since 2015, Ukrainian customs authorities' (State Fiscal Service) powers remain limited. Ukrainian customs have no authority over in-transit goods, the nature of suspected goods has to be confirmed by independent experts without involvement of the trademark owners, storage capacities are inadequate, and destruction procedures are complex. Ongoing draft amendments to the Customs Code (Law N. 4614) intended to increase compliance with the EU *aquis* would bring in only few improvements, such as provisions on destruction of small shipments. The weak legal environment and poor application of existing laws mean that Ukraine remains a key transit point for the global trade in counterfeit goods.

UNITED ARAB EMIRATES RANK 32/50



Strengths and Weaknesses

| KEY AREAS OF STRENGTH | KEY AREAS OF WEAKNESS |
|--|--|
| <ul style="list-style-type: none"> ✓ Basic IP protections in place ✓ Enhanced anticounterfeiting efforts, including criminal penalties ✓ Awareness raising and capacity building efforts on importance and value of IP rights | <ul style="list-style-type: none"> ✗ Deep uncertainty over protection for biopharmaceutical patents, as no action has been taken on the 2017 approval of two generic versions of a pharmaceutical product still on-patent ✗ Significant holes in copyright regime—limited online-specific legal framework and enforcement capacity ✗ High levels of physical counterfeiting—UAE physical markets are listed in USTR's <i>Out-of-Cycle Review of Notorious Markets</i> ✗ Gaps in customs measures and civil remedies for infringement |

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 3.25 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.50 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.50 |
| 3. Patentability of computer-implemented inventions (CIs) | 0.50 | 14. Digital rights management (DRM) legislation | 0.50 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 3.40 | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 0.25 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.50 |
| Category 2: Copyrights, Related Rights, and Limitations | | 2.28 | |
| 9. Copyright (and related rights) term of protection | 0.53 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.75 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.50 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.25 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 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 | 0.50 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 1.00 | | |
| 22. Protection of trade secrets, civil remedies | 0.50 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.50 |
| 23. Protection of trade secrets, criminal standards | 0.50 | 36. Effective border measures | 0.25 |
| 24. Regulatory data protection (RDP) term | 0.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.00 |
| Category 5: Commercialization of IP Assets | 2.75 | Category 7: Systemic Efficiency | 2.00 |
| 25. Barriers to market access | 0.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.25 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.50 | 39. Consultation with stakeholders during IP policy formation | 0.50 |
| 27. Registration and disclosure requirements of licensing deals | 0.25 | 40. Educational campaigns and awareness raising | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 0.50 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.25 |
| 29. IP as an economic asset | 0.50 | Category 8: Membership and Ratification of International Treaties | 1.00 |
| 30. Tax incentives for the creation of IP assets | 1.00 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 2.54 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 31. Physical counterfeiting rates | 0.36 | 44. Patent Law Treaty | 0.00 |
| 32. Digital/online piracy rates | 0.68 | 45. 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 |
| 33. Civil and procedural remedies | 0.75 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.00 | | |
| TOTAL 18.22 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

The UAE's overall score has decreased slightly from 40.68% (16.27 out of 40) in the 6th edition to 40.49% (18.22 out of 45) in the 7th edition. This was driven primarily by a score drop on indicator 4.

Patents, Related Rights, and Limitations

4. Pharmaceutical-related patent enforcement and

resolution mechanism: 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. In 2017, the UAE government approved for marketing two generic versions of a pharmaceutical product still on-patent in the country of origin. No official action was taken to rectify this approval in 2018. Consequently, there is deep uncertainty over the

provision of basic patent protection in the UAE. As a result, the score on this indicator has been reduced to 0.

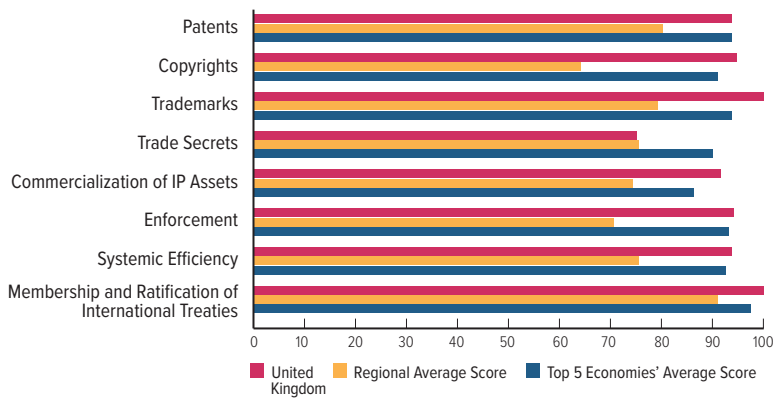
Commercialization of IP Assets and Market Access

25. Barriers to market access: In September 2018, the government issued a new Foreign Direct Investment Law through federal Legislative Decree No. 19 of 2018. The law grants foreign investors an exemption from the requirement of having an Emirati partner holding a minimum of 51% of the company's shares, established by the Commercial Companies Law. It includes a negative list of sectors excluded from its scope (e.g., banking, insurance, post, telecommunication and other audio-visual services, roads and transportation, and publishing) and foresees the publication of a positive list. The exemption will not be granted automatically but will require a license from the Dubai Investment Development Agency, including for sectors established on the positive list. There will also be a list of sectors opened for up to 100% ownership from foreigners outside free trade zones. An FDI Committee will be created and charged with proposing the positive list and additions to the negative list. Projects that fall in neither the

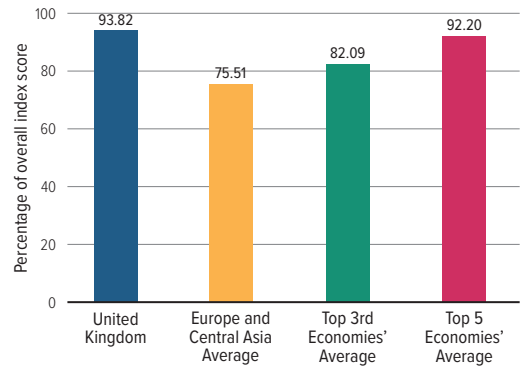
positive nor negative list will require approval by the Council of Ministers. Companies licensed for foreign investment will be included in a dedicated register within the Ministry of Economy, and will have to comply with certain obligations, such as local hiring requirements. The current regulatory regime contains a number of barriers to ownership and licensing, which together have held back the UAE's efforts toward building a knowledge-intensive economy. While overall this new FDI law is a positive development its net impact will depend on the upcoming resolutions by the Council of Ministers, which will define the obligations and the functioning of the FDI Committee. Consequently, the score for this indicator remains unchanged. The Index will monitor these developments in 2019.

UNITED KINGDOM RANK 2/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Strong and sophisticated national IP environment
- ✓ UK 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
- ✗ European 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 biopharma industry
- ✗ Limited criminal sanctions available for the theft and misappropriation of trade secrets

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 6.00 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 1.00 |
| 2. Patentability requirements | 1.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 1.00 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 1.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 1.00 |
| 8. Patent opposition | 1.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 1.00 |
| Category 2: Copyrights, Related Rights, and Limitations | | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 1.00 |
| 9. Copyright (and related rights) term of protection | 0.63 | 20. Industrial Design Term of Protection | 1.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 1.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 1.00 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 1.00 | | |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 2.25 | | |
| 22. Protection of trade secrets, civil remedies | 1.00 | 35. Criminal standards including minimum imprisonment and minimum fines | 1.00 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 1.00 |
| 24. Regulatory data protection (RDP) term | 1.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 1.00 |
| Category 5: Commercialization of IP Assets | 5.50 | Category 7: Systemic Efficiency | 3.75 |
| 25. Barriers to market access | 1.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 1.00 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 1.00 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.75 | 40. Educational campaigns and awareness raising | 1.00 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 29. IP as an economic asset | 0.75 | Category 8: Membership and Ratification of International Treaties | 4.00 |
| 30. Tax incentives for the creation of IP assets | 1.00 | 42. WIPO Internet Treaties | 1.00 |
| Category 6: Enforcement | 6.59 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| 31. Physical counterfeiting rates | 0.80 | 44. Patent Law Treaty | 1.00 |
| 32. Digital/online piracy rates | 0.79 | 45. 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 |
| 33. Civil and procedural remedies | 1.00 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 1.00 | | |
| TOTAL 42.22 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

The UK's overall score has decreased from 94.93% (37.97 out of 40) in the 6th edition to 93.82% (42.22 out of 45) in the 7th edition. This was driven by a weak performance on indicator 23.

Area of Note: Brexit

Following the June 2016 referendum to leave the EU, the British government triggered Article 50 of the Lisbon Treaty in early 2017. Britain and the EU have since been in negotiations over the future terms of their relationship. In late 2017, it was announced that a two-year transition period would follow the 2019 withdrawal deadline and that the EU and UK were continuing to negotiate the terms of their future trading relationship. On November 25, 2018, the British government and European Commission announced that a final agreement on the terms for the UK's withdrawal from the EU had been reached. Titled the *Agreement on the Withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the*

European Atomic Energy Community, it includes a separate chapter covering intellectual property. Title IV of Part 3, "Separation Provisions," Articles 54–61, provides much needed clarity on the future legal environment. For example, the *Agreement* clarifies that holders of European Union trademarks, registered designs, and Community plant variety rights will, without reexamination, be granted equivalent rights in the UK. At the time of research, there was still deep uncertainty over whether this agreement would be accepted and form the legal basis for the UK's withdrawal from the EU. In anticipation of the UK's withdrawal—with or without any agreement—the UK government has published a number of "guides" on policy changes following the UK's withdrawal. The UK Intellectual Property Office (UKIPO) has prepared a guide, *IP and BREXIT: The Facts*, on the IP environment and expected changes to UK law. To the extent possible, this guide seeks to provide some clarity both on which areas of UK IP law are likely to be affected by the withdrawal as well as how those laws will be impacted. Similar to the finalized *Agreement*, the guide seeks to reassure rights holders that on critical issues, such as the future legal status of EU trademarks and Registered Community Designs, "the

government aims to ensure continuity of protection and avoid the loss of those rights.” In other areas, there is a firm commitment to maintain the status quo. For example, on the issue of SPC protection for biopharmaceutical patents (discussed below), the guide states explicitly that the current UK SPC regime will remain in place after EU withdrawal. Similarly, the UK will remain a contracting party to the European Patent Convention, the EPO, and the Unified Patent Court. But in other areas, there is more uncertainty. For instance, with respect to copyright protection and border enforcement, the guide only affirms that current arrangements and laws will remain in place as long as the UK remains part of the EU. Less clarity is provided on future arrangements. The Index will continue to monitor the Brexit process and its ramifications for IP rights holders over the next year.

Patents, Related Rights, and Limitations

6. Patent term restoration for pharmaceutical products:

On May 28, 2018, the European Commission published its proposal to amend Regulation (EC) No. 469/2009 granting an SPC manufacturing exemption for export and stockpiling purposes to European generic and biosimilar manufacturers. As mentioned in previous editions of the Index, the Commission appears to have lost sight of the fact that IP incentives, including SPC protection, have been central to the success of Europe’s research-based biopharmaceutical industry. Many troubling assumptions underlie the Commission’s proposal. The proposal assumes that there is an actual market and demand for European generic manufacturer’s products. The markets that will be targeted by European generic manufacturers under an SPC exemption are markets that do not provide IP protection and exclusivity for products under SPC protection in the EU for which the SPC exemption would apply. 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. The Commission is relying on estimates of economic gains resulting from an SPC exemption. But the economic gains described by the Commission and other studies do not fully take into account the possibility that other economies may seek to emulate this IP carve-out in order to boost their own generic industries. Instead of

benefiting the European generics industry, it is much more likely that other economies will emulate the EU. This could result in a race toward the bottom in weakening global IP standards. The overall net effect of the SPC exemption may thus be a limited gain, if any, to the European generics industry while a weakening of the research-based industry through a direct loss of sales. In its guide, *IP and BREXIT: The Facts*, the UKIPO has stated that the current SPC regime in the UK would remain unchanged: “As far as the UK’s own SPC regime is concerned, our intention is to provide maximum certainty and clarity for businesses operating in this important area of innovation. We will do this by maintaining the current SPC legal framework in the UK as we leave the EU.”

Trade Secrets and the Protection of Confidential Information

23. Protection of trade secrets (criminal sanctions):

British law does not provide specific criminal provisions for the theft or misappropriation of trade secrets. Criminal sanctions can be found in other parts of the legal code, such as the Theft Act, Computer Misuse Act, Fraud Act, and Serious Crime Act. However, these are patchwork and contain inherent workarounds or limitations when applied in the context of trade secrets. For example, the Theft Act criminalizes the stealing of property, but relevant case law has established that intangible property (such as trade secrets) does not constitute property for the purposes of the Theft Act. There is also a requirement under the Theft Act to prove the permanent deprivation of property; copying a computer file containing a trade secret would not per se involve the removal of any real property. Similarly, criminal sanctions can be provided under the Fraud Act, including for “fraud by false misrepresentation; fraud by failing to disclose information; and fraud by abuse of position.” However, per definition, these acts are prosecutable only if they involve fraud. Criminal charges can also be brought under the Computer Misuse Act under which it is an offense to gain “unauthorized” access to information contained in a computer. The current lacuna in UK criminal law has been recognized by policymakers for the past 20 years. In 1997, the Law Commission (which conducted an in-depth review of trade secret protection in the UK) found, “at present the criminal law gives no specific protection to trade secrets. In

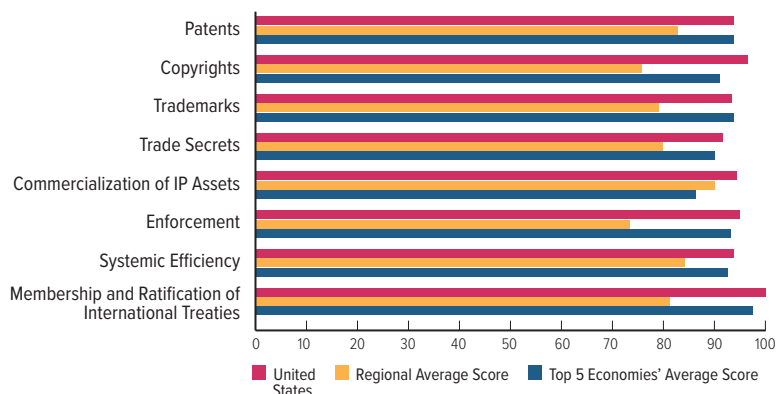
particular, trade secrets cannot, in law, be stolen: they do not constitute ‘property’ for the purpose of the Theft Act 1968” and recommended that “the unauthorised use or disclosure of a trade secret should, in certain circumstances, be an offence.” There is evidence that some prosecution does take place, but this has been under the Fraud Act and under the Serious Crimes Act.

Commercialization of IP Assets and Market Access

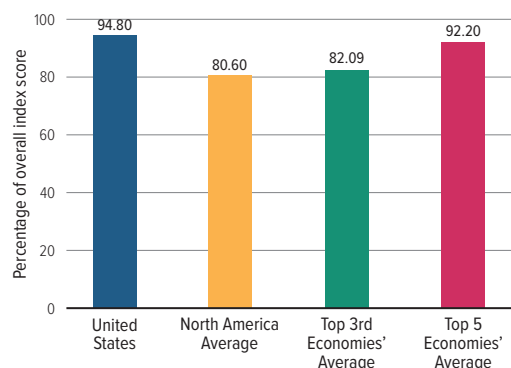
30. Tax incentives for the creation of IP assets: British tax law offers generous R&D tax incentives and a dedicated patent box scheme has been in place since 2013. R&D incentives are provided through a super deduction for qualifying expenditure specifically for small companies. Larger business entities are entitled to an R&D expenditure credit. The patent box scheme now provides an effective rate of 10% corporation tax on income generated by the underlying patent asset.

UNITED STATES RANK 1/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Global leader and standard setter for the protection and enforcement of IP rights
- ✓ USMCA sets new standard for IP protection internationally and potential model for future FTAs
- ✓ Sector-specific rights and protections in place across all categories of the Index
- ✓ 2018 reform efforts to patent opposition proceedings by the USPTO should provide a greater balance and address concerns over unpredictability and uncertainty

KEY AREAS OF WEAKNESS

- ✗ 2018 congressional proposal for compulsory licensing as a pharmaceutical cost containment policy
- ✗ Continued uncertainty over patentability for high-tech sectors
- ✗ Lack of a targeted legal basis for addressing online piracy in line with other global leaders

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 7.50 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 1.00 |
| 2. Patentability requirements | 0.75 | 13. Scope of limitations and exceptions to copyrights and related rights | 1.00 |
| 3. Patentability of computer-implemented inventions (CIIs) | 1.00 | 14. Digital rights management (DRM) legislation | 1.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 1.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 1.00 | 5.60 | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 1.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 0.75 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 1.00 |
| Category 2: Copyrights, Related Rights, and Limitations | | 6.75 | |
| 9. Copyright (and related rights) term of protection | 1.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 1.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 1.00 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 1.00 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 0.75 | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 2.75 | 35. Criminal standards including minimum imprisonment and minimum fines | 1.00 |
| 22. Protection of trade secrets, civil remedies | 1.00 | 36. Effective border measures | 1.00 |
| 23. Protection of trade secrets, criminal standards | 1.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 1.00 |
| 24. Regulatory data protection (RDP) term | 0.75 | Category 7: Systemic Efficiency | 3.75 |
| Category 5: Commercialization of IP Assets | 5.66 | 38. Inter-governmental coordination of IP rights enforcement efforts | 1.00 |
| 25. Barriers to market access | 1.00 | 39. Consultation with stakeholders during IP policy formation | 1.00 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 1.00 | 40. Educational campaigns and awareness raising | 1.00 |
| 27. Registration and disclosure requirements of licensing deals | 1.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.75 |
| 28. Direct Government intervention in setting licensing terms | 1.00 | Category 8: Membership and Ratification of International Treaties | 4.00 |
| 29. IP as an economic asset | 1.00 | 42. WIPO Internet Treaties | 1.00 |
| 30. Tax incentives for the creation of IP assets | 0.66 | 43. Singapore Treaty on the Law of Trademarks | 1.00 |
| Category 6: Enforcement | 6.65 | 44. Patent Law Treaty | 1.00 |
| 31. Physical counterfeiting rates | 0.80 | 45. 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 |
| 32. Digital/online piracy rates | 0.85 | | |
| 33. Civil and procedural remedies | 1.00 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 1.00 | | |
| TOTAL 42.66 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

The United States' overall score has decreased marginally from 94.95% (scoring 37.98 out of 40) in the 6th edition to 94.80% (scoring 42.66 out of 45) in the 7th edition. On the one hand, the U.S. saw its score increase on indicator 8 and performed strongly on the majority of new indicators added to the Index. On the other hand, the U.S. underperformed its average Index score on 2 of the new indicators added this year, indicators 30 and 41.

Patents, Related Rights, and Limitations

5. Legislative criteria and use of compulsory licensing of patented products and technologies:

In July 2018, Democratic Rep. Lloyd Doggett introduced bill H.R. 6505 *Medicare Negotiation and Competitive Licensing Act of 2018* to the House of Representatives. The bill proposes to provide the U.S. Secretary of Health and Human Services the power to directly negotiate the price of medicines purchased and covered under Medicare Part D. If such negotiations are deemed to be unsuccessful,

the proposed legislation also grants the secretary the power to allow the “use of any patent, clinical trial data, or other exclusivity granted by the Federal government” under a “competitive license.” In effect the bill would grant the United States government the power to override any granted form of exclusivity in the event the price of a given medicine was not to the government’s liking. The passing of the proposed bill or similar legislation would be a strange and unexpected policy departure for the U.S. Not only would such legislation undermine the basic idea of the protection and sanctity of property rights generally, but on a sector-specific level it would threaten the very foundation of America’s position as the undisputed global leader in biopharmaceutical innovation. Biopharmaceutical breakthroughs by American firms are improving health treatment for patients globally, providing a steady stream of new drugs and health technologies. Since 2000, American companies have developed more than 550 new medicines; roughly half of all drugs launched globally. American research-based biopharmaceutical firms spent an estimated USD58.8 billion in 2015 on R&D, more than 80% of which was spent domestically in the U.S. This leadership

in global biopharmaceutical research and manufacturing also translates into large economic dividends for Americans. Revenues generated by a new blockbuster drug are comparable to the export of 1 million cars. The sector also accounts for and supports 4.5 million jobs. With an average annual wage of more than USD117,000, jobs in the drugs and pharmaceuticals sector pay, on average, 85% more than the private sector average. The basic economics of the biopharmaceutical industry show how critical IP rights are to incentivizing and supporting the development of new medical technologies and products. In 1979, the total cost of developing and approving a new drug stood at USD138 million. Almost 25 years later, in 2003, this figure was estimated to have rocketed to USD802 million. Research from Tufts University in 2016 suggests that it costs USD2.6 billion to develop a new drug. On average, only 1–2 of every 10,000 synthesized, examined, and screened compounds in basic research will successfully pass through all stages of R&D and go on to become a marketable drug. Patents and other forms of exclusivity for biopharmaceuticals, such as regulatory data protection and special exclusivity incentives for the protection and production of orphan drugs, enable research-based companies to invest these vast sums in R&D and the discovery of new drugs, products, and therapies. American taxpayers and patients are concerned with the cost of prescription medicines and want their elected representatives to take appropriate action. However, the cost of drugs is a complex subject that does not lend itself to generalizing. It involves many different factors, such as health system infrastructure, health financing, and how the American health system itself is organized, financed, and accessed by patients. Within this cost equation the protection of IP plays a relatively small role. Instead of achieving the goal of lowering costs, proposals like Rep. Doggett's risk killing the proverbial goose and model of innovation that since the mid-1980s have been providing Americans—and patients around the world—with new and better health technologies and medicines. The passing of bill H.R. 6505 or similar legislation into law would result in a score decrease from 1 to 0 on this indicator. Notably, a federal inter-agency task force convened under the National Institute for Standards and Technology (NIST) released a December 2018 Draft Green Paper, "Unleashing American Innovation," (NIST Special Publication 1234), which stated

unambiguously that "[compulsory license] rights should not be used as a mechanism to control or regulate the market price of goods and services." The Index will continue to monitor these developments in 2019.

8. Patent opposition: In 2018, the U.S. Patent and Trademark Office (USPTO) introduced several significant changes to the administration of patent opposition proceedings under the Patent Trial and Appeal Board (PTAB). In April, USPTO Director Andrei Iancu stated that the reform of IPR proceedings was one of the agency's "highest priorities," and it was considering "how and when we institute proceedings, the standards we employ during the proceedings, and how we conduct the overall proceedings. The goal, with whatever action we take, is to increase predictability of appropriately-scoped claims." Following these remarks, important reforms at the USPTO were undertaken that collectively should improve the predictability of the review process. Specifically, these include (1) changing the patent claim construction standard used, moving away from the broadest reasonable interpretation (BRI) standard to the so-called Phillips standard, which is the claim construction standard used by federal courts since the mid-2000s; (2) a new Trial Practice Guide; and (3) Standard Operating Procedure (SOP) changes. Using the Phillips standard will align IPR proceedings with the same claim construction standards that are used in patent infringement proceedings at U.S. district courts. There will thus no longer be a discrepancy and difference in the claim construction standard used within the PTAB proceedings and that used in the judiciary. The new Trial Practice Guide provides greater clarity on the grounds on which a review may be initiated. And the changes to both SOP 1 and SOP 2 seek to streamline how judges are assigned, the composition of panels, and the way precedent-setting opinions are set. Specifically, SOP 2 sets up a Precedential Opinion Panel, headed by the USPTO director. SOP 2 states that this panel "will be used to establish binding agency authority concerning major policy or procedural issues, or other issues of exceptional importance in the limited situations where it is appropriate to create such binding agency authority through adjudication before the Board." These are meaningful reforms that go a considerable way to address concerns about unpredictability and uncertainty in the U.S.

patent opposition system. As a result of these changes, the score for this indicator has increased by 0.25. On the legislative front Senator Orrin Hatch introduced the Hatch-Waxman Integrity Act of 2018, a set of amendments to the Drug Price Competition and Patent Term Restoration Act (the Hatch-Waxman Act). The purpose of these amendments is to address the challenges that the biopharmaceutical sector has faced within the IPR proceedings. As Senator Hatch explained it, these amendments would “preserve Hatch-Waxman as the standard path for generic companies to challenge brand patents, while keeping IPR as an option in situations where other interests come into play.” The proposed law would require all drug applicants (innovators as well as follow-on manufacturers) to certify they have not “filed, or will file, a petition to institute an IPR or PGR challenge of any patent claiming the reference listed drug.” If enacted, this measure would improve predictability of patent opposition in the bio-pharmaceutical space.

Trade Secrets and the Protection of Confidential Information

23. Protection of trade secrets (criminal sanctions): U.S. law provides clear and strong criminal sanctions relating to the theft and misappropriation of trade secrets. The 1996 Economic Espionage Act (Chapter 90 of Title 18 of the U.S. Code, “Protection of Trade Secrets”) provides criminal sanctions for the theft and misappropriation of trade secrets. The law provides for prison terms of up to 10 years and fines up to USD5 million or 3 times the value of the stolen trade secret to the organization; these fines were strengthened by the 2016 Defend Trade Secrets Act. There is also strong evidence that federal prosecution of trade secret theft under the Economic Espionage Act has increased substantially under both the Obama and Trump administrations. Domestic legal analysis estimates that under the Obama administration prosecution of criminal violation of trade secret law grew by approximately 20%, from 7.2 cases per year in 1996–2009 to 8.6 cases per year in 2009–2016. Given increasing rates of global economic integration and the growth of both direct and indirect state-sponsored economic and industrial espionage, cases have become more focused on corporate malfeasance involving corporate defenders as well as foreign nationals. The growth in prosecution rates

seems to have held steady under the first half of the Trump administration’s first electoral term, with an estimated 9 new cases prosecuted in 2017.

Commercialization of IP Assets and Market Access

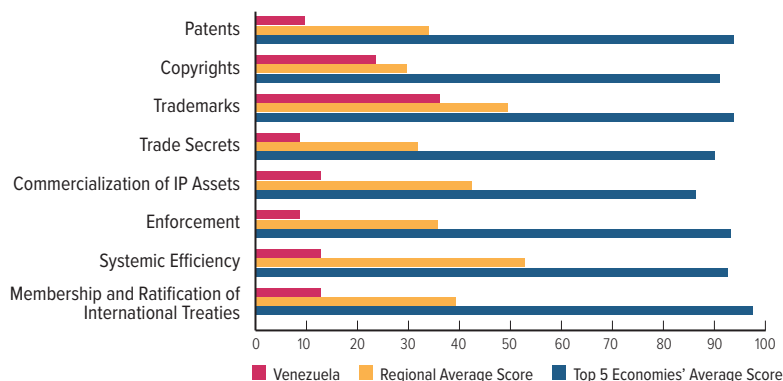
30. Tax incentives for the creation of IP assets: R&D tax incentives are provided at both the federal and state levels, but there is no IP-specific tax incentive, such as a patent box, in place. The federal Research and Experimentation Tax Credit allows companies to claim a tax credit of between 14% and 20% of qualifying amounts. After 30 years of uncertainties, during which time the credit lapsed 6 times and was extended 17 times, it was made permanent in December 2015 and expanded to cover R&D investments by small businesses. In addition, 39 U.S. states offer R&D tax credits at varying rates. For example, California offers a research credit of 15% of qualifying supplemental research activity conducted within the state, Maryland provides a credit of up to 13% of qualifying expenditure, and Massachusetts offers a credit of 10% on R&D expenses and 15% for donations to universities for basic research. Many states also offer additional incentives and tax credits such as seed capital tax credits, state venture capital investments, and state sales tax exemptions for R&D equipment.

Systemic Efficiency

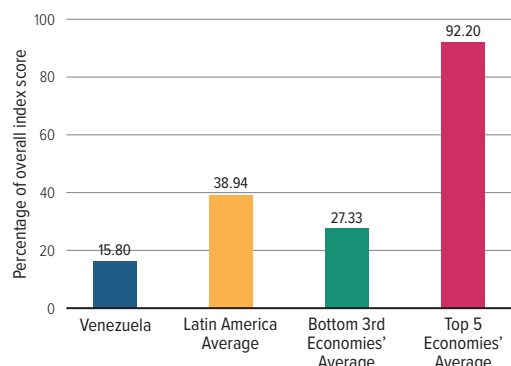
41. Targeted incentives for the creation and use of IP assets for SMEs: Reduced fees for patent applications are available for small and micro entities. The USPTO also provides a range of educational programs and direct technical assistance through, for example, the Inventors Assistance Center as well as numerous events and workshops targeting SMEs and micro entities. Expedited review is primarily offered under two USPTO programs: Accelerated Examination and Track One. Track One is open to all applicants. The Accelerated Examination program has eligibility rules and applications are treated on a case-by-case basis. Biotechnology applications filed by small entities qualify for Accelerated Examination, but there is no general qualification for SMEs.

VENEZUELA RANK 50/50

Category Scores



Overall Score in Comparison



Strengths and Weaknesses

KEY AREAS OF STRENGTH

- ✓ Basic copyright, trademark, and industrial design frameworks in place
- ✓ 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—insufficient penalties and administrative inaction
- ✗ Government interference and regulatory barriers to commercialization of IP assets

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 0.75 | |
| 1. Patent term of protection | 0.50 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.25 |
| 2. Patentability requirements | 0.00 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.25 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.25 | 14. Digital rights management (DRM) legislation | 0.00 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.00 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.25 |
| 8. Patent opposition | 0.00 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.25 |
| Category 2: Copyrights, Related Rights, and Limitations | | 1.63 | |
| 9. Copyright (and related rights) term of protection | 0.63 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.00 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 20. Industrial Design Term of Protection | 0.40 |
| 11. Expedient injunctive-style relief and disabling of infringing content online | 0.00 | 21. Legal measures available that provide necessary exclusive rights to redress unauthorized use of industrial design rights | 0.25 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------------|--|-------------|
| Category 4: Trade Secrets and Related Rights | 0.25 | | |
| 22. Protection of trade secrets, civil remedies | 0.25 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.00 |
| 23. Protection of trade secrets, criminal standards | 0.00 | 36. Effective border measures | 0.00 |
| 24. Regulatory data protection (RDP) term | 0.00 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.00 |
| Category 5: Commercialization of IP Assets | 0.75 | Category 7: Systemic Efficiency | 0.50 |
| 25. Barriers to market access | 0.00 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.00 |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.00 | 39. Consultation with stakeholders during IP policy formation | 0.00 |
| 27. Registration and disclosure requirements of licensing deals | 0.25 | 40. Educational campaigns and awareness raising | 0.50 |
| 28. Direct Government intervention in setting licensing terms | 0.00 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.00 |
| 29. IP as an economic asset | 0.50 | Category 8: Membership and Ratification of International Treaties | 0.50 |
| 30. Tax incentives for the creation of IP assets | 0.00 | 42. WIPO Internet Treaties | 0.50 |
| Category 6: Enforcement | 0.58 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 31. Physical counterfeiting rates | 0.22 | 44. Patent Law Treaty | 0.00 |
| 32. Digital/online piracy rates | 0.11 | 45. 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 |
| 33. Civil and procedural remedies | 0.25 | | |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.00 | | |
| TOTAL 7.11 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Venezuela's overall score has decreased from 17.12% (6.85 out of 40) in the 6th edition of the Index to 15.80% (7.11 out of 45) in the 7th edition. This reflects a weak performance on the new indicators added to the Index.

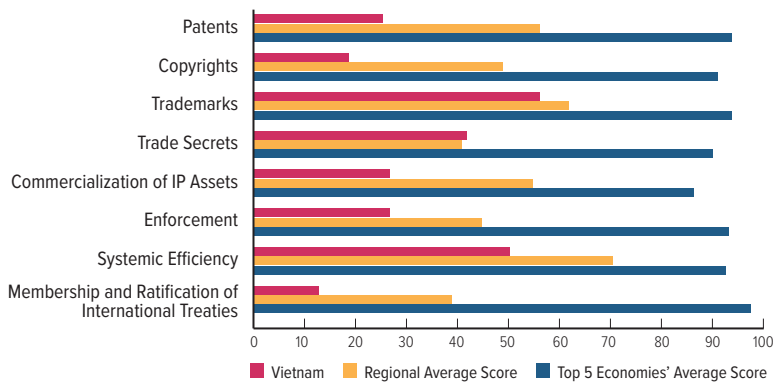
Area of note

Following the intensifying economic crisis and hyperinflation in Venezuela, the Autonomous Service of Intellectual Property (SAPI) has dramatically increased fees for most of its procedures, making IP protection *de facto* inaccessible to Venezuelan businesses, in particular SMEs. Venezuela's fees for the registration of most forms of IP are now reportedly the highest in Latin America. Although no patent has been issued since 2007, fees for patent applications have been set at approximately USD930, compared with less than USD30 in Colombia in 2017. SAPI also temporarily suspended the provision of its services for 2 months in 2018. During this time, Venezuelan rights holders were unable to access any IP-related services provided by the agency.

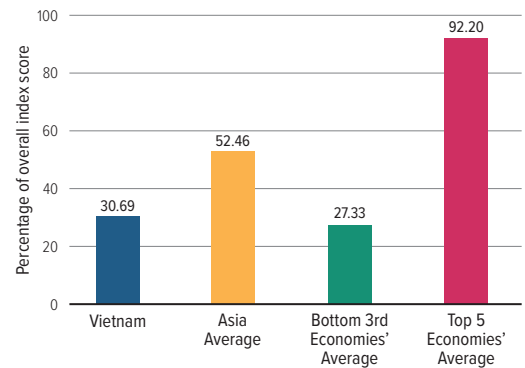
Commercialization of IP Assets and Market Access

25. Barriers to market access: In 2017, Venezuela passed a new FDI Law, the Constitutional Law of Productive Foreign Investment, which replaced the previous one from 2014 and strengthened the government's control over investment. While this law aims to promote foreign investment, generate technology transfer, and diversify the economy, its provisions add barriers and create more uncertainty for foreign investors. All aspects of potential investment, including the parties to the investment, its value, duration, and geographical scope, must be disclosed and approved by the government. Investments should not be lower than EUR800,000 (approximately USD935,000) and should last at least two years. Investors cannot make contributions to public or private institutions and civil associations without the government's consent, and should refrain from making any political comment in the media. The law allows full repatriation of dividends (previously capped at 80%) but maintains the possibility for the government to reduce the percentage to between 60% and 80% "in cases of force majeure or extraordinary economic situations." Last, investors not complying with the provisions of the law will be subject to fines of up to 3% of their investment and will see their contracts revoked.

Category Scores



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
- ✓ Growing integration into international IP platforms—e.g., through EU-Vietnam FTA
- ✓ Long-standing effort to coordinate IP enforcement

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
- ✗ High physical counterfeiting rates and rampant online infringement—BSA estimates a software piracy rate of 74%
- ✗ Enforcement generally poor; penalties insufficient in practice; administrative inaction

Indicator Scores

| INDICATOR | SCORE | INDICATOR | SCORE |
|--|-------|--|-------|
| Category 1: Patents, Related Rights, and Limitations | | 2.00 | |
| 1. Patent term of protection | 1.00 | 12. Availability of frameworks that promote cooperative action against online piracy | 0.00 |
| 2. Patentability requirements | 0.25 | 13. Scope of limitations and exceptions to copyrights and related rights | 0.00 |
| 3. Patentability of computer-implemented inventions (CIIs) | 0.00 | 14. Digital rights management (DRM) legislation | 0.25 |
| 4. Pharmaceutical-related patent enforcement and resolution mechanism | 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 |
| 5. Legislative criteria and active use of compulsory licensing of patented products and technologies | 0.00 | Category 3: Trademarks, Related Rights, and Limitations | |
| 6. Patent term restoration for pharmaceutical products | 0.00 | 3.35 | |
| 7. Membership in Patent Prosecution Highways (PPHs) | 0.50 | 16. Trademarks term of protection (renewal periods) | 1.00 |
| 8. Patent opposition | 0.25 | 17. Ability of trademark owners to protect their trademarks: requisites for protection | 0.25 |
| Category 2: Copyrights, Related Rights, and Limitations | | 1.28 | |
| 9. Copyright (and related rights) term of protection | 0.53 | 18. Legal measures available that provide necessary exclusive rights to redress unauthorized uses of trademarks | 0.50 |
| 10. Legal measures which provide necessary exclusive rights that prevent infringement of copyrights and related rights (including Web hosting, streaming, and linking) | 0.25 | 19. Availability of frameworks that promote cooperative private action against online sale of counterfeit goods | 0.50 |
| 11. Expeditious injunctive-style relief and disabling of infringing content online | 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 |

| INDICATOR | SCORE | INDICATOR | SCORE |
|---|-------|--|-------|
| Category 4: Trade Secrets and Related Rights | | 1.25 | |
| 22. Protection of trade secrets, civil remedies | 0.50 | 35. Criminal standards including minimum imprisonment and minimum fines | 0.50 |
| 23. Protection of trade secrets, criminal standards | 0.25 | 36. Effective border measures | 0.25 |
| 24. Regulatory data protection (RDP) term | 0.50 | 37. Transparency and public reporting by Customs authorities of trade-related IP infringement | 0.00 |
| Category 5: Commercialization of IP Assets | | 1.58 | |
| 25. Barriers to market access | 0.00 | Category 7: Systemic Efficiency | |
| 26. Existence of technology transfer framework with clear and defined IP provisions | 0.25 | 38. Inter-governmental coordination of IP rights enforcement efforts | 0.75 |
| 27. Registration and disclosure requirements of licensing deals | 0.25 | 39. Consultation with stakeholders during IP policy formation | 0.50 |
| 28. Direct Government intervention in setting licensing terms | 0.00 | 40. Educational campaigns and awareness raising | 0.75 |
| 29. IP as an economic asset | 0.75 | 41. Targeted incentives for the creation and use of IP assets for SMEs | 0.00 |
| 30. Tax incentives for the creation of IP assets | 0.33 | Category 8: Membership and Ratification of International Treaties | |
| Category 6: Enforcement | | 0.50 | |
| 31. Physical counterfeiting rates | 0.34 | 42. WIPO Internet Treaties | 0.00 |
| 32. Digital/online piracy rates | 0.26 | 43. Singapore Treaty on the Law of Trademarks | 0.00 |
| 33. Civil and procedural remedies | 0.25 | 44. Patent Law Treaty | 0.00 |
| 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by copyright infringement | 0.25 | 45. 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 13.81 | | | |

Spotlight on the National IP Environment

Past Editions versus Current Scores

Vietnam's overall score has decreased from 32.97% (13.19 out of 40) in the 6th edition to 30.69% (13.81 out of 45) in the 7th edition. This was driven by a weak performance on the new indicators added to the Index.

Commercialization of IP Assets and Market Access

26. Barriers to technology transfer; 27. Registration and disclosure requirements of licensing deals; and 28. Direct government intervention in setting licensing terms: The licensing and technology transfer environment in Vietnam is highly challenging, with the Vietnamese government regulating all aspects of technology transfer and licensing. A new Law on Technology Transfer introduced in June 2017 aims to boost science and technology efforts, encourage the adoption of the latest advances from abroad, and prevent the import of outdated technologies. The law seeks to address barriers faced in the commercialization of scientific research and technological development. However, as a whole, the law imposes new barriers and

does little to eliminate existing challenges facing licensors. For example, the law makes registration of technology transfer contracts compulsory and restricts the transfer of technology for treating products using biotechnologies, and technology for propagation and/or cultivation of new plants/animals that has not been tested. These restrictions and requirements are unlikely to help Vietnam achieve its goals of achieving more innovation and stronger economic growth. In terms of foreign licensing contracts, the registration of a technology transfer contract is mandatory for technology coming into Vietnam from a foreign country. This applies also to domestic tech transfer using state funds. Governmental Decree 76/2018/ND-CP implementing the new technology transfer law creates lists of technologies that are encouraged, restricted, or prohibited for transfer to Vietnam. Restricted technologies, for which prior evaluation and agreement by the authorities are needed, include technologies that are not widely used in industrialized countries and technologies for creating products using genetic modifications. Prices of transferred technologies must be audited at the request of the tax authorities. Last, the decree also makes it mandatory to

record with the Ministry of Science and Technology any tech transfer agreement (not only those for restricted technologies) involving foreign entities or capital. With respect to registration requirements, IP license agreements must be recorded with the National Office of Intellectual Property of Vietnam to be enforceable against third parties. All registration requests are required to be accompanied by certified copies of the signed contractual agreement translated into Vietnamese. The recordal process takes about two months, but can reach three to six months. In addition to a lengthy procedure, licensing contracts have to comply with strict rules on dividend payments and limited contract duration.

APPENDIX: METHODOLOGY, SOURCES, AND INDICATORS EXPLAINED

The Index consists of 45 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 the Protection of Confidential Information;
- v) Commercialization of IP Assets and Market Access
- 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.

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 45. 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. to orphan works.⁵⁹ 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. The use of mixed indicators provides 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 a 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 in 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 levels. 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 31 and 32 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.⁶⁰

Up until its 4th 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);⁶¹ and
- Software piracy rates compiled by the Business Software Alliance (BSA) (2018 being the latest published survey).

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 measure has been developed by the U.S. Chamber of Commerce and Pugatch Consilium to provide a new global measure of physical trade-related counterfeiting. This measure of physical counterfeiting is also being used for this edition of the Index and provides the basis for the score on indicator 31.

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 GIPC and U.S. Chamber of Commerce's 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 three 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 pre-established damages and/or mechanisms for determining the amount of damages generated by infringement;
- Criminal sanctions 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 was increased to 50% of the score for indicator 31.

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. 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 31.

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 32; 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 32 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 nongovernmental organizations (NGOs) 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.

We welcome these submissions and endeavor 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 require—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.⁶² 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 and/or administrative 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 a relevant mechanism and its application/enforcement. If no mechanism is in place, the maximum score that can be achieved is 0.5 and is based on the extent to which *de facto* practices (such as expeditious preliminary injunctive relief) 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 indicator 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 unduly delay the granting of a patent (in contrast to a right of opposition before the patent is granted) and ensures fair, transparent, and expeditious 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).⁶³ 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. Protection of well-known marks –

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.⁶⁴

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 the Protection of Confidential Information

The indicators in this category relate to trade secrets, related rights and limitations, and the protection of confidential information.

22. Protection of trade secrets (civil remedies) – 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. This is a mixed indicator.

23. Protection of trade secrets (criminal sanctions) – Measured by the existence of (1) legislation that provides criminal sanctions for the misappropriation, improper acquisition, use, or disclosure of trade secrets or confidential business information and (2) the application of this legislation and effective access to these remedies. This is a mixed indicator.

24. 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.⁶⁵ This is a numerical indicator.

Category 5: Commercialization of IP Assets and Market Access

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.

25. Barriers to market access – Measured by 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.

26. Barriers to technology transfer – Measured by the extent to which laws and regulations or *de facto* practices act as barriers to technology transfer and commercialization activities of publicly funded and supported research. This is a mixed indicator.

27. Registration and disclosure requirements of licensing deals – Measured by the extent to which licensing agreements must be registered and/or disclosed with relevant authorities to carry legal effect. This is a mixed indicator.

28. Direct government intervention in setting licensing terms – Measured by the extent to which relevant government authorities directly intervene and set licensing terms between licensee and licensor.⁶⁶ This can

be done through, for example, governmental preapproval for any licensing agreement between two parties as well as government intervention in the setting of licensing terms, including royalty rates. This is a mixed indicator.

29. 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.

30. Tax incentives for the creation of IP assets – Measured by the extent to which governments provide tax incentives for the creation and use of IP assets. This indicator consists of three layers corresponding to an equal share of the available score:

- 1. Layer 1** – economies offer general tax incentives for the creation of IP assets through, for example, general R&D incentives and/or tax credits.
- 2. Layer 2** – incentives are targeted specifically at the creation of IP through, for example, innovation and patent boxes.
- 3. Layer 3** – the extent to which the above described incentives are not hampered by onerous localization and/or administrative requirements linked to the availability and use of the tax incentive or mechanism.

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, the authority of customs officials to carry out border controls and inspections, and the transparency of customs authorities.

- 31. Counterfeiting/piracy 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.
- 32. Software piracy rates** – Measured by rates of software piracy. This is a numerical indicator.
- 33. 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.
- 34. Pre-established damages and/or mechanisms for determining the amount of damages generated by infringement** – This is a mixed indicator.
- 35. 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). This is a mixed indicator.
- 36. Effective border measures** – Measured by the extent to which border guards have the *ex officio* authority to seize suspected counterfeit and pirated goods, including goods in transit,

without complaint from the rights holder. This is a mixed indicator.

37. 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.

- 38. 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 cross-governmental coordination to national IP enforcement efforts. This is a mixed indicator.
- 39. 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.
- 40. Educational campaigns and awareness raising** – Measured by the extent to which national governments engage in educational campaigns and awareness raising on the positive socio-economic impact of IP rights and the negative impact the infringement

of these rights has on creators, innovators, and the national economy. The indicator is also measured by the extent to which these campaigns and awareness-raising efforts (if in place) are systematic and sustained efforts. This is a mixed indicator.

41. Targeted incentives for the creation and use of IP assets for SMEs – Measured by the extent to which a given economy’s national IP system provides special incentives for SMEs for the creation, registration, and use of IP assets. Examples of such incentives include fast-track registration procedures, reduced filing fees, and technical assistance targeting SMEs. 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 42–44 are measured using WIPO as a source. The following treaties each make up one indicator:

42. 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.

43. Singapore Treaty on the Law of Trademarks – This is a mixed indicator.

44. Patent Law Treaty – This is a mixed indicator.

45. At least one post-TRIPS free trade agreement with substantive IP provisions and chapters in line with international best practices as captured in modern post-TRIPS U.S. and EU FTAs – This is a mixed indicator.

NOTES

- 1 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 (2018), "Country and Lending Groups": <http://data.worldbank.org/about/country-and-lending-groups>
- 2 European Commission (2017), "The 2017 EU Industrial R&D Investment Scoreboard," p. 54.
- 3 Ibid.
- 4 JA DiMasi et al (2003), "The Price of Innovation: New Estimates of Drug Development Costs." *Journal of Health Economics* 22.2: 151–185.
- 5 D Mestre-Ferrandiz et al (2012), *The R&D Cost of a New Medicine*. London: Office of Health Economics, p. v.
- 6 JA DiMasi, HG Grabowski, & RW Hansen (May 2016), "Innovation in the Biopharmaceutical Industry: New Estimates of R&D Costs," *Journal of Health Economics* 47: 20–33.
- 7 M Pugatch et al (2012), *Taking Stock: How Global Biotechnology Benefits from Intellectual Property Rights, the contribution of IPRs to the Biotechnology Ecosystem and Economic Growth in Developed and Emerging Economies: Examining the Literature and Evidence*.
- 8 Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Regulation (EC) No 469/2009 concerning the supplementary protection certificate for medicinal products, COM/2018/317 final - 2018/0161 (COD).
- 9 European Commission (May 31, 2018), "Supplementary Protection Certificate for Medicinal Products: Frequently Asked Questions (FAQs)."
- 10 P Stevens (September 17, 2017), "Saudi Missteps on Intellectual Property Will Hold Back Its Economy," *The Hill*, <http://thehill.com/opinion/international/351074-saudis-missteps-on-intellectual-property-will-hold-back-its-economy>
- 11 Ibid.
- 12 Health Malaysia (September 20, 2017), "Press Statement Minister of Health 20th September 2017 – Implementation of the Rights of Government for Sofosbuvir Tablet to Increase Access for Hepatitis C Treatment in Malaysia," <https://kpkesehatan.com/2017/09/20/press-statement-minister-of-health-20th-september-2017-implementation-of-the-rights-of-government-for-sofosbuvir-tablet-to-increase-access-for-hepatitis-c-treatment-in-malaysia/>
- 13 *The Star* (September 5, 2017), "US Firm Expands Hepatitis C Generic Licensing Agreement to Malaysia," <https://www.thestar.com.my/news/nation/2017/09/05/affordable-cure-in-the-works-us-firm-expands-hepatitis-c-generic-licensing-agreement-to-malaysia/>
- 14 Alessandri Legal (March 15, 2018), "Chile Discusses the Use of Compulsory Licenses for the Exploitation of a Patent," <http://www.alessandri.legal/en/attorneys-at-law/chile-discusses-the-use-of-non-voluntary-licenses-for-the-exploitation-of-a-patent/>
- 15 Text available at https://www.keionline.org/wp-content/uploads/2018/03/9March2018-MoH-Chile_10032018_164316.pdf

- 16 E Silverman/StatNews (May 25, 2017), “Peruvian Lawmakers Seek a Compulsory License for a Bristol HIV Drug,” <https://www.statnews.com/pharmalot/2017/05/26/peru-compulsory-license-bristol-drug/>; AIS Peru (May 25, 2017), “Peru’s Congressional Health Commission Declares Atazanavir of Public Interest,” <http://aisperu.org.pe/documentos/17-nota-de-prensa-declaran-atazanavir-de-interes-publico-ingles/file>
- 17 I Hussain (2012), “NAFTA and Intellectual Property Rights.” In: *Reevaluating NAFTA*. New York: Palgrave Macmillan, p. 83.
- 18 MP Pugatch (2004), “The International Political Economy of Intellectual Property Rights,” pp. 129, 131; International Centre for Trade and Sustainable Development, World Health Organization UNCTAD (2006), *Guidelines for the Examination of Pharmaceutical Patents: Developing a Public Health Perspective – A Working Paper*, p. vii.
- 19 See: U.S. Chamber of Commerce, Global Intellectual Property Center (February 2017), *U.S. Chamber International IP Index: The Roots of Innovation*, Fifth Edition, pp. 12–16.
- 20 World Bank Data Bank, Trade, Merchandise exports (current USD).
- 21 Ibid.
- 22 FCC (August 1998), *Trends in the U.S. International Telecommunications Industry*, Industry Analysis Division, Common Carrier Bureau Federal Communications Commission
- 23 K Schwab (December 12, 2015), “The Fourth Industrial Revolution, What It Means and How to Respond,” *Foreign Affairs*, Council of Foreign Relations.
- 24 Ibid.
- 25 The Driver of Production pillar within the Readiness for the Future of Production Index comprises 59 indicators within 11 subpillars nested under six key drivers: Technology & Innovation, Human Capital, Global Trade & Investment, Institutional Framework, Sustainable Resources, and Demand Environment. See: World Economic Forum, *Readiness for the Future of Production Report 2018*, pp. 5–9.
- 26 The Technology & Innovation subpillar within the Readiness for the Future of Production Index measures economies’ capacity for innovation and utilization of new technologies in the value chains by gauging ICT availability and usage, digital security levels, R&D spending, and innovative outputs as well as availability of venture capital and Foreign Direct Investment in innovation. See: World Economic Forum, *Readiness for the Future of Production Report 2018*, p. 21.
- 27 The Global Trade & Investment subpillar within the Readiness for the Future of Production Index measures economies’ trade balance and infrastructure, logistic performance, availability of financial resources for the private sector, and volume of investments. See: World Economic Forum, *Readiness for the Future of Production Report 2018*, pp. 46–47.
- 28 See, for example, R Florida (May 2002), “The Rise of the Creative Class,” *Washington Monthly*. For a full discussion of this literature, see A Markusen et al (2008), “Defining the Creative Economy: Industry and Occupational Approaches,” *Economic Development Quarterly*, 22; 24.
- 29 Ibid.
- 30 P Higgs et al (2008), *Beyond the Creative Industries: Mapping the Creative Economy in the United Kingdom*. Nesta, p. 22.
- 31 United Nations (2008), *Creative Economy Report 2008: The Challenge of Assessing the Creative Economy: Towards Informed Policy making*. Geneva: UNCTAD and United Nations Development Programme.

- 32 United Nations (2010), *Creative Economy Report 2010: Creative Economy: A Feasible Development Option*. Geneva: UNCTAD and United Nations Development Programme.
- 33 United Nations (2016), *Creative Economy Outlook and Country Profiles: Trends in International Trade in Creative Industries*. Geneva: UNCTAD.
- 34 WIPO (2003), *Guide on Surveying the Economic Contribution of the Copyright-Based Industries*.
- 35 United Nations (2008), foreword.
- 36 WIPO (2003), p. 2.
- 37 WIPO (2014), *WIPO Studies on the Economic Contribution of the Copyright Industries, Overview 2014*, summary table, p. 29, Annex 1.
- 38 UNCTAD databank.
- 39 UNCTAD (2016), p. 4.
- 40 UNCTAD databank, Trade in creative goods, China, 2012.
- 41 UNCTAD (2010), p. 2.
- 42 Ibid.
- 43 UNCTAD (2016). Pid figure between 0-1.and IPRstices other BRICS the enforcement of copyrights and the ability of rights holders to collect roy
- 44 UNCTAD Statistics, Values and shares of creative goods, exports, annual, 2002–2011. See also UNCTAD (2013)
- 45 Ibid.
- 46 Creative output is measured by the score of the Creative Outputs pillar of the Global Innovation Index, Innovative Output sub-index, which captures outputs such as exports of creative services, entertainment, media and ICT spending, and local creation of webpages and audiovisual content. Source: WIPO/ Institut Européen d'Administration des Affaires INSEAD/Cornell, Global Innovation Index 2018. Copyright-related indicators consist of indicators that fall under the Copyright category of the GIPC Index, as well as those indicators in Commercialization of IP Assets, Enforcement, and International Treaties categories that are relevant to copyrights (specifically 9–15, 25, 27–28, 31–37, 42, and 45).
- 47 Creative content–related indicators consist of indicators that fall under the Copyright category, as well as relevant indicators in Trade Secrets, Commercialization of IP Assets, Enforcement, and International Treaties (specifically 9–14, 22–23, 25, 27–28, 31, 33–37, 42, and 45).
- 48 The availability of licensed online music services is measured by the number of online licensed music services per country that offer music as a download, stream, or ringtone, based on information from local industry groups that is compiled by the International Federation of the Phonographic Industry. Source: Pro-Music.org (2017).
- 49 TUBITAK, p. 32, http://tubitak.gov.tr/sites/default/files/gelismelere_iliskin_degerlendirmeler_1.pdf
- 50 ASEANup, “Malaysia’s Economic Plan 2016-2020,” <https://aseanup.com/malaysia-economic-plan-2016-2020/>; Malaysian Government Vision 2020, <http://www.isis.org.my/attachments/Vision%202020%20complete.pdf>

- 51 Colombian Government, “Where We Want to Get: Vision 2032 and Main Strategies,” <http://www.colombiacompetitiva.gov.co/prensa/informes/VISION-2032-CPC.pdf>
- 52 Finep, A Empresa, http://www.finep.gov.br/pagina.asp?pag=institucional_empresa
- 53 Phys.org (January 19, 2016), “US Science and Technology Leadership Increasingly Challenged by Advances in Asia,” <http://phys.org/news/2016-01-science-technology-leadership-increasingly-advances.html#jCp>
- 54 See World Bank databank, 2018.
- 55 World Bank databank, Charges for the use of intellectual property, payments (BoP, current USD), 2018.
- 56 Only 25 of the 26 economies sampled are included below; Ireland’s rates of in-licensing are too high and would skew the figure.
- 57 Census Bureau, Top Trading Partners - October 2018, Year-to-date.
- 58 International Post Corporation (2017), *State of e-Commerce: Global Outlook 2016-21*, <https://www.ipc.be/en/knowledge-centre/e-commerce/articles/global-ecommerce-figures-2017>
- 59 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 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.
- 60 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. Because of this, 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 MD Smith & R Telang (2012), *Assessing the Academic Literature Regarding the Impact of Media Piracy on Sales* (Social Science Research Network).
- 61 OECD (2016), *Trade in Counterfeit and Pirated Goods*, pp. 110–1
- 62 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.”

- 63 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)
- 64 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 take-down 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>.
- 65 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.
- 66 This indicator is not concerned with commercial litigation brought by private parties and settled by an independent judiciary.



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