

Research on the Development of Digital Music Industry Based on Copyright Protection

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Keywords: Digital music, copyright, exclusive authorization, tort

Abstract: Digital music industry is the mainstay of China's music market today. Under the impact of the epidemic, digital music has played its incomparable advantages through streaming media. But behind the prosperity, China's digital music industry also exposed many problems. From the perspective of copyright protection, On the one hand, the copyright owner is plagued by infringement, and the existing copyright protection system is difficult to completely protect the rights and interests of the copyright owner. On the other hand, copyright itself is also prone to abuse, which makes it difficult to play its role. In the article, the author takes the protection of copyright and the deep cultivation of copyright resources as the direction, draws on the experience of foreign systems, focuses on regulations, technology and collective organization system, and puts forward ideas and suggestions on copyright protection and development.

1. Introduction

The music industry is an indispensable part of the modern global cultural industry. In the past, traditional physical music with CD, record or tape as the carrier has built up half of the music industry, and physical music has entered the public's vision as an important way of entertainment. However, this mode of taking physical music as the main body and selling records and CDs as the main way of profit seems to be out of place in China. A large number of pirated CDs spread around the streets, and the record companies suffered immeasurable losses due to piracy. At present, after the Internet has given music a pair of wings, digital music has emerged. As a substitute for physical music, digital music has changed the Chinese people's habit of listening to music. Although digital music has many advantages, piracy is still common. After the country introduced a number of measures to curb music piracy, the phenomenon of music piracy in China seems to have abated. But the author tried to search for "music download" on the Internet, and the search results were unexpected, the overall situation does not seem optimistic. In 2021, according to the statistics of the International Recording Industry Association, the proportion of digital music in China will rank first in the world, but the proportion of piracy will reach 70%. Thus, It is very important to study the copyright protection of digital music industry.

2. Overview of China's Modern Digital Music Industry

Digital music refers to music stored in digital format and transmitted on the Internet as a platform [1]. As a musical work of the new era, digital music has the greatest difference from traditional physical music that uses CDs and CDs as carriers, which is reflected in its own characteristics of easy production, easy dissemination and easy storage [2]. However, the copyright enjoyed by digital music is more complex than other types of copyright. The main reason is that the right type of digital music copyright itself is more complex. Its layer is mainly the copyright of music works, including ownership, reproduction, interpretation and distribution rights, public performance rights, exhibition rights and information network communication rights in the digital era. The second level is mainly adjacent right which is subordinate to the copyright of audio recordings. Regrettably, although digital music entered China early, its own development was limited by the limitations of its age. The successful construction of the commercial system in the digital music industry is mainly attributed to the joint action of capital, policy and other factors in recent years.

In 2014, the development trend of the Internet on the mobile end was obvious. Many companies smelled business opportunities and launched various mobile music platforms on the mobile end. After 2015, the Chinese government has successively issued the Notice on Ordering Online Music Service Providers to Stop Unauthorized Transmission of Music, Several Opinions on Vigorously Promoting the Development of China's Music Industry and other documents which opened the curtain of digital music legalization in China. In 2017, the scale of investment and financing in China's music industry also reached a new high, and the influx of capital injected more vitality into the development and innovation of the music industry. In 2018, under the guidance of Several Opinions on Vigorously Promoting the Development of China's Music Industry issued by the former State Administration of Press, Publication, Radio, Film and Television, China's digital music industry continued to innovate in content, gradually integrated its industrial structure, and shared its industrial model development. The total output value of the digital music industry reached 60.95 billion Yuan, and it still keeps rising in 2018 [3]. The industry report showed that the global music record market had increased by 7.4% in 2020. Although the global music industry had been hit by the COVID-19, the growth of streaming media paid subscriptions had offset the decline in revenue from physical music and lived music performance rights which marked the sixth consecutive year of growth in the global music record market. In China's digital music industry, music streaming media services occupy an absolute leading position. Streaming media services greatly facilitate consumers to consume and listen to digital music which has also become the service mode provided by most domestic music platform service providers [4].

The global recorded music market grew again by 18.5% in 2021. Among them, the growth of paid subscription streaming media revenue was particularly prominent, about 22 percentage points higher than that of the previous year. By the end of 2021, there were 523 million paid subscription accounts worldwide, as shown in Figure 1. Many consumers said frankly that during the epidemic period, music played a soothing role. According to the statistics of the respondents, the average time for consumers to subscribe to and listen to music has increased by 51%. 97% of Chinese consumers listened to music through music streaming media (free or paid), and Chinese consumers spent about 22.9 hours a week listening to music. Compared with other countries, an outstanding symbol of China's music industry was that users spent an average of 45% of their time on short video App. In other words, the music video on the short video APP was also one of the channels for consumers to listen to music. Although it was not so "traditional", it was undeniable that the short video APP constituted an important part of China's music industry.

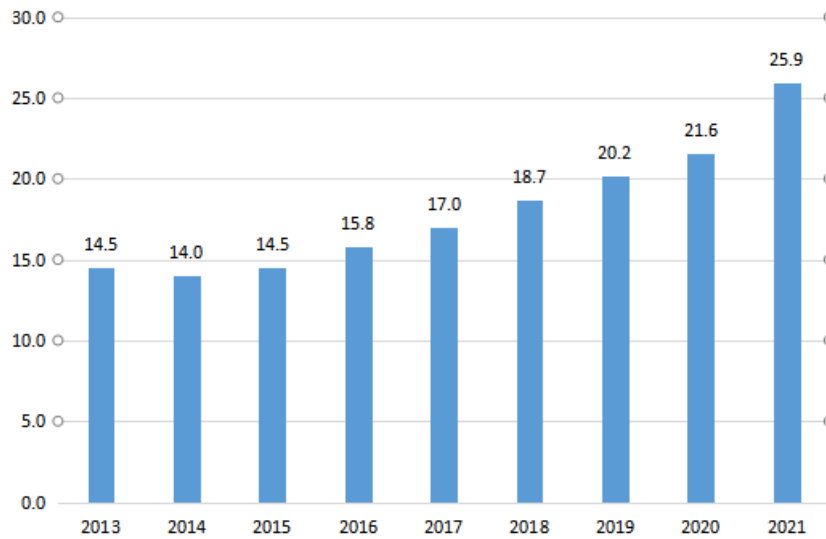


Figure 1: Revenue of the global recorded music industry (in billions of dollars)

3. Problems in Modern Digital Music Industry

As a link of the Internet industry chain in China's current digital economy, the digital music industry has received greater social attention. Since 2015, after the Chinese government launched the "Jianwang Action" to vigorously rectify the infringement of digital music, the copyright protection of digital music has been strengthened, and the society has gradually formed the embryonic trend of respecting copyright. However, it is undeniable that China's digital music industry is still far from the international digital music industry, and some of the problems emerging from it are thought-provoking.

3.1. Difficult to Control Infringement of Digital Music

Although digital music is an art work explicitly protected by copyright law, in the process of practice, infringement of digital music is still common. The chaos of piracy in the digital music industry has already hit the music industry hard, it has also aroused extensive discussion from all walks of life. The main reasons can be summarized as follows.

First, digital music is easy to copy and spread. The nature of digital music itself determines that it is easy to be copied and disseminated. There are many differences between digital music and traditional physical music based on CD and record. Digital music works can be copied in an unlimited number, with quality and authenticity, and spread through the fast and convenient Internet. In terms of providing music services, the nature of digital music is a huge advantage to help its industry grow rapidly. However, considering its disadvantages, this is undoubtedly a hotbed for piracy.

Second, the subjects of infringement are small and scattered. In the past, the main body of spreading pirated digital music was often some music sharing websites, or some music platforms that grew savagely in the early days. However, since the implementation of the "Swordnet Action" by the state, with the improvement of social copyright awareness, such infringers have gradually disappeared. This is because, in the Internet era, the rapid development of "peer-to-peer network" technology has provided nearly perfect concealment effect for the spread of digital music infringement. The so-called "peer-to-peer network" is commonly known as the P2P (Peer to Peer) model. In a peer-to-peer network, each participant is equivalent to a node sharing resources, each

user in the network is not only the provider of resources, services and content, but also the acquirer of resources, services and content [5].

In addition, short video APP may also have a huge number of music infringements. Most short videos are produced by individual users on the network. If the background music used in them belongs to the music uploaded by users themselves and the platform has no copyright, which constitutes a music infringement. However, the huge user base makes it like looking for a needle in a haystack for rights defenders to search for such violations, which can only be ended in the end.

Finally, the cost of safeguarding rights is too expensive. Now, although the state has implemented some legal provisions on digital music infringement, due to the above reasons, the cost of digital music rights protection in China does not match the benefit. In P2P mode, countless infringers may only be network users who are insignificant to the Internet itself. In addition, as a disaster area of digital music infringement, the time, energy and money spent in safeguarding its rights are huge. The subject of rights protection needs to bear the cost of finding violations, seeking legal relief and executing judicial decisions in the process of maintaining its own rights and interests which is difficult for many independent musicians emerging in the digital music industry today [5]. The unbalanced cost of rights protection fundamentally extinguishes the motivation of the infringed subject to protect their own rights, thus leading to many violations against the bottom of the digital music industry, which have repeatedly escaped legal sanctions.

3.2. Hidden Danger of Vicious Competition of Copyright

Copyright should be the right born to protect the rights and interests of creators. However, in the development of the digital music industry today, copyright has a tendency to be alienated into a tool to seize interests. Benefited from today's developed communication media technology, the production and distribution cost of a digital song has become extremely low. Today, the operation of digital music platforms is becoming more and more homogeneous, and the difference between music libraries may become the biggest difference between digital music platforms. Listening to digital music is the core service that the digital music platform can provide, and the size of the music library can even be seen as the key force in the competition between platforms. In January 2022, the National Copyright Administration interviewed each record company and asked each service provider not to sign an exclusive agreement. However, this measure had little effect on the copyright antitrust of the head musicians. Exclusive agreement was "name dead real". The pursuit of exclusive copyright by music service providers often damages the interests of consumers and deprives them of the positive role of copyright.

First, it reduces the enthusiasm of users. At present, the large domestic digital music service providers generally provide two consumption modes for their main business. The first is membership subscription system, that consumers can listen to the digital music designated by the digital music service provider for an unlimited period of time by subscribing to the music content provided by the digital music service provider for a monthly fee. The other is to directly provide consumers with channels to purchase digital music albums, Consumers can pay for digital music albums, so as to obtain digital music file downloads and listen to them for life. These two consumption modes have their own advantages and disadvantages. However, in the current copyright environment, the membership subscription system has the problem of setting a threshold for user consumption. Compared with purchasing albums, membership subscription is more affordable when consumers often listen to music. However, the music copyright held by each music platform is different, which leads to a situation in which consumers are extremely dissatisfied. The above situations undoubtedly hurt the interests of consumers and weakened the enthusiasm of users to pay for music services.

Second, bidding up copyright fees disrupts the market. The strictest copyright order in 2015 undoubtedly blew a breeze for the digital music market at that time. The National Copyright Administration has interviewed more than 20 domestic and foreign music companies one after another, demanding an end to such behavior of boosting copyright and disrupting the music market [6], which indicates that the mode of exclusive authorization had attracted the attention of the national government. As an intangible asset in intellectual property, the asset value of copyright is completely determined by record companies and copyright purchasers. This purchase and sale relationship determined by market supply and demand is more likely to lead to the emergence of market foam [7]. The super platform with abundant capital has turned the exclusive copyright licensing mode into an invisible war, and consumers often pay for it.

Third, vicious competition violates the original intention of copyright. The ultimate goal of intellectual property rights should be to maximize the total social benefits by protecting the creators' intellectual achievements, but the vicious competition of copyright obviously violates this point. In the digital music market, the "head effect" is extremely obvious for some popular music [8]. Taking Tencent Music as an example, when various music service providers are fighting for copyright, Tencent Music has first completed the gathering of copyright. Although Tencent Music shares 99% of its music library to other music platform service providers through sublicense in the intervention of the state, it still insists on occupying 1% of the exclusive music license, that is, music copyright in the "head" position, which makes the sublicense model almost useless.

4. Measures to Be Taken by Digital Music Industry

The problems in the digital music industry are inextricably linked to copyright. Effective regulation of infringement and anti abuse of copyright are the key to breaking the digital music industry.

4.1. Strengthen Copyright Protection through Regulations and Technology

Digital music, as a product of the information age, its nature determines that it can be encrypted by technology and developed and advanced by technology. As an intellectual property right, digital music copyright depends on the power given by the law itself.

First, emerging technologies are expected to lead copyright protection. As one of the social technology trends, big data technology can be fully applied to the construction of digital copyright protection mechanism [9]. The technology can be applied to digital copyright protection and can be used to build a big data platform to collect, process and publicize digital music copyright information. And it can record the transmission traces of digital music works so as to provide sufficient and clear evidence for safeguarding rights that the vast majority of digital music infringements have no escape. In the field of music, if the blockchain technology is used to confirm the copyright of digital music, it can not only record the subsequent transaction information, but also serve as judicial evidence. It can also be integrated into the above-mentioned big data platform by means of digital fingerprint, and reduce the occurrence of digital music plagiarism as much as possible by means of fingerprint comparison [9].

Second, laws and regulations should be the umbrella of copyright. China promulgated the Copyright Law of the People's Republic of China in 1990 and revised it in 2012. The ever-changing society makes it difficult for the legal provisions to adapt to today's complex and changing digital music industry situation. The most important thing is to improve the relevant legal provisions on digital music copyright and clearly define and classify the division of digital music copyright. Relevant laws should be corrected mainly from two perspectives. On the one hand, the law should strengthen its deterrent effect on infringement. On the other hand, the law should also reasonably

limit the use of the exclusive licensing model, and should not allow capital to manipulate copyright to make it a profitable tool. For the phenomenon of "non exclusive licensing", we can refer to the legal provisions in the U.S. Copyright Law to specify the period of digital music works licensing, and require that works cannot be repeatedly licensed to the same music platform within a certain period of time, creating a window for copyright repeated licensing.

Third, building a more perfect organization system for collective copyright management. To maximize the efficiency of protecting the copyright of the digital music industry, a more common method is to introduce a collective copyright management organization. The system of the China Music Copyright Association is opaque and inefficient, In this regard, the international collective copyright management organization system can give us inspiration. The association should actively help the musicians who join the association to investigate the infringement phenomenon in the society, and collect the copyright fees for them, so as to protect the copyright rights and interests of musicians [10]. Collective copyright management organizations should also make their own systems and norms transparent and reform their own internal management mechanisms.

4.2. The Digital Music Industry Should Focus on the Development of the Overall Value System

First, paying attention to cultivating users' awareness of copyright payment. The payment rate of Chinese users in digital music consumption has risen in recent years, but there is still a gap compared with other countries with mature models. Therefore, promoting the spirit of abiding by the law and the consciousness of copyright should be a long-term plan at the national level. The specific implementation should be targeted at the music industry practitioners and the young generation of Internet users, and the organization of conference learning and public service advertising for publicity. In addition, education should also start from students. We can consider including knowledge and examples related to copyright protection in the ideological and moral curriculum materials, so as to root the awareness of copyright protection in people's hearts and form a clear and healthy atmosphere of respecting copyright at the social level [11]. The digital music industry can jointly establish an e-commerce platform, introduce musicians with real name authentication as copyright sellers through a model similar to "Taobao", conduct business docking with users, and transfer pricing power to the market through the market pricing adjustment mechanism. And similar practices have been carried out in this way at home and abroad, such as "Monkey Sound Joy" and "Quduoduo" in China. This mode of selling goods with "clearly marked price" can not only be used as a supplement or replacement to the collective management organization system of copyright, but also help users to more intuitively form a sense of payment for purchasing copyright and paying royalties.

Second, actively exploring the resources of independent musicians. With the development of the Internet, the field of independent music has gradually entered the public view. Independent music is a music form that is different from the mainstream commercial record companies. The development of digital technology and We Media has provided independent musicians with channels and opportunities to speak, and independent music has grown rapidly [12]. Therefore, we can consider strengthening the support and training of independent musicians, increasing the exposure of independent musicians, integrating resources to produce independent musicians' programs, improving the investment in the production of independent musicians' original content, establishing an incentive mechanism for music talents, and narrowing the polarization gap between musicians. Specifically, the music service platform can support the flow of independent musicians, and directly push their latest original works to users who may be interested through big data algorithms. We should also provide independent musicians with publicity channels including live broadcast, short

music videos, online music festivals, etc., and implant ticket outlets for offline music festivals or Live houses (small live performances) in the APP to attract traffic for independent musicians. In addition, music service providers can also learn from the experience of the British independent record label 4AD and consider establishing a "brand" with strong independence to ensure that the independence of independent music does not deteriorate, and find a balance between commerciality and independence to attract independent musicians.

Third, service providers' vertical deep cultivating platform mode and content. The status of music copyright as the core competitive content of music service providers can be said to be hard to shake in the case of incomplete sublicense at present, but this does not mean that the content and mode of music service providers' platforms cannot attract users [13]. In recent years, music service providers have been actively exploring the content and payment mode of the platform. For example, in the form of bundled payment, members of the music platform are bundled with value-added payment services related to video websites and idol economy to achieve higher payment rates [14]. In addition, on the way to explore a new mode of payment, NFT, which will be popular in 2021, may point out a new way for various service providers [15]. The introduction of NFT can introduce a new concept - digital art for music. The music service provider can produce a digital music album based on NFT. The digital album is released in limited quantities. Each digital album has a unique number and cover. The digital album purchased by consumers will be permanently engraved into the blockchain as a collection. The function of digital artworks is not just collection and transaction, but also a "voucher" in the hands of users, according to which music service providers can carry out more relevant activities to improve the value of digital artworks. As young people are more willing to pay for digital music and are more willing to try new things, digital works of art will have a good appeal to this group.

5. Conclusion

From the piracy rate of 70% in 2012 to the sixth largest music market in the world in 2021, China's music industry has gone through a rough road. For the great changes in China's music industry over the past decade, the International Federation of the Phonographic Industry IFPI commented: "The Chinese government has returned the income of copyright owners to them through long-term legal construction, and further invested in the music community. We believe that this will be an excellent example, which proves that making the right laws can shape a bright future for music." However, some of the drawbacks of China's digital music industry cannot be solved in an instant, which is bound to be a long way. The ideas and suggestions provided in this paper are also limited by space, and cannot be explored in depth, and have their shortcomings. The author believes that the phenomenon of piracy in China's music industry cannot be simply attributed to the quality of citizens, but should be considered from the perspective of system and environment. We can't expect every ordinary citizen to consciously abide by the order, but should start to establish a reasonable system to correct violations. Without a mature copyright protection system, sound policies and regulations, and citizens' awareness of paying for copyright, the digital music industry cannot thrive in any case. It is gratifying that in the social survey on copyright protection conducted by the author, most of the respondents have demonstrated their recognition and support for music copyright. Perhaps the future of digital music will not be smooth, but it will certainly move forward steadily. For every ordinary person, the significance of copyright protection is that when we are tired, we can take a rest in the harbor brought by music, and rush to the next section of the road with faith and courage.

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