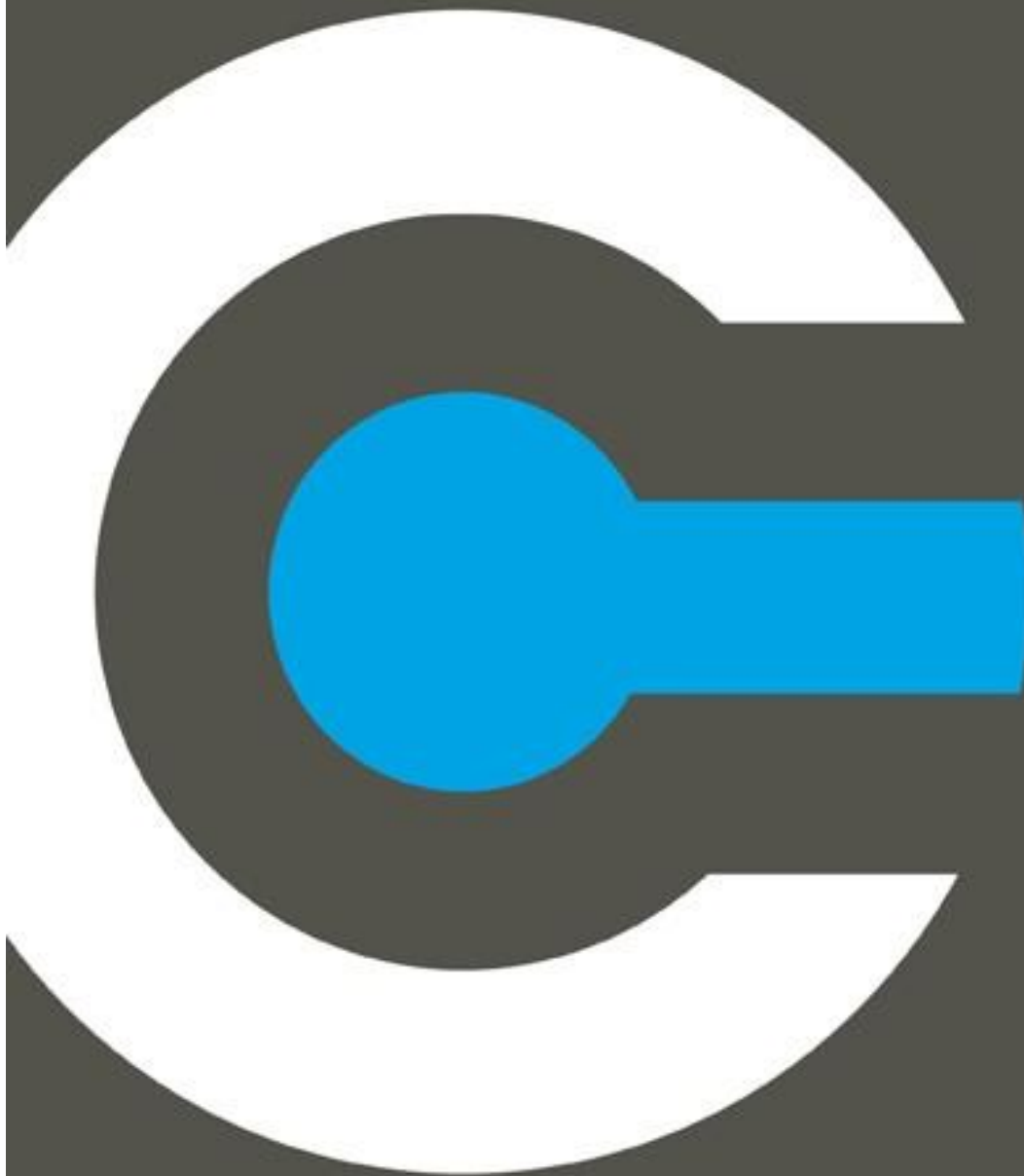


“Because it's free”

The damage to the Dutch film industry as a result of downloading from illegal sources



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Considerati
Meester Bart W. Schermer
Meester Nathalie Falot
www.considerati.com
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Summary

There is a lot of discussion about the damage which downloading from illegal sources is causing to the (Dutch) film industry. This study is aimed at gaining an insight into the damage (in terms of lost turnover) which is suffered annually by the Dutch film industry as a result of the downloading of films from illegal sources. This report provides a concrete calculation of the lost turnover as a result of downloading from illegal sources in the Netherlands. The report is based on two studies: 1) a quantitative study into downloads from illegal sources of films over P2P networks (carried out by MarkMonitor), 2) a study into the downloading behaviour of consumers and an economic analysis of the substitution and sampling effects of this (carried out by IViR/CentERdata).

The consumer survey by IViR/CentERdata shows that more than **one quarter (25.8%) of the Dutch population have downloaded or streamed at least one film from an illegal source over the past year**. The percentage of the Dutch population in the age group 16-24 who download films from illegal sources has risen from 18% in 2008 to 56% in 2014. The percentage of the Dutch population who bought one or more DVDs fell over the same period from 46% to 31.6%.

MarkMonitor recorded **2.9 million unique downloads of 25 films from illegal sources in the Netherlands over the 6 month measurement period**. It should thereby be noted that not all 25 films were actually tracked for 6 months, as a result of which the total for 25 films over six months is higher than this. **By extrapolation this means a total of 5.1 million downloads of these 25 titles per year from illegal sources**. Based on MarkMonitor's extrapolated figures and the consumer research by IViR/CentERdata, we conclude that **a minimum of 61 million films are downloaded from illegal sources per year in the Netherlands**.

In order to produce an accurate calculation of the lost turnover for the Dutch film industry, we need to examine how many of these downloads actually displace consumption through legal channels. For this reason, the net effect of substitution and sampling was also examined. This net effect provides insight into all the legal consumptions which have actually been displaced. The research by IViR/CentERdata shows that the negative effects of downloading from illegal sources (substitution) outweigh the positive effects (sampling). Based on the model estimates by IViR/CentERdata, the net effect of substitution and sampling (whereby both effects are offset against one another) is 0.32. **This means that for every 10 downloads, 3.2 fewer films are watched legally**.

The lost turnover for the Dutch film industry (DVD sales and VOD streams), taking into account the effects of sampling and substitution (0.32), is at least 78.4 million euro including VAT per year. In 2013 the total turnover in the home video segment (including series) was 256.6 million euro including VAT. In 2009 this turnover was still 312 million euro.

The research by IViR/CentERdata indicates that **the most important reason for downloading or streaming a film from an illegal source is that one doesn't have to pay for it. 71% of respondents indicated that they would stop or would download (much) less if downloading were to be criminalised**, a situation which has now arisen in practice following the ruling of the European Court of Justice.

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1 Introduction

There is a lot of discussion about the damage which downloading from illegal sources is causing to the (Dutch) film industry (including producers, rights owners, directors, writers, actors, distributors, retailers, VOD channels and broadcasters/television stations). Although a lot of research has been done internationally into the damage resulting from the downloading of music from illegal sources, there is a much less clear picture of the damage resulting from the downloading of films from illegal sources.¹This study is aimed at gaining an insight into the damage which is suffered annually by the Dutch film industry as a result of the downloading of films from illegal sources.²This study has disregarded series. In this report we use the term 'damage' in the sense of lost turnover. Any damage as a result of altered price perception, diminution of the offering or erosion of distribution channels is disregarded.

The report also examines the behaviour and attitude of consumers with regard to the idea of 'downloading films from illegal sources' and the legal context for it in the Netherlands. This partly in view of the recent ruling by the European Court of Justice about the home copying exception which declared that the Dutch exception to copyright for home copying from illegal sources conflicts with European copyright law.³

The study consists of three parts: 1) a quantitative study into downloads from illegal sources of films over P2P networks (carried out by MarkMonitor), 2) a study into the downloading behaviour of consumers and an economic analysis of the substitution and sampling effects of this (carried out by IViR/CentERdata) and 3) an overall assessment which translates the findings of both studies into a 'concrete' damage amount. This relates to lost turnover as a result of the downloading from illegal sources. The findings of this third part are set out in this report. The findings of the study by Mark Monitor and the study by IViR/CentERdata are attached as appendices to this report.

The studies by MarkMonitor, IViR/CentERdata and Considerati were carried out completely independently of one another.

1.1 Research question

This study answers the question of what damage downloading from illegal sources causes to the Dutch film industry.⁴The primary research question is:

What is the damage (in terms of lost turnover) to the Dutch film industry as a result of the downloading of films from illegal sources?

¹ See for example Schermer and Wubben 2011 for a partial summary of the research.

² This study was carried out on behalf of Filmproducenten Nederland (Film Producers Netherlands - FPN), Stichting Cultureel Fonds Audiovisuele Producenten (Audiovisual Producers Cultural Fund Foundation - CFAP), Nederlandse Vereniging van Filmdistributeurs (Dutch Film Distributors' Association - NVF), Filmfonds Nederland (Netherlands Film Fund) and the Nederlandse Vereniging van Producenten en Importeurs van beeld- en geluidsdragers (Netherlands Association of Producers and Importers of video and audio media - NVPI).

³ European Court of Justice, *ACI Adam v. Stichting de Thuis kopie*, ECLI:EU:C:2014:254

⁴ The distribution chain for audiovisual content is extensive. Not just writers and film producers, but also investors, cinemas, television broadcasters and retailers. The term 'the Dutch film Industry' used in this study therefore refers to all these participants. Damage is not further differentiated by participant.

In order to be able to answer this question, a number of aspects of downloading from illegal sources will have to be examined separately. These aspects have been formulated in a number of sub-questions.

- 1) *What is the actual number of downloads of films from illegal sources in the Netherlands?*
- 2) *To what extent is there a substitution effect for films which have been downloaded from an illegal source?*
- 3) *To what extent is there a sampling effect for films which have been downloaded from an illegal source?*

In order to assess the impact of the legal context on downloading from illegal sources in the Netherlands, the following question was also posed:

- 4) *What impact does the attitude of the Dutch government with regard to downloading from illegal sources have on the consumer?*

This study will examine these questions individually.

1.2 Methodology for calculating damage

Calculating the consequences (in terms of damage suffered) of downloading from illegal sources is complicated.⁵ Nonetheless we believe that the damage calculation that we have adopted is the most accurate reflection to date of the lost turnover as a result of downloading films from illegal sources in the Netherlands. The reason for this is that the damage calculation: 1) is based on unique research from IViR/CentERdata in which the substitution and sampling effects of film downloads have been investigated for the first time for the situation in the Netherlands, and 2) a realistic estimate has been made of the actual number of downloads from illegal sources (solely via P2P networks) in the Netherlands based on actual measured download volumes (Considerati, MarkMonitor).⁶

Firstly quantitative research has been conducted into the number of downloads from illegal sources in the Netherlands (see chapter 3). This research was conducted by MarkMonitor. MarkMonitor tracked the download traffic on P2P networks (Bittorrent and eDonkey) over 6 months for a sample of 25 films.⁷ The result is the actual number of unique downloads of these films in the Netherlands. These figures were then extrapolated in order to give a picture of the total number of downloads from illegal sources in the Netherlands over a year.⁸

In order to calculate the damage, most studies look at the market value which these downloads represent. The total lost turnover can be calculated by multiplying the actual number of downloads by an average market price:

⁵ For this see inter alia: Schermer and Wubben 2011.

⁶ For a detailed explanation of the methodology please see the methodological explanation in the source studies.

⁷ See appendix 1 for the list of titles.

⁸ For reasons of cost and time, it was not possible to monitor all downloads of all films in the Netherlands over a year. For this reason an extrapolation was carried out.

Total number of downloads x Market price = Loss (lost turnover)

However, because this method does not take account of the fact that not every download necessarily represents a lost sale and there may also be promotional effects (sampling) from the downloading from illegal sources, research was also done into the substitution and sampling effects of downloading films from illegal sources.⁹By taking account of these effects, we gain a more realistic picture of the actual damage done.

The study into substitution and sampling was carried out by IViR/CentERdata.¹⁰The net effect of substitution and sampling was then used to calculate the actual loss. This gives the following calculation:

Total downloads x Net effect of substitution and sampling x Market price = Actual loss (lost turnover)

For further interpretation, the results of previous national and international studies were also incorporated into the research.

1.3 Guide to the report

As an introduction, chapter 2 gives an overall picture of downloading from illegal sources in the Netherlands and an overview of the legal context for copyright. Chapter 3 sets out the findings of the quantitative study by MarkMonitor. Chapter 4 discusses the issue of substitution and sampling on the basis of the study by IViR/CentERdata. The total damage caused by downloading from illegal sources is calculated in chapter 5 on the basis of the findings of both studies. Finally chapter 6 examines how - in view of the ruling of the European Court of Justice about downloading from illegal sources - Dutch consumers feel about a download ban and what effect this has on their downloading behaviour.

⁹ For this see inter alia: Huygen 2009; Schermer and Wubben 2011

¹⁰ Poort, J., Leenheer, J. (2014), *Alleen maar nette mensen, consumentengedrag downloaden films*, IViR/CentERdata (see appendix 2)

2 Background

This chapter will provide some background to the downloading of films from illegal sources in the Netherlands. This will particularly focus on the legal context. For details about downloading behaviour in the Netherlands we would refer to the report from IViR/CentERdata.

2.1 Downloading in the Netherlands

IViR/CentERdata has carried out research into downloading behaviour in the Netherlands amongst a representative sample of the Dutch population. This research shows that more than a quarter (28.1%) of the Dutch population have downloaded at least one film from an illegal source over the past year.¹¹

Internationally the Netherlands is amongst the top countries for downloading films from illegal sources (see chapter 3). The downloading of films from illegal sources has also grown significantly in recent years. The percentage of the Dutch population in the age group 16-24 who download films from illegal sources has risen from 18% in 2008 to 56% in 2014. The percentage of the Dutch population who bought one or more DVDs fell over the same period from 46% to 31.6%.¹²

2.2 Legal context for downloading in the Netherlands

Legally speaking, downloading films is 'reproduction' and therefore subject to copyright law. According to article 1 of the Auteurswet (Copyright Act), copyright is:

"the exclusive right of the maker of a work of literature, scholarship or art or their successors to publish and produce it, subject to the restrictions imposed by law."

In summary, this means that the copyright holder has the exclusive right to determine who may make use of their work, for what period and under what terms. Third parties may, in principle not make a work of literature, scholarship or art public (publish, upload) or reproduce (copy, download) it without the permission of the maker of this work or their successors (the 'copyright holder').¹³

Copyright comprises moral rights and economic rights. The Netherlands Supreme Court has stipulated that the aim of copyright is "to provide protection for the maker of a work, including with regard to its exploitation through publication or reproduction."¹⁴ Right holders obtain their means of subsistence from the income that they can obtain from their creations. Copyright also serves as a stimulus for fresh cultural achievements and investments.¹⁵

However, the law includes some restrictions on copyright with which lawmakers have sought to achieve "the right balance between right holders and users".¹⁶

¹¹ Poort and Leenheer 2014, p. 7

¹² Poort and Leenheer 2014, p. 11-12

¹³ article 12 Aw (Copyright Act) with Article 14 Aw with Article 1 Aw.

¹⁴ Supreme Court 22 June 1990 (Zienderogen Kunst), NJ 1991, 268, Informatierecht/AMI 1990/9, 202 and AA 1991, 672. ¹⁵ Kamerstukken (Parliamentary Documents) II, 28482, no. 3. Explanatory Memorandum on Amendment of Auteurswet pursuant to Directive no. 2001/29/EC. §4, p.9

¹⁶ Kamerstukken (Parliamentary Documents) II, 28482, no. 3. Explanatory Memorandum on Amendment of Auteurswet pursuant to Directive no. 2001/29/EC. §6.3, page 18

Restrictions on copyright must be in line with the 'Berne three-step test', which is set out in article 5 of the European Copyright Directive.¹⁷ A restriction on copyright is only lawful if it meets the following three criteria:

- 1) The restriction may only be applied in certain special cases;
- 2) provided that this does not conflict with a normal exploitation of works or other materials; and
- 3) the legitimate interests of the right holder are not unreasonably prejudiced.¹⁸

2.2.1 The home copying exception

One of the restrictions on copyright in the Netherlands is personal copying or home copying. This restriction is important in the light of the discussions about downloading from illegal sources. Home copying is understood to refer to copying copyright-protected material for personal practice, study or use.¹⁹ No permission is required from the right holder for such reproduction, but a reasonable fee must be paid.²⁰

One important point for discussion up until recently was the question of whether downloading from an illegal source fell within the bounds of the home copying exception. In replies to parliamentary questions from then Member of the House of Representatives Gerkens as to whether downloading from illegal sources is also covered by the home copying exception, the minister replied in 2002 that:

*"The Internet user who makes use of the possibilities offered by Napster, KazaA and similar peer-to-peer services to copy works of literature, scholarship or art for personal use generally operates within the bounds of copyright. That also applies when a personal copy is made of an original which has been published illegally, i.e. without permission from [the] copyright holder."*²¹

This declaration therefore meant that downloading from illegal sources was 'legal' from 2002.²² This view was endorsed - albeit with serious reservations - by the Court of Appeal in the Hague, amongst others:

*"downloading from illegal sources for personal use [...] is permitted under Dutch law, because when modifying the Dutch Auteurswet in line with the European Copyright Directive the Dutch government expressly and repeatedly declared that downloading from illegal sources for personal use is not prohibited."*²³

However, in response to preliminary questions, on 10 April 2014 the European Court of Justice gave a negative ruling on the Dutch arrangement whereby downloading from illegal sources falls

¹⁷ Article 5, Directive 2001/29/EC. ¹⁸

Article 9 Berne Convention

¹⁹ Article 16b of the Auteurswet with article 10 of the Wet op de naburige rechten (Related Rights Act)

²⁰ Article 16c paragraph 2 Aw

²¹ Kamerstukken (Parliamentary Documents) II 2002-2003, 28 482, no. 5, p. 32

²² The Minister did view the uploading of copyright-protected works via the Internet as a breach of copyright, since this involves publication in the sense of Auteurswet article 12 and not reproduction (to which the home copying exception relates). See: Kamerstukken (Parliamentary Documents) II 2002-2003, 28 482, no. 5,

p. 33

²³ LJN BO3980, BO3982

within the home copying exception.²⁴ According to the European Court of Justice such an arrangement conflicts with the three-step test, and is therefore unlawful. This ruling has therefore introduced a *de jure* and *de facto* 'download ban' in the Netherlands. The State Secretary for Security and Justice declared immediately after the European Court of Justice's ruling that downloading from illegal sources was prohibited with immediate effect. There was no need to amend the law for this, since only the interpretation of article 16b with 16c has changed.²⁵ After twelve years this therefore brought an end to the situation where the downloading of films (amongst other things) from illegal sources was legal in the Netherlands. 'Downloading from illegal sources' has therefore officially been 'illegal downloading' since 10 April 2014.

²⁴ *ACI Adam v. Stichting de ThuisKopie*, ECLI:EU:C:2014:254

²⁵ See "Kamerbrief over uitspraak auteursrecht" (Parliamentary letter on copyright ruling), 17-4-2014, <http://www.rijksoverheid.nl/documenten-en-publicaties/kamerstukken/2014/04/17/kamerbrief-over-uitspraak-auteursrecht.html> (most recently consulted on 1 June 2014)

3 Quantitative figures for downloading from illegal sources in the Netherlands

The first step for this study into the damage caused to the Dutch film industry by downloading from illegal sources is to identify the amount of film content that is downloaded from illegal sources in the Netherlands annually.

The quantitative research into the number of downloads from illegal sources was conducted by the MarkMonitor research agency. MarkMonitor measured the actual downloads from illegal sources via peer-to-peer (P2P) networks for 25 films over a measuring period which ran from 2 December 2013 to 1 June 2014. Not all titles were actually tracked for 6 months. Because of restrictions in terms of time and budget, 15 'slots' were available for monitoring the films. A number of films were therefore monitored for a shorter period, because they were replaced by other films depending on release date and the time when the title appeared on the Internet. A number of titles also appeared on the illegal circuit much later in the stipulated measuring period (such as *Bro's before Ho's*).²⁶

The titles were selected in such a way that they gave a representative reflection - as far as possible - of the offering of films in the Netherlands over the measuring period. The selection includes action movies, science fiction, comedies, arthouse/niche films and a documentary.²⁷ Given the Dutch context, special attention was paid to Dutch films, which are comparatively strongly represented on the list compared to international titles.²⁸ In terms of the lifecycle of the titles, most titles were in the initial or middle phase of their lifecycle. A number of titles were also selected which were further along in their lifecycle (long after the DVD release).

For the study MarkMonitor focused solely on the distribution of copied material via P2P file swapping (more specifically Bittorrent and eDonkey). P2P internet protocols are transparent and internet users have complete insight into them. MarkMonitor's software works in the same way as freely available P2P client software and can therefore make connections with other P2P client applications through the standard and public P2P protocol. MarkMonitor automates the recording of data which is publicly available on P2P networks. MarkMonitor also spends a lot of time on verifying the obtained data, in order to ensure that data is provided which is as accurate as possible. Files and IP addresses are verified, 'false positives' are eliminated. In monitoring the titles MarkMonitor looked at all unique downloads of files containing the film in question. All information is recorded, stored securely, shared and stored in line with international and local laws and regulations.

As part of this research MarkMonitor expressly did *not* look at the distribution of copyright material through download links (URLs) and associated *direct download platforms*, also called *file hosting services* or *cyberlockers*. Social media, mobile apps and streaming services were also disregarded. The total number of downloads will therefore be considerably higher in practice, but because accurate

²⁶ The DVD release date for this title was 8 April 2014, the first downloads of this title were recorded on 6 April 2014.

²⁷ See appendix 1 for the complete list

²⁸ Around 16% of the cinema offering is Dutch films, whilst around 40% of the films in the complete list are Dutch titles.

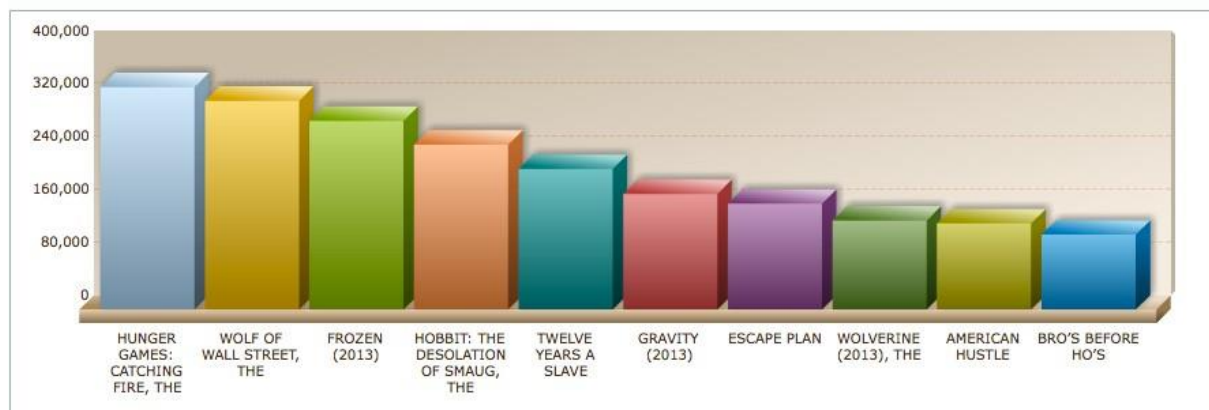
figures for this cannot be obtained, the decision was made to disregard these channels for the purposes of the study.

The number of downloads per title over the measuring period has been extrapolated by Considerati to a period of one year for the total film offering. The extrapolation has been compared with figures from MarkMonitor about the number of downloads of films in the Netherlands in earlier years and the findings of the consumer research conducted by IViR/CentERdata.

3.1 Absolute figures for downloads from illegal sources in the Netherlands

The 25 monitored titles were downloaded a total of 2,902,028 times in the Netherlands during the measuring period from 2 December to 1 June 2014. It should thereby be noted that for some films this therefore involved a period which was shorter than 6 months. This does not therefore constitute all the downloads of these 25 films over the past 6 months. This figure is higher than this.

Date range: [Weekly: 12/2/2013 - 6/1/2014]

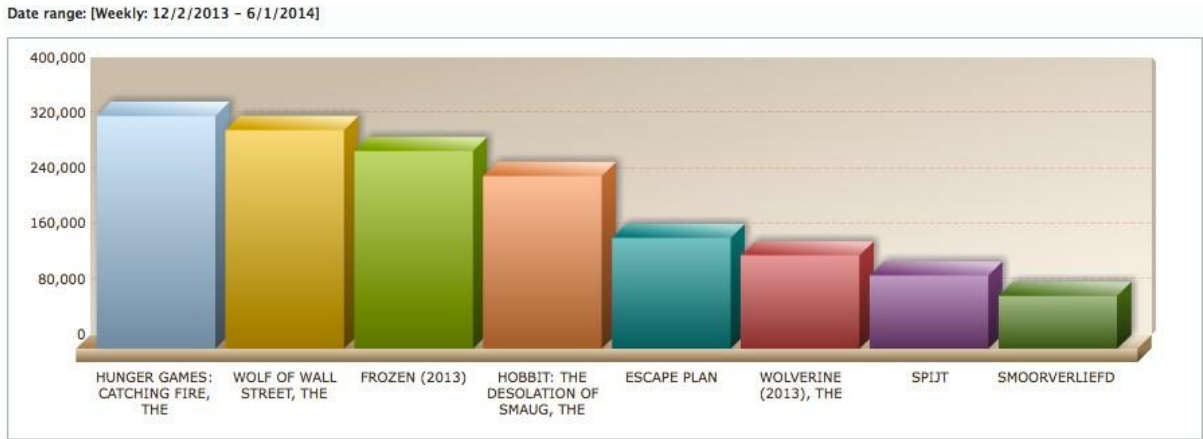


Title	Start of Monitoring	End of monitoring	Downloads
American Hustle	6 Feb 14	1 Jun 14	130,106
Anchorman 2	21 Mar 14	1 Jun 14	44,101
Bro's before Ho's	5 Apr 14	1 Jun 14	113,050
Counselor, the	2 Dec 13	7 Feb 14	15,428
De Nieuwe Wildernis	17 Dec 13	13 Mar 14	35,867
Elysium	17 Dec 13	26 Feb 14	88,902
Ender's Game	2 Dec 13	18 Mar 14	103,136
Escape Plan	17 Dec 13	8 Apr 14	159,787
Frozen	4 Dec 13	1 Jun 14	285,226
Gravity	06-02-14	1 Jun 14	174,610
Hobbit, The - an Unexpected Journey, The	17 Dec 13	6 Feb 14	72,355
Hobbit the - the Desolation of Smaug, The	16 Dec 13	1 Jun 14	249,176
Hunger Games Catching Fire	2 Dec 13	1 Jun 14	336,012
Inside Llewyn Davis	16 Jan 14	6 Feb 14	3,799
La Grande Bellezza	6 Feb 14	21 Mar 14	3,262
Leve Boerenliefde	17 Dec 13	16 Jan 14	5,851
Mannenharten	15 Mar 14	1 Jun 14	76,891
Mees Kees op kamp	11 Mar 14	1 Jun 14	60,386
Smoorverliefd	14 Dec 13	1 Jun 14	76,202
Soof	5 Apr 14	1 Jun 14	85,952
Spijt	2 Dec 13	1 Jun 14	105,499
Twelve Years a Slave	6 Feb 14	1 Jun 14	212,385
Verliefd op Ibiza	6 Feb 14	1 Jun 14	40,866
Wolf Of Wallstreet, the	7 Jan 14	1 Jun 14	315,627
Wolverine, the	2 Dec 13	24 Apr 14	134,552
TOTAL			2,929,028

figure 1: total number of downloads of all 25 monitored titles.

The top 5 consists of major Hollywood productions which also did well on the legal circuit. One notable feature is the high position of the Dutch film *Bro's before Ho's*. This film only appeared on the illegal circuit towards the end of the measuring period (on 5 April 2014) and had already been downloaded some 113,000 times within two months. *Soof* also had more than 85,000 downloads in two months.

If we look at the 8 films that were tracked during the largest part of the measuring period (5 to 6 months), we get the following picture.



Title	Start of monitoring	End of monitoring	Downloads
Escape Plan	17 Dec 13	8 Apr 14	159,787
Frozen	4 Dec 13	1 Jun 14	285,226
Hobbit: the Desolation of Smaug, The	16 Dec 13	1 Jun 14	249,176
Hunger Games: Catching Fire, The	2 Dec 13	1 Jun 14	336,012
Smoorverliefd	14 Dec 13	1 Jun 14	76,202
Spijt	2 Dec 13	1 Jun 14	105,499
Wolf Of Wallstreet, the	7 Jan 14	1 Jun 14	315,627
Wolverine, the	2 Dec 13	24 Apr 14	134,522
TOTAL			1,662,081

figure 2. Total number of downloads of 8 films measured over 5 to 6 months

For eight films it involves a total of 1.66 million downloads from illegal sources.

If we look at the nine monitored Dutch titles, we see that they were downloaded 600,564 times during the measuring period.



Title	Start of Monitoring	End of monitoring	Downloads
Bro's before Ho's	5 Apr 14	1 Jun 14	113,050
De Nieuwe Wildernis	17 Dec 13	13 Mar 14	35,867
Leve Boerenliefde	17 Dec 13	16 Jan 14	5,851
Mannenharten	15 Mar 14	1 Jun 14	76,891
Mees Kees op kamp	11 Mar 14	1 Jun 14	60,386
Smoorverliefd	14 Dec 13	1 Jun 14	76,202
Soof	5 Apr 14	1 Jun 14	85,952
Spijt	2 Dec 13	1 Jun 14	105,499
Verliefd op Ibiza	06 Feb 14	1 Jun 14	40,866
TOTAL			600,564

figure 3. Total number of downloads of Dutch films during the measuring period

As indicated, these figures are not directly comparable with one another: for example, *Bro's before Ho's* and *Soof* had more downloads in a space of two months than *Spijt* did in 5 to 6 months. This is linked to the popularity of the films in general, but also to the period in which they were tracked.

For more details please see appendix 1 to this study.

3.2 Extrapolation of MarkMonitor figures

MarkMonitor's measurement gives an accurate picture of the total number of downloads during the measuring period for the selected 25 films. These figures need to be extrapolated in order to gain an overview of the total number of downloads of the annual film offering in the Netherlands. The extrapolation is done along two axes: time and the total film offering.

3.2.1 Time

MarkMonitor monitored the downloading of the titles during the six month measuring period. For some titles this was throughout the period, for others just two months. If we want to calculate the annual damage caused, we must extrapolate the actual figures to a year.

How often a film is downloaded during a year depends on various factors (when is a good illegal copy available, when is there coverage of the film in the media, is another instalment in the series of films being released etc.). Every film therefore has a unique 'download pattern'. This generally makes it difficult to accurately extrapolate the download figures over time.

Yet there is a general trend visible for most films: downloads of the films take place around the release and particularly go up strongly when there is a good copy available. The main peak therefore generally happens when the title is released on DVD/Blu-Ray/VOD (because good rips can then be made). The number of downloads then declines over time as the film becomes older. Account has been taken of these patterns as much as possible in making the extrapolation: for example, was the measurement done at the end of the 'lifecycle' or at the start of the lifecycle?

Annual figures from MarkMonitor for previous years have also been incorporated in the extrapolation. These were used to assess whether the estimated amounts are within the same range as the total figures over a year for comparable titles. For example: the number of downloads for a blockbuster in 2013 will be broadly comparable to the same type of blockbuster in 2014.

Based on extrapolation over time, we have calculated a download total for the 25 films in question of 5.1 million.²⁹ For a detailed explanation of the extrapolation please see the appendix.

3.2.2 Film offering

Films are offered through various channels in the Netherlands. Consumers can legally consume films by viewing them in the cinema, through Video on Demand (VOD), via legal streaming websites or on television. Films can also be physically purchased on DVD or Blu-Ray. On average around 250 film titles a year are released into cinemas in the Netherlands and around 3000 titles on DVD/Blu-Ray/VOD (home video entertainment).³⁰ These three thousand titles consist of the video releases of the 350 cinema films listed above, direct to video releases (new films which have not been shown in Dutch cinemas) and all sorts of re-releases (such as special editions). Alongside those new releases there is, of course, also a back catalogue of films released in previous years which are still available through one or more channels (legal and illegal).

Because the array of home entertainment titles is so diverse and the list of titles as monitored is not representative of this home entertainment offering, it is not really possible to include this offering in the extrapolation. For this reason we have not carried out this extrapolation. The study and the calculations of the damage therefore only include cinema titles and not this extensive home entertainment catalogue. We would therefore expect the actual number of downloads for the entire Dutch film offering to be higher than the extrapolation that we have produced.

In order to extrapolate the film offering, we assumed 350 films a year.³¹ The monitored 25 films make up 7.14% of the total annual 'film offering'. Based on 5.1 million downloads, that therefore gives us a total of 71.4 million downloads.

The figure of 71.4 million downloads is higher than the download quantities self-reported by consumers from the study by IViR/CentERdata. The study by IViR/CentERdata shows that the average number of downloads from illegal sources per person per year for the population aged between 12 and 65 is 5.3.³² Based on figures from Statistics Netherlands we can assume around 11.5 million people aged 12 to 65.³³ It then involves

²⁹ See the appendix for the extrapolated numbers.

³⁰ Sources: There were 369 films in 2013. See: Nederlands Filmfonds and Gfk (http://issuu.com/netherlandsfilmfund/docs/fff_2013_def)

³¹ Source: Nederlands Filmfonds and NVB

³² This may involve self-underestimation and socially desirable responses to questions. The true figure could therefore be higher in reality.

³³ See: <http://www.cbs.nl/nl-NL/menu/themas/arbeid-sociale-zekerheid/publicaties/barometer-beroepsbevolking/barometer-bevolking-15-65-art.htm> and <http://statline.cbs.nl/StatWeb/publication/?VW=T&DM=SLNL&PA=70072ned&D1=0-118&D2=0,12&D3=14-15&HD=100914-1525&HDR=T&STB=G1,G2>

11.5 million x 5.3 = 60,950,000 downloads from illegal sources. This relates to the total number of downloads from illegal sources through all channels, so including downloads from file lockers and via illegal streams.³⁴The most obvious explanations for the difference between extrapolation and the self-reporting are: 1) the sample of monitored films is not sufficiently representative, and/or 2) there is self-underestimation with regard to the download quantities amongst consumers.³⁵

For the purpose of calculating the amount of damage, we will assume 61 million downloads to be on the safe side.³⁶

3.3 Dutch downloading behaviour in perspective

Worldwide the Netherlands ranks in 16th place with regard to downloading from illegal sources via peer-to-peer networks with around 2.3 million downloads of the tracked international titles.³⁷If we convert these figures per head of population, we see that the Netherlands ranks 10th worldwide with regard to downloading from illegal sources.³⁸Within Europe the Netherlands ranks 5th after Estonia, Greece, Italy and Sweden.

³⁴ It is not possible to calculate the total number of downloads via the alternative channels. Envisional (2011) estimated the ratio between Bittorrent and other channels (Usenet, Streaming, file lockers) at around 2:1 in 2011.

³⁵ The sample includes a number of major titles for which the DVD releases occurred during the measuring period.

³⁶ The authors believe that this estimate is conservative.

³⁷ In order not to distort the figures, the Dutch titles have been filtered out here, because these are expected to be less popular in the rest of the world.

³⁸ The top 10 consists of: the United Arab Emirates, Israel, Estonia, Greece, Italy, Australia, Qatar, Sweden, Singapore and the Netherlands.

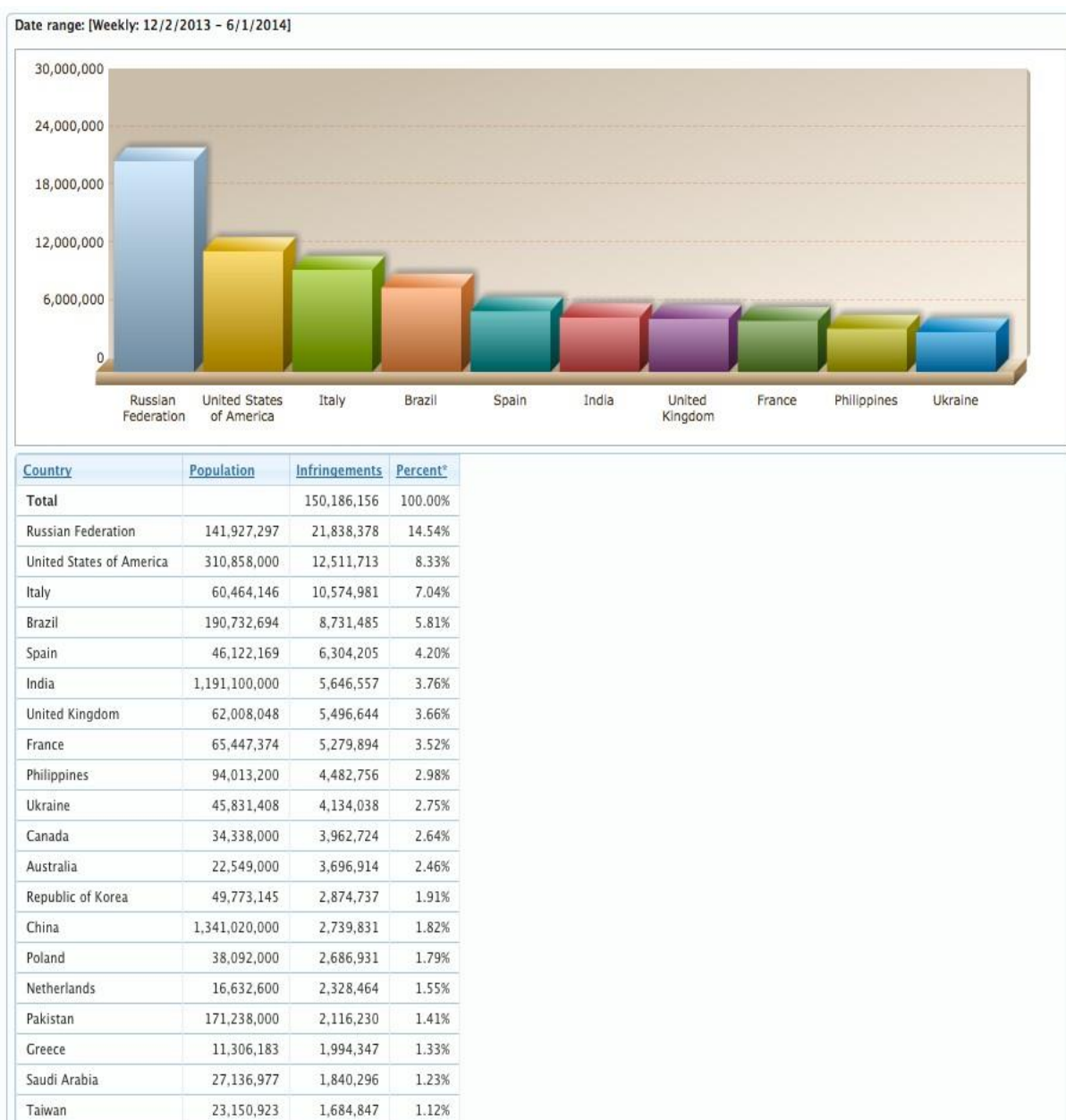


Figure 4. Actual downloads during measuring period of all measured international films (Dutch films excluded). Absolute numbers, not corrected per capita.

Various explanations have been given for the Netherlands' high position on the world rankings. For example, the Netherlands has a very good ICT infrastructure, including the international internet node AMS-IX, and a competitive broadband market. This means that we have relatively high Internet speeds at a low price in the Netherlands. Residents of the Netherlands also make plenty of use of this good infrastructure. With an Internet penetration of 93%, the Netherlands is in joint fourth place with regard to Internet penetration in Europe according to research by *We Are Social*.³⁹ The Netherlands is thereby well above the world average of 34%. In Europe the average Internet penetration is also much lower than in the Netherlands, namely 68%.⁴⁰

³⁹ We are social (2014), *Social, Digital and Mobile in Europe 2014*, via: www.wearesocial.net. See also the OECD Broadband Portal at: <http://www.oecd.org/sti/broadband/oecdbroadbandportal.htm>

⁴⁰ We are social 2014

Alongside the quality of the Internet, other factors may also play a role. The Netherlands has an international orientation and we have good command of the English language (in which many films are released). The interpretation of the home copying arrangement which applied up until 10 April with regard to downloading from illegal sources probably also contributes to the high position on the list of downloaders. Some 70% of Dutch respondents indicate that they will stop downloading or download (much) less as a result of a ban.⁴¹In Italy, for example, there is also a relatively permissive approach to downloading from illegal sources: in 2007 the highest court in Italy ruled that downloading from illegal sources is not a crime.⁴²In that regard the Dutch situation is/was therefore similar to the Italian in terms of the legal context. There is a download ban in Sweden. Illegal downloading consequently declined considerably shortly after the ban was introduced. However, after a while the illegal traffic recovered to its old level. This can probably be explained by the fact that the file-sharing culture in Sweden did not change, and enforcement is not particularly tough.⁴³

3.4 Interim conclusion

MarkMonitor tracked 25 film titles on P2P networks over a six month period. In the Netherlands the monitored titles were downloaded from illegal sources 2,929,028 times. It should thereby be noted that not all titles were actually tracked for 6 months and the total for six months is therefore higher than this. If we extrapolate the figures to a year, that gives us a download total of 5.1 million unique downloads of 25 films. Based on 350 films per year (the number of films that are shown in cinemas on average), that gives us 71.4 million downloads. Self-reporting by consumers gives a total of 60.9 million downloads. This (conservative) estimate is rounded off to provide a starting point for the calculation. The Netherlands is in the top 10 countries which download most. Within Europe the Netherlands ranks 5th after Estonia, Greece, Italy and Sweden.

⁴¹ Poort, J., Leenheer, J. (2014), p. 25

⁴² See: Associated Press (2007), *Italian Court: Downloading OK if not for profit*, via: <http://nbcnews.to/1ik9ZqU> (most recently consulted: 10 June 2014).

⁴³ See inter alia Adermon & Liang 2010

4 Substitution and sampling effects of film downloads

Now that we have identified the scale of downloading from illegal sources in the Netherlands, we need to determine to what extent this illegal offering is disrupting the normal market. Because not every download is automatically a lost sale. In order to get a realistic picture, we also need to take account of the substitution and sampling effects.

IViR/CentERdata has carried out research in order to determine the substitution and sampling effect of downloading films from illegal sources in the Netherlands.⁴⁴ IViR/CentERdata examined to what extent consumers' downloading behaviour affects the purchasing and consumption behaviour through legal channels. The choice was made for a consumer survey amongst a representative sample of the Dutch population aged between 12 and 65 and an economic model estimate. The study is attached as an appendix.

4.1 Substitution

Substitution is the situation whereby the availability of (free) illegal offerings cause the consumer to forgo consumption of a legal product. Downloading from an illegal source then effectively displaces the regular offering, i.e. part of the existing demand for a product is met by the illegal offering. Substitution leads to actual loss of turnover.

Little research has been carried out into substitution in the market for films. Available studies about downloading (broader than just the film market) are often also contradictory in their conclusions about the substitution effect. It has been found to be difficult to establish to what extent a consumer who downloads from an illegal source would have opted for the legal offering if file sharing had not been an option.⁴⁵

In the IViR/CentERdata study the respondents were asked whether they would have paid to go and see the most recent film that they downloaded from an illegal source if it had not been available from illegal sources. 67.9% of the respondents answered this question in the affirmative. There is therefore a substitution ratio of 67.9%; in other words, for every 10 film downloads some 7 fewer films are viewed through legal channels. Almost half the respondents (48.7%) stated that they would then watch the film in the cinema, whilst 29.5% would be interested in the DVD or VOD stream, and 22.2% stated that they would have opted for a paid download.⁴⁶ It can be concluded from this that the vast majority of the respondents would have been prepared to pay for their most recently downloaded film if it had not been available illegally.

However, because consumer research can be influenced by selective memory and socially desirable responses and because only the willingness to pay was examined, the substitution effect has also been estimated using econometric models. For details of this see the IViR/CentERdata study.⁴⁷

⁴⁴ Poort and Leenheer 2014, p.

⁴⁵ See inter alia Schermer and Wubben 2011

⁴⁶ Poort and Leenheer 2014, p. 15

⁴⁷ Poort and Leenheer 2014, p. 17

4.2 Sampling

Alongside substitution, it is also possible that the availability of an illegal offering may have positive consequences for the sale of films. The download culture could also offer the sector something. It is not known whether there is a causal link between illegal consumption and subsequent legal purchase, the so-called 'sampling effect'. Specific research about the sampling effect in the market for films in the Netherlands is scarce.⁴⁸ However, this effect is relevant because it could ameliorate the damage which the industry suffers as a result of substitution.

With sampling, a distinction needs to be made between direct sampling and indirect sampling. Direct sampling means that the consumer purchases the same product legally as a result of the download. Indirect sampling means that the consumer legally purchases a related product as a result of the download, such as a film by the same director or with the same actors.

Various studies have observed a sampling effect for music.⁴⁹ When a consumer listens to a track by a particular artist and they like the track, this can lead to the consumer going on to legally purchase the rest of the album or other albums by the artist. In this scenario the rights holder experiences positive effects (promotion effects) from illegal downloads.

Studies into downloading and the discussions within society about it make no distinction between the sampling figures for music and film, whilst these are significantly different product groups. Hence music is listened to repeatedly and there is often more material available by the same artist. The situation with films is different: a film is usually not viewed multiple times. This likelihood of direct sampling is therefore smaller. Also relevant to films is the fact there is a different production, earnings and distribution model than for music. Film is far more of a composite product than music. The director who directs film A can then direct film B for a completely different studio. Any indirect sampling effects (a downloader watches film A, is enthusiastic about the director and buys film B) will therefore not necessarily accrue to the party that suffered damage from substitution in the first instance (film A).

The consumer research by IViR/CentERdata shows that the sampling effect (direct and indirect) for films is generally low. The direct sampling effect is between 0.9 and 2.8 films per downloader per year. This is equivalent to 5 to 15 extra purchased films per 100 downloads. The indirect sampling effect, whereby the downloader buys a film by the same makers as a direct result of the download is estimated to be slightly higher, at 1.7 to 3.9 films per downloader per year. This is equivalent to 8 to 19 extra purchased films per 100 downloads.⁵⁰

Because there is a risk of socially desirable responses and self-overestimates when self-reporting, these figures have also been corrected by the researchers using econometric models. For details of this see the IViR/CentERdata study.⁵¹

⁴⁸ See Schermer and Wubben 2011

⁴⁹ See Schermer and Wubben 2011

⁵⁰ Poort and Leenheer 2014, p. 16--17

⁵¹ Poort and Leenheer 2014, p. 17

4.2.1 Net effect of substitution and sampling

In order to reduce the uncertainties of survey research, IViR/CentERdata has calculated what the effects are of substitution and sampling on the basis of econometric models. Based on the model estimates of substitution and sampling, IViR/CentERdata has calculated a net effect of substitution and sampling. That means that both effects are 'offset' against one another. This calculation shows that the substitution effect is significantly stronger for films than the sampling effect. In other words: downloading from illegal sources has a negative effect on legal consumption everywhere.

The average displacement ratio (i.e. substitution) for all types of downloaders is 0.32. On average, one hundred downloads from illegal sources lead to 32 fewer films being consumed from legal sources.⁵² This means that for every ten downloads from illegal sources, approximately 3 legal consumption moments are lost: one film on TV, one VOD stream and one Blu-Ray/DVD.⁵³

With regard to the lost turnover, we are adopting this model estimate from IViR/CentERdata. Although the consumer research shows that the consumer also substitutes for cinema visits by downloading, this is not shown by the model estimates from IViR/CentERdata. Since IViR/CentERdata ascribe the greatest accuracy to these, we have taken these figures as the starting point. For details of this see IViR/CentERdata's comments.⁵⁴

4.3 Interim conclusion

Downloading from illegal sources has negative effects on the legal market because the legal offering is displaced (substitution) and positive effects because there is a promotional value to the downloads (sampling). However, if we offset both effects against one another, there remains a strong negative effect. For every 10 downloads, 3.2 fewer films are viewed through legal channels.

⁵² Poort and Leenheer 2014, p. 18

⁵³ Poort and Leenheer 2014, p. 19

⁵⁴ Poort and Leenheer 2014, p. 18

5 Calculation of damage from downloading from illegal sources in the Netherlands

5.1 Lost turnover in absolute figures

If we are calculating the damage to the film industry in the Netherlands in absolute figures, we need to look at the total value of the downloaded films. That gives us the following calculation:

Total number of downloads x Average market price⁵⁵ = Damage (lost turnover)

61,000,000 x 9.53 = 581.3 million euro lost turnover (including VAT).

To put that in context: the total home entertainment market (DVD, Blu-Ray, VOD) accounted for 256.6 million euro in turnover in 2013 including VAT.⁵⁶ However, it is better to refer to it as the total value of these downloads rather than lost turnover or damage, because the example above does not take account of the fact that not every download represents a lost sale.

5.2 Lost turnover corrected for substitution and sampling

However, the example above does not take account of consumers' more limited willingness to pay for the legal alternative and possible budget restrictions. Not every download is a lost sale. If we want to gain a (more) realistic picture of the damage caused to the film industry in terms of lost turnover, we need to calculate the damage on the basis of the actual number of legal consumptions displaced.

The calculations by IViR/CentERdata show that the average net effect of substitution and sampling gives a displacement ratio of 0.32.⁵⁷ This leads to the following calculation:

Total downloads x Net effect of substitution and sampling = Lost legal consumptions

61,000,000 downloads x 0.32 = 19,520,000 lost legal consumptions.

Account must thereby be taken of the fact that this relates to watching films. If we break this down further, then for every 100 illegal downloads 11.1 fewer films are watched on television, 11.3 fewer on DVD/Blu-Ray and 9.9 fewer on VOD.⁵⁸

To estimate the lost sales per DVD/Blu-Ray we can - based on IViR/CentERdata's models - use a figure of 11.4 lost sales per 100 downloads.⁵⁹

⁵⁵ To calculate the average market price we have assumed 5 euro for a VOD, 10 euro for a DVD and 16 euro for a Blu-Ray (source: NVPI report 2014). In order to calculate a single figure, the amounts have been averaged on the basis of their relative share of turnover (25% for VOD, 13% for Blu-Ray and 62% for DVD). This price is 9.53 euro.

⁵⁶ Source: NVPI report 2014

⁵⁷ Poort and Leenheer 2014, p. 18

⁵⁸ See Poort and Leenheer 2014, p. 19. It is not possible to accurately estimate the lost turnover in the television channel because of the lack of clear and unambiguous figures about the income per viewer. For this reason this lost turnover will not be included in the final total.

This is equivalent to 6,954,000 lost sales ($=61,000,000/100 \times 11.4$). Assuming an average price of 9.31 euro per DVD/Blu-Ray, this means a lost turnover of **64,741,740 euro** including VAT.⁶⁰

In order to estimate the lost sales per VOD stream/download, we can assume 9.9 lost legal viewing moments per 100 downloads on the basis of IViR/CentERdata's models. This means 6,039,000 lost legal consumptions ($=61,000,000/100 \times 9.9$). At an average price of 4.99 euro this means a lost turnover of 30,134,610 euro. However, we must thereby take far more account than with DVD of the fact that - according to IViR/CentERdata - VOD streams are watched by several people.⁶¹ Corrected for this, the lost turnover is **13,697,550 euro** including VAT.

This means that the total actual annual damage in terms of lost turnover for the Dutch film industry is **78,439,290 euro** including VAT.

The authors thereby note that this calculation is based on conservative estimates and does not include the lost television turnover, as a result of which this figure probably represents the minimum lost turnover for the Dutch film industry.

Damage calculation for individual films: The Hunger Games & Spijt

The damage calculation can also be made for individual films.

The international title *The Hunger Games: Catching Fire* was tracked for six months. Over those six months the film was downloaded 336,000 times. The expectation is that this will be 450,000 times in a year. This means that the film will probably lose 144,000 legal consumptions in 2014. This means a loss of DVD and VOD turnover for 2014 of **578,651 euro** including VAT.

The Dutch film *Spijt* was tracked for six months. Over those six months the film was downloaded 105,499 times. The expectation is that this will be 190,000 times in a year. This means that the film will probably lose 60,800 legal consumptions in 2014. This means a loss of DVD and VOD turnover for 2014 of **244,319 euro** including VAT.

5.3 Lost turnover in perspective

In 2013 the total turnover for video (films and series) in the home entertainment segment (VOD, Blu-Ray, DVD) was 256.6 million euro including VAT.⁶² The calculated annual lost turnover of 78.4 million euro is therefore around a third of the industry's annual turnover in this segment. It should therefore also be noted that the total turnover *includes* series and our damage calculation *excludes* series. It can therefore be argued that the Dutch film industry loses more than a quarter of its potential annual turnover in the home entertainment segment due to downloading from illegal sources.

⁵⁹ The difference between 11.3 and 11.4 lies in the fact that two different models have been used which lead to virtually the same weighted displacement ratio (see Poort and Leenheer p. 18, table 3.5).

⁶⁰ Figures from NVPI and GfK. In 2013 the average price for a film DVD was 8.23 euro, and 14.66 euro for a film Blu-Ray. Based on relative market share, that gives us an average price of 9.31.

⁶¹ For that reason we have corrected by the average size of a Dutch household (2.2 persons). ⁶² Figures from NVPI Report 2014.

The market for home entertainment has shown a downward trend for several years, which is not yet being compensated by new business models such as VOD. The market for home entertainment video shrunk in 2013 by 10.9% in total compared to 2012. In 2009 the turnover from sales in the home entertainment segment was still 31 million euro.⁶³ There was also still a substantial rental market in 2009 which accounted for some 60 million, but this had largely evaporated by 2013.

⁶³ Annual figures NVPI 2009 (from www.nvpi.nl)

6 Sentiment with regard to downloading and 'download ban'

As already discussed in the introduction, the Dutch situation for downloading from illegal sources had long been unique. By placing downloading from illegal sources under the home copying arrangement, there was no 'download ban' in the Netherlands until recently. The recent ruling of the European Court of Justice in the case of *ACI Adam vs. Stichting de ThuisKopie* changed this. IViR/CentERdata's study shows that around a third of Dutch residents are well-informed about the rules (in force at the time) concerning the legality of unpaid downloading, copying and the home copying arrangement. Around one third were not at all informed, and one third were roughly aware. Downloaders were thereby better informed about the applicable laws and regulations than non-downloaders.

Researchers claim that factors such as moral responsibility, feelings of guilt or the risk of being caught influence the choice to download from illegal sources.⁶⁴ The closure of file-sharing platforms is also said to affect the purchase of films and series from legal sources.⁶⁵

When respondents were asked whether they think it's important that film maker should be rewarded for their work, almost 75% responded in the affirmative.⁶⁶ Research by Portsmouth University has also shown that consumers who download films from illegal sources are more including to stop their downloading behaviour if they think that this behaviour will harm the film industry.⁶⁷

6.1 Effect of 'download ban' on consumer behaviour

The question is to what extent a 'download ban' influences consumer behaviour. The flipside of this question is also relevant: to what extent has the Dutch 'policy of tolerance' of downloading from illegal sources which has now been overturned by the European court influenced consumers' downloading behaviour.

73.8% of the respondents stated in IViR/CentERdata's survey that they would stop downloading or would download significantly less from illegal sources if it was banned and penalties were applied to it.⁶⁸ The perception that there can be or will be no enforcement therefore appears to be reason enough for this group of respondents to carry on downloading. In that sense the fact that downloading from illegal sources has been 'legal' in the Netherlands for the past 12 years will undoubtedly have contributed to them starting and continuing to download.

Finally around a third of respondents feel that a download ban is acceptable, a quarter think that a download ban is (highly) unacceptable and the remainder are in the middle.

⁶⁴ See inter alia Schermer and Wubben 2011

⁶⁵ The closure of file sharing platform Megaupload resulted in a rise in the number of films sold/rented. See: Danaher and Smith (2013)

⁶⁶ Cox & Collins 2014

⁶⁷ Cox & Collins 2014

⁶⁸ Poort and Leenheer 2014, p. 25-26

7 Consulted literature

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Weda, J. et al. (2012), *Digitale drempels: Knelpunten voor legaal digitaal aanbod in de creatieve industrie*, SEO Economisch Onderzoek

8 Appendices

8.1 Appendix 1: List of titles of monitored films

Title	Cinema release	DVD release	Start of monitoring	End of monitoring	Months monitored	Downloads	Extrapolation of downloads
American Hustle	6 Feb 14	7 Aug 14	6 Feb 14	1 Jun 14	4	130,106	300,000
Anchorman 2	27 Mar 14	27 May 14	21 Mar 14	1 Jun 14	3	44,101	100,000
Bro's before Ho's	5 Dec 13	1 Apr 14	5 Apr 14	1 Jun 14	2	113,050	315,000
Counselor, the	14 Nov 13	12 Mar 14	2 Dec 13	7 Feb 14	4	15,428	25,000
De Nieuwe Wildernis	26 Sep 13	1 Dec 13	17 Dec 13	13 Mar 14	4	35,867	58,000
Elysium	15 Aug 13	1 Dec 13	17 Dec 13	26 Feb 14	3	88,902	180,000
Ender's Game	23 Jan 13	1 May 14	2 Dec 13	18 Mar 14	4	103,136	175,000
Escape Plan	17 Oct 13	1 Feb 14	17 Dec 13	8 Apr 14	5	159,787	170,000
Frozen	11 Dec 13	1 Apr 14	4 Dec 13	1 Jun 14	6	285,226	450,000
Gravity	3 Oct 13	Feb 14	06-02-14	1 Jun 14	4	174,610	350,000
Hobbit, The - an Unexpected Journey, The	12 Dec 12	1 Apr 13	17 Dec 13	6 Feb 14	2	72,355	125,000
Hobbit the - the Desolation of Smaug, The	11 Dec 13	16 May 13	16 Dec 13	1 Jun 14	6	249,176	450,000
Hunger Games Catching Fire	20 Nov 13	27 Mar 14	2 Dec 13	1 Jun 14	6	336,012	450,000
Inside Llewyn Davis	5 Dec 13	8 Apr 14	16 Jan 14	6 Feb 14	1	3,799	20,000
La Grande Bellezza	7 Nov 13	27 Mar 14	6 Feb 14	21 Mar 14	1	3,262	18,000
Leve Boerenliefde	16 May 13	1 Sep 13	17 Dec 13	16 Jan 14	2	5,851	23,000
Mannenharten	28 Nov 13	1 Mar 14	15 Mar 14	1 Jun 14	3	76,891	175,000
Mees Kees op kamp	11 Dec 13	1 Apr 14	11 Mar 14	1 Jun 14	3	60,386	130,000
Smoorverliefd	12 Sep 13	1 Jan 14	14 Dec 13	1 Jun 14	6	76,202	125,000
Soof	12 Dec 13	1 Apr 14	5 Apr 14	1 Jun 14	2	85,952	200,000
Spijt	20 Jun 13	12 Nov 13	2 Dec 13	1 Jun 14	6	105,499	190,000
Twelve Years a Slave	20 Feb 14	20 May 14	6 Feb 14	1 Jun 14	4	212,385	350,000
Verliefd op Ibiza	31 Jan 13	1 Jun 13	6 Feb 14	1 Jun 14	4	40,866	75,000
Wolf Of Wallstreet, the	9 Jan 13	27 May 14	7 Jan 14	1 Jun 14	5	315,627	500,000
Wolverine, the	25 Jul 13	1 Nov 13	2 Dec 13	24 Apr 14	5	134,552	180,000
TOTAL						2,929,028	5,134,000

Figures for unique downloads as measured by MarkMonitor. Extrapolations by Considerati.

8.2 Appendix 2: IViR/CentERdata study

Report by IViR/CentERdata (Poort, J., Leenheer, J. (2014), *Alleen maar nette mensen: consumentenonderzoek downloadgedrag films*, IViR/CentERdata).