Digital Music Business Models in the US and Europe: The Emergence of Streaming Services and the Subsidization of Music

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Abstract

The main issue facing the music industry is finding a sustainable way of generating revenue online. Streaming services emerged as a consequence of this and are still in their primacy, as can be seen in the different methods of generating revenue that are being used by the different services. This thesis will be a comparison of three digital music streaming services (Spotify, Pandora, and Deezer), and will attempt to determine which business models are the most effective at generating a sustainable stream of revenue as well as increasing subscriptions. Streaming services have created for themselves a concrete place in the value chain of the music industry, despite being relatively new. Their ownership and business models have evolved, and of utmost importance is determining which properties they possess, and perhaps they developed from other players in the music industry, and where these properties place them in the value chain.

Keywords: Music streaming, Business model analysis, Freemium, Two-sided markets
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1. INTRODUCTION

1.1 Scientific Relevance

The race to find a sustainable method of monetizing copyrighted content on the internet has dominated the music industry for the past decade. Several scholars and music industry experts believe that streaming services are the best option to generate revenue online, but the sustainability of these streaming services is often called into question.

There is no concrete business model for streaming services that has been both profitable and sustainable. Research of this topic is pertinent as traditional business models are being challenged by the digital climate.

1.2 Social Relevance

At its foundation, society would suffer greatly if the music industry were to collapse. However, there are also other social implications which are relevant to the emergence of music streaming services. Streaming services incorporate new technologies, such as Customer Relationship Management and Digital Rights Management softwares, which have been developed partly as a reaction to the chaos the internet has created for most industries, but particularly the entertainment industries.

Customer Relationship Management softwares, some argue, infringe upon consumer privacy by collecting data of consumption habits and using that data to direct certain advertisements towards certain customers. Streaming services, using these CRM technologies, sometimes also sell this data to third parties.

Digital Rights Management softwares, despite being mostly unsuccessful, fuel the discussion over access to versus ownership of content for the consumer. Content owners allow constant access to their creative content, but either strictly control consumer ownership or do not allow ownership at all.

1.3 Main Issues

The main issue facing the music industry is finding a sustainable way to generate revenue online. Streaming services emerged out of this, but they are still in their primacy, and different methods of generating revenue are being used by different services. This thesis will be a comparison of two services and will determine which are the most effective ways to generate revenue and increase subscriptions. Digital music streaming services’ ownership and business
models have evolved, and I think it is very important to determine which properties they possess, and perhaps took from other players in the industry, and where these properties place them in the chain.

1.4 Research Questions

To examine these properties and to provoke an interesting study into the different business models of streaming services and how they coincide with the music industry as a whole, I have formulated the following research questions:

RQ1: What are the techno-economic functions of music streaming services?
RQ2: What strategies are used by streaming services to monetize creative content online?
RQ3: What is the value dynamic between record companies, artists and streaming services?

2. METHODOLOGY

I used an open-ended, long-frame interview to assist me in my analysis of the properties of digital music streaming services and the music industry. As stated by Anderson, “the long-frame interview is a directed interview that allows the interviewer to follow the discursive line taken by the respondent but still has particular goals (often expressed in actual questions) to fulfill” (Anderson, 2012, pg. 72).

I believe that the long-frame interview allowed me to gain more insight into the actual business models of streaming services, including why they are becoming more significant to the music industry and why some are successful while others are not. In examining business models, the properties that are included are extremely significant. I could not, for instance, learn more about the properties of music streaming services by using participant observation methods because this would lead me in the direction of understanding why people use music streaming services, an interesting but out-of-scope topic.

Creating an effective text for long-frame interviews is essential because the answers are only as good as the questions. However, I believe the long-frame interview more insightful than a directed conversation, as I was able to learn about specific properties and detail the differences between them.

The frame of the interview focused on why streaming services have gained importance in the music industry’s value chain and which properties of the streaming services make them effective generators of revenue.
Unfortunately, I ran into some obstacles while attempting to find participants to take part in these interviews. I reached out to individuals across several disciplines (people who worked in the industry, people who were consultants to the industry, and academics who study the industry), but was not able to find three willing participants. A list of individuals who were contacted to participate in an interview for this thesis can be found attached as Appendix A.

In addition to the interview, a content analysis was also performed as part of my methodology because it is directed toward the objective features of an entity, in this case digital music streaming services. By looking at the characteristics present within specific streaming services, I was able to locate the properties, compare the properties between multiple streaming services, and describe the properties themselves.

A content analysis is the best metric method to use for this thesis because it deals with objective features. If I were to use experimental methods, I would be testing the effects of one set of conditions on another. While this could be applied to music streaming services, using this methodology would stray from comparing the streaming services themselves. The effects of streaming services in general will be discussed in the thesis, as it pertains to the emergence of the services and the subsidization of music, but that is not the focus of the thesis.

Ballon’s (2007) text, entitled *Business modelling revisited: the configuration of control and value* will be used as the theoretical and practical framework through which Spotify, Pandora and Deezer will be analyzed. A description of this text can be found in the Framework of Analysis section within the chapter containing the case studies.

### 3. LITERATURE REVIEW

This thesis will discuss and analyze the music industry as a whole, but particularly the emergence of digital music streaming services and what changes in the music industry led these services to gain popularity. I found the literature that I used for the literature review in a variety of sources, including books, academic journals, and on the internet. Literature on this topic seems to be growing, and the scope of this thesis did not allow for the inclusion of all aspects of each topic covered. The literature review should serve as a foundation which will add depth to the significance of the case studies that follow.

#### 3.1 Celestial Jukebox

The Celestial Jukebox will serve as a framework to characterize the music industry’s ongoing struggle to generate revenues with sales of digital music. The Celestial Jukebox is defined
as the following: “The various systems whereby any text, recording, or audiovisual artifact can be made available instantaneously via wired and wireless broadband channels to Internet appliances or home computers” (Burkhart and McCourt, 2006, pg. 1). This is a particularly interesting term because of its implications and rhetoric. The first half of the term, “celestial,” implies heavenly attributes, while the second half, “jukebox,” invokes the significance of “e-commerce,” employed by corporations and technologists eager to derive revenues from online access to content or cultural products (Burkhart and McCourt, 2006, pg. 4). The two words paired together accurately depict the power struggle within the music industry to gain control of not only cultural products themselves but also of sustainable methods of revenue generation by way of distribution of these cultural products.

The fight for control of the Celestial Jukebox ceases to end, as music formats and distribution methods, much like the music industry as a whole, are constantly evolving with technological developments and society.

Arguably, music is an aspect of everyday life. It is produced within a social context and reflects ideals of the current society. One must not forget, however, that a great deal of popular music is created within an industry attempting to generate profits (Longhurst, 2007). This is of course still true today. As the Internet became increasingly commercialized in the late 1990s, a succession of software companies undertook the technical development of the Celestial Jukebox in hopes of reaping substantial license fees from online merchants, media conglomerates, and other copyright owners (Burkhart and McCourt, 2006). Control of the Celestial Jukebox became increasingly complicated with these particular technical developments because the technology companies were new players in the music industry value chain. New methods of business-to-business licensing were needed and the record companies who formerly controlled the Celestial Jukebox were resistant to these developments because of the financial success of CDs (Imfeld and Ekstrand, 2005). This disruption in the value chain also had legal implications as intellectual property policies needed to be adapted to the digital environment.

Eventually, as CD sales declined and music industry revenues decreased, the record companies became more willing to allow these technology companies to enter the value chain. After many years of legal and technical development, the basis of the Celestial Jukebox has been established by the global cultural industries and their technology partners, and it has been accepted by the major stakeholders, including consumers, artists, labels, and legislators (Burkhart and McCourt, 2006). This evolution of the Celestial Jukebox also has implications for the Internet. The
cultural industries have influenced the transformation of it from a public space into a private distribution platform for media conglomerates.

Of note is the fact that the music industry is concentrated in and affected by conglomerates. Concentration refers to a situation in which the ownership of an area of production is concentrated in the hands of a small number of companies (Longhurst, 2007). As these few conglomerates and technology companies try to gain control of the Celestial Jukebox, one important power relationship is often overlooked: the cultural industry’s relationship with its customers. Still today, “the concentrated nature of the pop music industry has led to complaints that the dominant companies can use their power against the interests of consumers” (Longhurst, 2007, pg. 31). As technology is developed to benefit record companies and policies are designed and implemented to protect these companies, consumers have perpetually forfeited the little power they had in the Celestial Jukebox: the power of choice. The corporate homogenization of the Internet ensures that, despite the variety of online music selections growing every day, its growth will generally be characterized by more people visiting fewer destinations (Hill, 2003).

While this fact seems negative, the industry has a different opinion about the homogenization of the Internet. Through the Celestial Jukebox, the industry hopes to enjoy closer, even “one-to-one” relationships with its audiences (Burkhart and McCourt, 2006). While doing this, however, the industry will also be denying consumers important choices that could enhance privacy and competition. With the rise of affordable digital music production technologies, there is now more music content than previously. However, artists not promoted by a major record label have difficulty reaching wide audiences because of this mass of available music. The record labels have the power to largely promote few artists and create demand for these artists’ products. The inverse formula or low access and low flexibility corresponding to high price is the basis of the music industry (Hill, 2003). This fact constitutes part of the reason that record companies exist in the first place. With the arrival of the digital era, the record companies lost some of this control and were forced to find a way to accommodate both business needs and consumer demands. These demands include greater access and more flexibility (Hill, 2003). Throughout the evolution of the music industry, there have always existed three aspects of music freedom in the Celestial Jukebox: accessibility, flexibility, and inexpensiveness. While the consumers want these three freedoms, the record companies want just the opposite, such as tightly controlled releases of music and constrained formats, which would allow them to control the price of music (Hill, 2003). This opposition between the business community and the consumer is simply a supply and demand formula.
The record companies are not only working against consumers to regain control though, especially in the digital realm. The real conflict online is “between the media companies that fund much of the entertainment we read, see, and hear and the technology firms that want to distribute their content - legally or otherwise” (Levine, 2011, pg. 4). From the perspective of the technology companies, helping consumers access content has been very lucrative. This creates a bit of tension, as consumers perceive technology companies as allies and record companies as the enemy. The difference between the perspectives of the record companies and technology companies extends even further, as Levine (2011, pg. 5) notes:

From the perspective of the technology world, information wants to be free because the cost of getting it out is getting lower and lower all the time. The idea that online media will inevitably be free comes from the theory that the price of any good should fall to its marginal cost. Since digital distribution gets cheaper every year, the marginal cost of media keeps approaching zero.

From this angle, it appears that record companies could continue to lose control, and more importantly revenue, from the spread of digital music formats. However, this is yet to be determined and the two competing views continue to clash.

Levine (2011) also states that these two competing visions will continue to compete over the next decade, and one will most likely win: Media companies want the internet to work more like cable television (a closed system) while technology companies want cable to run more like the internet (an open system). If the record companies were to achieve a closed, controlled system, it would be much easier and more appealing to buy music than to download it without paying. Piracy would not be impossible, but it would be terribly inconvenient (Levine, 2011).

As mentioned earlier, the internet is becoming increasingly commercialized, marking the post-Napster digital music landscape, where corporate forces are moving begrudgingly into the virtual space with subscription services that are designed to legally deliver top music acts in streaming and downloadable formats (Hill, 2003). The internet grew in popularity and broadband expanded in society, so the record companies really had no other choices.

The pay-per-use model seemed to be the most reasonable option, so it was put in use. Burkhart and McCourt (2006, pg. 5) note that “although the trappings may be new, the pay-per-use business model is grounded in the history of the Jukebox.” This refers to the wide array of formats that have existed throughout the history of the music industry, such as live concerts, the jukebox,
records, CDs, and now digital music files. All must be paid for in order to be consumed. The price for which these different formats have been and are consumed and the popularity of the formats themselves are determined by the market.

In relation to the global music market, the U.S. market has an increasing proportion of music sales, and this, despite the fact that industry ownership has become increasingly transnational, means that the Celestial Jukebox caters to a largely U.S. audience (Burkhart and McCourt, 2006). This provides more insight into the control of the Celestial Jukebox and also shows that consumption power plays a significant role in determining each player’s position in the value chain behind the control of the Jukebox. The fact that the U.S. market continues to grow proportionally in relation to the global market means that technology companies and record companies want to develop and focus on continuing to grow this already dominant market (Power and Hallencreutz, 2005).

The dominance of the U.S. market also shows that consumers, despite losing more of their control, have in fact some control over the Celestial Jukebox. Throughout the evolution of music formats, consumers have once again become increasingly more empowered, armed yet again with the freedom of choice. Because of the decrease in record companies’ control over music distribution and access, consumers have disrupted the value chain, along with the technology companies who are increasingly taking over distribution, and are forcing record companies to develop new ways to provide value with their products without relying on physical distributors.

Digital music streaming services have been a step forward in once again adding value to music, as they exploit two-sided markets in order to allow some users to listen to licensed content for free.

3.2 Two-Sided Markets

Very relevant to the emergence of music streaming services is the idea of two-sided markets. A market is considered to be two-sided if at any point in time there are (a) two distinct groups of customers; (b) the value obtained by one kind of customer increases with the number of the other kind of customer; and (c) an intermediary is necessary for internalizing the externalities created by one group for the other group (Evans 2002). Two-sided markets exist in some form across most industries and disciplines, but are very prevalent in media markets. In media markets, the intermediaries, which include digital music streaming services, match a group of buyers with a group of sellers (Evans 2002). In this case, the sellers are the advertisers looking for a platform on which to market their products. The buyers, then, are of course the consumers, the ones who will be
viewing or hearing these pitches. In this sense, streaming services are merely trying to create a large audience to which they can broadcast their advertisers’ messages.

Therefore, these two groups of customers need each other. Digital music streaming services, acting as “matchmakers,” bring these groups of customers together in order to sell their own product (Evans 2002, pg. 2). Having only advertisers as their customers would not be possible for a streaming services, as they would not be able to provide a valuable product (in this case, a large audience for the advertisers to sell their products to) to the advertisers. On the other hand, these streaming services could not function with only consumers because the revenue generated from the paying subscribers, currently the minority of customers, would not be enough to cover all operating costs of the streaming services, especially the licensing and royalty fees. In addition, the dynamics of two-sided media markets are very intricate because the attractiveness of the media outlet, at least as perceived by a stakeholder in one of the customer networks, is immediately affected by the number and the character of the stakeholders in the other networks (Rysman 2009). Some consumers would not be drawn to certain music streaming services in the absence of advertisers if, for instance, there was no free subscription level. Conversely, advertisers would not be attracted to a certain streaming service if all the subscribers of the service paid for advertisement-free streaming.

Advertising represents a significant portion of revenue in the media industries, whose economic viability depends on low cost (Anderson and Gabszewicz, 2006). Even though low cost plays an important role in the music industry, boosting revenue through improving advertising ratings and generating new revenue from sources such as multi-platform distribution of content is even more important (Hendricks, 2011). Even though some users are paying subscribers to digital music streaming services, these subscription fees do not match the revenue generated from advertisement.

However, the scale on which streaming services can realistically broadcast advertisements is not infinite. In the case of media industries, indirect network externalities can be negative. The number of advertisers, when it surpasses a certain point, can be expected to have a negative impact on media consumers, while advertisers will tend to favor an audience that is as large as possible (Reisinger, 2004). This is one of the reasons that streaming services are in search of the optimal pricing structure. As Evans (2002) writes, a key aspect of the business model in media industries involves the optimal pricing structure, which is the division of revenues between the two sides of the market that attracts both sides to and keeps them involved in the market. The search for the optimal pricing structure was further complicated with the emergence of the active audience, which disrupted the two-sided market structure by adding yet another side to the market: the active,
content-producing audience, which is a heterogeneous audience that varies in the way it contributes to conversations (Hartley and Montgomery, 2002). However, the emergence of the active audience is not overwhelmingly negative for music streaming services and the different stakeholders who use them. The multiple stakeholder networks all have their unique characteristics and collectively contribute to the value and attractiveness of the media outlet in the same way as when there were only two networks in the market (Hartley and Montgomery, 2002).

While in search of the optimal pricing structure that maintains consistent involvement from both sides of the market, streaming services sometimes need to shift their focus away from profit maximization. It has been speculated that business models in multi-sided platform markets, rather than to focus on profit maximization in a single market, should primarily focus on getting the various stakeholder groups on board by balancing interests between these groups (Ballon, 2009).

There are several methods used when trying to retain customers, such as customer lock-in techniques. The optimal pricing structure is arguably one of the most important obstacles that music streaming services face. In two-sided (or multi-sided) markets, the product may not exist at all if the business does not get the pricing structure correct (Evans, 2002). This fact reinforces the idea that music streaming services should make profit maximization a lower priority. The need for pricing structure as well as pricing levels distinguish two- or multi-sided markets from the industries ordinarily studied by economists (Evans, 2002). The success of multi-sided markets is determined by different factors, as put forth by Ballon (2009, pg. 16):

> Whether a successful business model platform can be found is less a case of cost-oriented prices but rather of setting pricing policies that maximize the quantity (and quality) of both application and content providers and end users, e.g. through cross-subsidization.

The pressure felt from the necessity to find an optimal pricing structure is not the only pressure music streaming services face. As they struggle to balance the needs and demands of their stakeholders, they also need to take into consideration one of their main “competitors”: unlicensed, and therefore illegal, peer-to-peer filesharing networks. Because streaming services only offer, at most, a stream of music with the option to purchase individual songs or albums, they must find a way, or several ways, to add value to their product to entice customers into leaving peer-to-peer filesharing networks in favor of listening to legally licensed music. Levine (2011) states that, in order for music streaming services to compete with these illegal websites, legitimate services must aggressively cut prices or offer some media for free, which, unfortunately, can hamper the growth
of companies with the potential to generate more revenue. Levine (2011, pg. 78) calls this the “new-media catch-22”: a business must give away content for free to attract an audience that eventually turns out to be worth less than they previously conceived, simply because that audience is attracted to free content.

Kusek and Leonhard (2009) add that if record companies expect consumers to purchase music, they will have to make it much easier and infinitely more convenient and rewarding to buy music rather than to steal it, and they must also add other values to be competitive. The intention to encourage customers to pay is reflected in music streaming services’ business models, as they are increasingly including more tools that add value to their services, such as the inclusion of social networks. Kusek and Leonhard (2009, pg. 91) predict the rise of other direct revenue-generating methods, such as advertising, sponsorships, and merchandising, and indirect methods such as data-mining and other “Big Brother”-type reporting, since it is unlikely that music content in and of itself will generate sufficient and sustainable revenue streams.

A practical example of music streaming services that is gaining more momentum is the freemium business model. In the freemium model, “a basic version of an offering is given away for free, with the hope of eventually persuading sufficient numbers of customers to pay for a more advanced version” (McGrath, 2010, pg. 251). While this is a positive development in the industry, the perfect balance, if it truly exists, has not been achieved. Levine (2011, pg. 77) cites a major-label executive who deals with digital services, who states that streaming services must “restrict free, so that it is basically a customer acquisition vehicle and not a service alternative.” If the free service is of high quality, there is no incentive for a free subscriber to convert to a paying subscriber. On the other hand, if the quality of the service is too low, then the customer will leave the service in search of a better, higher quality alternative. This alternative could involve the use of illegal peer-to-peer filesharing networks.

3.3 Metcalf’s Law

With technology constantly moving forward, often at a faster and faster pace, Metcalf’s law of exponentiality of networks becomes more significant as a theoretical approach to analyzing digital music streaming services. This law pertains to the importance of network effects, which arise when the value that one user receives from a product increases with the number of other users of that product (Evans 2002). Not all network effects are positive, however. In relation to digital music streaming services, the network effects could be negative if, for example, the streaming service broadcast too many advertisements. Broadcasting too many advertisements would discourage new
users from joining the service and discourage current users from continuing their use, as they would not be able to fully enjoy the music played by the streaming service. Furthermore, the decrease in consumers who listen to digital content through the streaming service would also decrease the number of advertisers willing to pay for advertising space with the service. Maintaining positive networks effects should be a priority for streaming services as this will not only increase the number of consumers who use their product, but it will also increase their revenues gained from advertising.

Metcalf’s law was in line with “soon blossoming literature on network economics and network effects, and reinforced the general assumption that...once a critical mass of users was reached, these effects would ensure very rapid growth and high profits” (Ballon, 2009, pg. 5). Network effects do not take effect at the beginning stages of new networks. The network, in this case digital music streaming services, must find ways of enticing users to join their networks. Once enough users have joined a network, then positive network effects can start working in favor of the streaming services’ goals of generating profit and a growing database of users.

Shapiro and Varian use the term “demand-side economies of scale” to describe information companies’ network effects. Cited by Ballon (2009, pg. 5), their explanation of this phenomenon is that:

While traditional companies profited most from supply-side economies of scale - because of e.g. efficiencies in production created by massive size -, information companies instead profit most from demand-side economies of scale - i.e. the fact that people value a product because a lot of other people use it as well.

Extending upon this notion, Ballon (2009, pg. 5) continues that demand-side economies of scale create “a virtuous cycle for winners and creates ‘winner takes all’ markets.” This means that once a company has achieved a significant positive network effect, it will be hard for competitors to grow their own positive network effects to a similar scale, let alone match the original company and compete with it. In addition, Ballon (2009) states that lock-in effects and a lack of standardization across networks only further encourage the “winner takes all” market structure prevalent in demand-side economies.

However, the situation is not so clearly defined when these lock-in effects and standardization enter the market. The literature on network effects is more commonly being forced to “acknowledge that the existence of network externalities at the same time reduces the scope for
creating lock-in effects through closed and proprietary standards” (Ballon, 2009, pg. 5). To attract the highest amount of users, a system must be somewhat open, as it must be accessible. If the system were to have a high lock-in standard, gaining new users would be difficult as they would most likely defect and find another service to use.

Networks effects, and the associated approaches of lock-in effects and standardization, are an example of another balance that digital music streaming services must find. In order to be successful, they must utilize the perfect combination of the above elements in order to reach the highest user count possible. Reaching this high user count will not only have positive effects for gaining even more users, but it will also have a positive effect on the other side of the streaming services’ market, as it will allow them to generate more revenue through advertising.

3.4 Methods of Music Subsidization

As the music industry has evolved, there have been certain new approaches to subsidizing music. The reason for subsidization and the method for subsidization have changed, however. As mentioned in the section on two-sided markets, most audience makers earn a disproportionate share of their revenues from one side of the market and, like some market makers, may lose money on one side of the market (Evans, 2003). Although previous methods of subsidization may not have been a result of multi-sided markets, they are still important to discuss as a factor of the emergence of digital music streaming services.

Typical of media platforms, particularly the ones who do not charge a fee or have multi-tiered payment and subscription structures, is a varying amount of advertising. Advertisers pay to reach the audience of a particular media platform, but this revenue generated for media platforms from advertising is not pure profit. The fees that media platforms collect from advertisers “pay for the content that the [platform] presents to the audience” (Evans, 2003, pg. 5). On the other side of the market, audiences are expected to pay an implicit price of time. Because they may not explicitly pay financially to listen to the content streamed by the music service, they must pay with their time by listening to the advertisements, and possibly their data.

In this way, entertainment and content are the bait to lead prospective purchasers of consumer goods to be exposed to advertisements (Anderson and Gabszewicz, 2006). The advertiser will indirectly pay for the content as long as the consumer listens to the advertisements. Through this process, the music industry is generating revenue through the licensing fees charged to the streaming services, and the streaming services are creating a place for themselves in the music industry value chain.
This balancing of different parties’ interests yet again reinforces the necessity for digital music streaming services to obtain a significant audience in order to make themselves more desirable in the eyes of advertisers. Jullien (cited in Ballon, 2009, pg. 15) refers to this initial lack of sufficient participation as a special case called a “reputation effect,” in which one side of the platform gives the confidence that there will soon be a significant amount of participation on the other side. Ballon (2009, pg. 15) also adds that one way of overcoming this “chicken-and-egg” problem is a cross-subsidization of the initial participation of one side and then counting on the two-sided network effects to encourage the non-benefitted side (in this case, the audience) to participate.”

Another way in which the music industry has subsidized music in the past is the use of a “star model,” which has been in use since the inception of the music industry (Kusek and Leonhard, 2009). The star model describes the approach to commercial music invoked by record companies. They heavily promote a single group or artist in order to ensure a successful album, while other artists under the domain of the record label do not receive the same marketing budget. Therefore, after the release of the albums, the positive revenues generated from the heavily marketed artist will offset the losses incurred by the less successful artist.

There have been several types of subsidization used in the music industry since, as Kusek and Leonhard (2009) point out, its inception. Subsidization between markets has become a very important method of subsidization, and it shows a change in the value chain as this form of subsidizing is not controlled by the record companies themselves, but an outside actor. The two-sided model of these platforms attempts to give value to their product or service while still meeting the needs of advertisers and consumers alike, and also by generating revenues for the copyright owners within the music industry.

3.5 Overview of Policies Concerning the Music Industry

First and foremost, this thesis discusses the business and revenue models of digital music streaming services. Because this is not a discourse on media policies, only a short overview will be given about the policies that have had some effect on the music industry.

In regards to policy, the music industry has several uphill battles to overcome. A significant one of these obstacles is the issue of copyright. Copyright enforcement has become more difficult in the digital age, and the main issue with the current streaming situation is how copyright holders can protect their content and monetize it while their competitors offer it illegally in unlimited abundance and at no cost. As Dubosson-Torbay, Pigneur and Usunier (2012, pp. 2-3) write, “the
first reaction of recording companies and associations of artists was to sue the peer-to-peer actors, [and] try to make them disappear and go back to a ‘normal life.’”

Doing this is much easier said than done, however. In general, companies are struggling to monetize content online, and “copyright law has provided most owners of media content with no clearly scalable and sustainable mechanism for commercializing their works in an age increasingly dominated by digital distribution over the internet” (Priest, 2008, pg. 3). This led record companies and other content owners to pursue other methods of controlling the distribution of their content. According to Dubosson-Torbay, Pigneur and Usunier (2012), in order to prevent peer-to-peer piracy, record companies tried various approaches to prevent consumers from illegally downloading files. These approaches included harassing users with technology tools such as “interdiction,” swamping a peer-to-peer file server with false requests in order to slow down or stop downloads, uploading decoy files that empty or do not work in order to frustrate users, “redirection” (guiding users towards servers that do not contain the file they are looking for), and file-blocking. The irony in the use of these methods is that some of them may be illegal.

According to the Copyright Act of 1976 in the United States, copyright holders “have the exclusive right to control the reproduction, modification, distribution, public performance and public display of their copyright works (Copyright Law of 1976, 1976). The control provided by this act allowed content owners to create a monopoly over their own content. In the eyes of the record companies, this was not a negative outcome, as there was only an insignificant amount of quantifiable customer upset. During the last quarter of 2001, Universal Music International (UMI) sold two million protected CDs and received only two hundred complaints from consumers (Dubosson-Torbay, Pigneur and Usunier, 2012). However, Dubosson-Torbay, Pigneur and Usunier (2012, pg. 2) further elaborate on this figure by stating that “only a minority of dissatisfied customers complain.” This statement can be confirmed by the decrease in physical sales that significantly impacted the music industry shortly after 2001. Consumers, with the ability to download unprotected music at no cost, abandoned the record companies’ protected products. As Priest (2008, pg. 3) writes, “copyright law has, by and large, failed to protect the rights of content owners and prevent unauthorized sharing and consumption of their works online.”

The loss of some control over the distribution of their content caused record companies and the organizations who represent them, such as the Recording Industry Association of America (RIAA) in the United States, to pursue other means of gaining back control. In 2003, RIAA started suing 261 John Does indentified by their IP address, and in January 2004 it pursued its massive action against 523 individuals (Dubosson-Torbay, 2012). Following this, the industry started to sue
individuals in Europe in 2004 (Zentner, 2006). The outcome of these lawsuits varied, but there was one definite consequence. The industry damaged itself on the consumer level, and the attempts at lawsuits, regardless of how successful or unsuccessful they were, achieved little in terms of actual industry reconstruction (Morris, 2004).

Perhaps there existed an underlying problem within the relationship between the music industry, its customers, and the intervention of policies: misunderstanding. According to Hering (2003), new policies regarding intellectual property rights protection, such as the Digital Millenium Copyright Act in the United States and the European Directive on Electronic Commerce (EDEC) in the European Union, make a variety of distinctions that “do not make sense to people. It is difficult to understand why you can make copies under certain circumstances and not in others.” The music industry wants to be compensated for its wide array of intellectual property and the music industry’s customers wish to acquire products of value at a competitive price. Policy tries to mediate these two sides, but the detail and wording is not accessible to the common customer. Instead of balancing these interests, the relationships between these three actors usually result in increased tension. Still today, “the lawsuit path and the digital rights management path both offer the entertainment industries in the West little hope of resurrecting traditional entertainment business models and revenues” (Priest, 2003).

In addition to the tensions that developed between the music industry and its customers, an uncertainty developed within music industry representatives in Europe. In a survey conducted by Krueger, Swatman and Van Der Beek (2012, pg. 8), “35.2% of [music industry representatives] agreed that file sharing should be prosecuted, but the same number disagreed and 29.6% neither agreed nor disagreed.”

It is unlikely that a clear decision will soon be reached in the business, policy, and consumer arenas, but the music industries in both Europe and the United States will need to develop new, sustainable methods of revenue generation regardless of this. There once was a time when copyright protection directly resulted in the monetization of content, but that is no longer the case. Internet users now control how music is acquired, shared, and consumed on the web, not the music industry (Priest, 2003). As seen with the early successes on some digital music streaming services, embracing and incorporating this power into business and revenue models can quite possibly spark more growth in the digital music industry.
3.6 Licensing of Digital Content

With the decrease in physical music format sales, record companies are increasingly licensing their content to other actors in the music industry value chain (Zhu and MacQuarrie, 2003). There are two major approaches to licensing content invoked by record companies: Voluntary Collective Licensing and Compulsory Licensing (Kusek and Leonhard, 2009). Voluntary Collective Licensing involves groups of copyright holders joining together to voluntarily offer blanket licenses, which is beneficial to copyright holders in that it continues to allow them to set prices for their content and it does not require any changes to the current copyright law (von Lohmann, 2004). Compulsory licenses, on the other hand, are used to legally allow music to be played on the radio. This is viewed more as a content “tax” that encourages internet service providers (ISPs) to add a small monthly fee to their current charges in order to include digital music services (Kusek and Leonhard, 2009, pg. 133). Outside of these two popular approaches to licensing, there are a variety of other options, including the, as Kusek and Leonhard (2009, pg. 133) call it, “ridiculous” environment in which each piece of music can be individually licensed from each rights owner on a track-by-track basis. As blanket licensing pertains more to digital music streaming and subscription services, it will be discussed more in detail.

A blanket license, which is also called a collective license, is a license in which music subscription and streaming services would be granted rights to distribute recordings by an organization designated by labels to collect money from them and distribute the funds to copyright holders (Levine, 2011). This allows the streaming or subscription service to distribute partial or whole sections of a copyright holder’s repertoire without paying for a license for each individual track. Because the internet makes it more difficult to control the distribution of media content, this idea, deemed “compensation without control,” is being pushed by some entertainment and technology executives, as well as some European politicians (Levine, 2011, pg. 214). Record companies and other copyright holders of creative content wish to be compensated for their works, and since the blanket license ensures compensation and presumably less hassle than other approaches to licensing, it only makes sense that the blanket approach would be favored. Levine (2011, pg. 216) deduces that, implemented correctly, “a blanket license system could preserve the best aspects of both the record music business and the internet as it exists now; labels would have an incentive to invest in and market artists while technology companies would not have to worry about barriers to the use of online music.”

The implications of blanket licensing also imply a shift in attitude between record companies and technology companies. While at first record companies were reluctant to license
music to online distribution platforms, such as iTunes, and technology companies, they seem more likely to license content now that there is a seemingly reasonable form of license that ensures compensation (Graham and Burnes, Lewis and Langer, 2004). However, blanket licensing does have its downside.

Levine (2011) suggests that the most significant problem with blanket licensing is that it would be difficult to implement without help from governments. As the digital music market evolves, the policies surrounding it also need to evolve. Currently, U.S. law provides little, if any, incentive for internet service providers to negotiate deals with content owners (Levine, 2011). Internet service providers’ subscribers already download content for free, so internet service providers have very little to gain, if anything, from obtaining blanket licenses in order to allow themselves to offer legal content for their users. This, of course, is not the case with music streaming services and platforms.

Currently, several third-party companies license, from record labels, the right to encode commercial product in the MP3 format and sell it to downloading customers, with pricing set on a per-download and/or flat-fee basis (Hill, 2003). The most significant example of this is the Apple iTunes Store.

From the perspective of the industry, being forced to license content is already a concession, as record companies would presumably like to return to the days when physical formats dominated and controlling distribution guaranteed significant revenues. However, the age of manufacture is now over in the music industry (Vaccaro and Cohn, 2004). Longhurst (2007, pg. 39) contends that, in the music industry’s own jargon, “each piece of music represents a ‘basket of rights’” and that “the company task is to exploit as many of these rights as possible.” This reinforces the statement that music is created in an industry that seeks profits.

While record companies may be reluctant to admit their loss of control and adapt their business models to the digital environment, other actors in the music industry value chain see the rise of digital content as a positive change. Through licensing, creators of intellectual property “will regain control over copyright while liberating themselves from barriers to entry and the interference of distributors” (Burkhart and McCourt, 2006, pg. 1). Continuing along these lines, Burkhart and McCourt (2006) continue that distributors will not be negatively affected either, as they will gain huge new revenue streams while eliminating material costs, overhead, and geographic boundaries.

It seems that with the shift to digital music formats and the need for record companies to license their content, there have been several changes to the music industry value chain. Individual artists and other copyright holders have fewer barriers to entry with the decline of physical
distribution, and new digital distributors, having created a solid position for themselves in the value chain, are able to distribute content to wider audiences while the cost of this distribution continues to decline. The once dominant record companies appear to be the main players in the industry who felt the negative effects of the shift to digital, with licensing being a significant example.

3.7 Access versus Ownership

With the evolution of music into the digital era, there is an ongoing discussion about how to approach the exchange of music content between different actors of the value chain, mainly record companies and consumers. One position in this conversation is that if a consumer pays for music, that consumer should then own a license to play that content whenever and wherever he wants. On the other side of the spectrum, proponents of the access position believe that a consumer should not own actual licenses to content, but instead have the ability to pay for ongoing access to a method of playing music whenever he wants. As Burkhart and McCourt (2006, pg. 129) state, “in the network-based economy..., value is not an inherent character of the product; it is the manner in which it reaches the consumer, and that, unlike a tangible product, can be easily sold to the same consumer” repeatedly.

The influence of the network-based economy on the evolution of the music industry helped bring about the transition from a product-based to a service-based industry. Therefore, “the commodification of the popular music product depends in large part on building...relationships between the music fan and the music service” (Burkhart and McCourt, 2006, pg. 129). As a product, music is simply exchanged through the value chain, beginning with record companies and finally reaching the consumers at the other end. As a service, however, music becomes much more than a product that switches hands. It becomes an experience, in which a strong one-to-one relationship is important because of the value it adds to the music.

The will to completely control the system in which music is exchanged was in no way abandoned by the record companies during the transition from a product-based to a service-based industry. In seeking complete control of this exchange, record companies “sought not to protect [their] properties from theft but to convert them from sales to rental and thereby transform [the consumers] from owners to tenants” (Burkhart and McCourt, 2006, pg. 129).

The notion of music rental is somewhat of a novel concept. The word “rental” obviously implies that the “renter” does not own the product, but also implies that there are conditions to the rental agreement. In the case of music streaming services, these conditions might include the necessity of the user’s computer being logged into the internet, which would enable the service to...
ensure that the user’s subscription is in good standing, or that the songs can only be played during a
certain time period, only to be taken away at the end of the period (Hill, 2003).

In describing the music industry’s reaction to the widespread diffusion of downloading and
the music industry’s push towards a “rental” model, Hendricks (2011, pp. 120-121) describes some
of the reasons that a new innovation becomes popular in the marketplace:

Cost and accessibility are important components of diffusion. Another key is relative
advantage. This is where the consumer accepts a new technology as a replacement for an
existing one because it is seen as better than the previous technology. Relative advantage
leads to a substitution effect, which, not surprisingly, is much greater if there is a cost
advantage with the new innovation. In the case of recorded music, the innovation of
downloading already had a distinct cost advantage over the traditional way of acquiring
music. In addition, the main audience for record music had minimal difficulty in using the
new technology/distribution mechanism of digital downloading. These advantages were so
pronounced that the record music industry was unprepared to do anything but lash out at its
best customers.

Because of the music industry’s rash response to the diffusion of downloading into the
marketplace, tension started to arise between the record companies and consumers. These tensions
were only heightened when the industry started to shift to a rental-based model of business.
Because of this, many music consumers felt “their rights [being] impinged by limitations to
burning” (Hill, 2003, pg. 55). Hill continues that “making copies of music for personal use, after all,
is a protected right under current United States copyright law. However, personal-use copying is not
mandated by law.”

The tensions that arose between consumers and record companies during the period of these
transitions are difficult to overcome. However, these were not the only obstacles that consumers
faced. Necessary for the use of digital music streaming services is an internet connection with high
degrees of bandwidth. Bandwidth serves as a bottleneck to the use of streaming services, and “some
subscription plans plainly recommend that people with low-speed internet connections stay away;
others offer a choice of speed options; and others leave [the consumer] to discover on [his] own that
the service does not stream smoothly through [his] connection” (Hill, 2003, pg. 57).

If a consumer does not have enough bandwidth to effectively stream music from a digital
music streaming service, this consumer will most likely find other ways of acquiring music. Even if
his intentions are to acquire music legally through a streaming service, having this bottleneck could encourage him to use other, less preferable, approaches.

### 3.8 Digital Rights Management

An industry reaction to the rise of digital piracy of music resulted in the widespread attempt of digital rights management. The major record companies, along with other actors in the value chain, such as artists and producers, wanted to maintain some control over how purchased copies of digital music tracks were diffused among users. Digital Rights Management was designed to regulate the audiences’ online activities (Burkhart and McCourt, 2006). A general example of digital rights management would be a record label or digital distributor of music restricting the number of devices onto which a user could put their legally purchased song.

Digital rights management covers three different aspects of rights management: description, identification, and protection (Burkhart and McCourt, 2006). During the formulation of the description, rights holders and distributors define the actual content and the possible ways in which it can be used. Identification defines the user who will be utilizing the content. Protection of the content ensures legal, legitimate use by identified, legitimate users. The provider of the content is the actor who determines what and who are legitimate.

The development of digital rights management softwares was an attempt to limit the user, to take back some of their newly gained control. Now, consumers only have the option to access their purchased content exclusively on the provider’s terms, which are stipulated in user licensing agreements, terms of service, and Federal (US) law (Burkhart and McCourt, 2006).

While digital rights management software allowed intellectual property rights holders and content providers more control over the use of legally purchased content, digital rights management had no effect on pirated content.

However, digital rights management “underlies the entire value chain for the Celestial Jukebox. If media industries are to sell products on the internet, they must be able to restrict access to those products” (Burkhart and McCourt, 2006, pg. 117). Seen as a necessary development in the process of selling content over the internet, digital rights management is still debated today, as it can negatively impact consumers’ enjoyment of their legally purchased content. As Priest (2008, pg. 3) writes:

Digital rights management technologies have proven largely incapable of preventing widespread copying and sharing of copyrighted works online. Restrictive digital rights
management schemes have, however, proven rather effective at alienating paying customers and driving them to seek unrestricted files through alternative sources online, primarily though peer-to-peer file sharing networks.

Furthermore, digital rights management, with its restrictive intentions, possibly causes consumers to value music less. Digital rights management technologies have not, however, been the only attempt at controlling digital copies of content. Another method is called watermarking.

Unlike digital rights management technologies, which are based on the premise that only explicitly licensed uses of content are allowed, watermarking does not necessarily impose a priori restrictions on the use or interoperability of content (Samtani, 2009). This in itself is a significant business advantage because it does not negatively impact consumer enjoyment of digital content. Digital watermarking is the process by which digital information is embedded into digital media in a way that is imperceptible to humans, yet persists with the file through format changes and nonlinear distribution paths. This digital information, while it never leaves, has little or no impact on the file’s integrity of fidelity (Samtani, 2009).

While there are several methods being tested to find a solution which allows controlling digital rights and/or restricting use, consumers are still looking for value in the content they purchase. While the use of digital rights management technologies is logical and well-intentioned, alienating consumers will in no way cause them to raise their valuation of digital music.

### 3.9 Customer Relationship Management

An aspect of digital music streaming services that companies are trying to refine is how to build and maintain a positive relationship with customers. As consumers are generally not able to interact with companies directly in person or with other consumers, interactions personalized through technology are becoming a necessity in order for companies to become more competitive in the digital market. While all customer relationship management technologies are not equal, they do share some common characteristics, which will be the main discussion point of this section.

As defined by Burkhart and McCourt (2006), customer relationship management (CRM) technologies send personalized content to consumers based on profiles of user attributes and behavior, while assembling merchandising dossiers that can be used in-house to automate marketing campaigns or can be sold to outside interests. Already with this definition, it becomes clear that CRM technologies serve multiple purposes and are not solely used to build relationships with customers. By compiling databases of information about consumers attributes and behaviors,
companies using these CRM technologies can build another revenue stream for themselves by selling this data to outside interests.

Managing customer relationships, as previously stated, became a necessity as the internet became increasingly commercialized in the late 1990s, and to meet these business needs, technology companies began developing a wide range of autorecommendation, personalization, and rights-management platforms for online marketing and e-commerce (Burkhart and McCourt, 2006). Personalization is a foundational characteristic of CRM technologies, and companies seek to build brand loyalty through personalization. According to Stefanou, Sarmaniotis, and Stafyla (2003, pg. 619), “the best means to accomplish customer retention is to keep customers satisfied. In fact, a number of studies have shown that customer satisfaction can lead to brand loyalty, repurchase intention and repeat sales.” Further extending upon this, Oliver (1999) writes that customer retention seems to be related to profitability.

While these software firms were developing technologies capable of compiling user data, companies that wanted to use the technologies to form relationships with their customers started developing methods of acquiring data about consumers. This eventually turned into the widespread use of registration policies that collected transactional data (Burkhart and McCourt, 2006). Transactional data refers to “data obtained when a transaction takes place, such as product name, quantity, location and time of purchase. These data are collected from registration forms, order forms, computer cookies, log files, surveys, and contests” (Rygielski, Wang and Yen, 2002, pg. 495).

As Burkhart and McCourt (2006, pg. 95) write:

In the recording industry, the personalization systems responsible for engendering “community” fall into three categories: collaborative filtering, which suggests content based on the user’s purchasing history and volunteered comments from the user and others; human-based genre/mood matching, in which experts classify and categorize individual music tracks into logical groupings; and “listening machines,” which analyze the actual wave forms of recordings so as to compare their melody, tempo, harmony, timbre, and density.

As human-based genre/mood matching and “listening machines” seem to be self-explanatory, collaborative filtering will be discussed more in depth. Im and Hars (2007) define collaborative filtering as a personalization technology that generates recommendations for users based on other’s
evaluations. Burkhart and McCourt (2006, pg. 95) provide more insight by noting that collaborative filtering is similar to “an automated equivalent to word of mouth,” in which a user’s site-navigation patterns, purchasing history, and volunteered feedback are compared to those of other users, resulting in recommendation based on the matches.

Collaborative filtering seems to be effective, but only to a certain extent. Consumer tastes are not fixed, and Brynjolfsson, Hu and Smith (2006) write about their findings which show that consumer tastes are far more varied than one would expect. Collaborative filtering systems also share some of the same weaknesses as contemporary radio market research practices such as call outs, “wherein listeners evaluate five-second segments [of new songs],” which inevitably lead listeners to respond “to familiar music and unfavorably to unfamiliar or stylistically innovative music” (Burkhart and McCourt, 2006, pg. 98). Because digital streaming services allow consumers wide access to a expanding library of music, collaborative filtering softwares can help by guiding consumers towards music they may like, but may also impede discovery of new artists by steering consumers away from them. This is especially true with collaborative filtering, as opposed to the other methods of music recommendation, because collaborative filtering also involves ratings given by peers of the user. Peers’ opinions, as documented by the CRM technology, could guide a consumer in the direction of a new artist or away from a new artist without the input of the actual user (Adomavicius, 2005). Burkhart and McCourt (2006) further detail the downfalls of collaborative filtering technologies by saying that such systems make it unlikely that listeners will be exposed to unfamiliar genres and develop new tastes and interests. Filtering systems, similarly, can know only what the user already likes, and they are further restricted by the arbitrary parameters imposed by coders. Quoted by Burkhart and McCourt (2006, pg. 98), a music industry executive says:

The holy grail [of CRM] is to be able to capture all the customer’s interaction[s] in detail and get smarter about what not to recommend. We can recommend very well. Knowing when not to bother someone is much harder. Thus, systems err on the side of false negatives (not offering music a consumer might like) rather than false positives (offering music a consumer might not like). This inherent conservatism results in predictable choices.

It seems as though there is a fine line on which CRM technologies must walk. However, despite its drawbacks, CRM is seen as a positive tool that, at the very least, allows firms to leverage “the interactivity characteristic of the internet” and “enhance marketing operations efficiency in areas
such as post-sales customer relationship management, market research, and knowledge sharing” (Kalaignanam, Kushwaha and Varadarajan, 2008, pg. 302).

Organizations today must focus on delivering the highest value to customers through better communication, faster delivery, and personalized products and services (Chen 2003). The use of collaborative filtering technologies and other methods of customer relationship management are one of the efforts from the music industry and digital music streaming services to deliver value to consumers. In addition, the data collected by these technologies helps companies increase their profits because they are able to sell consumers’ data to third parties. While these technologies continue to be refined in order to accommodate consumer interests, the sale of data will still be able to generate some revenue.

3.10 A Brief History of the Music Industry

Instead of giving a general overview of the history of the music industry and its major developments, I will discuss the evolution of the industry in regards to four main topics: the transition from a service to a product (and the arguable transition back to a service); the evolution of the business of music; the impact of the internet and new technologies on the music industry; and the rising empowerment of music consumers.

3.10.1 From a Product Industry to a Service Industry

The grammophone, invented by Emil Berliner in 1887, “forever changed the concept of music from a dynamic and interactive entertainment experience to a fixed product” (Kusek and Leonhard, 2009, pg. 12). Kusek and Leonhard (2009, pg. 12) continue that music became “nearly synonymous with the medium that delivered it, beginning with the wax cylinder, then the vinyl disk, followed by cassette tape, and eventually compact disc.” In essence, the grammophone marked the change of music from being a service and performance to a manufactured product.

This is due to the emergence of new technologies that allowed businesses to sell music in different ways. Before technology existed to record music and sell it as a physical product, the music industry was necessarily a service industry; those in the music profession made their living performing, teaching, or writing commissioned compositions (Priest, 2008). New technologies changed this as physical, manufactured products became the main source of revenue for the industry. According to Longhurst (2007), the value of sales is significantly affected by technological change and innovation in the ways in which music is carried.
These technological changes are sometimes a result of increasing competition or consumer demands. Factors such as these expressed a need to make music more mobile in order for consumers to listen to their purchased music wherever they went. The gramophone was not very conducive to mobility, but the Walkman was a huge success because it was objectified by its mobility, and the CDs success was also due to mobility. The introduction of digital music impacted the industry significantly, as it is “the very pinnacle of the mobility paradigm” (Kusek and Leonhard, 2009, pg. 33).

This extremely mobile format of music, while it significantly increased convenience for consumers, also allowed the widespread and often illegal sharing of music. However, as Hill (2003, pg. 65) argues, “digital music is not about free music, it is about available music.” Consumers demanded the ability to take music with them wherever they went, and the business community devised a way in which consumers could do this. However, it is impossible to predict how consumers will use a new product (Tuomi, 2006), and the rapid diffusion of illegal file-sharing and the emergence of peer-to-peer file-sharing networks was one of the unintended consequences of this innovation.

The industry response to illegal file-sharing is discussed in the policy section of this thesis, but the overall implications for the music industry will be discussed in this section. With the advent of digital music formats, the age of manufacture in the music industry was brought to an abrupt end (Frith, 2008). This forced music industry actors to begin developing new methods of protecting their products and generating revenue. The historical strategy of vertical integration, where oligopolistic concentration of the record industry was maintained by control of the total production flow from raw materials to wholesale sales (Peterson and Berger, 1996), was no longer an option. The music industry faced a choice: it must either change and adapt to the new competitive digital climate or perish. Burkhart and McCourt (2006, pg. 18) support this when they state that because the music industry’s “infrastructure and practices [were] based on the production, distribution, and promotion of ‘hard goods’ like CDs, the popularity of music on digital downloads is forcing it to change.”

One could argue that the music industry is transitioning from its era of manufacturing to the current digital era. According to Priest (2008, pg. 12), because “digital technologies have allowed freely available recorded music to become ubiquitous, thereby gutting the value of recorded music to a growing number of consumers, some ponder whether the industry will be forced to return to a model in which services comprise its primary revenue stream.” Digital music streaming services...
appear to be a step towards this renewed model, although assessing the sustainability of their revenue models is not yet possible due to their relatively recent emergence.

The nature of the whole music market has changed with the shift to digital. Burkhart and McCourt (2006, pg. 88) write that in the future, “many observers envision the market-based economy of buyers and sellers of hard goods replaced by a network-based economy of servers and clients and flows of assets.” In this situation, the servers could be the digital music streaming services, and their clients would include record companies, advertisers, and consumers. The assets could include copyrighted content from the record companies, advertisements from the advertisers, and playlists or social interactions between consumers.

All of these assets that exist in the network-based economy of the music industry are vital. The streaming service needs copyrighted content from the record companies in order to attract an audience. This audience needs to be large enough to attract advertisers, who will indirectly pay for the content license fees that will go to the record companies. An added value to consumers is the inclusion of the Web 2.0 aspect, the social interactions allowed by the streaming services. In addition to becoming a service once again, music has increasingly become more about the experience (Kusek and Leonhard, 2009).

Audio recordings are part of nearly all audiovisual products, and because of this, the recording industry is among the most pervasive and fundamental of the entertainment industries (Burkhart and McCourt, 2006). The music industry has an impact on most other forms of entertainment: television, film, theatre, etc. Therefore, it must find sustainable ways of generating revenue because the possible obsolescence would have a significant impact on the wider entertainment industries and also on society.

The solution to the conflict between products and services is not to be found by solely record companies, however. Some artists, such as Radiohead, are taking the initiative to solve problems directly related to artists. In 2007, Radiohead released their album *In Rainbows* via their website, www.radiohead.com. They allowed consumers to pay as much as they wanted for the album, and this included the option of paying nothing (Brandle, 2007). The album ended up averaging USD $2.60 per download, which exposed the high industry prices of music. Customers decided on how much they valued the music, and reflected that value in their contributions. The physical market of music, where prices are controlled by record companies and retailers, seeks to maintain its monopoly over the products. With the tendency towards services now, record companies and other rights holders must develop new methods of injecting value into their products to entice consumers to pay for them. Online distribution of content is crucially different from the
physical distribution of hard goods that has long shaped recording industry practices (Burkhart and McCourt, 2006). The actual product of the music industry, recorded music files, contains little or no economic value for many customers, who tend to obtain these products from peer-to-peer filesharing websites. A service that distributes these otherwise low-value products has an opportunity to deliver these products in a valuable manner that encourages consumers to pay, or reversely, allows the consumer to listen for free with some supposed inconveniences such as advertisements. However, the basis of all these possibilities is the intention of giving music value. A sustained value proposition is essential for survival in the more competitive economic environment that characterizes today’s private sector (Kusek and Leonhard, 2009).

In the 1980s, the profit margins of the music industry was between 15-20%. In the 2000s, that profit margin dropped to 5-10% (Plunkett, 2009). If streaming services give music value, the music industry must accept them as a possible sustainable source of revenue generation.

3.10.2 The Evolution of Consumer Empowerment

Consumer empowerment has arisen with the digital and mobile ages as consumers now have more opportunities to create, comment, and connect around content at the very moment of inspiration (Manafy and Gautschi, 2011). The impact of Web 2.0 has played a significant role in this as it ushered in social networks, which play a vital role in some digital music streaming services. However, “empowerment of the consumer is not what most record labels want” according to Kusek and Leonhard (2009, pg. 13). The opportunities afforded to consumers by this wave of empowerment consequently took some powers away from the major record labels. Ubiquitous music became a demand of consumers, and this demand was not immediately met by record companies and other actors in the music industry.

In response to this newly-gained consumer power and the associated demands, an abundance of applications designed to facilitate these demands have transformed publishing, marketing, advertising, and communications (Manafy and Gautschi, 2011). These applications and the technologies that were developed beforehand, such as the MP3 format, gave consumers so much control that the record companies saw no other option than to fight back through lawsuits or begin licensing their content to service providers such as iTunes. From the perspective of the record companies, if music were to not remain a product, they would not be able to control access or pricing, among other aspects such as dictating when and how music is released or influencing the availability of music (Kusek and Leonhard, 2009).
The record industry, blinded by its loss in profits that influenced its attempt to punish illegal file-sharers, was not privy to the various studies that proved the fact that users regarded unpriced music as a third priority, behind great selection and easy downloading access. The users in these studies would also have been willing to pay a monthly subscription price to use an authorized service built on the same foundations (Hill, 2003). Each stakeholder in the music industry will obviously promote its own interests. Record companies are in search of profits. Technology companies and service providers are also in search of profits. Consumers, as described by the aforementioned studies, are in search of a wide selection of music and easily downloadable music.

The emergence of mobile technologies and services only further enhanced these consumers’ wishes as they were now able to take music with them, whether in a static format or through a streaming service, everywhere. Mobile developments took the interaction between record companies and other property rights holders, technology companies and streaming services, and consumers to a new level, particularly for the generation that has grown up with the internet (Manafy and Gautschi, 2011). While the industry attempts to construct new methods of monetizing content in these new technologies, the industry attempts to avoid methods that will give away content for “free.” “Free,” from the industry’s perspective, seems only to have one meaning: without charge. From the consumer’s perspective, however, “free” takes on an ironic triple meaning, as put forth by Hill (2003, pg. 239): liberated from the vaults of unavailable music; emancipated from the disc and CD player; and free of charge.

Taking these alternative approaches to “free” into account is a necessity as the music industry and the new actors in the music industry value chain move forward in their attempts to monetize digital music.

3.10.3 The Evolution of the Music Business

The emergence of digital music services was not immediately a welcomed addition to the music industry value chain. The music industry had been holding prices steady and decreasing the breadth of their retail channels, while refusing to license music to the emerging digital music players that were pushing the new technologies and business models (Kusek and Leonhard, 2009). This, however, was not a surprise. In fact, it could have been expected in some ways because “when the companies that dominate an industry find their status challenged by new technologies, their enduring response is to incorporate, contain, or destroy these technologies through forces of the market and the state” (Burkhart and McCourt, 2006, pg. 43). This also becomes apparent when examining other initial responses from the music industry such as the lawsuits against individual
users and websites. Burkhart and McCourt (2006) continue that the creation of alternative models of distribution and promotion, which are fostered by new technologies, have been opposed by the major record companies because the very possibility of these models threatens their primary strengths.

These new technology companies and the models they were encouraging needed to be developed themselves initially. This could also be another reason for the major record labels’ hesitation. During the first decade of online music, “the incumbent music companies were not sure how to handle the many issues associated with selling music online, and most major players simply held out, and stayed put, in order to eke out the best possible deal” (Kusek and Leonhard, 2009, pg. 109). An unintended consequence of this, unfortunately for the record companies and other rights holders, was that music consumers quickly turned to unlicensed services (Kusek and Leonhard, 2009). This sentiment relates back to the different definitions of free. While the record companies restricted access to their entire libraries, making legal access more difficult for consumers, the consumer, seeking music that was “liberated from the vaults of unavailable music” (Hill, 2003, pg. 239), preferred to use illegal services that offered music in abundance. This change in consumer behavior was significant economically, but also socially. As Manafy and Gautschi (2011, pg. 99) confirm that “most, if not all, of the social technologies that are changing business today grew out of consumer-level applications that were not built for business.” Therefore, social influences and the technologies developed around them had and still have a significant impact on the evolution of business models in the music industry.

In addition to the social changes that shape the music industry, there have been three phases of companies which have dominated the industry and have all had different methods of generating revenue. These three phases, as described by Garofalo (1999), are as follows:

- Music publishing houses, which occupied the power center of the industry when sheet music was the primary vehicle for disseminating popular music (from approximately 1886 to 1910)
- Record companies, which ascended to power as record music achieved dominance (from approximately 1910-1980)
- Transnational entertainment corporations, which promote music as an ever-expanding series of “revenue streams” - record sales, advertising revenue, movie tie-ins, streaming audio on the internet - no longer tied to a particular sound carrier (from approximately 1980 to present)
While the revenue streams changed during these three phases, the prevailing business model of publishing, in which royalties are collected, still have a firm place in the future (Kusek and Leonhard, 2009). The digital network itself will benefit from this because sales and uses of published digital content will be much easier to accurately track and report (Kusek and Leonhard, 2009).

Another aspect of note is the transition around 1980 from record companies to transnational entertainment corporations. The mergers and acquisitions that have taken place across the entertainment industries, with music being no exception, have led to increased concentration. This process of consolidation is called tight diversification, a process in which companies spread their risks across various sources of income and focus on portfolio management, which is a method of managing a company’s diverse range of interests (Negus, 1998). Burkhart and McCourt (2006, pg. 29) further define this concept by comparing it to horizontal and vertical integration:

Unlike horizontal integration, in which a company buys its competitors, or vertical integration, in which a company buys its suppliers and distributors, tight diversification involves mergers with companies that can extend brands across different media and exhibition windows, that can secure distribution outlets, or that can provide access to new content and technologies. In tight diversification, the interlocking structures and activities of companies radiate through multiple media, changing constantly.

Tight diversification seems to be a process that seeks to expand the reach of products and brands, not necessarily increase profits. This, of course, can be a consequence of tight diversification, but it does not appear to be the main focus.

In the process of tight diversification, record companies not only diversify their products, but they also diversify their markets (Chan-Olmstead and Chang, 2003). Burkhart and McCourt (2006) state that diversification of markets is more important than that of products because of that fact that spreading a smaller selection of products across a greater number of international markets can substantially improve profits.

Technologies developed because of social pressure have had a profound impact on the way businesses operate in the music industry. Consumers continue to demand more access, more content, and more opportunities to participate in the media in which they involve themselves, and companies are trying to adapt to these demands. Companies are also seeking to promote their products and brands in new ways, which has led to the increase in tight diversification within and
across markets. Because of these changes in the characteristics of business practices in the music industry, the evolution of the music business is important to the emergence of streaming services.

3.10.4 The Internet’s Effect on the Music Industry

Already briefly described in the section about evolution of business practices in the music industry, this section will focus on the changes brought about in the music industry by the internet and the new technologies associated with it.

The internet, after its inception, proved an upsetting force in the music industry because it weakened “the once supreme synergy of broadcast radio and per-unit sales of record music” (Hill, 2003, pg. 238). Both parties in this synergistic situation, broadcast radio and physical music products, were affected by the internet. With the advent of the internet, consumers were able to listen to music online and, doing this, they would have more control over which songs they listened to. In regards to physical products, the internet brought about the MP3 format and a multitude of technologies that enabled the downloading, ripping, and sharing of these music files. In more direct terms, the internet was a disruptive technology in this case, which is a technology that “upsets a long-standing business model in an existing market, alters established relationships between industry and stakeholders, and threatens to superannuate or supplant markets under their control” (Burkhart and McCourt, 2006, pg. 43).

In fact, the internet was such a disruptive technology to multiple markets, that it eventually became an economically significant application. This posed the challenge to those multiple markets, which include the music industry, to create and develop new ways to generate revenue on the internet. With the development of other technologies as well as the internet, there was:

> a strong decline in the costs of electronic hardware, of transmission, and of storage and processing of data, [which] contributed to the notion that in the ‘internet economy,’ the largest economic gains would arise from the production and distribution of digital ‘content’ instead of from the commoditized hardware and transmission networks carrying this content. (Ballon, 2009, pg. 3)

The music industry began pursuing options that focused on monetizing their digital content, such as lawsuits and licensing deals. However, the internet caused tension between the music industry and its consumers in two major ways, according to Hill (2003, pg. 238):
• Webcasted music (internet radio) gives listeners one-click access to thousands of alternative programmers around the world, rendering the geographic limitation of “terrestrial” broadcasting, and its corporate-controlled playlists, dated anachronisms.
• Effortless global distribution of recorded material at the grassroots level (file-sharing) peels the music away from the disc and generally reduces the value of per-unit sales.

These two developments brought about what Burkhart and McCourt (2006, pg. 44) call the “internet nirvana theory,” which is a belief that technology alone would “usher in an era of post-scarcity’ and provide an unlimited array of goods and services.” While the internet arguably brought about the era of post-scarcity in the music industry, there are other developments within and outside of the internet that posed challenges to the current business models in overcoming the loss of control over the scarcity of music products. Papathanassopoulos (2011, pg. 149) writes that the “multimedia, e-commerce and interactive characteristics of the internet and the mobile commercial (or ‘m-commerce’) possibilities or smart phones...are just a few of the media developments that radically changed the way that brands are bought, sold, marketed, and understood.” This new paradigm of understanding between the media companies and their consumers posed a significant challenge to the media companies. It influenced and changed many factors with the music industry such as the “diversity and vibrancy of media systems, the relationship of consumption to definitions of prosperity and happiness in our lives, the role of surveillance and privacy, environmental impact and issues of personal agency” (Papathanassopoulos, 2011, pg. 149).

With the power afforded to them by the internet, users began to network together and devise ways of sharing content with each other. This obviously impacted copyright policies because record companies did not want their consumers sharing purchased content with others instead of having all users purchase the same content. Priest (2008, pg. 3) writes that three technologies emerged to forever change the copyright ecosystem: Optical disc media such as CDs and DVDs, the personal computer, and the internet. He continues:

Optical disc media provide perfect digital source files to be read and cloned by personal computers, and the internet provides a means of accessing and distributing unlimited perfect copies of those files to anyone else with a personal computer and internet connection, at virtually no cost to the user.
This practice of sharing resulted in the growth of peer-to-peer file-sharing networks, which really disturbed confidence in the music industry, and interfered with the government’s ability to enforce existing copyright laws.

However, Hill (2003) says that the question should not be whether or not copyright should exist or whether music ownership can be commercial in the future. The question should actually be how to “profitably distribute music assets through existing technology.” This is always the question, whether the technology environment includes player pianos, sheet music, phonographs, broadcast radio, CDs, or the internet, and record companies should focus only on this question, as their main objective is to generate profit. Hill (2003, pg. 241) continues that “the popular fixation on the internet as uniquely threatening is merely the arrogance of the present moment, which always seems to be more consequential than the past.” This is not the first time in history that record companies have been faced with the obstacle of overcoming advances in technology to survive. Because the internet is the newest form of technology that, along with the other applications and technologies that have been developed to complement it, has had a significant impact on the music industry, some record company executives, academics, and industry experts alike are purporting that these technologies affect the very foundation of the music industry. The music industry actors have overcome similar advances in technology in the past, however, and as Hill stated above, focusing on tangentially relevant topics such as copyright enforcement or debating the very existence of copyright only slow down the process of overcoming the issues faced by the industry.

During the past ten years, mobile phone use and broadband internet connections have increased. Hendricks (2011, pg. 34) writes that the combined growth of mobile phone use and broadband internet connections, which are accessible to nearly 3 out of every 4 Americans, plus the advanced capabilities of mobile devices to handle multimedia content and internet connection, help establish mobile devices as “the next frontier for media opportunities.” The music industry should, again, focus on monetizing content, not solely punishing those who develop ways to infringe on copyright. The industry has become sidetracked in its pursuits of punishment for individuals and technology companies through lawsuits, and if it continues to focus on this, the industry could also fall behind in the emerging mobile market.

### 3.11 The Emergence of Digital Music Streaming Services

In this section, the factors leading up to and influencing the emergence of streaming services will be discussed. These factors will be divided into three categories: technological changes and the
internet; changes in business and industry practices; and changes in consumer behavior and the influence of consumer empowerment.

3.11.1 Changes in Consumer Behavior

Today, there are many more ways for consumers to spend their discretionary time and money (Assink, 2004), which is a characteristic of Bell’s post-industrial society. As industries and markets change to a more service-oriented approach, new services arise on which consumers can spend money. For example, some of these services may include lawn services, cleaning services, or other basic services. These services can also include music streaming services. It is important to remember, however, that these services are usually not provided at no cost.

Because the music industry is in a transition from physical music products to digital files, the idea of paying a monthly or yearly bill for delivery of music is rather new (Hill, 2003). Consumers are accustomed to buying physical albums and transferring them to their devices, allowing them to listen to all the included songs whenever they want without paying extra fees. The generation that grew up with the internet is accustomed to downloading, sometimes illegally, digital music files and enjoying them the same way that consumers who purchase physical albums enjoy their music. Neither group of consumers are accustomed to paying for music services, in which a reoccurring subscription cost is charged and the enjoyment of streaming music in limited to devices allowed by the streaming service.

Partly because of this, some streaming services operate for free or have a subscription option that strictly limits music enjoyment, but involves no cost. As Pulverer (2009) writes, free music models could be attractive to digital music providers, but it might lead to a devaluation of music due to music being combined with advertisements. Consequently, artists could reject this approach as they want their music to be valued. This may be the best way to recruit consumers into using a streaming service, but the obstacle then stands to formulate a way in which value can be added to the service. This added value should be high enough that it encourages customers to upgrade their subscription to a paid subscription. The industry has responded to this obstacle by attempting to simultaneously “develop and refine the narrowcasting strategies of radio and cable television through personalized ‘stations,’ consumer-provided playlists, and pay-per downloads, catering to the individual consumer’s tastes by knowing what the customer wants before the customer knows or wants it” (Burkhart and McCourt, 2006, pg. 89).

The music industry was not the first one to attempt to accommodate consumers’ demands though. Napster, a filesharing website and actor outside of the music industry, allowed users to
pursue their own interests and obtain music without paying for it. The difference between Napster and the new services that emerged in the music industry is that “Napster connected users to each other; the new services connect users to a central inventory of licensed music” (Hill, 2003, pg. 52). Hill (2003) continues that the result of this is an unpredictable selection within streaming services and much less music overall.

One necessary factor was established between Napster and the emergence of streaming services: A viable approach to adding value to music would be to make music social. Web 2.0 brought about social aspects of the internet such as blogs, wikis, and social networks. As long as social networks continue to have any level of popularity, “consumers will use them to talk about what they like to consume” (Manafy and Gautschi, 2011, pg. 110). Incorporating aspects of social networks could be a positive development for all parties involved in social networks. Music companies would have the added value they wished for in music, which would increase revenues. Consumers would be able to interact with each other, which would allow the discovery of new music as well as the bonding that could occur through these interactions. And streaming services could generate more revenue from the consumer side of their two- or multi-sided platforms as well as maintain advertising revenue as new users tested their services by listening to advertising-supported music streams.

Hendricks (2011) confirms that interactivity is an essential feature of online media content. The breadth of the internet allows consumers to access new products that they previously could not have accessed. It also allows consumers to interact with other consumers with whom they would not have previously interacted. Hendricks (2011) states that interactivity happens when the audience is involved in the production of media content, through direct modification, feedback, or even the creation of original content. The internet allowed all of these interactive elements to enter the scene and enhance the value of the digital marketplace. The music industry, after its initial hesitance to enter the digital marketplace, started to incorporate these elements and find some success.

Burkhart and McCourt (2006) note that in less artificial online communities, which are created by actual members, recommendations may be shared more successfully. Eventually, these types of communities could become more dominant than music magazines, radio and television, and live performances as a means of publicizing artists. With the influence and rising importance of the social aspect of music, consumers increasingly determine success and failures of artists and their music.
3.11.2 Recent Technological Changes

Meteoric transformations in the creation and distribution of music over the past ten years have drastically changed the landscape for musicians (Berkman, 2011). The rise of Web 2.0 as well as other technologies have allowed consumers new privileges that they previously did not have. These privileges include the abilities to easily access, create, and provide feedback on content online. High-speed internet has also created new technological opportunities for the music industry to distribute music to consumers. On one side, the technology of selling digital music is built on a new cost structure, and on the other side, technological protection of digital music files raises new economic and legal challenges for players in the market and for policy-makers (Illing and Peitz, 2006).

These new technologies of distribution and consumption have not, however, completely replaced the former technologies. The evolution of technology is a constant process and while new paradigms arise, there is always overlap between the new and old, as characterized by Perez (2009). Also, innovations are not completely random, and new communication media are no exception. As stated by Burkhart and McCourt (2006, pg. 6), “historically, new media do not completely and irreparably supplant formats they follow without adopting some shared or overlapping modes of consumption and distribution.” For example, the increasing mobility made available by music formats through the past 100 years shows the constant evolution of mobility. Music formats were not able to jump from the grammophone to digital files without the intermediate innovations. With these changes, and other changes within the music industry such as the emergence of streaming services, consumers began to experience more and more advantages and possibilities for music enjoyment.

Recent technological change related to digitalization and the internet has led to obvious advantages to music consumers, but also the artist, who can now learn to exploit the new world of the record music industry (Hendricks, 2011). As consumers adjust to these new technologies, however, they develop new demands that the music industry and technology must try and meet. In the future, Kusek and Leonhard (2009) argue that music will be like water because it will be ubiquitous and free-flowing, like water from a tap. Longhurst (2007) extends this assertion and says that if music becomes similar to water from a tap, music will also be able to be turned on and off like a tap. This is an interesting metaphor, and it is supported as streaming services increasingly become important and act as the hand that turns the “music tap” on and off.

Also of note when discussing the “music tap” is the fact that record labels do not possess the necessary technological infrastructure to enable the distribution of digital music (Krueger, Swatman
and Van Der Beek, 2012). Therefore, the streaming services not only gain control over the manner of access that consumers have to the music services they offer, but they also become more powerful in their relationship with record companies. Burkhart and McCourt (2006, pg. 45) express that it is “inarguable that new media technologies have disrupted the recording industry by widening or eliminating the gateways that the industry once exclusively, and profitably, maintained.” With the elimination of these gateways, it is no longer a one-sided relationship in which the streaming service needs the record companies while the record companies control business as usual. Now, the streaming services need the record companies to license content to them, but the record companies also need the streaming services as they have been able to increase music industry revenues through their services. Krueger, Swatman and Van Der Beek (2012, pg. 5) confirm this statement when he states that it is necessary for record companies to “form joint ventures with companies such as telcos, ISPs, or providers of other types of technology,” which would include digital music streaming services.

Obviously forming these joint ventures is of utmost importance for record companies as they are continuously searching for viable methods of generating revenues. Longhurst (2007, pg. 39) writes that the “value of sales is significantly affected by technological change and innovation in the ways in which music is carried,” which has been evident throughout the last decade with the shift to digital. This continues to be relevant as streaming services continue to attempt to innovate the distribution methods of digital music and also as consumer demands continue to evolve.

These technological developments that have impacted the music industry are not only affecting the ways in which digital music is distributed. They are also affecting other technologies because the “development of digitalization is leading to the convergence of technologies; for example, CDs are not often sold with a ‘bonus’ DVD, DVDs are increasingly sold in stores that were previously devoted to music, and music is available on mobile phones” (Longhurst, 2007, pg. 41). These convergences have presented challenges for digital music streaming services, but have also created numerous opportunities for new methods of generating revenue. The development of making music readily available on mobile phones would force technology companies to develop applications through which music could be delivered, but could add to those companies’ revenue after they developed this application because doing so would make music even more accessible for consumers. This means that many consumers would be willing to pay for the application.

However, some other technology companies have a different opinion. According to Levine (2011), from the perspective of the technology world, information wants to be free because the cost of distributing it to consumers is getting lower and lower all the time. With these competing
opinions present in the music industry and the technology sector, competing innovations are being placed into the market. This leaves the power of choice to the consumer. As shown around a decade ago, Napster was the victorious technology, and, as Hill (2003, pg. 51) writes, it was also “the strongest catalyst for new music services.”

Predicting future technologies is virtually impossible, especially when the power struggles between companies and consumers present in today’s market are taken into account. However, one aspect of technology and its relation to digital music distribution is true, and that is that technology will constantly evolve.

3.11.3 Changes in Business and Industry

The digital era brought about some significant changes in media business models, as media managers were “forced to look to the internet to distribute content and generate new revenue due to the impressive numbers of consumers that [were] migrating from traditional media outlets to new media outlets online” (Hendricks, 2011, pg. 14). Traditional methods of revenue generation, such as the sale of physical albums, were no longer as successful as they had previously been. With some reluctance and tension, media companies slowly moved into the digital market space. Some of these media companies failed to see that the new methods of doing business on the internet were not necessarily negative though. Burkhart and McCourt (2006, pg. 1) write that “creators of intellectual property will regain control over copyright [on the internet] while liberating themselves from barriers to entry and the interference of distributors, and distributors will gain a huge new revenue stream while eliminating material costs, overhead, and geographic boundaries.”

There were not only changes for content-producing media companies and the distributors who distrubted this content, however. The way in which music gets to consumers has forever been changed as has the industrial structure that for so long almost completely dominated the business, including the radio and music symbiosis. This symbiosis is being challenged because digital downloads, whether legal or illegal, are “here to stay, as are the myriad other ways” in which consumers are able to obtain digital music (Hendricks, 2011, pg. 128).

The frustrations that arose as an effect of these new technologies and business practices seemed to be a main focus of the music industry as it transitioned to digital. These new technologies have allowed recordings to bypass traditional distribution channels and “thereby evade the industry’s control over access to its intellectual property. [These new technologies] have also provided delivery platforms that the record companies do not control” (Burkhart and McCourt, 2006, pg. 45). Because the music industry has lost some control, it must find other ways to add
value to its product in an effort to lure consumers into once again paying for content. To defend the traditional value chain against the initial decline in physical CD sales, Universal Music Group reduced CD prices for consumers by nearly a quarter in September of 2003, and some discount stores such as Best Buy or Wal-Mart drove down the prices even more (Dubosson-Torbay, Pigneur, Usunier, 2012). However, reducing the prices of physical CDs was not a solution to the growing digital market place that the music industry was forced to break into. In addition to making their content available online, the music industry also had to consider new methods of dealing with consumers. The digital market place is not like the physical market place and therefore requires new approaches to pleasing the consumer. Papathanassopoulos (2011, pg. 152) writes about the four converging trends in digital consumers discourse that refine the ability of marketers to construct commodity-signs:

The four trends that then potentially add symbolic “magic” to the commodity are the internet as a multimediated channel for commodity-sign construction; the emphasis on interactivity, data mining, and target marketing; the ever-evolving power of digital production techniques; and the blurring of the commercial into other mediated texts.

The internet has seemingly endless possibilities for value construction, particularly because it allows for significant interactivity between businesses and other businesses, businesses and consumers, and consumers and other consumers. Tracking individual tastes and gathering other pertinent data about individual consumers is easier with digital technologies and allows for more detailed and relevant target marketing. Companies can then sell consumers’ data for even more revenue. Digital production is also becoming easier for consumers and allows them to participate in the creative process behind the music industry. As the internet brings about convergence of media sectors, the music industry can license its content to be in other media, such as advertisements and television.

In regards to data mining and target marketing, Levine (2011, pg. 7) quotes Reuters’ product manager Anthony DeRosa as describing the dominant online business model as “digital feudalism,” in which the consumer thinks he is using YouTube when YouTube is really using him. This is an interesting statement as it implies that streaming services, such as YouTube, and other technology services sometimes use the consumer to generate more revenue from other businesses instead of developing methods of providing value to the consumers and generating revenue directly from them. This citation also shows how important businesses’ relationships with other businesses are.
As companies continue to converge upon each other and consolidate through mergers and acquisitions, some speculate how sustainable these streaming services will be. Burkhart and McCourt (2006, pg. 7) write that “the music-service providers and clearinghouses that currently make up the [Celestial] Jukebox may very well be transitory and specific to an era of higher broadband internet availability and music industry consolidation.” Whether or not these services will be successful in a decade or more does not seem to be a prominent consideration taken into account by the music industry. Streaming services are important now, and because of this, they seem to have the attention of the music industry actors.

One aspect of businesses that remains important no matter what the influence of technology may be is their brands. Brands can be communicated throughout all platforms and are important to companies because as customers become familiar with a brand, they might want to follow that brand. The convergence of media businesses is likely to continue breaking down “barriers” between the different products and further facilitate the sort of branding described by Lury (Longhurst, 2007, pg. 41). Lury’s (2007) approach to branding describes a brand as a new media object, and because brands are a new form of media, they themselves are platforms for content. Whether or not this approach to branding is necessary in the music industry is debatable, but it is an interesting theory that brands transcend technological innovation.

While the ability of a brand supposedly is a new media platform, its ability to generate revenue by itself is questionable. Because other new media, such as the internet and streaming services, are still prominent, the music industry needs to find ways to generate revenue online. This is difficult, however, because some believe that online media will “inevitably be free” (Levine, 2011, pg. 5). This idea is derived from the theory that the price of any good should fall to its marginal cost. Since digital distribution decreases in price every year, the marginal cost of media keeps approaching zero (Levine, 2011). While this is arguably a great development for the music industry, especially distributors, this shows that the value invested in the product keeps falling and there exists a dire need for the addition of value to the basic music products, as well as the exploitation of other revenue streams in the music industry. Despite the fact that it is technically possible for universal music selection, business considerations prevent it from becoming a reality as quickly as consumers would like (Hill, 2003). There has been a growth in music consumption in the broad sense, and one aspect of this growth is the increase in the revenue gained from live performances of music (Longhurst, 2007).

While consumers are undoubtedly willing to pay more in order to access live music performances, streaming services must find a way to encourage them to pay for their services. Some
services offer a free subscription option in which music is supplemented with advertisements, but as a major label executive who deals with digital services told Levine (2011, pg. 2), it is extremely important to “restrict free, so that it is basically a customer acquisition vehicle and not a service alternative. If the free service is really good, what is the incentive to convert?”

The post-Napster digital music landscape is marked by increasing commercialization (Hill, 2003) and partly because of this, music consumers still seek out free alternatives to purchasing music. After the downfall of Napster, however, the industry first tried to construct an internet distribution system modeled on broadcast, with streaming channels and personalized playlists in addition to the pay-per-burn services, in hope of luring back file traders and deterring artists from bypassing record companies (Burkhart and McCourt, 2006). Napster resulted in the loss of some control by record companies, and they quickly had to re-establish themselves as a valuable actor in the music industry value chain. As they tried to do this, digital music streaming services began to gain influence. Streaming services were a new player and had not shown their value, and outside of that, “there is nothing forcing any record label or independent artist to make their music available through online subscription” services (Hill, 2003, pg. 61). While the music industry needed to find new methods of generating revenue online, they did not see music subscription services as the only possible way to do so.

The importance and power of streaming services soon changed though as the music industry shifted from a product industry to a service industry. Priest (2008, pg. 13) writes that “a services-oriented model might suggest a shift toward a subscription paradigm for online content, in which users pay a recurring fee not to own the content, but to access it on demand together with core value-added services.” The paradigmatic shift encouraged music companies to be more open to these new methods of distribution. One main competitor to not only these emerging streaming services, but to the entire music industry, still existed, however. According to Redshift Research, as cited by Dubosson-Torbay, Pigneur, and Usunier (2012, pg. 2), “a big disadvantage of these fee-based sites is the fact that they cannot compete on the choice dimension against peer-to-peer networks.” Being able to license enormous music libraries is a struggle for streaming services, and this struggle can make them less significant in the eyes of the music industry. In fact, in March 2002, Kazaa made available more than 180 million digital files, which were downloaded nearly a billion times, while label sites were offering on average only 10% of the top US singles and 9% of the top 100 albums (Garrity, 2002). This severe difference exposes the difficulty that licensing forces on the emerging streaming services.
Therefore, content suppliers would like to develop new methods of overcoming the antagonistic peer-to-peer filesharing sites. They try to do this by restricting free-rider behavior and turning public information goods into club goods, which are non-rival yet exclusive (Ballon, 2009). They can do this through “the restrictive use of Intellectual Property Rights, through price discrimination and product differentiation, and through lock-in strategies (e.g. selling complementary products and services, using long-lasting contracts, giving quantity discounts, using proprietary technological standards to raise switching costs and so on)” (Ballon, 2009, pg. 3). Through these methods, the act of limiting access becomes a very important aspect of the business model. As Hill (2003, pg. 3) writes, “the difference between a limited service and an unlimited one is one of the primary value distinctions.” The competition still stands between legitimate streaming services and their peer-to-peer filesharing counterparts though. “Because the original version of Napster was the motivating force behind the entire fledgling music subscription industry,” Hill (2003, pg. 52) says that “it is fair to ask if the current crop of pay-by-month music services represent a copyright-friendly alternative to the gray-market Napster that so many people loved.”

The beginning of the music streaming services market found its origins near the end of 2001, when two of the major labels (Universal and Sony) clumped together to form one service (MusicNet), and the other three (Warner, BMG, EMI) pooled their catalogs into an opposing service (Pressplay). With the marketplace for mainstream music thus inconveniently fragmented, these giant media companies were finally ready to compete (Hill, 2003). These streaming services, obviously created as a product of the big five record labels, were the only services created by those record labels. They existed as “an industry response to Napster” (Hill, 2003, pg. 69).

These two streaming services have similarities and differences, as described by Hill (2003, pp. 69-70). Their similarities include:

Monthly paid access to a song/album catalog rich with major-label content; whole-song streaming and downloads; restricted download formats that limit song-copying, burning to CD, and removing from the subscribing computer; tiered subscription plans for more and less extensive (and expensive) access; dedicated clients (installed programs) for accessing the service, browsing and searching the catalog, downloading, streaming, organizing, and playing downloads.

Hill (2003, pp. 69-70) continues that MusicNet and Pressplay differ from each other in two crucial ways that affect the user’s experience:

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1. The two music catalogs represented by the services are mostly non-overlapping. MusicNet and Pressplay are like two music stores, each of which is boycotted by the other’s record-label suppliers, an impossible situation in the physical world.

2. Unlike Pressplay, MusicNet includes its music content in a broad media service that is mostly a nonmusical source of streaming news and information. While Pressplay is purely a music service distributed through a handful of high-profile web destinations, MusicNet’s music is buried in the varied media catalog of a parent service called RealOne.

These music service providers were eventually abandoned by the major record labels for various reasons. According to Burkhart and McCourt (2006, pp. 91-92), “pressures for short-term profits, coupled with the economic risks posed by developing an online music infrastructure, convinced [the major labels] that they stood to gain more by licensing their primary economic assets (recordings) out to clearinghouses.” Investing in the amount of research and development required to build a sustainable, functioning streaming service would have been an enormous risk for record companies, especially since building this infrastructure would have been outside of their competences. Allowing these outside clearinghouses to build the necessary technological infrastructure would have prevented the record companies from incurring any major losses if the technology were to fail. In addition, by the time of their divestiture, “Universal and Sony had each poured $30 million into Pressplay and had attracted fewer than 50,000 subscribers for their trouble,” (Burkhart and McCourt, 2006, pg. 92) which further shows that the record companies did not have a sufficient amount of expertise to develop a successful technological platform for music distribution.

3.11.4 Conclusion About The Emergence of Streaming Services

In conclusion, several factors have influenced the emergence of streaming services, and these factors have various origins. The emergence of streaming services has been influenced by changes in consumer behavior and the rise of consumer empowerment, innovations in technology and the development of the internet (more specifically, Web 2.0), and changes in business and industry practices. As a result of all of these factors, music streaming services seemed to be the logical next step for the music industry.
4. EXPERT INTERVIEW

I had the privilege to interview Olivier Maeterlinck, Director of the Belgian Entertainment Association, which represents the Belgian game, music and video industries, for this thesis. The interview consisted of 10 initial questions, which can be found in Appendix B. The following section will be a narrative of my conversation with Mr. Maeterlinck.

I initially asked Mr. Maeterlinck to discuss how music streaming services are affecting the music industry value chain. He did not know exactly how streaming services were positioning themselves in the value chain because they are a new and developing model. He noted that they are clearly replacing different aspects of the traditional ways in which consumers enjoy music, stating that they are more of a radio model than a purchasing model. Some people think that digital music streaming services will erase other models, such as the model of physical product sales, and also the market of downloads. Therefore, it is clear that streaming services have affected and continue to affect the music industry value chain. However, as Mr. Maeterlinck says, one must know the value that the service has and what will be the impact on the other models, if there is any impact at all.

The long tail theory also comes into play with the emergence of streaming services. Chris Anderson, who developed the theory of the long tail, describes it as the increasing shift in our culture and economy away “from a focus on a relatively small number of ‘hits’ (mainstream products and markets) at the head of the demand curve and toward a huge number of niches in the tail” (Anderson, 2006).

Anderson (2006) continues that “as the costs of production and distribution fall, especially online, there is now less need to lump products and consumers into one-size-fits-all containers.” Because of the increasing amount of access to niche content that the internet and streaming services provide, Mr. Maeterlinck argues that allowing consumers access to a streaming database is a sustainable method of generating revenue for the music industry that could provide for a long career.

Record companies are not the only players benefitting from the rise of streaming services though. These services help artists reach new audiences, and also allow for audiences to stream and possibly purchase an artist’s older content after listening to the newer content. Some have speculated that streaming services could decrease the need for record companies, as artists can now more easily reach these wider audiences. Mr. Maeterlinck expressed that the marketing costs are still paid by the record companies, not the streaming services, and because of this, streaming services are not impacting the role of record companies.
When asked why streaming services are becoming more prevalent in the market, Mr. Maeterlinck responded that currently, there is 50% less money than before in the music industry. Record labels are not willing to take significant risks and want to protect their revenues. Streaming services are generally external to record companies, and record companies are willing to license their content to streaming services as the fate of the streaming service will not have a major effect on the overall music industry. As record companies are willing to license more and more content to streaming services, these services become more attractive to consumers. Therefore, it seems that with the acceptance of record companies, streaming services were allowed to continue to grow and become more powerful as they gained access to larger libraries of music.

My next question for Mr. Maeterlinck was to describe the ways in which streaming services affect the relationships between artists, record companies and consumers. He began by expressing that the record companies are still instrumental in allowing artists to obtain high quality, professional recordings of their music. Record labels, with the rise of the digital era, have transformed into more of a service label than a record label. Record companies are now signing agreements on other services outside of recordings, such as marketing, and are also becoming co-owners of recordings with artists. Some agreements exist between record labels and the artists they have signed which allow the artist to maintain ownership over their content, but allow the record company to promote it through a licensing agreement.

Streaming services obviously affect the relationship between record companies, artists and the individuals who consume their content because streaming services represent a new way in which consumers can enjoy music. With this statement, I asked a follow-up question about whether or not digital music streaming services are paving the way for the emergence of “middle class” artists (artists who do not produce hits). Mr. Maeterlinck answered, saying that within streaming services, there is a lot more choice than in physical record stores. Because of this, it is easier for consumers to discover new artists. Mr. Maeterlinck followed this up saying that streaming models are not necessarily based on a push model. They are still a pull model in which consumers must click on an artist in order to listen to that artist’s music. The artist is not always presented to them. He notes that when looking at the music charts on Spotify, they are basically the same as traditional pop music charts. Streaming services simply make music more accessible, and it is still up to the consumer to seek out and discover new artists.

The next question dealt with whether or not streaming services were a sustainable option for positive revenue generation. Mr. Maeterlinck responded that streaming services are definitely sustainable in countries where music streaming is popular, such as Sweden. Sweden, by means of
Spotify, has experienced growth in revenues that have been in the double digits. 63% of music revenues now come from digital music. 95% of that comes from streaming alone. This has very significant implications for the music industry. Growth on this scale gives hope that streaming services will continue to grow and prosper in countries like this. A whole generation has grown up acquiring music without paying, and the fact that individuals from this generation are now willing to pay for streaming services is an enormous victory for the music industry. Mr. Maeterlinck says that we should look at what we are winning back.

Belgium, unlike Sweden, has not experienced a significant uptake of music streaming services. The problem in Belgium is that streaming services on not pushing enough on the music service. Belgians still prefer to buy physical albums, and this is not changing very rapidly. Mr. Maeterlinck notes that the Netherlands is a more promising country, predicting that streaming services will be more prominent there within the next 10 years. He says that the physical market will still exist, but most of the revenues in the music industry will be derived from digital streaming services.

Another factor that influences streaming services is mobile internet. In Sweden, mobile internet is very cheap, which makes streaming services much more accessible and worthwhile for Swedes. Mobile internet is extremely important to having streaming become a popular model. Internet service providers also need to support these services, according to Mr. Maeterlinck.

He spoke about the example of BelgacomTV. Internet service providers are not prepared to invest in video streaming services because they will not be able to compete with BelgacomTV. There is no music equivalent of BelgacomTV, however, so internet service providers are prepared to invest in music services. Video-on-demand generates more revenues than music services though, and music is therefore not a priority. With the discussion of these services, net neutrality entered the discussion. This is an extremely important debate when it comes to this topic, but as net neutrality is not discussed in this thesis, I did not pursue further information from Mr. Maeterlinck.

I next asked what the alternatives to music streaming services were, and Mr. Maeterlinck responded that Youtube is the most popular streaming service, but that most people do not acknowledge it as being one. Outside of this, no other alternatives to streaming services were discussed, outside of the other formats of music, such as physical products and digital downloads.

We then briefly discussed how Customer-Relationship Management (CRM) softwares enhance the user experience within streaming services. Mr. Maeterlinck acknowledged the use of CRM technologies, but expressed his opinion that the social media aspect of streaming services is more significant than the use of CRM technologies. People are not ready to accept a
recommendation from a machine because the “personal touch” of human interaction remains very important to consumers. He uses the example of Spotify and says that it is used as a social media. He continues that the role of streaming services and peer-to-peer networks is generally the same. The process of using both of these services involves installing the client or becoming a member in order to gain access to the database of files, then exchanging playlists and the music one listens to with other users. People enjoy receiving recommendations from friends and are more likely to listen to those recommendations than to the recommendations received from a machine.

Because the social aspects of digital music streaming services and peer-to-peer filesharing networks are similar, one must wonder why consumers should choose to use streaming services. Mr. Maeterlinck says that streaming services are more secure and that by using these services, consumers are investing in music and allowing for the creation of newer enjoyable content. It is Mr. Maeterlinck’s firm belief that culture should not be shared for free.

Following this, I inquired about the use of Digital Rights Management (DRM) softwares and whether or not they were effectively used by streaming services. Mr. Maeterlinck says that access to the digital streaming services is DRM-based, so the use of DRM is definitely effective to a certain extent. In addition, to enhance the value for users, if a user stops using a service, the service will keep the user’s playlists for a certain amount of time in case the user returns to the service. This ensures that once the user pays for a new subscription, his profile will still be personal and just the way he left it.

Digital rights management can have different meanings, according to Mr. Maeterlinck. DRM can mean regulation of the access a consumer has to a database of content, regulation of the ways in which a consumer pays for the content, and redistribution to the rights holders. Whether or not these are used effectively is debatable.

This led into my next question which was about the various ways in which streaming services affect peer-to-peer filesharing networks. Mr. Maeterlinck stated that people are moving towards streaming services and away from peer-to-peer sharing. The only argument left in the debate with users about why they use peer-to-peer networks is that “it is free.” As I previously discussed, consumers value the economic implication of free music less than the other two definitions of free (universal access, free from one device), so it appears that the fact that music is “free” on peer-to-peer networks is an increasingly weak argument.

Streaming services have changed the dynamic for consumers who used peer-to-peer networks. They have made music extremely accessible, and even possible to listen to for free. Once users become accustomed to the ease of use that comes along with streaming services, they are
likely to continue using the service. A major advantage that streaming services have over peer-to-peer networks is that streaming services are generally extremely user-friendly.

Our conversation then transitioned to iTunes and the effects that it has had and continues to have on the emergence of streaming services. Mr. Maeterlinck started his answer by saying that the only problem with iTunes is that Apple tries to avoid being a follower in technology. They did not invent streaming services, and it is therefore difficult for them to make the decision to enter that market. iRadio is a new service from Apple, but the company will not admit that it is a streaming service. The success of iRadio is yet to be determined.

Apple’s successful music invention, iTunes, originally broke open the digital music market. They were the first technology company to convince music companies to offer their music online in a digital format. With its quick rise to dominance in the digital music market, competition had a difficult time surviving. Mr. Maeterlinck says that a little competition would be nice in this market since iTunes is currently a bit of a monopoly.

Streaming services, however, are beginning to compete with iTunes. A lot of consumers only want access to music and do not have a preference about whether or not they actually own it. In this sense, streaming services are starting to affect iTunes, and iTunes is not really having an affect on streaming services. As customers migrate to streaming services, iTunes must think of methods to keep consumers. Since iTunes already existed before today’s streaming services, the streaming services have never competed in a market in which iTunes was absent.

Mr. Maeterlinck also discussed his belief in the artist as an application, a concept that is still in the experimental stage, but that has great potential in the eyes of many music industry actors. It is important to mention that the approach of creating an application for an individual artist can not be done for every single artist. For an artist to “qualify” for an application, she must be established in the industry enough that consumers would be likely to download the application in order to gain more access to that specific artist’s content. Creating and maintaining this application of course comes with costs because someone must initially develop the application and then someone must constantly update it with news about the artist. This could, however, be a sustainable distribution model for established artists. Most probably, these applications would not replace streaming services. They would simply serve as a platform for dedicated fans of a certain artist to become privy to important news about the artist, such as new music releases, new videos, live performances, etc. These applications would not allow consumers to discover new artists like they can in streaming services.
I concluded my conversation with Mr. Maeterlinck by discussing his stance in the discussion within the music industry dealing with consumers accessing or owning licenses to content. He answered by saying that there is a generational gap. Older generations want to buy and own physical products that they can carry with them. The younger generations, raised with the internet, have a different mindset. Perhaps access is more important to these younger generations, which may be expressed in the rise of streaming services. Access also allows for more discovery of artists, as a user can view the contents of an entire database with a music service subscription, while someone who owns a physical product can only enjoy the contents of that product.

As streaming services are becoming more integrated into smart televisions, surround systems, and computers, access to music can be found in a variety of places and formats. However, the physical market will always remain, no matter how much it decreases. Physical products do not require a physical store. They can be purchased online through digital stores that have a huge selection of products. This is why physical stores are closing.

The debate between access and ownership goes even beyond music. VHS had a high rate of rental while DVDs have a high rate of purchase. This marked a shift in the video industry, and now with the rising use of video-on-demand, access is becoming more important as it was in the days of VHS. There is also a difference in the type of content that is rented or owned. A large percentage of the DVDs sold are of television series, while the video-on-demand and DVD rentals are mainly movies. It appears that this constant shift between access and ownership will always play a role in the entertainment industries, including the music industry.

With the generational gap playing a part in consumer preference between access and ownership, it will be interesting to see the developments that come with streaming services. My conversation with Mr. Maeterlinck was very useful in determining some of the reasons behind the emergence of streaming services and how these services are affecting the music industry and the individual competitors within the industry today.

5. EMPIRICAL RESEARCH: BUSINESS MODEL ANALYSIS

This section contains an analysis of three digital music streaming services: Spotify, Pandora and Deezer. I will briefly describe the framework for my analysis, and will then present the three different cases. After the applicable characteristics of each digital music streaming services have been analyzed, the three services will then be compared to each other to construct a clearer view of how each service is different from the other two.
5.1 Framework of Analysis

This section contains three case studies of different digital music streaming services. These services are Spotify, Deezer, and Pandora. To analyze the business models of these three music streaming services, Ballon’s (2007) article discussing the relationship between control over and value of ICT services will be used. Ballon (2007, pg. 7) states that “the guiding question of a business model has become ‘Who controls the value network and the overall system design’ just as much as ‘Is substantial value being produced by this model (or not).’”

Ballon’s business model analysis framework contains four levels on which business models operate. The first level is the value network level, in which roles, actors, and relationships are examined. A role is “a distinct value-adding activity within the value network,” an actor is “a commercial entity active in the marketplace,” and a relationship is defined as “the expression of an interaction between roles or actors” (Ballon, 2007, pg. 10). The next level is the functional architecture level. At this level, technical systems composed of at least one module are dealt with, which are governed by certain rules or intelligence, and that interwork or do not interwork with other technical systems. At the third level, the financial level, costs for setting up and running the service or product, the revenues gained from doing so, and the way these revenues are shared between actors are analyzed. The final level is the value proposition level. At this level, basic organizational choices are made. These choices are how to position a service against existing services, whether a “finished” value proposition is made or whether to allow substantial customer involvement in constructing value of the service, and what the main value proposed to the market primarily consists of.

Each of these levels contains three critical design parameters. The levels, along with their design parameters, are depicted in Figure 1 below.

FIGURE 1.

<table>
<thead>
<tr>
<th>A. Value network parameters</th>
<th>B. Functional architecture parameters</th>
<th>C. Financial model parameters</th>
<th>D. Value proposition parameters</th>
</tr>
</thead>
</table>

The control parameters, as can be derived from Table 1, consist of the following value network parameters: combination of assets within and outside of a firm, vertical integration, customer ownership; and the functional architecture parameters: modularity, distribution of
intelligence, and interoperability. The only control parameters that will be analyzed in this thesis are the value network parameters.

Combination of assets can also be expressed as combinative capabilities, defined by Koruna (2004) as the combination, within a firm’s ability, of internal and external resources by the firm in the attempt to create new resource combinations that are rare, valuable, hardly imitable and non-substitutable. Through the combination of these internal and external resources, different types of relationships that influence the shaping of a business model are formed within the value network. These different types of relationships are structural, contributing, and supporting partners, which range from greater to lesser actor power, depending on the kind of resources they contribute (Ballon, 2007). Ballon (2007, pg. 11) cites Wehn de Montalvo et al., who “match these types to, respectively, essential, network-specific, and generic resource contributions to value creation, ranging from greater to lesser relevance to value creation in the network, based on resource characteristics.” Taking all of these characteristics into account, one will be able to determine a company’s combination of assets. As Ballon (2007) states, if essential resources are concentrated with one actor, while the other actors only have generic resources, assets are strongly concentrated. At the other extreme, if essential resources are spread evenly across multiple partners, assets are distributed.

Vertical integration refers to the scope of the firm in terms of markets and industries in which it competes (Ballon, 2007). The online marketplace has had an impact on some aspects of vertical integration in some companies, particularly in companies that operate in industries in which new players entered the market on the internet. These new companies can impact other players’ scopes. Ballon (2007) writes that, clearly, the scope of the firm, or the level of vertical integration, within a particular value network, directly affects the business model. Therefore, vertical integration is crucial in analyzing business models. Ballon (2007) continues that the essential trade-off that can be indentified in regards to vertical integration is whether a company is integrated or disintegrated and whether the value chains and networks it functions in are integrated or disintegrated. Whether or not a value chain is integrated greatly affects the ways in which companies within that value chain operate.

Customer ownership is the third parameter within the value network parameters. Customer ownership refers generally to the customer relationship and particularly to the customer ownership and is also related to the access to key information about customers, products, markets and costs (Ballon, 2007). Ballon (2007) continues that the several levels of intensity of customer ownership are distinguishable, depending upon issues such as establishing a trusted reputation, customer
relationship management, marketing and branding, and customer lock-in. These factors will be analyzed in the following case studies, as they indirectly relate to how streaming services generate revenue. The trade-off in relation to customer ownership is determining whether the customer ownership is intermediated (i.e. operated by intermediaries that are positioned between the actor that produces the service in question) versus direct (i.e. operated directly by the actor that produces the service in question) (Ballon, 2007).

The value parameters, also visible in the above graphic, consist of the financial model parameters: cost sharing model, revenue model, and revenue sharing model; and also the value proposition parameters: positioning, user involvement, and intended value.

A company’s cost sharing model refers to its anticipated costs that are necessary for the design, development and exploitation of a service, and more precisely the way in which these are shared amongst the actors involved (Ballon, 2007). These costs could include investments and the anticipated operational expenses. There are also two cost concepts that are relevant here, and these are sunk costs, which cannot be recovered, and marginal costs, which are costs that are incurred when producing additional increments to the existing service (Ballon, 2007). Because all the streaming services analyzed are private companies, these figures may not be available for public use. I will analyze each company’s cost sharing model to the best of my abilities, however. If successful, I will be able to state whether the investments are concentrated with one actor, or distributed over various actors.

The revenue models of the companies will be analyzed after the cost sharing models. As Ballon (2007) writes that in the case of digital content services, the traditional trade-off in revenue models is between direct revenue models, which involve payment directly by the customer, and indirect revenue models, which involve payment by the advertiser. Being players in two- or multi-sided markets, the revenue models of digital music streaming services will be interesting to discuss, as having a balance, or unbalanced, revenue model may be the key to success in this competitive market.

The final financial model parameter is the revenue sharing model. This refers to agreements about how separate actors involved in the value chain will share revenues between themselves (Ballon, 2007). This consists of a very basic distinction, which is whether companies have a revenue sharing model in place which includes revenue that is distributed between several actors, or no revenue sharing model, which means that revenues are concentrated with a single actor and are then distributed to other actors in the value chain through direct-market mechanisms, such as licensing (Ballon, 2007).
Next, the value proposition parameters will be discussed, the first of which is positioning. While positioning can refer to a wide range of business activities, Ballon (2007) focuses on business choices regarding “intended complementarity and substitutability.” The main differentiation between companies lies in their choice to position their service as a complement to a particular set of existing services, or rather as a substitute to them.

Customer involvement is another aspect of business model design that falls into the value proposition parameters. The main differentiation in customer involvement choices in the value creation process is the one between favoring high levels of customer involvement, in which the customer is involved in all or most stages of development, or low levels of customer involvement, in which customers are involved in few or no stages of development (Ballon, 2007).

The final business model parameter is the intended value of a service. This parameter lists the primary attributes that the service is intended to possess, and that together constitute the intended customer value (Ballon, 2007). According to Treacy and Wiersema (1993), there exists three different strategies to achieve a high valuation by the users:

1. Operational excellence: through cost advantages, the price of the service drops below a level where it can attract a critical mass of consumers.
2. Product leadership: The service offered is of premium quality and innovative, and comes at a premium price.
3. Customer intimacy: The consumers sees the advantage of a more intimate relationship with the provider of the service, and is willing to relinquish an amount of privacy in exchange for a custom-made solution.

These three strategies can also be evaluated as strategies of price (operational excellence), quality (product leadership), or lock-in (customer intimacy) (Ballon, 2007).

Taking all of these design parameters into account, each digital music streaming services will be evaluated based on Figure 2.

FIGURE 2.
5.2 Case Study: Spotify

Spotify is a digital music streaming service that was founded in 2006 by Daniel Ek and Martin Lorentzon (Spotify Privco, n.d.). According to the Spotify “Fast Facts” sheet (Spotify Fast Facts, n.d.), downloadable from the website and attached as Appendix C, “Spotify brings you the right music for every moment - on your computer, your mobile, your tablet, your home entertainment system and more.” The immediate use of “you” several times in the text places the focus on the consumer, which through this case study, will be shown as an extremely important characteristic of Spotify’s business model. Also found on the fact sheet (Spotify Fast Facts, n.d.) are some figures to show just how popular Spotify has become. There are over 6 million paying subscribers, over 24 million active users, over 1 billion playlists created by the users, and Spotify is available in 28 countries, a list of which can be found as Appendix D. Spotify also boasts giving access to over 20 million songs globally (although catalogue size varies in each country), and states that it has paid over $500 million in revenue to rightsholders since its launch (Spotify Fast Facts, n.d.). Before the 2012 Grammy Awards, the CEO of Spotify, Daniel Ek, was quoted by the LA Times as saying “The value of music is not $15 billion, it is worth much, much more than that” (Pham, 2012). According to a Deloitte Study, Spotify has placed some value back in music, and may “be able to save the international market” (Deloitte, n.d.).

Spotify is an individual platform that contains a unique user interface. This interface also includes a direct connection to Facebook, which gives Spotify a more social characteristic. Spotify does not own Facebook, however, and appears to greatly depend on Facebook to enhance the social features that Spotify offers. Spotify, directly through its interface, allows sharing on Facebook, Twitter, and Tumblr. These three sites are external platforms that are meant to enhance the value of Spotify. The content that Spotify streams is not owned by Spotify itself, but by record companies and individual artists. As will be later discussed, Spotify works to acquire this content through content aggregation companies, which collect content from the content producers (Spotify Aggregators, n.d.). Within the user interface of Spotify, users can import existing playlists from iTunes instead of having to create completely new playlists. Spotify also distributes applications from outside companies, such as Billboard Top Charts, Rolling Stone, Coca Cola, and even individual bands like One Direction (Spotify App Finder, n.d.). Because of all these factors, I determined that Spotify’s combination of assets in distributed.

Spotify makes it possible for external companies to become partners. On their web page dedicated to Partners, Spotify reaches out to internet service providers and mobile operators and encourages them to offer Spotify and its services to their customers (Spotify Partners, n.d.).
addition, Spotify also addresses consumer electronics producers (such as media streamers, mobile phones, connected televisions, set-top boxes, and gaming consoles). Because Spotify encourages the above service and product providers to become a partner, it can be stated that Spotify does not own the means to develop, produce or distribute these technologies. The music content that Spotify streams is also not produced by Spotify itself. Sten Garmark, director of Spotify, says that they “have to turn themselves into to operating system of music” (Dredge, 2012). The Deloitte (Deloitte, n.d.) study on Spotify states the position of Spotify in the value chain quite nicely:

By broadcasting the [Spotify as OS of Music] vision and directly engaging and orchestrating key ecosystem participants, such as major music labels, artists, music industry media, third-party developers, and consumers, Spotify has multiplied the depth and complexity of the listening experience on its platform.

Because of these factors, I have found that Spotify and the wider music industry value network are disintegrated.

Despite not producing its own content, Spotify still acts as the guarantor of the value proposition present in its service. As previously cited, the director of Spotify considers Spotify the operating system of music. On its website (Spotify Features, n.d.), Spotify states, in similar wording to the “Fast Facts” sheet, that users can “listen everywhere” because Spotify works on “your computer, your mobile, your tablet, and your home entertainment system. You can even download your favorite music for when you are offline.” Again, Spotify emphasizes the “you” that is so present in their approach to consumer involvement. To stream music from Spotify, users have the option to download the platform or listen in a web player directly through Spotify’s website. On its website (Spotify Features, n.d.), Spotify states the following reasons in encouraging consumers to use its system:

- Find new music by browsing the collections of friends, artists, and celebrities
- Build a personal collection by creating your own playlists
- Follow and share, which, according to Spotify itself, is what makes Spotify “so social”

All of the above reasons for joining Spotify are also lock-in effects. The music collections of friends, artists and celebrities that users can browse are only available on Spotify. Spotify also prevents users from joining other services by connecting to iTunes and importing the user’s library
and integrating it into the user’s playlists. Users can add songs to their personal library directly in Spotify without having to purchase the song through iTunes. The ability to follow others and share songs with others serve as lock-in effects.

On the About page on Spotify’s website (Spotify About, n.d.), Spotify further shows its commitment to building convenience for its customers. The first address that appears on the top of the page is the address for the Spotify office in the country closest to the IP address of the user. The other international offices, shown below the nearest office, establish a trustworthy reputation for Spotify because the multiple addresses show that Spotify is a large company. The customer service portion of their website (Spotify Support, n.d.) includes three different methods of troubleshooting for customers. These are the help section, which is a list of frequently asked questions, the Community Support page, in which a user can ask other users for advice. An interesting aspect of the Community Support page is that users can also create or vote for feature requests. The final method is a Contact Form, with which a customer can directly contact Spotify’s customer support team. Because of the mentioned characteristics, I would classify Spotify’s customer ownership as direct.

On its main information page (Spotify Fast Facts, n.d.), Spotify openly reports paying over $500 million to rights holders since its launch. These costs seem to be concentrated with Spotify. However, Spotify raised about $100 million in 2012 from venture capital firm Kleiner Perkins Caufield & Byers and Russian investment firm DST Global (Musil, 2012). Duedil, a website which gives vital information about companies, classifies Spotify as a private limited company with share capital (Deudil, n.d.). This means that Spotify cannot offer shares to the public, but can sell shares privately. Limited implies that investors will only lose their shares if Spotify goes bankrupt. Spotify’s current liabilities (or costs that Spotify must pay to other actors) currently sits at around $133 million, according to Deudil (Deudil, n.d.). Spotify’s operating profit (yellow) can be compared to its operating liabilities (green) in Figure 3.

![Figure 3](image_url)
Because of this financial information, it can be said that Spotify’s upfront costs, which include research and development, are distributed between actors. However, Spotify’s marginal costs, which include royalty payment, are concentrated with Spotify itself.

In regards to revenue derived from consumers, Spotify’s revenue model consists of three different price tiers (Spotify Features, n.d.). These price tiers are the following:

1. Free - Spotify’s service is available for use on a laptop or a desktop computer and it is made possible by advertising.
2. Unlimited - Users must pay $4.99/month in the US or €4.99/month in the EU. The unlimited service is available on a laptop or desktop computer. Because users pay for this tier, there are no advertisements and the unlimited subscription does not have a commitment as to how many months a user must pay for the service.
3. Premium - Users must pay $9.99/month in the US or €9.99/month in the EU for this tier. The premium service is available on all devices, and it also includes the capability to download and listen to songs offline. In addition to these features, the premium service offers enhanced sound quality for subscribers. Similar to the unlimited price tier, there are no advertisements or commitments that come with the premium service. Currently, there is a 30 day free trial for the premium mobile version of Spotify (Spotify Features, n.d.).

Another way in which Spotify generates revenue directly from users is by offering Spotify e-cards. These cards are not available in the US, but are available in the EU. These cards, which contain 12 months of access to Spotify’s premium service, can be purchased and given as gifts between users.

On the other side of its market, Spotify generates revenues from advertising, which allow it to offer the free price tier. Because Spotify requires users to register before they can access to service, regardless of price tier, Spotify is able to gain certain crucial information about users. With this data, Spotify says it can offer consumer targeting advice to advertisers (Spotify Advertisers, n.d.). Spotify also offers user detail tracking and reporting services to its advertisers. On its advertising information page(Spotify Ad Formats, n.d.), Spotify details the different types of advertising outside companies can purchase. These different types of advertising include:

1. Audio Advertising: A 30-second clip, supplied by the advertiser, plays between songs, an image is displayed in the cover art area for users to click on, and supplied text is scrolled across the screen as an additional Call To Action, as Spotify describes it.
2. Display Advertising: Images from the advertiser are displayed for 30 seconds, and no other advertisements are shown during this time. There are two possible dimensions for display advertising: leaderboard, which appears at the bottom of the Spotify client, and skyscraper, which appears at the right-hand side of the client. Acceptable third-party tags
for display advertisements are JavaScript, iFrame, a click command function, and a 1x1 pixel that gives information to a third-party site. The audio of display advertisements is user-initiated, and any URLs in the advertisements must open in a new window. Spotify or a third party may host animated GIFs, but Flash advertisements must be hosted by a third party.

3. Billboard Advertisements: Billboard advertisements are large “screen saver” images that are displayed after five minutes of inactivity. When the user returns to his computer, the billboard advertisement remains on the screen for two seconds, then minimizes to a leaderboard or skyscraper for users to click on. Billboards themselves are not clickable. There are no acceptable third party tags with billboard advertisements and the billboard must be hosted by Spotify, not a third party.

4. Mid-Page Unit (MPU): An MPU is displayed on the Spotify homepage and the What’s New homepage within the client. In an MPU, the audio must be user-initiated, but the video can play automatically. The MPU must contain a Play and Stop buttons, and On/Off volume controls at all times. Acceptable third party tags on MPUs are a click command function and a 1x1 pixel that gives information to a third party site. Spotify or a third party can host the advertisement if it is a GIF or a JPEG, but a third party must host all Flash advertisements.

5. Homepage Takeover Advertising: This type of advertising consists of a full-size background “skin” and an optional interactive area that takes over the Spotify homepage. There are no other advertisements displayed when a Homepage Takeover is displayed. Users are able to click the background image and in the interactive area. Acceptable third party tags on Homepage Takeovers are JavaScript, iFrame, or a 1x1 pixel that gives information to a third party site. The “skin” must be hosted by Spotify. If the interactive area is a GIF or JPEG, it can be hosted by Spotify or a third party, but all Flash advertisements must be hosted by a third party.

6. Branded Playlists: Branded Playlists are Spotify playlists that contain branded cover art images and text. Branded Playlists can also contain links to any webpage, but, due to record label restrictions on licensed content, the playlist must be user-generated. The Playlists must also have 40 or more songs, with only one track allowed per artist. Branded Playlists come with the capability to launch a lightbox, which will be detailed in item 7, via clickable text. As a final note about Branded Playlists, Spotify states that Branded Playlists remain forever in Spotify unless the creator of the Playlist requests deletion.

In addition to the first six forms of advertising available through Spotify, Spotify also offers two additional formats of advertising, which are add-ons and premium formats. These include the following:
7. Lightbox: This is an overlay window that opens within the Spotify client. The Lightbox can contain “nearly anything,” according to Spotify. Unique to this format of Spotify advertising is that it is the only user-generated format.

8. Advertiser Pages: The final type of advertising available through Spotify is Advertiser Pages. These are ad-served microsites that are integrated into the Spotify client. Advertiser pages can contain any webpage content, and all other forms of advertising are blocked with the exception of audio advertisements played during streaming. Advertiser Pages are hosted by an external URL and are never hosted by Spotify itself.

Spotify exploits various sources of revenue, and because of this, it can be said that Spotify’s revenue model includes both direct and indirect aspects. Direct revenue is that generated directly from consumers, while indirect revenue is that which is generated from sources other than consumers (Ballon, 2007).

While Spotify has a very defined revenue model, it does not seem to have a revenue sharing model, but instead tends to work through licensing and other forms of direct-market mechanisms. For instance, Spotify does not enter direct deals with record labels, but instead chooses to gain access to content through content aggregators (Spotify Labels, n.d.). The two types of content aggregators that Spotify works with are label aggregators and artist aggregators, which support individual or unsigned artists. On its website (Spotify Aggregators, n.d.), Spotify lists 35 label aggregators and 13 artist aggregators. By streaming the content to which Spotify has access, Spotify needs to pay royalty fees. Spotify states that is pays out the majority, almost 70%, of all revenue to intellectual rights holders, which include artists, labels, publishers, and performing rights societies such as ASCAP and BMI. Spotify establishes agreements with all of these actors and therefore does not technically share revenue with them. Each actor is paid a different amount, as Spotify pays royalties in relation to an artist’s popularity on the service. The example provided by Spotify (Spotify Artist Payment, n.d.) is that, for instance, approximately 2% of gross royalties will be paid to an artist whose music represents approximately 2% of what users stream. Spotify also claims to have affected digital music download sales in a positive manner, which generates revenue for other actors in the music industry value network. In every territory where Spotify has launched, digital download revenues have sustained growth or even accelerated. Spotify also helps other actors generate revenue by developing new features that alert artists’ followers to artists’ new releases, allowing them to listen instantly. Spotify is also integrated with Songkick (Spotify Songkick, n.d.), which, when an artist goes on tour, alerts the artist’s followers when the artist is geographically close to them.

Even though Spotify does not appear to have a financial relationship with companies that sell digital music downloads or tickets to an artist’s live performance tour, Spotify still insists on
helping these actors generate revenue. Even though Spotify itself does not have a revenue sharing model, it appears that Spotify still helps other actors in the music value network generate revenue.

In terms of position, Spotify considers itself the “first truly social digital music experience” because of its deep integration with Facebook (Spotify Artist About, n.d.). On its Partners Page (Spotify Partners, n.d.), Spotify reaches out to internet service providers and mobile service providers to include its service in their services. In addition, Spotify also reaches out to actors in the consumer electronics industry such as producers of media streamers, mobile phones, connected television, set-top boxes, and gaming consoles. Spotify is also integrated with delivery platforms such as FUGA and Consolidated Independent (Spotify Labels, n.d.). Developers are also becoming an increasingly important outside actor to Spotify. As Spotify states (Spotify Developer, n.d.), developers can “empower [their] software with the world’s biggest music platform.” Developers have the option to utilize Spotify Apps, in which they can make their application available through Spotify’s client; Libspotify, in which developers can make Spotify available in their product; or the Play Button, which allows developers to make Spotify available through their websites (Spotify Developer, n.d.). These aspects of Spotify make it a complement to existing products and services. The only way in which Spotify acts as a substitute is when it is compared to traditional radio. In Spotify’s words, “Spotify allows people to listen to the music they want instantly, unlike commercial radio” (Spotify Advertisers, n.d.). Taking this into account, Spotify can still be considered generally complementary to outside services and products.

Spotify’s involvement of the customer further proves that Spotify is devoted to the “you,” its customers. To make use of its service more convenient, Spotify has adapted its service to allow use across different types of devices, and has also made it possible for users to download music for offline use. In order to allow users to “choose the music [they] love” (Spotify Features, n.d.), Spotify allows users to search or browse collections of friends, artists, and even celebrities. With this music, users can make their own playlists, or add other users’ playlists to their own personal collection. Users can then share individual songs or playlists through the actual Spotify client, Facebook, Twitter, personal blogs, or email. Users can also follow other users, in order to receive updates about other user activity. In regards to contact with and between customers, Spotify excels. As previously stated, Spotify allows users three different ways of finding answers to their questions: through the help (FAQ) section, through “Community Support,” and through a Contact Form that contacts Spotify directly (Spotify Support, n.d.).

Within the “Community,” there exists a FAQ page, which contains users’ answers to other users’ questions, contests for users to enter, polls in which users can vote for their favorite artist to be featured on Spotify, and a description of how to nominate a user as a “Spotify Star” (Spotify Community, n.d.). By identifying a user as a “Spotify Star,” Spotify recognizes that particular user
as a helpful member of the Spotify community, and can allow that user access to the “Wolfpack” (Spotify Star, n.d.). The “Wolfpack” is an exclusive group of users that are allowed access into a private community, can partake in exclusive Skype sessions with Spotify, have direct access to the Spotify community team, and most importantly, can learn new methods of helping other users maximize their Spotify experience (Spotify Wolfpack, n.d.). The main “Community” page also shows Top Solution Authors and Top Taggers, which is another method of not only involving users, but of rewarding users for their involvement (Spotify Community, n.d.). In addition to these methods of user involvement, it should be noted once again that the Lightbox form of advertising available on Spotify is a user-initiated format. These aspects of Spotify reveal it to have a high level of customer involvement.

Of the three strategies put forth by Ballon (2007) in regards to a company’s intended value, which are operational excellence, product leadership, and customer intimacy, Spotify seems to favor a mix of all three. When examining Spotify’s strategy for operational excellence, one must look to their price structure. Including the free tier in the subscription pricing model, Spotify dropped the price of their service below a level where it could attract a critical mass. However, even though operational excellence is taken into account in Spotify’s business model, it does not appear to be the most prevalent strategy for adding value. Product leadership also plays a significant role in Spotify’s approach to business. Through the premium tier in the subscription pricing model, Spotify offers a service that is of premium quality. This tier of service allows users to utilize the service on all of their devices without advertising or a contract, as well as offering users the opportunity to download single tracks and listen to them offline. Spotify extends their premium product above others by also allowing users to take their music across geographical borders and enhancing the sound quality of the streams. This emphasis on developing and providing a premium product to consumers shows that Spotify follows a product leadership strategy. Although the product leadership strategy seems to be more important to Spotify than its operational excellence strategy, I would argue that Spotify’s product leadership strategy is still not the most prominent. This of course leaves its customer intimacy strategy. Throughout its website, Spotify consistently refers to “you.” Spotify refers to itself as a social service and allows its users to integrate the Spotify service into their social lives by connecting through Facebook. Spotify, staying consistent to its desire to build a relationship with consumers, is also open about its data usage and details, presented in a page that is simply written, as opposed to a lengthy, difficult terms of service. When examining the pricing structure, it becomes clear that the free tier in the subscription pricing model serves as a customer conversion tool. Spotify seems to have boundless opportunities that allow users to become involved in bettering the service, as well as finding a like-minded community based on similar musical tastes. Spotify boasts over 24 million active users and 6 million paying subscribers. The ratio of paying subscribers to
active free users is 20% (Spotify Fast Facts, n.d.). This represents a significant amount of paying subscribers. Once users are exposed to the inclusive, constantly improving environment of Spotify, Spotify hopes that these users will choose to convert to a paid subscription. Because of this reason, Spotify’s customer intimacy strategy is the most important in Spotify’s overall business strategy.

In conclusion, Spotify is a digital music streaming service with a distributed combination of assets that also operates as a social experience for its users. With high consumer involvement, several lock-in strategies, and direct customer ownership, Spotify not only builds a relationship with its users and allows users to build relationships with other users, but it also encourages users to become paying subscribers. Spotify depends partially on revenues from paying subscribers as it uses both direct and indirect revenue models to pay for its content and other operating costs. Working through licensing, Spotify does not have a revenue sharing model and is responsible for paying portions of its high and concentrated marginal costs to other actors in the disintegrated music industry value network. Spotify also positions itself as a complement to most other services, but as a substitute to traditional commercial radio. With customer intimacy being one of its main priorities, Spotify truly is a social music service.

5.3 Case Study: Pandora

The digital music streaming service Pandora has a single mission: to play only the music and comedy that its customers will love. Since Pandora started in 2000, it has been constantly developing one of its main projects, The Music Genome Project (Pandora About, n.d.). Pandora allows users to discover new music with the assistance of The Music Genome Project and store these newly-discovered tracks in up to 100 unique “stations” (Pandora About, n.d.). On Pandora’s “About” page (Pandora About, n.d.), a brief description of the name is also provided:

The name Pandora means “all gifted” in Greek. In ancient Greek mythology, Pandora received many gifts from the gods, including the gift of music, from Apollo. She was also very curious. Unlike those gods of old, however, we celebrate that virtue and have made it our mission to regard the musically curious among us with a never-ending experience of music discovery.

Pandora’s users are able to utilize the streaming service by listening to it directly on the internet through Pandora’s website. Users are able to create their own unique stations, but these stations are not exportable to any other streaming service or digital music service. In 2011, Pandora launched its innovative comedy service, Pandora Comedy, that it operates in addition to its already popular digital music streaming service (Pandora Comedy, n.d.). However, for both of these
services, Pandora does not own the content, but instead works directly with rights holders through licensing. In the case of music, Pandora licenses music from actors such as record companies, individual artists, and content aggregators (Pandora Licensing, n.d.). In regards to its comedy offering, Pandora licenses content directly from artists or through agencies (Pandora Licensing, n.d.). Because of these characteristics present in Pandora’s business model, Pandora’s combination of assets can be defined as distributed.

As discussed in the case study of Spotify, the music industry value chain is disintegrated. This characteristic is further acknowledged in Figure 4.

FIGURE 4.

Pandora does not produce or own the rights to the content it streams, and must work through organizations which handle the licensing of the content. A marked difference between Spotify and Pandora, however, is that with Pandora, artists can submit content directly without working through a content aggregator (Pandora Licensing, n.d.). While this eliminates the position of the content aggregators in Pandora’s relationship with the music industry value network, this aspect of Pandora’s business model still does not make it completely vertically integrated. These aspects of the digital music value chain and Pandora’s business model expose each of these entities as disintegrated.

By providing a digital music streaming service, Pandora connects producers to consumers, establishing itself as an intermediary. When examining Pandora’s own position in regards to consumers, Pandora’s customer ownership is direct. Throughout its website, Pandora invokes various techniques to establish itself as an innovative and creative service that enhances
consumers’ music enjoyment. On its “About” page, Pandora discusses its main musical cataloging initiative, The Music Genome Project (Pandora About, n.d.). Pandora itself describes The Music Genome Project as “the most sophisticated taxonomy of musical information ever collected” (Pandora About, n.d.). Musical analysts, who Pandora says have all obtained university degrees in some aspect of music, analyze 450 traits of each song and then place the song into a certain category. Through The Music Genome Project, Pandora believes it will be able to more closely define its users’ tastes than other streaming services. Pandora also offers consumers the opportunity to listen to the streaming service through various devices, including the internet, mobile phones, tablets, and e-readers (Pandora Mobile, n.d.). The intention behind offering its service on multiple devices is to encourage consumers to continue to use the service across all their devices, essentially locking them into using only Pandora. Another lock-in effect used by Pandora is the establishment of The Music Genome Project, which, being “the most sophisticated taxonomy of musical information ever collected,” is obviously not available in any other digital music streaming service. Users can also generate their own personal stations through Pandora. If a user is happy with the music played on his station, he will be more likely to continue using Pandora, as his station is unexportable. This serves as another lock-in effect. Along these same lines, users are able to connect their Pandora account with their Facebook account, allowing for the immediate sharing of stations or tracks. Sharing of stations and tracks is also possible through Twitter or email. This encourages a user’s acquaintances to join Pandora in order to gain access to the recommended content. In addition, users can obtain followers and follow other users directly on Pandora, which, Pandora hopes, will encourage them to continue using the service to avoid losing follows or updates from accounts they follow themselves. Further lock-in strategies include the option to subscribe to the Pandora service in a way that makes it playable in certain automobiles (Pandora Auto, n.d.), that legally allows businesses to stream the service for commercial purposes (Pandora Business, n.d.), and that makes it available in certain consumer electronics, such as Blu-Ray players, high definition television, and Google TV (Pandora Devices, n.d.).

The “Help” page on Pandora’s site contains a frequently asked questions page and an email address that allows users to contact Pandora directly (Pandora Help, n.d.). However, as opposed to Spotify’s “Help” page, for example, Pandora’s “Help” page allows for very little customer involvement. Pandora is also classified as a non-interactive radio station by the American Association of Independent Music (AAIM, n.d.). Once again, these characteristics present in Pandora’s business model show that its customer ownership is operated directly by Pandora and not by an intermediary.

Pandora’s cost sharing model appears to be concentrated overall. Pandora is a publicly traded company (Pandora Privco, n.d.), which would lead one to believe that Pandora’s cost sharing
model is more distributed. While the upfront costs behind Pandora, including research and development, are paid for by venture capital funds, mainly led by GGV Capital and with significant involvement from Allen & Company (Ha, 2010), the marginal costs, such as licensing fees, seem to be paid only by Pandora itself. According to data provided by Pandora, it has paid over $520 million in “content acquisition costs” since 2011, as stated in Pandora’s most recent Statements of Operations (See Appendix E). Other costs are also incurred by Pandora from accepting submissions from artists and entering direct agreements with them. If Pandora agrees to accept an artist’s content, that artist must register with SoundExchange, a non-profit performance rights organization which was appointed by The United States Library of Congress as the sole entity in the United States to collect and distribute digital performance royalties (SoundExchange About, n.d.). After streaming an artist’s work, Pandora then pays SoundExchange licensing fees on behalf of artists and labels. Pandora also pays licensing fees to other royalty-collecting organizations, such as Broadcast Music, Inc. (BMI), the American Society of Composers, Authors and Publishers (ASCAP), and the Society of European Stage Authors and Composers (SESAC) (Pandora Royalties, n.d.). To obtain the most up-to-date data that contains song and artist information, Pandora also pays Rovi. Rovi says its partnership with Pandora has the ultimate goal of delivering entertainment data that enhances the music discovery experience (Rovi Corp., n.d.). As Pandora is constantly adding artists and content to its database, this ongoing partnership with Rovi is a marginal, recurring cost.

To offset its content acquisition costs as well as all other operating costs, Pandora uses both direct and indirect revenue models, and also has multiple sides to the market they serve. In terms of revenue derived directly from consumers, Pandora has two different subscription options: the free option and PandoraOne, the paid subscription option. The free subscription allows users to listen to Pandora on the internet, on home-listening devices, and on most mobile devices (Pandora Free, n.d.). There is a 40 hour per month cap on free mobile listening, but Pandora suggests three solutions to overcome the inconveniences imposed by this cap (Pandora Mobile Cap, n.d.):

1. Users can pay $0.99 to stream Pandora on their mobile device for the remainder of the month.
2. Users can upgrade to PandoraOne for unlimited listening on all devices.
3. Users can continue to listen on only the internet for free.

Pandora states that its mobile cap was introduced because “Pandora’s per-track royalty rates have increased more than 25% over the past three years, including 9% in 2013 alone, and are scheduled to increase an addition 16% over the next two years” (Pandora Mobile Cap, n.d.). Another revenue stream generated directly from consumers is the sale of gift cards. Pandora allows its users to “give the gift of music” to potential users (Pandora Gift, n.d.). The gift cards sold by Pandora are worth a one year subscription to PandoraOne. Once purchased, users are able to email or print the gift card,
which eliminates the need for Pandora to pay postage to mail the card. Pandora also makes its gift cards available in all Target stores, which are supermarkets, in the United States (Pandora Gift, n.d.).

The advertising page on Pandora’s website (Pandora Advertising, n.d.) was viewed in hopes of retrieving information about the different forms of advertising Pandora offers, but the page only consisted of a form with which potential advertisers could contact Pandora directly. While no details were obtained, it can be said that advertising is a key revenue stream for Pandora, as it funds the free subscription option.

Pandora offers businesses the opportunity to stream Pandora, and this serves as yet another revenue stream. Pandora provides business subscriptions for $24.95 per month, and this subscription option is only available in the United States. This subscription option is advertisement-free, since businesses pay for it, but to use it, business must also purchase a DMX player from Pandora’s partner, DMX, for $99 (DMX, n.d.).

Pandora has multiple revenue streams, as previously shown, but it does not seem to have in place a revenue sharing model. It appears that Pandora generally works only through licensing agreements to distribute its royalties. Pandora has several different actors in the digital music value network with which it has agreements, but as shown in the information available on their website, none of these agreements seem to be that of revenue sharing. They are all strictly licensing. It seems that the possibility for a revenue sharing model could exist between Pandora and its partner DMX, which allows businesses to stream Pandora through its specialized player, because this agreement seems like a complementary revenue stream for both companies. However, as no data is available, my analysis will conclude that Pandora does not have any apparent revenue sharing models in place with partners or any other actors in the digital music value network.

Because Pandora’s service is a non-interactive online radio station, Pandora has positioned itself as a direct substitute for traditional AM/FM radio. Not only has it positioned itself as a traditional radio substitute in regards to consumers, but Pandora has also courted advertisers and encouraged them to advertise through Pandora instead of traditional radio stations (AddedValue, 2012). In the Pandora white paper on the changing radio landscape, Pandora urges advertisers and attempts to persuade them that advertising with Pandora is much more effective (AddedValue, 2012).

As can be seen in Figure 5, consumers apparently believe that Pandora has better advertisements than traditional radio.
This is because of Pandora’s ability to personalize advertising through the use of consumer data. Consumers also tend to pay more attention to advertisements played in Pandora as opposed to traditional AM/FM radio. Pandora uses the three statements in the left-hand side of the figure to relay the message to advertisers that advertising on traditional radio causes more inconvenience for the consumer than advertising on Pandora.

Figure 6, shown below, is yet another set of data that is utilized in convincing advertisers that not only is advertising less of an inconvenience for consumers when it is on Pandora, but that consumers also tend to remember advertisements they hear on Pandora.
In Figure 7, the characteristics of advertising with Pandora and with traditional AM/FM radio are compared. Consumers view advertising through Pandora as unique and different, more popular than ever, innovative, and engaging, with a significant difference at a 95% confidence between Pandora and traditional radio in all areas.

Therefore, not only does Pandora position itself as a substitute to traditional AM/FM radio for consumers, but it also positions itself as a substitute to traditional radio in the eyes of advertisers.

In terms of customer involvement, Pandora does not seem to involve its customers in a significant amount of the stages of its business. Therefore, Pandora’s customer involvement is low. Although Pandora works on several devices and is also available in automobiles and for business use, these decisions about different formats of offering its service seem to be made solely by Pandora. Within the Pandora service, users can search for an artist or song and Pandora will create a personalized station for them. Pandora increases a user’s control over his station by allowing the possibility to “like” a track, “add variety” to a station, and shuffle songs (How to use Pandora, n.d.). Users are able to skip songs, but this is limited to 6 songs per hour per station. The user’s music feed shows what his friends are listening to and creates a list of what he has listened to, allowing him to interact with other users. While these mechanisms are added to Pandora’s service to further convenience its customers, these characteristics do not involve customers in the actual development of Pandora’s business. In terms of its direct relationship with its customers, Pandora users must create accounts in order to gain access to features, such as personalized stations. Within their accounts, users can adjust their privacy settings and filter out explicit music. If a user is inactive, Pandora will display an “Are you still listening?” message, which, if the user does not respond, will cause Pandora to close the service (Pandora “Are you still listening?”, n.d.). If a user has an issue related to Pandora,
the user can contact Pandora directly through email. Contacting Pandora by phone is not possible and there is no community support on Pandora’s website, in which users can aid each other.

Due to the low customer involvement in Pandora’s business model, a customer intimacy strategy seems to be somewhat present, but not a main focus. Pandora’s two main intended value strategies are product leadership and operational excellence. In terms of operational excellence, it is important to acknowledge Pandora’s free tier in its subscription model. The free streaming option is unlimited, except on mobile, which has a 40 hour per month cap, and is supported by revenues gained from advertising. However, the advertisements between songs are shorter, making Pandora a more desirable service than its traditional radio competitors. When analyzing Pandora’s product leadership approach, the premium individual subscription plan, PandoraOne, and the business option can be taken into account. PandoraOne offers enhanced quality in the streaming audio, as well as unlimited listening across all user devices. The business subscription plans offers a premium service to commercial actors as, with the purchase of a DMX player and a monthly subscription, businesses can stream Pandora and Pandora will secure all the required rights that usually inconvenience businesses.

In conclusion, Pandora’s non-interactive music streaming service functions in a disintegrated music industry value network and has a distributed combination of assets. Pandora’s customer ownership is direct, but its customer involvement is rather low. Its cost sharing model is generally concentrated, and to offset these costs, Pandora uses both direct and indirect revenue models. None of these revenue models seem to be a revenue sharing model, however. In terms of positioning, Pandora is a substitute to traditional AM/FM radio from the perspectives of both consumers and advertisers. Finally, Pandora’s intended value strategies seem to focus on operational excellence and product leadership and not customer intimacy.

5.4 Case Study: Deezer

Deezer considers itself a “music on demand” service, allowing its customers access to over 25 million songs for free (Deezer Homepage, n.d.). Formerly known as Blogmuisk SAS, Deezer was founded in 2006 and is based in Paris, France (Deezer About, n.d.). Unlike Pandora and Spotify, Deezer is not yet available in the United States, although it may expand into the American market soon (Brandle, 2013).

In order to gain access to Deezer, users must register and stream either directly through Deezer’s website or through the Deezer application. When using Deezer, users can share music through social networking sites, such as Facebook, Twitter, Google+, but also through email. Users can also connect with Deezer through other social sites, such as the Deezer blog, YouTube, Instagram, DailyMotion, and Foursquare (Deezer Partnerships, n.d.). This integration makes
Deezer more than just a music service, it makes it a social service. If a user wants to purchase a
digital music file, Deezer connects directly to iTunes in order to make purchasing more convenient
for its users (Rozat, 2011). Even though Deezer allows customers to listen to and to purchase digital
music, Deezer does not own the content. The content is owned by individual artists and record
companies. Deezer states that it works with over 2,000 labels in order to obtain the widest possible
collection of music for its users (Deezer About, n.d.). Deezer also sustains the OpenDeezer project,
which gives developers “the power to innovate, creating boundless possibilities for music sharing a
discovery” (Deezer Affiliate Program, n.d.). Within this program, Deezer has developed an affiliate
program for developers, allowing developers to earn a share of qualifying revenue. In addition,
Deezer also maintains the Deezer App Studio, Deezer’s own application ecosystem that contains
third party applications that are promoted within Deezer’s interface, and that contain an affiliate link
to Deezer, which is tracked by Deezer itself (Deezer Affiliate Program, n.d.). Some of these
applications promote individual bands and artists, such as the Daft Punk application, but also other
applications such as Spotizr, which is an application especially made to import Spotify playlists to
Deezer. Because of its relationships to all of these external actors, Deezer’s combination of assets is
distributed.

In terms of vertical integration, Deezer is generally disintegrated, as is the digital music
value network. However, advertising that is streamed through Deezer is processed by Deezer’s own
advertising agency, Deezer Media (Deezer Media, n.d.). Therefore, in regards to its advertising
structure, Deezer seems to be somewhat vertically integrated. When taking the entire company into
account, though, Deezer is disintegrated. Deezer has a reliance on developers to develop
applications to enhance the Deezer App Studio, as well as integrate Deezer into third party sites.
Deezer relies on record companies and individual artists to produce music content that it can
license, and therefore stream, for its users. Deezer also has partnerships with Belgacom in Belgium
and Orange and EE in the United Kingdom that is beneficial, as customers of these service
providers can opt to include Deezer in their service. (Deezer Help, n.d.). In addition to partnerships
with the telecommunications industry, Deezer partners with several other players in the
entertainment industries. The reason behind these partnerships is the production of the Adami
Deezer Talent Award (Deezer Talents, n.d.). The partners that help Deezer make this award come to
fruition include music festivals, such as Les Nuits Botanique, Europol, and the Montreux Jazz
Festival; Adami, which is a society for the collective administration of performer’s rights (L’Adami
c’est, n.d.); Zimbalam, which is a digital music distribution service (Zimbalam Distribution, n.d.);
Arte, a European cultural service television channel (Arte About, n.d.); LesInrocks, a cultural
magazine based in France (LesInrocks, n.d.); and Le Mouv’, which is a radio station based in
France (Le Mouv’, n.d.). In addition to the Adami Deezer Talent Award, Deezer also has a
partnership with iTunes, which allows users to purchase digital music files. These partnerships, both for the Talent Award and the enhancement of its streaming service and the greater music industry, show that Deezer operates in a vertically disintegrated manner.

Regarding its customer ownership, Deezer has direct contact with its customers. It acts as an intermediary between record companies and consumers, however. Within Deezer’s service, users can access music recommendations from Deezer, personal recommendations from friends, artist-based radio stations that make finding similar artists easier, and themed radio channels that are constructed by Deezer to bring users with similar tastes together (Deezer Homepage, n.d.). Deezer also has its OpenDeezer initiative, which allows third parties to distribute their application on Deezer’s platform. The “Help” page contains a frequently asked questions section, as well as a form that allows users to contact Deezer directly (Deezer Help, n.d.). Inconvenient to some users, however, this form must be filled out and submitted in English. To afford the website a more personal atmosphere, on the the “Press” page (Deezer Press, n.d.), Deezer identifies the location of the IP address used by the user’s computer, and lists the aspects of Deezer that are offered in that user’s specific country. Deezer also offers a 15 day free trial on both premium subscription options, although only one 15 day free trial can be used (a user access 15 days on each subscription tier for free, only one) (Deezer Offers, n.d.). These characteristics of Deezer make it more personal and more social, which is one of its main aims. In terms of availability and access, Deezer offers users access to 25 million different music tracks in 182 countries. These music tracks come from over 2000 music labels and are streamed by Deezer’s more than 26 million registered members, almost 2 million Facebook fans, and over 500,000 Twitter follows (Deezer Press, n.d.). These significant figures establish a trustworthy reputation for Deezer. The wide range of devices, which include computer, mobile, television, in-car radio, and external audio systems like Sonos and Logitech Squeezebox, further establish Deezer’s trustworthy reputation. Recognizing that the social aspect of music services is important, Deezer’s integration with Facebook, Google+, and other social networks allow for more interaction between Deezer and music fans, and music fans and other music fans. Deezer seems to go to great lengths in order to maintain and enhance its reputation, which further emphasizes the importance of its direct interactions with its users.

Deezer’s cost sharing model seems to be somewhat similar to Spotify’s. Blogmusik, Deezer’s parent company, is a simplified single shareholder company, which is similar to a public limited company in the United Kingdom (French Law Office, n.d). Deezer received initial investments from outside companies, with its main investor being Access Industries, coincidentally the owner of Warner Music Group, which invested $130 million (Access Industries, 2012). This venture capital and investment money was probably used to research and develop Deezer. Deezer seems to have high upfront costs, probably due in part to its constant expansion into new territories,
but also high marginal costs, as it must constantly pay licensing fees and other fees to other actors in the digital music value network. Unfortunately, financial reports are not available, so specific figures cannot be found.

In order to offset its significant marginal costs, Deezer, similar to other streaming services, uses a revenue model which seeks to generate revenue directly from customers, but also from other parties, mainly advertisers. Deezer has a tiered subscription structure that includes three different levels (Deezer Offers, n.d.):

1. Discovery subscription: Free tier that is supported by revenues from advertising; It is unlimited for the first 12 months of use, but limited to two hours per month afterwards.
2. Premium subscription: $/€4.99 per month with no commitment; No advertising in this option as the user indirectly pays for licensing fees; Unlimited listening during the length of the subscription; Enhanced quality of streaming audio; As of July 2013, Deezer offers a 15 day free trial of this subscription tier.
3. Premium+ subscription: $/€9.99 per month with no commitment; No advertising in this option as the user indirectly pays for licensing fees; Unlimited listening on multiple devices during the length of the subscription; Enhanced quality of streaming audio; Offline access to music; Also available on IPTV and audio systems; This option gives users access to exclusive content from Deezer and artists; As of July 2013, Deezer offers a 15 day free trial of this subscription tier.

In addition to generating revenue directly from consumers through the premium subscription options, Deezer generates enough revenue from its advertisers to continuously sustain its free subscription tier, the Discovery tier. However, Deezer does not have any information about advertising on its website, and I could not find any facts or figures from external websites. While it is clear that advertising plays a significant role in Deezer’s revenue model, the extent of the significance of advertising cannot be determined.

From Deezer’s website, it can be deduced that it has a revenue sharing model in place, but only for certain partners. Deezer seemingly works through licenses or other direct market mechanisms with actors such as record labels and individual artists. However, Deezer shares revenue with its developer affiliates. As stated on Deezer’s Affiliate Program webpage,

“As an affiliate, [developers] can earn a share of all qualifying revenue generated by directing users to the Deezer Premium and Premium+ subscriptions. For every new subscriber [a developer brings] to Deezer, [he] will get a one-time payment equivalent to the price of one month’s subscription (excluding vat), payable after the user’s third month of subscription” (Deezer Affiliate Program, n.d.).
Deezer’s Affiliate Program is directly connected to the Deezer App Studio, and works through affiliate links that are placed within third party applications. All data is tracked by Deezer for the affiliate program and is openly viewable by developers at all times. In order for developers to receive a payment from Deezer, a minimum invoice amount of €100 must be reached. Payments will be transferred through Paypal, so developers must have a Paypal account in order to receive any payments from Deezer (Deezer Affiliate Program, n.d.).

Through all of its partnerships with musical festivals, developers, music distribution services, and television and radio stations, Deezer seems to have positioned itself as a complement to many players with the music industry value network. Deezer considers itself a music on demand service, and, through some of its features, appears to have attempted to position itself as a substitute to Spotify and other music streaming service. Particularly with Spotify, Deezer shares several key characteristics. These characteristics include the deep integration with social networks such as Twitter, and particularly Facebook; The ability to import songs and playlists from iTunes (Deezer extends upon this by allowing users to click a link that directs them to iTunes for purchasing digital music files) (Rozat, 2011); and the identical tiered pricing subscription model. Each have tiers that are free, cost $/€4.99, and cost $/€9.99. Therefore, it can be said that while Deezer is complementary to other actors in the digital music value network, it has positioned itself as a substitute to other music streaming services, in particular to Spotify.

In order to compete with Spotify, Deezer must develop ways to compete with Spotify’s levels of customer involvement. Customer involvement is key to the creation of value in Spotify’s service. Through analyzing Deezer’s website, it can be said that Deezer also has high levels of customer involvement in the process of value creation. It is possible to utilize Deezer’s service on a wide range of devices, depending on which subscription tier a member chooses. Included in all subscription tiers, however, is access to 25 million songs and a service that allows users to discover new music that they can listen to anywhere (Deezer Homepage, n.d.). If they enjoy the music that Deezer plays, they have the option to share this music through multiple platforms, which involves them in the process of making Deezer more social. In terms of helping its customers, Deezer’s Help & Contact (Deezer Help, n.d.) page contains a frequently asked questions section, in which customers can rate answers as helpful or not helpful. This allows Deezer to constantly improve its answers. Users also have the option to contact Deezer directly, but only in English. The Deezer application ecosystem also adds value to the service, as it involves users in yet another way. Developers also contribute greatly to value creation in this way.

These aspects of Deezer influence Deezer’s different methods for providing users the intended value of the service. In my analysis, I found that Deezer utilizes some form of all three strategies, but each strategy has a different level of importance. Deezer strives for a degree of
customer intimacy by integrating with several different social networks and requiring users to register for the service. Through this integration and the registration requirements, Deezer is able to access more detailed data about its users while providing them with the music streaming service. This does not seem to be Deezer’s main focus though. When examining the pricing structure of Deezer, the free option, Discovery, exemplifies Deezer’s attempt to obtain operational excellence. This free service, although it obviously does not have the features of the paid subscription options, still allows users to stream over 25 million songs for free, as well as integrate their Deezer account to their social networking accounts. A valuable service can be derived and used without paying. Operational excellence, although seemingly more important than Deezer’s customer intimacy strategy, is still not the most important. The most important strategy for Deezer is its product leadership strategy. Within the two paid subscription options, Premium and Premium+, Deezer offers an increasingly high quality streaming service, depending on which subscription option the user chooses. Already with the Premium subscription, users can avoid all advertising while having access to unlimited streaming. The streaming is delivered with enhanced sound and a mixing desk, allowing users to mix the songs together. The Premium+ option includes all of these same features, as well as offline access, which allows users to access the service through 3G or 4G networks, and also unlimited mobile and tablet streaming (Deezer Offers, n.d.). There are very clear lines drawn by Deezer between the subscription plans, and users are able to choose exactly what they want to get out of the service. Subscribing to the Premium+ option ensures the user will gain access to a high quality, unique service. Because of all of these aspects, Deezer appears to use all three business strategies in the following order of importance (least to most): Customer intimacy, operational excellence, and product leadership.

In conclusion, Deezer’s “music on demand” service has a distributed combination of assets and is disintegrated. Deezer has a direct approach to its customer ownership and high levels of customer involvement in the value creation process. Deezer’s cost sharing model involves private companies investing to cover the upfront costs and the high marginal costs of operating the service. To offset these costs, Deezer uses both direct and indirect revenue models, and Deezer appears to have a revenue sharing model with some partners, but specifics could unfortunately not be found. In regards to developers, Deezer has a very clear revenue sharing model. Through its numerous partnerships, Deezer seems to have positioned itself as a complement to several other players in the music industry value network, but appears to have attempted to position itself as a substitute to radio and other digital music streaming services, particularly Spotify. To compete with Spotify, Deezer uses three strategies intended to give its service value: operational excellence, product leadership, and customer intimacy. Customer intimacy does not seem to be the main focus of
Deezer’s strategy. Operational excellence seems to be more important than customer intimacy, and product leadership appears to be Deezer’s main strategy and goal.

5.5 Comparison of Case Studies

The three digital music streaming services analyzed in this thesis all have stark differences and some similarities. In Figure 8, some general difference can be derived.

FIGURE 8.

<table>
<thead>
<tr>
<th>Company Description</th>
<th># Countries Available*</th>
<th>Active Users</th>
<th>Paying Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spotify Social music service</td>
<td>35**</td>
<td>24 million</td>
<td>6 million</td>
</tr>
<tr>
<td>Pandora Non-interactive radio</td>
<td>3</td>
<td>58.3 million</td>
<td>2.5 million</td>
</tr>
<tr>
<td>Deezer Music on demand service</td>
<td>217</td>
<td>22 million</td>
<td>1.5 million</td>
</tr>
</tbody>
</table>

* Lists of the countries in which each service is available can be found in Appendices D, F, and G

** Number includes different language versions of Spotify within the same country

In Figure 9, the differences between the services in the value network parameters, in relation to Ballon’s (2007) business modelling framework for analysis, can be seen.

FIGURE 9.

<table>
<thead>
<tr>
<th>Combination of Assets</th>
<th>Vertical Integration</th>
<th>Customer Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spotify</td>
<td>Distributed</td>
<td>Disintegrated</td>
</tr>
<tr>
<td>Pandora</td>
<td>Distributed</td>
<td>Disintegrated</td>
</tr>
<tr>
<td>Deezer</td>
<td>Distributed</td>
<td>Disintegrated</td>
</tr>
</tbody>
</table>

In regards to the value network parameters, all three digital music streaming services are identical. Generally, the foundations of their business models are similar, and their approaches to the functional architecture of their business also appear to be generally the same. The comparison between the approach to the functional architecture parameters by the three digital music streaming services can be seen in Figure 10.

FIGURE 10.

<table>
<thead>
<tr>
<th>Cost Sharing Model</th>
<th>Revenue Model</th>
<th>Revenue Sharing Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spotify</td>
<td>Distributed/Concentrated*</td>
<td>Direct and Indirect</td>
</tr>
</tbody>
</table>
The degree to which the cost sharing models of each digital music streaming service vary cannot be determined without access to financial documents from all three companies. The most striking difference between the three companies in regards to their functional architecture is the fact that Deezer is the only one of the three that appears to have a revenue sharing model.

The companies’ three different approaches to the value proposition parameters put forth by Ballon (2007) are presented in Figure 11.

FIGURE 11.

<table>
<thead>
<tr>
<th>Service</th>
<th>Positioning</th>
<th>User Involvement</th>
<th>Intended Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spotify</td>
<td>Complementary</td>
<td>High</td>
<td>CI - PL - OE**</td>
</tr>
<tr>
<td>Pandora</td>
<td>Substitute</td>
<td>Low</td>
<td>PL - OE - CI</td>
</tr>
<tr>
<td>Deezer</td>
<td>Complementary***</td>
<td>High</td>
<td>PL - OE - CI</td>
</tr>
</tbody>
</table>

* In order from most dominant to least dominant  
** CI (Customer Intimacy); PL (Product Leadership); OE (Operational Excellence)  
*** Complementary to other actors, but functions as a substitute to other digital music streaming services

The services of Spotify and Deezer have different degrees of complementarity, while Pandora seems to position itself as only a substitute. Pandora is also the only service with a low level of user involvement, which may be due to the fact that it functions as a non-interactive radio service. Pandora and Deezer seems to rank their strategies of intended value in the same manner, although their approaches to these strategies, which can be exemplified in their services, are different. Spotify ranks its strategies differently and focuses on the “you” of their service, the users.

6. CONCLUSION

In this thesis, literature surrounding the transition of the music industry into the digital market was analyzed, as well as literature that explained the factors that contributed to the emergence of streaming services. The Celestial Jukebox was used as a theoretical framework to approach the study of the delicate relationships between the different actors within the digital music value network. Two-sided markets were then described as they have are significant to streaming
services and characterize the balance that streaming services must find between their two markets in order to be considered profitable and sustainable. A short description of Metcalf’s Law followed and then methods of music subsidization were described.

The methods of subsidization have evolved throughout the existence of the music industry, and with the emergence of digital music streaming services, these new methods include finding digital music streaming services’ attempts to find a balance in their two- or multi-sided markets. A brief overview of policy concerning the music industry was then described, followed by a description of the different approaches to licensing content that are present in current music industry. The discussion about the changes in licensing led into the section on access versus ownership for the consumer. The physical market for music is decreasing, and consumers seem to be demanding access to digital music products as opposed to ownership of them. Some think this is unfair to the consumer, however. Regardless, Digital Rights Management has gained popularity in the music industry. With the use of Digital Rights Management, the music industry allows consumers high access to content, but also controlled access. Ubiquitous access to digital music is similar to a water tap; it can be turned on and off. Digital Rights Management is a tool that allows this. Customer Relationship Management, on the other hand, has the goal of creating a strong bond between business and its consumers. There are several types of Customer Relationship Management technologies that are used in the music industry, but the most prevalent seems to be collaborative filtering. A significant downfall of Customer Relationship Management technologies is that they become a burden though. Consumers tend to favor recommendations from people they know, as opposed to recommendations from a machine.

Following this, a brief history of the music industry was described. The history was described from four different perspectives: the music industry’s evolution from a product industry to a service industry; the evolution of consumer empowerment within the music industry; the evolution of the music business; and the internet’s effect on the music industry. The emergence of digital music streaming services were then described through three different, but similar, perspectives: changes in consumer behavior, recent technological changes, and changes in the music business and industry. Brief conclusions were then drawn about the emergence of digital music streaming services.

The expert interview used for this thesis was with Mr. Olivier Maeterlinck, Director of the Belgian Entertainment Association. During the interview, Mr. Maeterlinck discussed several of the topics covered in the literature review portion of this thesis. These topics included the emergence of streaming services, streaming services’ effect on iTunes, the question of access versus ownership, and whether or not digital music streaming services are a sustainable option for future revenue generation in the digital music market.
The empirical portion of this thesis followed, which included three separate case studies: Spotify, Pandora and Deezer. The description of the framework of analysis, Ballon’s (2007) conceptual paper, preceded the case studies. A comparison of the case studies followed, in which all three digital music streaming services were compared to each other with the information obtained from the analysis.
6. ANNEX

A. List of individuals or companies contacted for an interview

B. List of interview questions

C. Spotify “Fast Facts” Sheet

D. List of countries in which Spotify is available

E. Pandora Statement of Operations

F. List of countries in which Pandora is available

G. List of countries in which Deezer is available

H. List of Figures
A. List of individuals or companies contacted for an interview (in order of contact)

1. Christian Buhl, music producer
2. Moses Avalon, American music industry consultant
3. Dr. Magali Dubossen-Torbay, director of the Haute Ecole de Gestion de Genève
4. Dr. Jean-Claude Usunier, professor at HEC Lausanne
5. Dr. Yves Pigneur, professor at the University of Lausanne
6. Auvibel, collective rights management company
7. Spotify
8. Deezer
9. Pandora
10. Disney Belgium
11. Dr. Kornelia Van Der Beek, professor at the University of Koblenz
12. Dr. Tim Paul Thomas, professor at Wissenschaftliche Hochschule für Unternehmensführung
13. SIMIM, member of IFPI Belgium
14. Olivier Maeterlinck, Director of the Belgian Entertainment Association
15. Mark Mulligan, American music industry consultant
16. Sony Music Belgium
17. Universal Music Belgium
18. Warner Music Benelux
19. Johan Van Roy, Marketing Director Belux, Deezer
20. American Society of Composers, Authors and Publishers
B. List of interview questions

1. How are streaming services affecting the music industry value chain?

2. Why are streaming services becoming more prevalent in the market?

3. In what ways do streaming services affect the relationship between artists, record companies and consumers?

4. Are streaming services a sustainable option for positive revenue generation? Why or why not?

5. What are the alternatives to streaming services?

6. How does Customer-Relationship Management (CRM) software enhance the user experience within streaming services?

7. Are Digital Rights Management (DRM) softwares effectively used by streaming services? Why or why not?

8. In what ways do streaming services affect peer-to-peer filesharing networks?

9. What effects did/does iTunes have on the emergence of streaming services?

10. What is your stance on the access vs. ownership debate?
Hello. Spotify here.

Here’s what we do.

Spotify brings you the right music for every moment - on your computer, your mobile, your tablet, your home entertainment system and more.

If you know what you want, just search and hit play. Or discover new music by browsing the collections of friends, artists and celebrities. Or sit back and enjoy Spotify radio.

And because music is social, so is Spotify. Share music on Spotify, Facebook, Twitter, your blog and via email. You can also follow other cool people - so when they discover music, you do too.

Soundtrack your life with Spotify.

Here’s how you listen.

Free
Instant music for free - made possible by ads.

Unlimited
Unlimited, ad-free music on your desktop & laptop.

Premium
Listen everywhere with unlimited, ad-free music on all your devices. Plus, better sound quality and offline listening.

Here are our numbers.

Paying subscribers:
Over 6 million

Active users:
Over 24 million

Number of songs:
Over 20 million* available globally

Number of playlists:
Over 1 billion have been created so far

Revenue paid to rightsholders since launch:
Over $500 million

Number of countries in which Spotify is available:
28 - USA, UK, Australia, New Zealand, Germany, Sweden, Finland, Norway, Denmark, France, Spain, Austria, Belgium, Switzerland, The Netherlands, Ireland, Luxembourg, Italy, Poland, Portugal, Mexico, Singapore, Hong Kong, Malaysia, Lithuania, Latvia, Estonia and Iceland.

* Number of tracks licensed globally. Catalogue size varies in each country.
D. List of countries in which Spotify is available

1. Andorra
2. Australia
3. Belgium
4. Denmark
5. Germany
6. Spain
7. Estonia
8. Finland
9. France
10. Hong Kong
11. Iceland
12. Ireland
13. Italy
14. Latvia
15. Liechtenstein
16. Lithuania
17. Luxemburg
18. Malaysia
19. Monaco
20. Mexico
21. The Netherlands
22. New Zealand
23. Norway
24. Poland
25. Portugal
26. Switzerland
27. Singapore
28. Sweden
29. The United States of America
30. The United Kingdom
31. Austria
### E. Pandora Statement of Operations

<table>
<thead>
<tr>
<th>Period</th>
<th>Revenues</th>
<th>Costs and expenses</th>
<th>Net income (loss)</th>
<th>Other income (expense)</th>
<th>Net income (loss) attributable to common stockholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>20XX Q1</td>
<td>$100,000</td>
<td>$90,000</td>
<td>$10,000</td>
<td>$1,000</td>
<td>$9,000</td>
</tr>
<tr>
<td>20XX Q2</td>
<td>$110,000</td>
<td>$105,000</td>
<td>$5,000</td>
<td>$500</td>
<td>$3,500</td>
</tr>
<tr>
<td>20XX Q3</td>
<td>$120,000</td>
<td>$110,000</td>
<td>$10,000</td>
<td>$700</td>
<td>$4,800</td>
</tr>
<tr>
<td>20XX Q4</td>
<td>$130,000</td>
<td>$115,000</td>
<td>$15,000</td>
<td>$900</td>
<td>$5,900</td>
</tr>
</tbody>
</table>

Note: All amounts are in thousands, except per share amounts.
F. List of countries in which Pandora is available

1. Australia
2. New Zealand
3. The United States of America
G. List of countries in which Deezer is available

1. The United Arab Emirates
2. Afghanistan
3. Albania
4. Armenia
5. Angola
6. Argentina
7. Austria
8. Australia
9. Azerbaijan
10. Bosnia and Herzegovina
11. Bangladesh
12. Belgium
13. Burkina Faso
14. Bulgaria
15. Bahrain
16. Burundi
17. Benin
18. Brunei
19. Bolivia
20. Brazil
21. Bhutan
22. Botswana
23. Belarus
24. Canada
25. Cocos Islands
26. Democratic Republic of the Congo
27. Central African Republic
28. Republic of the Congo
29. Switzerland
30. The Ivory Coast
31. Cook Islands
32. Chile
33. Cameroon
34. Columbia
35. Costa Rica
36. Cape Verde
37. Christmas Island
38. Cyprus
39. Czech Republic
40. Germany
41. Lichtenstein
42. Djibouti
43. Denmark
44. Greenland
45. Dominica
46. Algeria
47. Ecuador
48. Estonia
49. Egypt
50. Western Sahara
51. Eritrea
52. Spain
53. Ethiopia
54. Aland Islands
55. Finland
56. Fiji
57. The Falkland Islands
58. Micronesia
59. Andorra
60. Saint Barthélemy
61. France
62. Saint Martin (French Antilles)
63. Martinique
64. New Caledonia
65. French Polynesia
66. Saint Pierre and Miquelon
67. Reunion
68. Wallis and Futuna
69. Mayotte
70. Gabon
71. The United Kingdom
72. Guernsey
73. Gibraltar
74. Isle of Man
75. Jersey
76. Saint Helena, Ascension and Tristan da Cunha
77. British Virgin Islands
78. Georgia
79. Ghana
80. Gambia
81. Guinea
82. Equatorial Guinea
83. Greece
84. Guatemala
85. Guinea-Bissau
86. Honduras
87. Croatia
88. Hungary
89. Indonesia
90. Ireland
91. British Indian Ocean Territory
92. Iraq
93. Iceland
94. Italy
95. San Marino
96. Holy See (Vatican City)
97. Antigua and Barbuda
98. Anguilla
99. Barbados
100. Bermuda
101. Bahamas
102. Belize
103. Dominican Republic
104. Grenada
105. Guyana
106. Haiti
107. Jamaica
108. Saint Kitts and Nevis
109. Cayman Islands
110. Saint Lucia
111. Montserrat
112. Turks and Caicos Islands
113. Trinidad and Tobago
114. Saint Vincent and the Grenadines
115. Jordan
116. Kenya
117. Kyrgyzstan
118. Cambodia
119. Kiribati
120. Comoros
121. South Korea
122. Kuwait
123. Kazakhstan
124. Laos
125. Lebanon
126. Sri Lanka
127. Liberia
128. Lesotho
129. Lithuania
130. Luxemburg
131. Latvia
132. Libya
133. Morocco
134. Moldova
135. Montenegro
136. Madagascar
137. Marshall Islands
138. Macedonia
139. Mali
140. Mongolia
141. Mauritania
142. Malta
143. Mauritius
144. The Maldives
145. Malawi
146. Mexico
147. Malaysia
148. Mozambique
149. Namibia
150. Niger
151. Norfolk Island
152. Nigeria
153. Nicaragua
154. Aruba
155. The Netherlands
156. Suriname
157. The Faroe Islands
158. Norway
159. Nepal
160. Nauru
161. Niue
162. New Zealand
163. Oman
164. Panama
165. Peru
166. Papua New Guinea
167. The Philippines
168. Pakistan
169. Poland
170. The Pitcairn Islands
171. Portugal
172. Palau
173. Paraguay
174. Qatar
175. Romania
176. Serbia
177. Russia
178. Rwanda
179. Saudi Arabia
180. The Soloman Islands
181. Seychelle
182. Sweden
183. Singapore
184. Slovenia
185. Svalbard and Jan Mayen
186. Slovakia
187. Sierra Leone
188. Senegal
189. Somalia
190. São Tomé and Príncipe
191. El Salvador
192. Swaziland
193. Chad
194. French Southern and Antarctic Territories
195. Togo
196. Thailand
197. Tajikistan
198. Tokelau
199. East Timor
200. Turkmenistan
201. Tunisia
202. Tonga
203. Turkey
204. Tuvalu
205. Tanzania
206. Ukraine
207. Uganda
208. Uruguay
209. Uzbekistan
210. Venezuela
211. Vietnam
212. Vanuatu
213. Samoa
214. Yemen
215. South Africa
216. Zambia
217. Zimbabwe
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6. Pandora users remember ads (AddedValue, 2012)
7. Pandora characteristics of advertising (AddedValue, 2012)
8. Comparison of Spotify, Pandora and Deezer
9. Case studies: value network parameters
10. Case studies: functional architecture parameters
References


Priest, E. (2008). Why emerging business models and not copyright law are the key to monetising content online. Sydney: NSW.


