

Research on Industrial Value Chain of Digital Music

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Abstract

Digital music is the integration of music with information technology, telecommunications, Internet, and media. There is a growing digital economy built around music. A huge variety of download stores, subscription services and streaming offerings are available. The characteristics of digital music industry value chain and economic characteristics are analysed by comparing the traditional music industrial value chain with digital music industrial value chain in this article. The development of the digital music industry is the strategic choice. It is very important to find out the deep reasons that restrict the development of digital music industry. It will help the further development of Chinese music industry through summarising and studying the digital music industry based on the industrial value chain theory in a timely and systematic way.

Record companies' digital revenues for 2012 are estimated at US\$5.6 billion, up an estimated 9 per cent on 2011 and accounting for more than a third of total industry revenues (34%; IFPI Digital Music Report). Digital music, as a kind of industry, has brought new opportunities for the development of the cultural market, the expansion of cultural consumption, cultural construction and management through combining with other industries. The digital music industry is an emerging industry in contemporary society, it is not only the extension of the traditional music industry, but also is very important to the prosperity of the cultural industry.

The industrial value chain of digital music is a product of the music industry's specialisation and competitive pressure; it focuses on analysing the relationship of all departments of the industry. The healthy development of the industrial value chain of digital music depends on effective interconnection and interworking in every link in the chain, getting profit and value added only through good cooperation of all the roles on the chain.

一、 The difference between industrial value chain of traditional music and digital music

(一) industrial value chain of traditional music

In the traditional music industry value chain, there are songwriters, artists, record producers, side musicians/vocalists, recording engineers, record manufacturers, merchandisers, a music publishing company, recording labels, a distributor, a retailer, and so on. The music carrier is mainly CD, cassette tape, videotape, VCD and DVD (Hull, 2004: 21-25).

The income stream for the traditional music industry is from the use of songs and the recording of the songs, such as royalties, synchronisation fees, sheet print, etc. In order to produce income in a traditional music industry, record labels usually gain control over a master recording of a performance by an artist via an exclusive recording agreement with labels, producing a

recording, then manufacturing and marketing copies of the recording for ultimate purchase by consumers.

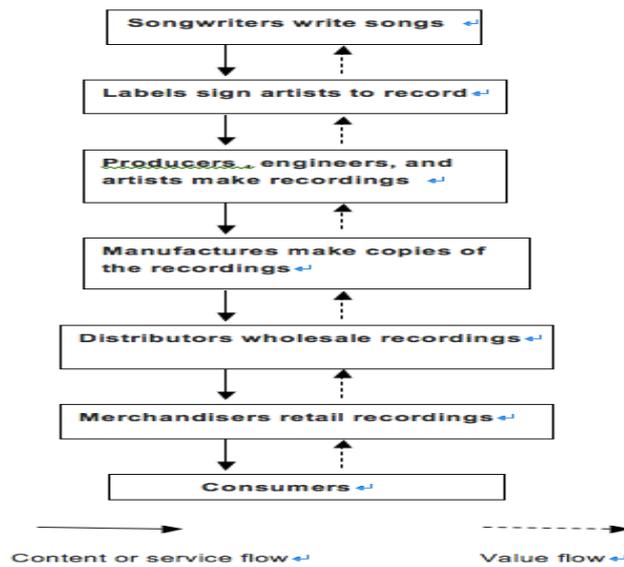


Figure 1: The industrial value chain of traditional music¹

Figure 1 illustrates the most simplistic depiction of the income stream of the traditional music industry.

The aim of any role in the value chain is to maximise its own profit, so it can add value and create value conversion only through collaborating with other roles of the industrial value chain, trying their best to achieve mutual cooperation, mutual restraint, and mutual integration. However, in China the industrial value chain of traditional music is developing in a lopsided way, with almost all consumers buying pirated recordings instead of normal recordings due to rampant piracy, and a disordered recording market, the income of the traditional music industry is not from recording sales profits, but from artists taking advertising and commercial performances to maintain the development of the industry, so the industrial value chain of traditional music lacks efficiency and has a low level of profitability in China (iResearch market survey firm. Chinese digital music industry 2009-2010). The industry value chain is not

complete, directly leading to the core product of the music industry and the valuable music itself. Each role in the value chain can not gain strategic alliance.

(二) Industrial value chain of digital music

Nowadays digital music usually includes online music and mobile music in China. None of these digital technologies even existed only a generation ago, and technology has made more formats than anyone could ever have anticipated. Income from recordings has declined approximately 30 percent throughout the world in the past eleven years. File sharing is a factor contributing to the music industry's decline, but that has been exacerbated by artificially high prices for CDs and the record companies' slowness in embracing new business models made possible by the new technologies. Online music has four digital formats: music video, downloading, streaming and webcasting, and mobile music includes ring tone, ring back tone, IVR music, and music downloaded to a mobile phone. Digital music brought new opportunities to China's music industry, making our record companies no longer focus on how to fight against piracy, but directly enter the digital music era.

At present, digital music industry has been divided into online music and mobile music, therefore the author studied the industrial value chain of online music and mobile music separately.

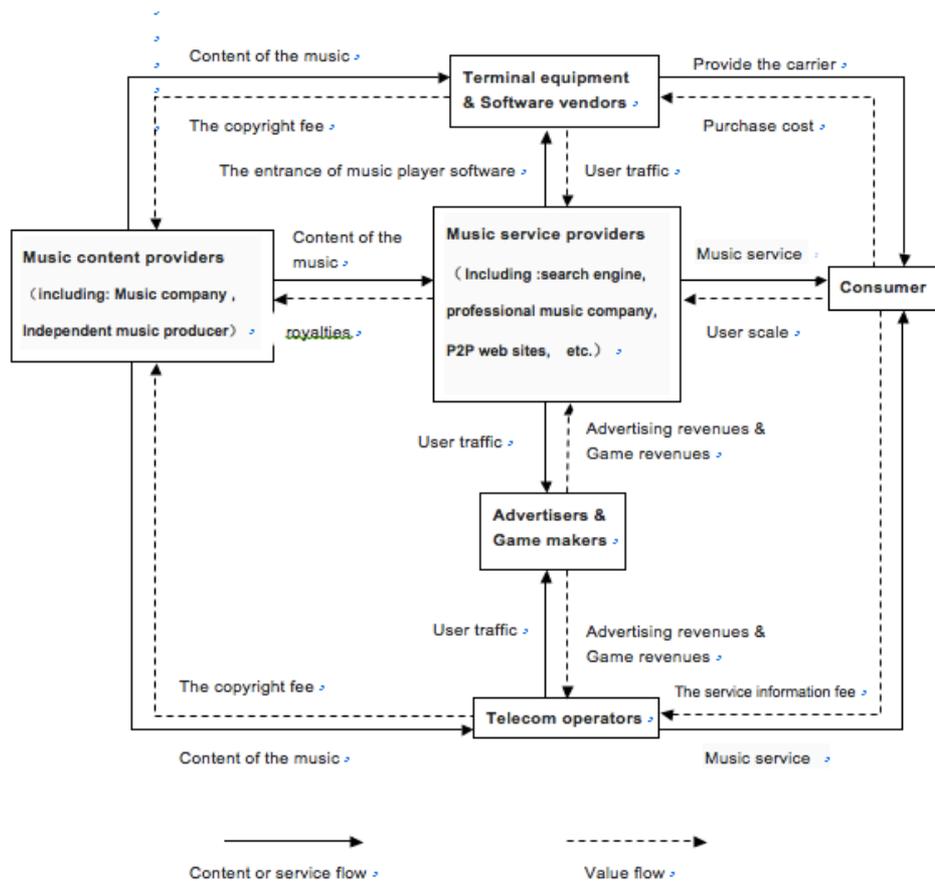


Figure 2: The industrial value chain of online music (from the author)

The industrial value chain of online music includes record labels, independent music producers, music websites, service providers and operators, and others (see Figure 2). The intention of the author putting the advertiser and game maker into the value chain is that the Chinese online music piracy phenomenon is very serious, the music service providers (including the search engines, portal websites, professional music websites, and P2P websites) and Telecom’s operators barely able to obtain profit directly from the users, while most of the income is from advertisers and game makers. It is very different from foreign countries.

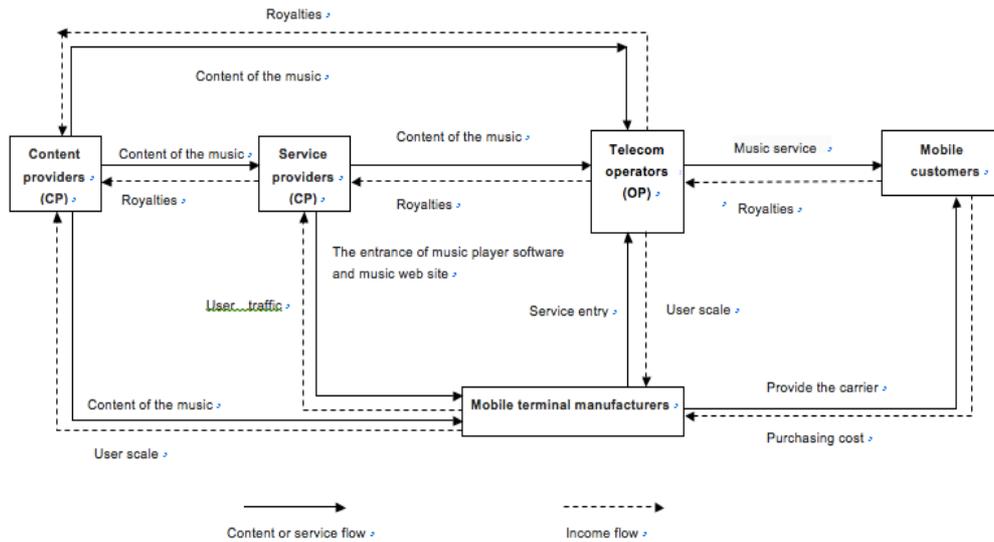


Figure 3: The industrial value chain of mobile music (From iResearch market survey firm. Development report of industry of Chinese number music 2009-2010 and author.

The industrial value chain of mobile music is composed of content providers (CP), service providers(SP), operators (OP), terminal equipment manufacturers and mobile music users, among others (Figure 3). The value transfer of the industrial chain of mobile music mainly refers to the profit sharing and cooperation model between operators, CP, SP and the terminal provider. Specifically, the content provider provides copyright for service providers, service providers provide a music product or music service for the music users through the operators that help the service providers charge content use fees to the user in the user’s Telecom bills per month, and also deduct part of the cost as the collecting commissions. The split ratio depends on each role’s position on the chain, and usually the value transfer has three kinds of patterns. Take CP/SP as the leading value transfer mode. The first can be expressed as ‘CP - SP - OP - Music user’, CP/SP is the most important role in this pattern, the split ratio of SP and OP is 85:15, SP accounted for 85%, then SP with CP (the record companies), generally five to five. The second takes OP as the leading value transfer mode. It can be expressed as ‘CP - OP

- terminal manufacturers and users'. Operators occupy the leading position in this kind of model, sharing the profits from the original 15:85 to three seven or five five. The third is cooperation mode, and is shown as 'CP/SP - terminal manufacturers - OP - Music user', OP plays only the channel role in this model, and cannot get the most value chain profit while this mode of CP/SP is the dominant position.

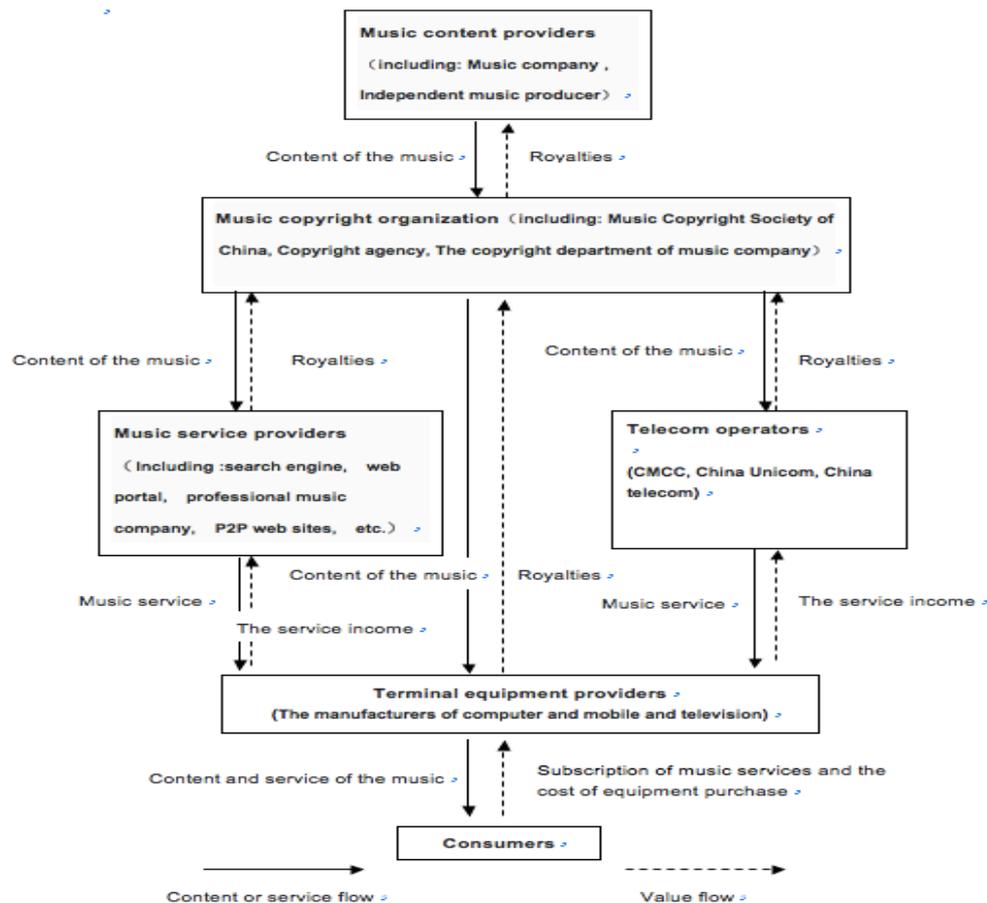


Figure 4: The industrial value chain of digital music in the future (from the author)

Digital music brought not only a huge impact to the traditional music industry, but also huge market opportunities. The appearance of the value chain changed the previous sales model and profit model of the traditional music industry. This kind of change provides opportunities for the traditional music industry, and we can foreknow that digital music is expected to lead

China's music industry out of years of difficulties, and go on the road of healthy development.

Digital music brought not only a huge impact to the traditional music industry, but also sizeable market opportunities, especially the appearance of the value chain which changed the previous sales model and profit model of the traditional music industry. This kind of change provides opportunities to the traditional music industry, and we can foreknow that digital music is expected to lead China's music industry out of years of difficulties, and towards healthy development. These are hard-won successes for an industry that has innovated, battled and transformed itself over a decade. They show the music industry has adapted to the internet world, learned how to meet the needs of consumers, and monetised the digital marketplace.

(三)Difference Value model between the industrial value chain of traditional music and digital music

1. The traditional music industry's value chain has a single linear structure feature, and the value flow of it also represents a form of single circulation. Furthermore, the value relationship between each link is simple, and there is rare interaction between music creators and consumers. The digital music industry's value chain has a grid structure feature, and there could be bidirectional value flow among any chain link, therefore, the transparency of the original form of music communication gets reproduction and return.

2. The single linear structure of the value chain makes the traditional music industry create value through each layer of value-added process from upstream to downstream, and the source of income of each link on the chain is single; because digital music industry is the combination of technology, the combination of Internet, the combination of facility and the combination of enterprise, its value chain has more pluralistic characteristics, in addition, its vertical and transversal development reflects the feature of dot, line, cover and net of the industry value chain, and the mutual corporation can produce a more

valuable value production system; besides that, each chain link can have various approaches to generate profits. For instance, the record company which plays a role as a content provider can be involved in advertising revenue-sharing not only through providing music copyright to search engines, music websites, wireless value-added producers, telecom operators, etc, but also by setting up an online sales platform to market products to users directly (Mingjie, 2004). Apart from that, the record company can cooperate with terminal product manufacturers, which help the company to build their music products into the digital audio players to go on with bundle sales. Diversified ways to gain profits are instrumental in proceeding with effective expansions and coordination by enterprises relying on the value contacts with other links, which enhance the competitive advantages.

3. The way of the circulatory value flow of the chain value of traditional music industry makes the nonadjacent links lack constraint force among each other. The sales channel and way of music product are traditional, purchasing records is a direct money-product exchange process, all kinds of sales outlets are the main channel of music products sales, once something went wrong in the intermediate links, there would be congestion in the passageway of value flow or breakage of the industry value chain because the upstream and downstream cannot connect directly. Compared with the traditional music industry, the structure of the value chain of digital music industry represents as a type of net; if problems or obstacles came into being in a certain link, the value flow still can be achieved by other passageways.

二、Obstacle factors of industrial value chain of digital music

Despite the optimism, there remain enormous challenges; our markets remain rigged by illegal free music, and a crucial debate is looming in many centres of governments around the issue of copyright reform, where a weakening of copyright rules would set back the music industry at the very moment when it is on the path to recovery.

(一) **Political and legal factors**

A country or region's political system, principles and policies, has a major role in the development of the online music industry. The current development of China's cultural industry development momentum and the pace of development cannot be underestimated, but there are still imbalances in reform of the economic system and the cultural system: illegal downloading occupies most of the music market, the government's fight against piracy efforts is strengthening, the copyright service system is not perfect, lack of valid authorisation mechanisms and clear copyright Price Standard exist, and so on. Copyright issues in the development of the digital online music industry value chain has been an insurmountable bottleneck.

Digital technology brings a strong impact to copyright protection, beginning in the last century in the mid- to late 1980s. In 1996 the new treaty of the world intellectual property was published after discussion by experts from more than 100 countries in the world, and the treaty was established under the conditions of new technology and rules of copyright protection under the network environment. The treaty established the copyright protection under the conditions of new technology and network environment (Li Huailiang, Yan Yugang, Luo Bing, Huangli, 2007: 36). However, law always seems to be lagging behind technology, and the mature network technology can easily bypass the existing legal provisions and share consumers' favorite music on the network platform. Nowadays, commercial music websites are the mainstream online music service, where online music users enjoy music in a way that can be summed up in the 'search - click - download - copy - play' simple operation mode, but under this simple consumption pattern hides a new problem, that is: how to protect copyright of music works online? On the one hand, digital makes the spread of online music occur more quickly. On the other hand, the piracy phenomenon is very serious and common, and has broken the balance of benefit among online music copyright owners, online music dissemination gatekeepers and the customers. This is without a doubt

the factor of digital music where the industry value chain cannot keep a balance.

(二) **Social and cultural factors**

Taylor Edward once said: 'culture is a complex whole, including knowledge, belief, art, morals, law, custom, and as members of the society and other aspects of the ability and habit.' Music is an important part of culture; it can be without borders, and the musical traits determine if it is from one society to another or from one part of society to another part. Whether intentionally or not, it can both affect people's consciousness and world views, and can even affect the change of the whole society.

But when the music can instantly find popularity around the world, and is freely available, it can be more multi-level, comprehensive and highly permeable to social culture popularisation, and affect people's values and worldview. Released from the MP3 technology, more and more websites provide online music listening and downloadable music online services. One of the most famous websites is MP3.com. At the beginning, there were 67,700 registered artists, 424,200 original music works, and 557,000 daily visits from all around the world. Overall P2P music file sharing is global, and the impacts on digital music consumers are negative. It is the fact that it is free for users to engage in illegal music file sharing that constitutes an unfair competitive advantage over legal music service. Legal music services need to pay for music or the music copyright owner of the copyright fees, and cannot compete with free illegal file sharing (Cui Lihong, 2007: 149-150). Nowadays, the popularity of music sharing makes people believe that it is a common social and cultural phenomenon. With the idea of synchronisation is the frequent infringement of online music, and the way that infringement also presents the diversification trend. The unlimited expansion of private copying behavior and private downloading behavior brings great convenience to online users and enjoyment, but also leads to a series of problems at the same time. A large

number of users using P2P software exchange unauthorised music files freely, directly affecting the benefits for music copyright owners. In addition to wireless music forming a distribution pattern (the operator takes 15%, and the remaining 85% is taken by SP and CP), online music piracy is at almost 100%, there is still no good mechanism, as there are no transparent and normative charging statistics and platforms between the rights holders and business organisations. This is the crux hindering the development of the music industry. This link also involves the audience in the end.

(三) **Technical factors**

In the online music industry value chain, the emergence of P2P software increases the individual users who download digital music product sources. The software which people usually use, such as BT, only need a few minutes to download a 4G concert, greatly expanding the scope of efficiency and the spread of piracy. Today is an era of copying music from the internet, with the emergence of P2P software marking the music reproduction behaviour of the new era. P2P disseminates the online music source, and the object of attachment can have a massive difference in overlap on the timeline. Web servers for each of the digital music works themselves are a virtual copy of several hundred million of the music works, so when people want to listen and download some music works, they can enjoy the music at any point in time by using P2P technology. Even though it is not by using the same computer, others can share music via a computer file. Although the starting point is different for each person receiving music works, it will not affect music works' integrity in the process of each person sharing; this is known as asynchronous transmission. The asynchronous transmission is a transmission source provided to the network at any point in a digital music work, and this audition download behavior is a copied behavior, where you can copy any time and many times. Diverging from the value of the industry value chain perspective, P2P software makes it easier to spread music, and P2P technology allows the

private copy of user expansion ability and individual users (Liang Fei, 2011: 16-17). As long as shared directories of digital music products exist in P2P software, without having to bear any costs, you have the scale of the public's ability to spread these digital music products. These digital music works have plenty of authorised users, but most of the music works did not get permission from the copyright owner. There is no doubt a bad impact on the potential market of online music. Music products of normal value are hard to reflect and it is growing more impossible to talk about the value of the creation and realisation of music products.

三、 Suggestions to perfect the industry value chain of digital music

According to Michael Porter's theory of Competitive Advantage, three strategies which enterprises usually use in order to maintain their competitive advantages are cost leadership strategy, being-unique strategy, and target concentration strategy. It is barely possible for an industry value chain to develop steadily without competitive advantages. The core of restructuring the industry value chain of digital music is to provide the music consumers with more and better value of music as well as products which can meet their needs more practically and conveniently (Porter, 2005: 13).

(一) To pay attention to music productions is the core of online music

Although online music communication is an economic behaviour, while music exists as merchandise, however, music is a special one, which not only includes the general value, but also an abundant cultural value. Therefore, a healthy industry value chain of online music only exists when music itself possesses a value. In that way, it is possible to obtain profit in both art and business.

When purchasing online digital music, consumers mean to gain an artistic treat, an edifying influence, and a wonderful object to look forward to, instead of a

simple vocal sound. Music can express almost all ideas and objects in the field of human life. During the rise of medieval Christianity and romanticism, music was put in the first place prior to other forms of art. It is now traded in the industry value chain of online music as a form of merchandise; the second part is the digital music service. Located in the lower reaches of the online music industry value stream, music service is a combination of varieties of services and interests which can offer consumers greater satisfaction. For example, music consumers want to know the background of the song, or other songs in a similar genre when downloading it, and find out live performance information as well as the performer's background, or find out who else has a similar taste in music to theirs, or they want to use it as background music, and so on. Music service is a derived product of music, and it is of vital importance to the development and innovation of the industry value chain of online music. Music service can be able to meet the needs of music consumers in every aspect. It is an objective requirement of keeping the industry value chain of online music working efficiently, and a vital part in the chain of online music industry that cannot be ignored.

Being the basic content in the industry value chain of digital music, music products also help in connecting every part in the chain. High definition music products and high quality music services will always be the core of the industry value chain of music. We should advocate producing music with high value in both the market economy and in art. It should be sincerity and passion as well as the originality and creativity of music composers that supports the industry chain of online music.

(二) Perfection in the judicial system is the basic guarantee of the industry value chain of online music

The United States of America has so far built the best judicial system to protect copyright, including *Copyright Law*, *Patent Law*, *Trademark Law*, *Law against*

Unfair Competition, Digital Millennium Copyright Act, Combating Online Infringement and Counterfeits Act, among others. In 2007, France approved the *Innovation and Internet Law* in order to establish an independent administration structure (HADOPI), which is focused on managing and penalising the infringement of digital music. In 2009, Korea has approved a law concerning illegal digital music. It penalises internet users who break this law for the first time with an internet suspension of one month, and one to three months suspension for the second time, with a maximum of six months suspension for the third time they break that law. The UK approved the *Digital Economy Bill* to make provision for the online infringement of copyright and penalties for the infringement of copyright holders' rights. Complementing and revising the law of copyright can provide the digital music industry with strong protection, and to formulate laws considering facts that different countries are facing can protect the copyright of digital music efficiently.

(三) Support from the government is an important driving force for the development of the industry chain of digital music

The government should provide a field of fair competition when the problem of digital music pirates cannot be solved simply by creation, legal authorisation or economic means. There are governments which provide great support to music industry after the integration of telecommunications networks, cable TV networks and the internet such as the USA, the UK, Japan and Korea, among other countries. Regulations include different stages of responding, unauthorised service blocking, and solutions for personal information sharing through P2P network. In the meantime, governments should encourage public education of copyright in order to build and enhance a copyright consciousness among music consumers. A lawsuit would be the last method of protecting copyright. It is a precaution of massive infringement. In October 2010, the US government passed a ban on Limewire, the biggest source of illegal music downloads in the country, to stop providing service to the public, and prohibited its service of unauthorised file share. Mininova, which used to

be one of the most popular BT websites, claimed that most of the contents of the total ten millions of downloads on its website are under the protection of copyright law. However, the usage rate declined for over 80% after the Netherlands government shut down its infringement services. In November 2010, the Swedish government affirmed the previous judge of imprisoning the three men who spread infringement service, and losses of copyright holders were urged to be compensated as well. In that case, the industry value chain of digital music can maintain a longlasting development only under the government's protection (Wang Cheng, 2009: 13-14).

(四) Establish a management system of consumers value and expand diverse services (Tong, 2009: 112-114)

The digital music market consists of a number of buyers and sellers, and it is based on the needs of buyers. Digital music products should not only meet the maximum needs of buyers, but also to stimulate consumption. The requirements of consumers are the starting point of every subject in the value chain. Establishing a management system of consumers' value can maintain a consistent good relationship with consumers, and it can be a long lasting one by providing them a diversity of music services (Zhou Honglei, 2004: 99-100).

Values of music consumers can be changeable and dynamic, differences can also be shown in different stages of lives. How to distinguish values of consumers is a problem that every object in the industry chain of digital music should solve. The marketing plan should change from massive sell into target marketing by dividing the music market into multiple groups of similar tastes and needs. A differentiated service helps in raising consumers' value of limited music resources and competing efficiently. In the future, digital music will be interactive, and consumers can find their satisfactions in diverse and

differentiated music services. The main strategies include cloud music service, family digital music and mobile music.

In summary, the requirements of music consumers are still far from being satisfied. After the integration of telecommunications networks, cable TV networks and the internet there will be a music community with an intelligent high-speed searching program and a resourceful music platform to allow consumers to find music, explore more music, share music and communicate with other consumers at the same time. One-stop music will be provided including music with higher qualities, and free music services supported by legal advertisements. The one-stop service will keep increasing in market share, and keep motivating other kinds of paid legal services, such as a monthly payment service of music recommendation, a requirement and gift service, a ringtone service and a monthly paid live performance watching service, with many additional increment services through China's telecom operators and other personalised services. A music recommendation service cannot be defined simply as a mathematical model or a computer program. It is based on Fine Marketing, Viral Marketing, Social Psychology, System Correlation Theory, Communication, Business Intelligence and other theories.

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