

University of Arkansas, Fayetteville
ScholarWorks@UARK

Economics Undergraduate Honors Theses


Economics

5-2016

Are Music Streaming Services Healthy for the Recorded Music Industry?

Elizabeth W. Pittman
University of Arkansas

Follow this and additional works at: <http://scholarworks.uark.edu/econuht>

 Part of the [Arts Management Commons](#), [Income Distribution Commons](#), [Industrial Organization Commons](#), and the [Technology and Innovation Commons](#)

Recommended Citation

Pittman, Elizabeth W., "Are Music Streaming Services Healthy for the Recorded Music Industry?" (2016). *Economics Undergraduate Honors Theses*. 18.
<http://scholarworks.uark.edu/econuht/18>

This Thesis is brought to you for free and open access by the Economics at ScholarWorks@UARK. It has been accepted for inclusion in Economics Undergraduate Honors Theses by an authorized administrator of ScholarWorks@UARK. For more information, please contact scholar@uark.edu.

Are Music Streaming Services Healthy for the Recorded Music
Industry?

An honors thesis submitted in partial fulfillment of the requirements for
the degree of a Bachelors of Science in Business Administration in
Economics

By
Elizabeth Walsh Pittman

Advised by
Dr. Ronn Smith
Sam M. Walton College of Business
University of Arkansas, Fayetteville
BSBA in Economics, 2016

May 2016
University of Arkansas

Table of Contents

Introduction 3

Streaming Services’ Effect on Recorded Music Industry Revenue..... 9

Spotify: A Micro-scale Example 13

Evaluation of the Label Environment 18

The Legal Environment of Streaming 20

Conclusion 24

Endnotes 26

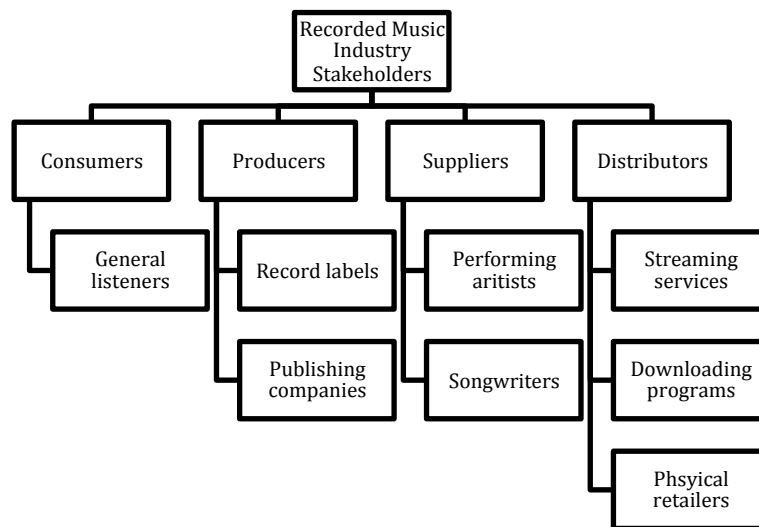
Introduction

To listen to music just a few hundred years ago would require hundreds of miles of travel, tons of wood and metal and ivory and copper strings, construction of a stage and audience platforms, human capital to perform the music of course, and *lots* of money. All of these variables would combine to produce an auditory experience of approximately 45 minutes total. Today, a single musician can produce the sound of dozens with just a laptop, and it can be consumed relatively cheaply with the click of a button. Digital services such as iTunes or Spotify give listeners access to enough music to last 140,000 years¹ in an intangible format. As incredible as this metamorphosis is, it does beg the question: is all change a good thing?

With music being one of the central pillars of culture, alterations to the music industry often have acute social effects and are manifested in day-to-day life. Music radio, per se, made music the standard audio choice in car rides². The Walkman radio radicalized the portability of music and the design of headphones³. Napster had over 20 million users within 9 months of launching⁴, which Steve Jobs usurped with the generation-altering introduction of iTunes in 2001. Now, his once impenetrable fortress of music access is being threatened by taste-prediction capable, on demand streaming services, such as Spotify. Americans listen to an average of 4 hours of music per day⁵ and it is an arms race of who gets the profit from that daily consumption. Although consumers reap the benefits of this competition, it is putting the longevity of the industry in a precarious situation. Alarming, the revenue of the music industry has been in nearly constant decline since 2006⁶, perhaps due to these rapid changes in methods of music consumption.

The goal of this paper is to zoom in on the most recent appendage of the digital music revolution: streaming services. From the consumer side, this is a wonderful addition to the industry that increases accessibility to and convenience of the daily music fix. However, streaming services are undeniably radicalizing the make-up of the music world. Such an intense change is normal in the commercial entertainment sector, with new technology bringing a new medium to capture the market every decade or so⁷. However, it is hard to tell if this transition from downloads to streaming is as healthy as the other changes in distribution methods in music's past.

It is important to note the difficulty that comes with drawing a single conclusion about the impact of streaming on the entire recorded music industry.



When looking at the different stakeholders of the recorded music industry, many of them have opposing values. For example: more affordable access to music is a benefit to the average music consumer, but can be detrimental to artists who pursue music for a living. Furthermore, within specific stakeholders themselves, there are

differences. There are artists who would rather have their music widely available and recognized regardless of profit, such as the band Moke Hill, with band member Ben Berry graciously claiming that “Spotify has exposed [their] songs to an audience who would otherwise have little chance of finding [them].”⁸ Conversely, there are also artists who seek higher payment for their work—even if that means making it exclusive to more expensive platforms (Beyoncé with Tidal, per se⁹). The music industry is based on consumer preferences, producer preferences, supplier preference, and distributor preferences. Therefore, to ascribe a single adjective to the entire industry’s feelings about streaming services is not only impractical, but also impossible.

As such, this paper will break down the effects of streaming services and examine the micro-level changes they are causing in the music industry, as well as how certain stakeholders are reacting or can react to these changes. There are four main points this paper will focus on. The first will be a “big picture” look at how much streaming services are contributing to the revenue of the recorded music industry. Second is an in depth look at the ever-prevalent complaints of musicians that Spotify, a popular streaming service, is unfair or detrimental to their livelihood. Third, this paper will determine if there is any merit to the “indie label revolution”¹⁰ supposedly spurred by streaming services. Finally, a glimpse beyond the recording studio to the courtroom to evaluate the pertinent copyright laws that regulate streaming services.

A Brief History of the Digital Music Revolution

The 2000s have been revolutionary in the music world, with digital technology disrupting the status quo of music distribution multiple times. The release of Napster in mid-1999 radically altered the industry heading into the turn of the millennium. Napster allowed file sharing of MP3 audio files across the Internet—essentially a mainstream piracy service. Napster still holds the record for the fastest business growth rate recorded¹¹, beating Google and Facebook. Although copyright law kept the longevity of Napster to a minimum*, the impact was still made. Music consumers would no longer settle for the traditional physical sales mediums.

In 2001, Steve Jobs released Apple's response to the Napster-craze: iTunes¹². The software was actually available beginning in 1998 under the name of SoundJam MP, but lacked popularity due to the free downloads attainable on Napster. Once Apple acquired SoundJam MP, they added the ability to burn CDs, nixed the recording features, and released iTunes as a Mac OS 9 exclusive application¹³. iTunes Store was then released in 2003 and, working in tandem with the innovative iPod products, Apple dominated the digital market for rest of the decade¹⁴.

While Apple had their response to Napster, the industry's response was MusicNet in 2001¹⁵. With a monthly subscription fee of \$9.95 (uncannily similar to today's popular streaming services), MusicNet provided a monthly allotment of 100

* Napster was shut down in July 2001 by an injunction by the United States Court of Appeals for the Ninth Circuit.

† The net income of Vevo alone was \$275 million dollars in 2014. It is estimated that 40% of all video streams on YouTube are music related.

song downloads and 100 song streams from their library of around one million legally licensed songs¹⁶. Overshadowed by the Apple software/iPod bundles, however, the service never really gained traction in the market. Plus, any downloads expired after the 30 day download period, creating some frustration with consumers. AOL acquired it in 2005, but MusicNet ultimately fizzled out of existence a few years later¹⁷.

Pandora Internet Radio is a vestige of the Napster-response era that is still popular today. Pandora.com launched in 2005, using mathematic algorithms to construct “personalized” radio stations¹⁸. Although it initially charged mandatory fees for all access, it quickly adopted a two-tier model: uninterrupted radio for a subscription fee, or advertisement-riddled radio for free (referred to as a “freemium” model in the entertainment industry). By 2013, Pandora had captured 70% of all Internet radio usage, and nearly a tenth of all radio usage¹⁹. As the first successful music platform that did not require pay per downloads, Pandora set the standard operating structure for similar services:

The Pandora Process

In 2013 it was reported that 80% of total revenues for Pandora Radio came from advertisements on their free tier²⁰. Like all streaming services, it has a highly variable cost structure with little to no control on content acquisition. It follows a common three-step process to obtain and sustain streaming rights to music that is now the norm for digital music distribution²¹:

1) SoundExchange is a non-profit organization on behalf of recorded audio copyright owners. SoundExchange will collect the content fees from streaming services and then handle the distribution of that revenue to the copyright holders and, ultimately, the artists. The cut of these fees artists get is set by their contract with their label (more on this later). The vast majority of Pandora's (and other streaming services') cost goes to paying content fees to SoundExchange.

2) While SoundExchange distributes royalties to labels, licensing fees must be paid to songwriters, composers, and publishers via other middlemen. Broadcast Music, Inc. (BMI), American Society of Composers, Authors, and Publishers (ASCAP), and the Society of European Stage Authors and Composers (SESAC) are the most common worldwide. Similar to SoundExchange, they collect fees—in this case, for licensing, not copyright—from digital services and distribute them to license holders as designated in contracts.

3) For artist information and song classification, Pandora and similar services pay the third and final cost to the Rovi Corporation. Their entertainment metadata is vital to the organization and on-demand or on-search access to music. This data helps digital services create cohesive playlists with algorithms, as well as codes music for specific searches.

Spotify is the most recent development in the digital music realm. Launched in 2008, Spotify is the closest legal program to serve Napster's mission: unlimited

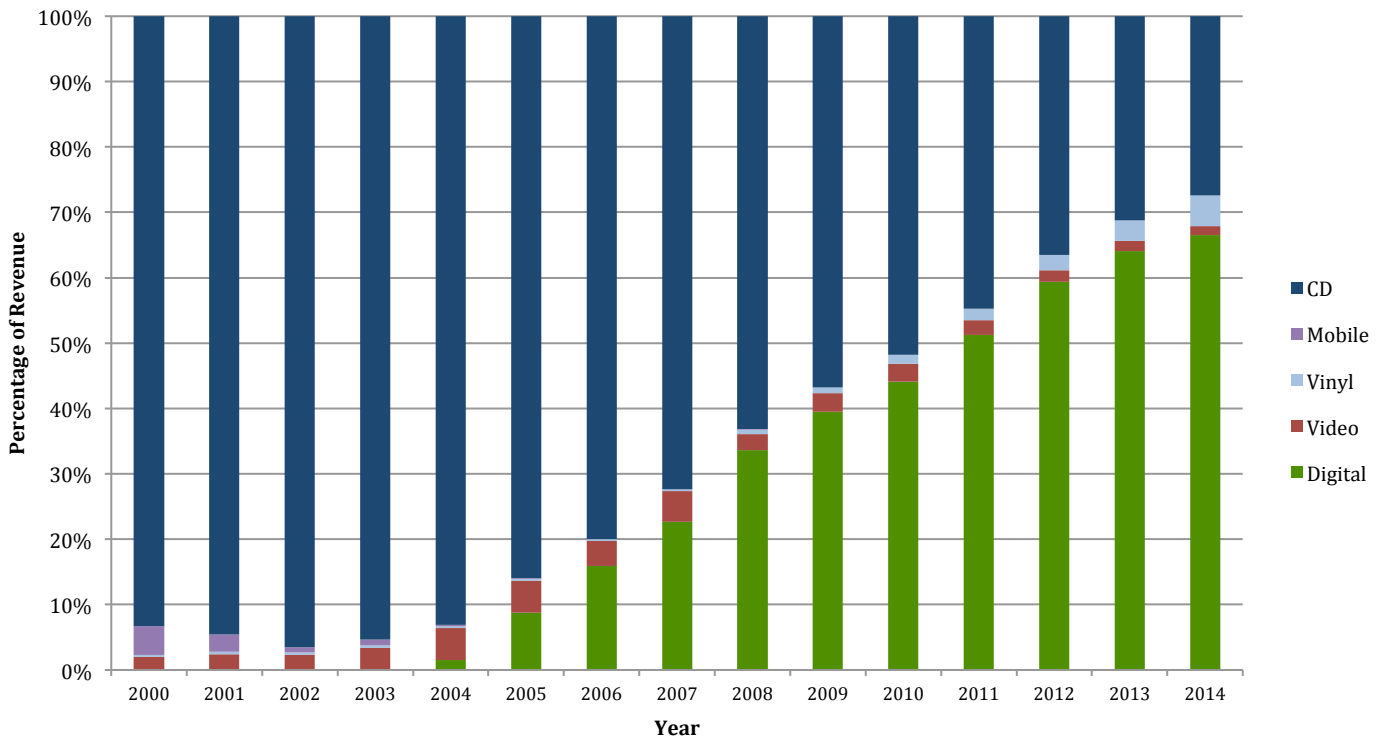
music on demand²². Beginning in Sweden, a country notorious for its malleable intellectual property laws²³, founder Daniel Ek was able to bring in American labels to his initially Swedish market. Fear of new competitors quickly expanded Spotify to a global scale by 2011, and MP3 piracy in the United States began to drop²⁴. However, as the service gained popularity in the main revenue generating markets (i.e. North America, Western Europe, and Australia), artists began expressing frustration with Spotify's royalty payments. This paper will go in to more depth concerning Spotify in a future section.

1. Streaming Services' Effect on Recorded Music Industry Revenue

The revenue of the music industry has been in decline since 2006. However, so have many of Western countries' economies (which are the main consumption centers of music). Keeping in mind that streaming services started to gain momentum in the market around 2007, it is difficult to delineate the causing factors of the industry's decline. The United States of America, the anchor of the music industry, entered a serious recession in December of 2007. It is believed that this decline in average consumer income caused the cheapest music medium, AM/FM radio, to set a record number of listeners in 2009 with 45.67 million people tuning into the relatively archaic sound waves in the new millennium's digital world²⁵. However, changes in the music industry actually started occurring a few years earlier than the recession, as Apple Music began to gain customers with its legally attainable digital music library of iTunes in the early 2000s.

The following chart shows the revenue contributions of the five main sales mediums of recorded music from 2000-2014: physical CDs (CD), music purchased and personalized for cell phone ringtones (Mobile), physical vinyl (Vinyl), music video purchases (Video), and both digital downloads and streaming (Digital).

Industry Revenue Breakdown

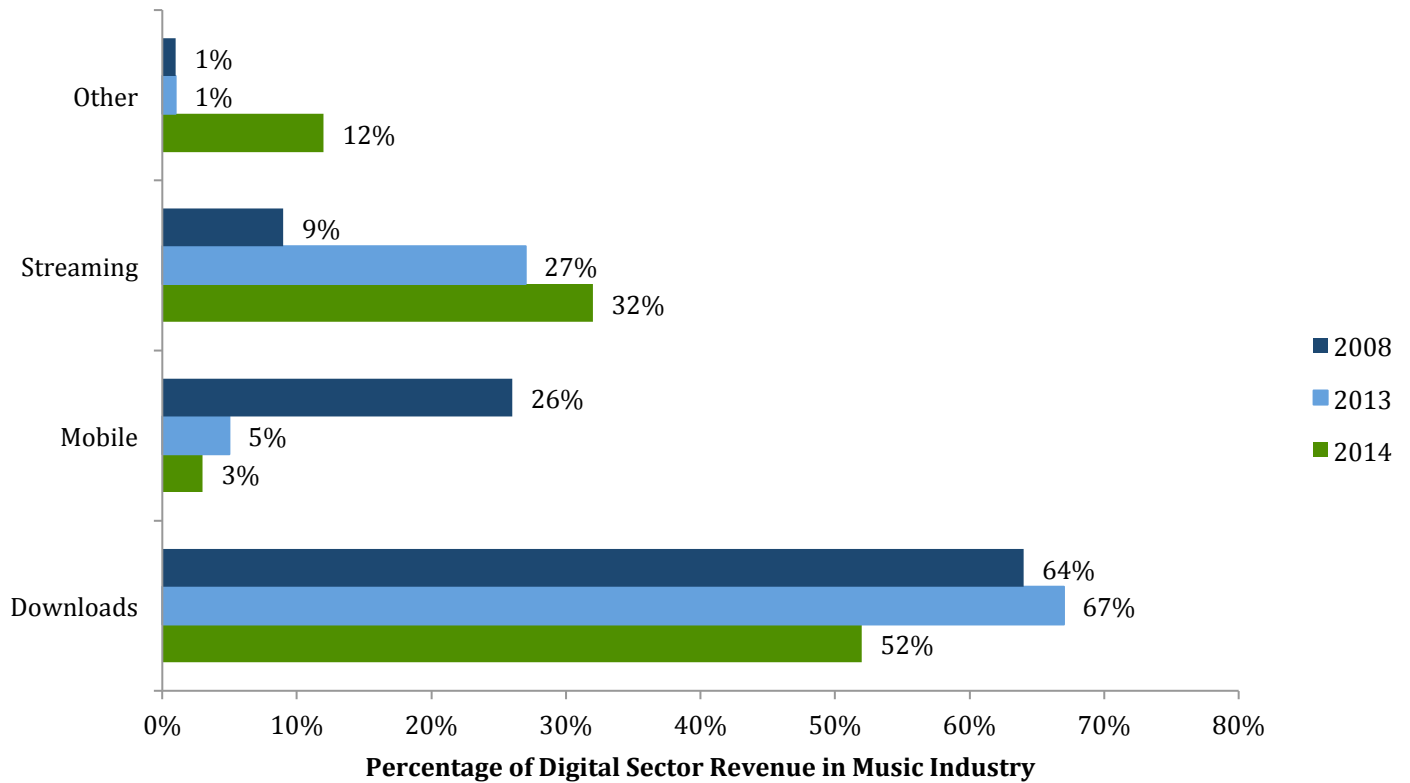


Statistics provided by the International Federation of the Phonographic Industry

As shown, the recorded music industry began to radically change in 2004, with a medium that was non-existent in 2000 supplying approximately two thirds of all revenue a decade and a half later.

Perhaps more interesting, however, is the revolution going on within the digital sector itself. The stronghold of downloads (iTunes, mainly) is being chipped away by streaming services. The following figure shows the evolution of the digital sub-industry in America just over a few years.

Digital Sector of the US Recorded Music Industry Revenue Breakdown

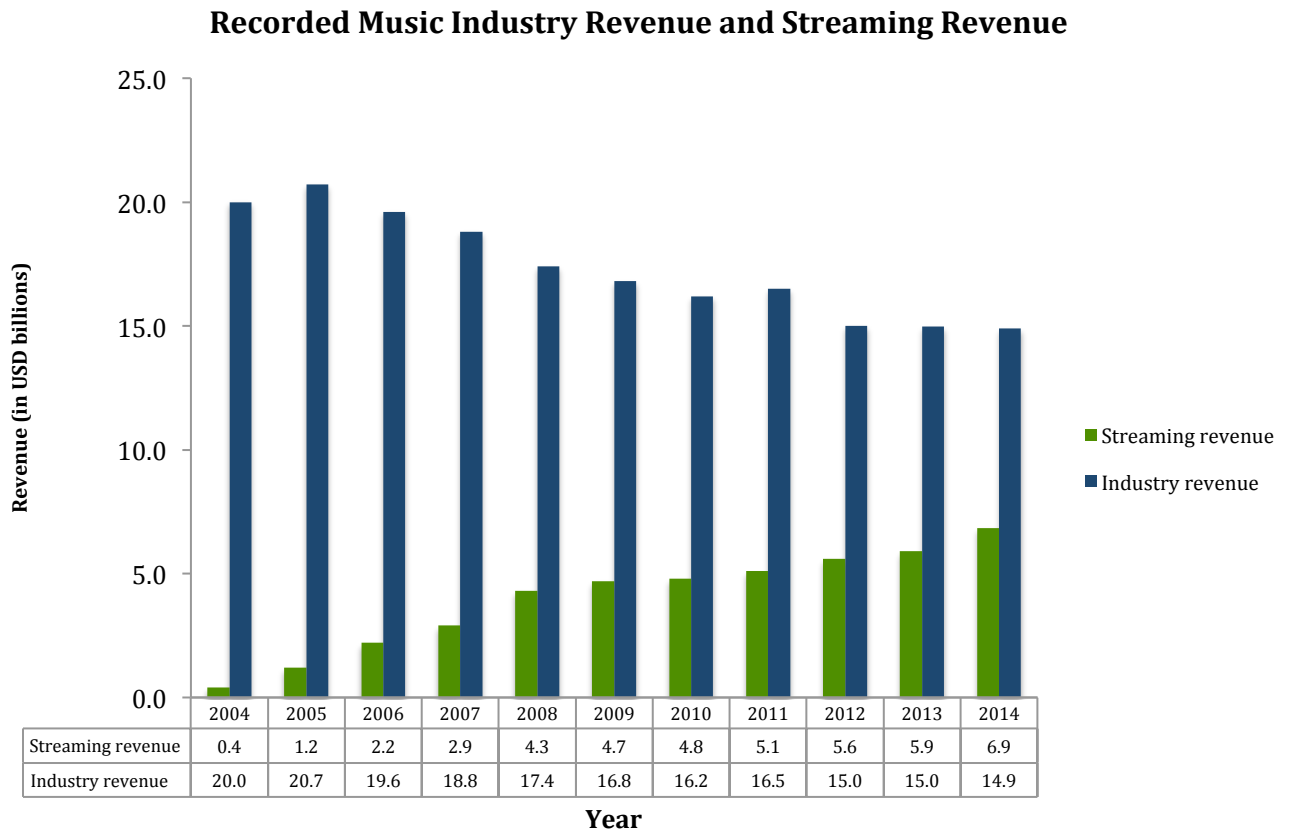


Statistics provided by the International Federation of the Phonographic Industry

Downloads had a dominant position in the US digital sector of 2008 with 64% of the revenue captured. Downloads continued to capture the majority of the market over the course of the next 5 years. The mobile industry shrank to a ninth of its size by 2014, but the proportion of digital revenue generated by streaming more than tripled between 2008 and 2014. The increase in 2013 alone caused more growth in the streaming sector than the previous 5 years combined. By 2014, music downloads were on the decline, still supplying over half of the digital revenue, but with projections showing that streaming services will soon overtake downloads in the US²⁶. The “Other” section, mainly comprised of YouTube streams of music videos

by companies such as Vevo^{†27}, is also growing at an alarming pace, further chipping away at the downloads portion of digital revenue.

The combination of decreasing industry revenue and increasing proportion of streaming revenue is interesting.



Statistics provided by the International Federation of the Phonographic Industry

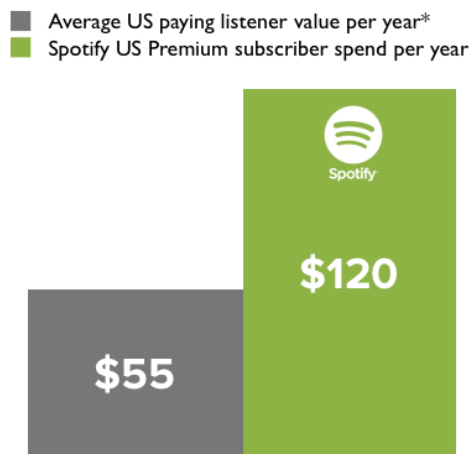
As shown in this graph, industry revenue and streaming revenue are moving in opposite directions. While diversification is key to any consumer industry, control of the recorded industry market by a single medium is relatively common. This

[†] The net income of Vevo alone was \$275 million dollars in 2014. It is estimated that 40% of all video streams on YouTube are music related.

increasing proportion of revenue generated by streaming is to a degree alarming, but not necessarily out of line with previous market shares of vinyl, CDs, or even downloads²⁸.

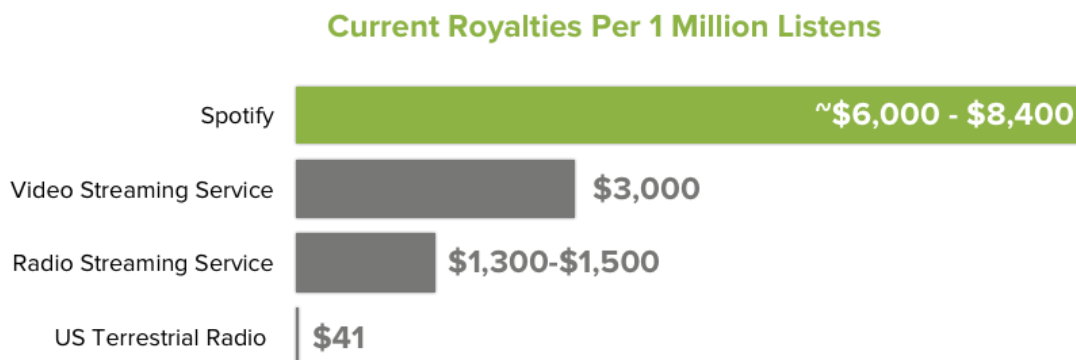
2. Spotify: A micro-scale example

It is easy to see how the industry and its consumers are confused about how Spotify affects the future of music. An often publicized pro-Spotify argument is that the streaming service is actually *increasing* industry revenue, which seems counter-intuitive because consumers are attracted to it by its perceived cost-effectiveness. The company claims that the average American listener who pays for music will spend \$55 per year on music²⁹. However, should that consumer begin to use Spotify Premium as their music source at the \$9.99 monthly fee, they will spend essentially \$120 per year on music: a \$65 revenue increase per person, an appreciation of 118%. So, while explaining how it is healthy for the industry, Spotify highlights how it is a more expensive alternative to the average paying music listener's expenditure.



Graphic supplied by the "Spotify Explained" page on Spotify's website

Their strongest point comes, however, in their evaluation of the entire music consuming population of the US—both paying and non-paying. When using this larger population, the average contribution to the music industry per person is \$25.00³⁰. However, once Spotify pools its revenues from both the paid subscriptions and the advertisements played on the free-tier, and then divides that by all of the users of Spotify, the average contribution per Spotify listener to the music industry is \$41.00³¹. Spotify claims that the value of their user will continue to increase, as the proportion of subscribing consumers is increasing relative to their free-tier users^{32‡}.



Graphic supplied by the "Spotify Explained" page on Spotify's website

While royalties will be more fully addressed in the next sections, the company claims to be the best of the streaming options as fair as royalty payments go. It is worth noting, however, that it is too early to see if Spotify will be a better

‡ This is reliant on the assumption that the revenue brought in to Spotify per free listener is less than \$120, which the company never directly addresses, but can be inferred.

alternative for the industry than Apply Music—Apple’s streaming service that was released less than 11 months ago³³.

The Artist’s Cut: Spotify vs. Downloads

There are two different routes an artist can go when they begin creating music for profit: sign with a label, or go unsigned. Being an unrepresented artist has its risks and it certainly the more difficult route, as the artist won’t have access to label connections and management. However, unsigned artists will get a larger piece of the revenue pie by cutting out a third party. Spotify claims that their revenue distribution to musicians is more than the industry average of 60%, claiming that they distribute “around 70%” of revenue to owners³⁴. Of course, the royalty rates artists receive differs in every contract.

Spotify reported more than 7 billion hours of music was listened to on their service in 2014, and the length of an average song is 3 minutes and 20 seconds³⁵. This means that Spotify had approximately 68,571,428,571 streams that year. Spotify also generated \$1.4 billion of revenue. Therefore, the average revenue per stream is about \$0.020. With around 70% of that going to the owners, the labels receive \$0.014 per stream. An incredibly generous contract with a signed artist, to create an easily followed hypothetical displaying the principal of artist portion-share of revenue, is 50% of the label’s cut (the industry reported average is around 30%³⁶). So, a signed artist will receive roughly \$0.007 per stream, which Spotify

affirms on their website[§]. An unsigned artist will receive the full approximately \$0.014 per stream.

The minimum wage of the United States is \$7.25/hour³⁷. Therefore, a full-time, minimum wage worker would make \$1,160 per month. In order to meet that threshold, an artist making all of their money from Spotify would need 82,857 streams per month if they were unsigned, or 165,714 streams per month if they were signed (again, with an incredibly generous contract with their label). In 2014, Spotify reported that it had nearly 75 million users. Therefore, to receive minimum wage, an unsigned artist would have to rely on at least 1.11% of all Spotify users to listen to their music, or 2.22% if they were signed. That is a significant risk to the artist if they are depending on their work to generate money to live on, and often times the revenue eventually tricked down to musicians is seemingly pointless to anyone besides the top recording artists in the world³⁸.

Spotify reported that The Weeknd's album, *Beauty Behind the Madness*, was its #1 album of 2015 with over 60 million streams³⁹. The album has 14 songs, an approximated 840 million streams, and then of course there are additional streams of single songs, so the total number of streams of the songs from the top album of 2015 is can be approximated at around 1 billion. The Weeknd is signed with Republic Records of Universal Music Group⁴⁰. It is unknown what The Weeknd's cut is with his label, but continuing the previous best-case scenario, The Weeknd could receive 50% of the label's cut. One billion streams generates around \$7,000,000 of

[§] It is worth noting that this is based off of uncommonly high revenue cut for artists, and Spotify does not disclose the data they used to calculate their \$0.007 value.

revenue for The Weeknd. In addition, he sold approximately 1.38 million albums on download platforms (iTunes) and physical copies at \$17.99⁴¹. Assuming the same 50% cut, he made approximately \$12,413,100 from non-streaming sales. Combined, that is \$19,413,000 for The Weeknd from his #1 album.

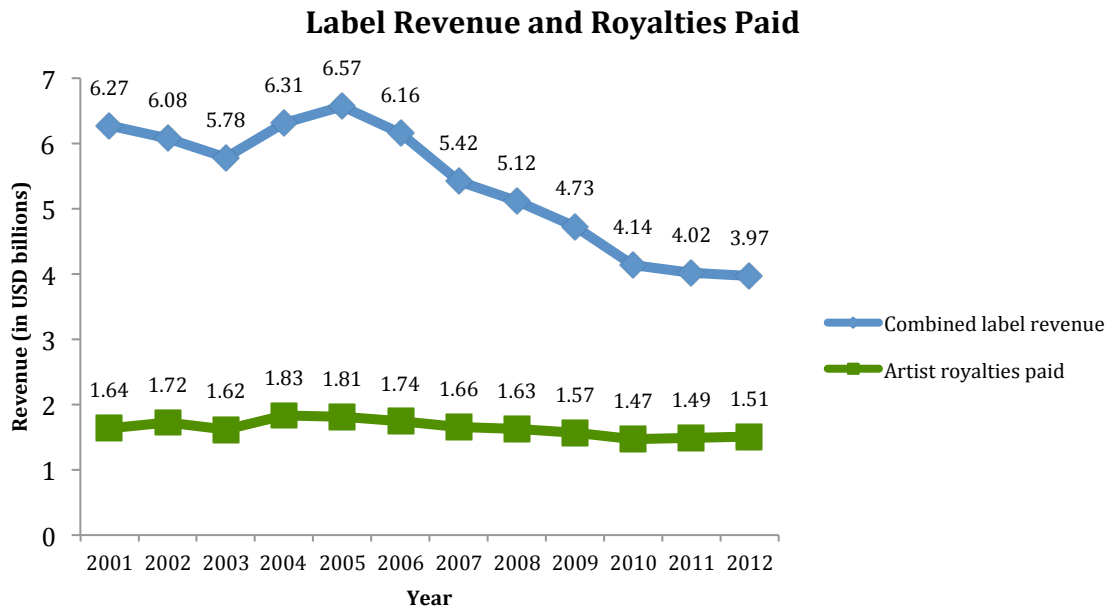
In 2007, the #1 album was *Noel* by Josh Groban. It sold 3,699,000 copies that year at \$12.99⁴². Applying the same generous 50% cut, Mr. Groban made \$24,025,050 in from his #1 album in 2007^{**}. A total inflation of 14% between 2007 and 2015⁴³ brings that total to \$27,388,505.70 in today's dollars. This means that Josh Groban's pre-streaming era #1 album made him \$7,975,405.70 (at least) more in the non-streaming era than The Weeknd's #1 album made during the streaming era—that's over 40% more.

This is the kind of information that makes artist's like Taylor Swift pull her albums from Spotify (more on this later). Artists, even the most popular ones, are not making the same amount of money as they used to. Again, some of this can be attributed to the recession beginning in 2007, but an artist with the top album making 40% less than what top-selling artists made under a decade ago is problematic.

^{**} Streaming information is not available for this album, but it can be inferred that he made some small amount more from the streaming sector, as it made up over 20% of industry revenue in 2007.

3. Evaluation of the Label Environment

As industry revenue decreases, so does label revenue. Despite how artists have been portraying things in the media, however, labels are still paying their artists a larger portion of their revenues than ever before.



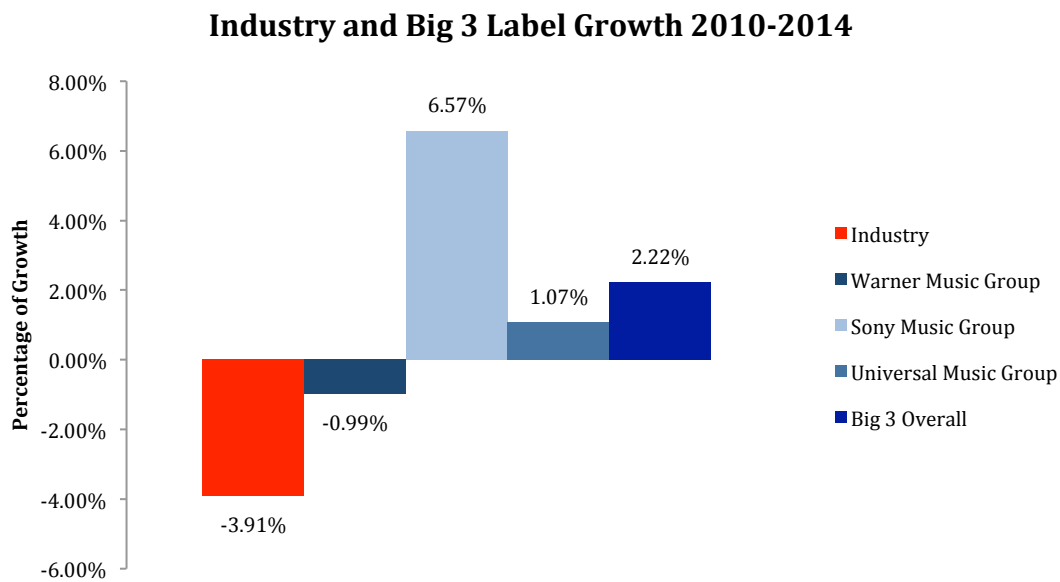
Statistics provided by Recording Industry Association of America

As of 2012, 38% of label revenue went to their artists—albeit each artist receives a different portion of that via their individual contracts. While this does not necessarily mean that artists’ pay cuts are independent of the actions of labels, it does lend itself to proving that labels are not to bear the full burden of the blame for the diminishing payment of artists.

The “Indie Label Revolution”: Is it real?

One of the main arguments for the streaming industry is that it helps independent artists succeed⁴⁴. Accessibility perks normally provided by big labels is

not really an issue if an artist can easily upload their music to Spotify: a forum of around 75 million listeners. The statistics, however, do not support this claim that streaming services are empowering indie labels. In fact, while the total revenue of the music industry fell by 3.91% from 2010 to 2014, the overall revenue of the Big 3^{††} labels increased by 2.22%.

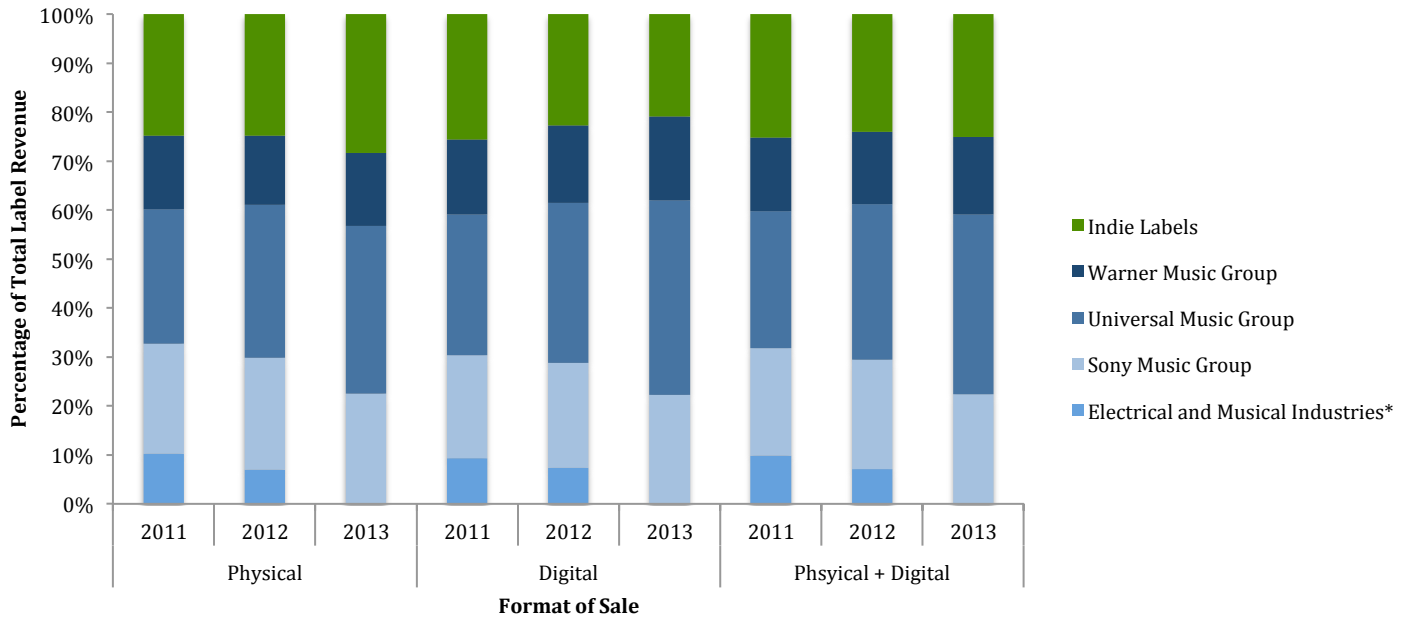


Statistics provided by Recording Industry Association of America

Further, not a single sector of the recorded music industry from 2011 to 2013, a booming time frame for streaming, shows much change between revenue captured by labels and revenue captured by independent labels.

^{††} The Big 3 is comprised of Warner Music Group (WMG), Sony Music Group (SMG), and Universal Music Group (UMG). For decades it was the Big 4, including Electric and Music Industries (EMI). However, EMI disbanded in 2013.

Label Revenue Breakdown



Statistics provided by Recording Industry Association of America

If the argument that streaming services are boosting the indie label sector had significant merit, there should be notable growth in the digital sector revenue portion for independents. That does not appear to be occurring.

4. The Legal Environment of Streaming: a close look at “windowing”

Windowing: the loophole of antitrust law and therefore the worst nightmare of competitive market capitalist. It is when production companies or artists pressure distributors to be exclusive, or vice versa. The practice of windowing has been used for decades in the entertainment industry. In the digital era, it has been the practice “of holding back a new release from other digital services.”⁴⁵ This is a strong bargaining power for rights holders, but from the consumer perspective, windowing can have harmful effects. Windowing can cause anticompetitive

behavior because it eliminates competition; only one company has the materials for the market, so it can charge a premium for access. It is a, albeit typically temporary, monopoly of that artist or work.

Windowing began with movies, with first-run and second-run (“dollar”) theatres. As technology enhanced the home theatre market, only certain companies would be able to sell DVDs for a period of time (i.e. Target or Best Buy selling a movie before it was available at Walmart). Another easy example is when a movie would come out on Blu-ray a month before coming out on DVD. With Netflix in the mix, often times movies will be on sale as a DVD/Blu-ray, or for sale or rent on iTunes, Amazon, etc. for months or years before becoming available on Netflix. A similar trend is beginning in the music industry as it catches up to the digitalization of the rest of the entertainment facets.

What makes the music industry unique, however, is the Copyright Act of 1976, 17 U.S.C. § 115, which applies to digital music via the Digital Performance Right in Sound Recordings Act of 1995. Internet radio, or non-interactive digital streams, is covered by the compulsory license provision. This means that services such as Pandora can gain the license to any music if they simply pay the statutory license or royalty amount mandated by the Copyright Board. However, “interactive Internet transmission services”, meaning on demand online music services such as Spotify, are required to negotiate with the copyright holder and come to an agreement with them in order to obtain the right to “perform”, or transmit, the recording.

This is why artists such as Beyoncé, Adele, and Taylor Swift can do both of the following:

1) Withhold all or some of their music from digital platforms. All of these artists' music is fair game for Pandora, and is often heard on it, because Pandora simply paid the mandated rate for license rights and automatically received the material no contest. However, artists can keep their music off Spotify because they refuse to come to an agreement, which is necessary for Spotify to obtain the rights. There is no no-contest route for streaming services like Spotify to obtain music like non-interactive Internet radio can.

2) Give certain streaming or download services exclusive rights. Just as artists can refuse to agree with certain services, they can exclusively agree with others. For example, Taylor Swift only came to an agreement with Apple Music and no other download or streaming service. This gives Apple Music a monopoly on one of the biggest pop-stars of the decade.

In other words, the interactive nature of streaming services enhances the power of the artist, which is why it—to a certain degree—is frustrating that artists complain so much about the revenue distribution of Spotify. It is quite simple: if the artist does not like Spotify that much, they can just refuse to reach an agreement from licensing origination or, if they have already signed a contract, suffer the consequences of breach of contract and pull their material. Of course, there is a risk of lost exposure to the market to take their music off popular platforms, but that is up to the artist.

Focusing on how this affects the industry as a whole though, this is dangerous. Many people see this practice as penalizing loyal fans: making them pay more than what the music would typically be sold for, or the fair competitive market value⁴⁶. Further, as previously mentioned, windowing creates mini-monopolies throughout the music industry. If companies such as Tidal and Apple Music continue to recruit artists on the grounds of exclusivity, it will destroy the competition of the music market. These one to two services could begin increasing their prices to astronomical heights due to this absence of competition. Music is an integral part of culture and arguably a necessity, or at least close enough to it, to the point that consumers have a relatively inelastic demand for it. Such an inelastic market *must* be protected from monopolies for the safety of the consumer. While the digital industry certainly is not to that point yet, the CEO of Sony Pictures Entertainment (parent of SMG) said in February of 2016 that “We all see the [music] business going downhill...[and] going forward, you will see some sort of windowing in the music industry.”⁴⁷

Revenue contributed to the industry, the average artists’ cut of the pie, and consumer accessibility are surface issues with the streaming industry. However, *all* of these facets could be harmed if, in the legal roots of music, the practice of windowing grows in the industry without a change to the current digital music copyright laws.

Conclusion

The fact of the matter is it may just be too early to really see what the effect streaming services are going to have on the recorded music industry. With the popularity of Spotify arising around the same time as the recession, it is hard to ascribe symptoms of the industry to specific ailments. However, there are noteworthy trends occurring:

- 1) Overall industry revenue is declining as streaming revenue is increasing.
- 2) Artists (subject to their individual contract with their label, or lack of label) make less money from success on streaming platforms than success on non-streaming sale platforms.
- 3) Streaming is not decreasing the power of the Big 3 labels, nor is it increasing the success of independent labels.
- 4) The threat of anticompetitive windowing practices in streaming services is becoming more prevalent and could be detrimental to the industry if laws and regulations remain as they currently are.

That being said, things could change. As the worldwide economy picks up and music consumers have more disposable income, the entire industry revenue could pick back up. Perhaps labels become more artist friendly and quiet the complaints of musicians, or rather independent labels do so and gain market share. Hopefully, compulsory license laws will amend to the adjusting market and continue to protect consumers.

The only thing that is certain is that streaming services put the industry in a precarious condition. However, change is normal in the entertainment world.

Audiophiles watched in fear as vinyl and boom boxes became Walkman and CDs, then CDs to iTunes. Perhaps that same natural and cyclical fear is occurring as the industry evolves right on schedule from downloads to streams. It is hard to predict what the future holds, but it ain't over until the fat lady streams.

-
- ¹ Woollaston, Victoria. "15,000 Songs a MINUTE Downloaded on iTunes as Apple's
- ² "Facts Archive - RIAA." *RIAA*. The Recording Industry Association of America, 2016. Web. 20 Feb. 2016.
- ³ Haire, Meaghan. "The Walkman." *Time*. Time Inc., 01 July 2009. Web. 08 Mar. 2016.
- ⁴ Suskind, Alex. "15 Years After Napster: How the Music Service Changed the Industry." *The Daily Beast*. Newsweek/Daily Beast, 06 June 2014. Web. 08 Mar. 2016.
- ⁵ "Facts Archive - RIAA." *RIAA*. The Recording Industry Association of America, 2016. Web. 20 Feb. 2016.
- ⁶ "From Major to Minor." *The Economist*. The Economist Newspaper, 12 Jan. 2008. Web. 08 Mar. 2016.
- ⁷ Pinkerton, Stewart. "Going Vinyl." *Forbes*. Forbes Magazine, 07 July 1997. Web. 20 Mar. 2016.
- ⁸ Berry, Ben. "Spotify Doesn't Hurt Artists: My Band Would Be Nowhere Without It." *Wired.com*. Conde Nast Digital, 26 Nov. 2014. Web. 29 Mar. 2016.
- ⁹ Rys, Dan. "How Beyonce Shook Up the Music Industry (Again) With 'Lemonade'" *Billboard Business*. Billboard, 28 Apr. 2016. Web. 28 Apr. 2016.
- ¹⁰ Barracco, Filippo. "The Indie Revolution - Past, Present and Future Prospects of Independent Recording Companies." *Academia.edu*. Academia, 14 Feb. 2014. Web. 08 Mar. 2016.
- ¹¹ Steiner, Christopher. "Meet The Fastest Growing Company Ever." *Forbes*. Forbes Magazine, 12 Aug. 2010. Web. 08 Mar. 2016.
- ¹² Pepitone, Julianne, and David Goldman. "iTunes 4." *CNNMoney*. Cable News Network, 28 Apr. 2003. Web. 27 Feb. 2016.

¹³ *Id.*

¹⁴ Pham, Alex. "iTunes Market Share Still Dominant After a Decade (Research)." *Billboard Business*. Billboard, 16 Apr. 2013. Web. 08 Mar. 2016.

¹⁵ "Labels Target Napster Fans with For-pay MusicNet." *USA Today*. Associated Press, 04 Dec. 2001. Web. 27 Feb. 2016.

¹⁶ *Id.*

¹⁷ Breeding, Andy. *The Music Internet Untangled: Using Online Services to Expand Your Musical Horizons*. Watertown, MA: Giant Path Pub., 2004. 86. Print.

¹⁸ About Pandora Media." *About Pandora Media*. Pandora Media, 2016. Web. 03 Mar. 2016.

¹⁹ *Id.*

²⁰ Pandora Media, Inc. "2011 3rd Quarter Report, SEC Form 10-Q." November 29, 2011. Retrieved December 2, 2011.

²¹ Pascal-Emmanuel Gobry and Henry Blodget, "Pandora Still Growing Like Gangbusters -- Now 4% Of Total US Radio Listening", Business Insider, November 23, 2011

²² Malter, Jordan. "Spotify's Vision for the Future of Music." *CNNMoney*. Cable News Network, n.d. Web. 08 Mar. 2016.

²³ Peoples, Glenn. "Business Matters: A Brief History of Spotify Royalties." *Billboard Business*. Billboard, 30 Aug. 2012. Web. 27 Feb. 2016.

²⁴ *Id.*

²⁵ Burrell, Ian. "The Big Question: Why Are Radio Audiences Rising, and How Come the Industry Is in Crisis?" *The Independent*. Independent Digital News and Media, 7 May 2009. Web. 08 Mar. 2016.

²⁶ "Digital Music Report 2015." *IFPI News*. International Federation of the Phonographic Industry, 14 Apr. 2015. Web. 22 Feb. 2016.

²⁷ McIntyre, Hugh. "Vevo Looking to Restructure Ahead of Sale." *Forbes*. Forbes Magazine, 31 July 2014. Web. 02 Apr. 2016.

²⁸ "Digital Music Report 2015." *IFPI News*. International Federation of the Phonographic Industry, 14 Apr. 2015. Web. 22 Feb. 2016.

²⁹ "Spotify Explained." *Spotify for Artists Spotify Explained Comments*. Spotify Music, 2016. Web. 04 Feb. 2016.

³⁰ *Id.*

³¹ *Id.*

³² *Id.*

³³ "Introducing Apple Music - All The Ways You Love Music. All in One Place." *Apple - Press Info*. Apple, 08 June 2015. Web. 08 Mar. 2016.

³⁴ "Spotify Explained." *Spotify for Artists Spotify Explained Comments*. Spotify Music, 2016. Web. 04 Feb. 2016.

³⁵ Anisko, Nathan, and Eric Anderson. "Average Length of Top 100 Songs on iTunes." *StatCrunch*. N.p., 04 Dec. 2012. Web. 27 Feb. 2016.

³⁶ "Facts Archive - RIAA." *RIAA*. The Recording Industry Association of America, 2016. Web. 20 Feb. 2016.

³⁷ "Minimum Wage." *Department of Labor, Minimum Wage*. United States Department of Labor, 09 Dec. 2015. Web. 02 Apr. 2016.

³⁸ Gross, Doug. "Spotify and Pandora Don't Pay Off, Musicians Say." *CNN*. Cable News Network, 13 Nov. 2014. Web. 08 Mar. 2016.

-
- ³⁹ Lazzaro, Sage. "These Are Spotify's Most Streamed Songs and Artists of 2015." *Observer Business and Tech*. Observer, 01 Dec. 2015. Web. 02 Apr. 2016.
- ⁴⁰ "The Weeknd - Republic Records." *Republic Records News*. N.p., n.d. Web. 02 Apr. 2016.
- ⁴¹ "Top Billboard 200 Albums 2015." *Billboard Charts*. Billboard, n.d. Web. 02 Apr. 2016.
- ⁴² Hasty, Katie. "Groban Remains No. 1, Becomes '07's Best-Seller." *Billboard News*. Billboard, 19 Dec. 2007. Web. 02 Apr. 2016.
- ⁴³ "Inflation Rates in the United States of America." *Inflation Rate in the United States*. StatBureau, n.d. Web. 02 Apr. 2016.
- ⁴⁴ Schonfeld, Zach. "What Do Indie Musicians Really Think About Streaming?" *Newsweek Culture*. Newsweek, 23 July 2015. Web. 02 Apr. 2016.
- ⁴⁵ Klebanow, Alexa and Wu, Tim, Is Music the Next eBooks? An Antitrust Analysis of Apple's Conduct in the Music Industry (July 14, 2015). *Columbia Journal of Law & the Arts*, Forthcoming.
- ⁴⁶ Sisario, Ben. "So Much Streaming Music, Just Not in One Place." *The New York Times*. The New York Times, 15 Mar. 2016. Web. 02 Apr. 2016.
- ⁴⁷ Cooke, Chris. "Sony Chief Reckons Windowing Will Become the Norm in Music." *Sony Chief Reckons Windowing Will Become the Norm in Music*. Complete Music Update, 19 Feb. 2016. Web. 03 Apr. 2016.