



LEVERAGING INTELLECTUAL PROPERTY IN THE GLOBAL SPORTS ECONOMY

SPORTS AS A TOOL FOR
PROGRESS AND DEVELOPMENT



GIPC
GLOBAL INNOVATION POLICY CENTER

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EXECUTIVE SUMMARY

Intellectual property (IP) rights stimulate creativity in virtually all aspects of human behavior; they provide the platform to translate good ideas into profitable endeavors. This report analyzes how IP rights enable one seemingly unrelated economy: the world of sports.

By its nature, sports involves multiple layers of economic activity. Properly framed, kicking the ball on a rural dirt field can become instead a stadium filled with tens of thousands of spectators plus millions more glued to their televisions, laptops, or smartphones. Cutting-edge sports gear, alluring sportswear designs, and the excitement surrounding competition make sports a highly enjoyable and popular activity. But each sport and the related sports industries need the protection of some form of IP rights, and an environment that enforces those rights. In an enabling environment of robust IP rights, a chain reaction occurs benefiting multiple sectors of the economy—to the tune of 1% of global GDP.

Key finding 1: The modern sports industry *depends on and cannot exist without* IP rights.

Innovation is present in every sport. Yet sports cannot become a commercially productive asset without IP rights and incentives. Patent-protected inventions drive improvement in sporting equipment, including sportswear and footwear. Broadcasting rights are the foundation for investment in transmitting tournaments to fans and sports enthusiasts. Trademarks protect the goodwill of events, leagues, teams, and manufacturers of sporting goods. Licensing and merchandising agreements generate the revenues needed to take sports to higher levels of productivity. The sports economy is an instructive case study of how an IP asset becomes a platform for economic activity and related industries.

Key finding 2: A modern sports industry requires a broad menu of IP rights to thrive.

Traditionally, sports has been associated with two main IP rights: copyright and trademarks. But this report finds that this traditional view is a limited view of how sports industries use IP rights. Copyright and trademarks are still foundational to various subsectors (e.g., broadcasting, apparel, brand value) but the use of other types of IP rights to protect content/creation is significant. For example, the rise of enhanced technologies yields more research-driven innovative sporting products. In turn, these products require strong patent protection. There are literally tens of thousands of utility patents relating to sports. A search of the Google Patents Public Datasets (a patent database aggregated from 17 patent offices around the world) reveals hundreds of thousands of utility patents related to sports and making reference to such terms as “athletic” or “athletes.” Many sporting goods companies are also technology companies with broad patent portfolios. Similarly, the growth of the internet and globalization of sports—with international viewership of domestic leagues growing exponentially—necessitate clear and strong broadcasting rights. Revenues from broadcasting and media rights are becoming the main source of revenue for sports organizations (including leagues and individual teams) to build stadiums, host tournaments and championships, and carry out community outreach to maintain and grow public interest in their sport.

To build a modern, successful sports economy, countries must provide a broad menu of IP rights.

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Key finding 3: Physical counterfeiting poses a real threat to the sports industry and to consumers.

Counterfeit sporting goods and sportswear have a substantial and detrimental impact on economies—depriving leagues and athletes of economic gains, damaging brand integrity and consumer confidence, and resulting in loss of legitimate jobs. Given the rise in online shopping, with rates of e-commerce increasing by double digits annually, levels of counterfeiting are growing exponentially. This study estimates that the direct economic impact of counterfeiting on the global sporting goods and sportswear markets is almost \$50 billion each year. When accounting for the indirect effect on related services, the overall impact of counterfeiting is an estimated \$84 billion each year.

Key finding 4: Online piracy of sports broadcasting is mushrooming, but governments struggle to keep up with the threat.

Unauthorized streaming services and websites for pirated sports broadcasting are operating by the thousands. Ubiquitous and cheap “plug-and-play” set-top boxes are providing free access to sports broadcasts at the click of a mouse. The fast proliferation of broadcast piracy is a major concern, as it is stunting growth of subscription fees and advertising, estimated at dozens of billions of dollars each year. For example, in China online piracy is stifling of its domestic soccer league (Chinese Football Association Super League). Specifically, despite growing consumer interest and match attendance, league revenue from paid subscription amounts to less than 10% of overall revenue; this compared with 50% in mature markets. While in mature markets governments and key stakeholders like Amazon, eBay, and Facebook are taking steps to combat the threat posed by piracy, emerging economies are still struggling to define the scope of their copyright laws and are unable to take swift action to shut down sources of pirated content.

INTRODUCTION

In December 2016, the United Nations (UN) General Assembly adopted a Resolution affirming the role of sports in the 2030 Agenda for Sustainable Development. The Resolution acknowledged the contribution that sports has on promoting education, improving health, stimulating development, and achieving peace.¹ In the words of the UN Secretary General, “sport has become a world language, a common denominator that breaks down all the walls, all the barriers. It is a worldwide industry whose practices can have widespread impact. Most of all, it is a powerful tool for progress and for development.”²

Of course, everything cuts both ways, including sports. At times hooliganism and violence have tarnished sports, but thankfully, such behavior is the exception rather than the rule. By its very nature, sports brings people together and blurs cultural, political, and ethnic differences by promoting dialogue and reducing tensions.

MAPPING THE SPORTS ECONOMY

The Olympics and the Fédération Internationale de Football (FIFA) World Cup are two events that manage to unite the world in unique ways. From the “ping-pong diplomacy” of the 1970s to the rapprochement of the Koreas for the 2018 Winter Olympic Games, sports has proved to be a powerful instrument of peace and progress. While nations cheer their athletes trying to out-perform their competitors, younger generations get inspired to take on the task years down the road. This progress would not be possible without the investment in organizing and broadcasting these games to all corners of the world.³

Additionally, according to World Intellectual Property Organization (WIPO), sports is an important generator of economic value: The sports sector fuels job creation—especially high-skill, high-value jobs—and stimulates a wide spectrum of economic activity.⁴ More specifically, the makeup of the sports sector as defined in this report includes:

- **Teams and leagues:** The economic value created by teams and leagues, stemming from selling tickets at stadiums, hosting tournaments and championships, and merchandising. This economic value also includes support for related food, beverage, and hospitality services that cater to sports fans
- **Broadcasting:** The broadcasting industry that allows fans and enthusiasts to follow their teams wherever they play
- **Sporting goods:** The sporting goods industry, including manufacturers of bicycles, helmets, tennis racquets, golf clubs, surfboards, and sports equipment generally, as well as manufacturers of technology-based sports products such as electronic wearables, fitness trackers, apps, and software
- **Apparel and sportswear:** The sportswear industry, including manufacturers of clothing, footwear, and apparel

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Table 1 gives a depiction of the makeup of the sports sector as defined in this report.

TABLE 1: MAKE-UP OF THE SPORTS SECTOR (AS DEFINED IN THIS REPORT)

Make-up of the Sports Sector (as defined in this report)



A recent study by A.T. Kearney estimates the global market for sporting events alone in 2014 at \$80 billion, with a forecast 7% growth rate.⁵ The value jumps to \$700 billion when adding sporting goods, apparel, equipment, and health and fitness spending, collectively estimated to contribute 1% of global GDP.⁶ In short, the sports sector is a key economic engine and contributor to higher living standards.

Yet the role of IP rights in generating this value is often underestimated or missed entirely.

From world championships to regional, national and even local sporting events, IP rights play a key role in the success and long-term viability of the sports sector. Sports is an intangible asset and IP rights provide the legal protection to build economic value and stimulate interest and vitality in sports.

REPORT OVERVIEW

The purpose of this report is to provide an in-depth examination into the role of IP rights in the world of sports. Developed economies have seen firsthand how IP rights have facilitated the rise of their sports sectors, and the resulting economic growth and social well-being. Conversely, many emerging economies express a clear aspiration to build a vibrant sports sector but struggle to gain the critical mass needed to become world players.

Section 1 of the report examines the interplay between IP rights and the sports sector; a term used to describe broadly all aspects related to sports. It also describes with more granularity how different IP rights enable different parts of the sports economy, namely the practice of the sport itself; the existence of teams and leagues that host sporting events, tournaments, and championships; the broadcasting of such events, tournaments, and championships; and the economy around sporting goods, sportswear, and merchandising. The section provides a number of case studies of sports-related products that illustrate how specific types of IP rights spurred development and commercialization.

Section 2 documents the detrimental effects of IP infringement on the sports sector, looking at three specific types of infringements and their economic impact:

- a) physical counterfeiting of sporting goods and sportswear;
- b) pirating of sports broadcasting events, with a specific focus on China and the Chinese Football Association Super League; and
- c) a new generation of piracy enabled by the proliferation of set-top boxes.

Section 3 provides concluding thoughts and ties together the data and information of the preceding sections.

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1. IP RIGHTS AND SPORTS: A SYMBIOTIC RELATIONSHIP

1.1 MAPPING IP RIGHTS IN THE SPORTS SECTOR

There is virtually no sport that has remained unchanged since its inception; all have seen innovation and growth. What has driven this progress? To a large extent, IP rights have provided the right incentives to continuously inspire advancement in sports.

Different kinds of IP rights stimulate the growth of the sports industry in different ways. This section examines how five important categories of IP rights (patents, trademarks, design rights, copyrights, and trade secrets) are used in the sports sector to protect assets, generate value, and stimulate growth.

1.1.1 PATENTS

In a nutshell, the patent system is a contract between inventors and the public: In exchange for sharing the details of how to make an invention, the government will prevent others from copying it for a period of time—about 20 years in most economies—giving the inventor the opportunity to recoup investment as the only source in the marketplace selling the invention. There are generally two kinds of patents: utility and design patents (design rights, whether protected by patents or specific IP rights, are discussed separately below).⁷ The former protects functional aspects of an invention, while the latter protects the ornamental aspects. This system has proved to be a powerful incentive to innovate with a no less important societal benefit of enhancing the common pool of knowledge and stimulating others to build on and improve the current state of the art—setting a virtuous cycle in motion.

Sports is a sector that directly uses and benefits from the patent system. Sporting equipment is continuously evolving. New technologies help athletes jump higher, swim faster, cycle longer, and hit a ball harder and farther. Safety also improves with technologies that lessen impact and stress on athletes' bodies. These technologies are a direct result of a patent system that offers proper incentives to innovate and a stable platform to disseminate inventions and make them widely available in the marketplace.

There are literally tens of thousands of utility patents relating to sports. A search of the Google Patents Public Datasets reveals hundreds of thousands of utility patents related to sports and making reference to such terms as “athletic” or “athletes.”⁸ Table 2 provides a breakdown of the number of utility patents for a selection of major sports.

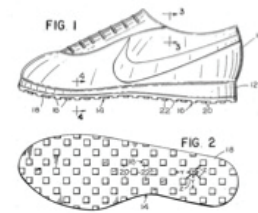
TABLE 2: NUMBER OF UTILITY PATENTS GRANTED TO DATE ACROSS 17 SELECTED PATENT OFFICES AROUND THE WORLD, SELECTED SPORTS CATEGORIES

Kitesurfing	14,224
Hockey	17,668
Polo	19,793
Soccer	28,779
Boxing	32,694
Baseball	44,468
Tennis	52,526
Skiing	110,501
Golf	112,256

Source: Google Patents; analysis: Pugatch Consilium

Case Study 1: The Waffle Trainer

Up until the 1960s, running shoes featured flat soles. The University of Oregon's running coach Bill Bowerman took on the task to improve traction and shock absorption in training shoes. He experimented by using his wife's waffle maker to mold rubber spikes on the soles, and created a superior running shoe he named the Waffle Trainer. The design revolutionized the sneaker industry. Bowerman and one of his students, Phil Knight, founded Blue Ribbon Sports, which eventually became Nike. Today, Nike has obtained thousands of patents worldwide and now has a patent portfolio that rivals that of many leading companies in the pharmaceutical, automotive, and defense sectors, all traditionally research and development- and technology-intensive industries.⁹



The following subsections provide examples of how different parts of the sports industry are using patent rights to drive their businesses and develop new sports-based products and technologies.

APPS AND WEARABLES

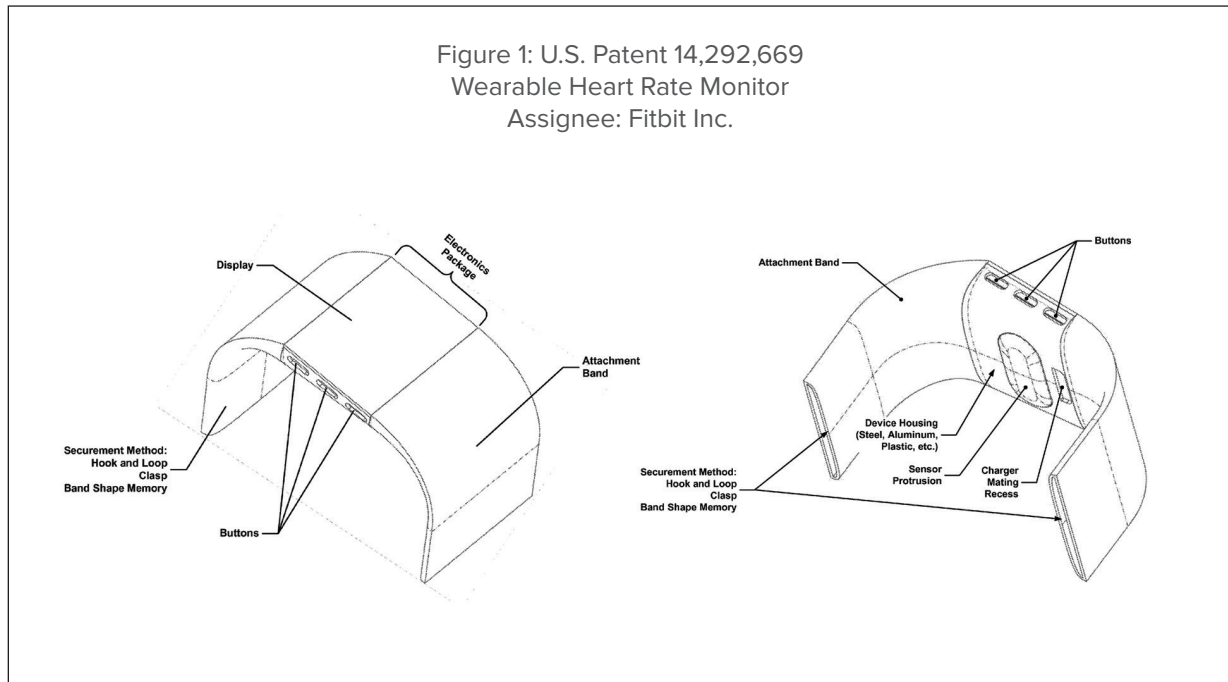
From footwear that senses running and fitness information, to belts tracking athlete performance, to smart watches and rings with Global Positioning System (GPS) capabilities and accelerometers, a vast platform of sports hardware is becoming more affordable and ubiquitous. The market for wearable devices is expected to double in the next three years, from 125 million devices in 2017 to 240 million in 2021, with the so-called smart clothing category growing at a 76% compound annual growth rate.¹⁰ Sales of smart watches and wristbands are forecasted to jump from 70 million units in 2017 to 161 million units by 2021.

Utility patents are at the core of this wave of technology development. For example, Fitbit, the maker of popular fitness trackers, has over 90 U.S. utility patents (issued and pending) describing different technological aspects of the tracker.¹¹ Multiple other utility patents are licensed to Fitbit as well. Figure 1 shows an example of a utility patent covering one aspect of a popular fitness tracker.

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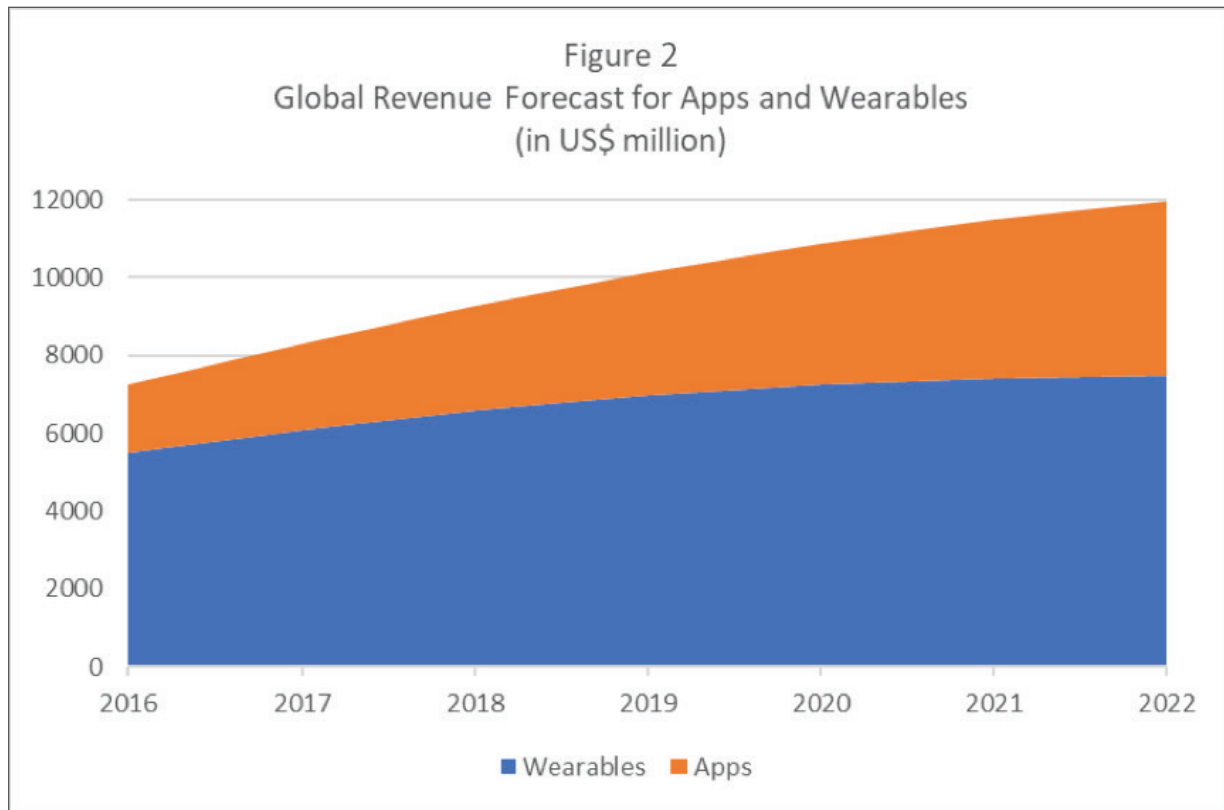
Figure 1: Wearable Heart Rate Monitor (U.S. Patent 14,292,669, Fitbit Inc.)



Source: Google Patents

With the advent of wearable technologies capable of tracking vital signs such as heart rate and burned calories, a new related industry has emerged in the form of patentable apps designed to motivate and help sports enthusiasts improve their training. In fact, this new industry and line of products—built on the existence of the wearable devices—is projected to actually generate **more** sales than the devices themselves. Figure 2 shows how the use of fitness apps is projected to grow faster than wearables over the next six years.¹² Without proper IP protection, however, the development and commercialization of these new apps becomes virtually impossible.

Figure 2: Global revenue forecast for apps and wearables (in million USD)



Source: statista.com; analysis: Pugatch Consilium

ENERGY DRINKS AND SUPPLEMENTS

Innovation has been equally ubiquitous in the field of energy drinks and supplements designed to help athletes perform better and rehydrate faster. A Google Patent search on sports energy drinks, for example, yields more than 3,000 patents. One of the assignees of many of these patents is Gatorade, invented by Dr. Robert Cade and three medical fellows in a University of Florida lab in 1965 to help athletes restore electrolytes after intense physical activities.¹³ It is currently the most popular energy drink, with a 52.8% market share in 2016 and sales of over \$3.3 billion in the United States.¹⁴

THE WAY SPORTS ARE PLAYED

The way sports are played has also seen its share of technology development. New technology is being used to help judges, umpires, and referees make close judgment calls. For example, Hawk-Eye's goal-line technology currently used in 18 different sports to determine if part of a ball has touched or crossed a line in close calls.¹⁵ Similarly, there have been advancements with respect to sporting moves, methods, and techniques such as placing a golf ball,¹⁶ fitness training¹⁷, training pitchers in baseball,¹⁸ and so on.

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1.1.2 TRADEMARKS

Branding plays an essential role in creating value, interest, and vitality in sports. It drives consumer loyalty and confidence in the quality and features of sporting goods. It also generates allegiance to sports teams and sportswear styles. Trademarks work differently for goods and for services in the sports sector depending on the product or asset being protected, but the common denominator is the distinctiveness of the mark. Importantly, trademarks provide protection against confusion about the source of a given product.

The sports sector presents a unique opportunity to create a “domino effect” in trademark value creation. Consider an individual athlete who becomes a dominant player in a team sport and develops his or her own individual brand. The dominance of this athlete drives the growth and popularity of the athlete’s team as well as the entire professional league in which he or she plays. There are numerous examples of athletes who raise teams and entire sports leagues to national and even global prominence and strengthen the brand and goodwill associated with both. This in turn creates business opportunities for related sports industries, including for sporting goods manufacturers (apparel and shoes as well as sport-specific gear) and broadcasters as television viewership and interest in the sport increase.

PERSONALITY RIGHTS

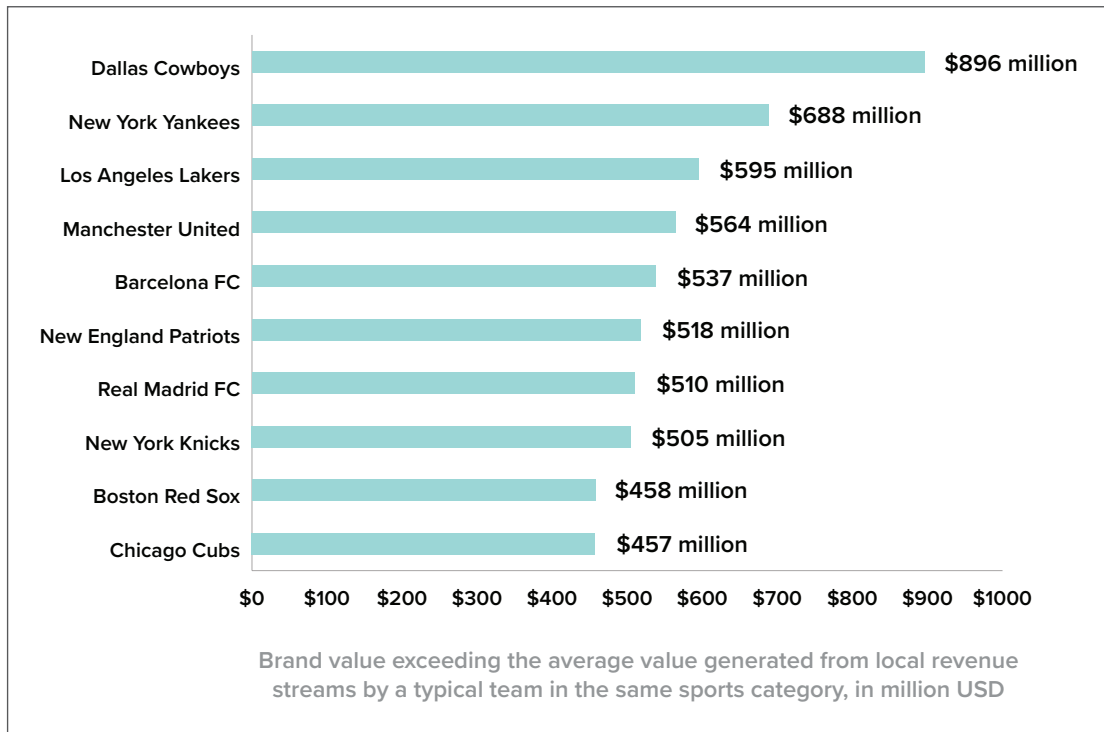
Celebrity athletes capitalize on their branding power to drive goodwill in sporting goods and sportswear by developing their own product lines. These “personality rights” allow athletes to control the commercial and economic exploitation of their personal attributes. Moreover, these rights have helped athletes establish successful business endeavors, generating revenue long after their sports careers end. Sports teams and associations have also leveraged these rights to build goodwill, attract new fans, and boost their competitive edge.

BRANDING OF TEAMS AND LEAGUES

Branding has also become an essential asset and revenue producer for sports teams and clubs. From a consumer’s perspective, branding is critical. Brands are indicative of quality and value. Significant resources are invested in enhancing the goodwill of individual teams’ and sports leagues’ branding, generally through community outreach and sports-related activities designed to pique interest in the sport and inspire new generations of athletes. As such, teams become the pride of the host city or economy, generate an allegiance among fans, and drive sales of products bearing their brands. An extra layer of branding and goodwill comes from the leagues or sports organizations hosting tournaments and championships among teams. Thus, sponsorship of sports events can link sponsors to the prestige and allure of those events.

Brand value makes up a significant share of the overall value of sports teams and leagues. Although not an exact science (from an accounting perspective, the estimated value of intangible assets including goodwill and brand value is difficult to calculate), it is possible to quantify the brand value of sports teams. For example, in its annual Fab 40 rankings, *Forbes* estimates the **brand** value of sports teams.¹⁹ According to *Forbes*, this is “the portion of [a sports team’s] enterprise value attributable to local revenue streams like television, advertising, merchandise and tickets, that exceeds what a typical team in the same sports generates.” Figure 3 lists the brand value of several sports teams according to *Forbes*.

Figure 3: Top 10 sports teams by brand value exceeding the average (in million USD), Forbes Feb 40 2017



Source: Forbes; analysis: Pugatch Consilium

As teams become more successful, the value of their brands climbs. Similarly, as a sport becomes more popular, the goodwill of the league or sport organization becomes stronger. A virtuous cycle is then set in motion, in which better players emerge, improved stadiums are constructed, and more elaborate events, tournaments, and championships can take place, enhancing the overall entertainment experience and expanding the number of enthusiasts. This in turn leads to higher demand from fans for viewership, and for merchandising bearing the brands.

1.1.3 DESIGN RIGHTS

An equally important IP right in the sports sector is aesthetics protected by design-specific IP rights. Industrial designs are key to making a product attractive and desirable. Companies spend vast amounts of resources on understanding consumers' tastes and developing stylish and attractive product designs to capture valuable market segments. These designs often become their most valuable assets.

Protection for design rights varies by jurisdiction. For example, Registered Community Designs (RCDs), created in 1998 in the European Union, provide 25 years of protection to unique aesthetic features designed to give a product "individual character" and make it stand out from the competition.²⁰ An industrial design has "unique character" if the "overall impression it produces on the informed user" differs from previously known designs.²¹ In this regard, in 2011 the EU Court of Justice ruled in *PepsiCo v. Grupo Promer Mon Graphic SA* that the "informed user" is more engaged than the average consumer in trademark matters—i.e., "knows the various designs which exist in the sector concerned, possesses a certain degree

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of knowledge with regard to the features which those designs normally include, and, as a result of his interest in the products concerned, shows a relatively high degree of attention when he uses them.”²²

Unlike the sui-generis nature of European RCDs, industrial designs are protected in the United States as a subcategory under the U.S. Patent Act. The term of protection of U.S. design patents is 14 years from date of issuance.²³

Design rights (whether protected by patents or other forms of IP rights such as RCDs) are of growing importance to creators around the world. While the Hague Agreement Concerning the International Registration of Industrial Designs dates from 1925, an increasing number of countries are ratifying the Agreement (a WIPO-administered treaty). For example, Israel passed a new design law (Designs Law 1176-2017) in 2017 that fulfills the conditions of the Hague Agreement. The new law increases the term of protection from 15 to 25 years and strengthens enforcement and customs measures in Israel. Other countries that have acceded to or ratified the Hague Agreement in the past year include the United Kingdom, Russia, and Cambodia.

Case Study 2: Cycling Outside the Box²⁴

In an effort to reduce back pain and injury after long bicycle rides, Canadian cycling enthusiast Lucio Tortola developed a clever bicycle frame that better absorbs shock. Tortola replaced the pole on which the seat is mounted with a pair of parallel rings designed to dissipate energy from the ground along its curved structure. In 2011, he obtained a design patent, and three years later he obtained a utility patent and trademarked the bicycle “RoundTail.” Tortola was able to successfully leverage his IP assets by investing in strategic branding and collaborating with established partners in the industry. Today RoundTail bikes are sold worldwide and Tortola has received several prestigious design awards.



1.1.4 COPYRIGHTS

Copyright plays a critical role in maintaining the vitality of sports, keeping fans interested and inspired, and enhancing value. The promotion and marketing of championships and sporting events, the artistic designs of the logos of sports teams and sports competitions, the literature contained in game-day programs sold to fans and supporters, the merchandise, and the software of computer and online games are all copyrightable subject matter.

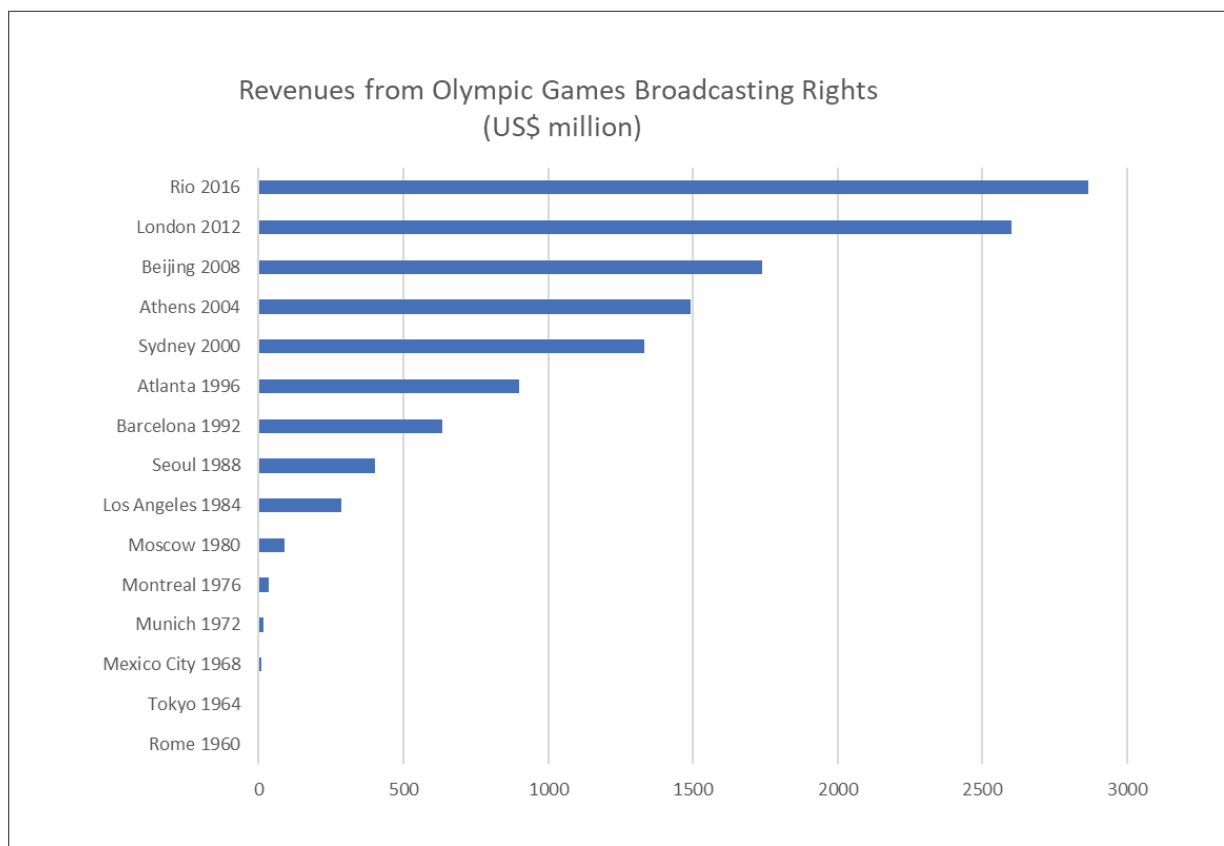
Revenues from broadcasting and media rights are often the main source of funds for sports organizations to build stadiums, host sporting events, and carry out community outreach to maintain high levels of interest.²⁵ Major sporting events can now be streamed or broadcast anywhere in the world, giving millions of fans the opportunity to participate in the excitement of an event.

Most countries have, either through specific legislation or through case law, established that the broadcasting of a sporting event is copyrightable. For example, recognizing the significant economic value in sports broadcasts, the United States enacted its own sui generis law, the Sports Broadcasting Act of 1961, which regulates and protects the sale and distribution of sports media rights. There is also a substantial body of U.S. case law on the extent to which sports broadcasting is protected by copyright.

Existing gaps remain, however, in key emerging markets such as China, where copyright law is currently in flux and broadcasters still do not have the certainty required to invest significantly and leverage the full potential of the markets (this example is discussed in more detail in Section 2).

As a result of recent advances in telecommunications and the internet, the value of broadcasting rights has grown at an increasingly accelerated pace. Figure 4 shows the exponential growth in value of broadcasting rights of the Olympic Games throughout its history.

Figure 4: Revenues from Olympic Games' broadcasting rights (in million USD)



Source: International Olympic Committee; analysis: Pugatch Consilium

Other examples of rapid growth of rights can be seen in the broadcasting rights generated by individual sports leagues. Most if not all of the major sports leagues around the world have seen substantial increases in revenue from broadcasting rights.²⁶

With strong and comprehensive copyright protection, these rights can be divided in multiple ways and across multiple geographies to maximize the potential commercialization and revenue of the given sport. Rights holders can license separately live broadcasting, webcasting, delayed broadcast/on-demand streaming, and the packaging of highlights. This spiral of value generation results in better, and more exciting and inspiring, sporting events, which brings more enthusiasts to the sport.

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The 2014 FIFA World Cup illustrates the massive economic potential of copyrights generally, and broadcasting rights specifically. The final match between Brazil and Germany was watched by an estimated 1 billion fans, and despite it being played at 3:00 am local time in China, 30 million Chinese viewers tuned in.²⁷ Ninety percent of Dutch households watched the semifinal between Netherlands and Argentina.²⁸ Two years earlier, the International Olympic Committee estimated an audience of 900 million for the opening ceremonies in London (4.8 billion viewers throughout the games), and almost 114 million viewers tuned in for the 2017 Super Bowl.²⁹

1.1.5 TRADE SECRETS

Sports also generates an important volume of trade secrets that play a key role in competitive advantage and value creation. Teams gather proprietary information in the form of statistical analysis, scouting reports, dietary regimens, physiological metrics, and psychological assessment techniques—all to gain potential competitive advantage over their rivals. Sports gear often features secret new compounds and materials to allow athletes to perform better. Companies invest heavily in elaborate focus groups to find the right mix of features and designs to make their products more attractive and marketable.

In a way, trade secrets and patents/design rights are the two sides of the innovation coin. Patents and design rights are the publicly known aspects of the invention, while trade secrets encompass the undisclosed knowledge behind it. In exchange for disclosure (filing or registering at the patent or relevant IP office), the inventor obtains a patent that prevents others from copying the invention for a period of time. Conversely, there is no need to register trade secrets, and they can last indefinitely as long as the information is kept confidential. But protection is much more limited; others are only prevented from breaching the security measures in place. Moreover, competitors are free to independently develop that very same invention. Hence the two sides of the innovation coin: elements of an invention subject to reverse engineering are candidates for patent protection, while trade secrets can protect what is not apparent from examining the product. Often patents and other registerable forms of IP rights are the tip of the iceberg. The rest is knowledge acquired over time during many iterations of the development process. Some inventions, like the secret syrup formula for Coca-Cola for instance, are difficult if not impossible to determine how to copy and as such can be kept entirely secret indefinitely, as long as measures are in place to ensure their security.

Trade secrets can take many forms in the world of sports, from proprietary information and processes used by individual teams and leagues to techniques and business strategies used by sporting goods and product manufacturers. Sports gear and equipment utilize undisclosed formulas, material, and processes, so, for example, golf balls can be more aerodynamic or skateboards can be lighter and stronger.³⁰ The development process of new products and designs takes years of prototyping and testing that must be kept secret to prevent tipping off the competition.

Case Study 3: Big Data—Big Deal

As teams look for every possible competitive advantage, a new frontier is being explored in the field of data analytics. While extensive discussion of statistics is becoming a fixture, for example, during Major League Baseball (MLB) broadcasts,³¹ behind the scenes, sports leagues and teams know more than ever about their players from engaging in significant data mining and increasingly complex statistical analysis of individual performance, mental sharpness, physical health, and psychological profile.³²

This so-called big data has been most prominently used in baseball, especially in MLB.³³ Proprietary data analytics in baseball reached its climax when the Oakland Athletics managed to reach the playoffs four straight years in a row in the early 2000s, when they prominently leveraged statistical analysis of player performance and developed a unique set of strategies that exploited inefficiencies of competitors' assessment of their players.³⁴ The event was re-created in the movie *Moneyball* with Brad Pitt, based on the book *The Art of Winning an Unfair Game* by Michael Lewis.

Today every professional MLB team has its own proprietary analytics department based on increasingly larger data sets that go beyond the traditional metrics of runs batted in, batting averages, or pitchers' win-loss records. With the help of wearable biometric tracking technology, teams are also able to monitor their players physiologically, for example, managing team sleep patterns to minimize fatigue,³⁵ measuring stress on players' joints and tendons,³⁶ or following in great detail the players' moves to optimize their performance.³⁷

Trade secrets are becoming more and more important for IP-intensive industries, including the sports apparel and sporting goods industries. These industries quickly turn ideas into manufactured products, with new product lines introduced annually or sometimes seasonally. For these innovators strong trade secrets protection provides a nimble and necessary form of protection.

However, despite the role they play in IP-related economic activity (including sports), trade secrets are not adequately protected everywhere. In 2014 the Organisation for Economic Co-operation and Development (OECD) created a Trade Secrets Protection Index that measures key aspects for the protection of trade secrets, including legal definitions of trade secrets, civil and criminal definitions, existing remedies, and enforcement and registration requirements.³⁸ Many key U.S. trading partners—including Russia, Indonesia, China, and India—were in the bottom five of the index. And many countries were found to have poor enforcement environments with large discrepancies between legal definitions of trade secrets and the provision of legal remedies versus actual application and enforcement. On this last aspect of enforcement environments, Indonesia, Thailand, and Turkey scored particularly poorly.

Similar results appear in the U.S. Chamber International IP Index, an empirical tool that ranks the IP environment of economies by six categories: patents, copyrights, trademarks, trade secrets, enforcement, and ratification of international treaties.³⁹ In the trade secrets category, 33 out of the 50 economies surveyed in 2017 do not have laws that protect this type of intellectual property, or at best have a patchwork of laws relating to employment contracts and disclosure of confidential information.⁴⁰

Trade secret protection is mandated by articles 39.1 and 39.2 of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement.⁴¹ Moreover, both the EU and the United States have introduced new forms of protection for trade secrets in the past few years and are setting important international

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benchmarks. In the United States, the Defend Trade Secrets Act was signed into law in 2016. This new law introduces a federal right of action against misappropriation of trade secrets (on top of existing state-level rights of action). Available remedies include damages for actual losses—with higher damages for willful infringement—injunctive relief, and seizures (in extreme situations). Relief is also provided for threatened misappropriation if there is clear evidence of a threat. The new framework aids in enhancing protection of trade secrets across the United States. In the EU, the Trade Secret Directive sets common minimum standards and a common trade secret definition for all member states. The directive also introduces secondary liability claims and protection of confidentiality during legal procedures. As of the date of this report, EU member states are amending their relevant national laws and regulations to be fully compliant with this directive.

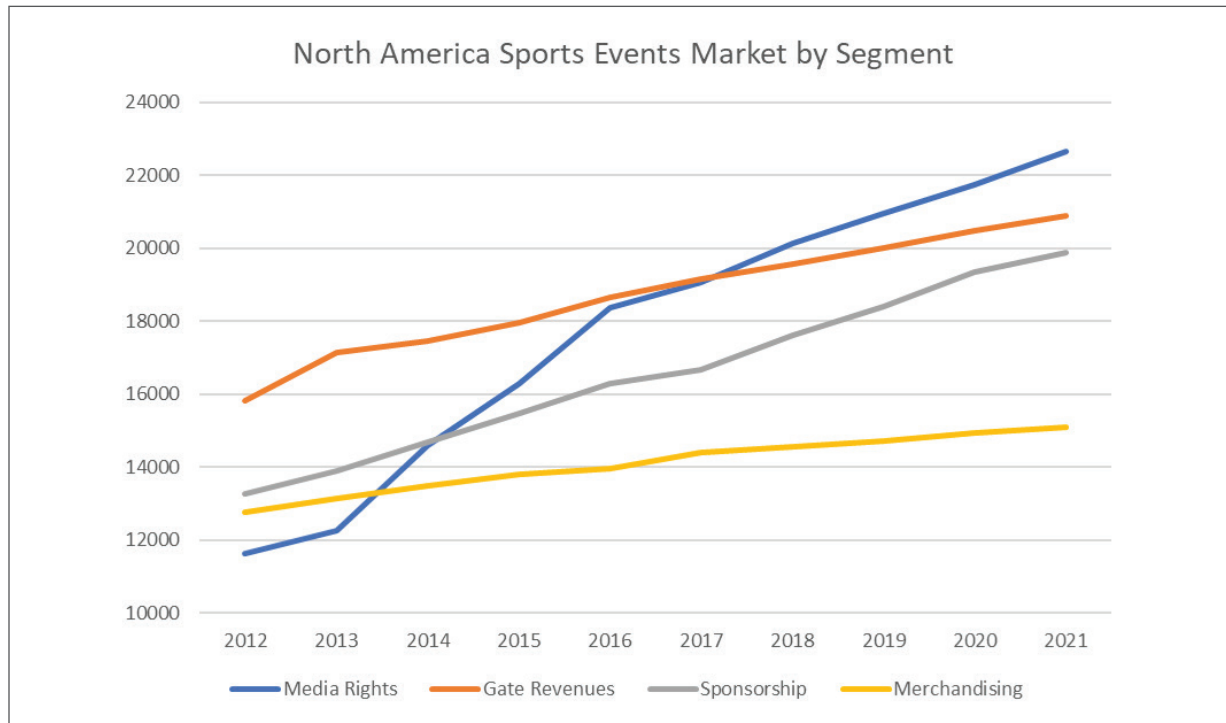
1.2 IP ASSETS IN THE SPORTS MARKETPLACE

The contribution of the sports sector to global economic growth is significant. In the United Kingdom, for example, the value added of the sports sector is estimated to be 1.7% of GDP, with sports-related turnover comparable to that of the automotive and food industries.⁴² In Australia, the sports sector contributes an estimated 2% of GDP.⁴³ In North America, the sports sector amounts to about 1.3% of GDP, and in 2016 generated roughly \$266 billion.⁴⁴ Similarly, the sports sector in the EU was valued in 2016 at \$204 billion.⁴⁵ A study commissioned by the European Commission concluded that in 2012 the contribution of the sports sector and industries to the European economy was comparable to the shares of agriculture, forestry, and fishing—combined.⁴⁶ Globally, A.T. Kearny estimates the sports economy to contribute roughly 1% to world GDP.⁴⁷ It is worth noting that much of the value generated in the sports sector comes from mature economies, which hints at the tremendous potential that lies ahead when emerging economies build their IP systems to international standards.

What generates this value creation?

As suggested in the preceding subsection, an important shift in revenue source for athletes, teams, and leagues is taking place. For example, looking at the North American sports market, Figure 5 shows that stadium ticket sales are no longer the main source of revenue. Instead, media rights and sponsorships, two segments wholly dependent on sports as an IP asset, are becoming the key drivers of value.

Figure 5: North America sporting events market by segment



Source: PwC 2017 Sports Outlook⁴⁸

This change in market dynamics underscores the importance of IP rights for future growth in the sports sector and the importance of developing the full commercial potential of the sports sector in emerging markets.

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Case Study 4: Ditch the Workout, Join the Party



In the early 1990s, Colombia native Alberto “Beto” Perez emigrated to Miami penniless but with an idea to make workouts more attractive and fun. With some seed capital, Perez produced a series of fitness videos in which he choreographed dance and aerobic movements to the beat of energetic music. He called it Zumba. His motto was “Ditch the workout, join the party.” Today, 15 million fans take Zumba classes each week in over 200,000 locations across more than 100 economies. Ten percent of Zumba Fitness’ 250-strong workforce is its legal staff, focused on enforcing its IP portfolio of 60+ copyrights and 50+ trademarks and design patents.

The Zumba concept began to branch out into various modalities catering to different demographics, apparel and footwear design, video games, and even cruise ship experiences.

Currently, Zumba Fitness has an elaborate licensing program for Zumba instructors with 20 different levels of specialization and expertise. Zumba Fitness has agreements with national fitness chains, including Curves, 24 Fitness, and LA Fitness, and partnerships with the American Council on Exercise and LiveStrong.

Zumba Fitness’ IP footprint is the linchpin to its licensing prowess and its main source of revenue, which is partly reinvested to create new and more exciting and motivating choreographies, many of which are tailored to specific audiences such as children, seniors, and handicapped enthusiasts.

1.3 THE UNTAPPED POTENTIAL OF EMERGING ECONOMIES

The story of Zumba and “Beto” Perez exemplifies the enabling role that IP rights have in sports. The Zumba concept was incubated, disseminated, and eventually expanded in large measure because of the strategic use of IP rights and the development of an IP portfolio. Sports as IP and the ability to protect the ideas behind Zumba catapulted Zumba Fitness from a local workout studio to a multinational endeavor. But how many other Perezes are in his native Colombia, or in other emerging economies?

IP has become the de facto currency in sports-related business transactions. In economies with weaker IP environments, creators lack a full platform to develop, disseminate, and profit from their ideas. For example, of the 50 economies included in the 2018 edition of the U.S. Chamber International IP Index, 34 are considered emerging economies, 29 of which ranked significantly lower overall than mature economies. Only Taiwan, Israel, South Korea, and Singapore ranked competitively with the mature economies included in the study.⁴⁹

Having examined how central IP rights are to the sports economy, this report now shifts focus to counterfeiting and the infringement of sports IP. IP infringement and the inability to provide and enforce sports-related IP rights is one of the biggest threats to the sports economy.

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2. THE COST TO SOCIETY OF IP INFRINGEMENT OF SPORTS-RELATED GOODS AND CONTENT

This section provides an in-depth analysis of three different case studies of IP infringement in the sports sector and the resulting negative effects on consumers and economies:

1. The global impact of counterfeit sporting goods and sportswear
2. Piracy of live sports broadcasting: The impact on emerging economies; and
3. The threat of a new generation of piracy from set-top boxes

Whether by physical counterfeiting of goods or by pirating a live broadcast, sports IP infringement causes substantial economic losses that reverberate across the entire sports sector. This section attempts to delineate the two sides of the coin: on the one hand, estimating the economic losses and indirect impact of sports IP rights infringements on society; on the other hand, showing what economies stand to gain from providing adequate protection of sports IP rights.

2.1 THE GLOBAL IMPACT OF COUNTERFEIT SPORTING GOODS AND SPORTSWEAR: TRADEMARK ZOOM-IN

2.1.1 THE POTENTIAL DANGERS OF COUNTERFEITING

Physical counterfeiting and trademark infringement entails the unauthorized use or application of an existing trademark or brand to goods that were not intended to bear the brand. The TRIPS Agreement of 1994 provides a formal definition:

Counterfeit trademark goods shall mean any goods, including packaging, bearing without authorization a trademark which is identical to the trademark validly registered in respect of such goods, or which cannot be distinguished in its essential aspects from such a trademark and which thereby infringes the rights of the owner of the trademark in question under the law of the country of importation.⁵⁰

The level of forgery or imitation of a counterfeit product can vary significantly in terms of quality, from very poor, cheap imitations to products of close likeness to the original. For example, footwear and apparel can mimic distinguished features of the brand and its logo but the materials and assembly are generally of lesser quality.

The obvious and direct harm of counterfeits is to the originators. They lose income from the sale of legitimate products. They also lose goodwill because of the poor quality of counterfeit copies, especially among disappointed buyers unaware of the counterfeit. This undermines a brand's integrity and can result in significant revenue losses. In sum, IP owners sustain not only direct losses due to decreased market share, but also damage to the brand's reputation and dilution of the brand, along with costs related to defending their rights.⁵¹

As important as the damage to genuine producers is the harm done to consumers and consumer confidence. Counterfeiting today represents a tremendous and ever-increasing global threat. Counterfeit products—ranging from consumer products, toys, and consumables to industrial parts and medicines—circulate across the globe. These products cause real damage to consumers and can pose a serious

public health risk. For example, counterfeit automotive parts are often of very poor quality and lead to failure with, for instance, brake pads malfunctioning and airbags failing to deploy or deploying and releasing metal shrapnel. Similarly, counterfeit clothes and cosmetics can contain excessive levels of dangerous chemicals.⁵² Counterfeit medicines may be composed of dangerous or contaminated substances and sometimes do not contain an active ingredient at all; these medicines can be fatal or cause serious medical problems.⁵³ It is estimated that each year deaths resulting from counterfeit products among the G20 economies bear an economic cost of over \$18 billion, with an additional \$125 million spent on treating counterfeit-product-related injuries.⁵⁴

Buying counterfeits also feeds an underground economy that is largely unregulated, adhering to virtually no labor or environmental laws.^{55, 56} Counterfeiting represents relatively easy and fast funding for organized crime, yielding as high as 900% profit margins.⁵⁷ Moreover, counterfeiting is increasingly linked to terrorist groups. Seizure records from Interpol and the FBI suggest that millions of U.S. dollars in proceeds from counterfeit goods have been destined for terrorist organizations, such as Hezbollah and Al-Qaeda.⁵⁸

ONLINE MARKETS—THE NEXT COUNTERFEITING FRONTIER

More consumers are able to access and use the internet than ever before. In 2010 an estimated 28.8% of the world's total population (just under 2 billion people) had access to the internet.⁵⁹ By the end of 2017 this number had doubled to 4.2 billion internet users (or 54.4% of the global population).⁶⁰ As more consumers are able to access and use the internet, online shopping is growing in popularity. While still smaller than brick-and-mortar shopping, e-commerce accounts for a growing share of total global retail sales. In 2017 total e-commerce sales worldwide were estimated at \$2.3 trillion, up by close to 25% from 2016.⁶¹ E-merchants and online platforms, such as E-Bay, Amazon, Alibaba, Mercado Libre, and others, account for a growing share of global retail sales today.

As online shopping becomes more popular and widespread, so does the proliferation and sale of counterfeit goods. For example, a number of online merchants are included in the United States Trade Representative's (USTR) annual Notorious Markets List. The latest edition of the list from January 2018 includes online merchants such as DHGATE.com, Indiamart, and Taobao.⁶² But few countries have in place effective mechanisms to combat the increased sale of counterfeit goods through online auction houses and merchants. There are private initiatives—such as e-Bay's Verified Rights Owner Program—through which online merchants employ measures to combat the sale of counterfeit goods.

There are also some examples of countries where relevant primary or secondary legislation includes an obligation on the part of online merchants to take down IP-infringing material upon notification by a rights holder. For example, in the EU principles and obligations were established with regard to the E-Commerce Directive and online auction houses in the 2011 European Court of Justice case *L'Oréal SA and others v. eBay International AG and others*, Case C-324/09. But overall the mechanisms in place are outweighed by the sheer quantity of counterfeit goods available online. This is particularly the case in Asia. A significant proportion of counterfeit goods in circulation globally emanates from China and Hong Kong. Seizure data from U.S., EU, and Japanese customs authorities from 2010 to 2014 show that the percentage of counterfeit goods seized coming from China or Hong Kong was overwhelming.⁶³ China and Hong Kong together were responsible for more than 86% of the import of counterfeit goods into the world's three largest markets (with a shared market value of nearly \$2 trillion each year). Indeed, China's share as the economy of origin of counterfeit goods seized by the U.S. Customs and Border Protection increased from 12.5% in 1995 to 73.6% in 2005. Additionally, China's share of counterfeit goods seized by EU Customs and Japan Customs increased from 55% and 53.9% in 2008 to over 72% and 75.8% in 2013, respectively.⁶⁴

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2.1.2 COUNTERFEITING IN THE SPORTING GOODS AND SPORTSWEAR SECTORS

Consumers rely on innovative sporting goods to fulfill their functions at the highest level. This is particularly so for more extreme activities, from skiing and downhill biking to surfing and diving, where failure due to poor quality of materials or assembly may cost human lives. Counterfeiting of sporting goods and sportswear also has a direct effect on leagues, teams, and professional and celebrity athletes, whose commercial activities are harmed due to the substandard quality of the copies and resulting dilution of their brands.

Yet what is the actual impact of counterfeiting on the sporting goods and sportswear sectors? How much counterfeiting is taking place and what is the cost?

This section attempts to estimate the global economic impact of counterfeiting on the sporting goods and sportswear markets.

THE CHALLENGE OF MEASURING THE GLOBAL REACH OF COUNTERFEITING

Estimating the scope of counterfeiting and its economic impact on a global scale is highly challenging. The illicit nature of counterfeiting—from manufacturing to distribution and sale—entails reliance on customs seizure statistics and industry figures, which depend on dynamic success rates as well as on the methods used for calculating the value of seized goods. As a result, while customs authorities seize billions of dollars' worth of counterfeit goods each year, these may well represent only a small fraction of the actual number of counterfeit goods on the market.⁶⁵

SPORTING GOODS AND SPORTSWEAR: DEFINITIONS

The sporting goods and sportswear sectors encompass numerous products that can be classified under more than one category. Different estimations of market value for these sectors depend on the types of products included, but these data are not always provided, particularly for the sportswear sector. In order to estimate the global economic impact of counterfeiting on the sporting goods and sportswear markets, this study relies on several different sources.

For sporting goods, this study relies on the definition provided by the European Office for Harmonization in the Internal Market (OHIM),⁶⁶ which includes the following categories:

- Hard, soft, and inflatable balls
- Rackets, bats, and clubs
- Skis, ski-boots, bindings, and poles
- Sailboards and surfboards
- Requisites for sport fishing, including landing nets
- Requisites for hunting, mountain climbing, etc.
- Leather sports gloves and sports headgear
- Basins for swimming and padding pools, etc.
- Ice skates, roller skates, etc.
- Bows and crossbows
- Gymnasium, fitness center, or athletic equipment⁶⁷

In contrast, the sportswear sector is more broadly defined. It includes everything from clothing, footwear, and accessories designed for workout and exercise to the wearable tech market—including “smart” wrist- and waistbands and watches.⁶⁸ As is detailed in the next subsection, this study utilizes two estimates of

the global market for sportswear, by Morgan Stanley and by Société General, which both look at clothing, footwear, and accessories.⁶⁹ Additionally, the study builds on an additional report by the OHIM that provides an assessment of the impact of counterfeiting on the clothing, footwear, and accessories sector in Europe, which includes the following categories:

- Clothing (including clothing in specialized stores)
- Footwear (including footwear and leather goods in specialized stores)
- Underwear and outerwear
- Other wearing apparel and accessories⁷⁰

2.1.3 ESTIMATING THE GLOBAL ECONOMIC IMPACT OF COUNTERFEITING ON THE SPORTING GOODS AND SPORTSWEAR INDUSTRIES

Over the years, several methods have been developed to meet many of the methodological challenges described above, including the extrapolation of data from seizures by customs authorities, extensive supply-and-demand surveys, and use of econometric multipliers.⁷¹ This study utilizes several methods and available sources to piece together a general estimate of the global impact of counterfeiting on the sporting goods and sportswear markets, using the following stepwise approach.

First, the overall global value of the sporting goods and sportswear markets is identified. Due to differences in classifications, calculations, and methods of analysis, different sources cite varying estimates with regard to the value of these markets.

- Looking at sporting goods, two recent reports by Macquarie Research and by Capitalmind estimate the value of the global market at an average of €281 billion, or \$351.5 billion.⁷² According to regional estimates, the United States and the EU account for approximately 85% of global sales.⁷³
- Looking at the global sportswear market, two recent reports by Morgan Stanley and by Société General estimate the value of the global market at an average of \$276 billion, with the United States and the EU accounting for approximately 62% of global sales.⁷⁴

Second, the magnitude of trade in counterfeit sporting goods and sportswear, its share of global sales, is identified.

One established estimate for the magnitude of counterfeiting in the sporting goods market is provided for the EU by a 2015 study carried out by the OHIM.⁷⁵ The study revealed that in 2012 counterfeiting of sporting goods resulted in the loss of nearly €500 million in sales of sporting goods within the EU, amounting to 6.56% of total estimated sales of €7.5 billion. When considering the indirect impact on related industries and services, the OHIM study found that losses increase to approximately €850 million. Thus, the direct impact of counterfeit sporting goods is established at 6.56% of sales, with the total impact (direct and indirect) amounting to 11.4% of sales.

A similar estimate does not exist for the sportswear sector. However, an additional 2015 OHIM report provides the same analysis of the impact of counterfeiting on the clothing, footwear, and accessories sector in the EU. This study estimated the direct impact of counterfeiting on the clothing, footwear, and accessories sector in the EU at 9.7%, with the total impact (direct and indirect) amounting to 16% of sales.⁷⁶

Third, the estimated impact of counterfeiting on the global sporting goods and sportswear sectors is extrapolated to the established baselines of these markets' global value. Thus, the direct impact of

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counterfeiting on the global sporting goods market is estimated at \$23.05 billion, with the total impact (direct and indirect) amounting to as much as \$40.07 billion. Similarly, the direct impact of counterfeiting on the global sportswear market is estimated at \$26.77 billion, with the total impact (direct and indirect) amounting to as much as \$44.16 billion. A summary of the methodology used and results are depicted in Figure 6.

FIGURE 6: THE IMPACT OF COUNTERFEITING ON THE GLOBAL MARKET FOR SPORTING GOODS AND SPORTSWEAR

Step 1:	Identifying the global value of the sporting goods and sportswear markets	Sporting goods	\$351.5 billion	
		Sportswear	\$276 billion	
Step 2:	Identifying the magnitude of trade in counterfeit sporting goods and sportswear	Sporting goods	Direct impact	6.56% of sales
			Total impact	11.4% of sales
		Sportswear	Direct impact	9.7% of sales
			Total impact	16% of sales
Step 3:	Estimating the impact of counterfeiting on the global sporting goods and sportswear markets	Sporting goods	Direct impact	\$23.05 billion
			Total impact	\$40.07 billion
		Sportswear	Direct impact	\$26.77 billion
			Total impact	\$44.16 billion

Sources: Macquarie Research, Capitalmind, Morgan Stanley and Société General, Office for Harmonization in the Internal Market (Trade Marks and Designs) (OHIM)

It is important to note that while the actual value of economic impact may be lower or higher than these estimates, the economic losses are substantial. As such, this is a clear indication of the magnitude of physical counterfeiting within the sporting goods and sportswear industries and of the severe and detrimental impact it has on these industries.

Furthermore, counterfeiting in these markets has an extended economic impact on national budgets and government tax receipts.⁷⁷ According to the OHIM studies, these losses of government revenues amount to as much as €1.9 billion, or \$2.4 billion, each year within the EU alone.⁷⁸

2.2 PIRACY OF LIVE SPORTS BROADCASTING IN EMERGING ECONOMIES: A BARRIER FOR NATIONAL SPORTS DEVELOPMENT

2.2.1 PIRACY OF LIVE BROADCASTING OF SPORTS EVENTS: A GLOBAL CONCERN

As documented in the preceding section, live broadcasting of sporting events is one of the most valuable sports commodities. Given the increasing fragmentation of entertainment and wide selection of television and online offerings, live sports is one of the few forms of entertainment in which advertisers are able to reach a true mass audience. Indeed, the biggest sporting events of the year are prime events for advertisers. For example, the U.S. National Football League's main event—the Super Bowl—attracted some 114 million viewers in 2017 and a 30-second slot of advertisement cost about \$5 million on average, over \$166,000 per second.⁷⁹ Media rights increasingly represent the fastest-growing segment of the sports market. As mentioned above, in North America this segment is projected to grow by a compound annual growth rate of 4.3% by 2021 and to account for nearly 30% of all sports market revenues by 2021.⁸⁰

But piracy—the unauthorized streaming of live broadcasts of sports events—undermines the revenue potential that broadcast rights offer, and stunts the growth of the sports sector. A recent BBC survey revealed that in the United Kingdom more than a third of English Premier League (EPL) viewers are watching live matches via unauthorized streaming websites.⁸¹ Similarly, the recent professional boxing match between Floyd Mayweather Jr. and Conor McGregor is estimated to have been viewed illegally by some 3 million viewers (including through social media platforms such as Facebook), generating estimated revenue losses of \$250 million.⁸²

Yet identifying and fighting piracy of live broadcasts of sports events is very difficult. Take for example the multimillion-dollar site LiveTV.sx, which streams pirated sports events complete with banners and pop-up ads. The site, the 1,750th-most-popular website in the world, is administered in Panama with a domain name registered in the Caribbean by a Kazakh national.⁸³ A 2011 report identified tens of thousands of websites, peer to peer filing file sharing networks, and unicasts illegally streaming live broadcasts of sports events.⁸⁴

2.2.2 THE PIVOTAL ROLE OF ROBUST COPYRIGHT PROTECTION IN PROMOTING SPORTS

Piracy of live broadcasting of sports events exists in most economies today, and governments around the world are increasingly becoming cognizant of the need to address this rapidly growing illicit activity. Action campaigns and initiatives in developed and developing economies alike have resulted in the blocking of thousands of piracy websites, and in some instances even criminal charges.⁸⁵

Rampant and unrestrained, sports broadcasting piracy impacts not only the holders of broadcasting rights, but also the national sports environment as a whole, as revenues from subscriptions are reflected in deals on broadcasting rights between leagues and broadcasters, which in turn enable broadcasters to provide increased access to more national and international sporting events.

Thus, in the fight against piracy of sports broadcasting, the existence and enforcement of IP rights is critical. In countries where the IP regime is weak, the national sports environment is missing out on essential income that could develop and promote it further.

This section focuses on China as a case study, examining how gaps in its current IP framework hinder its abilities to effectively fight piracy of sports broadcasting and stifle the development of the national league of its most popular sport: soccer.

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2.2.3 PROMOTING THE NATIONAL SPORT THROUGH BETTER IP PROTECTION: THE CASE OF CHINA

China is currently poised to be the next frontier in sports. Fueled by the sheer size of demand, from 0.6% of its GDP in 2014 to 0.7% in 2015, the Chinese sports sector is rapidly growing. Sporting goods industry sales in China grew at a rate of 11%, amounting to \$28.4 billion in 2016.⁸⁶

China's growing interest in sports is in no small part a result of strong government support for building this sector. In 2016 the Chinese government announced its National Fitness Program for 2016–2020, aimed at increasing the domestic sports market to RMB5 trillion (\$722.5 billion).⁸⁷ The government also issued the “Chinese Football Mid-to-Long-Term Development Plan (2016–2050)” aimed at developing a national team capable of winning a FIFA World Cup.⁸⁸ The plan includes the establishment of 20,000 soccer academies and 70,000 soccer fields nationwide. Since then, the Chinese Football Association Super League (CSL)—the top national league for soccer, consisting of 16 individual clubs—has strengthened its lineups with foreign players at a total sum of \$417 million.⁸⁹ As a result, attendance at CSL matches has increased from some 10,000 fans in 2004 to over 24,000 in 2016 on average, with top matches seeing an increase from 20,000 fans in 2008 to 45,000 fans in 2016.⁹⁰

But China's IP system is still in flux, especially its copyright laws with respect to the broadcasting rights of sports events and capacity for effectively fighting high rates of piracy. This subsection examines the impact of piracy on Chinese holders of sports broadcasting rights, and the potential gains of strengthening the IP environment through stronger enforcement of and clearer protection for broadcasting rights.

TO COPYRIGHT OR NOT TO COPYRIGHT?

From a copyright perspective, the live broadcasting of sports events consists of two distinct elements: the sporting event itself and its live broadcast. The first is generally not regarded as a “creative work of authorship” and is therefore excluded from copyright protection as such. The second, however, is generally protected. Under the Rome Convention of 1961, broadcasters are provided with exclusive rights for a term of 20 years for communication to the public through reproduction, “fixation” (recording), and rebroadcasting.⁹¹ As mentioned, attaching copyright to sports broadcasts is recognized and codified in many economies. For example, in the United States the live broadcasting of sports events involves the “fixation” of an audiovisual work and is therefore eligible for copyright protection. Similarly, in Australia the transmission of the signal in itself entitles copyright protection for the broadcast, regardless of the “work.”⁹²

However, Chinese copyright law is not clear on live broadcasting. Within China's Copyright Law, under article 46, a broadcaster is required to obtain permission and compensate the producer and copyright owner only for “a cinematographic work or a work created by a process analogous to cinematography, or a video recording produced by another person.”⁹³ There is no specific reference to the broadcasting of live sports. As a result copyright protection for live sports is very much left to case law, which so far has not been consistent. For example, in 2013 the Shanghai No. 1 Intermediate People's Court ruled that the Asian Cup China versus Uzbekistan soccer match was not copyrightable, citing the exclusion of live sports broadcasting from copyright protection under Chinese law.⁹⁴ However, in 2015 the Chaoyang basic level court in Beijing ruled that streaming live CSL matches was copyrightable, ordered the shutdown of accused infringing websites, and awarded damages of RMB500,000 (\$73,000).⁹⁵ The court acknowledged that the broadcast of the live CSL match consisted of a composition of fixed and unfixed cameras as well as replays and close-up shots, etc., the formation of which represents a creative endeavor of the director and can therefore be viewed as meeting the criteria of originality, thereby constituting a copyrightable work.⁹⁶ While this recent ruling marks a positive development, codifying the broadcasting rights in legislation would provide even more clarity.

From an enforcement perspective, in order to effectively combat piracy, rights holders should have an adequate recourse mechanism for seeking redress in the form of swift and effective relief. While injunctive relief is available, the Chinese Special IP Courts are generally reluctant to provide such relief, with only 27 injunctive reliefs granted from some 90,000 civil IP cases before the Chinese courts in 2012.⁹⁷ However, piracy of live sports broadcasting necessitates swift action, with preemptive or simultaneous blocking of pirated websites.⁹⁸

The negative impact of China's weak IP environment can be seen on the ground, specifically in its domestic sports leagues. The next subsection provides a case study analysis of the domestic soccer league, the CSL. Specifically, it examines how China's IP environment is shaping the commercial prospects of the CSL.

CSL ZOOM-IN: IS A WEAK IP ENVIRONMENT HOLDING BACK CHINESE SOCCER?

From a broadcasting rights perspective, China is experiencing the growth that one would expect from one of the largest and fastest-growing economies in the world. Over recent years, broadcasting rights of major sports leagues, tournaments, and championships have been purchased for billions of dollars.⁹⁹ For example, there are some 200 million fans of the EPL in China, and NBA attracts some 700 million viewers throughout its season.¹⁰⁰ The domestic leagues too are gaining in popularity: During the 2016 season, the CSL had an estimated 500 million viewers.¹⁰¹

Yet there is a striking difference between the revenues of Chinese rights holders for the sale of their broadcasting rights and the revenues of rights holders in mature economies. Within mature economies like the United States and Europe, TV and digital subscriptions constitute an average of 50% of the total revenues of rights holders.¹⁰² This is the case for broadcasters such as ESPN, Eurosport, and Sky Sports.¹⁰³ In contrast, Chinese broadcasters receive a considerably lower 9% of revenues from TV subscriptions.¹⁰⁴ Looking specifically at the CSL (whose 2016 matches as noted above were viewed by an estimated 500 million people), only RMB80 million (\$12.66 million) originated from paid subscriptions.¹⁰⁵ This was only 3% of the CSL's total revenues of RMB2.5 billion in 2015 (\$395 million).

TABLE 3: REVENUES FROM TV AND DIGITAL SUBSCRIPTIONS OF THE CHINESE SUPER LEAGUE COMPARED WITH ESPN AND EUROSPORT

	LeTV (CSL)	ESPN	Eurosport
Subscription revenues	\$12.66 million	\$7.6 billion	\$311.25 million
Total revenues	\$395 million	\$14.8 billion	\$622.5 million
Subscription revenues' share of total revenues	3%	51%	50%

Sources: *CNStock News*,¹⁰⁶ *Forbes*,¹⁰⁷ *Discovery Communications*,¹⁰⁸ *Sportcal*.¹⁰⁹

The low percentages of revenue stemming from subscriptions in China are not explained solely by Chinese viewers' purchasing power and level of disposable income.

Instead, online piracy appears to be the main reason for the considerably lower percentages of revenue stemming from subscriptions in China. Much of the inherent value of a sports broadcast is its immediacy;

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replays and match highlights have by comparison more limited value to sports fans and consumers. With easy and usually free access to pirate websites illegally streaming live sports broadcasts, Chinese sports consumers have no incentive to pay for a subscription, despite its relatively low cost.¹¹⁰

A recent survey covering Chinese soccer fans ages 25 to 50 revealed that 62% are reluctant to pay for viewing CSL matches, and only half of the remaining 38% are willing to pay more than RMB5 (\$0.8) per match.¹¹¹ Thus, the wide prevalence of easily accessed pirated content substantially limits the CSL's revenue potential. Indeed, despite efforts to combat online piracy and the shutdown of thousands of websites and links leading to copyright-infringing content,¹¹² sports broadcasting piracy is still rampant in China. For example, according to statistics from China's public broadcaster CCTV, an average of 30% of viewership of the 2016 Olympic Games was through unauthorized streaming, and an average of 45% of viewership of the 2014 FIFA World Cup was through unauthorized streaming on mobile apps.¹¹³ While the rights holder for the FIFA World Cup threatened legal action against infringers, no progress was made, reportedly due to the uncertainty involving copyright protection for live sports broadcasting in China.¹¹⁴

As suggested above, although subscription revenue remains low, the CSL's popularity is growing. The number of fans attending CSL matches (and the associated increase in gate revenue) grew at a compound annual growth rate of 8.6% between 2006 and 2016.¹¹⁵ A recent report by Nielsen Sports shows that interest in soccer is experiencing steady growth in China, with nearly a third of the population ages 16 to 59 interested in the sport.¹¹⁶ Additionally, the paid subscription model for viewing live sports broadcasting is gaining momentum in other leagues. For example, both the NBA and the EPL seasons are now offered in full only via paid subscriptions, with a limited number of "high-profile" matches broadcast via the public broadcaster.¹¹⁷

2.3 SET-TOP BOXES: A NEW BATTLEGROUND IN THE FIGHT AGAINST SPORTS BROADCASTING PIRACY

2.3.1 SET-TOP BOXES: INTRODUCING “LEAN-BACK” PIRACY

While earlier generations of pay-TV and internet piracy required technical expertise and resources, current “plug-and-play” set-top boxes are sold very inexpensively. Through pre-loaded software (“fully loaded”) or specific add-ons acquired through a simple internet search, they enable free access to copyright-protected content at the click of a mouse.¹¹⁸

Figure 7: Example of a currently available “fully loaded” set-top box



The fully loaded set-top box depicted in Figure 7 is offered for £35 (\$49), promising free access to sports channels such as Sky Sports, BT Sports, and ESPN, when connected to the internet.¹¹⁹ This plug-and-play setup allows consumers to illicitly intercept sports broadcasts of their choice effortlessly. Often, the electronic interface of a pirated set-top box mimics the user experience provided by legitimate cable companies so well that the users are not aware of their copyright-infringing actions.¹²⁰ These set-top boxes are creating a new battleground of online piracy that is even more challenging to counter than its predecessors.

The following subsections provide a discussion of the scope and extent of the impact of this new generation of online piracy of the live broadcasting of sports events, and recent measures taken to combat this threat.

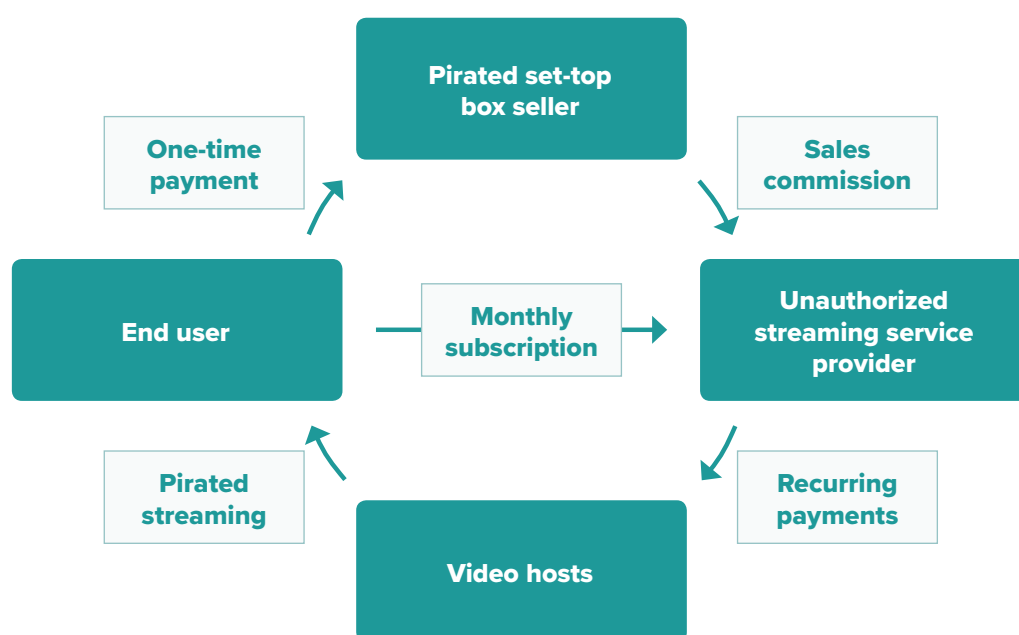
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2.3.2 THE IMPACT OF SET-TOP BOX PIRACY ON LIVE SPORTS BROADCASTING

As with any illicit activity, the providers of set-top box piracy services are not a web version of Robin Hood: Most of these services provide unauthorized access through paid subscription at prices not much different from legitimate providers.¹²¹ Their business models also rely on advertising, except nearly 66% of advertising promotes malware, scams, and online gambling.¹²² Sellers of fully loaded set-top boxes—through dedicated websites and physical stores—form an additional part of the circle of illicit service providers, as seen in Figure 8:

Figure 8: The economic cycle of set-top box piracy



Source: Sandvine, *Video and Television Piracy: Ecosystem and Impact*, 2016; analysis: Pugatch Consilium

As discussed above, revenues from sports events are generally divided into four distinct categories:

1. media rights (including subscription fees),
2. advertising,
3. commercial sponsorship, and
4. merchandise.

Piracy of sports broadcasting weakens the revenues generated from legitimate subscription fees and advertising. Fully loaded set-top boxes are advertised as “cord-cutters,” freeing the viewer from all cable subscription fees—though for viewing live sports broadcasts, a monthly subscription is usually required, ranging between \$20 and \$60 on average. According to recent industry estimates, 500 set-top boxes purchased at roughly \$20,000 can generate annual revenues of over \$170,000—7.5 times their original cost—just from subscriptions, sold at an average of \$390 per year.¹²³

2.3.3 MEASURING THE MAGNITUDE OF SPORTS BROADCASTING PIRACY

As for counterfeiting, the magnitude of piracy of sports broadcasting can only be estimated. One major reason, in addition to the illicit nature of all counterfeiting and piracy activities, is the fact that set-top boxes and some of the software on which they operate (such as Kodi) are legitimate products. Their modification into fully loaded set-top boxes is what makes them illegal. Tracking the purchases of such boxes—and more so identifying the exact rate of piracy of sports broadcasting via modified set-top boxes—is difficult.

Yet, there is enough evidence (including survey data) that suggests the scale and cost of this infringement both generally and for specific sports.

For example, a study by the Canadian-based networking company Sandvine finds that an estimated 6.5% of North American households subscribed to TV piracy services, resulting in the loss of an estimated \$4.2 billion each year in subscription revenues.¹²⁴ Reports in the United Kingdom suggest online piracy reaches levels of 25%–30%, with more than 1 million pirated set-top boxes purchased during 2016–2017.¹²⁵ In emerging markets such as China and Vietnam, the number of paid subscriptions to pirated content streaming services is estimated to outnumber the number of subscribers to legal services by 10 to 1 and 15 to 1, respectively.¹²⁶

While these figures provide an estimate of the impact of online piracy on all TV broadcasts in general, given the popularity of live sports, it can be assumed sports broadcasts make up a significant share of these overall piracy numbers. Indeed, according to Nielsen, sports broadcasting accounts for 93 of the top 100 TV programs viewed live in 2015, with viewers across the world spending 31 billion hours watching sports on TV that year.¹²⁷

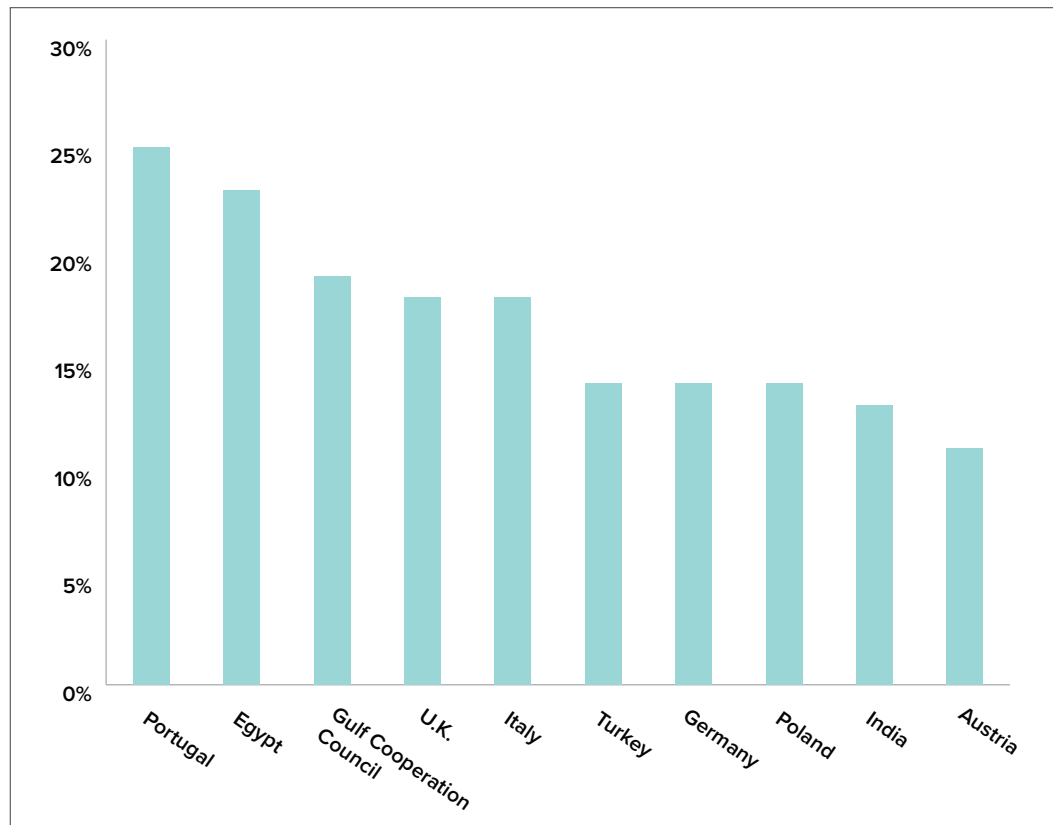
Evidence from individual economies also suggests that pirated live sports is a huge part of pirated content online. Survey evidence from the United Kingdom suggests that visits to sports piracy sites have increased by 20%, from 100 million visits in September 2015 to 120 million in September 2016.¹²⁸

Looking at a bigger set of economies, additional survey evidence suggests that pirated live sports broadcasting is indeed among the most attractive content for consumers. Figure 9 shows the results from a survey by Irdeto that found that 10%–25% of consumers placed pirated live broadcasts of sports within their top three interests.

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Figure 9: Share of consumers most interested in viewing pirated live broadcasting of sports



Source: Irdeto, 2017; analysis: Pugatch Consilium

The widespread availability of illegal sports content and the growing number of consumers willing to make use of this content are having a sustained negative impact on legitimate sports broadcasting. In many countries pirated streaming is so widespread that legitimate viewership of live sports broadcasts is declining.¹²⁹ According to a study by YouGov U.K., more than 800,000 people in the United Kingdom have canceled at least one legal subscription service and are instead opting for pirated content. Ominously, many respondents with legal subscriptions stated they planned to make a similar switch in the future.¹³⁰ Of note is that this activity is primarily driven by a younger audience. In fact, a recent survey conducted in the United Kingdom revealed that more than half of all respondents ages 18 to 24 admitted to regularly watching pirated live broadcasts of sports events compared with only 4% of respondents over age 35, and younger viewers are half as likely to purchase a paid subscription for live broadcasting of sports compared with older viewers.¹³¹

2.3.4 COUNTERING SET-TOP BOX PIRACY OF SPORTS BROADCASTING: A DEVELOPING FIELD

Governments, enforcement authorities, and rights holders are becoming more cognizant of the negative impact illegal streaming is having and are taking action. The English Premier League has launched an aggressive campaign against unauthorized streaming of its matches. As part of this campaign, the league obtained preliminary injunctions in the form of a High Court Order requiring an immediate blocking of Internet Protocol addresses that provide unauthorized streaming of its matches in real time.¹³² In other words, the EPL can detect and instantaneously block illicit Internet Protocol addresses without the direct intervention of a court. According to the EPL, the injunction has led to the blocking of 5,000 Internet Protocol addresses that streamed pirated broadcasting.¹³³ The EPL is also taking action against set-top box piracy, working to identify individuals involved in the selling of fully loaded set-top boxes. This has led to enforcement raids in the United Kingdom, Ireland, and Spain, and arrests and substantial fines.¹³⁴

More broadly, the European Union's Court of Justice (EUCJ) has recently ruled in favor of the Dutch anti-piracy group *Bescherming Rechten Entertainment Industrie Nederland* or *Association for the Protection of the Rights of the Entertainment Industry of the Netherlands* (BREIN) against a Dutch individual who sold fully loaded illicit set-top boxes online. The EUCJ found that "temporary acts of reproduction, on that multimedia player, of a copyright protected work obtained by streaming on a website belonging to a third party offering that work without the consent of the copyright holder, cannot be exempted from the right of reproduction."¹³⁵ While the selling and possession of a set-top box in itself is legal, a fully loaded set-top box, pre-installed with software that enables the streaming of pirated content, is now illegal under this new ruling.

Similarly, a Canadian Federal Court recently issued an injunction against sellers of pre-loaded set-top boxes advertised as "Cable Killers" for causing irreparable harm to copyright holders. This injunction was made possible by a recent amendment to the Canadian Copyright Act that introduced "services" that act as infringement of copyrights.¹³⁶

These landmark cases against set-top boxes have reverberated around the world. Earlier this year, a group of rights holders sued two local sellers of fully loaded set-top boxes in Singapore.¹³⁷ In April 2017, retail giants Amazon and eBay officially banned the selling of fully loaded set-top boxes.¹³⁸ A month later Facebook updated its policy terms to include a ban on selling "devices that facilitate or encourage streaming digital content in an unauthorized manner."¹³⁹ In addition, the developers of Kodi, one of the most popular open-source media players for running set-top boxes, launched a campaign denouncing online piracy via modified set-top boxes and sellers who use the term "Kodi boxes" and "fully loaded set-top boxes" interchangeably.¹⁴⁰

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3. CONCLUSIONS AND FINAL THOUGHTS

The purpose of this report has been to examine the centrality of IP rights to the sports economy. While sport is not often discussed in economic or commercial terms, sport is the quintessential intangible asset.

At their core, IP protections and incentives allow industries and individuals to prosper in their pursuit of innovation and brand development. This creates a synergistic and reinforcing effect. The development of new technologies strengthens a given brand; the strengthening of a given brand leads to the development of new technologies and products, which in turn further strengthens the brand. Additionally, the popularization of a given sport leads to the development of related industries and technologies. Think of wearable fitness devices, which have led to the creation of a whole new sub-industry of app development. Similarly, there is a powerful symbiosis between individual players, their sports, their teams, the respective leagues, and related industries, including branding, sporting goods, and sportswear. The success of one part of this ecosystem leads to potential commercial opportunities and the development of new products and services for all related industries.

Yet each layer of this economy and each related industry requires an individual layer of IP protection to thrive and develop.

A modern sports economy—just like any high-tech, IP-dependent sector—requires a full menu of IP rights and incentives. This allows individuals and businesses maximum protections and incentives to create, innovate, and commercialize their IP assets. Only once these fundamentals are in place can a modern sports economy thrive and reap the accompanying socio-economic benefits. Absent this enabling environment, sports may still exist, but will be confined to small-scale, primarily noncommercial activities—the proverbial game in the park rather than the game in the stadium watched by millions across the world.

Four key findings come out of this report.

Key finding 1: The modern sports industry *depends* on and cannot exist without IP rights.

Innovation is present in every sport. Yet sports cannot become a commercially productive asset without IP rights and incentives. Patent-protected inventions drive improvement in sporting equipment, including sportswear and footwear. Broadcasting rights are the foundation for investment in transmitting tournaments to fans and sports enthusiasts. Trademarks protect the goodwill of events, leagues, teams, and manufacturers of sporting goods. Licensing and merchandising agreements generate the revenues needed to take sports to higher levels of productivity. The sports economy is an instructive case study of how an IP asset **becomes a platform for economic activity and related industries.**

Key finding 2: A modern sports industry requires a broad menu of IP rights to thrive.

Traditionally, sports has been associated with two main IP rights: copyright and trademarks. But this report finds that this traditional view is a limited view of how sports industries use IP rights. Copyright and trademarks are still foundational to various subsectors (e.g., broadcasting, apparel, brand value) but the use of other types of IP rights to protect content/creation is significant. For example, the rise of enhanced technologies yields more research-driven innovative sporting products. In turn, these products require strong patent protection. There are literally tens of thousands of utility patents relating to sports. A search of the Google Patents Public Datasets (a patent database aggregated from 17 patent offices around the world) reveals hundreds of thousands of utility patents related to sports and making reference to such

terms as “athletic” or “athletes.” Many sporting goods companies are also technology companies with broad patent portfolios. Similarly, the growth of the internet and globalization of sports—with international viewership of domestic leagues growing exponentially—necessitate clear and strong broadcasting rights. Revenues from broadcasting and media rights are becoming the main source of revenue for sports organizations (including leagues and individual teams) to build stadiums, host tournaments and championships, and carry out community outreach to maintain and grow public interest in their sport.

To build a modern, successful sports economy, countries must provide a broad menu of IP rights.

Key finding 3: Physical counterfeiting poses a real threat to the sports industry and to consumers.

Counterfeit sporting goods and sportswear have a substantial and detrimental impact on economies—depriving leagues and athletes of economic gains, damaging brand integrity and consumer confidence, and resulting in loss of legitimate jobs. Given the rise in online shopping, with rates of e-commerce increasing by double digits annually, levels of counterfeiting are growing exponentially. This study estimates that the direct economic impact of counterfeiting on the global sporting goods and sportswear markets is almost \$50 billion each year. When accounting for the indirect effect on related services, the overall impact of counterfeiting is an estimated \$84 billion each year.

Key finding 4: Online piracy of sports broadcasting is mushrooming, but governments struggle to keep up with the threat.

Unauthorized streaming services and websites for pirated sports broadcasting are operating by the thousands. Ubiquitous and cheap “plug-and-play” set-top boxes are providing free access to sports broadcasts at the click of a mouse. The fast proliferation of broadcast piracy is a major concern, as it is stunting growth of subscription fees and advertising, estimated at dozens of billions of dollars each year. For example, in China online piracy is stifling of its domestic soccer league (Chinese Football Association Super League). Specifically, despite growing consumer interest and match attendance, league revenue from paid subscription amounts to less than 10% of overall revenue; this compared with 50% in mature markets. While in mature markets governments and key stakeholders like Amazon, eBay, and Facebook are taking steps to combat the threat posed by piracy, emerging economies are still struggling to define the scope of their copyright laws and are unable to take swift action to shut down sources of pirated content.

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ENDNOTES

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