INTELLECTUAL PROPERTY RIGHTS AND PUBLIC POLICIES FOR THE CREATIVE ECONOMY

Recommendations for Latin America and the Caribbean

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IDB

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Preface

This report seeks to familiarize policymakers and creators with the relationship between intellectual property (IP) protection and the development of the creative economy in Latin America and the Caribbean (LAC).[1] There is a wealth of information sources on these two concepts, but they lack certain essential elements. For instance, they do not provide a comprehensive analysis for understanding how and under what specific circumstances IP rights apply to the concept of the creative economy. They also handle a variety of definitions, making it difficult to identify the elements of these industries that would enable the exercise of IP rights. Additionally, they only tangentially study the influence of geographical, socioeconomic, and political contexts on the success or failure of IP protection and promotion in the context of the creative economy.

Previous studies have shown how the creative economy has positive impacts on the countries of the region in terms of employment and economic activity, even contributing to reducing social exclusion and inequality, and fostering greater innovation and economic integration (Rodríguez, 2018). However, this type of economy is known for having markets that are difficult to define and value. Consequently, the exercise of IP rights, and thus the realization of their benefits, poses a challenge. Therefore, it is essential that key players in the creative economy receive support by accessing documents that provide greater clarity regarding the elements and mechanisms of IP that they can leverage to protect their creations and collect benefits. On the other hand, due to the rapid evolution that characterizes these industries, governments must be clear about existing and available mechanisms in terms of protection to update or create new ones, thus enabling their countries' economies to effectively harness the benefits of these industries.

This is even more evident in the context of the COVID-19 pandemic and its impact on the entire value chain of the creative and cultural industries (from production to commercialization). Firstly, because the pandemic highlighted the urgent need to adapt and modernize the creative sector's IP mechanisms, in response to the rapid digitization of the industry. This digitization has become an important tool for economic resilience that must be encouraged

1 It should be understood that within a broad concept of the creative economy, we are referring to the cultural sector from an economic perspective and the cultural and creative industries.

and protected. A survey conducted by the Inter-American Development Bank (IDB) between June and August 2020 revealed that, in LAC alone, more than 2 million jobs were affected by the pandemic, and more than half of the self-employed and creative businesses reported an 80 percent loss in income or sales. However, creative sectors with a greater use of digital technologies and less dependence on physical presence were the most resilient. While 63 percent of companies operating in cultural and entertainment activities reported reductions of up to 80 percent in sales, only 17 percent of those in the media sector informed that same drop. The challenges surrounding the IP protection in the creative sector are much greater when put together with those related to IP protection in the digital world, and this requires increased efforts to enhance the agility of IP systems in this new global context.

Moreover, the sharp decline of the creative sector is a sign of the lack of integration with global value chains due to high informality and the limited understanding of the added value they can bring to traditional economic sectors in manufacturing or services. A fast and appropriate adaptation of IP systems to the creative sector would facilitate greater integration of the sector with the needs of the rest of the economy. This would allow for clearer and more formal game rules, making it easier for other sectors to recognize the benefits of collaboration and integration in the value chain. This, in turn, would lead to widespread gains in economic growth and innovation in our countries.

It is therefore extremely important to have a handbook tailored to the LAC regional context that describes the interaction between traditional IP concepts and their impact on the creative economy. This document is a key effort towards the development of such a handbook, mainly because it contains three fundamental elements. On the one hand, it describes the dimensions of the creative economy that may be effectively protected through IP. In addition, it includes specific examples from around the world and compares them with the Latin American context, illustrating how each form of protection is applied. Regarding this, it highlights the significant connection with the cultural and historical richness of LAC and the differences among countries within the same region.

On the other hand, the document identifies specific challenges in terms of access to the IP protection system faced by the LAC region. These challenges are explored in a variety of administrative, legal, and monetary dimensions both generally and in specific countries. Finally, it proposes general recommendations based on international best practices, addressing challenges related to access, as well as those associated with difficulties in

monetization, lack of agility in adapting to the industry's rapid evolution, and the endemic issues in LAC and other emerging countries, such as piracy.

Overall, this document identifies common challenges among the LAC countries in terms of IP protection that affect proper development of the creative economy, as well as difficulties particular to each country. However, it is also important to be clear about how foreign markets perceive the level of IP protection in LAC and how they decide to invest in these industries in the region. Based on a review of reports prepared by private or governmental entities in developed countries, this document includes an informative table that compiles the problems identified as most prevalent in LAC and specific countries in the region. Particularly those problems that make our countries less competitive compared to other emerging regions/ countries in Asia, for example, and therefore affect foreign investment levels in creative industries.

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Esteban holds a degree in Law. He completed a master's degree in intellectual property law at The George Washington University and was the recipient of a Fulbright scholarship. He also completed a master's degree in economic law from the Benemérita Universidad Autónoma de Puebla, graduating with the cum laude. He also holds a diploma in artificial intelligence and intellectual property from the Center for International Studies on Intellectual Property.

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Esteban has represented Latin America in activities organized by entities such as the World Intellectual Property Organization, the United States Patent and Trademark Office, the International Union for the Protection of Plant Varieties, and the United Nations Conference on Trade and Development, among others.

Introduction

How does intellectual property (IP) relate to the creative economy? Through mechanisms provided by IP, the creators can protect their creations and thereby obtain recognition from an authority that enables them to prevent unauthorized use by others. This recognition is key so that the creator or rights holder can also monetize their work, including deciding whether they want compensation or not. In addition, in the event of someone infringing their IP rights, proper protection is essential to request sanctions against the infringer and prevent further unauthorized use. The creative economy cannot be conceived without the existence of IP.
This study is based on the premise that providing clear, simple, and accessible information to creatives, public officials, government decision-makers and legislators will help improve conditions for strengthening and growing the creative economy. It is primarily aimed at those who wish to delve deeper into the subject, especially civil servants working in the areas of culture, economy, IP, and innovation.

At the same time, it is a contribution to literature, as it is the first study to identify the challenges IP faces in the creative economy, as well as how these challenges limit its growth in Latin America and the Caribbean (LAC) region. In addition, it offers a comprehensive analysis and literature review that address various topics of great value for the design, implementation and evaluation of better public policies, programs, support systems, incentives, and laws aimed at promoting this type of economy in the region.

This study is the first of its kind to include updated literature on the role of artificial intelligence (AI) in the creation of works or inventions that can be applied to the creative economy. Finally, its cross-cutting perspective stresses the relevance of observing the phenomenon in a comprehensive and connected manner, mainly given the relationship between IP, the creative economy, public policies, economic growth and development, new technologies, AI, regulation, and innovation.

The first chapter explains certain IP figures, such as copyrights, trademarks or patents, and links their role in the creative economy. Through examples, it shows how creatives can use these figures to their benefit. In turn, we believe the analysis will enable governments to identify areas of opportunity, as well as issues on which to focus when providing support to creatives. It illustrates how innovation and creativity can work hand in hand.

The second chapter contains some general challenges faced by IP in the creative economy. It compares the current situation in LAC with that of other countries in terms of IP protection. Furthermore, it contributes to the literature and encourages countries to tackle these issues, considering the significant impact of IP on foreign direct investment.

The third chapter discusses the importance of protecting IP rights given their effect on investor perceptions. Moreover, it reveals some threats and challenges inherent to the value chain. Ultimately, it sheds light on four of the most important challenges IP encounters in LAC's creative economy, namely:

1. **Access to the IP system**. This section examines the administrative challenges that could act as barriers for creatives, such as the possibility of conducting IP filings and registrations online, which has gained relevance in the wake of the pandemic. It also highlights the importance of considering the analysis of legislation, especially from an economic law perspective. Other administrative challenges are also contemplated, such as the cost of protection and defense in the event of IP rights infringements. Contemporary topics like the use of new technologies, such as blockchain (for protection and as a means of evidence in case of trial) and AI (as a tool available to national IP offices for providing advice to creatives), are explored.
2. **Monetization of creations protected or protectable through IP.** This section explores the various conditions that determine the possibility of monetizing IP (depending on the type of market, commercial practices, etc.). It explores how innovation and novelty can be promoted to add value to new creations, thereby increasing the chances of commercialization. Efforts by some countries to enhance the monetization possibilities for creatives are also showcased. Finally, it analyzes the relevance of designing *ad hoc* public policies to improve the creative ecosystem's conditions, mainly in relation to IP.
3. **Changes generated by technological evolution sometimes outpace legislation, and the updating process is not as fast as technological evolution itself. AI considerations.** This section shows how technological advances bring benefits to the creative economy but at the same time generate new challenges that question established IP figures and their longstanding limitations. It shows how IP figures such as patents are important for the cultural and creative industries, especially those called creative patents in this document. The relationship between innovation and regulation is also described, as well as the way in which the former can be undermined by the latter. Additionally, it explores AI, one of the most recent phenomena transforming

the IP world. This segment addresses some of the most pressing issues, such as the difficulty of defining authorship when AI is involved in most of the creation process.

4. **Piracy.** How piracy impacts the creative economy is analyzed, exposing its various facets, primarily physical and digital. Effects beyond the realm of IP, such as the rule of law, are considered. This section also shows how education is a key element in fighting piracy, while generating other social benefits such as better civic education.

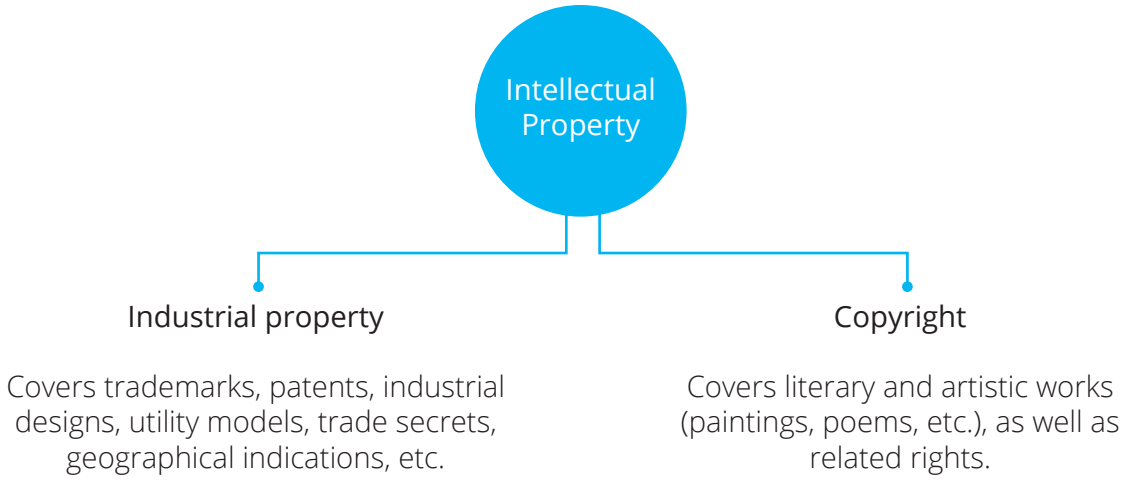
Each challenge is described in detail, accompanied by identified best practices from countries in the LAC region or other continents, serving as examples or references. In addition, recommendations for LAC countries are given at the end of each challenge. Addressing them could provide important support to the creative ecosystem while improving conditions of the creative economy, since IP enables creatives to secure ownership, guarantee protection both personal and of their creations, reduce the risk of someone taking advantage without them being able to defend themselves, and increase the likelihood of monetizing their creations, among other advantages.

Lastly, bearing in mind that LAC countries are at very different levels in terms of the implementation of the creative economy, the fourth chapter proposes general recommendations and observations. Although the tools and information may be useful not only for countries in the region but also for other regions, it is important to caution against replicating best practices and public policies without first carrying out an analysis to verify their feasibility for implementation at the national or subnational level.

1 || MAIN INSTRUMENTS OF INTELLECTUAL PROPERTY IN THE CREATIVE ECONOMY

According to the World Intellectual Property Organization (hereinafter referred to as WIPO), IP is defined as that which "refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce."[2] This document follows that definition. WIPO and several authors suggest that IP elements be divided into two branches to facilitate their study and use (Figure 1).

Figure 1. IP Elements



Souce: Authors' elaboration.

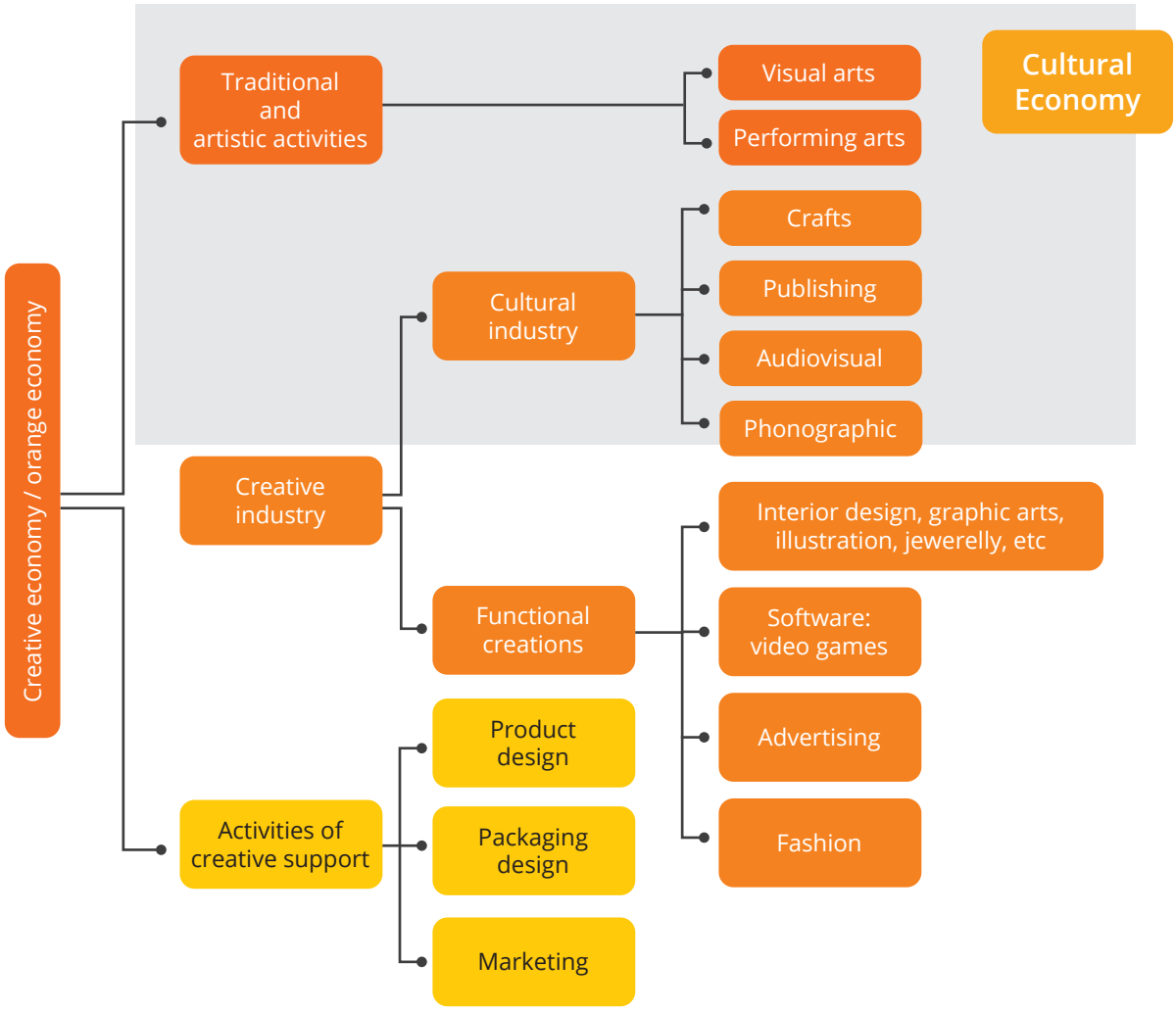
In LAC, some countries formally adopted this division in their legal frameworks or institutions, while others do not. When this publication refers to IP, it should be understood that it encompasses all elements that are part of industrial property and copyright. While there is a long list of elements comprising IP, for practical purposes, this publication focuses on those most closely related to the creative economy. The IDB generally uses the term "orange

2 https://www.wipo.int/edocs/pubdocs/en/general/1060/wipo_pub_1060.pdf.

economy" to refer to the creative economy, so in this publication the two terms are considered synonymous.

The creative economy, as defined by Benavente and Grazzi (2017, p. 9), is defined as "the group of activities through which ideas are transformed into cultural and creative goods and services whose value is or could be protected by intellectual property rights" (Figure 2).
This first chapter was designed on the basis of the taxonomy designed by Benavente and Grazzi, which should not be considered limiting, as new technologies or trends appear occasionally and produce new branches that can be integrated within the activities or industries.

Figure 2. Areas and elements that constitute the creative economy, according to the IDB



Source: Benavente and Grazzi (2017).

From the definitions mentioned at the beginning, it is clear that IP interacts transversally with the entire creative economy, although not all IP types do, nor to the same extent. Therefore, for practical purposes in this publication, attention is limited to the following IP types:

1. Copyright
2. Industrial property
   - Trademarks;
   - Patents;
   - Industrial designs; and
   - Trade secrets
3. Traditional knowledge and traditional cultural expressions or expressions of folklore.

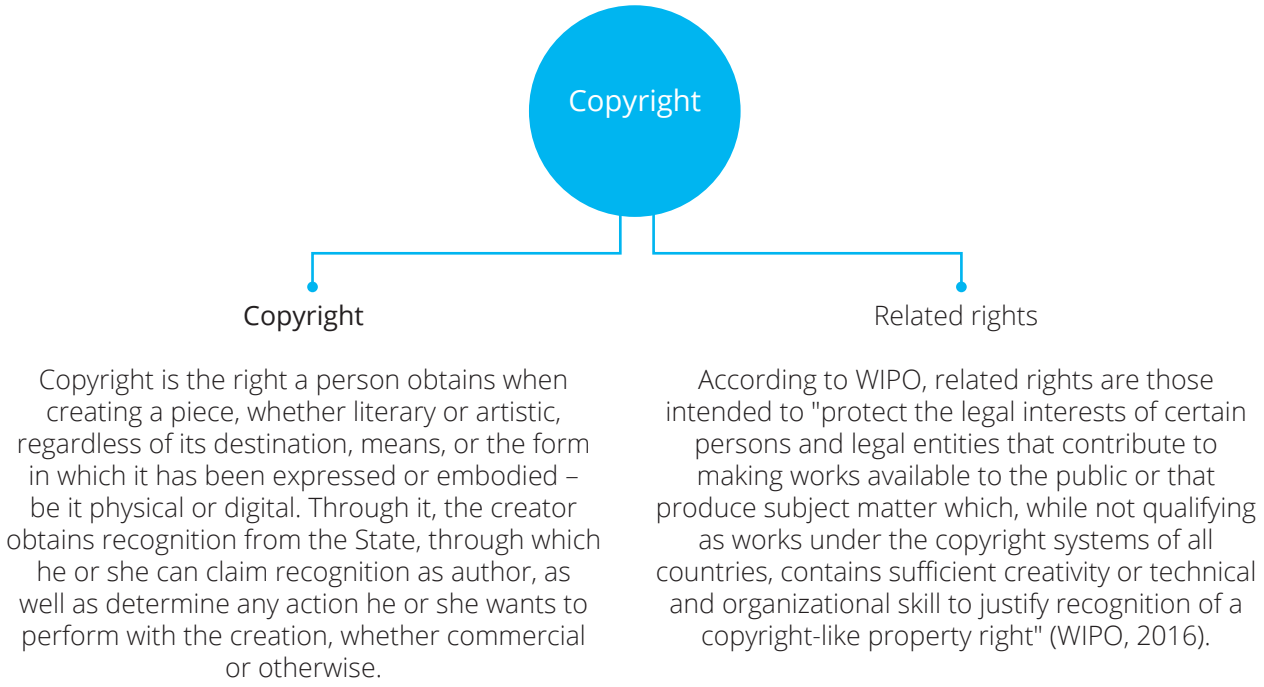
1.1 Copyright

Copyright is possibly the type most closely related to the creative economy. Since 2002, WIPO has published "The Economic Performance of Copyright-Based Industries" (WIPO, 2002, p. 2), which measures the economic contribution of copyright and related rights industries. Evidence shows that in several countries the contribution exceeds 5 percent of GDP, which highlights its relevance for the creative economy. Copyrights are defined and divided as shown in Figure 3.

It should be specified that copyright protects only the form in which ideas are expressed, which may be through literary, artistic and other works. It also protects two rights: moral rights and economic rights, which will be explained later. For example, copyright may prevent a third party from copying or using the work without authorization, subject to certain exceptions provided for in national legislation. Sometimes there are two or more similar works without this representing a problem, as long as each author has created it independently and without trying to copy the work of another author.

It is important to clarify that copyright does not protect materialization or implementation, nor does it protect the ideas embodied. In the practical case of creative economy, if a writer of a novel talks about a flying car and time later a person invents it, the writer could not claim royalties from the inventor for a right on the invention, since he should have previously opted for the protection of a patent.

Figure 3. Division of copyright



Souce: Authors' elaboration.

The holder of this right may prevent another person from performing acts such as generating and distributing copies, especially for commercial purposes, without prior authorization. It may also prevent the partial or total modification of the work, even if it is for purposes such as creating the script of a film, or even the public presentation of their work, or other acts such as translation into any language without their permission.

Unlike almost all IP elements that must go through a procedure to be protected, copyrights are obtained as soon as the work is fixed in some material form,[3] so no procedure or registration is required. This general rule applies to all LAC countries, since to date all have signed the Berne Convention for the Protection of Literary and Artistic Works adopted on September 9, 1886 (WIPO, 2018a).

Two clarifications are needed here: (i) the concept of fixation in some material is not limited to physical or tangible media, but also includes digital format; (ii) the registration or deposit of works (the denomination varies according to the country) offers very important advantages,

3 The concept of material support may vary depending on the legislation of each country.

such as having key evidence to prove the authorship and ownership of the work, which makes the procedure highly recommendable although it is not a prerequisite.

Copyright consists of two essential rights: (i) moral rights and (ii) economic rights. Knowledge of their scope, limitations and characteristics is essential for authors, entrepreneurs, businesspersons and any government agency working with the creative and cultural industries (Table 1).

Table 1. Characteristics of moral and economic rights

Moral right	Economic rights
Protects the reputation and recognition of the author as the author of his or her work. The only recipient of this right is the author of the work.	Protects the economic and financial interests of the copyright holder. The holder of this right may or may not be the author of the work.
May not be transferred, assigned or sold under any scheme. It cannot be waived or confiscated. Its validity does not expire. For example, no matter how old the book is the book *The Ingenious Gentleman Don Quixote of La Mancha*, Miguel de Cervantes Saavedra is still recognized as its author.	May be transferred in whole or in part to one or more people. One person may have the rights to a book to produce a movie, and another may have them to produce a play. Validity begins from the moment the work is fixed in some material form, continues throughout the author's life and lasts for at least 50 years after he or she dies[a], although this may vary (in Mexico it is 100 years[b] and in Argentina, 70 years[c]. After this period, the work is considered to be within the public domain[d].

Source: Authors' elaboration based on information from WIPO and national copyright laws.

a. Article No. 7 of the Berne Convention for the Protection of Literary and Artistic Works (Berne Convention for the Protection of Literary and Artistic Works (http://derechodeautor.gov.co/decision-andina). This is also established in Andean Decision No. 351 of 1993, the common regime on copyright and related rights, which is relevant since the Andean Community is made up of four IDB borrowing countries (http://derechodeautor.gov.co/decision-andina).
b. Article No. 29 of Mexico's Federal Copyright Law establishes this period (http://www.diputados.gob.mx/LeyesBiblio/pdf/122_150618.pdf).
c. Article No. 5 of Law No. 11723 (Argentina's Intellectual Property Legal Regime) establishes this period (http://servicios.infoleg.gob.ar/infolegInternet/anexos/40000-44999/42755/texact.htm).
d. There are different definitions of what the public domain is in the legislation of the countries in the region. However, in general terms, when they fall into this domain, works can be used by any person or company free of charge, provided t the moral rights are respected

In conclusion, one way of defining copyright has been provided by the International Council on Archives stating that "copyright law aims to strike a balance between the interests of creators and those of the general public, so that creators receive a fair reward for their works

and the public can access them. In that way, copyright law favors future creations while supporting the expansion and dissemination of knowledge and culture" (Dryden, 2017).

It is important to know some characteristics and formalities on which LAC countries agree regarding copyright (Table 2).

Table 2. Copyright: some elements and formalities on which LAC countries agree

Characteristics	Formalities
• Applies to creations that are legally considered literary or artistic works. • Protection is limited to the expression of the work, not to ideas or elements expressly excluded by law. • The validity of the economic right begins once the work is created, lasts the remaining life of the author, and continues for a minimum of 50 years from the year of his or her death.	• No official procedure is required for the author to be protected. • For registration or deposit of the work, this must be done before a competent authority, and may be useful as proof of authorship in case of trial. • In several countries, registration of the work is a requirement for filing a lawsuit for copyright infringement, or for receiving a tax or economic benefit in favor of the creative economy.

Source: Authors' elaboration with information from IP legislation of the countries in the region.

Table 3. Example of countries' position regarding the registration of works

Mexico	Article No. 5 of the Federal Copyright Law: "The recognition of copyright and related rights does not require registration or document of any kind, nor shall it be subject to the fulfillment of any formality."
Brazil	Law No. 9610 on Copyright and Related Rights (Art. No. 18): "The protection of the rights referred to in this law is independent of registration."
Colombia	Copyright Law (Art. No. 9, January 28, 1982): "The protection granted by this law to the author has as its original title the intellectual creation, without requiring any registration. The formalities established therein are for the greater legal certainty of the holders of the rights that are protected."
Peru	Copyright Law (Art. No. 170): "Registration is merely optional for authors and their successors in title, and not constitutive, so that its omission does not prevent the entitlement or full exercise of the rights recognized and guaranteed by this Law."

Source: Authors' elaboration with information from IP legislation of the countries mentioned.

On the other hand, governments must also respect copyright. In general terms, international treaties and legislation in the region do not exempt governments from respecting copyright or IP rights. It is true that some exceptions apply to almost anyone in the use of rights, such as when a work is used for educational purposes. However, if they are used in other activities (a public performance such as a concert or the use of a computer program), payment must be made to the owner.

Box 1. Example of respect for copyright by a government

The controversy between architect Santiago Calatrava and the Bilbao City Council is an example of the respect that a government should have for an author. According to Marín, the City Council commissioned Calatrava to design a bridge to be built over the Nervión River. After it was delivered and payment was received, construction began. Time later, modifications were made to the bridge without the author's authorization.

Calatrava sued City Hall for damages to his moral rights, arguing that the City should have requested his authorization to modify the work, since, although he was paid for it, the moral right (of respect for his reputation) does not disappear with any payment regardless of the amount. The author requested compensation of EUR 3 million, far beyond the payment he had received for the design.

In court it was confirmed that the City Council should have requested the author's authorization to modify the work. Sometime later, Calatrava received a compensatory damage payment, but for a lower amount than the originally requested.

The example in Box 1 would pertain throughout Europe, where the integrity of the work contemplates that it cannot be modified without prior authorization (WIPO, 2011a), as doing so would harm the author's reputation and, therefore, his or her moral rights. However, in Colombia the legislation establishes that "the author of an architectural project may not prevent the owner from introducing modifications to it but shall have the right to prohibit his name from being associated with the altered work" (Law No. 23 on Copyright, 1982).[4]

In Peru, it is established that the "author of architectural works may not oppose the necessary modifications during or after construction, or their demolition" (Copyright Law, 1996)[5]. It is evident that there are differences between countries in the region, and this is relevant for

4 Pursuant to Article No. 43 of the aforementioned law (http://derechodeautor.gov.co/documents/10181/182597/23.pdf/a97b8750-8451-4529-ab87-bb82160dd226).

5 This is found in Art. No. 80 of the Copyright Law (https://www.wipo.int/wipolex/en/legislation/details/3412).

those involved in the creative economy, especially when they intend to take their creations to other nations.

Another common example is when singers sue for infringement of copyright and related rights against governments, politicians and public officials who use their songs in activities such as election campaigns. One of the most recent cases was that of singer-songwriter Eminem. The New Zealand Supreme Court found that the National Party infringed his copyrights and imposed a financial penalty for damages amounting to several thousand dollars (Roy, 2017). Finally, in the face of uncertainty and problems such as Calatrava's, in Ecuador a specific regulation was designed concerning the economic rights of the public sector (The Organic Code on the Social Economy of Knowledge, Creativity and Innovation of 2016.) This law clearly sets forth the assumptions under which these rights are held by the State6, and becomes relevant because it fills the gap left by the law or employment contracts.

Copyright is the way to protect most of the creations that make up the taxonomy of the creative economy presented at the beginning. However, other creations within creative support activities will normally be protected by industrial property laws. There will even be occasions when other complementary laws will be involved in areas such as those covering traditional and artistic activities.

Most of the countries' legislation establishes a list of works that are protected by copyright. Some countries list the types of works, like Chile (Law No. 17.336 on Intellectual Property, 1970), while others focus on the branches, as in the case of Mexico (Federal Copyright Law, 1996), as shown in Table 4.

Although a list is established in both cases (Chile and Mexico), it leaves open the possibility that other works may be eligible for copyright protection, provided they be considered as literary and artistic works by analogy. Also some legislations in the region use different terms that could be synonymous, as in the case of Guatemala, which uses "computer programs" to refer to the well-known "software" (Decree No. 33-98, Law on Copyright and Related Rights, 1998).

6 This can be verified in Art. No. 116 of the Code (https://www.wipo.int/wipolex/en/text/439410).

Table 4. Comparison of copyright legislation

Chile	Mexico
Article 3 - The following are specially protected under the present law: 1. Books, pamphlets, articles and writings, whatever their form and nature, including encyclopedias, guides, dictionaries, anthologies and compilations of all kinds.	Article 13.- The copyrights referred to in this Law shall be recognized with respect to the works of the following branches: 1. Literary 2. Musical, with or without lyrics 3. Drama

Source: Authors' elaboration based on the Chilean Intellectual Property Law and the Mexican Federal Copyright Law.
Note: Only one article and three paragraphs are included for reference purposes, not the complete text.

On the other hand, almost anything generated by imagination and creativity can be made. A good example is Harry Potter (Box 2)., written by J. K. Rowling, where about 400 licenses were granted to exploit the work commercially.[7]

Box 2. The Harry Potter case

The author of Harry Potter had to look for other ways to protect her creations, which would allow her to safely conduct business in activities outside the literary field; for example, the manufacture and marketing of action figures, school supplies, etc. that used the characters or had their shape.

After the success, J. K. Rowling opened a website where readers can access her books. This is allowed despite the fact that a company holds the rights to her books in print version, because the author retained the universal rights to the digital publication of her works (López García and Rivas Rea, 2012).

This example also shows the relevance of elaborating contracts, which should also have well-defined limits and scopes.

Copyright can also be used as a driver of economic development, as was the case with Nigerian cinema, called Nollywood, which is considered the second mecca of cinema, having produced as many as 1,200 films a year (Bauer, 2015). According to Oh (2014), in 2014

7 http://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2007/wipo_pub_121_2007_05.pdf.

Nollywood came to produce an average of 50 films per week, less than India (Bollywood), but more than Hollywood. In addition, estimates are that almost 1 million people are employed in this industry, which is the second most important source of employment generation after agriculture.

Despite the challenges involved in obtaining funding, their productions have gained a reputation. Proof of this is the Nollywood week in Paris, established in 2013[8]. Nigeria also began to receive international attention, with articles in the press recognizing its quality in film production (The Guardian, 2014), in addition to considering it one of the key elements of the country's economy (Liston, 2015) and a significant part of the Arts, Entertainment and Recreation Sector, which contributed 2.3 percent of its GDP in 2016 (PWC, 2017).

Turning to related rights, legislation in the region coincides with most of the elements of the definition proposed in this section, although not all of them include a definition in their legislative texts. Some establish a broad list, such as Mexico[9] which considers performers, book publishers, phonogram producers, videogram producers and broadcasting organizations. Others consider fewer figures, such as Peru[10] and Ecuador[11] but include the section on "other related rights", where they open the door to new figures.

An example of how related rights work is in music. Often people buy a record because they like a singer's voice, although typically the singer is not the author of either the lyrics or the music. If the author is not a good singer, he would probably sell very few records. This is exactly where the relevance of the related right prevails because the singer's talent is necessary for a song to be a commercial success, so this other right can become as valuable and important as that of the author.

Another example is the video-on-demand company iROKOtv, a world leader in the exhibition of Nollywood movies, which in only seven years has grown to offer service to 178 countries. The related right protects it for making works (films) available. This 2010 Jason Njoku venture (Jewell, 2017) receives payment not as an author, but for making works (movies) available to the public.

8 http://www.nollywoodweek.com/en/.
9 Title V of the Law can be consulted (http://www.dof.gob.mx/nota_detalle.php?codigo=4907028&fecha=24/12/1996).
10 Title VIII of the Law can be consulted (https://www.wipo.int/wipolex/en/legislation/details/3412).
11 Article 237 of the Code can be consulted (http://www.wipo.int/wipolex/es/text.jsp?file_id=439410).

In addition to leveraging the benefits of the creative economy, iROKOtv generated an impact on digital economy, observable in the growth of mobile internet subscribers in Nigeria from 7.7 million in 2013 to 50.4 million in 2018 (Omanufeme, 2016). Many of these new subscribers seem to aim at watching the movies offered by this company. This is just a sample of the relevance and potential of this type of rights.

1.2 Trademarks

According to WIPO, a trademark is a sign capable of distinguishing the goods or services of one enterprise from those of other enterprises.[12] Trademarks are of great use in the creative economy, both for the private and public sectors. Regardless of the services or products they offer, whether they are in tourism or video games, they are usually the element the public looks for or with which they identify creative products or services on the market.

A registered trademark gives its owner the right to exclude others from using it in the marketplace. This right covers only the class of goods or services[13] where the trademark was registered, with some exceptions as, for example, when it is a trademark that the national intellectual property office considers famous or well-known,[14] according to the country's legislation.

Unlike in the European Union, there are no regional or community trademarks in LAC,[15] so protection only covers the country where registration is obtained. Duration is similar in all countries in the region (10 years) and the term can be renewed indefinitely for similar periods. The presence of trademarks is visible in all activities and industries of the creative economy. Whether in the tourism, film, theater or video-game sectors, it is generally through trademarks that consumers can identify the owners, whether government or private. In addition, a

12 https://www.wipo.int/trademarks/en/index.html

13 To know what type of products and services are to be protected with a trademark without generating confusion, especially when seeking protection in other countries, a classifier was designed, divided into 45 classes that classify from legal or research services to the organization of academic events. More details available at: https://www.wipo.int/classifications/nice/en/preface.html.

14 This type of trademark refers to brands that are well known or popular both in the sector where they offer their services or products and probably also within the general population, even if they do not have activities or consume products of their line of business, an example being the Coca Cola® trademark. In these cases, countries offer special protection alternatives included in their local legislation, with the objective of protecting mainly the consumer, so that he or she is not deceived by a person or company that uses one of these famous or popular trademarks without being the legitimate owner in order to take advantage of the popularity gained by the trademark owner.

15 https://euipo.europa.eu/ohimportal/en/trade-marks-in-the-european-union

trademark is an intangible asset that can be used for other purposes; for example, to apply for credit or a loan where the asset pledged as collateral could be a trademark.

In BRANDZ's 2018 annual report on the world's most valuable brands, it is evident that several are related to creative businesses. Companies such as Netflix are present which, without going any further, did not appear in 2012 in the global top 100 (BRANDZ, 2012), but ranked 61st in 2018 (BRANDZ, 2018). This is an example of the relationship between trademarks, copyrights and related rights.

Gradually, more and more creative brands are on the BRANDZ list, focusing on protecting companies whose predominant business activity is part of the creative economy. In 2012, Disney was the only creative brand within the BRANDZ top 100 considered to be entertainment. It ranked 43rd and moved up to 19th place in 2018. Another case is YouTube which, despite being considered a "technology" company in the ranking (51st place in 2018), a huge amount of its content can be located through its platform and is part of the creative economy.

Similarly, trademarks can help protect creative taxonomy businesses such as cultural creations, specifically fashion. In the same ranking are brands such as GUCCI (54), ZARA (42) and LV (26). In these cases, creative economy is present in the designs of garments, bags and other products. The trademark helps the consumer identify product ownership, quality and reputation.

Trademarks can be classified into two types: traditional and non-traditional. They could be defined as follows: traditional types are those identified only through the sense of sight, have no movement and are made up of elements such as symbols, words, numbers, drawings, or a combination of all the above. Non-traditional trademarks are those identified and perceived through any of the five senses, and their representation differs from that of traditional trademarks.

In the LAC region, all countries protect traditional trademarks, and some (Mexico, for example) are beginning to accept non-traditional trademarks as well. There are several reasons to start protecting smells or sounds as trademarks that are generally related to new ways of doing business and attracting customers (WIPO, 2009a), while opening up new opportunities for creative economy.

Table 5. Types of trademarks and countries that protect all or some of these types of trademarks

Traditional trademarks	Non-traditional trademarks	
• Word • Figure (without any type of movement) • Three-dimensional • Combination of the above	• Hologram • Sounds • Smells • Touch	• Color mark • Multimedia • Of movement
Countries such as Guatemala and Honduras only recognize traditional trademarks.	Countries such as Bolivia, Costa Rica, Ecuador, Mexico, and Peru recognize traditional plus all or some of the non-traditional trademarks.	

Source: Authors' elaboration with information from WIPO and national intellectual property offices in the region.

Non-traditional trademarks could be very useful tools for the creative economy, as evidenced by the creative companies that have used them. Such is the case of sound trademarks such as "Looney Tunes" (USPTO, 2000),[16] or the popular "tiger roar" that sounds at the beginning of the Metro Golden Mayer movies (USPTO, 1985),[17] and the well-known "Tarzan's jungle call" (EUIPO, 2006).[18]

The transition in countries of the region toward the protection of non-traditional trademarks has not been smooth. In the Andean Community, of which four countries in the region are members (Bolivia, Colombia, Ecuador and Peru), Commission Decision No. 486 (Andean Community, 2000) concerning the common regime on industrial property, has considered the protection of non-traditional trademarks for some years.[19] On the other hand, it was only in 2018 that Mexico amended its legislation to recognize them (Table 6).[20]

16 The trademark file is available at: http://tsdr.uspto.gov/#caseNumber=75934538&caseType=SERIAL_NO&searchType=statusSearch and the trademark sound at: https://www.uspto.gov/sites/default/files/75934538.mp3.

17 The trademark file is available at: http://tsdr.uspto.gov/#caseNumber=73553567&caseType=SERIAL_NO&searchType=statusSearch and the trademark sound at: https://www.uspto.gov/sites/default/files/73553567.mp3.

18 The trademark file can be consulted and listened to at: https://euipo.europa.eu/eSearch/#details/trademarks/005090055.

19 Article No. 134 establishes that sounds and smells may constitute a trademark (https://www.indecopi.gob.pe/documents/20795/225805/02.++01-Decision486.pdf/d5223fc0-59f6-4c3a-b8f3-e960b9eca11e).

20 Sections V and VI of Article No. 89 of the former Industrial Property Law stipulate that sounds and smells can now be registered as trademarks (http://www.diputados.gob.mx/LeyesBiblio/pdf/50_180518.pdf).

Table 6. Trademarks: some elements and formalities in which Latin American and Caribbean countries coincide

Elements	Formalities
• They must be distinctive signs (the scope may vary among countries that do or do not protect non-traditional trademarks). • They must be able to distinguish products and services from others. • They must not contain non-registrable elements (e.g., official logos). • The term is renewable every 10 years.	• It is necessary to file a procedure before the competent office to obtain State recognition. • Payment is required. • The filing of the application for registration is not enough, the right to the trademark is only obtained when the corresponding title is issued.[a]

Source: Authors' elaboration based on information from national intellectual property offices in the region.
Note: [a] In some countries a right may be obtained under certain conditions without registration.

There are other types of trademarks that can be used for the benefit of the creative economy, such as collective trademarks and certification trademarks, although their use is less common. Both are very useful tools, mainly because their aim is to give a positive reputation to products or services from a specific country, area or region. These trademarks can be traditional or non-traditional, depending on whether or not the country where they want to register provides for the possibility of choosing both options.

For WIPO, collective trademarks are signs that distinguish the geographical origin, material, mode of manufacture or other characteristics common to the goods and services of the various enterprises using the collective trademark. The owner may be associated with these companies as members or any other entity, be it a public institution or a cooperative business (Box 3).

According to WIPO, certification trademarks are granted to products that meet defined requirements; membership to a group or

Box 3. How can the collective trademark be used?

In Peru, a group of small and medium-sized cheese producers in Cajamarca had problems maintaining the quality of their product and suffered unfair competition from the informal sector, among other challenges, which led to a loss of customer loyalty.

The solution was to create a collective trademark and establish guidelines to standardize quality, which allowed them to obtain a positive image of their product (WIPO, 2010) and improve its earnings.

entity is not a prerequisite. They may be used by anyone who certifies that their products meet certain standards (Box 4). This is another model that has been very successful in several countries, although so far not many in the region have included it in their legislation, as Mexico has recently.[21]

Box 4. CE Certification marking

The letters "CE" are a certification trademark referring to products marketed in the European Economic Area, with high requirements for safety, health and environmental protection. In addition, the reproduction of the trademark must comply with shape, size and measurement requirements.

Source: European Commission image, CE marking (https://ec.europa.eu/growth/single-market/ce-marking_es).

Certification trademarks have also been used to protect the Colombian success story of Juan Valdez. Originally, this trademark was used to certify that a coffee was 100 percent Colombian, which helped to safeguard the good reputation of Colombian coffee, while bringing together a trade and positioning the country's coffee at an international level (WIPO, 2015a). In general, these types of trademarks are accompanied by rules of use that must be respected by those who wish to use them, and this case was no exception.[22]

Another example of trademark is the so-called destination brand,[23] which promises a tourist experience and attaches significance to a territory, thus reducing the risk of search and correct choice (Cerdá-Bertomeu, 2018). It can be used as protection for creations, businesses or other commercial activities that are mainly carried out within the cultural industry, as well as in traditional and artistic activities such as tourism, crafts and tangible and intangible cultural heritage, which are also part of the creative economy. Both governments and the private sector are beneficiaries.

21 In 2018, industrial property legislation was reformed, and regulation, which considered collective trademarks, added certification marking (Art. No. 98), how they were obtained, and other useful information (http://dof.gob.mx/nota_detalle.php?codigo=5523102&fecha=18/05/2018).

22 This regulation stipulates elements on who may use trademarks, requirements to be met and conditions and forms of use, among others (http://www.cafedecolombia.com/static/files/Reglamento_de_Uso_IGP_Titulo_4.pdf).

23 These trademarks are theoretical, since countries do not normally offer this type of specific registration; however, they are mentioned as particular reference to the type of products and services for which they are used.

An example is the case of the popular "I LOVE NY" trademark, which is managed and administered by the New York Department of Economic Development. This practice can already be seen in some countries in the region, especially at the national or subnational level, but also specifically includes trademarks that cover elements of the creative economy, as in Mexico and Colombia (Image 1.1).

Image 1. Examples of destination brands

Source: In the case of New York, the image was taken from the United States Patent and Trademark Office (Trademark Registration 5113793), while in the case of Mexico, from the Mexican Institute of Industrial Property (Trademark Registration 1891501).

Destination brands can help promote the cultural wealth of countries in the region. For reference, New Zealand based its destination brand on cultural issues and traditions (Smith, 2015). These trademarks can and should be protected almost like any other trademark, because although they are certainly created and administered by governments, that simple fact does not automatically grant them protection.

Image 2. Logotypes of several Spanish cities as candidates for the European Capital of Culture in 2016

Source: European Cultural Capitals. The European concept of culture regarding some current processes of symbolic renewal and urban transformation (http://www.ub.edu/geocrit/sn/sn-339.htm).

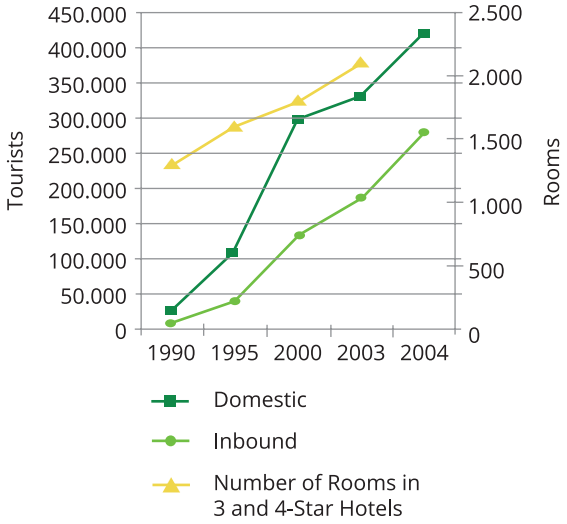
In connection with these trademarks, the "European Capital of Culture" movement and brand was developed in Europe (Arriba, 2010). This case is interesting for the creative economy because it combines destination brands, certification trademarks and other creative elements such as tourism, tangible and intangible cultural heritage, or performing arts and entertainment. As a reference of its impact, according to Gil de Arriba (2010), in the case of the French city of Lille (Figure 4), "the total number of tourists received in 2004, the year of the celebration (as European Capital of

Culture), was almost five times higher than those registered a decade earlier".

Concerning tourism, trademarks are useful for promotion purposes. Colombia has a destination trademark for the country that includes six options for visiting, one of which is culture, and this, in turn, offers information on elements such as art and folklore.[24] Various elements of a country's creative economy can be promoted this way, while seeking to attract tourists and investors.

On the other hand, the private sector is likely to benefit the most from trademarks. An example is Xcaret, in Mexico, the best theme and water park in the world in 2018 (Excelsior, 2018) that offers a combination of culture, history, entertainment, ancestral traditions and shows[25] that are linked to the country's culture. The company has registered a large number of trademarks to protect its products and services, where the creative economy is at the core of the business.[26]

Figure 4. Evolution of the number of tourists and hotel accommodation (No. of Rooms in 3 and 4-Star Hotels) between 1990 and 2004



Source: European Cultural Capitals. The European concept of culture regarding some current processes of symbolic renewal and urban transformation. Data from CSEF (Comité Subrégional de l'Emploi et de la Formation), Liège (http://www.ub.edu/geocrit/sn/sn-339.htm).

Image 3. Colombia destination brand

Fuente: http://www.colombia.co/.

24 http://www.colombia.co.

25 The company has a YouTube channel where it posts videos of the park, and you can see how the elements are combined (https://www.youtube.com/watch?v=U0Li_s9Tf7I).

26 For example, you can check its trademark registrations 525608, 1680374, 1582664, or 1582623 on the following website (http://marcanet.impi.gob.mx/marcanet/vistas/common/dashboard/marcanetDashboardBusquedas.pgi).

The park's success is an example of the creative economy's impact, as it triggered economic growth and development. It was projected that in 2018, 32 percent of tourists visiting the Riviera Maya would attend Xcaret (Sin Embargo, 2018); what's more, many tourists decided to travel to Mexico specifically to experience the park. It was also a reference for other creative companies such as DreamWorks to engage in building a theme park in that area of Mexico (Vázquez, 2016), as they identified that the public consumes what this economy offers.

Image 4. Trademark: Lijjat

Source: http://www.wipo.int/ipadvantage/es/details.jsp?id=3619.

Moreover, brands can be leveraged to empower women through the creative economy. A cooperative business created by Indian women in 1959 when seven illiterate female neighbors took advantage of traditional knowledge (part of the creative economy) to make and sell *papad*, a traditional cookie, had 62 branches in 17 states across the country by 2015. The cooperative designed a development and empowerment model for women seeking employment, and created and registered the Lijjat trademark, which is a "symbol of female strength" (WIPO, 2013).

1.3 Patents

A patent is an exclusive right granted on an invention. For WIPO, patent protection means an invention may not be produced, used, distributed for commercial purposes, or sold without the consent of the patent owner.[27]

In general terms, a patent empowers its owner to decide whether the invention may be used by third parties and, if so, in what form. In return for this right, the patent owner makes technical information related to the invention available to the public in the published patent document. A patent gives its owner the right to exclude others from commercially exploiting it in the country where protection is granted.

27 https://www.wipo.int/patents/en/

Although the right of exclusion is valid only in the territory of the country or countries where registration is filed, its impact is worldwide, since the information contained in the patent becomes a source of international knowledge, so no one else could be the owner of that patent by claiming that the patent was not requested in a country. For example, if Rasec obtains a patent in Argentina, and then Pedro tries to obtain the same in Mexico in his own name, he would not be able to do so because that invention already exists. But Alejandro, not having protected his invention in Mexico, could not claim royalties for its use from Pedro.

It is important to point out that the patent is not the only type of invention protected by IP; there are other types of inventions that can be protected through figures such as utility models (also known as small patents or minor inventions),[28] industrial designs. However, not all countries in the world or in the region recognize these figures, so, although this publication considers them, one should check whether the country recognizes these types of figures.[29]

To obtain an invention, it is necessary to comply with three indispensable requirements in all the countries of the region (WIPO, 2007a):

1. **Novelty.** The essential elements of the invention have not been previously disclosed by and/or to third parties prior to filing the patent application; otherwise, the invention would no longer be new and therefore could not be patented. There is a 12-month grace period with respect to disclosure. Information evaluated to know if the invention already exists, or if a similar invention affects novelty, is known as prior art.[30]
2. **Industrial application.** The invention must be useful and/or industrially applicable, and also that it can be reproduced (or reproducible). This requirement is not necessarily related to the economic viability of the invention or profitability, since manufacturing or marketing the invention might be very costly and the market might not be willing to pay the price; however, this would not be decisive for complying with the industrial application.

28 Sometimes these inventions are called "small patents" or "patents of innovation", since their inventive activity does not comply with the common requirements and forms that correspond to a patent, but they do provide some new element or represent a new technical solution to a problem. They are used occasionally when an invention does not have sufficient elements to obtain a patent but does have elements that are liable of protection and at the inventors' request. More details available at http://www.wipo.int/sme/es/ip_business/utility_models/utility_models.htm.

29 In this section, you can see the list of countries that legally recognize utility models in the region and in the world (https://www.wipo.int/patents/en/topics/utility_models.html).

30 In general, countries in the region have similar definitions and, according to WIPO, the technical concept comprises anything made available to the public, prior to the relevant date, anywhere in the world, by means of a written disclosure and that can be used to determine whether the invention claimed is new and involves an inventive step (i.e. is not obvious) for the purposes of the international search for the preliminary international examination (https://www.wipo.int/pct/en/texts/glossary.html.)

3. **Inventive step.** The invention is not regarded as obvious or evident to a skilled person in the state of the art of the subject matter of the invention. This concept has different meanings depending on the country, among which are non-obviousness and inventive step. For example, the Andean Community (Bolivia, Colombia, Ecuador and Peru) uses the term "non-obviousness" (Andean Community, 2000)[31], whereas Mexico uses "inventive step" (House of Representatives of the House of Congress of the Union, 2020).[32] However, the interpretation used both for the study of a patent application and for the resolution of a lawsuit regarding inventive step is essentially the same.

Patentable subject matter ranges from devices to processes or methods, and even chemical compounds. They can also be improvements to existing inventions. In certain cases, and under certain conditions, patents can be obtained through software. In countries such as Colombia, they are already beginning to study how patents that contemplate new technologies such as blockchain (Superintendencia de Industria y Comercio de Colombia, 2018) will be analyzed.

Table 7. Patents: some elements and formalities on which LAC countries agree

Elements	Formalities
• All LAC countries in the region must comply with the three indispensable elements. • The protection lasts for 20 years. • Protection is limited to the country or countries in which protection is granted.	• In order to acquire protection, patent prosecution must be carried out before the competent authority. • Protection is not obtained just by filing the application but comes into force when the corresponding title is obtained. • All inventors must be cited.

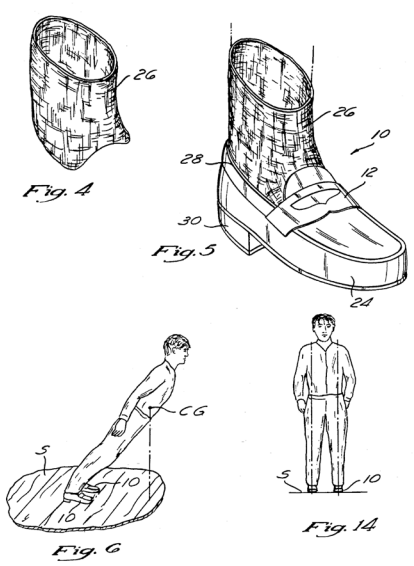
Source: Authors' elaboration with information from IP legislation of different countries.

31 In the Andean Community, this is the definition used for the case in question: "Inventive step is considered a creative process, the results of which are not obviously deducible from prior art to a person with average knowledge in the field, at the application or recognized priority filing date." (http://intranet.comunidadandina.org/documentos/Procesos/I_841_153_IP_2015.pdf).

32 Mexico's Federal Law for the Protection of Industrial Property states that industrial application means "the possibility that an invention may be produced or used in any branch of economic activity, for the purposes described in the application." (http://www.diputados.gob.mx/LeyesBiblio/pdf/LFPPI_010720.pdf).

Patents could be present in almost any taxonomy of the creative economy. Orange or creative patents are those that have direct application in one of the areas of the creative economy and are useful in solving a technical problem or innovating in this type of economy. For example, Michael Jackson shocked the world by defying gravity, as well as logic, when at one of his concerts while performing "Smooth Criminal" he fixed his feet on the ground and then tilted his entire body more than 45 degrees. The act became famous and is known as the "anti-gravity" effect. What very few knew was that a patent was behind that act. Michael Jackson, along with two other inventors, filed a patent application for a method and means of creating an anti-gravity illusion.[33] Until 2018 many people still did not know this (LaMotte, 2018).

Image 5. Invention patented by Michael Jackson



Source: Extracted from US 5255452 (A), Method and Means for Creating Anti-Gravity Illusion (https://worldwide.espacenet.com/publicationDetails/

On the other hand, patents can also be used to innovate in the creative economy. In theater, another area of this economy which has existed for several centuries as a form of performance (Oliva, 2002), patents can help to innovate, for example, through the generation of inventions that make use of innovations such as virtual reality and the combination with theater plays.[34] (Image 6)

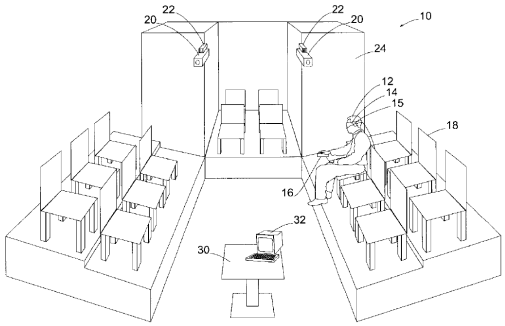
Just as patents are useful for innovating, they can also be a tool to exclude others from unauthorized use and exploitation, regardless of the size of the company. For example, a few years ago, *Cirque du Soleil* was sued for the use of three patents without authorization of the owner in the "Michael Jackson One" show (FilmOn.TV NY Inc. et al. v. Cirque Du Soleil, Inc.).[35] The rights holders argued that Cirque used them without their authorization at the

33 This is patent US5255452A, of 1993 (https://worldwide.espacenet.com/publicationDetails/originalDocument?CC=US&NR=5255452A&KC=A&FT=D&ND=&date=19931026&DB=&locale=).

34 This is patent US6409599, of 2002 (https://worldwide.espacenet.com/publicationDetails/originalDocument?CC=US&NR=6409599B1&KC=B1&FT=D&ND=&date=20020625&DB=&locale=).

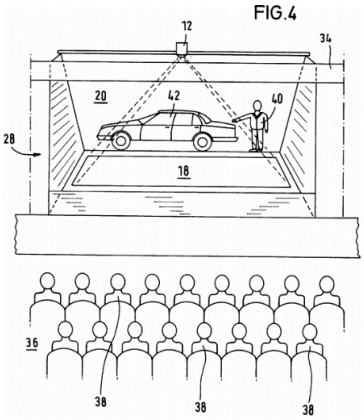
35 https://www.courtlistener.com/docket/4151187/filmontv-ny-inc-v-cirque-du-soleil-inc/.

Image 6. Patent for an interactive virtual reality performance theater entertainment system



Source: Extracted from US 2018/0059528 A1, Interactive virtual reality performance theater entertainment system (https://worldwide.espacenet.com/publicationDetails/originalDocument?CC=US&NR=6409599B1&KC=B1&FT=D&ND=&date=20020625&DB=&locale=).

Image 7. Patent of moving images on stage



Source: Extracted from US 5,865,519, Device for Displaying Moving images in the Background of a Stage. (https://pdfpiw.uspto.gov/.piw?Docid=05865519&homeurl=http%3A%2F%2Fpatft.uspto.gov%2Fnetacgi%2Fnph-Parser%3FSect2%3DPTO1%2526Sect2%3DHITOFF%2526p%3D1%2526u%3D%2Fnetahtml%2FPTO%2Fsearch-bool.html%2526r%3D1%2526f%3DG%2526l%3D50%2526d%3DPALL%2526S1%3D5865519.P).

most important moment of the show (Gardner, 2014). One of the patents[36] consisted of an apparatus that could be used to display a virtual image on a stage, specifically on a reflective surface onto which an image is projected, while a person stands between the audience and the image (Image 7).

Regardless of the dispute resolution, the above reflects the relevance of protecting a creative invention correctly and in time so that no one can use it without authorization or without paying royalties. It also highlights the importance of respecting the right of the patent holder, as well as the feasibility of timely seeking a license or ownership of the patent rights in order to avoid lawsuits.

36 This is patent US5865519, of 1999 (https://pdfpiw.uspto.gov/.piw?Docid=05865519&homeurl=http percent3A percent2F percent2Fpatft.uspto.gov percent2Fnetacgi percent2Fnph-Parser percent3FSect2 percent3DPTO1 percent2526Sect2 percent3DHITOFF percent2526p percent3D1 percent2526u percent3D percent2Fnetahtml percent2FPTO percent2Fsearch-bool.html percent2526r percent3D1 percent2526f percent3DG percent2526l percent3D50 percent2526d percent3DPALL percent2526S1 percent3D5865519.P).

1.4 Industrial Designs

An industrial design is a different type of invention from patents, in that it protects the ornamental or esthetic aspect of an article. Industrial design includes industrial drawings and industrial models. Some countries call them design patents.

The industrial design may consist of three-dimensional features, such as the shape or surface of an article, or two-dimensional features, such as patterns, lines or colors[37]. In general, countries that have the figure of industrial design establish a clear division of protection both in their legislation and in administrative terms. Mexico, for example, clearly specifies the components of industrial designs (Figure 1.5).

Figure 5. Industrial designs in Mexico

Industrial drawings

Any combination of figures, lines or colors incorporated into an industrial product for ornamental purposes, giving it a peculiar and unique appearance.

Tie pattern

Industrial models

Any three-dimensional shape serving as a type or pattern for the manufacture of an industrial product, which gives it a special appearance as long as it does not involve technical effects.

Chairs

Source: Definitions and images extracted from the Industrial Designs User's Guide for applications filed on or after April 27, 2018 (IMPI) (https://www.gob.mx/cms/uploads/attachment/file/490141/GUIA_DE_DISEN_OS_INDUSTRIALES_2018.pdf).

As with patents, the rights of exclusion obtained with registration is limited only to the territory of the country or countries where registration is made. The principle of worldwide impact also applies, since the information contained in the design becomes a source of international knowledge, so that no one else could become the owner of a design by claiming that it is not protected in another country. This does not grant a right to the actual inventor in another country.

37 https://www.wipo.int/designs/en/faq_industrialdesigns.html

To be able to obtain registration of an industrial design, certain indispensable requirements must be met. The only common prerequisite for all countries in the region is novelty (Table 1.8). Novelty is defined above, in the patent section. Table 8 presents the requirements and provides the definition of both novelty, and the other elements required by each country.

Table 8. Industrial design requirements in Mexico, Peru, and Spain

Mexico	The design must meet the following requirements (IMPI, 2018, p. 7): Industrial application: The design (whether drawing or model) must be susceptible of being produced or used in any branch of economic activity. Novelty: The design (whether drawing or model) must be new, i.e., independently created and differ to a significant degree from known designs or combinations of known design features. Independent Creation: When no other identical industrial design has been made public before the filing date of the application for registration, or before the date of the recognized priority. Industrial designs whose characteristics differ only in irrelevant details shall be considered identical. Significant degree: The overall impression that the industrial design produces on a person skilled in the art, and that differs from the overall impression produced by any other industrial design made public before the filing date of the application for registration or before the date of recognized priority, considering the degree of freedom of the designer for the creation of the industrial design.
Peru	The only requirement is novelty (INDECOPI, 2018, p. 12): Novelty: Implies that the esthetic element to be protected has not been known or disclosed, nor has it been accessible to the public prior to its application or priority (if it has a prior registration in another country).
Spain	The design must be new and unique in character (OEPM, 2018): New: A design is considered new if no other identical design has been made public prior to the filing date of the application for registration. Uniqueness: assumes that the impression it produces on an informed user differs from the overall impression produced by previous design(s).

Source: Authors' elaboration with information from IP legislation of the countries mentioned.

Ideally, the requirements of a country should be checked before requesting protection for a design . Although it might seem somewhat confusing, criteria are usually very similar between countries.

Table 9. Industrial designs: some elements and formalities on which LAC Countries agree

Elements	Formalities
• The novelty requirement must be met in all countries of the region. • The validity varies depending on the country. Chile grants 10 years[a], and Mexico grants 5 years, renewable for similar and successive periods up to a maximum of 25 years (IMPI, 2018, p. 4). • Protection is limited to the country or countries in which protection is granted.	• In order to acquire protection, the procedure must be carried out before the competent office. • Protection is not obtained just by filing the application but comes into force when the corresponding title is granted. • All inventors must be listed. • Payment must be made together with the application.

Source: Authors' elaboration with information from IP legislation of several countries.
[a] https://www.inapi.cl/patentes/tipos-de-patentes/disenos

Nowadays, designs are often as important, if not more important, than all the technology inside a product, as consumers sometimes decide which product to buy based on what they see and not the technology inside. An example, according to Benavente and Grazzi (2018), is the case of a new car model: it may not have functional improvements, but major esthetic changes could have a substantial impact on its sales and thus on its value.

Designs are present in functional creations, from fashion to jewelry. They are used in a huge number of products such as umbrellas, lamps, clothing, cell phones and even chairs. Although it is often believed that only large companies can invent and therefore protect, this is not the case. Products such as shoes may also be protected, and occasionally in these cases only knowledge of the subject, a pencil, a sheet of paper and the advice of an expert are needed to make the registration.

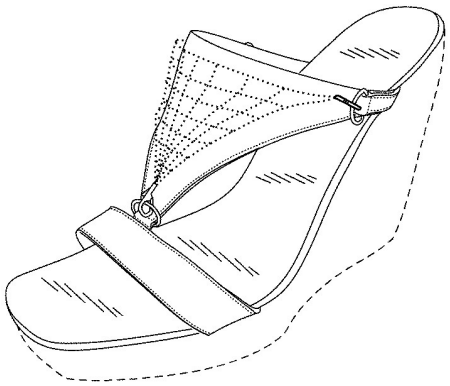
Design plays a key role in the fashion industry. According to Chávez (2018), fashion not only expresses ways of thinking, but also concepts such as creation, creativity and novelty, which together translate into innovation. Therefore, in general, design can be applied to almost any activity or industry of the creative taxonomy, especially when seeking to develop a more advantageous product, for which Vega (2004) suggests considering structural, technical-productive, use and function requirements that allow this advantage to be obtained or achieved.

As indicated above, design is useful for innovation and achieving it could improve anyone's income. In the Philippines, a person innovated designing musical instruments from the bamboo plant, and protected them through industrial designs (OMPI, 2011). Before achieving commercial success, the inventor sold his products on the street, but thanks to his perseverance he finally managed to market his creations, and the fact that his designs were protected was key.

Correct and timely registration of industrial designs allows the owner to prevent others from misusing a design. Proof of this is the litigation between Apple and Samsung (Apple Inc. vs. Samsung Electronics Co., Ltd., 2012), where Apple proved that in some countries Samsung had infringed certain designs, for which the Korean company was sentenced to pay around USD 1 billion, which set a very important precedent for design-related inventions (Bajwa, 2014). As for Samsung, they also sued and won lawsuits in other countries against Apple on the same issue, as happened in a South Korean court (Ramstad and Sun Lee, 2012). The truth is that these cases were useful to demonstrate the relevance of this type of inventions, as well as their correct and timely protection.

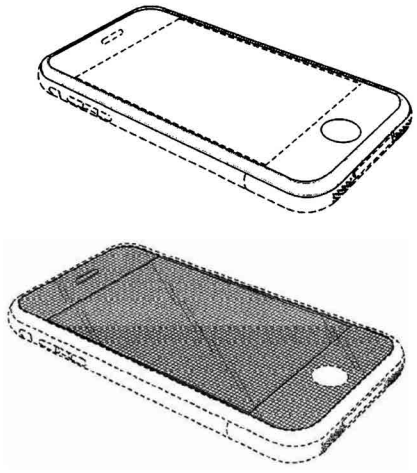
In conclusion, as pointed out by Benavente and Grazzi (2018), industrial designs generate economic value for which consumers are willing to pay, and innovations emerging in

Image 8. Industrial design of a shoe with interchangeable parts



Source: Extracted from D0611694, Interchangeable Fashion Shoe (https://www3.wipo.int/designdb/en/index.jsp#).

Image 9. Industrial design of the apparatus in dispute



Source: Extracted from case Apple, Inc., Plaintiff-Appellant v. Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Telecommunications America, LLC, Defendants Appellees 678 F.3d 1314 (Fed. Cir. 2012) (http://www.law.nyu.edu/sites/default/files/upload_documents/Apple%20v.%20Samsung%20%28edited%29.pdf).

the creative industry can expand their benefits to the rest of the economy. Thus, a protected industrial design represents the economic value attached to the appearance of a product (Laygo, 2019).

1.5 Trade secrets

According to WIPO, a trade secret is any confidential information that gives a company a competitive advantage. Trade secrets include industrial or manufacturing secrets as well as business secrets. Most countries in the region use the concept of trade secret and, although they are not exactly synonymous, they do share elements, so this section will not include a theoretical analysis of the differences. When the concept of trade secret is used, it must be understood in the broadest sense.

National legislation defines what is considered eligible for trade secret protection, as well as the requirements and formalities that must be met to legally obtain such recognition.

Secrecy protects information that you want to keep hidden from competitors (Pooley, 2013). However, this idea is not simplistic since the holder's word is not enough proof for certain information to be considered a trade secret. The basis for what is considered a trade secret has been established both by local laws and by WIPO and World Trade Organization premises (WTO, 2008).[38]

Elements such as sales and customer convincing strategies, databases, customer lists, advertising strategies, and others that generate a competitive edge are part of the trade secret of a creative company.

38 The WTO, especially the section on Intellectual Property Rights, better known as TRIPS, considers undisclosed information and its relation to trade or industrial secrets. (https://www.wto.org/spanish/tratop_s/trips_s/ta_docs_s/8_bgd_trips_89_s.pdf).

Table 10. Trade secret: some elements and formalities on which LAC countries agree

Elements	Formalities
• Information that is not in the public domain or public knowledge, nor evident. It must be and remain secret. • Information that represents a competitive edge and/or commercial value to the holder in the market. • Information that may be applicable to industry or commerce.	• No registration with the intellectual or industrial property office is required. • The information must be documented. • The supporting information must show that this information represents a competitive and commercial advantage, with a positive effect for the holder in terms of profits, sales, etc. • Access to information must be restricted and protected with security measures.

Source: Authors' elaboration with information from IP legislation of several countries.

The key element is the confidentiality of the information. Therefore, if the information is disclosed (even to people within the same company who should not have access to the information), it may no longer be considered a trade secret. Hence, protection strategies must be designed, especially for employees, such as those proposed by Sheikh (n. d.):

- Identify all valuable trade secrets, and develop and implement a policy and program to protect them.
- Inform employees about the importance of trade secrets and make them aware of the policy and the related program.
- Decide carefully, and periodically review which employees have a "need to know and use" information, and limit access to trade secrets on a need-to-know or need-to-use basis.
- Apply physical or technological restrictions on access to trade secrets.
- Limit and monitor public access to buildings containing trade secrets.
- Mark with the terms "secret" or "confidential" all documents containing trade secrets in order to avoid accidental and unintentional disclosure.
- Sign confidentiality agreements with all relevant employees and also with people outside the company who have some access to its trade secrets.

In the creative economy, trade secrets can be key; for example, in the case of creative patents, because of all the information that is used both to identify the problem, and in the research and development (R&D) process. It could also apply in the case of a new film, where only

those involved should know the details. It is essential for owners to identify correctly what they have and its value, as well as what should and can be shared with employees.

Trade secrets also cover test data, including data showing what went wrong, which can be very useful because it saves time and money. Therefore, the ruling on this type of valuable data by the Court of Justice of the Andean Community is no coincidence (Calderón Villegas, 2008). So, for example, it could have taken years of testing for an animation company to know what kind of animations are of interest to investors, and the results of knowing would be very useful for the competition, as it could save all those years and investment.

Trade secrets can be used by any person or company within the creative taxonomy, regardless of their size, who will take advantage of their benefits, such as the fact that no proceedings are paid for their protection or registration (Nirwan, 2017). They are so important that some countries such as the United States (United States Congress, 2016), and even the European Union (European Parliament, 2016), have recently designed specific legislation for this figure.

In the case of a film production company, it could have databases with information such as contacts of sponsors, actors and directors, as well as data on fees, rates for productions and future projects. This information surely generates a competitive advantage.

In addition, trade secrets could be used to complement protection, for example, in the textile industry (especially the fashion industry) and thus protect prototypes that might be launched for the first time at a design fair and eventually gain protection through another figure. Behind the results there is surely a lot of work and investment in research activities with key information is that contributes to the development of a product with the competitive advantage generated by a trade secret.

Gustavo De Negri, founder of a fashion company, decided to protect by trade secret the operations he uses to make modifications and improvements, as well as to adapt the work involved in his production chain (WIPO, 2010a). This information is a fundamental part of the value of his company (along with the brand, although the latter protects a different element) so the trade secret is the basis for the creation of the products that have allowed him to succeed in the market.

Content software, as part of functional creations, provides another example of what can be done with trade secrets. One case is that of the Chinese software company Shinetech Inc., which has succeeded in doing business both locally and internationally. To achieve and maintain success, but above all to provide security and confidence to its customers, the company implemented certain practices ranging from the signing of non-disclosure agreements with all stakeholders, the generation of procedures and security measures, and even the creation of offices that focus solely on the care and maintenance of confidential information, both of the company and its customers (WIPO, 2010b). This could be applied in sectors such as video games.

Despite not having to register with any government office, if the correct protection measures have been taken, the trade secret is both a shield and a weapon to defend oneself or sue whoever has extracted, disclosed, or taken advantage of it without authorization. Sometimes, what trade secrets protect may not seem entirely relevant, but the entrepreneur or creative businessperson must assess the relevance that this type of information provides: not everything is a trademark, copyright or patent.

1.6 Traditional knowledge and traditional cultural expressions

According to WIPO, traditional knowledge is understood as a living body of knowledge that is developed, sustained and passed on from generation to generation within a community. It often forms part of its cultural or spiritual identity.[39]

On the other hand, traditional cultural expressions, also known as expressions of folklore, are those that encompass music, dance, art, designs, signs, symbols, performances, ceremonies, architectural forms, handicrafts, narratives and many other artistic or cultural expressions.[40]

Traditional knowledge and traditional cultural expressions are integrated under the same heading in this publication, as in WIPO, which doesn't mean they are equivalent, although they are closely linked.

39 https://www.wipo.int/edocs/pubdocs/en/wipo_pub_933_2020.pdf.
40 https://www.wipo.int/tk/en/folklore/

According to Becerra et al. (2017), traditional knowledge is ancestral, community-based, dynamic, territorial, practical, vital, diverse, cultural, and common. To better understand what traditional knowledge protects, it is useful to describe its characteristics:

- It comprises knowledge, experience, skills, innovations or practices.
- It is passed down from generation to generation.
- It is set in a traditional context.
- It is part of a traditional way of life of indigenous and local communities, who act as its guardians or custodians.

According to WIPO,[41] examples may include knowledge about traditional medicines or traditional hunting or fishing techniques, among others. Considering the history of the countries in the LAC region, as well as the cultural wealth they possess, it is possible to locate a great deal of traditional knowledge. Some countries such as Peru, in addition to applying it to attract tourists interested in culture and history, have generated *ad hoc* public policies to care for and preserve them (Ministry of Culture of Peru).[42]

Three elements define traditional cultural expressions: (i) they can be considered as the forms in which traditional culture is manifested; (ii) they are part of the identity and heritage of a traditional or indigenous community; and (iii) they are transmitted from generation to generation.

Examples include dances, songs, crafts, ceremonies and even stories. Examples of traditional cultural expressions can be found in most or possibly all countries in the region. However, very few have specific legislation. Some nations with similar wealth have designed specific legislation, as is the case of Kenya. (Republic of Kenya, 2016).[43] Another option for protecting these rights is customary law, although the analysis has not been sufficiently thorough in the countries of the region to be able to verify how to apply it.[44]

41 https://www.wipo.int/edocs/pubdocs/en/wipo_pub_933_2020.pdf.

42 The example of Peru is very interesting as it carries out a very broad study with an international perspective and adapting that vision to a specific policy to be implemented at the national level. (http://www.cultura.gob.pe/sites/default/files/noticia/tablaarchivos/estrategiactmatrizfinal.pdf).

43 The case of Kenya is appealing because it is a country rich in both elements, to the extent that part of the motivation for generating this specific legislation is, on the one hand, protection, but also the regulation of income from their use.

44 https://www.wipo.int/edocs/pubdocs/en/wipo_pub_tk_7.pdf.

Table 11. Traditional knowledge and traditional cultural expressions: some elements and formalities in which LAC countries agree

Elements	Formalities
• They are not newly created. • Their creation and use were not normally conceived for commercial or business purposes. • The acknowledgment of author, creator, or ownership does not correspond to an individual but rather to a group of people (collective property) or community. • They are generally linked to the way of life, worldview, religion, culture, traditions and government of a group of people (collective property) or community.	• Registration with the intellectual or industrial property office is not required for them to be valid or considered as such, unless the legislation so considers.[a] • Protection, recognition and defense measures in case of violations are usually determined in sui generis laws or through customary law. • Occasionally, parallel protections are made through intellectual property laws, but this is usually for defensive purposes and not necessarily to grant rights.

Source: Authors' elaboration based on *ad hoc* legislation from various countries.
a Generally, if required by law, it is not for the purpose of granting rights or not, but for identification purposes and to have a database to identify them more efficiently in the country or abroad.

The relationship of this category to the creative economy taxonomy focuses mainly on traditional and artistic activities. However, there is also a relationship with other activities and industries, for example, in theater, circuses and even in cinema and television, where they are continuously reproduced or presented. There is no exhaustive list including all the elements that make up traditional knowledge and traditional cultural expressions, as they vary from case to case. Acea (2014) even contemplates elements such as types of housing or means of rural transportation, including fishing boats.

Box 5. Canoe Trip from Xcaret

Every year, Xcaret Park stages a reenactment of a canoe trip to celebrate the Mayan goddess Ixchel, which took place more than 1,000 years ago. The route covers from Xcaret Park (formerly called Polé, in the Mayan language) to the island of Cozumel (previously named Cozumil) (Iruegas, 2018). This celebration has attracted hundreds of tourists seeking to participate in the experience.

Another way in which they can be used is for the purpose of promoting a country's cultural identity. To this end, in Malaysia, an organization designed and implemented a project in a creative and innovative way, which consisted of carrying out activities in a contest format; participants submit three-minute video clips, where they address some topic related to traditional knowledge and traditional cultural expressions (Pillai, 2015). The winner was awarded a prize (Linkages).

Among the winners is a video where the authors talk about the use of traditional knowledge, illustrating the case of a leaf that is utilized as a natural cockroach repellent (Liang Huey and Tze Phei, 2013).[45] This is a clear example of the way in which creative economy is related to traditional knowledge, as well as its link to industrial culture.

Both traditional knowledge and traditional cultural expressions may be used for commercial exploitation purposes by the holders, owners, guardians or any figure in charge of their protection and safeguard. This can generate an economic income for the communities. To make this possible, it is important to review cases where win-win practices have been followed, as was the case in Lithuania (WIPO, 2013).

Another example of this is the community of Olinala, Mexico, where the lacquered handicrafts sector is estimated to reach 80 percent of the economic activity of that region, thanks to products that represent traditional knowledge and traditional cultural expressions (WIPO, 2012). This case combines the use of natural resources (the linaloe tree) with techniques, designs, colors, and other elements representative of the community (IMPI, 2016). Thanks to their efforts, in 1993 they were awarded the National Arts and Sciences Award to the "Lacquer Artisans of Olinala" (Secretaría de Educación Pública, 2014).

Image 10. Appellation of origin: Olinala box

Source: Obtained from Denominaciones de Origen Orgullo de México (IMPI) (https://www.gob.mx/cms/uploads/attachment/file/96531/DO_Orgullo_de_Mexico.pdf).

45 The winning video of the 2013 edition of the contest can be viewed at: https://www.youtube.com/watch?v=TwiVFGu7iVw.

Within the region, some countries are working to find that balance, as is the case of Ecuador, where recently (2016) the Organic Code of the Social Economy of Knowledge, Creativity and Innovation was created (Asamblea Nacional, 2016). This type of exercise is useful to find balance and innovation at the same time, a task that is not easy, as debates continue on who should receive royalties or benefits, as well as on the definition of how to put them to use.

Likewise, it is possible to legally claim both respect and recognition, and even the payment of either royalties or damages. In the music area, for example, there was a case where the South African Zulu people sued Disney for copyright infringement by using one of their songs in the movie "The Lion King" (Bachner, 2005). Part of the conflict was in the fact that the Zulu people claimed the original song "Mbube" to be written by one of their members, Solomon Linda in 1939 and, as such, was part of their traditional knowledge and traditional cultural expressions.

Although it may seem impossible for a community to enforce its rights, there is evidence to the contrary. A few years ago, a patent was revoked from a person who had obtained it for a new variety of what is popularly known as *ayahuasca*. The goal was attained after the petition for the revocation of the patent was filed by representatives of several communities in the Amazon region (Wiser, 2001). News of this case were published around the world as an example that it is possible to enforce these rights regardless of the country involved.

2 || GENERAL CONTEXT OF THE CHALLENGES AND PROBLEMS FACED BY INTELLECTUAL PROPERTY IN THE CREATIVE ECONOMY

This chapter aims to provide an overview of IP in the creative economy from a statistical approach. It considers challenges and data from several countries, which allow for some comparisons at the regional level. At the same time, it shows how important it is for the State to participate in improving the conditions of creative economy. Hence, it is worth considering the suggestions of experts such as Mariana Mazzucato and Joseph Stiglitz regarding the State's role.

2.1. Challenges according to the Special 301 Report

The "Special 301 Report" is a document that is frequently referred to in literature to determine whether or not intellectual property rights are protected and enforced in various countries worldwide. It is published annually by the United States government (Office of the United States Trade Representative, 2021). This report is based on research documents, data and opinions of key actors in the countries considered, although it does not account all nations in the world.

For this study, a review of the reports for the period 2015-2020 was carried out, considering all the countries included in the Report. The aim was to identify the most common challenges and problems faced by those who hold intellectual property rights, specifically in the creative economy (Annex 1). The results for each region (Latin America and the Caribbean, Asia, Africa, etc.) were compared, and the problems threatening investment in the creative industries were identified, namely:

- The difficulties identified as most recurrent were: (i) piracy (physical or material), (ii) online piracy (including signal piracy), (iii) enforcement; (iv) legislation and regulation, (v) intellectual property offices (lack of personnel, lack of trained personnel, etc.), (vi) ecosystem to incentivize IP creation, and vii) trafficking.
- The problems described above are not present in all countries or in all years.
- Online piracy is the most recurrent problem, especially in the three years prior to the preparation of this document (2018, 2019 and 2020). Specifically, in the case of the LAC

region, it appears more often in countries such as Colombia, Mexico, Paraguay, Peru and the Dominican Republic, among others. This may be due to the fact that these countries have greater Internet connectivity than other LAC countries. This also includes what is known as signal piracy (radio, for example).

- Another problem that appears repeatedly in all countries is the application or enforcement of the law for IP protection. This refers to the possibility for an intellectual property right holder to stop the unauthorized use of an IP right, including being paid for the damages caused, as well as imposing civil and criminal penalties on infringers. In addition, we consider the absence or minimal collaboration between intellectual property offices and those in charge of other legal areas, such as those responsible for arresting criminals.
- The previous point is related to the problem of intellectual property offices, although the focus here is limited to their operational and administrative capacity for processing protection and registration procedures.
- Another common challenge for countries is legislation, as suggestions for regulatory improvement usually arise, especially to update legal frameworks to better protect IP, as well as to broaden jurisdiction, especially regarding the Internet. This is a recent issue.

The Special 301 Report divides the considered countries into two main groups: Watch List and Priority Watch List. The first considers countries in need of change, reform or action. The second contemplates countries that require urgent action, or where respect and protection of intellectual property rights face serious problems. Table 12. shows the number of countries included in the Report in the first (2015) and last reference year of this section (2020), in three regions.[46]

Table 12. Region comparison in the Special 301 Report

Region	Watch list 2015	-: Priority watch list 2015	Watch list 2020	-: Priority watch list 2020
ALC	12	4	11	3
Asia	1	5	8	5
Africa	2	1	1	1

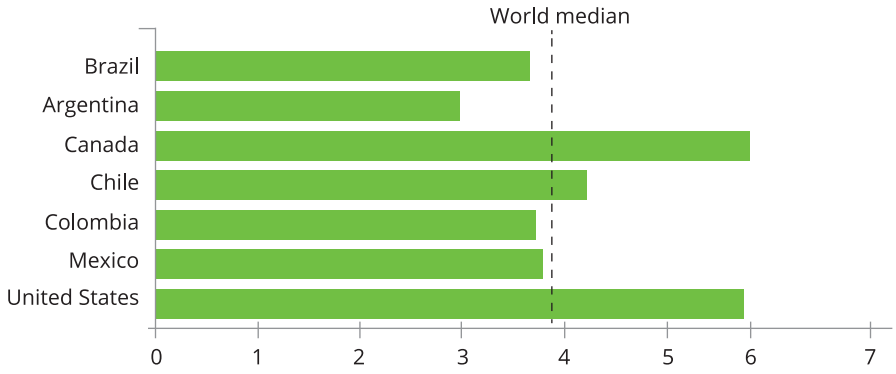
Source: Authors' elaboration based on the 2015 and 2020 Special 301 Reports (https://ustr.gov/issue-areas/intellectual-property/special-301/2020-special-301-review).

46 The Report did not consider all countries in the region in 2014 and in 2020, so comparisons in total terms are not recommended.

The report includes several LAC countries, which contribute the most to the watchlist. Some are known and recognized as important players in the creative economy, such as Brazil and Mexico who, according to ECLAC, are the two leading nations in cultural and creative industries in LAC (De Groot, Dini, Gligo et al., 2020). This situation should be considered by governments and creatives due to the negative effect it produces.

The Special 301 Report results agree with the ranking carried out by the World Bank with information from the World Economic Forum (WEF) to calculate how well IP is protected, where most LAC countries in the Report rank below the world average (World Bank, 2016). As a reference, Figure 6 shows a comparison between some LAC countries included in the Report and two of the countries with the highest levels of protection.

Figure 6. IP Protection



Source: Authors' elaboration based on World Bank TCdata360, Intellectual Property Protection (https://tcdata360.worldbank.org/indicators/entrp.ip?country=BRA&indicator=3375&countries=USA,CAN,MEX,CHL,COL,ARG&viz=bar_chart&years=2016&compareBy=region).

Now, according to Ahmed Lahsen and Piper (2019), one argument for increasing intellectual property rights protection (which is the proposal presented in each edition of the Special 301 Report) is that doing so promotes economic transactions, investment, and economic growth. Similarly, Sattar and Mahmood (2011) identified evidence supporting the fact that intellectual property rights contribute to economic growth in high, middle and low-income countries, although the level may vary.

One way to confirm this is to identify the impact of creative economy on the GDP. Although this indicator is made up of several variables, it can be assumed that, based on the above, the greater the protection of intellectual property rights, the greater the impact of the

creative economy on the national GDP. However, there are very few studies that identify the contribution of creative economy to LAC's GDP.

One of the efforts aimed at measuring the economic performance of copyright-based industries was undertaken by WIPO.[47] Based on this methodology, calculations were made for several countries in the world, including some in LAC, although the time periods covered vary substantially depending on each country. A recent calculation generated the results shown in tables 13 and 14 for some LAC countries.

Table 13. Estimated economic contribution of copyright-related industries to GDP

Country	2006-13[a]	2014	2018-19
Argentina[b]	4.70% (2013)	3.47%	3.62%
Colombia	3.30% (2008)	4.25%	4.24%
Mexico	4.77% (2006)	9.22 %	9.21%

Table 14. Estimated contribution to total employment of copyright-related industries

Country	2006-13[a]	2014[c]	2018-19[c]
Argentina[b]			1.70%
Chile		1.39%	1.69%
Colombia	5.80% (2008)	2.01%	2.14%
Mexico	11.01% (2006)	14.67%	17.53%

Source: Santamaría, Worthman, Álvarez Huitrón et al. (2021) (https://www.caiinno.org/wp-content/uploads/2022/01/Knowledge-economy-and-creative-economy-CAIINNO-BID.pdf).
Notes:
a Authors' elaboration with data obtained from Table 1.1, previous studies and data from the Guide on Surveying the Economic Contribution of the Copyright Industries, WIPO 2015 (https://www.wipo.int/edocs/pubdocs/en/copyright/893/wipo_pub_893.pdf).
b For percentage calculation, the annual item of "interdependent"" was not identified within Argentina's satellite account, so it was not considered in the 2006-2013 and 2014 columns.
c For the 2014 and 2018-19 calculation, in the case of Mexico, the 2014 and 2019 Economic Censuses of the National Institute of Statistics and Geography were used (https://www.inegi.org.mx/programas/ce/2019/). It should be clarified that the satellite account was not used because the data from this source are not disaggregated to the desired level for the calculation. We sought to explore creative industries in greater depth and the best way was through the contents of the National Economic Censuses. For the other countries, the national culture

47 In the case of LAC, calculations were made for Argentina, Ecuador, Jamaica, Mexico, Panama, Peru, and Trinidad and Tobago (https://www.wipo.int/copyright/es/performance/).

satellite accounts were used. For Colombia, the National Administrative Department of Statistics (https://www.dane.gov.co/index.php/estadisticas-por-tema/cuentas-nacionales/cuentas-satelite/cuenta-satelite-de-cultura-en-colombia/cuenta-satelite-de-cultura-y-economia-naranja-cscen-2014-2018p#creaciones-funcionales); for Argentina, the National Institute of Statistics and Census (https://www.indec.gob.ar/indec/web/Nivel4-Tema-3-9-47); in Chile, the Culture and Leisure Time yearbooks of the Ministry of Cultures, Arts and Heritage (https://www.cultura.gob.cl/publicaciones/cultura-y-tiempo-libre-informe-anual-2014/).

Moreover, in human history, the impact of the institutionalization and evolution of property rights, including their enforcement, has contributed to technological change, while encouraging the circulation of new creations, whether by inventors or creatives (Acemoglu and Robinson, 2015). One example is Venice, which was like the Silicon Valley of the 15th century, largely thanks to the creation of the first law in the world that recognized and protected intellectual property rights, which attracted a huge number of creatives, inventors and investors (Nard and Morriss, 2006).

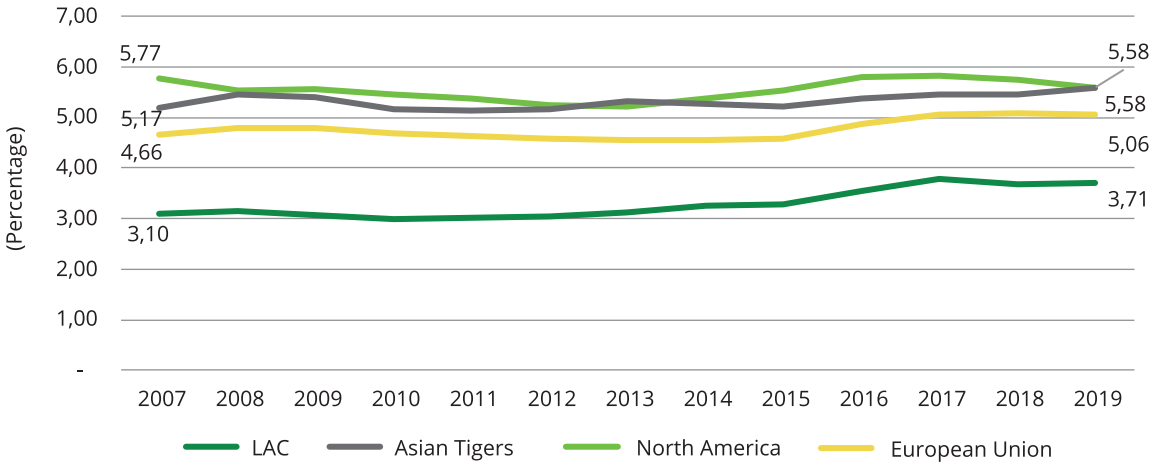
2.2. Statistical information for IP protection comparison

Literature review identifies some studies with enough statistical information to compare the enforcement of intellectual property rights in LAC with that of other regions. The World Economic Forum developed the Global Competitiveness Report (2018), which provides information on the extent to which IP,48 as well as private property49 are protected in the countries surveyed. Figures 7 to 9 show a comparison between the results of four regions, where scores of the countries belonging to each region were averaged, with 7 being the highest score and 1 the lowest.

48 The Forum's calculation was obtained from a survey of business leaders in the selected countries, where the responses to the question are evaluated on a scale from 1 to 7 (1=not at all and 7=to a great extent): "To what extent is intellectual property protected in your country?"

49 The Forum's calculation was obtained from a survey of business leaders in the selected countries, where the responses to the question are evaluated on a scale from 1 to 7 (1=not at all and 7=to a great extent): "To what extent are property rights, including financial assets, protected in your country?"

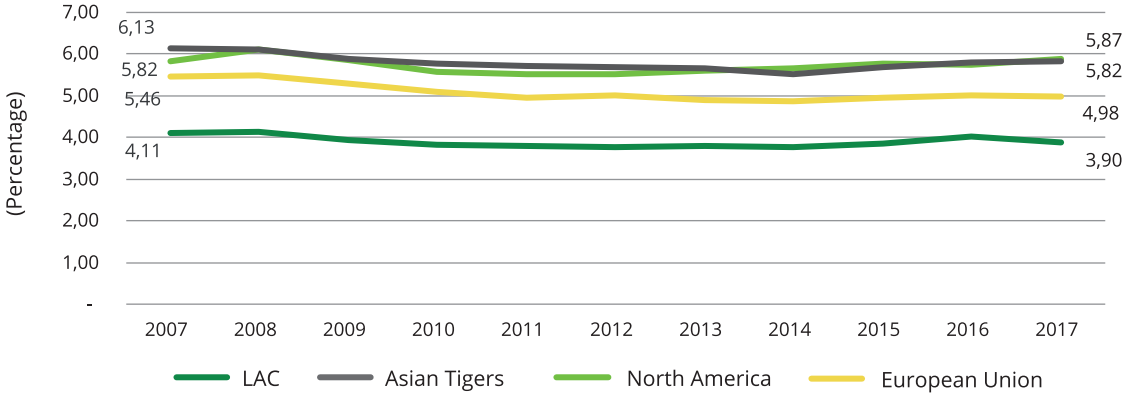
Figure 7. IP Protection in four regions



Source: Authors' elaboration with information obtained from World Economic Forum, Global Competitiveness Report (http://reports.weforum.org/global-competitiveness-index-2017-2018/competitiveness-rankings/#series=EOSQ052).
Note: LAC= Latin America and the Caribbean.

Among the regions included in the above calculation, LAC is below average in most of the years shown for countries where IP is considered highly protected. However, there are signs of an improvement, albeit a slow one, as between 2007 and 2019 the score rose from 3 to 3.7. Regarding property right protection, which includes financial assets, Figure 8 shows that LAC has remained above average in all the years under study. However, LAC is below the rest of the regions considered in the calculations.

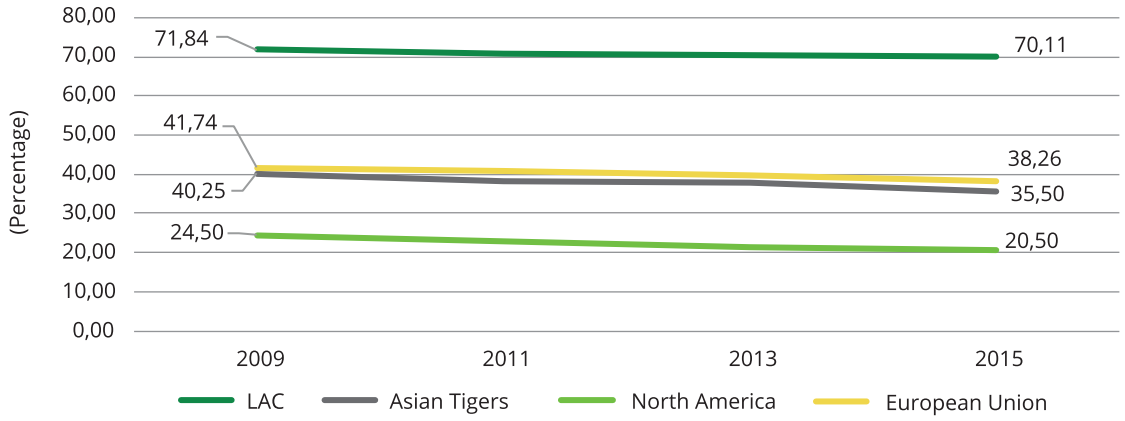
Figure 8. Property right protection in four regions, including financial assets



Source: Authors' elaboration with information obtained from World Economic Forum, Global Competitiveness Report (http://reports.weforum.org/global-competitiveness-index-2017-2018/competitiveness-rankings/#series=EOSQ051).
Note: LAC= Latin America and the Caribbean.

LAC's position in Figures 7 and 8 of the Global Competitiveness Report is due to several factors that cannot be covered in this study. An example of possible causes is the installation of computer programs without a license or authorization from the rights holder. In order to identify its impact, we used the survey conducted by The Software Alliance (2016), which shows the volume of unlicensed software installed (Figure 9).

Figure 9. Unlicensed software installation in four regions



Source: Authors' elaboration with information obtained from The Software Alliance, BSA Global Software Survey (https://globalstudy.bsa.org/2016/downloads/studies/BSA_GSS_US.pdf).
Note: The graph contains the average percentage of the countries in each region considered. LAC = Latin America and the Caribbean.

Figure 9 also reflects linear behavior in the use of unlicensed software and shows that LAC has the highest percentage among the regions compared. Another noteworthy finding is that the trend toward a change in practice that leads to an infringement of intellectual property rights has remained constant in LAC in the years under study. This is just one factor that may explain LAC's performance in Figures 7 and 8.

2.2.1 Foreign markets' and investors' perception of LAC countries

Internationally, there is a positive perception of LAC in at least two ways within the creative economy (UNCTAD, 2018): (i) as a generator of talent, quality creative goods and services, although this is limited to a few countries such as Brazil, Mexico, Chile, Colombia, or Argentina mainly, and (ii) as a consumer, although this depends on the type of products or services (for example, Argentina stands out for its book consumption).

According to Kyrkilis and Koboti (2015), decisions that motivate Foreign Direct Investment (FDI) are subject to factors such as protection and respect for intellectual property rights. Nunnenkamp and Spatz (2004) found that strong protection of intellectual property rights not only increases the quantity of FDI, but also influences its quality (e.g., the type of technology that enters a country). In addition, they found that good protection causes companies to increase their investment in R&D in the country in which they invest.

In line with FDI quality, according to Maskus (2000), weak protection of these types of rights affects the decision of foreign companies to engage with local companies for fear that they will not be able to defend themselves against a violation of knowledge and technology transfer agreements. Thus, it is no coincidence that the volume of exports may depend on the degree of strength of intellectual property rights protection (Dhar and Joseph, 2012). Therefore, the perception of national and foreign investors determines at least three decisions: (i) whether or not to invest; (ii) the volume of investment; and (iii) the type of investment.

However, to check whether intellectual property rights protection has an effect on FDI, a calculation was made based on the model designed by Nunnenkamp and Spatz (2004), which was corrected for this case and explained in Annex 2. Statistical information from 49 countries was used: seventeen from LAC and 23 from other regions. The data were obtained from the World Bank and the World Economic Forum. Table 15 shows the results.

Table 15. IP effect on FDI

Independent Variable	Coefficient	Standard Error	Statistical *t*
Intellectual Property Protection Index (estimate).	2.625158**	1.214384	2.161720

Source: Authors' elaboration based on Nunnenkamp and Spatz (2004), with data obtained from the World Bank and the World Economic Forum.
**Statistically significant at 10 percent.

The hypothesis expected in this model was to show that IP protection positively influences FDI and that if a country increases its guidelines to protect IP, FDI will increase at the same rate. The following can be deduced from the result:

- IP protection has a positive relationship with FDI; that is, when it increases its variation by 1, the FDI variation will increase by 2.625158.
- From the above it can be interpreted that the more intellectual property rights are protected in a country, the greater the FDI inflows will be.
- The alternative hypothesis that IP does not influence FDI is only satisfied at a 10 percent significance level.

That said, an investor also takes other elements into account. For example, Arias (2011) mentions the perceived fragility of democracies in LAC, or whether there is the risk of an authoritarian regime. Therefore, the international perception of the negative effects generated by political risks in LAC may condition foreign investment in the region, including when linked to the creative economy. It is thus essential that countries in the area eliminate the possibility of generating any kind of fear that governments may condition the free market, or affect it as a result of political changes.

Today, FDI prospects should be considered considering the COVID-19 factor. In this regard, according to ECLAC (2020), FDI in LAC decreased 36 percent in 2020, compared to the same period in 2019,[50] with the steepest declines occurring in countries such as Peru (72 percent), Colombia (50 percent) and Brazil (45 percent). Thus, the current situation of the countries, as well as the reaction of governments to reactivate the creative economy, could be key to attracting both domestic and foreign investors.

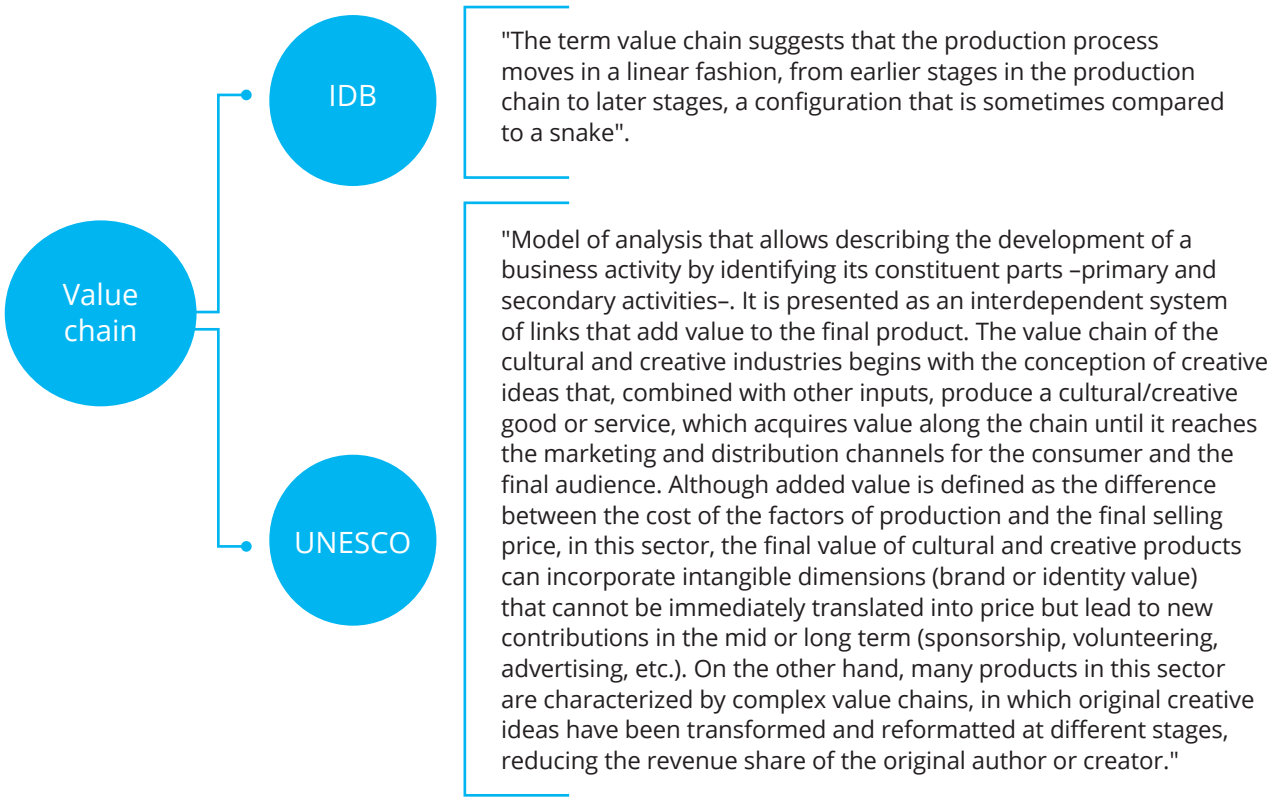
In conclusion, the protection of intellectual property rights does have an impact on FDI, and certainly also on investment by nationals. Evidence shows that this is not the only thing that determines the decision to invest in a LAC country; in other indicators, the region also faces important challenges that can motivate investors or scare them away. Therefore, countries must work on a number of issues in order to become attractive and receive better quality investments that bring other benefits, such as innovative activities, instead of just focusing on *maquila* or low value-added activities.

50 According to ECLAC, at the time of publishing its study, some countries considered the third quarter and others the second quarter.

2.2.2 Value chains and IP: unfinished business

We must be cautious when speaking of value chains in the creative economy, because although this concept is used in general terms, in practice there may be at least one chain for each cultural and creative industry, and they can even be subdivided into many others. In addition, they may vary depending on the characteristics of each country. This section addresses the topic in a broad and general manner but considers elements that could be applied to any value chain within the creative economy.
What are value chains? Figure 10 shows IDB and UNESCO definitions.

Figure 10. Value chain definitions



Source: Blyde (2014, p. 2) in the case of the IDB, and UNESCO (2010, p. 134).

Depending on the type of cultural and creative industry, IP may be present from the first steps in a value chain, and then throughout the entire process. For reference, Figure 11 is a general representation of IP within the music industry value chain as shown by UNESCO (2010).

Figure 11. IP in the music industry value chain

Source: Authors' elaboration based on "Policies for Creativity" (UNESCO, 2010) (http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CLT/images/UNESCOCulturalandCreativeIndustriesguide_01.pdf).

In addition to the structure and characterization of value chains in the creative economy, in all their complexity, digitalization is another key element that must be added nowadays. The COVID-19 pandemic has caused radical, profound and unexpected changes in some sectors. According to UNESCO (2021), digitalization has changed and will continue to change the rules of the game throughout the value chain of the creative economy by generating new ways of communicating, creating and working.

2.2.3. Threats and challenges in the creative economy value chains

First of all, it is important to keep in mind that certain threats affect almost any value chain in LAC industries, including cultural and creative ones. This study will approach the topic in a very general way, focusing on the industries covered by the creative economy. According to Arias (2011), entrepreneurs in the region face at least three obstacles in any industry:

1. The culture of LAC entrepreneurs is very dependent on the status quo, and fears an uncertain future (this obstacle may be one of the most complex to address and resolve).
2. Bureaucracy and arbitrary requirements are numerous and cumbersome.
3. There is a low level of trust due to legal insufficiency and distrust in institutions.

Points 2 and 3 are related to IP, since the process of correct and timely protection in value chains is often seen as a necessary but sometimes difficult step to carry out, as obstacles are frequently greater than the advantages perceived by creatives, which represents a problem. On the one hand, administrative procedures are complex or slow and, on the other, the lack of specialized advice both have a negative impact on the value chain of any creative industry, along with other situations analyzed in this publication.

Another challenge closely related to the above, according to Fariña (2014), is the high rates of informality in the creative sector. While informality is common in certain industries, this limits the ability of entrepreneurs or small businesses to convince large companies of their capacity to deliver products and services on time and under agreed conditions. In this sense, one challenge in IP is the barriers to efficient protection. For example, with the pandemic, several creatives were unable to register due to the lack of digital services in their countries, which in some cases caused them to stop investing, recording or contracting.

A further challenge, although also related to the above, is the practice of registering both the creations that can be protected through an IP figure and the related contracts. The lack of correct and timely protection generates or increases investor uncertainty, which affects the value chain in almost any industry, as it may cause litigation. According to WIPO (2017), legal certainty regarding ownership and contracts is key in the value chain, especially in the audiovisual industry. For example, one of the problems faced by Nollywood is that in Nigerian legal practice contracts and their registration were not common, so the lack of documentary evidence was constant and, as these were a requirement to initiate legal proceedings, creatives and entrepreneurs' capacity to exercise legal action was limited (Oh, 2014).

Another challenge has to do with the protection, monotoring, and collection of royalties in the digital environment. According to Ahvenniem et al. (2014), digital royalties in the music industry account for between one-third and one-half of profits; however, in the value chain, collecting and suing for unauthorized use of works is very difficult. Today, many creatives seek to be popular on the Internet, although as Lindvall (2013) points out, for several this has been a nightmare, because the way in which the Internet is integrated into the value chain is still new and unfamiliar to many, despite years of use.

In the digital environment, IP faces challenges especially regarding copyright in various value chains that have yet to be resolved, even in developed countries. The European Parliament (2016) has identified the following, among others: (i) exceptions where works can be used without infringing rights; (ii) jurisdiction when it is difficult or impossible to determine where a right was infringed; and (iii) data mining. The biggest threat is uncertainty for everyone involved, both creators and consumers.

On the other hand, the legal recognition of new ways to protect and control IP in the value chain, specifically the case of blockchain technology, is also a challenge. As per Cocorocchia,

Dunn, Hall et al. (2018), its effect on the creative economy can appear at various stages of the chain: in royalty collection, monitoring and even in the transfer of rights, for example. However, at present, no court in LAC recognizes this legally, which represents a threat to creatives, entrepreneurs and businesspersons who are already using it as a very valuable tool.

According to Calatayud and Ketterer (2016), another difficulty has to do with the poor performance of banking intermediation in LAC countries, which generates negative consequences for financing the productive sector and insertion in value chains. The reality of cultural and creative industries in LAC is that they rarely have access to credit or financing that would allow them to generate a credit history, and thus support their compliance with their investments, whether domestic or foreign.

Lastly, a new player, capable of substantially modifying several value chains, is also posing a new problem: AI. According to the European Parliament (Caramiaux, 2020), AI is already involved at all levels of the creative economy value chain (creation, production, dissemination and consumption). Moreover, this disruption impacts chains in at least two ways (Caramiaux, 2020, p. 4):

1. Shifting services generally performed by humans to AI-based algorithms, which raises issues in controlling and assessing the quality of AI-generated content.
2. Bypassing external expertise to empower the creator in order to open questions about expected changes in incentives for research and innovation and disqualification.

Creative systems that enable co-creativity or the emergence of artificial equipment currently have no legal certainty about their creations in LAC, which in turn affects the legal certainty of those who participate in the value chains. In this regard, two further challenges can be added: (i) identifying and assessing the degree of collaboration in the co-creation of the work (Karimi, Grace, Maher et al., 2018), and (ii) determining the type of intellectual property right applicable to the result of the co-creation. Much of what will happen in value chains where AI is involved depends on the solution to these issues.

3 || MAIN CHALLENGES FACED BY INTELLECTUAL PROPERTY IN THE CREATIVE ECONOMY OF LATIN AMERICA AND THE CARIBBEAN

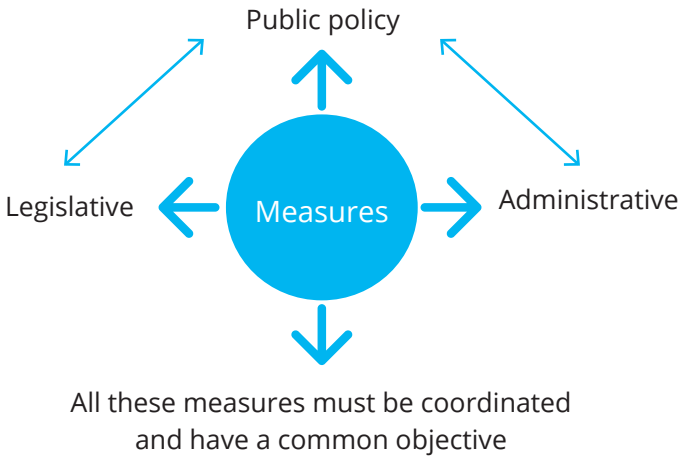
Despite the relevance of IP in the creative economy, there are significant challenges in the region that need to be addressed to be able to take full advantage of it. Inadequate protection, outdated legislation, lack of respect and support for intellectual property rights, as well as for the institutions in charge of these issues, have negative effects on the creative ecosystem, and therefore affect its viability.

This is why the most important challenges in the LAC region were identified and selected for this study. A detailed description of the methodology used and the list of IP experts consulted can be found in Annex 1. The objective was to get their views on what they believed to be the most important challenges facing IP in the creative economy, especially in LAC.

From the list of challenges, both the experts and the author chose those presented below as they might be the most urgent to address, due to the negative impact they have on the implementation and success of the creative economy.

Most of the recommendations can be carried out at the same time, so the implementation of measures should be approached in a comprehensive way, not separately, with the participation of all the necessary ecosystem stakeholders. This will increase the chances of success of the creative economy in the countries of the region. Figure 12 presents a suggestion of the type of measures that should be considered and the correlation between them, which exemplifies how one could impact another.

Figure 12. Measures to be considered for creative economy success



Source: Authors' elaboration.

This chapter is structured as follows: the challenges are explained and detailed in specific sections, examples of best practices are then presented for reference, and recommendations are given based on these practices.

Scope and limitations

Heterogeneity is one of the characteristics of LAC (ECLAC, 2011), so the feasibility, specificities and applicability of the recommendations set out in this study should be considered as general guidelines. Policies, actions or public interventions should be designed and implemented *ad hoc* depending on the features and institutional, economic and administrative capacities of each country.

3.1 Challenge 1. Access to the intellectual property system

This challenge can be approached from three perspectives:

1. Administrative: difficulties in carrying out the protection process and/or formalities.
2. Legal: lack of figures or inadequacy of existing figures to properly protect new creations or innovations.
3. Costs: this perspective is considered from a general point of view in this study.

1. Administrative perspective

Reasons limiting access:

- Unclear information on IP figures.
- Inability to respond to user inquiries in an effective and efficient manner.
- Services limited to physical or nonelectronic procedures, such as package delivery.
- Services limited to headquarters; lack of trained personnel.
- Online services that only contemplate certain IP figures.
- Limited capacity of online services to receive large files.

In relation to the first reason, one of the three problems Oh (2014) identifies regarding the optimization of copyright protection in Nigeria is authors' lack of knowledge of IP. This stems, in part, from the limited and inaccurate information on IP provided by the government, which affected access to the system. It was common to find disputes in which the authorship or validity of contracts could not be determined, as they were usually settled by word of mouth or otherwise were poorly drafted, causing problems for creators and harming the creative ecosystem.

At present, few countries have IP offices outside the capital city, so unless you live there, there is little chance of accessing government officials trained in the field. It is worth noting that Mexico is one of the exceptions, as its industrial property office set up regional representations to provide specialized advice (IMPI, 2016) and reduce an entry barrier to the system. In addition, visits are made to regional offices in neighboring cities, thus covering the entire country.

On the other hand, only a few countries offer services for registering types of IP online. Among these, not all allow the processing of the different types of IP (Table 16).

Table 16. Online services for various types of IP

Country	Online patents	Online trademarks	Online copyright
Colombia	Yes	Yes	Yes
Chile	Yes	Yes	Yes
Mexico	Yes	Yes	Yes
Peru	Yes	Yes	Yes
Argentina	Yes	Yes	Yes
Brazil	Yes	Yes	No

Source: Authors' elaboration with information from the intellectual property offices of the abovementioned countries, last updated as of March 1, 2022.

The online registration service represents a commendable effort, as it requires a significant investment of material, economic and human resources. However, much remains to be done. For example, one of the challenges for the countries that already offer this service is to increase the size limit of files (works) for registration (Table 17). If the file to be registered exceeds this size, it will not be possible to complete the process online.

Table 17. Example of maximum weight of a work for copyright online registration

Country	Maximum weight
Peru	Up to 25 megabytes
Chile	Up to 30 megabytes

Source: Authors' elaboration with information from the copyright offices of the countries, as of October 2019.

This sometimes limits or makes access to the IP system impossible for many creatives. Therefore, in the absence of action, solutions emerge from the private sector. One example is the "Safe Creative" service, which offers more innovative, efficient and advanced technological systems for the generation and management of evidence of authorship and related rights.[51] While these companies face challenges such as the risk of technological circumvention, they offer a solution to those who have not been able to access the system.

51 https://www.safecreative.org/about;jsessionid=node01omefnjg5zhkj178xvyohfq9oh4832.node0.

2. Legal perspective

Regarding the lack of types of IP or the inadequacy of those in existence, changes are necessary so that they correctly protect new creations or innovations that IP regulations do not yet recognize, especially in the area of copyright (Guerrero, 2017). These upgrades are not easy, but they are urgent.

In the case of recent phenomena, such as works created by AI: what protection options do LAC countries offer today for these types of creations?

Therefore, some countries analyze IP evolution and how the international community evaluates the implementation of its legislation while seeking benefits for the country's economy (Ola, 2014). Other priorities are striking a balance between regulation and both the current and future situation of IP, in terms of economic law (Gibson and Walbaum, 2015). Thus, in view of the new phenomena, it is wise to evaluate at least two options:

1. Whether it is sufficient to maintain existing figures and expand their sphere of protection.
2. If it is necessary to generate new types.

An example is computer program or software. When the innovation emerged, deciding how it should be protected was a challenge. And the following options were discussed:

- WIPO proposed the creation of a sui generis system, with which Japan and the European Commission agreed.
- In 1980, the United States opted for copyright (Samuelson, 2012).

Today, the U.S. option is used.

Although the regulation problem seemed to be solved, new challenges have arisen, as computer programs were linked to other copyrights, as happened with the audiobook. This new application created conflicts. For example, there were cases where the user bought a digital copy of a book to read on his computer, but used a program that read it aloud without the license authorization, which discontent and conflict with the book's author. [52]

52 "Copyright Law Changes That May Affect You". Stanford Libraries (https://fairuse.stanford.edu/overview/faqs/law-changes/).

Cases such as the above became a problem when the new ways of using software were not regulated by law. There was uncertainty as to whether or not the uses were legal , and it also seemed that new rights were emerging. Outdated legislation can limit access to the IP system, and this is why Alikhan (2000) suggests updating or reforming the law as well as the necessary structures, to enforce intellectual property rights while maintaining a balance with innovation to further encourage it.

3. Cost perspective

This issue can, in turn, be analyzed from different types of costs:

- **a.** Cost of official fees that intellectual property offices charge to handle the procedures.
- **b.** Costs for management or expert advice.
- **c.** Costs of enforcing intellectual property rights.

a. Costs of official fees

Some types of IP such as copyrights may skip the investment in the registration, while others such as trade secrets do not require any official payment. In the case of IP elements that do require registration to obtain an exclusion right (trademarks, patents, etc.), cost is defined by the government and, in theory, the reason is that the State grants a right for which payment is required both for registration and maintenance.

This payment is also justified due to the salaries and specialized technical knowledge of public servants. Given its characteristics, IP cannot and should not be managed by officials without technical knowledge in the field. This is not the only case, since there are several areas in which lack of knowledge can have serious consequences, not only for the institution, but also for users, consumers, etc.

b. Costs for management or expert advice

In this area, investment can be significant, sometimes more than the cost of official fees, but it is useful and on occasion very necessary. Standards and legal criteria are constantly changing, so experts usually take courses to update their knowledge in the field in their own country or abroad. In addition, in certain topics, cross-cutting knowledge from other areas, such as engineering, is required. It may even be necessary to know other languages, especially English in the case of patents. All this has an impact on the cost of services of field specialists.

In LAC countries, advice is not mandatory, nor is it a requirement for protection, but it is recommended in order to avoid mistakes that could result in higher costs. Several countries have decided that certain legal activities can only be practiced by certified or qualified professionals, which helps protect citizens, the rule of law and the administration of justice, as these IP advisors must meet certain knowledge standards (Solicitors Regulation Authority, 2015).

As an example for the case of patents, in the United States professionals must be approved and admitted to practice before USPTO. To achieve this, specific know-how and certain academic qualifications are required (IP Watch Dog, 2017). To this end, very precise guidelines are developed as well as certain orientations that can be used as reference to comply with all requirements and achieve admission (USPTO, 2018a).

c. Costs of defending and enforcing intellectual property rights

These might be the highest of the three. In general, the complexity of a lawsuit in this area forces creatives to seek the support of experts, who usually must have more experience than those who provide support in the protection process. In litigation, the support of the IP office is normally nonexistent, as it cannot intervene in favor of any of the parties involved because doing so may be deemed illegal.

Many factors can give rise to a lawsuit, from an incorrect registration process, to infringe someone else´s IP right, to even seek protection for a creation that the intellectual property office deems unprotectable. According to the American Intellectual Property Law Association, in 2007 (AIPLA, 2009) the average cost of a patent infringement litigation was USD 1.6 million, when the case ranged from USD 1 to USD 25 million.

In practice, concepts such as "sale of work" in copyright can be interpreted differently by the author and the buyer. Whoever buys a painting, for example, might believe that this gives him the right to modify the work without limits and without the need to inform the author. Legally this is not the case and, if this were to happen, it would certainly lead to litigation between author and buyer.

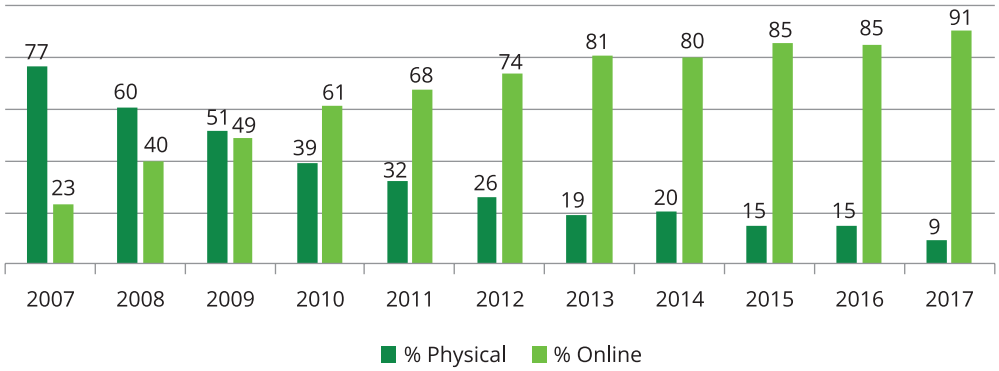
International best practices and recommendations to face the challenge

1. Use of ICTs as a tool for processing applications to protect IP

While information and communication technologies (ICTs) have posed challenges for IP, they have also brought opportunities such as using them to carry out the process for online registration. This eliminates barriers to accessing the intellectual property system, such as shipping costs or travel to complete procedures or obtain information. This service has become especially useful during the COVID-19 pandemic, as IP offices could continue receiving printed filings without putting their staff and creators at risk.

As an example of its viability to reduce or eliminate barriers to access the intellectual property system, there is the case of Colombia, one of the few countries that offers an online copyright registration service. Currently, more than 90 percent of the total number of registrations were obtained through online procedures (Figure 13). This even means going paperless.

Figure 13. Comparison of physical and online copyright registration in Colombia, 2007–2017



Source: Elaborated by the Copyright National Directorate of Colombia for the IDB.
Note: Online registrations also include those processed through the cellphone application.

The practice of online registration is being gradually implemented in the region as other countries such as Peru, through its National Institute for the Defense of Competition and Protection of Intellectual Property (INDECOPI), also allow registration, with the advantage that it can be carried out from anywhere, and at any day and time, since it operates 24 hours a day (INDECOPI, 2014). In order to simplify the registration process, INDECOPI (2014) complemented the initiative with a video explaining how to register online.

On the other hand, countries such as Canada are already making the most out of the innovations offered by ICTs to improve their services to creatives through blockchain technologies for the registration of copyrights (The Conference Board of Canada, 2018). Although this is a pilot program, it is good practice from a technical, administrative and legal perspective to explore taking advantage of new technologies to optimize the registration system.

On the other hand, private sector alternatives have emerged that are gaining relevance for users in the market, such as IP passport. Beyond the debate on the legal scope of their registration services,[53] they offer, for example, the service of registration and publication of copyrights by which they grant a certificate for proof against third parties, since registration is guaranteed by a system of multiple fingerprints and time-stamping (Safe Creative and WIPO, 2011).[54] The IDB has already conducted studies to identify the impact of blockchain on the music industry (De León and Gupta, 2017), identifying a wide variety of functions and actions for future collaboration.

According to De León (2019), blockchain is useful for managing and protecting IP. It helps to safeguard the confidentiality of trade secrets and to prove the authorship of an invention or artistic work. It could also speed up the registration process and IP protection.

In this respect, a Chinese court recently ruled that registration of several authorial works made through blockchain was valid, so that this helped as legal evidence to prove an infringement (Case of Dispute over Right of Dissemination over Internet, 2018).[55] In the United States, the admission of blockchain as evidence in litigation has been approved in some legislations (Code of Virginia, 2019).

53 It is important to point out that both the need and the way of registering intellectual creations vary depending on the type, and even the country. In the case of copyrights, all IDB borrowing countries are members of the Berne Convention, so registering to obtain copyright is unnecessary. It is enough to fix the work on a material support.

54 The service offered is an option to protect and, especially, to manage the works through the monitoring of licenses or permits, among other activities. (https://www.safecreative.org/about and https://www.ippassport.io/cgi-sys/suspendedpage.cgi). Moreover, in cases such as copyrights, it is especially useful since registering in an office to obtain a right over a work is not required.

55 More details available at Case of Dispute over Right of Dissemination over Internet: http://english.court.gov.cn/2019-12/04/content_37527759.htm.

Finally, another recent type is the Non-Fungible Token or NFT.[56] Just as a person can boast of having an original and unique work with the author's signature, something similar can happen through NFT, but instead of an autographed signature, the backing is the blockchain that records the information about authorship. Their use has grown significantly, prompting various specialists to analyze their viability[57], challenges[58] and risks;[59]. Either way, the truth is that they are helping to solve some of the problems that certain countries have not been able to resolve.

Recommendations for taking advantage of ICTs

- **Use ICTs as a tool to carry out procedures or formalities for the protection of IP elements online.** This could eliminate certain entry barriers in countries where the service for carrying out procedures or formalities is provided only in one city or headquarters, which entails a significant investment of money and time for creators, who most travel or send documents through courier services. To enable ICTs to be used for this purpose, reforms in legislation or regulations are needed.
- **Ask for support and learn from others.** In countries that have not yet implemented this service, it would be very useful to talk to others that have done so, both in the LAC region and elsewhere, in order to learn from their experiences. In some cases, a country could provide free of charge or at a lower cost the software it developed for its own works registration service or other IP elements, as well as technical advice for its implementation. This practice has already been carried out in the region with good results, such as in the case of the Intellectual Property Office of Trinidad and Tobago, which provided training to neighboring countries such as Belize, Suriname, Antigua and Barbuda and Barbados (Intellectual Property Office of Trinidad and Tobago, 2018).
- **Analyze before implementing.** Any office seeking to use ICTs must consider among other issues the authenticity of digital records, the ways in which online payment

56 Fungibility refers to the possibility that an asset can be exchanged or substituted for a similar one having the same value, so here it would be the opposite, since each token is supposed to be unique and irreplaceable for something similar. It applies a similar logic to a painting of which only one original work exists.

57 While its use helps to solve certain protection and transaction problems, there is sometimes confusion about what is being protected and marketed, as in the case of Tim Berners-Lee's WWW: https://www.technollama.co.uk/can-sir-tim-berners-lee-sell-an-nft-of-the-www-code.

58 One of the challenges is that it can sometimes be very difficult to verify whether the person claiming to be the creator of the tokens really is, especially in cases where it is hard to validate their identity.

59 One of the important points about NFTs is the scope of the rights being acquired, as well as what can be done with that right, particularly when it comes to digital art, as the circulation of the work online and even its modification is difficult to control.

systems will work, the authentication formalities, as well as the legality of digital signatures. Security in the handling of information, both in terms of confidentiality and the use of personal data, and the risk of cyberattacks, are also important in order to be truly prepared.

- **Adapting platforms to new needs.** In countries of the region that already have the service, at least three challenges were identified that should be solved, and would have allowed IP offices to continue receiving registrations during the COVID-19 pandemic: (i) a very large size (megabytes) of work makes it impossible to use the online service; (ii) online registration is not suitable for all types of work; (iii) strengthening security measures to ensure the privacy of the data of creatives, as well as that of any other user and of the works or any IP element for which the online service is used; and (iv) a user-friendly format, even for those creatives without prior knowledge.
- **Thinking about the future online.** The private online registration service provides a certificate that could constitute evidence in case of trial (Alba, 2015), but it certainly would not be accepted as evidence today, at least not legally, in all countries of the region. It would be convenient to analyze the feasibility and method in lawsuits for accepting more digital or electronic public evidence (issued by the government), or private evidence (issued by a company), looking at the increase in the use of ICTs both to create and to monetize, commercialize or consume, including the violation of intellectual property rights on the Internet. Internet-based business was growing significantly before the COVID-19 pandemic, but during and after it will change consumer habits with IP content faster throughout the LAC region.

2. Tools to provide clear information on types of intellectual property

An example of good practice is the UK Intellectual Property Office (IPO), which has a website section that explains in a very simple, brief and illustrated manner the most important elements of interest to creators or inventors.[60] Another example is France, whose National Institute of Intellectual Property (INPI) developed an interactive portal[61] that, in addition to being very attractive visually, allows users to identify whether they have a patent or another type of IP by taking a test consisting of a set of questions.

60 The Office explains very concretely what each element is and explains with examples (http://www.ipo.gov.uk/blogs/iptutor/creative-copyright-part-1/).

61 The Institute allows interaction with the system so that the user can identify for himself whether what he has created is a patent (https://www.inpi.fr/fr/feuille-de-route/les-etapes-de-votre-projet).

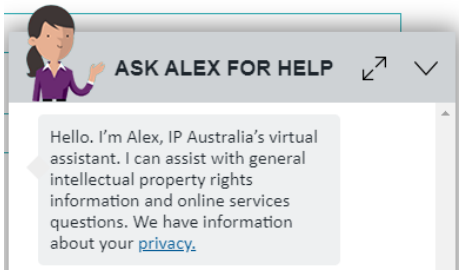
To reduce the negative effects of the challenge of IP unawareness, WIPO has developed a series of publications that explain "how to make a living in creative businesses".[62] It covers topics such as creative business management (Xavier Greffe, 2006), IP management in the advertising industry (WIPO, 2011c), the importance of copyright in film distribution (Renault and Aft, 2011), and even IP management in the book publishing industry (Seeber and Balkwill, 2007).

Some countries in the region are already producing simple, easy-to-understand and attractively designed manuals or guides to explain IP issues to creatives. For example, in Peru, a copyright guide for musicians with these characteristics was developed (Iriarte and Medina, 2013).

Another case is Nigeria, which designed and disseminated a "Handbook on the Use of Copyright for Small and Medium Enterprises" (Nigerian Copyright Commission, 2011). This was useful to implement new policies and regulations that have been updated for some time (Federal Republic of Nigeria National Assembly, 1993). It also helped reduce conflicts linked to copyright licenses by explaining basic elements the author and the licensees of works had to contemplate for licenses to be legal. This was an asset in educating and establishing a culture of registration in the country.

ICTs have also experienced this issue through AI, as did the Australian Intellectual Property Office with Alex, an animated character that provides advice to users.[63] Its implementation resulted in the reduction of up to 5,000 calls per month, when previously the monthly average was 12,000 (Barbaschow, 2019). In addition to receiving several awards, possibly the success of this initiative lies in the fulfillment of its objective: to correctly resolve doubts, achieving 84 percent satisfaction (Kelly, 2018).

Image 11. Alex, Australia's virtual assistant



Source: https://www.ipaustralia.gov.au/beta/virtual-assistant.

62 https://www.wipo.int/edocs/pubdocs/en/wipo_pub_cr_2017_1.pdf.

63 You can interact with Alex from the office home page (https://www.ipaustralia.gov.au/beta/virtual-assistant).

The involvement of AI is becoming increasingly relevant in the IP world, at least from two perspectives: as a tool to create types that are susceptible for protection under some form of IP and as a tool to help manage IP.

WIPO has been using it in various ways for some time; for example, to translate and manage the enormous amount of data generated especially in patents. In the words of Claudio Cocorocchia, who focuses on AI at WIPO: "as data increases, more value can be obtained from innovation and creativity; IP offices can play an important role in producing value for their IP ecosystems, and using artificial intelligence to extract this value is a very coveted skill and activity."

Recommendations for providing clear information on types of IP

- **Increased education and awareness.** Educational and awareness materials or portals on how to use IP in the creative economy should be provided. Ideally, the information should be designed based on the local context of each country. Materials and portals should have visual design and content that is easy to understand for businesspersons and creative entrepreneurs.
- ***Ad hoc* documents.** Each type within the creative economy requires an analysis of how it relates to IP, so it would be best to prepare specific documents for each case, such as manuals, instructions or guides. This can be done in collaboration with other actors such as the IDB, or offices in other countries. An example is the "Copyright Guide for Video Game Creators and Producers" (Iriarte and Medina, 2013),[64] a collaboration between INDECOPI and the United States Agency for International Development (USAID).
- **Updated information.** Technological advances produce constant changes in the relationship between IP and the creative economy, hence the need for the creative community to have access to the latest administrative and judicial criteria, laws, legal reforms or policies on the subject.
- **Expert advice.** Although manuals or guides facilitate the understanding of IP, and may even enable some creatives to carry out certain procedures on their own, this type of document should not be promoted as a tool to completely replace expert advice.

64 This INDECOPI initiative is very interesting because the guide is easy to understand and its design is reader-friendly (https://www.indecopi.gob.pe/documents/20182/143803/GDA_creadoresProductoresDeVideojuegos.pdf).

- **Harnessing AI.** This is not a simple process; however, countries in the region can seek the support and experience of other offices, especially WIPO, which has carried out very useful developments, ranging from specialized translators to automatic classification or file management. According to WIPO's Claudio Cocorocchia, by the end of 2019, WIPO had already licensed various AI systems to 17 organizations, especially the translation service. In addition, it could provide support in something as important as change management regarding functions of the employees since implementation will most likely require training and a change of functions to optimize their activities. Leverage must come with good human resources management, since this does not mean that jobs will be lost, but rather that they will be more efficient, as happened at WIPO.
- **Analysis of the scope of AI involvement.** Several elements should be examined when a government uses AI; for example, issues of accountability, ethics and trust. The European Union is one of the sources that can provide experience and guidance to LAC government offices. More recommendations on this topic are presented later in the section on AI, but an important contribution to this challenge that should also be considered by governments are the "Ethics Guidelines for Trustworthy Artificial Intelligence" (European Commission, 2019). These guidelines pay particular attention to the requirements needed to ensure trust in AI to be used by governments.
- **AI-aided decisions.** If a government decides to use AI as a tool for IP decision making, it must ponder several factors ranging from human rights to making the use of programs transparent to users . Likewise, it is essential to be aware of the biases the program may have, in order to avoid discrimination.

3. Alternatives to reduce the administrative costs of protection

Although administrative fees charged by intellectual property offices cannot be eliminated, some countries have chosen to offer benefits in the form of discounts, preferential rates and even cost elimination for first-time applicants (Table 18). The United States offers a 75 percent discount on the payment of official fees to microenterprises (USPTO, 2018b), which are legally considered as such.[65]

65 The American Invents Act establishes a microenterprise to be in terms of the special treatment offered by the USPTO, which is different from other types of microenterprises (https://www.uspto.gov/patent/laws-and-regulations/america-invents-act-aia/fees-and-budgetary-issues#heading-2).

It comes as no surprise, therefore, that USPTO's independence is being proposed in the United States. Financial reports show that this is possible (USPTO, 2018c). Its usefulness is seen in situations such as the recent closing of U.S. government offices, as the USPTO was free to decide to continue offering its services on a regular basis thanks to its access to money collected (USPTO, 2018c). As early as 2017, it was proposed that the USPTO become an independent agency (Quinn, 2017), as is the National Aeronautics and Space Administration, better known as NASA.

Table 18. Some LAC countries that have implemented discount policies

Argentina	Mexico	Ecuador
The service is free when it is the first song of an author, and under certain conditions the benefit allows registering up to 15 songs[66]. In addition, the portal shows that it is a short process, and explains it in very simple language. This reduces the perception of difficulty in accessing the IP system.	A 50 percent discount is granted on items such as patents, provided that the applicant is: (i) a micro or small business; (ii) a public sector scientific or technological research institute; (iii) a university; (iv) a government institution; or (v) an independent inventor (IMPI, 2018).	A 50 percent discount is provided on certain administrative actions such as the registration of databases, audiovisual works and computer works (CEDEPI).

Source: Authors' elaboration with information from the copyright offices of the countries mentioned above.

Recommendations to reduce administrative costs of protection

- **Evaluation of the implementation of incentives.** Discounts or incentives of various types that are in place in some countries reduce the entry barrier in terms of registration costs, and generate an additionality, or multiplier effect. Before implementing them, feasibility and the best possible option should be verified by learning from experiences in other countries. This, in turn, must be complemented by providing information and an evaluation to identify the impact of incentives.
- **Administrative independence.** In places where the IP office has sufficient income to achieve some financial independence, economic incentives could be increased or improved. Collaterally, this would allow the administration to react more quickly to new protection challenges. On the other hand, certain decisions concerning income

66 https://www.argentina.gob.ar/servicio/registra-tu-primera-cancion.

goals could be taken , such as payment for employee training. This would be very beneficial to the creative economy in the region, as employees could gain useful information and experience on how to approach new creations.

- **Expert accreditation.** With respect to the costs of private advice or management, in order to reduce the problems arising from poor advice and justify its cost, countries in the region could ask those offering services in this area to demonstrate their knowledge through proven experience, academic qualifications in the field, or even certifications.
- **Promotion of pro bono activities.** This type of practice is common in developed countries and could be encouraged among IP associations or professionals. They must go hand in hand with a well-developed public policy in order to prevent malpractice, and to avoid damage to the market for specialized services. As an example, some time ago, the World Economic Forum and WIPO implemented the Inventor Assistance Program, which aims to help inventors and micro-enterprises in some developing countries to obtain pro bono expert advice (WIPO, n. d.).

3.2 Challenge 2. Monetization of creations protected or protectable through intellectual property

Monetization, understood in this case as obtaining economic and non-economic retribution, usually in the form of royalties, from the exploitation of intellectual property rights, is one of the most common challenges facing creatives.

Several conditions determine the possibility of monetizing IP. Among the most common for the creative economy are the following:

- **Depending on the type of IP.** As already mentioned in the first chapter, each IP type has characteristics that make it different from the rest, ranging from its nature and term of protection to its geographical scope. Sometimes, this makes the ways and possibilities of monetizing certain elements more complicated, costly or limited than others.
- **Depending on market type.** In some countries, the film industry is much more important than creative tourism, so the chances of monetizing a creation that has the film industry as its niche are likely to be greater than for a creation that may be applicable to tourism, or to another underdeveloped or uninteresting area.

- **Based on mandatory regulations.** Occasionally, transactions involving IP items, which are viewed as intangible assets from a tax or accounting perspective, must comply with certain regulations that may motivate or hinder business. Another scenario is exporting or importing into a country that requires excessive payments, requirements or formalities to allow the entry or circulation of creative products, as this increases costs and certainly also the difficulty of marketing creative products or services. As an example, a country might not allow the exhibition of a certain film in its territory, significantly reducing the possibility of monetizing the work.
- **Based on commercial practices.** Sometimes certain practices take the form of unofficial regulation, but are recognized and commonly applied by a sector, the market or the consumer. An example is the bad practice of not paying for the use of works such as music in restaurants, bars, hotels, etc., which hinders the possibility of monetizing IP, especially copyrights.
- **Based on the fame of the author or rights holder.** In general, it is easier for well-known creatives to monetize their creations, or at least being famous increases the chance that investors or possible interested parties will give them the opportunity to show their creations and be more certain about the return on their investment. Something similar can happen with the economic rights holder, whether it is a person or a company with a good reputation, since the public trusts the creator or work selection that the company puts on the market. So, if consumers plan to invest their time or money in watching a movie, they are likely to choose the option offered by well-known companies (economic rights holders). "*Vendiendo al artista, no el arte*" [Selling the artist, not the art] is an article where Blumenfeld (2019) addresses the importance of the artist as a brand, which has a direct impact on the selling value.
- **Depending on available funding.** A very useful tool to support creative ventures and monetize IP is *ad hoc* funding. Options such as venture capital provide risk funds to businesses or undertakings that commonly seek to invest in IP elements, or leave their creations (works, trademarks, patents, etc.) as collateral. Obtaining financing not only provides access to funds to move forward with a project, or to get out of what is known as the "valley of death", but also provides further added value (World Trade Organization, 2015). It is not common for commercial banks in the region to trust intangible assets; tangible assets (houses, land, etc.) are preferred as deposit guarantee funds.
- **Depending on innovation or novelty perception.** Without debating these concepts or viewing them as synonyms, the possibilities of monetization will vary depending on

how novel or innovative a creation is considered to be. It is also based on the added value it produces for the user.

- **In terms of enforcement of intellectual property rights.** This refers to two general variables: (i) consumer violations through schemes such as piracy, and (ii) ways of enforcing intellectual property rights through legal or administrative means. To the extent that one or both variables increase or decrease, they will also have a positive or negative impact on monetization probability, as the risk of recovering or increasing the investment rises or falls, respectively.
- **Depending on who oversees monetization.** Monetizing IP in the creative economy requires professionals in charge with the necessary knowledge, experience and skills. Otherwise the possibility of monetization is reduced. Sometimes the author or the economic rights holder can handle these issues on their own, but often the involvement of a consultant is crucial at different moments, from negotiating IP licenses to generating marketing strategies.
- **Based on uncertainty.** Innovations or new uses of creations or inventions are often put on the market with no regulation in force to set the standard from a legal standpoint as to what the consequences of their exploitation are. This causes uncertainty about their application. On the one hand, there is the example of creations that use AI as support, such as the case of "The Next Rembrandt" Project that will be described in the next section (Image 12). And there are also those that use traditional knowledge or cultural expressions.

International best practices and recommendations to face the challenge

1. Promoting innovation and novelty in the creative economy

The battle for market share is not an easy one, and once you get there, the real fight is just beginning. This is part of what Schumpeter's "creative destruction" represents, regarding the constant struggle for the innovation of products or services to replace obsolete ones, which sometimes includes the companies that brought them to life. Those seeking to innovate must be prepared for what it entails.

This is why it is useful to understand the concepts and the difference between novelty and innovation, since policies and strategies can be designed based on these in order to help creatives monetize the IP related to their creations. On the other hand, creatives must also do their homework and study about these issues to know how to

innovate or generate novel creations, and even verify if such a search is convenient. Another best practice is to learn about the results of the experiences of programs and public policies in other countries, as it helps to identify what went right, what went wrong, the lessons learned and even whether something can be taken up again in another country and how.

For its part, the OECD has conducted studies and made policy recommendations about innovation and economic development systems related to national intellectual property systems, such as that of Colombia (OECD, 2014) or Kazakhstan (OECD, 2016), which could be useful for LAC countries. The first interesting recommendation is the establishment of a council to provide support in the design of policies that contemplate strategies to facilitate monetization.

> Although intellectual property offices have experts in the field, they do not necessarily have experience in designing public policies focused on creative economy, hence establishing a council could be a good idea.

Finally, statistical and economic information related to IP is essential to identify areas in which innovation can take place. It also provides learning and useful data for its monetization, especially on issues such as the value chain. In this regard, the Ministry of Finance of Argentina has published *"Informes de cadenas de valor en las industrias culturales"* [Reports on Value Chains in Cultural Industries] (Ministry of Finance of Argentina, 2017), which can be used as reference to locate areas of opportunity to monetize IP.

Recommendations to promote innovation and novelty

- **Use of AI.** AI should be leveraged to: (i) support the analysis process in activities such as data review; (ii) identify trends and areas of opportunity; and (iii) design and implement actions, programs and policies (somewhat similar to WIPO's AI technology trends study [2019]). The use of data and AI is a useful and novel practice in policy design and decision making (Colson, 2019), although countries in the region need sufficient data for this.
- **Analysis of previous experiences.** There are already studies on public policies focused on innovation and the creative economy that contemplate IP participation. Sell (2004) has written about the evolving role of IP in policy. Some conclusions are the

uniformity of intellectual property policies across countries, and the implementation of higher protection standards as a requirement for trade and investment agreements to take effect. Wiens and Jackson (2015) discuss the impact of overly weak or harsh intellectual property policies, noting that the ideal is to seek a balance, as moving towards extremes in general can reduce innovation incentives. They also indicate that causes and practices inhibiting innovation should be analyzed in order to design policies or legislate in this regard. An example is keeping patents for the purpose of threatening or suing for possible infringement, expecting payment for not doing so instead of putting the invention into practice since a right was granted for that purpose. In addition, although the idea is not to start from scratch, it is not advisable to replicate without analyzing the context of the place where the policy is to be implemented.

- **Role precision.** The diagnosis and policy should bear in mind where and how IP is involved, to define the public intervention approach required. In this case, the participation of a board of advisors can be very useful as they are able to contribute with their vision as members of the value chain (academics, businesspersons or entrepreneurs), and present ideas on actions that can help innovate and monetize IP.
- **Investments in projects that produce general-purpose technologies.** According to Bresnahan and Trajtenbergb (1995), these technologies are broad, have an inherent potential for technical improvements and open the door to increasing returns. According to Bresnahan (2012), such a technology, which also covers copyrights, induces others to invest in developing complements, whereby a country could succeed in developing several creative works or inventions thanks to the trigger effect of this technology. Jovanovic and Rousseau (2005) give examples of such technologies: electricity, internal combustion and information technologies, among others. At the same time, they point out that although these are radical changes in the world, they can be used as a basis for innovation. New technologies have recently emerged, such as AI or possibly blockchain (which were mentioned earlier). Although these new technologies may not have appeared in any country in the region, this does not mean that they are not applicable , quite the contrary. A starting point is already in place, so a government could invest in leveraging these types of options to develop new applications or technologies to benefit the creative economy.
- **Constant expert presence.** Members of the intellectual property office and judges, among others, should be consulted to know the criteria required to protect the type of innovations before promotion. If there is little clarity in this regard, it would be wise

to evaluate the viability of continuing with a support policy or program, as uncertainty could undermine the possibilities of monetizing the resulting IP.

- **Weak or strong innovation.** Designing or adopting criteria to define whether there is a weak or strong innovative or novel element can be useful. In Teece's (2018) view, weak elements are difficult to protect because they are easily codifiable and IP legal protection is ineffective, while strong elements can easily be correctly and fully protected through IP. The stronger they are, the greater the chances of monetization. This is why it is crucial to identify when the system is on the right track.
- **Innovation is not a miracle.** It is essential not to focus expectations on short-term results, but to contemplate the design of policies with medium and long-term effects.
- **Support to adventurers.** Designing and implementing financial and non-financial support and incentives are recommended in order to test concepts, design prototypes or access expert advice for protecting and even monetizing IP. This involves designing programs to identify, define and improve the value chains for integrating new products or services.

2. Support in business generation, marketing and monetization

Understanding how to do business is not easy, but some examples can help explain the process. (Table 19). Another best practice is implemented by the Canadian Intellectual Property Office, which explains through the presentation of cases how a small business created a work, protected it, obtained royalties and is now ready for the future by applying different IP functions with an emphasis on creative industries (Canadian Intellectual Property Office, 2019). The Office went further and in 2019 it produced an interactive guide, "Plan your IP Strategy"[67], that can be used as reference for designing a strategy on how to use IP as a business.

67 This guide is available at the following link: https://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/wr04563.html.

Table 19. Examples of initiatives in other countries to encourage monetization

Europe	The European Intellectual Property Rights Helpdesk created and published documents such as "IP in Business Plans" (European IPR Helpdesk, 2015).
United Kingdom	Online courses were designed to help the public learn about IP in greater depth, as well as how to use and leverage it to do business (UK Intellectual Property Office, 2019).
Chile	A National Plan for the Promotion of the Creative Economy was designed with a commercial perspective, which includes IP (Consejo Nacional de la Cultura y las Artes, 2017).
Indonesia	The Agency for Creative Economy was recently created (Jewell, 2019), whose main purpose is to develop an ecosystem to foster and grow creative businesses, of which IP is a part.
Colombia	An entire state policy was developed around the orange economy (Ministry of Culture, 2019), called *"Colombia Crea 2030*" Strategy (Government of Colombia, 2019), which addresses IP participation and other actions that will help its monetization.

Source: Authors' elaboration based on information obtained from various sources cited in each table.

Finally, another best practice has to do with being clear and precise about how to design new policies that facilitate the monetization of IP related to the creative economy. Japan is an example, as it developed a format for policy recommendations with tables, diagrams and steps showing what needs to be done in this matter, as well as why, when, where and how (Japan Patent Office, 2008).

Recommendations for generating business, marketing and monetization

- **Putting each piece in its place.** *Ad hoc* guides should be designed to the reality of each creative sector and each country.
- **Attract the participation of many actors.** Encourage the involvement of universities and public and private incubators, as well as investors, in order to share experiences, expand and improve the creative ecosystem. As an example, in Peru (DAFO, 2016) and Colombia (PROCOLOMBIA, 2016) events were held to learn how to monetize films and

music in collaboration with the U.S. Patent and Trademark Office. The way in which options such as Spotify and Google Music work was also discussed, as well as the legal considerations required to take advantage of these options.

- **Train the trainers about IP in cultural and creative industries.** It is essential to develop policies and strategies to train public or private incubators specialized in creative and cultural industries. Assessment and training programs should provide tools that allow entrepreneurs and business people to learn about issues such as rate of return.
- **Design measures for a limited budget.** Given that the budget is usually limited, it would be best to invest efficiently. The objectives and methodology for the projects or programs to be supported should be established in advance in public policy. Existing options could be taken as a reference, such as that of Ivanko (2018), who designed mathematical formulas to define the number of products that must be sold to achieve a fair monetization for an IP element. Another option is business models such as the "Intellectual Property Business Model" (Ferriani, Garnsey, Lorenzoni et al., 2015). In general, protection of the IP elements should be required as a condition for receiving back-up financing.
- **Conduct an auction; yes, an auction.** There is evidence that copyright auctions have been held since the 19th century; for example, for music (Towse, 2016). But do they work? In 2017, a copyright catalog with songs from "Sesame Street" was auctioned for USD 580,000 (Rys, 2017). To better benefit from auctions, valuation and other aspects must be taken into account (Andrzejewski, 2010), and their feasibility and application should be analyzed, especially from a legal perspective.
- **Create collective management organizations.** In line with the WIPO toolkit (WIPO, 2018b), the recommendation is to draw on their experience to identify best practices and challenges to monetize IP, as well as to promote diligent, efficient, non-discriminatory and transparent services regarding the administration, use, collection and distribution of profits. On the other hand, the implementation of best practices should be promoted to avoid limiting creative artists in the monetization of their works. Some examples are: (i) publication of information related to the operation (memberships, conflict resolution procedures, policies on deductions and distribution, total remuneration paid, etc.); (ii) establishment of objective and clear conditions for not accepting members; (iii) respect for the bylaws; (iv) improvement of the conditions for changing or terminating the relationship with members; (v) no imposition of obligations contrary to what has been agreed by the rights holders; and (vi) permission for all members to participate in the general assemblies.

3.3 Challenge 3. Changes generated by technological evolution sometimes outpace legislation, and the updating process is not as fast as evolution itself. Artificial intelligence considerations

While advances in technology generate various benefits, they are generally accompanied by challenges in terms of the way in which current legislation applies to them. Specifically, speaking of IP, the debate arises as to whether there are types of IP under which they can be protected, whether those in place are adequate or sufficient, and even whether the form of protection in one country is better than another's.

Thus, WIPO Director General Daren Tang, in the third session on AI and IP, stated that "the future of innovation is driven by new emerging technologies such as artificial intelligence, advanced robotics and quantum computing. A strong artificial intelligence sector needs a strong intellectual property system" (WIPO, 2020).

In the constant hunt for innovation, legislation, treaties and regional and international bodies in charge of regulating IP are often overwhelmed. As a result, modifications, reforms, research, and new policies have been generated to provide legal certainty to the world's creators and inventors. The task is difficult, yet necessary in a field that deals with innovation and creativity on a daily basis.

Some creative economy areas originated years or even centuries ago, such as theater (Oliva, 2002), while others, such as video games, are much more recent, but both must comply with regulations that are not necessarily up to date. The requirements and formalities for protecting IP have also changed, from when the church had to conduct an examination in order to grant copyright for a book centuries ago (Paschkes, 2005) to the possibility of online registration today.

The relationship between regulation and innovation is not new. Therefore, the timely reaction of all involved and interested parties is essential to fill the void and uncertainty caused by the lack of updated regulations. This can be carried out through *ad hoc* policies or legislation in the context of the new phenomenon. Five hundred years ago, they called it the printing press; today it has many faces and many names: Internet, blockchain and other new types.

In the words of Francis Gurry, former Director General of WIPO, "technologies are being created today that will have a fundamental impact on the current IP landscape. Although we do not yet understand them in their full dimension, we can be sure that they will pose important challenges to IP administration, policy and governance" (WIPO, 2017a). The challenge becomes worse because of the gap between countries that develop, implement and adopt new technologies more quickly than others.

The challenges facing IP at present and future will not diminish, especially now that new technologies such as AI have gone beyond a simple computer program or tool. Internationally, given the creative capacity or fundamental role played by this technology in the creation process (sometimes with little participation or supervision by humans) the question arises of who the author is (WIPO, 2017b).

A specific case directly related to creative economy is that of the "New Rembrandt" (known as "The Next Rembrandt", Image 12). This project sought to produce a painting by the painter as if he had created it. His works were analyzed through AI, which defined who he would paint and what the painting would look like if Rembrandt were alive.[68] Algorithms and a 3D printer are the authors of a work of art on which not a single human brushstroke was used.[69]

Image 12. "The Next Rembrandt Project"

Source: xtracted from The Next Rembrandt Project official website (https://www.nextrembrandt.com/).

In this case, it has been argued that we are dealing with autonomous technology, which means that it has a certain freedom to create according to what it believes it is most viable. In the wake of debate regarding issues such as work ownership, or questions about who should enjoy the benefits of copyright protection, legal recognition of "work made for hire through artificial intelligence" has been proposed (Yanisky-Ravid, 2017).

68 https://www.nextrembrandt.com.

69 This case has caused several debates on the determination of the picture ownership, not of the various equipment and algorithms developed, as ownership here is clear in this case.

Recently, WIPO conducted a survey to learn which national and regional IP offices are benefiting from technologies such as AI (WIPO, 2018c). Of the 35 offices in the region that responded, the report highlights that efforts can only be recorded in countries such as Brazil, Chile and Uruguay. Almost all of the projects shown in the report are related to patents and trademarks, which can also be leveraged in favor of the creative economy. According to the same source, up to 2018 only Canada had a specific project underway to harness AI and blockchain in administrative functions of its intellectual property office, which identifies the feasibility of using AI to accelerate the copyright registration process,[70] a very useful contribution to the creative economy. In LAC, Chile launched initiatives in this direction, through its Center for Technological Revolution in Creative Industries (CORFO, 2020).

The changes that AI will generate in the creative economy are broad, but how many and what they will be cannot currently be foreseen, especially if it is considered as a "general purpose technology," as it has the potential to bring about new technologies as well as to improve over time (Cockburn, Henderson and Stern, 2018). Therefore, all cultural and creative industries working with this technology must evaluate the challenges that come with the opportunities produced by AI.

For example, today the Spotify music service has a playlist called AI Music (Image 13)[71] with several songs created by Taryn Southern with the help of AI (Southern, 2020). However, it is debatable whether she should be recognized as can author under international treaties and current LAC national legislation, because of the way in which AI participates in the creative process of the songs.

Image 13. AI music

Source: xEtracted from the Tary Southern website (https://www.tarynsouthern.com/album).

Just as with patents related to drugs that must pass several filters to be able to circulate in the market, something similar could also

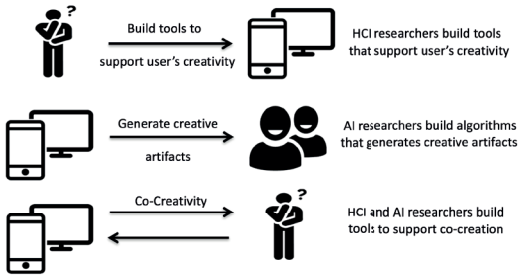
70 The explanation states that the aim is to "encourage rights holders to share information." (http://www.wipo.int/edocs/mdocs/globalinfra/es/wipo_ip_itai_ge_18/wipo_ip_itai_ge_18_1.pdf).

71 The list can be accessed through this link: https://open.spotify.com/playlist/3PrjzSlvlVYO0MhOPEs3D6?si=aM0w7enIRcOpsqXTXccHMQ&nd=1.

happen with creative products and services that work with or through AI. Hence, this issue requires a much broader analysis than merely identifying the right or most appropriate form of protection.

Possibly one of the most complex and urgent challenges to solve —is the definition of criteria on authorship and protection of works created by or with the help of AI. According to Karimi, Grace, Maher et al. (2018), creative systems[72] that enable co-creativity[73] (Infographic 1), or the emergence of artificial teams,[74] follow three main trends in creative systems: (i) as tools to support creativity; (ii) as fully autonomous systems; and (iii) as co-creative systems.

Infographic 1. Co-Creativity



Source: Extracted from Karimi *et al.* (https://arxiv.org/pdf/1807.09886.pdf).

In the case of LAC, according to Santamaría (2021), a review of the various national legislations shows that only a human being can be considered to be an author, which entails that current legal frameworks do not expressly provide for protection in the case of co-creation either. So different ideological, legal, political or economic positions are under debate. According to the same author, at the moment there are at least four positions in the world regarding the protection or non-protection of works created entirely or partially with AI:[75]

1. No Precision: A characteristic of LAC.
2. Precision in Law: the case of the United Kingdom's Copyright, Designs and Patents Act, which addresses protection.
3. Case law: in *Tencent v. Yinxun*, a court in China granted copyright protection to an AI-generated creation.
4. Administrative clarification: the U.S. Copyright Office has indicated that they will not register works generated by an AI.

72 As per Karimi et al., creative systems are smart systems that can perform creative tasks on their own or in collaboration with others.

73 As per Karimi et al., co-creativity is when computers and humans collaborate with each other to create shared creative devices.

74 Within literature, it is already possible to identify several articles that study the phenomena of human-computer interface, co-creativity or artificial teams.

75 These general positions are those held by the vast majority of countries in the case of copyright (https://www.caiinno.org/wp-content/uploads/2022/04/CEIPI-Esteban-Santamaria.pdf).

An example of the revolution caused by co-creation is a recent case in China. In a litigation, a Court ruled that an article generated by an AI called "Dream writer" is protected by copyright, so the use of the article without authorization from the plaintiff company (Tencent) constituted a copyright infringement and the plaintiff was to be compensated for its economic losses (Bo, 2020). This is the first time in the world that an authority has recognized AI as a copyright holder. The above raises problems that are not limited to the determination of whether or not copyright exists, or whether the creation generated by an AI is deemed a protectable work under this right, but extends to and may impact any person through infringement. In the China case, the defendant argued that there was no infringement because there was no copyrightable work, as the article should be considered in the public domain because the law does not provide copyright protection for creations generated by an AI. However, the defendant lost the lawsuit and had to pay a substantial sum for the infraction. This case illustrates the problems of using tools such as the Creative Adversarial Network, which opens the debate about whether copyright should be modified (Svedman, 2020).

Now, another related outstanding issue is the recognition of an AI as an inventor (Lim, 2018). Computer-implemented inventions are gaining relevance worldwide, especially for two reasons: (i) because of their upward trend (WIPO, 2019), and (ii) because of legal uncertainty on several fronts, as well as the lack of international agreement on several issues.

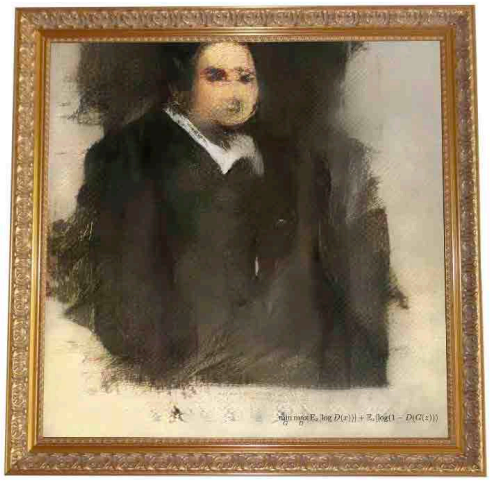
Truth is we are already talking about computers with the capacity of generating inventions (some possibly applied in the creative economy), where the participation of human beings is minimal, to the point where they should not even be called authors or inventors (Abbott, 2016). Therefore, for LAC governments, the issue of inventions and AI cannot be a minor issue, as ignoring this would have a negative impact on the creative economy.

Another challenge posed by AI is jurisdiction in the case of lawsuits where it is unclear which authority is competent. An example is the scope of the "use" of data (Benjamin, Gagnon, Rostamzadeh et al., 2019); specifically, when it is used for the creation of a work and if infringement occurs, both a court specialized in IP and one in personal data or in civil matters, or even in economic competition, could be competent. This can be further complicated when using what is commonly known as "free software", "free license" or "open license".

It is therefore clear that analyzing the use of AI in the creative process cannot be limited to how related creations are protected, nor to the profits obtained, as with the portrait of

Edmond de Belamy which was created by AI and sold for almost USD 500,000 (Cohn, 2018). A further challenge is the difficulty for those participating in the process of learning and understanding what is involved in using AI in new creations.

Image 14. Portrait of Edmond de Belamy, created by an IA



Source: Extracted from The New York Times website (https://www.nytimes.com/2018/10/25/arts/design/ai-art-sold-christies.html).

Despite the euphoria in networks around the Edmond de Belamy portrait, a serious problem arose behind the scenes: ownership. It turns out that a database belonging to a person who was not acknowledged was used to train the AI that created the work. The issue is that this person allowed the use of the database, but not for those purposes (Epstein, Levine, Rand and Rahwan, 2020). And this is where a relevant question is raised that has been barely discussed in literature: what happens when an AI infringes copyright?

Another of the most relevant challenges is the use of data for AI training. Using tools such as machine learning requires an enormous amount of data, some of which could be copyrighted works[76] or personal or sensitive data. In both cases, it is risky to use them without the correct preventive measures, which would create a problem for the creative or the company working with these tools. This shows that using AI for creative works or inventions requires advice or technical knowledge, not only about technology or art, but also about other regulations.

Finally, defining the legal status of AI as creator or inventor is arguably the most important debate of the present day, because of the effect it will have on the future of IP. This could change the way IP has worked since its creation, given that historically it has been assumed that only a human being can be the creator of copyrights, patents, or other types of IP, even excluding animals, as was the case of the Naruto monkey (Guadamuz, 2018), where it was decided that he could not hold a copyright for a selfie he took without human intervention (Babie, 2018).

76 In the case of the United Kingdom, data protection could even be considered under a sui generis right. More information can be found at https://www.gov.uk/guidance/sui-generis-database-rights.

International best practices and recommendations to face the challenge

1. Generating smart regulation

Smart regulation lays out a challenge for governments in terms of the digital economy (Zarate and Farias, 2018). One best practice is to carry out cross-cutting work that involves and impacts as many actors in an ecosystem as possible, in order to enhance the positive effect of intellectual property rights (Edler, Cameron and Hajhashem, 2016).

Studies have been conducted in countries such as South Africa (Berger and Rens, 2018), to learn about the current IP situation at the national level, its relationship with the international trend, the identification of the need for legal reforms (laws and regulations) and the state of institutions (IP offices, budgets, public policies, and even judge training). This example represents a good practice, since it is based on an *ad hoc* diagnosis for the country, and then complemented with lessons learned from other countries.

In line with the above, legislation is key to the success of many public policies. China introduced its new Trademark Law in 2014, with a cross-cutting approach that seeks to comply with international standards, streamline procedures for registration and strengthen the legal protection of trademarks, while aiming to generate economic and social benefits for the country (Zhang Mao, 2014). Since its enactment in 1982, trademark legislation underwent only two reforms until 2014 (1993 and 2001),[77] making substantial reform essential as part of public policy to improve the ecosystem.

Recommendations to generate smart regulation

- **Carry out changes or reforms.** This should occur based on the definition and identification of key actors (Lozeco, Schreider, Petri et al., 2015), and with a focus on the needs of a country's creative ecosystem[78] or field of interest. It is then necessary to identify the challenges faced when using new technologies and investigate how they

77 The Trademark Law of the People's Republic of China already contemplates current issues such as the registration of sounds or criteria on three-dimensional trademarks, previously discussed with the European examples (https://www.wipo.int/wipolex/en/text/341321).

78 In this study, we adopt the definition of creative ecosystem proposed by Benavente and Grazzi (2017), who define it as the set of entities and rules that regulate the production, dissemination, and consumption of creative goods and service https://publications.iadb.org/publications/english/viewer/Public-Policies-for-Creativity-and-Innovation-Promoting-the-Orange-Economy-in-Latin-America-and-the-Caribbean.pdf

have been resolved in the country and in other countries. Finally, analyze what could be the best solution (law reform, regulation, public policy, regulation, etc.) applicable to the specific case.

- **Carry out cross-cutting action.** Legal and institutional reforms should go hand in hand, and not be implemented in isolation.

2. Parallel, cross-cutting, and *ad hoc* legislation reforms

Another practice is the creation or modification of parallel legislations to those specific to IP, as a mean to improve the ecosystem and enhance its use. An example is the Bayh-Dole Act of the United States, which promoted the commercialization of inventions developed at universities (WIPO, 2006a). The law had different positive repercussions, such as an increase in the number of patent applications filed by universities (Levenson, 2005), as well as their revenues.

A specific example is the "Orange Law" No. 1834, of May 23, 2017, for the promotion of the creative economy (Congress of Colombia, 2017). This legislation focuses on promoting the creative economy while establishing a link with IP, especially copyright.

Continuing with the case of Colombia, that seeks to promote cinema as an area of interest, certain requirements were established for access to tax benefits in the context of regulations specific to this activity. Some examples are the presentation of certificates of assignments and/or authorizations for the use of a work.[79] This is an example of parallel legislation and cross-cutting actions to those specific to IP.

On the other hand, international treaties constitute a source of knowledge. A good practice is to take them as a reference for updating legislation or creating new laws. Among the most recent cases are the new version of the treaty between the United States, Mexico and Canada (T-MEC, 2018), as well as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP, 2018), which involves three countries in the region (Chile, Mexico and Peru). Among the topics of relevance to

Each of these treaties has a specific IP section: Chapter 20 in the North American (T-MEC, 2018) and Chapter 18 in the Trans-Pacific (CPTPP, 2018).

79 http://www.mincultura.gov.co/areas/cinematografia/Legislacion/Documents/Cartillapercent20-percent20Normas percent20del percent20Cine percent20en percent20Colombia.pdf.

creative economy are the following:[80]

- Domain names, especially if related to disputes. Creative companies such as Netflix have already had their rights infringed (Netflix, Inc. v. WhoisGuard Protected, WhoisGuard, Inc/Linda Deutch/Jamaal Baine/c/o WHOIStrustee.com Limited, Registrant of netflixnew.com, 2017).
- Internet service providers: definition, scope, limitations and exceptions in terms of liability, and even relations expected with other actors (e.g. copyright holders).
- Strategy for removing copyright infringing content from the Internet, known as Notice and Take Down.

On the other hand, experiences shared by other countries on how they deal with new creations that seek IP protection (in computer programs or software) are also a source of knowledge that some countries analyze to determine whether this is a good practice that should be implemented in their country.

An example of a useful topic for the creative economy, because it is trending worldwide, is the "notice and take down" process, around which the United States published a list of good and bad practices and cases.[81]Another example is Australia, which developed a guide on best practices in the purchase and lending of works and cultural heritage (Ministry for the Arts, 2015), which can be used by institutions in the countries of the region.[82]

Court rulings are also a source of knowledge and experience that provide insight into trends. From foreign courts it is possible to learn how IP litigation that would impact the creative economy is being analyzed. One example is the recent case that debates whether an innovation violates copyright. Determining whether a court has jurisdiction over the Internet

80 The two treaties in question contemplate several guidelines that set the basis for the reforms that various IP legislations would have to make, especially in the case of new technologies, such as copyright. The T-MEC is available at: https://ustr.gov/sites/default/files/files/agreements/FTA/USMCA/Text/20_Intellectual_Property_Rights.pdf,and the CPTPP, at: https://www.gob.mx/cms/uploads/attachment/file/86486/18._Propiedad_Intelectual.pdf.

81 In all countries it is possible to upload or download content of various types without the authorization of the intellectual property rights holder, especially copyrights; therefore, this document prepared by the United States Patent and Trademark Office, where the country shares its experience, is very useful because eventually countries will have to ensure measures to protect intellectual property rights on the Internet. (https://www.uspto.gov/sites/default/files/documents/DMCA_Good_Bad_and_Situational_Practices_Document-FINAL.pdf).

82 The use of this guide is specified mainly for institutions that purchase or lend works or elements of the country's heritage, but it considers certain issues that could be useful for developing regulations within the organizations, and as a basis for implementing legal reforms (https://www.arts.gov.au/publications/australian-best-practice-guide-collecting-cultural-material).

(WIPO, 2007b) exemplifies the type of problematic issue for a court with no prior experience in such matters.

Finally, in view of the uncertainty and lack of guidelines defined in laws that may affect the creative ecosystem, some countries have designed instructions or examples of how to protect new creations in existing schemes. Colombia is an example, since the government published a report on blockchain and how IP can use it for its own benefit (Superintendencia de Industria y Comercio de Colombia, 2018).[83]

Recommendations on parallel reforms, cross-cutting reforms, and *ad hoc* legislation

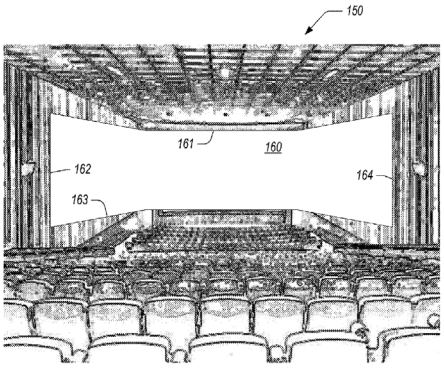
- **Create parallel legislations.** This type of instruments should be created. however, before approval the way in which the type will be used should be verified with the intellectual property office so that it does not contravene specific legislation. If the legal instrument generates new activities or obligations for the office, operational and budgetary capacity to carry out new or additional activities must be verified beforehand. In addition, according to Rhines (2005), other cases should be contemplated when analyzing what went wrong or what needs to be improved.
- **Be careful with concepts.** Sometimes fashionable concepts are used, so clear definitions should be specified. For example, the program that provided "green patents" with incentives to receive special treatment in their examination process (Kirik, 2011) and to speed up the decision to grant or deny the patent, [84]made no changes or differences in the requirements for inventions to be patented, but this program did specify what type of inventions were viewed "green". This would be useful if a country decided to work on the generation of a program to encourage "creative patents", since the specific legislation surely does not recognize this type.

83 The Superintendence of Industry and Commerce of Colombia recently (2018) published a report on the use of this technology, which analyzes the possibility of protection through patents based on what Colombian practice and legislation allow (http://www.sic.gov.co/sites/default/files/files/Propiedad percent20Industrial/Boletines_Tecnologicos/Boletin_Blockchain.pdf).

84 The United States Patent and Trademark Office developed the Green Technology Pilot Program, which "was implemented for applications related to environmental quality, energy conservation, renewable energy development or gas emissions reduction, and put those applications among the first to be examined" (https://www.uspto.gov/learning-and-resources/newsletter/inventors-eye/accelerated-review-green-technology-patent).

- **Learn from others.** Recent treaties or judicial decisions should be analyzed in an effort to identify trends and use them as a reference for updating laws. The WIPO Director suggests the creation of a space for collective reflection where countries can exchange ideas freely and without obligations (WIPO, 2017a). This would allow officials to speak without the pressure of official or diplomatic channels, where an individual's opinion might be taken for a country's position.

Image 15. Creative patent



Source: Extracted from US 2018/0059528 A1, Systems and methods for an immersion theater environment with dynamic screens, availableat: (https://worldwide.espacenet.com/publicationDetails/originalDocument?CC=US&NR=2018059528A1&KC=A1&FT=D&ND=3&date=20180301&DB=&locale=en_EP).

- **Have expert officials.** Programs should be designed for the professionalization of officials and judges, as well as to create courts specialized in IP-related matters.
- **Learn from oneself.** It is essential that countries document their experiences. This would result in impact evaluations, identification of areas for improvement and challenges faced, so that new officials, legislators and judges know how to approach new challenges. In addition, this information should be shared with all government agencies linked to the creative economy for their consideration.

3. Artificial intelligence

Literature does not yet provide a comprehensive list of best practices, lessons learned and policies on this issue. Most come from the European Union, the United Kingdom, the United States or Australia. A good reference for LAC is the "Feasibility Study" designed by the *ad hoc* Committee on AI of the Council of Europe, especially the section "Main Elements of a Legal Framework for the Design, Development and Application of Artificial Intelligence" (Council of Europe, 2020). Another useful reference is the study on IP by Bosher, Gurgula, Stokes, et al. (2020).

Now, considering that governments, creatives and companies in the industry can all use AI, it is important to examine the extent of their responsibility in the use of this technology.

In this regard, the report on "Liability for artificial intelligence and other emerging digital technologies" (European Union, 2019) can be consulted as a useful reference for how this issue is being addressed in other regions.

In line with the above, when faced with the imminent risk of damage by an AI, different ways of assessing liability must be evaluated In this sense, ethics plays a fundamental and decisive role. The European Commission document "Ethics guidelines for trustworthy artificial intelligence" should be reviewed thoroughly (European Commission, 2019). At this point, it is key to pay attention to "auditability", in the interest of avoiding misunderstandings regarding IP confidentiality.

Another best practice is developing studies to identify the ways in which AI can be used (and is being used) in the creative economy, as well as what are its economic, legal and even labor implications such as, for example, regarding automation. An interesting initiative on this point was in the hands of the French government, with the creation of a program to identify the legal and economic stakes of AI in the cultural creation sectors (Ministère de la Culture, 2020). This study can be used as a reference for the LAC region, as decisionmakers need this type of information.

Recommendations on artificial intelligence

1. **Definition and delimitation.** AI is very difficult to define, as are related concepts, but it is important that governments, especially decisionmakers and congresspersons, define the necessary notions. The following aspects, among many others, should be taken into account:
   - Analyses, debates and regulations created by other countries with more experience in the subject must be reviewed (Samoili, López Cobo, De Prato et al., 2020). Similarly, learning how creations and inventions are already being protected in places like France are also a must (Deltorn and Leménager, 2021).
   - Aspects of civil liability (European Union, 2017), personality, other concepts such as "electronic person" and, in general, everything related to legal status should also be considered. Adopting the use of AI, as well as definitions without prior in-depth analysis, would be a very serious mistake with potential negative consequences.
2. **Protection of creations and inventions made with AI.** Regarding the above but limited to IP, it would be ideal to decide whether to protect the results of co-creation,

as well as the type to be used. This analysis should be carried out by all those involved and from a theoretical and technical perspective. Learning from the experience of other countries is important, but replicating it is not feasible without analyzing the country's context. The following issues should be considered:

- Identify how AI relates to IP, as well as ways in which co-creation can occur; for example, through the link between deep learning and copyright (Delton, 2018).
- Analyze available studies on debates and decisions regarding how to determine who should be regarded the inventor in creations or inventions made with the help of AI, as Shemtov (2019) does on ownership in inventions involving this new technology.
- With respect to co-creations eligible for protection, it is important to learn how examinations or analyses are carried out to determine whether protection is granted, especially in the case of national intellectual property offices. International experience should be analyzed for ways in which patentability examination for computer-implemented inventions are conducted by institutions such as the European Patent Office (Deltorn, Thean and Volkmer, 2019).

3. **Governments and artificial intelligence.** In the case of governments, considerations should include what conditions and in what ways AI can be used as part of their services, especially when decisions are made based on suggestions or results that AI delivers, and that influence citizens. It should not be implemented without a theoretical, technical and legal review of the implications of its use.
4. **Private sector and artificial intelligence.** This sector must pay attention to the treatment of personal data and privacy. It is important to keep in mind that using certain data and information for work creation will certainly place agents in a position where they must comply with certain regulations. It is worth noting what other countries are doing in this regard.
5. **Diverse use of artificial intelligence.** If AI services are used for activities where an automated processing system is responsible for profiling, monitoring, scoring people, predicting or recommending, etc., it would be appropriate for creatives or companies to conduct a privacy risk assessment. The Guidelines on Data Protection Impact Assessment of the European Commission (2017), can be used as a reference.[85] In this regard, the government should establish guidelines and ensure that regulation

85 In this section you can find the answer to: When is a Data Protection Impact Assessment (DPIA) required? (https://commission.europa.eu/law/law-topic/data-protection/reform/rules-business-and-organisations/obligations/when-data-protection-impact-assessment-dpia-required_en)

does not harm the innovative use of new technologies, as it could discourage the development or growth of creative businesses and enterprises.

6. **Cross-cutting application.** Everyone involved, but especially creatives using AI to create new works, should be aware that the impact of this type of technology can be broad and cross-cutting, so they could look at issues such as:
   - Liability: ranging from liability for unintended effects of the technology to serious consequences arising from its use, such as the death of a person.
   - Coexistence with humans: ranging from respect for human dignity, and non-discrimination to respect for human rights.
   - Transparency: from privacy information collection and usage for R&D activities, to the right to privacy.
   - Remedy: ranging from consumer protection in cases such as defective products to payments for damage caused by products that work with AI.
7. **Learn from others.** Analyzing and learning from the experiences of other countries should be a constant task both for governments (especially intellectual property offices) as well as for the cultural and creative industries. Recently, the European Commission published a paper with an extensive literature review on IP and AI, addressing various issues from various positions (Iglesias, Shamuilia and Anderberg, 2021). Something similar was done by the United States Patent and Trademark Office, although its focus devotes more attention to patents (USPTO, 2020).
8. **Preserve the balance.** The various government actors should strive not to generate policies, practices or regulations that affect innovation in creations or inventions within the creative economy that involve the use of AI. Before making decisions, it is essential that they listen to those involved, prepare studies and diagnoses and analyze the experiences of other countries.

3.4 Challenge 4: Piracy

There are several definitions of piracy,[86] although one of the clearest is proposed by the National Institute of Industrial Property of Chile: "it refers to certain acts of use that have not been authorized by the holder of copyright or related rights, nor are they covered by any exception expressly established by the respective law. With such illegitimate uses, the normal

86 It is important to clarify that copyright infringement is not legally defined as "piracy". This concept is normally used to refer to the crime of attacking ships.

exploitation of intellectual productions generated by authors, artists and creative industries is affected."[87]

Despite the positive impact that the creative economy has generated in economic and social terms, countries such as Cameroon are victims of piracy, which is undermining the African music industry in general (UNCTAD, 2018). According to Oh (2014), in Nollywood it is estimated that 1 million jobs are lost due to piracy, while it has also prevented further investment, ranging from USD 25,000 to USD 70,000 per film, as profits are only sustained for two to three weeks after release.

After that time, sales decrease sharply as the circulation of pirated copies increase substantially, causing producers and other people involved to stop receiving their profits. This situation caused investors to perceive this industry as a risky market, which obviously scared away any private investment scheme. The situation is similar in LAC.

This problem is not limited to the piracy of works on physical media such as compact discs. According to the founder of iROKOtv, a platform for watching Nollywood movies online, "Internet piracy is a constant struggle. No matter how well we protect our content on the Internet, there will always be someone who tries to appropriate it and upload it to other platforms for free" (Jewell, 2017).

Thinking about the future of the creative economy, piracy poses a challenge particularly when it takes place on the Internet because it not only causes economic damage to already famous producers and artists (Granados, 2015), but also obstructs the emergence of new artists (Granados, 2016). This is something that should be taken into consideration when developing public policies aimed at promoting the creative economy.

Icaza (2007, p. 50) outlines some reasons why the purchase of pirated copies should be avoided, according to WIPO:

- Piracy eliminates the economic profit authors have a right to, and reduces their ability to continue creating new works.
- Piracy reduces the motivation for record labels and distributors to continue investing in new authors and performers.

87 https://www.inapi.cl/protege-tu-idea/pirateria-y-falsificacion.

- Consumers are not protected against defective copies.
- Piracy makes legal copies more expensive in the long run.

The effects of piracy are present in several countries in the LAC region. In Mexico, the National Chamber of the Transformation Industry indicated that, in 2014 alone, piracy caused the loss of more than 480,000 jobs, which reduces the possibilities of creating formal jobs (Cantera, 2014). It even accounted for 34 times the budget of its Industrial Property Office in 2015 (WIPO, 2015b). In Colombia, a recent study estimates that annual losses from piracy in pay TV in that country have accounted for USD 100 million (Santamaría and Manzano, 2017).

At the same time, according to Aguilar (2010), piracy may be indicative of a weak rule of law, which represents another problem of national and international perception. The Special 301 Report, prepared by the Office of the United States Trade Representative, publishes a list of countries where in their view there are significant challenges in terms of respecting and enforcing intellectual property rights (USTR, 2018). In its 2018 edition, 14 of the 36 countries on the list belong to the LAC region.[88]

Various opinions attempt to explain or justify piracy and can apply to various countries to some degree. For example, the perspective that the problem lies in the application of strategies that are obsolete or inadequate to the current reality for defining prices and distribution (Tassi, 2012). This means that the cost is high for a large segment of the population and, since it is very easy to obtain the content free of charge, consumers choose this option without pondering the consequences.

On the other hand, according to Chávez and Sánchez (2017), choosing piracy depends on the rational evaluation of costs and benefits derived from respecting copyright law or not. They also assess that, in digitally poor communities, piracy microenterprises are one of the channels through which consumers have access to information industries, and therefore suggest creating a connectivity policy.

88 Argentina, Chile, Colombia and Venezuela are on the Priority List. Mexico, Costa Rica, Dominican Republic, Guatemala, Barbados, Jamaica, Bolivia, Brazil, Ecuador and Peru are on the Watch List. It is important to mention that the Special 301 Report is not limited to copyright, but covers other IP areas, so some of the countries may be on the list not for piracy-related problems but in the area of patents (https://ustr.gov/sites/default/files/files/Press/Reports/2018 percent20Special percent20301.pdf).

Research to identify the reasons for piracy in LAC is scarce. On the one hand, the main reasons have to do with costs or distribution problems of the original works. Conversely, a study from Chile tried to identify them in the case of business graduate students, and found that they purchase original software when they use it constantly, when requested by the institution or when they value the technical support they will receive when purchasing it, while the reason for obtaining a pirated version has to do with the cost (Pedreros-Gajardo and Araya-Castillo, 2013).

Several countries in the region face challenges that, according to research, articles and opinions, have a direct and causal relationship with piracy, such as poverty (Doctorow, 2011). According to Karaganis (2011), piracy is common among poor people who do not pay for an original product because it is too expensive, at least in certain sectors,. While in the case of better-off people buying a DVD requires a few hours of hard-earned money, for others it represents days or weeks of work.

Another issue is the so-called "signal piracy", which affects large and small companies alike. A 2011 study showed that the cost of piracy in the Asia-Pacific region (not including any countries in the Americas) was USD 2.2 billion (Sharma, 2018). In LAC, incidents that are difficult to counteract have also been documented, mainly because there is a lack of legal instruments that allow related rights' holders to force infringers to remove content (Wood, 2014).

However, it is key to find a balance between the fight against piracy to defend intellectual property rights (especially copyright) and other areas such as access to information or freedom of expression. On this issue, a few years ago a worldwide debate started in the United States on the "Stop Online Piracy Act", better known as SOPA (U.S. Congress, 2011).

In conclusion, the phenomenon of piracy is very complex due to the diversity of positions on the subject. That said, the negative effects it produces and will continue to produce for the creative economy are present. Evidence has shown how important it is to address this problem; otherwise, the impact of both public and private initiatives aimed at strengthening and boosting the growth of the creative economy in LAC would be undermined.

The SOPA Act stipulated to define obligations for Internet service providers, generate liability exclusions, and empower the government to shut down Internet pages from which copyright-protected content could be downloaded without the authorization of the owner, among other regulations (Pereda, 2012).

International best practices and general recommendations to face the challenges

1. Learning about experiences, policies, and information between countries

An interesting case is Moldova. An Observatory of Intellectual Property Rights Infringements was created to comply with the recommendations of the European Commission (AGEPI, 2012). The program included a national campaign to raise awareness among the population from an early age about the risks and consequences of piracy. It also included the preparation of a publication on the consequences of this practice, with information about its perception and impact.

The Observatory contains reports on results, policies and legislation; statistical reports, and even a campaign to "stop piracy and trafficking" (AGEPI, n.d.). In turn, it created a YouTube channel, where it promotes its campaign against piracy (AGEPI, 2018) through animated, short and simple videos, as well as another campaign against counterfeiting (AGEPI, 2018).

Brazil has developed and implemented policies that could be replicated in other countries in the region. In 2004, it created the National Council to Combat Piracy and Crimes against Intellectual Property (*Conselho Nacional de Combate à Pirataria e Delitos contra a Propriedade Intelectual, e dá outras providências*), through Decree No. 5.244 (Cámara de Diputados, 2004). The Council is part of the Ministry of Justice and is in charge of developing guidelines for the national anti-piracy plan, among other activities, seeking to involve the public and private sectors.

This is a country achievement in governmental terms, since both public and private sectors have equal voice and vote, allowing the development of guidelines since 2005 to work in three areas: (i) deterrence; (ii) raising awareness; and (iii) economics (WIPO, 2009b). One of the most important elements could be the analysis of lessons learned and challenges that arise along the way, which are considered for the design of new strategies.[89]

89 In addition, several Ministries or State Secretariats participate in a Committee together with associations representing copyright owners. The Executive Secretary prepared a document setting out some of the details and characteristics of the Committee's operation and its challenges. (https://www.wipo.int/edocs/mdocs/enforcement/en/wipo_ace_5/wipo_ace_5_8.doc).

Sharing best practices among countries is also a recommendation of the World Anti-Piracy Observatory managed by UNESCO, which has generously documented and created a space where several anti-piracy practices implemented by its member countries can be consulted (UNESCO, n. d.). The practices focus primarily on supporting activities that help reduce the negative effects of piracy in the creative industries.

Recommendations for sharing experiences, policies and information between countries

- **Knowing and learning.** From at least three perspectives, (i) from recommendations and projects developed by international organizations such as the IDB or WIPO; (ii) from other countries (this lesson should not be limited to learning about successful examples, but also about failures, mistakes and problems, as well as how they were solved), and (iii) from academic studies, especially those developed in the region, for example in Colombia (Huertas, 2015), which analyze specific cases.
- **Sharing and learning.** Visits by official personnel to other countries are suggested in order to gain first-hand experience. This would make it possible to learn from experiences, open up the possibility of collaboration and develop better policies. For this to have a long-term impact, offices should strive to retain staff despite political or administrative changes in government.
- **Documenting.** This can be key both in the fight against piracy and in the generation of knowledge, and of great support for the operation of intellectual property offices. Generating and documenting information is recommended. This information is useful for knowing, for example, whether trained dogs work, how they can be used and their limitations, as was the case in Malaysia (WIPO, 2007c). This practice could emerge from a joint effort between the government and the private sector.

2. Education as a tool

Education goes hand in hand with outreach and raises awareness. For the UK, education and building respect for IP are key elements in its consumer outreach strategy (Neville-Rolfe, 2016). The Intellectual Property Office found that, on occasion, consumers of pirated goods did not think that they could also have legal problems as a result. This was a motivation to work intensively on building informed consumers.

Among the activities carried out by the Intellectual Property Office is the partnership with an animation company to organize a contest where children understood the value of respecting intellectual property rights (Aardman Animations, 2016).[90] Children aged 4 to 16 participated. The winners and their school received a prize (Cracking Ideas Design Competition, 2020), which allowed for a broader awareness-raising impact, as peers also gained information about the competition's theme.

Image 16.
UK Intellectual Property Office
Competition for children

Source: Extracted from (https://www.wipo.int/wipo_magazine/en/2016/si/article_0004.html).

Moreover, the Shanghai government has proposed and worked to include IP education in academic programs, with the intention that students gain deeper knowledge and awareness of the issue from an early age. Indeed, early education is deemed key to the development of a society (UNESCO, 2008), so this practice could determine whether piracy is not only considered illegal, but also morally wrong, as Anderson (2018) argues.

In line with the above, a conference on education and IP was held in Spain (CEDRO, 2018).[91] There it was stated that the fight against piracy must start from childhood. Good practices were shared, such as "a day at the movies", which consisted of informing the public at the end of a film about its impact on issues such as the creation of jobs, among others (Morales, 2018). This is an example of awareness raising.

Another best practice in Spain is the "*Manual de buenas prácticas para la persecución de los delitos contra la propiedad intelectual*" [Manual of best practices for the prosecution of intellectual property crime] (Ministerio de Cultura, 2008). It provides useful information throughout the judicial and administrative process for both government agencies and private parties wishing to enforce their intellectual property rights. It explains the roles of

90 https://shaunthesheep.com/news/new-cracking-ideas-competition-celebrates-40-years-aardman.
91 http://www.cedro.org/actualidad/agenda/2018/10/31/jornada-educacion-y-propiedad-intelectual.

each competent authority in a piracy case, and the various types of measures (preventive, regulatory, training, cooperation and awareness raising). It describes how legal proceedings are handled and how international cooperation works.[92]

That said, the fight against piracy cannot be won by the government without the support of intellectual property rights holders. Therefore, another best practice includes partnerships and participation of other stakeholders. In Mexico, for example, the Huevo cartoon company and the National Chamber of the Cinematographic and Videogram Industry helped in the design, production and dissemination of an education and awareness raising campaign against piracy (El Universal, 2012). The video was presented before the film started, so that all attendees could watch it.[93]

Recommendations for using education as a tool

- **Design an education strategy around the piracy issue.** Ideally, start with the definition of objectives. Develop it keeping in mind that education has three main tasks: (i) to inform; (ii) to dissuade; and (iii) to prevent. Depending on the case, specific tasks can be designed to meet the objectives.
- **Not only the government should work.** Rely on the support and collaboration of other actors such as academia, the private sector and, above all, the authors, whom society normally identifies with and empathizes with more easily. Create campaign links with other countries, taking advantage of the fact that rights holders such as Youtubers are seen in several countries. Another option is to work with organizations such as the IDB or similar, which have an international reputation and reach.
- **Correctly define the audience.** Campaigns should narrow down their target audience as much as possible. For several years now, WIPO (2006b) has suggested that awareness raising and education campaigns on the subject of piracy should be designed to get the right message across to the right audience. To this end, the design process should include a rapprochement with the audience, since the way in which

92 Although the Manual is not a substitute for expert advice, it contains the minimum information necessary to know what can be done, which authorities to contact, as well as the legal channels in the event of a piracy case (https://www.seguridadpublica.es/wp-content/uploads/2013/04/Manual-de-Buenas-Pr percentC3 percentA1cticas-para-la-persecuci percentC3 percentB3n-de-los-delitos-contra-la-Propiedad-Intelectual.pdf).

93 The video, in addition to explaining briefly and concisely what piracy is and its effects, presented the impact it has on professional life and income, aiming to show the real impact on orange entrepreneurs and companies (https://www.youtube.com/watch?v=uuskMbkzJCw).

older adults conceive piracy is different from that of the digital generation (WIPO, 2007d). In this sense, it is essential to define the format and key collaborators, among other useful elements for the success of the campaign.

- **Encourage the participation of more government actors.** Work should not be restricted to the intellectual property office. Engage in collaboration with other government agencies such as, for example, the Secretariat or Ministry of Education. This could have at least two approaches: (i) integration of the topic of respect for intellectual property rights as part of some course or subject such as civics, and (ii) organization of joint activities to educate and raise students' awareness beyond the classroom, through activities such as contests.
- **Educate within the government.** An education strategy should be carried out within the government. It is important that officers be familiar with actions and acts that may infringe on intellectual property rights. There are cases in which public officials use pirated computer programs in their work tasks, which are also installed on official equipment.
- **Put right holders to work.** Schemes should be designed so rights holders can inform in greater detail about the scope and limitations of the licenses they are granting. The average user or consumer is usually unaware, for example, that a computer program offers different types of licenses depending on its intended use (academic, business, etc.). They could choose the cheapest one (exclusive use for academic purposes), without understanding that it is not the right license if they are going to use it in a business, thus infringing copyright.

3. Analysis and updating of legal and institutional frameworks

As a foundation for reforming or creating a law, one good practice is to take advantage of the knowledge emerging from academia through studies that analyze the relationship between IP and the creative economy (Nimmer, 2004), as well as its impact on legislation (Chiang, 2014). Also, the knowledge that arises from organized civil society, as in Mexico, where research was used as a source to generate a law reform initiative focused on promoting creative industries (Santamaría and Becerra, 2017, p. 14), being thus recognized by the Congress (Congreso de la Unión, 2018).[94]

94 The *Centro de Análisis para la Investigación en Innovación, A.C.* [The Analysis Center for Innovation Research] developed a series of proposals in a document where it suggested a concept of creative industries, in addition to integrating them into the cultural legislation, since they were not integrated. On the basis of this proposal, the Congress drafted the initiative that reproduces what was suggested by the Center almost in its entirety (http://infosen.senado.gob.mx/sgsp/gaceta/63/3/2018-07-25-1/assets/documentos/Inic_PAN_Cultura.pdf).

Other key players in the reform process are judges and officials working in the field of IP and the creative economy. They have first-hand knowledge of the legal problems facing the fight against piracy in the administration of justice, at least from their field of action. One best practice has been to learn their views on updating and modernizing IP-related laws (Olsson, 2005). This avoids leaving legal loopholes that can be exploited by those who violate intellectual property rights.

Another good practice is building an *ad hoc* regulatory framework. In Peru, for example, Anti-Piracy Law No. 28289 was created (Congreso de la República, 2004).[95] This is one of the few cases in the world. Other elements have also emerged, but with a special focus on piracy perpetrated through the Internet, which is already being regulated in international treaties such as the T-MEC, mentioned above.

Recommendations on the analysis and updating of legal and institutional frameworks

- **Collaborate.** Ideally, the Congress should identify key documents and actors from the private sector (companies, collective management societies, etc.) and civil society. Likewise, the private sector should seek rapprochement. To this end, the existence of channels through which the private sector can communicate, and present research, projects or proposals is essential.
- **Look after personnel.** One issue that should be taken into account is the care and protection of the intellectual property office representative, since his or her life may be at risk when carrying out activities such as seizure of pirated goods.
- **Look ahead.** Acknowledging the rapid evolution of the creative economy areas, and the fact that infringers are constantly looking for new ways to generate and distribute pirated products, legislators should hold meetings with key players from time to time. This would be useful for learning about the results of new research, trends and further challenges, and for using this information to promote better initiatives. The legal system for enforcing intellectual property rights would also be improved.
- **Legislate at the federal and local levels.** Although crimes and penalties for intellectual property rights violations through piracy are normally regulated by national legislation,

95 Anti-Piracy Law No. 28289 provides for issues such as penalties, concepts, and even the creation of the Commission Against Customs and Piracy Crimes, among others (https://www.wipo.int/edocs/lexdocs/laws/es/pe/pe057es.pdf).

law makers could establish in the law that Congresses and local governments also participate in the fight against this and other problems in the field. Their support could be through administrative actions; search, identification and apprehension of piracy, and local backup (which could be very important). However, for this to occur, it must be determined by the legislation.

- **Analyze its collateral impact.** In some countries, if a pirated computer program is found, authorities can secure a computer equipment; however, uncertainty arises as to what happens if the equipment contains confidential information, personal data or results of clinical analyses necessary for medical treatment. Copyright infringement exists, but in this and other cases there must be a very serious analysis of the implications of possible reforms in other areas.
- **Create a specific law.** As Peru did, this could be a good option. Before working to develop a specific law, legislators should be aware of the results, lessons learned and challenges that other countries have met, to know what precautions, considerations and determinations should be contemplated beforehand.

4 || RECOMMENDATIONS AND CLOSING REMARKS

To provide suggestions that can be taken into consideration in the countries of the region, general recommendations are proposed for each IP figure to improve the creative ecosystem:

Copyright

- Provide online registration of works, as well as other processes.
- Update the definitions of certain concepts, for example, "first sale" or "temporary reproduction in electronic form"; otherwise, outdated perceptions or interpretations might be maintained, thus affecting the possibility of protecting new types of works.
- Analyze, preferably jointly with those directly involved, the way in which terms are conceived that may generate conflicts of interpretation in laws or trials, as is the case in types such as copyleft[96], related to free software.
- Integrate new elements or concepts in the legislation that are useful for improving copyrights and related rights protection; for example, penalties for the circumvention of technological measures through products whose sole purpose is to protect; communicating signals, or copyright infringement on the Internet.
- Generate a more direct relationship between the national copyright office and the industrial property office, especially when they are separate, in order to seek solutions and avoid confusion that harms the creative ecosystem; for example, in matters such as trademarks and their connection with the titles of publications or names of characters.

Patents

- Generate public policies and programs so that the areas that focus on R&D activities learn more about the creative economy and its needs, and also collaborate with the

96 According to the Free Software Foundation, copyleft is a general method of releasing a program or other work (in the sense of freedom, not free), which requires that all modified and extended versions also be free" (https://www.gnu.org/licenses/copyleft.es.html).

different sectors involved, in an effort to find solutions to current problems and generate innovations.

- Analyze the feasibility and the need to create reforms in the national patent legislation that seek to take advantage of inventions for the benefit of the creative economy.
- Design specific programs to promote research, development and innovation activities to be implemented in the areas of the creative economy, as well as special guides for technology and knowledge transfers in this area. Technology transfer in the creative economy should not be viewed in the same light as in other business areas, such as pharmaceuticals.
- Take advantage of and encourage the use of AI tools promoted by WIPO, mainly to facilitate administrative and management activities.

Traditional knowledge and traditional cultural expressions

- Analyze the possibility of introducing specific legislation on traditional knowledge and traditional cultural expressions.
- Analyze, discuss, consult, and define the way in which the equal sharing of benefits arising from traditional knowledge and traditional cultural expressions would be determined.
- Carry out studies to learn and identify traditional knowledge in order to obtain reference information. This will allow the intellectual property office to find out when some non-owner intends to protect that knowledge or profit from it; for example, studies have been carried out to identify the use of certain knowledge in communities living in the Amazon area (Luzuriaga-Quichimbo, 2018).
- Design strategies, measures and penalties to prevent the misappropriation of traditional knowledge and traditional cultural expressions. The starting point should be a serious study, the decision to not take action without technical knowledge, and to contemplate both the collaboration and permission of the owners.

Trademarks

- Analyze the possibility of reforming the legal framework for the registration of non-traditional trademarks. To this end, a transition strategy should be designed, so that both national intellectual property offices and users can take advantage of them; otherwise, the change could entail problems that would have to be resolved in court, mainly affecting users.

- Analyze the feasibility and the need to take advantage of the alternatives for the international registration of trademarks, specifically the Madrid System.[97]
- Depending on their legislation, governments in the region could promote, through both branding options (collective or certification), a way to develop creative products or services with a very solid reputation, thus encouraging them to build a positive image for their quality at the national and international level. This includes almost all types of products and services within the creative economy, from video games to tourism.

Trade secrets

- To disseminate the usefulness of trade secrets in the creative economy more widely, as well as to take advantage of information, best practices and experiences in other countries regarding the way in which they can be used.
- Promote workshops, courses and easy-to-understand outreach materials for businesspersons and creative entrepreneurs to address how trade secrets can be used. These materials should be specific or organized by areas and focus, for example, on the visual arts or the publishing industry.
- Analyze how to deal with potential conflicts in the event that government regulations come to require disclosure of information (source codes, for example) without this being necessary, which puts trade secrecy at risk. Even in the case of inspection visits to identify pirated computer programs, when a staff member requests access to computer equipment containing a secret.

Statistical information

- Generate statistical information necessary for the design of public policies related to the creative economy.
- Promote and encourage the production of copyright data. Although it is true that the Berne Convention for the Protection of Literary and Artistic Works of 1886 does not require registration for works to be considered protected, doing so allows statistical information to be collected, which is essential for the development of creative public policies.

97 In this section you can check which countries are party to both the Madrid Agreement and the Madrid Protocol as of November 13, 2019 (https://www.wipo.int/wipolex/en/treaties/ShowResults?start_year=ANY&end_year=ANY&search_what=C&code=ALL&treaty_id=8)

- Bear in mind that collecting statistical information requires economic, administrative and human resources.
- Share information and experiences among countries, because it helps to know how information is collected and classified. It also encourages learning about computer problems that have occurred in data collection, and even sharing computer programs.
- Share statistical information collection programs. Some countries have developed special computer programs for obtaining and managing this type of IP data, which could be licensed or transferred to other countries that need them but have not been able to develop them due to lack of material, economic or human resources. The resources designed by WIPO around IP could also be tapped, especially in the AI area.

5 || CONCLUSIONS

This study presents some of the several challenges IP faces within the creative economy in Latin America and the Caribbean. The situation of each country in the region varies considerably. A few have been working on policies focused on this type of economy, which rightly include IP. Others have taken action on a more isolated basis. Evidence shows that there is still work to be done.

Various ways in which the creative economy relates to almost all IP figures are considered. At the same time, some challenges already resulting from the emergence of new technologies have been identified, such as AI. The examples put forth can be a reference for actors such as Ministries/Secretaries of Economy, intellectual property offices or inventors/creators, to identify the opportunities provided by the creative economy to innovate, collaborate and integrate into the creative ecosystem.

This study shows that IP is one of the elements that give life to the creative economy. Therefore, it is urgent to work on improving access to the intellectual property system, which is one of the identified challenges. This becomes especially relevant when the context generated by the COVID-19 pandemic prevented government offices in several countries from receiving applications for protection of the various works of creative artists. Only countries that took advantage of the benefits of ICTs were able to continue offering most of their services.

In the case of creatives who want to make a living from their work, it is essential to provide them with different types of support, as proposed in this document, which will allow them to monetize their products and services. Correct and timely protection is key. For this reason, cross-cutting and organized work of government agencies, including Congress and the Judiciary, which are part of the creative ecosystem, is essential. They must collaborate in the design, implementation and evaluation of public policies. The work of the intellectual

property office is often viewed as another government service; however, this position should be corrected to engage the office as part of the ecosystem.

Addressing the above challenges and recommendations will enable governments to react efficiently and effectively to the changes produced by the evolution of technology. Creativity and innovation are two elements that are in the creative economy's DNA and bring about constant change, which can create a problem for governments: providing legal certainty to new creations. This document illustrates the need to address this situation, as well as the negative effects of not doing so, such as that the creativity of creatives is inhibited for fear of not having adequate protection.

Piracy, one of the most complex challenges in the region, is a factor that often scares away both investments and creatives, due to the damage that many have suffered, especially to their assets. This study identifies best practices that attempt to address this situation with proven alternatives, such as providing information on this issue starting from elementary education, so that children identify the importance of respect, not only for intellectual property rights, but also for their environment as part of the civic education that the LAC region so urgently needs.

In short, this study is a guide that provides LAC countries with a starting point and reference information, so that they are aware of what can be done to ensure that IP helps improve their creative ecosystem. There are no magic formulas, nor should policies be replicated without prior analysis of the local context. Success requires serious, professional and sustained work. This is the only way that creative economy investments, programs and policies implemented by countries can be successful with IP as one of their fundamental tools. More importantly, the creative economy and IP are key tools for development and growth in LAC.

References

Abbott, R. 2016. I Think, Therefore I Invent: Creative Computers and the Future of Patent Law. *Boston College Law Review.* 57(4): 1079–1126.

Acea, Y. 2014. Realidad y derecho sobre los conocimientos tradicionales: especial referencia al sector agrícola en Cuba. *Revista Novedades en Población.* 10(19): 113-121. Available at: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1817-40782014000100010.

Acemoglu, D. and J. A. Robinson. 2015. The Rise and Decline of General Laws of Capitalism. *Journal of Economic Perspectives.* 29(1): 3–28.Available at: https://www.aeaweb.org/articles?id=10.1257/jep.29.1.3.

Aguiar, J. C. 2010. La piratería como conflicto. Discursos sobre la propiedad intelectual en México. *Revista de Ciencias Sociales.*38:143–156. Available at: https://dialnet.unirioja.es/descarga/articulo/3293514.pdf.

Ahmed Lahsen, A. and A. Piper. 2019. Property rights and intellectual property protection, GDP growth and individual well-being in Latin America. *Latin American Economic Review.* 28(12): 1–21. Available at: https://latinaer.springeropen.com/track/pdf/10.1186/s40503-019-0073-5.pdf.

Ahvenniemi, H., B. Finley, A. Hernández Estradaet al. 2014. BitBang 5 - Changing Global Landscapes, Role of Policy Making and Innovation Capability. In: Neuvo, Y., E. Ormala y E. Karvonen.*Creative Industries and Bit Bang – How Value is Created in the Digital Age*.Págs. 164-190). Available at: https://www.researchgate.net/publication/260277035_Creative_industries_and_bit_bang_-_how_value_is_created_in_the_digital_age.

Alba, I. E. 2015. Edición digital y contratación de derechos de explotación: Perspectivas legislativas. En: Tesón, I. V. (Ed.).*Cuestiones de actualidad en el ámbito de la propiedad intelectual*. Pages 53-75. Available at: https://books.google.com.mx/books?id=vGm7CwAAQBAJ&pg=PA74&lpg=PA74&dq=safe+creative+wipo&source=bl&ots=fn5QBTOx2t&sig=70vptnkPUZqpUgWYS7x5xB9z87E&hl=es&sa=X&ved=2ahUKEwjX2fywmpvfAhUFL6wKHVvAAJ04FBDoATAHegQIBxAB#v=onepage&q=safe percent20creative percent20wipo&f=false.

Alikhan, S. 2000. Socio-economic benefits of intellectual property protection in developing countries.WIPO. Available at: ftp://ftp.wipo.int/pub/library/ebooks/wipopublications/wipo_pub_454e.pdf.

American Intellectual Property Law Association (AIPLA). 2009. Statement of Teresa Stanek Rea President American Intellectual Property Law Association Before The Subcommittee On Courts And Competition Policy Committee On The Judiciary United States House Of Representatives. Washington, D. C.: AIPLA. Available at: https://www.aipla.org/docs/default-source/uploadedfiles/documents/advocacy-shared-documents/tes-2009-07-14-111c-biologics-rea.pdf?sfvrsn=d4103cb1_1.

Andean Community. 2000. Comunidad Andina: Normativa Andina. Available at: http://intranet.comunidadandina.org/Documentos/Gacetas/Gace600.pdf.

Anderson, R. 2018. Is Copyright Piracy Morally Wrong or Merely Illegal? The Malum Prohibitum/ Malum in Se Conundrum. *The Scholarly Kitchen*. Available at: https://scholarlykitchen.sspnet.org/2018/04/30/copyright-piracy-morally-wrong-merely-illegal-malum-prohibitum-malum-se-conundrum/.

Andrzejewski, A. 2010. Patent auctions: The New Intellectual Property Marketplace. *University of Louisville Law Review*.48(4): 831-842.

Ángeles, M. G. and P. S. Medina. 2017. Industria de la información y piratería digital en México: Análisis económico de la protección de los derechos de autor. *Investigación Bibliotecnológica*. 31(71), 53 - 72.

Arias, O. 2011. Culture Matters: The Real Obstacles to Latin American Development. *Foreign Affairs.*90(1): 2-6. Available at:www.jstor.org/stable/25800375.

Arriba, C. G. 2010. Capitales culturales europeas. El concepto europeo de cultura en relación con algunos procesos actuales de renovación simbólica y de transformación urbana. *Revista electrónica de geografía y ciencias sociales.*14(339). Available at:http://www.ub.edu/geocrit/sn/sn-339.htm.

Asamblea Nacional. 2016. Código orgánico de la economía social de los conocimientos, creatividad e innovación. Available at: http://www.wipo.int/wipolex/es/text.jsp?file_id=439410

Babie, P. T. 2018. The "Monkey Selfies": Reflections on Copyright in Photographs of Animals Naruto v. Slater, 888 F.3d 418 (9th Cir. 2018). *UC Davis Law Review Online.*52: 103-117. Available at: https://lawreview.law.ucdavis.edu/online/vol52/52-online-babie.pdf.

Bachner, B. 2005. Facing the Music: Traditional Knowledge and Copyright. *Human Rights Brief.*12(3): 9-12. Available at: https://digitalcommons.wcl.american.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1322&context=hrbrief.

Bajwa, S. 2014. Apple v. Samsung: Is it Time to Change our Patent Trial. En: Law, P. M. (Ed.) *Global Business & Development Law Journal.*27(1): 74-106. Available at: https://scholarlycommons.pacific.edu/cgi/viewcontent.cgi?article=1003&context=globe.

Barbaschow, A. 2019. IP Australia's Alex is more than just a chatbot. *ZDNet*. Available at: https://www.zdnet.com/google-amp/article/ip-australias-alex-is-more-than-just-a-chatbot/?__twitter_impression=true.

Bauer, R. 2015. Media (R)evolutions: The epic Nollywood machine. *World Bank Blogs*. Available at: http://blogs.worldbank.org/category/tags/nollywood.

Becerra, R., E. Huerta, L. Neyra andR. Portilla. 2017. Conocimiento tradicional asociado a los recursos biológicos. México. Available at: https://www.giz.de/en/downloads/giz2017-es-biodivers-abs.pdf.

Benavente, J. M. and M. Grazzi. 2017. Public policies for creativity and innovation: Promoting the Orange Economy in Latin America and the Caribbean. Washington, D. C.: Inter-American Development Bank.

---------. 2018. IDB Blog.Puntos sobre la i: innovación: Tres maneras de entender el vínculo entre la economía naranja y la innovación. Available at: https://blogs.iadb.org/innovacion/es/vinculo-entre-economia-naranja-e-innovacion/.

Benjamin, M., P. Gagnon, N. Rostamzadehet al. 2019. Towards Standardization of Data Licenses: The Montreal Data License. Available at: https://arxiv.org/pdf/1903.12262.pdf.

Berger, J. and A. Rens. 2018. Innovation and Intellectual Property in South Africa: The Case for Reform. Shuttleworth Foundation. Available at: http://ip-unit.org/wp-content/uploads/2018/05/Innovation-IP-in-SA.pdf.

Blumenfeld, Z. 2019. Selling the Artist, Not the Art: Using Personal Brand Concepts To Reform Copyright Law for the Social Media Age. Columbia Journal of Law & the Arts. 42(2): 241-275.

Blyde, J. S. 2014. Fábricas sincronizadas: América Latina y el Caribe en la Era de las Cadenas Globales de Valor. Washington, D. C.: Inter-American Development Bank. Available at: https://publications.iadb.org/publications/spanish/document/F percentC3 percentA1bricas-sincronizadas-Am percentC3 percentA9rica-Latina-y-el-Caribe-en-la-era-de-las-Cadenas-Globales-de-Valor.pdf.

Bo, Z. 2020. Artificial Intelligence and Copyright Protection: Judicial Practice in Chinese Courts. Shenzhen: WIPO. Available at: https://www.wipo.int/export/sites/www/about-ip/en/artificial_intelligence/conversation_ip_ai/pdf/ms_china_1_en.pdf.

Bosher, H., O. Gurgula, S. Stokes, F. Wang and P. Westenberger. 2020. WIPO Impact of Artificial Intelligence on IP Policy Response from Brunel University London, Law School & Centre for Artificial Intelligence. Londres: Brunel University London. Available at: https://www.wipo.int/export/sites/www/about-ip/en/artificial_intelligence/call_for_comments/pdf/org_brunel.pdf.

BRANDZ. 2012. Top 100 Most Valuable Global Brands.Available at: http://www.millwardbrown.com/docs/default-source/global-brandz-downloads/global/2012_BrandZ_Top100_Report.pdf.

2018. Top 100 Most Valuable Global Brands.Available at: http://brandz.com/admin/uploads/files/BZ_Global_2018_DL.pdf.

Bresnahan, T. F. 2012. Generality, Recombination, and Reuse. In: Lerner, J. and S. Stern (Eds.).*The Rate and Direction of Inventive Activity* (Págs. 611-656). U.S.: University of Chicago Press. Available at: https://www.nber.org/chapters/c12374.pdf#?.

Bresnahan, T. and M. Trajtenbergb. 1995. General purpose technologies 'Engines of growth'? *Journal of Econometrics.*65(1): 83–108. N. B. Research. Available at: https://www.sciencedirect.com/science/article/abs/pii/030440769401598T.

Calatayud, A. and J. A. Ketterer. 2016. Gestión integral de riesgos para cadenas de valor. Washington, D. C.: Inter-American Development Bank. Available at: https://publications.iadb.org/publications/spanish/document/Gesti percentC3 percentB3n-integral-de-riesgos-para-cadenas-de-valor.pdf.

Calderón Villegas, J. J. 2008. Los datos de prueba: entre las patentes y el secreto comercial. Perspectivas a partir del análisis económico del derecho en el contexto de procesos de integración comercial. *Revista Estudios Socio-Jurídicos.*10(1): 227-264.

Cámara de Diputados. 2004. Decreto Nº 5.244, de 14 de Outubro de 2004.Available at: http://www2.camara.leg.br/legin/fed/decret/2004/decreto-5244-14-outubro-2004-534323-norma-pe.html.

Cámara de Diputados del H. Congreso de la Unión. 1994. Ley de la Propiedad Industrial. México. Available at: http://www.diputados.gob.mx/LeyesBiblio/pdf/50_180518.pdf.

Canadian Intellectual Property Office. 2019. Government of Canada: Canadian Intellectual Property Office.Available at: https://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/wr04479.html.

Cantera, S. 2014. La piratería ahoga a empresas mexicanas. *Expansión*. Available at: https://expansion.mx/economia/2014/04/21/la-pirateria-crecera-9-en-2014.

Caramiaux, B. 2020. Research for CULT Committee - The Use of Artificial Intelligence in the Cultural and Creative Sectors. Policy Department for Structural and Cohesion Policies. Brussels: European Parliament. Available at: https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/629220/IPOL_BRI(2020)629220_EN.pdf.

Cerdá-Bertomeu, M. J. 2018. Arquitectura de marcas destino y cobranding de marcas turísticas: Enfoques de gobernanza territorial. *Revista de Ocio y Turismo (ROTUR).*12(2): 43-59.

Chávez Valdivia, A. K. 2018. Entre el derecho de los diseños y las patentes: La tecnología ponible. *Revista IUS.*12(41): 155-168. Available at: http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1870-21472018000100155.

Chiang, T.-J. 2014. Rehabilitating the Property Theory of Copyright' s First Amendment Exemption. *Notre Dame Law Review.*89(2): 520-578. Available at: https://scholarship.law.nd.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1712&context=ndlr.

Cockburn, I. M., R. Henderson and S. Stern. 2018. The impact of artificial intelligence on innovation. *National Bureau of Economic Research*.Pages1-38. Available at: https://www.nber.org/system/files/working_papers/w24449/w24449.pdf.

Cocorocchia, C., J. Dunn, S. Hall and R. Takahashi. 2018. Creative disruption: The impact of emerging technologies on the creative economy. World Economic Forum. Available at: http://www3.weforum.org/docs/39655_CREATIVE-DISRUPTION.pdf.

Code of Virginia. 2019. A bill to amend the Code of Virginia by adding a section numbered 8.01-390.4, relating to business records electronically registered on a blockchain self-authenticating. Virginia: Virginia´s Legislative Information System. Available at: https://lis.virginia.gov/cgi-bin/legp604.exe?191+ful+HB2415#:~:text=In percent20any percent20civil percent20proceeding percent20where,no percent20extrinsic percent20evidence percent20of percent20authenticity.

Cohn, G. 2018. AI Art at Christie's Sells for $432,500. The New York Times. Available at: https://www.nytimes.com/2018/10/25/arts/design/ai-art-sold-christies.html.

Colson, E. 2019. What AI-Driven Decision Making Looks Like. Harvard Business Review. Available at: https://hbr.org/2019/07/what-ai-driven-decision-making-looks-like.

Congress of Colombia. 2017. Ley 1834 por medio de la cual se fomenta la economía creativa: Ley Naranja. Colombia. Available at: http://es.presidencia.gov.co/normativa/normativa/LEY percent201834 percent20DEL percent2023 percent20DE percent20MAYO percent20DE percent202017.pdf.

Congreso de la República. 2004. Ley Nº 28289: Ley de Lucha contra la Piratería. Lima. Available at: https://www.wipo.int/edocs/lexdocs/laws/es/pe/pe057es.pdf.

Congreso de la Unión. 2018. Iniciativa con proyecto de decreto por el que se reforman y adicionan diversas disposiciones de la Ley General de Cultura y Derechos Culturales. México City. Available at: http://infosen.senado.gob.mx/sgsp/gaceta/63/3/2018-07-25-1/assets/documentos/Inic_PAN_Cultura.pdf.

Consejo Nacional de la Cultura y las Artes. 2017. Plan Nacional de Fomento a la Economía Creativa.Available at: https://www.cultura.gob.cl/wp-content/uploads/2017/04/plan-economia-creativa.pdf.

Corporación de Fomento de la Producción (CORFO). 2020. CORFO presenta su primer centro para la revolución tecnológica en industrias creativas. Chile creativo. Available at: https://chilecreativo.cl/corfo-presenta-su-primer-centro-para-la-revoluci percentC3 percentB3n-tecnol percentC3 percentB3gica-en-industrias-creativas/.

Council of Europe. 2020. Ad hoc committee on artificial intelligence (CAHAI): Feasibility Study. Strasbourg: Council of Europe. Available at: https://rm.coe.int/cahai-2020-23-final-eng-feasibility-study-/1680a0c6da.

Dirección del Audiovisual, la Fonografía y los Nuevos Medios (DAFO). 2016. Conversatorio "Cómo monetizar las películas y la música". Available at: https://dafo.cultura.pe/conversatorio-como-monetizar-las-peliculas-y-la-musica-el-31-de-mayo/.

De Groot, O. J., M. Dini, N. Gligoet al. 2020. Economía creativa en la revolución digital: La acción para fortalecer la cadena regional de animación digital en países mesoamericanos. Santiago: ECLAC. Available at: https://repositorio.cepal.org/bitstream/handle/11362/45529/1/S2000218_es.pdf.

De León, I. and R. Gupta. 2017. The Impact of Digital Innovation and Blockchain on the Music Industry. Washington, D. C.: Inter-American Development Bank. Available at: https://publications.iadb.org/publications/english/document/The-Impact-of-Digital-Innovation-and-Blockchain-on-the-Music-Industry.pdf.

Deltorn, J.-M. 2018. Disentangling deep learning and copyrights. Available at: https://www.auteursrecht-online.nl/art/3751.

Deltorn, J.-M., A. TheanandM. Volkmer. 2019. The examination of computer implemented inventions and artificial intelligence inventions.Brussels: 4IP Council. Available at: https://www.4ipcouncil.com/research/examination-computer-implemented-inventions-and-artificial-i.

Deltorn, J.-M. and G. Leménager. 2021. Protecting artificial intelligence in France and Europe. *Annales des Mines - Réalités industrielles.* Págs. 44-48. Available at: http://annales.org/ri/2020/resumes/novembre/08-ri-resum-FR-AN-novembre-2020.html.

Dhar, B. and R. Joseph. 2012. The rise of the south and new paths of development in the 21st century: Foreign direct investment, intellectual property rights and technology transfer. New Delhi: UNCTAD. Available at: https://unctad.org/system/files/official-document/ecidc2012_bp6.pdf.

Doctorow, C. 2011. Why poor countries lead the world in piracy. The Guardian. Available at: https://www.theguardian.com/technology/2011/may/03/why-poor-countries-lead-world-piracy.

Dryden, J. 2017. Excepciones al derecho de autor: La perspectiva de un archivero. *OMPI/Revista*. (4): 16-19. Available at: http://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2017/wipo_pub_121_2017_04.pdf.

Edler, J., H. Cameron and M. Hajhashem. 2016. The intersection of intellectual property rights and innovation policy making – A literature review. Manchester Institute of Innovation Research, University of Manchester, United Kingdom for the Innovation Policy Section, Department for Transition and Developed Countries of the World Intellectual Property Organization. WIPO. Available at: http://www.wipo.int/edocs/pubdocs/en/wipo_report_ip_inn.pdf.

El Universal. 2012. Huevocartoon hará campaña contra la piratería en cines. *El Universal*. Available at: http://archivo.eluniversal.com.mx/notas/880450.html.

European Commission. 2017. Guidelines on Data Protection Impact Assessment. European Commission. Available at: https://ec.europa.eu/newsroom/article29/item-detail.cfm?item_id=611236.

2019. Ethics Guidelines for Trustworthy Artificial Intelligence. Brussels: European Commission. Available at: https://ec.europa.eu/futurium/en/ai-alliance-consultation.

European IPR Helpdesk. 2015. La propiedad intelectual en el plan de negocios. EU. Available at: http://www.iprhelpdesk.eu/sites/default/files/newsdocuments/Fact-Sheet-IP-and-Business-Plans-ES.pdf.

European Parliament. 2016. Copyright in the digital single market. Brussels: European Parliament. Available at: https://www.europarl.europa.eu/RegData/etudes/BRIE/2016/593564/EPRS_BRI(2016)593564_EN.pdf.

---------. 2016. Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32016L0943 .

European Union. 2017. Civil Law Rules on Robotics.*Official Journal of the European Union*. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX-:52017IP0051&from=EN .

---------. 2019. Liability for artificial intelligence and other emerging digital technologies. Luxembourg: Publications Office of the European Union. Available at: https://op.europa.eu/en/publication-detail/-/publication/1c5e30be-1197-11ea-8c1f-01aa75ed71a1/language-en.

European Union Intellectual Property Office (EUIPO). 2006. EUTM file information. Available at: https://euipo.europa.eu/eSearch/#details/trademarks/005090055.

Excelsior. 2018. Nuevamente... Xcaret es el mejor parque acuático del mundo. Excelsior. Available at: https://www.excelsior.com.mx/nacional/2018/02/14/1220301.

Fariña, A. A. 2014. Mapeo de las Industrias Creativas en Chile.Available at: https://www.cultura.gob.cl/wp-content/uploads/2014/01/mapeo_industrias_creativas.pdf.

Federal Republic of Nigeria National Assembly. 1993. National Film and Video Censors Board Act. Nigeria. Available at: https://lawsofnigeria.placng.org/laws/N40.pdf.

Ferriani, S., E. Garnsey, G. Lorenzoniet al. 2015. The intellectual property business model (Ip-Bm). London: Centre for Technology Management. Available at: https://www.ifm.eng.cam.ac.uk/uploads/Research/CTM/working_paper/2015-02-Ferriani-Garnsey-Lorenzoni-Massa.pdf.

Gardner, E. 2014. Michael Jackson Hologram Conjures Billionaire's Patent Lawsuit (Exclusive). The Hollywood Reporter. Available at: https://www.hollywoodreporter.com/thr-esq/hologram-lawsuit-alki-david-michael-jackson-690899.

Greffe, X. 2006. Gestión de empresas creativas.WIPO. Available at: https://www.wipo.int/edocs/pubdocs/es/copyright/938/wipo_pub_938.pdf.

Gibson, E. A.and A. S. Walbaum. 2015. La noción de derecho económico. *Revista de Derecho de la Pontificia Universidad Católica de Valparaíso.*Primer semestre de 2015; pages 387-420. Available at: https://scielo.conicyt.cl/pdf/rdpucv/n44/a12.pdf.

Gil de Arriba, C. 2010. Capitales culturales europeas. El concepto europeo de cultura en relación con algunos procesos actuales de renovación simbólica y de transformación urbana. *Revista electrónica de geografía y ciencias sociales. XIV*(339). Available at: http://www.ub.edu/geocrit/sn/sn-339.htm.

Government of Colombia. 2019. Estrategia Colombia Crea 2030.Available at: https://www.mincultura.gov.co/Economa percent20Naranja/assets/files/COLOMBIA percent20CREA percent202030.pdf.

Granados, N. 2015. How piracy is still hurting the filmmakers and artists you admire. Forbes. Available at: https://www.forbes.com/sites/nelsongranados/2015/12/03/how-piracy-hurts-the-filmmakers-and-artists-you-admire/.

---------. 2016. How online piracy hurts emerging artists. Forbes. Available at: https://www.forbes.com/sites/nelsongranados/2016/02/01/how-online-piracy-hurts-emerging-artists/#484165ba7774.

Guadamuz, A. 2018. ¿Qué nos puede enseñar sobre la legislación de derecho de autor el caso del mono que se hizo un selfi? WIPO Magazine. Available at: https://www.wipo.int/wipo_magazine/es/2018/01/article_0007.html.

Guerrero, E. M. 2017. Retos de la propiedad intelectual en la sociedad de la información. *Portal de Revistas Académicas*. 189-201. Available at: http://revistas.urp.edu.pe/index.php/Inkarri/article/download/1236/1128/.

Huertas, P. J. 2015. Las infracciones al derecho de autor en Colombia y la responsabilidad patrimonial, "Análisis jurisprudencial y posibles soluciones".Universidad Católica de Colombia. Available at: https://repository.ucatolica.edu.co/bitstream/10983/2329/1/TRABAJO percent20DE percent20GRADO, percent20FINAL percent20(LICENCIA).pdf.

Icaza, M. D. 2007. Aprender del pasado para crear el futuro: Las creaciones artísticas y el derecho de autor. OMPI. Available at: https://www.wipo.int/edocs/pubdocs/es/copyright/935/wipo_pub_935.pdf.

IFPI and Music Canada. 2015. The Mastering of a Music City, Key Elements, Effective Strategies and Why it's Worth Pursuing. International Federation of the Phonographic Industry and Music Canada. Available at: https://musiccanada.com/wp-content/uploads/2015/06/The-Mastering-of-a-Music-City.pdf.

Iglesias, M., S. Shamuilia and A. Anderberg. 2021. Intellectual Property and Artificial Intelligence - A literature review. Luxembourg: European Commission. Available at: https://publications.jrc.ec.europa.eu/repository/handle/JRC119102.

Intellectual Property Office of Trinidad and Tobago. 2018. Annual Report: Intellectual Property Office 2017-2018.

IP Watch Dog. 2017. Who Can Take the Patent Bar Exam? *IP watch dog*. Available at: https://www.ipwatchdog.com/patent-bar-exam/patent-bar-qualifications/

Iriarte, E. A. and R. P. Medina. 2013. Guía de derecho de autor para creadores y productores de videojuegos. Lima: INDECOPI - USAID. Available at: https://www.indecopi.gob.pe/documents/20182/143803/GDA_creadoresProductoresDeVideojuegos.pdf.

Ivanko, E. 2018. A fair monetization model to reconcile authors and consumers of intellectual property. Cornell University. Available at: https://arxiv.org/abs/1611.01471v1.

Japan Patent Office. 2008. New Intellectual Property Policy for Pro-Innovation. Draft Policy Recommendations of "Policy Committee on Innovation and Intellectual Property". Available at: https://www.jpo.go.jp/e/news/public/previous/document/iken_e_innovation_pc/draft_policyr_ecommendation.pdf.

Jewell, C. 2017. iROKOtv: Delivering Nollywood content to the world.*WIPO Magazine.*5:8-13. Available at: http://www.wipo.int/export/sites/www/wipo_magazine/en/pdf/2017/wipo_pub_121_2017_05.pdf.

---------. 2019. Leveraging Indonesia's creative economy. *WIPO Magazine.* (5): 16-21. Available at: https://www.wipo.int/export/sites/www/wipo_magazine/en/pdf/2019/wipo_pub_121_2019_05.pdf.

Jovanovic, B. and P. L. Rousseau. 2005. General Purpose Technologies. In: Aghion, P. y S. N. Durlauf (Eds.). *Handbook of Economic Growth* (Vol. 1B).

Karaganis, J (Ed.). 2011. Media Piracy in Emerging Economies. Social Science Research Council (SSRC). Available at: http://piracy.americanassembly.org/wp-content/uploads/2011/06/MPEE-PDF-1.0.4.pdf.

Karimi, P., K. Grace, M. L. Maheret al. 2018. Evaluating Creativity in Computational Co-Creative Systems. *ArXiv*. Available at: https://arxiv.org/pdf/1807.09886.pdf.

Kelly, P. 2018. IP Australia puts digital intelligence to work. *Wipo Magazine.* (3): 22-25. Available at: https://www.wipo.int/export/sites/www/wipo_magazine/en/pdf/2018/wipo_pub_121_2018_03.pdf.

Kirik, C. 2011. Inventors Eye: Accelerated Review of Green Technology Patent Applications. Available at: https://www.uspto.gov/learning-and-resources/newsletter/inventors-eye/accelerated-review-green-technology-patent.

Kyrkilis, D. and S. Koboti. 2015. Intellectual Property rights as determinant for Foreign Direct Investment entry mode: the case of Greece. *Elsevier.* (19): 3-16.

LaMotte, S. 2018. How Michael Jackson's tilt defied gravity. CNN. Available at: https://edition.cnn.com/2018/05/22/health/michael-jackson-dance-moves/index.html.

Laygo, J. E. 2019. The Nexus Between Creativity and Innovation: A Comparative Approach to Copyright and Industrial Design Protection. *Ateneo Law Journal. 62*(4): 1280-1372.

Levenson, D. 2005. Consequences of the Bayh-Dole Act. Massachusetts Institute of Technology. Available at: https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-901-inventions-and-patents-fall-2005/projects/bayh_dole.pdf.

Liang Huey, L. and T. Tze Phei. 2013. Pandan Leaves as a Natural Cockroach Repellent. Perak, Malasia. Available at: https://www.youtube.com/watch?v=TwiVFGu7iVw.

Lim, D. 2018. AI & IP Innovation & Creativity in an Age of Accelerated Change. *The John Marshall Institutional Repository.* (813): 814-875. Available at: https://repository.law.uic.edu/cgi/viewcontent.cgi?article=1724&context=facpubs.

Lindvall, H. 2013. YouTube and Spotify ripping: why won't they act? The Guardian. Available at: https://www.theguardian.com/media/media-blog/2013/jun/19/youtube-spotify-ripping-apps-mp3s.

Liston, E. 2015. Hello Nollywood: how Nigeria became Africa's biggest economy overnight. The Guardian. Available at: https://www.theguardian.com/world/2014/apr/10/nigeria-africa-biggest-economy-nollywood.

Lozeco, C., M. Schreider, D. Petriet al. 2015. Identificación de actores: una contribución a la gestión de los colectores de drenaje de la ciudad de Cipolletti (Río Negro, Argentina). UNESCO. Available at: http://www.unesco.org/new/fileadmin/MULTIMEDIA/FIELD/Montevideo/pdf/04IdentificaciondeActores-unacontribubucionalagestion.pdf.

Luzuriaga-Quichimbo, C.,T. Ruiz-Téllez, J. Blanco-Salas et al. 2018. Scientific validation of the traditional knowledge of Sikta ('Tabernaemontana sananho', Apocynaceae) in the Canelo-Kichwa Amazonian community. *Mediterranean Botany. 39*(2): 183-191.

Maskus, K. E. 2000. Intellectual Property Rights and Foreign Direct Investment. Centre for International Economic Studies Working Paper No. 22. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=231122.

Mexican Institute of Industrial Property (IMPI). 2016. Denominaciones de origen, orgullo de México. Mexico: Secretaría de Economía. Available at: https://www.gob.mx/cms/uploads/attachment/file/96531/DO_Orgullo_de_Mexico.pdf.

---------. 2018. ¿Conoces las marcas sonoras? Reformas a la ley de la propiedad industrial. Available at: https://www.gob.mx/impi/articulos/conoces-las-marcas-sonoras?idiom=es.

---------. 2018. Guía para el registro de diseños industriales. Lima, Peru. Available at: https://www.indecopi.gob.pe/documents/20791/2093642/Guia+para+el+registro+de+dise percentC3 percentB1os+industriales.pdf/cc69ea39-5db0-2516-de0d-a59a8d5b2fbd.

Ministère de la Culture. 2020. Mission du CSPLA sur les enjeux juridiques et économiques de l'intelligence artificielle dans les secteurs de la création culturelle. Paris: Government of France.

Ministry of Culture of Colombia. 2019. Micultura: Economía naranja. Colombia.

Ministry of Culture of Spain. 2008. Manual de buenas prácticas para la persecución de los delitos contra la propiedad intelectual. (S. G. Técnica, Ed.) Available at: https://www.seguridadpublica.es/wp-content/uploads/2013/04/Manual-de-Buenas-Pr percentC3 percentA1cticas-para-la-persecuci percentC3 percentB3n-de-los-delitos-contra-la-Propiedad-Intelectual.pdf.

Ministry of Culture of Peru (n.d.). Propuesta de Estrategia de Conocimientos Tradicionales de los Pueblos Indígenas en el Perú. Available at: http://www.cultura.gob.pe/sites/default/files/noticia/tablaarchivos/estrategiactmatrizfinal.pdf.

Ministry of Finance of Argentina. 2017. Informes de cadenas de valor en las industrias culturales. Secretaría de Política Económica. Ministerio de Hacienda deArgentina.

Ministry for the Arts. 2015. Australian Best Practice Guide to Collecting Cultural Material. Australian Government. Available at: https://www.arts.gov.au/publications/australian-best-practice-guide-collecting-cultural-material.

Morales, M. 2018. Luchar contra la piratería desde la infancia. El País. Available at: https://elpais.com/cultura/2018/11/06/actualidad/1541517640_452310.html.

Nard, C. A. and A. P. Morriss. 2006. Constitutionalizing Patents: From Venice to Philadelphia. *Review of Law & Economics*. 225-321. Available at: https://core.ac.uk/download/pdf/214111507.pdf.

National Institute of the Defense of Competition and Intellectual Property Protection (INDECOPI). 2014. INDECOPI Oficial: Registra virtualmente tus obras. Available at: https://www.youtube.com/watch?v=Fe4AK7Cmxdc.

Neville-Rolfe, L. (Baronesa). 2016. The challenge of protecting intellectual property. *OMPI/Revista*. Págs. 8-11. Available at: https://www.wipo.int/export/sites/www/wipo_magazine/en/pdf/2016/wipo_pub_121_2016_si.pdf.

Nigerian Copyright Commission. 2011. Nigerian Copyright Commission.Handbook on Copyright for Small and Medium Scale Enterprises in Nigeria.

Nimmer, D. 2004. Codifying Copyright Comprehensibly. *The UCLA Law Review*.Pages. 1233-1387.

Nirwan, P. 2017. Los secretos comerciales: el derecho de propiedad intelectual oculto. *OMPI/Revista.* (6): 31-34. Available at: http://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2017/wipo_pub_121_2017_06.pdf.

Nunnenkamp, P. and J. Spatz. 2004. Intellectual Property Rights and Foreign Direct Investment: A Disaggregated Analysis. *Review of World Economics.*140(3): 394-415.

Office of the United States Trade Representative (USTR). 2015. 2015 Special 301 Report. Washington, D. C.: Office of the United States Trade Representative. Available at: https://ustr.gov/sites/default/files/2015-Special-301-Report-FINAL.pdf.

---------. 2018. Special 301 Report. Office of the United States Trade Representative. U.S. Government. Available at: https://ustr.gov/sites/default/files/files/Press/Reports/2018 percent20Special percent20301.pdf

---------. 2020. 2020 Special 301 Report. Washington, D. C.: Office of the United States Trade Representative. Available at: https://ustr.gov/sites/default/files/2020_Special_301_Report.pdf.

---------. 2021. Issue Areas: Intellectual Property: Special 301. Available at: https://ustr.gov/issue-areas/intellectual-property/Special-301.

Oh, E. 2014. Nigeria's Film Industry: Nollywood Looks To Expand Globally. Washington, D. C.: United States International Trade Commission.

Ola, K. 2014. Evolution and future trends of copyright in Nigeria. *Journal of Open Access to Law. 2*(1): 1-36. Available at: https://ojs.law.cornell.edu/index.php/joal/article/download/26/38.

Oliva, C. 2002. Apuntes sobre historia del teatro:El camino hacia la verdad escénica. In: C. Oliva, *Cuadernos para investigación de la literatura hispánica* (Págs. 15-80). Fundación Universitaria Española. Available at: http://www.fuesp.com/pdfs_revistas/cilh/27/cilh-27-1.pdf.

Olsson, H. 2005. The Role of Government in Establishing a Modern Copyright System. The World Intellectual Property Organization in cooperation with the Ministry of Culture. WIPO. Available at: http://world-intellectual-property-organization.com/edocs/mdocs/arab/en/wipo_cr_krt_05/wipo_cr_krt_05_2.pdf.

Omanufeme, S. 2016. Runaway Success: Nigeria's film industry is taking off. *IMF Finance And Development.*53(2): 30-32. Available at: http://www.imf.org/external/pubs/ft/fandd/2016/06/pdf/omanufeme.pdf.

Organic Code on the Social Economy of Knowledge, Creativity and Innovation. 2016. WIPO. Available at: http://www.wipo.int/wipolex/es/text.jsp?file_id=439410

Organization for Economic Cooperation and Development (OECD). 2014. National Intellectual Property Systems, Innovation and Economic Development with perspectives on Colombia and Indonesia. Paris: OECD.

---------. 2016. Boosting Kazakhstan's National Intellectual Property System for Innovation. Paris: OECD.

Paschkes, C. V. 2005. La propiedad intelectual. Mexico: Trillas.

Pedreros-Gajardo, M. and L. Araya-Castillo. 2013. Piratería de software: Propuesta de modelo. Revista Pilquen.2(16): 1-18e

Pillai, R. 2015. Vincular el pasado y el futuro: Preservar los conocimientos de Malasia. *OMPI/Revista.* (1): 21-25. Available at: http://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2015/wipo_pub_121_2015_01.pdf.

Pooley, J. 2013. El secreto comercial: El otro derecho de propiedad intelectual. *OMPI/Revista*. (3): 2-4. Available at: http://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2013/wipo_pub_121_2013_03.pdf.

PROCOLOMBIA. 2016. Seminario en Medellín: Cómo monetizar películas y música. Available at: http://www.procolombia.co/lista-de-eventos/seminario-en-medellin-como-monetizar-peliculas-y-musica.

PROMÉXICO. 2016. La industria automotriz mexicana: Situación actual, retos y oportunidades.

PWC. 2017. Spotlight The Nigerian Film Industry. Nigeria: PWC. Available at: https://www.pwc.com/ng/en/assets/pdf/spolight-the-nigerian-film-industry.pdf.

Quinn, G. 2017. House Republicans Propose USPTO as an Independent Agency. IP Watch Dog. Available at: https://www.ipwatchdog.com/2017/09/29/house-republicans-uspto-independent-agency/id=88670/.

Ramstad, E. and M. Sun Lee. 2012. South Korea Court Says Samsung, Apple Infringed Each Other's Patents. The Wall Street Journal. Available at: https://www.wsj.com/articles/SB10000872396390444812704577608242792921450.

Renault, C.-E. and R. Aft. 2011. Del guión a la pantalla: La importancia del derecho de autor en la distributión de películas. WIPO.

Republic of Kenya. 2016. The Protection of Traditional Knowledge and Cultural Expressions Act.

Rhines, R. 2005. Consequences of the Bayh-Dole Act. MIT.

Roy, E. A. 2017. Eminem wins $600,000 after New Zealand political party breached his copyright. The Guardian. Available at: https://www.theguardian.com/music/2017/oct/25/eminem-wins-600000-after-new-zealand-political-party-breached-his-copyright.

Rys, D. 2017. Popular 'Sesame Street' Song Royalties Sell For $580,000 at Auction. Billboard. Available at: https://www.billboard.com/articles/business/7825864/sesame-street-song-royalties-auction-580000.

Safe Creative and WIPO. 2011. Registro Privado On-Line de Propiedad Intelectual. Conferencia sobre Documentación e lnfraestructura del Derecho de Autor. WIPO.

Samoili, S., M. G. López Cobo, G. De Pratoet al. 2020. AI WATCH. Defining Artificial Intelligence. Luxembourg: Publications Office of the European Union.

Samuelson, P. 2012. The Past, Present and Future of Software Copyright Interoperability Rules in the European Union and United States. *European Intellectual Property Review*. Pages. 229-236.

Santamaría H., E. 2021. Artificial intelligence and co-creativity: A general copyright perspective from Latin America. Available at: https://www.caiinno.org/wp-content/uploads/2022/04/CEIPI-Esteban-Santamaria.pdf

Santamaría H., E., S. Worthman, S. Álvarez Huitrónet al. 2021. Economía del conocimiento y economía creativa como herramientas para salir de la crisis generada por el COVID-19 en América Latina y el Caribe: un enfoque hacía la Alianza del Pacífico. Available at: https://www.caiinno.org/wp-content/uploads/2021/07/Economia-del-Conocimiento-BID.pdf.

Santamaría H., E. and D. N. Becerra V. 2017. Propiedad intelectual, creatividad e innovación para el desarrollo de México.Centro de Análisis para la Investigación en Innovación. Available at: http://www.caiinno.org/wp-content/uploads/2018/07/PI-Algunas-Propuestas-CAIINNO.pdf.

Santamaría H., E. and G. Manzano. 2017. Piratas a la vista. Puntos sobre la i. Available at: https://blogs.iadb.org/innovacion/es/propiedad-intelectual-pirateria/.

Sattar, A. and T. Mahmood. 2011. Intellectual Property Rights and Economic Growth: Evidence from High, Middle and Low Income Countries. *Pakistan Economic and Social Review.*49(2): 163-186.

Secretaría de Educación Pública. 2014. Premio Nacional de Ciencias y Artes: 70 años.Available at: https://www.inba.gob.mx/multimedia/prensa/galerias/130/130-nota-informativa_.pdf.

Seeber, M. and R. Balkwill. 2007. Gestión de la propiedad intelectual en la industria editorial de libros.WIPO. Available at: https://www.wipo.int/publications/es/details.jsp?id=255&plang=ES.

Sell, S. 2004. Intellectual Property and Public Policy in Historical Perspective: Contestation and Settlement. *Loyola of Los Angeles Law Review.*38(267): 267-322.

Sharma, S. 2018. La piratería de señales: una amenaza para los organismos de radiodifusión de Asia y el Pacífico. *OMPI/Revista.* (1): 9-14. Available at: http://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2018/wipo_pub_121_2018_01.pdf.

Shemtov, N. 2019. A study on inventorship in inventions involving AI activity. London: European Patent Office.

Sin Embargo. 2018. Xcaret, el principal parque de la Riviera Maya que aprovecha su belleza natural para atraer turistas. Sin Embargo. Available at: http://www.sinembargo.mx/04-03-2018/3393029.

Smith, R. 2015. Fomento de la marca país: contar la historia de Nueva Zelandia. *OMPI/Revista.* (4): 30-33. Available at: http://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2015/wipo_pub_121_2015_04.pdf.

Solicitors Regulation Authority. 2015. Research and Analysis: The changing legal services market.Available at: http://www.sra.org.uk/consumers/using-solicitor/costs-legal-aid.page.

Southern, T. 2020. AI Music. Available at:https://www.tarynsouthern.com/album.

Spanish Patent and Trademark Office (OEPM). 2018. ¿Por qué solicitar un diseño industrial en España? Available at: https://www.oepm.es/export/sites/oepm/comun/documentos_relacionados/Publicaciones/Folletos/Disenio_industrial.pdf.

Superintendencia de Industria y Comercio de Colombia. 2018. Blockchain: la revolución de la confianza digital. Centro de Información Tecnológica y Apoyo a la Gestión de la Propiedad Industrial. Available at: https://www.sic.gov.co/sites/default/files/files/Propiedad percent20Industrial/Boletines_Tecnologicos/Boletin_Blockchain.pdf.

State Agency on Intellectual Property of Moldova (AGEPI). 2012. Raising Awareness Campaigns: The Experience of The Republic Of Moldova. State Agency on Intellectual Property. Observatory on Enforcement of IP Rights. Available at: https://www.wipo.int/edocs/mdocs/enforcement/en/wipo_ace_10/wipo_ace_10_panel_1_moldova.pdf.

Svedman, M. 2020. Artificial Creativity: A Case Against Copyright for AI-Created Visual Artwork. *IP Theory.*9(1): 2-22. Available at: https://www.repository.law.indiana.edu/cgi/viewcontent.cgi?article=1053&context=ipt.

Tassi, P. 2012. You Will Never Kill Piracy, and Piracy Will Never Kill You. Forbes. Available at: https://www.forbes.com/sites/insertcoin/2012/02/03/you-will-never-kill-piracy-and-piracy-will-never-kill-you/#4f66a30d7a52.

Teece, D. J. 2018. Profiting from innovation in the digital economy: Enabling technologies, standards, and licensing models in the wireless world. *Research Policy.* (47): 1367-1387.

Terrill, A. and A. Jacob. 2015. Qué beneficios obtienen las ciudades al ayudar a crecer la industria musical. *OMPI/Revista.*(5): 36-39. Available at: http://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2015/wipo_pub_121_2015_05.pdf.

The Conference Board of Canada. 2018. Cautious Optimism. Adopting Blockchain to Improve Canadian Government Digital Services. Available at: https://www.conferenceboard.ca/temp/61309f56-db5a-4873-aefb-b4b27eb7daa4/9591_Cautious percent20Optimism_BR.pdf.

The Guardian. 2014. Nollywood goes to Paris.Available at: https://www.theguardian.com/world/2013/may/07/nollywood-week-paris-nigeria.

The Software Alliance. 2016. Seizing Opportunity Through License Compliance: BSA Global Software Survey. Washington, D. C.: The Software Alliance. Available at: https://globalstudy.bsa.org/2016/downloads/studies/BSA_GSS_US.pdf.

T-MEC. 2018. United States-Mexico-Canada Agreement. Available at: https://ustr.gov/trade-agreements/free-trade-agreements/united-states-mexico-canada-agreement/agreement-between.

Tobin, B. and R. de la Cruz (n.d.). El Derecho Consuetudinario y los Conocimientos Tradicionales.WIPO. Available at: https://www.wipo.int/edocs/pubdocs/es/wipo_pub_tk_7.pdf.

Towse, R. 2016. Copyright Auctions and the Asset Value of a Copyright Work. *Review of Economic Research on Copyright Issues.*13(2): 83-99. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2903420.

UK Intellectual Property Office (IPO). 2019. IPO's online training tools. Available at: https://www.ipo.gov.uk/ip-support/.

The United Nations Conference on Trade and Development (UNCTAD). 2018. UNCTAD Creative Economy Outlook:Trends in International Trade in Creative Industries 2002–2015/Country Profiles 2005–2014. UNCTAD. Available at: https://unctad.org/en/PublicationsLibrary/ditcted2018d3_en.pdf.

The United Nations Economic Commission for Latin America and the Caribbean(ECLAC). 2011. El desarrollo inclusivo en América Latina y el Caribe. En: R. Infante (Ed.). *El desarrollo inclusivo en América Latina y el Caribe: Ensayos sobre políticas de convergencia productiva para la igualdad.* Santiago, Chile: ECLAC. Available at: https://repositorio.cepal.org/bitstream/handle/11362/2594/S2011288_es.pdf?sequence=1.

---------. 2020. La inversión extranjera directa en América Latina y el Caribe. Santiago de Chile: ECLAC. Available at: https://repositorio.cepal.org/bitstream/handle/11362/46450/2/S2000595_es.pdf

The United Nations Educational, Scientific and Cultural Organization (UNESCO). 2008. The Contribution of early childhood education to a sustainable society. Paris: UNESCO. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000159355.

---------. 2010. Políticas para la creatividad. Paris: UNESCO. Available at: http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CLT/images/UNESCOCulturalandCreativeIndustriesguide_01.pdf.

---------. 2021. Cutting Edge: The creative economy: moving in from the sidelines. UNESCO. Available at: https://en.unesco.org/news/cutting-edge-creative-economy-moving-sidelines.

United States Congress. 2011. Stop Online Piracy Act. Available at: https://www.congress.gov/bill/112th-congress/house-bill/3261/text

2016. Defend Trade Secrets Act of 2016.United States. Available at: https://www.congress.gov/114/plaws/publ153/PLAW-114publ153.pdf.

United States Patent and Trademark Office (USPTO). 1985. Trademarks.Available at: http://tsdr.uspto.gov/#caseNumber=73553567&caseType=SERIAL_NO&searchType=statusSearch.

---------. 2000.Trademarks.Available at: http://tsdr.uspto.gov/#caseNumber=75934538&caseType=SERIAL_NO&searchType=statusSearch.

---------. 2018a. General Requirements Bulletin for Admission to the Examination for Registration to Practice in Patent Cases before the United States Patent and Trademark Office. United States Patent and Trademark Office, Office of Enrollment and Discipline. Available at: https://www.uspto.gov/sites/default/files/documents/OED_GRB.pdf.

2018b. Fees and Budgetary Issues: Micro Entities. Available at https://www.uspto.gov/patent/laws-and-regulations/america-invents-act-aia/fees-and-budgetary-issues#-heading-2.

---------. 2018c. FY 2018: Performance and Accountability Report.Available at: https://www.uspto.gov/sites/default/files/documents/USPTOFY18PAR.pdf.

---------. 2019. USPTO operating status during a lapse in federal appropriations. Available at: https://www.uspto.gov/uspto-operating-status.

---------. 2020. Public Views on Artificial Intelligence and Intellectual Property Policy. Washington, D. C.: United States Patent and Trademark Office. Available at: https://www.uspto.gov/sites/default/files/documents/USPTO_AI-Report_2020-10-07.pdf.

---------. (n.d.). DMCA Notice-and-Takedown Processes: List of Good, Bad, and Situational Practices. Department of Commerce DMCA Multistakeholder Forum. Available at: https://www.uspto.gov/sites/default/files/documents/DMCA_Good_Bad_and_Situational_Practices_Document-FINAL.pdf.

Vázquez, J. 2016. DreamWorks operará dos parques en la Riviera Maya. El Economista. Available at: https://www.eleconomista.com.mx/estados/DreamWorks-operara-dos-parques-en-la-Riviera-Maya-20160905-0015.html.

Vega Barón, M. A. 2004. Protección de los diseños industriales. *Revista Propiedad Intelectual*(6 and 7).

Wiens, J. and C. Jackson. 2015. How Intellectual Property Can Help or Hinder Innovation. Entreprenuership Policy Digest.

Wiser, G. 2001. U.S. Patent and Trademark Office Reinstates Ayahuasca Patent: Flawed Decision Declares Open Season on Resources of Indigenous Peoples. Center for International Environmental Law. Washington, D.C.: Center for International Environmental Law. Available at: https://www.ciel.org/wp-content/uploads/2015/06/PTO-DecisionAnalysis.pdf.

Wood, C. 2014. La piratería de señales es una amenaza para los organismos de radiodifusión que prestan servicio a las comunidades minoritarias. *OMPI/Revista.* (6): 19-21. Available at: http://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2014/wipo_pub_121_2014_06.pdf.

World Bank (WB). 2016. Intellectual Property Protection. Available at: https://tcdata360.worldbank.org/indicators/entrp.ip?country=BRA&indicator=3375&countries=USA,-CAN,MEX,CHL,COL,ARG&viz=bar_chart&years=2016&compareBy=region.

World Economic Forum (WEF) 2018. Global Competitiveness Index 2017-2018.

World Intellectual Property Organization (WIPO). 2006a. IP Asset Development and Management: A Key Strategy for Economic Growth. WIPO. Available at: http://www.wipo.int/edocs/pubdocs/en/intproperty/896/wipo_pub_896.pdf.

---------. 2006b. Planificación de una campaña de sensibilización. *OMPI/Revista.* (5): 4. Available at: https://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2006/wipo_pub_121_2006_05.pdf.

---------. 2007a. Manual de la OMPI de redacción de solicitudes de patente. Geneva: WIPO. Available at: http://www.wipo.int/edocs/pubdocs/es/patents/867/wipo_pub_867.pdf.

---------. 2007b. IP Infringements on the Internet – Some Legal Considerations. *OMPI/Revista.* (1): 12-13. Available at: https://www.wipo.int/export/sites/www/wipo_magazine/en/pdf/2007/wipo_pub_121_2007_01.pdf.

---------. 2007c. Olfatear la piratería: Operación doble aprieto. *OMPI/Revista.* (3): 10. Available at: https://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2007/wipo_pub_121_2007_03.pdf.

---------. 2007d. Charla con la generación digital. *OMPI/Revista.* (2): 14-15.

---------. 2009a. Olfato, oído, gusto. Los sentidos de las marcas no tradicionales. *OMPI/Revista.* (1): 4-6. Available at: http://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2009/wipo_pub_121_2009_01.pdf.

---------. 2009b. La lucha contra la piratería y la falsificación en el Brasil: Progresos y desafíos. Comité Asesor sobre Observancia. Quinta sesión. Consejo Nacional para Combatir la Piratería y los Delitos de Propiedad Intelectual (CNCP). Available at: https://www.wipo.int/edocs/mdocs/enforcement/es/wipo_ace_5/wipo_ace_5_8.doc.

---------. 2010a. La defensa de la propiedad intelectual en la industria textil: Una pyme enfrenta el problema. Available: http://www.wipo.int/ipadvantage/es/details.jsp?id=2626.

---------. 2010b. La información confidencial y la gestión de la p.i. en la subcontratación externa. China. Available at: http://www.wipo.int/ipadvantage/es/details.jsp?id=2542.

---------. 2011a. Controversias entre la arquitectura y el Derecho de Autor. *OMPI/Revista.* (5). 12-14. Available at: http://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2011/wipo_pub_121_2011_05.pdf.

---------. 2011b. Música y propiedad intelectual. Phillipines. Available at: http://www.wipo.int/ipadvantage/es/details.jsp?id=2715.

---------. 2011c. Gestión de la propiedad intelectual en la industria publicitaria. WIPO. Available at: https://www.wipo.int/publications/es/details.jsp?id=257&plang=ES.

---------. 2012. Revitalizar la comunidad y salvaguardar la cultura. WIPO. Available at: https://www.wipo.int/ipadvantage/es/details.jsp?id=3495.

---------. 2013a. Una receta sencilla para el empoderamiento de las mujeres. Available at: http://www.wipo.int/ipadvantage/es/details.jsp?id=3619.

---------. 2013b. Los conocimientos tradicionales como camino hacia el éxito. Lituania. Available at: http://www.wipo.int/ipadvantage/es/details.jsp?id=3620.

---------. 2015a. La importancia del origen: La experiencia de Colombia. Available at: http://www.wipo.int/ipadvantage/es/details.jsp?id=2617.

---------. 2015b. Estudio sobre la piratería: "El mercado *sombra* en México". Comité Asesor sobre Observancia. Décima sesión. Available at: https://www.wipo.int/edocs/mdocs/enforcement/es/wipo_ace_10/wipo_ace_10_12.pdf.

---------. 2016. Principios básicos del derecho de autor y los derechos conexos. Available at: http://www.wipo.int/edocs/pubdocs/es/wipo_pub_909_2016.pdf.

---------. 2017a. El futuro de la propiedad intelectual: oportunidades y desafíos. *OMPI/Revista.* (5): 2-7. Available at: https://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2017/wipo_pub_121_2017_05.pdf.

---------. 2017b. La inteligencia artificial y el derecho de autor. *OMPI/Revista.* (5): 14-19. Available at: https://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2017/wipo_pub_121_2017_05.pdf.

---------. 2018a.Treaties Administered by WIPO: Contracting Parties: Berne Convention. Available at: https://www.wipo.int/treaties/es/ShowResults.jsp?lang=es&treaty_id=15.

---------. 2018b. WIPO Good Practice Toolkit for CMOs (The Toolkit). Available at: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_cr_cmotoolkit.pdf.

---------. 2018c. Resumen de las respuestas a la nota sobre las aplicaciones de la inteligencia artificial en la administración de las oficinas de propiedad intelectual. Available at: http://www.wipo.int/edocs/mdocs/globalinfra/es/wipo_ip_itai_ge_18/wipo_ip_itai_ge_18_1.pdf

---------. 2019. WIPO Technology Trends 2019: Artificial Intelligence. Geneva: WIPO. Available at: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_1055.pdf.

---------. 2020. WIPO Director General Opens WIPO Conversation on IP and AI: Third Session. WIPO. Available at: https://www.wipo.int/about-wipo/en/dg_tang/news/2020/news_0014.html.

World Trade Organization (WTO). 2008. Aspectos de los derechos de propriedad intelectual relacionados con el comercio. Available at: https://www.wto.org/spanish/tratop_s/trips_s/ta_docs_s/8_bgd_trips_89_s.pdf.

---------. 2015. Extract from minutes of meeting of the council for trade-related aspects of intellectual property rights, item 10 IP and innovation: the role of intellectual property in financing innovation.Geneva: WTO. Available at: https://www.wto.org/english/tratop_e/trips_e/09_ip_and_innovation_role_of_ip_in_financing_innovation_79a1.pdf.

Yanisky-Ravid, S. 2017. Generating Rembrandt: Artificial Intelligence, Copyright, and Accountability in the 3a Era—The Human-Like Authors are Already Here—A New Model. Michigan State Law Review. Pages. 659-726.

Zárate, A. M. and P. Farias. 2018. Regulación inteligente: ¿Cómo construir las reglas del juego de la economía digital? Gobernarte. Available at: https://blogs.iadb.org/gobernarte/2018/11/15/regulacion-tecnologica-como-estan-evolucionando-las-reglas-del-juego-de-la-economia-digital/.

Zhang, M. 2014. Nueva Ley de Marcas de China. *OMPI/Revista.* 5: 34-36. Available at: http://www.wipo.int/export/sites/www/wipo_magazine/es/pdf/2014/wipo_pub_121_2014_05.pdf.

Annex 1.
Consultation with experts to establish the main challenges

Objective

To identify, together with experts with international experience in the IP area, the challenges facing the creative economy in LAC.

Specific objectives

- Validate the identified challenges.
- Select those to be analyzed in the study.

Strategy

- Experts in the field based in Washington, D. C. were contacted to explain to each of them individually the objective of the project, as well as the input needed from them.
- A list of challenges was drawn up and the experts were asked to share those they felt should be included, in addition to those already identified. Some sent their opinions before receiving the list.
- Four academics from different countries in the LAC region were also consulted for their views on the challenges.
- Finally, a meeting was organized with experts from Washington, D.C., where the challenges were presented in order to validate those identified and reach a consensus on the list of four challenges to be analyzed for the study.

Methodology justification

Expert consultation as a method for validating results is used by several authors in various areas (Gustafsson and Ollila, 2003), Council of the European Union (2012), Michalus, Sarache Castro and Hernández Pérez (2015) or Escobar-Pérez and Cuervo-Martínez (2008). In this case, the Bank's geographic location allows access to experts with international reputations in the IP area, with work in the international, private, public and academic sectors at two of the most respected universities in the world in this field. In addition, the creative economy expert of the World Intellectual Property Organization participated and collaborated in the event.

This is the list of experts who collaborated, to whom we are very grateful for having given their time and experience to achieve the study's publication:

- Dimiter Gantchev (Director of Creative Industries, World Intellectual Property Organization).
- Michael Ryan (Georgetown University Professor and IP for Development Specialist).
- Steven Tepp (Professor at The George Washington University and copyright specialist).
- Albert Keyack (Representative of the European Patent Office in the United States).
- Patrick Kabanda (Former Advisor to the Vice-Presidency of the World Bank, expert in African Cultural Economics).
- David J. Kappos (former Director of the USPTO, now Partner at Cravath, Swaine & Moore).
- Deborah S. Cohn (International Trademark Association).
- José Luis Londoño (Head of Representation of the International Trademark Association).
- Matthew Schruers (Vice President of the Computer and Communications Industry Association, international NGO).

This is the list of scholars who collaborated, to whom we are very grateful for having given their time and experience to achieve the study's publication:

- Manuel Magaña (Director of the School of Law, Aguascalientes Campus, Universidad Panamericana, Mexico).
- Valentina Delich (Academic Secretary of FLACSO Argentina and Advisor to the Ministry of Production on International Intellectual Property Negotiations).
- Francisco Astudillo (Professor of the Doctorate in Law of the Universidad Central de Venezuela and founding professor of the Postgraduate Program in Intellectual Property of the Universidad de Los Andes).
- Marta Giménez Pereira (Research Professor at the Federal University of Bahia, Brazil, and the National Autonomous University of Mexico).

It should be noted that collaborators' responses were not used as part of the text of the study; they were used for informational and reference purposes only, so none of them is cited as the specific author. The list on which the experts collaborated in the selection of the four challenges was limited to the experts' responses.

Consultation

- Most of the collaborating experts were present at the meeting and shared their views on the challenges. The two experts who could not be present sent their opinion separately.
- The objectives of the study were presented, as well as its limitations in terms of time, data, human and economic resources.
- The challenges identified by the IDB team, which had been sent previously, were introduced in order to have a starting point and focus the conversation on those directly related to the creative economy.
- Participants discussed several of the challenges the LAC region faces, including some encountered in developed countries, which normally have a robust IP system. Among those addressed were:
  - The perception that access to various elements of IP should be free of charge, mainly those related to culture and creative industries.
  - Lack of knowledge of what IP is, as well as its relevance and how to protect it, both from entrepreneurs, companies and governments.
  - Difficulty in managing licenses and technology transfers, mainly abroad.
  - Lack of data and statistical information on the different IP figures.
- Looking at the above limitations, the conversation focused on the points that were regarded as relevant to investigate in order to fulfill the study's and the Bank's objectives in terms of future projects related to the creative economy. The four challenges are as follows:
  - Access to the IP system.
  - Monetization of creations protected or protectable through IP.
  - Changes generated by technology evolution sometimes exceed legislation, and the updating process is not as fast as evolution itself.
  - Piracy.
- Finally, it was concluded that these are only four of a large number of challenges that exist and must be addressed in order to achieve an optimal ecosystem that fosters the development of the creative economy in LAC. It was agreed that it is very complicated (even for those who are experts with a long career in the subject) to define which are the most important or urgent. That said, the selected challenges are a good starting point.

Annex 2.
Estimating the Impact of intellectual property rights on foreign direct investment

The following model was developed with the purpose of demonstrating the impact of Intellectual Property Protection (IPP) on Foreign Direct Investment (FDI). The methodology for the elaboration is inspired by the document "Intellectual Property Rights and Foreign Direct Investment: A Disaggregated Analysis" of the Kiel Institute of World Economics (Nunnenkamp and Spatz, 2004). This study analyzes the relationship between FDI and IPP by means of an econometric model, where the effect of GDP per capita, total population, distance between the United States and the countries to be studied, the cost of investing abroad, average years of schooling and the IPP index on FDI are analyzed.

In our case, due to availability of information, it was decided to work only with the following indicators:

- Net FDI flows
- GDP per capita
- IPP Index
- Total population

The collected information corresponds to 2017. In total, data was obtained from 49 countries:

LAC countries	Other countries
Argentina	Austria
Bolivia	Belgium
Brazil	Bulgaria
Chile	Croatia
Colombia	Cyprus
Costa Rica	Denmark
Ecuador	Germany
El Salvador	Slovenia
Guatemala	South Korea
Honduras	Spain

LAC countries	Other countries
Mexico	Czech Republic
Nicaragua	Estonia
Panama	Finland
Paraguay	France
Peru	Greece
Dom. Republic	Hungary
Uruguay	Ireland
Venezuela	Italy
	Japan
	Latvia
	Lithuania
	Luxembourg
	Malta
	New Zealand
	Poland
	Portugal
	Romania
	Slovak Republic
	Sweden
	United Kingdom
	United States

Source: World Bank and World Economic Forum.

The expected hypothesis in this model is to show that IPP protection positively influences FDI and that if a country increases its guidelines to protect IP, FDI will increase at the same rate. The opposite hypothesis would be that IPP has no effect on FDI.

The approach of this model is a linear regression expressed with the following equation:

$$FDI = C + GDPPC + IPP + POP + SCHOOL + \varepsilon$$

Where:

FDI= Estimated net FDI flows.

C= Intercept.

GDPPC= estimated GDP per capita.

IPP= Estimated IPP Index.

POP= Estimated total population.

SCHOOL= Estimated average years of schooling.

E= Estimated Error.

The result was as follows:

Independent Variable	Coefficient	Standard Error	Statistical *t*
C	2.103816***	2.017470	1.042799
GDPPC	0.811071**	0.410504	1.975793
IPP	2.692767**	1.318594	2.042151
POP	0.645003*	0.087469	7.374088
SCHOOL	-0.833679***	1.045831	-0.797146

R2	0.789600	F-Statistic	0	Durbin-Watson	1.630258

Notes:
*Statistically significant at 5.
**Statistically significant at 10.
*** Statistically not significant.

It should be noted that the model was corrected by the difference method (the logarithm of each indicator was calculated) to avoid autocorrelation.

The model has three significant variables: (i) GDP per capita (GDPPC); (ii) intellectual property protection (IPP), and (iii) total population (POP); and two non-significant variables: (i) average years of schooling (SCHOOL), and (ii) intercept (C). Therefore, in order to achieve a better fit in the results, the original model was modified as follows:

$$FDI = GDPPC + IPP + POP + \varepsilon$$

Where:
FDI= Estimated net FDI flows.
GDPPC= estimated GDP per capita.
IPP= Estimated IPP Index.
POP= Estimated total population.
E= Estimated Error.

The result was as follows:

Independent Variable	Coefficient	Standard Error	Statistical *t*
GDPPC	0.725653*	0.237298	3.057976
IPP	2.625158**	1.214384	2.161720
POP	0.710691*	0.063726	11.15221

R2	0.781915	Durbin-Watson	1.581320

Notes:
*Statistically significant at 5.
**Statistically significant at 10.

It should be noted that the model was corrected by the difference method (the logarithm of each indicator was calculated) to avoid autocorrelation.

In the final model, the coefficient of determination (R2) explains FDI with a value of 0.781915; that is, IPP, GDP per capita and total population together determine FDI by 78.1915 percent.

Similarly, the hypothesis expressed above is fulfilled, since IPP is a statistically significant variable, which means that IPP is indeed related to FDI. The alternative hypothesis that IPP does not influence FDI has only a 10 percent probability of being fulfilled.

The following can be inferred from the coefficients obtained:

- IPP has a positive relationship with FDI; that is, when it increases its variation by 1, the FDI variation will increase by 2.625158. From the above, it can be interpreted that the more intellectual property rights are protected in a country, the greater the FDI inflows will be.
- GDP per capita (GDPPC) is positively related to FDI: as soon as the change in GDP per capita increases by 1, change in FDI will increase by 0.725653. This demonstrates the importance of a country's income and productive capacity to attract greater investment.
- The total population of a country has a close relationship with FDI: if the change in population is increased by 1, change in FDI will increase by 0.710691. Thus, it can be inferred that the population is relevant when it comes to attracting investment.

Annex 3.
Latin American and Caribbean countries included in the U.S. Special 301 Report on intellectual property protection

1. *Watch List*
2. *Priority Watch List*

Country	2014	2015	2016	2017	2018	2019	2020
ARGENTINA			2	2	2	2	2
BAHAMAS							
BARBADOS	1	1	1	1	1	1	1
BELIZE							
BERMUDAS							
BOLIVIA	1	1	1	1	1	1	1
BRAZIL	1	1	1	1	1	1	1
CHILE		2	2	2	2	2	2
COLOMBIA	1	1	1	1	2	1	1
COSTA RICA	1	1	1	1	1	1	X
DOMINICA	1	1	1	1	1	1	1
ECUADOR	1	2	1	1	1	1	1
EL SALVADOR	X	X	X	X	X	X	X
GRANADA	X	X	X	X	X	X	X
GUADALUPE (FRANCE)	X	X	X	X	X	X	X
GUATEMALA	1	1	1	1	1	1	1
GUYANA	X	X	X	X	X	X	X
FRENCH GUYANA	X	X	X	X	X	X	X
HAITI	X	X	X	X	X	X	X
HONDURAS	X	X	X	X	X	X	X
CAYMAN ISLANDS (GB)	X	X	X	X	X	X	X
FALKLAND ISLANDS	X	X	X	X	X	X	X
MEXICO							
TURKS AND CAICOS (GB)	X	X	X	X	X	X	X

Country	2014	2015	2016	2017	2018	2019	2020
BRITISH VIRGIN ISLANDS	X	X	X	X	X	X	X
JAMAICA	1	1	1	1	1	1	X
MARTINIQUE	X	X	X	X	X	X	X
MEXICO	1	1	1	1	1	1	1
MONTSERRAT	X	X	X	X	X	X	X
NICARAGUA	X	X	X	X	X	X	X
PANAMA	X	X	X	X	X	X	X
PARAGUAY	1	1	X	X	X	1	1
PERU	1	1	X	1	1	1	1
PUERTO RICO	X	X	X	X	X	X	X
DOMINICAN REPUBLIC	1	1	1	1	1	1	1
SAINT KITTS & NEVIS	X	X	X	X	X	X	X
SAINT VINCENT AND THE GRENADINES	X	X	X	X	X	X	X
SANTA LUCIA	X	X	X	X	X	X	X
SURINAME (Netherlands)	X	X	X	X	X	X	X
TRINIDAD AND TOBAGO	1	1	X	X	X	X	1
URUGUAY	X	X	X	X	X	X	X
U.S. VIRGIN ISLANDS	X	X	X	X	X	X	X
VENEZUELA		2	2	2	2	2	2

Source: Authors' elaboration based on Special 301 Report (Office of the United States Trade Representative: https://ustr.gov/issue-areas/intellectual-property/special-301).

List of challenges identified in the U.S. Special 301 Report

The following table contains the list of challenges and issues identified within the U.S. Special 301 Report for the years 2014-2020. Some are general, affecting the entire intellectual property rights (IPR) system, and others are specific to copyrights, trademarks, patents or geographical indications (GIs). Priority was given to those that affect or limit the positive impact of the creative economy in LAC.

Country	2014	2015	2016	2017	2018	2019	2020
ARGENTINA	High levels of physical and digital piracy and counterfeiting. Excessive delays in some registration procedures. Serious patent problems.	Problems of observance and effective protection of Intellectual Property Rights (IPR). The Argentine police do not undertake *ex officio* actions, processes are stalled, the proceedings are excessive and when there is a definitive sentence, the offenders do not receive dissuasive sentences. Serious patent problems.	Deficiencies in IPR protection and enforcement measures persist, making the country a difficult market for IP-intensive companies.	The country still does not provide adequate protection against unfair trade practices.	Not all of INPI's internal processes have yet been digitized, and the online service for users could be more efficient. The Patent Cooperation Treaty (PCT) has not yet been ratified.	A national IP enforcement strategy is needed. The Federal Prosecutor's office specializing in IP is not yet operational. There is an urgent need for legislative work on IPR.	There is a lack of legislative work to strengthen IPR protection and to give continuity to previous legislative work; for example, to increase criminal penalties for counterfeiting carried out by criminal networks.
BARBADOS	Problems of respect and effective protection of IPRs. Many cable and broadcasting companies infringe copyrights without consequences, affecting creatives.	Problems of respect and effective protection of IPRs. Cable operators, radio and television broadcasters refuse to negotiate compensation for public musical performances. Difficulties in filing lawsuits, and in claiming payment for damages. There is a lack of legislation on online copyright.	Problems of respect and effective protection of IPRs. No royalties are normally paid to IPR holders. Broadcasters refuse to pay for public musical performances. Update regulatory framework to improve creatives' protection, and to protect online copyrights.	Broadcasters refuse to pay for public musical performances. Update regulatory framework to improve creatives' protection, and to protect online copyrights.	Problems of respect and effective protection of IPRs continue. No royalties are normally paid to IPR holders. An IP legal system was implemented, but it does not adapt to the latest developments and international legal practices, especially with regard to copyrights.	A basic legal framework of respect and effective protection of IPR, has been established, but the country has not acceded to the WIPO Internet treaties. In addition, little is applied. The issue is not a priority for the government. Problems with illegal retransmissions of multimedia content continue.	Accession to WIPO Internet treaties, but no applicable law yet. The current law is still not effectively enforced. Problems with illegal retransmissions of content continue.
BOLIVIA	High levels of counterfeiting and piracy. IPR protection is low.	High levels of counterfeiting and piracy. Limited law enforcement.	Problems of respect and effective protection of IPRs. Limited law enforcement. High levels of counterfeiting, piracy of video, music and software. Few officials with technical knowledge.	High levels of counterfeiting and piracy. Limited law enforcement. There is an urgent need to raise public awareness of the importance of protecting and respecting IPRs. Resolutions for IPR violations are not in line with world standards.	Problems of respect and effective protection of IPRs continue. Implementing arbitration did not solve the problems of the criminal and civil systems in enforcing IP law.	High levels of counterfeiting and piracy continue. Registration processes are slow. Lack of specialized staff. Enforce penalties as provided by the Cinema and Audiovisual Arts Law.	Problems of respect and effective protection of IPRs continue. Bolivia has not acceded to the WIPO Internet treaties. There is a lack of regulations that would allow the application of the Cinema and Audiovisual Arts Law to criminally prosecute IPR violations.

Country	2014	2015	2016	2017	2018	2019	2020
BRAZIL	High levels of counterfeiting, online and TV signal piracy. The long delays in the registration of patents continue.	High levels of counterfeiting, online and TV signal piracy. Stricter dissuasive sanctions are required.	High levels of counterfeiting, online and TV signal piracy. Low utilization of effective measures against IPR infringements. Insufficient staff generates significant delays in processing.	High levels of physical and digital piracy and counterfeiting. Excessive delays in the procedures continue. Border care and appropriate deterrents continue to be necessary.	High levels of physical and digital piracy and counterfeiting. Budget cuts and the lack of legislative measures are cause for concern. Adequate deterrents are urgently needed.	High levels of physical and digital piracy and counterfeiting. Actions to reduce delays do not seem suitable. Decrease in the results of the National Council to Combat Piracy and Intellectual Property Crimes. The country does not adhere to the WIPO Internet treaties, nor does it generate regulations in this regard.	Levels of counterfeiting, physical and online piracy and software piracy remain high. Current legislation is not sufficient. The country does not adhere to the WIPO Internet treaties, nor does it generate regulations in this regard.
CHILE	Legislative changes are needed to update IP laws, especially against circumvention of technological measures, and to enable copyright holders to bring actions for online infringement, and to provide certainty to Internet service providers.	The need for legislative changes to update IP laws persists, especially against circumvention of technological measures, and to enable copyright holders to bring actions for online infringement, and to provide certainty to Internet service providers.	More action is urgently needed to prevent the circumvention of technological protection measures. The liability regime for ISPs needs to be improved. It is necessary to ensure more effective administrative and judicial procedures.	Legislation is needed on criminal and civil penalties for the theft of satellite signals and trafficking in decoder devices.	It is important to ensure more effective administrative and judicial procedures, as well as deterrent remedies, for IPR holders. High levels of online piracy persist. The liability regime for ISPs needs to be improved.	Criminal activities need to be specified with the implementation of the law. Anti-circumvention actions are still required. Measures to ensure effective administrative and judicial procedures are insufficient. The liability regime for ISPs needs to be improved.	There is a lack of measures against online piracy, especially related to ISPs. Problems remain with the use of data in the case of patents.
COLOMBIA	High levels of physical and online piracy persist. Urgent measures for the protection of geographical indications.	High levels of online piracy and product trafficking persist.	The liability regime for ISPs needs to be improved, as well as other legal updates on copyright. Lack of guidance for implementing and enforcing the IPR policy. High levels of product trafficking persist.	Copyright legislation needs to be updated, especially regarding ISP liability. There is an urgent need to improve IPRs respect and effective protection. Online piracy continues, particularly through mobile devices. Government authorities' reaction is urgent.	High levels of online piracy persist, especially through mobile devices, and product trafficking.	High levels of online piracy persist, especially through mobile devices, and product trafficking. It is necessary to broaden authorities' powers to improve their legal reaction and action.	High levels of online piracy persist, especially through mobile devices, and product trafficking. It is necessary to broaden police authorities' powers to improve their legal reaction and action.
COSTA RICA	There is an urgent need to improve IPRs respect and effective protection. Few criminal prosecutions result in convictions of a deterrent nature. There is no specialized court to hear IP cases. There is a lack of certainty as to whether the government only uses software licenses or not. Improved liability regulation for ISPs is urgently needed.	There is an urgent need to verify the legal use of computer programs in the government. The specialized unit for IP-related crimes prosecution has still not been created. It is necessary that the government allocate the required resources to ensure effective IPRs protection and respect. Improved liability regulation for ISPs is urgently needed.	Greater transparency on IPR violation lawsuits is needed to verify government actions. The high use of unlicensed software persists. There is an urgent need to improve the regulation of ISP liability for copyright infringement.	Greater transparency on IPR violation lawsuits is needed to verify government actions. The high use of unlicensed software persists. There is an urgent need to improve the regulation of ISP liability for copyright infringement.	The government using only licensed software has not been fully guaranteed. More precision is needed on the protection of geographical indications. Limited law enforcement. There is an urgent need to improve the regulation of ISP liability for copyright infringement.	Piracy persists, especially online. The government using only licensed software has not been fully guaranteed yet. There is an urgent need to improve notification and takedown procedures.	There is a lack of effective policies and procedures to ensure that their own government agencies do not use unlicensed software, and there is an urgent need to improve notification and takedown regulations.

Country	2014	2015	2016	2017	2018	2019	2020
ECUADOR	High levels of counterfeiting and piracy. There is an urgent need to improve IPRs respect and effective protection. There is an urgent need to strengthen the IEPI [Ecuadorian Institute of Intellectual Property].	High levels of counterfeiting and piracy. IPR violators hide in the country because they believe that the authorities will not take action against them. The draft Law on Knowledge Economy and Innovation moves the country away from international best practices in IPR, which would affect the creative industries.	There is an urgent need to improve IPRs respect and effective protection. The draft Code of Social Economy of Knowledge, Creativity and Innovation moves the country away from international best practices in IPR, which would affect the creative industries.	High levels of physical and digital piracy and counterfeiting. Limited law enforcement. Concerns about the scope of certain exceptions and limitations to copyright and patent rights contained in the Code of the Social Economy of Knowledge, Creativity and Innovation.	There is an urgent need to improve IPRs respect and effective protection. Uncertainty persists with respect to certain exceptions and limitations to copyrights and patents. Improved liability regulation for ISPs is urgently needed.	High levels of physical and digital piracy and counterfeiting. Uncertainty continues regarding the liability regime for ISPs. Certain exceptions and limitations to copyrights and patents persist, as well as legal uncertainty regarding other IP issues, such as geographical indications.	High levels of physical and digital piracy and counterfeiting. Uncertainty continues regarding the liability regime for ISPs. Certain exceptions and limitations to copyrights and patents persist, as well as legal uncertainty regarding other IP issues, such as geographical indications.
EL SALVADOR	It is necessary to ensure that geographical indications do not violate preexisting rights.	It is necessary to ensure that geographical indications do not violate preexisting rights.	It is necessary to ensure that geographical indications do not violate preexisting rights.	It is necessary to ensure that geographical indications do not violate preexisting rights.	Greater legal certainty is required regarding the use of compulsory licenses.	Greater legal certainty is required regarding the use of compulsory licenses.	Greater legal certainty is required regarding the use of compulsory licenses.
GUATEMALA	High levels of counterfeiting and piracy. Few governmental and judicial actions against IPR infringers. Limited law enforcement. The administrative and judicial system must be strengthened.	High levels of counterfeiting and piracy. Few governmental and judicial actions against IPR infringers. Limited law enforcement. The administrative and judicial system must be strengthened.	High levels of counterfeiting, physical and signal piracy. Few governmental and judicial actions against IPR infringers. Limited law enforcement. The administrative and judicial system must be strengthened. There is a lack of certainty as to whether the government only uses software licenses or not.	High levels of counterfeiting, physical and signal piracy. Few governmental and judicial actions against IPR infringers. Limited law enforcement. There is a lack of certainty as to whether the government only uses software licenses or not.	High levels of counterfeiting, physical and signal piracy. Few governmental and judicial actions against IPR infringers. Limited law enforcement. There is a lack of certainty as to whether the government only uses software licenses or not.	High levels of counterfeiting, physical and signal piracy. Few governmental and judicial actions against IPR infringers. Limited law enforcement. There is a lack of certainty as to whether the government only uses software licenses or not.	High levels of counterfeiting, physical and signal piracy. Few governmental and judicial actions against IPR infringers. Limited law enforcement. There is a lack of certainty as to whether the government only uses software licenses or not.
GUYANA, BAHAMAS, JAMAICA, SAINT LUCIA, JAMAICA, TRINIDAD AND TOBAGO, SAINT VINCENT AND THE GRENADINES, SURINAME, CAYMAN ISLANDS, TURKS AND CAICOS ISLANDS, MONTSERRAT, SAINT KITTS & NEVIS, BELIZE, DOMINICA, BERMUDA[a]	Difficulty for creatives to receive payment for infractions. Limited law enforcement. Few IP holders receive royalty payments. Broadcasting and transmission (piracy) of copyrighted content without license, and without royalty payments to creatives.	Broadcasting and transmission (piracy) of copyrighted content without license, and without royalty payments to creatives. The government's position aggravates the situation. Difficulty for creatives to receive payment for infractions. Increasing levels of online piracy.	Broadcasting and transmission (piracy) of copyrighted content without license, and without royalty payments to creatives. The government's position aggravates the situation. High levels of online piracy. Need for more trained staff. There is an urgent need to update the law. Increase in online piracy.	High levels of counterfeiting, physical and signal piracy. Limited law enforcement. IP legislation needs to be modernized. Few IP holders receive royalty payments.	High levels of counterfeiting, physical and signal piracy. Limited law enforcement. IP legislation needs to be modernized. Few IP holders receive royalty payments.	High levels of counterfeiting, physical and signal piracy persist. Limited law enforcement. IP legislation needs to be modernized. Few IP holders receive royalty payments.	High levels of counterfeiting, physical and signal piracy persist. Limited law enforcement. IP legislation needs to be modernized. Few IP holders receive royalty payments.
HONDURAS			High levels of counterfeiting, physical and signal piracy. Limited law enforcement.	Counterfeiting, physical and signal piracy persist. There is an urgent need to improve law enforcement.			

Country	2014	2015	2016	2017	2018	2019	2020
MEXICO	High levels of physical and digital piracy and counterfeiting. Insufficient resources of the authorities in charge of enforcing IPRs. Need to update copyright legislation, and implement all WIPO Internet treaties.	High levels of physical and digital piracy and counterfeiting. Insufficient resources of the authorities in charge of enforcing IPRs. Need to update copyright legislation, and implement all WIPO Internet treaties.	High levels of physical and digital piracy and counterfeiting. Insufficient resources of the authorities in charge of enforcing IPRs. Need to update copyright legislation, and implement all WIPO Internet treaties.	High levels of physical and digital piracy and counterfeiting. Reduction of human resources in charge of enforcing IPRs. Need to update copyright legislation, and implement all WIPO Internet treaties.	Need to improve coordination among authorities to enforce IPR laws. Levels of physical and digital piracy and counterfeiting persist.	Need to improve coordination among authorities to enforce IPR laws. Need to update IP legislation.	High levels of physical and digital piracy and counterfeiting. Improve enforcement of IPR laws. Reduction of IPR enforcement officers.
PARAGUAY		High levels of counterfeiting and piracy. Limited law enforcement.	High levels of physical and online piracy. Limited law enforcement.	High levels of physical and online piracy. Limited law enforcement. Improved performance of authorities is needed.	Limited law enforcement. Improved performance of authorities is needed.	High levels of physical and online piracy. Limited law enforcement. Improved performance of authorities is needed. There is a lack of certainty as to whether the government only uses software licenses or not.	High levels of counterfeiting and piracy. Limited law enforcement. Improved performance of authorities is needed. There is a lack of certainty as to whether the government only uses software licenses or not.
PERU	High levels of online piracy. There is a lack of certainty as to whether the government only uses software licenses or not. Limited law enforcement.	High levels of online piracy. There is a lack of certainty as to whether the government only uses software licenses or not. Limited law enforcement. Patent problems.	High levels of physical and digital piracy and counterfeiting. Limited law enforcement. Improved performance of authorities is needed.	High levels of physical and digital piracy and counterfeiting. Limited law enforcement. Improved performance of authorities is needed.	High levels of physical and digital piracy and counterfeiting. Limited law enforcement. The administrative and judicial system needs to be strengthened and trained.	High levels of physical and digital piracy and counterfeiting. There is a need to strengthen and train the administrative and judicial system, and to implement regulations on notice and takedown, as well as on Internet providers.	High levels of physical and digital piracy and counterfeiting. The administrative and judicial system needs to be strengthened and trained. Awareness-raising activities should continue.
DOMINICAN REPUBLIC	The administrative and judicial system must be strengthened, trained and equipped.	High levels of counterfeiting, physical, online and signal piracy.	High levels of counterfeiting, physical, online and signal piracy. There is a lack of certainty as to whether the government only uses software licenses or not.	The administrative and judicial system must be strengthened, trained and equipped. There is a lack of certainty as to whether the government only uses software licenses or not.	High levels of counterfeiting, physical, online and signal piracy. There is a lack of certainty as to whether the government only uses software licenses or not.	High levels of counterfeiting, physical, online and signal piracy persist. The high use of unlicensed software persists. Limited law enforcement.	High levels of physical, online and signal piracy persist. Limited law enforcement.
VENEZUELA	Legal inconsistency in relation to international treaties. Limited law enforcement.	High levels of counterfeiting, physical, online and signal piracy. Limited law enforcement.	High levels of counterfeiting, physical, online and signal piracy. Limited law enforcement. Insufficient resources of the authorities in charge of enforcing IPRs.	Limited law enforcement. Insufficient resources of the authorities in charge of enforcing IPRs. IP legislation needs to be modernized.	High levels of online piracy. Limited law enforcement. The high use of unlicensed software persists. Insufficient resources of the authorities in charge of enforcing IPRs.	High levels of online piracy. Limited law enforcement. The high use of unlicensed software persists. Insufficient resources of the authorities in charge of enforcing IPRs.	High levels of online piracy persist. Limited law enforcement. The high use of unlicensed software persists. Insufficient resources of the authorities in charge of enforcing IPRs.

Source: Authors' elaboration based on Special 301 Reports (Office of the United States Trade Representative: (https://ustr.gov/issue-areas/intellectual-property/special-301).
Notes: in the case of countries with empty boxes, this is because the report did not include any comments for the country in that year.
WIPO = World Intellectual Property Organization.
[a]These countries were grouped together because the challenges and problems were very similar in most cases, and even some 301 editions treat them the same.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