THE IMPACT OF DIGITALIZATION AND INTERNET ON MUSIC INDUSTRY VALUE CHAIN

UTJECAJ DIGITALIZACIJE I INTERNETA NA VRIJEDNOSNI LANAC GLAZBENE INDUSTRIJE

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Abstract: *The technological development in the past two decades has brought several major inventions which have affected the music retail value chain. Digital storage and distribution of music together with the rapid growth of Internet popularity caused turbulences in the music industry, changing the way in which people buy, listen and trade music. In this paper we will analyze contemporary value chain in music industry and emphasize data on music industry value flows.*

Key words: *music industry, value chain, music retail, Internet*

Sažetak: *Tehnološki razvoj u posljednja dva desetljeća polučio je nekoliko velikih izuma koji su utjecali lanac vrijednosti maloprodaje glazbe. Digitalna pohrana i distribucija glazbe, zajedno s brzim rastom popularnosti Internet izazvala je turbulencije u glazbenoj industriji, te promijenila način na koji ljudi kupuju, slušaju i razmjenjuj glazbu. U ovom radu će se analizirati suvremeni lanac vrijednosti u glazbenoj industriji te će se prezentirati podaci o tijeku vrijednosti u glazbenoj industriji.*

Ključne riječi*: glazbena industrija, lanac vrijednosti, maloprodaja glazbe, Internet*

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1. Introduction

Internet is affecting and changing almost every industry both in developed and in transitional countries [1]. The impact of the Internet is the most obvious in industries which deal with goods that can be easily digitalized and distributed online. Due to a large number of Internet users, network effects and accessibility of different easy-to-use software tools both for digitalization and distribution, music seems to be the most exposed to Internet theft and piracy.

I this paper, firstly, a structure of the music value chain will be described. Secondly, historical development of technology, that enables digital music creation and distribution, will be elaborated. Finally, the current situation and trends in the music industry will be presented.

2. The Structure of a Music Value Chain

The music industry has got three principal segments or revenue streams: industry for purchase of recorded music, industry for broadcasting recorded music and industry for attending live performances [2].

A simplified value chain for the music industry can be described as follows. The revenue stream begins with a composer and a lyricist writing a song. Performers play the song either in a recording studio for the purpose of recording it, or live in front of an audience.

Despite the low cost modern technology, a big number of music authors (lyricists, composers and performers) make use of the expertise of recording companies. Cooperation between a recording company and a performer is regulated through a contract specifying obligations of each counterpart including payment to the performer for each recording sold and reimbursement for the recording company for marketing and distribution costs [2].

The recorded music is then distributed to consumers via retail distribution networks, but also via online distribution services. The value chain may continue if the consumer (authorized listener) shares his/her recordings giving them to unauthorized users [3].

On the other hand, radio stations often receive free copies of the music directly from recording companies, but they have an obligation to pay royalties for playing songs and this is usually done through performing rights organizations [2].

The third revenue stream constitutes of live performances. Revenues gathered from selling tickets to concert spectators are distributed among the performer, the concert promoter and the music publisher according to special contracts regulating organized concerts.

From the given description of the value chain for the music industry we can distinguish several interest groups or key players in the music industry value chain. They are: (1) music creators (authors) and/or artists: lyricists, composers and performers, (2) record companies, (3) distribution companies – music retailers and online distributors, (4) broadcasters, (5) concert promoters and/or organizers, (6) rights organizations and (7) consumers.

3. Development of Digital Music and its Impact on Music Retail Value Chain

The production of music as a saleable product is a relatively recent phenomenon. The retail of music began with the sale of music sheets in the 19th century, but it was fully developed in the 20th century when music was sold stored in the form of vinyl records (LPs), cassettes and so on [4].

Since 1982, the music industry on the global level is in the process of digital transition. The digital transition started with the introduction of audio CD standards and their adoption in everyday use. Digital transition continued with the idea of a computer as a reproduction device. The realization has been developed since 1985, through incorporating CD-ROM devices into the standard PC configurations.

CD-ROM devices incorporated standards for playing music directly out of audio CDs. The software for audio files ripping was developed soon after that. Ripping allowed users to listen to music directly from their hard discs. In 1988, Philips and Sony produced the first CD-R discs. From now on users could transfer music from audio CD to hard disc and from hard disc to CD-R disc creating as many CD-R copies as they wanted. Moreover, they could create customized CD-Rs with selected songs. In 1989 MP3 standard was invented. It is a software compression standard which enables digital audio to be compressed to the approximate size of one tenth of the original audio CD with almost no loss of audio quality. The MP3 was found as an eliglible format for online transfer. Therefore, the popularity of the MP3 format continued to grow rapidly. Users started to share songs stored on MP3 with their friends by using web sites, FTP sites, or Usenet groups in a constantly increasing number. This fact has broadened the legal questions regarding music file sharing.

In 1999, a new kind of Internet service emerged: P2P (peer-to-peer) network for sharing music. P2P networking represents direct Internet-based communication or collaboration between two or more agents (such as PCs or devices) that bypass the centralized computer server [5].

The leader in the field of P2P music sharing networks was Napster. It was estimated that, by October 2000 Napster's software was installed on 30% of all PCs worldwide, while in February 2001 Napster had 26.4 million users worldwide. Some researchers showed that the average user in March 2001 was spending more time using Napster then browsing any music-related web site [6]. After a law suit, on March, 2001 Napster was ordered to prevent trading of copyrighted music on its network and on June, 2001 Napster shut down its network. Moreover, it agreed to pay $26 mil. to creators and music owners for the lapsed period. Recently, more powerful P2P software with anonymous applications has appeared. Most of them are open, decentralized P2P systems that allow authors and readers to remain anonymous and ensure secrecy of information on real storing location of exchanged files. So, by definition, they are true P2P without any centralized control that allow individuals to trade files without the existence of a central server. This results in a "no one to sue" legal situation, so one could say that they are out of range of current legislation [7].

All above mentioned technologies led to the rise of music piracy both throughout Internet and via CD piracy. If we analyze RIAA Annual Reports we can observe that

CD retail revenues have been declining since 2000. The main reason for such a situation is the increased piracy rate. In 2004 the global piracy industry was estimated to be worth $4.8 billion [8]. Therefore, major recording companies tried to establish their own online sales services, but not very successfully. Therefore, they changed their strategy towards new partners – specialists for online music distribution [4].

4. Current Situation

Since 2004 till nowadays there is a rapid decline of CD sales measured in the dispatched units. On the other hand, there is a growth of legally downloaded singles. But the growth is slowing down since 2008. In addition there is a slow growth of music downloads via legal subscription channels. While mobile downloads grew till 2008 (see Figure 1).

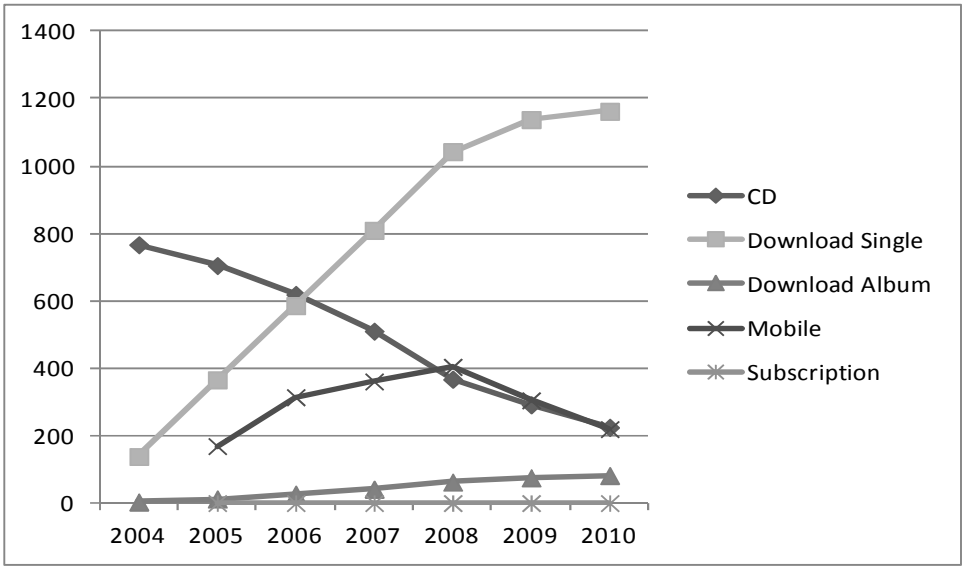

Figure 1. Change in music retail – units dispatched in millions, source: own compilation upon data in [9]

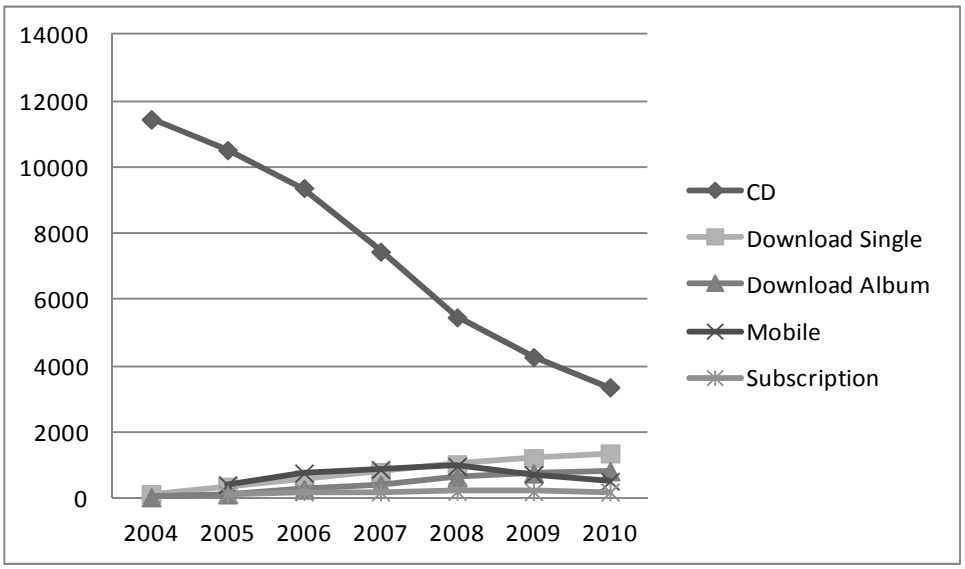

Figure 2. Change in music retail revenues, source: own compilation upon data in [9]

But, the main problem of music retail value stream is that overall generated value is in decline in given period: the rapid decline of revenues gathered out of CD sales is not replaced by the growth of online digital sales (see Figure 2). It is obvious that if this trend continues no one in the industry will be able to cover production and distribution costs (not artists, nor recording labels, nor music retailers). Therefore, broadcasting and live performances have to be able to minimize the negative effects.

5. Conclusion

There are three main revenue streams within music industry: (1) retail of recorded music, (2) broadcasting, (3) live performances. The first revenue stream is in decline thanks to the technological development and increased piracy. Therefore, artists, lyricists, composers and others stakeholders have to search solutions in other two value streams, i.e. they have to switch from the music retail stream to the value creation in the other two revenue streams. That means that they have to generate higher income via broadcasting and live performances. In addition, intellectual property legislation has to be improved in order to solve the problem of piracy.

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