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Internet and the digitalization of products: A potent mix or recipe for disaster? A case study of the music industry



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Executive summary

The purpose of this thesis is to analyze how the ongoing controversy surrounding the Internet, the phenomena of digitalization and file sharing will affect the music industry in the form of the “big five” labels. Furthermore the thesis aims to present a recipe of strategies for the companies’ survival by studying their situation through a theoretical perspective in conjunction with a comparative analysis with industries facing the digitalization challenge. The theoretical contribution lies in the strategic perspective at an industry level. Both the positive and negative aspects of the Internet and digitalization is discussed. Additionally, the possibilities for the industry to create value and make money, the future shape of the major players and new entrants are examples of issues analyzed. The thesis can roughly be divided into three dimensions; the consumer, the value chain (the product) and the strategies. In order to perform the analysis, empirical information has been gathered from a wide array of sources, principally secondary in nature. The thesis is a mix between a traditional research paper and a research synthesis. To confer a comprehensive and unbiased view of the ongoing controversy the author has collected data from reports, newspapers, Internet journals and websites, research papers, academic journals and statements from key actors involved in the ongoing development. Traditional business theory including the value chain, Five Forces competition, innovation and transaction cost theory, strategic networks, product and customer value has been updated to incorporate the effect of the Internet. Together with the empirical findings the analysis focuses on how the industry has been affected in terms of the theoretical concepts and its value creating potential. The results form the basis for the ensuing strategic suggestions for continued survival, which is compared to other industries in the same situation as the music industry. The conclusions from the analysis suggest that the music industry is currently going through a restructuring phase where new entrants have attacked parts of the value chain like distribution and production, whereas marketing and talent recruitment remain strongholds of the “big five”. Artists and consumers have increased their bargaining power in relation to the industry, there are more choices in music genres and alternative digital formats to the CD. P2P networks have hastened the industry’s online ventures and value added offerings. Comparative analysis with industries facing the same challenge of product digitalization have shown that there are measures and strategies that can protect the value creating potential of the company and chance for survival. A recipe of strategies that include taxation, advertising, brand leveraging, new price structure, strategic partnering, the development of secure formats and in the long term a divestiture, where the “big five” of the music industry concentrate on activities more immune to the process of digitalization and the impact of the Internet, are suggested on the basis of the theoretical analysis. Digitalization and the growth of the Internet promises to be society-changing events affecting not only businesses but also people’s personal lives.

Key words: File sharing, “big five”, Internet, digitalization, value chain, strategy, P2P, product value, music industry.

Preface

The last few months have been an arduous and long journey. At the same time it has been a very interesting and informative process. It gave me the opportunity to combine personal interest with academic knowledge accumulated over my university years. The topic of the thesis concerns a development that most certainly will be studied in detail as it has immense implications for companies, individuals and society in general. This is something I have tried to convey in the general conclusions. It will be most interesting to be a part of this society-changing development and to see if current predictions hold true.

This thesis has been a solo effort in terms of the physical writing process but I have had help from several sources in the idea process. Without them I might have missed interesting directions and theories. First and foremost I would like to thank my tutor, Matts Kärreman who under the entire process kept me focused and provided useful insights and guidance. He has consistently pointed out the broad implications of the topic at hand and convinced me of the merits of conducting an analysis of wider proportions when I was embarking on a narrower trail.

I have refrained from using primary sources as I wanted to keep the thesis general and industry based. To validate my findings and to discuss current developments I have had email contact with a number of Internet based analysis and research firms. I would like to express my gratitude to the following:

www.futureofmusic.org/

www.openP2P.com

www.musicdish.com

www.next20years.com

Lund, January 2003

Richard Lindberg

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1 Introduction

In this chapter the reader will be introduced to the area of the thesis and the problems to be analyzed. The purpose of the thesis will be presented as well as discussions regarding target audience and boundaries. At the end, a visualization of the intended structure will give the reader the chance to see how the author visualizes the flow of the thesis.

1.1 Background¹

There is a war raging today. The results and consequences are not yet known but one thing is for certain. There are billions of dollars at stake. The combatants are the entertainment industry with the music and movie studios at the helm and on the other side, the odd mix of individuals and Internet sites who perform and allow free distribution of music and film. File sharing networks like Kazaa and Gnutella have made it possible to download media content such as songs and films in an easy and above all wallet friendly fashion. The first casualty has already been cast aside. Napster, the company who pioneered file sharing, has been successfully shut down and its remnants have been sold and resold to various companies. Napster's demise was brought on by numerous lawsuits instigated by the music industry² and their champion, the RIAA³. The RIAA, whose objective is to protect the rights of the music companies and their artists have lately become a major force to be reckoned with, mostly because of the emergence of file sharing networks. Their vociferous campaign against Napster and its successors has been long and contentious. Napster has become synonymous with free music and inspired new and more hard-to-stop followers, and therefore the battle over royalties and intellectual property rages on. The controversy surrounding Napster has also served as a wake up call for the industry; the consumer expects more service and customization than before. This has forced the industry to venture into unfamiliar territory on the Internet with mixed results as of yet.⁴

The consumer, who so far has been able to stay out of the conflict, now risks being drawn into the legal entanglements as the music and film industry step up their efforts

¹ The background discussion is based on the general debate, there is no unique source of reference, it represents the author's accumulated knowledge up to the point of choosing topic for the thesis.

² The music industry, the focus of the thesis, entails the "big five", BMG, EMI, Sony, Universal and Warner and their entire value chain. They are treated as an entity. Entertainment industry encompasses the music, film and TV industries.

³ Recording Industry Association of America: The Recording Industry Association of America is a trade group that represents the U.S. recording industry. Its mission is to protect a business and legal climate that supports and promotes members' creative and financial vitality. Its members are the record companies that comprise the national music industry in the world. RIAA members create, manufacture and/or distribute approximately 90% of all legitimate sound recordings produced and sold in the United States. In support of this mission, the RIAA works to protect intellectual property rights worldwide and the First Amendment rights of artists; conduct consumer industry and technical research; and monitor and review state and federal laws, regulations and policies. For more see www.riaa.com

⁴ www.nethistory.urldir.com/napster.html

to end what they see as outright stealing. The industries claim that file sharing through P2P⁵ networks is eroding their profit margin while spokespersons for the file sharing community mean that it is the other way around, the increased availability of music and film is creating a buzz around the products and the artists and make the consumer more informed and willing to spend on his or her favorite artists. The consumer is not sure of exactly what is legal and the entertainment industry are not sure their efforts to force service providers to reveal names of people sharing files will be tolerated by the courts as this is bordering on personal integrity infringements. Bad PR can hurt their long-term survival. There have been similar outcries in the past when personal recording devices such as the tape recorder became ubiquitous, the difference now is spelled; Internet. It has become much easier to share your personal copy, you are no longer limited to your circle of friends but instead have the world at your fingertips. The Internet is often likened to the old west, an uncharted frontier where laws haven't made an impact on the settlers, an untamed territory where you more or less take what you want without paying. This is what the entertainment industry is afraid of, the prevalence of the "everything on the Internet is free" culture that so far has made most moneymaking schemes on the Internet fail miserably. They want to hammer in the notion that their product isn't free and that the artists and creators will be the persons who suffer. The Internet has also given people without funds and connections the ability to spread their word and talent, which is why the artist community is not completely in unison when denouncing these sites which allow their creations to spread to a wider audience than previously imagined.⁶

To dismiss this as an isolated event, only related to the entertainment industry is wrong (Rao, 1999). There is revolution waiting to unleash its true force, it has only begun to show some of its effects, predominately in the music industry. This revolution, brought on by the emergence of the online economy, concerns the digitalization of physical products like music, film and computer games but also a host of other products and services that are part of our daily life. Once the product is digitalized, the challenges facing the different industries are the same, for example illicit distribution and pirating. The difference lies in the actual use of the product, music consumption differs from reading a book. Think of the changes to the postal service now being forced to compete with new niche companies, and email which has taken away a sizeable part of its business. The banking sector and other financial sectors like the brokerage industry have had many lucrative parts of their businesses hijacked by Internet based competitors with unlimited reach and reduced fees, for example E-trade. The future form of education is very much a debated issue with online courses rapidly gaining in scope and popularity, how will "real world" campuses respond? Digitalization of these products and services will therefore have an impact on how and where people will work. Other industries face or have faced similar problems, the publishing world are at an early stage with e-books not having emerged as a serious threat yet, they are however facing an onslaught in the newspaper sector, both through free online newspapers and free physical papers like Metro[®] which might represent the future of physical newspapers and other media like music; free content, with money coming from advertisers. The software industry with Microsoft in the forefront have battled the problems of digitalization for long and have developed alternative strategies in order to be profitable and survive, strategies

⁵ Peer-to-Peer: a process where customers or consumers directly distribute content among themselves without the need of third party involvement. For more see www.open.p2p.com

⁶ www.chipar.com/papers/MPx.pdf

which might hold clues to what the entertainment industry and others can do to respond to their challenges.

What makes digitalization, the conversion of information into computerized form, revolutionary? Digitalization makes duplication easy, it is accurate and very low cost. It allows sharing and transmission of copies without loss of content or the risk of destroying the original. Copies can be transmitted effectively and instantaneously, eliminating many of the barriers of distance that previously hindered commerce and culture to spread. Digital technology is rapidly developing, making digitalization an ever growing phenomenon. It is becoming cheaper to participate in the revolution, thus broadening the number of people who can gain from digitalization. Each of the processes and benefits of digitalization reinforces the others. This increases the divide between digital and non-digital approaches and at the same time furthers the evolution of digital formats (Robinson & Halle, 2002).

No matter what happens in the courtrooms it is obvious that several industries and their respective incumbents are facing a seismic shift (Day, 1997) in the way they do business.⁷ Industries are because of the digitalization of their products being restructured; boundaries are being redefined, both in terms of geography and product convergence. Value creation is migrating in the value chain, customer needs are changing and new specialized actors are emerging as serious competitors forcing incumbents to change their strategy despite of the uncertainty of what will happen in the future. The emergence of the online economy and the increasing digitalization of physical products and services coupled with rapid development of technologies such as computing, broadband, memory storage, encryption technology and mobile platforms are threatening to alter their existing value chain and its activities. The consumer will demand new forms of value as time progresses, and the challenge facing companies influenced by digitalization will be to devise strategies that take into consideration the consequences discussed above. Maybe unbundling (outsourcing or divestiture of activities) the corporation (Hagel & Singer, 1999) is the only way to go as specialized online actors take over distribution-oriented activities of the business. Perhaps the corporation can establish it self as a micro industry player. These choices will certainly be among the many paths different businesses and industries will take to ward off challengers. At the same time there are researchers who claim that the Internet only is a complement to strategy and that it doesn't change the fundamentals of traditional business concepts (Porter, 2001; Rangan & Adner, 2001). The music industry's experience can serve as a point of study, are the changes that Internet and digitalization implies as far reaching as often claimed or is it a mere bump in the road forcing only slight strategic changes?

1.2 Problem discussion

As discussed above, the reason for the ongoing controversy has been mostly about the spreading of intellectual property without compensation, this is what the music industry state as the reason why sales are declining. Certainly this is a problem for them, but the real problem lies in the fact that the Internet and the digitalization of

⁷ For a deeper understanding on the concept of "seismic shift" see Day's article "Strategies for surviving a shakeout", *Harvard Business Review*, March-April 1997, p92-102

their product has meant that new channels through which consumers access music have proliferated, causing the value to migrate within the music industry's value chain, a value chain that has been fermented over the last century. The Internet has increased the power of the consumer who now has the opportunity to demand more tailored products. This has not been possible in the past and the industry has been caught of guard, they have until recently not been able to offer this service and as a consequence they are not in the driving seat. It is now entrepreneurs with technologic talent who drive the development of service and availability; they do it on their own terms and are threatening to cut out the industry from the value creation process. The music industry must rethink their strategy and business models to place themselves in a lucrative position where current and future technology will work for them, not against them. Their slow adoption of the Internet and their diehard protection of the current, profitable business model has created the current situation; they let others beat them to the punch. "Why change a good thing", has been the prevailing attitude, the problem now is that the consumer realizes that it's not all good, it can get a lot better from their point of view (Parikh, 1999). The Internet has spawned communities and made it possible for strangers to meet and discuss online and lately share digital content such as music and film. All of a sudden the possibility to download songs for free exploded thanks to the MP3 format⁸. In conjunction with advances in CD and DVD technology it has become possible to create your own compilation of favorite songs. It sounds fantastic from a consumer point of view but for the people engaged in producing, distributing and marketing the content it has become a nuisance to say the least. Consumers who spend a lot of time on the Internet appreciate the possibility to choose exactly the content they want instead of having to buy a CD with 20 songs when they are interested in perhaps 4 or 5. The technology making file sharing possible is advancing rapidly and the entertainment industry fear that this will make file sharing even more prevalent. It is a self perpetuating circle of development, consumer needs and wants feeds the creation of new services and technologies which in turn makes the consumer more aware and demanding of even more service.

The different directions facing the industry today are creating a lot of confusion; there is no consensus of where things are heading and why. Marketing, distribution, artist control, pricing, the physical product, are areas where the knowledge landscape⁹ has become fuzzy and the right approach hasn't presented itself. New technology has created bifurcation points¹⁰ with several possible routes and outcomes. There are currently many different forms of technology and formats vying to become standard. Identifying the most important factors for the end consumer will be vital for deciding which standard to back. Perhaps they will all be relevant. Understanding the present market situation and why it looks like it does is important for the success of future strategies (Williamson, J, 1999). Observing how other industries facing similar challenges react and strategize can help the music industry to develop alternative sources and processes for creating value and making money and thus competing with

⁸ MP3 is short for Mpeg audio layer 3, patent owned by Thomson Multimedia and Fraunhofer Institute. Mpeg is a consortium that develops standards for film compression.

⁹ For a discussion on the concept of knowledge landscapes see: Eneroth, K & Malm, A.T (1999) "Knowledge webs & generative relations – a network approach to developing competencies", *European Management Journal* volume 9, nr 2, April 2001.

¹⁰ For a theoretical discussion on dissipative structures and bifurcation points see: Eneroth, K & Malm, A.T "Strategic identity – visions as catalysts for competence dynamics", *Advances in Applied Business Strategy*, JAI-Press, volume 6A, 2000.

new entrants more streamlined for the digital age. Much of the current debate is focused on the problems digitalization and file sharing causes, no doubt there are threats but there are also opportunities for skilled participants to grab.

There is an enormous amount of information regarding the future of the music industry but little connection to established business theory, most strategies are suggested without a credible business plan. I have tried to remedy this malady by relating strategies with traditional business concepts like the value chain, competition analysis, product/customer value and transaction economics, acknowledging the different views on how the Internet influences these concepts. Furthermore, a vast majority of reports are biased; my intent is to be objective and scientific.

Key issues raised and analyzed:

- What is the state of the traditional record industry today?
- What effect will digitalization and the Internet have on the existing music industry value chain?
- How have traditional music companies responded to issues and challenges thrown up by changes in the value chain; will they be weakened or strengthened?
- Which companies are now aligned following the recent spate of acquisitions, consolidations and partnerships? Which key players are emerging?
- How do consumers react to the new environment, how does the new digital product measure up compared to the physical?
- What strategies can we expect, can comparing challenges to other industries impacted by digitalization be a valuable exercise?
- What is the future for file sharing systems?

1.3 Purpose

The purpose of this thesis is to add to the current debate and give interested readers a clearer picture of what has been going on in this controversy so far and how the Internet, digitalization and file sharing will affect the music industry's value chain.

The theoretical contribution lies in the strategic perspective. Together with theory and comparisons with developments in other industries facing the challenge of digitalization and value chain disintegration, the analysis will focus on what recipe of strategies the music industry can implement and what future scenarios we can expect based on the outcome from the empirical findings. The strategies are in majority Internet related as the thesis aims to show how the Internet and digitalization affect the music industry, both positively and negatively. Are there possibilities for the industry to create value and make money, and if so in what form, or will other entities take over?

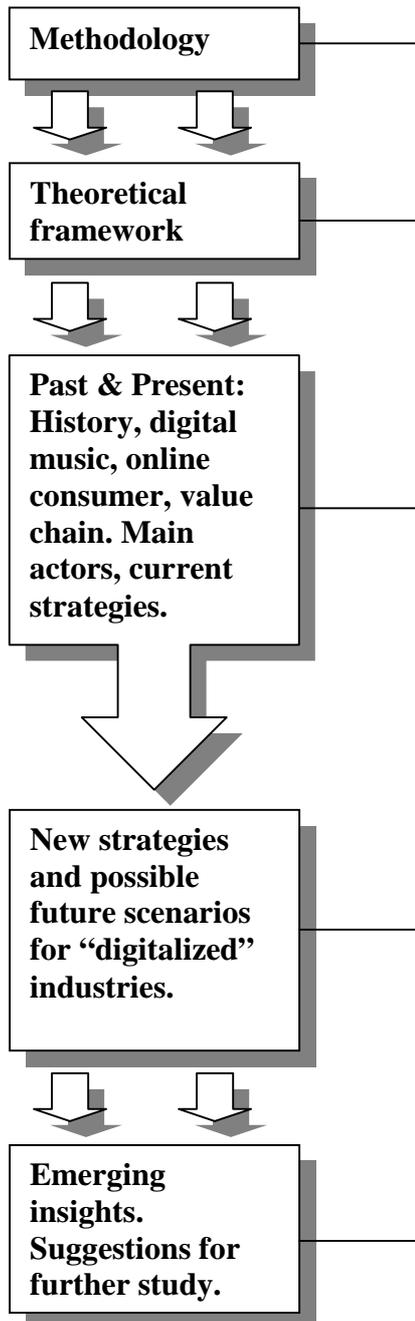
1.4 Target Audience

The primary target audiences for this thesis are students and faculty members at Lund University. It can however also be read by analysts, people active in the industry and persons with general interest in this field of study as well as researchers and students at other universities. Given the theoretical backdrop it requires some prior knowledge concerning business, economics and academic research methods. Technical jargon has been kept to a minimum for general readers and explanations of necessary abbreviations are included in the text as footnotes.

1.5 Boundaries

The thesis' focus will be on the music industry and its particular situation as it is most affected by recent developments at the time of writing. Naturally, because of the similar circumstances facing industries whose products are being digitalized, comparative discussions will be included to offer possible strategies that the music industry can implement to protect or alter their value chain in order to remain profitable. These strategies will mostly be online related, as the aim is to show how digitalization and file sharing can be useful as well as troublesome. Identifying technological factors that will be important for the prevalence of file sharing and thus consumer power, such as broadband availability, complementary mobile products and computer development will also be touched upon. As the online economy grows in size and importance, and will most likely play a major part in the music industry's future profitability, the factors that the consumer values when buying and selecting content on the Internet will also be discussed. When analyzing technological factors important for the power of the consumer, for example broadband availability, the discussion will be in the context on how it affects file sharing and other related factors, not its general usefulness. Technological factors as well as service factors will be in the context of the online world, not the physical world. The intent is for this thesis to be internationally applicable but because of the head start in Internet usage in the U.S. and Europe the vast majority of the information collected has a "western world" flavor to it. The thesis can roughly be divided into three dimensions; the consumer, the value chain (the product) and the strategies.

1.6 Structure



After the introduction where the background, problem discussion and purpose are outlined, a chapter devoted to the research methodology will follow where the reader will learn how the information presented in the thesis was collected and analyzed. This chapter influences the results and layout of subsequent chapters. In the third chapter a description on the theory used in the thesis is presented. The theoretical framework has an impact on the following chapters. Chapter four lays out the present situation and gives a brief historical rundown so the reader can better understand current events and the empirical findings. The main actors and their current strategies as well as the concept of digital music will be included in the chapter. In chapter five an analysis will provide the reader with possible scenarios and survival strategies for the music industry and other industries facing the digitalization challenge. Chapter six presents emerging insights, general conclusions and suggestions for future research. It takes into account the discussions in previous chapters to give a wide picture of the findings. The thesis ends with the bibliography.

Figure 1.6: Intended flow and structure of thesis

2 Methodology

This chapter serves as a guideline for the reader in order to explain how the author selected and handled the information required for the thesis and its completion. It will present the methodological approaches taken, the advantages and disadvantages with the approach and hence give the reader an explanation to how it influenced the result and ultimately the contribution of the thesis. The author hopes this will give the reader the possibility to form an opinion on whether the content and results of the thesis are relevant to the stated purpose.

2.1 Introduction

The reader will in this chapter learn about the author's background and frame of reference so to better understand how and why the thesis came about. A discussion on the approach taken when collecting the necessary data will start of the chapter. The theoretical framework is an essential part of the thesis and understanding why and how the chosen theories are important to the analysis will be integral for the reader and his ability to understand the text and to develop personal insights. A section on the information collected will describe how the data was organized and analyzed. Its reliability and value will be discussed in the part titled "criticism of sources". To conclude the chapter the reader will learn how the analysis was conducted.

2.2 Empirical framework

To confer a comprehensive and unbiased view of the ongoing controversy the author perceived it sensible to report on the latest developments, give a historical outline and present the latest findings of scholars researching the factors fueling the controversy. There is no intention of finding out only one side of the matter; instead the intent is to analyze the present situation from different perspectives. Therefore no field study has been conducted, as focusing on a particular actor could have a narrowing effect on the thesis. In order to present an oversight of the issues at hand, statements from key actors in the ongoing controversy combined with other empirical research are fused together. Statements used were found in the press, the Internet and from official homepages and reports released by interested parties.

Because of the nature and purpose of the thesis a traditional research perspective was chosen for the task at hand. Unlike a qualitative perspective, the traditional research method is designed to prove or support earlier findings, trying to evaluate an already known truth from an objective point of view (Backman, 1998), in this case the assumed "truth" that the music industry is in fact facing serious challenges. Hypotheses and theories are tested and based on past theoretical findings and actual reality. The qualitative perspective is more individual, subjective and social in its structure. Had the qualitative perspective been chosen for this thesis the interpretation of the empirical findings would have been based on the author's and key actors' personal thoughts about the controversy, a perspective that would have been used if the thesis had been a field study concentrating on one particular actor in the music

industry or its adversaries (Backman, 1998). This thesis is intended to give a coherent and wide overview of the above-mentioned controversy and provide the reader with a theoretical backdrop regarding the future capabilities of the music industry to create value and make money, given the threats and opportunities that digitalization and file sharing constitute. Although objectivity is a stated intent the reality of the matter is that the current controversy is fiercely subjective. None the same, the chosen perspective aims to find general principles based on assumptions and theories. Traditional research is normally explorative in its nature but this thesis is more descriptive, it borrows traits from the burgeoning field of research synthesis where the goal is to find generalizations, cause and effect connections, develop theories and seek practical applications (Backman, 1998). The reason why the research synthesis perspective was used can be summed up in the following points:

- The area of study lacks a coherent oversight.
- The amount of data regarding this field of study is rapidly increasing.
- There are contradictory statements and evidence circulating.
- There is a lack of theoretical support in the general debate.
- To add to the debate and give an explanation to why the controversy has arisen.

The objective of the research synthesis is not to rehash past research but to analyze its implications and further the knowledge base. The contribution of the thesis is to introduce theoretical perspectives highlighting both the positive and negative effects of the Internet and digitalization in order to give more credence to the implications from the business point of view. The purpose of the research synthesis in this thesis is to be both integrative and to single out pivotal areas for possible strategic use. It will focus on past research results and its practical implications. The scope of the thesis is not to be completely exhaustive, instead a selective process has been chosen in terms of a timeframe because of the nature of the thesis. Developments are happening at a dizzying pace and for this thesis to be as relevant as possible the research synthesis was concentrated on research done from 1998 to present time.

2.2.1 Approach

The relationship between theory and empirical findings is defined by the choice of research approach (Alvesson & Sköldbberg, 1994). The thesis has used a deductive approach. It is deductive in the sense that discussions and analysis are based on theoretical knowledge from books, articles and statements from experts in the field. The problem is that this is a new area of study and past research is relatively limited in reality. Estimates and conclusions about the future are mostly based on assumptions without theoretical or empirical evidence. The IT sector has often been misjudged one way or another; the bursting of the Internet bubble is a perfect example of overly positive predictions. Because of this, the inductive approach was used in circumstances where generalizations are based on events and occurrences that have taken place. The collected data presented in the empirical chapter were in those cases extrapolated to formulate theories and conclusions not previously included in the theoretical discussion.

The method chosen for this thesis is qualitative in its nature, as it doesn't rely on numbers and other quantitative measures. Instead it is based on verbal wordings, written or spoken. It is important to distinguish between qualitative method and qualitative perspective, they are not synonymous (Backman, 1998). This method was well suited in order to answer the questions and problems posed in the introductory chapter. The thesis is a case study although it hasn't got a qualitative perspective, which is often synonymous with case studies (Backman, 1998). The contextual approach in itself has made it hard to define what a case really is and where to draw the line. The process started out with the definition of the problem and the choosing of the analysis subject, which in this thesis is the phenomenon of digitalization. A case can be a firm, an individual, a group, an event or a phenomenon. As the digitalization phenomenon is a wide area of study, a tangible subject was chosen (the music industry). A case study does not limit itself to one case; several cases can be studied within the confines of the study, which in this thesis represents the comparative analysis with industries facing the same challenge as the music industry, for example the financial and software industries. The following quote by Yin (1989, p 23), that defines a case study as a strategy designed to investigate a phenomenon in its actual environment, helped confirm that it was a case study.

“A case study investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used.”

The thesis is focused on the particular problems facing the music industry in lieu of the increasing digitalization of their product and its impact on their value chain. A phenomenon not only observed in the music industry but also in publishing, film and TV, software, etc. The case is as mentioned above the phenomenon of digitalization of physical products and the study object chosen, the music industry (the big five). The object of the thesis is to analyze the impact of digitalization and the Internet on the industry value chain. In order to do this several other actors will be discussed as well, including the file sharing networks, the online music consumer and strategic partners to the “big five”.

2.2.2 Work process

Whether collecting data from a database or from other sources like a search engine the phases of the investigation, collecting and analysis process I have gone through are roughly the same;

- 1. Problem formulation.**
- 2. Investigation plan is constructed.**
- 3. Data collection method; the advantages/disadvantages of database search or search engine are weighed against each other to decide which will suit the current investigation.**
- 4. Data collection.**
- 5. Handling, evaluating and organizing of data.**
- 6. Analysis; the data is interpreted and categorized.**
- 7. Presentation of results in written format.**

2.3 Theoretical framework

As the digitalization phenomenon is a relatively new field of study, understanding the underlying theory is imperative for the reader in order to relate to the discussions found in the analysis, where different strategies for future profitability and survival is presented. The theoretical chapter will cover traditional business theories, which are also relevant in order to understand the value creating potential of the Internet, as companies discussed in this thesis increasingly have to conduct their business on the Internet.

Both the pitfalls and possibilities of doing business on the Internet will be theorized, for example the effect on the value chain, which is central to the thesis. To better understand how the music industry is facing increased competition, models of competition analysis like Michael Porter's Five Forces (Porter, 1985) will be presented. Transaction cost theory, innovation and strategic networks are other theoretical perspectives used in the analysis. The Internet and the online economy have meant new theories of customer service had to be developed, especially suited for the unique experience when shopping online. The music industry and others venturing into Internet related endeavors have to study exactly what the customer wants when buying content online, i.e. customer value and consumerism and develop a close relationship. For example, the power of communities, which is central for the existence of file sharing networks, will be explained. The product and its value drivers are both important concepts to understand in order to analyze what future the digital format has compared to the physical. To summarize, the theory will deal with value creation in the new digitalized environment facing the music industry and other business sectors.

The choice of theory was consciously directed towards finding new and updated models that took into consideration the impact of the online economy on traditional business models and had evidence to back up its claims.

2.4 Data collection

The data collected for this thesis is secondary in its nature, a common trait of the research syntheses process. Secondary data functions as further education as well as basis for analysis. The intent was to give a strategic perspective to the topic of study and to be as objective as possible. Conducting a specific study of one company in the music industry with a more qualitative perspective was considered but in the end discarded as it felt more relevant to provide a industry wide analysis because of the their similar response towards digitalization and file sharing, they all use the RIAA as their spokesperson and often collaborate when introducing Internet related ventures. It was also easy to consider them as one entity, they are known as the "big five" and control around 85 % of the market. Furthermore, in order to keep the strategic perspective on a general level (because of the cross industry comparisons), studying the specific resources and capabilities of each company would make it harder to reach industry wide conclusions. Therefore no direct interviews have been made, the aim is to show what could happen given the new circumstances, not what the music industry think will happen, or want to happen.

2.4.1 Primary data

Emails were sent out to the “big five” with questions that were supposed to fill in the blanks and provide more accurate predictions regarding possible strategies and developments in the field. The limited response rate from senior management coupled with the fact that relevant data was available on their homepages and in previous interviews, meant that primary data was comprised of the general data about current online ventures given by the “big five” in their responses. The data collection process entailed getting hold of statements from the “big five” and other key actors in order to get a picture of how the present situation has come to be and how this would affect future strategies given the empirical findings. As no direct interviews were made with the traditional music industry no interviews were conducted with other actors like consumers, partners, etc as this could result in the author developing a predisposition towards accepting a particular viewpoint. Both sides of the story have to be considered. Data from other actors were collected in the same manner; homepages, statements in the press and article searches. When discussing possible strategies for the music industry, comparisons with other industries facing the same issues were made. To get a better sense of what the main actors actually think, the chosen method was to go straight to the source and study statements made by senior management, statements that related to long-term strategy and the changing business climate facing their respective industry. The next step was searching for news articles and research papers about the same topic. Articles and statements were printed out and then organized in a manner that would simplify analysis and comparison. In order to find out if my topic of discussion and eventual conclusions would have any practical interest for the general public and to validate my findings and work process I have had discussions with analysts and researchers specifically oriented in this field. These discussions have been general in nature and mostly focused on what avenues to explore and how likely a particular outcome would be. The discussions were conducted with the following Internet based forums: *www.futureofmusic.org*, *www.musicdish.com*, *www.openP2P.com*, *www.next20years.com*.

2.4.2 Secondary data

The bulk of the source material used for this thesis is written, secondary data; this includes books, articles, Internet homepages and information gathered from news reports. This thesis is a mixture between a traditional research paper and a research synthesis process, gathering data for eventual analysis is therefore the most important task. Given the wealth of information, the problem was deciding what to use and what to disregard. As this field of study is developing rapidly and therefore makes relevantly recent reports outdated, the time frame criteria was vigorously enforced. I chose 1998 as a time frame as this was the year when the digital music revolution took off and the music industry realized what a threat to their business model it was becoming. It was also the year when the RIAA decided to take action against MP3.com, a site on the Internet where free music could be downloaded; this sparked the controversy, still in full bloom today, four years later.

Databases were the primary tool for finding relevant literature and articles. Searching through bibliographies of essays and reports also functioned as a process of validation for the literature selection. Most bibliographies contained the same base reference works and gave an indication of where to look to get an accepted and proven

reference, sort of a triangulation method. The work process described in chapter 2.2.2 is an accurate account of how the data was organized and handled. Before writing anything down, I organized the information into different topics chosen beforehand to correspond with the theoretical headings. To collect data for empirical and theoretical implementation, the database ELIN at Lund University was used in conjunction with ERIC and ABI/Inform. These databases have a wide variety of economic, Internet and strategy oriented journals at their disposal. I have used search engines like yahoo.com and google.com to further the search and find material perhaps not included in traditional research databases. Search terms used to find the desired data included: "Napster", "online strategy of big five music companies", "music industry's value chain" and "effect of digitalization on financial, postal, movie and publishing industry".

2.5 Criticism of sources

There are a number of factors regarding both primary and secondary data that have an influence on this thesis and its conclusions. Here follows a rundown on these influencing factors in order for the reader to decide if the data used can be considered useful for the stated purpose of the thesis.

Primary data that consists of interviews naturally run the risk of having leading questions colored by the constructor and his frame of reference. Furthermore, subjectivity can never be eliminated; there is a tendency to leave out information not suited for outsiders. Traces of subjectivity can however be useful and interesting as this can explain certain behavior that outsiders find puzzling (Backman, 1998). In addition it can be useful to study past statements and compare them to the most recent to see the change in attitude towards a particular issue. To get a well-balanced view of the story, statements from all involved parties have to be considered and evaluated. Not having any direct primary data has its drawbacks and consequences for the thesis, the level of detail normally obtained in personal interviews is reduced, and there is a risk of misinterpretation both from the interviewer and the person analyzing and using past interviews as a source. Furthermore the contribution to the general debate can be questioned if too much data is merely a repeat of earlier work, the challenge lies in conducting an analysis that takes these drawbacks into consideration. To compare the involved companies' answers to more objective bystanders' answers, analysts and researchers were used to combat the aforementioned problems.

Secondary data poses its own particular problems, even more so in this thesis that relies on reports on a phenomenon that is neither over nor clear-cut. All material used faces the same problem, it is mostly assumptions and educated guesses, nobody can predict future events. The purpose of the thesis is to give a strategic perspective on the current controversy and the effects of digitalization on the music industry's value chain, strategies that will enable them to make money and survive in one form or another. They are however, not meant to be guaranteed models for success. Four criteria in the data selection process were applied; answers and statements had to be valid, relevant, reliable and truthful (Alvesson & Sköldberg, 1994). Given the nature of the topic there has been added emphasis on the timeframe discussed in chapter 2.4.2. Reports, essays and other written material have been evaluated in terms of consistency of arguments, assumptions and stated implications. A concerted effort has

been made to resist the temptation of only using material that would back up personal thoughts or conclusions. Using search engines on the Internet like yahoo.com is at times like searching for a needle in a haystack, a lot of data had to be discarded and sorted through a filtering process to find only the most “official” data possible, i.e. not information to be found on personal websites. The only data used from these searches were from official company websites, online versions of newspapers and additional research papers and reports to complement the ones gathered from the academic databases. Objectivity can of course never be expected when using data from official company homepages, the information used from these sources have been limited to studying current strategies and finding out what the official company line is towards the challenges discussed in the thesis. Newspapers and online news sources are expected to convey a more objective and unbiased view. This is however not a given. The process of publishing an article in the paper is dependent on individuals who might have a dormant predisposition one way or the other, there is also the risk that the journalist has misinterpreted information and as a consequence written a report lacking in accuracy. Editorial content aside, some online sources can also be regarded as more “Internet friendly” than other physical newspapers, it can be difficult to sort out which are heavily biased and which strive for “objectivity”. Research articles from databases, which are heavily used in this thesis, have gone through a rigorous academic feedback process; there are certain conditions that have to be met in order for the article to be published. None the same the author’s personal thoughts often shine through and when using these articles as reference for theory and empirical findings the information is already analyzed. Furthermore, their work is based on sources which the reader often can’t subject to the same standards as used for the own thesis or report.

2.6 Frame of reference

My academic background in business administration, with a focus on strategy in high-tech markets coupled with my interest in Internet related issues has made me aware of the business perspective when dealing with Internet related strategies, the challenges and possibilities that the Internet implies and also how traditional business thinking will have to be modified to adapt to the new environment. The dominant subject matter as of late has centered on the controversy surrounding the music industry and the file sharing sites like Napster, Morpheus and Kazaa. The implications are however larger than commonly known, digitalization will concern several industries and will most certainly have a monumental impact on our daily routines. Intellectual property issues, privacy infringements, money making potential and the survival of the music industry are some of the most intriguing topics now being discussed in the media and among analysts and have therefore captured my interest.

My background gives me an opportunity to further the debate and provide interested readers with a two sided approach that will give them a better understanding on recent developments, the prerequisites for continued development in the field and strategic options available for the music industry in order to deal with the assault on their value chain and money making potential. Because of my extensive background reading, both before and after making the choice of thesis topic I have been colored by the experience and although impossible to be completely objective on a personal level the

method chosen to conduct the thesis will help me achieve an relatively unbiased analysis.

2.7 Method of analysis

The analysis process begins in chapter 4 in a small scale to convey the changes that already have affected the value chain of the music industry. It is important to point out that chapter 4 is not strictly a neutral empirical chapter, there are pre-analyzed sections that will be carried over into the analysis in chapter 5 and then put under the microscope with the help of the theoretical models from chapter 3. The most important findings of this analysis are then recapped in the form of a Five Forces analysis in the beginning of chapter 5. As a basis for the comparative discussions with other industries facing the digitalization challenge a theoretical analysis is conducted. To round of the analysis the long term perspective is dealt with. The analysis is continued in chapter 6, emerging insights, which also serves as a summary of the thesis and an opportunity to speculate on the future and the implications of digitalization. The process entailed a fusion of the theory and empirical findings so that the results of the analysis were grounded in theory that took into consideration the new reality that the Internet implies.

Data collection and data analysis can be hard to distinguish in cases where the collected data is pre-analyzed (Amit & Zott, 2001). To combat the problem the theoretical framework was systematically compared to the data so that the analysis in chapter 5 and 6 would differ from the analysis in chapter four which was mainly based on past research. It was an iterative process where I moved between the analysis and the theory to develop a strategic perspective. The collected data was sorted into strategic subcategories in order to ease the comparative analysis with the music industry. The analysis of the music industry is divided into the value chain and transaction cost perspective, innovation, competition, strategic networks and product/customer value.

3 Theory

In this chapter the reader will be introduced to the theories that are the backbone of the thesis. It will be vital to understand them in order to fully comprehend the discussions that follow in subsequent chapters. As this thesis focuses on Internet related strategies, the reader will first be acquainted with the virtual market and its possibilities for value creation. Value chain theory, innovation, competition analysis, strategic networks and transaction cost economics are central to the endeavor of creating value online and will therefore be included in this chapter. Product value, consumer value and behavior will also be incorporated. The discussion will cover both the positive and negative effects of digitalization and the Internet.

3.1 Internet and virtual markets

As the Internet boom of the late 90s has turned sour the positive aspects of the “new economy” have been lost in the confusion. While it is true that many of the companies caught up in the collective enthusiasm disregarded fundamental business concepts, it does not change the fact that there are sound business ideas involving the Internet in a long-term strategic perspective. The “growth is everything” phase is over and defending acquired territory is now prioritized. There is more focus on competitive advantage and the strategies to achieve it (Evans & Wurster, 1999). A challenge now facing remaining firms is to find potential for making a profit, which was eroded during the boom years by letting customers purchase products and services at an artificially low price. Subsidized cost and price, distorted market signals and creative accounting helped disguise the reality of the situation and as a consequence enabled the proliferation of companies with identical business ideas because of the perceived low entry barriers (Porter, 2001). During the boom period it was mostly new ventures that supplied the new ideas, now established firms are entering the fray with financial muscle that will force the strictly Internet based firms to sharpen their strategy and profit making potential. Despite the early adoption of e-business in the U.S. it has become a global phenomenon with Europe closing the gap.¹¹

Virtual markets are defined as a setting where business transactions are conducted via fixed and wireless Internet infrastructure. Characteristics of these markets are the importance of information and networks (Shapiro & Varian, 1999), a focus on transactions (Balakrishnan et al, 1999) and high connectivity (Dutta & Segev, 1999). The Internet has enabled millions of people to search and exchange considerable amounts of information quickly and at negligible cost. Navigation and selection freedom has meant that retailers have lost some of their power over the consumer because the suppliers can communicate directly with the end consumer and bypass retailers (disintermediation of the value chain). New actors like the infomediary Yahoo can help organize information about the consumers without having to participate in the transaction (reintermediation) and others like Priceline.com created innovative market mechanisms like the reverse auction. Navigation has three dimensions that can help create competitive advantages (Evans & Wurster, 1999). The first, *reach*, concerns access and connection; how many people a business can

¹¹ Forrester research report; “emarketplaces boost B2B trade”, 2000 as discussed in Amit & Zott, 2001.

reach or how many products it can offer. Extending the market segment can be an alluring concept but the more reach a company strives for the bigger the risk of undermining the strategic fit. Core activities shouldn't be changed unless it is certain the change will be useful in adding value to customers (Rangan & Adner, 2001). The second dimension, *affiliation*, reflects whose interests the business represents, either the seller or the buyer. The final dimension, *richness*, concerns the level of detail that the company collects about the customer and can help establish customer loyalty. Privacy constraints and the customers' ability to search for their own information limit the usefulness of richness as a strategy to build competitive advantage. P2P networks¹² and virtual communities (Hagel & Armstrong, 1997) are other byproducts of the Internet that have increased the bargaining power of the consumer. In communities it is the participants who create the value, not the creator of the site. The creator functions as a magnet to attract new users but it is the people who use the site who keep new users attracted and willing to stay. Sponsors appreciate this fact since it makes their ads more visible in the minds of the users who normally only stay a few minutes on a new site. Virtual communities are likely to have a bright future as digitalization permeates our life both professionally and socially. More users means more value for the existing users and sponsors, as is illustrated by the following model:¹³

$$\text{Return on participation} = \frac{\text{User return}}{\text{User investment}}$$

User return: the perceived profit or advantage the user acquires by participating.

User investment: the time and effort the user sacrifices by participating.

A high ROP means a higher proportion of participation that strengthens the relationship with the users.

Other characteristics of a virtual market include the ease of extending the existing product range with complementary products and assets, real time customization, sometimes with the help of other firms. Reduced information asymmetry is another very important factor that has meant increased consumer power. In the past consumers did not have access to the kind of information that is available on the Internet, this was privileged to a select few. As an example, online brokerage firms today offer their customers the same real time information as professional stockbrokers have access to (Amit & Zott, 2001).

3.2 Value chain framework

The value chain – “the set of activities where a product or service is created and delivered to the customer” (Porter, 1985) analyzes value creation at the firm level, it identifies the activities of the firm and their economic implications. It entails four steps; defining strategic business units, main activities, products and the value of the activities. Configuring the most important activities to create and add value to the product, and hence compete in its industry, is the most essential task the firm will

¹² For further discussion on different P2P networks see chapter 4

¹³ www.participate.com - (to read white paper, request form have to be sent in).

undertake. The value chain consists of primary activities like marketing and logistics, which directly creates value, and support activities like procurement, which affect value by their impact on the primary activities (Porter, 1985). Value is measured by total revenue and value has to exceed cost if the product or service shall be profitable. Differentiation along the different stages of the chain creates value. Differentiation drivers include policy choices like what activities to perform and how, linkages within and outside the value chain, timing, location, learning, integration and institutional factors (Porter, 1985).

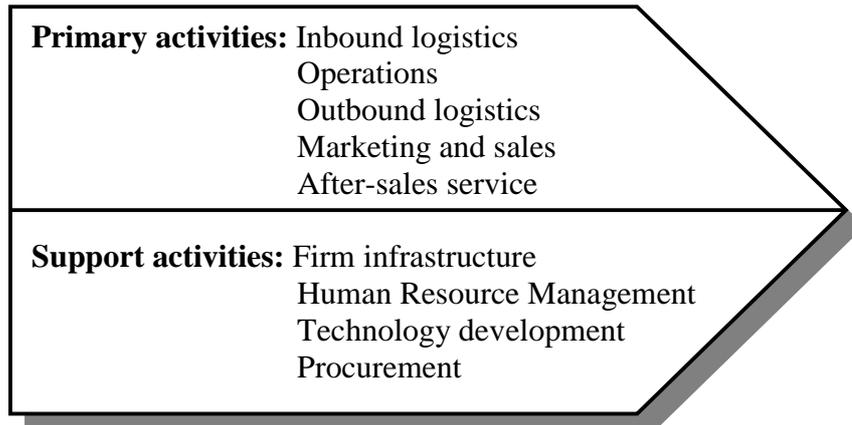


Figure 3.2: Value Chain Model (Porter, 1985)

Information technology has a lasting influence on the value chain because each activity involves creating, processing and communicating information. Physical activities can be moved online and be made more cost effective, for example web based training for the personnel and interfirm communication, which can create faster and better cross-functional teamwork. Online customer support and self-service, customized marketing and close supervision of inbound and outbound logistics are other benefits. Internet has the advantage of creating real time uplinks between the activities both within the company and with outside suppliers, channels and customers. It provides a standardized infrastructure, bi-directional communication and ease of connectivity, all at lower cost than previous electronic networks like the Electric Data Interchange, EDI. Porter argues that the Internet is not a revolution by itself, instead it is step forward in the ongoing technological evolution and it relies on advances made by earlier technology, for example scanning, wireless communication and relational databases (Porter, 2001). Virtual activities will not eliminate physical activities; it will serve more as a complement and sometimes may even amplify the importance of the physical activity or create the need for a new one. Consider the strain on employees at Internet based job posting services, the added reach made possible by the Internet has meant a flood of résumés and applications to go through. This is a general observation made by most business who have gone digital, the saved cost are often offset by strains on physical activities because of added request for information and quotes by their customers (Porter, 2001). Internet applications have an important influence on cost and quality but conventional factors like skills of personnel, product and process technology will continue to play prominent roles for companies that have started to offer online services. The limitations of the Internet

such as the inability for the customer to touch the product before purchase and the lack of face-to-face contact means that the virtual activities will serve the company best if they are integrated into the overall value chain and supported by physical activities to deliver superior value to the customers (Porter, 2001).

3.3 Innovation

Economic development and value creation can be viewed through technological changes resulting from innovation (Schumpeter, 1934). Innovation can come in the guise of new production methods, reorganization of industries, creation of new markets, introduction of new goods, discovery of new supply sources, etc. The concept of “creative destruction” (Schumpeter, 1942) means that after technological change certain rents (Schumpeterian rents) become available to the entrepreneurs. As the technological change becomes mainstream and knowledge diffuses these rents diminish and ultimately self-destruct. The theory identifies innovation as the source of value creation. New products and production methods rely on technology and novel combinations of resources and capabilities. Because of the new products and production methods, markets and industries are transformed which leads to economic development (Schumpeter, 1934).

For innovation to become a competitive advantage for a firm it has to have a high return on innovation in relation to the risk involved, furthermore it has to be unique and not easily substituted or imitated (Grant, 1998). Access to complementary assets and strong property rights protection (appropriability regime) will also add to the value creation potential of the innovation, from the firm perspective (Teece, 1987). Patents, copyrights, trademarks and trade secrets are some of the methods a firm has to protect its investment and reap potential benefits without the risk of free-riding. The innovation capability of a firm depends on corporate culture (conditions for innovation like cross functional cooperation, creative atmosphere and idea champions who are willing to help and secure funding for new ideas), resources and capabilities and strategic management (Hitt & Ireland, 2000). Strategies for exploitation of the innovation can range from licensing, outsourcing to strategic alliances and joint ventures. Timing, competition and property rights protection can determine whether a company chooses to become a follower or innovator. Innovation can also be shared freely in order to become the de facto standard; however, there is a trade off between market share and short-term profits that needs to be considered before making the decision.

Value creation in virtual markets can be described using Schumpeter’s theory but it can’t fully explain the phenomenon as virtual markets have broadened the innovation concept. Virtual markets span firm and industry boundaries, they involve new exchange mechanisms and unique transaction methods and have spawned new forms of collaboration among companies (Amit & Zott, 2001).

3.4 Competition

In order to create value at the firm level the resource-based view (RBV) can help explain why some companies survive and others fail. It builds on Schumpeter's theory on value creation discussed in chapter 3.3. The RBV sees the firm as a bundle of resources and capabilities. To create value and build a sustainable competitive advantage a firm has to combine complementary and specialized resources that are heterogeneous within an industry, furthermore they have to be scarce, durable, not easily traded and difficult to imitate (Barney, 1991). These asymmetric firms exist until there is a shock to the system, for example, the innovation the company relied upon loses its patent and the competitors now freely use it without restitution. A firm's resources (tangibles like physical assets, intangibles like reputation and human resources (the workforce)) and capabilities (competence) are only valuable if they reduce costs or increase revenues compared to if the company didn't possess these resources (Barney, 1997).

Analyzing the competition is essential in order to position the company in a lucrative segment and to know what companies to attack and avoid (Grant, 1998). Identifying the main competitors, their objectives, reaction patterns, strengths and weaknesses and future strategies are necessary steps in this process. The most important part to examine is the resources and capabilities of one's own company. The strategy chosen must have a strategic fit and this will not happen unless the company knows its own strengths and weaknesses. Strategy, which can be defined as the link between the firm (goals, values, resources, capabilities, organization structure and systems) and the external environment (economic, social, political and technological factors) shall be seen as a vehicle for coordination and communication (Grant, 1998).

Competitive advantage can be described as "when two or more firms compete within the same market, one firm possesses a competitive advantage over its rivals when it earns a persistently higher rate of profit or has the potential to do so" (Grant, 1998). To sustain the advantage and fend off those who want to imitate, the firm can engage in a number of barrier erecting activities, for example by obscuring superior performance, setting the price at a low level (cost advantage; economies of learning and scale, improved process technology, improved product design, etc), setting the price high and focusing on superior quality, preempting new entrants by moving into niche markets (differentiation advantage; size, color, weight, complementary products speed of delivery, social status, exclusivity, security, etc) or trying to do all at once (Grant, 1998). Cost and differentiation advantages can be achieved in two ways (Porter, 2001), either by doing the same things as your competitor but doing them better (operational effectiveness: better technologies, superior inputs, better trained people) or doing things differently than the competitors and creating unique value for the customers (strategic positioning: different product or service features, different logistics arrangement).

The Internet has enhanced operational effectiveness by easing and speeding the exchange of real-time information across the entire value chain of almost every company and industry. The open platform design of the Internet has also meant that the benefits can be acquired at lower cost than previous information technology formats (Porter, 2001). A cost advantage is difficult to sustain under normal circumstances as rivals rapidly copy the best practice and eventually this leads to

competitive convergence, making price the determinant for customer choice, which can undermine industry profitability. The Internet with its open systems and applications has made it even easier to imitate the best practice. Third party involvement has made the spreading of same system design even more prevalent (Porter, 2001). This implies that developing a sustainable competitive advantage through strategic positioning becomes all the more important. Porter has identified six fundamental principles that will help in creating the necessary competitive advantage with the help of the Internet:

1. Formulate the right goal – strive for profitability, not only growth.
2. Deliver unique value to a specific set of customers, don't overreach.
3. Develop distinctive value chain, integrated with the Internet, tailored for the targeted customers.
4. Make trade-offs; don't try to be all things to the customer.
5. Make sure there is a strategic fit between the activities performed and the value chain.
6. Strive for continuity of direction.

If these principles are enforced there is a bigger chance that rival companies will have a tougher time imitating the firm's strategy. However, not everyone in the research community takes Porter's theories about the Internet at face value. There are individuals who claim that there is compelling evidence to why we have entered into a new economy and that the Internet is a revolutionary tool. There is new infrastructure for wealth creation, there are new business models, new sources of value and more varied ownership of wealth (Tapscott, 2001). Virtual markets have opened up new sources of value creation since complementary resources and capabilities can be exploited in a novel fashion, for example between on and offline assets (Amit & Zott, 2001). Because information based resources have a higher degree of mobility than physical resources value migration is a likely side effect. Newly created value will also have reduced sustainability because in a networked economy there are alternatives to ownership and control of resources and capabilities, for example by acquiring or building them. Substitution resources are easier to access on the Internet (Amit & Zott, 2001).

3.4.1 The Internet and industry structure

In order to fully understand the analysis in chapter 4 and 5 and the conflicting views on the implications of digitalization and the Internet this section will deal with the challenges they imply for industries that have ventured out on the net, either by will or by necessity. The text is meant to function as an eye-opener, to give the reader a two-sided view of the new reality created by new technology and the Internet and is not to be seen as strict theory.

While the Internet has created some new industries like online auctions and digital marketplaces it has had greatest impact in the reconfiguration of existing industries like digital learning. It has reduced costs for communicating and information gathering to mention a few examples (Porter, 2001). To study how the Internet has changed industry structure in general Michael Porter's Five Forces Model can be used although the strength of each force can vary depending on the industry. In the general debate surrounding the Internet hype of the late 90s, industry analysis was said to be

obsolete because of the rapid pace of technological change. As reality has caught up with most industries it can be useful to perform industry analyses in order to evaluate profitability drivers and to see how competition alters strategic choices of incumbents and new entrants.

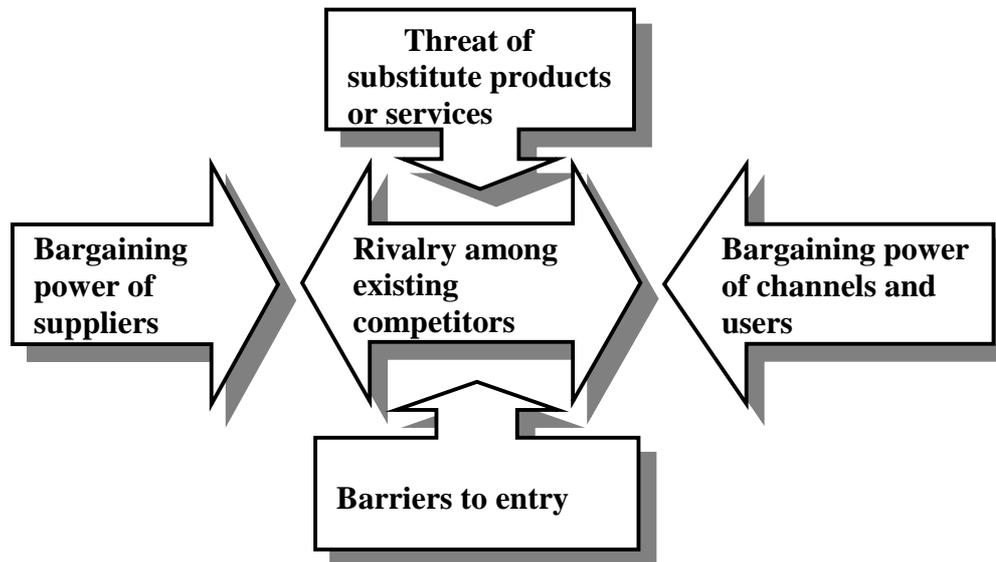


Figure 3.4.1: Five Forces Model (Porter, 2001)

Buyer clout increases because they have more access to information about products and suppliers, they are no longer fragmented. Suppliers can directly reach end users, creating competitors out of previous partners. Digital markets tend to give all companies easier access to each other's suppliers, which causes products to become standardized. Because the sales force and in some cases the physical assets can be almost eliminated, barriers of entry are lowered enabling more competitors to fight for the profits. More competitors from new places enter industries because of the lack of geographical boundaries; this in turn shifts competition into a price war, hurting long term profitability. Entry barriers like economies of scale and product differentiation are virtually abolished while barriers like the need for vast amounts of capital to build a brand still exist. New approaches to meeting needs and performing functions have created new substitutes, which has put stress on price and profit (Porter, 2001). By making industries more efficient Internet has also expanded the size of the market and improved its position in relation to traditional substitutes, there is huge potential for reaching new customers. Not every industry will be unattractive; it depends on the choices made by the competitors (Porter, 2001).

As can be understood from the discussion above, Porter believes that the Internet has an overall negative impact on the industry structure, but he is challenged by a hoard of researchers who have a more favorable view of Internet applications (Tapscott, 2001). The main point of controversy concerns profitability. Porter argues that the Internet hasn't increased switching costs (costs incurred by consumer when changing to new supplier, for example learning how to use new product or service) for the consumer because innovative web technologies have given users unprecedented possibilities to roam and choose new businesses as soon as they tire of the old. It is not difficult to learn how new systems work since many of them are designed by the same companies and use the same system of customer profiling. There are no strong network effects as

the Internet is borderless and that makes proprietary a tricky concept for any business, applications that display network effects like email and instant messaging are not patented. Building powerful brands online has therefore suffered despite heavy promotion. Behemoths like AOL, Amazon and Yahoo are claimed to be exceptions to the rule according to Porter. First mover advantages are based on sources like scarcity of inputs or distribution channels, sustained cost differentials and high switching costs for users, none of which is true in Internet businesses. Instead it is essential to being best mover (Rangan & Adner, 2001). This has darkened the prospect for first movers to acquire sustainable competitive advantages. A statement disputed by several other researchers (Schilling, 1999; Tapscott, 2001). The merits of being first, such as free publicity, value brand recognition, moving customers up on the learning curve and reaching critical mass are enough to keep the customers loyal, for example with subscription fees, loyalty programs, dominant design, etc. Technological advances are seen as source for profitability increases, for example videoconferencing which will cut travel expenses.

3.5 Strategic networks

Strategic network theorists seek to answer questions like why and how networks are formed, how value is created in the network and how the relationships between the firms affect the network's performance (Amit & Zott, 2001). Strategic networks are defined as, "stable interorganizational ties which are strategically important to participating firms. They make the form of strategic alliances, joint ventures, long-term buyer-supplier partnerships and other ties" (Gulati, Nohria & Zaheer, 2000). The structure of the network, its configuration in terms of density and centrality (Freeman, 1979) are important for the network advantages like timing, access and referral benefits (Burt, 1992) to function in an efficient manner. Size and heterogeneity of the ties also have a positive effect on the availability of valuable information within the network. Communication strategies in the network will differ in relation to the receiver (Fill, 1999). Consumer behavior needs to be understood (level of involvement in purchase decision, risk factor, etc) in order to craft effective messages delivered to the correct target audience (pull strategy). Communication strategies to intermediaries like agents, retailers and wholesalers shall stress the benefits of the product and the ability to offer them brisk sales in order for them to place the product on their shelves (push strategy). The profile of the communicating company will play a part in its relationship to all stakeholders, the identity, image and reputation relies on past credibility and reliability. Communication holds together the network; it coordinates activities, relieves tension and needs to flow in all directions to nurture the relationships crucial for the network's continued existence (Fill, 1999). Success in the network depends on relationship commitment, trust, communication behavior and conflict solving techniques. A network can take different forms depending on its purpose, for example information exchange networks or task oriented networks where experts cross over hierarchical levels in quest for a solution to the problem (Fill, 1999).

Strategic networks enable easier access to information, markets and technology, shared risk and knowledge, economies of scale and scope (Katz & Shapiro, 1985; Shapiro & Varian, 1999). Shortened time to market (Kogut, 2000), enhanced transaction efficiency, reduced information asymmetry, improved inter-firm

cooperation (Gulati et al, 2000) are other benefits offered by strategic networks. Because of the importance of networks of firms, customers, suppliers and other partners in the virtual market, network theory is useful for understanding value creation (Shapiro & Varian, 1999). It cannot however fully explain the creation of value on the Internet as firms like Priceline.com have relied more on transactional innovation for their value creation (Amit & Zott, 2001). Porter disputes the notion that partnering on the Internet has improved industry economics. Complementary products offered to consumers to speed up industry growth have created a myriad of partnerships, often with rivals. Porter argues that this standardizes the product offering, spurring a price war that undermines industry profitability. The same problem can be traced to the trend of outsourcing on the Internet; companies are giving up on potentially lucrative activities and creating powerful partners who can become direct competitors in the future (Porter, 2001; Christensen et al, 2001). Clamoring for extended reach, many firms have entered into partnerships without any established structure or control. When times are good nobody complains but when things take a turn for the worst the partners usually end up fighting over strategic control, a dispute that often leads to the unraveling of the partnership (Rangan & Adner, 2001).

Other sources say it is indisputable that the Internet dramatically reduces search, coordination, contracting, and other transaction costs between firms. New business models have emerged that are different from the traditional industrial-age model. They point to the hundreds of old and new companies that are winning by focusing on their core capabilities and letting partners do the rest. Complementing partners are in the networked economy one of the pillars of value creation on the Internet as this creates a value added product or service for the customer (Hax & Wilde, 2001). Most companies don't focus on their core competencies. Instead, they attempt to make due with some combination of in-house design, manufacturing, marketing, and other capabilities that are often not up to par. With the Internet, business functions and large projects can be reduced to smaller components and outsourced to more specialized companies around the world with virtually no transaction costs. This captures the benefits brought on by the competitive environment. As suppliers strive to reduce costs and increase quality and innovation there are other specialized workers and companies around the world able to replace them (Tapscott, 2001; Hagel & Singer, 1999; Werbach, 2000).

3.6 Transaction cost economics

Internalize or outsource? A question that lies at the heart of transaction cost economics study (Coase, 1937). "A transaction occurs when a good or service is transferred across a technologically separable interface. One stage of processing or assembly activity terminates and another begins" (Williamson, 1975, 1979, 1983). Transactional inefficiencies like bounded rationality (the individual has no chance to investigate all decisions possibilities and their respective consequences because of limited analysis capability and an uncertainty of how reactions on decisions will turn out), asymmetric information and opportunism (deliberate action in order to improve own situation) vary with the governance mechanism and has an effect on contracts, both in the firm hierarchy and with partners in the market. Transaction cost theory tries to explain the choice of the most efficient governance form given a transaction in

a specific economic context (Klein et al, 1978; Williamson, 1979). Transaction cost arises from planning, adapting, executing and monitoring task completion (Williamson, 1983). Enhanced transaction efficiency reduces cost and thus increases value creation. Reputation, trust and transactional experience can lower the cost of exchange between firms by strengthening the relationship (Williamson, 1979, 1983). As discussed in chapter 3.2, investment in information technology like the Internet can reduce coordination cost in the value chain, an additional benefit is the reduced transaction risk. This is particularly true in the value chain of the music industry where production and distribution are areas where Internet technology has created new levels of potential efficiency for music companies like BMG, Universal and EMI. Therefore transaction cost economics can be of importance when studying value creation in Internet related ventures. Creating a lasting competitive advantage out of transactional efficiency with the Internet will be cumbersome as the efficiencies are easily identified by other companies (Porter, 2001).

In addition to decreasing direct cost like cost of travel, processing paper documents and inventory management, Internet businesses can also reduce indirect costs like adverse selection, moral hazard and the hold up problem. This because of increased frequency of transactions that reduces uncertainty, asset specificity and an increase in connectedness between people that previously were on their own (Dyer, 1997). Transaction cost theory's main focus lies on cost minimization by single parties, joint ventures governance models receive little attention (Zajac & Olsen, 1993), which contrast with the importance of strategic networks in the Internet age. In the context of virtual markets, studying isolated exchanges makes it hard to evaluate the value created by the specific economic exchange as it often is complemented by other exchanges. This can explain the lack of validation of the relationship between exchange attributes and firm performance (Poppo & Zenger, 1998).

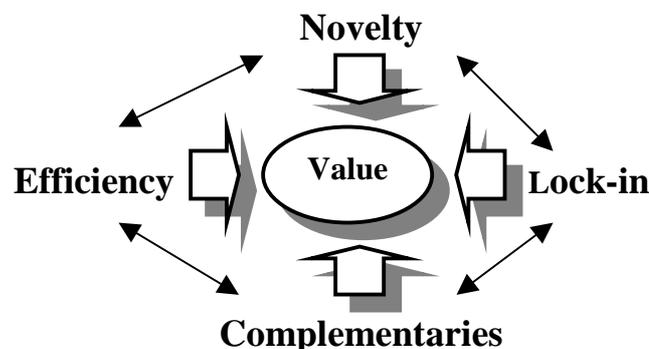


Figure 3.6: Value creation on the Internet (Amit & Zott, 2001)

Creating value on the Internet can be summed up in four interdependent and reinforcing dimensions (Amit & Zott, 2001); *novelty* (new transaction structures and content), *lock-in effect* (switching cost and network externalities), *complementaries* (between products and services, on and off-line assets, activities and technologies) and *efficiency* (reduced search costs, more symmetric info, economies of scale). As argued by Porter and other researchers these value dimensions are not always beneficial to the firm, it is mostly suppliers and customers who are the benefactors. The Internet has spawned creations like virtual communities and P2P networks whose existence rely on the ability to attract and keep users. Many formats of technology, applications, standards and business ideas on the Internet rely on the same fact; it is

essential to appear attractive and dominant in order to reach a critical mass of users. It does not matter if the diffusion of the idea is free or not (Schilling, 1999). The concept of increasing returns (Arthur, 1994) states that small, sometimes random events in the introductory phase can determine which technology or company will become dominant. After reaching this stage it becomes very difficult to unseat the dominant company as old users resent switching costs that moving up a new learning curve implies. New users perceive the dominant as having positive network externalities because of the many individuals already using the format. A high number of users also serve as signal for sponsors that it is worthwhile to support the dominant company (Schilling, 1999).

3.7 Product value

To better understand why the consumer has embraced the digital music format, the concept of product value provides useful clues. A product is said to consist of three parts (see figure 3.7); the core product which represents the main reason why the customer buys the product, the actual product which is product, brand, design and packaging all together and then the augmented product which includes guarantees, delivery, etc (Kotler et al, 1999). Understanding what the characteristics of the core product and what the customer sees as true value in a product is essential if companies and whole industries shall stay competitive (Levitt, 1960). Establishing a relationship between the company and the customer is becoming more and more important now that the Internet has made customer loyalty a fickle concept. In order to understand customer behavior the relationship aspect needs to be nurtured (Grönroos, 1996). The value of the product is according to Grönroos defined not only in terms of Kotler et al's. model but also in terms of the relationship between the customer and the company, it can be a make or break decision when it is time for a purchase. In times of rapidly increasing technological sophistication the consumer can get confused and the selection criteria, when in a purchase situation, becomes more subjective and relationship oriented, logic often takes a back seat.

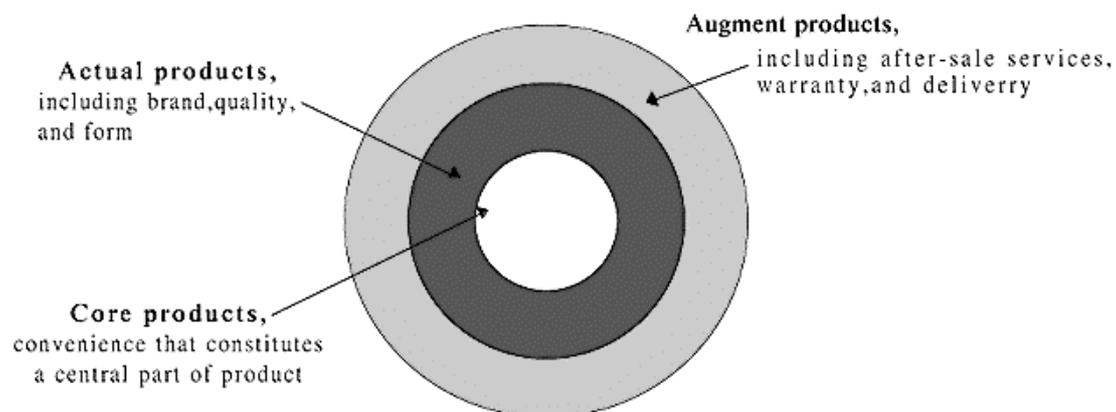


Figure 3.7: Product definition (Kotler et al, 1999)

The benefits a product will offer are communicated to the consumer through what is known as the four P's; product, place, price and promotion (Kotler et al, 1999). Tangible product attributes such as quality, packaging and design and intangible

attributes like brand and status are used, as the product has to satisfy both material needs and social needs. These attributes will often serve as the basis for their purchase decision. Marketers utilize these features to position a product in the mind of the target customer. Buying habits can often be used as an identifying tool for marketers, a tool suitable for online ventures where 1-2-1 marketing is feasible. Production advantages like distribution efficiency is a concept that is becoming especially important in the age of digitalization. Technology should however never be a substitute for strategy, only a complement (Rangan & Adner, 2001). The customer needs and wants, cost, convenience and communication must correspond with the product offering.

Brand names: A brand can provide information to consumers, encourage loyalty and add value to the product. They often convey the product quality, an indication of price and where you are likely to be able to buy the product. Brand names make the comparison of different products easier and, when the same brand is used for a wide range of goods and services, a consistency of quality across the different products is expected (brand and line extension). Brand names therefore reduce the risk of a new product failing if the brand has had success before (Kotler et al, 1999). Packaging and design is an important part in building brand awareness. A company can choose to use the manufacturer's brand, a private or licensed brand or co-branding where two companies use their collective brand strength to reach a wider customer base.

Product mix: A product mix (Kotler et al, 1999) that is seen as complementary by the consumer can be very important in order to offer a product that has perceived added value. A product mix is discussed in relation to its breadth (the total number of product lines the company sells), its length (the total number of products it carries in each product line) and its depth (the number of versions of each product). The product mix is also a sign of what strategy the company implements depending on the company position in the market; market leader (tries to expand total market, grab market share, improve productivity and defend its position), challenger (strategy varies from attacking leader head on or focusing on the leader's weaknesses), follower (can copy leader or improve leaders product) or market nicher (can choose one or multiple niches). Product classification into consumer and industrial products is another step in determining which market segment to go after and how to do it. Offering the customer complementary products can sometimes cause a loss of focus (Rangan & Adner, 2001). Companies forget to ask themselves the basic question of what business they are in. A wider product range can be useful if it enhances the core product. In the initial Internet frenzy during the late 90s companies considered all Internet sectors to be the same and disregarded the fact that these sectors (infrastructure, applications, portals, content, services and exchanges) had different characteristics and value drivers. This undifferentiated view of the landscape makes it harder to specify whom the true competitors are, to allocate resources in the right place and how to satisfy the customer (Rangan & Adner, 2001).

Pricing strategies: Price differs in the product life cycle stages and is often used as a means to position the product or service in the eyes of the consumer. It depends on the market situation for the company, who can use a wide assortment of strategies to combat new entrants or itself enter a new market, for example market skimming and market penetration pricing. Discount pricing, segment and psychological pricing,

promotional and value pricing are other pricing strategies used to protect or increase market share (Kotler et al, 1999).

Product life cycle: Consumer tastes and preferences, as well as technology developments and competition are rapidly changing. There is no guarantee that a successful product will remain successful in the long term. Therefore, companies cannot rely on their existing products, they must have processes in place to develop new product opportunities and follow them through to commercialization. This process needs to be stringent and well coordinated in order for the product to be successful during its life cycle stages (product development, introduction, growth, maturity and decline) and new-product development process. It entails the following steps; idea generation, screening, concept development and testing, marketing strategy, business analysis, product development, test marketing and commercialization (Kotler et al, 1999). The advantages of the Internet like increased transaction efficiency and real time uplinks within the company can speed up the product development process and at the same time make it more accurate and desirable by incorporating customer feedback along the way.

3.8 Customer value and customer behavior

Value: Digitalization and the Internet will certainly alter the way consumers perceive value when going about their daily routines, this does not imply that traditional theories about customer value and behavior shall be discarded, they only need to be seen in a new context (Butler & Peppard, 1998).¹⁴ There are a large number of definitions concerning customer value, the common thread being that value is created in the exchange of performances between the producer and the customer. The amount of value created is determined by the relative size of the performances. If the customer thinks the price was too steep in relation to the use he got out of it, the degree of customer value is perceived low. The difference between value and price (cost) determines the customer's will to buy a product. Comparing customer value is essential in order for a company to offer the best product or service and stop the customer from choosing an alternative product (Anderson & Naurus, 1998). The value chain consisting of primary (inbound and outbound logistics, operations, marketing and service) and secondary activities (procurement, human resource management and infrastructure) need to be closely connected with various partners so they together can create added value for the customer. In cases where the end consumer is part of the value chain as is happening in the music industry, increasing value will require an efficiency enhancement of other activities in the value chain, for example by 1-2-1 marketing and added product offerings. Different people are attracted to different aspects of value and from a company perspective it is important to do a value segmentation (Meltzer, 2000) in order to determine which customers to serve. The level of value offered to the segment has to be clarified, a close relationship with the customer will reduce the risk of delivering the wrong level and form of value and will also keep them ahead of competition by offering the customer exactly what they want (Meltzer, 2000). The level of value offered must not be too high in relation to the cost for the company to supply the value. Free products have a high value in the eyes of the consumers but for the company it doesn't make

¹⁴ Chapter 4 discusses the characteristics of the music consumer and the Internet context.

economic sense in the long run. Developing an effective communication process between company and customer entails five steps. Identifying the target audience, determining communication objectives, designing a message with correct content, structure and format to grab the attention, interest and desires of the target segment are the first three. The fourth step deals with choosing a media channel to deliver the message; it can be either personal channels like word of mouth or non-personal like promotional events. The fifth step concerns the feedback process that can help in developing a better follow-up product (Fill, 1999). Communication can inform, persuade, remind and make customers aware and thus help the company differentiate itself and retain the customers at greater convenience (Fill, 1999).

Quality: Value is not equated with quality, it is more personal and implies a trade off between different factors (Zeithaml, 1988). Products and services are not judged in the same manner in terms of quality because the customer can't touch the service like they can with the physical product. The difference between expectations and actual outcome is the same as with the product evaluation but when consuming a service, the result is not the only parameter used. The service process itself is part of the evaluation. Service quality has two dimensions (Grönroos, 1996); the technical (the result) and functional (the process). These dimensions can be judged differently by the customer, for example the technical quality might be satisfactory while the functional might be seen in a less favorable light. The company's reputation and profile can play a part in the evaluation process and once again a close relationship with the customer can alleviate the problem. It is important to reduce the relationship costs (Grönroos, 1996), which can be direct (customer commits own effort in order to consume service or good), indirect (costs incurred by faulty good or service) or psychological (feelings of discomfort as problems with good or service occurs).

Satisfaction: Another concept not to be overlooked is customer satisfaction, which deals with the sense of well being a customer feels when consuming a good or service. Only the customer can define this state of mind and the marketers will be poised for success if they can establish a close relationship with the customer. Satisfaction can be seen as a complement to customer value as they don't have the same meaning (Meltzer, 2000).

Customer value	Customer satisfaction
<ul style="list-style-type: none"> • Formed during consumption. • Represents what customer desires in product. • Serves as a guideline for the company, what they should do to create value. 	<ul style="list-style-type: none"> • Formed during or after consumption. • Represents customer reaction to consumed good or service. • Serves as a grade for the company, how well did value creating efforts succeed.

Figure 3.8: Comparison between customer value and customer satisfaction.

3.8.1 Customer behavior

The behavior of the customer is based on several factors; among them are personal values and psychological factors like motivation, perception and learning capabilities. The level of involvement in the purchase decision, the buying situation and post purchase service are other important parameters. Business buyers have a different behavior model where organizational fit and proposal evaluation are among the most important factors. The fascination with new technology and products, i.e. materialism that has become a hallmark of the Western world, functions as status symbols. Environmental influences like culture, subcultures (age, geography, race and religion) and groupings (family, membership clubs etc) and situational influences are important aspects to study in order to understand the behavior of different customers (Meltzer, 2000). Music consumption is a personal and symbolic act of consumption; it's all about pleasure (reaching a level of well being) and image creation (communicating your identity and status). Social interaction in places like the music store often serves as a place where the consumer can "advertises" his identity. Young consumers of music are fickle in terms of preference, adult consumers are easier to categorize and target with specific offers. Furthermore, complementary products like a good stereo system play a big part in the satisfaction evaluation. The moral values of an individual is something very relevant for this thesis, the concept of moral hazard describes common behavior among consumers. Downloading music for free is a moral ambiguity; one could argue that it is immoral as no payment goes to the creator. A common sentiment is: "It doesn't make a difference what I do, I am only one person". The individual only thinks about himself and not about all the others who feel the same way.

Price, design, location are other well-known factors of customer behavior. The challenge lies in measuring these values. One model is the means-end chain analysis (Guttman, 1982) that defines the link between means and end as the connection between product attributes, consequences for the customer and personal values. The model is based on two assumptions; the customer's values plays a big part in the selection process and the complexity in choosing between products are reduced by product classifications. Values control behavior, consequence governs specific behavior in specific situations while the attributes produce the consequences.

The process of adoption of a new product or service is formed by the prior conditions mentioned above and consists of five stages (Fill, 1999):

1. **Knowledge** – information about new product is spread by media or word of mouth
2. **Persuasion** – consumers become aware of how new product can be of use.
3. **Decision** – positive or negative attitude will develop.
4. **Implementation** – acquire, use and test product.
5. **Confirmation** – accept or reject on basis of trial experience.

There are five categories of adopters (Fill, 1999). The *innovators*, who like new ideas and have a high income, *early adopters* who are mostly young and educated, the *early majority* who represent the opinion followers and rely on informal sources of information. The *late majority* who are skeptical of new ideas and only adopt new products because of social or economic factors. Finally there are the *laggards* who are

suspicious of new ideas and set in their ways, usually low income and less educated than the norm. The buyer decision making process moves through five phases; problem recognition, information search, alternative evaluation, purchase decision and post purchase evaluation which need to be reinforced by the company in order to reduce the perceived risk a customer faces when going through the phases. The risks are financial, physical, social, performance, and ego related. They determine the level of involvement in a purchase decision; low risk means low involvement. Involvement level also depends on level of complexity in using the product or service (Fill, 1999).

3.9 Chapter summary

The impact of the Internet and its potential for value creation is a fervently debated issue. Agreed upon is the fact that things are changing. If it is for good or bad is contested. The main flashpoints of the disputed value creation range from competition to partnerships and transaction benefits. One point of view was that the hype of the late 90s was not grounded in theoretical concepts and as a consequence the fall back to earth was rapid and hard (Porter, 2001). Others, who still think the Internet has created a new reality, have also come to the conclusion that to create lasting value, practice has to be tied to theory, albeit not the same theory as in the past (Tapscott, 2001). The theoretical framework presented in this thesis has tried to balance the view of both “camps”, with the underlying conclusion that no single theoretical concept can explain the potential for value creation on the Internet. The discussed theory; the value chain, innovation, transaction economics, competition analysis and strategic networks all need to be integrated to understand the problem analyzed in this thesis. To fully comprehend the problem a deeper understanding of product value and customer behavior is needed, value isn't created by itself.

4 The past and the present

In this empirical chapter the reader will be introduced to the music industry. Its history, current legal battles, structure, strategies and main actors will be presented. To give the reader a good base for the analysis chapter, the concept of digital music, the online music consumer and key success factors like P2P networks and communities will also be discussed.

4.1 Historical background and recent developments

The evolution of the music industry has been profoundly influenced by developments in technology. New technologies often find existing relationships ill-equipped for changes, and technology therefore becomes the medium for change and further development of existing relations. The usual reaction of the existing establishment is to attempt incorporation of new developments into an existing structure and then to use them for profitable purposes. For example, look at the impact of Gutenberg's invention in the 15th century. Control of the duplicating process had moved from the hands of church into those of the entrepreneur. Literature was becoming secularized to meet the demands of its new audience. The eventual development of the market economy created economic interests and new ethics about the value of a work of art and this in turn led to the protection of intellectual property, legal issues have since addressed the division of profit between artist and distributor. New inventions that challenged the existing laws failed to radically alter the system and instead reinforced them (Garofalo, 1999).¹⁵

It was the phonograph and later the gramophone, that brought the music industry into existence. The ability to make an unlimited number of copies from the original, the development of a mass-scale home-entertainment market for recorded music, and a system of royalty payments to artists derived from the sale of disks were some of the immediate consequences resulting from the inventions. The threat was soon apparent to piano-makers and retailers, music teachers, sheet music publishers and music hall artists. Emile Berliner, the inventor of the gramophone and his company, The Talking Machine developed a business plan at the beginning of the 20th century based on growth in two areas. First the basic technology had to evolve to be easy to use, inexpensive to the consumer and profitable for the company. Second, new musicians and music had to be discovered. Demand for that music had to be generated to sell gramophones and related technologies. Berliner managed to succeed in both. He created the 78 RPM discs that were the industry standard until 1948 (the 33-1/3 RPM disc appeared in 1948, and the 45 RPM disc was first available in 1949). Since then the recording industry has continued using recording directors and talent scouts to promote its business. Like every other successful business, the music industry had to follow and at the same time reinforce the public's tastes. A new technological development, the radio would prevent the market from expanding and it would force the recording industry into its first decline. The same way that recording techniques

¹⁵ The historical background is based on the article written by Garofalo

threatened the entertainment business of the nineteenth century, they were themselves challenged by the development of radio and its consequences.

Radio made music reproduction available in homes at a much lower cost and as a consequence radios replaced record players. People could listen to music without having to purchase it. At this point (late 20s to early 30s) the consuming custom of “possessing music” - owning a recording – wasn’t developed so the market declined. The depression also had a considerable impact on the declining record sales spawning consolidation within the industry (Garofalo, 1999). New marketing efforts were responsible for changes in the music industry in the late 1930s. Jukeboxes were installed in thousands of bars and became an integral part in the industry effort to promote and advertise its commodities and manipulate consumer demand. Companies became less concerned to exploit big stage names, and more interested in building stars from scratch. In addition, radio and the industry tried to coordinate their efforts, with radio continuously promoting music stars and their albums. The popularity of radio and jukeboxes became a profitable source of income for the music industry, because of changes in copyright laws that gave companies royalties for every public performance of music. Shows that took audience tastes into consideration became popular marketing channels. This system experienced a shock as new technological developments; long-play records (33 and 45 RPM), television, transistor radios, and tape were introduced to the public (Garofalo, 1999).

The transistor was a revolutionary machine, it could reproduce an improved quality of sound compared to older, tube-based radios and it was much smaller, less power consuming and more durable. Its low price made it extremely popular and as a consequence promoted music in astonishing ways (Garofalo, 1999). The gramophone made it possible for consumers to own recordings but they were still expensive and fragile. Early tape recordings were not easily marketable because they were also very expensive. The long-playing 33 and 45-RPM (LP) records were incredible breakthroughs because of their lower cost, great durability, and improved sound quality (Garofalo, 1999). These advancements made music a commodity that easily could enter anyone’s home. They were met with great enthusiasm and the music industry experienced unprecedented expansion. Musicians were profiting from the changes since their music was reaching ever-growing audiences. The music industry was safe from any type of piracy as there was no other way to reproduce music except via radio, but challenges were on the horizon (Garofalo, 1999).

The introduction of cassette-tape brought many new consumers to the music industry. Tapes were aimed at bringing music into one of the places that consumers spent many hours - the car (Garofalo, 1999). Cassette technology enabled the transnational music industry to penetrate remote corners of the globe, but was also responsible for the industry's two main financial headaches of the 1980’s - piracy and home-taping (Garofalo, 1999). Tape technology is portable and recordable, and is one of the easiest ways to duplicate, produce and distribute music. This technology emerged as a major threat to the music industry but the industry responded by finding a way to profit from it. A tax was levied on blank tape and related equipment, which could be used to compensate copyright holders for their loss of income. Record companies got 38 percent of the royalty pool, performers 26 percent, and writers and publishers 17 percent each, with the remaining divided among unfeatured musicians and vocalists (Garofalo, 1999).

The development of music videos and the creation of MTV in the 1980s provided music with direct influence of the top recording companies. The videos and MTV were extremely popular and profitable. MTV's dominance forced the music companies to shoulder the expense of video production and then pay MTV to air the videos. The music industry was determined to never let anything like that happen to their business ever again (Shirky, 2001).

4.1.1 Recent developments¹⁶

In order to understand the present situation, the following recap of recent developments, highlighting the most relevant for this thesis will be of use. It can also help the reader determine who is suing whom, the legal foundations, partnership structures and how fast things have changed.

1992: MPEG1-Layer3 is developed by the International Organization for Standardization in Germany. The Copyright Act of 1976 is amended; a surcharge on blank cassettes and digital recorders is allowed to allay the music industry's fears.

1995: The American Senate passes the Digital Performance Rights Act of 1995 that imposes royalties and certain license restrictions on digital transmissions of sound recordings by subscription broadcast or interactive on-demand delivery systems.

1998: In March, MP3.com launches a site designed for undiscovered bands to promote their music using the MP3 format. In May the RIAA sends cease and desist letters to a student at Arizona State University who posted music online without securing the rights to do so. In October, the RIAA sends letters to musical artists asking for their support in the fight against MP3. RIAA also announces it is seeking an injunction against Diamond Multimedia to halt the release of its Rio PMP300 player based on the MP3 format which is rejected later in October. On October 12 the Digital Millennium Copyright Act is passed by the American Congress which among other things requires webcasters to pay licensing fees to music companies. In November there are roughly 200 000 songs on the Internet according to the RIAA. In December, Chuck D takes down songs he posted on his Web site for free downloading after being threatened by his record company, Def Jam, for violating copyright law. He vows to keep on fighting the establishment and to support the MP3 revolution. The "big five" launch the Secure Digital Music Initiative saying they will try to find ways to co-exist with MP3.

1999: In February and March Sony, IBM, Intel and Matsushita announce a watermark to prevent illegal copying of a new music format. In April Universal and BMG join forces to form online music ventures like Getmusic.com. May proves to be a very important month for two reasons. First Real Networks' "Jukebox" debuts, allowing consumers to create play lists from music they find online and also music from their own CD collections. Second, Napster, the file-sharing network based on software created by college student Shawn Fanning, opens its doors. In June Internet giant AOL acquires two Internet music companies, Spinner and Nullsoft. Furthermore the American Society of Composers, Authors and Publishers (ASCAP) announce a licensing agreement with MP3.com. In September Sony begin selling the memory

¹⁶ Drawn from www.msnbc.com/modules/DigitalMusic

stick Walkman, a portable storage and playback device for digital audio files. Critics say Sony is simultaneously fighting digital music as a record label and promoting it as a hardware manufacturer. In December the RIAA sues Napster for copyright infringement.

2000: In January the RIAA sues MP3.com for copyright infringement. A month later a variety of music firms join forces with new digital counterparts to sell online, including EMI and Supertracks, Universal Music and RioPort.com, and Sony Music with Digital On-Demand. In May Metallica delivers 335,435 names of Internet users they say downloaded their music to Napster and asks for them to be banned from the service for copyright violation and later a federal judge orders Napster to stand trial for copyright infringement. Napster responds by saying it blocks user screen names identified by Metallica as allegedly infringing on the rock band's copyrights. MP3.com agrees to remove all major-label content from its controversial My.MP3.com service. After a two-year investigation, the Federal Trade Commission in America settles a price-fixing case with the five major record labels, estimating that consumers were overcharged by \$500 million over the last four years. Conflicting studies show declining CD sales and others show a rise in CD sales in recent years. In June MP3.com settles a copyright infringement lawsuit with Warner Music Group and BMG Entertainment. In July a U.S. district court judge issues a temporary injunction barring Napster from allowing music to be traded online, pending a trial. A federal appeals court later overturns this ruling. In September a federal judge rules against MP3.com, saying the company willfully violated copyright protections in posting music files on its online service, awarding Universal Music Group \$25,000 per compact disc. In October Napster announces a surprise alliance with former antagonist BMG, striking a deal that will change the free online music-swapping service into a paying one.

2001: In February a federal appeals court rules that Napster must stop trading in copyright material and may be held liable for vicarious copyright infringement when it fails to patrol its system. In May Vivendi Universal acquires MP3.com to function as the backbone of its own online music venture, Duet. In October the major labels sue peer-to-peer systems Morpheus, Grokster and FastTrak (Kazaa). Several reports indicate more songs were swapped on these types of services than during Napster's heyday. A typical month could see up to 3 billion files, which included music, films and games, being traded. In December label-backed subscription services MusicNet and Pressplay launch, with charges of \$9.95 per month.

2002: The global music industry reports sales fell five percent in 2001, due mostly to piracy. Furthermore, more blank CDs than music CDs were sold. In April Kazaa wins an important case in Holland where they are deemed to be innocent and can't be faulted because their product is used for downloading pirated music. In June Napster files for Chapter 11 bankruptcy in an effort to protect themselves from creditors as Bertelsmann AG prepare for a complete buy-out. In September a judge blocks the sale of Napster to BMG, chapter 7 bankruptcy liquidation of the company's assets begins. In the fall of 2002 the music industry resorts to more aggressive legal challenges to combat the spreading of pirated digital music. Individual users are to be suspended from their Internet providers if they engage in file sharing without compensation to copyright holders, fines will be enforced on those who continue.

4.2 Digital music

Before explaining the concept of digital music, a clarification of modern music technology is useful. CDs, tapes, and vinyl discs reproduce sound through an analogue format which means that various devices can play music by reading physical bumps or grooves of the surface of the media. In comparison, computers reproduce music by using a digital format that converts these bumps or grooves into number combinations, called algorithms, which the computer translates into sound waves (called WAV files, short for Wave audio format). These algorithmic files have a disadvantage in that they take up a large amount of space, making storage and transfer difficult. The solution to these problems has come in the form of MP3.

Technological aspects

MP3, developed by the Moving Picture Experts Group based in the Fraunhofer Institute for Integrated Circuits in Germany had as a purpose the creation of a high quality, low memory music file. As the human ear cannot hear all the frequencies of a WAV file, they decided to eliminate all the sound frequencies that a human ear fails to pick up, thus reducing file size. A WAV file can be compressed to 1/22nd the size of the original by using MP3 technology, which means the file is easy to transfer and store. A MP3 file is a satisfactory sound reproduction of a WAV file as long as it is not reduced to its minimum of 1/22nd its original size, a noticeable amount of sound quality is then lost. Reducing the file to one-tenth of its original size, the resultant sound quality appears to be unaffected. The result in real terms is that layer 3 shrinks the original sound data from a compact disc (with a bitrate of 1411.2 kilobits per second of stereo music) by a factor of about 10-12 (down to 112-128kbps) without sacrificing sound quality.¹⁷ Continued audio compression is an important factor for sustained popularity of digital music as quality enhancements are on the way for the physical product. Conservation of storage will in the future become a non-issue as computer hard drives and flash memory capacity will increase dramatically.¹⁸

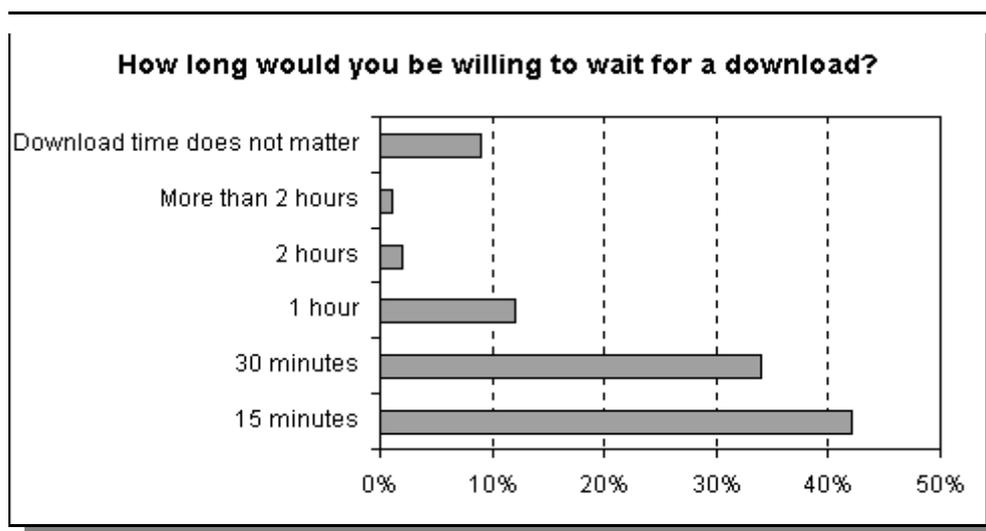


Chart 4.2: Download time questionnaire (Forrester research, 6700 Americans interviewed)

¹⁷ www.mp3haven.com/mp3-facts

¹⁸ www.chipar.com/papers/MPx.pdf

As the chart¹⁹ illustrates, transfer times are essential for the popularity of the digital format, together with virus-free files and sound quality they represent the three most important factors. Transfer times have gone down as new modems and broadband access have been introduced, a telephone modem (56K) can transfer one 4,8-minute song in about 11 minutes, a cable modem can transfer one in 48 seconds, and faster links make transfer time almost a non-issue entirely.²⁰ Broadband access as well as Internet access are two very essential factors that will determine the future of digital music and other products. In the West, Internet penetration is high, 60 % in some countries while broadband has had a hard time establishing a big customer base. For example, market penetration for broadband in the US is only estimated at 15 million users by 2003. Broadband has been essential for the popularity of downloading music over the Internet, 52 percent of those with a bandwidth of less than 56k downloaded MP3s, compared to 85 percent of those with access to high-speed T1 connections, according to a study by the University of Southern California.²¹

New formats and devices

Coupled with the rise of commodity hard drives, storing huge amounts of MP3 files is both efficient and affordable, a significant reason to why it became so popular in such a short time. In addition, an important advantage is that the change from WAV to MP3 is completely inexpensive. Internet users adopted this new technology and started using MP3 for their music files and the amounts of Web searches for “MP3” have reached sensational numbers. Individuals with access to the Internet can log on the World Wide Web, join a file sharing network and download music for free. MP3 is not the only digital compression format, either in audio or film. The phenomenon of digitalization of music is not dependent on the MP3 format, it just happened to be at the right place at the right time, in the future it will be a different standard that dominates. Other well-known formats are wma by Microsoft, Attrac 3 by Sony, a2b by AT&T, the open source format Ogg Vorbis and MP3 Pro developed by Swedish firm Coding Technologies.²² The divx format threatens to be to the TV and movie industry what MP3 is for the music industry. With complementary devices like CD or DVD recorders, consumers can transfer these digital files to an analogue and physical format. Complementary products in general are very important for the uptake of digital music, users appreciate the possibility to store their entire CD collection on a single device like Apple’s MP3 player, which has 40 GB storage. Other products like the music system at home or in the car need to be upgraded to support storage of the digital formats before there is true “revolution”. Portable devices like PDAs and cell phones are going through a convergence period. Added features are MP3 players, digital cameras and Internet connectivity. They are becoming multimedia devices and as time progresses will become even more central to people’s lives. Increasing bandwidth is a must in order to enhance quality of experience, not even the upcoming 3G networks will be good enough at the onset. Digital radio might be an alternative in the short term.²³ Adapting media content to the portable devices can create value

¹⁹ web.mit.edu/armani/www/it/page6.html

²⁰ www.mp3haven.com/mp3-facts

²¹ www.firstmonday.dk/issues/issue7_2/fox/

²² The specifications of all available formats is not central to this thesis, digital music will be discussed mostly from the MP3 perspective as it roughly shares the same specifications as other leading format standards. The technologically interested reader is advised to visit:

www.puredigitalaudio.org/digitalcompression/index.shtml or

www.teamcombooks.com/mp3handbook/12.htm

²³ www.durlacher.com/downloads/music.pdf

added service to the consumers and profits to the content providers by increasing the flexibility of listening to music, listening to music from the computer is not optimal for the consumer.²⁴

There is a distinction to be made between download technology and streaming content technology (Sosinsky, 1999).²⁵ Streaming technology allows a user to view or hear digitalized content as it is being downloaded. It allows information to be accessed in virtual real time as the file is being transmitted from another location. As the file is used, its remnants are discarded which is a direct contrast with downloading where a user must download the entire file before accessing it. Internet radio stations that use this technology have recently come under attack by the RIAA. Copyrights fees have been imposed retroactively meaning that several radio stations have been forced to shut down as they couldn't pay the sums required by law. The RIAA claimed that the possibility of creating personal song lists on the radio stations was tantamount to downloading illegal MP3 files.²⁶

The CD is a physical technology format, to place music onto the CD requires digital technology. The reason why it hasn't been completely phased out is that the level of quality is considered top notch and that MP3 files are abstract, the tendency to transfer these files to a CD is testament to that. Furthermore, the process of acquiring the CD can be a pleasant experience, a chance to browse and talk with music lovers face-to-face. Music as a product can be either a pleasant sound or a chance for socialization. For the consumer, this can justify the price of a CD but as virtual communities become more real than virtual the price might begin to outweigh the value. Especially if the technical quality of the digital service (quality of sound) and functional quality (the process of finding and downloading the file) increases. As wholly digital formats on the Internet continuously increase their quality, the CD must evolve and become even better. The DVD-Audio and Super Audio CD are two new formats the music industry hope will keep consumers happy and therefore turn around the falling sales of music in 2001 and 2002. Superior sound and integration with video are two product enhancements billed as the reasons why the consumer shall upgrade. They also offer more copy protection than the traditional CD. Encryption technologies promise to be a key to future digital formats, attempts at encoding CDs have proven to be unreliable, promoting new physical formats with superior encryption standards is an attempt to extend the shelf life of the physical format. As prices on copy devices like the CD and DVD burner drop consumer piracy will always be a threat. Future digital formats like MP4 are integrated with more encryption technology, but many other open source formats are not (Paul, 2002).²⁷

Online digital music consumption

Apart from changes in music distribution, it could be argued that MP3 has brought about a change in the ways that modern fans of music perceive a musical piece of art. Physical objects (CDs, tapes and vinyl) are replaced by computer bits stored in devices owned by music fans. The lack of physical contact with the music format has created new ways of understanding music. New types of relationships between the consumer and the product have also been spawned by the digital format. Like the

²⁴ www.firstmonday.dk/issues/issue7_2/fox/

²⁵ http://www.stern.nyu.edu/~sjournal/articles_00/streaming_technologies.htm

²⁶ For a detailed discussion visit riaa.com and saveinternetradio.org

²⁷ www.csmonitor.com/2002/0916/p13s01-wmcn.html

change that music fans experienced when CDs replaced vinyl, MP3 has changed concepts of ownership and the idea of the musical piece of art as a whole. The striking growth of the music downloading population has occurred across virtually every demographic group and level of online experience. The increase in the number of music downloaders has occurred among men and women, the well-to-do and those in modest economic circumstances, and in different racial and ethnic groups. 78% of US Internet users who download music didn't think that is "stealing". 53% in the general online population held the same view. 61% of downloaders said that they didn't care if the music was copyrighted, 64% of all respondents aged 18-29 thought downloading music is "just fine" (compared to 43% of those aged 30-49 and 28% of the 50-64 age group), this according to an American study.²⁸ A June 2002 survey by Ipsos-Reid projected that 41.5 million people in the US, age 12 and over, have downloaded digital music files. 81% of those surveyed claimed that their CD purchases had stayed the same or increased since they began downloading.²⁹ The community sense that has developed on the Internet is very much based on a "free for all" attitude that is hard to dislodge.³⁰ The sensation of physically owning music after every purchase with an album cover and its artwork is no longer the same for the consumer. Artwork, including photographs and liner notes, is an important augmented product feature but it's importance decreases whenever it can be downloaded and printed to a color laser printer. A couple of Internet sites already offer the consumer the possibility to print an exact copy of the CD sleeve. Consumers may be willing to pay to avoid that effort, but they will be willing to pay less in the presence of viable cheap substitutes.³¹ There is thanks to digital music a more direct relationship with the sound experience than before. Consequently, it could be argued that this new technology, and generally the possibilities provided by computers, produces several new challenges for the music industry related to distribution, consumption, copyright and art creation. The new computing achievements and the digital "revolution" are not only affecting the music industry but also other parts of modern society and everyday life. The MP3 trend can be seen as just one example of the digital "revolution". MP3 technology in itself didn't shock the traditional music industry. Everything changed after the development of MP3 sites based in the idea of file sharing, like Napster and MP3.com.

4.3 The pioneers of file sharing

The prevalence of file sharing would not be possible without advances in technology. This is however not the only factor for continued success of file sharing. If technology was the only factor, people could use their email as a tool to spread files. Communities and P2P networks have become essential in order for protocols like Napster, Gnutella and Kazaa to function. Within these communities, status is affected by a variety of factors, such as connectivity, size and relevance of personal archives of music, behavior, and tenure. But the most important characteristic of these communities is their attitude towards copyright. P2P networks are essentially technological communications where all parties are equal. The Web is not peer-to-peer, it has a server-to-client model. On the Web, P2P refers specifically to a

²⁸ www.pewinternet.org/reports/pdfs/PIP_More_Music_Report.pdf

²⁹ www.ipsos-reid.com/media/dsp_displaypr_cdn.cfm?id_to_view=1542

³⁰ www.pewinternet.org/reports/pdfs/PIP_More_Music_Report.pdf

³¹ www.chipar.com/papers/MPx.pdf

decentralized network established by a group of users sharing the same software program, like Napster who contrary to common belief was not the first P2P network. It has been around for several decades but only used sparingly. P2P allows computers, and their users, to tap and pool unused resources such as extra megahertz of processing power, gigabytes of storage and music that would otherwise remain locked up in individual desktops. There are three forms of P2P networks; collaborative computing, instant messaging, and affinity communities. Collaborative computing environments pool the processing power of many computers. In return the participants receive incentives or the satisfaction of knowing they are helping a worthy cause. Instant messaging allows users to swap text messages in real time. Affinity communities are direct file sharing groups, like Kazaa. Shared spaces are used in which they interact directly without a central database. Prominent members of the business community like Andy Grove, chairman of Intel, calls P2P “a revolution that will change computing as we know it.”³² There is a difference between the file sharing protocols used on the Internet today and as a consequence they offer different forms of benefits to the consumer. Understanding these differences will make it easier for the music industry to incorporate the benefits of the networks into their business model.

4.3.1 Napster and MP3.com

Napster: In 1999, Shawn Fanning, created Napster, a MP3 Web site that was unlike all other existing sites at the time. There were no music files to download, instead it was a file sharing system which used a software program, called Napster (after his nickname at high school). It allowed visitors to access music by using a direct file transfer. Visitors could obtain the Napster software by visiting the site, and then search for available music by typing in a song title or the name of an artist. The server would then link one Napster user to another Napster user who had the desired song on their computer. For the traditional music industry, Napster made music piracy on the Web a mass phenomenon, for in just a few months Napster acquired an astonishing number of users. At the height of its popularity in February 2000, 80 million users were estimated to use Napster sharing 2.8 billion files in a single month. The numbers fell as the lawsuits mounted.³³ Shawn Fanning’s motivation to create such a service was his desire to establish a music community where you could “hang out” with like-minded individuals. It was also rooted in the frustration of the limitations of MP3.com and Scour.net.³⁴ Asked if he thought Internet-based piracy and future file sharing through Kazaa, Morpheus, and Grokster can be stopped in the courts he answered: “You can’t stop technology. Even if they (the RIAA) succeed in shutting down those particular services, new services will spring up. It’s the nature of the Internet. I think the industry’s approach of providing a limited catalog of music, providing services that are significantly below the consumer’s expectations, and then simultaneously scaring them from trying to do what they want is the wrong approach. They really need to try to determine what are the core things that people really love and respect from a music service and make sure they satisfy those needs.” He did not believe the music industry was hurt by Napster, instead he said: “My view is when consumers have the ability to learn about new and interesting music — and the barrier is lowered

³² The discussion concerning P2P networks is drawn from:
www.cio.com/research/knowledge/edit/p2p_content.html#fit

³³ www.nethistory.urldir.com/napster.html

³⁴ Interview with Shawn Fanning, March 2000: zdnnet.com/2100-11-502047.html?legacy=zdnm

in a way that gives them control over how they experience it — I think those are positive things.”³⁵

MP3.com: Another pioneer, MP3.com created by Michael Robertson, had a different purpose. According to the founder its aim is to “provide artists with an option besides the traditional industry route, an avenue in which they have control of their destiny and keep ownership of their work”³⁶. When artists sign up, they agree to give a free download of their work for visitors to the site. When visitors on the site decide to purchase an entire CD, MP3.com delivers it to their homes. “The artist sets the price of the CD, gets 50% of the retail price on every sale, and keeps full control of the master recording (Mardesich, 1999). The service that MP3.com offered allowed users to access copyrighted CDs from their own home computers. As explained by MP3.com, a user creates an account with the website, then either inserts their own legal copy of the CD or buys the rights to it online. When the CD is entered into their online library of discs, the website allows users to access this CD from any computer by accessing it in MP3 format from the servers at MP3.com. The service is password protected, the only person that will have access to the CD is the person who actually owns the CD. MP3.com stated that these two services made it easier for individuals to access CDs that they already owned the rights to. The RIAA countered that argument by saying that MP3.com was using illegal copies of the albums to distribute music to other users. All done without the consent of the artists and was therefore in violation of copyright laws. In late 2000 MP3.com had more than 500 000 songs available for downloading, after the buyout by Vivendi Universal the number has dropped as they only offer music from Universal’s catalogue and the music isn’t free to download like before. Streaming music is free and the number of songs are in this format estimated at over 1 million.

Value chain: Napster and MP3.com can be categorized as semi-distributed databases (Kant, Iyer, Tewari, 2002), storage of data is decentralized but there is a central index that is used for searching after a desired file. This is what enabled the music industry to mount a successful legal challenge; the catalogue of music was in violation of copyright laws. Napster’s value chain is an example of both disintermediation and reintermediation of the value chain. All the activities between the artist and the consumer are removed, instead new activities are created. The artist creates the music, Napster handles catalogue indexing, the consumer stores the music and Internet service providers distribute the music.

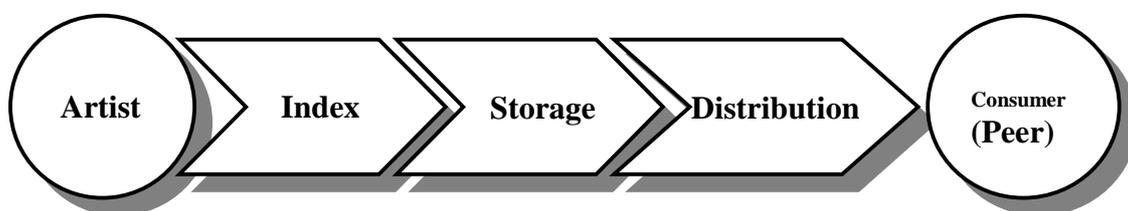


Figure 4.3.1: Value chain of semi-distributed databases

³⁵ Interview with Shawn Fanning, *Wall street journal*, 2002, reprinted on: stacks.msnbc.com/news/815473.asp#BODY

³⁶ Jodi Mardesich, 1999. “Music and the Net: How the Internet hits big music,” *Fortune*, volume 139, part 9, pp. 96-102.

4.3.2 Online music service³⁷

The attempts by the music industry to offer digital music online through ventures like Musicnet and Pressplay do not use the same system architecture as Napster. They use a normal database where both catalogue index and data storage is centralized (Kant, Iyer, Tewari, 2002). In their value chain they bypass traditional retailers and work together with partners on the Internet. Index and catalogue is centralized to achieve a high level of control, i.e. protection against illegal pirating and distribution. They are supported by activities like promotion from the traditional value chain. Competition comes from other music sites like Wippit³⁸ who have made deals with major labels in order to legally offer subscription-based music to the consumer.³⁹ Establishing a popular site whether it is retail or subscription based like Pressplay, the creators must be wary of falling into the technological trap that spelled the end for pioneers like Boo.com. “The features that are most likely to increase the likelihood that an online shopper will make an online purchase at that site tend to be features that make the online shopping experience more like on-land shopping,” said PricewaterhouseCoopers e-retail intelligence director Mary Brett Whitfield.⁴⁰ Something for the music industry to consider as customer value for the physical art of music shopping tends to higher than online shopping. Internet marketers should focus their energies on developing search engines, safe financial transaction and offering detailed product information and availability status, factors which are more likely to increase visitor-to-buyer conversion rates. Other popular set of features includes visual appeal, merchandise reviews and in-stock status.⁴¹ Developing online strategic relationships with sites that makes it easy for the customer to find the site is essential, for example with portals like Yahoo.com. Links to relevant articles, a Frequently Asked Questions section, rapid email response, a section for complaints, comments or questions, relationship history (customization), message boards and chat rooms are useful features that can help establish a community feeling around the site. Incentives for ordering online, such as a one-time discount or free samples are examples of how to attract first time users.⁴²

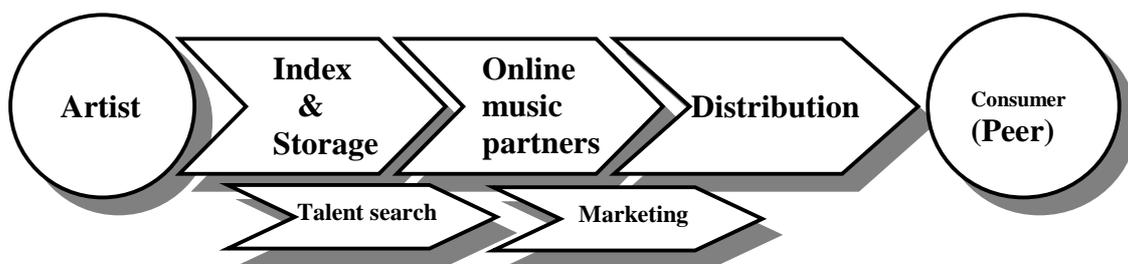


Figure 4.3.2: Value chain of Online Music service with central database

³⁷ For more on the “big five’s” online offerings see chapter 4.5

³⁸ www.wippit.com

³⁹ *Internet world* (Swedish edition), issue 9, 2001, p 11

⁴⁰ www.newsfactor.com/perl/story/7964.html

⁴¹ *ibid.*

⁴² www.quality-service.com/news/six.html

4.3.3 Next generation networks⁴³

After Napster's demise file sharing hasn't ended, instead several other networks have taken its place. Names like Gnutella, Bearshare, Fasttrack (Kazaa), Morpheus and Grokster represent the new foes of the music industry. Gnutella is an open source protocol which users are free to improve. Bearshare, Morpheus and Limewire are networks using the Gnutella protocol. Together they have over 130 million users. An individual who installs the Gnutella application in his computer can choose which of his own files he is willing to share. Kazaa and Grokster are networks who use the Fasttrack protocol. The difference compared to Gnutella is that Fasttrack decides who can use the protocol. Kazaa is licensing a protocol in hopes of establishing a file sharing community, it is Fasttrack's own file sharing application. It also exists in an ad free version, Kazaa lite. It is estimated that the Kazaa file sharing program has been downloaded 163 million times.⁴⁴ Niklas Zennström, developer of the Fasttrack protocol says that the music industry can't stop the evolution of the P2P networks, they will adapt to changing environments.⁴⁵ The network Imesh.com has its own application and over 30 million users. Imesh, Kazaa, and WinMX have 1 million simultaneous users.⁴⁶

These different networks have replaced Napster; file sharing is on the rise with more than 3.5 billion files traded every month. Figures from analyst firm Jupiter Media Matrix indicate the number of users taking part in legally dubious file sharing on the Internet is rising. Industry analysts warn that unless the music industry offers real alternatives soon, the legitimate digital music industry will never be able to take off. Nearly 40% of Internet users use their broadband connection for sharing music on the Internet.⁴⁷ Furthermore the number of file swapping networks keep rising, a conservative estimate puts the number at 500 with thousands in development⁴⁸. They have drawbacks for the individual user, as some applications are prone to include spy programs, computer intrusion and unwanted ads. Content is not always broad which means the consumer has to join several networks to find everything he wants. Quality of the music, virus attacks, free riding and long download times are other problems. Despite these limitations the number of users increase, the community feeling is strong as well as the desire to acquire content for free, low price is a very important factor for the popularity of digital music.⁴⁹ For the individual participant the legal issues are often not crystal clear. Parallel's can be drawn to video and TV, it is legal to make a personal copy but illegal to share and distribute it (fair use practice). However, it is illegal to copy pirated content. The same goes for Internet radio. The RIAA claim that most of the music on the net is pirated. As recent legal developments indicate (Kazaa's victory in a Dutch court) and the fact that the networks are registered through shell companies in the South Pacific, the music industry are fighting a loosely defined foe. They have scored a success in shutting down

⁴³ Information on next generation networks were also gathered from respective homepages; www.morpheus-os.com, www.grokster.com, www.imesh.com, www.limewire.com, www.kazaa.com, www.bearshare.com, www.gnutella.com

⁴⁴ www.downloads.com

⁴⁵ *Internet world* (Swedish edition), issue 9, 2001 p 10-11

⁴⁶ www.musictarget.com/webmusic_news.shtml

⁴⁷ *ibid.*

⁴⁸ *Internet world* (Swedish edition), issue 9, 2001, p 11

⁴⁹ www.durlacher.com/downloads/music.pdf

Audiogalaxy, a popular file-swapping site that had over 30 million users.⁵⁰ Another tactic used by the RIAA and its overseas counterparts as of late is to go after the individual user and convince the network to suspend the user from further participation. Internet providers are also urged to suspend broadband users if they detect individuals downloading and sharing copyrighted material.⁵¹ The RIAA is looking into the possibility of legalizing hacking so they can damage P2P networks sharing illegal content. Flooding the networks with fake MP3s (spoofs) have recently been tried without much effect.⁵²

Freenet: The challenges the RIAA faces with the fully distributed networks can get even harder if Freenet, an open source program based around wholly anonymous net publishing and distribution becomes as widely used as above mentioned P2P networks. Ian Clarke started the Freenet project nearly four years ago as a Scottish university student. Clarke says he expects copyright holders groups such as the RIAA and the Motion Picture Association of America to stigmatize the network if it grows in popularity and acknowledges that they will have an easier time after recent anti terror laws. Chinese dissidents have also been able to use the program for their purposes; the negatives often drown out the positive according to Clark⁵³. Freenet has been hailed in headlines around the world as the next step in file trading after the wholly decentralized Gnutella. The software resembles a parallel World Wide Web more than it does the search-and-download networks of file-swapping services like Kazaa. Individuals can post Web pages, store files and, using recently developed technology, even produce live Webcasts across the network, all completely anonymously. The developers have worked hard on building in a level of encryption and anonymity that ordinary P2P services can't provide. Their aim is to allow global, uncensorable free speech, not only facilitating the distribution of such things as music or movies. There is however already a type of "anonymous Napster" available called Espra. Using a network like Kazaa or Napster, anyone offering content or downloading content exposes their address on the Internet, which makes them easily traceable through their ISP (Internet service provider). Freenet works by having each person involved dedicate a portion of their hard drive to hold content uploaded to the network. This is encrypted, nobody will know what is in their cache at any given time or be knowingly responsible for hosting any particular piece of content. Content migrates automatically between these nodes as people make requests to download it. There is no obligation to share files if the individual doesn't want to. Like other P2P networks, it is dependent on the number of users and the generosity of the people who donate space from their hard drive. Having what is perceived as the dominant format will function as a signal to attract more users and as a consequence achieve positive network externalities. The more popular the content, the easier it is to find it.⁵⁴ According to Clark an average of 3000 individuals download the Freenet application every day.⁵⁵

Value chain: These networks are fully distributed which means that both catalogue index and storage are decentralized (Kant, Iyer, Tewari, 2002). They are commonly referred to as Napster clones, this is a falsification as can be understood by the

⁵⁰ *Internet world* (Swedish edition), issue 6, 2002

⁵¹ *Internet world* (Swedish edition), issue 9, 2002 p 20-21 and
www.musictarget.com/webmusic_news.shtml

⁵² www.musictarget.com/webmusic_news.shtml

⁵³ news.com.com/2008-1082-899662.html?tag=rn

⁵⁴ *Internet world* (Swedish edition), issue 9, 2001. For more on Freenet see: freenetproject.org

⁵⁵ news.com.com/2008-1082-899662.html?tag=rn

separation into semi- and fully distributed networks. Next generation networks have no central server, all data exist with the users. When a search is made it is sent to the network from user to user. When a hit is registered the file is downloaded directly between the two participants without third party involvement (Koman, 2001).⁵⁶ The value chain is constructed in the following manner: The artist creates the music, the consumer handles both index and storage, Internet service providers handle distribution.

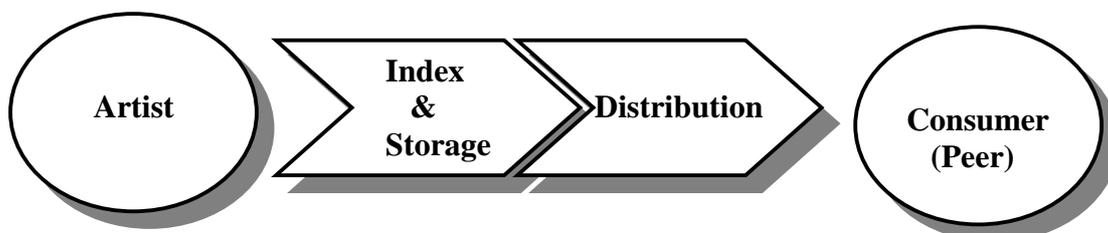


Figure 4.3.3: Value chain of fully distributed P2P networks

The incredible number of Napster and MP3.com users and the creation of next generation networks like Kazaa has resulted in legal responses by the music industry (the big five) but the artist community remains divided. Despite legal success against Napster and MP3.com, the music industry is facing a new reality that is difficult to control, challenging many of the principles of the existing system. The MP3 storm has already produced a major crisis related to producing, reproducing and distributing music. It is obvious that the MP3 reality is testing the entire system, including artists, the music industry, consumers and their relations. But as history has shown, this is not the first time that technology is changing or threatening these relationships. Innovation is an important factor in value creation.

4.4 The music industry today

Five big labels dominate the music industry today and control around 85 % of the market. Universal Music Group, a subsidiary of Vivendi Universal, has a commanding market share of 31.2 percent. BMG, a unit of Bertelsmann, has a share of 17.2 percent. The market share of Sony Music Entertainment, a division of the Sony Corp, is at 15 percent while Warner Music Group, part of AOL Time Warner, has 14.2 percent. The market share of EMI Recorded Music, part of the EMI Group, is 7.2 percent.⁵⁷ The following tables show US and European music sales as projected by an analysis done by Jupiter Media Matrix, Forrester research and IFPI (the world wide music industry organization).⁵⁸ Interesting to note is how physical distribution is thought to continue dominate over the digital distribution form and that US online sales will continue to outperform European. The relatively small percentage of digital sales indicate that in the short term the music industry can rely on their traditional sales outlets for most of the profits. The sales of recorded music have fallen recently,

⁵⁶ Additional reference material was collected from openP2P.com see: www.openp2p.com/pub/a/p2p/2001/07/06/PR_070601.html

⁵⁷ www.taipeitimes.com/News/worldbiz/archives/2002/12/24/188439

⁵⁸ www.durlacher.com/downloads/music.pdf. The interested reader can see worldwide figures at www.ifpi.org. Note: Japanese market is second biggest after the American, together they represent over 50% of the market. RIAA counterpart in Japan, RIAJ estimates that over 100 million songs have been illegally downloaded in Japan.

about 10% since 2001. Many articles have been written about whether this decline is due to the downloading of MP3 files. Information recently released reveal that the music industry has slashed production by 25% over the last two years.⁵⁹ Record sales have had four prior declines in the last thirty years. Reports on mid-year record sales for 2002 indicate a more pronounced decline in sales that now appears to make the current decline larger than previous ones which supports the claim that MP3 downloads are causing harm to the recording industry. The current recession does not appear to be responsible for the current decline. Sales of singles have been falling almost continuously for the last thirty years and therefore, if they are removed from overall record sales, the severity of the current downturn diminishes. Price does not seem to play a role in record sales fluctuations. An estimate is that if MP3 downloads continue unabated, unit sales will drop somewhat more next year and then begin to level off, with an overall decline of about 20% (Liebowitz, 2002). Blaming digital file swapping for declining sales will cause the labels to miss a tremendous opportunity, according to a new report from 2002 by Jupiter Media Matrix. Senior analyst Aram Sinnreich, who wrote the report, found that active file swapping actually leads to more music purchases. File swapping leads to decreased music-buying among some demographics but “the boost outweighs the bust,” says Sinnreich, who found that experienced file sharers are 41 percent more likely than the average online music fan to increase their overall music spending. “File sharing has a net positive effect on music sales,” Sinnreich says. “The record industry has finite resources, and the biggest possible waste of their finite resources would be to stem online file sharing. It’s not a real threat. Privately, even the IFPI acknowledges that file sharing is not the culprit they’ve made it out to be publicly.”⁶⁰ The Recording Industry Association of America points to a survey by Magex, a digital commerce services company, estimating that online piracy will cost the music industry \$10 billion a year by 2003.⁶¹

US Music Market	Total US music market sales (millions of \$)	Online sales as % of total US music market	Digital distribution as % of online music market / as % of total US market	Physical distribution as % of online music market / as % of total US market
2002	17,402	13,0	6,7 / 0,9	93,4 / 12,1
2003	18,300	17,4	14,7 / 2,6	85,3 / 14,8
2004	19,170	22,0	21,8 / 4,8	78,2 / 17,2
2005	20,100	26,7	28,2 / 7,5	71,8 / 19,2

Table 4.4 (1): Projected US music market sales, on and offline

⁵⁹ www.musictarget.com/webmusic_news.shtml

⁶⁰ www.business2.com/articles/web/0,1653,40007|2,00.html

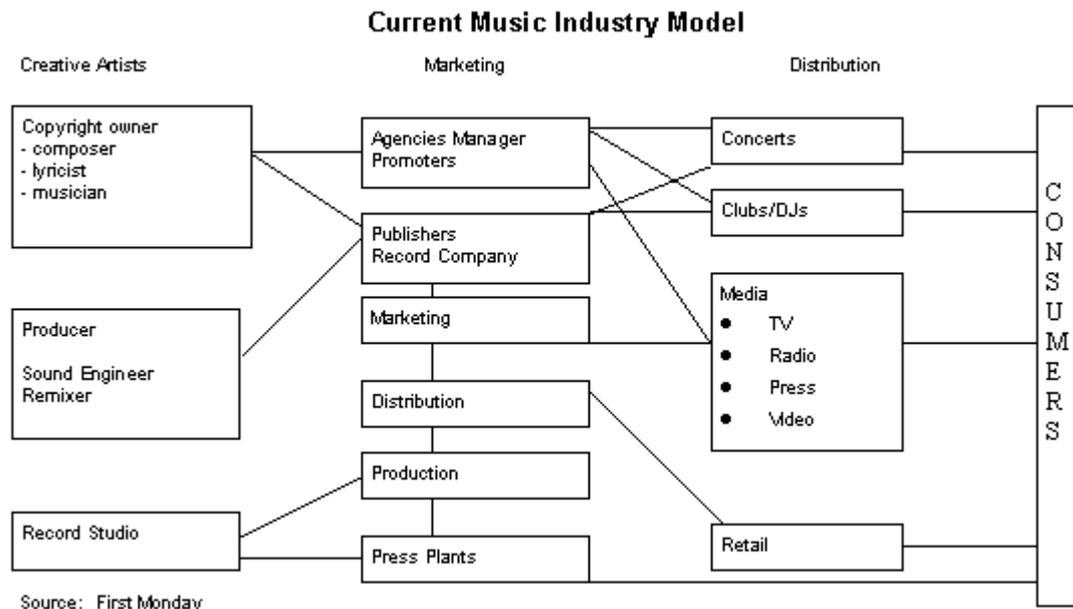
⁶¹ www.business2.com/articles/mag/0,1640,14341,FF.html

European Music Market	Total European music market sales (millions of \$)	Online sales as % of total European music market	Digital distribution as % of online music market / as % of total European market	Physical distribution as % of online music market / as % of total European market
2002	13,931	5,4	2,7 / 0,1	97,3 / 5,3
2003	14,413	8,9	6,7 / 0,6	93,3 / 8,3
2004	14,862	13,0	14,7 / 1,9	85,3 / 11,1
2005	15,408	17,4	21,8 / 3,8	78,2 / 13,6

Table 4.4 (2): Projected European music market sales, on and offline

4.4.1 The evolving value chain

There is no consensus as to precisely what types of businesses are representative of the music industry. At the broadest level, the music industry can be seen to encompass all activities and businesses that have music as a product. This definition includes the creators, developers, packagers, marketers, distributors and advisors, who together add value to the music product on its road to the consumer. There is a logical rationale behind grouping music businesses under an industry perspective. This can be seen in the context of the value chain that links the activities of the music industry, which offers a chance to see how it is being changed by digitalization and the Internet. The main activities include artist and relations, production, marketing and distribution.

Figure 4.4.1 (1): Music industry model before impact of digitalization and Internet⁶²

⁶² www.firstmonday.dk/issues/issue5_5/dolfsma/

Figure 4.4.1 (1) presents the structure or value chain of the music market before the Internet and digitalization had made an impact. Since part of it remains the same most of the following discussion can be used for further analysis. It explains how music moves from the artist to its final destination, the consumer. Musicians come with a sample of their music to a music publisher or an artist & repertoire (A&R) manager of a record company. If this person finds the music promising, negotiations start. A contract is signed with a music publisher. Recording is undertaken and then copies of the recording are pressed and promoted to both retailers and media. After recording, a marketing plan is drafted for diverse audiences, not just the ultimate consumer. Only a small proportion of all samples submitted to the initial “gatekeepers” will become a commercial recording. This filtering is a characteristic of many other entertainment industries as well. Financial means and industry contacts are used by music publishers and record companies to attract attention to new releases and create demand. Intermediaries that select and validate information passing through them includes the media (radio, television, music press), retail business, and organizations that control schedules and venues for live performances.⁶³

Development: In the music industry, record labels will actively seek to sign up bands and artists on long-term exclusive contracts. The key to success in development is to spot talent and to sign it up early. Record labels spend considerable amounts in the development function in order to stay ahead of the game. Agents find and represent artists in return for commissions. The benefit of knowing an agent relates to how the industry works and their relationships with publishers, manufacturers, and distributors. The creativity and talent of the artists; musicians, lyricists and recording artists create the music. Labels, distributors, retailers, DJs/clubs, broadcasters, and others market and distribute the music. Labels (such as Sony Music, Bertelsmann Music Group, EMI Recorded Music, Warner Music Group, and Universal Music Group) play a major role in all these processes by providing initial capital and marketing know-how to create, promote and distribute music.

Production: Production is relatively cheap in the music industry, where the cost of digital recording equipment and production of CDs is falling rapidly. It is now possible for artists and bands to produce music (on CD) in their own homes. Major labels will finance production and provide advances to artists.

Sales and Marketing: Major record labels hold power in the sales and marketing process. They determine the amount of promotional spend on a given album / single based on its potential popularity and profitability. Labels, distributors, retailers, DJs/clubs, broadcasters, and others market and distribute the music through their established relationships with music stores, radio stations, press and media. Marketing includes branding, information dissemination and community building.

Distribution: Majors typically have a global network of branch offices to handle the sales, marketing and distribution process, while independent labels need to license them to local distributors. Major record labels will typically do the marketing and licensing themselves and may outsource the physical distribution process. While distribution companies will typically sell directly to the big retail chains and to some of the smaller chains, some small shops will opt to purchase from a wholesaler (so

⁶³ www.firstmonday.dk/issues/issue5_5/dolfsma/

they are not tied to purchasing minimum amounts from the distributor). Retailers put in orders to the wholesalers as and when albums and singles are required.

The major labels typically extend their activities right down the value chain from development to distribution. Typically major labels do not have their own retail outlets. Labels (such as Sony Music, Bertelsmann Music Group, EMI Recorded Music, Warner Music Group, and Universal Music Group) play a major role in all these processes by providing initial capital and marketing know-how to create, promote and distribute music, this industry structure has evolved over many decades. It incorporates up to three levels of intermediaries between the artist and consumer and each intermediary adds a layer of cost leading to higher final cost to the consumers. By combining roles of multiple intermediaries BMG Music Club and Sony Music Group have been able to reduce cost. They have been selling CDs and audiocassettes directly to their club members at lower costs. This venture shows the need to reduce the cost by increasing transactional efficiency. It must be kept in mind that these intermediaries have economies of scale and economies of scope to achieve lower costs, they may have gone through a learning curve of optimizing distribution channels to minimize costs. To reduce the cost of promotion and distribution, music is sold as an album consisting of many songs. This practice customarily leads to inclusion of several songs in an album that are not as good as the singles. Consumers are forced to buy an album in order to get the couple of songs of their choice. Under the current structure, the most dominating force in the industry are the labels. Labels exert power by controlling major marketing and distribution channels and by committing their artists to long-term contracts. Most emerging artists have limited access to marketing and distribution channels and consequently cannot compete on their own. The choice they have is to join a label or remain small in a niche market. This allows labels to walk away with most of the profit. In general, labels collect about 85 to 90 percent of the profit from music sales.⁶⁴

The first wave: The first signs of value chain restructuring came with the emergence of the Internet which provided a vast and frictionless environment to match buyers with sellers. Like in many other industries, such as book selling and stock trading, the Internet impacted the retail part of the music industry, particularly distribution. Other activities of the value chain were less affected (Parikh, 1999). E-retailers, such as CDNow and Amazon.com, began selling CDs over the Internet successfully, prompting several physical retailers, like Virgin and Tower Records, to go online. Internet-radios such as Spinner.com and NetRadio also emerged using streaming audio technologies to send music from web sites. The first wave of changes reduced transaction costs by making many aspects of music retailing more efficient. For example, e-retailers do not have to carry inventory, with a stable and coordinated ordering and partnering structure, they function more as an infomediary, collecting data about the customers that can translate into a closer and more lucrative relationship, thus reducing seller search cost. The lack of physical stores means reduced cost of hiring sales staff, developing and maintaining physical outlets. The use of Internet reduces search cost for buyers. The consumer can from his home order CDs and listen to them before making a purchase decision. Internet also meant that the global market was within reach, logistic cost could be kept down, as no physical

⁶⁴ www.firstmonday.dk/issues/issue5_5/dolfsma/ and www.nickselby.com/articles/technology/napster.html

stores were needed. Difference in consumer tastes across borders vexed some initial ventures (Parikh, 1999). Artists began using the Internet for promotional purposes and to sell CDs. Labels also saw the opportunity to bypass traditional retailers by selling directly to consumers through their music clubs on the Internet.

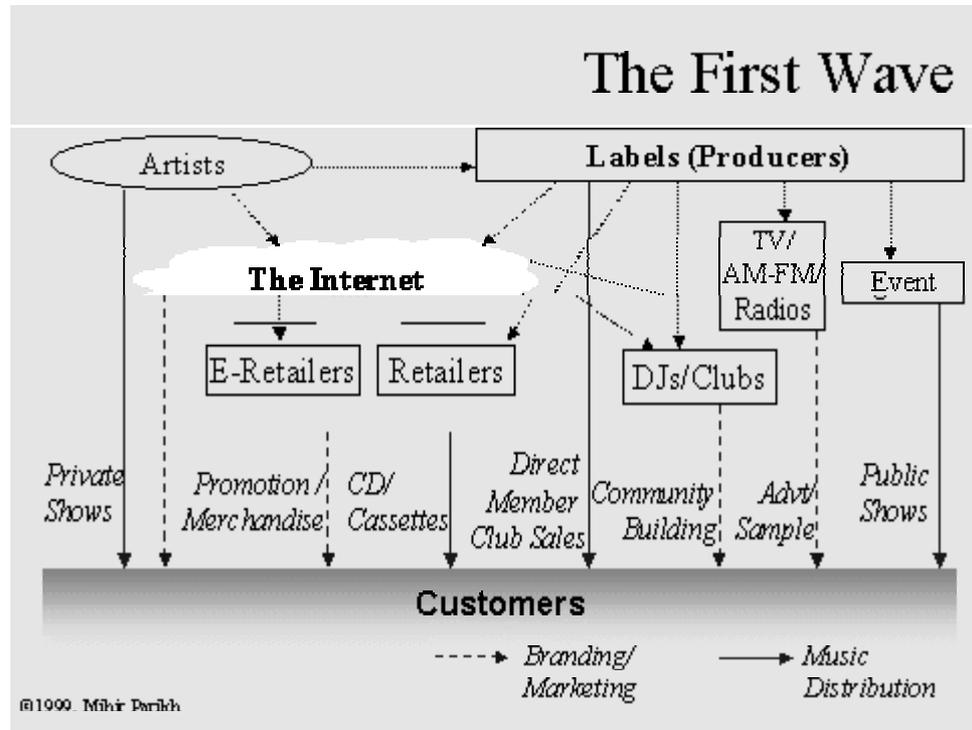


Figure 4.4.1 (2): The first wave of changes to the structure of the music industry (Parikh, 1999)

The next wave: A new wave of changes started when it became possible to practically digitalize the CD. Emerging communications technologies, such as cable modems, have provided the essential infrastructure and bandwidth needed to distribute music through the Internet. The merger of audio and computing technologies have increased the quality of sound by using digital noise filters, multimedia computers store music on hard disks and provide excellent quality of sound. Digital audio technologies like MP3, RealAudio, Microsoft MediaPlayer, and LiquidAudio, compress music files to a size that is practical to transfer over the Internet. MP3, being an open standard is well received by many audio software developers and has become the de facto standard for music distribution over the Internet. With the emergence of MP3, new portable audio devices that supported it emerged allowing music lovers to carry the music with them. Internet-based consumers have developed an appetite for downloading songs and other media content for free. It started with computer software where users have routinely downloaded freeware (free to use) and shareware software (free use for a certain time period, then pay a nominal registration fee for continued use). When the publishing industry provided magazine and newspaper free of charge over the Internet in exchange for brand recognition and advertising revenue the “everything on the Internet is free” culture spread. These habits are now affecting the music industry. The changes brought on by this wave are stronger and swifter than those from the first e-retailer wave. They have the power to alter the whole music industry structure (Parikh, 1999).

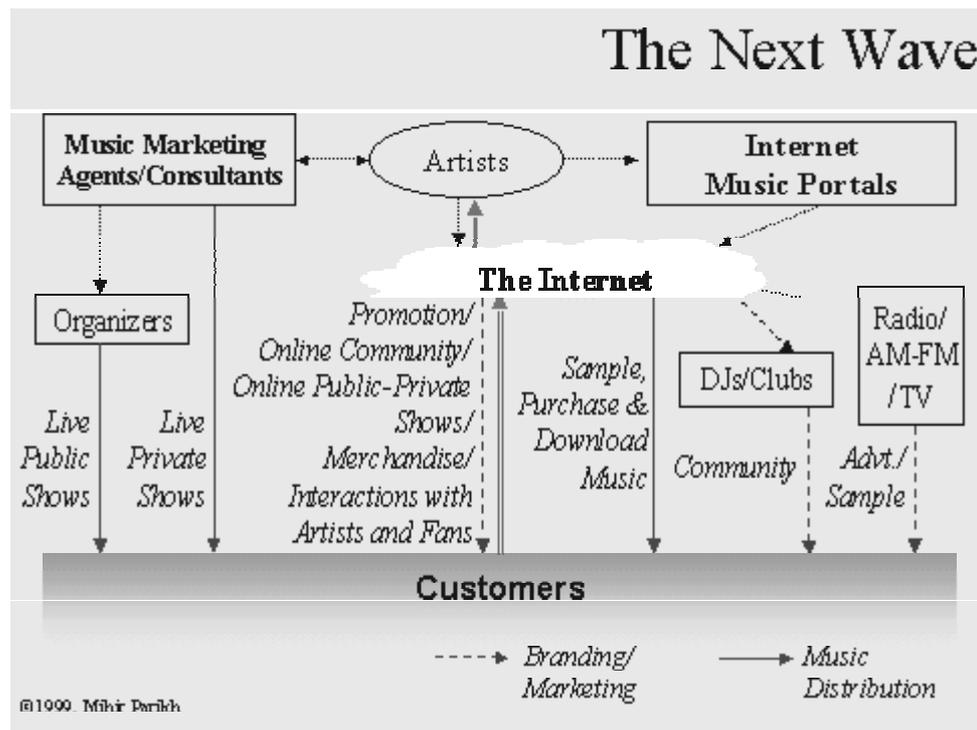


Figure 4.4.1(3): The next wave of changes to the structure of the music industry (Parikh, 1999)

The new structure threatens to destroy the old supply chain in the music industry. Labels, distributors, physical retailers, and e-retailers of CDs will either change to conform to the new structure of the industry or will gradually be phased out (Parikh, 1999). Customers are downloading music and storing it on hard disks or portable players. Internet has become an important channel for marketing and distributing music. Artists have gained more control over marketing and distribution of their music, for example by setting up websites (Parikh, 1999). Artist who before couldn't get contracted now have a channel to reach mass audiences, major artists who feel that the labels walk away with most of the profits see the Internet as an emancipation tool. Professional agents and marketing consultants are hired to advice and manage their careers. The main responsibility of these agents, unlike that of labels, is to protect the interests of their clients. They provide professional services to develop and maintain their client's web sites and their contracts with the Internet music portals. The Internet music portals-have started to take on the combined role of labels, distributors and retailers. They are affiliated with many artists through non-exclusive contracts to promote the artists. Revenue sources like live events and merchandise, online advertisements, online shows and Internet-based broadcasts, have become major components of the revenue stream, not just the sale of CDs (Parikh, 1999). This new industry structure leads to new forms of disintermediation and reintermediation. If labels act smartly and move swiftly, they can easily transform themselves into the new intermediaries and still be able to survive in the long run. Their core capabilities will be hard to dislodge for new players, for example talent recruitment, securing airplay and promotion (Porter, 2001). Protecting the current value chain through legal action will be hard as the changes are already set in motion. Delaying the changing of their business models will lead to the rise and strengthening of competitive forces. The future is a creative combination of music, content, community and custom marketing that enhances all aspects of the music experience (Parikh, 1999).

4.5 Important players

The new environment that is the Internet has spawned new players that the music industry must work with in order to offer the customer a valuable service on the Internet, strategic partners that will increase transactional efficiency. The following presentation will only deal with the most important players on the Internet and their respective strategies, as it is widely believed that the future of the music industry is closely tied to developments on the Internet. P2P actors will not be discussed under this headline as they were included in chapter 4.3. Naturally this is not a list of all involved parties, the intent is to present the leading firms. The digital distribution chain can be illustrated in the following manner⁶⁵:

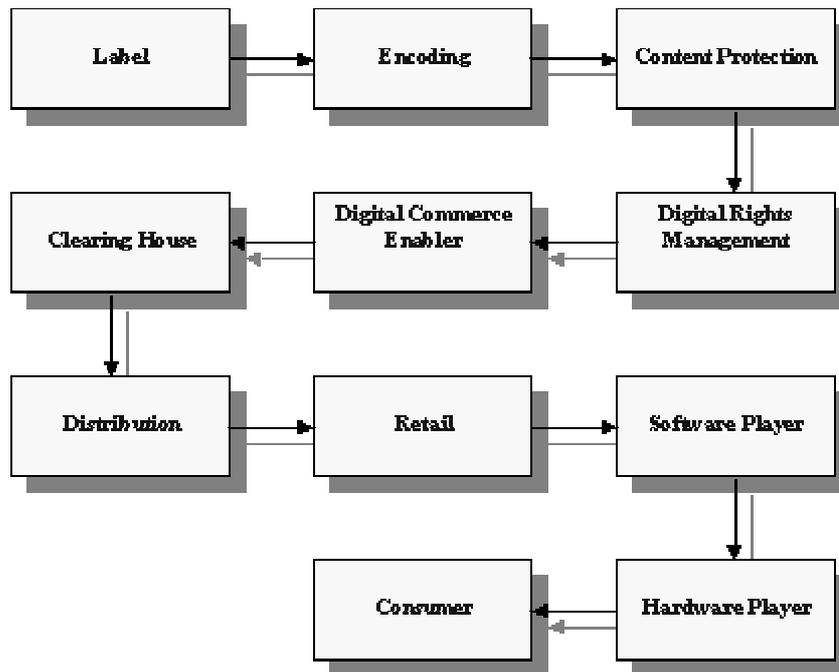


Figure 4.5: Digital distribution chain

Label: These companies belong to giant media groups, and therefore benefit from incomparable promotion machines, media groups own magazines, newspapers, film studios, TV channels, cable channels, radio companies, etc. The most important players at this level of the chain are: Universal, BMG, Sony, Warner and EMI. These big five labels have launched own content distributors on the net like Pressplay and Musicnet.

Encoding: Music tracks are encoded to a format that can be distributed through the Internet. Major players at this level are: Sony, AT&T, IBM, Liquid Audio, Microsoft, Loudeye and RealNetworks.

Content Protection: To guarantee the protection of the rights on the track companies can use watermarking (inserting an inaudible trace in the track that remains even if

⁶⁵ web.mit.edu/armani/www/it/page7.html

copying is intended). The relevant players at this level are: AT&T, IBM, InterTrust, Liquid Audio, Microsoft, Loudeye and RealNetworks.

Digital Rights Management (DRM): Assigns download, copying, distribution, and listening rights to music tracks. It specifies how many times a song can be listened to, how many times it can be copied, etc. DRM information is encoded with the music track, and remains its constituent part throughout the distribution. Major players: Liquid Audio, Microsoft and AudioSoft/AOL.

Digital Commerce Enablers: Companies that make music available for sale over the Internet also provides hosting and fulfillment services. Important players at this level are: Liquid Audio, Microsoft, AudioSoft/AOL, Loudeye and RealNetworks.

Clearing-houses: This process entails the management of rights for digital music and enforcing rules specified by DRM. Players: Liquid Audio and AudioSoft/AOL.

Distribution: The distributors host databases with digital music and distribute files to several retailers simultaneously. Most important distributors: Liquid Audio and Loudeye.

Retail: On-line retailers that sell digital music over the Internet, and offline retailers that allow music to be downloaded in in-store kiosks. Most important players: RealNetworks, Amazon, CDnow, eMusic, MP3.com and Yahoo.

Software Player: To play downloadable music software products are needed. Some products support more than one standard of digital music, while others support one specific standard. Most relevant companies that develop these products: Liquid Audio, Microsoft, AudioSoft/AOL and RealNetworks.

Hardware Player: Devices that play digital music, such as portable players and stationary like CD player. Companies involved in this level of the chain: Sony, Philips, etc.

4.5.1 The big five

Vivendi Universal: The company is a world leader in media and communications with over 300 000 employees. The conglomerate deals in music, publishing, TV and film, amusement parks, telecom, Internet and environmental services. Through Universal Music Group (UMG), Vivendi Universal is the world's leading music company with wholly owned record operations or licensees in 63 countries around the world and with the largest global music publishing businesses, Universal Music Publishing Group. Decca, MCA and Motown are some of the labels under the control of UMG. UMG is the global market leader; one of every four albums sold worldwide in 2001 was a Universal album. UMG's artist roster includes: Ashanti, Mary J. Blige, Andrea Bocelli, Bon Jovi, Sheryl Crow, Eminem, Enrique Iglesias, Jay-Z, Elton John, Ronan Keating, Diana Krall, Limp Bizkit, Nelly, No Doubt, Luciano Pavarotti, Sting, Texas, Shania Twain, U2 and Russell Watson. UMG controls over one million copyright protected songs. UMG's online music strategy is centered on Pressplay, which launched in the U.S. in December 2001. Pressplay is an online music subscription service that gives consumers on-demand access to online music. All five

major labels and many independent labels provide music to Pressplay on a non-exclusive basis. Subscribers can enjoy the music by streaming, downloading, burning or transferring select tracks to portable devices. Pressplay is designed to respect and protect artists' rights. A Universal-Sony joint venture, Pressplay is available in the U.S. through affiliates MP3.com (owned by Vivendi Universal), MSN Music, Roxio, Yahoo and Sony's Music club, as well as through the Windows Media Player 9 series. Vivendi has a service called E-music which is also a subscription based service, it offers the customers value added service by including promotional tie-ins in the subscription fee. Former CEO of Vivendi Universal, Jean-Marie Messier says "There's no question of restructuring the music industry. Our position is not defensive, it's offensive, with a three-pronged line of attack. Firstly, there's the technological aspect, then there's the strategic aspect, the creation of a joint-ventures. The third aspect of this offensive strategy is our ability to sign agreements with online distributors."⁶⁶

Bertelsmann: Bertelsmann produces, serves and markets media. The main business areas are television, radio, music, magazines, newspapers, book publishing, media e-commerce, print and media services. It also has book and music clubs. The company employs around 80 000 people. Bertelsmann Music Group artists include Christina Aguilera, Alabama, Toni Braxton, The Foo Fighters, Five, Whitney Houston, Kenny G, Avril Lavigne, Alicia Keys, Sarah McLachlan, Elvis Presley, Eros Ramazzotti, Santana, Rod Stewart, and TLC. With more than 200 labels, including names as Arista, RCA and Ariola, BMG's musical diversity ranges from hip-hop and musical soundtracks to alternative rock and classical music. The online music strategy is both download oriented and retail oriented, for example CDNow, which is affiliated with Amazon.com and Getmusic, a partnership with Universal. Click2Music is the umbrella under which BMG has united 40 music Web sites from five continents.⁶⁷

Sony: Sony is a leading manufacturer of audio, video, communications and information technology products for the consumer and professional markets. Its music, motion picture, television, computer entertainment, and online businesses make Sony one of the most comprehensive entertainment companies in the world. It employs 170 000 people around the world. The music division is comprised of three divisions; Sony Music (U.S.), Sony Music International (all countries outside the U.S. and Japan), and Sony Classical. Among the labels are Columbia Records Group, Epic Records Group and Legacy Recordings. Artists include: Aerosmith, Anastacia, Marc Anthony, Tony Bennett, Destiny's Child, Celine Dion, Bob Dylan, Gloria Estefan, Macy Gray, Lauryn Hill, Michael Jackson, Wyclef Jean, Jennifer Lopez, Ricky Martin, Will Smith, Bruce Springsteen and Barbra Streisand. The 50-50 joint venture with Universal that created Pressplay represents the online music strategy of Sony Music. Affiliate partners include MP3.com, MSN, Roxio, Ecast, Listen.com and Yahoo. Sony and Universal also have an agreement to sell individual songs at a low price on Amazon.com.⁶⁸ Sony has an ongoing partnership with RioPort, a music application service provider partnered with many of the music industry's heavy hitters, including other members of the Big Five.⁶⁹

⁶⁶ www.vivendiuniversal.com

⁶⁷ www.bmg.com

⁶⁸ www.sony.com

⁶⁹ ecommerce.internet.com/news/news/article/0,,10375_1366441,00.html

AOL Time Warner: The merger between AOL and Time Warner created one of the world's leading media and entertainment companies whose businesses include interactive services, cable systems, filmed entertainment, television networks, music and publishing. It employs close to 100 000 people. The company has several divisions including; AOL, HBO, New Line Cinema, Time Inc, Time Warner Cable, Turner Broadcasting, Warner Bros and Warner Music Group (WMG). WMG has operations in more than 70 countries, record labels include Warner Bros records and Atlantic recording. Artists include Faith Hill, Eric Clapton, Leann Rimes, Tracy Chapman, Alanis Morissette and Red Hot Chili Peppers. WMG has recently made a deal with Music Match to offer the WMG music catalogue on their new subscription service Artist On Demand, which is a new interactive streaming service that will give users the ability to enjoy instant playlists, composed of artists of their choice. It is designed to offer a unique and compelling alternative to today's music download services. WMG also has a non-exclusive agreement with Pressplay. Through their affiliation with Music Net WMG can offer the consumer music in digital download format based on subscription payment.⁷⁰ Richard Parsons, the chief executive officer of AOL Time Warner, believes online services are key to the overall music industry's survival. "It may be that the days of charging \$15 for 12-track CDs has seen its zenith," Parsons said. "If we don't figure out how to tame the technology and make it a business, there won't be any music," Parsons said at a recent media conference.⁷¹ AOL's expertise in Internet related matters is thought to gain WMG's online music service, broadband customers will be offered a superior distribution system.⁷²

EMI: EMI Recorded Music is the world's largest independent record company, operating in nearly 50 countries around the world and employing around 10 000. The proposed merger with Time Warner fell through on antitrust issues and there has been a failed attempt to merge with BMG. Its record labels include Angel, Blue Note, Capitol, EMI Chrysalis, EMI Classics, Mute and Virgin. EMI builds its music publishing business throughout the world by signing new songwriters, renewing existing contracts with songwriters and acquiring catalogues of existing compositions. Artists include Simply Red, The Prodigy, Jamiroqai, The Offspring, Savage Garden, Sting, Texas, Rod Stewart and Aerosmith. In November 2002 EMI announced that it signed deals to offer enhanced digital download distribution programs in which the company will give consumers, through leading distributors, the ability to download tracks permanently, the technical capability to burn a limited number of personal copies and the flexibility to import recordings to portable devices. Deals were made with Alliance Entertainment Corporation, Ecast, FullAudio Corporation, Liquid Audio, Listen.com's Rhapsody service, MusicNet, Pressplay, Roxio and Streamwaves. EMI will enable these distributors to sell content as digital downloads through the dozens of Internet service providers, portals and online retailers they service, including AOL, Yahoo, Earthlink, Verizon Online, MSN, DIRECTV Broadband, BestBuy.com, HP.com, MTV.com, MP3.com and SongPro.com. As part of the new digital download program, consumers can purchase radio singles from upcoming albums. EMI will give its distributors the ability to sell these radio singles to the public in digital download formats when the tracks debut on radio and before the album's street date. EMI has made its recordings available to more than 60 companies around the world, mainly in temporary download or in streaming audio

⁷⁰ www.wmg.com

⁷¹ news.zdnet.co.uk/story/0,,t287-s2127130,00.html

⁷² www.business2.com/articles/mag/0,1640,14341|3,00.html

formats. The company's new enhanced digital download program is designed to give its distributors more flexibility and upgraded formats to sell EMI's music to consumers. "This is the next step in our plan to give consumers our music in the formats they are demanding today, and to give our distributors maximum flexibility to offer a wider range of options and a deep selection of music," said David Munns, Chairman and CEO of EMI Recorded Music North America.⁷³ Whether consumers want to download music through a subscription service online or to a music kiosk at a record store, EMI's music will be there. And whether consumers want music to play on their mobile phone, PDA or desktop computer, EMI's digital format system will make that possible.⁷⁴ Portable devices are becoming more and more advanced and strategic partnerships with manufactures like Nokia are seen as very important.⁷⁵

4.5.2 Product and customer information partners

Microsoft: Founded in 1975, Microsoft is the worldwide leader in software, services and Internet technologies for personal and business computing. The company offers a wide range of products and services designed to empower people through software, any time, any place and on any device. MSN is the world's most popular destination on the Web, attracting more than 230 million visitors per month. Available in 33 markets and 17 languages, MSN provides consumers with their home on the Web where they can get everything they need from the Web and make the most of their time online. MSN is a world leader in delivering Web services to consumers and digital marketing solutions to businesses worldwide. MSN offers a co-branded Pressplay and MSN Music site that provides on-demand access to downloaded and streamed music. Microsoft's strong position on the Internet will make them the spider on the web, for example they are the ones developing secure digital formats, they have detailed customer information from MSN which the music companies dream of and the ability to include software in the dominating Windows operating system that will further their online agenda.⁷⁶

Yahoo: Yahoo Inc. is a global Internet communications, commerce and media company that offers a branded network of services to more than 185 million individuals each month worldwide. As the first online navigational guide to the Web, Yahoo is the leading guide in terms of traffic, advertising, household and business user reach. Yahoo is the most recognized and valuable Internet brand globally, and is ranked as No. 38 of the leading consumer brands worldwide. The company also provides online business and enterprise services designed to enhance the productivity and Web presence of Yahoo's clients. These services include Corporate Yahoo, a popular customized enterprise portal solution, audio and video streaming, store hosting and management and Web site tools and services. Its music strategy is tied to Pressplay.⁷⁷

Muze: Muze is the leading source of entertainment product information for music, books, videos, and games. Since 1991 Muze has provided businesses with

⁷³ www.emigroup.com and

www.news.com.au/common/story_page/0,4057,5524509%255E15318,00.html

⁷⁴ www.microsoft.com/windows/windowsmedia/content_provider/film/dmm/emi_case_study.pdf

⁷⁵ press.nokia.com/PR/200008/789391_5.html

⁷⁶ www.microsoft.com, www.msn.com

⁷⁷ www.yahoo.com

entertainment content designed to help their customers make informed purchasing decisions. Muze content drives commerce by providing customers with detailed information about entertainment products, turning browsers into buyers. More than 250 companies, including five of the 10 leading media/web properties ranked by Jupiter Media Matrix, rely on Muze's entertainment content to sell their products, for example Yahoo, AOL, Tower Records, Best Buy, Virgin Megastores and MTV. Muze product information also drives commerce by providing in-store solutions for companies such as Transworld Entertainment and Barnes & Noble.⁷⁸

Alliance Entertainment: Alliance Entertainment Corp. is a leading total solution provider of business-to-business infrastructure services that helps to transact commerce in the home entertainment product marketplace. Through its Distribution and Fulfillment Services Group, Alliance offers a product inventory (including CDs, cassettes, DVDs, videos, video games and related merchandise) as well as e-commerce fulfillment capabilities and innovative technology and support services for today's marketplace. Through its Media and Internet Services Group, Alliance is a leading distributor of digital entertainment as well as search, browse and preview capabilities through Digital On-Demand and a leading content provider through the All Media Guide (AMG) databases. AMG's customers license its e-commerce enabling entertainment databases to support their Internet retailing and content businesses. AMG is also a developer of proprietary web sites for music (www.allmusic.com), movies (www.allmovie.com) and games (www.allgame.com).⁷⁹

4.5.3 Technological distribution partners

Ecast: Ecast, Inc. provides a platform for the secure delivery and management of digital content to consumers in both the in- and out-of-home marketplaces. The Ecast Interactive Media Network, available through broadband-enabled jukebox systems and entertainment consoles internationally, allows millions of users to enjoy a wide variety of content and applications including: digital music from all of the major and many popular independent labels. Ecast's RioPort Division, focuses on the aggregation, delivery and management of secure digital content to personal devices, such as desktop computers, portable music playback devices and Internet-enabled appliances. Ecast customers include out-of-home venue operators in the U.S. and Europe; leading online e-tailers such as BestBuy.com, MTV.com and HP.com.⁸⁰

FullAudio: FullAudio Corporation provides a platform and infrastructure that enables channel partners to deliver digital media services, such as digital sampling, streaming, and music downloads, allowing them to quickly expand their relationships with consumers by offering on-demand subscription services or short-term promotions. FullAudio provides all of the back-office functionality, including billing, reporting and analysis, and usage analysis. FullAudio also offers its service through Charter Communications, Clear Channel Communications, Earthlink, and Windows Media Player. FullAudio Corporation is a digital music subscription service company working with the music industry, artists and songwriters to create a legal and secure means to distribute music to consumers. Delivering diverse content from the

⁷⁸ www.muze.com/press33.html

⁷⁹ www.emigroup.com/news/index.asp

⁸⁰ *ibid.*

industry's leading record labels and other music resources, FullAudio provides a personal service that allows fans to discover new music, create their own collections, and listen to digital music on PCs and a range of portable devices. For a monthly fee, the FullAudio subscription service provides fans with unlimited play of a set number of tracks they choose. Much like the subscription models of cable television, fans will have access to their FullAudio music service only as long as their account is in good standing. Full Audio offers different levels of subscription service, providing fans with competitive pricing options related to the amount of music to which they choose to subscribe. The higher the level of subscription (Silver, Gold, Platinum), the more slots consumers are given to fill with their favorite and new music.⁸¹

Loudeye Technologies: Loudeye provides digital media solutions. By building the digital media infrastructure for today's top companies in the media, entertainment and enterprise markets, Loudeye is paving the way for companies to transform their traditional media assets into dynamic digital content. Loudeye offers advanced Digital Media Services, Digital Media Applications and Consulting Services including encoding, management and distribution. Partners include Warner Music.⁸²

Liquid Audio: Liquid Audio Inc. is a provider of software, infrastructure and services for the secure digital delivery of media over the Internet. The Liquid Audio solution gives content owners, Web sites and companies the ability to publish, syndicate and securely sell digital media online with copy protection and copyright management. Using the Liquid(TM) Player software, consumers can preview and purchase downloadable music from hundreds of affiliate Web sites in the Liquid Music Network.⁸³

Real Networks: The company provides the universal platform for the delivery of digital media from any point of origin across virtually any network to any person on any Internet-enabled device anywhere in the world. In 1995, Real Networks pioneered the entire Internet media industry, because the Internet was built to handle text-based information, not audio and video and other rich media, Real Networks foresaw the need for specific solutions that could handle the creation, delivery and consumption of media via the Internet. Today, hundreds of millions of unique individuals throughout the world take advantage of Real Networks media creation, delivery and playback technology. RealNetworks develops end-to-end solutions that allow everyone to create, send and receive audio, video and other multimedia services over the Internet.⁸⁴

Roxio: Roxio Inc. provides digital media software. Roxio makes award-winning software products for CD/DVD burning, photo editing and video editing. Roxio's current installed base is in excess of 100 million users. Roxio distributes its products globally through strategic partnerships with major hardware manufacturers, in stores with the leading worldwide retailers, through Internet partnerships and also sells its products direct at www.roxio.com.⁸⁵

⁸¹ www.fullaudio.com

⁸² www.loudeye.com

⁸³ www.emigroup.com/news/index.asp

⁸⁴ www.realnetworks.com/company/index.html

⁸⁵ www.emigroup.com/news/index.asp

4.5.4 Online retail and digital music providers

Vitaminic: Vitaminic is Europe's leading value added digital music solution provider, focused on new digital formats and innovative electronic distribution channels. Vitaminic operates in 10 countries through its local websites. The Vitaminic Music Network includes Peoplesound.com, and FranceMp3, the leading French online music website. Vitaminic manages one of the largest digital music catalogues in the world, in complete accordance with copyright regulations. This catalogue contains about 430,000 digital tracks which are organized into over 250 musical genres, coming from more than 95,000 artists and about 1,500 record labels, including BMG, Emi, Sony, Universal and Warner. Vitaminic's technological platform digitally stores, manages and delivers music streams and downloads via innovative electronic networks, taking care of the management of digital rights and the payment of royalties within a multi-country and multi-currency environment. Vitaminic provides major online and offline operators with digital music services, syndicating Music Applications via fixed and mobile networks and offering a selection of Marketing Incentives (i.e. bundled subscriptions for the Vitaminic Music Club, premium CDs and online premium CDs) to brands to enable them to offer music to their users in a variety of ways. Consumers can listen to and download tracks for free or upon payment of a fee, subscribe to Vitaminic Music Club, or buy traditional CDs or online compilations. The network delivers highly innovative services to the music industry, such as tailored online consumer research campaigns and cutting-edge marketing and targeting services. In addition to these services, Vitaminic also provides publishing services to authors, publishers and third parties.⁸⁶

Amazon.com: A Fortune 500 company based in Seattle which opened its virtual doors on the World Wide Web in July 1995 and today offers "Earth's Biggest Selection". Amazon.com seeks to be the world's most customer-centric company, where customers can find and discover anything they might want to buy online at an affordable price. Amazon.com and sellers list millions of unique new and used items in categories such as apparel and accessories, electronics, computers, kitchenware and housewares, books, music, DVDs, videos, cameras and photo items, toys, baby items and baby registry, software, computer and video games, cell phones and service, tools and hardware, travel services, magazine subscriptions and outdoor living items. A multiyear agreement between CDNOW and Amazon.com extends the list of alliances Amazon.com has formed with best-of-breed brands such as Toys'r'us.com, Borders.com and Virginmega.com, demonstrating Amazon.com's ability to customize its platform to meet the needs of other leading companies, with the mutual goal of better serving customers.⁸⁷

Listen.com: Listen.com is an online music company that develops and distributes Rhapsody, a digital music subscription service. Launched in 2001, Rhapsody gives consumers unlimited access to a large library of music. Rhapsody combines on-demand music, customized and professionally programmed Internet radio, and engaging music information and editorial recommendations. Rhapsody is available through Listen.com and a network of companies that offer co-branded versions of the service, including Cablevision Systems Corporation's Optimum Online (TM), Charter

⁸⁶ www.vitaminic.com

⁸⁷ www.amazon.com

Communications, DIRECTV Broadband, Down Beat, JamBase, Internet portal Terra Lycos, Time Warner Cable's Road Runner high-speed ISP, Sony's Music club, Speakeasy and Verizon Online.⁸⁸

Streamwaves: Streamwaves is a leader in the digital music subscription business. Streamwaves was the first Internet company to build a streaming subscription engine, the first to license major label masters for a subscription service, and the first company to launch a subscription service with major label content. Streamwaves holds license agreements with EMI Recorded Music, EMI CMG Publishing, BMG, Universal Music Group, Warner Music Group.⁸⁹

MusicNet: MusicNet is a digital music company. The most widely distributed digital music service for streaming, downloading and burning music online, MusicNet offers the music catalogs of major and independent record labels including Warner Music Group, BMG Entertainment, EMI Recorded Music, Sony Music Entertainment, Universal Music Group. As both a service and music content provider, MusicNet licenses to companies seeking to fully integrate digital music services into their online music offerings. MusicNet is a joint venture between RealNetworks, AOL Time Warner, Bertelsmann AG, EMI Recorded Music and Zomba.⁹⁰

Musicmatch: Musicmatch is a global leader in personalized music software and services that let people find and listen to the music that best matches their unique tastes. The company invented the digital jukebox concept in 1997, and since then has registered more than 28 million users of its number-one selling Musicmatch Jukebox.⁹¹

Pressplay: Launched in December 2001, Pressplay is an equally held joint venture between Sony Music Entertainment and Universal Music Group. Music companies, including BMG, EMI Recorded Music, Madacy, Matador, Navarre, OWIE, Razor & Tie, Roadrunner, Rounder, Sanctuary, Sony Music Entertainment, TVT, Universal Music Group, Warner Music Group and Zomba separately provide their content to Pressplay on a non-exclusive basis. Pressplay is marketed to consumers through relationships with MP3.com, MSN Music, Roxio, Sony Music Club and Yahoo. The challenge for services like Pressplay lies in educating the consumer about the availability of new and improved legitimate services. Analysts estimate there are half a million subscribers in total for all the paying music subscription services, while Kazaa alone has topped 10 million home users. "Building awareness is a big element and we haven't done that in a very focused way because we haven't had all the content until now," said Mike Bebel, chief executive of Pressplay.⁹²

ARTISTdirect: An online record label, ARTISTdirect, Inc. is an innovative and diversified media powerhouse. A pioneer in the birth of music on the Internet, ARTISTdirect has established brand loyalty by bringing fans and artists closer together through an unparalleled network of online and offline assets, including: ARTISTdirect, UBL, an all-inclusive music portal and search engine with a database

⁸⁸ www.emigroup.com/news/index.asp

⁸⁹ www.emigroup.com/news/index.asp

⁹⁰ www.wmg.com/wmg/news/newsContent_2487449_2489041_1.jhtml

⁹¹ www.wmg.com/wmg/news/newsContent_2487870_2489462_1.jhtml

⁹² news.zdnet.co.uk/story/0,,t287-s2127130,00.html

of more than 500,000 artists and millions of links, iMusic, the online music community site with message boards; and the ARTISTdirect Superstore, a full-service online shopping mall that features exclusive artist merchandise and other collectibles. With BMG world-wide distribution, ARTISTdirect Records has a roster of emerging talent from a wide variety of genres. iMUSIC, ARTISTdirect, Inc.'s new label is a simple business model for signing, promoting and compensating artists. iMUSIC and the artist share net profits equitably; the artist retains ownership of his masters; the agreements cover only one release, and a major distributor, BMG gets the releases into stores. To keep costs down and put more dollars into the artists' pocket, iMUSIC uses traditional and non-traditional marketing avenues, especially the Internet. The artist has total control over his music, and is hands-on with how marketing dollars are spent.⁹³

4.6 Chapter summary

History has shown that the music industry has battled technological developments before and was able to integrate them into their business and as a consequence came out of the experience both bigger and more profitable. Consolidation in the industry created companies with complete control over the entire value chain. Recent technological advances have introduced the world to completely digitalized music, the physical product is no longer the only option. The most revolutionary aspect has been the changes to distribution, consumers can share digital music files over the Internet, often for free. This has caught the music industry of guard, their value chain has been attacked and their response has been legal action to force file-sharing sites to shut down. In some instances they have been successful, but the situation can be likened to the mythical figure Hydra, the industry keep chopping off heads, but new ones keep popping up. This reality have made them introduce new services in collaboration with Internet partners where consumers can access music over the Internet for a token sum, challenges still remain as the consumers have gotten used to the idea of free music.

⁹³ www.artistdirect.com

5 Analysis

The fifth chapter of the thesis tries to make sense out of the empirical findings from chapter 4 with the help of theory from chapter 3 and comparisons to other industries that face similar challenges with digitalization. The result comes in the form of strategies for the music industry, strategies that will keep them in the black. The analysis which began in chapter 4 will be continued to highlight in what form the industry might survive given the new situation.

5.1 Five Forces analysis

As discussed in chapter 4.4.1 the industry structure and competitive situation has changed for the “big five”. Using Michael Porter’s Five Forces model it is easy to see the new reality, threats and possibilities, after the Internet and the emergence of digitally distributed music. The problem with this kind of analysis is that it only captures the situation today and can be rendered obsolete, as the pace of change in the music industry is rapid.

Substitutes: From physical products like tape, vinyl and CD being the dominant format, the consumer today has a digital alternative. Content can be either downloaded for free (although this remains legally ambiguous) or the consumer can join clubs like Musicnet where a subscription fee is paid for legal downloading or streaming services.

Bargaining power of customers: In the past the music consumer has had next to none bargaining power over the record companies. The only weapon has been the choice of boycotting music purchases. The music industry and its partners have decided on price and music choice. With the new substitutes to the CD the consumers have in effect voted with their wallets, the mass adoption of the digital format and P2P services like Napster and Kazaa was a signal to the industry that the price of the CD has been too high and that the new substitutes offer more value also in the service dimension with the creation of user communities. That said, the physical format is by no means disappearing fast, technological innovations is extending the life of the CD and its successors.

Barriers to entry: The entry barriers for new companies wishing to challenge the “big five” have been extremely high, as the incumbents have established complete control over the entire value chain. Except for EMI they are huge conglomerates with vast resources and well-oiled machinery for promotion, talent recruitment and production. In cases where new challengers have made inroads they have been bought up by the big players, EMI has been targeted as well. The Internet and digital music have lowered the entry barriers in some regards, for example in distribution but other parts of the value chain remain strongholds of the incumbents. Marketing which has been attacked by new entrants with the advent of the Internet, has been harder to wrestle from the established companies as it requires vast resources. One of the reasons why the industry has been reluctant to take the step to digital distribution is their heavy investment and close relationship with physical retailers. They have a symbiotic relationship for sales and promotional aspects.

Bargaining power of suppliers: In the past artists have been more or less forced to deal with record companies if they wanted their music published, this process functioned as a filter, determining what the consumers were offered. Considering the artist as the supplier, the Internet has meant that they can publish their music without the help of big record companies, for example with the aid of MP3.com. Getting the word out to the audiences still remains hard without resources, it is mostly established artists who benefit, new artists who can release their work without the labels will be hard pressed to get similar responses as from promotion campaigns backed by the big companies. Most CDs published by the big companies don't make a profit, letting the artists test the waters by themselves can reduce the risk of backing the "wrong" artists. If the performer becomes successful in relation to the marketing undertaken the music industry can move in, sign the artist and promote him heavily, thereby reaching a wider audience.

Rivalry between existing companies: Rivalry in the past have for the most part been centered on which artists signed with who, price has not been an issue as can be gathered by the price fixing judgment a couple of years ago.⁹⁴ The big five are in many regards similar companies with different product offerings (artists), their dominant market share makes it very hard for new competitors to mount a serious challenge. It is likely to remain this way in the short term because of antitrust issues and because of the exit barriers; there is too much money and pride on the line for any company to consider leaving the arena and concentrating on a particular part of the value chain even if it makes strategic sense. The emergence of digital music and new players like Napster forced the industry to take legal action to protect their business and value chain structure. The rivalry between the firms still concerns the artists but price has become another dimension as alternative digital formats have grown in popularity. To counter the P2P networks they have also come together to offer consumers full catalogues of music from all companies. These pay as play or download services still remain dwarfed by file sharing programs like Kazaa.

5.2 Theoretical analysis

This section will analyze the music industry as presented in chapter 4 through the theoretical lens presented in chapter 3 in order to set up the strategic conclusions that follows. The premise of the analysis is to show how one perspective is inadequate to explain how value can be created in the situation the music industry faces today; together they provide a better basis for analysis.

5.2.1 Value chain and transaction cost perspective

The theoretical concepts of the value chain and transaction cost are closely related, especially for the music industry and the situation that has developed over the last couple of years. As observed in chapter 4.4.1 the Internet hasn't cannibalized the entire value chain of the music industry, only parts of it have changed, the rest will not be affected in a revolutionary manner for the foreseeable future. The advantages of the Internet, which should be used to complement the traditional activities, are mostly related to creating effective communication both internally and externally

⁹⁴ www.msnbc.com/modules/DigitalMusic

because of the possibility of real time uplinks between the primary and support activities of the value chain. Transaction cost is reduced because of the cost effectiveness of moving physical activities like distribution online. The cost of each transaction decreases and this increases the transaction efficiency, an occurrence that has been observed in the distribution activity of the music industry's value chain. Increased frequency of transactions also reduces the perceived risk that partners within the strategic network feel when conducting business. Planning, adapting, executing and monitoring task completion is easier with the help of the Internet. Layers of intermediaries between the company and the customer have been abolished but new ones have emerged as exemplified by the music industry. They can sell to the consumer directly over the Internet but instead of the traditional retailers new companies that handle digital distribution have emerged. The Internet which has been seen as a threat by the music industry, have because of its standardized infrastructure, bi-directional communication and ease of connectivity huge potential to offer economies of scale and scope for the "big five". The possibility to reach new markets without large investments, low cost distribution, close relationships with the consumers and a new effective promotional tool are some of the advantages the Internet implies for the industry, if they can overcome the challenges that digitalized music has created (free file sharing). Reduced cost in areas like distribution have meant that there is added cost in other activities like customer relations; a close relationship means that the customers turn to the customer service department for information.

Production: The value chain of the music industry, which consists of development, production, marketing and distribution, has not yet been completely restructured by the emergence of digitalization and the Internet. Production has become cheaper because of new digital recording technology making it easy for artists to produce music in their own home and forego the huge costs of booking studio time, which often meant that their music wouldn't be published since the labels are reluctant to spend money unless they can be relatively sure it will be a hit. This coupled with the possibility of releasing the music over MP3 sites or P2P networks mean that artists have the option of completely bypassing the labels and the long term contracts, consumers also benefit by having more music to choose from. This strategy is best suited for already established artists who are self promoting, their name already has a connotation for the consumer and they have resources to handle the extra promotion needed. They can hire independent agents to handle marketing aspects. New artists who decide to use the Internet instead of the labels will have a harder time making themselves a big name and big profits as the Internet alone isn't as effective as a combination with other media formats. Relying on the goodness of the music consumers for monetary compensation is a risky tactic. Whether or not less well-known artists will be discouraged from creative activities if the Internet is exempted from copyright, is an open question. The price effect is slightly negative (decreased income from royalties as a source of income disappear or at least sharply decrease), but the income effect may well offset this by far. If music consumption is and remains to be a social phenomenon, technologies allow communities of music fans to form in defiance of geographical boundaries. In effect, these communities will aggregate demand to such an extent that niches will be created to economically sustain many previously unknown kinds of music or artists. As musicians reach audiences across geographical boundaries, they will improve their bargaining positions with traditional record companies for a share of revenues from the sale of recorded music. In any

case, creative individuals are seldom stopped from pursuing their objectives by an absence of monetary returns. Better recording technology has also meant reduced cost for the recording studios and possibilities for a better recording quality and thus an enhanced product for the customer.

Distribution: Distribution over the Internet means that the physical product is no longer the only alternative for the consumer, digital formats are cost effective in many regards, they can be duplicated without additional cost and distributed without the need for physical retailers, instead they only need a digital distribution technology firm to create the formats for Internet delivery. The ease of distribution has attracted many new players, some without sound business models. P2P networks like Napster and Kazaa have relied on the consumers handling the distribution, free content no less. This threatens the profit making potential of the current industry model, which is why legal action has been taken against them. Despite legal success in some instances new P2P networks keep popping up, many relying on the open source format and the collective effort of the users. Physical retailers who have a close relationship with the “big five” are now competing with the online retailers who can reduce logistics cost because they don’t have to carry inventory, don’t need physical stores and only need a minimal staff.

Development and marketing: The rest of the value chain, like development, (talent search and agent representation) and marketing/promotion/securing airplay are still areas where the “big five”, with their financial muscle and ties to media and music clubs/DJs, are in control and the best source for artists to turn to if they want world wide exposure. Promising new and upcoming artists who perform in various small-scale venues are quickly discovered and represented by the major labels because of the myriad of “informants” they have working for them at music venues. This is a well-established system where the labels will get instant feedback from the audience and their response to the performing artist, making the search for talent and sales capable acts easier and less risky. Internet while used as a promotion tool is still too unstructured to compete with traditional marketing tools like TV and radio. As of late the industry have understood the power of the Internet for reach purposes and established music services like Pressplay to offer the music consumer a completely legal option. These ventures bring them close to the consumer and enables the “big five” to profile the consumers and offer a customized service and match them with the right artist and product offering, all at low cost due to the transactional efficiency of the Internet. Reduced information asymmetry can also decrease the customers’ search and bargaining costs. Their decisions will be faster and better informed. Furthermore, the reduced distribution costs and simplified transactions speed up transaction processing and order fulfillment, which benefits the customers, retailers and labels. Infomediaries like Yahoo and Rolling Stone magazine are also in this line of business so the music labels will have to be innovative to offer the customer something Yahoo can’t. Because of the close ties to media, agents and event organizers, the “big five” are in a position to offer the consumers value added service, for example advance concert tickets or special compilations of previously unreleased material from an artist. Offering the consumers complementary products or services reduces the search and switching costs and will increase the chance of customer loyalty. To achieve repeat purchases and higher transaction volume for the “big five”, the concept of customer lock-in has to be considered. Customer retention can be achieved by having loyalty programs which reward customers who order a lot of music, like the “frequent

flyer” program. A dominant design will reduce the need for the customer to learn how to use new formats, transaction safety is also important; the reputation and brand profile of the company is on the line. Direct and indirect network externalities can attract new users, especially when building communities, “more users more value”, both for the users, community and sponsors. First mover advantage normally means that customer lock-in gets off to a good start. The music industry have been slow to adapt to the possibilities of the Internet and have to counter that by being best mover, i.e. offering a superior product.

Online ventures: Online music services like Pressplay and Musicnet have a different value chain than the P2P networks, it relies on value creating activities like promotion and talent recruitment whereas the P2P networks’ value chain consists of activities like indexing, storage and distribution, all subject to easy duplication by a number of other firms or networks, no real competitive advantage exists, even the communities are easy to set up elsewhere, the value drivers of successful e-retailing sites or communities are well known and easy to copy. Furthermore the P2P networks often don’t have the same extensive catalogue as the newly created online services. The burgeoning close relationship between the consumer and the “big five” can be extended beyond the computer as enhanced wireless technology turn mobile products like cell phones and PDAs into multimedia terminals. In primary activities like distribution and production the differentiation drivers that make value chain activities competitive in relation to competitors have been considerably standardized, the chance of establishing a competitive advantage is slim. In marketing and talent recruitment, which still relies on human resources and contacts, there are still differentiation possibilities. Support activities like human resource management and procurement have been made more effective due to the real time uplinks but not seriously altered by the changes to the industry.

5.2.2 Innovation perspective

Innovation can create value as Schumpeter advocated. Innovation has come in many forms to the music industry. *New production methods* for the recording of music has as discussed above made the product better and reduced the cost of production. Value has been created, the question is, who will benefit? Artists now have the capability to record in their homes and free themselves from the labels. Not all artists will choose this route as the labels have more financial backing to produce an even better product. The loss of some artists will be offset by the saved cost that the new technology has brought about. *New markets and new products* have been created by the added reach capabilities that the Internet offers, both geographically and in terms of music genres. Logistical cost incurred by building and maintaining physical stores can be avoided by establishing online retailers that serve the new markets. The challenge lies in adapting music and marketing to the new markets in order to successfully compete with established locals. Because of lowered production cost the labels are more willing to back narrow music stiles, attracting consumers who are willing to try the latest and stand out from the crowd. Value is created not only for the labels but also for the consumers and the artists who now have the possibility to publish their music, either through the labels or by themselves with the help of the net. Another innovation is the *new digital distribution* method, which has lowered costs considerably by making the transaction far more efficient. Added bandwidth and other technological advances promise to make digital distribution ever more efficient. The value created

has not ended up with the “big five”, distribution has so far been more of threat because of P2P networks who have enabled consumers to download music and other content for free. The industry response, which has mostly centered on legal action, is today also about offering the consumers legal alternatives to the P2P networks and building music communities of their own. Partnerships with Internet businesses like Loudeye Technologies and Real Networks are the music industry’s way of capitalizing on digital distribution, they supply the format of distribution and help in the creation of secure formats. The production of physical formats that have enhanced encryption are other innovative measures that will make the illegal distribution harder and thus reduce the losses incurred by piracy and lack of royalty payments. The digitalization of the physical product and the emergence of the Internet have also created *innovative customer and product solutions*, for example 1-2-1 marketing and communities. By partnering with all-purpose suppliers like Amazon they can create innovative product solutions because of the possibility to offer complementary products. The risk lies in creating a competitor out of the partner. The *transaction structure* has as a consequence gone through an innovative process as well. The innovation has come in the form of connection of previously unconnected parties, the elimination of inefficiencies in the buying and selling process and capturing latent consumer needs. The removal of geographical and physical constraints, reversal of information flows between customer and seller make the innovation possibilities endless. In this environment, product innovations precede process innovations, giving the firm who is first to introduce a new product, and is able to draw the market’s attention to it, a considerable head start. It is, therefore likely that intermediaries like the labels will continue be active in the music industry. Record companies and music publishers have been able to adapt to changes in their economic and technological environments in the past, thanks to their financial strength and collective reputations.

The concept of creative destruction is applicable to the innovations that have taken place as of late. The rents made available to the industry have started to evaporate as new entrants have started to eat into the profits. New digital recording technology has enabled artists and independent labels to offer a product very much like the one supplied by the “big five” and thus increased competition. New markets available thanks to the Internet, can be reached by all online competitors and distribution can be handled by almost anybody with technological expertise. These innovations do not constitute competitive advantages for the industry as they are not unique and can be easily substituted and imitated. The innovation in distribution is blamed for the declining sales over the past years because of the lack of copy protection. The innovative customer solutions haven’t yet translated into profits that can compensate for the loss of royalties. Innovation in file sharing has in part been responsible for the declining sales. The open source format of the P2P networks have created an aura of continuous innovation which has manifested itself in the success of circumventing every measure the “big five” and the RIAA have tried in order to eradicate their existence. The free diffusion of the file sharing technology has made it hard for the music industry to compete with their licensed and secure formats. Exploitation of the innovations has been slow and as a consequence the major labels have become followers rather than leaders. Bad timing is not solely to blame, increased competition from new entrants on the web has put a stress on profitability and holes in copyright protection regulation are other factors to consider. Moves to combat these problems have been taken, new legislation is under way, both in Europe and in the U.S. Strategic alliances, joint ventures and licensing are also on the rise.

5.2.3 Competition perspective

Seen from an industry perspective the resources and capabilities of the “big five” have in the past extended through the entire value chain. The consolidation process has created companies with vast financial resources and complementary capabilities. Intangible resources like reputation and human resources, tangible like physical assets also work in their favor. The brands of the collective holdings are in most cases closely related to the parent company, for example Sony who incorporates the name in their respective businesses. Take AOL Time Warner as an example, its businesses include cable systems, film and television, music, publishing and Internet services. They and Sony, BMG and Vivendi can use these businesses to offer their customers a complete media solution, the synergies created by the Internet and the emergence of digitalization have opened the door for services that provides the customer with media and other content from the same source, thereby reducing search and switching costs and benefiting the companies in terms of increased customer lock-in. EMI which is the last major independent label is not in the same position to offer these kinds of services. EMI has been targeted by AOL Time Warner to increase the catalogue of music, a must to fight off the challengers on the net who can offer the consumer a wide array of music choice. The consolidation process has meant that the music labels have had incredible marketing tools at their disposal, TV, film, radio, newspapers, magazines and now Internet. These ties in conjunction with ties to clubs, DJs and event promoters makes it hard for new entrants to compete on the same level when it comes to promotion, searching for talent and securing airplay for the artists. As discussed in 5.2.1 Internet has not yet developed into a full-fledged alternative for new entrants to use as a marketing tool, so far it is more of a complement to traditional media. Production and distribution have seen technological innovations open up the field to new competitors. The innovations have made these capabilities, which in the past have been strongholds of the “big five” easy to copy, substitute and easy to trade, i.e. they no longer constitute competitive advantages for the companies as opposed to marketing and talent recruitment. One could argue that digitalization and the Internet shocked the established system and caused the restructuring of the industry and value chain.

Building competitive advantages: These developments do not imply that the “big five” should throw in the towel so to speak, the possibilities of the Internet and digital distribution can work in their favor if they incorporate the novelties that attracted the consumers to P2P networks in the first place, for example the ability to construct personal compilations and discover new styles of music, all at lower cost. The newly created services like Pressplay are moving in that direction all though they face a tough time in offering the same value as the file sharing services like Kazaa where content is free. Their chance is to offer ancillary benefits like artist related merchandise at low cost, bonus systems for heavy users and offers to buy concert tickets in advance. By combining on and offline assets the labels could outperform the rivals in terms of value added services. A detailed study of the P2P networks and their resources and capabilities are the best way to figure out how to beat them. Simply trying to shut them down by legal action will be costly and hard as new networks pop up as fast as they disappear. Operational effectiveness is hard to achieve when conducting business online because best practices have become easier to copy, the alternative is strategic positioning as mentioned above with the ancillary benefits to the customer, strategic partnerships with Internet firms can enhance the value for the

customer. The offerings should not extend to products unrelated to the core product. An integrated value chain that is targeted at the core customers is the best way to avoid overreach. Buyouts are another option; this extends to firms supplying the digital distribution technology as well. It should not be attempted unless there is a strategic fit between the firm and the buyer, for example, EMI is strictly a label and acquiring a technology firm might conflict with the main strategy of finding the most desirable artists and signing them. Becoming a niche player, only concentrating on parts of the value chain where competitive advantages still exist is a strategy that could further restructure the music industry.

5.2.4 Strategic network perspective

In the past the most important partners for the “big five” have included retailers and distributors who reinforced the structure of the value chain and the music industry. While these partners are by no means irrelevant (online music distribution will still be overshadowed by physical retailing for the next couple of years, see tables 4.4 (1) and 4.4 (2)) other players are today emerging as necessary partners. The partnerships have taken the form of strategic alliances (online music services and Amazon), joint ventures (Pressplay which was created by Vivendi Universal and Sony) and mergers (AOL and Time Warner). The emergence of digitalization and the Internet have had the effect of increased consumer power, which has put added emphasis on communication to consumers. Customer profiling will be important for the “big five” in order to succeed with customized services competing with P2P networks and their user communities. Communication strategies to other partners in the networks like the digital technology firms and online retailers need to be equally effective since they hold the key for the “big five’s” online ventures. Secure digital formats rely on several partners as illustrated in figure 4.5. The profile and reputation of the “big five” is currently being dragged through the mud as they and the RIAA have begun to target individual users in their legal actions. If millions of users start receiving letters forcing them to pay fines or face being sued, the long-term consequences for the labels might suffer and these users will choose other entities for future purchases.

Benefits and disadvantages of partnering: The networks in place today have benefited the labels in several ways. Easier access to new markets where local tastes are different and an established local can help in the transition period, easier access to technology that enhances digital distribution, shared risk if an online venture were to fail (Pressplay) and more effective customer profiling are some examples. Economies of scale and scope are benefits incurred by the digital distribution form. The close relationship with the artists and in the near future with the consumers will help bring the product to the market in a shortened time, it also increases the chance of success if the labels are certain of what is “hot” right now, feedback that can be picked up by paying close attention to what is going on in the communities. Strategic networks have also increased transaction efficiency as information between partners can be exchanged through secure intranets in real time, for customers it has come in the form of reduced information asymmetry. The downside with partnering on the Internet is that partners can become rivals without too much added cost. For example, the affiliation with Yahoo and Amazon who have strong Internet brands can be costly if they decide to dissolve the partnership and offer consumers the same service by themselves, with the help of other entities that are rivaling the labels in other

activities. If they decide to be an artist portal they can use their strong Internet presence to promote the artists that use them for the release of their music. This can spur a price war that further undermines profitability in the industry, which is already under attack from the P2P networks. Complementary product offerings can create customer lock-in and raise switching costs, thus increasing profitability. If the complement standardizes the industry's product offering, it can increase rivalry and dampen profitability. Outsourcing activities to partners should only be attempted after careful analysis so that potentially lucrative activities of the future aren't given up. Rampant outsourcing can also be a cause of depressed profitability in the industry as purchased inputs become more homogenous, in turn spurring a price war. In the music industry, the "big five" have more and more begun cooperating to fend off the threat from the file sharing services and to capitalize on the reduced transaction costs incurred by the digitalization of their product. The merger between AOL and Time Warner was pushed through in part because of the synergies between the companies as technology progressed, their products are physically different but when they are digitalized they share the same characteristics. Future mergers based on the same reasons are real possibilities. The effect of this collaboration has resulted in services that are very much alike (Pressplay and Musicnet). The chances of price war are slim, as the prices of the subscription fees have to be very low from the start in order to combat the likes of Kazaa who offer free music. Direct and indirect network externalities will be essential for the growth of the "big five's" online services. Trying to hold on to all activities in the value chain can be costly as other specialized firms are better positioned to capture the value, core capabilities might change faster than the labels anticipate.

5.2.5 Product and customer value perspective

Product value: Based on the product definition in chapter 3.7 it is obvious that the digital format of present time differs from the physical. Differences are to be found in all levels of the product definition. In order to determine if the formats are direct competitors or more of complementing products, the purpose of the *core product* has to be analyzed. If sound is the only reason to why the consumer listens to music the obvious answer is that they are direct competitors. The technological progress in compression techniques coupled with the increasing availability of broadband and Internet connection make the digital format a viable alternative in terms of sound quality. The social dimension of listening to music, i.e. creating an identity and image, status symbol, browsing in the music store are factors that in part are impossible to experience with the digital format. Who would dream of giving a digital music file as a present? The connection to the CD collection is often strong, the CDs can also be a window into your soul and give a idea of the personal development of a person (Dolfsma, 2000). This might change in the future as digitalization becomes a more natural part of our life. There are emotional ties to the artists that are easier to satisfy with the physical CD, for example the sleeve with additional information and glossy pictures. Loyalty to the artist can be one way of combating free file sharing. Future digital offerings from the "big five" may include extras that make the current CD sleeve look ridiculous in order to combat the free but naked alternative supplied on the P2P networks. The digital format has enabled the consumer to make personal compilations of songs that can be used at social events, but to break the physical formats dominance the use of the PC as a stereo system won't do, mobile personal

devices like MP3 players can be a step in the process of making the digital format an acceptable alternative.

The *actual product* is different in both tangible (design, packaging, etc) and intangible (brand and status) features. Branding can add value to the product if it has positive connotations for the customer, the legal strategy of the “big five” is threatening to damage their brands, which might carry over into other businesses they are engaged in. In the future the artists themselves will be the most important brand name, depending on how they promote themselves. The consumer of today often want to put a physical touch to complement the digital, a fact that can be observed in the copying of the file on to a empty CD, the sleeve can be retrieved in similar fashion with scanners. Materialism is an important reason for this behavior, the digital file is too abstract to consider you own. Digital music providers on the net compensate the lack of physicality by offering services like reviews, artist interviews and previously unreleased material. The benefits of the digital format such as the ease of duplicating and sharing with friends are factors that the customer values, new physical successors to the CD are making it even harder to make a personal copy. Next generation digital formats sanctioned by the music industry are threatening to do the same. This can drive the consumers to adapt open source formats in an even bigger scale.

The *augmented product* demonstrates perhaps the biggest differences, the digital distribution of music is fast and convenient and in some cases free. There is no warranty but none is needed as an inadequate copy can be erased and a new one downloaded and installed without too much effort. The physical format can be acquired either through an online retailer or by a trip down to the music store. The process of browsing in the store and meeting like-minded individuals is akin to the community feel made popular on the net. Innovative music stores can of course survive without the physical format, in house events and digital kiosks are possible strategies. Because of the wide arrays of businesses that the “big five” have under their collective roof, they are in a position to offer their customers a product mix of great proportion, complementary media services can add value to the core product, this will also give an indication of which company is the market leader and have strong synergy effects. Constant product innovation is required to keep up and stay ahead of the product enhancements that are disseminated freely on the net. The Internet in itself has because of the previously discussed transactional benefits made product development more efficient and less risky. Product screening, testing and pre-launch marketing are areas where the net has made the process more beneficial. A close relationship with the consumers can make product development both faster and in the end more successful.

Customer value: If the definition of customer value (see chapter 3.8) is used in conjunction with the analysis of product value, the value of the CD is not only measured in the quality of sound but also in social terms, there is symbolic value. The combined value can for some people be higher than the cost of buying a CD. The mass usage of file sharing services like Kazaa seems to point at the opposite and the fact that sales have dropped the past two years corroborate this statement. Downloading, while more of a youth oriented activity, has also been observed in other age groups. In the past there weren't any alternatives to the CD and the assigned price, today there is and the music industry have realized this by offering low priced online services. They face stiff competition, free digital formats that in the not too

distant future can be downloaded in a matter of seconds require very little in return from the customer. One way to top this customer value is to offer complementary products that are inaccessible from other sources. Moral apprehensions of acquiring content without the artist getting a dime in return can be a factor that limits legally dubious downloading. The longer the consumers associate music and other media content as free the harder it will be to change their behavior (moral hazard), a lesson that can be learned without facing court appearance, for example by using artists as educators and advertisers because they have a closer connection to the consumers than the labels. Digital music as supplied by the “big five” is better defined as a service given the abstract nature of consumption and acquisition. Quality is measured in terms of technical and functional terms. The quality of the download is the technical quality, the downloads acquired from the P2P networks can vary in quality (incomplete songs, low bitrate, etc) but as the number of users grow the amount of content with satisfactory quality increases, technological advances like increased bandwidth will further enhance the quality and ease of downloading. The quality of the legally sanctioned downloads are more consistent in providing quality. The functional quality refers to the ease of downloading content, file sharing networks sometimes don't offer a satisfactory catalogue, it depends on the number of users and the profile of the community members. Furthermore, spy programs and unwanted ads sometimes make the process more difficult. The problem with services like Pressplay has been the lack of full catalogues, a fact not lost on the “big five” who now are beginning to offer their entire catalogues on the subscription sites, they also license it to independent players. The relationship cost will be kept down as the quality and customer satisfaction increases. Increased customer profiling and value segmentation can determine which customers to target with a specific offer, a necessary tactic in order to rapidly move consumers through the adoption and buying decision process. Understanding the difference between the adopters can help in crafting a well-balanced message that will attract both early and late majority. The next step is to choose the right form of communication, some customers are more comfortable on the net and others prefer traditional media channels. In short, customized products are not enough, customized communication is also required to increase chance of purchase. The challenge lies in raising the level of involvement in the process of music acquisition and move away from the current state of the downloading process where the consumer simply sees it as a file transfer.

5.3 A new reality

As understood by chapter 4.5, the music industry's effort to be successful on the Internet in part relies upon a strategic network of complementing partners that facilitate the legal, online distribution of music. They are essential in the process of offering the consumer a value added product and as a consequence integral in order to establish customer lock-in. Take Microsoft as an example, their dominance and success has in large depended on the fact that the company has many complementary partners indirectly working for them by developing software that extend the usefulness of the Windows operating system. They have helped Microsoft achieve not only customer lock-in but also competitor lock-out and system lock-in. The barriers of entry erected by the music industry are being reduced by new technology. The industry should focus on the customer, build high entry of barriers around them, this can be achieved by a deep relationship with the customer and mutual understanding.

Communities: The consumers are today very much a part of the value chain and the industry must nurture the integrated value chain in order to enhance customer value, new technology has made 1-2-1 marketing achievable; the possibilities of customer customization are endless. Traditional bookstores like Barnes and Noble use intelligent software to achieve dynamic customization (customer richness). The software creates user profiles and matches them with similar profiles and makes recommendations based on their shared interest. It lets users receive real time, personalized listings for items in the catalogue of products. Online bookstores like Amazon have opted for a community based feel to customize their service, users who are avid readers post their own reviews and guides like-minded souls into making a informed purchase (Venkatraman & Henderson, 1998). In order to sustain the consumer oriented community feel (affiliation) Amazon informs the customers when biased partners have paid for reviews or product listings. A seller-oriented community has been tried but the customers complained, another sign of the increased bargaining power of the consumer. Virtual communities are already proving to be a dynamic source of information about new music, compared to the old marketing programs. Creating and fostering these communities has become an important strategy for firms to succeed in Internet markets. Because members of virtual communities have such diverse backgrounds, these communities are more knowledgeable about new and marginal developments. Dissatisfaction with an established music distributor can grow rapidly, particularly if alternatives are readily available and information about these alternatives moves quickly within a given community and is dispersed quickly to other virtual communities. Thus, even though those firms that now play a dominant role in this industry may be able to hold their own, the margin for adopting policies that may be considered antagonistic economically or otherwise is likely to be curbed. It remains to be seen whether the advantage of having an established reputation as a record company will persist or not. The music industry will have to offer value added services in order to combat the communities established around the file sharing services. Spotting customer trends can be a valuable by-product of the community.

“Physical retailing”: The reach potential of the Internet can supplement and add value to the traditional music stores. The average music store carries around 50.000 titles (Evans & Wurster, 1999), by partnering with online music sites like Pressplay the store can vastly improve its catalogue, thus avoiding the customer going to the competitors to search for the CD they didn’t have. Online kiosks in the physical store could function as terminals where the customer places an order, which can either be picked up in the store or sent directly to the customer’s home. In addition, the customer can create personal compilations and not be restricted to the pre-packaged CD format. The social interaction process of going to the music store, which is valued by the music consumer can be reinforced by the added possibilities of the physical music store. The close partnership between the retailers and the “big five” can therefore still be mutually beneficial. Becoming all-purpose providers like Amazon is however not recommended as this can conflict with customer needs and wants and the strategic fit of the company. By developing rich product information (product richness), for example artist biographies, recording history and chat rooms the “big five” can enhance their product offering and match it with the customers they know will be interested in purchasing the product.

Integrated value chain: The established companies that will be most successful in the new environment will be those who use the concepts of digitalization and Internet

technology to make traditional activities better and implement new combinations of virtual and “real world” activities along the value chain, which previously weren’t possible. For example by using the Internet as a promotion tool in conjunction with traditional media sources, thus reaching more customers with the same message. A glowing example in the financial sector is Charles Schwab’s expansion of its traditional branches by one third since the company moved into online trading, it’s even outdistancing online brokerage E-trade in terms of market share. It leveraged its experience in stock broking and gave existing and new customers more value in terms of service. Most buyers value a combination of online services, personal services and physical locations more than stand alone web services. A choice of channels, delivery options and ways of dealing with a company is important in today’s world. Commercial banks like Citibank have also taken advantage of the Internet in the same manner and have more online accounts than pure Internet banks (Porter, 2001; Venkatraman & Henderson, 1998).

Online education is embraced by the universities, it is not seen as a threat because they are confident that the online version is more of a complement to the traditional campus, they value the advantages and transactional benefits offered by the Internet. Imagine the cost for the university of having to expand its facilities to accommodate new students, with the Internet they can accept more students, collect the tuitions and save on physical expansion. Other benefits include reduced maintenance cost and stronger brand presence in remote locations. The trend among universities is to partner up with content providers to combat the virtual counterparts (Chassie, 2002).

The postal service who could see the Internet and digitalization as the end of their entire business have been resourceful in using the new technology to enhance its offering to the customers, for example by offering real time connections with sent mail or parcels, this way the customer can check the delivery progress of the package, an important feature in a world where online shopping will require mass handling of packages in an efficient manner. There are also plans to play a useful role as an objective intermediary in online bill presentment and payment processes. The online mailbox is value-adding service for the customer; it turns an electronic file into a sheet of paper, stuffed in an envelope. For 41 cents, customers could transmit a document or letter to the Postal Service, which would distribute the file, securely, to a contract printer nearest to the destination. The printer would then take the mail to the nearest post office (Surekha, 2000; Scott, 2000).

The music industry can take note from these industries and others who have adapted to the new reality and offered their customers a value-added service. The question is, which mix of strategies will make economic sense and if there are possibilities to make them happen. As this thesis has an industry perspective the strategies discussed below are general in structure as they don’t take into consideration the specific resources and capabilities of the individual company. What is certain is that the value chain will have to be changed, in fact it has already happened as discussed in chapter 4.4.1. The legal strategies undertaken by the industry may send a signal that they don’t acknowledge this change but the reality is that they have begun to understand the implications of the Internet and digitalization, their online ventures and partnerships are testaments to that.

5.4 Tax and Royalty System – an alternative legal strategy

The introduction of the VCR installed the same kind of fear in the movie industry as the new formats of digital music have today. Legal action was taken against Sony, the VCR manufacturer (Betamax format). The plaintiffs lost but had they won, the likelihood was that they would have sought the establishment of a system under which each purchasers of a VCR paid a fee, which would then be distributed to the owners of the copyrights in movies and television programs, in amounts roughly proportional to the frequency with which each movie and program were taped. As discussed in chapter 4.1 about the controversy that ensued over digital audio tape recorders, the music industry did better, persuading Congress to create such a system as a part of the Digital Audio Home Recording Act.⁹⁵ A similar legislative compromise might protect the investments made by the industry in searching, producing and publishing music and at the same time provide the artists with compensation. The problems presented by free Internet distribution of digital music could therefore be alleviated, the industry would benefit from increased transactional efficiency due to digital distribution. The law would regulate that purchasers of products used in the acquisition or performance of digital music pay fees, distributed to the owners of the copyrights in musical compositions and recordings in proportion to the frequency with which they are copied. MP3 playback devices, access to Internet service providers, empty CD and DVDs used for copying and hard drives are examples of items targeted for taxation. It would provide artists with an alternative source of revenue. Provided that the tax was set at the right level, this revenue could be sufficient to replace copyright royalties, ensuring the preservation of incentives for artists to be creative. Under this system, downloading content would not be illegal. Consumers and providers wouldn't have any reason to hide their activities and therefore tracking the frequency with which particular contents are copied for the purpose of fairly allocating the tax revenues would be easier and more accurate.

There are disadvantages to this system. Some of the devices targeted for taxation are used both by consumers of digital files and by non consumers, even specific MP3 devices are used by their purchasers with varying degrees of frequency, the taxation system could result in nonusers and light users in effect paying as much of the fares as the heavy users. A common trait of tax systems in general, but perhaps not as easily accepted in this case as this would be an additional tax created only to compensate individuals and companies with already vast resources. Furthermore, the Internet is a global phenomenon, regulations have limited reach. Only parts of the world music market would be affected by this system and mobile targets of the tax, for example ISPs would likely move offshore. File share developers have already set up shop in tax-exempt countries in the South Pacific. In addition, it could put a strain on the partnerships the music industry relies upon for effective use of its resources. Broadband providers, integral for effective digital distribution would not appreciate measures that would raise its price structure for the customer who have been slow to embrace the technology. The question of royalty has also been hotly debated in the performing arts industry, with the concept of digitalization and the eventual use of virtual actors, present day actors felt that the advertising industry could begin to use digital images of them and not pay for it. After a strike the parties agreed to wait three

⁹⁵ www.virtualrecordings.com/betamax.htm

years and see how the technological development panned out. For now they use a pay as play method for compensation (Robinson & Halle, 2002).

5.5 Secured formats and pricing strategies

Secure formats: As the enforcement of intellectual property doesn't seem to stop the problem of illegal downloads and physical pirating, contracts and technological barriers are more often used to protect made investments. Sellers of movies, software and databases, etc are relying less on copyright and patent protection and instead turning to private deals and encryption. The postal service in the U.S. has, to keep up with technology, begun to offer E-stamp, a secure format.⁹⁶

The movie industry who so far have avoided the mass distribution of illegal copies are eagerly supporting digital formats as they wish to avoid the same legal hassles as the music industry once broadband makes its possible for file sharing of movies and TV shows on a grand scale. It has to be said that they have started legal proceedings in some cases to make the point that movies are off limits to file sharing in a unsecured format. Applications like Kazaa are fully capable of distributing movies today. The major movie studios' main strategy has been to launch video-on-demand where the user can download a movie, keep it on his hard drive for a limited period of time and after watching it, the copy erases itself. The movie and TV industry have understood the marketing potential of the Internet, buzz around a movie can create a mass following and thus increase box office results, it also functions as a tool to add value to the movie or TV show. Networks and movie studios often release information about the product to enhance it when the viewer catches it on TV or in the cinema.

Digitized textbooks will force publishers to dramatically restructure their processes and technologies, custom printing, digital textbooks, and e-books will pressure publishers to offer greater consumer choice, variable presentation and delivery, and new ways to purchase. Multichannel publishing means that successful publishers will manage content from a single, comprehensive storehouse, a repository containing modular book content and structure. Now they're rethinking their business, in some cases literally tearing it apart. They're championing e-commerce initiatives that sell books chapter by chapter. They're offering study aids online and experimenting anew with multimedia. The publishers are cutting out the middleman, selling to students, materials previously available only through instructors. Today's universities are almost totally wired. Distributing editorial content electronically is far cheaper than manufacturing a book and carting it to distributors. According to the National Association of College Stores, printing, warehousing, and delivering a college textbook eat up about one-third of the revenue the book ultimately generates. The development of secure reading format and e-book devices are necessary in order for the writers to offer their work in a digital form (Brown, 2001).⁹⁷

The music industry appears to be following the same trend. The danger posed by illegal MP3 trafficking prompted a group of hardware and software companies and

⁹⁶ *eweek*, vol 7, issue 33, p46, Aug 14, 2000 at www.zdnet.com

⁹⁷ Information also from Forrester research report on e-books, reprinted in *Journal Information Today*, vol 18, issue 3, p43, 2001.

representatives of the music industry to join forces and developing new compression formats that would enable music providers to control the ways of copying content. The Secure Digital Music Initiative (SDMI), as this venture is called has had problems as new formats with added encryption have been easily hacked and the code released on the Internet, users also complain that the new technology makes it harder to play the music in devices like the car stereo or the CD-ROM in the computer. A few companies have developed their own; Microsoft has introduced the secure format (wma) to compete with MP3. Record companies have embraced the technology. AOL uses another encryption system, relying upon a combination of hardware and software. The software permits recording companies to include security information in digital music files. Once MP4, which contains an encryption option, becomes widely available, more enterprises of this sort will likely appear. Secure formats are not only developed for digital music, the successors to the CD, like the DVD-A is equipped with strong encryption technology. Chapter 4.5 detailed the relationship the music companies have with technology partners like Liquid Audio and Loudeye, if this strategy shall bear fruit in the future the relationships have to intensify so that they truly complement each other. The problem is to keep innovating as fast or perhaps even faster than individual entrepreneurs like file sharing developers.

The question is if the development and acceptance throughout the music industry of a secure compression format will solve current problems. The music industry's reluctance in distributing music online has been traced to the lack of secure formats, mass acceptance of these new formats would likely ease this hold up. The challenge lies in attracting a high number of users, today legal services like Pressplay are hopelessly outdistanced by file sharing programs like Morpheus and Kazaa. The consumers haven't yet adapted to the new product format, the decision to purchase can't come before the consumer has the knowledge about the offering. Furthermore, the product features have to be persuasive. The best alternative is to convince the early majority and innovators who if satisfied will spread the word. Without a high number of users it will be hard to establish the kind of music community users desire and are used to from the P2P networks. In addition more users will create positive network externalities and signal to other potential users that the service is worth trying out. That, in turn, will enable the industry and society in general to reap most of the benefits of Internet distribution discussed in chapter 4.4.1: lower music prices, better compensation for artists, elimination of over- and underproduction, greater accuracy and convenience in the marketing of music, and a wider choice of music available to the consumers. By offering the consumers a value added service (music with extra features like video, advance concert tickets, etc for a fee) that outdistances the legally questionable first movers could cause the number of users to reach a desired level.

Pricing strategies: It is essential that the music industry agree on a common standard for the secure formats, the worst case scenario would be if the labels ended up backing different standards driving the consumer into the hands of all purpose networks like Kazaa. Microsoft became the dominant player it is today by offering consumers an operating system that was IBM compatible. Strategic partners like Real Networks can be used for the mass adoption of a desired format by bundling the technology with Real Network's products, which already have a huge installed customer base. Given the fact that the competing formats are free, penetration pricing used by newcomers to attract a large following, is not considered useful for the music industry. Technological copy protection of music would strengthen the ability of

music suppliers to engage in price discrimination, to divide music consumers into subcategories and then charge each group according to their ability and willingness to spend, so called segmented pricing. The danger with free music as offered by the file sharing networks is that it might create a psychological barrier with the consumer who in the future values music only as an art form and neglects to consider the economic side (psychological pricing). If the secured formats fail to take off and the industry is forced to live with file sharing, as we know it today, a method of pricing that the software industry uses is market-skimming pricing. Microsoft in particular is an avid user of this method. The windows operating system is subject to mass copying all over the world, the majority of it being illegal. In order to achieve profitability they have set the price of the product high enough to offset the losses incurred by the illegal copying (Kotler et al, 1999).

Distribution of digital music in encrypted form has social drawbacks. Producers of music would have an easier time to curtail the freedoms currently enjoyed by music consumers, for example the freedom to make a back-up copy for personal use. Subscription based services like the ones currently offered by the labels on the Internet are dependent on secure formats, but the industry have been forced to offer download content which later can be copied as well, not only streaming or total encryption. The reason is to entice users who are used to this form of value from file sharing services like Kazaa. It is highly questionable if they can move away from this form of distribution in the future without alienating the consumers. The industry also needs flexibility in the pricing schemes, flat rate payment must be complemented with usage based pricing for the customer who only wants a few songs. Furthermore the customer has to be convinced about the safety of paying online, it has to be as safe as when paying over the counter. The prevalence of hacking will make secure formats a challenge to preserve; the major movie studios and the Motion Picture Association tried suing a Norwegian teenager who broke the DVD copy code. The MPA lost, the case can function as a precedent in terms of the fair use practice.⁹⁸

5.6 Brand leveraging and advertising

Branding: Internet businesses like browsers, search engines, portals, and websites make money, not by charging users directly, but instead by providing services to the public for free, attracting visitors, and then selling advertising to e-commerce and “real-world” enterprises that hope to sell products or services to those visitors. This model was pioneered by network television and radio and has been adapted for use in the new environment. The publishing industry has been using this strategy from the onset, content from magazines and newspapers are in some cases free for all, in other cases only free for subscribers. The brand functions as an ad in itself, attracting new customers who hopefully will subscribe to the real deal. It has also created a value added service for readers as the interaction with editors and writers is facilitated by chatting, email and message boards. Leading textbook publishers are creating supplementary web sites to connect students and professors throughout a course (Venkatraman & Henderson, 1998). Music distributors are beginning to explore applications of the same marketing strategy, retail and download sites are more interactive, more brand focused, both in terms of artist and label. Leveraging brand

⁹⁸ www.startribune.com/stories/459/3584322.html

value is a necessity for music labels because it can provide them with clarity since brands create simplicity and stability in a complex and fast changing world. Brands add value to products often resulting in a price premium. Brands enable relationships with customers by addressing specific needs and values, thus increasing loyalty. Competitive advantages can be obtained as brands create a stronger position in the market. Brands can be leveraged to deploy other activities and new technologies and therefore expanding the market (Kotler, 1999). Their brand names are known and they have a financial position that allows them to establish themselves on the Internet. The establishment of communities on their online music sites is a good sign for sponsors, a user spends considerable more time on the site if there is a community of his interest than if it is just a traditional click and order site. Partnerships with affiliate sites like Yahoo could strengthen brand presence by having the sites function as extended online music stores, when a user searches their site for a specific artist they could link directly to the labels' online stores. In return they receive a commission on sales referred by their sites.

Advertising: Ads in the format we recognize from TV can also be used, displaying advertisements on subscriber screens while they are downloading MP3 files or embedding advertising banners into streaming audio tracks are two alternatives. Another is to let users download the files to their hard drives in the usual fashion, then, each time they play the tracks, banner ads appear on their computer monitors. The business plan would be to split the ad revenues between the site and the music distributors. In turn, artists get a piece of the distributor's share. Unlike SDMI, it would facilitate the distribution of music for free which would increase its accessibility and unlike the subscription system, it would not depend upon systems of surveillance. The advertising strategy does, however, have features that limit its attractiveness. It would likely be associated in practice with some form of encryption. Otherwise, the listeners of music could quickly strip away the embedded advertisements and listen to the music without them. The copy restrictions necessary to prevent this behavior would give rise to the same problems that were associated with secured formats. Artists and consumers could also regard the intertwining of music and ads as corrupting and invasive as commercials already are part of most forms of contemporary culture, for example TV and movies.

5.7 A question of morality

If the labels and musicians released their creations to the public in an uncontaminated, unsecured form, all of the advantages of the systems considered above could be easily accessed and the disadvantages could be avoided. This will not happen if they forfeit the ability to earn any money so the challenge lies in offering value to the consumer while still preserving the monetary rewards and incentives for creativity. Three avenues for this system to work have been suggested (Robinson Halle, 2002), one by one they don't offer much hope but in unison they stand a better chance.⁹⁹

⁹⁹ Cultural differences impacting the morality of downloading copyright protected content is not addressed as it lies outside the scope of the thesis.

The first option is suggested by David Bowie's innovative website.¹⁰⁰ Visitors are invited to become members of the Bowie community. Persons who sign up are provided information about the artist and encouraged to participate in chat rooms with other fans. In addition, they are offered a wide variety of products and services, loosely related to Bowie's artistry. Because of the connection the consumer has to the artist they are willing to buy products they could obtain cheaper elsewhere, they wish to lend their support to the artist. The profits that this scheme provides to the artist would enable him, if he wished, to offer his music in downloadable form for free. At the moment David Bowie only directs consumers to buy his CDs at an online retailer.

The second option is taken from the experiences of museums, historical sites, theatres, public radio stations and churches. They survive financially, not by charging visitors, but by requesting donations. Radio stations and religious organizations ask listeners and parishioners to contribute "what they can" while other organizations "suggest" a specific amount. Musicians could operate websites on the same basis. For example, you visit your favorite artist's official website to download his latest CD for free, before downloading you are presented with a notice that suggest you give a modest donation for access if he is going to be able to offer the music for free. Would people pay? The anonymity of downloading suggest no but gratitude toward the musician, respect for the modesty of the fee, and a recognition of the benefits of keeping such a system alive suggest yes. The publishing industry with Stephen King at the forefront has tried this approach.

The e-Author: The Case of Stephen King

A major difficulty facing the e-book world is the issue of theft or copyright violation. Stephen King's foray into e-publishing is illustrative. In what was called the "e-book revolution," in March of 2000 Stephen King put his novel *Riding the Bullet* on the Web with the possibility of paying to download the entire novel. 500,000 readers did just that. King's move to digitally publish his work was closely watched by the publishing industry, in many cases with fear. King offered \$1.00 downloads of sections one through three and \$2.00 downloads for sections four and five of his next novel *The Plant*, using Amazon.com and www.stephenking.com. Since sections were priced so modestly, the cost of the apparatus to collect and monitor each payment would have exceeded the revenue; so the site worked on an honor system. The first installment required a fee to download, but readers were trusted to pay for later installments. Although sections were so inexpensive, it appears that many users were paying for one section and taking succeeding sections for free. In November of 2000, King announced that he would discontinue installments of *The Plant*. As fans arguably "stole" music using Napster, many e-book readers took advantage of easy replication to illegally copy sections of *The Plant*, avoiding even a first payment. A significant portion (54 %) of fans proved to be immune to honoring the payment plan. King had announced that unless 75% paid, he would stop the series (Robinson & Halle, 2002).

The third alternative suggest that consumers might be more willing to pay modest amounts for access to unsecured music if they were able to obtain ancillary benefits. These benefits could include news about the artist, opportunities to participate in discussion groups, discounted or advance concert tickets notices of new

¹⁰⁰ www.davidbowie.com

releases, etc. The likelihood of donations could increase with this sort of value added service. These options work best for the established artist with large number of fans. New artists would still rely on the promotional expertise of the labels.

5.8 A broken up business

While some researchers like Michael Porter claim that the Internet only will serve as a complement to strategy other claim it will cause companies to reevaluate their entire structure and business ideas (Hagel & Singer, 2001). In their mind the company is composed of three businesses: customer relations, product innovation and infrastructure. They entail different economic, competitive and cultural imperatives and bundled together cause conflict and trade-offs. Under the pressure of technological advances other industries have already been fractured along these lines in order to reduce transactional inefficiencies. The newspaper industry which not long ago encompassed all three businesses, it attracted customers (readers and advertisers), it produced most of the news stories and managed printing and distributing is an example. Today the situation has changed, much of what we read is outsourced to specialized news services like Reuters. Columns are syndicated, words and images are often inserts from specialty magazines. The move to specialized printers has left the newspaper industry with one core business to focus on, customer relations, which is about connecting readers and advertisers. Syndication is particularly easy with information goods. In financial services similar forces are at work. With the advent of the Internet, the level of competition has increased, given the widespread availability of information, and the separation of many components of service as well as the creation of a grass roots individual investor market. The value chain has been disassembled to accommodate various classes of brokerage services, depending on the depth of service customers are looking for, and the price they are willing to pay for these services. Companies like E-trade are using the Internet to build customer relationships, using syndicated material for the product offering. Traditional banks are forced to reconsider their businesses. Focusing on developing attractive financial products that can be marketed through infomediaries like E-trade can be a lucrative option (Rao, 1999).

Migrating value: A company can syndicate the same good to almost an infinite number of partners without incurring much additional cost. The syndicator's job is to package the content and manage the relationship between the originators (the creators) and the distributors (Werbach, 2000). The music industry could concentrate on the same business as the newspapers, connecting the artists with the consumers by doing what they do best, promotion, talent search and customer profiling, in effect becoming a niche player, just like the postal service who are more and more focusing on high priority mail and packages, understanding the profit potential and the vision of a paperless society. Unbundling and rebundling to become a new organization is not easy or popular, it's like admitting defeat for some corporate leaders. Outsourcing or unbundling should only be attempted after careful analysis of the value chain to consider where future profits may be located in the chain. Is it distribution, producing or marketing? Competition is different depending on the stage in the product life cycle. The music industry is at a critical junction with new digital formats on their way, formats the industry will keep the customer content, competition is based on customization, price and flexibility. When the product isn't good enough to satisfy the

customer it is best to be an integrated company as the activities of the value chain are interdependent, but when the product has developed to meet customer standards there is wisdom to concentrate on particular activities. It is essential to control the interdependent links in the value chain to be profitable (Christensen et al, 2001). The music industry is today at the situation where the product meets customer needs and desires thanks to the file sharing programs who forced the industry to adapt to the Internet. As the value chain links have become less interdependent there is opportunity to focus on the activities that bring in the most profit and given the nature of the Internet and other new technologies, distributing and producing can be done at considerable less cost today, the entry barriers are low prompting new entrants and consequently less profit.

The revolution in distribution is an innovation to be sure but it is not a competitive advantage for either file sharing networks or the music industry. It is easily duplicated, substitutes are rife and there is no copyright protection. Free riding is another problem already observed in these networks. The strategic networks now flourishing on the Internet risks standardizing the product, in the end creating a price war and low profits, this is another reason why the industry should focus on other parts of the value chain than distribution. The lucrative parts of distribution is shifting to distribution technology, there are, as seen in chapter 4.5 several firms already trying to capture the profits in this business sector. Given the size and financial muscle of the "big five" it is not impossible that they acquire some of these companies, AOL Time Warner has already bought Internet radio stations and streaming media technology firms. Another sign of buyouts is of course Bertelsmann's failed attempt at buying Napster in order to turn it into a more controllable business. The open source movements of next generation networks and their anonymity will be harder to shut down or buy, who exactly will the industry deal with? Remaining parts of the value chain like promotion will continue to be a lucrative activity as the Internet isn't yet the marketing tool that can be used for a mass audience in the way TV and other media does, this means the entry barriers are still high and given the "big five's" expertise in the field they are well positioned to reap the profits. Talent recruitment and marketing ties to media, clubs and physical retail stores are harder to copy and digitalize.

The competition in the future will likely come from Internet infomediaries like Yahoo who have begun to act like labels already. The PC industry moved through different phases in its relatively short life span (Christensen et al, 2001) the assembly makers like IBM lost out because they outsourced the later to be profitable activities like operating systems (Microsoft) and processors (Intel). In the future, alliances and partnerships will emerge between major online music retailers, music portals and other content providers like Rolling Stone Magazine and MTV Networks. Radio will continue to play a major role in popularizing music, and consumers will be able to download (and purchase) music in a matter of seconds in their homes or cars. Retailers operating in the physical space like Virgin Megastores, will need to move more aggressively into live in-store concerts and events and offer more music sampling stations. Another possible way for the "big five" to reap profits of the Internet is to begin acting as Internet service providers, Universal and Warner already belong to conglomerates who provide the service. Broadband penetration is an important factor for the continued trend of digitalization and Internet usage, if the labels become broadband providers they can offer the music and other media content

from their holdings as a complementary service if customers sigh with them, this way the money lost through file sharing can be recouped by the access fees paid by the customers.

Possible future for the “big five” labels: Based on the analysis in chapter 5.2 and 5.8 a possible future for the labels could take this form.

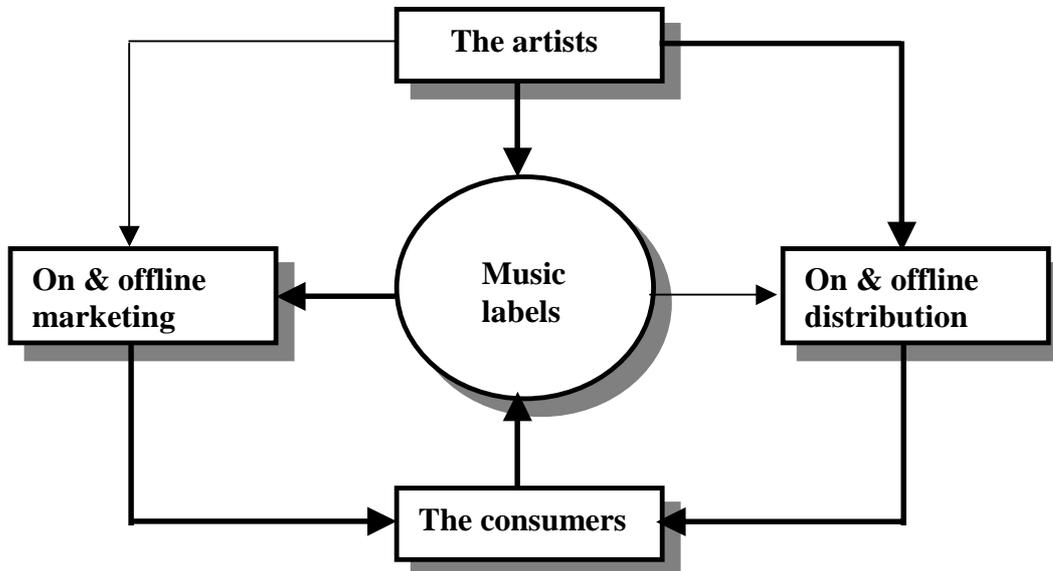


Figure 5.8: The future of the music industry's labels - spiders in a web

Future record labels like those controlled by the “big five” could function like a spider in a web. They will be the connecting point between consumers and the artists, functioning like an intermediary. Consumer profiling and talent search are two important areas where they will excel. Distribution and producing have with the emergence of the Internet and digitalisation become low cost and easy access activities, many new entrants mean low profits and the “big five” will only handle this in very low scale (mainly through offline sources like physical retail), most of it will be handled by the artists themselves through online sources, by services like Pressplay or if they choose to do it free by distributing it through P2P networks. The reverse situation will take place in marketing; the artists can use online resources in a small scale, bigger if they are established. The labels with their expertise and connections are better poised to promote the artists on a grander scale.

5.9 Chapter summary

The Five Forces analysis and the theoretical analysis made clear that the situation for the music industry has changed in many respects. Parts of the value chain have been hijacked by new competitors with different agendas, new digital music formats have emerged, providing the consumers with a product alternative that in the future can create more value than the physical format of today. Consumers have become a factor of vast power driving the trend towards more service, more music choice and value added products, in effect forcing the major companies to go digital. Artists have also benefited, as they now have a different venue for publishing their music. Innovation has come in the form of new markets, new production methods and a more efficient distribution system that has decreased transaction cost, both for the “big five” and the

consumers, they do not however create competitive advantages. The Internet in general has by real time links throughout the value chain reduced transaction cost and made information within the company and with its partners flow more effective. At the same time the innovations have been responsible for the surfacing of new specialized players who have acquired part of the value created by the innovations. File sharing networks will have a hard time creating value without copyright protection but an alternative could be the continued proliferation of the open source movements, which only rely on the collective efforts of the users. As a part of this process the major record companies have established strategic networks with players on the Internet in order to offer customers complementary services. The risk is that these partners can become rivals in the future. Competition from new players have the potential of forcing the “big five” to dispense with activities that in the past have been competitive advantages. Marketing and talent development are areas where there continues to be chances to sustain established advantages.

Examples from other sectors of the business world like the financial and mail sector have shown that even though digitalization is threatening to alter their industry structure they have been able to adapt and extend their business to include the Internet and thus ended up in a more profitable situation. Strategies for the music industry to achieve the same result could come in the form of advertising, taxation on copy related products or the development of secure formats. Higher prices and the morality of man could be other ways to compensate for the free diffusion of music. All of the above mentioned strategies have serious drawbacks and are not likely to be long-term solutions, at least not one by one, a mix could better protect the future profit potential and provide the artists and labels with enough incentives to keep producing music. Once again, looking for guidance in other industries, for example the newspaper industry have suggested that for long term survival, unbundling the organization and focusing on the most lucrative parts of the value chain is a hard but essential decision to make. The major companies in the music industry like the “big five” are better of dispensing with activities like distribution that have become low cost and attracts many new entrants. Instead they should focus on what they do best, find talent and promote them by using their expertise and connections with the media and other ties. As the physical format has a place in the business for the foreseeable future, all distribution activities need not be abandoned. The future lies in being a connecting point between artists and consumers. Becoming Internet service providers can provide the conglomerates with a viable venue to promote their products and at the same time come closer to the consumers. Although retrieving audio and video from the Internet will become increasingly easy, many will continue to be interested in buying authentic physical products such as CDs because of the materialism that permeates our society. The new, virtual economy will not substitute entirely for the physical economy.

6 Emerging insights

In this chapter the conclusions from the analysis and the empirical findings are fused together to create a wide picture of the strategic changes facing the music industry and other industries impacted by the emergence of the Internet and the digitalization phenomenon. Additionally the reader will be presented with suggestions for future research areas.

6.1 The case of the music industry

The music industry is going through a seismic shift shakeout of their business structure caused by technological discontinuity and the emergence of competency predators like the file sharing sites that cannibalized parts of the value chain. Had they been able to better understand the possibilities offered by digitalization and the Internet they might have avoided the current situation. Ponder the following: if the industry had digitalized their catalogues and offered consumers the ability to download songs over the Internet for a small fee, would later arrivals by Napster and Kazaa made such a huge impact? If consumers were used and educated to the ideas of paying, it is possible that the cult following of file sharers wouldn't have arisen, maybe they wouldn't have been created at all. After all, Shawn Fanning, creator of the Napster program, said that the reason why he made the program was because of his frustration with the industry and their lack of progress in the adoption of the Internet and its possibilities.

In the introductory chapter a list of questions were presented that were supposed to be the backbone of the thesis. The analysis has dealt with these questions and other relevant issues. The analysis chapter is integrative in design and as a consequence it can be hard to crystallize direct answers in specific sections. To alleviate eventual frustration this section will deal specifically with direct answers to the questions.

What is the state of the traditional record industry today?

The music industry of today is dominated by five major labels, Universal, BMG, Sony, Warner and EMI, who together control around 85 % of the worldwide market, fringe players constitute the rest. The last couple of years has seen sales drop from previous highs. The reasons can in part be traced to the proliferation of online file sharing networks where music is shared and distributed for free. Innovative measures like new production methods, new markets, a more efficient distribution system, customized product and customer solutions and a new transaction structure have come about because of the Internet and the phenomenon of digitalization. The value from these innovations have in many cases ended up with new entrants or with the artists and consumers and the industry is scrambling to make the technology work on their terms, for example by enforcing new legislation or the use of encryption technology. Competition from new specialized actors like file sharing networks and Internet portals are threatening to further erode the profitability of the "big five", making past competitive advantages standardized and low cost. This has forced the big labels to venture out on the Internet in order to offer the consumers more value added services and thus retaining the customer base. Alternatives to the physical format have come in the form of digital files, which can be downloaded or listened to as streaming sound.

As a direct consequence of the innovations the entry barriers have been lowered in some parts of the value chain and a new competitive environment has arisen. Physical retailing is longer the only option for sales outlets. The artists and consumers have increased their bargaining power towards the labels prompting more varied choice of music for the consumer who can demand more tailored service and ancillary benefits because of the prevalence of free music files circulating on the net.

What effect will digitalization and the Internet have on the existing music industry value chain?

Empirical evidence and subsequent analysis have shown that the value chain has been restructured but not completely destroyed as advocated by some researchers. In some regards recent technological advances have benefited the value chain, specifically the decreased transaction costs have streamlined the communication inside and outside the firm. Both primary and support activities have benefited from the real time uplinks made possible by the Internet. New distribution options have meant that layers of intermediaries have been cut out while new ones have emerged. The value chain which consists of development, production, marketing and distribution have been affected in different degrees. Development (talent recruitment and agent representation) and marketing have not been as affected as production and distribution. Production has become cheaper because of new digital recording technology, artists can record high quality content from their homes if they desire to do so. Distribution has since it became practical to share digitalized music files been the most contentious and affected activity of the value chain. Anyone with limited computer skill can now share files over the Internet, there is no direct need for the trip to the music store. New actors like the file sharing networks let the consumers handle the distribution in what is known as a P2P network whose value chain consists of indexing, storage and distribution. Content can be downloaded, duplicated and distributed in matter of minutes. Because the Internet hasn't yet become an effective marketing tool comparable to television and radio (technological advances in wireless and broadband technology could remedy that) the labels who have close ties to traditional media channels and with agents, clubs, DJs and event organizers still remain strong and relatively unchallenged by new actors. These ties have been nurtured over along period of time and constitute competitive advantages and cornerstones in the long term survival plan. A burgeoning close relationship with the consumers will also position them as intermediaries (connecting point) between the artists and consumers where they will become a matching resource relying on a wealth of customer information.

How have traditional music companies responded to issues and challenges thrown up by changes in the value chain; will they be weakened or strengthened?

The response from the music industry, a variety of artists and the RIAA has from the onset of the controversy centered on an aggressive legal strategy where file sharing networks and others who contribute to file sharing have been sued in rapid succession. Despite victories in the courtrooms the battle has not been won in terms of reduced file sharing without copyright protection. Instead it has snowballed, Napster proved to be only a precursor to the explosion in number of files traded over the net, new P2P networks are created as soon as others disappear. New legislation is on the way to make it even harder for the networks to avoid responsibility, Internet service providers are also asked to track and suspend users who participate in file sharing

without copyright protection. Because the artist community is divided on how to relate to the new environment and because the risk of alienating the consumers is too grave the big labels have also begun to offer their own secure digital music services. They have so far been unable to slow down the growth of the “renegade” P2P networks. Measures to combat these problems have been taken. The “big five” have begun to offer their entire catalogues of music on the same sites so the consumer will be able to acquire everything he desires from one place, something that most P2P networks can’t offer. Additionally, they have the possibility to offer value added service because of their ties to media, clubs and event organizers. Once the broadband revolution takes off they will also be able to offer complementary products like film and books in a digital form because they are owned by big conglomerates that have businesses in most entertainment fields. In the short term it may look grim but if they can reposition themselves in the above-discussed manner they have a chance to strengthen their position, albeit in a different structure.

Which companies are now aligned following the recent spate of acquisitions, consolidations and partnerships? Which key players are emerging?

As discussed in chapter 4.5 the Internet and the digitalization process have created a new reality where the labels have to form new strategic partnerships, the old physical retailers and distribution partners that operate in the “real world” are not useless but will play a lesser role in the future as technology advances. Technological advances are responsible for the consolidation process that created the industry structure of today, the big labels have been able to develop a stronghold on the entire value chain because of their size. The process is ongoing, the “big five” might soon become the “big four” if EMI, which has been targeted for acquisition before is bought up by the other big conglomerates. Digital distribution requires several intermediaries to reach the consumer, these firms (Full Audio, Loudeye Technologies, Liquid Audio and Real Networks) stand to make big money as digital files will include film, books and other products in the future. A possible strategy for the labels might be to buy these technology firms while they are still small. Product and customer information, which promises to be a lucrative segment in the future is ripe with competitors like MSN and Yahoo, so far the labels have been able to coexist with these players in the form of strategic alliances. Online music services launched by the labels have today allied themselves with online retailers like Amazon and Vitaminic to reach a wider customer base but in the future they too might be strong competitors. Other key players are of course the various P2P networks that continue to vex the industry with free file sharing. Names that are important today like Kazaa and Morpheus might not survive long if the courts toughen up, the concept of free file sharing will be harder to stop as it often relies on open source movements, therefore new players are likely to emerge. Linux is proof that these movements can survive despite of powerful commercial competitors.

How do consumers react to the new environment, how does the new digital product measure up compared to the physical?

Consumers have in large numbers adapted to the new environment, the number of downloaded files and ever-expanding user base of the P2P networks are testaments to that. The possibilities of easy and free access to music coupled with the creation of user communities have been the reasons for the development. The music industry were slow to realize that the customer were interested in this digital form of music and therefore other players have been able to dictate the evolution of online digital

music. Studies have shown that the popularity of downloading music is prevalent in all age groups and across the globe, youths have been pioneers because of computer experience. The social experience, among other factors like lack of Internet security, variable quality of digital downloads, of buying music in the physical store has kept sales from imploding. Recent attempts by the music industry to offer value added products is hoped to outdistance the P2P offerings. Technical quality will in the future not be an issue but customer value and satisfaction will be and the labels with the conglomerates in the background are poised to take advantage of the digitalization revolution because of their possibilities to offer a complete entertainment package in an efficient manner.

The future of the physical product is dependent on how long technological advances can keep the quality ahead or on the same level as the digital. Today there is difference between the two, mainly in the social dimension, it is hard to get as emotionally involved in a digital file as it is buying a CD in a store. Digitalization has not yet permeated our society to the degree where we don't distinguish between physical objects and abstract objects. At the other levels of the product definition the digital format edges out the physical, more customized services can be linked with the digital, more complementary digital products can be added. In the short term the physical format has a future.

What strategies can we expect, can comparing challenges to other industries impacted by digitalization be a valuable exercise?

The realization that a new reality is upon the "big five", where consumers have increased their bargaining power and the Internet have turned previous partners into potential competitors have made cross industry comparison useful and necessary. Looking at how other industries have responded to the emergence of the Internet and digitalization it has become clear that they have been able to integrate the advantages of the innovations into their value chain and thus been able to raise their profile and customer satisfaction. This is particularly true in the brokerage industry where Schwab have been able to hold off pure Internet players like E-trade. The postal service, publishing industry and universities have also been successful in adding value to their traditional activities by embracing the new technology.

The question for the labels is if revenues from new distribution channels and strategies on the Internet can compensate for diminishing sales of physical products like the CD? Based on the theoretical analysis in chapter 5.2 in conjunction with the cross industry analysis a number of possible strategies have emerged. Individually they have flaws that will keep them from being successful but together they stand a chance to keep the labels profitable. In the past when the tape recorder was introduced a tax on copy related products was enforced to compensate for lost sales, a similar approach could be used for the new devices that are part of the copy process. A strategy used by several other industries as well as the music industry is the development of secure formats, this is dependent on strong partnerships with firms that specialize on secure online distribution. Copy protection can also give the labels the opportunity to engage in segmented pricing, customers can be divided into segments based on their willingness to pay for different levels of service. Integrated advertising in the files is another way to compensate the labels and artists for the free diffusion of music, a strategy used by online newspapers. The software industry which for some time have seen large numbers of pirated products on the market have

adopted a different approach, the charge a price for each product that is high enough to offset the losses incurred by the piracy (market-skimming pricing). Hacking is a reason to why this approach can be costly to maintain. The “big five” are owned by huge conglomerates with strong brand presence, this can be used when the labels venture out into new territories where it essential to attract large numbers of customers and strategic partners. The discussion about product and customer value revealed that moral apprehensions of downloading content without compensation for the artists imply that an honor system could be tried where users download music and pay a small fee to support the artist, ancillary services is another option to persuade the consumer to choose the label-sponsored service. In the long term this mix of strategies might not be enough as technological and social factors change. Breaking up the business and focusing on activities that still constitute competitive advantages like talent recruitment and agent representation will be necessary as other activities like production and distribution become even more low cost and easy to duplicate, an occurrence that has been observed in the newspaper industry.

What is the future for file sharing systems?¹⁰¹

File sharing cannot be a sustainable business model without the files that are being shared themselves having some value. Imagine a new company that wishes to establish a file-sharing service to compete with existing players who charges a monthly fee. The startup invests in (by either creating or purchasing) software to enable sharing. The marginal cost of adding an additional subscriber to either service is practically zero. In the battle for subscribers, the startup will undercut the existing players who respond with a price cut. Reaching an equilibrium price of zero, equal to marginal cost, the two are locked in a perennial price war. Value could come from their customer base but they are also vulnerable to a price war. Further, the more valuable the customer base of the existing player, the more the startup is willing to spend on advertising, to convert customers and the inevitable price war occurs again. In short, file-sharing services do not have any assets on which they can create value. The analysis applies equally to the situation where users pay per file. The conclusion is that file-sharing technologies will not have value unless copyright owners control them. This is based on six factors:

1. **Value to users:** Users’ willingness to pay will depend on their preferences, their income and the relative prices of substitutes.
2. **The costs of reproduction and distribution:** This is the most dramatic impact of sharing technologies, as these costs fall to zero, a significant reduction in comparison to the physical world (costs of printing and distributing a CD).
3. **The ability to monitor use:** Without piracy, control of the sharing technology will allow copyright owners to track their works.
4. **The ability to collect payment:** Control of access to the sharing system should allow low-cost collection of subscription fees.
5. **The scope of exceptions to copyright:** A policy variable that sharing will not impact.
6. **The duration of the right:** This is also a policy variable.

¹⁰¹ Conclusion in part drawn from correspondence with open.P2P.com

File sharing like advocated by Gnutella and Freenet, the open source formats, have a different agenda. The value in these P2P networks are more than the files shared, it is based on the community and the value the user gets from participating, it is a social phenomenon that can rival the social interaction experience of the record store in the future when technological innovations have made virtual interaction close to the real thing. File sharing in this context only relies on the collective effort of the users, they can thrive if certain conditions are met (von Hippel, 2001). First of all the users must have sufficient incentives to innovate and second, they must be willing to share their innovations freely. This will only happen if the benefits of innovation exceed their cost. Thirdly, if the open source movement shall survive and attract more users it has to offer the same or more value than commercial production and distribution. The software industry has a good example in the Linux system, which is a serious alternative to other operating systems like Windows.

6.2 General conclusions

The reality of the Internet

How will the Internet and the increasing digitalization of products affect businesses and our life in general? It is hard to imagine how we will react to the changes, today there is a strong connection to the physical world, the online world hasn't permeated our life completely. Gradual change will perhaps make the transition smoother than we think. In what scale our lives will change is debatable. The Internet's impact is hotly debated, will it completely revolutionize business and society or will it be just another technological innovation that we incorporate without radically changing our lifestyles? The theories of Michael Porter, which have had a strong influence on this thesis, suggests that the Internet and other technological advances such as broadband are effective tools for reducing transactional cost for businesses and an important complement to traditional "real world" activities. However, the openness of the Internet makes it hard to establish competitive advantages, "bricks and mortar" activities of the businesses will continue to be important, the net should work to make them more efficient. The fixation of growth as a business goal has clouded the real aim of the businesses, to be profitable, there has been a tendency to overreach instead of focusing on a specific set of customers with a specific product offering, the strategic fit has been compromised as there is no continuity of direction in the stated strategies.

Real time information will make communication within the entire firm's network easier, a closer relationship with the customers is possible, which can revolutionize product development, the customers can become co-developers. The risk involved with product launches can therefore be lowered and it can reach the market in a shorter time, further reducing transaction cost. At the same time Internet has had an overall negative effect on profitability because it gives customers and other actors more leverage in relation to incumbent companies, this threatens their entire industry structure. The trend of partnering with online firms is seen as a dangerous development by Porter, Rangan and Adner who claim that the partners can easily become competitors in the future, other sources like Tapscott say that outsourcing is the only way to go as specialized firms on the Internet are more efficient for online dealings. A commonly held belief is that going online will help the firm cut out various middlemen and directly reach the end customer. While this is true it often also

means that new intermediaries are needed, an occurrence observed in the case of the music industry. The lack of geographical restrictions mean new markets open up without the need for costly investments, the ease of reaching these markets also mean that competitors can reach them just as easy. Rangan and Adner stress that first mover advantage is not essential in order to be market leader, best mover is the desirable tactic, i.e. a value added service that will attract customers despite the implied switching costs. The Internet is contributing towards making the business world buyer oriented, in part because of the reduced information asymmetry. In Porter's mind the consumer of the future will value a combination of online services, personal services and physical locations, not only stand alone web services. This in turn will favor the companies who have traditionally been "real world" players. Dotcoms will stay niche players with distinctive strategies that focus on services and product value. Other researchers like Amit, Zott and Tapscott argue that the Internet is a revolutionary tool. Completely new business models, new infrastructure for wealth creation and endless possibilities for consumer choice are examples of the innovative perspective. The ability to be permanently connected will give consumers access to information and services at their convenience, not the sellers. Amit and Zott claim that value on the Internet is created in four dimensions, there are novel transaction structures, possibilities of establishing customer lock-in and thus raising switching costs and network externalities, complementarities between on and offline assets, activities and technologies and finally increased transactional efficiency (reduced search cost, more symmetric info and economies of scale).

The case of the music industry

The music industry's experience as of late seem to validate Porter's ideas, the industry structure is changing, parts of the value chain are being attacked by new entrants and sales have gone down the last couple of years. At closer inspection, the realization that the situation could have been mitigated if the "big five" had adapted sooner, emerges. File sharing services, now partly responsible for declining sales, were created because the industry didn't offer the consumers the service they required with the help of the Internet. Other industries have responded faster and as a consequence become leaders and not forced to adopt an aggressive legal strategy. The brokerage industry with Schwab as an example has outdistanced dotcoms like E-trade, the software industry with Microsoft in the lead have adopted a price strategy to compensate for the free diffusion of their product. The movie industry, while also engaged in legal action, has been relatively quick to establish online services before P2P networks start spreading their product in the same manner as music. The mail and education sectors have also been fast to integrate the virtues of the Internet to their traditional business. Strategies that were suggested for the music industry to survive in one form or another have ranged from advertising, taxation on copy related products, brand leveraging, a new price structure, an honor system and the development of secured formats. In the long term a break up of the business could be a necessity. They could dispense with activities that have become low cost and attracted many new specialized entrants and focus on activities that constitute competitive advantages like marketing and talent recruitment where the net still hasn't emerged as a serious contender. Porter's skeptics have a point in suggesting that new models of business have emerged, customer power has increased and traditional businesses must change to adapt. Porter states that the Internet has mostly been bad for business, he does not analyze the greater good for society, instead his focus lies on the economics of businesses. Researchers like Tapscott deals more with the entire

picture and in that regard the Internet is a revolution in terms of connectivity and information sharing.

The concept of strategy

It needs to be said that these possible strategic choices are pure models for economic compensation in lieu of the free file sharing that has been responsible for declining sales, their success in other industries do not imply that they are sure to work for the music industry or other industries facing the same challenge. This thesis moves on two strategic levels, first, general models on how the music industry could make money despite the challenge of digitalization of products (business strategy) and secondly strategies for their continued survival (further consolidation, mergers, acquisitions, strategic partnering, outsourcing, unbundling, etc). The second level (corporate strategy) has tried to answer questions like what business the “big five” should be in and in what form. Only the second level are “real” strategies (based on the definition used in the thesis), they are based on an industry analysis where the competitive environment and new reality have been applied to reach aforementioned conclusions. Strategy shall be seen as vehicle for coordination and communication, a unifying theme that gives coherence and direction for the firm. The business strategy models (taxation, secure formats, advertising, new pricing structure, branding and the honor system are to be seen as a mix, a recipe of sorts that together might be successful. They have tried to answer questions like how the “big five“ should compete and how to make money. Strategy is a fleeting concept given its definition; it is the link between the internal environment of the firm (goals, values, resources, capabilities, organizational structure) and the external environment (economic, social, political and technological factors). As both these environments can change rapidly the strategies suggested in this thesis might not be valid or possible to implement in the future, strategies should come with a “best before” date. The Internet and digitalization process have already made an impact on both the internal and external environment, mostly the external but the internal is as suggested in for a restructuring as well. Technological innovations have changed the economics of businesses like the music labels, political forces are trying to stem the change by introducing more regulation, the major change will come when the social aspects really begin to take hold. Digitalization and the Internet haven’t yet altered society in the way it promises to do. Once this happens the internal environment for industries like the ones analyzed in this thesis will be radically altered, the changes we have seen today are merely the first steps.

The impact of digitalization

Digitalization of products, which has been eased by the distribution capabilities of the Internet is a phenomenon and influential force affecting society, by both generating new possibilities and transforming old patterns of conduct. It is important to distinguish between Internet and digitalization, they are not mutually dependent, digitalization of products can take place without the Internet, however it needs the net for the mass spreading of the content. Conversely, the Internet was designed as an information tool, a way of communicating, not to make physical products obsolete, its popularity however is heavily tied to the digitalization of products like music and newspapers. The music industry’s experience has shown that industry structure and value chains can be affected to a large degree. As more products and services are digitalized and made available online how will the affected industries respond and evolve? Will we see consolidation within the industry, maybe conglomerates that

dwarf those we have today will emerge that can offer all digital products and services from one source, further reducing transaction cost for the companies and the consumers. Another scenario could be the complete opposite, free content flowing on the Internet, paid for by connection fees for Internet access or broadband services. Advertising and taxation are other methods to secure compensation. Besides being a technological direction, digitalization affects everyday life in many concrete forms; processes, media, activities and even objects that appeared with a particular design in the material world, are being redesigned and reconstructed in a digital fashion.

Information flows

In this information society new social rules will develop. Old-fashioned, un-customized service will die away and companies will have to bridge the fences that have separated them and work toward greater cooperation. The new social structure will influence flows of people, merchandise, money and information. Among those flows, especially in the field of economics, digitizing the flow of money and using networks to do it will result in major changes. Networks are important for businesses to thrive; consumers have shown an affinity for networking (Napster, Ebay, Kazaa). Even on cell phones, a very popular feature is the SMS function where the consumer establishes contact with different people over the network. They want to produce the content in the network themselves. There are other areas with huge network opportunities: the job market, markets for used machines, knowledge management, education and real estate are a few examples. Convenience in peoples' daily lives will improve both in the virtual and "real world" by connecting individuals, companies and government. The future work place is sure to change as there won't be a need for a physical office in many cases, freeing up resources and time both for companies and individuals. The problem of information illiteracy could increase the digital divide if there isn't a concerted effort to spread the technology. Another problem we are beginning to experience already today is the matter of information overload, how to sort between the vast information flows coming at us, this will certainly be an issue for future network specialists to deal with. The uses of technology will shift from pure entertainment to work and education related issues. Internal networks in the companies of tomorrow stand to gain increased transaction efficiencies because of more computer and network savvy employees. Presently the full potential of internal networks isn't reached as employees see computers as a complement, face-to-face contact is still preferred. The flows of information such as transaction information, information concerning physical distribution, information related to business cooperation are undergoing major changes. Other flows, such as those of deregulation and structural reform, are also involved in this trend and the movement is toward the birth of new modes of business conduct, a social reform in which the conventional boundaries of industries are bridged. In the handling of information in enterprises, the main form in principle has been the substitution of functions, and it has begun and ended with the storage of information. However, in the future information will be handled as products, and a trend toward greater coordination and symbiosis of companies can be expected, with digitalized information as a foundation.

Digitalized products

Many products and services are either totally or largely non-digital: cars, steel, chemicals, food, hardware, haircare, hospital services to name a few. Others are totally or largely digital: music, data, stock prices, film, software, banking and insurance. Most products and services are not purely digital or purely non-digital, but

a mixture of both. The critical question is how large the digital part in the value chain is and if the advantages of digitalization (easy, accurate and low cost duplication, easy distribution, protection of original copy etc) can be effectively utilized. Media content such as music and film can be shared over networks with ease while visits to the hospital are hard to digitalize. The issue of physical product characteristics is mute when the products become fully digital, for example, what is the difference between a music file or a digitalized book, the size of the file will not be important in the future with virtually limitless bandwidth. The differences between a digital and physical product for example the CD are today big enough to sustain the shelf life of the physical format, this might change as we as consumers become more and more used to digital products and as technology progresses. As previously discussed the similarity between digital products could have the effect of creating giant firms who handle the digital distribution and control related technology, a vast product mix is an effective tactic of attracting a large customer base. Whether this will be handled by the same conglomerates we have today or specialized online firms depends on the strategy chosen by the important players. As this activity is low cost it could attract a high number of competitors, brands will be a useful tool to acquire market share as it signifies more than the actual product, status, design and personality are factors which could be important when using brand as a determinant in the selection process. The effect of the number of transactions is somewhat similar to the effect of the number of customers. If there are many transactions for a product, each with a small value and accordingly high transaction cost relative to the total value, the Internet can generate substantial savings. Again, the impact depends on the part of the value chain that can be made digital. If the product is digital, this distribution structure can be extremely economical over the Internet. One critical question is whether content can be sold profitably on the Internet. The fact is that consumers have been educated to obtain all kinds of free information on the Internet. Reeducating them to pay for this information will be difficult. In addition, once a product is in digital form on the Internet, it is highly likely that hackers will be able to multiply and distribute it for free. Revenue and pricing models will play a central role for digital businesses, for example subscription models, time-based pricing, volume-related pricing structures (number of bits), and value pricing. Copyright might become a thing of the past and money will instead come from other sources like advertising, taxation or future revenue models that take into consideration the virtues of new technology.

Further development

The time when radical changes of digitalization and the Internet will materialize depend on the development of devices and processes that will capitalize on the digitalization opportunities. Furthermore the habits and behavior of the consumer needs to be altered, today there is strong connection to physical products, digital products are considered abstract. The PC is not an ideal device for reading the newspaper, listening to music or watching films, the convergence and connectivity with devices that are more suitable for these activities are needed for total adoption of digitalized products. While value and quality of the digital product can be the same or in the vicinity as the physical the satisfaction dimension is harder to overcome, more technological development is needed before digital devices can be as comfortable or natural as the ones we are used to today. New processes are equally critical. Internet security is still an issue for many consumers; payments are complicated and still perceived as unsafe. The electronic signature is in a nascent stage and credit card fraud is perceived as a real risk. Standards have to be agreed upon and legal problems

have to be solved. It will take years, if not decades, to cope with all these challenges. Probably the most time-consuming bottleneck lies in consumer habits. A generation has to grow up with a new technology to fully exploit its potential. The development of television provides a fitting analogy. TV today is totally different than TV 30 years ago with more interactivity and complementary services. Important factors for the transition to this kind of society are computer power, increasing digitalization of products and services, continued miniaturization of products, wireless technology growth, changing customer habits, convergence of products like phone, TV and radio and continued growth of the Internet. These factors will give us the communications revolution, they will change education, social interactions, and economics. They could, by themselves, wipe out whole professions and careers, or they could, for the vigilant, provide a bounty of riches.

6.3 Suggestions for future research

Given the economic implications and the enormous scope of the subject there are several interesting venues left to explore. This thesis was general in nature; it aimed to give an industry wide perspective and not to concentrate on one particular company. Investigating one major player of the “big five” can be of interest as the level of detail gathered about the company and its particular resources and capabilities will give the possibility of supplying even more accurate strategic options. Personal interviews with key management would give more detailed knowledge about the thoughts and strategic imperatives of the company than can be gathered from secondary sources.

The consumer perspective has in a limited manner been included in the thesis, a detailed study of music consumption in the digital age would be of interest in order to predict the outcome of the war between the CD, its physical successors and the wholly digital format like MP3 and future formats.

P2P networks like Kazaa and Morpheus are today growing at an impressive rate, open source networks like Freenet suggest a near anarchical information world. Can they deliver what they promise and will consumers continue to use them when legal formats begin to spread? Questions that may decide which strategy the music industry and others facing the digitalization challenge will adopt to survive.

As the value chain is evolving there are activities that can and need to be outsourced, the profits are migrating both to activities that the music industry have expertise in and activities that they rely on partners for, digital distribution technology and the development of encryption technology are examples. Studying the further disintegration of the value chain as new technologies emerge and what players will take on the new activities will be interesting to see if the music companies will adapt faster in the future and avoid falling behind new actors capitalizing on their lack of foresight.

These are just some examples of the numerous of interesting avenues to explore. The author hopes this thesis has invoked the interest to continue reading and exploring the issue, in order to further the debate on the implications of digitalization and the Internet on business sectors like the music, mail, movie, publishing and financial industries.

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