# Diplomarbeit

**Titel der Diplomarbeit:**

"The Music Industry in a Digital Hassle" - An Empirical Analysis on the
Adoption of E-Business Models for Online Music Distribution.

**Verfasserin/Verfasser:**
Gerold Pulverer

**Matrikel-Nr.:**
0451008

**Studienrichtung:**
Internationale Betriebswirtschaft

**Beurteilerin/Beurteiler:**
ao.Univ.Prof. Dr. Elfriede Penz, MAS, EuroPhD

Ich versichere, dass:

ich die Diplomarbeit selbständig verfasst, andere als die angegebenen Quellen und Hilfsmittel nicht benutzt und mich auch sonst keiner unerlaubten Hilfe bedient habe.

ich dieses Diplomarbeitsthema bisher weder im In- noch im Ausland (einer Beurteilerin/einem Beurteiler zur Begutachtung) in irgendeiner Form als Prüfungsarbeit vorgelegt habe.

diese Arbeit mit der vom Begutachter/von der Begutachterin beurteilten Arbeit übereinstimmt.

Datum                                             Unterschrift

# Abstract

The aim of this diploma thesis is to provide a profound description of the music industry's value chain and its current market structure in the light of digital music distribution. Digital piracy, file sharing and the provision of improper distribution services have led to a monetization gap in traditional record sales which record labels have to close with the help of innovative customized online services. Different actors, governing mechanisms and promising e-business models are presented in the theoretical part. This founds the basis of the empirical part of the thesis in which an adoption model is provided which considers customers' importance assigned to different e-business models and features of legal online music distribution services (LOMDS). According to the theoretical part, different determinants for the adoption of LOMDS, such as the variety of music offered, the applied payment model and price, the decision whether to offer downloads or streams, flexibility and portability issues of music as well as value added services, have been retrieved. In a consecutive step an online survey (n = 1246) was conducted to find out if acceptors and non-acceptors of LOMDS would differ in the importance assigned to adoption factors. In regard to these results it can be said that differences exit between acceptors and non-acceptors and marketing efforts should focus on the supply of a vast amount of different artists and bands, combinations of "pay per track" models with subscription models, DRM free music tracks, downloading possibilities with streaming as additional support to curb digital sales and additional value added services like sampling, intelligent search facilities, music videos and lyrics.

# Table of Content

# Table of Figures

# Index of Tables

# List of Abbreviations

A&R                Artist & Repertoire

P2p-network        Peer-to-peer network

AKM                Staatlich genehmigte Gesellschaft der Autoren, Komponisten und
                   Musikverleger

GEMA               Gesellschaft für musikalische Aufführungs- und mechanische
                   Vervielfältigungsrechte

GVL                Gesellschaft zur Verwertung von Leistungsschutzrechten

IRC                Internet Relay Chat

IFPI               International Federation of the Phonographic Industry

FTP                File Transfer Protocol

ICT                Information and Communication Technology

DRM                Digital Rights Management

LOMDS              Legal Online Music Distribution Services

# 1 Introduction

## 1.1 Problem Statement

Part of the music industry that is worth approximately $ 130 billion worldwide today, is said to be in crisis.[1] With an average decrease in physical CD sales of 25 % all over the world in the past few years, the recorded music sector, worth $ 40 billion, sees itself in a position where options to generate money are or rather seem to be scarce.[2]

Physical media is a sinking ship since the beginnings of famous file-sharing networks like Napster in 1999. The emergence of the Internet, the MP3 format and p2p-networks have led to a shift from physical to digital distribution of music and have had tremendous impacts on the music industry. Music as a product has evolved from a physical entity to a digital good.

Music interested people or those who just want to financially exploit the possibilities offered through the Internet can record traditional radio broadcasts and offer them online to a wide audience. CDs borrowed from friends, public libraries or rental shops can easily be "ripped" (i.e. copied) and put onto PC or laptop in digital format, swapped for other digital content via e-mail, instant messaging, p2p-networks and several other forms, edited, re-mixed and de-bundled into single tracks and compiled in individualized playlists with the help of free software tools or listened to through online pirate radio broadcasting can be considered with digital audio content nowadays.

Online music has become an ubiquitous good, more popular than ever before, available to almost everyone in the world who does not lack the access to the necessary technology. The music industry has lost its control of financial exploitation by ownership, as music can not be considered a scarce product anymore.

This digital transition has not come all of a sudden, however music record labels missed opportunities to implement innovative business models focusing on the

---

[1] cf. International Federation of the Phonographic Industry (2007)
[2] cf. Leonhard (2009)

distribution of digital audio files over the Internet. Several attempts have been made, but the traditional music business has not been and still is not able to provide customers with products and services that meet their expectations and needs.

In the light of this development, the music industry is eager to find new innovative e-business models and successfully implement them to increase their revenues from digital downloading or streaming services. Marketing practitioners and policy makers have to find the appropriate mix of product characteristics, price, place and promotion to strengthen record labels' position in the digital market. Record labels have to decide, whether to stick to the traditional agenda of ownership, legal prosecution of illegal file-sharers or file-sharing networks and standardized offers, or to adapt to customer needs and improve their service or product portfolio and market position. This is likely to lead to increasing revenue income.

> "In any case the industry will now have no choice but to accept the fact that this ecosystem has morphed into a customer-driven, bottom-up world that renders many widely accepted "analog" paradigms and traditions instantly useless."[3]

The purpose of this thesis therefore aims to give an overview in how far the music industry, especially music labels and to some extent artists, could counteract this negative situation by applying new, innovative and consumer-friendly business models for the distribution of digital audio files – both satisfying customers and record labels and artists. It should be pointed out in how far these models match customer expectations, where differences in the adoption of music distribution services exist between acceptors and non-acceptors and which adaptations have to be considered for future success – namely the adoption of legal online music distribution services (LOMDS).

## 1.2 Research Focus and Structure of the Thesis

It is intended to give an overview of how the traditional music industry has altered due to digitalization and the distribution of audio content over the Internet and which

---

[3] Leonhard (2008, b), p.39

solutions exist to cover dropping CD sales by implementing new e-business models for the distribution of (online) music.

The initial focus in this thesis is given to the theoretical background on how the traditional music industry value chain became obsolete and which new challenges the music industry, especially the recorded music, has to face. The transition of the traditional value chain to a virtual value chain is analysed and new participants in music business are listed. A further step is to provide the reader with quantitative evidence of how physical music record sales have been crowded out by digital music sales.

Furthermore, p2p-file sharing and its impact on the music industry will be outlined and the main reasons, advantages and effects of digital piracy on record labels as well as on customers will be discussed. It has to be understood why (potential) customers prefer illegal downloading and, to some extent, sharing music online and what possibly keeps them away of using legal online platforms to purchase music. The chapter ends with general aspects of piracy prevention.

As a consequence, the role of innovation as a major source for the creation of new business models in a digital environment will be presented. Finally, this will lead to the main part of this paper. The chapter starts with a definition of business models and e-business models that cover the basic principles within the scope of this thesis. An initial approach is made by outlining the outdated business model record labels have applied for too long now.

In a second step, taxonomy of Internet business models is provided as a starting point for the analysis. Afterwards several promising e-business models from literature will be derived. It has to be pointed out, though, due to the lack of academic literature on e-business models and its implications on customer expectations and needs, this thesis represents more of a starting point which hopefully generates new findings and curbs further research.

As a consequence, it is intended in a further step to analyse in how far these e-business models basic ingredients match customers' expectations and needs regarding the composition of LOMDS. It is important for record labels to identify discrepancies between their supply and the demand side, which can provide essential insights for future business model adaptations and can overcome the monetization gap record labels

face at the moment. The empirical part of the thesis is therefore considered to observe (potential) customers' acceptance of different characteristics of LOMDS. Based on an acceptance model retrieved from literature, several key aspects of the distribution of online music will be analysed and compared with the e-business models discussed beforehand.

In this respect, the thesis will be based on the following fundamental research questions:

How has the traditional value chain changed through digitalization and the Internet?

Which types of e-business models for digital music distribution can be derived from theory and what specific characteristics do they have?

What are the basic criteria of digital music distribution and its impact on consumer adoption of legal online music distribution services?

Which differences can be observed between acceptors and non-acceptors of legal online music distribution services regarding specific characteristics?

# 2 The Music Industry Value Chain and the Music Market Structure

This section aims to give an overview of how the music industry is characterized and which players interact within this complex environment. The major players in the music industry's value added chain are presented and analyzed. Further the reader should be given insights into how the music industry's traditional business model lacks to adapt to an altering environment, especially in regard to the digitalisation of music, thus leading to an analysis of crucial economical challenges the music industry has to overcome. It has suffered severe shocks in the past few years that will and to some part already did change its structure. Innovative technologies, such as the MP3 file format or the possibility of digital distribution of music files through p2p-networks have dramatically influenced the music market structure as well as the traditional music value chain.[4]

## 2.1 The Traditional Music Value Chain

For the analysis it is important to define the main players involved in the music industry. Although people tend to talk about the music industry as a whole being in a crisis, this section aims to show that only part of the industry has to face major issues. In the course of this chapter the parts of the industry that are in trouble will be discussed.

### 2.1.1 Traditional Players in the Music Industry

The traditional way to produce and distribute music is complex and involves numerous individuals and companies. Each of the actors engaged in the music business is creating value at a certain point in the value chain and adds this value to the product or service. This chain of actors is mainly static, relationships are long-term based and there is a limited choice of actors through high vertical integration of record labels – a key aspect for their success during the past decades.[5]

---

[4] cf. Bockstedt, Kauffmann, Riggins (2006), pp.13
[5] cf. Graham et al. (2004), p.1093

At the very beginning of the industry or the music creation process you can find the so-called "Creative Community".[6] This term comprises all individuals actually involved in the process of creating music, like authors, musicians or producers.

According to Bockstedt et al. (2006) the most important players are the music record labels. They contract artists under exclusive deals and provide them with services such as CD manufacturing and distribution, marketing, promotion or even legal representation. CD manufacturing (i.e. the pressing or replication of physical CDs or DVDs in mass quantities which uses a master version created from an audio source recording) has been outsourced to external service providers within three out of four major record labels in the past few years.[7]

The labels maintain key relationships with the media (i.e. press, radio stations and music TV channels) and further add value to the final product by creating a circle of support through A&R (Artist & Repertoire[8], one of their core competencies), managers and producers. In addition, their goal is to support and assist artists in their long-term development (e.g. becoming a headliner), which takes up to two years and more.[9] Due to the huge amount of services provided, record labels are considered the most powerful actors in the traditional music market. [10]

Above mentioned services do not necessarily have to be executed by the record labels themselves. Another group of important actors is represented by music publishers, who are responsible to ensure songwriters and composers royalty payments in exchange for the copyright of their compositions. However, music publishing is regarded as not being one of the core competencies of record labels anymore.[11] Moreover, the traditional chain of actors consists of distributors, retailers and the final consumers. For the music industry as such, the two latter actors represent the demand side. Retailers sustain direct customer relations to the music labels and have a huge

---

[6] cf. Kromer (2007), p.35

[7] cf. Kromer (2007), p.28

[8] Basically Artist & Repertoire is similar to product development, which includes the discovery, the contract signing and support of artists, cf. Frahm (2007), p.105

[9] cf. Graham et al. (2004), p.1093

[10] cf. Bockstedt et al. (2006), p.16

[11] cf. Steinkrauß; Gmelin; Günnel (2008), p.28

impact on the pricing structure of music, whereas the final customers decide whether the product succeeds or not.[12]

### 2.1.2 Traditional Activities and Governing Mechanisms

The traditional product in the music value chain is a bundle of pre-recorded music that is put on a physical format, such as CD or DVD.[13] This product is placed at the end of the value adding activities chain. The activities further consist of discovering new talents (A&R - Artist & Repertoire, see chapter 2.1.1), recording, selecting music and creating master tapes and the production of the final product (CD, DVD, etc.). Afterwards the product is packaged, commonly promoted through live concerts, radio and music TV channels, and finally sold in physical retail stores or by mail-order catalogues. Activities are interdependent and characterized by high vertical integration.

The control and ownership of actors, also referred to as governing mechanism, is a key factor of the traditional music market. High initial costs, such as investment in A&R, recording, manufacturing as well as marketing make it hard for competitors to enter the market. Therefore it is not surprising that the music industry is controlled by only four major record labels (i.e. Universal, Sony Music, Warner, EMI).[14] Through high vertical integration (by acquiring companies along the supply chain, especially music publishers[15]) the major record labels are able to achieve economies of scale and thereby lower unit costs. High set-up costs for distribution systems and the power of major labels in this area make it difficult for new potential competitors to enter the market. Artists either have to sign with a major label based on a long-term contract to tackle the mass market or decide to remain independent and focus on small niche markets with the help of independent labels ("indies").[16]

---

[12] cf. Steinkrauß, Gmelin; Günnel (2008), p.35
[13] cf. Graham et al. (2004), p.1091
[14] cf. Steinkrauß; Gmelin; Günnel (2008), p.32
[15] cf. Mol; Wijnberg; Carroll (2005), p.263
[16] cf. Graham et al. (2004), p.1096

## *2.2   Challenges in the Music Industry*

In its more than 120 years of history, the music industry has often been exposed to changing market conditions. First and foremost technological innovation, tight legal frameworks as well as global economic and political crisis can be seen as the main influencing factors.[17]

Technology, such as the first commercial radio broadcast in the 1920's, the invention of the vinyl disc in the late 1940's or the compact-audio cassette in 1960's, the Walkman or the first music TV channel MTV as well as the Compact Disc (CD) in the two following decades, has always challenged the music business. These physical storage media allowed people to copy music and to help transforming music from a scarce to a ubiquitous good, further implying that the music industry could not rely on its pricing structure anymore. Consequently they had to correct prices and to abdicate lucrative margins.

In response to these new technologies, agreements on copyright protection had to safeguard performers, producers as well as broadcasting companies against certain acts they have not had consented to (e.g. the broadcasting of live-performances of musicians or the reproduction of phonograms). One of such agreements is the Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations in the early 1960's. In a consecutive step, the foundation of the World Intellectual Property Rights Organization (WIPO) in 1967 was supposed to enforce the protection of Intellectual Property on a global scale. The WIPO Copyright treaty[18] as well as the U.S. Digital Millenium Copyright Act in the 1990's can be seen as main reactions to the digitalization of music through innovation in technology such as the MP3 file format or the data medium DVD.[19] These treaties main aim is to create the framework for the adaptation of national copyright to the requirements of digital media.

---

[17] cf. Kromer, E. (2007), p.34
[18] cf. World Intellectual Property Organization (2009)
[19] cf. Tschmuk, P. (2006), p.180

The focus of this chapter should be on more recent (non-legal) issues and developments in the music industry.[20] Basically, although of great importance, legal issues will not be discussed in greater detail as they go beyond the scope of this thesis.

Over the past years, the Internet and the possibility to share music legally through digital retailers and illegally through p2p-networks, friend networks and others, is tremendously challenging the competitive situation in the music industry and threaten the traditional distribution model. Music tracks, ringtones or music videos can be cheaply downloaded and sometimes are even free of charge.[21] The digitalization of music has provoked an alteration of consumer behaviour. Potential music consumers search for their favourite music online and download tracks or albums for prices less than in physical retail stores. Consumers can easily share their music files online without paying for it. They can transfer the files to their mobile phones, MP3-players or other digital devices and listen to music wherever and whenever they want to.[22]

Like in other cases the record labels had and have to react. Some brief examples might best illustrate this situation of late response instead of pro-activity. The development of copy protection systems for audio CDs was introduced after CD sales started to plunge and most recently, Digital Rights Management (DRM) systems for digital audio files were implemented after the free (meaning no technical barriers to copy) MP3 file format had already become standard.[23] These examples prove that in most cases reacting to new innovations fails, as both DRM as well as copy protection systems did not establish themselves. A further example can be seen in the effort of music record labels to establish their own online distribution channels, but without much of success, they changed towards partnerships with specialist online distribution companies (i.e. 7digital in the case of EMI; see also chapter 3.4.6 ).[24]

According to Graham[25] the challenge "digitalization" implies three major issues for "the music industry". On the one hand, the physical distribution of music (through CDs or DVDs) is becoming less important. On the other hand, the four major record labels

---

[20] cf. Tschmuck (2006), pp.180 for further reading

[21] see providers such as Emule, BitTorrent, etc..

[22] cf. Frahm (2007), pp.13; Jakob (2008),pp.77

[23] cf. Kromer (2007), p.41

[24] cf. EMI Music Austria, www.emimusic.at, retrieved on 05.03.09.

[25] cf. Graham et al. (2004), p.1088

(Universal, Sony Music, Warner, EMI) will further see their market shares and consequently sales revenues decline. In addition, this situation will be reinforced by the rise of digital music piracy. From this perspective it seems necessary to outline that in our case "the music industry" stands for the traditional recording industry (see chapter 2.3.1). The music industry crisis, first of all, is a crisis of traditional CD sales - a key business segment that was worth approximately 40 billion US dollars worldwide in 2008.[26] As will be outlined in the upcoming chapters, digital distribution of music has not been able to replace physical distribution yet. However, e-business models for the digital distribution of music will be discussed in this paper, as the Internet is meant to be the future main source for consumers to obtain music.

## 2.3 The Digital Music Virtual Value Chain

New players enter the music market and threaten the traditional actors involved. The traditional value chain is replaced by a new so-called digital music value chain. The traditional principles and the music market structure are in a critical process of change, triggered by innovation and the new players. This chapter outlines in how far the set of players involved in the music industry, the music itself, the traditional value chain as well as the market structure have changed due to digitalization and the Internet.

### 2.3.1 The New Players

Although some of the actors in the traditional value chain in the music industry remain part of the new one (see chapter 2.3.2), it is necessary to provide the reader with a more detailed and modern definition of the main parties involved.

The approach of Kromer to divide the music industry in six business segments is applied to set a starting point for the upcoming analysis. In regard to his work, the new composition of the music industry looks as follows[27]:

- The traditional recording industry (embraces the possibility of industrial reproduction to sell as many records as possible).

---

[26] cf. Steinkrauß; Gmelin; Günnel (2008), p.28
[27] cf. Kromer (2007), p.27

- The distributors (including radio and TV channels as well as online music and mobile music portals)

- The music publishers (including mechanical licensing, collection and distribution agencies – i.e. the AKM (for authors and composers) and the LSG (for producers, artists and labels) in Austria or the GEMA and GVL in Germany)

- The musical live entertainment (live concerts and musicals)

- The accompanying industries (duplication of CDs, logistics, internet service providers, content-aggregators, merchandising)

- The Creative Community (proprietary artists, composers, musicians)

Some amendatory points should be given regarding the new distributors. Especially online distribution has motivated new participators, such as online music portals, to enter the market. These music portals have been initiated either by traditional retailers and intermediaries, telephone companies ("telcos") and technology providers or independent organizations. In the first case, traditional retailers in the physical world tried to use music downloads mainly as promotional/marketing tools. The second type of online music portals includes prominent spin-offs of telcos such as Vodafone music, Tiscali Music Club or T-mobile music. The most well-known spin-off of a major technology company is Apple's iTunes. Further, independent companies that do not necessarily find themselves in the traditional music value chain have established online music portals. Coca Cola, Amazon and Wal Mart might be the most familiar examples.[28] In 2007, the IFPI valued the number of all different legal online music services to more than 500 and expects it to further increase.[29] Therefore it is hardly possible to provide the reader with a full list of all providers.

Record label revenue and success is further influenced by another group of players from different markets entering the recorded music business. Music live entertainment companies or concert promotion companies in particular benefit from growth of live concert revenue in recent years. By offering the artist a range of attractive services, such as support on live and recorded music, these players more and more replace traditional

---

[28] cf. Swatman; Krueger; van der Beek (2006), pp.72
[29] cf. International Federation of the Phonographic Industry (2008, b), p.6

record labels. The most famous female artist of these days, Madonna, is demonstrating how severe the appearance of new players in the music industry is for the recording industry. She quit her 25-year relationship with Warner Music and signed a contract with Live Nation, a concert promoter that offers her a lucrative $ 120 million deal for the rights to sell three studio albums, license her name and merchandise and promote her concert tours. Around 75 % of her earnings are already supposed to be generated from concert- related sales.[30] Artists, tour operators and partially record labels have allowed for these popular models, often referred to as 360°-contracts[31], through the consolidation of income from single and record sales, sponsorship, product placement, concert tickets or merchandise.[32]

### 2.3.2   The New Value Chain

According to Bockstedt et al. (2006) [33] the digital music industry is characterized by a new virtual value chain (see figure 2, p.23). This chain exists as value-adding activities are performed through and with information. In the case of digital music records, the music itself is considered to be the information. Several advantages come along with music in this context. The digital product can be easily reproduced, transferred, searched, stored and modified. These characteristics imply the severe impact on all actors in the music industry. They can have either a positive or a negative outcome for all participants in the value chain.

Despite low manufacturing and distribution costs and therefore low break-even, artists and record labels have to deal with an increasing amount of copyright issues in a digitalized environment. On the one hand, products searching costs are decreasing as the Internet offers customized offerings and the consumers can easily detect their favourite music tracks with the help of intelligent filter systems/music search engine facilities. On the other hand, digital music retailers are affected by low display costs as well as low inventory and menu costs. A further advantage for retailers is the possibility for customers to sample music before purchase, which lowers customers' risks to obtain

---

[30] cf. Capgemini (2008), p.4
[31] cf. Steffes, A. (2008)
[32] cf. Weitmayr, H. (2009), p.4
[33] cf. Bockstedt, Kauffman, Riggins (2006), p.13

unwished music. However, as market entry barriers are relatively low compared to the traditional market it is more likely for new competitors to enter the digital one.[34]

Table 1 illustrates a summary of digital music characteristics and further lists the players affected and the way how they are affected by digital music. The list of players divides into consumers, artists, physical retailers, digital music retailers and the record labels.

| Characteristics | Actors | Impact on actors |
|---|---|---|
| Easy reproduction | Artists, record labels | Low manufacturing costs, Low break-even, Copyright issues |
| Easy transfer | Artists, record labels | Low distribution costs, Copyright issues |
| | Consumer | Cheap, high quality product |
| Easy search | Digital music retailer | Low display costs |
| | Consumer | Low search costs |
| Easy storage | Digital music retailer | Low inventory costs, Low menu costs |
| | Consumer | Likes high portability, Values high compatability |
| Easy modification | Digital music retailer | Versioning opportunities, Easy pre-purchase sampling |
| | Consumer | Customizability |
| | Record labels | Versioning opportunities, Copyright issues |
| Equivalent quality | Consumer | More product options |
| | Physical retailer | New competitors |
| Separability | Artists, record labels | Song singe is product |

**Table 1: Characteristics of Digital Music.**

Source: Bockstedt, J.C.; Kauffman, R.J.; Riggins, F.J. (2006), p.18; Illustration by author.

For a more profound understanding of recent developments it is inevitable to consider the impact of these product characteristics on physical music sales (CD, DVD, etc.). Due to the equivalent quality (for the average user) of digital music in comparison to the physical product, the consumer has no significant loss in switching to a digital music

---

[34] cf. Bockstedt; Kauffman; Riggins (2006), pp.18

product anymore. It can be considered a product substitute for the physical medium. In addition, the consumer is not bound to buy a whole physical album and therefore can download his favourite tracks separately and put them together in individual playlists – known as unbundling and re-bundling of digital music – which might be a further implication on dropping CD sales.

It seems obvious that traditional manufacturers and distributors become almost old fashioned and dispensable as record labels, artists and producers can directly (or via digital music retailers) link to their customers nowadays by offering them their products and services in a much easier and more comfortable way. Thus, additional value is added. Digital music retailers, acting as intermediaries between the suppliers (artists and record labels) and the customers, take an important part in the new digital value chain. Retailers add value for both, by applying new marketing, promotion, copyright and licensing opportunities. Further value is supposed to be added by the "enforcement of IP rights and piracy prevention"[35], usually performed by institutions such as the International Federation of the Phonographic Industry (IFPI)[36], the World Intellectual Property Organization (WIPO)[37] or the US Federal Trade Commission (FTC)[38].

Nevertheless an increasing competition between record labels and their artists can be observed as a result of the possibilities offered by online music distribution. Artists seem to have noticed that their dependence on record labels is decreasing, while their possibilities to distribute their music online are increasing.[39]

Figure 1 illustrates the new music industry market structure and the digital music value chain.

---

[35] Bockstedt; Kauffman;Riggins (2006), p.17

[36] for further reading, see www.ifpi.org

[37] for further reading, see www.wipo.int

[38] for further reading, see www.ftc.gov

[39] cf. Bockstedt; Kauffman; Riggins (2006), p.14
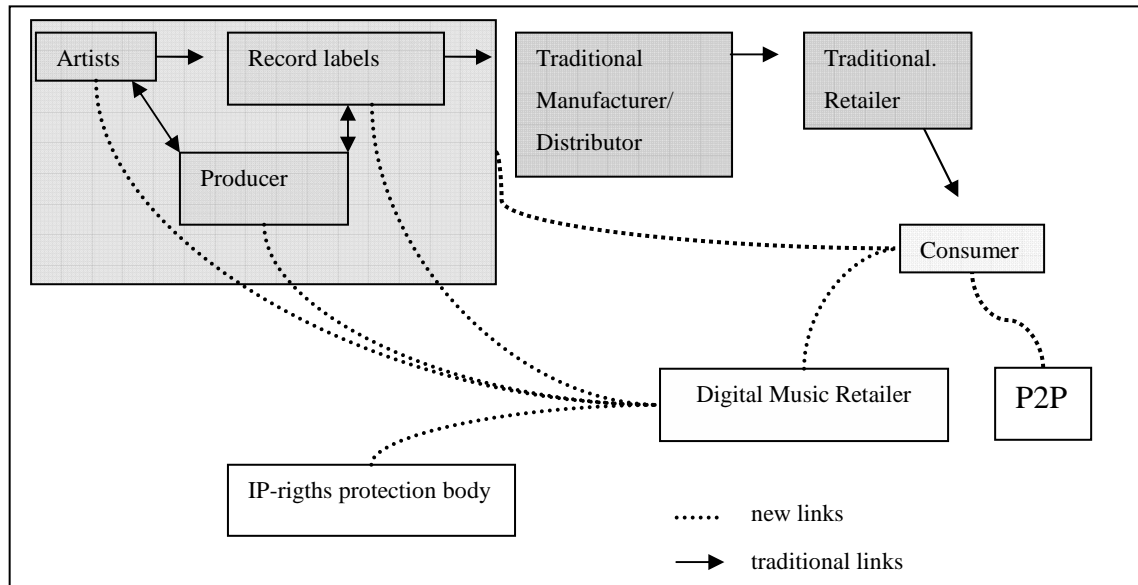
**Figure 1: New Industry Market Structure.**

Source: Bockstedt, J.C.; Kauffman, R.J.; Riggins, F.J. (2006), p.19; Illustration by author.

It has to be added that the traditional market structure will not completely be replaced by the dynamics of digitalization, but apparently its importance is shrinking. p2p-networks as one of the most severe dangers for the traditional market and a major channel to obtain digital content for the past ten years has been added to the model. In a whole, the figure shows clearly some of the most evident opportunities for consumers to obtain music within a digital environment – be it through traditional retailers, p2p-networks, digital music retailers or from the artists and bands themselves.
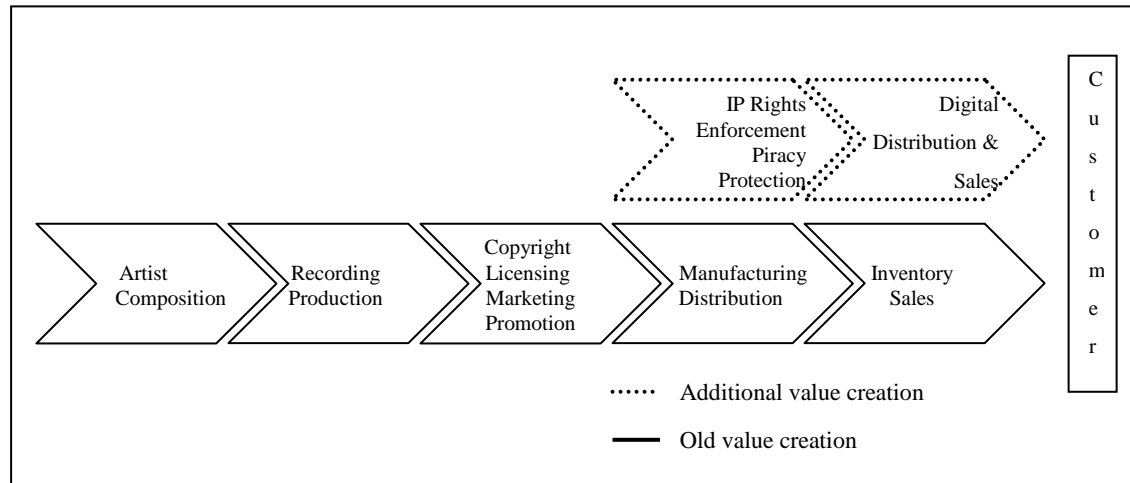
**Figure 2: New Digital Music Value Chain.**

Source: Bockstedt, J.C.; Kauffman, R.J.; Riggins, F.J. (2006), p.19; Illustration by author.

The digital music value chain (see figure 2) shows that traditional activities in the value chain, such as manufacturing, distribution as well as inventory and sales are crowded out by IP rights enforcement, piracy protection and digital distribution and sales. There is no need to say that the two initial might add value for the record labels, but it is to question if it adds value for customers as well. In the end, it is important for the consumers to adopt digital music distribution services.

According to Graham et al. (2004) the "future" (that now has to be considered the present) structure of activities, actors and governing mechanisms in a digital environment are characterized as follows[40]:

- Activities are simultaneous and parallel and belong to different value creation processes. The constellation of these activities is complex and record labels focus on their core competencies. Partnerships and collaborations allow sharing resources and capabilities. Activities are set on a digital goods market.

- The amount of actors is manifold. Therefore the record labels' dominance is decreasing. Nevertheless, record labels have high flexibility in the choice of

---

[40] cf. Graham, G. Et al. (2004), p.1092

actors. Relationships may be long-term or short-term as well as formal or informal. Illegal distribution of content by p2p-networks forces labels to react.

- Governing mechanisms weaken the dominance of record labels. Artists become more "powerful". Consumers gain bargaining power. Low entry barriers facilitate new competitors' market entry. Economies of scale and scope do not apply anymore, as vertical integration is no longer advantageous.

As already indicated, this altered environment challenges the record labels with physical sales dropping. Therefore, the following section is devoted to provide the reader with some insights into the recorded music industry sales situation.

## 2.4 Recorded Music Sales Development (CDs and DIGITAL) – The Rise and Fall of the CD Format

In 1982/83, when Sony and Philips first introduced the compact disc (CD), the most severe crisis in terms of record sales of the music industry was declared to be finished. At that time the music industry had to cope with an increasing number of home-taping, which resulted in declining sales.

The compact disk had successfully displaced the Vinyl-LP storage medium. High yields were attracting new participators from outside and non-related industries. Annual growth of CD sales (albums) worldwide exceeded more than 20 per cent until the mid-90s. However, since 1995 sales growth had fallen and the year 2000 marked the last year to denote positive growth in traditional physical sales. CD sales reached their peak in the same year with almost 2.4 billion CDs sold worldwide. Within the next six years, the most important music markets like the USA (-34.8 %), Germany (-44.3 %), Great Britain (-18.5 %), France (-31.4 %) and Japan (-31.3 %) had to cope with huge losses in unit sales. This means that between 2000-2006 the USA sold 327 million units less (others: Germany 91 million, Great Britain 37.2 million, France 34.7 million, Japan 90

million).[41] The biggest relative losses were observed in Austria with a decrease of 47.1 per cent or 9 million units.[42]

After 20 years of constant growth, the CD is being replaced by a new medium – the digital download. The latest figures on sales of physical and digital music sales published by the International Federation of the Phonographic Industry (IFPI) show clearly, that physical sales have dropped dramatically between 2007 and 2008. These sales included audio formats (singles, LPs, cassettes, CDs, DVD Audio, etc.) and music video formats (DVD, VHS, VCD). Worldwide sales (including physical and digital sales) fell by 15.4 per cent, with the most dramatic change in the US market (- 31.2 %). However, digital sales (referring to sales via Internet – single tracks, albums, music videos, streams, bundles – via mobile channels – ringtones, music videos to mobiles - and via subscriptions, income from ad-supported services, mono/polyphonic ringtones/ realtones and bundled subscriptions) increased by 24.1 per cent.[43]

In the past few years, the IFPI also published figures on the income generated by performance rights (royalty payments from collection societies to record labels, generated from licenses granted to third parties). For the record labels, this income amounted to $ 802 million with an increase of 16.2 per cent worldwide in 2008.[44] Although figures for digital and performance rights look promising, record labels are not capable of covering their losses in the traditional physical sales sector as physical sales account for almost 80 % of all recorded music sales. Nevertheless, provided that the increase in digital sales continues, there might be the chance to regain strength on a long-term basis. The development of digital sales over the past five years is shown in figure 3:

---

[41] cf. Tschmuk (2008), pp.145
[42] cf. Tschmuk (2008), pp.148
[43] International Federation of thePhonographic Industry (2009)
[44] International Federation of thePhonographic Industry (2009)

**Worldwide Digital Sales (2004-2008)**



**Figure 3: Digital Music Sales Worldwide (2004-2008).**

Source: International Federation of the Phonographic Industry (2008, d) - Digital Music Report 2008 (figures include online, mobile and subscription trade revenues; 2008 are estimates); illustration by author.

Figure 3 illustrates that not only digital music sales have increased rapidly, but also the share of digital sales in total record sales, which implies the huge importance of digital music distribution for the music industry. Nowadays, the music industry generates 20 % of total sales from online distribution of digital music.

The distribution of digital content is a boon for the legal rights holders. Given the simulation for the sale of a single music track download, it shows that record labels gain more than 25 per cent of retail prices, apart from the realtones/ringtones segment that is even more profitable.[45] This comfortable profit situation will hardly change within the next few years, as current competition and business models still have to settle and penetrate the market.

Today's revenue situation is much less attractive for retailers, rather worrisome. High intensity of competition with more than 500 legal online distributors characterizes

---

[45] cf. Jakob (2008), p.83

the current market situation.[46] Even for companies like Apple and its famous service
iTunes, trying to sell millions of songs for not more than 99 US cents, it is tough to
generate a profit, given costs of goods sold, client acquisition, operation and digital
platform operation.

Although digital music sales are improving, global music record sales dropped by
8.3 per cent worldwide between 2007 and 2008. Basically, the US market could be seen
as the major "driver" of this downward development with a total loss of 18.6 %.
Regarding digital sales, single track downloads increased by 24 % up to 1.4 billion units
sold and digital albums by 37 % - represent a major driver of the upward development
in the global online market.[47]

Table 2 illustrates these developments of record sales between 2007 and 2008,
considering geographical differences.

| | Physical | Change % | Digital | % | Performance Rights | % | TOTAL | % |
|---|---|---|---|---|---|---|---|---|
| USA | 3138.7 | -31.2 | 1783.3 | 16.5 | 54.8 | 133.3 | 4976.8 | -18.6 |
| Europe | 5808.8 | -11.3 | 750.8 | 36.1 | 576.2 | 11.3 | 7308.8 | -6.3 |
| Asia | 3600.9 | -4.9 | 1063.6 | 26.1 | 108.1 | 14.6 | 4772.7 | 1 |
| Latin America | 430.3 | -10.3 | 62.6 | 46.6 | 25.7 | 16.7 | 518.6 | -4.7 |
| Global | 13829.3 | -15.4 | 3783.8 | 24.1 | 802 | 16.2 | 18415.2 | -8.3 |

**Table 2: Recorded Music Sales (trade value) 2007-2008.**

Source: International Federation of the Phonographic Industry (2008, d) – Recorded
Music Sales 2008; values in USD millions, illustration by author.

Given these figures, it can be seen that only Asia recorded a slight increase in its total
recorded music sales between 2007 and 2008. Physical record sales plunged in every
region and consequently on a global scale, whereas digital sales soared as well as
performance rights (i.e. income from concerts, radio, etc.).

Taken the biggest music market worldwide, the US, future prospects for spending on
recorded music do not look rosy at all, at least for physical records. By 2013, US sales
of all recorded music will drop to $ 5.52 billion from $ 8.4 billion in 2008. Sales of

---

[46] cf. International Federation of thePhonographic Industry (2008, d)
[47] cf. International Federation of thePhonographic Industry (2008)

physical records will plunge below $ 1.0 billion until 2013, whereas digital sales (including both online and mobile music) will grow constantly, but not fast enough to cover losses from physical record. However, the share of digital music in total US sales will amount to around 80 %. [48]

## 2.5 Consumers and P2P File Sharing

"Piracy continues to eat away at our business. Our industry is fighting piracy to protect creativity in music".[49] This statement by the Chairman and CEO of IFPI John Kennedy may best depict the problem of illegal file sharing and its impact on the music business.

In addition to physical piracy (trade of pirated discs), internet or digital piracy is considered to be one of the most apparent dangers for the music industry. Although physical piracy is of great importance, the focus of this chapter will be on the effects of digital piracy on total music sales and consumers' advantages and intentions to engage in digital piracy. This chapter should provide the interested reader with information on where to find major reasons why people favour p2p-file sharing networks over LOMDS and where to find implications on the configuration of future business models.

### 2.5.1  Digital Piracy  - Facts & Figures

Digital or Internet piracy covers different ways to illegally distribute and download music. Be it through p2p-networks, websites selling music without legal permission, FTP sites, IRCs or blogs. Newer forms of digital piracy include LAN file exchange, digital stream ripping as well as mobile music piracy. Nowadays, the possibilities for consumers to download music illegally are manifold.[50]

According to the IFPI, 20 billion music tracks were illegally downloaded in 2005.[51] P2p- file sharing is considered to reduce the probability of buying music legally by 30 %.[52] As of today, some 95 % of all tracks downloaded online are made without any

---

[48] cf. eMarketer (2009)
[49] Kennedy, J. (2006), p.1
[50] cf. International Federation of thePhonographic Industry (2006)
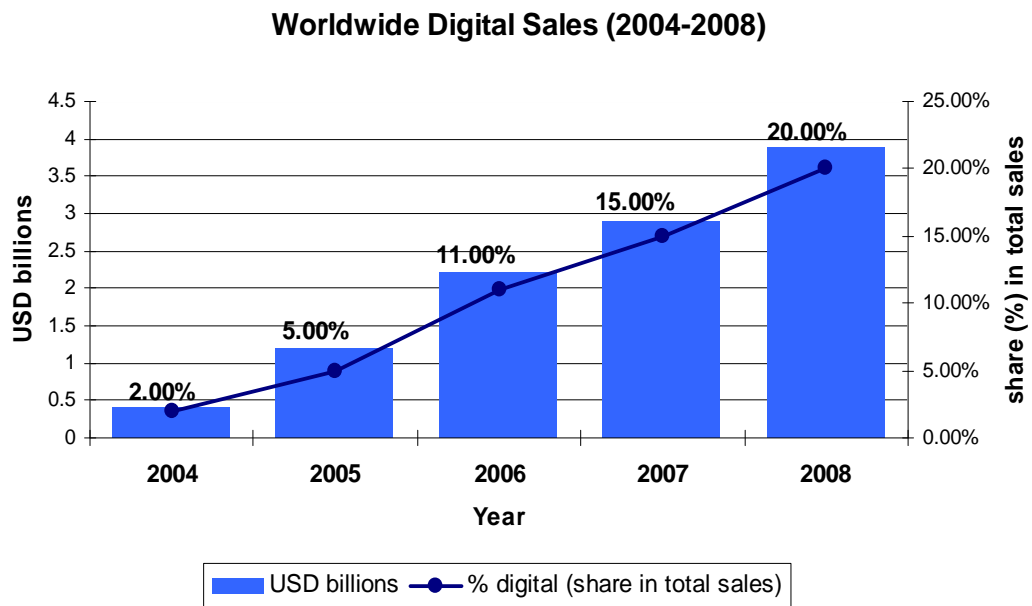[51] cf. International Federation of the Phonographic Industry (2006)
[52] cf. Taylor; Ishida; Wallace (2009), p.246

payment to the legal rights holders and therefore nurture the digital piracy community.[53] Approximately one billion music tracks are available online with more than 100 million users of file-sharing software (such as KaZaa, Bittorrent, etc.). By means of their intermediary functions, billions of illegal file transfers are made each month.[54] It is estimated that for every music track sold, 20 illegal downloads are made.[55]

More than ten years ago, most of these file transfers were supposed to be performed by young people (mainly 10-29 year olds) as they were not only the biggest but also the most price conscious consumer group of the music industry.[56] In addition, also the group of 30-39 year olds who download has dramatically increased over the past years. These new distribution channels have become their main source to obtain free digital content.[57] The latest allocation of active downloaders from different age groups can be found in chapter 4.2.

### 2.5.2    Advantages, Consumer Intentions and Effects of Digital Piracy

Traditionally, economic savings for the customer have been considered to be the most influential factors for digital piracy.[58] Obviously, the economic motive to download from illegal sources does not fully explain the actual behaviour. A lot of research has been conducted to find implications on why people tend to prefer taking the illegal path.[59] In the following chapters (2.5.2.1, 2.5.2.2, 2.5.2.3, 2.5.2.4) possible answers have been summarized.

### 2.5.2.1    Advantages of Digital Piracy

Factors such as content (especially the variety of content), convenience as well as costs are considered being important virtues for users of p2p-networks. Physical trade of music is restricted by inventory, whereas digital content is ubiquitous in P2P-networks and characterized by easy accessibility. However, already existing legal online retailers

---

[53] cf. International Federation of the Phonographic Industry (2009)
[54] cf. Quellet (2007), p.107
[55] cf. International Federation of the Phonographic Industry (2008, b)
[56] cf. Tom et al. (1998), p.412
[57] cf. Bundesverband Musikindustrie (2007)
[58] cf. Chen; Shang; Lin  (2008), pp. 418
[59] cf. Quellet  (2007), p.108

can hardly compete with the huge amount of digital content missing, due to restricted licensing agreements with record labels. A further aspect is actuality, as music files or full albums are often available online before official release.[60]

The rise of Digital Rights Management (DRM), which restricts the technical use of music files, has also enforced the popularity of file-sharing networks. Most of the content downloaded does not contain any barriers (mainly in mp3 file fomat) and therefore offers the "listener" boundless usage. Furthermore the impersonal nature of illegal file transaction over the Internet is considered to reinforce anonymity and therefore boosts the attractiveness of illegal downloading. It seems obvious that anonymity might lead to lower perceptions of prosecution risk and the (legal) intensity of consequences. [61]

In addition to the advantages mentioned above, some authors outline the importance of pre-purchase sampling of music before purchase and consequently consider the advantages of digital piracy for record labels and artists.[62]

### 2.5.2.2 Intentions to Demand

The intention to engage in file-sharing could be partially explained by the stimulus to collect music and to interact with a community. What was formerly known as "borrowing physical CDs to friends" has now become "sharing digital tracks with an almost unknown community". According to Becker, Clement and Schusser (2008) this "being cool – factor" played an important role during the rise of Napster.[63] Huang's findings also support the notion that social-networking plays a crucial role in deciding whether to download illegally or to purchase.[64]

Others like Taylor et al. (2009) argue that the intention to engage in digital file sharing is strongly predicted by desire, the frequency of past behaviour as well as perceived difficulty of the act.[65] Following LaRose and Kim (2007), one of the most important determinants for the intention to engage in downloading is the expected

---

[60] cf. Quellet, J-F. (2007), pp.107
[61] cf. Becker; Clement; Schusser (2008), p.212
[62] cf. Altschuller ; Benbunan-Fich (2009), pp.50, for further reading, see Oberholzer-Gee; Strumpf (2007)
[63] cf. Becker; Clement; Schusser  (2008), p.213
[64] cf. Huang (2007), p.49

outcome of the act. They further add that downloaders are characterized by deficient self-regulation that counteracts the music industry's efforts (like legal prosecution or educational campaigning) to ban digital piracy.[66] This means that although the risk of being prosecuted by law is high, users would still engage in digital piracy anyway.

A study conducted by Quellet (2007) shows that the relationship between the individual and the artist is directly influencing the decision of whether to acquire music legally or illegally.[67] Thus, if there is a more close relationship between the artist and the listener/consumer, they would rather buy the artists' songs instead of acquiring it by illegal means. In other words, loyalty in the artist-consumer relationship seems to be of great importance for the purchase decision.

### 2.5.2.3   Effects of Demand

According to the music industry, file-sharing is often considered to be one of the main reasons for the downturn in music sales. However, research results diverge. Authors like Oberholzer-Gee argue that there is no significant effect of file-sharing on sales revenue.[68] Under certain circumstances it might even enforce physical sales. Others like Liebowitz complain that free illegal copies are cannibalising legal demand and are the most obvious reasons for decreasing sales.[69] Peitz and Waelbroeck conclude that file-sharing is at least jointly responsible for this development.[70] Bhattacharjee replies in a more differentiated way that file-sharing is mainly harming unknown artists while star-artists do not necessarily have to be negatively effected by digital piracy. He also outlines the importance of pre-purchase sampling, which allows the potential customer to listen to music before purchase and therefore reduces the risk to buy music the customer actually does not want to obtain. [71] However, if someone downloads a track from an unknown artist, the chance of buying it afterwards is low. In case of well-known artists, sampling is hardly necessary as the artist and his music is already known

---

[65] cf.Taylor; Ishida; Wallace (2009), p.255
[66] cf. LaRose; Kim (2007), pp.267
[67] cf. Quellet (2007), p.116
[68] cf. Oberholzer-Gee; Strumpf (2007), p.37
[69] cf. Liebowitz (2007), p.22
[70] cf. Peitz; Waelbroeck (2004), p.9
[71] cf. Bhattacharjee et al. (2004), p.118 and (2006), p.154

through media coverage (radio, TV, etc.) which lowers the customer's perceived risks to obtain music.[72]

### 2.5.2.4 Intention to Supply in P2P-Networks

Reasons why someone supplies the online sharing community with digital content are not obvious. Participants do not make any revenue by offering digital content for free, but they have to carry the costs of technology for digital transfer. Media content has to be digitized, unbundled, compressed and labelled – further costs that have to be considered.

This lack of rational behaviour by offering something for free (from an economical point of view) could also be seen as a form of a "gift economy". However, gifts can either have altruistic or strategic motives – depending on the perceived benefit for the supplying person. In the first case, the supplier does not expect anything in return for his offers, whereas in the latter case some kind of "remuneration" is expected.[73] Becker and Clement argue that "users are more willing to share files if they expect reciprocal acts from other users".[74] In p2p-networks this could be to receive an offer (mp3 file, movie, image, etc.) of the same quality from other p2p-participators. However, this effect is considered to decrease with increasing experience of users. Quiring et al. argue in the same manner and state that "file sharing markets seem to rely on a non-monetary barter exchange combined with norms of reciprocity and altruism."[75]

### 2.5.3 Tackling Digital Piracy

Fighting piracy is not impossible as people always have reasons for sharing digital content. Consequently these reasons can be detected and diminished through different actions. Recently, the music industry has taken several steps to stop what is seen as the biggest threat for record labels and artists at the moment. These steps are:

- Offering legal online music download services (LOMDS)

---

[72] cf. Becker; Clement; Schusser (2008), p.220
[73] cf. Becker; Clement; Schusser (2008), p.216
[74] cf. Becker; Clement (2006), p.25
[75] Quring et al. (2008), p.175

- Enforcing intellectual property rights enforcement

- Pursuing education campaigning, and

- Implementing rights protection systems (e.g. DRM)

The development of new e-business models and the consequent emergence of legal online music distribution services offers customers the possibility to obtain music from vast record labels' repertoires and could be seen as a major source to push-back digital piracy. Some years ago, record labels started to react and introduced subscription-based distribution models online, like MusicNet or Pressplay – however without success.[76] Nevertheless, with more and more legal intermediaries appearing, record labels can focus on their core competencies and users are offered easy access to millions of music tracks from a lot of different online music retailers (like iTunes, Napster 2.0, musicload.de, etc.). Within the scope of this thesis, this part will be of great importance.

Intellectual property rights enforcement on individuals and on p2p-network providers (KaZaa, The Pirate Bay, eMule) seems to be the most intimidating measure towards users. The role of governmental legal actions as well as Internet Service Providers (ISPs) and its implications on the download of copyright-protected content is being discussed with huge commitment. Recently, France's efforts for ISPs to ban illegal downloaders from using the internet (anti-piracy law) could be seen as a major shift in the entertainment industry's history.[77] Nevertheless, the effectiveness of legal sanctions is discussed with a lot of scepticism and authors such as Bhattacharjee[78] et al. or Sinha and Mandel[79] doubt and proved that these sanctions (except ISPs banning individuals) hardly have any effect on users' future behaviour and that they might even increase piracy tendency, while the IFPI is claiming that these actions have had severe impacts on illegal file-sharers.[80]

Education to enhance awareness of copyright also plays a decisive role in the industry's efforts to decrease the amount of digital pirates. Multi-country educational campaigns have been launched with the support of national governments and

---

[76] cf. Becker; Clement; Schusser (2008), p.211
[77] cf. Abboud (2009)
[78] cf. Bhattacharjee et al. (2006), pp.129
[79] cf. Sinha; Mandel (2008), pp.1
[80] cf. International Federation of thePhonographic Industry (2006)

international institutions.[81] In this context, campaigns may not only be used to educate about legal affairs but also about the risk of obtaining illegal music files of low quality (bad recording, viruses, etc.).

In the future record labels have to act carefully when considering introducing new means of rights protection. Especially Digital Rights Management (DRM) proves best that a lot of consumer trust can be lost when their rights are being restricted. The technical infrastructure of DRM allows transforming artificially music into a scarce and consequently marketable good and the record labels' main aim is to keep users from sharing illegal music files. [82] Meanwhile all four major record labels have taken a step towards their customers' well-being and partly provide DRM-free songs on the Internet. Nevertheless, DRM and therefore mobility is still an issue that has to be considered and will therefore be implemented into the empirical part of this thesis.

In general, rational behaviour is considered to prevent someone from engaging in digital piracy. However, this would imply that an individual in a p2p-network refrains from sharing files and consequently the whole p2p-system starts to collapse (mixed motives of participants lead to a social dilemma[83], a state in which a private interest is at odds with collective interests). Empirical research has proven though, that there is already an increasing number of people in these networks who do not actively engage in uploading content but concentrate on downloading (known as free-riding). This development should consequently lead to lower attractiveness or even to the collapse of p2p-networks, as suppliers in these networks do not longer accept free-riding and quit offering their files online.[84] As a consequence, authorities might find ways to flood these networks and artificially increase the rate of free-riding, leading to the degradation or collapse of a file-sharing network.[85] It has to be mentioned that p2p-network providers try to counteract free-riding by setting a minimum upload level. This means that someone can only download files from the network, if he provides the network with a minimum amount of data. In some cases, like µTorrent, higher upload rates lead to higher download rates – a way to keep the system working.

---

[81] cf. International Federation of thePhonographic Industry (2006)
[82] cf. Frahm (2007), p. 75
[83] cf. Beckenkamp (2006), p.338
[84] cf. Becker; Clement; Schusser (2008), pp.218

These examples illustrate the opportunities for record labels and the music industry in general to fight piracy. For this thesis, though, the author concentrates on the analysis of new legitimate e-business models that focus on new ways to link record labels, bands and artists with the customer. Furthermore it is intended to find out which characteristics of such business models and LOMDS are important to (potential) customers to further curb digital music sales.

## *2.6 Concepts of Innovation in the Music Industry*

The development of the music industry has always been affected by technological, legal as well as music genre specific change. In this context it is necessary to define the term innovation and its importance to the music business. Once an innovation is made, it may lead to the application of new business models and consequently enable competitive advantage. Innovations are considered to be crucial for competitiveness and progress. It is therefore inevitable to understand where innovation comes from and where it might lead to.

### 2.6.1   A Typology of Innovation

When someone is talking about innovation, the term invention is often misleadingly equated with innovation.

According to Tschmuck

> "an **invention** is a novelty that has never existed in this particular form. However, an invention is not automatically an **innovation**. An innovation has occurred only after the invention is successfully put on the market".[86] (emphasis added)

As per Kotler, innovation could be described as a product, service or idea that someone perceives as being new.[87] These definitions may sound rather simple and broad, though for this thesis it might help to further distinguish the term innovation.

---

[85] cf. Becker, Clement, Schusser (2005), pp.201
[86] Tschmuk (2006), p.179
[87] cf. Kotler; Bliemel (2001), p.563

Brooks defines two different kinds of innovation - technological innovation and social innovation.

The latter one can be split up into four segments:

- market innovation,

- management innovation,

- political innovation and

- institutional innovation.

Market innovations are marketing capabilities helping either to implement new technologies in new markets or already existing ones (i.e. music promotion by radio DJs). Innovations in management are new work organizations that lead to an increase in productivity (i.e. music production by independents). Political innovations can be compared to political and legal actions aiming at new goals (i.e. copyright enforcement; setting new rules). Institutional innovations are described as new institutions that provide new services or fulfil social requirements (i.e. the foundation of collection agencies).[88]

However, this typology of innovation only describes social innovations. Therefore a typology for technological innovations in the music industry has to be added. Tschmuck tries to apply the intensity of innovation to the music industry. In addition to that he distinguishes between product and process innovation (see table 3). The intensity of innovation is described by two levels. Either the innovation is incremental, where a limited number of parts of an existing technology are modified leading to an improvement of the whole technological system, or radical where innovations lead to a completely new product or process design.

Following Frahm, a product innovation can be described as marketable content that is absolutely or relatively new on the market. Process innovations are in-house modifications for the efficient processing of content.[89] Finally, putting these parts together the model could be illustrated in the following matrix:

---

[88] cf. Brooks (1982), quoted in Tschmuck (2006), p.181
[89] cf. Frahm (2007), p.101

| | | Type of Innovation | |
|---|---|---|---|
| | | **Product innovation** | **Process innovation** |
| Intensity of Innovation | **incremental** | Double sided discs; portable gramophones | Stereo recordings |
| | **radical** | Vinyl disc; CD player; MP3 | Electrical recordings<br><br>Exchange of music on the Internet |

**Table 3: Technological Innovations and Intensity of Innovation.**

Source: Tschmuck, P. (2006), p.182. Adapted by author.

From these examples one can see that both the MP3 file format as a product innovation as well as the exchange of digital music on the Internet as a process innovation are characterized by radical change. As of Tschmuck, these radical innovations come from outside the industry and completely change its structure. Record labels are not able to adapt to these new market structures and the principles underlying. They are not able to control competition and supervise the industry value chain. Only after some time the majors will be able to regain strength and wall off the market until once again a radical innovation from outside enters the market.[90]

Frederiksen argues in a similar way. Technological and organizational innovations in the music industry are mainly adaptations to external technological innovations. As an example he mentions the development of new distribution channels using the Internet. They call for organisational innovations to create new business models or the introduction of new file formats or physical carriers.[91]

### 2.6.2   Incentive-based vs. Knowledge-based Models of Innovation

Theory further distinguishes two different models of innovation – the traditional neoclassical approach (or incentive-based model) and the knowledge-based model. The traditional neoclassical approach considers innovation as being technical know-how that

---

[90] cf. Tschmuk (2008), p.159
[91] cf. Frederiksen (2002), p.29

has the character of a public good.[92] However, public goods are characterized by non-rivalry and non-exclusiveness as new innovations enable the distribution and reproduction of music at high quality. This implies that the consumer profits from an increase in efficiency, whereas the supply side (record labels, artists) is lacking the incentives of its innovation. Consequently its sales revenue is declining and the supply side is hardly capable of covering the expenses of the "first copy" (i.e. costs of production, marketing, collecting agencies, distribution and fixed overhead, etc.). [93]

As indicated above, the supply side needs to make a profit out of its innovation with the help of instruments that "internalize effects that manifest themselves externally (technological spillover effects)".[94] Generally, legal protection of patents and copyrights can be seen as a means to achieve such spillover effects and has been widely applied by the music industry in the past decades.

This incentive-based model is outdated and challenged by the knowledge-based model of the new economics of innovation. Innovative activities are seen as an effect of collective knowledge. The acquisition of knowledge stays in the foreground. As this model is characterized by uncertainty, knowledge is partially privatized instead of being a public good. Regarding an e-business model, the ability to integrate knowledge across the value chain (more precisely in a relationship-based web or "value web") constitutes the basis for competitive advantage.[95]

A four-step process to innovation by Choi and Perez might best depict and illustrate how online piracy, technology innovation and the formation of new legitimate business models are related.[96]

---

[92] cf. Tschmuk (2006), p.183
[93] cf. Van Dyk (2008), p.199
[94] Tschmuk, P. (2006), p.183
[95] cf. Tiwana (2002), p.36
[96] cf. Choi; Perez (2007), p.173
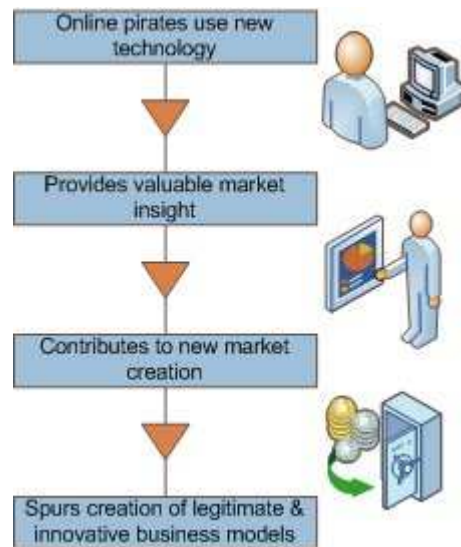
**Figure 4: Four-step process to innovation.**

Source: Choi, D.Y; Perez, A. (2007), p.173. illustration by author.

Figure 4 shows that in the first step of the process, online piracy pioneers the usage of new technologies (i.e. p2p-technology). Afterwards p2p-networks become valuable sources of market insight. These former illegal communities and their users migrate to become customers of legitimate business models and services. The fourth and last step includes newcomers to the markets, who enter the market with new business models that are based on the new technology. As a consequence, incumbent market participators try to adapt their business strategies to compete with them.

The most recent and prominent example for this four-step process is BitTorrent. Before the successor of Napster appeared, a p2p-network's main downside was its slow speed at which larger files could be transferred. However, the BitTorrent technology allowed solving this problem. In contrast to Napster and Co., users have been able to download files from several users synchronously, rather than from just a single user. BitTorrent's legal as well as illegal applications provide a source of valuable market insight. For example, companies realized that this new form of distribution allowed them to easily connect to their customers and provide them with free software updates or even full programmes (e.g. Sun Microsystems used BitTorrent to make available its entire Open Solaris operating system to users). As a consequence, established media and technology companies began to adjust their business models to changes provoked by this new technology and entrepreneurs flooded the market with new business

applications. Some companies used BitTorrent technology, others used alternatives to file-sharing technology to distribute their content. Business models, such as Video on demand (VOD), Internet TV broadcasting or video search arose from BitTorrent. Well-known players like Google, Disney, Yahoo, Youtube or MSN created new legitimate forms to generate revenue, based on these innovations.[97]

---

[97] cf. Choi; Perez (2007), p.175

# 3   Business Models – An Incremental Build-up

In the previous chapters the market structures and principles that have been changing in the past few years have been considered. The evolvement of digital distribution services has driven parts of the industry into crisis. Artists and music record labels have to face a changing environment by establishing new ways to generate money and to satisfy their customers.

Further on, the importance of innovation to create and preserve value in music business was discussed and how innovation might lead to the evolvement of new business models. Accordingly, this chapter is dedicated to the discussion of (new) business models within the music industry in an online environment. As the structure or system of the music business has been analysed in detail in the previous sections, this part of the thesis is supposed to provide the reader with new business principles derived from literature that might alter and preserve the music record labels' and artists' future financial success – in terms of generating revenue. Initially, a basic definition of the terms business model and e-business model is given. Afterwards, promising e-business models will be presented in detail.

## 3.1   Business Models – A Definition Approach

In this chapter the reader is provided with a common definition of the terms "business model" and "e-business model" as these terms will be further used in the course of this thesis. Afterwards, chapter 3.1.2 depicts what a successful business model consists of.

### 3.1.1   Definition of Business Models and E-business Models

Several definitions exist on what a business model actually is, however, there does not seem to be a commonly accepted theoretical definition. Rappa[98] might best depict the characteristics of a business model in the context of this thesis. He states that e-business models might be the most discussed but least understood facet of the Internet (e.g. transparency, operation mechanics, etc.).

As of him, a business model is defined as:

> "the method of doing business by which a company can sustain itself – that is, generate revenue. The business model spells-out how a company makes money by specifying where it is positioned in the value chain."

In this thesis, these business models will be referred to as e-business models, as the Internet and the possibility to distribute music online stay in the foreground of this analysis. To complement Rappa's definition, Timmer's[99] definition of internet business models is considered. He describes an internet or e-business model as

> "an architecture for the product, service and information flows, including a description of the various business actors and their roles; and a description of the potential benefits for the various business actors, and a description of the sources of revenues".

E-commerce brings on the emergence of new e-business models, but also the reconfiguration of or adjustments on already existing ones. A brief example for the latter might be companies such as Amazon, eBay or Barnes & Noble that apply traditional and already well-known concepts of wholesaling, brokerage and retailing to the virtual market place.[100]

E-business models are considered to evolve over time. Companies do not have to just apply a single business model, but they may also combine different models as a part of its overall strategy. This is an important notation for the analysis of music business models in this thesis. They may be partially, fully or discretely implemented from each other. For instance, it is not uncommon for content driven businesses to combine an advertising model with a subscription model (for further information on these models, see chapter 3.3).[101] The reader should therefore always bear in mind that there hardly exists a stand-alone method or model which guarantees financial success for the record company and consequently fully meets customers' expectations.

---

[98] Rappa (2009)
[99] Timmers (1998), p.4
[100] see eBay.com; barnesandnoble.com; amazon.com
[101] cf. Rappa (2009)

### 3.1.2   What Makes up a Successful Business Model?

Having provided a definition of e-business models for the music business, it has now to be considered the composition of e-business models. Following Zollenkop, there are three main factors a business model consists of (see figure 5)[102]:

- The product/market-combination

- The revenue mechanism

- The configuration and execution of value-adding activities

All this factors are interdependent and each one contributes to the success of a business model. Therefore success is characterized by the system correlation (see Figure 5). It is not only the quality and arrangement of a single factor that counts, but also the link between these factors. Only coherence of the whole system can guarantee high customer benefit and competitive advantage and revenue growth.[103] Due to the high complexity of this system it is impossible to find a business model that fully matches customer and record label expectations. Nevertheless, a business model is successful if customers' expectations and the combination of integral parts of a business model match.
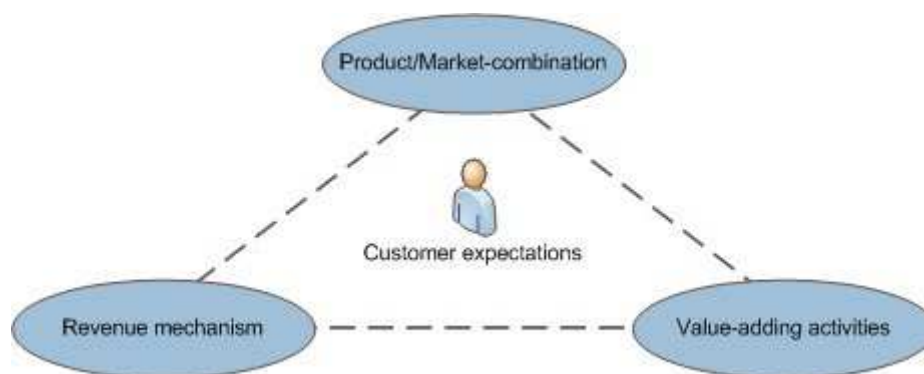


**Figure 5: Integral components of business model and customer expectations.**

Source: Zollenkop (2006), p.349. Illustration by author.

---

[102] cf. Zollenkop (2006), p.45
[103] cf. Zollenkop (2006), pp.45

Prior to the taxonomy of business models on the Internet and the description of some of the most promising (future) music business models, a brief part is dedicated to present the traditional approach or business model of music record labels to generate revenue. With the information already provided on the importance of innovation, the music value chain, the music market structure, digital distribution and the following part in this thesis, the reader should have a clear-cut picture of the basic principles and components that govern music business models.

## 3.2 The Record Labels' Traditional Business Model

In the course of this chapter, the reader will learn more about the traditional business model that has been applied by the music record labels for a long time. In a prior step, the composition of this business model will be specified. Afterwards the music industry life cycle and the cost and revenue structure of a music record label will be discussed.

### 3.2.1 The Traditional Composition of the Music Industry's Business Models

The first component of the traditional record label's business model consists of the product and the market as defined in chapter 3.1.2. The traditional **product-combination** in the music industry is based on records (mainly CDs). These are homogeneous mass products that contain a certain amount of different tracks of an artist, band or genre. The product bases on a double cross-subsidization as only 5-10 % of all CDs sold are profitable and finance or subsidize the other 90-95 %. Further, as CDs often contain tracks the customer actually does not want to obtain but has to buy due to unbundling issues, subsidization is being enabled.[104]

Concerning the **market**, there are three different customer segments that can be distinguished by intensity of purchase - intensive, average and extensive consumers. Intensive consumers make up a small part of the population, buying more than nine CDs per year. However, this segment makes up almost 40 % of the music industry's revenue. Most of the revenue comes from purchase from younger adults and sales are considered to be very seasonal as almost 70 % of CD sales fall into several weeks before Christmas.

As a consequence, it is important for record labels to focus their efforts on the management of a few, profitable artists and to target a specific, profitable group of customers. [105]

This leads to the second component of the business model – **the configuration and execution of value-adding activities**. Value-adding activities in the music value chain are primarily, as already mentioned in previous chapters, A&R-management, financial exploitation, administration and protection of intellectual property rights of composers and authors. This second step is completed by recording, production and duplication followed by the application of marketing and promotion, the distribution to retail stores, radio, clubs and gastronomy.

Prior to the rise of Internet distribution, the music record labels' main goal was to search for new talent, to produce artists' music and to promote their clients by videos, concerts, advertising, TV shows and other events.[106] At the end of the 20th century, the music industry was and still is very much dependent on a strong copyright framework. This copyright enabled not only the majors but also the independent labels and thousands of smaller ones to finance their initial investments they made in the "Creative Community". According to Papagiannidis, copyright guaranteed a flow of revenue for rights holders. The major record labels that own 100 % of the rights of sound recordings and 50 % of rights in the composition (through their music publishing company) established them and not the artists themselves as legal rights holders of the music product. Record labels retained control by ownership of capital intensive production processes. Consequently, negotiation power stayed with the record labels who designed contracts that put them into a more profitable position than the artists. The royalties they paid their best-selling acts were as low as the record labels themselves could cover operating costs plus profit from the artists' box-office takings. In other words, execution is characterized by many exclusive rights between labels, composers, artists and other parties. Regarding costs, the music industry is defined by high initial investments (fixed costs), low marginal costs and economies of scale.[107]

---

[104] cf. Zollenkop (2006), pp.349
[105] cf. Zollenkop (2006), pp.319
[106] cf. Swatman, Krueger; van der Beek (2006), p.70
[107] cf. Clemons; Lang, (2003), p.273

The **revenue mechanism** is based on fixed prices for records and most of the revenue is distributed to the majors as they control most activities in the value chain, like distribution, marketing, recording or production.[108]

### 3.2.2 The Music Industry Life Cycle

The financial exploitation or revenue mechanism in the music industry's life cycle could be described as "1 album and 2 singles", as record labels' concept focuses on producing an album and decouple two or three singles, in some cases followed by one or more music videos. These principles initiate a circle of different stages of financial exploitation of music.[109]

Figure 6 outlines the music industry's traditional approach that proved to be very profitable for decades. Exploitation of compilations, back catalogues and publishing are considered to be high profitable segments. However, the release of an album and the decoupling of single songs are still considered to be too much focused on these days.
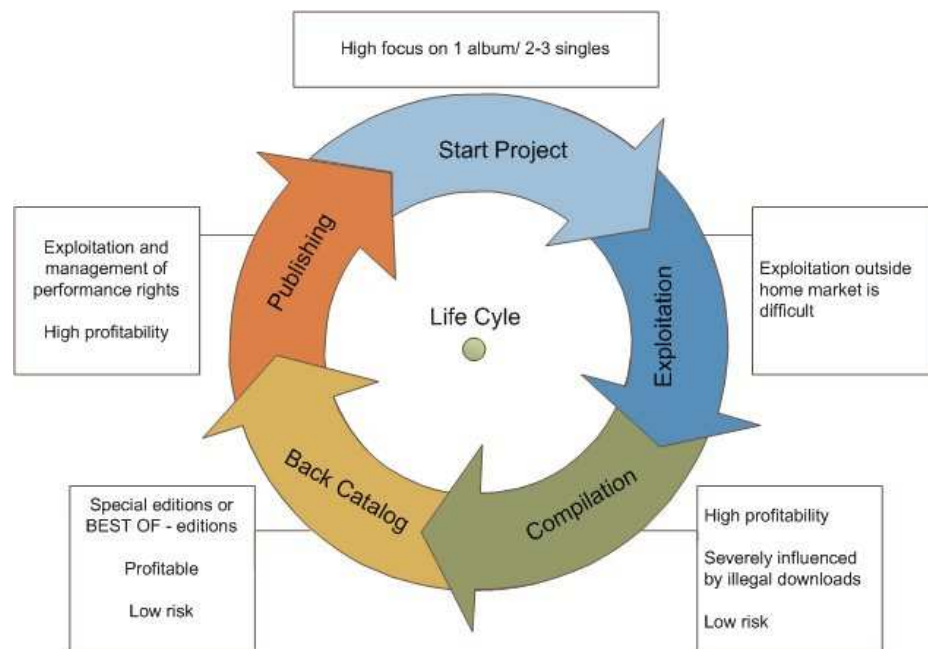


**Figure 6: Traditional Music industry life cycle.**

Source: Briegmann, F.; Jakob, H. (2008), p.90; illustration by author.

---

[108] cf. Zollenkop (2006), pp.356
[109] cf. Briegman; Jakob (2008), p.90

Nowadays, the Internet allows inexpensive manufacturing and reproduction due to higher bandwidth rates and customer-friendly programs for music production, thus, a shift of control from traditional record labels to artists and customers can be observed and the traditional circle of financial exploitation has been broken open.[110] Consumers are listening to more music than ever before as their possibilities to obtain music multiply. Artists and customers are now able to interact directly (through websites such as MySpace, Facebook, Twitter, artist websites, etc.), without any intermediary, diminishing the record labels influence. Moreover, copyright is less valuable for the record labels as innovation such as file-sharing is diminishing the importance of intellectual property for the music industry. More specifically, copyright enforcement might not be as a powerful tool as the music industry might hope. Record labels have failed to adapt to this changing environment on time, resulting in the rise of a "monetization gap".[111]

All in all, the music industry's business model is based on control and mass distribution of easily-digitized information (music). Physical distribution models have been built on limited access, which allowed the major record labels to maintain control. Digital distribution was limited by low bandwidth and technical copyright protection systems. Both restrictions do hardly exist anymore and record labels have to face the end of control of music by ownership.

### 3.2.3   Cost and Revenue Structure of a Major Record Label

The typical cost structure (see figure 7) for a major record label is characterized by high production costs (i.e. composing, recording, royalty payments etc.). Expenses on marketing make up a big part of the record company cost structure, which underlines the current notion that major record labels are more of marketing/promotion-focused companies. Administrative costs such as legal affairs, accounting, controlling and IT account for almost 10 %. Others include non-personnel expenditure like rental payments. Most surprisingly, just a small piece of pie is due to personnel distribution

---

[110] cf. Papagiannidis; Berry (2007), p.27
[111] cf. Capgemini (2008), p.8

costs and A&R expenses.[112] The latter implies less investment in the development and support of new artists, therefore downsizing the amount of different bands, artists and genres people can chose to listen music from.
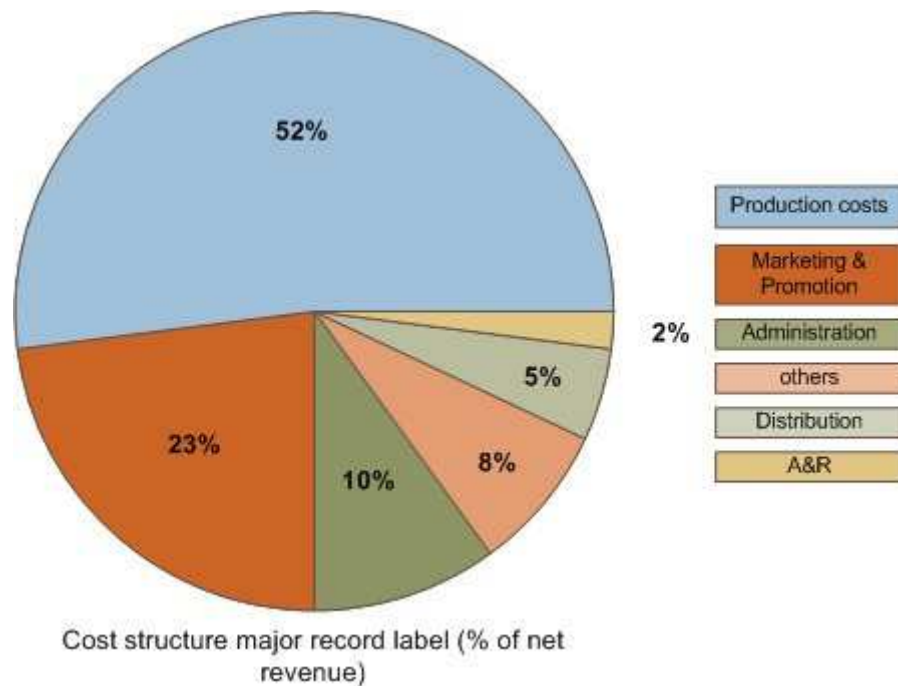


**Figure 7: Major record label cost structure.**

Source: Jakob, H. (2008), p.78, adapted by author.

Nevertheless it has to be added that these figures are estimates and to some part calculated based on third-party data and information as more detailed figures are not provided by record labels in general.[113] Though, it might give important implications on where to apply new business models or cost cutting initiatives, besides the implementation of LOMDS.

The main cost drivers in the traditional business model are the type and amount of artists as well as the rights management that comes along with them. During their successful years in the 90s, record labels produced and managed as much music and artists as possible. However, this resulted in the emergence of so-called "one-hit

---

[112] cf. Jakob (2008), p.78
[113] cf. Jakob (2008), p.79

wonders" that implicated a focus on short-term success. As a consequence, for every "hit" there were ten "flops" – leading to a huge portfolio of non-profitable artists, increasing A&R costs, manufacturing costs, higher administrative expenses and more legal rights management.

According to Jakob, it was not until 2004, when record labels started reorganizing their agenda. They cut overhead costs and tried to streamline their portfolios. In many cost categories the record labels had been able to cut costs down 30-50 per cent.[114]

## 3.3   Taxonomy of Internet Business Models

Prior to the discussion of how music record labels can apply new ways to generate money on the Internet, it is necessary to discuss the basic Internet business models that have been adopted by companies operating in an online environment.

Companies have several options of business models they can implement in their overall strategy. Rappa provides taxonomy of nine different concepts for the Internet (see figure 8). These business models or concepts are the brokerage, the advertising, the infomediary, the merchant, the manufacturer, the affiliate, the community and the subscription model.[115] It has to be pointed out that this chapter is to inform the reader about the basic business models that can be applied in e-commerce, some of them will found the basis for the e-business models in the music industry discussed in chapter 3.4.

---

[114] cf. Jakob (2008), p.81
[115] cf. Rappa (2009)
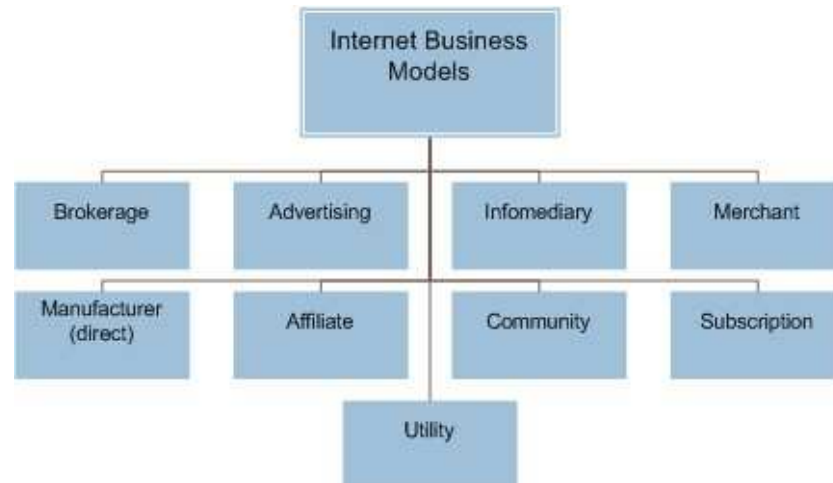
**Figure 8: Internet Business Models.**

Source: Rappa, M. (2009). Illustration by author.

As of Rappa, these models are defined as follows:

The **Brokerage model** is characterized by brokers or market makers. Their task is to bring together buyers and sellers and try to facilitate transactions between these two parties. In general, this model plays a role in business-to-business (B2B), business-to-consumer (B2C) and consumer-to-consumer (C2C) markets and brokers charge a fee or commission for the transaction.

**Advertising models** are considered to be an extension of traditional media broadcast models. In this case, a website offers content usually free of charge and different additional services (like instant messaging, blogs or email services). They are mixed with advertising messages in the form of banner ads and might represent the major source of income for the broadcaster. The broadcaster can either be the creator or just the distributor of the content provided. The attractiveness of this model for companies increases with the amount of viewers visiting the website.

**Infomediary Models** are simply applied by companies acting as intermediaries providing their clients with information about a given market. Clients can be sellers who want to receive information about consumption habits of potential clients, or buyers who are searching for product and service related information prior to purchase.

**A Merchant Model** is most frequently used by wholesalers or retailers The companies either carry out sales based on list prices or auction models.

**The manufacturer** or direct model allows a manufacturer who creates a product or service to directly reach potential customers without an intermediary's help. This model can be based on efficiency, better customer service or understanding of customer preferences.

**Affiliate models** are providing purchase opportunities wherever people surf the Internet. They offer financial incentives such as commissions to affiliate partners. The partners offer direct links to the purchase-point of the merchant. Others include banner exchange, pay-per-click or revenue sharing programs. This model is also referred to as pay-for-performance model, which implies that the affiliate does not cause the merchant any costs if he does not generate revenue.

**Community Models** are based to a high degree on their users' loyalty. As an example, users of social networking sites invest both time and emotion and the amount of involvement decides about the success of the model. Revenue can be obtained from the sale of amendatory products or services, donations, advertising or subscription for additional services.

With **subscription models** users are charged a fee, either on a daily, monthly or annual basis to get access to a special service, irrespective of actual usage. Commonly these models combine free content with premium services or content (i.e. subscriber or member-only). These models are often combined with advertising models.

**Utility Models or "on-demand"-models** are depending on usage rates, implying that users have to pay for what they actually are using. For instance, this "pay as you go"-approach is used by some Internet Service Providers in parts of the world, charging customers for connection minutes.

Hardly all of these models will be of importance for music record labels and artists. Some basic models have already been used by the music industry to generate revenue or some may not be applicable. However a couple of Internet business models might help to overcome the current monetization gap and will be discussed in detail in the upcoming chapter (see chapter 3.4).

## 3.4 *Music E-Business Model Categories*

The following business models do not represent a full list of all promising ways and methods for record labels (and artists) to generate revenue through different means of digital distribution. This approach would far exceed the scope of this thesis. The models were mainly derived from literature review that consisted of academic research papers, industry reports and interviews by members of record labels and artists. Certain subjectivity in the assortment of promising business models was not avoidable. Nevertheless, concepts were picked out that had been predominantly proposed by literature. It has to be added that these business models are primarily based on the interposition of intermediaries, such as Apple's iTunes Store. This example has shown that users are willing to pay for digital information goods if they are offered an easy to use distribution platform, in combination with a big repertoire of music at moderate price levels, more liberal DRM and additional services that fit customer expectations.[116]

Alternative business models that have either been proposed by technology experts or industry representatives and which are scarcely discussed in theory will also be implemented in this section as it is intended to contribute to future discussion on the development of new ways for digital music distribution and the improvement of service portfolios from digital music providers.

Each business model will be described in detail and their basic principles will be outlined, followed by examples from practice. To provide the reader with a more generic, structured description of these business models, the categorization approach from Amberg and Schröder was applied. They identified different e-business models in music distribution and created a set of four categories based on two essential criteria. Classification on the one hand is executed by the type of compensation or payment method and on the other by the consumer's dependency on the supplier or its technology (hardware and software).[117]

This approach seems to be beneficial for this analysis and in a second step simply allows us to test which type or category of business model might best match the

---

[116] cf. Quring et al. (2008), p.176; qt. Von Walter; Hess (2004)
[117] cf. Amberg; Schröder (2007), pp.291

consumers' attitudes towards the adoption of legal online music distribution services. It has to be added that this research was conducted several years before this thesis was written and due to the emergence of new forms of digital distribution it was decided to add categories and adapt some of the existing categories provided by Amberg and Schröder. These categories are:

- E-Business models that are based on "pay-per-download" or "à la carte" and are independent of the supplier's technology **(Category A)**

- E-Business models that are based on "pay-per-download" but are dependent on the supplier's technology **(Category B)**

- E-Business models that are based on a flat-rate **(Category C)**

- E-Business models that include commissions for reselling of digital music tracks ("superdistribution") **(Category D)**

- E-Business models that are based on free ad-funded music **(Category E)**

- E-business models that are based on virtual communities and social media websites **(Category F)**

- E-Business models that are based on the manufacturer model **(Category G)**

Each category will be described by four characteristics. The first one is content-related and depicts the type and volume of music/content provided. The second aspect focuses on the rights of use for customers and determines the level to which the customer is allowed to transfer or copy music to other devices. In general, this part can be referred to as the portability of music or flexibility in the purchase of digital music. Furthermore, the third aspect is related to prices of single tracks, albums and special offerings. A fourth point is supposed to analyse additional services, such as information on artists, bands and tours or customer support. Each business model will be exemplified by a legal online music distribution service or company that already apply these models. However, as some aspects of companies and market conditions may have changed in the past few years, all examples have been updated by the author through website analysis.

### 3.4.1 E-Business Models that are Based on "pay-per-download" or "à la carte" and are Independent of the Supplier's Technology (Category A)

In general, the most wide-spread form of digital distribution as a business model is the download of single songs or albums for a fee, also referred to as the "à la carte" – download. The downloaded digital files are offered in a special data format (i.e. MP3 or WMA). However, in this category it is not necessary for the consumers to obtain special technology to use the offer. Concerning the repertoire offered to the consumers it mainly consists of well-known songs of international charts in high audio quality.[118]

Customers do actually not buy the content itself, but the rights of use (i.e. a licence). Depending on the file format chosen, the consumer can either have non-restricted transferability possibilities or, in the case of the latter file format, is restricted in terms of the amount of copies or transfers to digital devices like mobile phones and portable music players. To avoid illegal actions, these rights are managed and organised by DRM-systems. However, their importance is supposed to decrease as online retailers and major record labels have already partially stopped applying DRM or at least intend to do so in the future.[119] Prices in this category are standardized, but labels and retailers try to attract more consumers by offering price-bundles, special prices or prepared discounts and are supposed to act as a stimulus for customers to download more content. Additional services are not very sophisticated as they focus primarily on services supporting the purchase.[120] Musicload.de by Deutsche Telekom AG is a prominent example operating in the German market (see table 4). It has to be mentioned that the business model of pay-per-download is more often adapted by further services and offers, such as streaming songs for a flat rate and for a certain period of time.

---

[118] cf. Amberg, Schröder (2007), p.293

[119] cf. Van Buskirk (2008); Amazon and Walmart are offering DRM free music, in mp3-file format to ist US-based customers. www.amazon.com. www.walmart.com

[120] cf. Amberg; Schröder (2007), pp.294

| Characteristics/Name | Musicload.de (Deutsche Telekom AG) |
|---|---|
| **Type and volume** | 300.000 songs; pop, rock, jazz, dance, folk, charts<br><br>data format: both DRM protected and free |
| **Price** | €0.99< for single; €5.00<for album; price-bundling:10 chart songs for €7.95; streaming (flatrate, €8.95 for 30 days/€25.9€ for 90 days) |
| **Rights of use** | Depending on data format; either none-restricted rights or restricted copy, export, transference possibilities |
| **Additional services** | Information on artists, albums, newsletters, etc.<br><br>User support: FAQ, guided tours for how to use platform |

**Table 4: Example Category A – Musicload.de.**

Source: Musicload.de; Illustration by author.

Comparing the results of Amberg and Schäfer with the author's findings, it is interesting to see that a couple of aspects have changed over the past few years. Especially the amount of different music genres seems to have increased and the opportunity to obtain DRM-free music tracks. Further, streaming opportunities are provided nowadays for a flatrate and a certain period of time. Additional services, such as information on artists and bands that have not been provided several years ago seem to be standard nowadays – not only in this particular case.

### 3.4.2  E-Business Models that are based on "pay-per-download" but are Dependent on the Supplier's Technology (Category B)

In general, the payment method of category B does not differ from category A. However, this category is constrained by a specific aspect. Digital audio content is provided in a data format that depends on the supplier's technology. In this case, the term cross-marketing might be appropriate as the main aim of the suppliers is to sell music for the purpose of promoting its main products. It is necessary for the customer to obtain this specific product (or technological device) to use and benefit from the music downloaded. To obtain music, the customer has to pass through a two step process. First he has to install a client-software for access control, usage control and accounting on his computer. This allows the customer to download songs and albums which can only be transferred to technology provided by the suppliers, usually mobile devices. Amberg and

Schröder call this "technology-based customer retention".[121] For this type of business model it is important to achieve a high level of customer loyalty, which suppliers try to accomplish by offering a huge repertoire of songs of different labels, bands and artists as well as artist-related services and information. Accordingly, the amount and type of content offered in category B does not differ from category A. However, the customers can use the music without restriction, but only with regard to the supplier's technology.

| Characteristics | iTunes (Apple) |
|---|---|
| **Type and volume** | Approx. 10 million songs; many different genres; audiobooks; data format: DRM-free |
| **Price** | €0.69< for single; €7.99<for album; |
| **Rights of use** | Non-restricted rights to copy and transfer songs to media players (usually from supplier – i.e. iPod) |
| **Additional services** | Information on artists, albums, newsletters, etc. User support: FAQ, client software for using the offer; guided tours for how to use platform |

**Table 5: Example Category B – iTunes.**

Source: iTunes.com; Illustration by author.

The most frequently mentioned and well-known example is the music portal iTunes from Apple with a market share of at least 75 % of the digital music market worldwide (see table 5). As implicated above, it is necessary for iTunes to provide its audience with a huge portfolio of record labels and vice versa record labels can not abandon this opportunity of reaching a majority of customers. Most recently, however, Apple announced to offer music without usage restrictions and further change its pricing which implies that its traditional competitive advantage is fading away.[122] Its € 0.99 per download approach (same price for dollar and euro) for single songs has been rejected, leading to a new flexible pricing structure of € 069, € 0.99 and € 1.29. However, this structure is supposed to be dependent on what record labels charge Apple and the novelty of the songs. This implies that older songs, referred to as the "back-catalogue", will be offered at the lowest rate and new songs at one of the two higher rates. Another

---

[121] Amberg; Schröder (2007), p.295
[122] "Apple's iTunes announces lower priced, restriction-free music" (2009); also Myslewski (2009)

example of this category was Sony Connect, which tried to compete with iTunes but had to be shut down in the US and Europe in 2008.

### 3.4.3   E-Business Models that are based on a Flat-rate (Category C)

This model is based on a flat rate or subscription, which implies that a customer has to pay a monthly or yearly fee to access, unrestrictedly download and listen to music. In most cases payment is considered to be on a monthly basis.[123] One of the biggest advantages for customers is to download music on a large scale, while not paying for each song separately.[124] Not surprisingly, this model is considered to be the future of music consumption. A model based only on sales is considered to be outdated and a model based on monetizing the access to music is propagated by the music industry.[125]

The number of subscription models has steadily increased over the past few years however, these payment models are still considered niche markets in many countries all over the world.[126]

To attract intensive users or downloaders, these models consist of a big variety of different music genres from well-known and independent artists. The customer has to first acquire a client-software which allows him to download or stream an unlimited amount of music. Like in category B, the supplier can control the access of customers to their services. In some cases this "all you can eat"-approach does not include rights to copy or transfer music to other devices and is only included in an additional fee. Sometimes there is only a very narrow list of players or mobile phones that are compatible to this service –like in the case of current Napster (see table 6), Nokia's "Comes With Music" or Rhapsody.[127] This circumstance and the commitment to a monthly or annual contract are considered to be barriers for potential customers to sign up for these services. However, suppliers try to circumvent the problem by offering per-track downloads and plenty of additional services.

---

[123] cf. Huber (2008), p.173
[124] Amberg; Schröder (2007), p.295
[125] cf. International Federation of thePhonographic Industry (2009), p.8
[126] cf. International Federation of thePhonographic Industry (2009), p.14
[127] see Napster, Inc. www.napster.com; also Nokia's  www.comeswithmusic.com

| Characteristics | Napster.de |
|---|---|
| Type and volume | Over 8 million songs; many different genres; |
| Price | Monthly flat rate: € 9.95 (only for PC usage); € 14.95€ (for PC and mp3 player). Per song download: € 0.99 |
| Rights of use | Mainly WMA format; restricted by DRM-system |
| Additional services | Information on artists, record labels, albums, newsletters, playlists, audiobooks, interviews, etc. <br><br> User support: community feature (exchange playlists), new filter sytems and music finder tools |

**Table 6: Example Category C – Napster.de**

Source: Napster.de; Illustration by author.

The differences between the characteristics of these service three years ago and the present service offered by the same provider are interesting and show the reader how dynamic on the one hand and how static on the other hand the online distribution of music is and how rapidly business models in the music industry change. For instance, the amount of songs available at Napster today is almost five to six times higher than a couple of years ago. Prices are more flexible nowadays, but the only crucial difference is the possibility to use the songs on portable media players for five more Euros a month. Further services, such as streaming, are not applied by Napster in the German territory (only US). Regarding the rights of use, the WMA file format is still being used and restricts customers listening behaviour - in times where DRM is supposed to harm both customers as well as record labels. Nevertheless Napster tries to offer customers with a bunch of additional features like a community platform (as in the first version of Napster in 1999) with the possibility for customers to legally share files.

In general, Huber sums up best the problems of subscription services today. On the one hand there are inbuilt restrictions, which means that when subscription is being cancelled or runs out, the music already obtained by the customer has to be removed (more precisely the rights to use).[128] New services such as Nokia's "Comes With Music" do not rely on this business principles anymore. On the other hand there are arbitrary restrictions through which DRM protected songs are being distributed that are

---

[128] cf. International Federation of the Phonographic Industry (2008, a), p.14

not even compatible with Apple's iPod – the most common portable digital media device these days.[129]

Furthermore, the IFPI adds that under-investment in marketing and promotion of such platforms hinders subscription-based models to flourish.

In the end of 2007 a new model approach emerged that bases on the bundling with music concept – offers (subscription models) that come in connection with a mobile device or an additional service, like a broadband connection. To some extent this approach follows the proposals by several copyright law scholars and technology industry groups, who considered a new compensation system for artists and rights holders, which is known as **voluntary collective licensing**.

Under this new subscription-like system, the issue of illegal file-sharing is a key aspect. In this case the music industry is supposed to form one or more collecting societies that offer consumers, especially file-sharers, the possibility to legally obtain and share music in exchange for a monthly or annual payment. Once payment is done, the collecting societies try to split up the money among the legal rights holders, based on the popularity of the artists' music. The rights holders gain more money the more their music is shared online. As long as digital distribution of music is popular, they are supposed to benefit. Further, the more people legally participate in file-sharing, the bigger the repertoire of online music will be and consumers might find everything they want online. At best, this system could generate billions of dollars and euros for the record labels and artists. As promising this proposal might be, there are several restrictions to bear in mind. For the music industry it is important to enforce file-sharers to pay a small monthly fee rather than to remain digital pirates without making any payment. Collecting societies would have to find out who owns the music downloaded by p2p-users and split and allocate the revenue. It would be important to find new mechanisms to calculate the popularity of an artist or band in such networks, as it is supposed to determine the amount of money they receive. According to the authors of this proposed model, the biggest problem would be to make record labels join this plan.[130]

---

[129] cf.Huber (2008), p.174
[130] cf. von Lohmann (2004), p.21

A similar approach that combines key aspects of subscription and collective licensing has already been initiated by some record labels. However, ISPs act as intermediaries between customers and labels and subscription to the record label's music catalogue is bound to a broadband bill.

Latest developments show that the basics of voluntary collective licensing might have positive effects on the music business. As Rob Wells of Universal Music Group pointed out in an interview:

> "When you bundle a subscription service with something else, be it a broadband subscription or the cost of a new phone that is when it becomes instantly attractive and makes sense." [131]

In the end of 2007, Universal Music initiated a project with French ISP Neuf Cegetel. The ISP offered high speed internet, fixed line telephone connection, HDTV as well as unlimited music downloads from Universal's catalogue for € 29.90 per month. At the same time EMI followed Universal by partnering with Alice, an ISP owned by Telecom Italia. Even in Austria, Universal plans to cooperate with ISPs on flat-rate subscription business models.[132] Most recently, Universal UK announced to establish a monthly flat-rate service in co-operation with ISP Virgin Media. Besides offering songs from the Universal music catalogue, the ISP will temporarily cut off clients from their internet access if they download songs without a valid license.[133]

For media experts, such as Gerd Leonhard, this model seems promising, however it will not be a solution just to work with a single label and a single ISP as consumers might hardly just listen to Universal's or EMI's music catalogue, once more illustrating the importance of a joint action of all major record labels to offer a wide range of different music from all possible genres. [134]

---

[131] cf. "Major subscription model imminent after Universal joins forces with Sky" (2008)
[132] cf. Huber (2008), p.174
[133] cf. Pfanner (2009)
[134] cf. Leonhard (2008, a)

### 3.4.4  E-Business Models that Include Commissions for Reselling of Digital Music Tracks ("Superdistribution") (Category D)

A new form of selling digital content is represented by category D. It links the idea of file-sharing with the exchange of money. The already discussed categories A, B and C mainly followed the traditional business-to-consumer (B2C) approach known from physical markets. This category combines file-sharing networks and electronic commerce and creates a consumer-to-consumer (C2C) market. The principles of super-distribution are not new and even ten and more years ago the importance of this multi-level distribution for electronic markets was discussed. Even further, the distribution of music was named a future potential area where this "new" form could be applied. [135]

Within the superdistribution model, consumers can either be the vendors or vendees of digital content. They get remunerated with a low rated commission for reselling the music they acquired. It seems obvious that this model is supposed to engage people in distribution as they get paid for it. This particular case of new online music distribution is based on special software that is needed to administer accounting of all processes. Customers can use the digital content without restrictions (MP3 file format) and have full responsibility and freedom to use the music as long as copyright will not be infringed.[136] The system itself was invented by a German cooperation between 4FriendsOnly.com Internet Technologies AG and Fraunhofer IDMT and is called PotatoSystem (see table 7).[137]

| Characteristics | Potatosystem.com |
| --- | --- |
| Type and volume | Many different genres, but only small repertoire of bands, artists and songs |
| Price | Per song/album download: price set by seller<br>Superdistribution |
| Rights of use | MP3, no DRM |
| Additional services | Information on artists, record labels, albums, audiobooks, sampling<br>User support: FAQ |

**Table 7: Example Category D – potatosystem.com**

Source: potatosystem.com; Illustration by author.

---

[135] cf. "Superdistribution spells major changes". (1999), pp.274
[136] cf. Amberg; Schröder (2007), p.296
[137] see www.potatosystem.com; also www.idmt.fraunhofer.de

The business model, or more specifically the distribution model, is offered without any DRM. The system itself bases on a superdistribution model at which commissions are given to the sellers and re-sellers of music. As the founders of this system work together closely with Germany's collecting society GEMA, copyrights of artists and labels stay untouched. However, this system is comparable to a p2p-environment, as the provider of music (seller or uploader) has to provide the music files on a server to the public. The PotatoSystem directly links the buyer with the seller. The price for one track can be determined individually by the provider. For each track sold, the rights holder gets 43 per cent from the initially set price minus the GEMA part. In case the buyer registered with the PotatoSystem, he obtains the distribution rights for this song and is allowed to re-sell it. This superdistribution model includes three buying parties at most, who receive a 35 per cent commission in total of the initially set price. According to the inventors, the system is to be suited for small record labels and artists, who hardly possess the necessary marketing budget to promote their music.[138]

Figure 9 illustrates the build-up of the multi-level superdistribution-network for the purchase of digital goods. It is obvious that download platforms can exploit the power of user communities that resume viral marketing (distribution and promotion).[139] Download platforms do only have to invest in a certain group of consumers (normal distribution) that spread word-of-mouth. The acquisition of new users (superdistribution) leads to increasing revenues for rights holders and intermediaries.

---

[138] cf. Fraunhofer IDMT (2009)
[139] cf. Helm (2000)
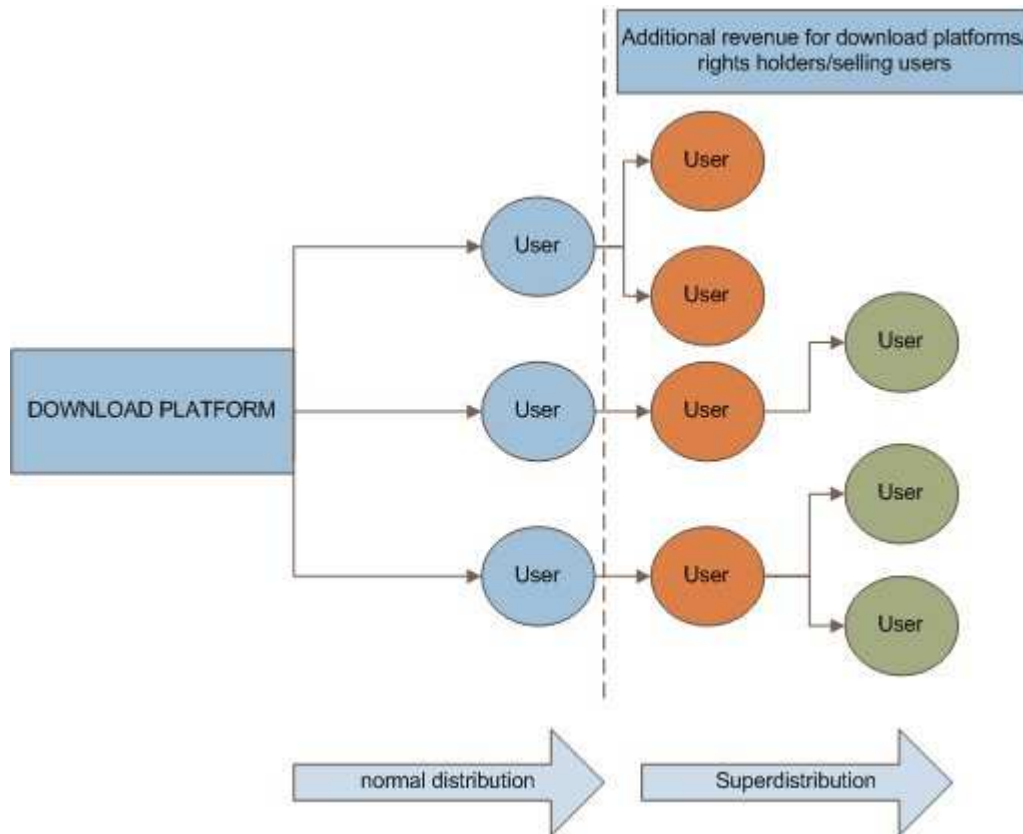
**Figure 9: Superdistribution Network.**

Source: 4FriendsOnly.com; Illustration by author.

According to an exploratory study on superdistribution among 100 research participants by Quiring et al. (2008) the ratio of revenue splitting between users and providers influences the source people download music from.[140] Almost all people interviewed would even be satisfied by a participation of half or less of the revenues, which implies that not only economic reasons (see chapter 2.5) influence consumer behaviour. However, most importantly music record labels should not reject this business model as the percentage of revenue participation does not seem to be very high but approximately between 30 and 40 per cent for users. As of Quiring et al. this corresponds to the percentage download services such as iTunes and others receive for their services.

Further, unlike in classic music business models, record labels can expect to participate in additional revenue generated by at least some of the users re-selling songs.

---

[140] cf. Quring et al. (2008), p.184

Despite constant total price per file, the number of files sold will increase. Besides, from a record labels' perspective this business model is supposed to contribute to a better image as people consider the C2C-model to be fair. Further, the model constitutes a cheap way of promoting artists and record labels as distribution is decentralized and fulfilled at minimal costs. In conclusion, Quiring et al. outline that the superdistribution model might in fact prevent file-sharers from digital piracy and make them pay for digital music by creating a decentralized C2C market environment.

The major drawback of this new innovative business model is that neither there have been any major empirical studies yet on the acceptance or behaviour of users, nor do any specific theoretical models exist that can be used to test superdistribution in C2C markets.

### 3.4.5 E-Business Models that are Based on Free Ad-funded Music (Category E)

In this subchapter a further category E that has not been included in the research of Amberg and Schröder is added, as this specific new business model has just recently become interesting to participators in the music value chain.

Category E depicts e-business models for the distribution of music that are based on the theory that digitalization in general leads to a downturn of prices of goods or services until the consumer gets it for free – at no charge.[141] Fox and Wrenn already suggested in 2001 that the music industry should consider an analogous model when it comes to the distribution of online music.[142] This model that has already been applied by TV and radio broadcasters, is supposed to work for the music industry as well. In this case the music is considered a free service. Revenue is generated from associated products and services, such as advertising or income from data mining for other companies (which means to aggregate consumer-specific information and to sell it).[143] Accordingly an e-business model that builds on the traditional advertising model by Rappa is discussed and links it to the characteristics of digital music distribution.

---

[141] cf. Anderson (2008)

[142] cf. Fox; Wrenn (2001); p.117

[143] cf. Swatman; Kruege; van der Beek (2006), p.58

This free ad-based models' main idea is the distribution of free music embedded with sound advertisements of different sponsors, basically following the idea of streaming[144]. The sound-embedded advertisement model (short SEAM) is based on the advertising model presented in chapter 3.3 and was analyzed in detail by Margounakis et al. (2006). [145] Assuming that this model as a stand-alone model is integrated into already existing business models, SEAM is then referred to as integrated sound-embedded advertisement model (ISEAM). Basically the first is characterised by a one-way B2C relationship, in which the consumer listens to music for free and can download any MP3 song he may find. Like in traditional radio, these songs contain sound advertisements at the beginning or end of the music track. The company operating the advertisements through songs, pays a proportionate value to the download platform/online music distributor. However record labels themselves can use this model to promote their own artists, bands and releases of them. Generally, it is the record label that receives a part proportionate to the songs downloaded and then pays the artists and other stakeholders.

In the latter case, which is illustrated in Figure 10, the artists are directly remunerated by the download platform and not by the labels. ISEAM is not limited to free music offers, but can be combined with "à la carte" or "subscription" models. In this case, free tracks are more of a promotional tool to enforce people to sign up for one of these services. Free downloads may include samples of music tracks in low or high quality attached with or without advertisement or simply full tracks with advertisement. Subscription of users might lead to increased revenues and flexibility considering issues like unpredictable sponsorship. However, as Margounakis et al. show, the revenue share of record labels applying this model is likely to decrease compared to the revenue distribution for a classical 99 cents track download as artists receive a higher percentage through direct compensation from the download platform.[146]

Another advantage for external sponsors or record labels is the system of targeted advertisement, a function that traditional radio broadcasts do not have. Companies can reach a precisely defined audience by aligning themselves with the music tracks their

---

[144] streams are audio/video-files constantly received by and sent to users, delivered by a streaming provider for free; examples: last.fm; magnatune.com; similar to what is known as online radio.

[145] cf. Margounakis; Politis; Boutsouki (2006), pp.1

[146] cf. Margounakis; Politis; Boutsouki (2006), pp.4

specific target group chooses to listen to. In this respect it is likely for sponsors to advertise more effectively which makes this model more attractive for both parties.
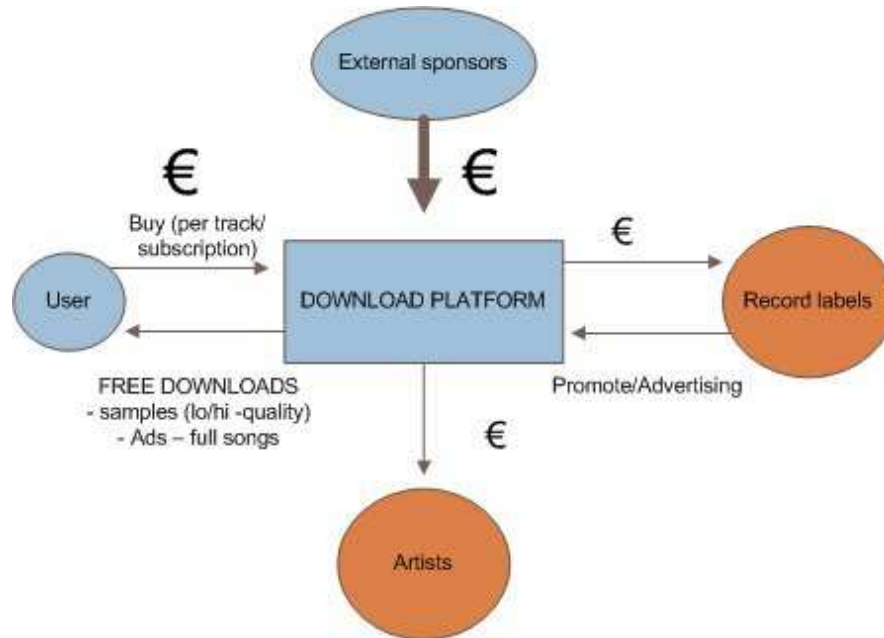


**Figure 10: Integrated sound-embedded advertisement model.**

Source: Margounakis, D.; Politis, D.,Boutsouki, C. (2006); Illustration by author. The size of the "€" illustrates the amount of money involved. Therefore the bigger the "€", the more money and higher yields are being generated.

As of Fox and Wrenn, free music models could be attractive to digital music providers, however it might lead to a devaluation of music due to music combined with advertisements and artists would reject this approach. Further it is still unclear if customers are willing to listen to songs with advertisements. Probably the most critical issue would be for record labels to change the notion that music is not a product but a service and that they do not accept sources of revenue lying outside the music itself.[147]

---

[147] cf. Fox; Wrenn (2001); p.117

| Characteristics | we7.com |
|---|---|
| Type and volume | Many different genres; approx. 3 million songs |
| Price | Per song/album streaming: free with advertisements |
| | Per song/album download: approx. € 0.55 per song |
| Rights of use | MP3 |
| Additional services | Online magazine, playlists, charts, newsletters, etc. |
| | User support: FAQ, community feature (share music), blogs |

**Table 8: Example Category E – We7.com**

Source: We7.com; Illustration by author.

A website that implemented the ad-based model in practice in 2007 is UK-based We7 (see table 8), co-founded by musician Peter Gabriel. With this platform the consumer is given the chance to listen to full songs and albums online (streaming), on-demand at anytime from a broad repertoire of different genres of different labels (major as well as indies). These streams can be shared online with friends as well. Nevertheless, DRM-free MP3 downloads for purchase are offered as well in some cases.

Similar to We7, music-streaming service Spotify also operates with the ad-based model. It offers around four million songs from majors and independents. Instead of embedding advertisements to each song, every 20 minutes the stream gets interrupted by a short commercial break. Additionally, the business model is amended by subscription on a monthly basis. For around € 10 the user can access music without advertisements.[148] Within four month of operation, Spotify has already leapfrogged the 1.500.000 user mark. However, the company tries to make more money out of subscription. Therefore, premium services are being added to their portfolio to entice more customers. One attempt was an exclusive acoustic set for subscribers by band Glasvegas.[149]

As Kumar and Sethi (2008) point out in a study, hybrid models combining subscription fees and advertisements like in the upper case are likely to replace business models that are focused purely on advertising. Free-ad based models as well as pure

---

[148] cf. Woods (2009)
[149] cf. Roberts (2009), p.39

subscription-based models are considered to be not applicable as stand-alone models for online sellers and consequently for the rights holders using them as intermediaries.[150]

### 3.4.6 E-business Models that are Based on Virtual Communities and Social Media Websites (Category F)

Social media, also referred to as consumer-generated media, is changing the tools and strategies for companies to communicate with customers and to sell products and services. The term social media

> "describes a variety of new sources of online information that are created, initiated, circulated and used by consumers intent on educating each other about products, brands, services, personalities, and issues"[151]

Social music websites or virtual communities, as an integral type of social media, represent a new business model category that has to be considered by record labels. According to The Nielsen Company, social services are growing faster than any other online sector, regarding global reach.[152] New revenue streams are opened up by the licensing of services that are provided for free, but reward artists and record labels through licensing fees or, like in category E, with a share of advertising income.[153] Besides, additional benefits for labels and their intermediaries are that these virtual communities represent a valuable source of customer information and they foster trust and security amongst their members.[154] Following the taxonomy of Rappa, this model illustrates a mixture of advertising, infomediary, affiliate and community models.

Social networks have demonstrated in the past two or three years how consumers find and recommend songs online by using a community model to create and exchange playlists and interact with each other.[155] A survey conducted by market research company NPD group illustrates the importance social music sites have for the music business. For example, the percentage of US teens that downloaded or listened to music

---

[150] cf. Kumar; Sethi (2008), pp.942
[151] cf. Mangold; Faulds (2009), p. 357, quoted Blackshaw; Nazzaro (2004)
[152] cf. The Nielsen Company (2009), p.9
[153] cf. International Federation of the Phonographic Industry (2009), p.11
[154] cf. Flavian; Guinaliu (2005), pp. 417
[155] cf. Bruno (2009), p.16

via social networks increased from 26 % in 2007 to 46 % in 2008.[156] According to prospects by Forrester Research, the European social music audience is likely to double by 2014, while revenue from licensing agreements are expected to grow more than eightfold to € 392 million in Europe until 2014![157] These developments evidently show this business model's huge potential for music record labels and artists.

| Characteristics | www.myspacemusic.com (only US) |
|---|---|
| Type and volume | Repertoire of all major record labels and independents; free ad-supported audio and video streams |
| Price | Per song/album streaming: free full or sample audio<br><br>Per song/album download: depends on affiliate |
| Rights of use | Free streaming |
| Additional services | Music videos, news, bulletins, groups, MySpace TV/Mobile, forums, polls, blogs, instant messaging, customized profiles, FAQs, etc. |

**Table 9: Example Category F – MySpaceMusic.com**

Source: MySpaceMusic.com; Illustration by author.

The music industry's efforts to monetize the link between music and social networks have led to services such as MySpace Music (see table 9). In the end of 2008, News Corporation's MySpace partnered with all four major record labels in a joint-venture to provide a service that is supposed to launch internationally in 2009.[158]

The websites characteristics are manifold. The user does not have to obtain any special software or even hardware to listen to music on myspacemusic.com. Integrated online media players allow the customers to easily access music within seconds. MySpace Music applies free music streaming at full length or samples, however it directly links the user to websites (like Amazon MP3 or iTunes) for DRM-free music downloads, which illustrates the affiliate model characteristics of this category. The company itself is solely funded by advertising. Additional value is created through

---

[156] cf. eMarketer (2009)
[157] cf. Bruno (2009), p.16

services, such as blogs, news, forums, mobile applications, video streams or profile customization.

Its core community features and the possibility to access music samples or streams led to a big success for MySpace Music within the first month of operation, with more than 80 million playlists being created and one billion streams being listened to.[159]

Other well-known social music websites like Last.fm, iMeem, iLike and Pandora with 20 to 30 million of users each can be considered further platforms for artists and record labels to connect with potential customers.[160] The music industry is currently facing an experimentation phase with social media and only future will show, in how far these two can work together and how customers' expectations can be met. A network illustration is represented by figure 11.
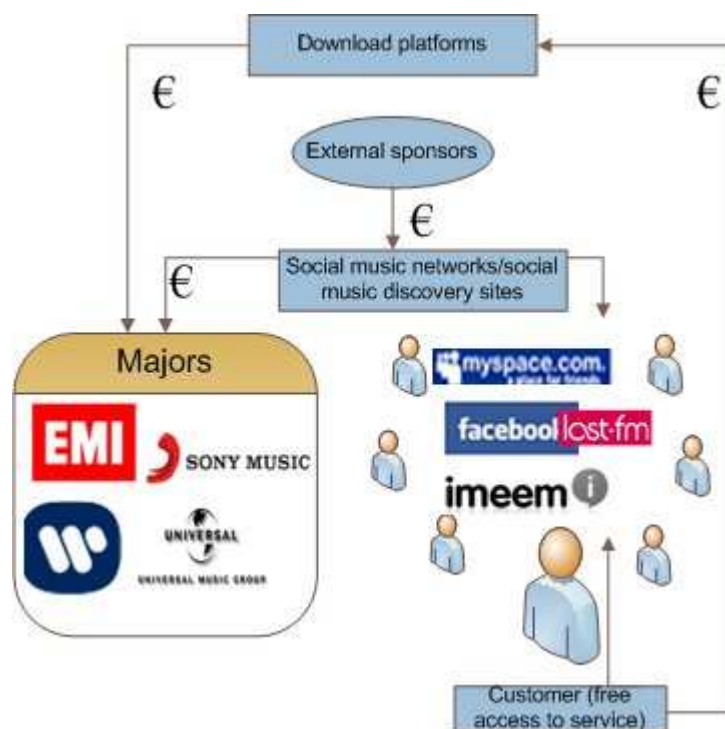


**Figure 11: Social Music Networks and Revenue Streams.**

Illustration by author.

---

[158] cf. International Federation of the Phonographic Industry (2009), see also
    http://www.emigroup.com/Press/2008/press92.htm. retrieved on 25.05.09.

[159] cf. International Federation of the Phonographic Industry (2009), p.11

[160] cf. Bruno (2009), p.16

### 3.4.7   E-Business Models that are Based on the Manufacturer Model (Category G)

Intermediaries like in the aforementioned cases do not necessarily have to be chosen by music record labels in the music value chain, as labels and artists themselves have the possibility to directly approach customers through their own websites (see figure 12). Customers are given the chance to directly purchase artist songs, merchandise or tickets via their websites and connect with their favourite artists and other fans.
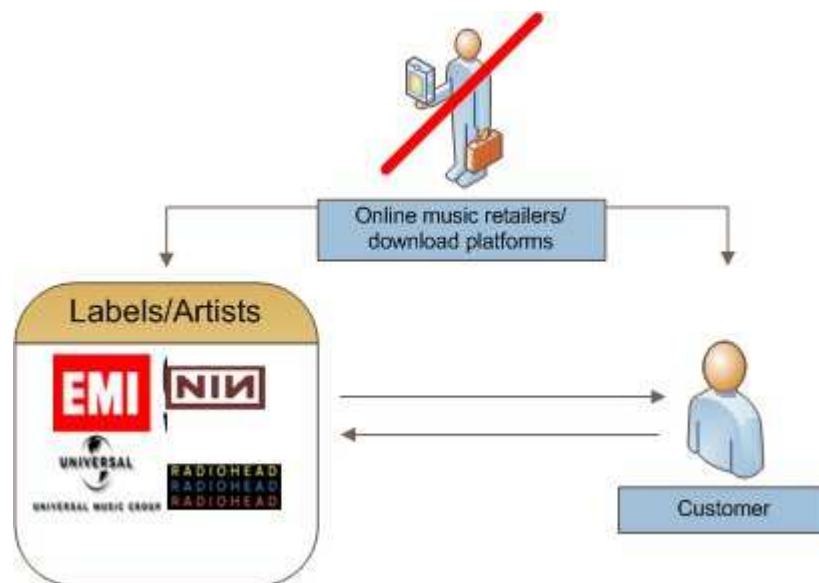


**Figure 12: Direct link between artists, labels and customers.**

Illustration by author.

Although less discussed in theory, this business approach might also help record labels to cut expenses on intermediaries and generate additional revenue. This manufacturer-model, according to the taxonomy of Rappa, is currently applied by majors like EMI, running a music download store by itself offering songs without DRM (see table 10).[161] However, these songs do only belong to the label's repertoire, which implies that online music retailers who maintain business relationships to several majors might attract a bigger audience, assuming that consumers prefer having more choice in music. In most

---

[161] see EMI Music Austria, www.emimusic.at

cases, prices for single track downloads amount for € 1.69 upwards and full albums €
12.99. Additional services mainly provide information on the artist, album or songs such
as charts, newsletters, RSS-feeds or recommendations. The website also contains the
possibility to sign up for an online account which allows the users to interact and
comment on videos or music tracks.

| Characteristics | www.emimusic.at |
|---|---|
| Type and volume | Several different genres, but only EMI catalogue |
| Price | Per song/album download: €1.69 upwards/€12.99 |
| Rights of use | Currently changing from WAV to MP3 |
| Additional services | Charts, newsletters, reviews, RSS-feeds, recommendations, music videos, links to ticket purchase, <br><br> User support: community feature (e.g. to comment on music, videos, etc.) |

**Table 10: Example Category G – emimusic.at**

Source: emimusic.at; Illustration by author.

Getmusic.com, a service from Universal Music Group illustrates a further example.[162] It
represents a one-stop-shop for customers who want to sample or buy music (à la carte or
subscription-like payment methods), ringtones, merchandise, concert tickets, receive
news, interact with other fans, taking part in competitions or watch music videos.
According to the IFPI, artists are increasingly demanding labels to provide specialist
support services like these.[163]

Record labels are more and more "threatened" by artists as well. Bands like
Radiohead or Nine Inch Nails show that artists themselves can directly approach the
customer without being signed up with a (major) record label and sell or distribute their
music to the online audience. In the first case, Radiohead even experimented with a new
pricing model, unproven in the marketplace. The band offered downloads of their album
"In Rainbows" under a so-called "honesty-box"-system. Fans were given the chance to
make a pre-order of the album at a price they chose to be most appropriate (but at least £

---

[162] see UNIVERSAL Music Group, www.getmusic.com
[163] cf. International Federation of the Phonographic Industry (2008, a), p.16

0.45) or to pay £ 40 for a premium physical boxset including CDs, vinyl records, artwork and booklets.

Nine Inch Nails, however, were giving away their most recent album "The Slip" for free, available in different audio file formats attached with files including artwork and credits. [164] They simultaneously engage their audience in using these files, which were distributed under a creative-commons license[165], to exchange, copy or remix the songs with anybody user or friend, and to put re-mixed songs onto the band's website where other users can listen to the songs and vote for them. This way of connecting with the fans might foster customer loyalty and consequently lead to customers buying physical CDs, online music, merchandise or concert tickets.[166]

Yet, it has to be proven, whether or not these business models led to financial profit and hold future prospects for record labels. Regarding the case of Radiohead, results show that around 32 % of downloaders were willing to pay for the album. Two out of five downloaders were willing to pay an average of $ 6. Although no absolute figures had been released regarding the amount of downloaders or the costs of production and distribution, this "pay what you'd like"-approach was considered to be a success for the band. [167]

However, success bases primarily on the popularity and the huge fan base of Radiohead that has been supported by a major record label for more than 15 years. Therefore it has to be questioned whether new and less-known artists are able to apply this model without the support and marketing expertise of record labels.

### 3.4.8   Concluding Remarks

Music record labels could apply these proposed e-business models as new ways to distribute their products or services and communicate with their customers. Prior to their implementation, different consumer behaviour and needs have to be at the centre of

---

[164] see band websites: www.radiohead.com; www.nin.com;

[165] "Creative Commons is a **nonprofit** corporation dedicated to making it easier for people to share and build upon the work of others, consistent with the rules of copyright. We provide **free** licenses and other legal tools to mark creative work with the freedom the creator wants it to carry, so others can share, remix, use commercially, or any combination thereof." Retrieved from http://creativecommons.org/about/ on 07.06.09.

[166] NIN case study presented by Masnik, M. at MIDEM 2009, retrieved from www.youtube.com on 07.06.09.

[167] Comscore (2007) press release on Radiohead album sales

further analysis. Only knowledge about what the customer needs or expects will enable record labels to regain strength. If digital audio content fits customers' needs, which means that the marketing mix is adapted properly, financial success will be likely.

As promising business models for record labels/artists have been retrieved from literature and discussed in detail, in a second step the demand side has to be considered. Consumer adoption of the key characteristics of e-business models presented afore will be analyzed. In a consecutive step the results should then be considered for further improvement of LOMDS by its providers.

## 3.5   Consumer Adoption of Legal Online Music  Distribution Services

The incremental importance of the Internet for the distribution of digital goods is particularly demanding for marketing as an active, system- and goal-oriented approach to configure markets and to manage relationships with consumers. New ways for digital distribution of music are considered to enduringly change consumers' processes to obtain and deploy music. Unlike the traditional physical form of music, the digital form of music and its applicability have challenged consumers. These transformations ask for a change in consumer behaviour. As of Frenzel[168], as soon as consumers adapt to these changes and use the novel product, it is referred to as consumer's acceptance or adoption.

Therefore, this chapter is dedicated to examine the adoption of (new) forms and features of digital music distribution or e-business models. More specifically, the goal of this thesis is to find out about consumer's attitudes and needs regarding the digital music product and its distribution over the Internet.

For further empirical analysis the approach of Frenzel to develop an adoption model has been considered, which allows retrieving important criteria regarding the acceptance of new business models for the distribution of digital music. In the beginning, the term acceptance/adoption and acceptance/adoption research will be defined. In the following step an adoption model will be presented, which allows further investigating consumer attitudes towards LOMDS.

### 3.5.1  Acceptance Research within the Area of Marketing and the Term "Acceptance"

Until the mid-90s, acceptance research had not been in the centre of marketing. However, the distribution of information and communication technology (ICT) and its impact on marketing severely changed the situation. Ever since, growing interest in acceptance research could be observed.[169]

The scope of acceptance research in marketing encompasses the observation of consumer criteria for acceptance or refusal regarding new products.[170] In this particular case, the new product can be considered as music in digital form as well as the way to distribute it. The traditional goal of acceptance research lies within the area of technological innovation. Acceptance research in marketing tries to find suitable strategies to enforce existing innovations.[171]

The term acceptance is hardly defined within academic marketing research, even if acceptance is explicitly mentioned in the title of an academic paper.[172] Unlike German literature, English literature often equates acceptance (for the German term "Akzeptanz") with adoption. In this respect, research focuses on how individuals decide whether and when to adopt an innovation. Further, adoption "means the decision of an individual to make use of an innovation as the best course of action available relative to invested resource".[173] Within the scope of this thesis, the term adoption will be used. However, it should be pointed out that literature might further distinguish adoption and acceptance – due to restraints of this thesis, the author abides with the proposed terminology.

### 3.5.2  The Adoption Approach

For the retrieval and examination of an adoption model, the author decided to follow the approach by Frenzel from 2003, whose intention was to develop a model that combines

---

[168] cf. Frenzel (2003), pp.3
[169] cf. Frenzel (2003), p. 104
[170] cf. Frenzel (2003), p.104, quoted Meffert (1976), p.77
[171] cf. Frenzel (2003), p. 105
[172] cf. Schrader (2001), p. 130
[173] Stahl; Maass (2006), p.233

goals of traditional adoption research and adoption research in marketing. This model's main purpose was to measure the adoption of digital music distribution systems within e-commerce. It considers both customer needs (adaptive approach) as well as target-oriented control of and influence on potential customers (users) of digital music distribution services (structure modifying marketing). Frenzel's intention was to find out which criteria of adoption and refusal of digital music distribution (as technological innovation) existed.[174]

Adoption is being composed of attitude adoption, behaviour adoption and utilization adoption, whereas the first one is considered to be the most important part of the analysis. Attitude adoption (for the German term "Einstellungsakzeptanz") is being defined as a positive cognitive and affective apperception orientation. It is coupled with the active willingness to adopt and use an innovation. The purpose of attitude adoption is to ascertain customers' behavioural tendencies that enable to modify marketing approaches according to the systems for the digital music distribution.[175]

### 3.5.3   The Adoption Model

As mentioned beforehand, different approaches in the area of traditional adoption research and adoption research in marketing have been proposed. Consequently, Frenzel argues that adoption research of technological innovations should be considered from both a process as well as a determinant perspective. Adoption can be seen as a point-in-time related phenomenon (determinant) or an approach that considers different phases of adoption over time (process). Given that these two model approaches are combined, the rate of adoption (process) and the characteristics of parameters (determinant) can be compared (see figure 13).[176]

In general, the adoption process consists of three different layers, which are attitude, behaviour and utilization. These layers exist within different periods of time. The first layer exists prior to the purchase, the second layer describes the time of purchase and taking over and the third layer considers the time of actual use. The

---

[174] cf. Frenzel (2003), pp.108
[175] cf. Frenzel (2003), p.110
[176] cf. Frenzel (2003), pp.114

attitude level focuses on the customer's awareness (i.e. the customer's level of knowledge and information about a product or service) and interest (focuses on objective characteristics and perceptions). The behaviour level includes both, the attempt (or trial) as well as the purchase. The usage level considers the expected usage requirements.[177]

The determinant perspective consists of three different determinants. In total, they affect customers' adoption of technological innovation. The three determinants are the object determinants (product-related), subject determinants (use-related) and context determinants (environment-related).[178]

Object determinants consist of two characteristics. First, there are custom-designed characteristics that are considered to have an important influence on the adoption of technological innovation. They comprise objective characteristics such as the variety of services or products offered and basically focus on objective features. In this case, the composition of the object itself has an impact on consumer behaviour.[179] Second, perceived characteristics are subjective and can be classified into five different attributes, of which Frenzel picked out the two most important attributes that are also used for this thesis:[180]

- Relative advantage and

- Perceived risk

Relative advantage describes the degree to which an innovation is perceived to be more satisfying than another (innovative) alternative.[181] Perceived risk represents the degree of customer uncertainty in respect to the functional, social and financial risks the product or service contains. Obviously, the higher the value of relative advantage, the higher the possibility that the customer adopts an innovation. On the contrary, the lower the perceived risk, the higher the chance to adopt an innovation might be.[182]

---

[177] cf. Frenzel (2003), p.118
[178] cf. Frenzel (2003), pp.118
[179] cf. Schwenkert (2006), p.16
[180] cf. Frenzel (2003), pp.120
[181] cf. Frenzel (2003), pp.140
[182] cf. Frenzel (2003), pp.142

Within the scope of adoption research subject determinants comprise socio-economic characteristics, which might be gender, age, education or income – factors that are also considered to have an impact on consumer purchase behaviour on the Internet[183], and psychographic characteristics that are directly related to the consumer's individuality (as part of his/her personality respectively). They include lifestyle, personality or value systems.[184]

Context determinants, as the third part of the determinant perspective, characterise environmental attributes such as economical, ecological, technological, political or socio-cultural parameters the consumer is exposed to during the whole purchase decision process.[185]

Finally, these two perspectives – the process and the determinant perspective- can be put into a combined system (figure 13), which looks as follows:



**Figure 13: Adoption Model.**
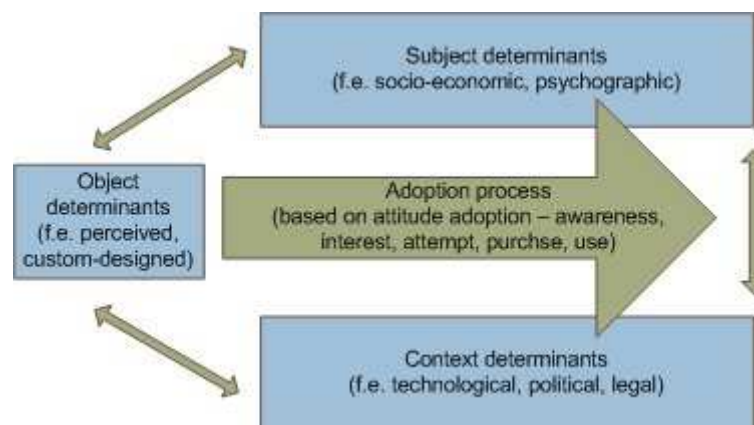
Source: Frenzel (2003), p.119; Illustration by author.

The arrow in Figure 13 illustrates the adoption process that is considered to contain different phases over time (process). The boxes surrounding the arrow describe the determinants as point-in-time related phenomena.

---

[183] cf. Dholakia; Chiang (2003), pp.175
[184] cf. Schwenkert (2006), p.14
[185] cf. Schwenkert (2006), p.18

According to Frenzel, attitude adoption founds the basis of the model proposed under chapter 3.5.3. Awareness, interest and behaviour intention stay in the foreground of the analysis. Behaviour intention is not only relating to the willingness to adopt an innovation, but is also considered to include the willingness to use it.[186] The determinants surround the adoption process and can influence each variable. Therefore it will be assumed that adaptations of (single) attributes at the determinants level will have an impact on the adoption process.

### 3.5.4   Sequencing Attitude Adoption

For this thesis, it is important to differentiate and compare different groups regarding their attitude adoption – people who are willing to adopt digital music distribution systems, people who do not, people who are not aware of digital music distribution and people who are indifferent whether they adopt it or not. Basically these groups can further be described as follows:[187]

- Non-knowing person: does not show awareness of digital music and its online distribution

- Non-acceptor: person who is aware of digital music and its distribution, but does not show interest in buying music this way

- Indifferent person: person who is aware of digital music and its distribution and has at least a non-negative interest in buying music online, but shows negative or indifferent attitudes regarding an expected purchase.

- Acceptor: person who shows positive attitudes towards awareness, interest and an expected purchase.

Within the scope of this paper it seems useful to just compare acceptors with non-acceptors, as the latter consciously manifest their disinterest in these distribution systems and explicitly reject them in contrast to people who are not aware of such systems.[188]

---

[186] Frenzel (2003), p.111
[187] cf. Frenzel (2003), pp.182
[188] cf. Frenzel (2003), p.181

It has to be pointed out, though, that the measurement of a certain type of adoption considers a certain willingness to act and use online music distribution systems (business models) and it does not necessarily imply that it will comply with future behaviour and result in its adoption. However, acceptors and non-acceptors might be seen as potential users and non-users and show a tendency for adoption.[189] By applying this approach, it is intended to detect the main criteria for the adoption of e-business models regarding the online distribution of music and music related content.

## 3.6 Consumer Attitudes towards Digital Content and Research Hypotheses

For this thesis it is important to retrieve insights into which attitudes consumers have towards digital content, especially digital music and its online distribution. More specifically, the fundamental question that motivates this thesis is which factors influence consumer adoption of online music distribution services. As academic research on the success factors of online retail is relatively scarce, it is tried in a first step to aggregate information from literature and to summarize several important characteristics that come along with the distribution of music over the Internet and customers' attitudes.[190] Based on the information retrieved in this and previous parts of the thesis, hypotheses will be aligned and tested in the empirical part.

Consumers' perceptions of a product are considered to be crucial determinants of choosing a specific distribution channel. Basically, criteria such as the content variety as well as pricing are seen as determining factors that are directly related to the product.[191] In addition, as portability or DRM-related features as well as additional services have been used to describe the e-business models in chapter 3.4, they will be discussed in greater detail in this chapter. Further, the adoption of downloads versus streaming-offers and the importance of income on the adoption of digital music distribution services will be analysed.

---

[189] cf. Frenzel (2003), pp.182
[190] cf. Chen; Tan (2004), p.74
[191] cf. Chen; Tan (2004), p.76

In total, having presented the adoption model and its key determinants, it is intended to point out that different adoption factors (e.g. variety of content, price and payment model, portability, additional services), as part of a specific area of analysis (e.g. custom-designed characteristics) stemming from object determinants, will be discussed in this chapter. As a consequence, it is intended to elaborate hypotheses from this analysis. As the business models in chapter 3.4 mainly have been presented according to custom-designed characteristics, the following subchapters are focussing on them in greater detail.

### 3.6.1   Content Variety or Breadth of Content

Variety seeking is based on the notion that people thrive for diversification in their lives.[192] Consumers might be in a situation of boredom that is considered to be caused by a low level of stimulation from the purchase. People try to avoid monotony and switch between products, irrespective of the satisfaction with the product.[193] The ability to comparison shopping in an online environment, having the possibility to obtain different products or services from different channels, is considered to increase variety-seeking behaviour. Content variety is therefore likely to be a major motive why consumers shop online.[194] Within the scope of this thesis, content variety will be referred to as the variety of repertoire, the amount and breadth of music offered (genres, bands and artists, actuality of music, record labels) through LOMDS. Fenech argues that the variety of content is one of the most basic drivers for consumers to adopt (mobile) entertainment services.[195] Consequently, as the barriers between electronic and mobile commerce are almost blurred, this notion might apply to the online distribution of digital music as well. Nowadays, the problem of legal online music distribution is, although offering far more songs and records than traditional physical sales that free (illegal) services such as p2p-networks do not have to invest money (if any) and time in arranging licensing agreements with record labels and hence are able to offer customers huge amounts of unlicensed digital content.

---

[192] cf. Faison (1977), p.172

[193] cf. Steenkamp; Baumgartner  (1992), p.

[194] cf. Rohm; Swaminathan (2004), p.750

[195] cf. Fenech (2002), p.486

H₁: Acceptors and non-acceptors differ in the importance given to the variety of music content offered.

## 3.6.2 Price and Payment Method

Without a doubt, the right pricing strategy is crucial for the financial success of record labels, artists and any intermediary. Price has always been a performance attribute that directs consumers to choose a specific distribution channel.[196] Studies show that customers of virtual stores expect the product or service to be less expensive than in traditional retail, as setup costs, maintenance costs and lower costs per customer contact are much higher in the non-virtual world.[197] Literature argues that making downloads even more affordable for customers might prove to be a success for the music industry. The characteristics of digital music such as low variable costs, speak in favour of a strategy to sell more for less money. In general, wider acceptance of costs is needed to have a real impact on preventing digital piracy.[198]

In general, pricing of digital music services depends amongst many other factors on the payment model. Basically, pay-per track downloads and subscription models are the most common forms of payment currently applied. According to Bhattacharjee et al., recent studies show that for a per download service, a per-unit fee generates sub-optimal profits compared to a lump sum payment or a percentage of profit payment model. A model applying per-track as well as subscription might better capture the broad market. This should consequently lead to higher profits for online retailers and record labels. Consumers' surplus is supposed to increase, as they are offered multiple ways to obtain music. [199]

Studies show that for a single song download studies show different levels of price acceptance. For example, Amberg and Schröder[200] found out that the average price acceptance for a single download would be € 0.67, whereas others like Buxmann et al.[201] differentiate between the price acceptance for older songs, rarities, newcomers and recent hits and come up with prices ranging from €0.10 to € 2 and more. However, the

---

[196] cf. Blakney; Sekely (1998), p.101

[197] cf. Chen; Tan (2004), p.76; quoted: Jarvenpaa; Todd (1997)

[198] cf. Lysonski; Durvasula (2008), p.175

[199] cf. Bhattacharjee, S. et al. (2009), p.139

[200] cf. Amberg; Schröder (2007), p.299

[201] cf. Buxmann et al. (2005), pp.10

authors argue that prices of more than € 0.99 are hardly accepted by customers unless it is a real rarity. In general, though, prices from € 0.10 - 0.49 (for the categories mentioned) would be accepted by a majority of customers. It has to be pointed out that the profit-optimal price for the supplier (more specifically the record labels) would be somewhere between €0.55 (for newcomers) and €0.99 (for rarities). This could imply that it would be beneficial for labels and their intermediaries to also offer songs from the artists' back-catalogues (rarities) or songs from unknown artists as well, as their music is hardly available in physical retail stores. As the reader might have noticed, this would again support the notion that more variety and choice in music is a key determinant for the success of digital music distribution. However, under current circumstances this approach is said to have some major restrictions, as intermediaries hardly make a profit with the current margin record labels are demanding from intermediaries. Therefore, it is crucial for the whole music value chain to negotiate new terms of cooperation and re-adjust margins charged.

Regarding subscription fees, studies show that a majority of consumers is willing to pay at most € 5 per month for this model with an "unlimited" (i.e. the repertoire of LOMDS) download volume.[202] Industry experts' views differ as of them customers are at most willing to pay $ 10 per month (approx. slightly more than € 7 at current exchange rates).[203] Obviously, the willingness and the amount of money to pay for music based on a subscription model depend on different factors, such as the physical transfer of music (download to a PC or stream from the Internet), the amount of songs included (content variety), rights management issues and portability or additional services offered. As this approach, to elaborate how much consumers would be willing to pay for the usage of either one model or the other, is far too complex to be analysed within the scope of this thesis, the author refrains from further discussion.

Another possible way of "payment" is presented by the ad-based business model (see chapter 3.4.5). Consumers obtain music for free (either as a download or a stream), but have to listen to advertisements attached to the digital songs (in other variations customers would have to "consume" advertisements on the provider website, without altering the core music product). Within the scope of this paper, it will be analysed if

---

[202] cf. Zollenkop (2006), p.357

consumers adopt this "payment method" if given the chance. Due to the actuality of this model it was not possible to obtain any meaningful research studies who consider it in more detail. However, knowing that price is one of the most crucial determinants in deciding whether to buy music (online) or not, it is assumed that consumers assign more importance to ad-based compared to subscription and per download models. In addition, it is assumed that there is a difference between acceptors and non-acceptors in the importance of free music with advertisements and per track downloads or subscription models for which they would have to pay for.

> $H_2$: Acceptors and non-acceptors differ in the importance assigned to ad-based models/ per track downloads/ subscription models.

> $H_3$: Acceptors and non-acceptors differ in the importance assigned to price for the purchase of digital music.

### 3.6.3 Downloading vs. Streaming

Basically users of digital music distribution services have the opportunity to obtain music in two different ways. Either users download a song from an external server (download service) directly to their local hard drives, or the user is only given the possibility to listen to a song that is located on an external server without the necessity to download (i.e. streaming). Generally, the latter appears in forms like online radio (webcasting) where the user has no direct influence on the choice of music played, or on-demand streaming where the consumer can choose between the songs he wants to listen to.[204] The main difference between these two forms of distribution (downloading vs. streaming) is obvious. The first allows to actually possess the rights to use a song, to add it to one's digital library and to listen to it offline and via portable media players, whereas the latter is bound to online internet access, only allows the temporary usage of a song and is characterised by less flexibility.[205]

A main interest is to find out, whether consumers prefer traditional downloads and still have a sense of ownership, or if they like to use streaming offers to satisfy their

---

[203] cf. Garrity (2005), p.53
[204] cf. Frenzel (2003), p.145
[205] cf. Huber (2008), p.175

needs of more diversity in music discovery. According to the results from literature, acceptors assign more importance to downloading than to streaming.[206]

From these results, the following hypothesis can be derived as it is of interest to see how these attitudes differ in between the two groups of acceptors and non-acceptors:

| |
|---|
| $H_4$: Acceptors and non-acceptors differ in the importance assigned to downloading and streaming. |

### 3.6.4   Flexibility, Portability and DRM

Closely linked to the previously discussed issue of downloading or streaming, portability or flexibility in the usage of digital music can be considered an essential determinant in the decision to accept or reject the application of legal digital music distribution systems. Portability describes the applicability of digital music independent of location.[207] The portability of downloads encompasses the authorised usage of digital music and its transfer to audio CDs or DVDs (burning) and portable media devices such as cell phones or mp3-players.

Usually, portability is restrained by the application of digital rights management (DRM) or technical protection measures (TPM). Although, as already mentioned in chapter 2.2, DRM is to be abandoned by the major record labels, the author's analysis of download websites indicates that DRM or forms of TPM, like encryption or watermarking, are currently applied and might have strong impacts on consumers' adoption of LOMDS. Therefore, this part has been included into this thesis.

A study by Berlecon Research for the EU-funded INDICARE project argues that consumers want to listen to the purchased digital music on each of their (portable) media devices, be it mp3-players, DVD recorders or HiFi - systems.[208]

As already indicated in chapter 2.5.2, these characteristics of portability are main motivations for people to engage in illegal file-sharing, as a majority of music offered in P2P-networks is usually without any DRM or other restrictive measures applied (in contrast to many legal services that still offer both DRM-attached and DRM-free songs). The assumption that portability is of critical importance can be further supported by the

---

[206] cf. Frenzel (2003), p.216
[207] cf. Frenzel (2003), p.148
[208] cf. Bohn (2006), p.45

fact that more and more people are in possession of portable media devices/mobile devices and this development is even supposed to continue. The development of mp3-player sales, especially within the group of 20-29 year-olds, indicates the importance of portability of digital music.[209]

Consequently, for this thesis it is interesting to test if non-acceptors of legal online music distribution systems are less likely to adopt restrictive measures (i.e. to assign less importance), such as DRM, than the acceptors of such systems.

> H₅: Acceptors and non-acceptors differ in the importance assigned to restriction-free music.

### 3.6.5   Additional Services

Additional services comprise services that go beyond the core service or product. These services are digital product supplements and can increase consumer benefit. Within marketing theory, the term product is often split up into three hierarchical levels with a basic or substantial product, an extended product and a generic product.[210] At each of the two latter levels, value or a benefit is added to the basic product. Regarding the following analysis, additional services and products are considered in a much broader sense.

On the one hand, these could be digital artist-specific images, music samples, videos, booklets, covers, lyrics or ringtones. On the other hand, services like virtual community features (forums, chats, social networks, etc.), the possibility to make product-related recommendations, discuss new album or song releases, exchange playlists, reviews, interviews with artists, intelligent music search facilities (to avoid unnecessary, time consuming manual search) could be attached to the product or service portfolio.

Authors argue that it is a commonly accepted theory that consumers' perceived risks play a crucial role in decision making and behaviours.[211] One of the major influencing factors why non-acceptors reject legal distribution systems might be that they perceive the risk to obtain music they do not know before purchase or even not like

---

[209] cf. Bundesverband der Phonographischen Wirtschaft/GfK (2007)

[210] cf.Frenzel (2003), p.33

[211] cf. Mitchell; Boustani (1993), p.17

after purchase to be much higher than acceptors. Therefore, it may be interesting to see in how far sampling (i.e. the possibility to listen to a song for usually 30 seconds prior to purchase) increases the likeliness to adopt legal distribution systems and buy music online. In theory, sampling is considered to reduce perceived risk as the customer has the possibility for a trial purchase – if the music does not fit the customers' requirements, he simply refuses to download and pay for it.[212]

| |
|---|
| H[6]: Acceptors and non-acceptors differ in the importance assigned to sampling. |

Another important assumption is that consumers are willing to pay more for digital music in case of sampling, because they can first check if product characteristics fit their needs.[213]

| |
|---|
| H[7]: If given the choice to select between several additional services and products, sampling would be the most preferred service acceptors/non-acceptors would pay an additional charge for. |

Communication amongst consumers and their peers is of great importance in a social network (in this case, a virtual community) and if an individual adopts something new, it is likely that other members of this community conform.[214] In general, this notion is based on the proposition of Rogers, whose opinion is that an individual's perception of a system is determined or at least influenced by the way peers around that person evaluate and use it.[215] A virtual community is not only a place for people to communicate, but also a virtual space to share experiences and knowledge.[216] The ability to participate in virtual communities and to exchange song playlists and other music-related content (news, videos, software, etc.) is considered to have a strong impact on the adoption of music services. [217] Therefore, it is assumed that an additional service in the form of a virtual community increases adoption of legal music distribution services, or is of great importance for the acceptors of such services. This assumption is based on and supported by the current trend of online music distribution systems to offer virtual community features to their consumers.[218]

---

[212] cf. Kunze; Mai (2007), p.864
[213] cf. Peitz; Waelbroeck (2006), pp.71
[214] cf. Hossain; de Silva (2009, p.9
[215] cf. Hossain; de Silva (2009, p.16
[216] cf. Flavian; Guinaliu (2005), p.407
[217] cf. Vlachos; Vrechopoulos; Doukidis (2003), p.143
[218] see www.myspace.com, www.mycokemusic.com, www.musicload.de, www.itunes.com;

| | H$_8$: Acceptors and non-acceptors differ in the importance assigned to virtual community features. |
|---|---|

### 3.6.6   Other Object, Subject and Context Determinants

Without any doubt, the analysis of custom-designed characteristics does not represent a full picture of the adoption of technology. Therefore the author decided to add other adoption factors from different areas of analysis from the adoption model presented in 3.5.3. This might be of importance for better evaluation and understanding of the business models proposed in chapter 3.4. The object determinants, relative advantage and perceived risk, have already been described in chapter 3.5.3.

| | |
|---|---|
| **Object determinants** | Relative advantage of digital music distribution over traditional music distribution<br>Perceived risk of digital music distribution |
| **Subject determinants** | Demographics (age, gender, household income, household size, |
| **Context determinants** | Free offers |

**Table 11: Other relevant determinants of adoption.**

Source: Frenzel (2003), pp.131; Illustration by author.

Table 11 shows different factors from all three determinant levels. Relative advantage, perceived risk, age, gender, income as well as free offers are considered.

By relative advantage the consumer's advantages of using digital music distribution systems compared to traditional forms of physical music distribution is considered.[219] Basically, it is important to know in how far the possibility to obtain single, unbundled songs on the Internet, to purchase songs that are not available in physical format or not available in the consumer's homeland and to obtain music in a direct, easy and fast way is assessed by the group of acceptors and non-acceptors.

---

[219] cf. Frenzel (2003), pp.140

Consumer adoption of online music services is dependent on the risks perceived by the consumer. All previously discussed factors are to some extent linked to the consumers' perceptions of risk regarding that factor. In this particular case, however, the focus is on issues such as privacy and uncertainty regarding technical issues in the delivery of music. It is of importance to find out how acceptors and non-acceptors differ in the importance of risk-related issues regarding the legality of downloads, the sound quality of downloadable files and privacy issues. These items have been retrieved from the results of Kunze and Mai, who discovered that these risks strongly influence consumers' music downloading decision.[220]

Demographics such as age, gender household income and size should further give insights into differences in the adoption of online music distribution. Furthermore, broadband connection is seen as a determining factor, as higher download speed results in faster and more comfortable usage of digital online music distribution services.[221] For example, streaming requires faster internet connection and transfer rates and therefore depends on the consumers' technical equipment.[222]

A crucial factor of the context determinant is the opportunity to download music for free from different Internet sources, such as band or record label websites or p2p-file sharing networks. The question underlying is, if the group of acceptors differs from the group of non-acceptors regarding the importance assigned to such kind of offers and which implications this might hold for marketers. It will be assumed that non-acceptors assign more importance to free music offers as they might predominantly source their music from such free online services.

---

[220] cf. Kunze; Mai (2007), p.867
[221] cf. Schwenkert (2006), p.18
[222] cf. Zollenkop (2006), pp.352

# 4 Research Methodology

## 4.1 Research Design

Survey is the research methodology used in this thesis. The theoretical constructs of the adoption model are measured by using multi-item scales. For this purpose, an online questionnaire was compiled. It consisted of entirely closed-ended questions. All responses to questions were compulsory. Only in a few examples the respondents were given the chance to give an optional answer. The questionnaire was formulated in German language and sent via email invitation to university students and administrative staff of the Vienna University of Economics and Business as well as to different users on social networks such as StudiVZ and Facebook in October 2009. Through a link in the invitation email the respondents could access the survey. Further respondents were given the chance to participate in a raffle, which was supposed to spur interest in the survey and to accumulate as many respondents as possible for analysis. The accessibility to the survey was concluded on 29th of October 2009.

For scaling, the author decided to predominantly implement the five-point Likert-scale. The items are constructed in a form of statements the respondents have to agree or disagree to. The ordinal scale is a rank of attitudes and is considered to fit best, within the scope of this analysis, for evaluation of the level of agreement regarding a statement. However, this scale does not allow any conclusions on the relations between the underlying attributes.[223]

## 4.2 Sampling

Due to the nature of this thesis, the total population is defined according to figures from the latest "Brennerstudie 2009" by GfK Panel Germany. Following the survey that has been conducted among 64 million Germans, approximately 10.4 million people already used the Internet to download digital music.[224] Assuming that the German population is

---

[223] cf. Ebster; Stalzer (2003), p. 170

[224] cf. Bundesverband Musikindustrie (2009)

similar to the Austrian population regarding Internet usage patterns and music purchase behaviour, these results will be used as the basis for further analysis.

Table 12 shows the scope of music among all people who already downloaded music (legally/illegally) in 2008, divided into five age groups. According to these results, 10 - 19 year-olds account for 17 %, 20 - 29 year-olds for 32 %, 30 - 39 year-olds for 26 %, 40 - 49 year-olds for 19 % and 50 + year-olds for 7 %.

| Age group | Percentage (%) |
|---|---|
| 10 - 19 year-olds | 17 % |
| 20 - 29 year-olds | 32 % |
| 30 - 39 year-olds | 26 % |
| 40 - 49 year-olds | 19 % |
| 50 + year-olds | 7 % |

**Table 12: Population – Music downloaders in 2008.**

Source: Bundesverband Musikindustrie (2009); Illustration by author.

Accordingly, a web-based questionnaire was considered to be most appropriate to reach the target group. It fits best for this analysis as respondents should have a minimum experience in using the Internet and consequently may also have knowledge about the technical processes and configuration of digital music. To a certain part this should allow that only a small part of the sample would have to be excluded from analysis due to the lack of awareness of downloading possibilities.

## 4.3   Sampling Method

The goal of sampling is to retrieve information about the population with the help of a rather small amount of testing units. This is only possible, if the composition of the

sample matches the composition of the population regarding pre-set characteristics. Accordingly, representative samples are diminished copies of the population.[225]

Within this thesis, the selection of the sample is non-random. The selection of respondents is based on the concentration principle or cut-off technique[226], i.e. the part of the population that is supposed to comprise the majority of elements.[227] In the underlying case this is the group of respondents ageing 10-39 years (almost 75 % of the population according to chapter 4.2).

## 4.4 Research Questions and Hypotheses

The analysis in this thesis is based on the following research questions:

- What are the basic criteria of digital music distribution and its impact on consumer adoption of legal digital distribution services?

- Which differences can be observed between acceptors and non-acceptors of legal digital music distribution services regarding specific characteristics?

According to these two research questions, the following hypotheses were retrieved from the theoretical part of this thesis, discussed in chapter 3.6.

| |
|---|
| $H_1$: Acceptor and Non-acceptors differ in the importance given to the variety of music content offered. |
| $H_2$: Acceptors and non-acceptors differ in the importance assigned to ad-based models/ per track downloads/ subscription models. |
| $H_3$: Acceptors and non-acceptors differ in the importance of price for the purchase of digital music. |
| $H_4$: Acceptors and non-acceptors differ in the importance assigned to downloading and streaming. |
| $H_5$: Acceptors and non-acceptors differ in the importance assigned to restriction-free music. |
| $H_6$: Acceptors and non-acceptors differ in the importance assigned to sampling. |
| $H_7$: If given the choice to select between several additional services and products, sampling would be the most preferred service acceptors/non-acceptors would pay an additional charge for. |
| $H_8$: Acceptors and non-acceptors differ in the importance assigned to virtual community features. |

**Table 13: Research Hypothesis.**

---

[225] cf. Ebster; Stalzer (2003), p. 188
[226] cf. Koch (2009)
[227] cf. Ebster; Stalzer (2003), p. 200

## 4.5  *Questionnaire Composition*

The questionnaire has been attached to the appendix. Each part of it will be briefly explained in this chapter.

In a first step it is important to measure the attitude adoption of people regarding their awareness of and interest in digital music distribution. In general, the first question under the section "Bekanntheit" (see Appendix, 1.) has been adopted from Frenzel.[228] The question distinguishes between the group of non-knowing persons and the group of non-acceptors, indifferents and acceptors. Supposed the respondent is not aware of any of the two ways of digital music distribution (downloading or streaming), he is considered to be a non-knowing person and will therefore be excluded from the analysis. In case the respondent is aware of the two forms of distribution, he will be further considered for analysis.

The part called "Interesse" (see Appendix, 2.) aims to find out about the interest of potential users (excluding non-knowing persons) of LOMDS to buy digital music. It has to be pointed out that this question is essential for further analysis and tries to distinguish between people who are not interested in buying digital music online (non-acceptors) and people who have a rather positive attitude towards the adoption of LOMDS (indifferent/acceptors).

The third part "Intention" (see appendix, 3.) includes two questions. The first one should outline in how far potential consumers are basically ready and willing to buy music in digital form. The second question is supposed to consider the intention to frequently use LOMDS to obtain digital music. Fundamentally, these two questions distinguish the readiness to act and the readiness to use (or the attempt/purchase and the usage).[229]

The fourth part named "Erfahrung" (see appendix, 4.) should help to figure out if respondents have already used legal or illegal file-sharing websites or networks and if they have streamed music for free or for a fee. In addition the respondents are given the chance to name optional sources they used for the acquisition of music.

---

[228] cf. Frenzel (2003), pp.138
[229] cf. Frenzel (2003), p.123

After the segmentation of different adoption groups is done, further analysis of previously discussed characteristics (determinants) will be initiated.

The part "Angebotsvielfalt" (see appendix, 5.) is supposed to ask the respondents about their attitudes towards the diversity or variety of music regarding genres, artists, actuality and songs from different record labels. The first four questions have been retrieved from Schwenkert[230], the fifth one has been added by the author.

Basically, questions under "Zahlungsmodell und Preis" (see appendix, 6.) focus the respondent's consensus regarding different payment models. In this case, the subscription, the pay-per track, the rent model and the free ad-based model have been submitted to the respondents. In addition, it is asked about the respondents' agreement with the statements that low prices for songs/albums in digital format are important, price does not constitute an important role in the purchase decision and the importance on the availability of free music tracks for the purchase.

As „Superdistribution" is a rather new theoretic field and major empirical studies on its adoption are missing[231], it was intended to formulate a simple question to find out the basic consumer's attitude towards the involvement in such a revenue-splitting system. It is asked, if the respondents show any interest in being involved in revenue splitting and if they intend to use this model in the future.

According to the hypothesis regarding the importance assigned to traditional downloading and streaming, the questions under "Downloading und Streaming" (see appendix, 7.) have been adopted from Frenzel.[232] Furthermore, the last two questions ask the respondents for the frequency of use of one of these ways to obtain digital music. The purpose is to provide information about the effectiveness of current streaming offers, as the author's research shows an ongoing trend in this respect.

"Tragbarkeit und Flexibilität" (see appendix, 8.) is supposed to help finding out if restrictions regarding the usage of digital music are important for the adoption of LOMDS and to test the hypothesis that acceptors and non-acceptors differ in the importance assigned to DRM and flexibility in the usage of digital music. The author

---

[230] cf. Schwenkert (2006), pp.217
[231] cf. Quiring et al. (2008), p.184
[232] cf. Frenzel (2003), pp.144

assumes that the term DRM, although being often discussed in media in the past few years, is not familiar to everyone. Therefore, to avoid any confusion, the term itself will not be mentioned in the questionnaire. In addition, it is asked if the respondents would agree to the statement that is important that the music download is not bound to the download of a specialised software client (as business models presented in chapter 3.4 were partially bound to the download of specialised software clients).

Questions asked in the part "Zusatzleistungen" (see appendix, 9.) focus on the respondent's attitude towards different additional services and products that might be included or attached to the basic music download. Especially the respondent's attitude towards virtual community features and sampling has to be taken care of. These questions have been compiled according to different authors and additional ones by the author of this thesis.[233]

"Traditioneller Musikvertrieb vs. digitaler Musikvertrieb" (see appendix, 10.) is related to the relative advantage of LOMDS in comparison to the purchase at a traditional physical retailer. The first five questions have been retrieved from Frenzel. The questions under "Risiko" (see appendix, 11.) regarding perceived risks have been compiled based on the surveys of Frenzel[234], Schwenkert[235] and Kunze and Mai[236].

The last part of the questionnaire "Ein paar letzte Schritte…" (see appendix, 12.) requires demographic information about gender, age, completed education, current profession, household income level, household size and the type and speed of internet.

In the case of the latest completed education, the respondents are asked to chose between the following possibilities which have been retrieved from Statistik Austria – Volksschule, Hauptschule, AHS/BHS, Kolleg, Berufsschule/Lehre, Akademie/Fachhochschule/Hochschule/Universität, and others. Current type of profession consists of Angestellter/Beamter, leitender Angestellter/Geschäftsführer, Arbeiter/Facharbeiter, Hausfrau/Hausmann, Lehrling, Pensionist, Schüler, Student, Selbstständig, Zivildiener/Grundwehrdiener, arbeitslos, keine Angabe and others. Regarding the type and speed of internet connection, categorisation of Statistik Austria

---

[233] cf. Schwenkter (2006), p.221; Vlachos; Vrechopoulos; Doukidis (2003), p.143

[234] cf. Frenzel (2003), p.142

[235] cf. Schwenkert (2006), p.218

[236] cf. Kunze, Mai (2007), pp.867

was applied. It distinguishes between broadband connection (i.e. ADSL and others) and modem/dial-up connection through telephone line (ISDN and analogue modem).[237] In order to compile an easy to use and understandable questionnaire, this approach to differentiate between a fast and a slow internet connection was chosen.

[237] cf. Statistik Austria (2009, b)

# 5  Data Analysis and Results

The goal of the underlying survey is to analyse adoption factors (i.e. determinants) regarding their different characteristics (i.e. importance assigned) among the two groups of acceptors and non-acceptors of LOMDS.

For the analysis the mean values assigned by acceptors and non-acceptors to certain factors will be compared. In a consecutive step the differences between the two groups will be evaluated regarding their significance with the help of an analysis of variance (ANOVA). A one way ANOVA is supposed to test for differences between two or more groups.[238] Further it allows identifying whether associations in the sample occurred at random or not. This procedure is also known as significance test which is considered to provide information on the significance of differences between groups.[239]

Provided that there is no significant difference between acceptors and non-acceptors regarding a certain adoption factor, this factor will not further be considered in detail. The chosen research design does not enable a proof of causality between the adoption of LOMDS and the determinants tested. Possible dependencies between adoption and determinants are primarily based on plausibility.

In a subsequent step these results and its implications for marketing of LOMDS will be outlined.

## 5.1  Sample Description

In total a sample size of 1256 respondents was allocated. In a first step possible mistakes and errors within the sample were deleted or corrected in order to continue working with an error-free data set (see table 14).

---

[238] Kohout; Kim (1973), pp.398
[239] Frenzel, T. (2003), pp.188

**Total Responses**

| | Cases | | | | | |
|---|---|---|---|---|---|---|
| | Valid | | Missing | | Total | |
| | N | Per cent | N | Per cent | N | Per cent |
| **Age** | 1256 | 100.0% | 0 | .0% | 1256 | 100.0% |

**Table 14 : Sample - Size.**

Out of the 1256 responses, two cases had to be excluded from further analysis. An explorative data analysis showed that the maximum age in the sample was 99 years and the minimum age 0 years. These outliers are either unreasonable (0 years) or lie far away from the second maximum value in the sample (i.e. 65 years). Therefore the sample size decreased from 1256 to 1254. Eight persons (non-knowing persons) have been excluded from further analysis. It should be pointed out once more that this thesis aims to find out differences between acceptors and non-acceptors of legal online music distribution services. The sample size has been further reduced from 1254 to 1246.

### 5.1.1 Gender and Age

Regarding the allocation of gender, analysis shows that 698 (55.7 %) females and 556 (44.3 %) males correctly filled out the questionnaire (see figure 14).
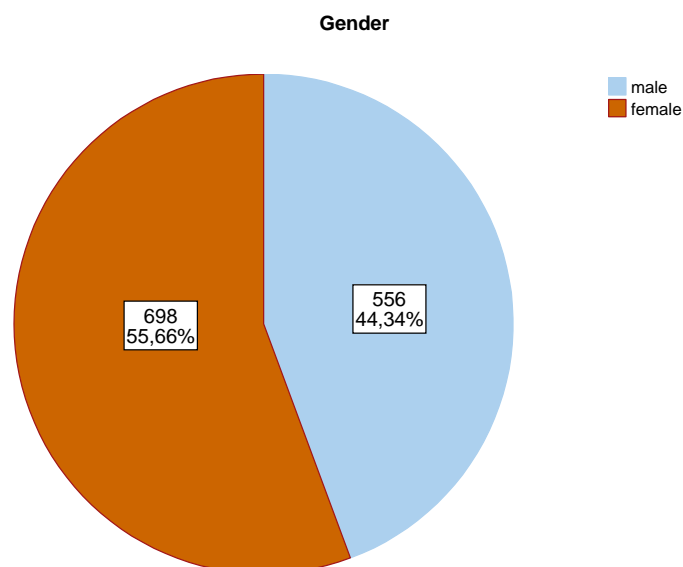


**Figure 14: Sample – Gender.**

Figure 15 illustrates the distribution of age within the sample. 13.6 % (170 respondents) of the sample is represented by the group of 10-19 year olds. Almost 72.6 % (904 respondents) of the sample consists of people aging between 20 and 29 years. This seems obvious to a certain extent as the majority of the sample is university students. Further, 30 to 39 year olds make up the third largest age group of the sample with 10.1 % (126 respondents). Only a small amount of respondents is 40 and older (3.7 % or 46 respondents).

Following the results from chapter 4.2 and the most recent figures on downloading and the allocation among age groups, the reader can notice that the group of 10-19 year-olds is almost equally represented in this sample compared to the results of the Brennerstudie 2009 (17 %). The group of 20-29 year-olds constitutes the largest group of downloaders according to the Brennerstudie with 32 %. Results of the underlying survey show that this group is disproportionately represented in this sample with 72.6 %, whereas the group of 30-39 year-olds is underrepresented with 10.1 % compared to 26 % within the Brennerstudie 2009. The same applies to respondents who are 40 years and older (3.7 % vs. 26 %).

Despite the fact that age is disproportionately distributed among groups, compared to the representative results of the Brennerstudie 2009, it can be said that the high proportion of young downloaders in the underlying survey can be considered helpful. As sampling method the cut-off technique is considered, which means that a focus is on the majority of certain elements (i.e. age group 10-39 year-olds) within the population. 75 % within the results of the Brennerstudie are people between 10 and 39 years, whereas almost 96 % of respondents within this survey sample age between 10 and 39 years. As outlined in previous chapters, younger age groups are still taking a central position in the purchase of music, especially of online music.
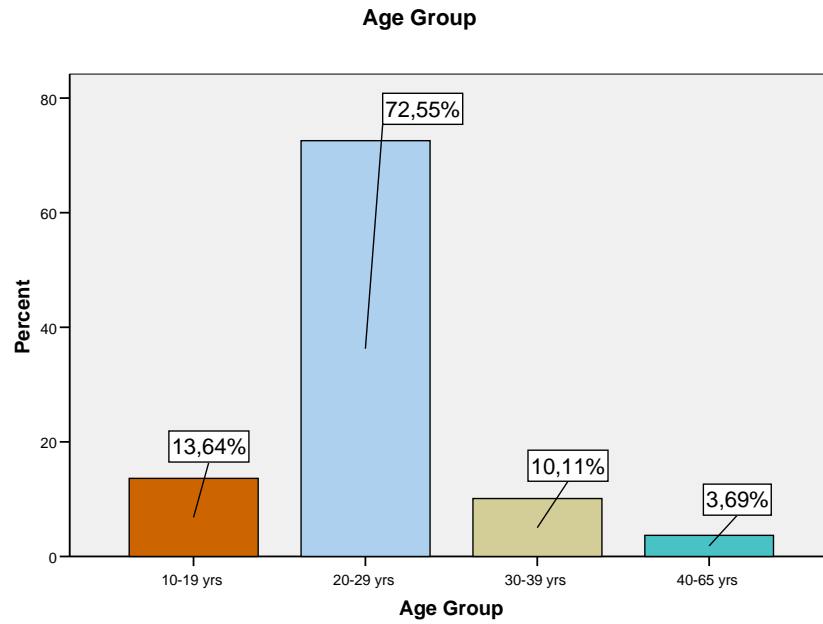
**Age Group**



**Figure 15: Sample - Age Group.**

## 5.1.2 Education and Profession

As the reader can see in this chapter, the German terms have not been translated into English as educational levels can not be simply equalized with the ones from other countries (see figure 16). The most often quoted highest educational level of respondents is an AHS/BHS degree (63 %), which could be compared to a high school degree in other countries. The second largest group consists of people with an university or comparable degree (24 %).
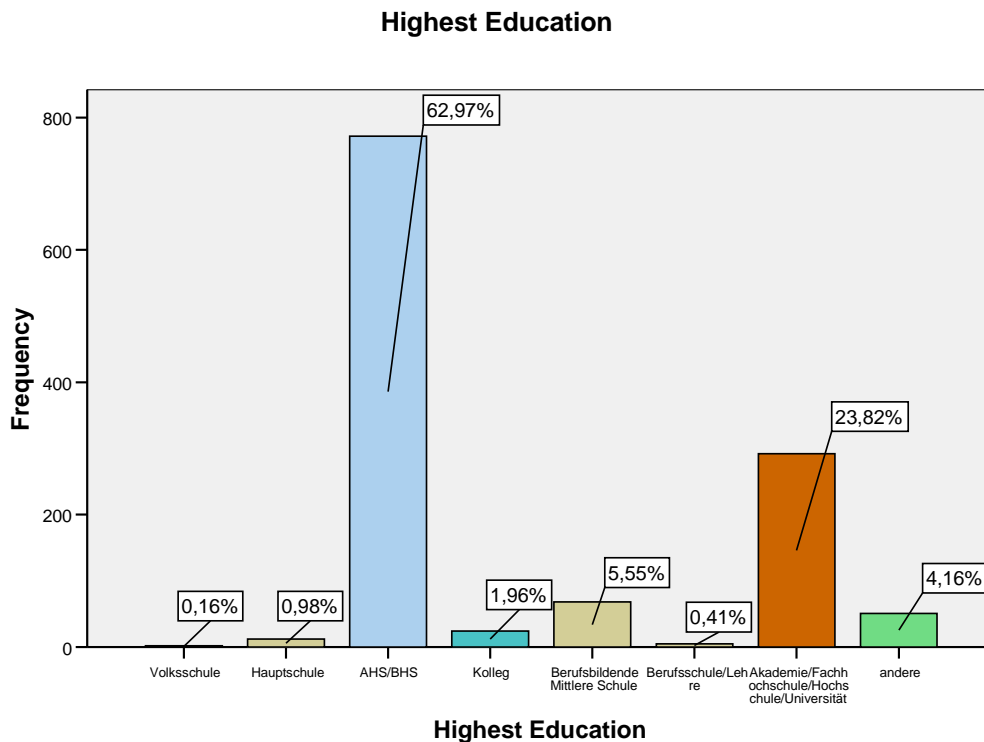
**Highest Education**



**Figure 16: Sample - Highest Education.**

Asked in a further step, respondents had to indicate their current profession. As already mentioned in chapter 5.1.1, the majority of respondents currently studies at an university or comparable institution (933 persons, 74 %). Almost 17 % (219 persons) of the sample consists of employees in private companies or civil servants in public institutions (i.e. universities, schools, government, etc.). Only 3 % (36 persons) take an executive or managing position as well as only 3 % working as civil or military servants.

### 5.1.3   Household Income and Household Size

Figure 17 illustrates the allocation of net-household income. 32 % of the sample has less than € 1000 net household income per month, 17 % earn between € 1001 and € 2000. Another 14 % have more than € 2000 a month. 36.6 % did not answer this question.
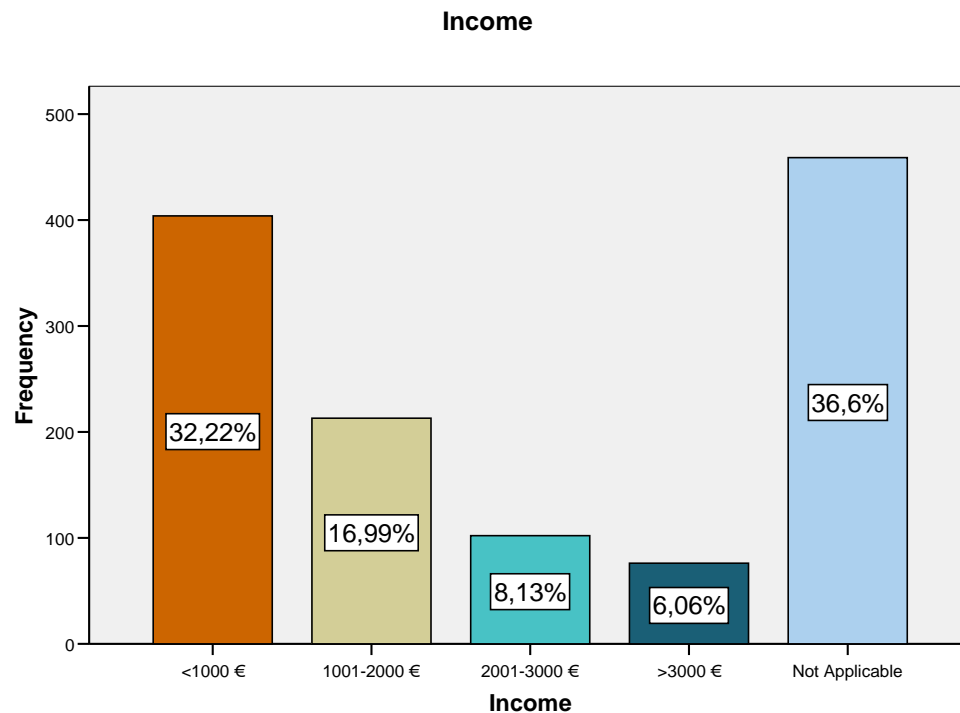
**Figure 17: Sample - Income.**

Finally, respondents were asked about the size of their household. Nine per cent of respondents (n = 1254) live in a single household, whereas another 25.7 % live together with another person, 28.4 % with two other persons, 19.1 % with three and 11.4 % with four persons. The rest lives in households with up to eight persons in total. Almost 8 % did not assign any value to this question. Evidently a larger amount of respondents still lives at home with its family or in a flat share, as the sample majority consists of pupils and students.

### 5.1.4 Type of Internet Connection

As the type of Internet connection is an important prerequisite for the acquisition of online music, respondents have been asked to fill out if they still use a narrow band connection (i.e. ISDN, etc.) or a broadband connection which usually allows downloading and streaming at much faster speed and in the case of a flat rate at much higher volumes. Figure 18 shows that more than 80 % use a broadband connection to access the Internet, whereas only 3.5 % still use a slow type of Internet connection. A bigger group (12.5 %) could not name the type of Internet connection. These results

allow the assumption that the majority of respondents have the appropriate technical infrastructure to download music at fast speed and high volumes and to stream online music without time restraints. Therefore it can be assumed that non-acceptors do not adopt LOMDS because of the necessary technical infrastructure (i.e. a broadband connection) to obtain online music without restrictive delays during downloading or streaming.

**Type of Internet Connection**
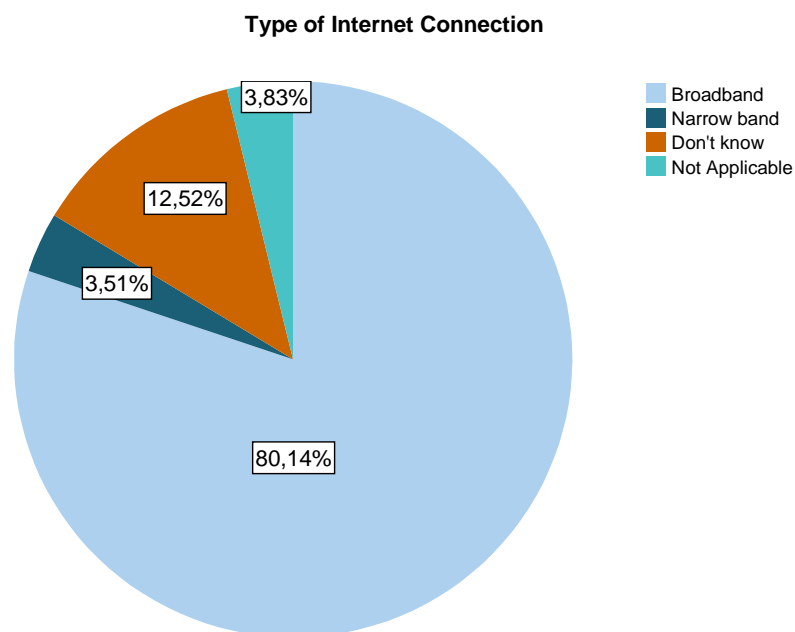


**Figure 18: Sample – Type of Internet Connection.**

## *5.2   Examination of Hypotheses*

In this chapter the hypotheses stated in chapter 3.6 will be tested and in chapter 6 the results will be analysed towards their implication for marketing and future efforts of music industry specialists.

### 5.2.1   Differentiation between Acceptors and Non-acceptors

As mentioned in chapter 3.5.4, in a first step it was necessary to distinguish between groups of respondents who are aware of the possibility to download or stream online music and those who do not know about it. Unsurprisingly, as the majority of respondents belongs to a much younger, technophile age group, only eight persons (or

0.6 % of the sample) did not know that these downloading or streaming possibilities exist.

Subsequently people who are aware of downloading or streaming online music, but do not show any interest in acquiring music from the Internet have been filtered out. A rather large group of respondents, the group of non-acceptors (413 persons, 33.15%), is not interested in the possibility to download or stream music via Internet. The rest (833 persons, 66.85 %) can be defined as acceptors (see figure 19), as they show at least the interest in downloading or streaming music. Within the scope of this thesis indifferent persons, thus persons who are aware of digital music and its distribution and who have an interest in buying music online, but show negative or indifferent attitudes regarding an expected purchase (which means that they do not intend to purchase online music on a regularly basis but at least intend to buy online music once in a while), will be included in the group of acceptors.
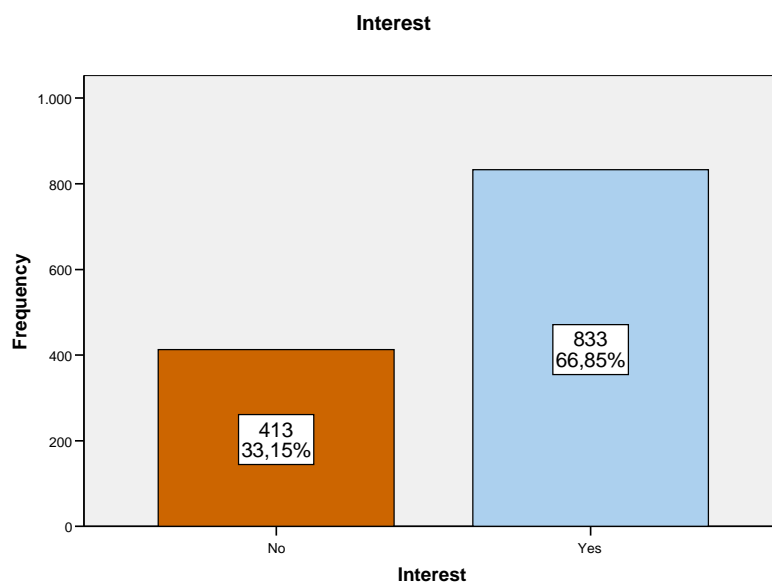


**Figure 19: Sample – Interest in downloading and streaming services.**

In the following step of the survey, respondents were asked about their intention to buy online music once in a while or on a regularly basis (see figures 21 and 22). Interestingly, there is a rather large group among non-acceptors that would occasionally purchase online music (129 persons, 31.2 %). This implies that, although non-acceptors are basically not interested in the acquisition of online music, they intend to do so as the

case arises. Among acceptors the majority (799 persons, 80.4 %) will occasionally purchase online music. If asked about the intention to purchase online music on a regular basis, the picture is even more interesting. Only a few non-acceptors would regularly buy online music (5 persons, 1.2 %), whereas also a rather small amount of acceptors would do a regular online purchase (234 persons, 28.1 %).

Finally it can be concluded that being an acceptor of online music distribution does not necessarily imply the intention to buy online music on a more regular, but on a more occasional basis. Non-acceptors certainly do not intent to regularly purchase music, but they will do so from case to case. Nevertheless the tendency to regularly buy online music is more evident for acceptors than non-acceptors. All this signifies that there might be different reasons that keep non-acceptors and acceptors from purchasing online music both on a regular and an occasional basis.
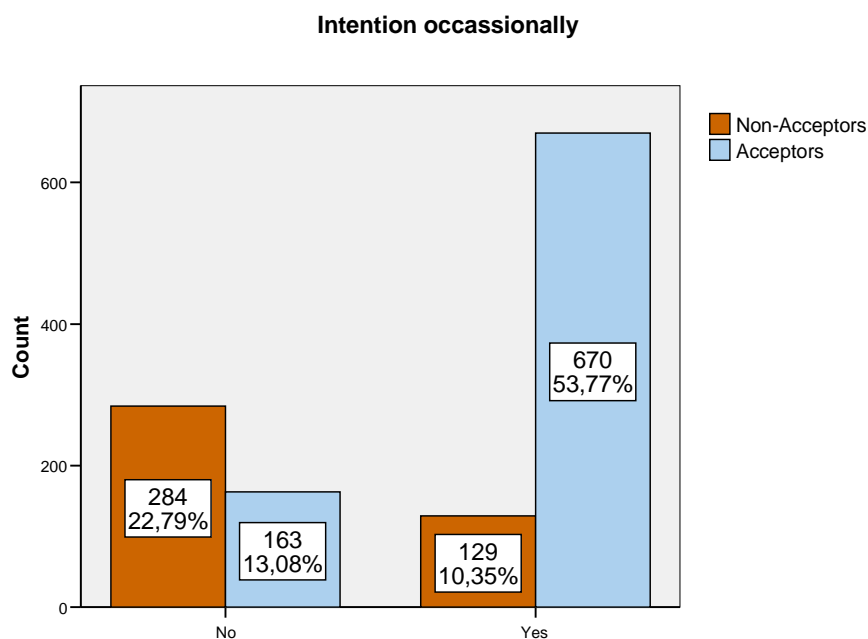
**Intention occassionally**



**Figure 20: Sample – Intention occasionally.**
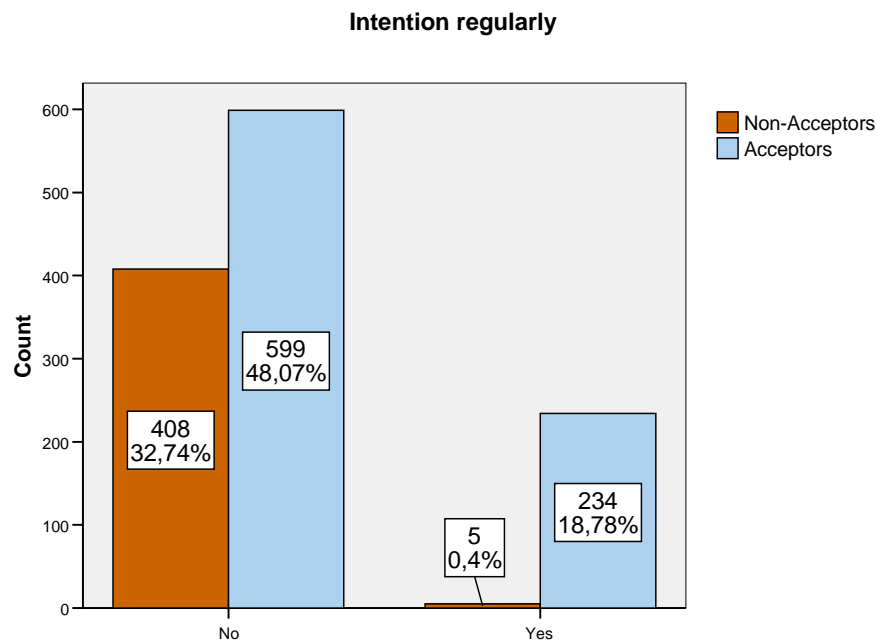
**Intention regularly**



**Figure 21: Sample – Intention regularly.**

## 5.2.2 Experience with Online Music

Regarding the experience in the acquisition of music from the Internet, respondents were asked about different ways and services (free services or services with costs) they had already source online music from.

In general, only a small portion of non-acceptors has already downloaded online music with costs (44 persons, 10.7 %), whereas acceptors (388 persons, 46.6 %) seem to have much more experience in the purchase of online music (see table 15). Regarding the purchase of online streams results illustrate an even clearer picture. On the one hand, non-acceptors hardly have used these services (9 persons, 2.2 %) and on the other hand acceptors (57 persons, 6.8 %) do not seem to be experienced either (see table 16).

|  |  | Internet with costs | | Total |
|---|---|---|---|---|
|  |  | No | Yes |  |
| Non-Acceptors | Count | 369 | 44 | 413 |
|  | % within Acceptors/Non-Acceptors | 89.3% | 10.7% | 100.0% |
| Acceptors | Count | 445 | 388 | 833 |
|  | % within Acceptors/Non-Acceptors | 53.4% | 46.6% | 100.0% |

**Table 15: Sample – Downloads with costs.**

|  |  | Stream with costs | | Total |
|---|---|---|---|---|
|  |  | No | Yes |  |
| Non-Acceptors | Count | 404 | 9 | 413 |
|  | % within Acceptors/Non-Acceptors | 97.8% | 2.2% | 100.0% |
| Acceptors | Count | 776 | 57 | 833 |
|  | % within Acceptors/Non-Acceptors | 93.2% | 6.8% | 100.0% |

**Table 16: Sample – Streams with costs.**

Following further analysis, the usage of p2p-services charging a fee for downloading or streaming have hardly been used in the past. Only 2.2 % of non-acceptors and 4.0 % of acceptors have already purchased music from p2p-services. Regarding the purchase of online music from band, label or artist websites the situation only differs a bit. Non-acceptors rarely acquired music from these websites (3.1 %). Among the group of acceptors only 12.5 % did already buy music from these channels.

However, there are vast differences to these previous results when the respondents were asked about their experience with free online music services. A majority of non-acceptors (78.2 %) and acceptors (76.7 %) have already used free online streaming services (like Last.fm or Magnatune). Free (illegal) p2p-services, the most often postulated enemy of legal online music distribution services, have been used by non-acceptors and acceptors almost at the same percentage (58.6 % vs. 53.3 %). A similar output could be generated regarding the usage of band, label or artist websites that offer music downloads/streams for free. 66.1 % of non-acceptors did already download free music from these websites, compared to 67.5 % of acceptors.

In addition to these previous results, non-acceptors (15.3 %) and acceptors (15.6 %) have acquired online music from several other sources as well (mainly illegally) – be it from friends via email or IRC, simultaneous audio recordings from YouTube videos or FTP servers.

### 5.2.3 Hypothesis 1 – Content Variety

Research Question:

Which differences can be observed between acceptors and non-acceptors of legal online music distribution services regarding specific characteristics?

Hypothesis:

H[1]: Acceptors and Non-acceptors differ in the importance given to the variety of music content offered.

The variety of music content has been described with the help of five different attributes - the music supply, the amount of artists, the discography, the actuality and the amount of music from different labels (see table 17). The music supply, music from a wide range of different music genres, is valued as an important factor by both groups, but the non-acceptors (n = 413, mean = 3.77, SD = 1.251) value it less important than the acceptors (n = 833, mean = 4.14, SD = 1.119).[240] The amount of artists and bands in the respective genre is rated higher by acceptors (mean = 4.18, SD = 1.059) than non-acceptors (mean = 3.92, SD = 1.151). In general, the actuality of the music repertoire is further seen as important for non-acceptors (mean = 3.78, SD = 1.325) as well as for acceptors (mean = 4.01, SD = 1.202), though with a big difference between the two groups. In addition, the width of artists' discographies is valued important by both groups with non-acceptors (mean = 3.54, SD = 1.289) and acceptors (mean = 3.67, SD = 1.198) being rather positively engaged. In contrast to these factors, the amount of music from different labels being available to purchase is the least important attribute among both groups. Non-acceptors (mean = 2.41, SD = 1.286) and acceptors (mean = 2.53, 1.295) range between disagreement and neither-nor-agreement. All in all it can be observed that there is a bigger difference between the (positive) ratings of both groups regarding three out of five factors.

---

[240] considering a range from "1= do not agree at all" to "5= fully agree".

|              |            | Music supply | Amount artists | Discography | Actuality | Labels |
|--------------|------------|--------------|----------------|-------------|-----------|--------|
| Non-Acceptors | Mean      | 3.77         | 3.92           | 3.54        | 3.78      | 2.41   |
|              | N          | 413          | 413            | 413         | 413       | 413    |
|              | Std. D     | 1.251        | 1.151          | 1.289       | 1.325     | 1.286  |
|              | Variance   | 1.565        | 1.324          | 1.661       | 1.755     | 1.655  |
|              | Std. Error | .062         | .057           | .063        | .065      | .063   |
| Acceptors    | Mean       | 4.14         | 4.18           | 3.67        | 4.01      | 2.53   |
|              | N          | 833          | 833            | 833         | 833       | 833    |
|              | Std. D     | 1.119        | 1.059          | 1.198       | 1.202     | 1.295  |
|              | Variance   | 1.253        | 1.121          | 1.435       | 1.446     | 1.677  |
|              | Std. Error | .039         | .037           | .041        | .042      | .045   |

**Table 17: Hypothesis 1 – Content Variety Mean Values.**

Considering a range from "1 = do not agree at all" to "5 = fully agree".

In a consecutive step, an analysis of variance (ANOVA) was generated (see table 18). Its purpose is to determine whether or not there exist significant differences amongst the acceptors and non-acceptors. It was found out that at the 5 per cent significance level the mean difference in respect to music supply between acceptors and non-acceptors is significant (sig. = .000). Further, the mean difference between these two groups regarding the amount of different artists and bands (sig. = .000) as well as the actuality of music (sig. = .003) are significant. The results on group differences in case of the availability of a broad artist or band discography (sig. = .085) and amount of labels (sig. = .102) are not significant.

According to these results hypothesis 1 ($h_1$) can be accepted, as most of the observed differences are significant. There are differences between acceptors and non-acceptors in the importance assigned to the variety of music content offered.

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Music supply * Acceptors/Non-Acceptors | Between Groups | 36.675 | 1 | 36.675 | 27.044 | .000 |
| | Within Groups | 1687.004 | 1244 | 1.356 | | |
| Amount artists * Acceptors/Non-Acceptors | Between Groups | 17.639 | 1 | 17.639 | 14.847 | .000 |
| | Within Groups | 1477.931 | 1244 | 1.188 | | |
| Discography * Acceptors/Non-Acceptors | Between Groups | 4.487 | 1 | 4.487 | 2.972 | .085 |
| | Within Groups | 1877.951 | 1244 | 1.510 | | |
| Actuality * Acceptors/Non-Acceptors | Between Groups | 14.145 | 1 | 14.145 | 9.137 | .003 |
| | Within Groups | 1925.919 | 1244 | 1.548 | | |
| Labels * Acceptors/Non-Acceptors | Between Groups | 4.484 | 1 | 4.484 | 2.686 | .102 |
| | Within Groups | 2076.936 | 1244 | 1.670 | | |

**Table 18: Hypothesis 1 - Content variety ANOVA.**

Considering a range from "1 = do not agree at all" to "5 = fully agree".

### 5.2.4   Hypothesis 2 and 3– Price and Payment Method

Research Question:

Which differences can be observed between acceptors and non-acceptors of legal online music distribution services regarding specific characteristics?

Hypotheses:

| $H_2$: Acceptors and non-acceptors differ in the importance assigned to ad-based models/per track downloads/subscription models. |
|---|

| $H_3$: Acceptors and non-acceptors differ in the importance assigned to price for the purchase of digital music. |
|---|

Payment methods consisted of four different models that were analysed. These were the subscription model, the rent model, the pay-per-track model as well as the free ad-based model (see table 19). In general, the pay-per-track model was valued the most important model among acceptors (n = 833, mean = 3.75, SD = 1.245), whereas non-acceptors (n = 413, mean = 2.78, SD = 1.314) show a rather negative attitude towards this model. The subscription model ranks second with acceptors (mean = 3.17, SD = 1.415) having a slight positive attitude compared to non-acceptors (mean = 2.57, SD = 1.389). Concerning the importance assigned to a free ad-based model, both acceptors (mean = 2.39, SD = 1.327) and non-acceptors (mean = 2.43, SD = 1.427) rate the possibility of

using such models rather negative. However, non-acceptors value this model even higher than acceptors. The rent model is neither favoured by acceptors (mean = 1.81, SD = 1.117) nor non-acceptors (mean = 1.68, SD = 1.087).

|  |  | Subscription | Rent | Pay Per Track | Free Ad-Based |
|---|---|---|---|---|---|
| Non-Acceptors | Mean | 2.57 | 1.68 | 2.78 | 2.43 |
|  | N | 413 | 413 | 413 | 413 |
|  | Std. D | 1.389 | 1.087 | 1.314 | 1.427 |
| Acceptors | Mean | 3.17 | 1.81 | 3.75 | 2.39 |
|  | N | 833 | 833 | 833 | 833 |
|  | Std. D | 1.415 | 1.117 | 1.245 | 1.327 |

**Table 19: Hypothesis 2 – Payment Method Mean Values.**

Considering a range from "1 = do not agree at all" to "5 = fully agree".

Following these statistics, an ANOVA table was used to determine the significance of differences between the two groups (see table 20). At a 5 per cent significance level, the differences between acceptors and non-acceptors are significant for the pay-per-track (sig. = .000), the subscription (sig. = .000) as well as the rent model (sig. = .047). The differences regarding free ad-based models (sig. = 0.618) are considered to be not significant.

|  |  | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Subscription | Between Groups | 99.478 | 1 | 99.478 | 50.273 | .000 |
|  | Within Groups | 2461.594 | 1245 | 1.979 |  |  |
| Rent | Between Groups | 4.839 | 1 | 4.839 | 3.950 | .047 |
|  | Within Groups | 1523.791 | 1245 | 1.225 |  |  |
| Pay Per Track | Between Groups | 260.131 | 1 | 260.131 | 161.720 | .000 |
|  | Within Groups | 2001.012 | 1245 | 1.609 |  |  |
| Free Ad-Based | Between Groups | .461 | 1 | .461 | .249 | .618 |
|  | Within Groups | 2304.053 | 1245 | 1.852 |  |  |

**Table 20: Hypothesis 2: Payment Method ANOVA.**

According to these results hypothesis 2 ($h_2$) will be partially rejected. There are only significant differences in the importance assigned to three out of four payment models for online music by acceptors and non-acceptors.

In a consecutive step it was analysed how far price is an important factor for both groups. Acceptors and non-acceptors were asked about the importance assigned to low prices, music free of charge, the availability of good quality and fast download possibilities of music tracks with prices being of less importance. Table 21 illustrates that a low price is the most important factor for acceptors (n = 833, mean = 4.26, SD = 0.893), whereas non-acceptors value it relatively less important (n = 413, mean = 3.93, SD = 1.185). Music tracks free of charge is rated the most important factor for non-acceptors (mean = 4.45, SD = 0.988) compared to acceptors (mean = 3.94, SD = 1.170) who generally assign less importance to this factor. Good sound quality of streamed or downloaded music, irrespective of price, is valued of no importance by both acceptors (mean = 2.61, SD = 1.105) and non-acceptors (mean = 2.07, SD = 1.054). A similar picture can be observed regarding fast downloads or streams with prices being of less importance. Acceptors (mean = 2.50, SD = 1.116) and non-acceptors (mean = 2.05, SD = 1.054) denote a rather negative attitude towards these factors. However, this implies to a certain extent that for both groups price is still much more important than the quality of downloads and streams as well as the speed of downloading and streaming. All in all, it can be observed that there are differences between acceptors and non-acceptors in the importance assigned to prices of online music. It is interesting to see that low prices per song or album are more important to acceptors than to non-acceptors, whereas the availability of free music is of greater importance for non-acceptors.

| Acceptors/Non-Acceptors | | Price importance | Free of charge | Price/Good Quality | Price/Fast Download |
|---|---|---|---|---|---|
| Non-Acceptors | Mean | 3.93 | 4.45 | 2.07 | 2.05 |
| | N | 413 | 413 | 413 | 413 |
| | Std. D | 1.185 | .988 | 1.054 | 1.054 |
| Acceptors | Mean | 4.26 | 3.94 | 2.61 | 2.50 |
| | N | 833 | 833 | 833 | 833 |
| | Std. D | .893 | 1.170 | 1.105 | 1.116 |

**Table 21: Hypothesis 3 – Price Mean Values.**

Considering a range from "1 = do not agree at all" to "5 = fully agree".

Analysis regarding the significance of these differences between acceptors and non-acceptors show that results are significant for price importance (sig. = .000), music free

of charge (sig. = .000), good sound quality (sig. = .000) and fast downloading (sig. = .000) at a 5 per cent significance level (see table 22). Therefore hypothesis 3 ($h_3$) will temporarily be accepted. Acceptors and non-acceptors differ in the importance assigned to price for the purchase of digital music.

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Price importance | Between Groups | 29.977 | 1 | 29.977 | 30.048 | .000 |
| | Within Groups | 1241.050 | 1244 | .998 | | |
| Price/Good Quality | Between Groups | 78.263 | 1 | 78.263 | 66.101 | .000 |
| | Within Groups | 1472.880 | 1244 | 1.184 | | |
| Free of charge | Between Groups | 72.269 | 1 | 72.269 | 58.361 | .000 |
| | Within Groups | 1540.447 | 1244 | 1.238 | | |
| Price/Fast Download | Between Groups | 57.361 | 1 | 57.361 | 47.751 | .000 |
| | Within Groups | 1494.373 | 1244 | 1.201 | | |

**Table 22: Hypothesis 3 – Price ANOVA.**

The superdistribution model, which has not been discussed and analysed by academic research in much detail in the past, was part of the price and payment method chapter. Results show that there are only slight differences between acceptors (n = 833, mean = 3.32, SD = 1.281) and non-acceptors (n = 413, mean = 3.17, SD = 1.324) for the interest in being involved in a revenue sharing service. Further acceptors (mean = 3.05, SD = 1.279) and non-acceptors (mean = 2.90, SD = 1.305) rank closely regarding the willingness to offer music via these services. Both groups are rather undetermined. These results may imply that respondents have not been aware of this business model before or/and the information given in the questionnaire was not sufficient for them to imagine how these services might operate. Nevertheless it should be pointed out that further research has to be conducted and people have to be informed in greater detail about how such superdistribution services might work.

### 5.2.5   Hypothesis 4 – Downloading vs. Streaming

Research Question:

Which differences can be observed between acceptors and non-acceptors of legal digital music distribution services regarding specific characteristics?

Hypotheses:

H$_4$: Acceptors and non-acceptors differ in the importance assigned to downloading and streaming.

Downloading and streaming are different ways to acquire online music and were analysed among acceptors and non-acceptors. Basically, results show that downloading is still the most important way to obtain online music for both acceptors (n = 833, mean = 4.16, SD = 0.967) and non-acceptors (n = 413, mean = 3.96, SD = 1.125). However, for acceptors downloading is relatively more important than it is to non-acceptors (see table 23). Following the frequency how often the two groups download music, it can be observed that 81.8 % of non-acceptors are active downloaders (91.6 % of acceptors). 38 % of non-acceptors (45.4 % of acceptors) even download online music regularly or often.

Music streaming is of greater importance to non-acceptors (mean = 3.20, SD = 1.356) than it is to acceptors (mean = 3.06, SD = 1.274). This result may be based on the fact that many streaming services, until recently, have been free of charge and this form of music acquisition has become the main music source for non-acceptors. This assumption might be reinforced by the results from chapter 5.2.4 where non-acceptors highly rated the importance of low prices and the availability of free online music. Further the frequency of streaming among respondents shows that 86.7 % of non-acceptors (89.6 % of acceptors) are active users of (free) streaming services (at least rarely). 42.6 % of non-acceptors (39.3 % of acceptors) even stream online music regularly or often.

| Acceptors/Non-Acceptors | | Streaming | Downloading |
|---|---|---|---|
| Non-Acceptors | Mean | 3.20 | 3.96 |
| | N | 413 | 413 |
| | Std.D | 1.356 | 1.125 |
| Acceptors | Mean | 3.06 | 4.16 |
| | N | 833 | 833 |
| | Std. D | 1.274 | .967 |

**Table 23: Hypothesis 4 – Downloading vs. Streaming Mean Values.**

Considering a range from "1 = do not agree at all" to "5 = fully agree".

Consequently, an ANOVA table should prove the significance of these results (see table 24). However, the differences regarding streaming are not significant (sig. = .075) at a 5 per cent significance level. On the other side, differences in the importance assigned to downloading are significant (sig. = .001) and hence hypothesis 4 (H$_4$) has to be rejected. Nevertheless, this analysis shows that there are significant differences, namely regarding downloading and that streaming is of average importance to both groups, irrespective of the non-significance of differences.

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Streaming | Between Groups | 5.390 | 1 | 5.390 | 3.181 | .075 |
| | Within Groups | 2107.837 | 1244 | 1.694 | | |
| Downloading | Between Groups | 11.267 | 1 | 11.267 | 10.788 | .001 |
| | Within Groups | 1299.176 | 1244 | 1.044 | | |

**Table 24: Hypothesis 4 – Downloading vs. Streaming ANOVA.**

### 5.2.6 Hypothesis 5 – Flexibility, Portability and DRM

Research Question:

Which differences can be observed between acceptors and non-acceptors of legal digital music distribution services regarding specific characteristics?

Hypotheses:

H$_5$: Acceptors and non-acceptors differ in the importance assigned to restriction-free music.

This chapter subsumes factors that influence the flexibility and portability of online music. Basically, respondents were asked to assign importance to factors such as the possibility to burn online music to sound storage media, to copy online music to portable players and mobile phones, to use music without restrictions and to listen to music without downloading a special software client.

Results show that the possibility to copy online music from PC or Laptop to a portable device (i.e. mp3-players, etc.) is the most important factor for both acceptors (n = 833, mean = 4.60, SD = 0.755) and non-acceptors (n = 413, mean = 4.37, SD = 1.066) (see table 25). No usage restrictions are almost equally important to acceptors (mean = 4.30, SD = 0.926) and non-acceptors (mean = 4.20, SD = 1.111). The requirement to

download special software in connection with downloading or streaming of online music seems to be a further crucial factor. Acceptors (mean = 3.97, SD = 1.135) and non-acceptors (mean = 4.05, SD = 1.207) assign importance to the non-existence of additional software downloads. The possibility to burn music on a CD/DVD is less important in general, but differences between acceptors (mean = 3.66, SD = 1.272) and non-acceptors (mean = 3.38, SD = 1.383) can be observed. The opportunity to transfer music from a PC or laptop to mobile phones is considered to be of less importance than other factors between acceptors (mean = 3.17, SD = 1.410) and non-acceptors (mean = 3.13, SD = 1.494).

| | | Burning CD | Copy | Mobile | No Usage Restrictions | No Software Download |
|---|---|---|---|---|---|---|
| Non-Acceptors | Mean | 3.38 | 4.37 | 3.13 | 4.20 | 4.05 |
| | N | 413 | 413 | 413 | 413 | 413 |
| | Std.D | 1.383 | 1.066 | 1.494 | 1.111 | 1.207 |
| Acceptors | Mean | 3.66 | 4.60 | 3.17 | 4.30 | 3.97 |
| | N | 833 | 833 | 833 | 833 | 833 |
| | Std.D | 1.272 | .755 | 1.410 | .926 | 1.135 |

**Table 25: Hypothesis 5 - Flexibility,Portability and DRM Mean Values.**

Considering a range from "1 = do not agree at all" to "5 = fully agree".

In a further step these results were analysed regarding their significance (see table 26). Only differences in burning CDs (sig. = .001) and copying music to portable players (sig. = .000) are significant. The other factors are not significant at a 5 per cent significance level. Consequently, hypothesis 5 ($H_5$) has to be rejected as only two out of five factors show significant differences between the two groups.

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Burning CD * Acceptors/Non-Acceptors | Between Groups | 20.199 | 1 | 20.199 | 11.775 | .001 |
| Copy * Acceptors/Non-Acceptors | Between Groups | 15.041 | 1 | 15.041 | 19.869 | .000 |
| Mobile * Acceptors/Non-Acceptors | Between Groups | .462 | 1 | .462 | .223 | .637 |
| No Usage Restrictions * Acceptors/Non-Acceptors | Between Groups | 2.648 | 1 | 2.648 | 2.695 | .101 |
| No Software Download * Acceptors/Non-Acceptors | Between Groups | 1.914 | 1 | 1.914 | 1.424 | .233 |

**Table 26: Hypothesis 5 - Flexibility,Portability and DRM ANOVA.**

### 5.2.7   Hypotheses 6, 7 and 8 – Additional Services

Research Question:

Which differences can be observed between acceptors and non-acceptors of legal digital music distribution services regarding specific characteristics?

Hypotheses:

| H6: Acceptors and non-acceptors differ in the importance assigned to sampling. |
| --- |

| H7: If given the choice to select between several additional services and products, sampling would be the most preferred service acceptors/non-acceptors would pay an additional charge for. |
| --- |

| H8: Acceptors and non-acceptors differ in the importance assigned to virtual community features. |
| --- |

Additional features including digital covers, information on bands and artists, song lyrics, music videos, ringtones, the exchange of playlists with peers, sampling and search facilities have been analysed in this chapter.

High importance is ascertained to search facilities by acceptors (n = 833, mean = 4.68, SD = 0.651) as well as non-acceptors (n = 413, mean = 4.43, SD = 0.962), still the first group rates it even higher than the latter (see table 27). Sampling is further considered as important for acceptors (mean = 4.29, SD = 0.924), whereas non-acceptors (mean = 3.91, SD = 1.179) assign less importance to this additional service, but still consider it as important factor in general. The availability of lyrics is evaluated as important by both groups with minor differences between acceptors (mean = 3.30, SD = 1.205) and non-acceptors (mean = 3.19, SD = 1.266). Music videos, covers, information on artists, community features as well as ringtones and playlists exchange are valued less important in total. However, acceptors assign more importance to almost each of them compared to non-acceptors.

The rating of community features is of further interest for the verification of hypothesis 8 ($H_8$). Acceptors (mean = 1.79, SD = 0.945) as well as non-acceptors (mean = 1.72, SD = 0.926) consider this feature hardly important with marginal differences between these two groups.

| | | Cover | Information | Lyrics | Music-videos | Ringtones | Community Feature | Playlists | Sampling | Seach Facilities |
|---|---|---|---|---|---|---|---|---|---|---|
| Non-Accept | Mean | 2.49 | 2.24 | 3.19 | 2.70 | 1.92 | 1.72 | 2.25 | 3.91 | 4.43 |
| | N | 413 | 413 | 413 | 413 | 413 | 413 | 413 | 413 | 413 |
| | Std. D | 1.265 | 1.146 | 1.266 | 1.249 | 1.156 | .926 | 1.212 | 1.179 | .962 |
| Acceptors | Mean | 2.93 | 2.49 | 3.30 | 2.82 | 1.91 | 1.79 | 2.35 | 4.29 | 4.68 |
| | N | 833 | 833 | 833 | 833 | 833 | 833 | 833 | 833 | 833 |
| | Std. D | 1.316 | 1.118 | 1.205 | 1.162 | 1.069 | .945 | 1.180 | .924 | .651 |

**Table 27: Hypothesis 6, 7 and 8 - Additional Services Mean Values.**

Considering a range from "1 = do not agree at all" to "5 = fully agree".

Significant differences at a 5 per cent significance level can only be observed with covers (sig. = .000), information on artists (sig. = .000), sampling (sig. = .000) and search facilities (sig. = .000). The differences in the other features, lyrics, musicvideos, rintones, community features and playlists, are not significant (see table 28).

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Cover * Acceptors/Non-Acceptors | Between Groups | 52.594 | 1 | 52.594 | 31.142 | .000 |
| | Within Groups | 2100.899 | 1244 | 1.689 | | |
| Information * Acceptors/Non-Acceptors | Between Groups | 17.602 | 1 | 17.602 | 13.846 | .000 |
| | Within Groups | 1581.468 | 1244 | 1.271 | | |
| Lyrics * Acceptors/Non-Acceptors | Between Groups | 3.127 | 1 | 3.127 | 2.081 | .149 |
| | Within Groups | 1869.474 | 1244 | 1.503 | | |
| Musicvideos * Acceptors/Non-Acceptors | Between Groups | 3.989 | 1 | 3.989 | 2.807 | .094 |
| | Within Groups | 1767.431 | 1244 | 1.421 | | |
| Ringtones * Acceptors/Non-Acceptors | Between Groups | .008 | 1 | .008 | .007 | .936 |
| | Within Groups | 1501.312 | 1244 | 1.207 | | |
| Community Feature * Acceptors/Non-Acceptors | Between Groups | 1.291 | 1 | 1.291 | 1.466 | .226 |
| | Within Groups | 1095.214 | 1244 | .880 | | |
| Playlists * Acceptors/Non-Acceptors | Between Groups | 2.627 | 1 | 2.627 | 1.853 | .174 |
| | Within Groups | 1764.047 | 1244 | 1.418 | | |
| Sampling * Acceptors/Non-Acceptors | Between Groups | 39.887 | 1 | 39.887 | 38.663 | .000 |
| | Within Groups | 1283.390 | 1244 | 1.032 | | |
| Seach Facilities * Acceptors/Non-Acceptors | Between Groups | 17.212 | 1 | 17.212 | 29.158 | .000 |
| | Within Groups | 734.342 | 1244 | .590 | | |

**Table 28: Hypothesis 6, 7 and 8 - Additional Services ANOVA.**

As the difference in the importance assigned to sampling is significant, hypothesis 6 ($H_6$) will temporarily be accepted, whereas differences in community features are not significant. Consequently, hypothesis 8 ($H_8$) will temporarily be rejected.

Finally, all respondents were asked about for which additional service or feature they would pay more in addition to the core music track (see figure 23). Acceptors and non-acceptors prefer search facilities (24.88 %) over sampling (21.59 %). This implicates that hypothesis 7 ($H_7$) has to be rejected, as sampling is considered as an important additional feature, but not the most preferred one. Further features such as music videos (18.06 %) and lyrics (17.01 %) are preferred by a larger amount of respondents. Community features are the least preferred ones, with less than 5 % preferring features such as the exchange of playlists and online conversation with peers. This is supported by the low rating in the importance assigned to them (see table 27).

**Most Preferred Feature**

| Feature | Percent |
|---|---|
| searchfacilities | 24,88% |
| sampling | 21,59% |
| musicvideos | 18,06% |
| lyrics | 17,01% |
| cover | 8,91% |
| ringtones | 4,41% |
| playlists | 2,33% |
| infos | 2,33% |
| conversation | 0,48% |
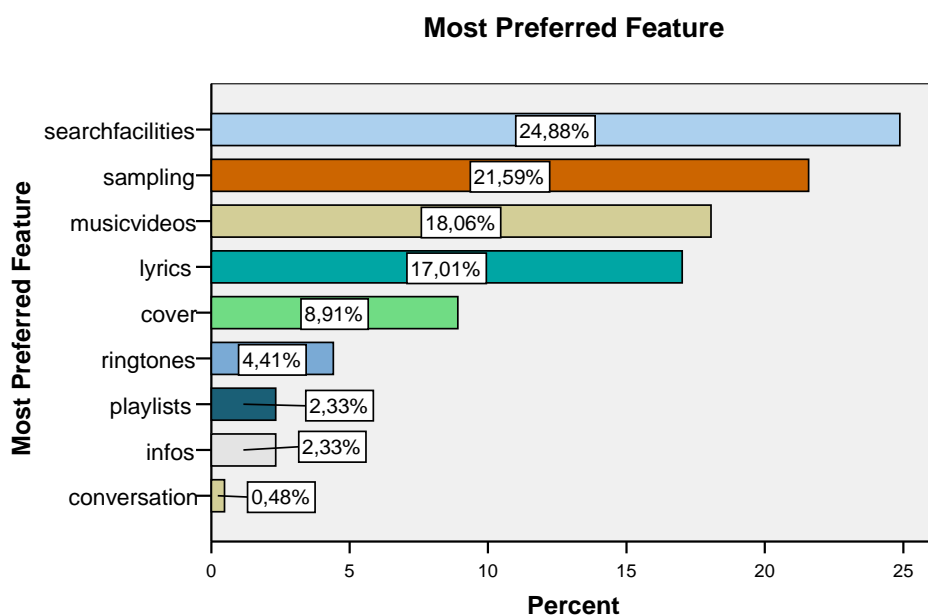
**Figure 22: Hypothesis 7 – Most Preferred Feature.**

## 5.2.8    Results on other Object, Subject and Context Determinants

Furthermore, respondents were asked about their evaluation of differences between traditional music retailing and digital music distribution. Five advantages of digital

music distribution compared to traditional record retailing were given to be rated regarding their importance to respondents.

The possibility to quickly obtain songs from the Internet is considered as the most important advantage for both acceptors (n = 833, mean = 4.49, SD = 0.775) and non-acceptors (n = 413, mean = 4.26, SD = 1.006) compared to traditional retail (see table 29). The availability of rare music tracks on the Internet ranks second, regarding the importance of advantages of digital music distribution. Acceptors (mean = 4.43, SD = 0.830) value it higher than non-acceptors (mean = 4.13, SD = 1.083). Similar to that, acceptors (mean = 4.37, SD = 0.879) also assign more importance to the elimination of territorial restrictions in comparison to non-acceptors (mean = 4.11, SD = 1.101). The possibility to acquire music 24/7 ranks 4th, with acceptors (mean = 4.27, SD = 1.007) once more assigning more importance to it than non-acceptors (mean = 4.01, SD = 1.214). The least important advantage, though still of great importance for both groups in general, the chance to buy singe songs compared to traditional retailing, shows a bigger difference between acceptors (mean = 4.24, SD = 1.020) and non-acceptors (mean = 3.70, SD = 1.245).

| Acceptors/Non-Acceptors | | Single Song | Scarcity | Territory | Speed | Time |
|---|---|---|---|---|---|---|
| Non-Acceptors | Mean | 3.70 | 4.13 | 4.11 | 4.26 | 4.01 |
| | N | 413 | 413 | 413 | 413 | 413 |
| | Std. D | 1.245 | 1.083 | 1.101 | 1.006 | 1.214 |
| Acceptors | Mean | 4.24 | 4.43 | 4.37 | 4.49 | 4.27 |
| | N | 833 | 833 | 833 | 833 | 833 |
| | Std. D | 1.020 | .830 | .879 | .775 | 1.007 |

**Table 29: Traditional vs. Digital Music Distribution Mean Values.**

Considering a range from "1 = do not agree at all" to "5 = fully agree".

In a consecutive step, the significance of these differences between the two groups was evaluated (see table 30). At a significance level of 5 per cent, all differences are significant (sig. = .000).

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Single Song | Between Groups | 81.461 | 1 | 81.461 | 66.680 | .000 |
| | Within Groups | 1529.519 | 1252 | 1.222 | | |
| Scarcity | Between Groups | 26.541 | 1 | 26.541 | 30.947 | .000 |
| | Within Groups | 1073.754 | 1252 | .858 | | |
| Territory | Between Groups | 18.949 | 1 | 18.949 | 20.381 | .000 |
| | Within Groups | 1164.031 | 1252 | .930 | | |
| Speed | Between Groups | 14.546 | 1 | 14.546 | 19.377 | .000 |
| | Within Groups | 939.850 | 1252 | .751 | | |
| Time | Between Groups | 19.298 | 1 | 19.298 | 16.481 | .000 |
| | Within Groups | 1466.045 | 1252 | 1.171 | | |

**Table 30: Traditional vs. Digital ANOVA**

The acquisition of music from the Internet is always related to different risks that have to be considered. On the one hand, licenses for the digital track may be missing, the sound quality of songs may be low, the stability of the download or streaming process may not be enabled or private information from downloaders (such as names, banking details, addresses, etc.) may illegally be used and transferred to third parties without the users' approval. For both groups, acceptors (n = 833, mean = 4.75, SD = 0.628) and non-acceptors (n = 413, mean = 4.70, SD = 0.712), privacy is regarded as a very important issue (see table 30), with only marginal differences between groups. The sound quality of downloaded or streamed music also is considered important by acceptors (mean = 4.71, SD = 0.605) and non-acceptors (mean = 4.59, SD = 0.718). The same applies to the importance of stability of the downloading or streaming process for acceptors (mean = 4.42, SD = 0.744) and non-acceptors (mean = 4.30, SD = 0.838). An interesting result was generated when acceptors (mean = 3.61, SD = 1.209) and non-acceptors (mean = 3.16, SD = 1.367) were asked about the importance of acquiring licensed music. In total, both groups value this risk slightly positive, however acceptors are much more concerned about it compared to non-acceptors.

| Acceptors/Non -Acceptors | | Licensed Music | Sound Quality | Stability of Download | Privacy |
|---|---|---|---|---|---|
| Non-Acceptors | Mean | 3.16 | 4.59 | 4.30 | 4.70 |
| | N | 413 | 413 | 413 | 413 |
| | Std. D | 1.367 | .718 | .838 | .712 |
| Acceptors | Mean | 3.61 | 4.71 | 4.42 | 4.75 |
| | N | 833 | 833 | 833 | 833 |
| | Std. D | 1.209 | .605 | .744 | .628 |

**Table 31: Digital Music Distribution Risks Mean Values.**

Considering a range from "1 = do not agree at all" to "5 = fully agree".

An ANOVA table was generated to find out if results differ significantly between these two groups (see table 32). Only the differences regarding licensed music (sig. = .000) and sound quality (sig. = .001) are significant. Stability of downloading or streaming and privacy differences are not significant at a 5 per cent significance level.

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Licensed Music | Between Groups | 56.514 | 1 | 56.514 | 35.410 | .000 |
| | Within Groups | 1985.432 | 1244 | 1.596 | | |
| Sound Quality | Between Groups | 4.378 | 1 | 4.378 | 10.534 | .001 |
| | Within Groups | 517.051 | 1244 | .416 | | |
| Stability of Download | Between Groups | 3.891 | 1 | 3.891 | 6.451 | .011 |
| | Within Groups | 750.267 | 1244 | .603 | | |
| Privacy | Between Groups | .578 | 1 | .578 | 1.339 | .247 |
| | Within Groups | 536.816 | 1244 | .432 | | |

**Table 32: Digital Music Distribution Risks ANOVA**

### 5.2.9   Restrictions

Finally, a few restrictions regarding the previously discussed results have to be named. First and foremost the sample predominantly consists of younger people between 10 and 39. Although this age group makes up the biggest part of people downloading legally and illegally (see chapter 2.5.1), further age groups should be included in future research. It would be interesting to learn about the reasons they have to refrain from using legal online music services. The question would be if they are aware of such

services at all and/or if they perceive these existing services to be too dubious, costly or even complicated.

In addition, results imply that respondents might not be well informed about business models such as the superdistribution model. Although the respondents were provided a brief explanation of the basic features of this and other models, respondents were rather indecisive about their intention to use this specific service in the future. Certainly they might just not be interested, however, as this business model is a rather new approach to distribute online music it can be possible that awareness and knowledge are not sufficient.

# 6 Interpretation and Discussion of Results

Following the survey results, it can be said that providers of legal online music distribution services have to consider both the needs of acceptors and non-acceptors of such services to overcome the problems and monetization gap due to physical retail sales. Unlike Frenzel, who only considers the group of acceptors for his analysis, it was decided to observe both groups (acceptors as well as non-acceptors) as it does not seem reasonable to exclude potential customers from further analysis. Non-acceptors' needs regarding the composition of LOMDS have to be profoundly analysed as well, as they do not show any signs to be completely opposing legal offers. The distribution of music in a digital era asks for solutions for potential customers' diverse needs. Services have to be adopted in accordance to this analysis' results.

Results show that the awareness of such music distribution services is given among respondents. However, the interest and intention to use such services have to be increased, thus it is inevitable to respect customer needs and accordingly to develop business models that include both the requirements of acceptors and non-acceptors. Following this analysis' results, the upcoming implications regarding the observed determinants and the future design of LOMDS can be constructed.

## 6.1 Variety of Content

The **variety of content** is a core issue for legal online music distribution services. Offering music from a wide range of artists and bands in a certain genre is crucial for success. Record labels as well as digital music retailers have to respond to this drastic situation. On the one hand record labels can offer their whole repertoire of artists and bands, on the other hand they will hardly be able to provide as much music as needed to (potential) customers. Co-operation with other labels and bands might seem inevitable, even if this would mean that control of ownership and lower margins have to be expected. Another solution could be that they invest more money in the development of new artists and bands in the future to increase their service and product portfolio. However it is a difficult approach as almost all record labels have downsized their amount of artists and bands to the few remaining "cash-cows", that are artists and bands

likely to generate profit for labels. Less overhead allows them to increase profits, even though potential customers are not offered a deeper set of genre-specific music. The same applies to a broader amount of different genres offered to customers. Actuality of music, offering chart newcomers and hits, is a further critical success factor. For the past few years it could have been observed that record labels market more "Greatest Hits"-albums and reunions of former success bands than ever before. This is a further characteristic in which disastrous situation record labels are finding themselves in – low investments in the development of new artists and trying to "squeeze out" their existing repertoire through extensive promotion (see also figure 7, cost structure of major record labels). This is only a one-sided approach to fulfil customers' requirements of actuality, as the development and launching of new artists and bands is not paid enough attention to.

## 6.2   Payment Model

In general, business models are often understood as the way **payment** is handled. Results show that still a pay-per-track payment model is the most important way to obtain online music. A subscription or "all-you-can-eat" model is not of great importance compared to the "pay-per-track" model, although the music industry's hopes are based on the current and future implementation of such services. This might have several reasons. Either these subscription services are considered to be too expensive or customers do not intend to download or stream as much music that it would pay off for them. This is further supported by the fact that respondents assign high importance to the possibility to obtain single digital songs compared to traditional retailing (where they usually would have to buy the whole album). Additionally it could be of interest in how far the duration of contracts (contracting period) in connection with subscription models is of importance for the adoption or refusal of LOMDS and in how far current contracting periods meet customers' needs. Nevertheless the music industry should further apply a two-sided approach, to offer both pay-per-track as well as subscription models. It can be assumed that respondents assign less importance to subscription models as still a majority of currently applied subscription models equals the rent model. This means that customers would not be able to listen to purchased music anymore as soon as they unsubscribe from LOMDS, which is further supported by the

low importance assigned to the provision of rent models and the high importance assigned to the non-existence of any restrictions in the usage of digital music. As soon as subscription models include these characteristics, subscription models are likely to be successful and in demand. In general though marketing should consider differences assigned to the importance of subscription models between age groups, as younger respondents were likely to assign higher importance to these models than older ones.

Similar to the rent model, free ad-based models are also not considered to be used in future by respondents. They are not satisfied with the circumstance that they will not receive music of excellent quality as a sound advertisement is attached to the songs, even though the songs can be acquired for free. It should be kept in mind that customers may also refrain from using these models, due to the lack of ownership of music. This is because free ad-based models predominantly appear in the form of streaming services (whose main difference to the traditional download is the restriction in the usage and ownership of the song) and this way of music distribution is not of great importance to acceptors as well as non-acceptors of LOMDS.

Record labels and digital retailers should keep away from altering the core product, which happens under the free ad-based model, and try to implement advertisements only on their websites or to allow customers to somehow remove the advertisements after they downloaded the music track. The problem would be in how far companies that pay for advertisements adopt this approach, as the ad-based model discussed in this thesis offers specific customer targeting opportunities compared to the traditional advertising model (i.e. showing ads on websites).

The implementation of superdistribution models is not considered to be of great importance for the near future of larger record labels' and artists' financial success as this model does not seem to be sophisticated enough to be applied within the next few years. However, potential customers show a slight positive attitude towards this model thus the aim of marketing of superdistribution should be focused on the description of the technical and administrative principles underlying to music industry specialists and potential customers, as well as on a larger model experiment applied by major industry players.

## 6.3  Price

Low **prices** are important prerequisites for respondents to obtain digital music, for acceptors this is even more important than it is to non-acceptors. However, music free of charge is even of greater importance to non-acceptors than it is to acceptors. This might imply to a certain extent that non-acceptors would rather acquire free online music from illegal sources than paying for it. Assuming that non-acceptors are not willing to pay for music at current price levels, labels and digital music retailers should once more decide whether to charge high margins per track or to lower prices to benefit from the quantity of downloads sold as non-acceptors could get an incentive to purchase (more) online music. The latter could guarantee existing customers to even download and stream more music and potential customers to accept legal online music distribution services. Price acceptance should therefore be a focus of further research among acceptors and non-acceptors.

## 6.4  Streaming and Downloading

Offering **streaming and/or downloading services** to customers is a further issue for record labels and digital music retailers. Results show that downloading is still the most important way of music acquisition. Usually it allows the customers to obtain music tracks forever, whereas streaming requires customers to have access to the Internet to listen to songs (except the user has specific technical knowledge and tools to copy streams while listening) and usually to pay for each time listening to music. This might to a certain extent imply the importance of mobility and portability of music. Streaming is still more important to non-acceptors than it is to acceptors, as streaming might have become the main (free) source to listen music to. Nevertheless, streaming is not considered being of great importance in general. Therefore the music industry should point its efforts on the supply of downloading services to (potential) customers. Though, it has to be mentioned that streaming might become more important in the future if record labels decide to offer the whole repertoire of bands and artists through streaming services. As of today not all labels or digital retailers offer the full repertoire to its customers through streaming. This might certainly be a reason for people not to use such services, which can be supported by the results regarding content variety. A further

disadvantage of online streaming might be that it resembles traditional radio broadcasting, which is usually considered a free service for customers (although in general radio fees have to be paid). All in all, these results are not surprising as downloading offers customers more convenience (i.e. portability, accessibility, etc.) compared to streaming. However, streaming can take a crucial part in the promotion of downloading services. Free sampling of music through streaming could have positive impacts on customers' risk reduction and therefore have a supporting function for the sales of digital downloads. It has to be added though that a majority of digital retailers/ record labels are already providing their customers with such online services. Future research could focus on their effectiveness on risk reduction and the purchase of online music.

Further it can be seen that free streaming has been effected by a majority of respondents, acceptors as well as non-acceptors, whereas only a small part already paid for online music streaming. Huber's statement, which says that the biggest problem of streaming is that only a few music consumers listen to online "radio", can therefore partially be negated (as still more older people have to be considered in future research). Thus it has to be found out which particularities of streaming outperform those of downloading. As a consequence marketing should point its effort on the promotion of these advantages.

It can be said that the provision of streaming could be made more attractive to potential customers in combination with a subscription model, combining both the advantages of unlimited downloading as well as the possibility to immediately stream music (assuming broadband connection).

## 6.5 Flexibility and Portability

Subsequently to these results, analysis on the **flexibility and portability** of music further strengthens the need for music without usage restrictions. Licensing of music is an important issue for record labels and artists, however at the costs of customers as different licensing schemes narrow their liberty and mobility in the usage of purchased digital music. Results show that neither additional software client downloads, protected digital file formats nor quantitative usage restrictions (i.e. burning, downloading,

transferring of music) are welcomed or accepted by customers. Unfortunately, this is one of the most critical issues for the whole music industry. Hardly anyone accepts to waive rights to others than themselves. The licensed use of music is intended to protect the creators of musical works and to guarantee them to get paid. However, as soon as these rights affect the liberty in where and how often customers are being allowed to listen to music, it becomes a serious issue for customers to refrain from any further purchase. Digital rights management (DRM) offers advantages to both the copyright owners as well as to customers. It may, for example, allow to benefit from the abolition of blanket taxes on storage media (i.e. CD or DVD), but the more customers will be restricted in their possibilities to listen to music the more they will search for alternative solutions to obtain online music. It seems obvious that this might elate customers to download or stream music from free (illegal) services. Free legal services could have positive effects on customers as well as on digital music providers, labels and artists. Customers and digital music providers would benefit from a wider range of music they could acquire or sell, whereas smaller labels and artists could leapfrog the monetization gap due to lower investment in the production, distribution and advertising of their music. This could imply both an increase in reputation and an increase in financial income from concert bookings or merchandise sales. In this respect the implementation of Creative Commons models that create individual usage rights for digital content could be proof useful, if only for bands, labels and artists that are restricted by digital rights management (i.e. unknown, commercially unsuccessful artists). Free music combined with songs for a charge could be combined and offered simultaneously in LOMDS, as this would provide customers with a wider range of music from major record labels as well as from independents (be it free or with costs). For the supply side, this could hold synergies for all parties involved, as well-known artists' reputation could be raised by the distinction between free music from unknown artists and music with costs from themselves. As mentioned before, unknown artists could well receive a boost of their own reputation as they offer their music alongside famous artists. Further it could lead to financial progress due to the lack of investment in promotional actions.

## 6.6  Additional Music Services

**Additional music services** add value to the core product – the song. It is of great importance for music service providers to offer search facilities that allow customers to easily find or detect music. A simple search function is the least they should provide. In a further step it may seem necessary to allow customers to search not only genre or artist related, but also to find new search criteria that facilitate the discovery of previously unknown bands and artists. This might reinforce the selling of artists' back catalogues or in general music from the "long tail"[241]. Users of legal online music distribution services should also be given the chance to sample music before purchase. This is a widely common requirement for customers to reduce risk and is also practice for most digital music providers. Anyhow, results show that other features are far less important than the previously mentioned ones. Lyrics and music videos could be further offered in addition to the core product. For these four features customers would rather pay an additional fee for in combination with the proper music track. Record labels and service providers could try to experiment with charging additional features. However, research on price acceptance regarding these features has to be conducted in the future.

It is interesting to see that respondents hardly appreciate the community feature, the possibility to interact with peers and exchange playlists with them, although a lot of digital music providers have set up community features such as forums and chats. This might imply that LOMDS will hardly be adopted because of the provision of such social networking or virtual community features. However, as soon as consumers adopt LOMDS and actively use it, such features could offer crucial background information on customers' music taste and music listening behaviour. Only if privacy issues (data mining) can be cleared out, these services might further be considered as supporting factors for the promotion of online music and the development of customized product and service bundles.

---

241 The "Long Tail"  is a retailing concept which intends to describe a strategy based on the Pareto principle (20/80 rule) in which a large number of unique items (f.e. music from less-known artists and bands) is sold in relatively small quantities, whereas fewer and more popular items are sold in larger quantities (f.e. music from well-known artists and bands). This "Long Tail" princinple has been propagated by Chris Anderson of Wired magazine.
cf. Anderson (2004)

## *6.7  Digital Distribution and Risk*

In general, the **digital distribution** of music dramatically increases **in comparison to the traditional sales of music**. Marketing efforts should focus the advantages the distribution of digital music through the Internet has to further curb sales in this direction. As traditional retailing will hardly be saved from decreasing record sales, energy should be given to the sales of digital music. Consumers appreciate the comfort the distribution of digital music has, like the speed of obtaining music or the purchase of rare songs which they might have to search long for in physical retail stores or not even find in their home country. Almost borderless (in regard to territory) and limitless (in regard to time) access to a vast range of multimedia content should be further highlighted through advertising campaigns as both groups observed assigned high importance to these features.

Major **risks**, such as to obtain not licensed music, songs of low sound quality (i.e. songs that might contain viruses or are incomplete), unstable streaming or downloading processes as well as privacy issues (e.g. fraud) are critical factors. Especially the latter three factors are assigned high importance to by acceptors as well as non-acceptors. This implies to a certain extent that LOMDS that can not guarantee customers security of privacy, digital distribution and sound quality will hardly be able to gain new customers, or to keep their existing ones.

# 7   Conclusion

"You go through stages where you wonder whether you are Christ, or just looking for him."

(David Bowie, singer)

This quote by Mr. Bowie may best depict the current situation of (mainly) music record labels on a global scale. For too long now, it seems that they did not know which business segment to focus on - either sticking to the promotion of traditional record sales or enforcing sales of digital music records. Today, as their old business concepts have failed, they seek for something which might save their business' future. The digitalisation of music has had tremendous positive (increasing sales) and negative (file sharing) effects on its distribution and on consumer behaviour over the past few years, but still only a small portion of revenue is generated by online sales compared to traditional sales. As a consequence, this thesis was intended to provide deeper insights into the current situation both record labels and artists on the one side, and customers on the other, are in.

A description of the music industry value chain and the music market structure was supposed to give a starting point for the underlying analysis. Both the traditional music value chain as well as its market structure had been depicted. In a consecutive step the influence of digitalization on the value chain and the market structure were analysed. New players of the music industry were presented and it was shown that the traditional players such as labels, artists, bands, producers or physical retailers are not the only ones trying to get a piece of the cake. Content aggregators, download platforms, virtual record labels, telcos or internet service providers – they all were found to be investing in online music distribution. This development was further highlighted by providing the reader with a comparison of physical versus digital music sales for the past couple of years. In this respect the dangers of digital music were stressed in detail. Often referred to as the main threat of digital music sales, users of file sharing networks and their characteristics, intentions to demand, effects of demand and the intentions to illegally supply Internet users with copyrighted music were described in chapter 2. Basically this was supposed to provide a foundation for further analysis on how future distribution services could be improved to decrease p2p file sharing and consequently increase

digital sales. Without knowing that not only economic reasons (i.e. prices), but also psychological reasons (risk perception) and certainly the composition and design of legal online distribution services have an effect on whether to adopt LOMDS or not, it would hardly be possible to understand the complexity which the digitalization of music brings along. In general, the music industry has provided a couple of actions to tackle digital piracy, of which the implementation of new e-business models in the final form of legal online music download/distribution services (LOMDS) is considered to be essential. Therefore as the music industry has always been driven by innovation, chapter 2.6 was supposed to give a depiction of what innovation means for the music industry and how, namely through customized LOMDS, it could be used nowadays to fight digital piracy and to further curb digital sales

In the third chapter an incremental build-up of business models was provided. First and foremost the different constituent parts of a business model were described and it was shown how the traditional music industry's business model had operated in the past. This led to taxonomy of music e-business model categories, which were described in detail in chapter 3.4. These models were found out to be the most promising (according to literature) models that could be applied (partially are applied) to increase the popularity of digital music sales. Categories were described based on attributes of digital music, its distribution and services that could come with music.

Afterwards an adoption model was presented that was intended to focus the demand side of the music industry – namely the final customer. Only if the specifics of LOMDS meet customers' diverse needs, success is likely. Consumer attitudes towards digital content specifics, such as the content variety or breadth of content, the price and payment model, downloading or streaming, flexibility and portability issues and additional services, had been retrieved from literature research and finally research hypotheses were drawn. The approach to distinguish between acceptors and non-acceptors of LOMDS was considered to provide important insights into how such services could be improved to gain new customers (non-acceptors) and to maintain existing ones (acceptors). The adoption model applied in this analysis can be considered a reliable tool to measure the adoption of different determinants of LOMDS. In addition it allowed distinguishing between acceptors and non-acceptors of LOMDS. The importance assigned to different characteristics of online music distribution allows the

discussion of the future composition of LOMDS and the implementation of new e-business models.

The online survey among predominantly university students and university staff showed that there are differences in the importance assigned to the specifics of digital music and its distribution among acceptors and non-acceptors of LOMDS. Although the majority of respondents consisted of young adults between 20 and 29 years, it has to be noted that these results have to be considered positively as this age group is still supposed to be the driving force of digital music sales nowadays. However future research should further include and observe the age group of 30 – 39 year-olds, among which the percentage of online sales has soared over the past years.

Basically analysis depicts that there is no single business model that represents *the* solution for future financial success for the music industry, though integral parts of business models described in this thesis were found to be crucial for the adoption of LOMDS. E-business models that are based on "pay per track" are still considered to be the main and most important form of payment. Subscription models, although propagated by the music industry for a couple of years now, are still not assigned much importance to. Nevertheless it can be said that the younger the age, the more importance subscription models are assigned to in comparison to older age groups. The combination of free digital music combined with advertising is considered a promising way of "payment" in theory, though results show that e-business models that are based on free ad-based music are of less importance compared to the traditional "pay per track" and subscription models. Also rent models are not considered the future success factor for an increase of digital sales. Superdistribution models that involve consumers in the financial exploitation of digital music sales can be seen as an interesting opportunity for record labels and artists. As mentioned in chapter 6.2 this model still poses several questions regarding its implementation and administrative steps regarding remuneration of labels, bands, artists and consumers. Anyhow these models can be used to promote less known labels and bands which are lacking the financial possibilities to offer their songs and records via LOMDS, as margins are more lucrative for all parties involved.

When offering online music, the way of digital distribution either through traditional downloading or through streaming can be considered an important success factor. Standalone models only focusing on either one of the two forms of distribution

are less likely to succeed. Downloading has to be primarily used in future in combination with streaming, which could proof to be an important supporting factor. Portability of music and flexibility in the usage of digital music is and will be the key for the adoption of LOMDS. Only downloads without restrictive DRM can comply with this prerequisite. The flexibility in the acquisition and usage of music can further be enabled through the abolition of the necessity to download software clients. Respondents assigned high importance to the non-existence of such restrictive measures and should not be ignored by record labels and digital retailers.

Virtual communities and social media websites are the phenomenon of the Internet in the past few years. Facebook, Twitter or MySpace with an increasing number of members are platforms pooling a vast amount of (potential) users of LOMDS. It is not surprising that music industry efforts are focused on these websites to promote and sell their online music. Anyhow virtual community features that are offered with LOMDS are assigned low importance to by respondents. The adoption of LOMDS is therefore not depending on the provision of such services, however they could help supporting the promotion of digital music, augmenting the popularity of artists and bands, and consequently increasing the interest in using LOMDS by external social media websites or virtual communities. For music record labels it could further represent a valuable source of information on consumers' music tastes and the influence of peers on other virtual community members' purchase behaviour. Future research could therefore look closer on the influence of such community websites on the adoption of LOMDS.

According to the results of the underlying analysis, e-business models that are based on the manufacturer model are considered to be less likely to attract customers, due to the absence of a vast amount of different genres, bands and artists. This can be supported by the fact that only a small amount of respondents has already purchased music from record label and artist websites. Record labels can basically offer any feature but the variety of music content a common digital music retailer offers. Co-operation between major record labels to circumvent this obstacle was initiated in the past, but without the necessary financial success. This implies that they should focus on their core competences and try to sell their digital music repertoire through the use of intermediaries (i.e. digital music retailers). By contrast record labels could further support online sales of physical records as well as digital music and basically try to use

their Internet presence for the promotion of their music supply. Free sample downloads or streams, free music videos, background information and lyrics could help to spur interest in their bands and artists. In the light of hybrid retailers such as Amazon, that offer both digital as well as physical records, record labels could provide consumers with content that can not be acquired from other sources and enable them to directly monitor and control their music (content) sales.

Regarding the adoption model applied for this thesis it can be said that future research has to take a closer look at the latter steps of the adoption process, which are the attempt to purchase, the purchase as well as the usage, to further improve online distribution services or to develop innovative customer-friendly services.

This thesis' main aim was to provide a closer look at the music industry's possibilities for the online distribution of digital music and adoption factors that could lead to an increase in music sales. However the music industry's crisis is not only to be solved by digital music distribution through LOMDS and the abolition of file sharing, but also through the adaptation of traditional music retailing to consumers' needs and the provision of value through live concerts, merchandising and sponsoring. Therefore it could be of importance to further observe these business fields to shed light on future success factors for the music industry.

In any way copyright will further dominate the discussion of the financial exploitation of music. Although this thesis did not consider legal issues in detail, its importance for future success remains unquestioned. Protection by copyright has to be adapted to guarantee financial success for the music industry as well as less restriction in the usage of music for consumers.

This is it!

# 8   Bibliography

Abboud, L. (2009): World News: French Illegal Downloaders Face Loss of Internet Access. In: The Wall Street Journal, Eastern Edition, pg. A.7.

Altschuller, S.; Benbunan-Fich, R. (2009): Is music downloading the new prohibition? What students reveal through an ethical dilemma. In: Ethics Information Technology, 11, pp.49-56.

Amberg, M.; Schröder, M. (2007): E-business models and consumer expectations for digital audio distribution. In: Journal of Enterprise Information Management, 20/3, pp.291303.http://proquest.umi.com/pqdweb?did=1344435291&sid=4&Fmt=3&clientId=37603&RQT=309&VName=PQD. Accessed on 05.06.09.

Anderson, C. (2004): The Long Tail. In: Wired. http://www.wired.com/wired/archive/12.10/tail.html. Accessed on 06.11.09.

Anderson, C. (2008): Free! Why $0.00 Is the Future of Business. In: Wired. http://www.wired.com/techbiz/it/magazine/16-03/ff_free. Accessed on 01.05.09.

"Apple's iTunes announces lower priced, restriction-free music" (2009) In: Internetretailer.com http://www.internetretailer.com/dailyNews.asp?id=28996. Accessed on 08.06.09.

Beckenkamp, M. (2006): A game-theoretic taxonomy of social dilemmas. In: Central European Journal of Operations Research. http://proquest.umi.com/pqdweb?did=1157662731&sid=5&Fmt=6&clientId=37603&RQT=309&VName=PQD. Accessed on 21.05.09.

Becker, J.U.; Clement, M. (2006): Dynamics of Illegal Participation in Peer-to-Peer-Networks – Why do People Illegally Share Media Files? In: Journal of Media Economics, 19/1, pp. 7-32. http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=19190623&site=ehost-live. Accessed on 20.05.09.

Becker, J.U.; Clement, M. Schusser, O. (2005): P2P-Netzwerke und die Generation Napster. In: Clement, M.; Schusser, O. (2005) (eds.): Ökonomie der Musikindustrie. 1st edition, Gabler Edition Wissenschaft, Wiesbaden.

Becker, J.U.; Clement, M.; Schusser, O. (2008): Piraterie in Peer-to-Peer-Netzwerken. In: Clement, M.; Schusser, O.; Papies,D. (2008) (eds.): Ökonomie der Musikindustrie. 2nd edition, Gabler Edition Wissenschaft, Wiesbaden.

Bhattacharjee, S. et al. (2004): Whatever happened to payola? - An empirical analysis of online music sharing. In: Decision Support Systems, 42, pp.104-120.

Bhattacharjee, S. et al. (2006): Consumer Search and Retailer Strategies in the Presence of Online Music Sharing. In: Journal of Management Information Systems, 23/1, pp.129-159.

Bhattacharjee, S. et al. (2009): Re-tuning the Music Industry - Can They Re-Attain Business Resonance? In: Communications of the ACM; 52/6, p.136-140. http://web.ebscohost.com/ehost/pdf?vid=4&hid=3&sid=e3ce2402-551a-4e75-888d-c2915a4527ec%40sessionmgr109. Accessed on 12.06.09.

Blackshaw, P.; Nazzaro, M. (2004). Consumer-Generated Media (CGM) 101: Word-of-mouth in the age of the Web-fortified consumer. http://www.nielsenbuzzmetrics.com/whitepapers. Accessed on 20.04.09.

Blakney, V.L.; Sekely, W. (1998): Retail attributes: influence on shopping mode choice behaviour. In: Journal of Managerial Issues, 6/1, pp.101-119.

Bockstedt, J.C.; Kauffman, R.J.; Riggins, F.J. (2006): The Move to Artist-Led On-Line Music Distribution: A Theory-Based Assessment and Prospects for Structural Changes in the Digital Music Market. In: International Journal of Electronic Commerce, 10/3, pp.7-38. http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=21258422&site=ehost-live. Accessed on 05.05.09.

Bohn, Ph. (2006): Akzeptanz von Digital Rights Mangement – Ergebnisse zweier Konsumentenbefragungen. In: Technologiefolgenabschätzung – Theorie und Praxis, 2/15. http://www.itas.fzk.de/tatup/062/bohn06a.pdf. Accessed on 07.07.09.

Briegmann, F.; Jakob, H. (2008): Management der Wertschöpfungskette. In: Clement, M.; Schusser, O.; Papies,D. (2008) (eds.): Ökonomie der Musikindustrie. 2nd edition, Gabler Edition Wissenschaft, Wiesbaden.

Brooks, H. (1982): Social and technological innovation. In: S. B. Lundstedt & W. E. Colglazier, Jr. (Eds.): Managing innovation - The social dimension of creativity, invention and technology. New York, Pergamon Press.

Bruno, A. (2009): ADD SUPPORTED? In: Billboard, 121/17. http://proquest.umi.com/pqdweb?index=10&did=1705229061&SrchMode=2&sid=2&Fmt=6&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1245059484&clientId=37603. Accessed on 12.06.09.

Bundesverband Musikindustrie (2007): Brennerstudie 2007. http://www.musikindustrie.de/uploads/media/ms_branchendaten_brennerstudie_2007_02.pdf. Accessed on 13.06.09.

Bundesverband Musikindustrie (2009): Brennerstudie 2009. http://www.musikindustrie.de/uploads/media/Brenner_Studie_2009_PR_FINAL_mit_Titel_090828.pdf. Accessed on 15.09.09.

A Business Model definition: validating opportunities opened by technological change (2004). Manuscript submitted to: International Journal of Electronic

Commerce.http://www.wireless.kth.se/AWSI/LCI/publication_files/Business%20
Model%20Defintion%20submit%20IJEC%20Apr04.pdf. Accessed on 01.06.09.

Buxmann, P. et al. (2005): Strategies for digital music markets: pricing and the
effectiveness of measures against pirate copies- results of an empirical study. In:
Zukunftsmusik.net, http://www.zukunftsmusik.net/db/upload/pdf/strategies-
digital_music.pdf. Accessed on 23.05.09.

Capgemini (2008): Music Labels – Striking the Right Chord for Stimulating
Revnues.Telecom & Media Insights, 26.
http://www.de.capgemini.com/m/de/tl/Music_Labels.pdf. Accessed on 28.05.09.

Chen, L-D.; Tan, J. (2004): Technology Adaptation in E-commerce: Key Determinants
of Virtual Stores Acceptance. In: European Management Journal, 22/1, pp.74-86.

Choi, D.Y.; Perez, A. (2007): Onlince piracy, innovation, and legitimate business
models. In: Technovation, 27, pg.168-178.

Clemons, E.K.; Lang, K.R. (2003): The Decoupling of Value Creation from Revenue –
A Strategic Analysis of the Markets for Pure Information Goods. In: Information
Technology and Management, 4, pp.259-287.
http://proquest.umi.com/pqdweb?did=323183821&sid=1&Fmt=10&clientId=376
03&RQT=309&VName=PQD. Accessed on 29.05.09.

Comscore (2007): For Radiohead Fans, Does "Free" + "Download" = "Freeload"?.
Pressrelease.http://www.comscore.com/Press_Events/Press_Releases/2007/11/Ra
diohead_Downloads. Accessed on 12.06.09.

Dholakia, R.R.; Chiang, K.P. (2003): Shoppers in Cyberspace: Are They From Venus or
Mars and Does It Matter. In: Journal of Consumer Psychology, 13/1-2, pp.171-
176. http://web.ebscohost.com/ehost/pdf?vid=3&hid=4&sid=6ffb0023-32a4-41f1-
a5d1-9bd21a22b6ab%40sessionmgr2. Accessed on 15.07.09.

Ebster,C.; Stalzer,L. (2003): Wissenschaftliches Arbeiten für Wirtschafts- und
Sozialwissenschaftler. 2nd edition, WUV Universitätsverlag, Wien.

Weitmayr, H. (2009): Musikbranche stellt sich trotz rauem Wind neu auf. Interview
with Hannes Eder, CEO Universal Austria. In: Wirtschaftsblatt, p.4, from
10.09.09.

eMarketer (2009): The Entertainment Industry Plays a Sour Note Online.
http://www.emarketer.com/Article.aspx?R=1007134. Accessed on 16.06.09.

EMI Music Austria Website. www.emimusic.at. Retrieved on 14.05.09.

Empirical Analysis. In: Journal of Political Economy, 115/1.
http://web.ebscohost.com/ehost/pdf?vid=2&hid=117&sid=36fa5e0c-b6bb-4b6d-
85fd-d6e9843c574f%40sessionmgr107. Accessed on 20.04.09.

Faison, E. (1977): The neglected variety drive. In: Journal of Consumer Research, 4/3, pp.172-175. http://www.jstor.org/stable/pdfplus/2488645.pdf. Accessed on 06.07.09.

Fenech, T. (2002): Exploratory study into wireless application protocol shopping. In: International Journal of Retail and Distribution Management, 30/10, pp.482-497. http://proquest.umi.com/pqdweb?index=0&did=239102711&SrchMode=1&sid=1 &Fmt=6&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1246966 461&clientId=37603. Accessed on 07.07.09.

Flavian, C.; Guinaliu, M. (2005): The influence of virtual communities on distribution strategies in the internet. In: International Journal of Retail & Distribution Management, 33/6, pp.405-425. http://www.emeraldinsight.com/Insight/viewPDF.jsp?contentType=Article&Filen ame=html/Output/Published/EmeraldFullTextArticle/Pdf/0890330601.pdf. Accessed on 10.07.09.

Fox, M.; Wrenn, B. (2001): "A broadcasting model for the music industry". In: The International Journal on Media Management, 3/2, pg.112-119. http://pdfserve.informaworld.com/828027_731272462_911787884.pdf. Accessed on 09.06.09.

Frahm, C. (2007): Die Zukunft der Tonträgerindustrie. Verlag Werner Hülsbusch, Boizenburg.

Fraunhofer IDMT (2009): PotatoSystem. http://www.idmt.fraunhofer.de/de/projekte_themen/potato.htm. Accessed on 10.06.09.

Frederiksen, L. (2002): Innovation? – The fuzzy case of the pop music industry. Conference Paper presented at the DRUID Summer Conference on "Industrial Dynamics of the New and Old Economy - who is embracing whom?" Copenhagen/ Elsinore 6-8 June 2002. http://www.druid.dk/uploads/tx_picturedb/ds2002-605.pdf. Accessed on 15.05.09.

Frenzel, T. (2003): Akzeptanz von Systemen der digitalen Distribution im E-Commerce der Musikwirtschaft. Logos, Berlin.

Frenzel, T. (2003): Akzeptanz von Systemen der digitalen Distribution im E-Commerce der Musikwirtschaft. Logos Verlag, Berlin.

Garrity, B. (2005): Too many subscriptions? In: Billboard, 117/39, pp.52-53. http://proquest.umi.com/pqdweb?index=146&did=901996521&SrchMode=1&sid =4&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=12470 41643&clientId=37603. Accessed on 08.07.09.

Graham, G. Et al. (2004): The transformation of the music industry supply chain - A major label perspective. In: International Journal of Operations & Production Management, 24(11/12), pp. 1087-1103.

http://proquest.umi.com/pqdweb?did=775203981&sid=2&Fmt=6&clientId=3760
3&RQT=309&VName=PQD. Accessed on 07.05.09.

Helm, S. (2000): "Viral Marketing – Establishing Customer Relationships by "Word-of-
mouse" ". In: Electronic Markets – The International Journal, 10, pg. 158-161.

Hossain, L.; de Silva, A. (2009): Exploring user acceptance of technology using social
networks. In: Journal of High Technology Management Research, 20/1, pp.1-18.
http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6W56-
4VXT0WR-
1&_user=464393&_coverDate=12%2F31%2F2009&_rdoc=1&_fmt=&_orig=sear
ch&_sort=d&_docanchor=&view=c&_acct=C000022138&_version=1&_urlVersi
on=0&_userid=464393&md5=531fafa5315ddee7b178b84dedd56d06. Accessed
on 09.07.09.

Huang, C-Y. (2007): File Sharing as a Form of Music Consumption. In: International
Journal of Electronic Commerce. 9/4, pp.37-55.
http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=17648577&sit
e=ehost-live. Accessed on 22.05.09.

Huber, M. (2008): Digitale Musikdistribution und die Krise der Tonträgerindustrie. In:
Genesch, G.; Stöckler, E.M., Tschmuk, P. (2008) (eds.): Musikrezeption,
Musikdistribution, Musikproduktion – Der Wandel des Werschöpfungsnetzwerks
in der Musikwirtschaft. 1stedition, Gabler Edition Wissenschaft, Wiesbaden.

International Federation of the Phonographic Industry (2006): The Recording Industry
2006 – Piracy Report. http://www.ifpi.org/content/library/piracy-report2006.pdf.
Accessed on 20.05.09.

International Federation of the Phonographic Industry (2007): The broader music
industry.http://www.ifpi.org/content/library/the-broader-music-industry.pdf.
Accessed on 17.06.09.

International Federation of the Phonographic Industry (2008, a): Recorded Music Sales.
http://www.ifpi.org/content/section_statistics/index.html. Accessed on 12.05.09.

International Federation of the Phonographic Industry (2008, b): Digital Music Report
2008. http://www.ifpi.org/content/library/DMR2008.pdf. Accessed on 20.05.09.

International Federation of the Phonographic Industry (2009): Digital Music Report
2009. http://www.ifpi.org/content/library/DMR2009.pdf. Accessed on 20.05.09.

Jakob, H. (2008): Wirtschaftlichkeit in der Musikindustrie. In: Clement, M.; Schusser,
O.; Papies,D. (2008) (eds.): Ökonomie der Musikindustrie. 2nd edition, Gabler
Edition Wissenschaft, Wiesbaden.

Jarvenpaa, S.L.; Todd, P.A. (1997): Consumer reactions to electronic shopping on the
world wide web. In: International Journal of Electronic Commerce, 1/2, pp.59-88.

Kennedy, J. (2006, a): The Recording Industry 2006 – Piracy Report.
http://www.ifpi.org/content/library/piracy-report2006.pdf. Accessed on 20.05.09.

Knowledge (2009): In: Knowledge and Process Management, 9/1, pp.34-42. http://www.bus.iastate.edu/tiwana/pdfs/j/TiwanaJKPM2002.pdf. Accessed on 16.05.09.

Koch, J. (2009): Marktforschung : Grundlagen und praktische Anwendungen. 5th edition, München – Oldenbourg.

Kohout,F.J.; Kim,J-O. (1973): Analysis of variance and covariance: Subprograms Anova and oneway. http://info.sns.edu.pl/css/courses/ResearchMethods/CourseMaterials/Readings/K mKohout_1973_R22_ANOVA.pdf. Accessed on 10.10.09.

Kromer, E. (2007): Wertschöfpung in der Musikindustrie – Zukünftige Erfolgsfaktoren bei der Vermarktung von Musik. Publisher Reinhard Fischer, München.

Kumar, S.; Sethi, S.P. (2008): Dynamic pricing and advertising for web content providers. In: European Journal of Operational Research, 197/3, pg.924-944. http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6VCT-4RWH899-7&_user=464393&_coverDate=09%2F16%2F2009&_rdoc=1&_fmt=full&_orig=search&_cdi=5963&_sort=d&_docanchor=&view=c&_acct=C000022138&_version=1&_urlVersion=0&_userid=464393&md5=a2fed137bd15edfdf0657027fca435c2#secx2. Accessed on 12.06.09.

Kunze, O.; Mai, L-W. (2007): Consumer adoption of online music services – The influence of perceived risks and risk-relief strategies. In: International Journal of Retail & Distribution Management, 35/11, pp.862-877.

LaRose, R.; Kim, J. (2007): Share, steal or buy? - A social cognitive perspective of music downloading. Cyberpsychology & Behavior,10/2, pp.267-277.

Leonhard, G. (2008, a): Neuf Cegetel offers Music Flat Rate with UMG tracks - the music flat rate is coming. http://www.mediafuturist.com/2007/09/neuf-cegetel-of.html. Accessed on 05.06.09.

Leonhard, G. (2008, b): Music 2.0 – Essays by Gerd Leonhard. http://www.mediafuturist.com/free-pdfs.html. Accessed on 10.06.09.

Leonhard, G. (2009): The End of Control and the Future of Content. In: http://gerdleonhard.typepad.com/mediafuturist/.video file. Accessed on 23.03.09.

Liebowitz, S. (2007): How Reliable is the Oberholzer-Gee and Strumpf paper on File-Sharing?. In: Social Science Research Network. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1014399. Accessed on 20.04.09.

Lysonski, S.; Durvasula, S. (2008): Digital piracy of MP3s: consumer and ethical predispositions. In: Journal of Consumer Marketing, 25/3, 167-178. http://proquest.umi.com/pqdweb?index=4&did=1472856461&SrchMode=1&sid=4&Fmt=6&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1246534190&clientId=37603. Accessed on 02.07.09.

"Major subscription model imminent after Universal joins forces with Sky". (2008). Interview with Rob Wells, Universal Music Group. In: Music Week. http://proquest.umi.com/pqdweb?index=6&did=1522930841&SrchMode=1&sid= 4&Fmt=3&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=124341 7524&clientId=37603. Accessed on 10.06.09.

Mangold, W.G.; Faulds, D.J. (2009): Social media: The new hybrid element of the promotion mix. In: Business Horizons, 52/4, pgs.357-365. http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6W45-4W1SGJC-1&_user=464393&_coverDate=08%2F31%2F2009&_rdoc= 1&_fmt=&_orig=search&_sort=d&view=c&_acct=C000022138&_version=1&_u rlVersion=0&_userid=464393&md5=368e1059218118f318d0bd5c13043124. Accessed on 12.06.09.

Margounakis, D.; Politis, D.,Boutsouki, C. (2006) : SEAM – A Sound-Embedded Advertisement Model for Online Digital Music Distribution. Proceedings of the Second International Conference on Automated Production of Cross Media Content for Multi-Channel Distribution. http://www2.computer.org/plugins/dl/pdf/proceedings/axmedis/2006/2625/00/262 50273.pdf?template=1&loginState=2&userData=Library%2Bof%2BVienna%2B University%2Bof%2BEconomics%2BBusiness%2BAdministration%253ALibrary %2Bof%2BVienna%2BUniversity%2Bof%2BEconomics%2BBusiness%2BAdmi nistration%253A137.208.80.253. Accessed on 01.06.09.

Meffert, H. (1976): Die Durchsetzung von Innovationen in der Unternehmung und im Markt. In: Zeitschrift für Betriebswirtschaft, 46/2, pp.77-100.

Mitchell, V.W.; Boustani, P. (1993): Market development using new product and new consumers: a role for perceived risk. In: European Journal of Marketing, 27/2, pp.17-32. http://proquest.umi.com/pqdlink?index=10&did=394510&SrchMode=3&sid=2& Fmt=6&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=12471420 90&clientId=37603&aid=1. Accessed on 08.07.09.

Mol, J.M.; Wijnberg, N.M.; Carroll, C. (2005): Value Chain Envy: Explaining New Entry and Vertical Integration in Popular Music. In: Journal of Management Studies. 42/2,p251-276. http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=16187434&sit e=ehost-live. Accessed on 11.05.09.

Myslewski, R. (2009): Apple iTunes unwraps (precious few) 69 cent tracks. In: The Register. http://www.theregister.co.uk/2009/04/07/no_bargains_at_the_itunes_store/ . Accessed on 08.06.09.

Oberholzer-Gee, F.; Strumpf, K. (2007): The Effect of File Sharing on Record Sales: An Empirical Analysis. In: Journal of Political Economy, 115/1.

Papagiannidis, S.; Berry, J. (2007): What Has Been Learned from Emergent Music Business Models? In: International Journal of E-Business Research, 3/3.

http://proquest.umi.com/pqdweb?index=0&did=1318079941&SrchMode=1&sid=
6&Fmt=6&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=123779
7834&clientId=37603. Accessed on 23.03.09.

Peitz, M.; Waelbroeck,P. (2004): The Effect of Internet Piracy on Music Sales: Cross-
Selection Evidence. In: Review of Economic Research on copyright Issues, 1/2,
pp. 71-79. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=511763. Accessed
on 19.06.09.

Pfanner, E. (2009): Universal Music and Virgin Reach a Download Deal. In: The New
York Times.
http://www.nytimes.com/2009/06/16/technology/internet/16music.html. Accessed
on 16.06.09.

Quellet, J-F. (2007): The Purchase Versus Illegal Download of Music by Consumers :
The Influence of Consumer Response towards the Artist and Music. In: Canadian
Journal of Administrative Sciences, 24/2, pp. 107-119.
http://proquest.umi.com/pqdweb?did=1508612531&sid=5&Fmt=3&clientId=376
03&RQT=309&VName=PQD. Accessed on 28.04.09.

Quring, O. et al. (2008): Decentralized Electronic Markets – Exploring the Effects of
Revenue Splitting Inside File Sharing Systems. In: Electronic Markets, 18/2.
http://web.ebscohost.com/ehost/pdf?vid=2&hid=2&sid=07db93df-5dfb-4baa-
a41d-a63be7669aaf%40sessionmgr104#db=buh&AN=32708431. Accessed on
05.06.09.

Rappa, M. (2009): Business Models on the Web.
http://digitalenterprise.org/models/models.html. Accessed on 14.05.09.

Roberts, J. (2009): Spotify- Free online music finds its stream. In: Marketing Week.
http://proquest.umi.com/pqdweb?did=1685898281&sid=2&Fmt=3&clientId=376
03&RQT=309&VName=PQD. Accessed on 12.10.09.

Rogers, E. M. (1986): Communication technology. In: The new media in society. New
York: Free Press.

Rohm, A.J.; Swaminathan, V. (2004): A typology of online shoppers based on shopping
motivations. In: Journal of Business Research, 57/5, pp.748-757.
http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6V7S-4619P3K-
8&_user=464393&_coverDate=07%2F31%2F2004&_rdoc=
1&_fmt=full&_orig=search&_cdi=5850&_sort=d&_docanchor=&view=c&_acct
=C000022138&_version=1&_urlVersion=0&_userid=464393&md5=b00fc6b58f
4cb570b07808a4682498fe#toc8. Accessed on 06.07.09.

Schrader, U. (2001): Konsumentenakzeptanz eigentumsersetzender Dienstleistungen –
Konzeption und empirische Analyse. Frankfurt am Main.

Sinha, R.K.; Mandel, N. (2008): Preventing Digital Music Piracy: The Carrot or the
Stick. In: Journal of Marketing, 72, pp.1-15.

Stahl, F.; Maass, W. (2006): Adoption and Diffusion in Electronic Markets: An Empirical Analysis of Attributes Influencing the Adoption of Paid Content. In: Electronic Markets. , 16/3, pg.233-244. http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=24904766&site=ehost-live. Accessed on 25.06.09.

Statistik Austria (2009, a): IKT-Einsatz in Haushalten 2008. http://www.statistik.at/web_de/statistiken/informationsgesellschaft/ikt-einsatz_in_haushalten/index.html. Accessed on 15.07.09.

Statistik Austria (2009, b): Verbindungstechniken der Haushalte für den Internetzugang 2008.http://www.statistik.at/web_de/ statistiken/ informationsgesellschaft/ikt-einsatz_in_haushalten/index.html.Accessed on 17.07.09.

Statistik Austria (2009, c): Volkszählung 2001 – Benutzerhandbuch. http://www.statistik.at/web_de/suchergebnisse/index.html. Accessed on 17.07.09.

Steenkamp, J.; Baumgartner,H. (1992): The Role of Optimum Stimulation Level in Exploratory Consumer Behavior. In: The Journal of Consumer Research, 19/3, pp. 434-448. http://www.jstor.org/stable/pdfplus/2489400.pdf. Accessed on 06.07.09.

Steffes, A. (2008): Robbie Williams streikt. In: Stern. http://www.stern.de/lifestyle/leute/plattenvertrag-robbie-williams-streikt-608311.html. Accessed on 20.11.09.

Steinkrauß,N.; Gmelin, H.; Günnel, S. (2008): Wettbewerbsanalyse. In: Clement, M.; Schusser, O.; Papies,D. (2008) (eds.): Ökonomie der Musikindustrie. 2nd edition, Gabler Edition Wissenschaft, Wiesbaden.

"Superdistribution spells major changes". (1999). In: International Journal of Retail & Distribution Management, 27/7. http://proquest.umi.com/pqdweb?did=219783141&sid=1&Fmt=6&clientId=37603&RQT=309&VName=PQD. Accessed on 09.06.09.

Swatman, P.M.C.; Krueger, C.; van der Beek, K. (2006): The changing digital content landscape – An evaluation of e-business model development in European online news and music. In: Internet Research, 16/1.

Taylor, S.A.; Ishida, C.; Wallace, D.W. (2009): Intention to Engage in Digital Piracy – A Conceptual Model and Empirical Test. In: Journal of Service Research, 11/3, pp.246-262. http://jsr.sagepub.com/cgi/content/abstract/11/3/246. Accessed on 10.05.09.

The Nielsen Company (2009): The Global Online Media Landscape. http://nielsen-online.com/emc/0904_report/nielsen-online-global-lanscapefinal1.pdf. Accessed on 15.06.09.

Timmers, P. (1998): Business Models for Electronic Markets. In: Electronic Markets – The International Journal, 8, pg.3-8.

Tiwana, A. (2002): Modes of E-business Innovation and Structural Disruptions in Firm

Tom, G. Et al. (1998): Consumer demand for counterfeit goods. In: Psychology and Marketing, 15/5, pp.405-421. http://www3.interscience.wiley.com/cgi-bin/fulltext/35974/PDFSTART. Accessed on 20.05.09.

Tschmuck, P. (2006): Creativity and Innovation in the Music Industry. Springer, Dordrecht.

Van Buskirk, E. (2008): More DRM-Free Major Label Music Sneaks onto iTunes. In: Wired. http://www.wired.com/listening_post/2008/11/drm-free-major/. Accessed on 05.06.09.

Van Dyk, T. (2008): Einfluss neuer Technologien auf die Wertschöpfungskette in der Musikindustrie. In: Clement, M.; Schusser, O.; Papies,D. (2008) (eds.): Ökonomie der Musikindustrie. 2nd edition, Gabler Edition Wissenschaft, Wiesbaden.

Vlachos, P.; Vrechopoulos, A.P.; Doukidis, G. (2003): Exploring Consumer Attitudes towards Mobile Music Services. In: The International Journal of Media Management, 5/2, pp.138-148.

Von Lohmann, F. (2004): Voluntary Collective Licensing for Music File-Sharing. In: Communications of the ACM, 47/10. http://web.ebscohost.com/ehost/pdf?vid=2&hid=4&sid=b54c9e25-057d-40b6-a14c-c752d959876c%40sessionmgr7#db=buh&AN=14521569. Accessed on 10.06.09.

Von Walter, B.; Hess, T. (2004):"A Property Righs View on the Impact of File Sharing on Music Business Models – Why iTunes is a Remedy and MusicNet is Not". Proceedings of the Americas Conference on Information Systems, New York.

Woods, A. (2009): Is time running out for DIGITAL MUSIC? In: Revolution.http://proquest.umi.com/pqdweb?index=1&did=1730884261&SrchMode=2&sid=1&Fmt=3&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1243580244&clientId=37603. Accessed on 12.06.09.

World Intellectual Property Organization (2009): Treaties. http://www.wipo.int/treaties/en. Accessed on 12.05.09.

Zeithaml, V.A. (1985): The new demographics and market fragmentation. In: Journal of Marketing, 49, pp.64-75. http://www.jstor.org/stable/pdfplus/1251616.pdf. Accessed on 07.07.09.

Zollenkop, M. (2006): Geschäftsmodellinnovationen. 1stedition, Gabler Edition Wissenschaft, Wiesbaden.

# 9 Appendix - Questionnaire

Below the reader can find the questionnaire that was filled in by respondents. The questionnaire language is German as the survey was sent via different mailing lists from the Vienna University of Economics and Business.

## 1) Bekanntheit

In diesem Abschnitt geht es darum, ob Sie die grundsätzlichen Übertragungsformen von digitaler Musik kennen.

**Frage 1**

**Die Möglichkeit Musik als Datei über das Internet herunterzuladen bzw. über das Internet zu hören (auch streaming genannt) ist mir bekannt. \*)**

☐ ja
☐ nein

ℹ️ Bitte nur ein Item auswählen

## 2) Interesse

In diesem Abschnitt geht es darum, ob Sie die grundsätzlichen Übertragungsformen von digitaler Musik interessant finden.

**Frage 2**

**Ich finde die Möglichkeit, Musik als Datei aus dem Internet kostenpflichtig zu downloaden bzw. zu streamen, interessant. \*)**

☐ ja
☐ nein

ℹ️ Bitte nur ein Item auswählen

## 3) Intention

In diesem Abschnitt geht es darum, ob Sie beabsichtigen die grundsätzlichen Übertragungsformen von digitaler Musik in Zukunft zu nutzen.

| **Frage 3** |
|---|
| **Ich denke, dass ich in Zukunft ab und zu/fallweise Musik als Datei über das Internet kaufen werde. *)** |

☐ ja

☐ nein

Bitte nur ein Item auswählen

| **Frage 4** |
|---|
| **Ich denke, dass ich in Zukunft regelmäßig Musik als Datei über das Internet kaufen werde. *)** |

☐ ja

☐ nein

Bitte nur ein Item auswählen

## 4) Erfahrung

| **Frage 5** | | |
|---|---|---|
| **Welche der vorliegenden Aussagen treffen auf Sie zu.** | | |
| **Ich habe bereits Musik (nur Audiodateien, ausgenommen Klingeltöne)…** | | |
| | ja | nein |
| kostenPFLICHTIG über das Internet heruntergeladen. *) | ☐ | ☐ |
| kostenPFLICHTIG über das Internet gestreamt. *) | ☐ | ☐ |
| kostenlos über das Internet gestreamt *) | ☐ | ☐ |
| kostenlos über P2P-Netzwerke (z.B. BitTorrent, emule, etc.) bezogen. *) | ☐ | ☐ |
| kostenPFLICHTIG über P2P-Netzwerke bezogen *) | ☐ | ☐ |
| kostenlos über einzelne Websites (von Bands, Plattenfirmen, etc.) heruntergeladen. *) | ☐ | ☐ |
| kostenPFLICHTIG über einzelne Websites (von Bands, Plattenfirmen, etc.) heruntergeladen. *) | ☐ | ☐ |
| über andere Wege aus dem Internet bezogen. Wenn ja, welche? *) | ☐ | ☐ |
| **Ihre optionale Anmerkung zu dieser Frage** | | |
| | | |

## 5) Angebotsvielfalt

| Frage 6 | | | | | |
|---|---|---|---|---|---|
| **Bitte bewerten Sie die folgenden Aussagen.** | | | | | |
| **Mir ist beim Kauf von Musik…** | | | | | |
| | stimme ganz und gar nicht zu | stimme eher nicht zu | bin unentschieden | stimme überwiegend zu | stimme voll und ganz zu |
| ein vielfältiges Musikangebot bzw. viele Musikgenres (z.B. Rock, Pop, Blues, etc.) wichtig *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| eine große Anzahl an Künstlern und Bands im jeweiligen Genre wichtig *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| die komplette Diskographie (alle Veröffentlichungen eines Künstlers/Band) der im Internet vorhandenen Künstler/Bands wichtig *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| die Aktualität des Sortiments (zum Beispiel Neuerscheinungen, Charthits, etc.) wichtig *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| die Möglichkeit der Suche nach verschiedenen Plattenfirmen (Record Labels) wichtig. *) | ☐ | ☐ | ☐ | ☐ | ☐ |

## 6) Zahlungsmodell und Preis

| Frage 7 | | | | | |
|---|---|---|---|---|---|
| **Bitte bewerten Sie die folgenden Aussagen bezüglich der Zahlungsmodelle von digitaler Musik.** | | | | | |
| **Unabhängig davon, ob Sie bereits eines dieser Modelle genutzt haben oder nicht.** | | | | | |
| **Ich kann mir die Nutzung…** | | | | | |
| | stimme ganz und gar nicht zu | stimme eher nicht zu | bin unent-schieden | stimme über-wiegend zu | stimme voll und ganz zu |
| eines "Abonnement-Modells" zum Erwerb von Musik in digitaler Form über das Internet vorstellen ( mit Zahlung eines z.B. monatlichen Festpreises eine unbestimmte Anzahl an Musikstücken downloaden/streamen). Nach Beendigung des Vertrages mit dem Musikanbieter können die heruntergeladenen Songs weiterhin abgespielt werden. *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| eines "Miet-Modells" vorstellen, bei dem ich für eine Einmalzahlung Musikstücke in unbegrenzter Anzahl downloaden kann, jedoch verfällt mit Beendigung des Vertrages mit dem Musikanbieter auch die Möglichkeit die Musik weiterhin abzuspielen. *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| eines „pay per track-Modells" vorstellen. (Sie bezahlen pro Download/Stream) *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| eines "auf Werbung basierenden Modells" vorstellen (in diesem Fall erhalten Sie die von Ihnen gewünschte Musik gratis als Download/Stream, jedoch ist an das Musikstück eine ca. 15-30 sek. Audio-Werbung am Anfang/Ende des Songs geknüpft. *) | ☐ | ☐ | ☐ | ☐ | ☐ |

| **Frage 8** | | | | | |
|---|---|---|---|---|---|
| **Mir ist für den Erwerb von digitaler Musik über das Internet…** | | | | | |
| | **stimme ganz und gar nicht zu** | **stimme eher nicht zu** | **bin unent-schieden** | **stimme über-wiegend zu** | **stimme voll und ganz zu** |
| ein niedriger Preis pro Song/Album wichtig *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| die kostenlose Verfügbarkeit von Musikdateien im Internet wichtig *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| der Preis nicht wichtig, Hauptsache ich bekomme die von mir gewünschte Musik in guter Klangqualität. *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| der Preis nicht wichtig, Hauptsache ich bekomme die von mir gewünschte Musik schnell und ohne Unterbrechung des Downloads/Streams *) | ☐ | ☐ | ☐ | ☐ | ☐ |

| **Frage 9** | | | | | |
|---|---|---|---|---|---|
| **Angenommen Sie hätten die Möglichkeit anderen Musikinteressierten im Internet die von Ihnen bereits erworbenen Musikdateien legal zum kostenpflichtigen Download anbieten zu können (mithilfe einer speziellen Software). Dabei wären Sie prozentual am Verkaufspreis beteiligt. Wie sehr stimmen Sie folgenden Aussagen zu:** | | | | | |
| | **stimme ganz und gar nicht zu** | **stimme eher nicht zu** | **bin unentschie den** | **stimme über-wiegend zu** | **stimme voll und ganz zu** |
| Am Verkaufsumsatz von Musik beteiligt zu sein ist interessant *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Ich würde meine Musik über dieses System anbieten wollen. *) | ☐ | ☐ | ☐ | ☐ | ☐ |

## 7) Downloading und Streaming

| **Frage 10** | | | | | |
|---|---|---|---|---|---|
| **Im Folgenden bitte ich um Ihre Einschätzung gegenüber der Möglichkeit Musik aus dem Internet zu streamen oder zu downloaden. Mir ist…** | | | | | |
| | **stimme ganz und gar nicht zu** | **stimme eher nicht zu** | **bin unentschie den** | **stimme über-wiegend zu** | **stimme voll und ganz zu** |
| es wichtig Musik aus dem Internet zu streamen, sie also direkt über das Internet hören zu können, ohne die Musik auf meinem PC oder Laptop speichern zu müssen. *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| es wichtig Musik aus dem Internet zu downloaden, sie also direkt über das Internet auf meinem PC oder Laptop zu speichern. *) | ☐ | ☐ | ☐ | ☐ | ☐ |

| **Frage 11** | | | | | |
|---|---|---|---|---|---|
| **Wie oft nutzen Sie die folgenden Möglichkeiten um Musik über das Internet zu hören?** | | | | | |
| | **nie** | **selten** | **manch-mal** | **häufig** | **oft** |
| Streaming *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Download *) | ☐ | ☐ | ☐ | ☐ | ☐ |

## 8) Tragbarkeit und Flexibilität

| **Frage 12** | | | | | |
|---|---|---|---|---|---|
| **Musikdateien aus dem Internet können unterschiedlich genutzt werden. Inwiefern stimmen Sie den folgenden Aussagen zu?**<br>**Mir ist wichtig…** | | | | | |
| | **stimme ganz und gar nicht zu** | **stimme eher nicht zu** | **bin unent-schieden** | **stimme überwiegend zu** | **stimme voll und ganz zu** |
| Musikdateien aus dem Internet auf CD/DVD brennen zu können *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Musikdateien aus dem Internet auf tragbare Player (mp3-player, iPod, etc.) überspielen zu können *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Musikdateien aus dem Internet auf mein Mobiltelefon überspielen zu können *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Musikdateien ohne jegliche Nutzungseinschränkungen (z.B. kann das Downloaden/Brennen/Überspielen/Abspielen von digitaler Musik mengenmäßig eingeschränkt werden) zu verwenden *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| dass der Erwerb von Musik aus dem Internet nicht an den Download einer speziellen, für den Übertragungsvorgang notwendigen, Software gebunden ist. (siehe iTunes, Nokia Music, etc.) *) | ☐ | ☐ | ☐ | ☐ | ☐ |

## 9) Zusatzleistungen

| **Frage 13** | | | | | |
|---|---|---|---|---|---|
| **Grundsätzlich werden neben dem Erwerb der Musikdatei über einen Anbieter im Internet meistens auch zusätzliche digitale Produkte/Services angeboten. Inwiefern stimmen Sie folgenden Aussagen zu?** **Es ist mir wichtig…** | | | | | |
| | **stimme ganz und gar nicht zu** | **stimme eher nicht zu** | **bin unent-schieden** | **stimme überwiegend zu** | **stimme voll und ganz zu** |
| mit der Musikdatei auch digitale Fotos (z.B.CD-Cover, Booklet) des Künstlers/der Band zu erhalten. *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| mit der Musikdatei auch Hintergrundinformationen (News, Tourdaten, Interviews, Biographie, etc.) zum Künstler/zur Band zu erhalten. *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| mit der Musikdatei auch Songtexte (lyrics) zu bekommen. *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Musikvideos des Künstlers/der Band zu erhalten *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Klingeltöne des Künstlers/der Band zu erhalten *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| mich online mit anderen Nutzern des Musikservices über Künstler/Bands/allgemeine Musik bezogene Themen zu unterhalten *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Playlists (eine individuelle Zusammenstellung von verschiedenen digitalen Musikstücken) mit anderen Nutzern des Musikservices auszutauschen. *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| die von mir gewünschte Musik vor dem Kauf Probe hören zu können, ohne sie auf meinem PC/Laptop speichern zu müssen (sampling). *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| dass ich einfach, schnell und ohne Probleme nach der von mir gewünschten Musik suchen kann. *) | ☐ | ☐ | ☐ | ☐ | ☐ |

| **Frage 14** |
|---|
| **Markieren Sie bitte die Zusatzleistung für die Sie AM EHESTEN MEHR für das eigentliche digitale Musikstück bezahlen würden? *)** |
| ☐ digitale Fotos (z.B. covers, booklets, etc.) des Künstlers/der Band |
| ☐ Hintergrundinformationen (z.B. News, Tourdaten, Interviews, etc.) zum Künstler/zur Band |
| ☐ Songtexte zur Musikdatei |
| ☐ Musikvideos zum Künstler/zur Band |
| ☐ Klingeltöne des Künstlers/der Band |
| ☐ die Möglichkeit sich mit anderen Nutzern zu einem Künstler/einer Band unterhalten zu können |
| ☐ Playlists austauschen zu können |
| ☐ die Musik vor Kauf Probe hören zu können |
| ☐ die Musik einfach, schnell und ohne Probleme finden zu können |
| 🛈 Bitte nur ein Item auswählen |

## 10) Traditioneller Musikvertrieb vs. digitaler Musikvertrieb

| **Frage 15** | | | | | |
|---|---|---|---|---|---|
| **Die Beschaffung von Musikdateien über das Internet bietet Ihnen andere Möglichkeiten als der Kauf eines Tonträgers (CD, DVD, Vinyl). Inwiefern stimmen Sie folgenden Aussagen zu? (Sollten Sie zusätzliche Vorteile im Erwerb von Musik über das Internet sehen, bitte ich Sie diese im Feld "Optionale Angabe" einzutragen.)** **Es ist mir wichtig...** | | | | | |
| | **stimme ganz und gar nicht zu** | **stimme eher nicht zu** | **bin unent-schieden** | **stimme überwiegend zu** | **stimme voll und ganz zu** |
| Musikstücke eines Albums einzeln kaufen zu können *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Musikstücke kaufen zu können, die im physischen Handel nicht/nicht mehr erhältlich sind. *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Musikstücke kaufen zu können, die in meinem Heimatland nicht erhältlich sind. *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Musikstücke schnell und auf direktem Weg zur Verfügung zu haben. *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Musikstücke jederzeit, rund um die Uhr, erwerben zu können. *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| **Ihre optionale Anmerkung zu dieser Frage** | | | | | |
| | | | | | |

## 11) Risiko

| **Frage 16** | | | | | |
|---|---|---|---|---|---|
| **Der Kauf eines digitalen Musikstückes ist meist auch mit einigen Risiken verbunden. Inwiefern stimmen Sie diesen Aussagen zu?** **Mir ist es wichtig, dass…** | | | | | |
| | **stimme ganz und gar nicht zu** | **stimme eher nicht zu** | **bin unent-schieden** | **stimme überwiegend zu** | **stimme voll und ganz zu** |
| die von mir erworbene Musik legal (d.h. lizensiert) ist. *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| die von mir erworbene Musik in einwandfreier Qualität (virenfrei, gute Klangqualität, etc.) vorhanden ist. *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| die Stabilität/Fehlerfreiheit des Downloadvorganges/Streams (Stream/Download bricht nicht ab) gegeben ist. *) | ☐ | ☐ | ☐ | ☐ | ☐ |
| der Schutz von persönlichen Daten (Name, Adresse, Geburtsdatum, etc.) gewährleistet ist. *) | ☐ | ☐ | ☐ | ☐ | ☐ |

## 12) Ein paar letzte Schritte...

| **Frage 17** |
| --- |
| **Sind Sie? \*)** |
| Männlich |
| Weiblich |
| 💬 Bitte nur ein Item auswählen |

| **Frage 18** |
| --- |
| **Wie alt sind Sie? \*)** |
| |
| 💬 Bei der Antwort sind nur Ziffern (0-9) zulässig |

| **Frage 19** |
| --- |
| **Bitte nennen Sie Ihre höchste abgeschlossene Schulbildung** |
| ☐ Volksschule<br>☐ Hauptschule<br>☐ AHS/BHS<br>☐ Kolleg<br>☐ Berufsbildende mittlere Schule<br>☐ Berufsschule/Lehre<br>☐ Akademie/Fachhochschule/Hochschule/Universität<br>☐ andere |
| 💬 Bitte nur ein Item auswählen |

| **Frage 20** |
| --- |
| **Welchen Beruf üben Sie derzeit aus? \*)** |
| ☐ Angestellter/Beamter<br>☐ leitender Angestellter/Geschäftsführer<br>☐ Arbeiter/Facharbeiter<br>☐ Hausfrau/Hausmann<br>☐ Lehrling<br>☐ Pensionist<br>☐ Schüler<br>☐ Student<br>☐ Selbstständig<br>☐ Zivildiener/Grundwehrdiener<br>☐ arbeitslos<br>☐ andere<br>☐ keine Angabe |
| 💬 Bitte nur ein Item auswählen |

| Frage 21 |
| --- |
| **Wie hoch ist Ihr monatliches Netto-Haushaltseinkommen (in Euro)? \*)** |
| ☐ keine Angabe<br>☐ mehr als €3.000<br>☐ bis €1.000<br>☐ €1.001-€2.000<br>☐ €2.001-€3.000 |
| 🛈 Bitte nur ein Item auswählen |

| Frage 22 |
| --- |
| **Wieviele Personen leben mit Ihnen im Haushalt?** |
| |
| 🛈 Bei der Antwort sind nur Ziffern (0-9) zulässig |

| Frage 23 |
| --- |
| **Über welche Bandbreite verfügt Ihr Internetzugang? (Mit welcher Bandbreite surfen Sie im Internet, laden Musik herunter oder chatten Sie mit Freunden?) \*)** |
| ☐ Schmalband (28,8k Modem, 56,6k Modem, ISDN, etc.)<br>☐ weiß nicht<br>☐ keine Angabe<br>☐ Breitband (Chello, DSL, ADSL, Cable/T1, etc.) |
| 🛈 Bitte nur ein Item auswählen |

Vielen herzlichen Dank für Ihre Unterstützung!

Gerold Pulverer

PS: Sollte es Fragen, Anregungen oder Wünsche Ihrerseits geben, bitte ich Sie mich unter folgender E-mail Adresse zu kontaktieren: h0451008@wu-wien.ac.at