Private Copying in Croatia

Daniel Antal, CEEMID

2019-05-02
# Table of Contents

Executive summary ........................................................................................................... 4

Chapter 1 ................................................................................................................................. 9

Who is listening to music? .................................................................................................. 9
  1.1 Audience demography ................................................................................................. 11
  1.2 Demand for paid and free music ................................................................................ 13
  1.3 Finding the right balance ............................................................................................ 15

Chapter 2 ................................................................................................................................ 16

How musicians get paid? .................................................................................................... 16
  2.1 Live performances ...................................................................................................... 19
  2.2 Compensation for the free music ............................................................................... 21

Chapter 3 ................................................................................................................................ 23

What is private copying? .................................................................................................... 23
  3.1 History of private copying .......................................................................................... 24
  3.2 Benefits of private copying ........................................................................................ 26
  3.3 Technology and compensation .................................................................................. 28
    3.3.1 Analogue copying and length of recording .......................................................... 28
    3.3.2 Digital copying of records .................................................................................. 29
    3.3.3 Multi-purpose use ............................................................................................... 30
    3.3.4 Compressing music: the mp3 format ................................................................... 31
    3.3.5 Surveying the widespread mp3 copies ............................................................... 32
  3.4 Further considerations ................................................................................................ 34
    3.4.1 P2P: Copying music from a strangers’ home ...................................................... 34
    3.4.2 Music is like water: the introduction of streams ............................................... 35
    3.4.3 Unlicensed streams and the value transfer to internet platforms ....................... 37
  3.5 Private copying in the age of streaming ..................................................................... 39

Chapter 4 ................................................................................................................................ 41

Considerations for private copying remuneration ................................................................. 41
  4.1 The nature of the private copying levy ....................................................................... 42
  4.2 From mechanical to probabilistic calculation of harm ............................................... 43
  4.3 Collecting the remuneration ....................................................................................... 44
  4.4 Negotiating a just and effective collection ................................................................... 46
  4.5 Technological flexibility ............................................................................................. 48
Executive summary

Private copying or home copying means that people can make free copies of music and films for their private use, at home, without royalty payments and fear of persecution. This exception from the general copyright law is granted by international, European and Croatian law under condition that consumers provide an adequate level of compensation for the creators of these works, in the form of private copy levies when buying copying devices and blank media carriers. The ability of home copying in almost all European jurisdictions and in most advanced countries, also followed by many developing nations, enables the people to get access to entertainment and high culture at a very low price. It makes the use of computers, smartphones, tablets and their accessories attractive for young and old, and creates a huge growth opportunity for the tech sector.

The condition for this very favorable regime is the creation of a functional private copying remuneration system which measures the consumers’ benefits from free copying and balances it with the economic harm caused to creators, levies the compensation payment for users and distributes it to creators. Given that the European private copying systems are more than 50 years old, they went through numerous changes necessitated by technological and legal change.

In Croatia, HDS is responsible for managing this system on behalf of various music, literary and audiovisual rightsholders. The current system was put in place in 2003, well before Croatia’s accession to the European single market, and in an era where most currently used entertainment devices and media, for example, mp3 players, smartphones and tablets were in their infancy, and not accessible for most users. The Croatian private copying compensation levied on various blank carriers, such as on blank DVDs, pendrives, external drives is 70-95% smaller than in other European countries. Because blank media is almost costless to fill up, Croatian households are making copies of music and film in more than 8 billion kunas value per year. The ability of households to benefit from home copying has grown significantly, since copying became cheaper, simpler, faster, and home copying almost took over from direct sales of music and films. To maintain the necessary balance between consumer benefits and rightsholders compensation a significant overhaul of the system is necessary.

In the 2017. compensation for private copying in Croatia was 8.739.763,85 kunas or 1.163.185,16 euros.
The per capita income from private copying levies in Croatia is almost 79% below the EU average. The reason for this can be found in exceptionally low tariff rates, as well as in widespread black market.

In order to establish a sustainable market and to adequately compensate for the use of home copied music and film, higher levies are necessary, and this would also reduce the incentive to copy all possible music and film content at almost no cost. It is not to say that rightsholders should receive billions of kunas in compensation, but the increase of copying levies and, subsequently, increase in their compensation is necessary.

The EU legislation calls for private copying remuneration systems to establish a fair balance between the consumer benefits and the harm incurred by private copying to rightsholders and artists.

Based on various, nationally representative survey of Croatian households, in comparison with other nations, and a very thorough examination of technological changes and sales conditions we found that the total value of the consumer's benefit from allowing home copying of music and audiovisual works is about 128 million kunas. A plausible argument for balancing out both interests and benefits of consumers and rightsholders would be splitting this benefit into two halves, which would leave a large benefit at the consumers’ end but would increase the benefits equally to rightholders. This would be a very
cheap solution to provide about 40% of the Croatian population with virtually unconstrained access to music and films, but the current levy system fails to generate this income.

In the study, we are suggesting to target a compensation level of 33-50% of this sum mentioned above, meaning 42-64 million kunas. This is because of the uncertain lines between home copied files that certainly fall under the home copying exception set by the European Union, and illegally copied files that could be potentially subject to criminal litigation and different source of damage claim. We argue that if the Croatian state allows the collection of approximately 42-64 million kunas (for the combined use of music and films), the rightsholders should not make a collective effort to claim damages for files that may not fall under the home copying exception, only in evidently criminal, individual instances. As the following chart shows, this sum would only marginally improve the position of the Croatian music and AV industry in international comparison, which would also create positive effects on the incomes of composers and audiovisual rightsholders.

The Potential Effect of Proposed changes On Croatian Music and AV Industry Position

![Chart showing the potential effect of proposed changes on Croatian music and AV industry position](image)

*Figure 2 The effect of the proposed changes on the Croatian music and AV industry’s international position*

This amount is much smaller than the compensation levied on Western European users. Croatian people have a smaller household budget than the EU average, therefore they allocate a smaller percentage of this household budget to culture and entertainment. This means that they spend less on gadget and blank media, and sadly, they also allocate less money to music and film sales, and they allocate proportionately more on housing costs, food and other necessities. This creates a challenge for both the tech sector that provides entertainment
equipment and series, and for cultural and creative industries that provide content for the Croatian people, because they have no less demand and desire for music, movies, recreation and dance, but can less afford it.

This study argues that the cultural and welfare benefits of this private copying regime are enormous and important to create a good quality of life in Croatia for all age groups, but especially for young people, and it must be maintained. Furthermore, it is very advantageous for the tech sector, because their products are mainly used with unlicensed music and film copies, given that only a very small portion of the population pays for downloads, or subscribes to services like Spotify, Deezer or Netflix.

In the last decade, the increase in the ability to copy music and films lead to increased disputes between the tech sector and the creative industries, and these disputes were resolved in many countries with significantly increasing the compensation values. In our view, the Croatian private copy levy payers and rightsholders can learn a lot from these disputes, and they can avoid time consuming, expensive and unpredictable lawsuits that may require payments for several years retroactively. Hopefully this study will help the renegotiation and modernization of the Croatian levy system without such conflicts.

The first chapter shows how Croatian households are listening to music, and what the role and consumer benefit of private copying for them is. Then the second chapter turns to Croatian musicians, and shows how they make a living, and what sort of remuneration would be needed for them to replace the lost revenues due to home copying. These are the facts that should be established, if possible, annually or even quarterly, with the level of detail that is deemed necessary by payers and receivers of the levy.

The third chapter introduces the technological and legal changes in private copying since the 1960s. A historical introduction is necessary, because some elements of the current system were originally designed for analogue devices and blank media and need to be reinterpreted for digital devices where copying capacity is a function of notional storage capacity, processing speed and real time compression rates and input-output speed. Furthermore, the current devices and blank media are not specialized for home copying and usually they are used for non-copyrighted, licensed and unlicensed uses at the same time.

The fourth chapter highlights some practical elements of an efficient system and reviews some important lessons from legal debates and disputes in the last decade. Croatia has become a member of the European Union, which means that this European jurisprudence is legally binding for participants in the private copy levy negotiations and for Croatian courts and authorities who may need to resolve disputes.

The fifth chapter shows three different calculations for the appropriate amount of compensation for the free use of music and audiovisual content in Croatia. Consumers benefit
from legal home copying and illegal copying based on various calculations about 115-128 million kunas, depending which model calculations we are looking at.

Based on these model calculations the study demonstrates that currently 42-64 million kunas should be levied on blank media and copying devices. This would comply with competition policy objectives to leave a significant part of the consumer benefit to the consumer.

This sum should be levied via tariffs that are able to produce this revenue. The tariffs may be relatively lower in case tariff payers and recipients create an efficient collection system and an efficient market monitoring system that detects illegal, non-levied sales in Croatia. If market monitoring cannot be strengthened, somewhat higher levies should be introduced.

Furthermore, the study will also show that Croatian households only pay a fraction of the private copying levy on their blank media compared to the EU average.

The best moment to make changes in the Croatian legislation is now, when the new Copyright directive calls for remedies for another technological change, the unlicensed use of music and audiovisual works on media platforms such as YouTube and Facebook.

The value transfer to media and technology companies measured in this study (based on 2017 data, for both music and films) stood at around 73 million kunas, already more than half of the value of home copying. This estimated amount is the value of unlicensed use of music on such platforms, which undermines both licensed uses in radio, television, mechanical copying and the equitable compensation value of home copying. New legislation should be able to create an even playing field among YouTube and TV channels, and at the same time share the benefit from allowing home copying between rightsholders and consumers on a 1:2 basis.

The details of the methodology applied, a review of the European jurisprudence, a more professional literature review not intended for the general readership of this study can be found in the Annex.
Chapter 1

Who is listening to music?

Almost everybody listens to music. Music is present in our lives, wherever we go, in the public spaces, in parties, in weddings and funerals, in the car, on the go. We use music when we celebrate, when we mourn. We use music to isolate the noise of the city or the crowd in a store. In this study we will show who and in what amount uses the creations of music authors, performers and what the role of private copying in the enjoyment of music is. We also take a look at films, television programs and other audiovisual work, where private copying also plays a very important role in the household consumption.

Comparison of Various Music Audiences
Background music, live performance genres, other cultural activities and music devices

![Bar chart comparison of music and other cultural audiences](image)


**Figure 3 Comparison of music and other cultural audiences**

In Croatia, more than 3 million people listen to music on the radio, almost two million people have been in the last year to a concert, 1.5 million to a dinner where music was played, and about 1.4 million people made copies of their favorite music on their computer or devices – almost as many people as the total cinema audience. Recorded music reaches almost everybody, and many people enjoy the benefits of home copying. The chart makes an
objective comparison of various access forms to culture in the field of music, audiovisual content and theatres.

In the chart we compare the size of the audiences of music in different sources, and we compare it to cinema and theatre, too, based on the of the Croatian CAP survey. Further details about this nationally representative survey can be found in the Annex\(^1\).

According to international, EU and Croatian law creators should receive a fair remuneration for their work. The copyrights of music and film, and the neighboring rights of recordings want to ensure that those artists, technicians, managers, producers, who create the all-surrounding music are properly paid.

Who is eligible for copyright and neighboring rights?

- In live performances the performing artists are playing the music live with their own voice, instruments or turntables in the case of DJ shows.
- In recorded performances the recording is made in a studio or during a live concert, and the recorded fixation is distributed on vinyl, cassette, CD, DVD, or in the form of mp3 files.
- In broadcasting the recorded or live performances are communicated to a larger audience via radio. Most of the radio content is music, and it is mainly recorded music. However, many public radios, including the Croatian public radio have an own orchestra, too.
- In public performance the recordings are played in restaurants, bars, shopping malls, partly to create a more pleasant atmosphere, and partly to dampen the unpleasant noises of machines or other customers.

\(^1\) The Croatian Cultural Access and Participation Survey was designed and processed by CEEMID, based on the recommendations of the Eurostat ESSNet-Culture working group and conducted by Hendal. See the details in the Annex.
1.1 Audience demography

The audience of music is similar all over in Europe, and even the world. The Croatian listening habits have some characteristics that are more alike the region and neighboring countries, but our data shows that Croatia is not that different.

In music listening, we can establish four phases [^2]

[^2: The characterisation follows the research of Morris B. Holbrook and Robert M. Schindler (Holbrook and Schindler 1989; Holbrook M.B and Schindler R.M 2013).]

- **Child age**, when the audience is listening to what the parents are listening or thinking fit, and when people do not have the money and the devices to buy or copy music.

- **Young age**, or music discovery age, roughly between 15-23 years, when people spend the most time in their age peer group and when they discover music. Not only is this the time when people listen to the most type of music, but this is the time when they try most of the music.

- **Middle age**, when people have the most money to spend on music, but when they have the least time to do so. It had been shown by many studies that most people stop discovering new music, and mainly stick to their old music collection, or the artists they started to follow at the music discovery age.

- **Old age**, when only those people listen to music, who made a life-time commitment to music at an early age, and generally musically well educated.

Almost all over Europe, it is a general trend that the time spent listening to recorded music and live performances is growing about till the age of 23, and then it is declining lifelong. Because there are much fewer young people than middle-aged and old people in Europe, the revenues of the music markets and artists depend on two very important factors: how many young people are listening to music at the peak, and how fast this audience is melting?

All over Europe young people are looking for the cheapest or free supply of music when they are discovering their own taste and style. Teenagers and college students download and copy vast amounts of music at this age, and if they can afford it, they visit many concerts. The European private copying regime that allows the free copying of music at home for the equitable compensation guaranteed by the states is very important for the European and Croatian youth. For a healthy, life-long commitment the PCR regime is an important positive factor, and probably almost as important as music education.

Our research shows that that there are some characteristics that are particularly fit for Croatia. In Croatia, the number of young people interested in music is particularly high, so music demand is peaking favorably. However, the decline of the audience as age grows is one of the fastest in Europe, which is very unfavorable for the Croatian music scene, because middle aged audiences disappear very soon, exactly when they would have more money to spend on records and concert tickets.
While the Croatian audience is not very different from other audiences in the region, it is very special for the Croatian artists: for most of the Croatian creators, they are the only audience. While many people listen to foreign music in the country, if they never pay for it, the effect will be minimal for the creator. International stars collect royalties from more than 180 countries and territories in the world. However, most Croatian creators can rely only on the copyright remuneration paid in Croatia, and to some extent, in the former Yugoslav countries. And because this collection is rather low, most artists cannot make a living from their profession. They are often forced to do second jobs, and completely abandon creating and performing music. A modern nation, like Croatia, needs a vibrant, relevant, new cultural life with music and film that is rooted in the Croatian language. Music creation would require a better protection and remuneration of the copyrights and neighboring rights of Croatian creators. Furthermore, if Croatian artist want to be better paid in their former Yugoslav markets, it is very important that the level of remuneration meets EU standards and Croatia sets an example to these EU-candidate and hopeful candidate countries.
1.2 Demand for paid and free music

Why are copyright revenues so low in Croatia? Demand for records and concert tickets are part of the general cultural and recreational demand of the households. They are ‘normal goods’, meaning that demand for music is depending on the price of the music and the income of the person. The cheaper music is, the more people want, and the more income they have, the more they spend on music and entertainment.

The analysis of household recreational spending shows that Croatian, or Czech, Hungarian, Slovak spending on culture and entertainment is significantly lower than in Northern and Western Europe. Households have lower income, and they allocate less to culture and entertainment against necessities. Because they allocate a smaller percentage of a smaller household budget for such spending, the effect is that per capita spending on concert tickets and recordings is far lower than in the richer parts of Europe.

*Figure 4 Private copying in Europe*
But do Croatian people want to have less fun in their free time? Do Croatian students fall behind in partying and dancing behind their Nordic peers? No! So Croatian people, like the people in Czech, Hungary or Slovakia in the EU, increasingly turn their attention to saving money. And the best way they can save money on music is to copy music on their laptops, mp3 players, smartphones and tablets for free. While Croatian people allocate less money to buy music, they have more time to look for free alternatives, and they rely even more on copied music than their Western peers.
1.3 Finding the right balance

It is a welcome fact that Croatia is among those EU countries that allow young and old people to copy their own music and films on blank carriers at home without penalties or seeking a license to do so. This is critically important for the well-being of Croatian people. This policy allows them that even if they are materially poorer than their Nordic and Western peers, cultural they are not. But that is only one side of the equation.

For Croatian musicians, and producers of Croatian film and television series, programs, the most important market is Croatia itself; to a smaller extent the culturally similar neighboring country. The world market plays a negligible role in maintain Croatian culture, because the world music and film markets are dominated by American superstars and blockbuster movies. If Croatian creators cannot get income in Croatia, and they cannot set an example to Serbia and Bosnia-Herzegovina, where the revenues of music and film are even lower proportionally, there will be fewer and fewer creators, performers and actors who can create fresh Croatian content. In turn, the Croatian audience will turn to American and imported music and film even more.

Before explaining in more detail in chapter 3 the legal and technological mechanism of home copying, we turn briefly to how musicians make a living in Croatia.
Chapter 2

How musicians get paid?

For purpose of this study, an anonymous survey was conducted with 200 Croatian musicians, mainly from the field of popular music. Some of the respondents are exclusively music authors, and members of Croatian Composers’ Society (HDS), some are exclusively artists-performers and members of Croatian Performers’ Rights Collecting Society (HUZIP). Many of them, on the other hand, are both authors and performers and members of both organizations. Furthermore, in some cases the musicians are also owners of their master recordings and are therefore eligible for compensation by Association for Protection, Collection and Distribution of Phonogram Producers’ Rights (ZAPRAF). The data collected from this survey is referenced in following Chapters.

As we have seen in Chapter 1, almost everybody listens to music, and almost every day. But how musicians get paid for their work? Many of us grew up in the world when all musicians’ dream was a good recording contract, and the news and Hollywood movies were full of stories of rich record labels. Since home copying and torrenting became widespread a decade ago, this picture changed fundamentally.

In the region and Croatia most musicians do not have a recording contract, and they have to self-manage the recording, mastering, reproductions, sales and marketing of their records. Unlike in the 20th century, most musicians are not paid by record labels even when they have such a contract. The labels in most cases only help in the distribution and marketing of the record, but often the musicians must pay for the recording costs themselves.

Artists and record labels are entitled to royalties after recordings, if the recording is made in a studio or during a live concert, and the recorded fixation is distributed on vinyl, cassette, CD, DVD, or in the form of mp3 files. The author of the music and the lyrics is entitled to copyright royalties, the performer is entitled to performance royalties, and the producer of the recording is entitled to producer royalties. In the case of self-published musicians, they often entitled to all three payments, because they play their own songs and they pay the studio costs to make the recording. These royalties are paid from record sales, from authorized digital downloads and from streaming subscriptions, such as subscription fees paid for Deezer.

In the next chart we show the individual income breakup of 200 Croatian musicians who filled out our anonymous survey. We mainly surveyed musicians from popular genres. In the popular music since the 1960s musicians are dominantly author-performers. As opposed to classical music and classical jazz, most modern musicians perform their own works with their own, personal musical voice. For this reason, a modern musician usually has a mixed income. In the 21st century, from the US and UK to Croatia or its neighbors the most important, seasonal and unpredictable income is the remuneration for live performances. However, musicians, as any other working person, need a predictable, constant stream of revenues from royalties to pay their constant costs. In some genres, especially in contemporary
classical music, but in some pop music as well, there are still composers who write classical pieces and songs for other performers. For them, as well as for author-performers on maternity leave or other longer abstention from the stage, copyright and neighboring rights revenues are crucial to make a living.

Figure 5 Revenue breakup of Croatian artists

Record label and music publishing revenues are almost invisible. As it will be shown, this decline results mainly from the fact that consumers are increasingly using available technology for fast and high quality downloading of music: private copying growth results in the sharper decline of record sales and subsequently in loss of this revenue source for musicians. It should therefore be compensated from the sale of blank carriers, because those blank carriers would not be sold in the first place if “free” content would not be available for them.

Most of the musicians, 51% earns more than half of their income from concerts, and 49% earns more from all royalty and grant sources than from concerts. This is not surprising, and we see similar rates in Hungary and Slovakia, where similar surveys are regularly conducted. And what about recordings? While many remember 20th century movies and celebrity news about fat paychecks from rich record labels, only 4 in 200 Croatian musicians earned at least 10% of their income from record labels. More musicians could make a significant income from selling music to advertising spots than from recordings.

The light blue part of the payment, which is the main income source for only a few artists, and in most cases accounts for very small portion of the income, or only a quarter of the musician’s revenue, we see royalty payments from HDS or HUZIP. These payments are almost
exclusively connected to recordings and mechanical music, and are not collected from end consumers, but instead from B2B users for their commercial exploitation of music.².

In broadcasting the recorded or live performances are communicated to a larger audience via radio or television. Most of the radio content is music, and it is mainly recorded music, and television broadcasting also contains much music. However, unlike radio presenters, editors and comedians, the musicians are not directly paid by the radio station or the television. Instead, the stations are paying a small fraction of their revenues to the collective management organizations, again, for HDS in the case of the author and the lyricists, for ZAPRAF in the case of the producer, and HUZIP in the case of the performer. They also provide the annual playlists to these organizations, who distribute the money based on playing frequencies to all the works that were used in the radio or television stream.

In the subscription-based streams, such as Deezer, the streaming company directly distributes to proceeds from subscription and from advertisement to the producers of the recordings and gives the author’s share to either the collective management organizations, or to other representatives of the author.

² With the exception of the composer’s share in live music.
2.1 Live performances

In live performances the performing artists are usually paid by the concert or festival promoter, the wedding organizer, or the venue that hires them to entertain the guests. However, there are often two roles who are not present in the live performance: the author and lyricist of the song. Their pay is a small contribution paid by the organizer, which is distributed by HDS. The problem with live performance fees is that they are very seasonal and unpredictable. Concert promoters and venues usually pay for one show, but an artist in our calculation must play at least 40 concerts in a year to break even. (This number is different across genres.) If an artist or band is lucky, they have a manager who can contract a tour that may have several stops in Croatia, and well-established bands with a wider audience reach can occasionally go abroad.

We compared average and maximum concert budgets in the capital cities, in the countryside and abroad. The typical concert budgets’ maximum and minimum value is shown in boxes. More than half of the concerts’ budgets in Croatia and the region fall into the ranges depicted by the colourful boxes on the chart below. (The average values are shown with the little whisker inside the boxes.)

![Budget Sizes Reported by Music Professionals](chart.png)

*Figure 6 Budget sizes*

Many of us think of concerts taking place in big arenas and on large festivals. The truth is that most Croatian musicians never play in such venues. For them, like to their colleagues, is a show in a music club, a restaurant or a local culture house, entertaining usually no more than 100 people. We compared the concert budgets of many Croatian and regional musicians. Most concert budgets in all categories are well below 400 euros or 3000 kunas. This budget usually pays for four or five musicians, four or five technicians (including the people
engineering the sound, the light and the stage technology), the tour bus driver, the young person who sells the CDs and T-shirts and the tour manager. It is still a decent hourly wage for the concert, but every concert needs several hours of practicing, preparation, travelling to the venue and back. The net payment of a musician altogether falls to a fraction of the minimum wage.

But even this money is mainly freelancer money, and often paid under the table. There is nothing wrong with freelancing but making a living as a musician is only possible if the seasonal, unpredictable concert income is matched with a stable royalty income flow, and that is partly missing in Croatia. Royalty payments are always taxed, have health and pension insurance compensation, and they are unreplaceable to keep a healthy music sector alive.
2.2 Compensation for the free music

There is a puzzling contradiction here. We have more and more devices to listen to recorded music, and we can listen to music in more and more places. We not only have the turntable and home hifi, but we have a car hifi, we have music on our laptop, we have music in our pockets, we have music on our smartphone. (The same goes for films.) How people get this music?

In Croatia, nobody is sued by record companies or authors if they make a copy their favorite songs at home, unless they distribute it on the market themselves, thus undercutting legal sales. If the copies remain in the household, nobody gets punished, no matter, how many albums, feature films, television series episodes or television programs are copied. Croatia has a private copying scheme since independence which was reinforced by the EU accession in the form of the adoption of the Information Society Directive. The directive states that Croatia can allow its citizens to copy music for free only if it creates a compensation system that adequately compensates composers, performers and recording producers for the loss of records sales.

![Recording Revenues in Europe](image)

*Figure 7 Recording Revenues in Europe*

While people enjoy at least as much music in Croatia than in the Nordic countries, and they are as eager to have music on their smartphones, tables, mp3 players, in the car and at home, often at work and even during shopping or visiting a restaurant, they spend almost no money
The further production of Croatian music is impossible without compensating for the loss of artists from private copying, which is exactly the aim of the European directive on this issue. The purpose of the private copying remuneration paid for/through smartphones, computers and blank CDs is to compensate for this harm and balance the benefits of the users with the creators’ losses.

The source of the data is the IFPI Global Music Report (IFPI 2018).

---

3 The source of the data is the IFPI Global Music Report (IFPI 2018).
Chapter 3

What is private copying?

Private copying is an exception from the copyright law: it allows private users to copy music and audiovisual works such as films and TV programs without obtaining a license from the creators and paying royalties in return. In return, private users must pay a compensation in form of the private copying levy. Furthermore, the Croatian state must guarantee that this levy offers and equitable remuneration to rightsholders.

After Croatia's EU accession this system was not updated, partly in the widespread belief that subscription-based, royalty paying streams will reduce the importance of private copying. The technological developments, the market conditions and our empirical research proves that this view was too optimistic and Croatian and international creators are not fully compensated for the vast amount of private copying in Croatia.
3.1 History of private copying

The origins of private copying go back to a technological novelty in the 1960s: the tape recorder. Taping made it possible to copy vinyl records at home without paying the so-called ‘mechanical reproduction’ royalties for each copy. Because of the investment and special equipment needs, only record companies created new copies on a regular basis.

Before the 1960s only very serious amateurs could contemplate to make a copy of a record. The laws at the time stipulated that anybody can mechanically reproduce records, if they pay the so-called ‘mechanical reproduction’ royalties for each copy. Because of the investment and special equipment needs, only record companies created new copies on a regular basis.

Tape recorders in the 1960s became smaller, cheaper and easier to handle. In 1963, the “microcassette tape” was introduced to the market that made copying from radios or records very simple and cheap. Today it takes about a minute to “grab” a commercial CD record into a computer and obtain an mp3 copy. In 1963, it took about 4 minutes to copy each song.

Figure 8 A German tape recorder from 1962.

In a ground-breaking decision of the German Supreme Court it was found that there is no practical way to collect these royalties from the people who are copying music at home. The Court found that forcing such an agreement would require impractical costs and intolerable breach of their privacy at home. Rightsholders were banned from going after individuals in their homes, but the Court recognized that their rights may be intolerably breached. The decision opened the way for a new legislation in West Germany that established the first private copying remuneration scheme in the world.

The Germany solution was the introduction of the private copying levy on the tape recorders and the tapes. This levy was collected at each sale and was set to be commensurate to the amount of music recorded at home. The merchants, producers or importers were required to pay this sum to the collective management organization of the authors, performers and producers, who distribute it similarly to the mechanical royalties from “professional copiers”.

Many countries in the world, and almost all European countries apply some form the private copying system. The system was later applied to audiovisual content, including films, TV
series, TV programs when the VHS video cassette recorders started to permit the home copying of video in the 1980s.

This system spread all over Europe and was introduced in Croatia, too. The German practice was followed by most European countries, and eventually it became EU law in 2001. The Information Society Directive foresaw that necessity to uphold this system in the new digital era, and at the same time balances the interests of creators. The commercial internet was only 7 years old, and the EU regulated very few specifics.
3.2 Benefits of private copying

About a half of the population uses in Croatia and its region for enjoying music, films and other audiovisual content, and this ratio is even higher, around 80% in Northern Europe. However, the ratio of actual buyers of content is below 5%, and the number of subscribers to paid music and audiovisual streams is a few ten thousand. The rest of these people are enjoying the benefits of the permissive European policy of private copying.

![Figure 9 Private copying in Europe](image)

Unlike in the United States, nobody risks a prison sentence or personal bankruptcy for downloading files, and rightsholders do not object to the fact if people are making copies of their favorite DVDs or burning a CD at home. The European Information Society Directive explicitly exempts households from the copyright protection in the countries where the state is giving a compensation for the authors, performers, producers and writers for this benefit.

The benefit not only provides a historically unparalleled level of access to culture, but it also paved the way to a swift transition into the digital age in the 21st century. A majority of the population is now online and uses smart devices. These devices would be dull and anything
but smart if music and other entertaining content would not be available for them at a low cost and in great variety. The benefit of free copying is exceptionally great in Croatia and the neighboring countries where only a very small minority of people are paying for digital music and films.

The fact that even poor people can have access to culture is a huge benefit, but not the only one. Because people are not limited to the availability of record stores and video stores anymore, a much wider selection of music and audiovisual works is available.

However, according the Information Society Directive, this generous and permissive policy is only possible if the state is setting up a compensation scheme that provides a *fair compensation* for musicians, artists and filmmakers. The fair compensation should yield an equitable remuneration that would be arise from the licensing and sale of the content enjoyed by the private users. In this study we would like to point out that in Croatia the consumers enjoy a far bigger benefit from home copying than the current compensation system, which is harmful and unlawful from the artists’ point of view.
3.3 Technology and compensation

The compensation for home copying has been connected to the technology of home copying in the last six decades. In Europe, almost all countries use the private copying levies on devices that can copy music and films, and blank carriers that can hold them. Two countries, Spain and Finland are compensating the artists from taxpayer money. The private copying remuneration systems are better and more just: the compensation is paid only by the consumers who take benefit from the system, and the payment is proportional to the amount of music and audiovisual content that can be copied on the devices for free.

3.3.1 Analogue copying and length of recording

The original German private copying system was designed for tape recorders and tapes. Both the copying device and the blank carrier needed to pay a compensation. The compensation was proportional to the number of recordings copied at home.

Tape recorders were available at least since the late 1940s for sophisticate amateurs, but they were not cheap and easy to work with. The useful lengths of the tapes were not standardized: one real could record a few minutes at high speed, allowing very good sound quality, and around an hour with low sound quality. Taping became widespread with the introduction of the compact cassette, which used much smaller, affordable, standard speed (recording length) players.

The original magnetic tapes and the so-called “compact cassettes” introduced by Phillips in 1963 did record the music as it was played from the vinyl, radio or magnetic tape original. If music was played for a minute, the recorder would record one minute of sound. The consumer tapes and cassettes were sold in the same length as the usual length of the records of the time. One cassette or roll of tape could record originally one, later two albums (with the introduction of 90-minute cassettes.) The calculation of mechanical reproduction royalties was easy, once or twice the mechanical reproduction royalty could be accounted for each cassette. Later, when music was sold on licensed, commercially produced cassettes, too, it became simpler: one original cassette could be copied at home to another cassette, allowing a simple minute / minute comparison of royalties and compensation levies.

*Figure 10 The first compact cassette by Philips*
The recording industry had relatively stable technological and economic conditions. Because the records needed to be produced, sleeved, shipped, and put on a store shelf, sale by song, which is the way most music is sold in the 2000s in digital downloads, was only possible when a song was a new hit and had a high value. The typical sales configuration was the album, which presented about 10-12 songs, or a similar number of movements from larger classical works, and it had an approximate playing time of 45 minutes. The playing time was limited by the size of the vinyl disc and the playback speed.

In the 20th century global trade was very different from the 21st century. Many trading obstacles were present in the form of higher transporting costs, customs, more complicated currency regimes, and generally lower national income. Records were not distributed beyond national borders or regions. In the late 1960s the record shops in Zagreb were selling songs of The Beatles produced on vinyl records by Jugoton. All over the world, many local companies like Jugoton produced records. There were no global royalty databases, and calculations were sent via post. Jugoton, like many similar companies around the world, had to pay a per song mechanical royalty for each printed copy of the song. To make such production easy and accountable, the mechanical royalty rates were set in international agreements and changed infrequently.

The calculation of the necessary copyright levy on compact cassette that made a copy of a Jugoton record was easy. Each side of the cassette could hold the copy of one Jugoton record, so the average private copying remuneration rate was set mechanical royalties payable after two average-length Jugoton records. The original private copying levies were placed on blank carriers that could copy 1 or 2 original albums of 45 or 90 minutes, and they were expressed in minutes. 45 minutes of music could be recorded on 45 minutes of tape length, so one only needed to know that this is roughly equals 10 songs or an album. In this analogue copying system there were costs and benefits. The private users obtained a cheaper copy, because their cassette was levied with the mechanical royalty equivalent, but not the printing, slewing, warehousing and retailing margins and marketing costs. The copy's quality was somewhat lower, but the cost was about half of the commercial recordings’ cost, too. A levy system based on analogy from mechanical copyrights could set a good balance between rightsholders and private users.

This system could be easily extended to video cassettes introduced in the 1980s. The usual sales configuration of VHS tapes was one feature film, or one feature TV program per original cassette. The cassettes for copying were usually of 180 minutes and could hold two feature films. The levies could be expressed in minutes, or in the number of films.

### 3.3.2 Digital copying of records

The problem of analogue copying was that the quality of the copies deteriorated with each copying. The original vinyl was made from the master tape, and re-releases, for example in the former Yugoslavia, were not copied from the master tape. So, the households received a second generation copy from the record store, and when they copied it to a cassette, they had a third-generation copy. If that copy was lent to a friend who made a copy, it became a less enjoyable fourth generation copy.
The original developer of microcassettes, Phillips, teamed up with the Japanese Sony to find a better carrier for music and introduced the Compact Disc or CD in 1982. The CD could hold up to 80 minutes of audio information, stored as not physical but digital information. The digital information had the advantage that it could be copied without loss of information. The CD was originally intended to replace vinyl records and make a more lasting and hopefully more enjoyable commercial product.

![Figure 11: A compact disc (CD)](image)

The private copying remuneration for the CD was easy to calculate. Similarly to the microcassettes, it could hold one album, and the private copying levy was proportional to the mechanical copying royalties paid by companies that copied CDs for commercial sale.

In 1990 Phillips and Sony started to produce CD-Recordable, which could be used from home copying with a special recorder unit attached to a personal computer. In the 1990s it became possible to copy music from an original commercial CD to a blank CD with no loss of quality. In 1995, Phillips and Sony came out with the video version, the DVD, and soon with the DVD-Recordable that could originally 3.7, later 4.7 GB of data, music or video. The various DVD and later BluRay formats exceeded this capacity significantly.

### 3.3.3 Multi-purpose use

The blank DVD-R was the first blank carrier where the relatively easy chain of copying logic was broken. The DVD-R was introduced in an age when many households had personal computers, and they started to use the DVD for many purposes: copying music and video, but also storing other digital information like copies of software and own documents written in word processors, and soon digital photographs or scanned older photos.

Apart from the CD-R and DVD-R, new blank carriers appeared on the market, mainly based on SSD technology in the form of memory cards and pendrives. SSD memory cards, which were available for digital photography and other uses in the 1990s, acquired a new standard, the SD card. It was developed in 1999 by the SD Card Association of SanDisk, Panasonic and Toshiba. Their cards became standard in many devices and went on further miniaturization over the years. The portable and small memory cards (and the similarly created pendrives) became a versatile, multi-purpose blank carrier than can hold music, film, own documents,
photos, software or any kind of digital content. This created another challenge for compensating their use for copying copyrighted content.

![Image of SD card and flash drives](image.png)

**Figure 12 Miniaturization of the SD card**

The portable and small memory cards (often built in “pendrives”) became a versatile, multi-purpose blank carrier than can hold music, film, own documents, photos, software or any kind of digital content. This created another challenge for compensating their use for copying copyrighted content, because the observation of sales date did not permit rightsholders to make an accurate claim on copyright compensation. Author’s societies started using nationally representative surveys of users to measure the use of these devices to copy music and film. The first such measurement with an evaluation purpose was carried out in Croatia for the making of this study after the country’s EU accession.

### 3.3.4 Compressing music: the mp3 format

In the 1980s, the Walkman, a portable cassette-player with headphones, and in the 1990s the Discman, a similar CD player made the enjoyment of own music during long commutes, travelling or jogging accessible.\(^4\) Especially the Discman was a rather big and heavy object with a fragile mechanical part. They could contain one cassette or CD and they could play it only in the order of recording. Miniaturization was a natural aim, and with both analogue and digital copying it could be done with recording more data on the same carrier, at the expense of some quality loss.

In 1994 the Fraunhofer Society released the first mp3 software that allowed the compression and de-compression of music recordings without a very significant loss of quality. The mp3 files were about 12 times smaller than digital songs on a CD, but they could not be played with a CD player. They use a complex mathematical algorithm to filter out unnecessary or negligible bits of information from the digital copy of the song. To recover the wave representation of the sound, the compressed data must be sent through the decompressing algorithm that requires very significant computing power. The early CD players were not equipped with this computing capacity, but the computers were.

Similar algorithms soon followed for compressing film, and of course, the audio content of the film. The amount of storage capacity needed became a compromise between loss of quality.

\(^4\) The original Walkman was released in 1979 and it was a brand of Sony, but it became a common noun after many cheaper versions came to the market. Similarly, the Discman was originally a product released by Sony in 1984.
quality and processing capacity. The more calculations could a processor make in second, the less loss was necessary.

This compromise can be best described with the bitrate, i.e. the number of bits that are conveyed or processed per unit of time. Mp3 files with a bitrate of 128 kilobits per second needed approximately 128,000 calculations to retrieve one minute of music, and provided a noticeable loss of quality. 196 or 224 Kbits are almost CD quality but require twice as big processing power, and the information stored has more details, so it also grows in size.

Very soon, the mp3 player was born, which was a small dedicated computer that could decompress the mp3 files. The first mp3 players were already much smaller than a Walkman or a Discman, but they were difficult to fill with songs from a computer and could hold only a few songs. In 2000 and 2001, the new SSD media, for example the SD card, and a new, revolutionary dedicated computer with a large storage capacity and a very user-friendly interface, the iPod appeared on the market. The first iPod already allowed the user to carry around about 70 albums.

The iPod became so revolutionary because Apple teamed of with the recording industry and broke out from home copying. In the United States, which was the company’s main market at the time, the private copying exception is not recognized, so people could be sued for copying mp3 files. Apple decided to create an mp3 player that can be easily uploaded with mp3 copies that were licensed in the iTunes store. After the 1963 introduction of the compact cassette (or microcassette), a new sales medium, the mp3 file was introduced to the market. Similar shops emerged in many countries, including Cetederija in Croatia.

The iPod and its copycats a few years later it was able to play videos and store personal photo collections, too. In 2007, Apple announced the iPhone, which was a telephone that could also acted as an iPod. As processing capacity became cheaper, smaller and affordable, sooner or later almost any device could hold and even play compressed music or video.

### 3.3.5 Surveying the widespread mp3 copies

In the late 1990s the use of personal computers for listening to music was still in its infancy. Record labels sold many vinyl, cassette and CD originals and shops were selling CD-R, DVD-R and microcassettes for home copying. The ability to increase the consumer benefit by compression algorithms was a somewhat geeky thing in student dormitories at the university. The blank levy system could cope with that.

In 2001 Apple came up with a revolutionary product, the iPod, the first viable mp3 player. Unlike earlier portable mp3 players, it could carry a large enough collection of music and was easy to use. Furthermore, Apple introduced the iTunes Store that allowed record labels to sell licensed mp3 files to the users of iTunes. A few years later it was able to play videos and store personal photo collections, too. Sooner or later, cheaper mp3 players followed.

The widespread use of the mp3 music and mp4 video formats (and many other video formats, such as .avi, .mkv, etc.) caused a complete upheaval in the private copying system. A decade earlier, we could be sure that a CD-R will hold the contents of a CD. Now the contents of a CD could end up in different size on a laptop, a pendrive, an mp3 player, a CD-R or DVD-R, or
even on a telephone! Those collective management societies that first met this problem started to rely on statistical surveying to follow the likely route of copies. This is the methodology that we will introduce in this study.
3.4 Further considerations

The technological progress did not stop with the mp3 and mp4 files. P2P communication and torrenting fundamentally changed the way files are copied at home, and music streaming created a new, often licensed alternative to copying music. Opponents of the private copying system made claims, with various success, against the PCR system related to these innovations. Contrary to their beliefs, they did not undermine the European PCR system, but these technologies indeed caused further legal and economic challenges to the administrators of private copying compensation schemes.

3.4.1 P2P: Copying music from a strangers’ home

In 2001 not only Apple introduced the iPod, but another ground-breaking innovation came to surface with Napster. This company created a software that allowed its users to copy each other’s music via the internet. Until 2001, the users could copy more and more music or video, but they had to do the copying themselves. They had to be present in the 45 minutes while a record was taped, or over the 6-10 minutes a CD-R was burned. Suddenly, they could leave their computer on the internet for a night, and by morning it copied music in mp3 form from other users in unprecedented quantities.

The most developed consumer societies witnessed a crazy feedback loop: household could have free access to more and more films, and the electronic entertainment industry produced more and more gadgets and software that could find, copy, store and play this content. With very little investment, a Croatian household could make a copy of all the records ever made by a record label, or all the records ever made in the country. And it required less and less effort, the creation of the private copying from finding the source to making the copy became fully automatic.

P2P copying introduced a new variable in the private remuneration equation: the bandwidth. If a computer had significant bandwidth to use the internet, it could find many albums and films to be copied. The benefit of buying a CD-R not only increased 12-fold, but it increased many times, because Croatian users could copy music that was never in their possession, or their family’s possession, or ever sold in Croatia. However, private copying levies did not increase by 12 times, and certainly not by more.

At this point various legal challenges were made, and many questioned the usefulness of the private copying system. A contentious Court of Justice ruling declared that files copied at home from illegal sources cannot be compensated through the copyright exception of the Information Society Directive. This decision offered little practical help, because ‘sources’ cannot be identified or empirically surveyed, only recordings and users. Statistical surveying is not an adequate methodology for illegal behavior, because participants cannot be expected to report criminal behavior, or, to understand the details of copyright and neighbouring rights law. One way to address this problem is to seek compensation for illegal copiers, such as sellers of pirate CDs and DVDs on markets or maintainers of torrent websites and subtracted the proven illegal copies from the private copying remuneration scheme. This issue, however, lost importance, because the interest in torrenting is generally falling, as new technology that involves private copying offers more easy access to music these days.
3.4.2 Music is like water: the introduction of streams

In 2001 the late David Bowie predicted that soon music will be like water, something that households will subscribe to and get all the time. In 2017, when Apple finished producing the once revolutionary iPod, the first successful hardware product that could successfully sell digital music via the iTunes store. They cited the subscription streaming model as the reason to discontinue their hardware that once introduced mass paid downloading into the global markets.

Streaming takes the bandwidth element of the equation one step further. If the user has sufficient processing capacity and bandwidth at the time of listening to the music, there is no need to copy and store the music. It is enough to download via the internet the bit of the song that is played at the moment. If there is a place where all music can be found and downloaded in this format, why bother buying blank carriers? The user can have the whole world repertoire without such an investment.

In 2008 Spotify launched its music streaming service in Stockholm, later to be followed in Deezer, the first such service available in Croatia. At the time they arrived to Croatia, they already offered access to around 30 million songs, or 3 million albums – many times more than ever available in the largest record shop at the same time.

In these years the tech industry claimed that the private copying levy became obsolete because people will not bother to spend time searching for music on various torrents or copying from friend when everything will be available for everybody. However, public reaction remained muted in Croatia and the neighboring countries, and even in many developed markets the dominant form of listening music is via private copying.

Streaming is a very resource-intensive technology, and the limitations of the technology and business model did not allow streaming to replace private copying.

Streaming requires the digitized music to be communicated immediately to the user, which requires even heavier compressing than mp3, and still requires some sort of storage. These technical steps are not only computing-intensive, but energy intensive. Streaming requires a strong processor to de-compress the information real-time, and if it uses a wireless internet connection, it needs to power a 3G or 4G receiver to receive the stream. Both processes require plenty of energy, and drain the battery in 2-3 hours, while mp3 players with pre-stored music can go on for 2 weeks with one charge.

Streaming introduces a new cost element, paying for bandwidths all the time. Especially in mobile applications this is very costly and increases the cost of the use significantly.

Streaming did not find a right business model yet in the emerging markets like Croatia’s market. The value of streams is very low, and for artist who sing in Croatian and has no access to a global audience, the revenues from streams are negligible. A large part of the small-nation repertoire is not available on the streaming services, and the offering is less valuable for Croatian households, who are reluctant to pay for even the reduced, local subscription fees.
Nevertheless, streaming offers many benefits, including a searchable, vast catalogue of music, which alone creates a very strong competition to torrenting. Torrents required another user in the network who has a copy of the searched song, and it depended on the online availability of this ‘peer’, and the peer’s willingness to give access and allocate bandwidth to the user’s download. Streaming platforms, such as Spotify, Deezer, YouTube or Netflix make searching instant and user-friendly, and offer larger catalogues.

Streaming as a technology has a bigger potential in video streaming, where many contents is only viewed once, such as in the form of television series. When files are used for years or decades, like with favorite music, this technology is not yet ripe. However, with video streams, where content is less numerous and individually more valuable, rightsholders are very reluctant to allow their content into streams. Even Spotify and Deezer do not offer a comprehensive catalogue in music for the Croatian audience. Netflix, the leading video stream provider of the world, offers in comparison to a video rental store a very limited catalogue in Croatia at the moment. For the music-lover, music streams are usually not the dominant source of music. They can indeed play an important role in music discovery with their vast catalogues, and with their mixed stream and buffer system can reduce the blank carrier capacity needed for private copying, but they are usually used besides licensed and privately copied mp3 and mp4 files.

Streaming providers eventually settled somewhere in between radio and television stations and the iTunes model. To reduce the drain on batteries and bandwidth, they offer ‘premium’ users the ability to download and store ‘temporary’ copies of the songs, which makes a Spotify App or Netflix App account very similar to an mp3 or mp4 player. The fact that the user, often unknowingly, uses these copies for a short time and replaces them with another, thus ‘saving’ storage capacity, increases the claim of rightsholders per Gigabyte, because each subsequent copy is connected to a new, valuable use. Contrary to the claim of some manufacturers, the carrier capacity of devices that stream are subject to private copying remuneration.

These songs are in fact mechanical copies, and according to the copyright law, they need a mechanical license or must be compensated as private copies of the recordings. A recent European Court of Justice ruling found that devices that make various streams available for the users cannot be exempted altogether from the Information Society Directive on the basis that they are just ‘buffering’ songs.

While some, licensed stream providers, like Deezer, Spotify and Netflix have long created mechanical copies of copyrighted content, their unlicensed large rival, YouTube [^6] is also widely used for private copying. Because YouTube, due to its contentious copyright policies, does not offer on most markets a ‘premium’ download offer, in many countries the most thought-after software in the last years were third party software that allows capturing songs and video from YouTube, exactly the way people used to record songs from the radio or films from the television in 1980s and 1990s.

[^6: YouTube has some form of an agreement with rightsholders, but its legal basis is not a music use license. YouTube makes it almost impossible to track piracy or collect any sort of revenue on its market-leading platform if the rightsholders do not make this agreement, but it falls short of a licensing agreement both in content and in financial remuneration.]
Figure 13 YouTube drives out new paid sources

The chart above shows that interest for YouTube is far higher than interest for torrenting, and in the last years more people searched for YouTube to mp3 download software than for torrents on Google in Croatia. Streaming in all forms is creating more mechanical and private copies, and the private copying remuneration system, with modification, is as relevant as it was in the last decades.

3.4.3 Unlicensed streams and the value transfer to internet platforms

During the creation of this report a legislative process was under way with heated political debates about addressing this transfer of value. The representative associations of composers (GESAC 2015a; GESAC 2015b; CISAC 2017), performers (AEPO-ARTIS 2016; AEPO-ARTIS 2017), and producers (Moore 2016) were all strongly calling for a change in these practices, particularly to limit the safe harbor of copyright law and to give mandatory access to already used tools to combat piracy to rightsholders who otherwise oppose this highly unfavorable deal. Technology companies on the other side were vehemently lobbying European governments and members of the European Parliament to stop or water down proposals.

Eventually the European Union adopted the new Copyright Directive (European Council 2019). In the next two years all member states need to transpose it to national law. It is very important that to give similar weight to modernizing the private copying remuneration and
the value transfer to bring Croatian artists’ and producer’s revenues closer to the normal, European equitable remuneration.

In the context of the home copying, it is very important to understand that the value transfer does not only undermine licensing to television and radios, but it also undermines the home copying compensation in two ways: first, by the devaluation of the music upon which the compensation is valued and second, on mass copying via “YouTube downloader” utilities from already devalued sources.
3.5 Private copying in the age of streaming

There were premature ideas about how licensed streams will drive out private copying had been so far completely unfounded. Neither sales data, nor research data suggest that this is the case. The interest for mp3 files remained constant in the last 5 years in Google searches from Croatia. The interest for torrenting, which is illegal, and cannot be compensated in the private copying system, sharply declined, and among the 25 most frequent search terms no music, and only a few movie searches for recorded. Torrenting is mainly an illegal activity that is harming software game producers.

The new licensed new forms, first Deezer in music, and later Spotify, generated very little interest. Netflix generated big expectation when it announced to go available worldwide, but actual searches only gradually catching up, because the price and the catalogue available in Croatia offers a far worse value than in the United States or other mature markets.

Streaming has changed the way we think about private copying. First, technology companies claimed that the private copying levy is now obsolete, because no copies will be made, and artists will receive a royalty payment from the stream providers. But they turned out to be wrong in many ways.

First of all, stream providers never paid adequate royalties, because they had to compete with YouTube, far the biggest streaming provider, which hidden in the mammoth Alphabet Inc.
that owns Google and protected by the “safe harbor” of American copyright law does not pay any royalties at all. YouTube is the biggest platform, and musicians cannot allow themselves to be excluded, but it only offers an “advertising revenue share”, which is not a copyright royalty. This contentious view is currently debated in the European Parliament, but at the moment, it is killing the business case of paid music streams, who cannot ask a decent subscription fee from many people because of the free competition of YouTube.

Secondly, it turned out that while the stream may be cheap for the user, at the expense of the creator who gets very little in return, it is only a good business for device producers and telecom companies, because it generates demand for bandwidth, and larger telephones. Streaming is a very intensive technological process that requires a lot of internet bandwidth and processing energy. Maintain a constant wifi or 3G/4G connection and processing streams drains the batteries of the smartphones and other devices very quickly.

Streaming providers offered novel solutions to this problem. Paid streams, such a Spotify and Deezer in music, or Netflix in video, offer premium users the possibility to download the music and video for up to a month at home, and enjoy it during travelling with less battery drain and no 3G/4G quota. But this is only possible by making copies on the devices, which, according to latest jurisprudence of the Court of Justice of the European Union is itself a private copy, unless the provider itself paid mechanical royalties to the societies.

In the case of YouTube, which maintains the legal fiction that it is not a user of music, such premium service is not yet available in most markets (Google is experiencing with replacing Google Play streams with new, premium YouTube streams till 2019). However, YouTube silently allowed software makers to produce “YouTube downloader” programs that exactly do this. Such downloaders, in the absence of any licensing constraint that Netflix, Spotify or Deezer faces, are not used only for a month, but they are permanent mp3 copies. Such software essentially replaced the radio cassette recorder that was able to record songs from the radio on a blank cassette carrier.

Eventually, a new form of private copying, converting YouTube music videos to mp3 files, in the form of “YouTube downloaders” or “YouTube to mp3” became more often searched than games, film and music torrent combined. Downloading from YouTube is a classical private copying, the modern version of taping music from radios. Chart Interest for free music sources in Croatia, i.e. 10, as opposed to chart 9 only shows YouTube-to-mp3, not total interest in YouTube, which is far greater than anything else.

Given that the main illegal form of copying music, namely torrenting, sharply declined, and new forms of private copying gained interest, while the general interest for the form of copied music files, i.e. mp3 remained high and flat, we can only conclude that the share of private copying had been rather growing than declining in the past five years. Streaming did not kill private copying, it just gave private copying a new form, and creators of music need private copying remuneration even more than earlier.
Chapter 4

Considerations for private copying remuneration

The European private copying compensation systems are 54 years old, and instead of retreating, more countries are introducing them. Several of them went through difficult changes, often initiated by lawsuits about the amount of levy to be paid and the way it should be collected. In Croatia, changes seem to be inevitable and many lessons can be learned from more advanced markets and regional EU members, too.

Private copying remuneration systems consist of a calculation of consumer benefit and economic harm, and a mechanism to collect revenues in the form of levies to compensate the harm, commensurate to the benefit.

In the beginning of the digital era, the European Union created the Information Society Directive that set a common rulebook for handling national exceptions and limitation from copyright. Allowing private copying in Croatia is such a limitation. The directive took into consideration that digital private copying will create more harm than analogue copying technology and gave considerations how to maintain equitable remuneration. It is questionable that Croatia followed these developments in the national law, because Croatian system had not changed fundamentally as new technologies increased the benefits for users and the harm for rightsholders.

In this chapter we briefly introduce some aspects recognized by the directive from a practical point of view. The relevant jurisprudence can be found in Appendix 7.
4.1 The nature of the private copying levy

The private copying levy, which must provide a *fair compensation* within the private copying remuneration system, is a *sui generis* concept of the EU law that cannot be altered in Croatia. The sui generis nature recognizes that fact that different EU member states have different copyright traditions, and the PCR must work regardless the legal concepts. This sui generis concept was interpreted in several important Court of Justice decisions. This levy is a ‘compensation’, not a tax or a product, and it is not subject to VAT treatment. The private copying remuneration is a compensation paid for creators of music, audiovisual works, and in many countries for literary and visual art works, in exchange for allowing private persons to make home copies for their own, home use.

The legal nature of the private copying remuneration is income, and it is closely related to royalty income, which is in turn the private income of the creator. So, it is a compensation paid for some harm. For the same reason, the growth of private copying should be better compared with the average and minimum wage growth than to consumer inflation. Consumer goods are becoming cheaper as technology advances, but wages grow, because services and living costs rise with the economy. For this reason, it is inappropriate to link the private copying levy to the price of blank carriers in a percentage form. It should be connected to the value of content that is copied, and the living costs of rightsholders.

In the last couple of years many payers and their lobbyist tried to make an argument to treat these levies as some form of tax or economic burden, and often compared its growth to inflation. This is a very incorrect view, because the private copying levy is an important basis of the personal income of musicians and filmmakers. In Hungary, for example, about 15% of the annual income of musicians is related to private copying, or, about 1.5 month of their living. As Croatia is slowly but surely catching up with the average European wages, it would be perfectly normal if people creating Croatia’s contemporary music and films could see their income catching up with their German or even Hungarian colleagues. As wages rise, living costs go up, too, and Croatian creators need to increase their income. It is a well-justified claim to increase the private copying remuneration if the benefit from home copying has increased since the last time the levies were raised.

\[ \text{\footnotesize 5} \] The sui generis nature of the private copy levy was spelled out in the Padawan case (CURIA 2010). This view was recently reinforced in the ruling concerning VAT payments on private copying remuneration in Poland (CURIA 2016a). See
4.2 From mechanical to probabilistic calculation of harm

The original levy systems were based on physical properties of the technology, and they were bound together like physical laws. A 60-minute microcassette could tape 60 minutes of music, and it could be used for very few other purposes. Levying the 60-minute cassette was a simple equation from the mechanical royalty rates. A blank cassette could never hold licensed music, only compensated music. Currently the hard disk of an average user has a vast array of media:

- various forms of compressed and licensed music, that was purchased for example on iTunes or Cedeterija. These files should be stored without compensation.
- various forms of compressed or not compressed private copies, including copies made from records, tapes, or licensed copies of files purchased from the webstores.
- licensed copies of films and television series purchased from webstores;
- private copies of films, television series and other television programs that were recorded for later use, even though these programs are not available in licensed copies at all;
- amateur or professional recordings of own music or acted performances, in which case copying is not only the right of the user, but the user is entitled to copyrights and neighboring rights
- amateur, commercial or artistic photos of the users, where the user retains copyrights
- unlicensed copies of photographs or photographic reproduction of artwork where the rightsholders are eligible of private copying remuneration
- audiobooks, both in licensed and unlicensed format, where the user may have paid for the authors or performers’ rights, or the rightsholders may be compensated via the private copying system
- photocopies of books and books, magazine, either licensed copies, or copied ones, which may be subject to private copying rights, reproduction compensation
- software, which is either licensed or not licensed, or even which his written by the user
- the user’s own documents and data.

There is no technological rule to tell us what will happen with a pendrive, a DVD-R record or an external hard disc when the user buys the blank carrier. The modern collective management relies on representative surveys to find out how users are using these devices and to establish the commensurate compensation for the private copying.

Instead of relying on technological solutions, we must ask several hundred or a thousand users to find out how they use their devices, and base our assumptions on such statistical, probabilistic models. In Croatia we conducted to the first such survey following the methodology used in Hungary and Slovakia, which we will show in the next chapter.
4.3 Collecting the remuneration

There is no common European legislation on who should pay the levies. In most jurisdictions, producers and importers of copying devices and blank media, and in some cases professional traders must pay the fees and recover it from the end-users.

The private copying remuneration system is not the only possible way to compensate rightsholders, but it the dominant form in the developed economies and almost the only system used within the EU. The alternative of the private copying remuneration system is either allowing the households to carry on copying music and audiovisual works at home, and compensating the authors from the state budget, like in Spain and Finland, or litigating households who are downloading and copying music, like in the United States. Both approaches are rather problematic. In the first case, this often leads to disputes and about 50-60 percent of the taxpayers who never copy music and films must pay for a minority. The latter case involves a very high threat to privacy, because households can be individually sued. This was first found intolerable by the German Supreme Court and then many European countries, which lead to the system where private copying remuneration is levied on the sales of copying devices and carriers. This is enshrined in the laws of Croatia and its EU neighbors, too, and in fact in almost all EU member states.

In our experience, the level of compensation often relies on the precise nature of the regulation and the way the collecting society can monitor the market. Some countries, like the Netherlands or Hungary collect high and distribute a high sum partly because of very thorough market monitoring, whereas in Slovakia, where levies are not particularly low, the difficulties of enforcing and monitoring causes harm to the rightsholders, and puts law abiding merchants in a competitive disadvantage.

In Croatia, this situation is potentially very complex. Whereas in Slovakia and Hungary, in the absence of large ports, almost all relevant devices and carriers arrive from another country of the European Single Market, thus without inspection at the border, Croatia has potentially significant entry point in the Rijeka container terminal. Furthermore, the proximity of low levy, low-enforcement Serbia and Bulgaria and the no-levy Bosnia and Herzegovina and Kosovo poses a risk of significant unlevied private and black imports, which is illegal, since all Croatian users are obliged to pay the Croatian levy. It is likely that the current imbalance of consumers benefit and rightsholders harm is not only caused by low tariffs, but high black market that bypasses the levy. It would benefit both levy payers and rightsholders if the negotiations on further tariffs would not only target the level of the tariffs but detection and monitoring, like in better compensated countries.

The governmental decrees and HDS procedures must reflect on these conditions and provide appropriate checks for monitoring the market and collecting the levy. Furthermore, levy payers, who are involved in the negotiations, should be made partners in detecting non-levy paying, unfair competition that puts law abiding payers and rightsholders at the same disadvantage. We can only establish the total harm on a national level and establish how much should be collected. If detection rates are higher, than lower tariffs can ensure the correct level of harmonization. The collection system must be practical, probability based and avoid disturbing the privacy of home users. The current European jurisprudence allows
discrepancies in harm and compensation if it is small and non-systematic. For the ease and efficiency of collection, the Court of the European Union did not find it problematic that certain private users are levied even though they do not copy any copyright protected works, because by and large most buyers do.

It is notable that in the recent years in all EU countries, including the Czech Republic, Hungary and Slovakia, levy payers realized that they can cheaper frustrate the payments via competition law cases than directly litigating the tariff payment. The competition cases are costless for the party who makes a complaint, which lead to many competition authority challenges in all EU states, including the newer member states. Like in many other economic fields, the competition authorities, who apply directly EU law and EU jurisprudence, became de facto, and in some countries de jure regulators of the levies. Therefore, it is very important to take the competition law consideration very seriously.

The manager of the private copying remuneration system must ensure that the millions of consumers are paying roughly proportionally, and users who surely do not engage in private copying are exempted. Furthermore, the regulator (in Croatia, the State Intellectual Property Office) and manager of the system (HDS) do not discriminate against any content type (for example, more favorable terms for one genre of music), or against a carrier (for example, more favorable terms to a certain brand or type of memory card) or against a well-defined user group (such as users of only audiovisual works who never listen to music.) Obviously, excessive high tariffs are avoidable, too, although in Croatia this is hardly a problem, because the level of compensation in this country appears to be inadequate.

Given that the private copying remuneration system is regulated at EU level, there is a wide range of precedents to these problems which are legally binding for the State of Croatian Republic and HDS, and which is briefly summarized in the Annex.
4.4 Negotiating a just and effective collection

There are different models where the levying system is brought in line with the economic harm. Some states regulate this issue directly, but most member states leave the issue to negotiation to payers of the levy and rightsholder association. In both cases, judicial review on national and EU level must be possible, and judicial review requires facts.

In some countries, besides Croatia in Germany, Austria and Japan the tariffs are fully negotiated. The most mature example of negotiated tariffs is Germany, where private copying remuneration has more than 50 years of history. In Germany, the negotiations stuck between certain producer and importer groups and ZPU which lead in this decade to a long litigation. This resulted in the tech industry having to pay forgone compensation for 2008-2015 on smartphones and 2012-2015 on tablets, and for 2011-2013 for computers. Generally, the advantage of negotiated tariffs is that the procedure is not politicized, but the disadvantage is that often large amounts of payments are subject to litigation. A more fact-based revenue target, monitoring target and tariff setting is advantageous for both payers and receivers.

In some EU countries, such as in the Czech Republic, Denmark, Estonia, Italy, Lithuania, Poland, Portugal, Slovakia and Slovenia, the government sets the tariffs. This often leads to a highly politicized process and inadequate funding. For further details, see the latest WIPO/de Thuiskopie reports (de Thuiskopie and WIPO 2014, de Thuiskopie and WIPO (2017)). We do not recommend this procedure, because usually there are no real competent government offices to establish the quantities of private copies, exemptions, and translate this into tariffs, which opens room for non-transparent, politicized decision making with lot of lobbying efforts from both rightsholders and the tech industry.

In several countries, the negotiated tariffs are set by law or decree after review by the state. This is the case in Belgium, Bulgaria, Canada, France, Hungary, Romania, Sweden and Switzerland. In the Netherlands, de Thuiskopie Foundation (home copying foundation) collects private copying remuneration, but the tariffs that importers and producers must pay after their Dutch sales is regulated by the Dutch state. This foundation produces the International Report on Home copying for more than 20 years, currently together with the World Intellectual Property Organization (WIPO) and it is the source of best practice throughout the world. In the last decade, there was a major litigation between the Dutch state and the de Thuiskopie, because de Thuiskopie could prove with user surveys failed to compensate the rightsholders. The reason for this was that the tariffs set by the Dutch state did not follow technological change and the declining value of blank carries due to the technological progress that allows users to buy more blank carrier capacity in gigabytes for less and less money. This problem is a big problem in Croatia, too, where levies are based on obsolete technology and price information. Based on the evidence presented by de Thuiskopie the Dutch state increased the private copying revenues, mainly with broadening the types of blank carriers that needed which resulted in a several fold increase in compensation. We believe that this is necessary, preferably without litigation, in Croatia, too.

Closer to Croatia, a similar problem was faced by Artisjus, the manager of the Hungarian private copying remuneration system. The Hungarian system is essentially a negotiation-based system, but with heavy regulation and oversight from both the Hungarian Intellectual
Property Office and the ministry of culture. Artisjus faced similar problems when smartphones and tablets significantly increased the benefits of users and the harm of rightsholders, and some negotiations got stuck. This leads to a change in regulation that made it mandatory to create annual, nationally representative user surveys to establish the factual basis of negotiations and potential regulatory or court review. In a later competition authority investigation Artisjus agreed with the competition authority to update the statistical methodology of the surveys with the best European practices. Artisjus, similarly to ZPU and de Thuiskopie had been using user surveys for more than 10 years. This Croatian study is based on a slightly simplified version of the survey conducted by Artisjus and SOZA in Slovakia, which follows the recommendation of Eurostat.

In our view, it is in the interest of the levy payers and the rightsholders to have a more fact-based, and probably better regulated negotiation process with very clear and preferably quick and cheap dispute resolution. The current low-level compensation in Croatia may leave open future claims for many years to come, which could be avoided by negotiating a gradual path to normal level of levies and higher detection of non-paying sellers of blank media and devices. The basis of such negotiations like in the Netherlands or Hungary could be an annual or quarterly independent survey, pre-agreed monitoring and harm recovery targets, and pre-agreed dispute resolution procedures. If possible, the tariffs should be agreed for 2-3 years, instead of annual changes, apart from new product that are introduced every year when wholesalers start to offer them to retailers preparing for the Christmas peak. If such agreement can be made with the major market players, it is unlikely that small, non-cooperative entities can frustrate the process. We believe that both the Dutch and the Hungarian example of negotiations and market monitoring can give good ideas for the relevant Croatian parties.
4.5 Technological flexibility

In the first three decades of the private copying compensation scheme, the technology of private copying was fixed. Records were copied to tape on a minute-by-minute basis. Films were copied to VHS tapes in a similar manner. The levy system could be based on blank carriers or copying devices, or both, and the levies could be simply calculated from mechanical royalty rates. For a short period of time, this equation was valid for copying CDs to CD-R and DVDs to DVD-R.

With the introduction of multi-purpose storage media and the computer’s CPU, any kind of content could be copied to a various number of media, which is either sold as a blank carrier, or as a storage unit in an mp3 player, telephone, or a smart television. With the technological advancement of storage and processing possibilities, more or and more devices can store and playing music or video: clocks, car hifi systems, and increasingly wearable gadgets such as smart watches or glasses.

The current private copying compensation must take into consideration fixed and interchangeable storing capacities, reading and writing capacities of various devices. As opposed to the occasional changes in the analogue years in once a decade, they need to follow the electronics entertainment industry every year, because the consumer benefit and economic harm is changing with the technology implied. Faster CPU speeds and higher data transmission speeds allow higher level of compression, and more copyrighted material on the same megabyte or gigabyte of carrier capacity. Furthermore, most digital devices, such as SSD memory-based cards, pendrives, smartphones and tablets are shipped year to year with significantly increased storage capacities. Almost all modern systems consider the capacity of the devices. In Croatia, the significant imbalance between consumer benefit and rightsholder harm arises from the fact of growth of capacity of the devices.

A potentially very harmful, and most likely illegal way of setting the tariffs is related to the price of the device or capacity. In the last decades, the per megabyte price of storage capacity had been decreasing very fast. This gave rise to huge consumer benefits, and even more when consumers could fill up these large capacities with more and more copyrighted content without paying. The increased capacity usually makes no sense at all without the ability to fill it up with copyright protected works, and in countries like Croatia when most of the users never, our almost never pays for licensed copies, this results in an increasing harm to the rightsholders. Whenever the price of the per megabyte price decreases, it is usually an indicator to increase the private copying levy, because consumers from the same budget will buy and fill up more and more capacity.
4.6 Professional and private use

In the 1980s when a microcassette was sold, it could be fairly assumed that it will be used to tape a record. There were very few other uses of the microcassette. It could store copies of software, true, but it was not particularly well suited for that purpose. There were negligible other uses than recording music.

Since the computer and its CPU is the main copying device, and the storage media is multi-purpose, household and business entities use the same devices for very different purposes. For example, CD-R, which have a relatively long history in archiving, are both used to archive banking records and they are still hold large numbers of privately copied music collections.

Musicians and filmmakers use a vast amount of storage media to record their sound and film. In this case they may pay more private copying levies than what they receive in the form of compensation after their works.

The modern private copying systems must handle the difference of household use and professional use and must only charge professional users in the case when private use is possible. For example, banks that use CD-Rs for archiving must not be charged for the right to copy music on these records. However, when banks purchase smartphones for employees who can use these phones at home and during travelling, and can copy music and video on the phone, should pay the compensation.

In Europe, surveying, consultation with large private copying levy payers and large users make sure that the private copying levy is paid when it is due and when copyrights are not infringed, the levy is forgone. See the Appendix 7 for further details.
4.7 Further limitations

The limits of private copying are a cultural policy and criminal enforcement question. In some countries the private copying levy payers successfully argued against the inclusion of torrented files into the calculation of the harm, and rightsholders sought court orders for ISPs to block torrent sites for their users. In other countries, like in Hungary, the ratio of private and illegal use was estimated with surveys, with limitations. Surveys are always voluntary, and it is against statistical regulations and practice to ask questions that create legal jeopardy for the respondent. Furthermore, common sense dictates that participants of a voluntary, anonymous survey may not reveal all activities that may be persecuted.

In our view, the best way to handle this issue is to take in the negotiations into consideration all compensation that was paid by people re-selling home copies on the black market or users of torrent servers and create a sufficient level of enforcement that fulfils the criminal objectives of the state, rightsholders and consumers. However, the manager of the private copying system, in Croatia, HDS, cannot be made responsible to criminalize certain users, use types or user groups. The economic harm of private copying is a civil law matter, illegal activities are criminal law categories and must be left within the procedures of criminal system.

Having said this, our experience in other countries and the data presented in this report suggests that illegal practices are declining, and it can be estimated at a sufficient level. On the other hand, a new type of copyright violation, the value transfer especially to YouTube and some stream providers is an issue that can be partly addressed in the private copying system. We are touching on this issue in detail in the report, and we suggest that readers of this study actively follow the current European legislative debate on the value transfer which is at the final stage in the European Parliament. New copyright legislation is expected in the near future that will both effect the digital licensing practices of the rightsholders, and the way private copying systems should be managed and remunerated.
Chapter 5

Compensation for free private copying

The European law exempts private copying at home from the usual remuneration scheme. The private copying exemption allows households to copy music without obtaining a license from the rightsholders and paying royalties, if they had paid the private copying levies.

The level of the compensation is not given by the European law, but it requires an equitable remuneration that is proportional to the consumer’s benefit from the copying and the loss of non-licensing for the rightsholder.

We use two different models to estimate the fair value of the compensation. These models have different pros and cons.

The direct estimate simply multiplies the number of downloaded music albums as mentioned in the interviews with their respective price. The answers of the representative survey then projected on the whole Croatian population. The drawback of this model is that it reaches an extremely high number, because the respondent currently feel almost no cost attached to copying. If this amount would be included in blank carriers and devices, they would certainly copy less.

The international comparison model estimates how much would be the total sales of physical and digital records in Croatia if there would be no people who do not pay at least occasionally for downloads, based on the household consumption expenditure as measured by the DZS (Croatian Bureau of Statistics). According to our model, about 115 million kunas are lost due to this problem. (A significant loss is made to the national Treasury, which could levy VAT on the records and films in the commercial transaction, or income tax on the compensation). We assume that only the usual amount of royalty payout happens, i.e. the rightsholders are not compensated for the loss of manufacturing and distribution costs, since they do not bear these costs in the case of home copying. The total value should be cc. 40 million kunas for music alone. This number is consistent with the third, and probably best method, the total market-based model calculation, which gives a very similar estimate.

The total market model estimates the market share of copied files in the total music and film enjoyment hours reported in the survey, and based on the average price of licensed uses, sets the compensation value. Based on the CAP survey, we separately calculate what percentage of the listening hours may be copied files and films and multiply these hours by the average (implied) royalty rates in Croatia for both music and film. In this model 27-41 million kunas should compensate the music use, and 15-23 million kunas the audiovisual use. The audiovisual use is not the compensation of audiovisual creators, but all the compensation necessary for copyright protected works of music, images and audiovisual works in the copied files.
5.1 Tariff comparison

While Croatians tend to rely on home copying in a greater proportion, and at least in the same quantity as the European average, the Croatian blank tape levy on various, comparable products is only 3-30% of the European average value. The gap is smaller with recent tariffs, but they were still introduced at very low levels and it is very big with mature products such as CD-R and DVD-R.

Figure 15 Comparison of private copying levies in Europe

The chart reveals a very unjust situation in Croatia. While consumers pay for these electronic entertainment devices and blank carriers the world market price in all countries, allowing only for small changes due to different VAT taxation and retail margins, creators in other European countries receive a far bigger compensation. We believe that the correct tariff levels should be somewhere around or above the EU average, because Croatians rely proportionally more on “free” music than Western Europeans. Such a move would certainly hold back copying to optical discs, where the current world market prices are often below the EU blank carrier levies, and the price would certainly shot up. Given that such devices,
especially CDs are often used for business purposes, an appropriate exemption for business users is necessary in this case, too\textsuperscript{6}.

From a legal point of view, and from the point of view of the creators of course it is not the tariff that matters, but the combined licensed and compensated use of music, and specifically for private copying the total compensation amount paid. The total compensation amount does not only depend on the tariffs: it depends on the national PCR system’s ability to include all blank carriers and devices, to monitor the market and to enforce sanctions against illegal sales and imports.

The total revenue per population was however about 79\% smaller than the EU average (average of gaps in 9 years) and in the recent year it was increasing. One reason is that the tariff is extremely low, but a larger black or unreported market can contribute to the problem, too. This does not necessarily have to stay like that. In the region, Hungary, after careful assessment of the value of private copying, and giving evidence to competition authority and courts, managed to close the gap with the European average and in fact collect revenues that take into consideration the larger private copying use in the region, exactly following the same line of argument that is outlined in this study.

\textbf{Figure 16 Comparison of private copying compensation levels in Europe}

\textsuperscript{6} Company and public archives often use CD-R for digital archiving, because this is the carrier where we have not more than 35 years of experience with the aging of the material and retrieval problems. Private users, however, prefer the far more cost effective DVD-R. The EU jurisprudence states that business users must be exempted from the PCR regime when there is absolute no private use - but these exemptions do not apply when there is a reasonable risk of home copying. See Appendix.
5.2 Direct assessment

In the direct assessment, we ask a representative group of consumers to tell us how many copies they made in a year to various devices. After projecting the number of copies they told us in the interviews for the whole Croatian population, we obtain the number of estimated copies made on various devices – the number estimated, after adjustments, is 114,6 million albums. In the next step, we multiply the equitable remuneration fee with the number of copies to obtain how much money should be collected in the form of private copying levies.

5.2.1 Downloading music

About 40% of the Croatian population does not download music, and about 60% downloads, generally 1-100 albums per year. In 2017, about 2.1 million people, excluding children younger than 15 years, downloaded some music. The following charts show the distribution of downloaded albums. (Less than 1 album refers to a few songs copied in the previous year.)

Like most consumption patterns in the economy, downloads follow a lognormal shape. The logarithmic scales makes the reading easier.

![Figure 17 Downloaded album numbers in the CAP survey](Image)

In the chart it is also visible that one person reported an extraordinary large downloading quantity, more than 4000 albums that would take almost a year to listen to.

Most people do not copy music, so their average copying is 0. There are 323 such people present in our survey sample. They are easy to generalize, and if accidentally we next time ask 320 or 325 similar persons, the total estimated number will change less than a thousand of a percent in our calculations.
However, there are some people who claim to copy more than 1000 albums per year. In our sample, there are 13 of them. If next time we accidentally ask 10 or 15 similar persons, it will dramatically change or results, because they copy annual the average amount of thousands of everyday Croatians. While the survey is very representative of everyday people, we would need maybe a survey of 10,000 people instead of 800 to have a more correct view on extreme copiers.

We used a standard statistical approach by cutting our sample until it resembled a lognormal distribution, which is a distribution of answers usually associated with the consumption of goods and services. This way we are leaving out 9 respondents from the following calculations who claim to have copied more than 1200 records in the survey. Some of their responses are not credible – somebody reported to have copied 80,000 songs on a smartphone, which is technically impossible. Some of them may be true answers, but we do not really know how many similar people there in Croatia are. As a consequence, our estimate with underestimate the total copying activities, and we do not know by how much, but we are very unlikely to exaggerate.

People are downloading on average large quantities of music. The average downloaded amount is slightly decreasing with age, as expected, but for the total Croatian market the effect is less pronounced. Due to the aging population, the younger generations have smaller populations than older people, and overall all generations download a lot of music.

Private copying is exceptionally beneficial for young people, who still do not have an own income. Teenagers alone are downloading and coping almost 20 million albums in Croatia alone – several times more than all the albums sold in the country.

---

7 The statistical algorithm (Loo 2010) is for detecting unusually large, probably not-representative or exaggerating replies. While in some cases the total numbers may still be exaggerated, these numbers are only used for demonstrating the severity of the situation. The final valuation will be based in the next subchapter on realistic assumptions.
While some people download excessively, few people claiming to download thousands of album per year (which is hardly justified by private use!), the typical values as presented in chart 14 vary between 5-15 albums per year, excluding people who do not download. Their lack of copying would of course bring down the typical and average numbers, but not the total projected values.

The following chart shows where these copies are being used.

The valuation is follows the following scheme.

<table>
<thead>
<tr>
<th>Device Type</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer</td>
<td></td>
</tr>
<tr>
<td>Computer Accessories</td>
<td></td>
</tr>
<tr>
<td>Entertainment Media</td>
<td></td>
</tr>
<tr>
<td>Optical Disc</td>
<td></td>
</tr>
<tr>
<td>Blank CD or DVD</td>
<td></td>
</tr>
<tr>
<td>Tablet</td>
<td></td>
</tr>
<tr>
<td>MP3 Player</td>
<td></td>
</tr>
<tr>
<td>HDD</td>
<td></td>
</tr>
<tr>
<td>Pendrive</td>
<td></td>
</tr>
<tr>
<td>Smartphone</td>
<td></td>
</tr>
</tbody>
</table>

Proportional to total albums per year for Croatian adults.
1. We take the typical price of an album, which is a collection of typically 10-12 recordings sold as a unit. The gross price in 2017 was typically 68 kunas.

2. We exclude the VAT from the calculation.

3. The private copying levy is designed to compensate rightsholders, not shops and manufacturers, even though their losses are significant, too.
   - The industry standard for CD records is that 50 percent of CD net price covers the manufacturing, packaging, logistics and sale margin of the CD, and 50% is the income of performers, authors and producers. -The percentage is usually different in the case of the now extinct CD Singles.
   - In the case of digital sales, the industry standard is 70% percent for rightsholders and 30% for the sales platform.

The total loss of a rightsholder’s for not selling but copying an album of music is roughly a net 27 kunas, or 2.5-2.7 kunas per song.

---

*Figure 20 Valuing the albums copied on blank carriers and devices*

Our evaluation does not take into consideration the loss of VAT for the treasury, the loss of retail margins, and any costs of bringing the recordings to the consumer. If the consumer would pay 68 kunas for a recording, the authors, performers and producers would receive 27-38 kunas in total.

This means that while the consumer’s benefit from private copying is 68 kunas per album, the rightholder’s would gain if the compensation would be based on this amount. Some
consumers would benefit even more, because they would be willing to pay maybe 78 kunas for the product. However, those consumers can enjoy the album who would only pay 40 kunas in the shop.

Competition law and copyright law suggest that in private copying the consumers and rightholders must equitable share the benefit from copying home, and it would violate competition law if rightsholders would squeeze out all consumer benefits. For this reason we base our compensation estimate on half of the net price.

Private copying is a significant loss for the Treasury that would tax the recording with 25% VAT and it would also tax author's, performer's and producer's royalty income. So the Treasury's loss is about 16-18 kunas per album copied.

However, with an appropriate private copying compensation scheme the Treasury can recoup some of this revenue. The private copying levy is not VAT taxable, because it is not a product but compensation for harm. However, the levy increases the final price of the blank carriers, and thus increases VAT revenues via the smartphones and blank CDs. Furthermore, it creates income for the creators, which is taxable. With the appropriate level of levy, the Treasury gains back almost 100% of the loss, since the manufactured blank CD and the smartphone is taxed at a higher level and the creator’s receive the income that is currently almost entirely foregone in Croatia.

This is a win : win : win situation, because the creator’s receive their income, the Treasury the taxes, but the consumer’s still cut out the marketing, wholesale and retailers costs, and receive the music at half the price.

5.2.2 Downloading films

The picture is similar with films, but because the files tend to be much bigger, the large capacity hdd and computer hard drives are more often used. Another reason for this is the fact that most movies and TV programs are watched only once and more storage is needed for archiving. On the other hand, music is mainly used for a long period of time and it is available in the carriers that are in daily use.

In the case of films, we have some extreme-looking downloading values, although the responses seem more credible. We excluded respondents who claimed to have downloaded at least 2000 films in a year. In this case, the log of reported downloaded films was a bit skewed and the correction is value was less well defined than in the case of music, but the individual responses generally looked more credible. We excluded 5 responses from the dataset and we had 499 respondents remaining. Generally, there are more people who download films than music.
The price of films is a bit more difficult to establish. Cetederija sells current DVDs for 109 kunas, but sometimes non-current films can be bought on the cheap in some stores. On iTunes, movies cost around 70-80 kunas. For simplicity, we assume that the total gross price of a film is 100 kunas.

Figure 21 Devices used for copying and storing audiovisual files

Figure 22 Valuing the films copied on blank carriers and devices
5.2.3 Summary of the direct assessment

The total value of films and music downloaded in Croatia is around 11.3 billion kunas. It would probably not desirable to levy this total amount to the smartphones, tablets, computers and accessories, because it would kill the whole digital economy of the country. Furthermore, if this budget would be present, it could buy completely legal solutions to all Croatians in the form of Spotify, Netflix accounts or other schemes. Nevertheless, such an amount of private copying is clearly disabling a functional content market without another form of remuneration.

The disruption is extremely disadvantageous for Croatian musicians and filmmakers. In other countries, for example, in the UK, Germany, Hungary or Slovakia, there may be stronger licensed sales, and the private copying remuneration is far more realistic. However, while British artists can rely on revenues from the UK, Germany, Hungary, Slovakia and Croatia, Croatian artists, as artists from other smaller countries, can mainly rely on revenues from Croatia itself, and to some extent from former Yugoslav republics. The language barrier limits their natural market to their native countries and to the region to some extent. Namely, the Croatian musicians’ main market is Croatia and the surrounding former Yugoslav republics. While a British superstar will not be really hurt if in Croatia her work is not fully compensated, the relationship is not symmetrical, because Croatian artists cannot hope to achieve a significant market share in the UK, Germany, Hungary or Slovakia. If they are not compensated in their home market, they cannot continue to create.

Before turning to a more realistic model, we conclude that the current regime causes extreme harm to the rightsholders and the Treasury, but it is very beneficial for the importers of electronic devices, telecom companies and other entities who are gaining from selling unnecessarily large carrier capacities to support this uncompensated hoarding of copyright protected content.
5.3 Market-share based assessment

The problem with the direct assessment is that it ends up with an unrealistic number. If we would charge this amount of money on blank carriers and devices, their price would significantly rise, and users would reconsider copying so much. Currently, a user may copy whatever she can, because the cost is so little that any music or video that may be potentially interesting later can be copied at practically zero cost.

This is of course an illegal solution, and it shows that the current level of levies is too low. But how can we know what would be the level of copying if the correct levies would be already in place?

CEEMID introduced a different valuation model, which is in principle based on a valuation model developed by PWC for IFPI, the global recording industry association. In this model we try to establish the market share of private copies and compare the value of their use to licensed uses. This is a very faithful representation of copyright royalty calculations, which always must be based on the value in use. The method, if properly applied, does not take into consideration of superfluous copies sitting on the computer that are never used.

In the following model, the source of the producer’s royalty income are the annual reports of ZAPRAF. Because we had no access to the performer societies’ annual reports, we assumed that HUZIP’s performer royalties are at the level of producer royalties.

---

Figure 23 The logic of full market comparator valuation

---

8 The statistical algorithm (Loo 2010) is for detecting unusually large, probably not-representative or exaggerating replies. While in some cases the total numbers may still be exaggerated, these numbers are only used for demonstrating the severity of the situation. The final valuation will be based in the next subchapter on realistic assumptions.
5.3.1 Presenting the market comparators model

5.3.1.1 Measuring the use of music and audiovisual works

In the first step, we measure the annual music and audiovisual use of a territory, for example, Croatia, with a nationally representative survey. The “relevant market” as defined by EU competition law is a national market, because royalties based on international copyright law are territorial and they follow national boundaries. We establish for each demographic group the average use of music in listening hours and the average enjoyment of audiovisual content in watching hours. Scaling up the listening hours and watching hours for the entire adult population we arrive to national (notional) use of music or films.

In the Croatia CAP survey we asked respondents to tell us how many hours they listen to music from different sources and on different devices per day or week. Weighting with their age, gender, location, education level we weighted their answers and projected to the 15-years or older population of Croatia.

We created the notional market shares, expressed in hours, for music and film enjoyment. We compared this with estimated royalty revenues from these sources. Among estimated revenues we calculated collectively managed (HDS, HUZIP, ZAPRAF) royalties and usual individually managed royalties after music or film.

We established the compensation value by projecting the market share of home copied files to the total market of revenues. So, instead of mechanically counting all copied files, many of which are never used, we only calculated a fair revenue share on the actually used ones.

The following, so-called treemap chart (which shows the total breakup of use by smaller areas proportionately sized to the proportion of use) illustrates the notional listening hours for music in various licensed and not-licensed forms. Most music is listened to on radio and television that is not viewed, just used as a background music source. These are depicted with blue on the treemap. The ‘laptop’ means files played on a laptop, and so on. The size of the rectangles are proportional to the total number of hours. In the top right-hand corner there is a small green area. It is so small that we could not print the ‘concert’ label. While concerts are the most valuable entertainment forms, in total hours they represent the smallest amount, because not everybody, and certainly not every day listens to live music.

Most of the recorded music is enjoyed by playing files. The vast majority of these files are copied at home, and did not pay license fees, i.e. it should be compensated from the private copying compensation scheme. The paid streams may represent the future, but currently they give only a very small fraction of the listening hours.
Figure 24 Treemap of music enjoyment hours

The chart reveals another problem, namely the value transfer problem. Another non-licensed form of music on YouTube is gaining fast market share. This anomaly is caused by the so-called ‘safe harbour’ rules in copyright law that allow media platforms to avoid paying licensing fees. We will come back to this in the third and fourth step.

5.3.1.2 Market Comparators

In the second step, we compare the actual (notional hourly) uses of music with various forms of licensed and non-licensed household uses. We are adding together, and in some cases, estimating the various public performance and mechanical royalties that authors, producers and performers receive in the country. We make this step to allow a meaningful comparison with the two most important non-licensed and non-illegal uses, streaming on various user-sharing platforms, mainly on YouTube and private copying. These uses, while not licensed, are subject to compensation.

Our model is similar to the market comparator model described by PWC in the Valuing the use of recorded music study for IFPI and other PWC work made known to IFPI members later. However, our model is more comprehensive because it can be used to set licensing tariffs or make private copying or value transfer claims. Furthermore, our model is standardized for international comparison for all EU countries, with a methodology than can be extended to any non-EU country.

The difficulty is consolidating enough royalty data for the territory to make the market comparison representative. Some uses are only collectively licensed, for example, radio stations in Europe play three collective performance royalty for music authors, performers and producers. Some uses are only individually licensed, such as Spotify or Deezer streams
for the opt-out repertoire. And most uses are have collectively and individually licensed elements, such as physical carriers, that are collectively licensed for authors and individually licensed for performers and producers.

Usually we start from collective management society data, add representative IFPI (survey based data), and add our survey based data from the Musician surveys, if necessary. In the case of Croatia, we used the data of HDS, ZAPRAF, HDU and estimated revenues with the help of international comparisons, IFPI data and our Musician survey data.

When we compare the national enjoyment hours, in millions of hours, and the actual royalty revenues of the Croatian music industry, we immediately see that the home copying causes a huge disproportionality. The grey areas of home copied files do not pay any royalties. To understand what we are doing, refer to the previous 19 figure and explanation.

**Figure 25 Comparing music use and royalty receipts**

If we compare the enjoyment in hours and the actual royalty receipts (in colors, excluding grey areas) we realize that not all uses are equally valuable. The total number of hours in concerts, that give the most valuable experience for music-lovers, cannot be printed in hours compared to radio, but it has a significant public performance royalty income. On the other hand, income from Streaming and YouTube is far smaller than the actual use.
Figure 26 Comparing music use and royalty receipts

Our view is to bring in line compensation for private copying, and compensation for YouTube with the proportion of their enjoyment.

5.3.1.3 Calculate Appropriate Private Copying Levy

In the third step calculate how much would be the proportional value of the non-licensed uses based on actual use. We valuate the use value of various forms of music, and we give more value to forms that are used more. We understand that many users are hording huge collections of copied files that they never use, because they are not confronted with the costs of this activity. However, if they would be required to fully compensate the market value of these files, they would not do it. So, our comparison is based on actual use, and we are comparing similar uses to similar royalty flows. There are some differences among jurisdictions how broadcast royalties and streaming royalties are treated. The relevant proportional use value is claimed for private copying remuneration.

Our model takes into consideration the EU jurisprudence on the calculation of private copying levies and has been applied in several countries.
5.3.2 Equitable Remuneration For All Music Use

In our earlier models, before 2016, we did not take into consideration the fact that YouTube and similar websites are not licensed uses. However, recently their market share became so big that omitting them from the model would make comparison meaningless. YouTube is often the most important use for music content and it is very important for audiovisual content, too. The amount that is not paid by YouTube is a contentious issue. Representative organizations of authors, producers and performers are all claiming that YouTube is using a loophole in the current legislation when it avoids paying a licensing fee for the music and audiovisual content used on its platform. According to the rightsholders, YouTube is unfairly exploiting this content, and undermines the markets of licensed users, such as radio stations and television stations by acquiring content at an unlicensed price and driving advertising revenue to its platform with an unfair advantage.

Most of the unlicensed use of YouTube and similar platforms cannot be claimed in the private copying compensation scheme, because most uses of YouTube are not private copying uses. An exception may be the use of buffering use of the blank carrier, and of course, downloaded music and film via YouTube downloader software (which is in many countries the most downloaded free software) creates a vast number of private copies. Our goal with separately showing the value of unlicensed YouTube use is to maintain the integrity of the full market model.

*Figure 27 Comparing music use and royalty receipts*
The total Croatian household music royalty market, including music royalties collected for foreign artists in the territory of the Croatian Republic is approximately **130 million kunas**. The streaming revenues are as reported by HDU to IFPI, the public performance royalties are taken from the reports of the three collective management societies. The mechanical royalties consist of four items: individually paid royalties for authors, performers and producers by record labels, and collectively managed mechanical royalties for authors represented by HDS. Since we have no access to these data, we use the international standard agreement in which such royalties amount to about 50% of the physical and 70% of the digital sales price.

These sums do not include business-to-business transactions to the hotels, restaurants and retailers (public performance) and the film industry (film synchronization). In our view, based on the market share of music not paid for by the households, there is a further **consumer benefit of 82 million kunas** arising from home copying and for unaccounted and illegal activities. [] In our model we do not make a distinction between home copying that must be compensated by the Croatian state, which chose to allow such activities, and potential damage claims to torrenters, and, taking this into account, we believe that **27 - 41 million kunas should be the equitable remuneration collected by HDS** for all music rights. This amount is due after the use of music, and it concern the compensation for music authors, lyricists, performers and music producers. And this is not their total economic harm, because their works are used in films, too, which we will calculate in the next subchapter.

---

9 This sum, as opposed to the previous sum, is the value of the music enjoyment for which the households do not pay.
The transfer to unlicensed platforms, such as YouTube, or to smaller degree Facebook and other social media websites undermines the market equilibrium. These platforms, citing a loophole in copyright law, claim that it is not them, but their billion users should pay licenses. They create vast, unlicensed, cheap alternatives to licensed services such as radio stations and Spotify or Deezer or Apple Music in the case of music, and TV stations or HBO GO or Netflix in the audiovisual market. They are able to provide advertisers with a much cheaper marketing space because they do not pay themselves royalties as their competitors do.

This is highly relevant to the calculation of both royalties and private copying levies that are substituting royalty payments. Undermining the royalty market and its prices, the price of music and the market-price based compensation value is falling, too.

At the time of the measurement, the value transfer was at least 30 million kunas in Croatia, which is at least half of the value home copying.

**5.3.2.1 Review: Full Compensation in Four Steps**

To review our calculations, we start from the top right corner, and we create the proportional uses of music for end-users. We usually measure use at the workplace (on headphones), during travel and at home. We exclude differently licensed uses such as music in restaurants, bars, or workplace but played publicly. We receive a nationally representative music use in (notional) hours.
We compare the actual uses with the actual royalty receipts. The royalty receipts are not straightforward to calculate, because there are three classes of music rightsholders (authors, producers and performers). Each rightsholder class usually receives individual and collective royalties. We use collective royalty management data, and, when necessary, musician survey data about individual royalties.

In the case of audiovisual content, the number of rightsholder classes are different in most jurisdictions. Most royalties are individually managed, and royalty values are not measured but estimated in our model, because it is next to impossible to get access to individually licensed uses. The collectively managed royalties are different from jurisdiction to jurisdiction, but usually they are relatively small compared to individually managed royalties.

As the second step we end up with a total market estimate for licensed uses of music, and we can establish a notional per hour price for music and audiovisual content.

In the beginning, we grey out the areas that do not have a market price (privately copied CDS, files, and YouTube or Facebook streams.) In the third and fourth step we calculate the values of these not-compensated uses.

Figure 29 Treemap of the music compensation

We claim a compensation roughly equivalent to the royalties paid by televisions and radios, and the royalties paid to authors after live performances. We cannot really show on the chart, because the sum is so small, but we reduced this claim with the almost negligible royalty
flows from legalized, paid downloads. Given that the use of unlicensed files, in the form of mp3 files or buffer files of unlicensed streams is the major source of music enjoyment, we believe that this claim is equitable.

We used the mechanical royalties as benchmarks for these files, because, as opposed to radio or streaming royalties, downloaded files are eternally benefiting the user. If we would have used an average per hour price of mechanical and performance royalties, we would have come to a somewhat smaller amount, which is still far above the actual compensation in Croatia.

5.3.3 Equitable Remuneration For All Audiovisual Filmed And Music Use

5.3.3.1 Market share of copied films and television content

In the next subchapter we repeat the last four steps for audiovisual content. The logic of the calculations is exactly the same. The primary source of watching films in Croatia is television, which is a licensed source. After each television play, the music authors, the music performers, the producers of the music, the actors in the film, the filmwriters receive a small amount of licensing fee. Even the visual artists receive a very small amount after the copyright protected paintings, photographs, design objects or artworks that are shown in the films.

The difference in comparison with music is that this sum is relatively low. The rightsholders receive a one-time, lump some payment from the producer when the film is made, which covers most uses, included cinema projections, DVD and digital video distribution, etc.

Audiovisual Content Enjoyment

Notional hours per year

Figure 30 Treemap of audiovisual enjoyment hours

The very slight, brown line above television is the notional amount of audiovisual enjoyment in movie theatres. It is a relatively low-volume and high value form of enjoyment.
Again, the problem with copied files and with YouTube streams that these royalties are not paid. The cinema and DVD related royalties are almost exclusively individually managed royalties. We based our estimates on international standards and on the data of the European Audiovisual Observatory.

In the case of television, most of the royalties are individually paid, and we expressed this sum as a percentage of the total television market. We conservatively estimate that 12.5% of the net revenue of televisions cover the costs of creating and buying copyright-protected programs.

Further, smaller royalties are payable to collective management organizations for certain music and film rights. Our estimate of YouTube remuneration is based on the fact that overall YouTube claims to pay out 60% to audiovisual content and 40% after purely music content. Because this data is corroborated by our own measurement in Hungary, we multiply the known YouTube royalties, as reported by HDU and IFPI, by 1.5 for all other use, i.e. films, educational videos and other copyright protected content that is not solely musical content on the platform.

In the case of cinema, again, we believe that about half of the ticket sales are compensations paid to rightsholders, and the other half covers the costs, and in some cases the profits of theatre operators. Furthermore, in cinemas there are also small amounts of collectively managed royalties present.

![Figure 31 Comparing audiovisual use and royalty receipts](image)

The same logic applies to audiovisual use than only music use.

1. recoup the value of the grey used files in the private copying remuneration system
2. close the value gap with YouTube and force them via changes of copyright regulation to pay equitable licensing fees.
Audiovisual use is not only licensed by “audiovisual rightsholders”, because each audiovisual work contains music, too. So, the problem with the audiovisual home copying is even more serious, because it does not only affect the three music rightsholders groups (authors, performers and producers) but also film writers and authors of artworks in the film.

### 5.3.3.2 Equitable remuneration for audiovisual use

The equitable remuneration takes into account that similar uses should be compensated similarly under market conditions. In the case of YouTube, we use the TV royalties as a benchmark. We do not base claims on this sum, but we present this as a disputed sum to avoid a fully distorted view of the market.

![Figure 32 Treemap of the audiovisual compensation](image)

The total Croatian household audiovisual royalty market, not only including revenues of domestic rightsholders, but also among others royalties paid for foreign TV series producers in the territory of the Croatia is approximately **194 million kunas**. In our view, based on the market share of audiovisual content freely enjoyed, i.e. *not paid for* by the households, there is a *further 46 million kunas* consumer benefit arises from home copying and for unaccounted and illegal activities such as torrenting. Similarly to music copying, we do not make a distinction between home copying that must be compensated by the Croatian state, which chose to allow such activities, and potential damage claims against torrenters, however, we believe that a **15 - 23 million kunas** remuneration would be equitable for this consumer benefit.

As shown in the chart, this is a conservative assessment. It is about three times more than the estimated royalty flow from the currently collapsed DVD+BluRay sales and rental markets. This is a very moderate compensation given that most people never buy DVDs but copy all their films.
Furthermore, we believe that the current legislative debate in the European Parliament about the value transferred to platforms such as YouTube is extremely important from the point of view of Croatian creators. The fact that YouTube claims that it is not liable for paying royalties, as opposed to Croatian TV channels, creates an unfair advantage on the media markets versus TV stations. The value of audiovisual content use on this platform, if it would be liable to pay at least as much royalties as the Croatian TV stations, would create a further 43 million kunas remuneration for rightsholder.

This is highly relevant for the calculation of the private copying levy. The fact that an important market player is not paying royalties devalues all media platforms and starts a race to the bottom. This results in low per hour media prices, and as a consequence, in the market comparator model, it devalues private copying, too.

5.3.4 Total Compensation Estimate

The total amount of consumer benefit is 82 million kunas for the use of music and 46 million kunas for audiovisual use of music and film, or together 128 million kunas.

An adequate level of compensation for private copying is:

- For music rights 27 - 41 million kunas;
- For audiovisual use, which includes various music and audiovisual rights: 15 - 23 million kunas;
- In total at least 27 + 15 = 42 million kunas, and up to 41 + 23 = 64 million kunas.

This sum is one third of the consumer benefit for allowing home copying to take place in Croatia, and it is the lower suggested value in the previous subchapters.

When the new Copyright Directive will be transposed into the Croatian law, the national legislative changes should result in a positive change of 30 million kunas for music use and 43 million kunas for the use of music and films in currently not licensed audiovisual Internet platforms. Therefore, the further increase in royalty collection in Croatia should be around 73 million kunas.
(APPENDIX) Appendix

For the more technical reader we have put the details, footnoted in the main text, into the annexes.
Appendix A

Literature overview

In Chapter 3 we have recalled history of private copying in detail. The early history of private copying which eventually became the basis of the current EU law introduced in 2001 is based on (Kreile and Becker 2003; Reinbothe 2003).

In the 2000s there was a general uncertainty about the future of private copying in the previous decade, when the emergence of file sharing and multi-purpose carriers made the compensation mechanism uncertain. In the European Union, a long public consultation was held between 2006-2013 that ended with the mediator’s report. (Vitorino 2013). Many arguments were produced in favor and against the levy system (see for example (Sanchez-Graells and Santaló 2007; Kretschmer 2011; Hargreaves 2011; Oxera 2011), but the consensus prevailed that system should be maintained with some clarifications. Even the United Kingdom, which was traditionally the most opposed to private copying, introduced the system. Finland and Spain opted to use a tax-based system, and the other countries, except for the smallest countries that are exempted on the basis of the de minimis rule use a compensation system maintained by the rightsholders and endorsed by the legislation, like in Croatia.

The private copying levies recently were reviewed and upward modified in the Netherlands (2012), in Hungary (2013), Germany (2015) and Slovakia (2016). In the Hungarian and Slovak case the predecessors of the models presented in this study were used which in turn used the experience with the modernization of the Dutch private copying system (Huygen et al. 2009; Antal 2013).

The market-share based model was developed in 2015 in an antitrust proceeding in Hungary, following the principles and original idea of PWC model proposed for rights evaluation for IFPI (PwC 2008; Dániel Antal 2015a).
Appendix B

Jurisprudence


(35) In certain cases of exceptions or limitations, rightholders should receive fair compensation to compensate them adequately for the use made of their protected works or other subject-matter. When determining the form, detailed arrangements and possible level of such fair compensation, account should be taken of the particular circumstances of each case. When evaluating these circumstances, a valuable criterion would be the possible harm to the rightholders resulting from the act in question. […]

(36) The Member States may provide for fair compensation for rightholders also when applying the optional provisions on exceptions or limitations which do not require such compensation.

(38) Member States should be allowed to provide for an exception or limitation to the reproduction right for certain types of reproduction of audio, visual and audio-visual material for private use, accompanied by fair compensation. This may include the introduction or continuation of remuneration schemes to compensate for the prejudice to rightholders. Although differences between those remuneration schemes affect the functioning of the internal market, those differences, with respect to analogue private reproduction, should not have a significant impact on the development of the information society. Digital private copying is likely to be more widespread and have a greater economic impact. Due account should therefore be taken of the differences between digital and analogue private copying and a distinction should be made in certain respects between them.

More practical issues were decided by the Court of Justice of the European Union, in litigation with copyright management organization in charge for managing private copying remuneration schemes. The International Survey on Private Copying (see, for example, (de ThuisKopie and WIPO 2017, de ThuisKopie and WIPO (2014))) is a very good summary of the recent European jurisprudence at EU and member state level. For complications in the negotiations between rightsholders and tariff payers it can be a good starting point.
B.1 Padawan

The Padawan case (CURIA 2010) clarified that private copying remuneration scheme should burden users who are likely to benefit from the private copying exemption from copyright law. It introduced an important limitation to the private copying system: it exempted users who are certainly not using a device or carrier to copy copyrighted content. For example, banks, who often use CD-ROMs because of their 3 decade long proven archival quantity, may purchase such blank carriers if they make sure that their workers will not use them to burn music or films.

B.2 Opus

The Opus case made it clear (CURIA 2011) that regardless of the origin of the blank carrier or device, the harm should be compensated where it is likely to be made, i.e. in the country where it is purchased. This means that carriers and devices purchased outside of Croatia, for example, via mail order, can be charged with the Croatian levy. It further clarified the Padawan ruling, making clear that a PCR system would be unworkable if it would need to identify every single user who benefits from the private copying exception.

B.3 ACI Adam

In the ACI Adam case (CURIA 2014) the European Court of Justice (“ECJ”) ruled that that a private copying levy system must distinguish between reproduction from a lawful source and reproduction from an unlawful source.

This is a very problematic issue for managers of PCR systems, because it is very unclear what may be an unlawful source. Survey-based compensation calculations trace if a copy is licensed or not, but they cannot make a legal judgement on the course of actions that created the copy. Application is very problematic in consumer surveys, because respondents of volunteer surveys should not implicate themselves for illegal activities.

One possible solution could be to calculate the harm, and then distract all compensation received by breaches of copyright – i.e. compensation received for distributing illegal copies of work that fall outside the scope of the private copying exception. Another possibility, applied in some countries, is to ask how the copies were acquired by the user, and rule out the portion clearly illegal, such as torrenting.

This ruling is important in countries such as the Netherlands or Hungary, where the harm is established annually with the help of consumer surveys.
B.4 Copydan

The Copydan case (CURIA 2015) reinforced the previous case law, adding some new elements. For CMOs particularly interesting is that even paid sources where copying is restricted by technical measures can be included in the private copying system, even if users pay twice in this case. This may be relevant in the case when paid services, such as streaming services, automatically create offline copies.

B.5 Brein v Wullens

The Brein vs Wullens case (CURIA 2017) takes the considerations already present in takes the considerations already present in Copydan with making it clear that a copy does not need to be made from another copy. This case is concerning a stream player. Technological solutions may not need to pay copyright royalties if five conditions are met under Article 5(1) of Directive 2001/29 that

- the act is temporary;
- it is transient or incidental;
- it is an integral and essential part of a technological process;
- the sole purpose of that process is to enable a transmission in a network between third parties by an intermediary or a lawful use of a work or protected subject matter; and
- that act does not have any independent economic significance.

In the preliminary ruling the Court of the European Union found that these criteria were not met in the ‘Filmspeler’ device, and it could not be exempted from either paying copyrights or private copying levies.

B.6 SAWP

In SAWP (CURIA 2016a) the Court of the European Union stated that “the obligation on producers and importers of blank media and of recording and reproduction devices to pay fees cannot be regarded as resulting from the supply of a service for which it constitutes the direct consideration. It is apparent from the order for reference that fees such as those at issue in the main proceedings are intended to finance fair compensation for holders of reproduction rights. However, the fair compensation does not constitute the direct consideration for any supply of services, because it is linked to the harm resulting for those rightsholders from the reproduction of their protected works without their authorization.” With this ruling the Court further highlighted the Padawan ruling which already clearly established that the private copying remuneration is a compensation for economic harm.
B.7 Microsoft Mobile Sales International Oy

In Microsoft Mobile Sales International Oy v MIBAC and SIAE (CURIA 2016b) the Court reinforced the criteria of Copydan for the importance of a non-discriminatory private copy levy system.
Appendix C

Data sources

This study is the fruit of a cooperation that started in the CISAC Good Governance Seminar for European Societies in 2013. In 2014 three societies, SOZA, Artisjus and HDS realized that need to make further efforts to modernize the way they measure their own economic impact, the economic value of their licenses to remain competitive in advocating the interests vis-à-vis domestic governments, international organizations like CISAC and GESAC and the European Union. They signed a Memorandum of Understanding with their consultant to set up the CEEMID databases and to harmonize their efforts (Artisjus et al. 2014).

CEEMID, the Central European Entertainment and Media Industry Databases, was created with public and private data layers to provide economic data and evidence for these goals. Missing data was collected via surveying the general public and music professionals, and open, industry and member specific data was combined to create more and more new indicators. CEEMID’s data was used in several valuation projects and in the creation of the Hungarian and Slovak national music industry reports (Dániel Antal 2015b, Antal (2019)).

C.1 CEEMID Music Professional Surveys

The three income streams model is essentially a value chain based model that was developed in the United States (Hull et al. 2011) and adopted by the European Commission’s Joint Research Center for European CCI policy purposes (Leurdijk and Ottilie 2012). We made minor adaptations in the three income model for applicability in Central Europe.

While in the original American model sound recordings are the “main” income stream, currently, especially in Central Europe the live performance stream earns the most income for a typical musician. The author’s stream is the oldest, traditionally and analytically first part of the music industry that includes revenue streams based on musical works exploited by music publishers and via author’s CMO societies such as HDS. In the US it is called the publishing stream, but in Central Europe it is dominated by authors’ societies, so we modified the label.
After the piloting Hungarian survey in 2014, the several surveys were conducted in Croatia (2015), Slovakia (2015, 2017) and Hungary (2015, 2017, 2018.) The surveys represented well the total musician populations with about 5% response rates.

C.2 CAP surveys

The European cultural statistics were harmonized by the Eurostat working group ESSNet-Culture (Bína, Vladimir et al. 2012) following the work plan approved by the European Union Council of Ministers (European Council 2008). This working group endorsed the use of the ICET model for surveying cultural enjoyment and transactions based on the best member state practices, and particularly the good experience with the early adopted, the Netherlands.

The ICET model is a modified model based on the quantitative sociology UGT model, which was designed originally for the quantitative study of radio and television use. With the digitization of culture, especially in music and audiovisual works, this framework could be generalized to further cultural domains (Haan and Adolfsen 2008; Haan and Broek 2012).

CEEMID had always followed the ESSNet-Culture guidelines and made pioneering work into statistical best practices (Dániel Antal 2015c). The CAP surveys are based on the ICET model, containing questions about information, communication, enjoyment and transactions of culture.
• For royalty and private copying calculations, enjoyment and transaction values are necessary. Enjoyment measures the use of licensed and unlicensed copies of music and films, for example, in a comparable way across laptops, radios, televisions, CD players, DVD players, etc.

• Transaction data is designed to be comparable with non-survey based, more exact transaction data, for example, the licensing data about concerts of author's societies or the national sales data of IFPI on physical and digital record sales.

• For comparability and royalty calculations we have program codes to integrate the CISAC Global Report, the various IFPI internal databases, the European Audiovisual Observatory databases, survey data from the EU digital agenda, and statistical data on the prices, revenues, use of licensed activities that contain music and film or carriers of cultural content. This information is only available for users who are authorized to access such data, for example, HDS for CISAC data.

The ESSNet-Culture technical guidelines provide recommendations on how to conduct the surveys and how to design questionnaires that can build on the top level (internationally comparable) results and go into greater depths according to national needs.

CEEMID was presented as a best practice to build upon this work and create CAP surveys that can provide regular data on the countries covered and create a standardized underpinning for measuring harm from private copying or calculating economic value of use for tariffs. CEEMID designed and conducted the CAP Hungary 2014 [online, trial], the CAP Hungary 2015, CAP Slovakia 2015, the CAP Croatia 2017, CAP Hungary 2017, and the CAP Hungary 2018 surveys. Together with the CAP 2007 EU and CAP 2013 EU surveys CEEMID's models are based on more than 60,000 live interviews.

Most of these surveys target people aged 15 years old or older, but in Hungary we survey children in the age group of 10-14 under parental supervision. The ESSNet recommendations suggest collecting data as early as possible, in some cases from the age 6, because on cultural participation these are formative years. Especially in the use of music, ages below 23 years are the peak years of exploration and use. Surveying children increases significantly the scope of private copying, for example.

The CAP surveys underlined this study, as well as similar studies made in Hungary and Slovakia. In the other two countries, n=1000 live interviews were used, in the case of Hungary, including children under parental supervision. In Croatia, due to cost considerations, CATI methodology, a smaller sample size and a reduced questionnaire was used, which obviously resulted on less detailed and accurate data than what we achieved in Slovakia and Hungary. In Croatia, the survey was carried out by Hendall.
C.3 Reproducible research

CEEMID introduced reproducible research techniques and standards in 2017. It means that each time there is a modification made in the document, all tables, numbers and calculations are re-created from scratch. The data, the text, and the data manipulation codes are contained in one Rmarkdown file for timely updating and for quality control.

The calculations are made in the R statistical language, which is increasingly used to make official statistics, too (Templ and Todorov 2016), particularly using tidyverse (Wickham 2017). Statistical data was refreshed with the help of the rOpenGov eurostat package (Lahti et al. 2019). Extreme values are detected and if necessary, moderated by (van der Loo 2016). Each time the document was refreshed, all the text and illustrations were newly knitted together (Allaire et al. 2019; Xie 2019; Xie 2018). These software codes are referenced in the bibliography and can be found in the open repository of the Comprehensive R Archive Network (CRAN).

C.4 Music markets

The most comprehensive data source of the global recording industry is the annual report of IFPI, i.e. the Global Music Report. The data are annually compiled by national IFPI chapters. In Croatia the data is collected by Hrvatska diskografska udruga.

For the measurement of the total market model, we used the annual reports of ZAPRAF. (ZAPRAF 2016; ZAPRAF 2015; ZAPRAF 2014, ZAPRAF (2013); ZAPRAF 2012). Because we had no access to the performer societies’ annual reports, we assumed that HUZIP’s performer royalties are at the level of producer royalties.

C.5 Audiovisual markets

The data source on the subscription cable, satellite and IPTV segment is the European Audiovisual Observatory’s Yearbook, and it appears flat because our data is projected from the 2009-2015 values. It constitutes about half of the market, and the share of Croatian content is lower.

The greater and growing share of the market is advertising and public funds, which constitute mainly of mandatory licensing fees paid by the Croatian households to HRT and to a lesser extent direct subsidy from the state budget to HRT. Especially the HRT has a very high level of Croatian content. The source of the mandatory household contribution is the series of annual report of HRT.(HRT 2013; HRT 2014; HRT 2015)
C.6 Photo credits

The German tape recorders triggered the creation of the first private copying remuneration scheme in 1963. The picture of the 1962 Grundig tape recorder is the work of Phrontis who released it under CC BY-SA 3.0 license.

The photography of the first Phillips compact cassette is a photograph of John Curtis from the Museum of Obsolete Media, and released under the CC BY-SA 4.0 license.

The picture of the memory cards is the work of Evan Amos from the Vanamo Online Game Museum.


Reinbothe, Jörg. 2003. “Private Copying, Levies and DRMs Against the Background of the EU Copyright Framework. DRM Levies Conference, 8th September 2003.”


