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Publication date

2019

Document Version

Final published version

Published in

American University International Law Review

[Link to publication](#)

Citation for published version (APA):

Quintais, J. P., & Poort, J. (2019). The Decline of Online Piracy: How Markets – Not Enforcement – Drive Down Copyright Infringement. *American University International Law Review*, 34(4), 807-876. [5]. <https://digitalcommons.wcl.american.edu/auilr/vol34/iss4/5/>

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THE DECLINE OF ONLINE PIRACY: HOW MARKETS – NOT ENFORCEMENT – DRIVE DOWN COPYRIGHT INFRINGEMENT

JOÃO PEDRO QUINTAIS* AND JOOST POORT**

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The authors wish to thank the participants of the 13th Annual Conference of the European Policy for Intellectual Property Association, Berlin (2018), the 5th Global Congress on Intellectual Property and the Public Interest, Washington D.C. (2018), and the 1st Intellectual Property & Innovation Researchers in Asia Conference, Kuala Lumpur (2019). The research for this article was funded by Google.

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I. INTRODUCTION

The ways in which consumers acquire music, films, series, books, and games have changed radically over the last twenty years.¹ Until the turn of the twenty-first century, copyright-protected content was bought primarily in the form of physical carriers such as CDs, DVDs and printed books. Nowadays, an increasing amount of purely digital content is acquired and experienced online. In recent years, it has become possible to discern a second shift in consumption of content: from ownership to access.²

1. This article is partly based on JOOST POORT ET AL., INST. FOR INFO. L., GLOBAL ONLINE PIRACY STUDY 59-63 (July 2018) [hereinafter POORT ET AL., GLOBAL ONLINE PIRACY STUDY]; JOÃO PEDRO QUINTAIS, INST. FOR INFO. L., GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT (July 2018) [hereinafter QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT].

2. See AARON PERZANOWSKI & JASON SCHULTZ, THE END OF OWNERSHIP: PERSONAL PROPERTY IN THE DIGITAL ECONOMY, 1-13 (2016) (discussing the shift from ownership to access).

In the music industry, for instance, digital sales—downloads plus subscription services—accounted for 54% of global revenues in 2017, whereas physical formats were down to a 30% share.³ In that year, streaming grew by 41% to account for 38% of total revenues, while revenues from downloads declined by 21%.⁴ In the film industry, total spending in Europe in 2016 on buying and renting video was €9.7 billion.⁵ Physical DVDs and Blu-ray discs accounted for €4.2 billion of that, down by 18%, while digital video and video on demand grew by 27% to €5.4 billion.⁶ The gaming industry has undergone a similar shift toward digital sales and subscriptions. “Physical books have, so far, been more resilient to digitisation; E-book adoption is increasing, but the revenue share of e-books is no higher than 30% in any of the markets examined in this article.”⁷

Unauthorized online content distribution—commonly referred to as “online piracy”—has followed the same evolution as authorized distribution of content: from physical carriers, via downloads, to streaming.⁸ For both legal and illegal distribution and consumption of content, these various channels coexist today to serve the preferences of different consumers.

This article deals with the “acquisition and consumption of music, films, series, books, and games through the various legal and illegal channels that exist [today], in a set of [thirteen] countries across the globe.”⁹ The article aims first to provide an overview of the rules on liability for and enforcement of online copyright infringement in the countries studied. The second aim is to provide factual information about the state of authorized and unauthorized acquisition and consumption of these types of content. The third aim is to assess the underlying mechanisms and the link with enforcement measures and

3. INT’L FED’N PHONOGRAPHIC INDUS., GLOBAL MUSIC REPORT 2018 13 (2018) [hereinafter GLOBAL MUSIC REPORT 2018], <https://www.ifpi.org/downloads/GMR2018.pdf>.

4. *Id.* at 11-13 (performance rights and synchronization rights were responsible for the remaining 16%).

5. *European Video Market 2017*, INT’L VIDEO FED’N (2017), <http://www.ivf-video.org/new/index.php?category/Market-information>.

6. *Id.*

7. POORT ET AL., GLOBAL ONLINE PIRACY STUDY, *supra* note 1, at 17.

8. *Id.* at 9.

9. *Id.* at 7. Software other than games, sports, and porn fall outside the scope of this article.

legal supply. The final aim is to assess the effect of online piracy on consumption from legal sources.

To these ends, we have carried out research that combines different sources and empirical methods. We have conducted consumer surveys among nearly 35.000 respondents, including over 7.000 minors, in thirteen countries: seven European Union (EU) member states (France, Germany, Netherlands, Poland, Spain, Sweden, and United Kingdom), two American countries (Brazil and Canada), and four Asian regions and countries (Hong Kong, Indonesia, Japan, and Thailand).¹⁰ The results of these surveys have been combined with comparative legal research based on a questionnaire concerning copyright legislation and enforcement, completed by legal experts in each of the countries.¹¹ In addition, country data has been obtained from the World Bank, and the resulting data set has been analysed using state of the art econometric techniques. With regard to the European countries studied, a comparable consumer survey was conducted for all such countries in 2014 and for the Netherlands only in 2012. Revisiting the countries in those reports allows for studying developments in content consumption for these countries over time. It also provides the unique opportunity to follow more than 4.000 respondents in seven countries over a longer time span.¹²

This article proceeds as follows. In Part II, we provide a brief

10. *Id.* at 17-18 (noting that data collection for these surveys was conducted by SSI (all 13 countries) and CentERdata (the Netherlands)).

11. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 6. The questionnaire concerns the legal status of online copyright infringement and enforcement under “national law”, a term that includes statute and case law. The questions concern two interrelated aspects: substantive legal rules and enforcement measures, procedures, remedies and sanctions.

12. MARTIN VAN DER ENDE ET AL., EUR. COMMISSION, ESTIMATING DISPLACEMENT RATES OF COPYRIGHTED CONTENT IN THE EU, FINAL REPORT 7 (May 2015), <https://publications.europa.eu/en/publication-detail/-/publication/59ea4ec1-a19b-11e7-b92d-01aa75ed71a1/language-en>. The authors conducted surveys in France, Germany, Poland, Spain, Sweden and the United Kingdom, to which 3,366 responded again in 2017. In an earlier report, Poort and Leenheer studied the Netherlands, which is why a separate consumer survey was conducted by CenterData, to also allow for a longitudinal analysis for the Netherlands for 986 respondents. Thus, a total of 4,352 respondents were followed over time. See JOOST POORT & JORNA LEENHEER, INST. FOR INFO. L., FILE SHARING 2©12: DOWNLOADING FROM ILLEGAL SOURCES IN THE NETHERLANDS, 3 (2012), <https://www.ivir.nl/publicaties/download/174>.

history of online piracy, discussing research on its effects, as well as the effects of enforcement on piracy itself. In Part II, we present the results of our legal comparative research in the thirteen jurisdictions studied. This includes an examination of rules on primary liability and secondary or intermediary liability for different online activities, including downloading, streaming, stream-ripping and hyperlinking. It also includes an analysis of the available arsenal of civil, administrative and criminal enforcement measures in national laws against users and intermediaries, combined with a discussion on the use and effectiveness of these measures. Our analysis indicates that the problem of piracy does not appear to be caused by a lack of substantive rules imposing liability for unauthorized uses or even a lack of enforcement measures. In Part III, we present the empirical findings of our research. These relate to the development of legal sales, the main outcomes of our consumer survey, and the effect of online piracy on legal sales (i.e., its displacement rate).

Our main conclusion is that online piracy is declining. This decline is linked primarily to increasing availability of affordable legal content rather than enforcement measures. Where content is available at affordable prices, in a convenient manner, and in sufficient diversity to address demand, consumers are willing to pay for it. This has significant policy implications, since it suggests that ongoing efforts to tackle illegal content online through repressive measures are misguided.¹³ Instead, it would make sense to direct resources towards enabling better lawful access to affordable content.

II. A BRIEF HISTORY OF ONLINE PIRACY RESEARCH

The launch of Napster in 1999 is considered by many to be the start of large-scale unauthorized online file sharing.¹⁴ Napster—a

13. See *infra* Part III (providing multiple illustrations of this trend, including the creation of a piracy “watch list” in Europe); see generally European Commission, *Commission Staff Working Document: Counterfeit and Piracy Watch List 2* (July 12, 2018), http://trade.ec.europa.eu/doclib/docs/2018/december/tradoc_157564.pdf (“In an innovation driven global economy, infringements of intellectual property rights (IPR), in particular commercial scale counterfeiting and piracy, pose a major problem for the European Union . . . IPR infringements must therefore be targeted as a threat to the IPR-intensive industries and to the society at large.”).

14. See Ramon Casadesus-Masanell & Andres Hervas-Drane, *Competing*

legitimate for-pay music service since 2004—began as the first globally used platform for exchanging music files without authorization of copyright holders.¹⁵ This was two years before the 2001 launch of iTunes, the first platform to sell music digitally and per track.¹⁶ After its shutdown in 2001, Napster was succeeded by many technically more refined platforms and file sharing protocols such as Morpheus, Gnutella, LimeWire, eMule and BitTorrent.¹⁷ Such platforms and protocols generally do not store copyright-protected content on a central server but facilitate direct peer-to-peer (“p2p”) exchanges among users (peers) to avoid liability.¹⁸ This exchange started off with music, but, as soon as growing Internet bandwidth allowed, films, series, and games followed suit.

A different technology, known as cyberlockers—such as Megaupload (succeeded by Mega) and Rapidshare—make use of cloud storage hosted at locations that aim to be out of reach of copyright enforcement.¹⁹ Just like authorized supply via platforms such as Spotify and Netflix, illegal supply expanded to streaming more recently, enabling users to enjoy music, films and series without permanently downloading them. Popcorn Time is a popular example of such a service for films and series.²⁰ In some cases, unauthorized streaming is done via dedicated technical devices/set-top boxes with

Against Online Sharing, 48 MGMT. DECISION 1247, 1247 (2010).

15. See ROBIN JEWELER, CON. RES. SERV., RL30683, COPYRIGHT CASES IN THE COURTS: NAPSTER, MP3 DIGITAL MUSIC, AND DVD MOTION PICTURE ENCRYPTION TECHNOLOGY 9 (Feb. 16, 2001) (stating that almost all of Napster’s users downloaded or uploaded unauthorized, copyrighted music).

16. See *Apple Introduces iTunes – World’s Best and Easiest to Use Jukebox Software*, APPLE: NEWSROOM (Jan. 9, 2001), <https://www.apple.com/newsroom/2001/01/09Apple-Introduces-iTunes-Worlds-Best-and-Easiest-To-Use-Jukebox-Software/> (introducing iTunes as a new and simpler way to download songs).

17. See Casadesus-Masanell & Hervas-Drane, *supra* note 14, at 1247.

18. See Annemarie Bridy, *Why Pirates (Still) Won’t Behave: Regulating P2P in the Decade after Napster*, 40 RUTGERS L.J. 565 (2009).

19. Joe Mullin, *How ‘Cyberlockers’ Became the Biggest Problem in Piracy*, GIGAOM (Jan. 20, 2011), <https://gigaom.com/2011/01/20/419-how-cyberlockers-became-the-biggest-problem-in-piracy/> (stating that these cyberlockers usually offer some services for free and charge for premium accounts).

20. See Nick Whigham, *Illegal Netflix-Style Popcorn Time Could Lead to Trouble for Users*, NEWS.COM.AU (Sept. 2, 2015), <https://www.news.com.au/technology/online/piracy/illegal-netflixstyle-popcorn-time-could-lead-to-trouble-for-users/news-story/e61d07b022e02b9cb9b5abc54e754320> (describing the functionality of Popcorn Time and describing it as “the Netflix of piracy”).

pre-installed links to unauthorized content platforms. A related use of copyright-protected material generally qualified as unauthorized is stream-ripping, whereby software tools, browser plugins or special websites are used to store music or audio-visual content, such as YouTube videos, offline for later replay, often in violation of the service provider's terms of service.²¹

This Part provides a brief overview the quantitative empirical research into the link between online piracy and legal sales, as well as the effect of various enforcement measures to combat online piracy.

A. THE EFFECT OF ONLINE PIRACY ON SALES

When online file sharing took off around the turn of the century, the recorded-music industry and, later, the film industry, were quick to blame it for lost revenues. In 2000, for instance, the International Federation of the Phonographic Industry (IFPI) wrote, “[o]nline piracy poses exactly the same threat as its physical equivalent to the creativity of artists and the investment of record producers. Potentially its impact is far greater than physical piracy.”²² And in a 2005 study for the Motion Picture Association, LEK Consulting stated that “[p]iracy is the biggest threat to the U.S. motion picture industry” and claimed that in 2005 the major US studios lost \$6.1 billion to piracy, 38% of which took place online.²³ This alarmist tone echoes the music industry's earlier response to the boom of private copying in the 1980s—‘home taping is killing music’²⁴—as well as the fear in the early 1950s that radio airplay would hurt record sales.²⁵

21. See Hugh McIntyre, *What Exactly is Stream-Ripping, the New Way People are Stealing Music*, FORBES (Aug. 11, 2017), <https://www.forbes.com/sites/hughmcintyre/2017/08/11/what-exactly-is-stream-ripping-the-new-way-people-are-stealing-music/#4eadcf111956>.

22. INT'L FED'N PHONOGRAPHIC INDUS., IFPI MUSIC PIRACY REPORT 2000 (2000), <https://www.ifpi.org/content/library/Piracy2000.pdf>.

23. L.E.K. CONSULTING, THE COST OF MOVIE PIRACY 3-4 (2015), https://www.immagic.com/eLibrary/ARCHIVES/GENERAL/MPAA_US/M080130L.pdf.

24. See, e.g., Andrew J. Bottomley, ‘Home Taping is Killing Music’: *The Recording Industries’ 1980s Anti-Home Taping Campaigns and Struggles Over Production, Labor and Creativity*, 8 CREATIVE INDUS. J. 123, 133 (2015) (adding that the attempt to criminalize home taping was ineffective because people believed they had the moral high ground).

25. See Huseyin Leblebici et al., *Institutional Change and the Transformation of Interorganizational Fields: An Organizational History of the U.S. Radio*

As Internet connectivity and bandwidth grew, so did online piracy.²⁶ But more recently, there is evidence that online piracy is declining, at least in some countries, since the advent of legal streaming services such as Spotify and Netflix.²⁷ On the other hand, a recent report by piracy-tracking company MUSO claims that global piracy is at an all-time high, after a 1.6% increase from 2016, due primarily to an increase in demand for TV content (+3.4%) and music (14.7%) and despite a decrease in demand for films (–2.3%).²⁸ In a similar vein, a study by PRS for Music and the UK Intellectual Property Office recently reported an increase in stream-ripping by 141% between January 2014 and September 2016, causing PRS for Music to call it the “most aggressive form of music piracy.”²⁹

Notwithstanding these statistics and the intricacies of establishing a causal link between online piracy and legal sales to be discussed below, it is largely undisputed that 1999 was a turning point for revenues from global recorded music sales.³⁰ Global revenues from physical and digital recorded music sales declined by 42% in nominal terms, from \$25.2 to \$14.6 billion between 1999 and 2014.³¹ Only since 2015 has the global music market been growing again, to \$17.3

Broadcasting Industry, 36 ADMIN. SCI. Q. 333, 356 (1991) (describing how critical air-play on the radio was to promoting sales, despite the fears of record companies).

26. See Tom Pritchard, *Study Says Peer to Peer Piracy Isn't Dying Off, It's Growing*, GIZMODO UK (Aug. 9, 2018), <http://www.gizmodo.co.uk/2018/08/study-says-peer-to-peer-piracy-isnt-dying-off-its-growing/> (stating that P2P piracy remains popular and that there has been a rise in streaming piracy).

27. See, e.g., Joost Poort & Jarst Weda, *Elvis Is Returning to the Building: Understanding a Decline in Unauthorized File Sharing*, 28 J. MEDIA ECON. 63, 66, 79 (2015) (stating that empirical academic literature on this decline in file sharing is scarce); Telecompaper, *Slechts 24 Porcent Nederlanders doet nog aan Gratis Downloaden*, Feb. 22, 2018, <https://www.telecompaper.com/nieuws/slechts-24-procent-nederlanders-doet-nog-aan-gratis-downloaden--1233037>.

28. *Global Piracy Increases Throughout 2017, MUSO Reveals*, MUSO (2017), <https://www.muso.com/magazine/global-piracy-increases-throughout-2017-muso-reveals>. But see Michael Geist, *The Case Against the Bell Coalition's Website Blocking Plan, Part 2: Weak Evidence on the State of Canadian Piracy*, MICHAEL GEIST (Feb. 13, 2018), <http://www.michaelgeist.ca/2018/02/case-bell-coalitions-website-blocking-plan-part-2-weak-evidence-state-canadian-piracy/> (questioning the validity of the MUSO data and suggesting the numbers are inflated).

29. *Stream-ripping takes over as most aggressive form of music piracy increases 141%*, PRS FOR MUSIC (July 7, 2017), <https://prsformusic.com/press/2017/stream-ripping-takes-over-as-most-aggressive-form-of-music-piracy>.

30. See GLOBAL MUSIC REPORT 2018, *supra* note 3, at 10.

31. *Id.* at 11.

billion in 2017.³² North American real video revenues (exclusive of box office) continued to grow until 2004, then levelled off and declined between 2005 and 2010.³³

Nevertheless, the empirical question of the effect of unauthorized online content consumption on legal sales has proven to be cumbersome. In past years, a substantial body of academic literature emerged on the effect of the unauthorized sharing of copyrighted works, but no general consensus was reached. Most of the earlier contributions focus on the music industry.³⁴ A smaller number of studies deal with the effect for films.³⁵

In literature reviews, it is observed that there are very few studies concerning other markets, such as games, books and software.³⁶ Smith

32. *Id.*

33. Stan J. Liebowitz, *Internet Piracy: The Estimated Impact On Sales*, in HANDBOOK ON THE DIGITAL CREATIVE ECONOMY 262, 265 (Ruth Towse & Christian Handke ed., 2013).

34. See, e.g., *id.* at 265-66 (discussing results from academic studies on whether file-sharing led to a decline in sound recording sales or movie revenues); Felix Oberholzer-Gee & Koleman Strumpf, *The Effect of File Sharing on Record Sales: An Empirical Analysis*, 115 J. POL. ECON. 1, 3 (2007) (rejecting the idea that file sharing has an extreme effect on record sales); Martin Peitz & Patrick Waelbroeck, *The Effect of Internet Piracy on Music Sales: Cross-Section Evidence*, 1 REV. ECON. RES. COPYRIGHT ISSUES 71, 71 (2004) (stating that many people believe that internet piracy has reduced sales of CDs and that illegal MP3 downloads are substituting legal purchases); Rafael Rob & Joel Waldfogel, *Piracy on the High C's: Music Downloading, Sales Displacement, and Social Welfare in a Sample of College Students*, 49 J.L. & ECON. 29, 29-30 (2006) (focusing on the effect of downloading on sales and welfare); Alejandro Zentner, *Measuring the Effect of File Sharing on Music Purchases*, 49 J.L. & ECON. 63, 63 (2006) (focusing on the decline of the global music industry since its high level success in the 1990s).

35. See David Bounie et al., *Piracy and the Demand for Films: Analysis of Piracy Behavior in French Universities*, 3 REV. ECON. RES. COPYRIGHT ISSUES 15, 16 (2006) (stating how only a few economic studies focus on movie piracy when compared to music piracy); Thorsten Hennig-Thurau et al., *Consumer File Sharing of Motion Pictures*, 71 J. MARKETING 1, 1 (2007) (describing the lack of evidence regarding the effect of file sharing on movie consumption); Rafael Rob & Joel Waldfogel, *Piracy on the Silver Screen*, 55 J. INDUS. ECON. 379, 381-82 (2007) (finding the effect of piracy on movie revenues is limited).

36. See Christian Handke, *Taxonomy of Empirical Research on Copyright – How Do We Inform Policy*, 9 REV. ECON. RES. COPYRIGHT ISSUES 47, 63-64 (2012) (noting a lack of clarity about the effect of piracy on different copyright industries); Michael D. Smith & Rahul Telang, *Assessing the Academic Literature Regarding the Impact of Media Piracy on Sales* (2012), <http://ssrn.com/abstract=2132153> (providing a “‘non-technical’ discussion of what academic literature in economics,

and Telang conclude that “the vast majority of the literature . . . finds evidence that piracy harms media sales.”³⁷ However, most of this evidence suggests a much smaller effect than a one-to-one displacement of sales by illegal copies, and quantitative estimates vary substantially. In a meta-analysis of the empirical literature up until 2013, Hardy, Krawczyk, and Tyrowic write:

In total, for the final analysis we have identified as many as 40 studies (with more than 600 estimates) of which 4 argue in favor of a positive effect of ‘piracy’ on sales, 21 demonstrating the opposite, 6 finding no relationship whatsoever and 5 finding the direction of the link dependent on the type of content or analyzed sample. In addition, in most of the papers, at least some of the specifications were insignificant.³⁸

Thus, a democratic vote would yield a narrow majority for a negative effect. But in a more rigorous meta-analysis, the authors of that study conclude that as a whole, the literature fails to reject the hypothesis of no effects on sales.³⁹ In other words, an effect cannot be proven beyond reasonable statistical doubt.

1. Different and Opposing Interactions Between Piracy and Sales

How can it be that this relationship between unauthorized consumption of works and sales, which seems obvious at first glance, is so elusive and hard to establish in practice? A likely explanation is that closer scrutiny paints a more diverse picture. Unauthorized distribution and consumption of works can affect legal consumption in several different ways, some of which have a negative impact on sales, some positive and some neutral. These various potential mechanisms are summarized in Table 1.

marketing, and information systems can tell us about how piracy impacts sales of media products”); Steven James Watson et al., *Determinants of Unlawful File Sharing: A Scoping Review*, 10 PLOS ONE 1, 2 (2015) (resorting to “grey literature,” not published in academic journals, to determine the effects of unlawful file sharing on various industries).

37. Smith & Telang, *supra* note 36.

38. Wojciech Hardy et al., *Friends or Foes? A Meta-Analysis of the Link Between “Online Piracy” and Sales of Cultural Goods 2* (Univ. Warsaw Fac. Econ. Sci. Working Paper No. 23, 2015).

39. *Id.* at 1.

Table 1 Possible effects of online piracy on the purchase of legal content⁴⁰

Positive	<ul style="list-style-type: none"> + It introduces consumers to music, films, books and games (and to artists, authors and genres), thus creating new demand. This is known as the <i>sampling effect</i>. + It allows consumers to pool their demand, resulting in increased demand. + It enhances willingness to pay and demand for concerts and related merchandise (<i>complementary demand</i>). + It enhances the popularity of products, boosting demand for legal supply (<i>network effect</i>).
Neutral	<ul style="list-style-type: none"> o It meets the demand of consumers who are not, or not sufficiently, willing to pay and subsequently are not served by legal supply. o It meets a demand for products that are not offered legally.
Negative	<ul style="list-style-type: none"> - It substitutes for the purchase of content or cinema visits (<i>substitution effect</i>). - It results in the deferred purchase of content at a lower price than the price at launch. - Sampling results in sales displacement as a result of fewer bad purchases. - It substitutes legal consumption via consumers' time budget.

The most prominent positive effect is known as the *sampling* effect, in which consumers are introduced to new music, actors, and genres and this creates new demand.⁴¹ Online piracy may also enhance the demand for complementary products such as live concerts and merchandise⁴² and increase the popularity of content; this is known as the network effect.⁴³

On the downside, the most prominent effect is obviously *substitution*: a consumer refrains from buying specific content legally after having acquired or consumed it from an illegal source.⁴⁴ Other

40. POORT ET AL., GLOBAL ONLINE PIRACY STUDY, *supra* note 1, at 25.

41. Hardy et al., *supra* note 38, at 4 (adding that the benefits of the low-cost version could be provided by the producers themselves, like the “freemium” business model in Spotify).

42. See Ralf Dewenter et al., *On File Sharing with Indirect Network Effects Between Concert Ticket Sales and Music Recordings* 25 J. MEDIA ECON. 168, 176 (2012) (clarifying that increased concert ticket demand can be a result of file sharing if indirect network effects are sufficiently strong); Jule Holland Mortimer et al., *Supply Responses to Digital Distribution: Recorded Music and Live Performances* 24 INFO. ECON. & POL'Y 3, 4 (2012) (providing more details about the two types of effects recorded music file sharing has on live concert performances – demand shifts and supply shifts).

43. See, e.g., Dewenter et al., *supra* note 42, at 169 (using the indirect network effects of the Harry Potter books on the movies and vice versa).

44. Hardy et al., *supra* note 38, at 6.

negative effects on sales occur when sampling leads to fewer bad buys or deferred purchases at lower prices.⁴⁵ Lastly, “piracy may displace legal consumption via competition for people’s time budget: if one watches a film illegally, one cannot watch a film legally at the same time.”⁴⁶

“Neutral effects with respect to sales occur when file sharing meets the demand of consumers with insufficient willingness to pay, consumers who have demand for a work that is not on offer, or for a work in a specific technical quality or file type that is not legally available.”⁴⁷

2. *Differences Among and Within Content Types and Changes Over Time*⁴⁸

Against the background of the ten different possible interactions in Table 1, it is less of a surprise that the findings of empirical studies on the relationships between online piracy and legal consumption of content vary widely, ranging from positive to neutral to negative. Moreover, the strength of the different interactions is likely to differ among and within content types, and between occasional pirates and heavy pirates. In top of that, it is likely to have changed over time.

One relevant difference between music and games, on the one hand, and films, series and books, on the other hand, is that most people enjoy the same music many times, whereas they watch a film or read a book only once or twice. This implies that sampling is likely to be more relevant for music—try before you buy—than for audio-visual content and books. Also, the positive effect of piracy on the demand for related products such as live concerts and merchandise may be more significant for music, whereas the time budget effect is less relevant as music is often enjoyed while doing other things at the same time. All this suggests that net sales displacement is like to be higher for films, series and books than for music. The position of games in this spectrum is not obvious: it is likely that a fully functional game

45. POORT ET AL., GLOBAL ONLINE PIRACY STUDY, *supra* note 1, at 11.

46. *Id.* at 10.

47. *Id.* at 24.

48. This Part II.A.2 is a direct quote from POORT ET AL., GLOBAL ONLINE PIRACY STUDY, *supra* note 1, at 25-26. Additional sources have been provided for further support.

from an illegal source displaces demand for a legal version, but the gaming industry has more technical possibilities to ensure that an illegal version is not a perfect substitute—for instance, because it does not allow for periodic updates.

The strength of the different effects also varies within content types: the sampling effect is likely to be weaker for famous artists and blockbuster films from which consumers generally know what to expect. Moreover, popular and recent content is more likely to be on offer legally, whereas older and niche content may be unavailable or out of commerce. If so, consumption of such content from illegal sources cannot displace legal acquisition for that specific title. This effect is likely to be stronger in countries such as Thailand, Indonesia and Hong Kong, where not all major legal platforms are available.

Watson, Zizzo, and Fleming mention the long-tail distribution of pirated content, and the net displacement effect may be different further down this tail than in the head of the distribution.⁴⁹ Indeed, some studies find indications that more popular musicians and albums⁵⁰ and blockbuster films⁵¹ suffer more from the substitution effect, whereas less-well-known productions may even benefit as the opposing sampling effect prevails. However, other studies find an opposite effect.⁵²

Lastly, the relevance of the interactions in Table 1 has changed over time. In the early days of illegal file sharing, music was available only on physical carriers, bundled in albums. Consumers who only wanted a specific song were not served. Likewise, audio-visual content was tied to DVDs locked with technical protection measures. This situation has changed dramatically, and nowadays most popular content is available not only on physical carriers but also as digital downloads

49. *Id.* at 25-26; see Watson et al., *supra* note 36, at 11.

50. See David Blackburn, *On-line Piracy and Recorded Music Sales* (Harv. U. Dep't Econ., Working Paper, 2004); Mortimer, *supra* note 41, at 8.

51. See Christian Peukert et al., *Piracy and Box Office Movie Revenues: Evidence from Megaupload*, 52 INT'L J. INDUS. ORG. 188, 189-91 (2017).

52. See Sudip Bhattacharjee et al., *The Effect of Digital Sharing Technologies on Music Markets: A Survival Analysis of Albums on Ranking Charts*, 53 MANG'T SCI. 1359, 1362 (2007) (finding that file sharing has a negative impact on low-ranked albums); Robert Hammond, *Profit Leak? Pre-Release File Sharing and the Music Industry*, 81 S. ECON. J. 387, 405, 406 (2013) (explaining that file-sharing, the unauthorized sharing of sound recording, disproportionately benefits established and popular artists because it generates public anticipation for the album).

and via streaming services. In addition, film trailers and music videos are generally available for free via platforms such as YouTube. And Spotify, for instance, offers a free ad-sponsored music streaming service.

Such developments have reduced the incentive to turn to illegal sources for sampling or for specific technical formats that are not on offer via legal channels. It seems plausible that this has reduced piracy, indeed what Poort and Weda concluded in 2015 for the illegal consumption of music concurrent with the rise of legal music streaming.⁵³ The authors also suggest that the net displacement rate of the remaining piracy may be higher as the positive sampling effect and the neutral effect of unmatched demand lose their relevance. Moreover, as many consumers lost interest in 'owning' content on CDs and DVDs, they became less likely to buy a physical carrier after sampling a digital file. For instance, in the Netherlands, this proved to be fairly common in 2008, but much less so by 2012: in 2008, 63% of music pirates and 48% of film pirates did this at least once in the preceding year, whereas four years later these rates had dropped to 20% and 23%, respectively.⁵⁴ On the other hand, by now the remaining pirates may be the ones with the lowest purchasing power or willingness to pay.

3. *Methodological Challenges*⁵⁵

A last, but no less important, explanation for the unequivocal outcomes of empirical studies are the methodological challenges involved. Put simply, one cannot just compare the legal and illegal music or film consumption of individuals and conclude that the observed correlation is causal. Several studies have shown that legal and illegal consumption go hand in hand and that on average, people who consume from illegal sources are the content industry's largest customers.⁵⁶ The underlying reason is that people who are more interested in music, films, series, books or games tend to consume

53. See Poort & Weda, *supra* note 27, at 81.

54. See POORT & LEENHEER, *supra* note 12.

55. This Part II.A.3 is a direct quote from POORT ET AL., GLOBAL ONLINE PRIVACY STUDY, *supra* note 1, at 26-27. Additional sources have been provided for further support.

56. See Nico van Eijk et al., *Legal, Economic and Cultural Aspects of File Sharing*, 77 COMM. & STRAT. 35, 44 (2010).

more via any available channel, leading to a positive correlation between consumption from illegal and legal channels.

This means that empirical studies that observe individual consumption need to control for such individual differences as much as possible. The easiest way to do that in a survey is to ask individuals how much of a music, film, book or game aficionado they are. But even controlling for this, there are remaining unobserved individual characteristics that tend to induce a positive correlation. Several studies use a so-called instrumental variable approach to resolve this issue. The aim in this approach is to look for variables that correlate with consumption from illegal sources but that affect consumption from legal sources only through the former.

Earlier studies used instruments related to Internet availability and speed or individual Internet skills.⁵⁷ That may have been a valid approach when content consumption via the Internet was almost synonymous with consumption from illegal sources, but clearly, today that can no longer be maintained. Indeed, in the current survey it is observed that such variables tend to correlate strongly and positively with consumption from both legal and illegal channels as people need to have Internet access and Internet skills for both, making them unsuitable as instrumental variables. Our study uses a different instrument related not to Internet aptitude or availability but to moral attitudes toward activities such as jaywalking, taking a flash photo in a museum and travelling on public transit without a ticket.⁵⁸ In addition, this study uses panel data analysis to control for unobserved individual characteristics.⁵⁹

A related complexity is that both legal and illegal content supply have changed and diversified over time. To legally consume recorded music, for instance, one can buy a CD, rent it or borrow it from a library, purchase a digital file (e.g., on Apple Music), or use a streaming service such as Spotify. There are also different channels for illegal consumption now. As mentioned in the introduction, the

57. See Zentner, *supra* note 34, at 63; see also Oberholzer-Gee & Strumpf, *supra* note 34, at 3-4; Godefroy Dang Nguyen et al., *Are Streaming and Other Music Consumption Modes Substitutes or Complements?*, 7 (2012), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2025071.

58. See POORT ET AL., GLOBAL ONLINE PIRACY STUDY, *supra* note 1, at 71-75; VAN DER ENDE ET AL., *supra* note 12, at 7.

59. See POORT ET AL., GLOBAL ONLINE PIRACY STUDY, *supra* note 1, at 75-80.

market as a whole has shifted from physical carriers via downloads to streams. This implies that it is dangerous to interpret developments per channel in isolation: legal consumption via one channel cannibalizes consumption via another. Put differently, a decrease in CD purchases may be due to legal downloads and streams as well as to online piracy. Ideally, one would estimate the effect of consumption via all illegal channels on all legal channels. This involves making assumptions about how to add streams, downloads and physical carriers.⁶⁰

B. THE EFFECT OF ENFORCEMENT ON ONLINE PIRACY

The entertainment industry has pursued different strategies to combat unauthorized file sharing throughout the years. The discussion below focuses on empirical studies on the effect of such strategies. The legal aspects of these strategies are addressed in Part II.

1. *Strategies Involving Legal Supply*

Some of the entertainment industry's strategies to tackle online piracy focus on the supply side. A good illustration is the attempt to prevent users from exchanging legally acquired content through the deployment of Digital Rights Management (DRM) technology.⁶¹ This approach has been reinforced legally in the WIPO Treaties, and to varying extents, in the national laws of all countries reflecting efforts to prevent circumvention of technological protection measures and rights management information in international law.⁶² However, this strategy proved to be counterproductive for CDs and digital music downloads, and has been mostly abandoned.⁶³ Nevertheless, DRM is still commonly used for streaming services, audio-visual products, e-books, and games.⁶⁴

Another tactic is to offer legal digital alternatives. In a study regarding the effect of the removal of NBC content from the iTunes store in December 2007 and the subsequent restoration of this content

60. *See id.* at 44-46.

61. *Id.* at 27.

62. *See id.* at 27-28.

63. *See* Rajiv K. Sinha et al., *Don't Think Twice, It's All Right: Music Piracy and Pricing in a DRM-Free Environment*, 74 J. MKT. 40, 41 (2010); *see also* Dinah A. Vernik et al., *Music Downloads and the Flip Side of Digital Rights Management*, 30 MKT. SCI. 1011, 1016-17 (2011).

64. *See* Vernik et al., *supra* note 63, at 1011.

in September 2008 on BitTorrent piracy and DVD sales on Amazon, the authors associate the removal of content with an 11.4% increase in piracy of this content. This amounts to twice the legal digital sales made prior to removal.⁶⁵ There were no significant effects on DVD sales or on piracy levels found after the content was restored.⁶⁶ A later study similarly observes a decrease in online music piracy in the Netherlands between 2008 and 2012, while unauthorized consumption of films and TV content almost doubled.⁶⁷ The authors link these opposite trends to the emergence of adequate legal services for downloading and streaming music (in particular Spotify) but the absence (at that time) of equally satisfactory services for audio-visual content.⁶⁸

Finally, a more controversial strategy involves the pollution or poisoning of illegal file sharing networks with useless decoys.⁶⁹

2. *Legal Action Against Individual File Sharers*

Legal action and enforcement against unauthorized sources can be distinguished by action against individual file sharers, or the demand side of the illegal market, and action against the supply side, the platforms that accommodate unauthorized file sharing.

In June 2003, the Recording Industry Association of America (RIAA) sued countless individual file sharers.⁷⁰ Research tracking the online file sharing behavior of over 2,000 individuals found that in reaction to these lawsuits, the majority of substantial file sharers decreased the number of files shared typically by 90% and small-time file sharers typically by two-thirds.⁷¹ However, the individuals who

65. Brett Danaher et al., *Converting Pirates Without Cannibalizing Purchasers: The Impact of Digital Distribution on Physical Sales and Internet Piracy*, 29 MKT. SCI. 1138, 1139 (2010).

66. *Id.*

67. See Poort & Weda, *supra* note 27, at 79-81.

68. See *id.*

69. See Nicolas Christin et al., *Content Availability, Pollution and Poisoning in File Sharing Peer-to-Peer Networks*, PROCEEDINGS OF THE 6TH ACM CONFERENCE ELECTRONIC COMMERCE 1 (2005) (explaining that a particularly popular technique in preventing the distribution of copyrighted material in peer-to-peer file sharing networks is called 'poisoning,' which is done by injecting a massive number of decoys into the peer-to-peer network to reduce the availability of the targeted item).

70. See Bhattacharjee et al., *supra* note 52, at 1364.

71. See *id.* at 1370-71.

continued unauthorized file sharing increased their activity again after a court ruling that made it harder for the RIAA to request the names of file sharers from internet service providers (ISPs).⁷² Furthermore, the authors of that study note that individuals may have gone off the radar, using more covert file-sharing technologies.⁷³

A separate study looked into the effects of implementation of the EU Enforcement Directive into Swedish law on music and film sales.⁷⁴ The authors found an 18% drop in Internet traffic during the six months following implementation.⁷⁵ Using difference-in-difference analysis with Finland and Norway as controls, they concluded that the implementation led to an increase in sales of physical music by 27% and digital music by 48%.⁷⁶ No significant effects were found on cinema visits or DVD sales.⁷⁷ However, it was also shown that “the reform effects more or less disappeared after six months except for digital music sales.”⁷⁸ This data suggests that it was primarily the publicity and awareness campaigns around the new legislation that caused a temporary effect. The authors also reported the outcome of two consumer surveys on file sharing. In 2009, 23% of the survey respondents stated that they had stopped using file-sharing sites as a result of the new legislation, and 37% used file-sharing sites less.⁷⁹ In 2010, 52% stated they used file-sharing sites less for downloading music than they had the year before.⁸⁰ In the group who reported downloading less than the year before, 56% reported Spotify and 25% ‘better legal services’ as the reason for this, and 34% mentioned the

72. *See id.* at 1371.

73. *See id.*; Annemarie Bridy, *Why Pirates (Still) Won't Behave: Regulating P2P in the Decade after Napster*, 40 RUTGERS L.J. 565, 604 (2009).

74. *See* Adrian Adermon & Che-Yan Liang, *Piracy, Music and Movies: A Natural Experiment 5* (Research Inst. Indus. Econ., IFN Working Paper No. 854, 2010), <http://www.ifn.se/wfiles/wp/wp854.pdf> (finding that the “Swedish implementation of the European Union directive IPRED on April 1, 2009 suddenly increased the risk of being caught and prosecuted for file sharing”, and concluding that “pirated music is a strong substitute for legal music whereas the suitability is less for movies”).

75. *Id.* at 18.

76. *Id.*

77. *See id.*

78. *Id.* at 3.

79. *Id.* at 20-21.

80. *Id.*

Enforcement Directive.⁸¹

Danaher et al. studied the effect of the French HADOPI legislation on digital sales in the iTunes store (described *infra*).⁸² Under this ‘three strikes’ legislation, implemented in October 2009, infringers first receive a warning.⁸³ When caught again, they get a second warning; then, suspension of their Internet connection may be ordered.⁸⁴ The authors used a difference-in-difference approach when comparing French data with other countries, and found a positive effect on song and album sales at iTunes of 22.5% and 25%, respectively.⁸⁵ However, it is impossible to separate the effects of the legislation itself from the effect of the education campaigns accompanying the introduction of HADOPI. Most of the effect seems to have arisen before the (amended) legislation was finally accepted by the Constitutional Council in October 2009 and diminished since then.⁸⁶ However, HADOPI is increasing the number of cases it brings to court and the “three million e-mails and 330,000 notice letters that the committee sent between 2010 and 2014 appear to have caused a reduction in online copyright infringement.”⁸⁷

3. *Legal Action Against Platforms that Accommodate File Sharing*

A distinct strategic option is to focus on the supply side of the illegal market by enforcing copyright against online platforms that enable or facilitate the file-sharing. The most direct way to do this is to shut down platforms and websites that host or direct to illegal content. However, this may be problematic if the platform is outside the jurisdiction of enforcement. Also, a platform that is taken down may quickly re-emerge elsewhere or be succeeded. An early example of this was the shutdown of Napster in July 2001.⁸⁸ As mentioned above, Napster was quickly replaced by next generation platforms (e.g.,

81. *Id.*

82. Brett Danaher et al., *The Effect of Graduated Response Anti-Piracy Laws on Music Sales: Evidence from an Event Study in France*, J. INDUS. ECON. 2 (2013).

83. *Id.* at 3.

84. *Id.*

85. *Id.* at 10.

86. *Id.* at 9.

87. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 86.

88. *Id.* See generally Brad King Gear, *The Day Napster Died*, WIRED (May 15, 2002), <https://www.wired.com/2002/05/the-day-the-napster-died/>.

KaZaA and BitTorrent clients) whose main characteristic was to increasingly, “decentralize the file-sharing process. The bootstrapping of the process occurs at sites such as [The Pirate Bay].”⁸⁹

A later example is provided by the shutdown of Megaupload in January 2012, the most popular cyberlocker in the world.⁹⁰ Danaher and Smith studied the effects of its shutdown on unauthorized file sharing and legal online film rentals and purchases, examining cross-country variation in the use of Megaupload before the shutdown and the change in legal sales afterwards.⁹¹ No relationship was found between the penetration of Megaupload and digital sales prior to the shutdown.⁹² But a significant positive relationship was found between this penetration and the change in legal sales after the shutdown. For each additional 1% of Megaupload penetration before the shutdown, sales increased by an extra 2.5–3.3% after the website was closed. The fact that before the shutdown, no relationship was found between Megaupload penetration and digital sales suggests that the effect of enforcement is temporary and lasts until consumers have found alternative suppliers of illegal video content. A different study on the effect of the Megaupload shutdown found that it had a negative effect on box-office revenues for smaller and mid-range films.⁹³ Only blockbusters benefited from the shutdown, whereas smaller films may have benefited more from file sharing through word-of-mouth on social networks. Overall, the effect found was not statistically significant.⁹⁴

Subsequent research on the effect of legal actions against cyberlockers, such as content removal, found that such actions are a nuisance to users but that their effect on overall availability of content and on file-sharing activity is limited.⁹⁵ The conclusion was that

89. Poort et al., *Baywatch: Two Approaches to Measure the Effects of Blocking Access to The Pirate Bay*, 38 TELECOMM. POL'Y 383, 385 (2014) [hereinafter Poort et al., *Baywatch*].

90. *Id.* at 386.

91. See Brett Danaher & Michael D. Smith, *Gone In 60 Seconds: The Impact of The Megaupload Shutdown on Movie Sales*, 33 INT'L J. INDUS. ORG. 1, 2 (2014).

92. Poort et al., *Baywatch*, *supra* note 89, at 386.

93. See Peukert et al., *supra* note 51, at 189.

94. Poort et al., *Baywatch*, *supra* note 89, at 386.

95. See Tobias Lauinger et al., *Clickonomics: Determining the Effect of Anti-Piracy Measures for One-Click Hosting*, 1 (2013), http://wp.internetsociety.org/ndss/wp-content/uploads/sites/25/2017/09/07_1_0.pdf.

cyberlockers “are probably most vulnerable to antipiracy measures targeted at removing external sources of revenue. Indexing sites may be less affected, especially those that are less driven by (and reliant on) monetary gain.”⁹⁶

Along the same lines, a study on the effect of the shutdown of an unauthorized video-streaming website (kino.to) in Germany concluded that “[t]his intervention was not very effective in reducing unlicensed consumption or encouraging licensed consumption, mainly because users quickly switch to alternative unlicensed sites.”⁹⁷ Moreover, it observed that after the shutdown, the unlicensed market became more fragmented, making it more resilient to subsequent interventions.⁹⁸

An alternative approach being applied in an increasing number of countries, particularly in Europe, is blocking access to infringing websites.⁹⁹ As noted below, in most countries website blocking requires a court order or at least follows an administrative procedure, so as to avoid chilling effects and over-blocking of websites containing both infringing and non-infringing content, or content of unclear legal status.¹⁰⁰ There are different technical means of blocking access,¹⁰¹ but the key element is that blocking can be done nationally or at the level of an Internet provider, without taking down the platform that is offering or directing to unauthorized content. Thus, jurisdiction is less of an obstacle. Research shows that blocking access to individual websites has little or no effect on consumption from illegal channels, as people can easily circumvent the blocking injunction or move to alternative websites.¹⁰² On the other hand, there is evidence that simultaneously blocking a large number of websites in the UK had a statistically significant negative effect on total online piracy and a positive effect on the use of legal video streaming

96. *Id.* at 12.

97. Luis Aguiar et al., *Catch Me if You Can: Effectiveness and Consequences of Online Copyright Enforcement*, 29 INFO. SYS. RES. 656, 656 (2018).

98. See Lauinger et al., *supra* note 95, at 12.

99. Nigel Cory, *How Website Blocking Is Curbing Digital Piracy Without “Breaking the Internet”*, INFO. TECH. & INNOVATION F. 12 (2016), http://www2.itif.org/2016-websiteblocking.pdf?_ga=2.12071156.1138118272.1550381679-1951500325.1550381679.

100. See *infra* Part III.

101. See Cory, *supra* note 99, at 8-11, 18.

102. Poort et al., *Baywatch*, *supra* note 89, at 387.

platforms.¹⁰³

Other approaches to combating the supply of unauthorized content may involve cutting off revenue streams of infringing websites by persuading advertisers and credit card companies to boycott them, removing such websites from search results, and removing infringing apps from app stores.¹⁰⁴

III. LEGAL ANALYSIS

This Part of the article contains the legal findings of our comparative research in the thirteen jurisdictions investigated. After a brief legal background, we explore national rules on primary and intermediary liability for different online activities, including downloading, streaming, stream-ripping, and hyperlinking. We then we examine the available arsenal of civil, administrative, and criminal enforcement measures in national laws against users and intermediaries, including a discussion on the use and effectiveness of such measures. We conclude that the problem of piracy does not appear to be caused by a lack of substantive rules imposing liability for unauthorized use or a dearth of enforcement measures.

A. LEGAL BACKGROUND

Copyright law is substantially harmonized by international law, which sets out basic rules and minimum standards on substantive copyright law and enforcement. The most relevant international treaties and conventions in copyright law are the Berne Convention for the Protection of Literary and Artistic Works, the 1994 Agreement on Trade-Related Aspects of Intellectual Property Law (TRIPS) and, in relation to use over digital networks, the 1996 WIPO Treaties on

103. See Brett Danaher et al., *Website Blocking Revisited: The Effect of the UK November 2014 Blocks on Consumer Behavior*, 4 (Apr. 2016), <http://ssrn.com/abstract=2766795>.

104. See Andrew Weinstein, *Study Shows Ad Industry Anti-Piracy Efforts Have Cut Pirate Ad Revenue In Half*, TAG (Oct. 5, 2017), <https://www.tagtoday.net/pressreleases/study-shows-ad-industry-anti-piracy-efforts-have-cut-pirate-ad-revenue-in-half>; Matt Southern, *Google Asked to Remove Over a Million Websites for Copyright Infringement*, SEARCH ENGINE J. (Feb. 15, 2017), <https://www.searchenginejournal.com/google-asked-remove-million-websites-copyright-infringement/185867/#close>.

Copyright (WCT) and Performances and Phonograms (WPPT).¹⁰⁵

The EU member states examined in this article are party to all international agreements. The EU as an organization is a member of TRIPS and the WIPO Treaties, making them binding on its institutions and member states.¹⁰⁶ All countries studied herein are party to Berne and to the latest amended version of TRIPS. Most countries are party to the WIPO Treaties, with the exception of Brazil and Thailand, which are not members of either.¹⁰⁷

Berne sets out minimum standards regarding inter alia the protection of works and the rights of authors.¹⁰⁸ TRIPS sets out minimum standards concerning the availability, scope and use of intellectual property rights, including copyright and related rights.¹⁰⁹ The minimum standards include protected subject matter, rights conferred, and permissible exceptions or limitations to those rights.¹¹⁰ Regarding copyright, TRIPS incorporates by reference most substantive provisions of the latest version of Berne, making them obligations under TRIPS as between its members.¹¹¹ Furthermore, TRIPS includes obligations regarding subject matter and rights not

105. See generally Berne Convention for the Protection of Literary and Artistic Works, *opened for signature* Sept. 9, 1886, 828 U.N.T.S. 221 [hereinafter Berne Convention] (noting that the agreement is premised on “[t]he countries of the Union, being equally animated by the desire to protect, in as effective and uniform a manner as possible, the rights of authors in their literary and artistic works.”); Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, 1869 U.N.T.S. 299 [hereinafter TRIPS] (discussing the parties’ desire to “reduce distortions and impediments to international trade . . . [promote] adequate protection of intellectual property rights, and [] ensure the measures and procedures to enforce intellectual property rights do not themselves become barriers of legitimate trade”); WIPO Copyright Treaty, Dec. 20, 1996, 2186 U.N.T.S. 121 [hereinafter WCT]; WIPO Performances and Phonograms Treaty, 1996 O.J. (L 89) [hereinafter WPPT].

106. The WIPO Treaties were approved on behalf of the European Community by Council Decision 2000/278/EC. Council Decision 2000/278/EC, art. 1, 2000 O.J. (L 89) 6.

107. *Summary Table of Membership of the World Intellectual Property Organization (WIPO) and the Treaties Administered by WIPO, Plus UPOV, WTO and UN*, WIPO, <https://www.wipo.int/treaties/en/summary.jsp> (last visited Feb. 17, 2019) (providing the different texts of these conventions and current lists of contracting states).

108. Berne Convention, *supra* note 105, arts. 3-6 bis.

109. TRIPS, *supra* note 105, arts. 1-40.

110. *Id.* arts. 9-14.

111. *Id.* art. 9(1) (incorporating articles 1-21 of *Berne*, except article 6 bis).

covered by Berne.¹¹² Unlike Berne, TRIPS also includes rules on enforcement procedures and subjects disputes between members concerning these obligations to WTO dispute settlement procedures.¹¹³

The WIPO Treaties adapt copyright and related rights to the digital age. The WCT is a special agreement under Berne, incorporating by reference most of its substantive provisions and adding protected subject matter and substantive rights to the international minimum standards.¹¹⁴ Among the features of this treaty is the recognition of a broad reproduction right with application to the digital environment, and a general right of communication to the public, including a “making available” prong covering interactive and on-demand use of digital content.¹¹⁵ The WPPT likewise extends to the digital age the standards of protection of the 1961 Rome Convention, including the recognition of a making available right for performers and phonogram producers.¹¹⁶ Both WIPO Treaties recognize in addition legal protection against the circumvention of technological protection measures (TPMs) and rights management information.¹¹⁷ Both treaties also include “light” provisions on enforcement of rights mandating contracting parties to adopt measures to ensure application of the treaties, although no specific measures are prescribed.¹¹⁸

Since over half of the countries examined are EU member states, it is important to briefly set out the basic rules governing copyright in the EU. EU law has been subject to a high level of harmonization stemming from a large number of directives on copyright and related rights, the interpretation of which is determined by the case law of the Court of Justice of the EU (CJEU). This copyright *acquis communautaire* often surpasses international minimum standards of protection. For our purposes, the most relevant instruments are the 2001 InfoSoc Directive, the 2004 Enforcement Directive, and the

112. *Id.* arts. 10-11.

113. *Id.* arts. 41-64.

114. WCT, *supra* note 105, at arts. 1, 4-5.

115. *Id.* arts. 4, 8.

116. International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations, art. 7, 10, 13, Oct. 26, 1961, 496 U.N.T.S. 43; WTTP, *supra* note 105, at 17-18, arts. 7, 10, 13, 14.

117. *See* WTTP, *supra* note 105, art. 18; WCT, *supra* note 105, art. 11.

118. WCT, *supra* note 105, arts. 10-12, 14; WTTP, *supra* note 105, arts. 16, 18-19.

2000 E-Commerce Directive (or ECD).¹¹⁹

The InfoSoc Directive implements the WIPO Treaties into EU law and adapts it to the information society.¹²⁰ It recognizes exclusive rights applicable to online use, namely reproduction and communication to the public (including making available), as well as number of exceptions or limitations to the same.¹²¹ The case law of the CJEU traditionally interprets the exclusive rights broadly and the exceptions strictly.¹²² Particularly important is its case law on the right of communication to the public, which includes the consideration of elements of knowledge and commerciality in the assessment of primary liability.¹²³

The directive further provides WCT/WPPT-”plus” legal protection to TPM and rights management information against circumvention and preparatory acts.¹²⁴ It also includes a provision on sanctions and remedies (implementing the WIPO Treaties), including a rule obligating member states to ensure that rights holders can apply for injunctions against intermediaries whose services are used by a third party to infringe copyright, even if the intermediary is not itself directly liable for infringement.¹²⁵ This provision has played a significant role in determining the liability of ISPs, and articulates the liability exemptions for intermediaries in the ECD.¹²⁶ In essence, although national laws can determine the scope and procedures of injunctive relief, they are generally limited inter alia by the operation of fundamental rights recognized in the Charter of Fundamental Rights of the EU (the Charter), leading to a fair balancing exercise.¹²⁷

119. See Council Directive 2001/29/EC, 2001 O.J. (L 167); Council Directive 2004/48/EC, 2004 O.J. (L 195); Council Directive 2000/31/EC, 2000 O.J. (L 178). N.B. the ECD is not strictly part of the EU copyright *acquis*.

120. Council Directive 2001/29/EC, *supra* note 119, at 10, 11 (Recital 15).

121. *Id.* at 16, 17, arts. 2-5.

122. See João Pedro Quintais, *Untangling the Hyperlinking Web: In Search of the Online Right of Communication to the Public*, 21 J. WORLD INTELL. PROP. 385, 387-88 (2018).

123. See *id.*; Jane C. Ginsburg & Luke Ali Budiardjo, *Liability for Providing Hyperlinks to Copyright-Infringing Content: International and Comparative Law Perspectives*, 41 COLUM. J.L. & ARTS 153, 161-62 (2018).

124. Council Directive 2001/29/EC, *supra* note 119, at 17, 18, arts. 6-7.

125. *Id.* at 18, art. 8(3).

126. *Id.*; Council Directive 2000/31/EC, *supra* note 119, arts. 12-15.

127. Charter of Fundamental Rights of the European Union, art. 52, 2000 O.J. (C 364) 1, 21 (EC). Despite the Enforcement Directive generally regulating

The Enforcement Directive implements TRIPS and applies to all types of intellectual property rights.¹²⁸ It deals exclusively with *civil* enforcement measures, procedures, and remedies, including rules on standing, injunctions (interlocutory and final), damages, and codes of conduct for infringement.¹²⁹

In EU law, there is no comprehensive harmonization of intermediary liability. The ECD contains conditional liability exemptions, or “safe harbors”, for certain types of intermediary services involving claims for damages: mere conduit (or access), caching, and hosting.¹³⁰ The directive further contains a prohibition on the imposition of “general” monitoring obligations on intermediaries.¹³¹ Under this regime, intermediaries may still be required to take measures against the infringement of copyright, since it remains possible to subject intermediaries to injunctions (e.g., under the InfoSoc Directive) and duties of care.¹³²

In interpreting this constellation of provisions, the CJEU has noted that safe harbors require a sufficient degree of “neutrality” from the intermediary. This approach creates a grey area for the qualification of certain web 2.0 platforms as “neutral”/“passive” or “active” intermediaries for the purposes of the hosting safe harbor.¹³³ Furthermore, it remains unclear what type of “specific”, as opposed to “general” monitoring duties may be lawfully imposed on providers to

interlocutory injunctions against intermediaries, the regulation of such injunctions for copyright infringement is dealt with by art. 8(3) InfoSoc Directive. On the CJEU case law on fair balancing in the copyright field. *See* CHRISTINA ANGELOPOULOS, EUROPEAN INTERMEDIARY LIABILITY IN COPYRIGHT: A TORT-BASED ANALYSIS (2016).

128. Council Directive 2004/48/EC, *supra* note 119, at 19, arts. 1-2.

129. *Id.* at 19, 24, arts. 1, 16.

130. Council Directive 2000/31/EC, *supra* note 119, at 12-13, arts. 12-15.

131. *Id.* at 12-13, arts. 12-15.

132. *Id.* at 6, 13, 14, arts. 13(2), 14(3), 18.

133. The approach finds its legal basis in Recital 42 ECD, according to which the directive’s safe harbours are applicable only if the platform’s activities are of “a mere technical, automatic and passive nature”. In its case law, the CJEU has applied Art. 14 ECD to a search engine’s advertising service, an online sales platform, and a social networking platform. *See id.* at 6; Joined Cases C-236/08, C237/08 & C-238/08, *Google France SARL v. Louis Vuitton Malletier SA*, 2010 E.C.R. I-2417; Case C-324/09, *L’Oreal SA v. eBay International AG*, 2011 E.C.R. I-6011; Case C-360/10, *Belgische Vereniging van Auteurs, Componisten en Uitgevers CVBA v. Netlog NV*, 2012 EUR-Lex CELEX LEXIS 85 (Feb. 16, 2012).

prevent infringement. CJEU case law has not sufficiently clarified these uncertainties.¹³⁴

B. RULES ON COPYRIGHT INFRINGEMENT¹³⁵

1. *Primary Liability for Online Activities*

a. *Overview*

To determine the legal status of online use under national law, we used a catalogue of online acts that may infringe the exclusive rights of copyright holders. All acts refer to the use of copyright-protected content from illegal or unauthorized sources, or the provision of access to works made available without the permission of copyright holders. They are as follows: downloading; (passive) streaming; stream-ripping; uploading; hyperlinking; and the sale of kodi boxes or similar devices with pre-installed add-ons providing links to illegal or unauthorized sources.¹³⁶

In most national laws, *downloading* from illegal or unauthorized sources is an act of direct copyright infringement of the exclusive right of reproduction, not privileged by a private use exception or limitation.¹³⁷ In the EU, the legal status of the act has been clarified by the CJEU in *ACI Adam*, although in Poland there is still some uncertainty among scholars due to the failure to amend Polish national law.¹³⁸ In Brazil, the act of downloading from illegal sources is probably infringing, but there is some uncertainty due to the lack of

134. See CHRISTINA ANGELOPOULOS, ON ONLINE PLATFORMS AND THE COMMISSION'S NEW PROPOSAL FOR A DIRECTIVE ON COPYRIGHT IN THE DIGITAL SINGLE MARKET 14 (2017), <https://www.repository.cam.ac.uk/handle/1810/275826>.

135. The majority of this Part III.B has been taken directly from QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 7-13. Additional text and sources have been provided for further support.

136. This list was supplemented by a catch-all category meant to include other activities that may infringe copyright specific to a national law. But the national experts did not report any significant additional types of unauthorized online use of copyright-protected content not included in our list of categories. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 36.

137. *Id.* at 143.

138. See Case C-435/12, *Adam BV v. Stichting de ThuisKopie*, 2014 EUR-Lex CELEX LEXIS 62012CJ0435 (Apr. 10, 2014); QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 143.

case law and the fact that criminal liability is expressly excluded for these acts.¹³⁹ In Canada, the act is considered to be infringing; however, an exception exists for musical sound recordings, as these are subject to a compensated private copying exception which does not expressly mention the legal status of the source of reproduction.¹⁴⁰

In Hong Kong, the fair dealing defense may apply on a case-by-case basis to downloading depending on the purpose thereof (research, private study, criticism, review, news reporting, or education) and whether certain requirements are met (acknowledgment and content removal).¹⁴¹ In Indonesia, non-commercial downloading will in many instances be covered by a general exception or “fair dealings” clause to the reproduction right.¹⁴² In Japan, this activity is only infringing regarding digital sound or video recordings and appears to require knowledge of the unlawful or unauthorized nature of the source.¹⁴³

By *streaming* we mean the reception or accessing of a stream by a user.¹⁴⁴ Streaming of this type involves making a temporary and often

139. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 220; Decreto No. 2.848, de 7 de dezembro de 1940, art. 184, Diário Oficial da União [D.O.U.] de 31.12.1940 (Braz.).

140. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 235-36. Canadian law provides for two private copying exceptions: a general uncompensated exception that applies to most subject matter but requires that the copy does not come from an illegal/unauthorized source; and a compensated exception (similar to EU law levy systems) for musical sound recordings that is not tied to the legal status of the source of reproduction. Copyright Act, R.S.C. 1985, c C-42, art. 29.22 § 3 (Can.) [hereinafter Canada Copyright Act].

141. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 251; Copyright Ordinance, (1997) Cap. 528, 1, §§ 38-39, 41 (H.K.).

142. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 262; Copyright Act, No. 28 (2014) art. 46 (Indon.).

143. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 274; Chosakuken Ho [Copyright Law of Japan], Law No. 48 of May 6, 1970, as amended through Law No. 64 of May 23, 1986, art. 30(1)(iii) [hereinafter Japan Copyright Act].

144. Streaming is a method of transmitting data packets so that the earlier packets can be reassembled and processed before the entire file is downloaded, allowing for immediate display or playback. In essence, streaming involves downloading a file and subsequently causing the downloaded data to become inaccessible. Streaming can be linear (similar to a broadcast) or interactive/on-demand. See JOÃO QUINTAIS, COPYRIGHT IN THE AGE OF ONLINE ACCESS: ALTERNATIVE COMPENSATION SYSTEMS IN EU COPYRIGHT LAW 140-41 (2017) [hereinafter QUINTAIS, COPYRIGHT IN THE AGE OF ONLINE ACCESS].

transient copy of a work; if qualified as a reproduction, it may also be subject to an exception for these types of copies.¹⁴⁵

In the EU, most member states qualify the act of streaming as a reproduction.¹⁴⁶ However, certain national experts made a more nuanced analysis, influenced by the specific facts of the leading CJEU case in this respect, *Filmspeler*.¹⁴⁷ The argument is that *Filmspeler* only applies if the stream is accessed through a kodi box or similar device with pre-installed add-ons that link to content made available online without the permission of rights holders.¹⁴⁸ Where streaming is considered to be a reproduction, all European national laws follow *Filmspeler* and exclude the application of the temporary and transient copying exception to this activity, on the grounds that it does not meet the “lawful use” requirement.¹⁴⁹

Outside the EU there is uncertainty across the board due to the absence of case law on this topic. In Brazil and Canada it is likely that streaming is outside the scope of copyright due to its experiential nature.¹⁵⁰ In Canada, even if the act is qualified as a reproduction, it would likely be privileged by an exception.¹⁵¹ The assessment is similar in Hong Kong and Japan.¹⁵² Only in Indonesia and Thailand is this activity probably infringing, but this conclusion is uncertain, due to the lack of specific case law on the matter.¹⁵³

Stream-ripping is defined here as the use of a software tool that captures, aggregates, and saves all streaming data.¹⁵⁴ The tool allows users to retain a permanent copy of the protected content streamed,

145. *See id.*

146. *Id.* at 146.

147. *See* Case C-527/15, *Stichting Brein v. Jack Frederik Wullems*, 2017 E.C.R. I-938 [hereinafter *Filmspeler*].

148. QUINTAIS, COPYRIGHT IN THE AGE OF ONLINE ACCESS, *supra* note 144, at 101-02.

149. *See id.* at 39-40; *Filmspeler*, 2017 E.C.R. ¶¶ 60-62.

150. *See* QUINTAIS, COPYRIGHT IN THE AGE OF ONLINE ACCESS, *supra* note 144, at 40.

151. *See* Canada Copyright Act, *supra* note 140, § 30.71.

152. *See* QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 251-52, 274; Japan Copyright Act, *supra* note 143, art. 47*octies*.

153. *See* QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 262-63, 283-84.

154. *Id.* at 97.

making it equivalent to a download.¹⁵⁵ For the most part, stream-ripping from illegal or unauthorized sources gets the same legal treatment as downloading in every national law, as in both cases the user makes a permanent copy of the work.¹⁵⁶ That is to say the majority of national laws consider it a direct infringement of the reproduction right.¹⁵⁷

This assessment is uncertain, however, owing to the novelty of the use and the absence of case law. A particularly unclear issue is whether stream-ripping qualifies as a violation of TPM anti-circumvention provisions. This would likely require qualification of the stream itself as an effective copy-control technological measure in legal terms, which is dubious. In this regard, at least some national laws require a subjective element—knowledge, awareness or intent—in connection with TPM circumvention.¹⁵⁸

Finally, stream-ripping will often occur from platforms authorized by copyright holders or shielded by safe harbors, such as Netflix or YouTube.¹⁵⁹ In these cases, the source itself is not illegal but rather an authorized online service provider. The act of ripping the stream will sometimes be a breach of the service provider's terms of service, a consideration that may affect the legal status of the act (e.g., by causing the ripped copy to not meet the requirement that it originates from a lawful or authorized source).¹⁶⁰ However, in the absence of clear guidance from statute or case law in this respect, the legal status of this activity remains uncertain.¹⁶¹

155. *Id.*

156. *Id.* at 8-9.

157. *Id.*

158. *Id.* at 102, 115-16, 274; Loi 92-597 du 1 juillet 1992 relative au code de la propriété intellectuelle [Law 92-597 of July 1, 1992 for the Intellectual Property Code], JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], art. L-131-32 (Fr.); Gesetz über Urheberrecht und verwandte Schutzrechte [Urheberrechtsgesetz] [UrhG] [Copyright Act], Sept. 9, 1965, BGBl. I § 95a (Ger.), <http://www.gesetze-im-internet.de> [German Copyright Act]; Japan Copyright Act, *supra* note 143, art. 30(1)(iii).

159. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 8.

160. See João Quintais, *Private Copying and Downloading from Unlawful Sources*, INT'L REV. INTELL. PROP. & COMPETITION L. 66, 81-82 (2015); Bernd Justin Jutte, *Coexisting Digital Exploitation for Creative Content and the Private Use Exception*, 24 INT'L J.L. & INFO. TECH. 2-3 (2015).

161. In Germany, recent judgements have found that websites proving stream-

Uploading content to a publicly accessible website without the permission of the copyright holder is either universally qualified as a direct infringement of the reproduction and communication or making available to the public rights,¹⁶² or solely of the communication to the public right or a national equivalent. Only two national laws contain exceptions that may apply to this activity. Under Canadian law, it may be lawful to upload works (often not in full) to an online platform under the exception for user-generated content, as well as the limited fair dealing rights for purposes of research, education, parody, or satire.¹⁶³ In Hong Kong, the act may in certain cases benefit from a fair dealing *defense*.¹⁶⁴

The legal status of *hyperlinking* is highly controversial in EU law, following judgments from the CJEU from *Svensson* to *Ziggo*.¹⁶⁵ After the landmark *GS Media*¹⁶⁶ decision, posting links to unauthorized content is subject to a knowledge test connected to a for-profit condition. In simple terms, the for-profit nature or intent of the linker triggers a presumption of knowledge of the unauthorized nature of the content, which if not rebutted leads to a finding of direct infringement

ripping services were infringing copyright and that such activities do not benefit from the private copying exception. See OLG München, Nov. 22, 2018, 29 U 3619/17 (*ZeeZee Media GmbH*) (Ger.); OLG Hamburg, Jan. 17, 2019 (*Musicmonster.fm*); Sigrid Herrenbrück, *Streamripper Verletzt Recht Der Öffentlichen Zugänglichkeit*, BUNDESVERBAND MUSIKINDUSTRIE (Feb. 2, 2019), <http://www.musikindustrie.de/news-detail/controller/News/action/detail/news/further-clarity-in-the-area-of-stream-ripping-in-favour-of-rightholders/>.

162. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 102, 144, 176.

163. *Id.* at 237; Canada Copyright Act, *supra* note 140, art.s 29 & 29.21; see also Carys J. Craig, *Digital Locks and the Fate of Fair Dealing in Canada: In Pursuit of "Prescriptive Parallelism"*, 13 J. WORLD INTELL. PROP. 4, 503 (2010) (discussing the the nature and role of fair dealing in Canadian copyright law and the threats posed to it by technical protection measures and anti-circumvention laws).

164. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 252; Cap. 528, §§ 38-39, 41.

165. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 42; Case 466/12, *Svensson et al. v. Retriever Sverige AB*, 2014 E.C.R. 76; Case 610/15, *Stichting Brein v. Ziggo BV, XS4ALL Internet BV*, 2017 E.C.R. 456.

166. See Case C-160/15, *GS Media BV v. Sanoma Media Netherlands BV et al.*, ECLI:EU:C:2016:644 (Sept. 8, 2016), <http://curia.europa.eu/juris/document/document.jsf?text=&docid=183124&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=870734>.

of the right of communication to the public.¹⁶⁷ As a rule, national laws in the EU follow this approach, despite its inherent uncertainty.¹⁶⁸ Consequently, posting hyperlinks to unauthorized content is infringing, as no exception applies.¹⁶⁹ The introduction of a knowledge test in the assessment of primary liability for this exclusive right is a departure from the strict liability paradigm in copyright law.¹⁷⁰

The situation differs outside Europe in four main ways. First, there is little case law on these types of acts, leading to uncertainty in their legal qualification. Second, some national laws, like those in Thailand and Hong Kong, qualify the act of hyperlinking as direct infringement of the right of communication to the public, without the need to assess subjective elements.¹⁷¹ Third, other national laws deal with this issue within the realm of intermediary or secondary liability, as in the case of Canada, Brazil (joint liability or solidarity, requiring commerciality of the link), or Japan (tort of facilitating the illegal public transmission of works).¹⁷² Finally, in Indonesia, it appears that posting hyperlinks does not give rise to liability for copyright infringement.¹⁷³

A *kodi box* is a multimedia player with pre-installed add-ons available online that contain hyperlinks to websites on which copyright-protected works or other subject-matter are made available to the public.¹⁷⁴ In the EU, *Filmspeler* raised the possibility that the sale of kodi boxes, which include by default add-ons that link to works

167. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 42 (providing an overview of hyperlinking related case law).

168. *See id.*

169. *See id.*

170. *See id.*

171. *Id.* at 253, 285.

172. *Id.* at 221, 238, 274-75; *Crookes v. Newton*, [2011] 3 S.C.R. 269, 269-270 (Can.); Lei 9.610/98, de 19 de febrero de 1998, Lei De Direito Autoral (Braz.) [hereinafter Brazil Copyright Act]; Chiteki Zaisan Kōto Saibansho [Intellectual Prop. High Ct.] June 20, 2013, 2011 (wa) no. 15245 CHITEKI KOTO SAIBANSHO SAIBANREI KENSAKU [CHIZAI KŌSAI WEB], http://www.ip.courts.go.jp/app/files/hanrei_en/893/000893.pdf (Japan); Chiteki Zaisan Kōto Saibansho [Intellectual Prop. High Ct.] Sept. 15, 2016, 2015 (wa) no. 17928, CHITEKI KOTO SAIBANSHO SAIBANREI KENSAKU [CHIZAI KŌSAI WEB] http://www.ip.courts.go.jp/app/files/hanrei_en/230/002230.pdf (Japan).

173. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 285.

174. *See id.* at 43-44.

available online without the permission of the copyright holder, constitutes direct infringement of the right of communication to the public.¹⁷⁵ The CJEU applied the *GS Media* knowledge test to this case, leading to a finding of direct infringement.¹⁷⁶ Before the judgment in *Filmspeler*, this activity was dealt with in the realm of intermediary liability, for instance in Poland and Germany.¹⁷⁷ After the judgment, however, most experts consider this activity to fall under the realm of primary liability, subject to a knowledge test described above.¹⁷⁸ Since no exception applies, the act is a direct infringement of the right of communication to the public.¹⁷⁹

Outside the EU, there is nearly no case law on the topic of selling kodi boxes, leading to uncertain legal qualifications of this act. Based on broadly worded economic rights under national law, a Brazilian expert notes that this would probably (more likely than not) qualify as direct infringement.¹⁸⁰ The situation is uncertain in Canadian law. Despite the grant of interlocutory injunctions in two cases (against the sale of set-top boxes and a website providing add-ons for kodi boxes), the legality of this activity is yet to be fully assessed in a pending case.¹⁸¹ The situation also diverges in Asian countries. In Thailand, this activity could be covered by the right of communication to the public, subject to requirements of knowledge (or awareness) and commerciality.¹⁸² Conversely, Japanese and Hong Kong law would probably deal with this activity under the heading of intermediary, secondary, or contributory liability and/or infringement by authorization.¹⁸³ In Indonesia, the act does not appear to qualify as

175. *Id.*

176. *Id.*

177. *Id.* at 117, 145; Poland Civil Code, Dz. U. tłum. gb Nr 16, poz. 93, art. 422 (1964); *The German Storerhaftung of Wifi*, FFII (Mar. 27, 2015), <https://blog.ffii.org/the-german-storerhaftung-of-wifi/> (for Germany, this results in the application of the doctrine of *Störerhaftung*).

178. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 43-44.

179. *See id.*

180. *See id.* at 221-22; Brazil Copyright Act, *supra* note 172, at 29-30, 104-05.

181. *See* QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 238-39; Bell Canada et al., [2016] F.C. at ¶ 38.

182. *See* Thailand Copyright Act B.E. 2537 § 4(5) (A.D. 1994) [hereinafter Thailand Copyright Act].

183. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 9-10.

direct infringement.¹⁸⁴

b. Areas of Legal Uncertainty

The analysis of primary liability in national laws uncovers three main areas of legal uncertainty. These refer to the absence of case law on some activities, the legal treatment of experiential use, and referential or mediated uses.

First, the absence of case law on many types of acts makes it difficult to state with certainty whether they violate copyright in some domestic laws. This is particularly true for acts like stream-ripping, passive streaming, hyperlinking, and the sale of kodi boxes with unauthorized add-ons. In the EU, some of this judicial scarcity is overcome to a certain degree by relying on the interpretative activity of the CJEU. In other jurisdictions, especially in Brazil and the Asian countries, it is only possible to rely on probability assessments by national experts. Therefore, some caution must be exercised before drawing sweeping judgments on the legal status of these acts.

Second, the legal qualification of stream reception as a copyright-relevant act is unclear. In the EU, the issue appears to be settled after *Filmspeler*.¹⁸⁵ However, outside Europe, it is noteworthy that some domestic laws do not consider this activity to merit copyright protection. This is based on the fact that that passive streaming is experiential in nature, similar to the offline equivalent of reading a book or viewing a TV series. As such, legally, streaming would not constitute a use of copyright.

Third, there is uncertainty in what we term *referential* or *mediated* use. This refers to types of acts like hyperlinking and the sale of kodi boxes with pre-installed add-ons, that are in some countries mostly likely governed by the right of communication to the public under a strict liability regime (Thailand and Hong Kong); in EU domestic laws governed by the same right but subject to a knowledge test stemming from CJEU case law; in another set of laws governed by intermediary liability regimes (Canada, Brazil, and Japan); and in one country

184. *Id.* at 250-92; see Thailand Copyright Act, *supra* note 182, § 31; Saikō Saibansho [Sup. Ct.], Feb. 13, 2001, Hei 955 (Ju) no. 1, 55 SAIKŌ SAIBANSHO MINJI HANREISHU [MINSHŪ] 87, 90 (JAPAN); Cap. 528, §§ 22(2), 273B(1); CBS Songs Ltd. v. Amstrad Consumer Electronics Plc., [1988] RPC 567, 578.

185. *Id.*

apparently not giving rise to liability for copyright infringement (Indonesia). Our main observation in this respect is that for these acts there is a blurring of the lines between primary and secondary liability, with a significant degree of uncertainty as to the application of subjective elements in the assessment of the exclusive right of communication to the public.

A final note should be made regarding the relevance of elements like knowledge, commerciality and content type. As a rule, there are no noteworthy differences for the assessment of primary liability depending on the type of content at issue, namely music, films and TV series, books, or video games.¹⁸⁶ Regarding knowledge and commerciality, the main points to emphasize are those noted above. In sum, other than the consideration of knowledge in the context of the legal qualification of downloading in Japanese law, the majority of acts described—from downloading to uploading—are strict liability torts. The situation differs when assessing the right of communication to the public in EU countries, and its application to hyperlinking and the sale of kodi boxes. In those cases, the subjective element of knowledge plays a central role in the legal qualification of the act. The CJEU has created a rebuttable presumption that relies on the for-profit nature, character and/or intent of the linker, the precise contours of which are still in flux. Thus, in this context, the commercial nature or intent of the act plays an important role in the legal assessment of primary liability.

2. *Intermediary or Secondary Liability*

a. *Overview: Notion of Intermediary and Safe Harbors*

In the EU, all national laws have implemented the ECD's safe harbors and no monitoring obligation, as well as related provisions.¹⁸⁷ Most laws fail to provide copyright-specific notions of "intermediary", advancing instead broader notions of intermediary or

186. The legal qualification of video games in national law as an independent work and/or as software is not clear in law national laws examined here. But this potential difference does not appear to affect the main conclusions regarding liability for the acts described above. *See id.* at 10, 17, 20, 37, 46, 70, 78.

187. *See id.* at 118-70. The relevant exception is Poland, which has not implemented Article 8(3) of the InfoSoc Directive on injunctions against intermediaries.

service provider in civil law or in national e-commerce legislation. Due to the implementation of the ECD, all national laws contain a definition of “information society service provider” or the like.¹⁸⁸

The laws analyzed do not appear to contain positive rules determining the liability of Internet intermediaries, but rather a partial regulation of the same through safe harbors that provide liability exemptions or immunities (for damages) to at least three types of intermediary services—mere conduit, caching, and hosting—in terms identical to the directive, as interpreted by the CJEU.

Despite that, there are some noteworthy national idiosyncrasies. For example, Spanish law contains a separate safe harbor for search engines and hyperlinks (which other laws place under the hosting exemption), while Dutch law provides a safe harbor from criminal copyright liability identical to those existing for civil liability.¹⁸⁹ Also, UK law clarifies the applicability of safe harbors not only for damages, but also for any other pecuniary remedy or any criminal sanctions.¹⁹⁰

The most controversial safe harbor is that of hosting and its application to large scale user-upload websites, such as YouTube and Daily Motion, as exemplified by judgments in France, Germany, and Spain.¹⁹¹ As a rule, the hosting safe harbor is tied to requirements of actual knowledge or awareness of the illegality of the content hosted, coupled with an obligation remove or disable the content hosted upon acquiring knowledge. In most cases, actual knowledge results from notice of the infringement sent by the copyright holder or his representative, containing a number of legally defined elements, such as information about the applicant, description of facts and URL, and the legal basis, among other things. Reception of a valid notice leads to an obligation of prompt takedown by the intermediary.

188. *Id.*; see also Council Directive 2000/31/EC, *supra* note 119, art. 2(a) (providing a definition of such providers).

189. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 127-37, 151-70; Ley 34/2002, de 11 de julio, sobre Servicios de la de Sociedad de la Información y Comercio Electrónico art. 17 (B.O.E. 2002, 187) (Spain); Artikel 36e lid. 2 SR (OUD).

190. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 199-215; The Electronic Commerce (EC Directive) Regulations, 2002, S.I. 2001/2555, §§ 17-19 (U.K.).

191. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 100-26, 151-70.

The Netherlands set up a more elaborate private notice-and-takedown (NTD) system. Based on the implementation of the directive in its Civil Code, several Dutch intermediaries adopted a Code of Conduct setting out voluntary NTD procedures for copyright infringing content.¹⁹² Notably, only two other Codes of Conduct were mentioned by national experts in their responses, both of them in the UK. The first is the Voluntary Copyright Alert Programme, which forms part of the industry-led scheme Creative Content UK; this is discussed below in the context of administrative enforcement measures. The second is the Voluntary Code of Practice on Search and Copyright agreed on in early 2017 by leading search engines, entertainment trade bodies, and music industry body BPI, in a deal brokered by the UK Intellectual Property Office (IPO). Under the Code, search engines commit to the removal of links to websites that have been repeatedly served with copyright infringement notices from the first page of their search results, with the aim of preventing UK internet users from downloading and streaming protected content illegally. These commitments include specific targets for reducing the visibility of infringing content in search results.¹⁹³

It is important to note that safe harbors set out specific liability exemptions but do not establish the conditions under which intermediaries are liable for copyright infringement by third parties using their services. Most domestic laws determine such liability through the application of general tort law and doctrines of contributory infringement. Due to the specificities of online copyright infringement, this has led to the development of specific torts for Internet intermediaries. In Germany, courts usually rely on and develop the civil law tort of “interferer liability” (*Störerhaftung*). An interferer is a person who has willfully made a causal contribution to the direct copyright infringement by a third party. That person can be held liable for injunctive relief (not damages) if they have violated a

192. *Id.* at 127-37; ECP, PLATFORM VOOR DE INFORMATIE, SAMENLEVING, GEDRAGSCODE NOTICE-AND-TAKE-DOWN (2018), <https://ecp.nl/publicaties/ntd-gedragscode-nl/>.

193. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 199-215; Mark Jackson, *UPDATE2 UK ISPs to Send First Internet Piracy Warning Letters this Month*, ISP REV. (Jan. 10, 2017), <https://www.ispreview.co.uk/index.php/2017/01/big-uk-isps-send-first-internet-piracy-warning-letters-month.html>.

reasonable duty of care to prevent the direct infringement at stake. These rules interact with safe harbors insofar as compliance with the latter is considered when assessing if the intermediary has violated a reasonable duty of care.¹⁹⁴ Spanish law, by contrast, has implemented a tort of indirect liability that strongly resembles a transplant from judge-made doctrines in United States law, as it includes identical formulations on contributory infringement, inducement, and vicarious liability.¹⁹⁵

The legal landscape of intermediary liability outside the EU is irregular. In Brazil, the Copyright Act does not define intermediaries or include safe harbors. A different piece of legislation, the Internet Civil Act (*Marco Civil*) does include such provisions, but it expressly excludes its application to copyright. This has led courts to deal with intermediary liability by combining provisions from the Copyright Act, the Civil Code, and the Consumer Rights Code. In doing so, the Superior Court of Justice has developed a secondary liability—a “subsidiary responsibility”—regime for hosting providers relying on tort law. This is in essence a NTD regime where knowledge is obtained by a sufficiently complete private notice, which gives rise to an obligation to promptly remove content on a temporary basis. The provider must then assess the legality of the content and may re-upload the content if it considers it lawful. Different factors must be taken into account when assessing the liability of providers in this context.¹⁹⁶

Canadian law is different insofar as it contains a rich mix of intermediary liability provisions. First, it provides a general safe harbor for intermediaries, according to which the mere supply of a

194. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 112-26.

195. *Id.* at 151-70; *see also* Por el Que se Aprueba el Texto Refundido de la Ley de Propiedad Intelectual, Regularizando, Aclarando y Armonizando las Disposiciones Legales Vigentes sobre la Materia art. 138 (B.O.E. 1996, 97) (Spain) [hereinafter Spain Intellectual Property Law].

196. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 216-33; *see also* Lei No. 12.965, de 24 de abril de 2014, DIÁRIO OFICIAL DE UNIÃO [D.O.U.] de 24.4.2014, arts. 19, 31 (Braz.); S.T.J.-nº 1.512.647/15, Relator: Ministro Luis Felipe Salomao (2013) (Braz.); S.T.J.-nº 1.396.417/13, Relator: Ministra Nancy Andriahi (2013) (Braz.); S.T.J.-nº 1.328.706/13, Relator: Ministro Luis Felipe Salomao, 09.04.2018 (Braz.); S.T.J.- (AREsp) nº 259.482/13, Relator: Ministro Sidnei Beneti (2012) (Braz.); S.T.J.- (AREsp) nº 259.482/13, Relator: Ministro Sidnei Beneti (2012) (Braz.).

(broadly construed) “means of telecommunications” does not give rise to liability for the provider. This is combined with specific safe harbors for the traditional types of intermediary services, namely network services (mere conduit or access), incidental acts (caching), and hosting, as well as for “information location tools.” The combined application of these provisions, as interpreted by the courts, exempts from civil liability a broad range of intermediaries, including search engines.¹⁹⁷

The application of safe harbors is subject to specific conditions for each category of services, like “neutrality” and knowledge, but also to a general condition, namely that the act at stake does not infringe upon a general “enabler liability” provision. This provision has the function of positively defining the instances in which an intermediary is liable, such as when its service is used primarily for the purpose of enabling copyright infringement and an actual infringement occurs as a result of the use of the service. Note, however, that there is little to no case law on this provision.¹⁹⁸

Canadian law also includes two further idiosyncrasies. First, it has instituted a “notice-and-notice” system, under which an ISP does not have to takedown content or disclose personal data, but merely relay the notice of infringement to its subscriber linked to the IP address. The non-compliant ISP is only subject to capped statutory damages.¹⁹⁹ Finally, the Copyright Act provides for a user-generated content exception. Where the exception applies to uploading by end-users, the hosting platform in question will not be liable for hosting that content.²⁰⁰

Still different regimes exist in Asia. In Hong Kong, for example, there are no safe harbors for intermediaries. Their liability can be established under two headings—infringement by authorization and

197. See Canada Copyright Act, *supra* note 140 at § 1.4(1)(b).

198. See *id.* §§ 27(2.3), 31.1.(6).

199. *Id.* § 41.26(3) (containing the recent update to the Canadian copyright notice-and-notice rules under which ISPs are “no longer required to forward notices that contain an offer to settle, a payment demand or a link to a payment demand”); Michael Geist, *No More Settlement Demands: New Rules for Canadian Copyright Notice-and-Notice System Receive Royal Assent*, MICHAEL GEIST BLOG (Dec. 17, 2019), <http://www.michaelgeist.ca/2018/12/no-more-settlement-demands-new-rules-for-copyright-notice-and-notice-system-receives-royal-assent/>.

200. See Canada Copyright Act, *supra* note 140, § 29.21.

contributory infringement as a common law tort. Both imply case sensitive inquiries as to issues like content removal and obligations of intermediaries.²⁰¹ Indonesian law also lacks specific safe harbors. Intermediaries are subject to a duty of care principle stemming from the Civil Code as well as to specific obligations specified in different Circular Letters from competent Ministries. These include providing reporting means for infringing content they host and removal or blocking of content upon acquiring knowledge thereof.²⁰² Japanese law is unclear on the criteria for definition of intermediary liability but does contain safe harbors for damages from infringement caused by information distribution, which are conditional upon the technical possibility of preventing such distribution and knowledge or awareness of the infringing act or the possibility of its occurrence. To avoid liability, the ISP must act upon that knowledge and remove the content.²⁰³ Finally, the law of Thailand provides for a safe harbor (regarding damages) for intermediaries that are neutral towards the infringing content and comply with a judicial order against the same.²⁰⁴

b. Areas of Legal Uncertainty

In the EU, there is uncertainty in the majority of the member states as a result of CJEU case law on the right of communication to the public and on the safe harbors in the ECD. On the one hand, the broad interpretation of the right and the introduction of subjective elements in its assessment extended its application to the activities of certain online platforms, in particular those hosting content. On the other hand, the CJEU has clarified that only predominantly “neutral”—but not necessarily passive—intermediaries may benefit from safe harbors. Further uncertainty arises from the difficulty in assessing the

201. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at at 250-59; *see also* Cap. 528, § 22(2).

202. *Id.* at 260-72; *see also* Minister of Communication and Informatics of the Republic of Indonesia, *No. 3 2016*, Circular Letters (2016); Minister of Communication and Informatics of the Republic of Indonesia, *No. 5 2016*, Circular Letters (2016).

203. *Id.*; *see also* Limitation of Liability for Damages of Specified Telecommunications Service Provider, Act No. 137 of 2001, art. 3(2) (Japan).

204. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 287; *see also* Thailand Copyright Act, *supra* note 182, sec. 32(3).

“actual knowledge” requirement for hosting platforms, as well in delineating what constitute admissible “specific” monitoring obligations for intermediaries.²⁰⁵ Thus, in this context, it remains uncertain where to draw the line between primary liability and the safe harbor provision for hosting platforms in the ECD. This uncertainty is at the heart of the controversial provision on the (direct) liability of online content-sharing services for uploads by their users in the recent Directive on Copyright in the Digital Single Market.²⁰⁶

Some of these challenges are echoed in national laws. For instance, German law struggles in differentiating when hybrid service providers (e.g. YouTube) use their own information/content—in which case they are primarily liable—from when they use external or third-party information content, in which case they may benefit from safe harbors.²⁰⁷ This has led to a pending preliminary reference by the Federal Court of Justice (*Bundesgerichtshof*) to the CJEU on this topic that promises to shape EU law in this context.²⁰⁸ In Spain, the articulation of the relatively new provisions on indirect liability with safe harbors is yet to be defined.²⁰⁹ Finally, in Sweden there is the expectation that some types of acts currently dealt with as intermediary liability are recast as instances of primary liability, with consequences for the types of remedies available against online platforms.²¹⁰

Outside Europe, there are also certain areas of legal uncertainty, but

205. See *supra* Parts III.A, III.B.2.a.

206. Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on Copyright and Related Rights in the Digital Single Market (OJ L 130/92) 17.5.2019, art. 17.

207. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 119-20; see also Act on Telemedia, Feb. 26, 2007 (as amended by the Law of May 31, 2010), at sec. 7.1 (Ger.); Bundesgerichtshof [BGH] [Federal Court of Justice] [UrhG], Nov. 12, 2009, I ZR 166/07 (Ger.); Rechtsprechung der Oberlandesgericht in München [OLG] [Higher Regional Court], Jan. 28, 2016, 29 U 2798/15 (Ger.).

208. See Bundesgerichtshof [BGH] [Federal Court of Justice], Nov. 6, 2018, ENTSCHEIDUNGEN DES BUNDESGERICHTSHOFES IN ZIVILSACHEN [BGHZ] 13, 2018 (Ger.); BGH 140/15, at 1.

209. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 157-58; Spain Intellectual Property Law, *supra* note 195, art. 138.

210. See QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 182-83.

not to the same extent as in the EU. In Brazil, for example, there is uncertainty on how to establish liability of ISPs in the context of the evolving judge-made doctrine of “subsidiary responsibility” described above. In Canada, the main uncertainty arises from the absence of case law on the aforementioned provision on “enabler liability”, which operates also as a condition for the application of safe harbors.²¹¹

In Hong Kong, the extent of involvement required to establish the liability of intermediaries remains uncertain, as the potentially applicable doctrines are heavily case sensitive and have not been sufficiently interpreted by the courts. In Indonesia, any uncertainty would probably relate to the case-by-case application of the duty of care principle to online intermediaries. In Japan, there are doubts surrounding the legal qualification of video sharing platforms as direct infringers of ISPs benefiting from safe harbors. Finally, in Thailand, the uncertainty relates to whether existing safe harbors can shield ISPs from liability arising out of criminal copyright infringement.²¹²

C. ENFORCEMENT MEASURES²¹³

This Part deals with public and private enforcement measures, procedures, remedies, and sanctions against online copyright infringement available in national law. These measures can be civil (e.g. injunctions), administrative (like warnings), or criminal (such as prison sentences). Enforcement measures may be aimed at the direct infringer—the user of protected content—or at intermediaries.²¹⁴

211. *Id.*

212. *Id.* at 13; *see* Cap. 528, § 22(2) (discussing infringement by authorization); Chiteki Zaisan Kōtō Saibansho [Intellectual Prop. High Ct.] Sept. 8, 2010, Hei 21 (ne) no. 10078, 2115 HANREI JIHŌ [HANJI] 102 (Japan). In Thailand, service providers are subject to court orders based on sec. 20 of the Computer-Related Crime Act for suppression of dissemination or removal of computer data which infringes copyright and constitutes a criminal act. *See* Computer-Related Crime Act B.E. 2550 (2007) (as amended by the Computer-Related Crime Act (No. 2) B.E. 2560 (2017)) (stating that service providers are subject to court orders based on section 20 of the Computer-Related Crime Act for suppression of dissemination or removal of computer data which infringes copyright and constitutes a criminal act, but it is not clear whether the safe harbours apply only to damages claims based on civil law, since that Act does not provide for safe harbours).

213. The majority of this Part III.C has been taken directly from QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 14-22. Additional text and sources have been provided for further support.

214. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT,

1. Enforcement Measures Against Users

a. Civil Enforcement

At the EU level, civil measures are harmonized in the Enforcement Directive, and include different types of injunctive relief and damages calculated according to the directive. As a rule, punitive or exemplary damages are not available. All member states have implemented the directive with varying degrees of detail, and largely follow its regime. Some details are worth pointing out.

German law includes provisions that incentivize parties to settle claims out of court; namely, detailed requirements for notifications to alleged direct and indirect infringers to “cease and desist” prior to instituting judicial proceedings. Dutch law allows for *ex parte* injunctions in the context of preliminary relief proceedings, subject to a showing of a risk of irreparable damage. Spanish law contains injunctions in the form of “restraining orders” specifically designed for the online environment, including measures to suspend the Internet access of infringers, block access to or remove infringing content from websites, and to require personal data of the infringer from ISPs in “special cases.”²¹⁵

UK law does not entitle the copyright holder to damages if, at the time of infringement, the defendant did not know or had no reason to believe that copyright subsisted in the work to which the action relates. However, additional damages may be available taking into account the flagrancy of the infringement or the profits made by the infringer. An account for profits is available as an alternative for damages. Regarding injunctions, UK law has developed a “search order” (formerly known as the “Anton Pillar order”) to allow the preservation of evidence prior to trial in copyright infringement cases, which can be combined with a “freezing” or “asset preservation” order for the retention of property pending litigation.²¹⁶

Outside the EU, Brazilian law provides for injunctions and damages

supra note 1, at 14 (noting that the analysis did not reveal there to be significant differences in national laws between public and private enforcement practices depending on the type of protected content: music, audio-visual, books, and video games).

215. *Id.* at 61.

216. *Id.* at 62, 81.

for copyright infringement. However, since the law is outdated regarding online use, the application of such measures must in some instances be done through analogy. Still, there is sufficient flexibility in the law to encompass injunctions and coercive fines against individuals or platforms that disseminate works online. Furthermore, the provisions on damages—even where they refer to offline copies—can arguably accommodate the specificities of online infringement. Finally, a recent trend in the case law points towards a consideration of ISPs as jointly liable for copyright infringement where they fail to takedown content subsequent to an adequate (private) notice.²¹⁷

Canadian law imposes liability on users for copyright infringement and circumvention of TPMs. In terms of infringement, copyright holders are entitled to injunctions, damages and accounts. Moreover, statutory damages for commercial and non-commercial infringements are available as an alternative to actual damages.²¹⁸ The laws of Hong Kong, Indonesia, Japan, and Thailand all provide for injunctions and damages against direct infringers.²¹⁹

b. Administrative Enforcement

Among the countries studied, administrative enforcement measures against direct online copyright infringement by users only exist in France, the UK, Indonesia, and Thailand. Additionally, Spanish law contains a special administrative procedure directed at ISPs that can be applied both to “users” and “intermediaries”, depending on how these concepts are defined.

In regards to online infringement, French law includes a graduated response system that is of mixed nature, administrative and criminal. The system, which has gone through different iterations, is managed by an administrative authority (the HADOPI), and works as follows. Individual Internet users have an obligation to ensure that their connections are not used to infringe copyright. After a 2013 amendment, the penalty for violating this obligation is no longer Internet disconnection but instead, fines up to € 1.5 thousand. This

217. *Id.* at 62-63, 222.

218. *Id.* at 63 (the regime is similar for TPM circumvention, with the exception that no statutory damages are available against individuals who circumvent TPMs for their own private purposes).

219. *Id.* at 63-64.

sanction can only be levied if certain conditions are met; notably, not having a secure Internet connection may not allow the subscriber to avoid sanctions.²²⁰

In the UK, the Digital Economy Act 2010 (DEA 2010) included a graduated response system for the online enforcement of copyright, with similarities to the first iteration of its French counterpart (i.e., including Internet disconnection as a sanction). However, this controversial system was never adopted. Instead, in 2014, the UK government promoted the adoption of an industry-led scheme called Creative Content UK, adopted by the UK's creative industries and ISPs. One major element of this scheme was the aforementioned Voluntary Copyright Alert Programme. This consists of email alerts sent by ISPs to residential broadband subscribers whose accounts are used to infringe copyright via p2p file-sharing. The Programme involves agents of copyright owners sending evidence of copyright infringement to ISPs, which then send letters or alerts to infringing customers with the intent to discourage infringement. A maximum of four letters with language escalating in severity can be sent to a single IP address. No sanctions are admitted under the Programme, but copyright holders are free to pursue legal action against the individuals.²²¹ The first letters were sent to subscribers in early 2017.²²² More recently, the UK Intellectual Property Office (IPO) has stated that it intends to set up a new a new “administrative site blocking” process that requires “broadband ISPs to block customers from accessing websites that facilitate internet piracy.”²²³

Indonesian law contains a Joint Regulation of two Ministries from 2015, based on a provision in the Copyright Act.²²⁴ This regulation provides a procedure for complaints related to online copyright infringement reported to either of the two Ministries, directly or

220. *Id.* at 64-65.

221. *Id.* at 65.

222. *Id.*

223. This system would function as an alternative to blocking injunctions obtained under sec. 97A of the UK Copyright, Designs and Patents Act, which require a judicial order. Mark Jackson, *Government to Remove Courts from UK ISP Piracy Website Blocks*, ISP REV. (Oct. 22, 2018), <https://www.ispreview.co.uk/index.php/2018/10/government-to-remove-courts-from-uk-isp-piracy-website-blocks.html>.

224. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 66.

through an electronic system in the website of the competent authority. Complaints can be submitted by copyright holders, licensees or CMOs, and are verified by a team at one of the Ministries, who issues recommendations on applicable measures. Decisions can be made to partly or entirely block access to infringing content, and there is a database of blocked sites/users. In addition, a Circular Letter from a Ministry imposes on user-generated content platform providers an obligation to provide a reporting instrument for complaints regarding inter alia copyright infringing content they host. If sufficient evidence is provided with the notice/complaint, platform providers must take necessary action to remove the content or block access thereto.²²⁵

The law of Thailand, in particular the Computer-Related Crimes Act, provides for an administrative enforcement measure for copyright infringement that constitutes a crime. This measure allows officials with approval from the Minister to file petitions for writs to stop dissemination of information, or to order the deletion of data from systems where inter alia the information or data in question qualifies as criminal copyright infringement. If the copyright infringement “bears characteristics which are contrary to peace and order or good morals”, a separate procedure applies, involving the intervention of a “Computer Data Screening Committee” prior to the Minister’s approval. In both cases, this power is broad in scope, allowing competent/authorized officers to compel the removal or suppression in question, or to carry it out by themselves. Users that do not comply with the court order are subject to multiple fines.²²⁶

Finally, Spain introduced a law in 2011, which instituted a special administrative injunction procedure by the Intellectual Property Commission (sec. 2) against infringements done for commercial purposes by ISP. The procedure, reinforced and enlarged in 2004, may be understood as applying both to users and intermediaries. This is because it covers not only categories of intermediaries that traditionally benefit from safe harbors (e.g., pure hosting) but also websites that may be qualified as directly infringing copyright, depending on the specific case. The latter include user-generated content websites and those providing links to infringing contents, which may for example directly infringe upon the right of

225. *Id.* at 66.

226. *Id.* at 66-67.

communication to the public. Where the procedure applies the latter type of website, it may be considered as targeting such websites as “users.” Measures available under this procedure include the suspension of the Internet service provided to the infringer, blocking and removing infringing contents, and publication of notices regarding the infringement.²²⁷

c. Criminal Enforcement

There is no harmonization of criminal measures against copyright infringement in the EU. Most member states criminalize intentional acts of direct copyright infringement and subject them to varying sanctions, ranging from fines to prison terms, and including seizure of infringing material and publication of the sentence. Offenses are usually aggravated if they occur on a commercial scale or with a for-profit aim. Among the crimes listed is the manufacture and distribution of TPM circumventing devices.²²⁸

Unlike in countries like Germany where these provisions are irrelevant in practice, they play a more prominent role in countries such as France and Spain. In France, in addition to the typical criminal provisions, for offenses committed using an online service courts can order the additional penalty of suspension of Internet access for a maximum of one year, during which period the person is prohibited from entering into another contract for the same service with any operator.²²⁹ The termination is notified by the court to the HADOPI, who in turn notifies the ISP to carry it out under the penalty of a fine.²³⁰ Spanish law, for its part, was amended in 2015 with the aim of extending the scope of criminal copyright sanctions to users of p2p services, a change that appears to be nudging the courts to increasingly condemn these types of users, as well as the respective platform operators.²³¹ In Sweden, criminal provisions have been used to target a user of a file-sharing website for contributory criminal liability.²³²

The general framework of criminal measures in the American and

227. *Id.* at 65.

228. *Id.* at 67-69.

229. *Id.* at 16 (noting that in France when a person commits an online offense, the court can suspend internet access for a maximum of one year).

230. *Id.* at 67.

231. *Id.* at 68.

232. *Id.* at 69.

Asian countries is similar to that of EU member states. One relevant difference is found in Brazilian law, which does not criminalize acts covered by an exception or limitation or the making of single copies of copyright-protected content for private and non-commercial aims, for example in the context of downloading or stream-ripping.²³³

2. *Enforcement Measures Against Intermediaries*

The aim of enforcement measures against intermediaries is for them to end or prevent infringement by third party users of their services. Examples of such measures include: suspension of the infringer from the Internet; measures to identify the infringer; the monitoring or filtering of content; the blocking or removing of infringing content, including in the context of NTD procedures; warning systems; obligations imposed on service providers to notify public authorities of alleged infringing activities or information provided by recipients of their service; and graduated response systems.²³⁴

a. *Civil Measures*

Under EU law, intermediaries that qualify for the safe harbors in the ECD are not liable for damages but only for injunctions—pursuant to Article 8(3) of the InfoSoc Directive—and duties of care, as permitted by the ECD and further established in national law. In all cases, measures must not conflict with the general prohibition against monitoring, under the national equivalent to Article 15 ECD, and must strike a fair balance between competing fundamental rights in line with CJEU case law. All member states contain different flavors of measures. It is worth providing some examples of those that are most unique to online enforcement.

In France, if a computer program is mainly used for unlawfully making available protected content (e.g., p2p software), a judicial order may be issued to take all necessary measures to protect the right

233. Decreto No. 2.848, art. 184(4).

234. In this article we do not discuss national rules on the disclosure of personal data in the context of enforcement or rules on the entitlement to apply for enforcement measures. For details on these, see QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 17; CHRISTINA J. ANGELOPOULOUS, EUROPEAN INTERMEDIARY LIABILITY IN COPYRIGHT: A TORT-BASED ANALYSIS 308-10 (2016) (discussing the procedures of Notice-and-Take-Down as a way of blocking and removing infringing content).

in question, which may include certain filtering mechanisms. In addition, a court may also order an ISP whose services are used for copyright infringement to implement measures to prevent or to block the infringement acts, such as removal of suggestions from a search engine service.²³⁵

In Germany, the tort of “interferer liability” allows for injunctions against intermediaries that violate reasonable duties of care to prevent such direct infringements. These include removing infringing content upon notice from copyright holders, and taking reasonable measures such as filtering to prevent further comparable infringements in the future. Information injunctions are also available against intermediaries.²³⁶

In the UK, Section 97A CDPA implemented Article 8(3) of the InfoSoc Directive, and allows injunctions against ISPs, subject to certain conditions. Most of the case law on this provision concerns blocking injunctions. In addition, intermediaries are also subject to Norwich Pharmacal orders, i.e. a form of disclosure order that amounts to an information injunction.²³⁷

Outside Europe, Brazilian law does not specify enforcement measures against intermediaries. As noted, this led to the Superior Court of Justice developing a secondary liability or “subsidiary responsibility” regime for hosting providers on the basis of tort law. Failure by ISPs to meet the conditions of this regime subjects them to contributory liability and remedies like injunctions and damages.²³⁸

Canadian law contains generous safe harbors for intermediaries and a notice-and-notice regime aimed at discouraging online copyright infringement. Under this regime, a claimant’s only remedy against an ISP who fails to perform its obligations are capped statutory damages.²³⁹ The law further includes as an exception to safe harbors the aforementioned provision on “enabler liability.” The provision has yet to be interpreted by the courts but could apply to platforms like

235. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 71.

236. *Id.* at 71–72.

237. *Id.* at 73.

238. *Id.* at 73–74.

239. *Id.*; see Canada Copyright Act, *supra* note 140, §§ 29.22, 79 et seq. (establishing the Canadian laws for copyright infringement under the Notice-and-Take-Down-regime).

The Pirate Bay or Popcorn Time.²⁴⁰ Canadian law also includes a somewhat similar rule prohibiting the provision of services or manufacturing technology primarily for the purposes of facilitating the circumvention of TPMs. Finally, copyright holders have the possibility to obtain information injunctions against ISPs under the form of Norwich Orders.²⁴¹

Under the law of Hong Kong, intermediaries may be liable for infringement by authorization or contributory infringement. If found liable, they are subject to similar civil remedies as direct infringers, namely injunctions and takedown orders, damages, and account of profits. Injunctions may include: takedown orders against forums; website blocking orders against ISPs; and de-indexing orders against indexing and bookmarking sites, including search engines.²⁴² The law of Indonesia does not contain specific civil enforcement measures against online intermediaries. However, since civil liability of intermediaries is based on a duty of care principle, a finding of liability will lead to the application of the same civil remedies as for direct infringers.²⁴³ Under Japanese law, it is unclear whether intermediaries are subject to injunctions similar to those available under Article 8(3) of the InfoSoc Directive, despite a specific instance (the *TV Break* case) where a video-sharing platform was subject to an injunction for direct infringement. An intermediary will be subject to the remedy of damages available in the Civil Code if considered a joint tortfeasor. In addition, the ISP Liability Limitation Act allows for a specific information injunction against ISPs.²⁴⁴ Finally, the law of Thailand allows for intermediaries to be subject to remedies of damages and injunctions if they are negligent and cause damages to right holders.²⁴⁵

240. See *supra* Parts III.B.2.a-b.

241. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 74; see also Canada Copyright Act, *supra* note 140, § 41(1)(b)-(c) (establishing the prohibition on circumventing technological protection).

242. *Id.* at 74.

243. *Id.* at 74–75.

244. *Id.* at 75; see [Law Concerning the Limits of Liability for Damages of Specified Telecommunications Service Providers and the Right to Request Disclosure of Identification Information of the Sender], Law No. 137 of 2001, art. 3(2)(ii) (Japan), http://www.soumu.go.jp/main_sosiki/joho_tsusin/eng/Resources/laws/Compensation-Law.pdf.

245. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 75.

b. Administrative Measures

Most national laws do not contain administrative measures specifically targeting online intermediaries. To the extent intermediaries qualify as users due to the nature of their activities, they are subject to the administrative measures available against direct infringers. The exceptions to this are Spain, Indonesia, and Thailand.²⁴⁶

In Spain, as noted, since 2011 there has been a specific injunction procedure with the Intellectual Property Commission (sec. 2) against ISPs whose services may be used *inter alia* by third parties to infringe copyright for commercial purposes.²⁴⁷ If the ISP fails to withdraw content or cease the infringement, this broad injunction allows the Commission to order a range of measures, subject to payment of fines. These measures include the suspension of the service provided to the infringer, the blocking and removing of infringing contents or domain names, suspension of advertisement on the infringing site, and the publication of notices regarding infringement. Rulings of this body require prior judicial approval by an administrative court. Based on the data available on these measures, their effectiveness is uncertain.²⁴⁸

In Indonesia, a Joint Regulation affords ISPs some discretion on how to deal with infringing content or activities carried out by third parties using their services. The intermediary will first send the user a warning letter to cease the infringement and/or terminate its contract with the user, leading to the blocking or deletion of the allegedly infringing content. Furthermore, it is possible that the user's Internet access is suspended pending the finalization of the process for producing evidence of the infringement by the Ministry of Communication and Information.²⁴⁹

Finally, in Thailand, two administrative measures are available against intermediaries. First, the Copyright Act allows for a court order against an ISP for the removal of infringing content from its

246. In addition, in the UK, the described Voluntary Copyright Alert Programme system is also relevant for intermediaries insofar as their services are used to send notices to end-users. *See supra* Part III.C.1.b.

247. *See supra* Part III.C.1.b. (describing the requirements of this procedure).

248. *Id.* at 75–76.

249. *Id.* at 76.

system.²⁵⁰ Second, the Computer-Related Crime Act provides for an administrative enforcement measure in case of copyright infringement that constitutes a crime, aimed at the suppression of dissemination or removal of computer data which infringes copyright and constitutes a criminal offence.²⁵¹ The ISP that disregards the first type of Court order faces no penalty but is subject to a subsequent civil lawsuit where this conduct may be relevant.²⁵² Failure to comply with the second order subjects the provider to steep fines.²⁵³

c. Criminal Measures

Most national laws do not contain criminal measures specifically targeting online intermediaries. To the extent intermediaries commit, or are involved in (by assisting or inducing others), any of the crimes of copyright infringement defined in national law, they are subject to the criminal measures applicable to users. Apart from that, it is worth to briefly mention the laws of Spain and Japan.

In 2015, Spanish law introduced a new crime tailored for websites that offer links to infringing content (e.g., on p2p and other platforms) and regardless of whether their activities are themselves infringing.²⁵⁴ The crime does not apply to “neutral” search engines or to ISPs that only “occasionally link to third party infringing contents.”²⁵⁵ Regarding the situation in Japan, other than the measures applicable to accessories to a crime in the Japanese Penal Code, it is worth mentioning a case concerning the “Winnie” file sharing software.²⁵⁶ In this case, after the Kyoto District court convicted a person who released the software of a crime of inducing third party copyright infringement, both the Osaka High Court and later the Supreme Court denied the crime on the ground that the accused lacked intent to be an accessory to the crime of copyright infringement.²⁵⁷

250. *Id.* at 286, 289-90.

251. *Id.* at 288.

252. *Id.* at 289 (discussing when civil lawsuits are possible).

253. *Id.* at 76-77 (describing the administrative enforcement measures against intermediaries).

254. *Id.* at 164-65.

255. *Id.* at 77, 151-52.

256. *Id.* at 278.

257. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 278; *see also* Saikō Saibansho [Sup. Ct.] Dec. 19, 2011, 2009 (A) 1900 no. 9, 65 Saikō Saibansho Keiji Hanreishū [Keishū] 1,

3. Most Used and Effective Enforcement Measures

Finally, we asked the national experts in our study about the most widely used or effective public and private enforcement measures in their country.

In France, reference was made to HADOPI's graduated response system—although doubts were expressed as to its effectiveness—as well as the legal provision that prohibits acts in relation to software that enables infringement.²⁵⁸ In Germany, the most widely used and most effective enforcement measure is the cease-and-desist letter.²⁵⁹ In the Netherlands, the issuing of court orders to require Internet access providers to block access to infringing websites is particular popular, although there is debate (even at judicial level) on how to assess its efficiency.²⁶⁰ It is also common for Dutch intermediaries to employ voluntary NTD procedures, according to the aforementioned code of conduct in place for ISPs in the Netherlands.²⁶¹ Finally, the anti-piracy organization *Stichting BREIN* frequently initiates civil enforcement actions against large-scale infringers.²⁶² In Poland, the most common measures are civil law injunctions and orders of damages based on the amount of double license fees, while sanctions against intermediaries are rare.²⁶³

In Spain, there has been frequent use of injunctions by the Intellectual Property Commission (sec. 2) to remove and block access to infringing content, disconnect the Internet service of infringers and cancel or block “.es” domain names or infringing websites.²⁶⁴ Criminal sanctions introduced in 2015 are only recently starting to be issued and

http://www.courts.go.jp/app/hanrei_en/detail?id=1131 (Japan).

258. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 106–07; *see also* CODE DE LA PROPRIÉTÉ INTELLECTUELLE [C. PROP. INTEL.] [INTELLECTUAL PROPERTY CODE] arts. L335-2 (Fr.); Cour de cassation [Cass.] [supreme court for judicial matters] Paris, crim., Feb. 27, 2018, Bull. crim., No. 16-86881 (Fr.); Cour de cassation [Cass.] [supreme court for judicial matters] crim., Sept. 25, 2012, Bull. crim., No. 11-84224 (Fr.).

259. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 86, 121-22.

260. *Id.* at 136.

261. *Id.* at 134, 136.

262. *Id.* at 86-87.

263. *Id.* at 87.

264. *Id.* at 156, 162.

drawing media attention.²⁶⁵ Moreover, a 2015 administrative procedure, where all Spanish ISPs were ordered by the aforementioned Commission to suspend service and block access within 72 hours to any websites identified as belonging to The Pirate Bay group.²⁶⁶ Finally, it was noted that CMOs typically notify ISPs about infringing content available on their websites and threaten with judicial action unless that content is blocked or removed/delisted, a practice that appears to be effective.²⁶⁷

In Sweden, the information injunction is a particularly effective measure for copyright holders to receive all the necessary details for further proceedings.²⁶⁸ A cease-and-desist letter typically follows this injunction.²⁶⁹ Right holders have also effectively initiated civil or criminal court proceedings against individuals primarily to stop infringement, rather than to obtain damages.²⁷⁰ Regarding injunctions against intermediaries, Swedish courts issued in 2017 and 2018 the first injunctions ordering ISPs to block its customers' access to a number of IP and http addresses (proxy and mirror sites) relating to The Pirate Bay, as well as other unauthorized streaming websites.²⁷¹ Despite that, it was noted that Swedish law requires at least a showing of contributory infringement—except for information injunctions—which, combined with the absence of more specific rules beyond safe harbors, arguably disincentives ISPs from developing common codes of conduct for NTD procedures.²⁷²

Finally, in the UK, injunctions against service providers under Section 97A CDPA are widely used: more than 500 injunctions were

265. *Id.* at 166.

266. *Id.* at 168.

267. *Id.* at 165.

268. *Id.* at 185, 191.

269. *Id.* at 191-92.

270. *Id.*

271. *Id.* at 192-93.

272. *See id.* at 190; Kacper Szkalej, *Blocking Injunctions Against ISPs in Sweden 2.0 beta – The Rise of the Interim Injunction? (Part 1)*, KLUWER COPYRIGHT BLOG (Nov. 22, 2018), <http://copyrightblog.kluweriplaw.com/2018/11/22/blocking-injunctions-against-isps-in-sweden-2-0-beta-the-rise-of-the-interim-injunction-part-1/>; Kacper Szkalej, *Blocking Injunctions Against ISPs in Sweden 2.0 beta – The Rise of the Interim Injunction? (Part 2)*, KLUWER COPYRIGHT BLOG (Nov. 26, 2018), <http://copyrightblog.kluweriplaw.com/2018/11/26/blocking-injunctions-against-isps-in-sweden-2-0-beta-the-rise-of-the-interim-injunction-part-2/>.

granted according to 2015 numbers.²⁷³ Most of the case law in this respect has concerned blocking injunctions, such as against unauthorized sports live streaming websites and websites like Popcorn Time.²⁷⁴

Outside Europe, in Brazil, the most effective measures are those carried out directly against intermediaries as private enforcement, such as the sending of out-of-court notifications and in general the judicially created NTD system.²⁷⁵ In the current judicial interpretation of the law, an ISP can be held secondarily liable if it does not make a URL to infringing material inaccessible after being notified by the interested party.²⁷⁶ In Canada, the most common measures are infringement notices sent by right holders via intermediaries through the notice-and-notice system or (less frequently) by way of a Norwich order.²⁷⁷ Canadian copyright holders have reportedly sent millions of notices since the law came into force in early 2015.²⁷⁸ Conversely, copyright holders have not launched many civil infringement and anti-circumvention proceedings against users and intermediaries.²⁷⁹ Finally, it is worth noting the current and controversial discussion in Canada on the possible implementation of a copyright web-blocking mechanism, to be managed by an independent third-party agency (the proposed Internet Piracy Review Agency), enforced by the Canadian Radio-television and Telecommunications Commission, and operating under the Telecommunications Act. As of writing, no decision regarding its implementation has been made.²⁸⁰

Turning to Asia, in Hong Kong, the most widely used private enforcement measures are takedown notices issued to local and foreign online intermediaries, and infringement notices issued to

273. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 201, 212.

274. *Id.* at 205.

275. *Id.* at 231.

276. *Id.* at 223, 237, 231.

277. *Id.* at 244-45.

278. *Id.* at 245.

279. *Id.* at 246.

280. *Id.* at 248; see also Michael Geist, *The Case Against the Bell Coalition's Website Blocking Plan, The Finale*, MICHAEL GEIST (Mar. 8, 2018), <http://www.michaelgeist.ca/2018/03/caseagainstsiteblockingfinale/> (with extensive coverage on this topic including an analysis of the Bell Coalition's Website Blocking Plan).

alleged infringers.²⁸¹ From the perspective of public enforcement, the most common measure is reporting to (or cooperating with) the Customs and Excise Department, which inter alia monitors popular online forums to track and arrest users uploading infringing content.²⁸² In Indonesia, it is common to tackle copyright infringement through the filing of criminal complaints.²⁸³ Also noteworthy are the administrative provisions that allow for the possibility of closing a website following reporting of an infringement to an ISP, a new governmental antipiracy task force created for the purpose of shutting down infringing websites, as well as a new “infringing website list” identifying popular piracy websites and encouraging advertisers to remove their ads therefrom.²⁸⁴

In Japan, there is significant litigation involving information injunctions under the regime of the ISP Liability Limitation Act.²⁸⁵ In addition, the Intellectual Property Policy Headquarters published in April 2018 the emergency plan against copyright infringing websites, encouraging ISPs to conduct a site-blocking under certain conditions and announcing the establishment of a legal system for enabling such site-blocking by ISPs.²⁸⁶ Finally, in Thailand, the most widely used enforcement practice is public criminal enforcement by police

281. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 257–58.

282. *Id.*

283. *Id.* at 270.

284. *Id.* at 260, 272; see also Ari Gema, *Intellectual Property Rights: Indonesia Can Win the War on Online Piracy*, JAKARTA POST, (May 3, 2018, 2:49 PM), <https://www.thejakartapost.com/academia/2018/05/03/intellectual-property-rights-indonesia-can-win-the-war-on-online-piracy.html> (“Since 2015, an interagency antipiracy task force within the government has shut down 392 illegal film websites that distribute or stream pirated content. . . . We are also going directly to advertisers. Last October, an Infringing Website List was launched by several industry associations . . . with the support of the Creative Economy Agency (Bekraf), to make companies aware of which sites they should not place ads on.”).

285. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 276, 279.

286. *Id.* at 280; see also Andy, *Japan Government Presents Pirate Website Blocking Proposals*, TORRENT FREAK (Sept. 18, 2018), <https://torrentfreak.com/japan-government-presents-pirate-website-blocking-proposals-180918/> (noting that the proposals are motivated by specific concerns with the piracy of manga and anime content, and the Government has gone as far as implementing interim “emergency measures to prevent access to websites hosting pirated manga, anime and other content”).

authorities.²⁸⁷ Also common are direct warnings for the removal of infringing content, a private enforcement practice taking place before the start of a criminal procedure.²⁸⁸ Finally, Thailand has a new Anti-Piracy Agency created with the aim to speed-up and streamline the legal process leading to website blocking.²⁸⁹

D. CONCLUSIONS OF THE LEGAL ANALYSIS

Our comparative legal research on the legal status of online copyright infringement and enforcement in the thirteen countries studied found that, despite some legal uncertainty, the majority of acts studied are qualified as direct copyright infringement by users or give rise to liability for intermediaries. Moreover, ISPs are often subject to injunctions and duties of care even when they benefit from safe harbors.²⁹⁰ On the whole, copyright holders have a vast arsenal of legal enforcement measures to deploy against end users and ISPs. There is a trend in many countries toward copyright enforcement through civil or administrative measures aimed at blocking websites that provide access to infringing content.²⁹¹ Notices to infringers and to platforms hosting or linking to infringing content with the aim of removing or blocking such content are likewise regularly used, the latter in the context of notice-and-takedown systems. Criminal measures are less popular.

Still, despite the abundance of enforcement measures, their perceived effectiveness is uncertain. Therefore, it is questionable whether the answer to successfully tackling online copyright infringement lies in additional rights or enforcement measures,

287. QUINTAIS, GLOBAL ONLINE PIRACY STUDY LEGAL BACKGROUND REPORT, *supra* note 1, at 22, 90.

288. *Id.* at 22.

289. See Andy, *Netflix Quick to File Complaint with New Thai Anti-Piracy Agency*, TORRENT FREAK (Dec. 19, 2018), <https://torrentfreak.com/netflix-quick-to-file-complaint-with-new-thai-anti-piracy-agency-181219/>.

290. See MARTIN HUSOVEC, INJUNCTIONS AGAINST INTERMEDIARIES IN THE EUROPEAN UNION: ACCOUNTABLE BUT NOT LIABLE? 104–11 (2017) (considering this to be in the EU a form of “accountability,” rather than liability).

291. See Andy, *MPA Reveals Scale of Worldwide Pirate Site Blocking*, TORRENT FREAK (Apr. 10, 2018), <https://torrentfreak.com/mpa-reveals-scale-of-worldwide-pirate-site-blocking-180410/> (according to information from the Motion Picture Association Canada, at least 42 countries are currently blocking infringing websites, and in Europe alone, 1.800 websites and 5.300 domains have been blocked).

especially if these will not lead to additional revenue for copyright holders and risk coming into conflict with fundamental rights of users and intermediaries. Instead, it might be sensible to search for the answer to piracy elsewhere—in the provision of affordable and convenient legal access to copyright-protected content.

IV. EMPIRICAL FINDINGS

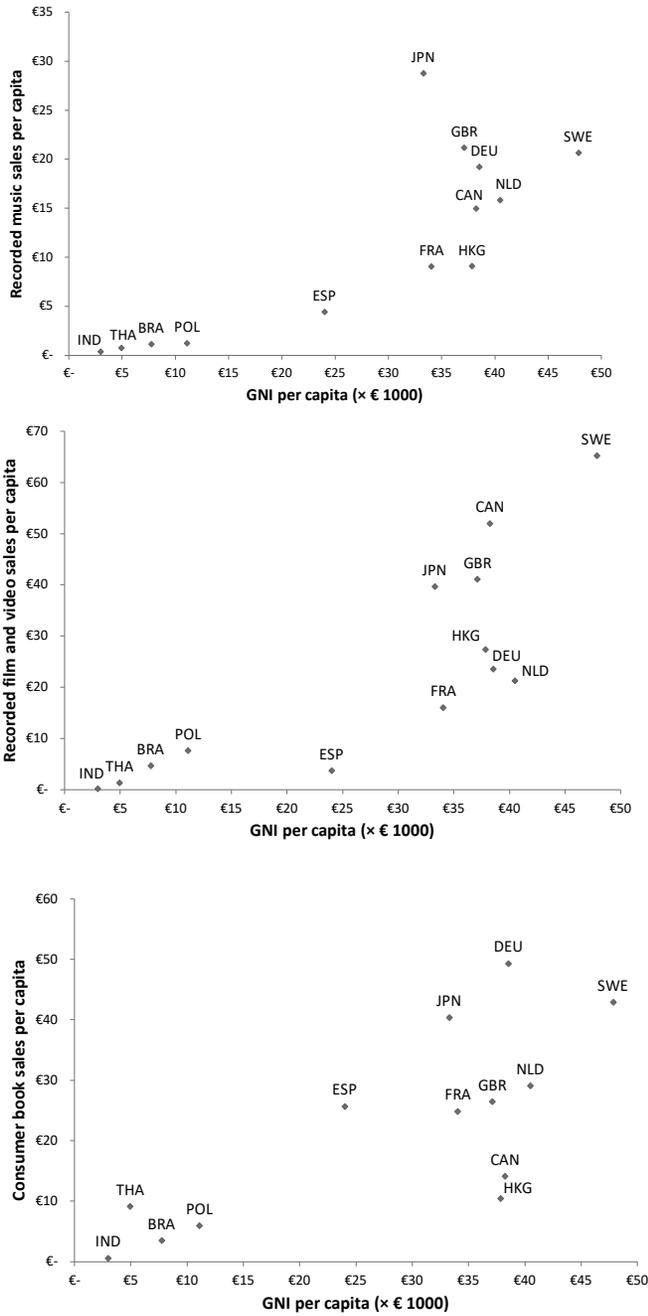
At the outset of this article we stressed the intricate relation between online piracy and legal sales. Positive, neutral and negative interactions exist and their relevance is likely to vary between content types, distribution channels, over time, and between blockbusters and niche content.²⁹² Moreover, empirical research to establish any such relation is met with methodological challenges that are difficult to resolve: at an individual level, legal consumption and piracy typically go hand in hand. This is illustrated in our research by the demographic description of pirates and legal users, who are very much alike. Moreover, because of underlying individual preferences, pirates are much more likely to be legal users of each content type than are non-pirates, and the median legal consumption of pirates is typically twice that of non-pirates. As such, a positive correlation between piracy and legal consumption can be expected. But this should not be hastily interpreted as a causal relationship. Against this background, this Part of the article discusses the empirical findings of our study, based on sales data and data from our consumer survey that targeted nearly 35.000 respondents.

A. THE DEVELOPMENT OF LEGAL SALES

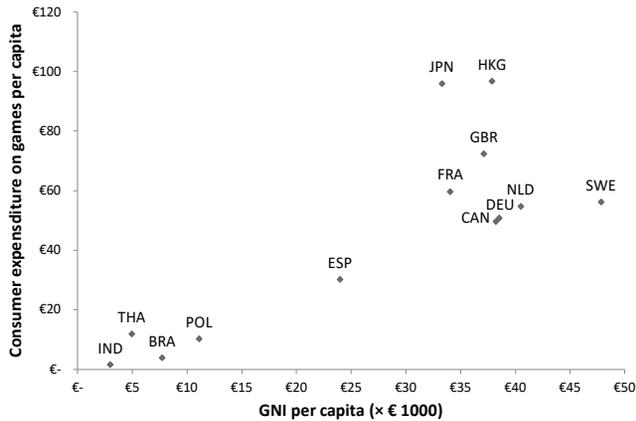
How have legal sales developed across the countries studied? To answer this question, we have examined sales data for music, film and video, books and games. Our research finds that across all content types and formats, per capita income is an important driver of per capita expenditure. That is to say, how much money people make greatly affects how much they spend on cultural content. However, this is only true up to a point: above an annual income level of €30.000 per capita, this relationship no longer seems to apply and national preferences dominate income effects. This is illustrated in Figure 1.

292. See *supra* Part II.A.

Figure 1 Legal content sales and income data²⁹³



²⁹³ POORT ET AL., GLOBAL ONLINE PIRACY STUDY, *supra* note 1, at 12.



Focusing on sales per content type, it is evident that physical sales are consistently declining for almost every content type and in almost every country studied, particularly for audio-visual content. Print books still dominate in all countries and books are relatively resistant to digitization. Digital sales have grown almost everywhere over the past three years. For music, digital streaming grew strongly at the expense of digital downloads. For audio-visual content, SVOD services such as Netflix are becoming the dominant model.²⁹⁴

Despite the physical sales decline, the increase in digital sales led to net growth for total recorded music, audio-visual content, books and games between 2014 and 2017. Expenditures on live concerts and cinema visits are growing almost everywhere. In the music category, live concerts generate revenues comparable to those for recorded music, except in Japan. In the audio-visual category, cinemas generate not much less revenue than physical and digital recorded content combined.²⁹⁵

B. MAIN SURVEY FINDINGS

Our consumer survey was completed by a total of 34,673 respondents, between 2,640 and 2,750 per country, for the thirteen countries studied here. A total of 4,352 respondents from seven European countries were approached with similar surveys in 2012 (the Netherlands) and the other six countries (2014), which implies that

294. *Id.* at 11, 36.

295. *Id.* at 31, 41.

they can be followed over time. The survey was carried out meeting state of the art methodological requirements as regards sample composition and recruitment, representativeness and weighing, and data cleaning.²⁹⁶ In this section we provide an overview of the survey's main outcomes.

The aim of the consumer survey was to provide information about the use of authorized and unauthorized channels for the acquisition and consumption of content, and to assess underlying mechanisms and the effect of online piracy on consumption from legal channels.

The survey demonstrates that consumption of music and its acquisition from illegal channels is most common in Spain, where 35% of the total population engaged in such activity in 2017, and least common in Japan, where only 9% did so. However, differences in the legal framework do not seem to play a role here, because downloading is illegal in both countries and both Spain and Japan have enforcement measures. Relative to the Internet population, music piracy is most common in Indonesia, Thailand, and Brazil. Between 2014 and 2017. The number of music pirates decreased in each of the European countries for which two measurements are available. The percentage of the population pirating films and series also decreased in each of these countries. For the number of book pirates, the trend in all European countries is again downward, and the same is found for games, except for a slight increase in Germany.

The percentages of the population consuming any of these content types via any legal or illegal channel are summarized, respectively, in Figure 2 and Figure 3. Figure 2 excludes live concerts and merchandise, but includes offline legal consumption on physical carriers. The percentage of legal content consumers per country ranges from 61% (France) to 93% (Indonesia). This percentage declined somewhat between 2014 and 2017 in most European countries, mainly due to a decrease for physical carriers, whereas total sales volumes increased.

296. *Id.* at 43-44.

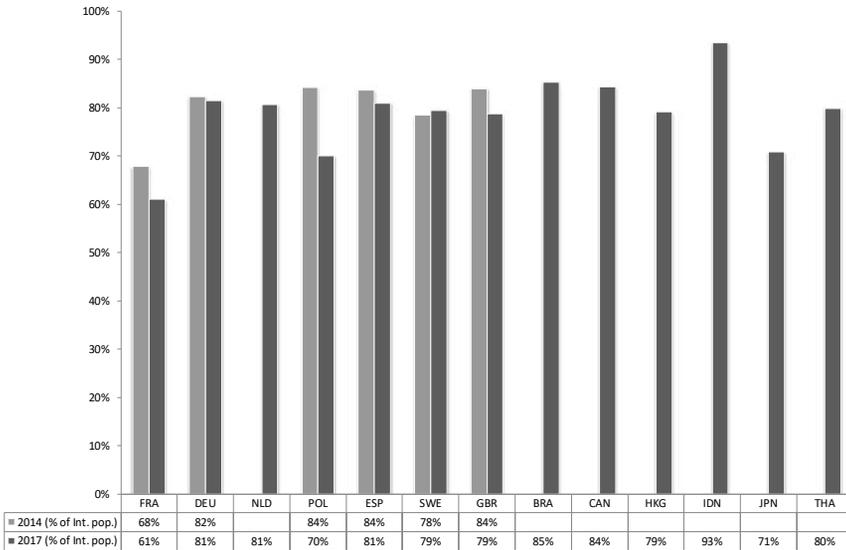
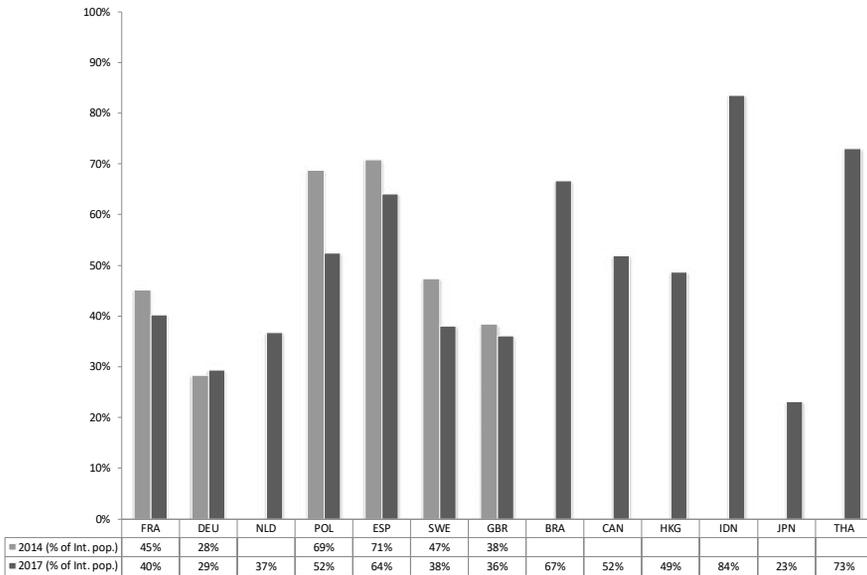
Figure 2 Acquired or accessed any content type legally (last year)²⁹⁷

Figure 3, shows that online piracy (excluding stream-ripping) is most prevalent in the Internet populations of Indonesia, Thailand, and Brazil, followed by Spain and Poland. As a percentage of the total population (not depicted), Spain, Canada, and Hong Kong are the top three countries for piracy, whereas online piracy is the least common in Germany and Japan. Except in Germany, the percentage of pirates decreased in all European countries. For the countries in this study outside Europe, this cannot be determined as no previous measurement using the same methodology is available.

297. Exclusive of radio, linear television, live concerts and merchandise; inclusive of offline consumption from legal sources. *Id.* at 13.

Figure 3 Acquired or accessed any content type illegally (last year)²⁹⁸

The per capita consumption volumes per legal and illegal content channel that follow from the survey do not always match these developments. In most European countries, there is a trend of decreasing volumes for physical carriers, at least for music and audiovisual content, not for games and books, despite a declining percentage of users of physical formats for all. Similarly, for most European countries and for most content types, there is an increase in the per capita volume of illegal content consumption, in spite of a decreasing percentage of the population engaging in online piracy. This implies that piracy is gradually becoming restricted to a smaller group, although its total volume is not decreasing: fewer people consume more on aggregate via illegal channels.

However, the groups in Figure 2 and Figure 3 overlap: in terms of demographics, pirates are very similar to legal users, although on average they tend to be somewhat younger and more often male.²⁹⁹ Most importantly, 95% or more of pirates also consume content legally and their median legal consumption is typically twice that of

298. Exclusive of stream-ripping and pirated copies on physical carriers. *Id.*

299. See, e.g., Joan-Josep Vallbé et al., Knocking on Heaven's Door - User Preferences on Digital Cultural Distribution (Forthcoming Internet Policy Review 2019) (providing a conclusion that is similar to those reached in other studies).

non-pirating legal users, for each content type and country. As such, the group of pirates in Figure 3 includes mostly people who also use legal channels, and the group of legal users in Figure 2 includes many people who also pirate content sometimes.

The ratio between the percentages of people who have used illegal channels compared to people who have used legal channels at least once in 2017 (and, if available, in 2014) is lowest in Japan and Germany, where there is about one user of illegal channels for any three users of legal channels. In Thailand and Indonesia, both groups are almost equally large. This metric, reconfirms the earlier observation that the percentage of the population engaging in online piracy is declining in most of Europe. It might be tempting to argue that an increase in the use of certain enforcement measures against obviously illegal platforms (e.g., Pirate Bay) contributed to the decreasing number of pirates in Europe. However, a lack of evidence concerning the effectiveness of most enforcement measures and the strong link between piracy and the availability and affordability of content suggests otherwise.

Figure 4 Pirates per legal content user vs. per capita income (in constant prices)³⁰⁰

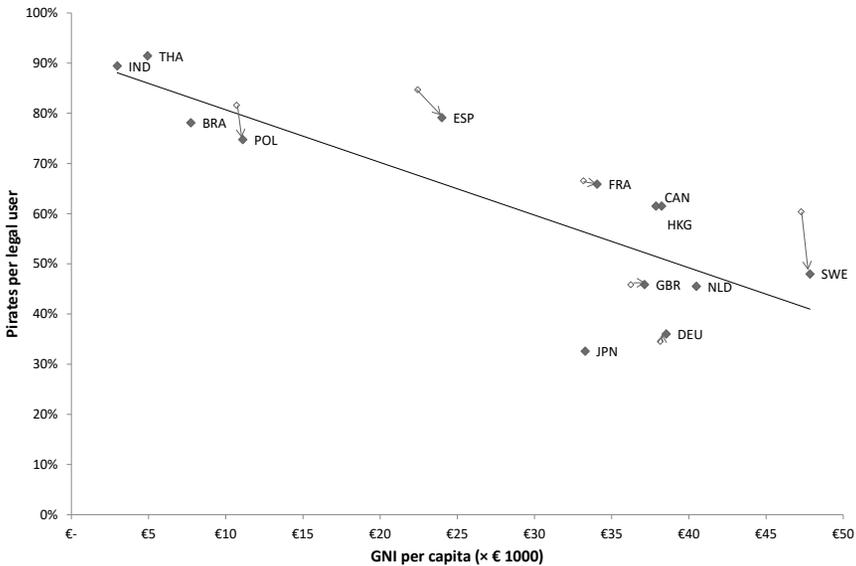


Figure 4 shows the number of pirates per legal user against per capita income. At a country level, online piracy is strongly linked to a lack of purchasing power. Higher per capita income correlates with a lower number of pirates per legal users. In countries above the line, there are more users of illegal sources per legal user than what is expected from the average income level. Notably, Spain is above the line, in spite of the extensive and increasing assortment of enforcement measures available against infringing users and intermediaries in its law. In Japan and Germany, countries below the line, there are less pirates per legal user than would be expected based on per capita income. Arrows show the development that countries have made between 2014 and 2017. Generally, this development has been along or towards the trend line. This implies that, as a rule, changes in piracy levels are best understood by pointing to changes in welfare, rather than enforcement.

300. *Id.* at 14.

C. SHALL I BUY OR SHALL I PIRATE? THE DISPLACEMENT OF LEGAL SALES

How does online piracy affect legal consumption? As said, correlation does not establish a causal relationship and a time series analysis does not differentiate between the effects of piracy and changes in preferences or in legal supply. To estimate this displacement effect, the article will first look at the number of content units per consumption channel that are reported in the survey, using an instrumental variable regression. Second, it analyzes survey questions in which respondents indicated which blockbuster films for the years 2015 to 2017 they had seen and how. Third, it combines the responses in the survey with those in a similar survey in 2014, and analyzes individual changes in consumption for the respondents who participated in both: a panel study.³⁰¹

Following the first approach, Table 2 provides statistical evidence that illegal consumption of music, books and games displaces legal consumption. However, the estimations are surrounded with substantial uncertainty: the 95% confidence interval for the displacement for music ranges from -0.06 to -1.23 . With regards to books and games, in particular, the range is large, which may be related to the fact that underlying these content types is a wider variety of actual works. More than likely people who download games from illegal channels are not interested in simpler free online games. In addition, separating the results between adults and minors implies that displacement occurs for adults but not for minors.

Table 2 Instrumental Variable estimation of displacement rates per content type³⁰²

	Music	Audio-visual	Books	Games
Displacement rate	-0.65**	-0.136	-1.195**	-1.963*
Standard error	0.30	0.301	0.580	1.029
95% confidence interval	-1.23 ~ -0.06	-0.73 ~ 0.45	-2.33 ~ -0.06	-3.98 ~ 0.05
N	14,712	16,289	11,878	10,567

Note: symbols *, **, *** stand for statistical significance at a 90%, 95%, 99% confidence level, respectively. Music excluding live concerts.

301. *Id.* at 43–46.

302. *Id.* at 15.

When breaking down the results from Table 2, the results for music suggest that illegal consumption primarily displaces legal downloads and physical carriers. The effect on streaming is not statistically significant. For live concerts and music festivals, the effect is positive. This goes with the notion that digital recorded music is not a substitute for live music but a complement and that this interaction benefits from the sampling effect.

For audio-visual content, there is no sampling for cinema visits, which is statistically significantly displaced, and the same holds for digital streams, while no significant effects are found for physical purchases and digital downloads. For rentals, there is a marginally significant positive coefficient, which would demonstrate that illegal consumption of audio-visual content promotes (what is left of) physical rentals. Rentals (including from libraries) concern older audio-visual content, which may benefit from a sampling effect.

With regards to books, the results contrast those for music and audio-visual; there are large and statistically significant displacement rates for books bought in print (or as audiobooks on a physical carrier) and borrowed from the library. Against the backdrop of a much smaller and statistically insignificant estimate for e-book downloads from legal sources (the more likely substitute for illegal downloads), these displacement rates may be overstated by capturing the effect of some people who have shifted from consuming print books to digital and others who have not.

With regards to games, the displacement rate for free games is particularly high, but the coefficients found for the other channels are also statistically significant. Similar to books, the large coefficient for free games may be overstated by a partial division between consumers who primarily play free games, and pirates who are more dedicated ‘gamers’, that prefer console games.

Using time-structured data for blockbuster films, there is an average displacement rate of -0.46 of first legal views by first illegal views. Particularly, for each two first illegal views of blockbuster films, a little less than one first legal view was displaced. This effect is smaller in Japan and the Netherlands and larger in Thailand and Brazil. In combination with a positive sampling effect on second legal views and taking various robustness checks into account, the aggregate displacement effect for blockbuster films is between -0.20 and -0.45 .

Put differently, on average 100 illegal views lead to twenty to forty-five fewer legal views.

This relates to blockbuster films, for which larger displacement can be expected than for niche content and older content. Moreover, it refers to audio-visual content, which most people consume only once or twice. Subsequently, the bandwidth is a plausible upper bound for overall displacement in the other content types. An analysis per channel reveals that most of the displacement occurs for cinema visits. Displacement rates for later windows are smaller.

From these estimations, calculating an upper bound for the comparative sales loss of total film views per channel and per country is possible. Generally, a maximum of around 4.1% of all legal blockbuster views is displaced by illegal views. In essence, about 4% of the would-be legal views if there were no piracy, did not occur because of it. For specific channels, this varies from 3.2% for TV to 4.5% for legal streams and downloads. Per country, it ranges from 0.3% in Japan to 10.3% in Thailand.

Consolidating the survey data with data from a similar survey in 2014, targeting the same respondents to the extent possible, allows for an analysis of individual changes in consumption in six EU countries over time. It demonstrates positive and statistically significant correlations for each content type. Thus, an increase in illegal consumption over time correlates with an increase in legal consumption and vice versa. Seemingly, substitution effects—‘Shall I buy or shall I pirate?’—occur on the spot. Over time, there have been improvements in the availability from legal channels and changes in personal preferences that affect legal and illegal consumption alike: in essence, if one increases or decreases, the other does so as well, leading to a positive correlation at an individual level.

V. CONCLUSION

This article examined the use of legal and illegal channels for the acquisition and consumption of copyright-protected content through legal and empirical research in thirteen countries and regions around the world: France, Germany, Netherlands, Poland, Spain, Sweden, United Kingdom, Brazil, Canada, Hong Kong, Indonesia, Japan, and Thailand. The types of content studied are music, films, series, books and games. Our empirical findings are based on consumer surveys of

35.000 respondents in the mentioned thirteen countries.

Comparative legal research shows that despite some legal uncertainty, most types of online use studied—downloading and streaming from illegal sources (including via dedicated technical devices), and stream-ripping—qualify as direct copyright infringement by users or give rise to liability for intermediaries. ISPs are frequently subject to injunctions and duties of care even when they benefit from safe harbors. Therefore, copyright holders have at their disposal a vast array of enforcement measures against end users and intermediaries to tackle infringement. At this stage, the most commonly used measures include the blocking of access to infringing websites, and the use of notices to infringers and platforms hosting or linking to infringing content with the aim of removing or blocking such content.

Our analysis reveals that the effectiveness of copyright enforcement measures is questionable, casting doubt on whether it holds the key to drive down piracy. This is especially true where enforcement measures fail to translate into additional revenue, or risk conflicting with fundamental rights of users and intermediaries. The answer to piracy, it appears, lies beyond the law. Most likely, it is to be found in markets.

Markets for copyright-protected content are growing. The increase in digital sales led to net growth for total recorded music, audio-visual content, books, and games between 2014 and 2017 in the majority of countries studied, despite a decline in physical sales. Expenditures on live concerts and cinema visits are also increasing. Furthermore, sales data show that across all content types and formats, per capita income is an important driver of expenditures, at least until an annual income level of € 30.000 per capita: how much money people make greatly affects how much they spend on cultural content.

Our surveys show that between 2014 and 2017, the number of pirates decreased in all European countries except Germany. In addition, online piracy is most prevalent in the internet populations of Indonesia, Thailand, and Brazil, followed by Spain and Poland. As a percentage of total population, Spain, Canada, and Hong Kong are the top three countries for piracy.

There is lack of evidence concerning the effectiveness of most enforcement measures to suggest that an increase in the use of certain

enforcement measures against obviously illegal platforms has contributed to the decreasing number of pirates in Europe. The strong link between piracy and the availability and affordability of content actually suggests otherwise: at a country level, online piracy correlates remarkably strongly with a lack of purchasing power. Higher per capita income coincides with a lower number of pirates per legal users.

Moreover, pirates are also legal users. Demographically, pirates resemble legal users quite closely, although on average they tend to be somewhat younger and more often male. Significantly, 95% or more of pirates also consume content legally and their median legal consumption is typically twice that of non-pirating legal users.

Regarding sales displacement, our research finds statistical evidence that illegal consumption of music, books, and games displaces legal consumption. For live concerts and music festivals, however, there is a positive effect. Illegal consumption of blockbuster films, which can be expected to lead to higher displacement rates than niche content and for instance music, is found to replace legal consumption at a rate of less than one half. This implies that for every two illegal blockbuster views, less than one legal view is displaced. Taking overall piracy rates into account, this translates into a sales loss of about 4%. At an individual level, changes over time in the availability of legal supply, in personal preferences, and economic welfare are found to trump outright displacement of legal sales by piracy.

The main takeaway from our research is that online piracy is declining. The key driver for this decline is the increasing availability of affordable legal content, rather than enforcement measures. Where the legal supply of content is affordable, convenient and diverse, there is increasing consumer demand for it. Under the right conditions, consumers are willing to pay for copyright-protected content and to abandon piracy. The crucial policy implication here is that policy makers should focus their resources and legislative efforts on improving those conditions. In particular, they ought to shift their focus from repressive approaches to tackle online infringement towards policies and measures that foster lawful remunerated access to copyright-protected content.