M. Sc. in Management of Creative Business Processes (CBP)

MASTER'S THESIS

How Spotify can benefit from guiding the listener into the long tail of niche artists through music discovery

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ABSTRACT

This master's thesis investigates how Spotify's music recommendation and features can help the niche artist getting more exposure, but also benefits Spotify in return. The theoretical framework for understanding the structure and capabilities of Spotify are provided by Chris Anderson's filters in order to sort through the supply of music, and understand the convenience with Barry Schwarts' "the paradox of choice". Through the examination of these capabilities is primarily focused towards Spotify Discover Weekly, but also Spotify's data-analytic tools through Spotify for Artists, and the playlist among others.

After the valuation of Spotify's features and capabilities it is analyzed if Spotify can keep their market leader position in a highly competitive market place. In Jay Barney's resource-based view it is analyzed if Spotify is able to have a competitive advantage through their acquired capabilities through the acquisition of the market leader in music technology intelligence, The Echo Nest.

Through the analysis of Spotify's financial statements it becomes evident how the big three, the major record labels, are benefitting from the increased spread of listening diversity through Spotify's music recommendation features.

The conclusion of the thesis is that the niche artist is not benefitting from Spotify's music discovery features, because the music recommendation systems are biased by popularity, and therefore not able to guide the listener into the long tail. Furthermore, Spotify's features and music recommendations might only benefit popular artists signed by the big three.

Spotify can consider their capabilities of creating music recommendations as a competitive advantage, even when these recommendations lacks novelty. This competitive advantage might not be sustainable in the future due to the increased data-driven competition in the market place.

Keywords: Spotify, The Long Tail, Chris Anderson, Music Discovery, Music Recommendation, Discover Weekly, Music Streaming, Spotify's Business Model, Royalty Payments, Resource-based View, VRIN-model, Music Industry, Subscription Models, Paradox of Choice, Niche Artist, Big Three

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Chapter 1 – Introduction

In many years the music industry has been struggling with decreased revenue from physical sales, such as CDs, and in fact the global recording industry has lost nearly 40% of its revenue between 1999 to 2014 (IFPI, 2017: 11). Since 1999 where Napster, a peer-to-peer (P2P) file sharing network, was introduced, the free alternative of pirated music has been widely available to the consumer (Ordanini & Nunes, 2016: 7).

In 2016, the global music market grew by 5.9% which was the fastest growth in the music industry since IFPI started tracking the music industry in 1997 (IFPI, 2017: 10). Music streaming has been a clear driver for this growth of revenue in the music industry, by accounting for 59% of the total digital revenue in the music industry (IFPI, 2017: 12).

Since music streaming is contributing with such a big part of the overall revenue of the music industry, this tendency of digitalization of the music industry has also made a lot of new opportunities for both the record labels, nice artists and the digital distributors, thereof the music streaming services such as Spotify.

Spotify has gained increased popularity over the recent years, and their subscribers have grown substantially over the past years. Spotify is the major music streaming service in the market, with a market share of at least 43%, making Spotify the biggest player in the music streaming market (Bershidsky, 2017). Because of the shift from physical media in the music industry towards digital streaming, Spotify is now able to collect a lot of sophisticated data about the consumer's listening habits, and could potentially use this data for a better consumer experience in music recommendation, raising the consumer's surplus and willingness to pay (Smith & Telang, 2016).

Even though music streaming services is generating much revenue in the music industry, Spotify has never been profitable and it is rumoured that Spotify will soon go for an Initial Public Offering (IPO)[1], (DMN, 2017b). In order for Spotify to be profitable they have to convert users using the free subscription, Spotify Free, into paying subscribers, Spotify Premium. Spotify is also dependent on acquiring content licenses from the minor and major

[1] IPO, Initial Public Offering: A company's first equity issue made available to the public. Also called an *unseasoned new issue* or an *IPO* (Ross et al., 2010: 475)

content owners (the big three for example) in order to provide its service (Spotify Financial Statement, 2016: 4)[2].

Through Music Discovery Technology, such as Spotify's Music Discovery, and the ability to collect data about the consumer through their platform, the question is, if Spotify is able to lower the consumer's search costs and guide them down Chris Anderson's Long Tail of obscure, niche artists. Some studies have shown that lowering the consumer's search costs, increase their willingness to buy niche products (Wimble et. al, 2016: 3). Not only would Spotify be able to increase and comfort the consumer experience through their platform, increasing the consumer's willingness to pay for Spotify Premium, but this could potentially lead Spotify to be less reliable on the "big three", the three major record labels in the world: Universal Music, Sony Music and Warner Music (DMN, 2017a).

Research question

Throughout the introduction of this thesis, I have explained some of the outcomes of the digitalization of the music industry. In the following paragraphs I will explain the problem statement and walk through the research questions I have made in order to conclude the problem statement. First the problem statement is stated and afterwards I give descriptions after each research questions of how I'm going to answer these questions.

Problem statement

The study in this thesis aims to answer the following problem statement:

Problem statement:

"Can Spotify's music recommendation tools help the niche artist to get discovered in the long tail and how could music recommendations and the features provided potentially benefit Spotify?"

In order to answer my problem statement I have chosen to split my thesis in two parts, answering each part of the problem statement separately:

[2] See the appendix for Spotify Consolidated Financial Statements December 31, 2016

Part 1: *"Can Spotify's music recommendation tools help the niche artist to get discovered in the long tail?"*

In the first part of the thesis I'm going to evaluate Spotify's music recommendation capabilities in order to determine how useful they are in order for the niche artists to get discovered. I will furthermore examine some of Spotify's other features as playlists to determine if this can be seen as a filter, enabling the niche artist to gain further reach towards more listeners.

Part 2: *"how could music recommendations and the features provided potentially benefit Spotify?"*

In the second part of this thesis, I'm going to look at the music streaming market in order to determine BOTH the recent growth AND the competition, and if Spotify's music recommendation capabilities can be seen as a resource in order to generate a competitive advantage, and if this competitive advantage can be sustainable in the highly competitive music streaming market.

Reading guide

In the following I'm going to give a brief explanation of how I'm going to answer the problem statement in which was split in two parts:

Part 1: *"Can Spotify's music recommendation tools help the niche artist to get discovered in the long tail?"*

The first part of my thesis was concerning if Spotify was able to help the niche artist to get discovered through their music recommendation tools. To answer this part of the problem statement I have included the following:

In order to understand how the increasingly digitalization in the music industry provides more opportunities in the expansion of the supply of music I have included Chris Anderson's long tail theory. Chris Anderson argues that the current technology available is able to filter through the supply of music, and guide the listener into the long tail of niche artists.

The digitalization in the music industry has increased the supply of music and it can be overwhelming for the consumer. I have included Barry Scwatch theory of the paradox of choice in order to understand how "filters" in Spotify, explained through music recommendations and playlists, are able to solve the listener's paradox of choice.

The filters ability to sort through the long tail in Spotify is criticized through David Hesmondhaulg. Hesmondhaulg argue that the current structure of the music industry is biasing the distribution channels in order to guide the listener into the long tail.

In order to examine what a music recommendation system is, I give a brief explanation and definition, before examining Spotify's Discover Weekly.

Through the examination of Spotify's Discover Weekly it became clear that Spotify uses its data collecting ability in order to recommend music to the listener. Therefore I examine some of Spotify's other music recommendation tools, and go through some of the features that Spotify can create from its data.

After the examination of Spotify's music recommendation systems ability to recommend music in the long tail, and the examination of how Spotify's other data-analytic tools can benefit the artist, I discuss and give points of critique of these capabilities.

After the discussion of Spotify's music recommendation capabilities the first part of the thesis gets concluded.

Part 2: *"how could music recommendations and the features provided potentially benefit Spotify?"*

In order to answer the second part of the problem statement I analyse the music industry in order to find out how Spotify is positioning itself in the market.

In the beginning of part two I examine where the majority of digital revenue in the music industry comes from, and that the music industry has been growing in the last couple of years.

After the industry analysis I present the biggest player's market share in the music industry, in order to provide the background knowledge for the following Porter's Five Forces analysis.

In the Porter's Five Forces analysis the intensity of competition is defined, and I take some of Spotify's previously explained features and capabilities into consideration through the analysis. This is how I combine my problem statement in order to answer it as a whole.

After the competition in the music streaming market is defined, I use Jay Barney's resource-based view in order to analyse if Spotify can use its music recommendation capabilities in order to gain a competitive advantage, and if it sustainable.

When the competition in the music streaming market was defined under Porter's Five Forces, and if Spotify could consider their capabilities in the music recommendations and features as a resource leading to a competitive advantage, I examine how this might affect Spotify's financial position.

In Spotify's financial statements I examine their business model, the majority of income going to licenses, a possible equity alliance with Tencent Music and Spotify's rumoured IPO.

After Spotify's financials has been analysed I discuss how my methodical approach has influenced the outcomes of my study, and what potential biases this approach might have for the validation of my conclusions.

Delimitations

In my study and research of the music industry I had to delimitate my subject in order to make a more nuanced picture of how digitalization was changing the music industry. The music industry is part of the creative industries, and I always thought that there where many interesting aspects of this industry to investigate. The music industry consists of many different forms of distribution, from physical media to digital media. The revenue from the physical media in the music industry has been decreasing for many years, and I thought that it could be interesting to investigate where the majority of the digital revenue where coming from.

When I was researching digital music I found out, that there are more than 400 digital music services worldwide (*IFPI, 2015: 22*). I obviously needed to decrease my scope even further.

When I saw that the digital revenue from music streaming services had been growing rapidly in the past few years, and was now accountable for 59% of the total digital revenue in the music industry (IFPI, 2017: 12), I thought it would be interesting to look at the music streaming phenomenon. Since there are many players in the music streaming market, my eyes was locked on the market leader, Spotify.

In the beginning of my research of Spotify, I tried their platform in order to get a feel of what this market leader in music streaming could do. For many years I have been a huge fan of different niche reggae artists I encountered through my past travels in the Caribbean. In my testing of the Spotify platform and searching through their supply of music, I began to wonder why I was not able to find many of the niche artists I knew. Furthermore, many of the music recommendations I encountered though Spotify Discover Weekly was from artists that I already knew.

In my frustration of not getting relevant and novel music recommendations I decided I wanted to use my thesis to investigate Spotify's music recommendation capabilities. If Spotify seemed as such a great music streaming platform, why wasn't I able to find obscure niche artists in their supply of music? Why did Spotify's music discovery tools not guide me through the long tail of niche artists?

I have furthermore tried Last.fm's audioscrobbler that are able to track my listening behaviour on several devices, but without any luck of getting novel niche recommendations. Since there are many other music streaming services in the market that offer music recommendations, I choose Spotify because their technology claimed to be able to make advanced and novel music recommendations.

Method

Hermeneutics

In the compared classical positivistic paradigms, where the purpose is to seek general explanations and causal relationships, hermeneutics are focused on understanding humans and the human phenomena in their cultural and historical context (Rønn, 2006). This means

that when we want to understand something, the way that we see it and understand it, is influenced by the place and time in which we live, the ideas and thoughts that we already on the subject and the historical context of the phenomenon in. Further, our understanding is both created from the culture we're in, and our own experiences surrounding the phenomenon. In the "motivation" part x of this thesis, I wrote that I am myself an amateur musician, which let me to investigate niche artists specifically, which is an example of my context as a researcher.

Pre-understandings

According to the German philosopher and important hermeneutic writer, Hans George Gadamer, we are all influenced by he has described as "pre-judgements" or "prejudices" on the subject that we want to investigate (Gadamer, 1989). Although "prejudices" for many carries a negative perception, but this is not how Gadamer wants us to understand it. Instead, Gadamer's definition is that prejudices take the form of:

"(…)a judgment that is rendered before all the elements that determine a situation have been finally examined" (Gadamer, 1989: 273).

As the quote illustrates, we as humans tend to have an already judged phenomenon before we have investigated all the different elements of the phenomenon. Our initial judgement is based on what we think we already know on the subject from our experiences, cultural and historical context. This Gadamer claims, is not something to criticize but rather, it is something that is a fundamental criterion for the human understanding and interpretation (Gadamer, 1989). The consequence of this means, that we can never be truly objective when it comes to investigate a human phenomenon. We are always influenced by our cultural and historical context and experiences, which makes us select *some* parts to focus on, and leave out other parts. This means that the researcher is required to be open on his viewpoints (in the thesis, my selected theories), and reflect on what kind of limitation his viewpoint could be said to result in.

My pre-understanding surrounds the subject of Spotify, music recommendation and the niche artists can be seen in the choice of the theories I have chosen to use as a frame of

understanding. Furthermore, they make up my "horizon" of understanding when it comes to the phenomenon (Højberg, 2004). The consequence of this means that there are areas that I am not covering, such as digital downloads, physical music media or the performance industry (live concerts). Some of these considerations was reflected in "delimitations".

To research and to gain new knowledge on subjects requires a process in which we move between our pre-judgements and the phenomenon itself. The structure of this process has been dubbed "the hermeneutic circle" (Gadamer, 1989).

The hermeneutic circle

"The hermeneutic circle" is a core concept that is derived from the hermeneutic tradition, and describes the process where knowledge and an understanding are created. The concept describes the relation between a part of a knowledge domain and the whole of that domain, and the way we have to include both to understand a phenomenon. To understand separate elements of something we want to examine, we have to examine the overarching frame of knowledge that these elements are embedded in. The reverse is also true: To understand the whole picture, we have to separate the elements that make the whole phenomenon (Bryman & Bell, 2007). When we interpret each individual element, it adds to our understanding of the whole, and creates a new horizon of understanding, from which we can investigate new elements. The constant development of new insights determines ever-new pre-understandings to interpret and understand new elements, creating a circle shaped process of understanding. Furthermore, this process is in theory, eternal, which means that some theorists have replaced the circled-formed flow of knowledge with a spiral, which illustrate that knowledge continuously evolves in new circles built on the previous gained knowledge (Rønn, 2006; Engholm, 2014).

It is important to know that the choice of hermeneutics means that I'm not trying to conclude definitively on whether Spotify and niche artists can benefit from each other, or how they can do it. The aim is to investigate in which potential ways that this can be said to be the case, and explore this from selected points of view, based on selected theories and areas of interest. The intent is to create new insights into the relation between Spotify, niche artists and music streaming, which can lay the foundation of further research, and still

newer insights, on the subject. I will try to show this in the thesis, where the investigated parts (Spotify, music streaming, and niche artists) of the whole music industry will result in new knowledge, which creates a basis for further research. To illustrate this process, I am going to provide ideas for further research after the thesis conclusion, which is based on the insights that I will come to during the thesis.

Motivation

In my personal life, I have always been a huge fan of music. My interest in music started in elementary school where I was very into heavy metal, which also inspired me to quit playing computer games and start playing guitar. Since starting my first band in elementary school and been playing in different bands over the past 10 years, I got first-hand experience of how difficult it was creating a reputation and keeping a band engaged doing difficult times.

When I wrote my bachelors in business administration, I got the opportunity to research the music streaming market when it was still emerging in Denmark. I thought it could be interesting to see what had happened to this market doing my masters.

I have always wondered if the digitalization of music would lead to increased accessibility for the listener towards the niche artists. Therefore the investigation of Spotify's music discovery capabilities was an obvious choice, to use my thesis in order to make this examination.

Chapter 2 – Theoretical Framework

The purpose of this chapter is to present the theoretical framework for the remaining part of the thesis. In order to provide some characteristics of the specific elements surrounding the music industry, I start this chapter by introducing economist Richard E. Cave's theory of experience products as complex, "nobody knows" properties. According to Cave's it is difficult to gain knowledge about the valuation and perception of the experience goods, and therefore the demand of the good, since the valuation is a subjective opinion.

To provide an understanding of the potential possibilities for niche artists regarding Spotify's music discovery features, I have chosen Chris Anderson's "The Long Tail"-theory. Instead of the primarily focus on revenue generated by the most popular artists, his theory argues that there is an untapped potential for additional revenue by focusing on the large amount of artists, that can be considered "niche".

To address the increased supply of music, I present psychologist Barry Schwartz theory of the complexity of choice, to highlight the potential difficulties in providing Spotify's over 30 million songs, with a continuous expanding range of music. To round off this chapter, I discuss Chris Anderson's long tail theory, with the critical view of Professor David Hesmondhalgh. Hesmondhalgh view the long tail theory as too optimistic, and points to some areas where Chris Anderson's theoretical points could fail in practice.

The complexity of creative products

Many researchers, such as Richard E. Caves, have described the creative industry as a complex industry. Caves argues that experience products are very complex, and that it is therefore very difficult to determine the market, and by extension, measure the demand in markets with creative products, including music (Caves, 2000: 2). Because there is a great amount of uncertainty regarding how consumers will value the products, it makes making the experience product potentially risky, as there are many possible demands, and by extension, many possible way to fail delivering the most profitable product.

Furthermore, experience products are complex in that the consumer's valuation is subjective, which means that it can be difficult for the producer of the good to know how

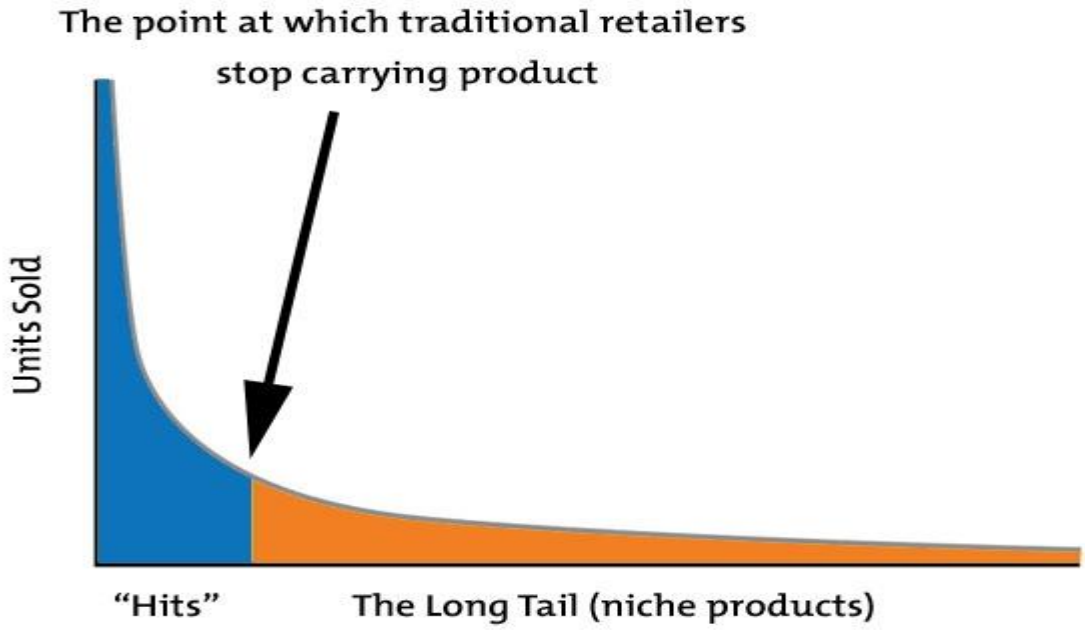
their product is perceived. Since there is so much uncertainty with the demand of complex experience products, Caves has adopted the term “nobody knows” properties when it comes to experience products (Caves, 2000: 3). Since Caves describes experience products as “nobody knows properties”, I would argue that the market where these products are sold could be described as a “nobody knows market”, since it can be difficult to understand the market if the demand is uncertain.

As the music industry is becoming increasingly data-driven due to the current digitalization, music streaming is starting to be the dominate way of consuming music. This gives the current market leader, Spotify, an incredible opportunity in collecting data about their users, potentially countering some of the complexity that Caves mentions as being a challenge when it comes to having knowledge about the valuation of the experience goods. The question is whether Spotify is able to solve some of this market uncertainty through the market analytic tools they are providing the artist.

In the following paragraphs I’m going to explain Chris Anderson’s view, in how technology has given the niche artist more possibilities, and give an explanation of how this affects the supply of niche artists in his long tail.

Chris Anderson’s Long Tail

Chris Anderson was the Editor-in-Chief at Wired magazine and came up with the theory of the Long Tail after studying hard data from the music service, Rhapsody at the time (Anderson, 2009: 9). He was researching for a speech he started calling “The 98 Percent Rule”, which sooner became “New Rules for the New Entertainment Economy” (ibid.), where he was studying that the big music hits accounted for 98 percent of the revenue in the music industry (ibid.). This was a known fact among executives in the entertainment industries, but when Chris Anderson looked closer at the sales data of one month of digital music downloads from Rhapsody he was surprised. The big hits were the head of the tale and accounted for a huge amount of downloads and after the head of the tale the numbers fell off steeply with the less popular tracks (Anderson, 2009: 10). What caught Anderson’s attention was that as the curve fell, it never fell to zero. Even when he was zooming in on the curve’s longest tail, the curve never reached zero (ibid.).



Graph 1: *"The Long Tail" Source: Taylor, 2017*

The Long Tail was derived from curves in statistics called "long-tailed distributions", because the curve is relative long compared to the head ("Hits") (ibid). Chris Anderson argues that because of the tail of available variety is far greater than we realize, it's within reach economically because of technology. When aggregated, the sum of the niche artists adds up to a significant share of the market, revealed a large potential for revenue (ibid). When taking Chris Anderson's theory about The Long Tail into consideration, we can use relate it to the Caves term "the nobody knows properties". The complexity of the nobody's properties makes it very difficult to tell whether the experience good is going to be a hit and be placed in the larger part of the tail, or if it is going to niche, and thereby be placed along the lower part of the tail.

Chris Anderson argue that we are shifting away from a mainstream market, where the focus is on a relative small amount of hits and into the longs tail of niche products, and that this is happening because technology has allowed us to find the niches that really interest us (Anderson, 2009: 52). But having an infinite supply of music will not automatically create a demand. Anderson argues that there are millions of niches in the Long Tail, but even when the supply in theory could be infinite; it wouldn't make sense unless people are looking for, and finding, these niches. Anderson argues that there are six important themes that help define the conditions for the viability of The Long Tail:

More niche goods than hits (1)

There are far more niche goods in virtually any market than hits. The niche goods grows exponentially when the tools of producing these niche goods becomes cheaper and ever-present (Anderson, 2009: 53). This is exactly was has happened in the music industry, where top-of-the-shelve music production software has become widely available for anybody who wants to write and produce songs (Smith & Telang, 2016: 89). Some professional music producers like, Graham Cochrane, who founded The Recording Revolution, which teaches the average Joe to produce music, argues that it is possible to record and produce professional recordings on a $350 budget for a home studio (Recording Revolution, 2017).

Search costs in reaching niches are falling dramatically (2)

The search cost of finding the niches in the Long Tail is falling dramatically. Because of the development of technology and the many possibilities in digital distribution, powerful search technologies, and the development and expansion of broadband internet, the search cost (eg. The time and energy the consumer has to spent to reach the product) of finding the niches placed in the Long Tail is falling dramatically (Anderson, 2009: 53). When music streaming platforms as Spotify has a significant role in the consumers music consumption, and when the major record labels doesn't own their distribution channels as they did before the digital revolution, Spotify has an advantage in being the distribution channel that delivers music to when and where the consumer wants it (Smith & Telang, 2016: 113). With Spotify's Discover Weekly, where the Spotify user is getting a playlist with music recommendations that could potentially have the interest of the listener every Monday (IFPI, 2017: 21), Spotify could lower the consumers search cost even further and guide them into the Long Tail of niche artists.

"Filters" can drive demand down the Long Tail (3)

Supplying variety doesn't shift demand by itself. As mentioned in the above paragraph, Chris Anderson argues that there have to be certain "filters" in order to drive demand down the

Long Tail (Anderson, 2009: 53), in which can be seen as music recommendations, playlists or ratings.

The demand curve flattens when the search costs are lowered (4)

Anderson argues that the curve flattens when there is a great variety of possible songs to listen to, and when filters are in place to have users search through them. The division between song that are considered hits or niche still remains, but the relative difference between them has been altered, in that the niches have become a bit more popular, and the hits have lost some popularity (ibid). The hits will always be present because of the availability and popularity over the niches, but by lowering the search costs of the finding your favourite niche, the possibility of you finding what you like in the niches is increasing.

The number of niches adds up (5)

Even if the niche artists in The Long Tail will only attract relatively few listeners individually, the total number of listeners when all listeners of all of the niches added up could make up a market so big it could potentially rival the hits (ibid).

When market barriers are removed, "natural" demand is revealed (6)

Demand is naturally revealed without the distortion of bottlenecks, lack of information, and limited choice because of physical shelve space. Chris Anderson argues that when these barriers are removed because of the opportunities of digitalization, the shape of the Long Tail is going to be far less hit-driven and as diverse as the population itself (ibid).

The through-line in these six themes is that a Long Tail is just supply of culture that is being unfiltered by economic insufficiency, and because of the current digital development our possibilities in reaching the niches in the Long Tail has expanded enormously.

In order to elaborate over why the Long Tail has been emerging, it is important to consider three forces that Chris Anderson argue have had an important impact on how the Long Tail

has been made possible, from both the reduced costs of production and distribution because of digitalization:

Democratizing the tools of production (1)

Because of the excessive spread of the Personal Computer and that these are getting more and more powerful and the price of the PC has been reduced significantly, the tools of production is becoming widely available to everyone who wants to pursue their creativity (Anderson, 2009: 54). As mentioned earlier, it is now possible to make professional music recordings in your bedroom on a budget (Hesmondhalgh, 2013: 312; Recording Revolution, 2017), and top-of-the-shelve music production software has become widely available for everyone (Smith & Telang, 2016: 89). Because of the wide availability of music production software, Chris Anderson argues that the amount of available music is growing fast, extending the Long Tail even further (Anderson, 2009: 54).

Cutting the costs of consumption by democratizing distribution (2)

Since everyone can make complex experience products in today's digital world, the making of content is only meaningful if you can share it with others. Because of the access to the internet, everyone can now spread content on a variety of digital platforms, such as YouTube, Facebook etc. (Anderson, 2009: 55). The traditional gatekeepers of the music industry has been removed and the indie artist is now able to distribute their music on many other digital distribution channels, including music streaming services such as Spotify (Spotify, 2017a). Digital music technologies and desktop publishing have had a major impact of the extent of content generated in the music industry (Hesmondhalgh, 2013: 312), and this have been an important factor in the increase of supply of digital music on the internet.

Throughout the analysis of Spotify's structure, tools and features they have provided for the artist, I'm going to evaluate if this can be said to be the case.

Connecting supply and demand (3)

The technologies that can introduce the consumer with newly available goods, such as digital music, can now be spread through anything from Google's wisdom-of-crowds search, iTunes recommendations, blogs, word-of-mouth, and customer reviews (Anderson, 2009: 55). In relation to the points made by Caves regarding the difficulty in figuring out consumer valuation and demands, these relatively newer tools can be seen as potential ways of countering the uncertainty that Caves think defines the market.

I'm going to investigate this statement in this thesis by evaluating Spotify's popular music recommendation system "Spotify Discover Weekly", in order to see if the music streaming market leader is able to recommend niche artists in the long tail, as Chris Anderson claims, that the current technology is able to do.

Research by Brynjolfsson et al. shows that the options for filtering the supply of music such as the ones mentioned by Anderson can reduce consumer's search cost in reaching niche artists. Furthermore, these options allow for connecting demand with supply, even when the demand for the niche artists is low. The lowered production, distribution and promotion costs have opened up the niche markets to the consumers (Brynjolfsson et al., 2006). The recommendation systems that allows the consumer to "help me find it" are essential for the discovery of niche artists in the Long Tail and is critical for the niches to be successful (Anderson, 2009: 217). This will be discussed and examined further in Chapter 3: "Critique and discussion of Spotify's music recommendations", if Spotify's Discover Weekly is able to do that.

Other academics argue that the opposite of the Long Tail, "the-winner-take-all" theory, is more accurate. Hits also benefits from digitalization and contradicts the Long Tail, because of the argument that lower search and transaction costs lead to convergence with fewer extraordinary songs and a smaller amount of artists who perform them (Ordanini & Nunes, 2016).

It is important, however, to point out that Anderson does not argue that his theory means the "death" of the hit (Anderson, 2009: 252). The hit will always be present since some

songs will always be more popular than others, and what Anderson highlights, is that the *monopoly* of the hit is dead. As previously mentioned, the digitalization in the music industry, means that the production, distribution and search costs have been significantly lowered. This results in that the blockbuster hits now have to share the stage with millions of niches, and that this will lead to a very different marketplace, because the listener is now able to find them (Anderson, 2009: 252).

In the following Barry Schwarts theory of the paradox of choice is going to be explained when the digitalization of music has increased the supply of music it can be overwhelming for the listener.

The paradox of choice

Not everyone share Anderson's points regarding the potentially positive facets of the increased supply and availability of music. Psychologist, Barry Schwarts, argues that the many choices can actually be demotivating for the consumer. He draws on a study, in which two groups of students each were presented with choices of a different number of chocolates. Faced with the possibility of picking amongst six or thirty pieces of chocolate respectively, the study showed that the group with the fewest choices to pick from reported being more satisfied with their tastings (Schwartz, 2005: 20)

Furthermore, Schwarts argues that the more choices the consumer is faced with, the less attractive the final choice becomes. This, explains Schwarts, has to do with the fact that when the choice is made, the consumer starts thinking about the potential missed pleasure which could have been had from the other possible choices (ibid).

Another point in which Schwarts mentions how the increased number of choices can be detrimental to the consumer experience is found in the way that the collection and use of data guides consumers to "more of the same". This, combined with the on-the-demand nature of allowing people to listen to what they want, when they want it, potentially means that people struggle to find shared experiences and create common interests (Schwartz, 2005: 18).

Criticism of "digital optimism" and The Long Tail

Not everyone is as optimistic as Chris Anderson when considering the opportunities of the technological development. David Hesmondhalgh argues that many people working with the creative industry, scholars, journalists and academics among others, are overstating the opportunities that the digital "revolution" has brought (Hesmondhalgh, 2013: 310). In his book *"The Cultural Industries"*, Hesmondhalgh brings critiques of digital optimism and even argues that this optimism is a discourse created by the tech industry, and calls Silicon Valley[3], *"(the) world centre of post-countercultural digital optimism"* (ibid.: 320).

Hesmondhalgh argues that in advanced versions of political economy of culture lies a nature of capitalism that wouldn't allow such a win-win situation to happen, which would benefit the indie artists over the established corporations. This is because it is in the business interest in trying to hold their privileges by restricting a flow in information and culture through intellectual property (ibid.: 318).

When it comes to distribution in the cultural industries Hesmondhalgh argues that because of the need for the artist to sell and expose their experience products, as music, they are very dependent on the distribution channels, which concentrates the power towards the distributors (ibid.: 314).

Furthermore, Chris Anderson's Long Tail is criticised for being digital ultra-optimistic because in Hesmondhalgh view, this is an example of the Silicon Valley digital utopianism, that the little "niche" guy wins over the big established record labels as a result of digital networks (bid.: 330). Hesmondhalgh refers to studies showing that there is music which is digital available, but has no purchases at all and that even in the illegal peer-to-peer networks, the music isn't downloaded at all (ibid). Further, it is argued that the search engines are the real gateway to the access to content such as digital music. Hesmondhalgh argues that in this case, the current search engines can be viewed as problematic when it comes to finding smaller niches on the internet, because the search engines is indexed with websites that has greater number of hits, rather than the less well-known niche sites. Futhermore, Hesmondhalgh points to the fact that search engines such as Google is not a

[3] A name used for a part of west California, south of San Francisco, that contains a large number of computer and software companies (New Oxford American Dictionary (3 ed.)) (Stevenson & Lindberg, 2011).

objective search engine such as a library search engine, but is biased by search engine optimizers, who in order to get a higher ranking on the Google search pays for this ranking (ibid.: 328).

Further, Hesmondhalgh argues that because of the internet isn't completely widespread yet, the unequal access to the internet is resulting in not everybody can benefit from the digital opportunities, that the internet has brought (ibid.: 321). Furthermore, Hesmondhalgh also argues that it requires a different level of skill in for example knowing where to find the niche artists in the Long Tail. As explained in the last paragraph, the major search engines such as Google, are biased in Hesmondhalgh's view. Therefore it requires knowledge and skill from the consumer in order to find and discover the niche artists in the Long Tail.

Moreover, Hesmondhalgh argues that a certain set of skills are required in order to use the digital opportunities the internet have brought. He argues that people underestimates how much that needs to be learned in order to use broadband to access information, checking your email and other basic doings on the PC (ibid.: 324). Further, these certain skills and knowledge is required in order for the consumer to find the niche artists. The consumer needs to know what platform to use in order to discover niche artists.

Chapter 3 – Part 1 - Music Recommendation & Other Features

Music recommendation

Due to the increased supply of digital goods, thereof music, on the web and in digital libraries such as Spotify provides, it is getting increasingly difficult to find what we want when we need it, and in a manner that best suits our requirements in musical taste, which was elaborated in the earlier chapter 2 in the section *"the paradox of choice"*. Because of the wide supply of music available the role of user modelling and access to personalised information is becoming crucial in order to screen through large amounts of available information on the consumer's interests and tastes. In order to suggest useful information to the consumer, many information sources embody recommender systems in order to personalize their content to the consumer (Lops et. al., 2011: 74).

Even though you can search across music streaming services such as Spotify, the consumer don't like to spend too much time searching. Because the consumer in today's digital world, have access to more music than ever before, it can be very overwhelming for the consumer (Leonard, 2016). The overwhelming supply was further reflected in the chapter about "the paradox of choice". Through the listening activity the consumer are spending on the music streaming service, this information can be exploited in order for the consumer to find music more efficiently, that is similar to the artist they are listening to but is less known (Schedl et al., 2005: 196). It is through the lesser known artists that we are moving towards the niche artists in the Long Tail.

The purpose of a music recommendation system is according to Celma: *"to propose to the user interesting music to discover, including unknown artists and their available tracks, based on the user's musical taste"* (Celma, 2008: 51). It is important to notice that throughout this thesis the terms "music recommendation" and "music discovery" are meaning the same thing, because the listener is discovering music through recommendation.

It is also important that the user is "open" to novelty in order to fully enjoy the music recommendations, because it's through the user's individual intrinsic need to seek stimulation through novelty through previously unfamiliar artists or genres (Tang & Yang,

2017: 3). Matthew Ogle, director behind Spotify Discover Weekly, argues that he can see that Spotify users are streaming more lesser-known artists than their favourite artists because of their recommendation technology (Leonard, 2016: 3).

In the following I will examine one of Spotify's most popular music discovery tools, Spotify Discover Weekly, and see how it works according to Spotify and if it is advanced enough to recommend niche artists in Chris Anderson's Long Tail.

Spotify Discover Weekly

Spotify Discover weekly is a playlist that is generated individual for the user of Spotify every Monday morning. The playlist consists of 30 auto-selected songs (Titlow, 2017) which are generated by analysing the individual listening data and then derives this data into a personalized playlist full of music recommendations (IFPI, 2017: 21; Spotify, 2017b). In order for Spotify to collect enough data about the listener, the user needs to use Spotify for a few weeks before Spotify knows the user's taste (Spotify, 2017d).

The vast amount of data Spotify is able to collect through their platform includes where the listener are, how often the listener is listening to music and also demographic information about the user (Rogers, 2016). All this data creates some crucial insights about who the listener is and can be used to make the listener's music experience better by optimizing the music recommendations. Spotify is for example able to suggest songs on the listener's typical behaviour doing the day, and Spotify can also customize a playlist that matches the listeners movement, so it matches the tempo of a beat through Spotify Running (Levine, 2015; Spotify, 2017j).

Due to the access of very sophisticated data that Spotify can collect through their platform, music recommendation systems are getting more advanced than never before (Leonard, 2016). Spotify also has access to over 2 billion playlists (Spotify, 2017e) in which they can make their recommendations. When Spotify tracks what the user is listening to, it compares the playlist with other playlists containing the same songs, and the other songs that are on the playlist but not on the user's playlist through algorithms. It's through these comparisons of playlists that Spotify is making their recommendations (Leonard, 2016).

Through all the playlists generated on Spotify, Spotify uses Discover Weekly to make an individual taste profile of the Spotify user. The way Spotify does it is to group the individual's music taste into groups of clusters of artists, and then make "micro-genres" or simply subgenres of the artists that the listener likes. These subgenres are not defined as broad as "Metal" or "Reggae", but like "Thrash Metal" or "Roots Reggae" (own examples),(Pasick, 2015). Here is a visual presentation of how these clusters of genres and subgenres are connected:

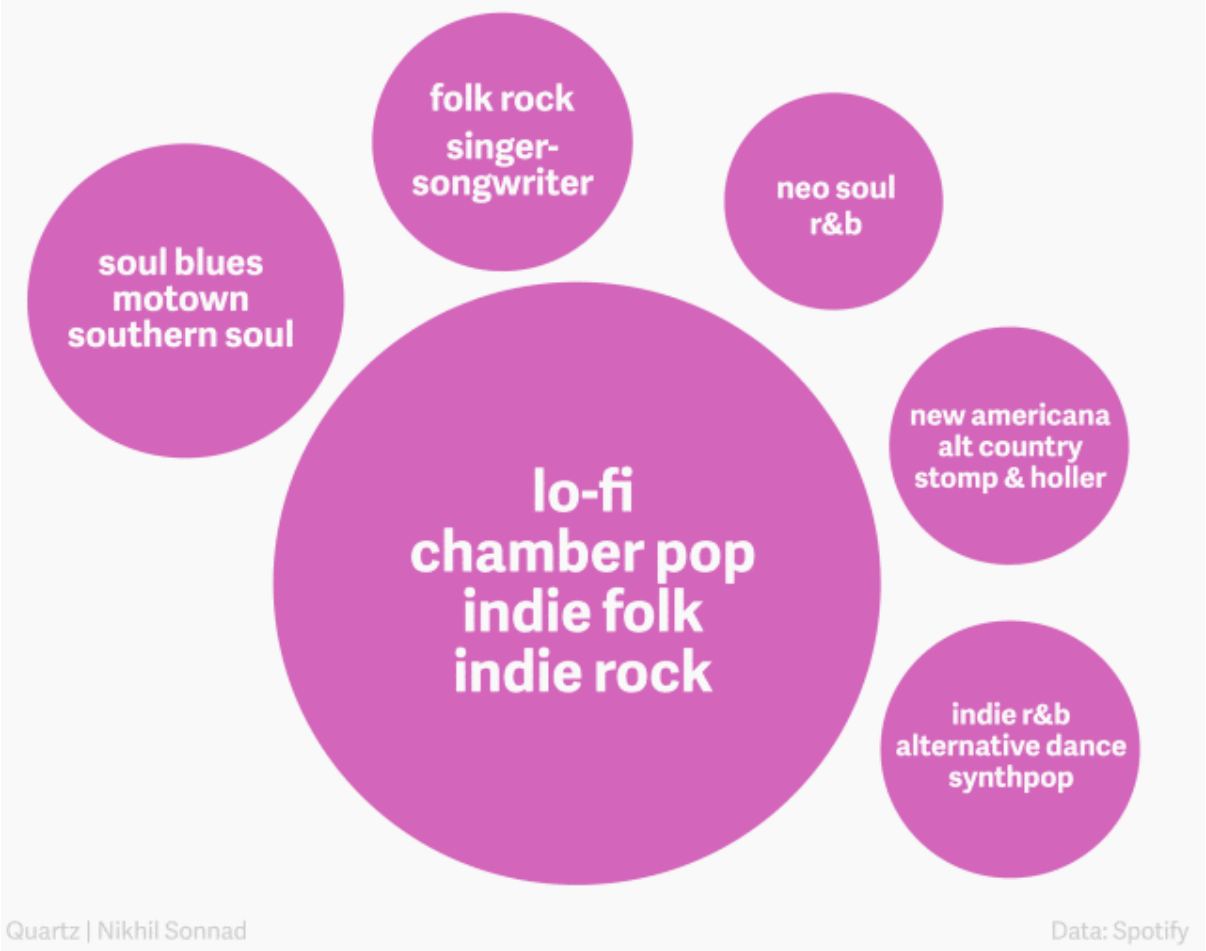


Figure 1: Clustering genres - Source: Pasick, 2015

The size of the clusters in the above picture reflects how often the listener is listening to the genre/subgenre, visually reflected in the size of the purple circles. When the listeners favourite genres has been defined through clustering of genres and subgenres, the Spotify algorithm in Discover Weekly is going into work, with the comparison of their 2 billion playlists of songs from different artists in these genres in the listener's taste profile (ibid). The algorithm in Discover Weekly is even smart enough to know, when the user is listening

to something that is away from the listener's taste profile – it could be a guilty pleasure of a pop-hit – or a children's song presented in the example below:

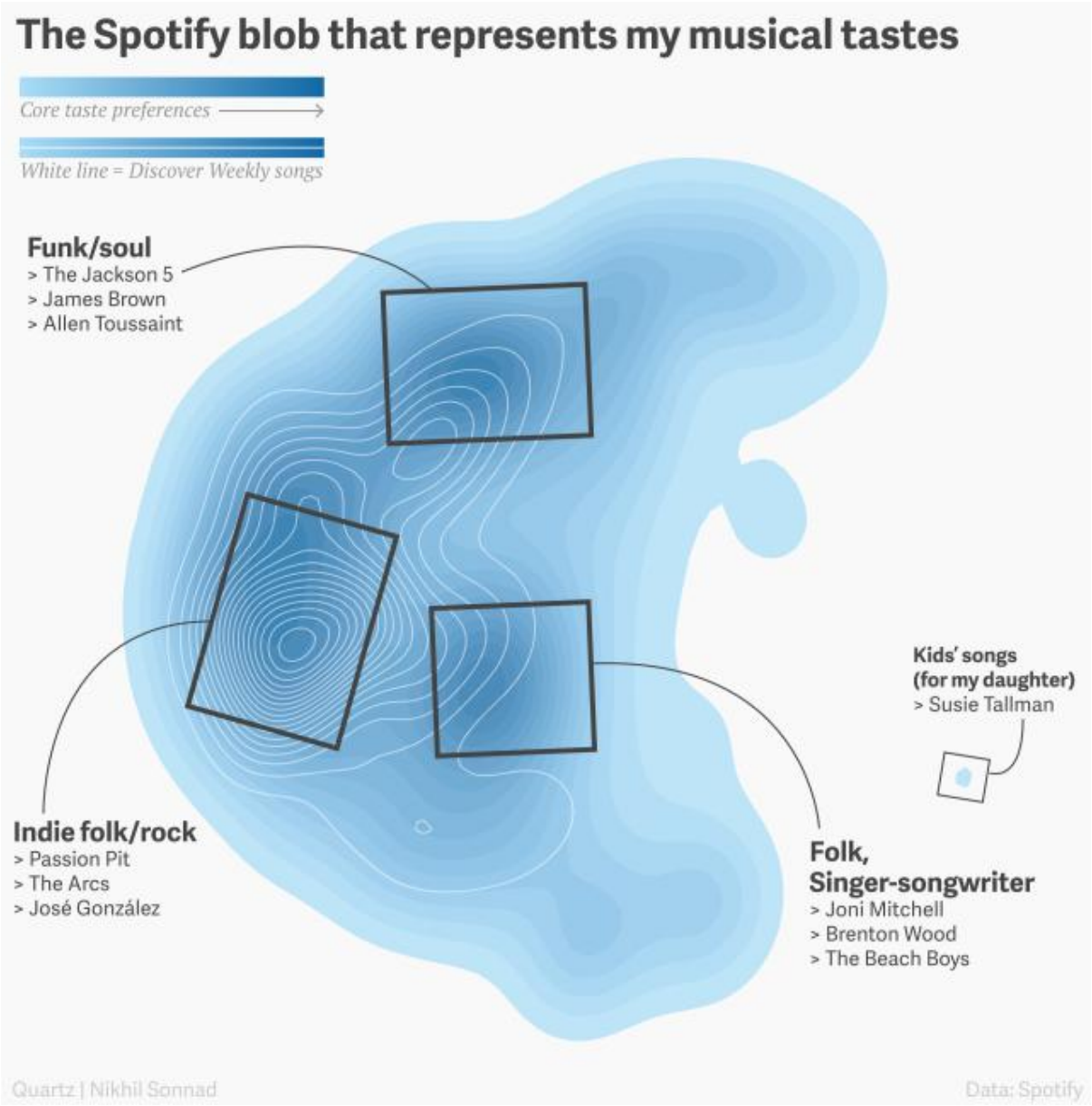


Figure 2: Blob of musical taste - Source: Pasick, 2015

In figure 2 presented above, the different shades of blue represents "Core taste preferences", which means that the darker the colour of blue in the "taste blob" is the most favourite genre or subgenre that the listener likes. The connected white lines within the taste blurb in the different areas of the shade of blue represents the songs that Discover Weekly picks out from the artists in the listener's favourite genres or subgenres. The whole Discover Weekly work flow can be summarized in figure 3:

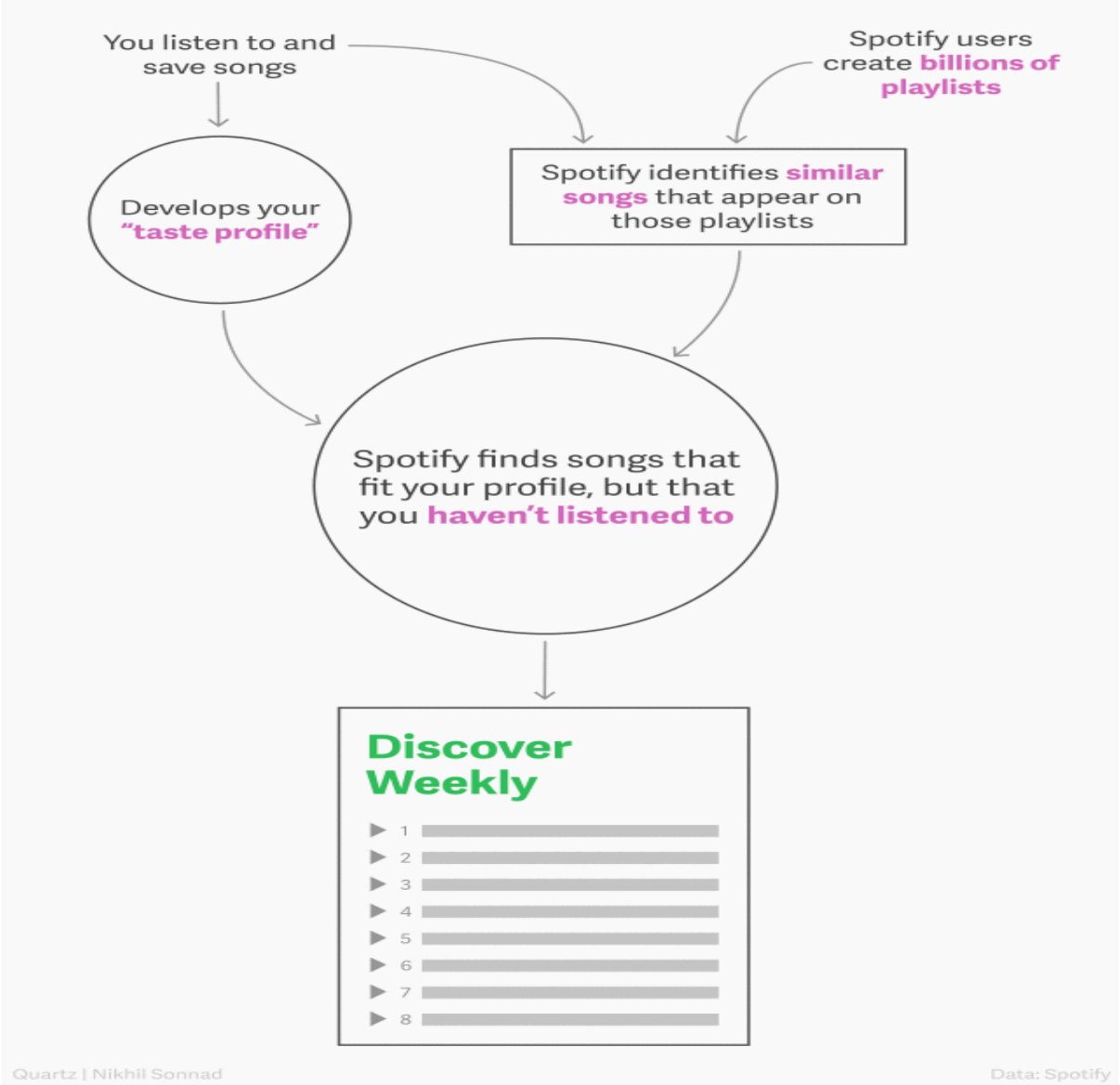


Figure 3: The Discover Weekly process - Source: Pasick, 2015

The music discovery technology behind Spotify's Discover Weekly, is provided by world leading music technology firm, The Echo Nest (The Echo Nest, 2017). The firm provides the algorithm behind Spotify's Discover Weekly (Leonard, 2016). The Echo Nest was acquired by Spotify on March 11, 2014, because of its leadership in music intelligence. It was through The Echo Nest's in-depth musical understanding tools that was the main driver for the music discovery for users. Spotify used this move to build on expanding their musical experience through this acquisition (Spotify Financial Statement, 2016: 30), which consisted of a team of high-caliber engineers which was in the forefront of the fields of data science and machine listening, which made a new generation of algorithms for music recommendations (Titlow, 2017).

People have been very impressed of how accurate and personalized the music recommendations have been through Discover Weekly. Some users have even been comparing Discover Weekly with an old friend that knows them very well, because of the accuracy of the music recommendations (Leonard, 2016).

Matthew Ogle, the product director behind Discover Weekly at Spotify (Kafka, 2017), has stated that Discover Weekly is a very powerful music discovery tool, which is capable of finding the most obscure niche artists and present them to the listener:

"We now have more technology than ever before to ensure that if you're the smallest, strangest musician in the world, doing something that only 20 people in the world will dig (like), we can now find those 20 people and connect the dots between the artist and listeners (...)".

"Discovery Weekly is just a really compelling new way to do that at a scale that's never been done before."

Matthew Ogle (Pasick, 2015)

If discover weekly is advanced enough to filter the supply of music, letting the listener discover niche artists deep in the Long Tail, then, as described earlier under The Long Tail, the criteria of "help me find it" has been fulfilled. This is critical in order for the long tail of niche artists to be successful. It wouldn't make any sense if the niche markets are available but the consumer is unable to find them, because of either too high search costs or because additional knowledge is required in order to know where to find these niche artists. If Discover Weekly is able to lower the search costs and solve the obstacles of finding obscure hidden niche artists, there could be an enormous potential for Spotify in this technology.

Matthew Ogle further explains how Discover Weekly could benefit the niche artists in the Long tail, by making them available to the listener with zero search costs (Leonard, 2016):

"It's moving the needle, especially for small-to-medium indie artists,"

Matthew Ogle (Leonard, 2016)

According to Matthew Ogle, Spotify's music discovery technology is able to guide the listener towards the artists through a whole new channel, because of their music recommendation technology:

"Artists are seeing this net lift of new listeners that they weren't getting through any other channel before."

Matthew Ogle (Titlow, 2017)

If music discovery technology such as Discover Weekly is as powerful in finding undiscovered niche artists in the Long Tail, then it could have some serious consequences for the traditional power structure in the music industry (Leonard, 2016). If the niche artists now can be found with music discover technology then it might affect their negotiation power towards the record labels, leaving the record label with less profitable record deals (Smith & Telang, 2016: 111). This can especially help the niche artist in making a carrier on their own and stay independent from the record labels (Herstand, 2017: 5).

Discover Weekly was released in Spotify in July 2015, and was one of the factors that increased Spotify's users from 75 million to 100 million users (Leonard, 2016). According to Spotify, 8,000 artists have gotten half their listeners from Discover Weekly from April 2016 to May 2016, but it isn't stated if these artists where niche artists or popular artists (Spotify, 2017k). Among the Spotify users, Spotify Discover Weekly soon became a huge success and according to Leonard; 40 million users tried it resulting in streaming 5 billion songs (ibid.). Spotify also states that especially the millennials[4] enjoy the personalized music experience through Discover Weekly. Spotify furthermore claims that they are using their streaming intelligence to reach this segment in the market (Spotify, 2017c).

Data

In this chapter I'm going to evaporate on how Spotify collect its data, and which tools and features Spotify has made with their data. According to Titlow, the Spotify platform is a "gold mine" of listening data and behaviour of the user in which Spotify creates tools for the

[4] A person reaching young adulthood in the early 21st century (New Oxford American Dictionary (3 ed.)) (Stevenson & Lindberg, 2011)

artist in order for the artist to better understand the market that it's operating in (Titlow, 2017). As the CEO of Spotify, Daniel Ek, put it:

"We've been doing this for years, and what we've built is the largest set of data of the most engaged music consumers"

Daniel Ek (Smith & Telang, 2016: 147)

In addition from collecting data about the user's behaviour on the Spotify platform, Spotify also collect data about device information, network information, additional cookies and address book information, location, and sensor data from mobile devices (Spotify, 2015). Furthermore, Spotify also use their data in making their royalty payments (Spotify, 2017b).

The new opportunities arising from the increasing data-driven approach in the music industry, is a whole new perspective from earlier, when the decisions of new music releases was based on only "gut-feeling" from the majors (Smith & Telang, 2016: 140), and not very sophisticated data about how the market would respond and if it was in the taste of the consumer (ibid.: 115).

Since the data that is collected says something about the users past and current behaviour, the data is not explaining something about the future, but the data might give the majors or the artist a better understanding of how their music is perceived and use it as a guideline to make better forecasts about the future. Furthermore, a major or artist would be able to see if a promotional campaign or tour had increased their Spotify streams, and also if a concert played in a specific city had increased their streams in the area after the concert. This gives the major or artist a better way of evaluating their current strategy if the pursued result is not showing up in the data.

In the following section of this chapter, I'm going to give some examples of how Spotify tries to increase their revenue from their ad-based business model, Spotify Free, through their data.

Advertisement and brands

Once data has been collected about the listeners likes and behaviour it makes it possible for the online platform to recommend music and make more relevant advertisement in order of what the online platform has learned from this data (ibid.: 142-143). In the case of Spotify, this could be evident in their ad-based business model, Spotify Free, to increase the relevance of their targeted ads, and further giving companies a better incentive of advertising on Spotify.

Research done by Smith & Telang has shown that a targeted ad that was in line with a movie trailer the consumer just had watched was very successful. This lead the consumer to be more likely to watch the movie, which resulted in a four to five times higher profit than non-targeted ads for the movie studio (ibid.: 171). The same approach could possibly be done with Spotify, where they could use targeted ads in relation to what kind of music the listener was listening to.

In fact, Spotify is already using their data to attract more brands to advertise on Spotify. Through their service "Spotify for Brands" they offer content targeting in which they can reach users with specific mindsets, habits and tastes which might fit the given brand (Spotify, 2017c). According to Spotify's UK director of sales, Greg Jarvis, Spotify is able to deliver an average of 14% incremental audience reach against commercial radio (Hemsley, 2015). Furthermore, Jarvis says that Spotify is able to build targeted and audience segments that are able to offer insights of which people are, what their interests is, what they're doing and even what they are feeling through what kind of music they are listening to (ibid):

"This allows brands to connect with consumers with a strong picture of their customer in mind. They can be superfocused with the message they want to deliver."

Greg Jarvis (Hemsley, 2015)

An example of a brand partnership is the collaboration between Starbucks and Spotify, where the Spotify user can download Starbucks app if they are a Starbucks Rewards member, and be able to see what songs that are playing at their cafés and save the songs to their own personal playlists (Spotify, 2015a). Since this feature is only available to paying Spotify Premium users and Starbucks Reward members, this collaboration is an example of

both companies trying to optimize their services by gaining a spill over effect. The Starbucks Reward members could be lured to make a paid Spotify subscription or Starbucks could attract some of Spotify's 70 million paying subscribers to their reward membership in order to benefit from this feature.

Other music discover features

When it comes to music recommendation and music discovery, Spotify has a wide range of different tools available for the Spotify user. The playlist based music discovery tools such as Release Radar, Daily Mix, Fresh Finds and Discover Weekly are sorely based on data from the users listening behaviour. According to Daniel Breitholtz, Spotify's Nordic head of shows and editorial, these tools are based on the user listening behaviour and should mirror the user's musical taste (Musically, 2017b).

The Release Radar music discovery tool makes a playlist for the user that consists of newly released songs from artist that the user has listened to, and that the user might not be aware of, because the user hasn't listened to the song yet. Your Daily Mix is a shuffled playlist that is based on the Spotify user's favourite tracks, and adds recommendations like Spotify Discover Weekly does. Spotify is distinguishing the user's favourite tracks from the frequency that the listener is returning to the song, and also how many times the user has listened to the song, and if the user has pressed the "heart button" (like).

Fresh Finds is based on an algorithm that are able to "crawl" internet sites such as music blogs and other sites to analyse and collect information about the release of new songs and artists (Titlow, 2017). These "fresh" recommendations are also playlist based, and are able to locate hype and activities surrounding music blogs.

When an online platform such as Spotify is able to collect huge amount of data about their users, this creates some new opportunities when making it easier for the artist to supply their music on the platform no matter how popular or niche the artist is. As described earlier in this thesis chapter 2, one of Chris Anderson's criteria's for the long tail of niche artists is going to work, is the how supply and demand is connected to the user. If Spotify's discovery tools are able to recommend niche artists in the long tail, these niches might start

to become profitable, because these niche artists have been overlooked when the major record labels made their traditional "gut feel" approach towards decision making (Smith & Telang, 2016: pp. 146). It wasn't profitable to provide these niches in the traditional brick-and-mortar stores according to Chris Anderson. Spotify's on-demand nature and their ability to collect data about their users, could start to make the niche artists profitable if Spotify has the ability to target the relevant listener with relevant music recommendations through their music discovery technology.

In the following section I'm going to examine some of Spotify's other tools that they can provide through their ability to collect data, and investigate how it can benefit the artists.

Spotify's data-analytic features

Despite from offering advanced music recommendations and better targeted advertisement through the data on Spotify's platform, Spotify also has some data-analytic tools available for the artist that are making their music available on their platform. The tools, Spotify for Artists and Fans First, I'm going to describe in this section is further build on the data that Spotify has acquired through their platform, and can help the artist better make decisions in their career (Titlow, 2017).

Spotify for Artists

Spotify for Artists is a service for every artist who has supplied their music on the Spotify platform. Through this service the artist is able to get audience insights, data about their songs, manage their profile, and get support from Spotify. Through Spotify for Artists the artist is able to see the demographics of where the Spotify user is listening to their music from. This includes the Spotify users age, gender and also what Spotify feature the Spotify user has used to find the artist's music (Spotify, 2017h). This includes statistics of which of the before mentioned music discovery tools that has guided the Spotify user towards the artist's music, and also which device the Spotify user is using to listen to the music.

The ability for the artist to know what gender listens to their music can benefit the artist when considering making merchandise such as t-shirts, hoodies, tank-tops etc. thereof

lowering the risk of overstocking their assortment for one of the genders. Sometimes artists get surprised to know who their fan base actually consists of.

Furthermore, Spotify also allows the artist to sell merchandise and physical media such as LP's or EP's on the artist's Spotify profile. This feature is only supported if the artist signs up with Merchbar, which is distributing the merchandise, so there isn't a direct channel which could benefit the niche artist (Spotify, 2016). This feature might only benefit more established and popular artists who can sell merchandise in larger quantities.

Fan location data from Spotify for Artists gives the ability for the artist to know where their fans are located can be quite convenient when considering planning their tour. This data can be used to know where the artist should play live, to know where the highest concentration of fans are located. Furthermore, the artist can also adjust their live set list in order of which songs that are the most popular in the current location, so the artist can maximize the fan's concert experience. Thus, the ability for the artist to know which songs that is popular at a specific location can also help the artist to have an idea of which songs they should pitch towards local radio stations (Spotify, 2017h). Through Spotify for Artists the artist is also able to see which similar artists the Spotify user is listening to. This can be used when the artist is deciding which other artist to make a collaboration with, when touring (ibid). The fan location data might not be as useful for the niche artist, because underground bands usually only are known in their local area, if they play local gigs or because of word-of-mouth. Either way, the niche artist could still confirm or disapprove where their Spotify listeners are located, and if promotional strategies are affecting targeted areas or listening streams.

Furthermore, taking Cave's complex *nobody knows* property into consideration these tools for data-analytics have now been available for every artist on Spotify. The artist might not know if the current music they're working on is going to successful, but now they have the ability to see more detail of how their music releases are perceived by the audience. This could give the niche artist a clue of the popularity of their songs, and what to try to focus on in the future, if they want to work their way towards the head of the tail.

Fans First

Fans First is a beta targeted email project, where Spotify identifies the artist's most obsessive listener and from which location they are listening from. This allows the artist to target potential ticket-buyers for their concerts and offer them exclusive offerings and the option to make pre-sale ticket purchases. The Fans First project is still at the beta state which includes a few hundred artists, but Spotify has plans on expanding this initiative (Titlow, 2017). The Fans First initiative is a way Spotify is trying to empower the artist with data in order to understand its fans, and make them less sceptical of the company (Marr, 2017). According to Johan Seidefors, Spotify's Nordic Head of Content Partnerships, Artist & Label Services & Studios, the Fans First initiative have already made over 300 concerts from Foo Fighters to rapper Silvana Imam. These concerts are made exclusively available for the biggest fans of the artist (Musically, 2017b).

To give an example of how successful the Fans First initiative from Spotify has been, Finnish rapper Cheek used this service in order to announce his retirement and farewell concert. Through targeting super fans the rapper was able to sell 16,600 pre-sale tickets in a few hours (ibid). Cheek however, isn't what could be described as a niche artist, because he has made several platinum and gold records (IFPI Finland, 2017), so he has been quite successful and popular. At this time it is not known if the Fans First initiative is being available and expanded to include niche artists, but so far, it is only the established and popular artists that have benefitted from this initiative.

Now some of the other features of Spotify has been described and evaluated in order to how efficient these offerings are for the niche artist, and if these features could contribute to increased cash flows from other activities other than music streaming. In the following section I'm going to describe how Spotify's popular playlists works, and discuss if Spotify is gate keeping the ability of the playlist's potential reach towards new listeners.

Playlists

Another feature of Spotify is the ability for the user to create their own playlists. This allows the Spotify user to create their own playlists with their favourite songs, or make playlists for when the user is engaging in specific activities (parties, relaxation, dinner music etc.).

Besides from the users own created playlists, Spotify also offers personalized and editorial playlists as RapCaviar, Baila Reggaeton, New Music Friday & Today's Top Hits to name a few (Spotify, 2017g). Just like a traditional radio station, the playlist curators that are genre-specialized, typically comes from a background in music television or radio (Titlow, 2017). Spotify has in total 4,500 of its own curated playlists which have a multi-tier hierarchy that is primarily broken down by genre (ibid). To give an example of the following of some of the curated playlists, Today's Top Hits has 14 million followers and RapCaviar has 6 million followers (ibid), so these playlists gives the artist huge exposure and a lot of reach towards a very large crowd of listeners. Because of the huge following of some of Spotify's curated playlists if the niche artist is placed on some of these playlists it can result in a huge spike of streams for the artist. One of the otherwise niche artists that have experienced such a spike in streams was Lorde that in 2013 was included on a popular Spotify playlist with a large following, with her song "Royals" that became a big global hit (ibid).

Furthermore, the playlists on Spotify can be convenient for the consumer, because it is limiting the listener's choices if the supply of music in Spotify is overwhelming the listener, thereof limiting the listener's "paradox of choice". Since the playlists are named after what they contain or by moods, the listener can quickly sort through their catalogue of music based on what feeling, mood, activity or genre that the listener spontaneously is having or doing.

As mentioned under Chris Anderson's long tail, one of the criteria's for niche artists to be discovered in the supply of music, the filters are necessary to sort through the content. Spotify's popular playlists, moods, genres or activities can be seen as such a filter, but the accessibility for the niche artist to be included on a popular playlist might be doubtful. Just as a traditional radio channel, Spotify is gate keeping their popular playlists and decides which popular or niche artist that should experience such a reach towards millions of followers.

Spotify denies to be gate keeping their popular playlists and according to Spotify's Nordic head of shows and editorial, Daniel Breitholtz, their playlists are curated by teams, and they are not able to favour new releases by influential majors or being paid to include certain artists to the huge exposure of their popular playlists:

"There is a big misconception that it's just a one-person show, running the whole things. That's totally not the case. We take decisions as groups regarding the bigger playlists (…) the decision on where we put a song, in what playlists, is based on historical data, but also in all honesty on the gut feeling of the editors."

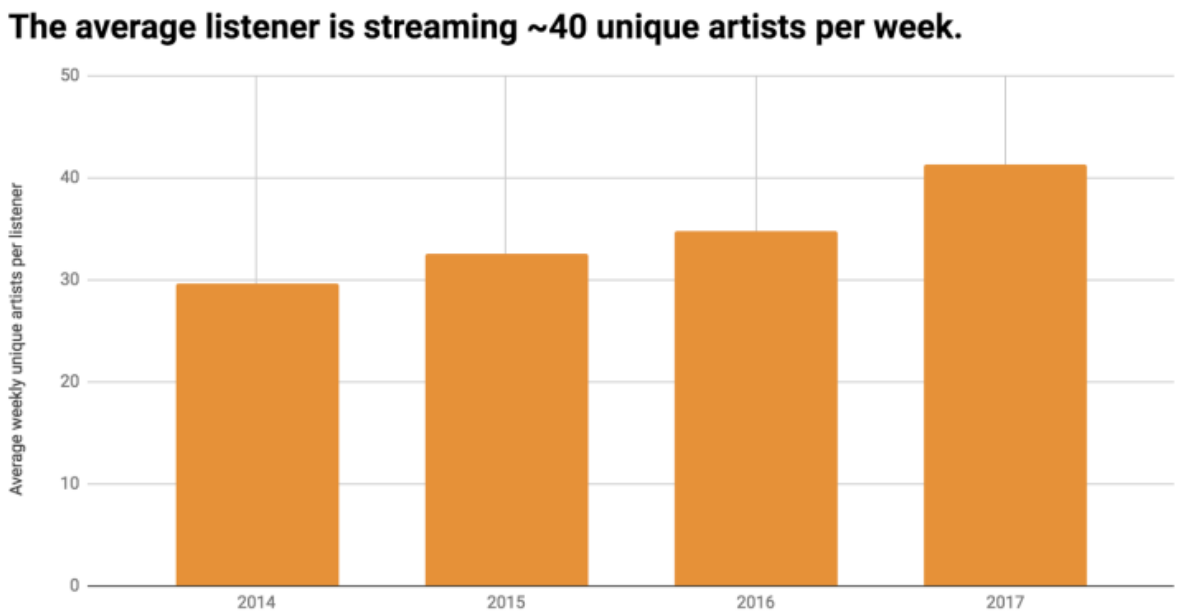
Daniel Breitholtz (Musically, 2017b)

Since the playlists are based on the editors' subjective opinion and that, this might make it difficult for the niche artist to be included on the popular playlists. Because of the niche artist's low popularity and small following, these artists do not create a lot of data. When Spotify is using data as a measure in their decision making of including artists in their playlists, the niche artist might get lost in the supply, not given them the ability to be discovered in the long tail. Therefore the playlist can't be seen as a filter fulfilling Chris Anderson's criteria's of helping the listener finding the niche artist. It is solving the listener's paradox of choice but not in a novel way benefitting the niche artist.

In the following section of this chapter, an internal Spotify study is revealing how their playlists and discovery tools are diversifying the listeners towards more artists, therefore diversifying their listening habits.

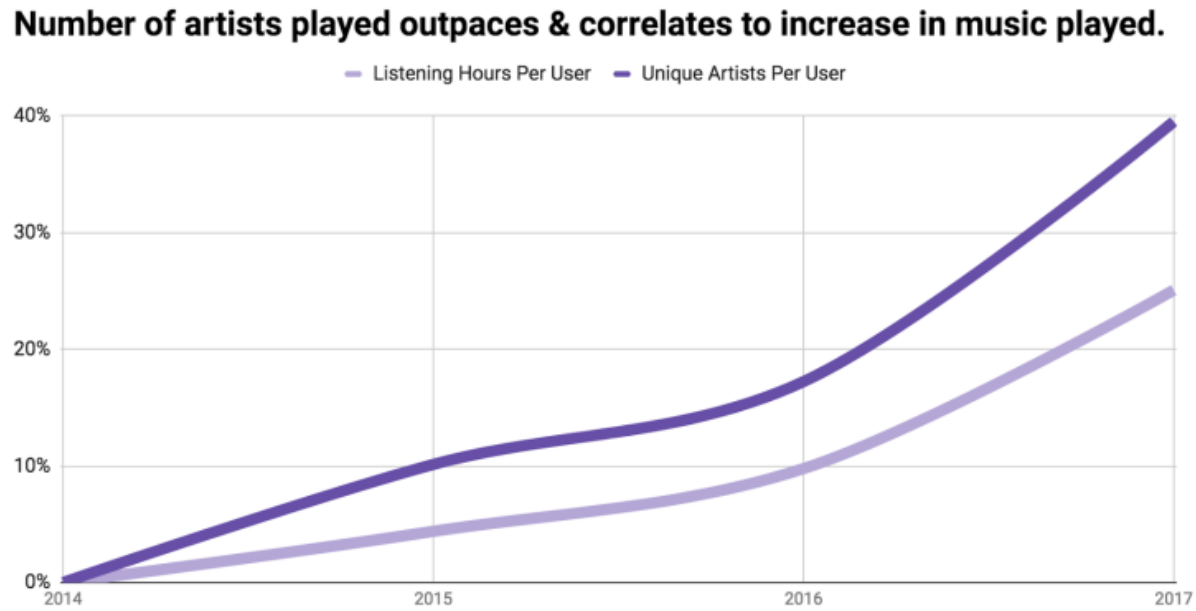
Spotify listening diversification

A recent released study made with internal data from Spotify has revealed that the Spotify user has increased their listening diversity by 40% in 2017. According to Spotify's own research, the average Spotify user is listening to around 41 unique artists per week in 2017 (Spotify, 2017g). Since 2014 the average number of artists the listener streams per week has increased by 37%, from just fewer than 30 artists per week to around 41 artists per week in 2017 (ibid). This increase of unique artists that the listener streams per week is illustrated in the graph below:



Graph 2: *The average listener is streaming ~40 unique artists per week. Source: Spotify, 2017g*

It's important to note, that in the graph presented above, the unique artists per week means that the listener hasn't listened to the artist before. According to the graph the average Spotify user is discovering more unknown artists to the listener. In the graph below we can see that there is a correlation between time spend on the Spotify platform and the amount of unique artists the listener has discovered:

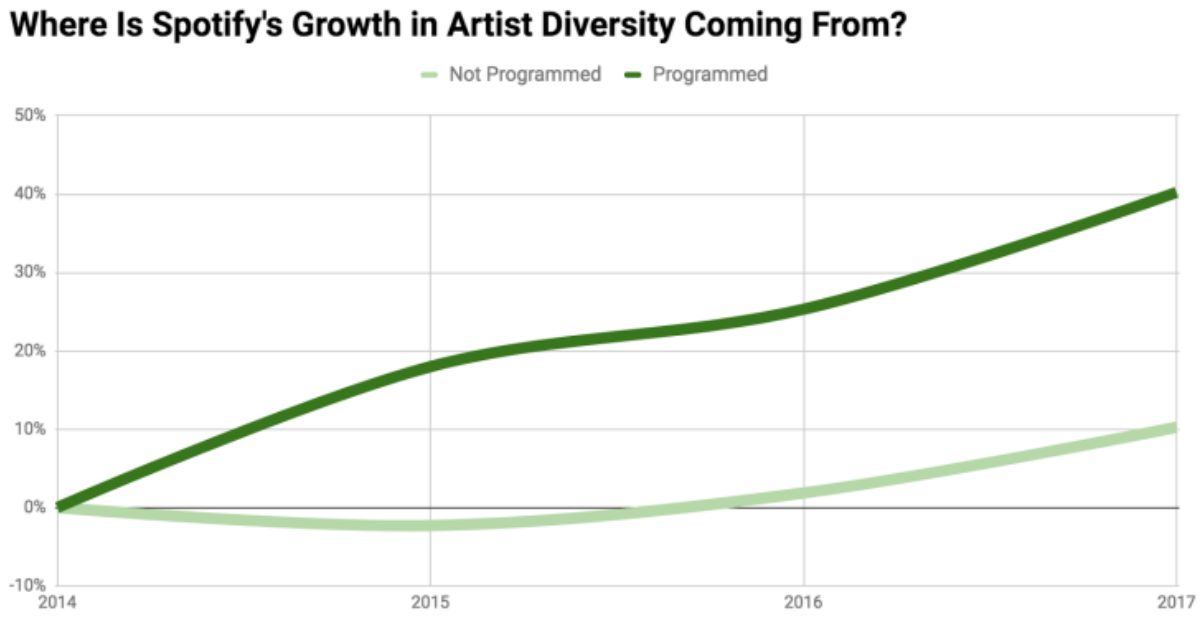


Graph 3: *Number of artists played outpaces & correlates to increase in music played. Source: Spotify, 2017g*

The connection between listening diversification and time spend on the Spotify platform, could be because Spotify's music discovery tools need data to analyse from the user's listening behaviour, so the longer the user is listening to music on the Spotify platform, the more data Spotify has to make more music recommendations (Spotify, 2017d).

The growth of Spotify users listening to new artists has to do with the steady launch of music discovery tools from Spotify. Spotify Discover Weekly was launched in 2015 and we can see that this has encouraged the growth in listening diversity, which Spotify is largely crediting this music discovery tool for (Spotify, 2017g). Fresh Finds which was mentioned earlier was also launched in 2015 which might also have contributed to the growth. From 2016 Daily Mix, Summer Rewind and Time Capsule was launched. We can see that since 2016 the growth in the Spotify's listening diversity has increased even further, and these music discovery tools have encourage the Spotify user to listen to artists that they otherwise wouldn't have discovered on their own, which has lead to the significantly boost in listening diversity (ibid.).

To further show support for this argumentation the following graph is showing what source that leads to higher listening diversity on the Spotify platform:



Graph 4:*Where is Spotify's Growth in Artist Diversity Coming From? Source: Spotify, 2017g*

In the graph presented above the two different lines show what leads the Spotify user into increase listening diversity of artists supplied on the Spotify platform. The line representing

“programmed” is the Spotify user that have been recommended new music using Spotify’s music discovery tools, and the other line “not programmed” is representing the Spotify user that have found new artists themselves. Through this graph we can see that the music discovery has a significant effect on how many artists the Spotify user is listening to.

Matthew Ogle, the product director behind Discover Weekly at Spotify, also back up the claim provided by this internal research at Spotify, that fewer users streams their old favourites and listens to newer acts instead (Leonard, 2016).

It is important to take into account that this research from Spotify isn’t being specific in how popular or niche the artists are that are being presented to the listener through music discovery. This makes it difficult to determine how effective Spotify’s discovery tools are able to filter the niche artists out of the long tail towards the listener.

In the following I will discuss and make points of critique of Spotify’s music discovery capabilities, and discuss if Spotify’s other features, playlists and data-analytic tools could be beneficial for the niche artist.

Critique and discussion of Spotify’s music recommendations

Throughout this thesis that has been highlighted a few of Spotify music discovery features, that Spotify provides for its users. In the previous section, it was described how, according to Spotify, that the listening diversity is increased because of their playlists and music discovery tools. However, in the Spotify user’s increased listening diversity, it is not made clear through Spotify’s data, what kind of artists, niche or popular artists that are benefitting from their discovery tools.

According to Celma the problem with music recommendation systems are that they are biased by popularity. Throughout his PhD he has evaluated several music recommendation systems and their ability to recommend the listener niche artists from the long tail, and he concludes that music recommendation systems lack a systematic method to evaluate the perceived quality and novelty of the recommendations (Celma, 2008: 204-205). This is a critical error in music recommendation systems ability to provide novel recommendations and recommend niche artists in the long tail.

Throughout the section about Spotify Discover Weekly, the product director behind Discover Weekly at Spotify, Matthew Ogle, is explaining how efficiently Spotify Discover Weekly is in providing music recommendations matching the listeners taste. Spotify isn't providing any specific evidence that their music recommendations actually are able to discover niche artists in the long tail, and if they are able to solve the popularity bias. When I tried to contact Spotify for an interview [5] regarding how efficiently their music recommendation systems could discover niche artists in the long tail, my interview got denied. If Spotify's music recommendation systems are as advanced as they say, why wouldn't they give more examples or accept an interview?

When taking Spotify's Discover Weekly into account, Spotify's Matthew Ogle, argues that their music recommendation system is able to connect the most obscure niche artist to the listener. There are just several biases in their own recommendation system. Since Discover Weekly is based on the 2 billion user generated playlists, Spotify is dependent on the novelty and quality of the user's ability to make playlists where they include niche artists. Furthermore, since these playlists are based on user generated playlists they might also be biased by popularity, since Discover Weekly's algorithm is only comparing playlists. If a niche artist is so unknown that they haven't got any reputation at all, and they haven't been included to a playlist in Spotify, then Discover Weekly's algorithm is not able to pick up this artist. This can have some serious consequences for Discover Weekly's ability to recommend novelty in their music recommendations, therefore not being able to reach into Chris Anderson's Long Tail of niche artists.

Another potential bias in Spotify Discover Weekly is the clustering of genres. Since each listener on Spotify gets their own taste profile, which was genres and subgenres formed into clusters, there is still the potential in defining the genres wrong. Since the defining of some bands subgenres can be a subjective matter, Spotify might cluster wrong bands together in Spotify Discover Weekly's clusters and therefore make irrelevant music recommendations. From the section about Spotify Discover Weekly there was given examples in the taste cluster as chamber pop, neo soul and R&B. If an artist was placed in a wrong subgenre, this could bias the recommendation. Some artists and music enthusiasts are really picky in deciding what subgenre of music their genre belongs to, so if Spotify has placed an artist in

[5] See the appendix for the *Spotify Interview Request*

the “wrong” cluster, the artists that are being recommended to the listener might not relevant, which would lower the quality of the music recommendation.

Even though that the music recommendations might not reach into the long tail of niche artists because of the bias of popularity, it might still be convenient for the user in order to solve their paradox of choice. If the listener prefers popular artists and their quest for novelty isn’t a relevant preference among the listener, the quality of the novel recommendation might not be an issue for the listener. Then the convenience of a playlist described by a genre or a mood might be good enough. This could only be a problem for the novel listener and the music enthusiast that see the novel discovery of niche artists as a great experience, and want to increase their knowledge and expand their repertoire of artists in a specific genre.

Conclusion of part 1

In the previous recommendation systems and playlist, I can conclude that these functions can be seen as a filter in order to decrease the listener’s paradox of choice. The recommendation systems Release Radar, Daily Mix, Fresh Finds and Discover Weekly among the other recommendation systems mentioned, can be such features that can filter through the supply of music. Their ability to create playlists for the Spotify user is enabling these music recommendation systems to limit the listener’s choices and make Spotify’s supply of music manageable and less overwhelming.

The more in-depth analysis of Spotify Discover Weekly revealed how this music recommendation system was able to compare 2 billion Spotify playlists, and clustering the artist’s genre’s and subgenres into the listener’s taste profile. Spotify’s Matthew Ogle provided a brief explanation of how efficiently Discover Weekly could recommend niche artists in the long tail without showing any evidence for his claims.

Through the critique and discussion of Spotify’s music recommendation capabilities, it was concluded that music recommendation systems are biased by popularity. The bias in the music recommendation systems are that the assumption that popularity is the most relevant way of recommending music to the listener. This bias makes it impossible to

recommend niche artists in the long tail, because of their low popularity and making the music recommendations without the needed degree of novelty.

Furthermore, Spotify's Matthew Ogle didn't provide any explanation and evidence how the comparison of playlists with Discover Weekly was able to solve the bias of popularity. Through the comparison of over 2 billion user generated playlists, the degree of novelty in the music recommendation is dependent on the Spotify's user's ability to provide novelty in their playlists. It is questionable how this method solves the popularity bias, without any evidence provided. Furthermore, the labelling of the artist's genre can also be seen as a potential bias, because of the subjective opinion of which genre the artist contains.

Further, I can conclude from Spotify's own study on music diversification that the listening diversity is in fact increasing because of Spotify's music recommendation systems. The study failed to address which artist, niche or popular, that was benefiting from this increase in listening diversity. Therefore I conclude that music recommendations increase the listening diversity towards popular artists, because of the popularity bias in Spotify's music recommendation.

Through Spotify's data collection capabilities I can conclude that Spotify can potentially benefit the popular artist in generating additional revenue through Spotify for Artists from merchandise and physical music. The niche artist on the other hand can't benefit from Spotify for Artists, because of the lack of popularity and therefore lack of demand of products from this channel. Furthermore, the niche artist might not find the data-analytic tools beneficial because of lack of data due to their small following of fans.

The Fans First initiative concluded that targeting listeners for concerts and exclusive offerings, was only available to established, popular artists, so the niche artist could not benefit from this feature. Furthermore, I conclude that the curated playlists might only be beneficial for popular artist, and artists who are moving towards the head of the long tail, because of the data these artists are generating. When these curated playlists are generated on a subjective opinion and data in mind, I conclude that it is only benefiting popular artists which are able to catch the eyes of the editors through their ability to generate data and music streams.

Chapter 4 – Part 2 – Music Industry Analysis and Spotify's Capabilities & Financials

Music streaming and the music industry

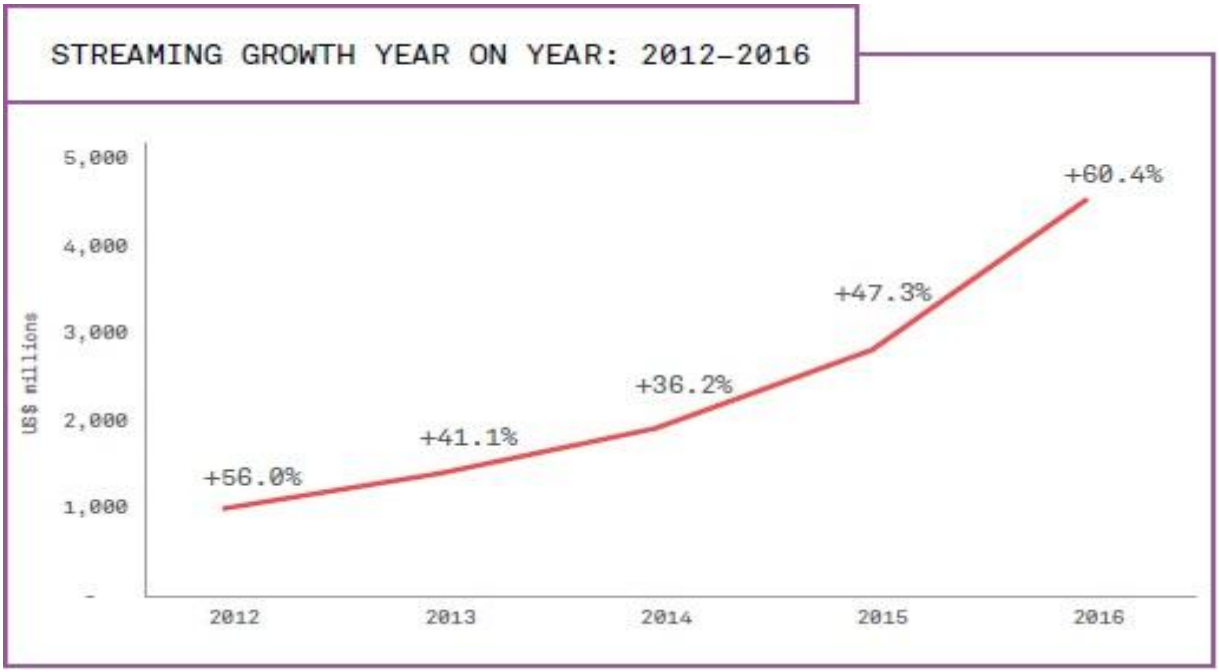
In the traditional music industry, before the digital revolution, the consumers bought physical media such as CDs, LPs or cassettes tapes in order to listen to the music they preferred. Through the music streaming service, the consumer is now buying access to their music instead of owning the music on physical media or music downloads. In the music streaming business model the consumer has access to a comprehensive library of music in their subscription period (Wlömert & Papies, 2016: 1). The music streaming model usually consists of two subscription models: One paid subscription where the music streaming service charges a monthly fee for the access and the other "freemium" model which is free for the consumer to use, but where there are interruptions between music tracks with commercials. The revenue from the freemium model is totally relied on ads and commercials (ibid: 3).

The music streaming model has been and still is widely debated in the music industry, because access instead of ownership is a rather untraditional approach for the music industry (ibid). The music streaming services has been growing in popularity among the consumers in the recent years, and through the growing popularity it is evident that a paradigm shift has happened in the music industry (ibid: 3). As stated in the introduction, the revenue from music streaming now represents the majority of digital revenue, accounting for 59% of total digital revenue (IFPI, 2017: 12)

To emphasise the shift in the music industry from physical to digital media, the revenues in the global music industry have been presented in the bar chart below:

Bar graph 5: Global recorded Music Industry Revenues 1999-2016. Source: IFPI, 2017: 11

In the bar chart we can see that the global music industry's total revenue has been growing in the recent years, from year 2015 with US$ 14.8 Billion to US$ 15.7 Billion in 2016 (growth approx. 5.73%). This bar chart illustrates the total revenue from all media and performance rights in the global music industry, and the digital revenue is both coming from music streaming and digital downloads. The growth in digital revenues coming from the music streaming services is presented by the graph below:



Graph 6: Streaming growth year on year: 2010-2016 Source: IFPI, 2017: 17

In the graph 6 above, we can see that there has been a clear trend of growth in the digital revenue coming from the music streaming services. The digital revenue grew from US$ 6.6 billion in 2015 to US$ 7.8 billion in 2016, where 60.4% of this growth in digital revenue was credited to music streaming as the main driver for this growth. The revenue from music streaming now represents the majority of digital revenue, accounting for 59% of total digital revenue (IFPI, 2017: 12). I argue that this growth in music streaming revenue can be seen as a trend of how the consumer is beginning to access music through music streaming services instead of music downloads.

In the following I will present the largest players in the music industry by their market share.

Streaming market shares of the music industry

In the music streaming market only a few big players own the majority of the rights to the music that are being supplied in the market. The "big three" consists of Universal Music, Sony Music and Warner Music's. Currently, the big three still has the majority of the music streaming market share according to music business worldwide:

RECORD LABEL AND PUBLISHER MARKET SHARES

All values are US dollars, converted from euros for Universal and Yen for Sony	FY15	FY16	15–16 GROWTH
STREAMING MARKET SHARE			
Universal Music	30.5%	30.4%	-0.1%
Sony Music	22.7%	22.7%	0.0%
Warner Music	19.3%	18.6%	-0.7%
Independents	27.6%	28.3%	0.7%
Total	100.0%	100.0%	

Table 1: Record Label and Publisher Market Shares 2015-2016, Source: (MBW, 2017)

In table 1 above, we can see that the big three are dominating the music streaming market with a combined market share of 71.7% in 2016, where the "indies", the independent musicians, has grown to a market share of 28.3% starting to catch up to Universal Music's market share of 30.4%.

Big three's ownership of Spotify

Since Spotify is a private company it's not easy to find all information about the company, because they are not keeping everything transparent, to keep critical information away from its competitors and sceptical artists. However, some Swedish journalists have discovered that the big three owns shares in Spotify. According to Computer Sweden, they have obtained financial documents proving that the big three (at the time the big four) and the independent artist's, Merlin, bought 18% of Spotify's shares accounting for €8,800 at the time (Jerräng, 2009). Furthermore, Computer Sweden describes that these shares was bought by the major record companies when Spotify was negotiating and collecting its licenses for the supply of music back when it was officially launched in October 2008 (ibid). The ownership of the shares are spread among the majors as follows: Sony BMG (5,8%), Universal Music (4,8%), Warner Music (3,8%) and EMI (1,9%) and the independent's Merlin also holds a small stake (The Swedish Wire, 2009).

It is important to mention that EMI was acquired by the other majors in 2011, where Universal Music acquired their music portfolio consisting of the rights of the artists that was signed by EMI (Atkinson, 2011). Since Universal acquired EMI's right to their music, I assume that EMI's stake in Spotify was also acquired by Universal Music, because of the relation to Spotify's music licenses. Therefore I assume that Universal Music has a 6,7% stake in Spotify's shares.

The bottom line is that when the big three owns shares in Spotify, this might affect Spotify's abilities to help the niche artists in the tools and features that were explained earlier in this thesis. When Spotify might follow the interest of the big three, it might affect Spotify's ability to reach into Chris Anderson's long tail, and only provide exposure to popular, head of the tail, artists which are signed by the big three.

Porter's Five Forces

In the following analysis I'm going to use Porter's Five Forces in order to determine the degree of competition in the music streaming market, and see if this is going to hurt Spotify's future profitability and see how Spotify's competitive advantage with their music recommendations might be able to differentiate them in the market. In the analysis I will give some examples of how Spotify is facing the competition, and include some of the described features that give Spotify the opportunity to overcome some of the competition in the music streaming market.

Bargaining power of suppliers: High

In order for music streaming services to provide their supply of music, they need to acquire the licenses from the record labels or the independent musician, which are the suppliers of the music, because they own the music. These licenses are paid through royalty rates and are negotiated individually with each of the big three and with the niche artist in order for Spotify to supply their music.

Since Spotify has stated in their financial statement, that they consider acquiring the licenses as a risk (Spotify Financial Statement, 2016: 14), because if these licenses are not acquired it is going to affect Spotify's supply of music, which could result in a lowered perceived value among the consumer. If the consumers can't find their favourite artists on their music streaming service it could affect the consumer surplus, because it is affecting the consumer's willingness to pay (WTP). This is also why Spotify is trying to provide as many features as explained earlier in this thesis in order for keep the artists on the platform, and give other incentives than their royalty payments.

One way that Spotify tries to decrease the suppliers of music's bargaining power, is to not making their royalty payments transparent by keeping them confidential. If the artists and the record labels doesn't know what each other gets paid by Spotify, it is more difficult for them to negotiate their royalties because of lack of knowledge of what competing artists or labels are receiving in royalties. However, according to Wlömert & Papies, the typical royalty payout the labels receive from the ad-based subscription model is around $1 per 900 streams, or approximately 0.001 EUR per stream (Wlömert & Papies, 2016: 5). This is just an

example of what the labels receive from the Spotify Free subscription model, and it is very difficult to know exactly what labels and artists gets paid because of the confidentiality of the licensing deals, but I assume the negotiation power among labels and independent artists depends on their demand among consumers measured in their popularity.

Another way to illustrate the majors bargaining power, because of their large catalogue of popular artists, Universal Music was able to window[6] their new releases by two weeks, before it was accessible for Spotify Free users (Spotify, 2017f). Furthermore, Universal Music was also able to negotiate their access to Spotify's data to better expand their engagement and build a better connection with their fans (ibid).

Further, it was explained that the big three, including the independent artists, was having their respectably market share: Universal Music (30.4%), Sony Music (22.7%), Warner Music (18.6%) and the independents (28.3%). Since the big three combined has a market share of 71.7% it would be devastating for Spotify if they pulled their music from their platform if licensing negotiations between the big three and Spotify broke down. Since the big three and the indie artist can choose from many different music streaming services, and other digital distribution channels, if they are not satisfied with their current royalty rate.

Since the niche artist's popularity is low, their negotiating power towards Spotify would also be low, because their music is not attracting many music fans. Furthermore, the niche artist's music would only benefit the engaged music consumer and the music enthusiast that are into novel and niche music. Since these niche artists will get lost in the supply of music, and Spotify's recommendation systems are not able to pick them up, because they are biased by popularity, the niche artist is not able to negotiate with Spotify. The niche artist has to play by Spotify's terms or find another distribution channel. The low negotiation power among the niche artist and their low potential of getting "filtered" out of Spotify's supply of music makes the niche artist less relevant for Spotify in supplying them. Because the niche artist is getting lost in the long tail, making them less relevant for Spotify, therefore further decreasing the niche artist's negotiation power towards Spotify.

I conclude that the overall bargaining powers of the suppliers are high, because of the big three's market share and their catalogue of popular artists, which would make it devastating

[6] Window (verb): To withhold a release from streaming services to maximize sales (Herstand, 2017: 423)

for a music streaming service not to acquire, even though the relevance of providing niche artists is less relevant because they might get drowned in the supply of music.

Threat of new entrants: High

It is rumoured that Google's YouTube is launching a music streaming service in Marts 2018 going under codename "Remix". Since YouTube has a userbase of 1.3 Billion (Shaw, 2017) and are part of Google's data-driven approach, this move might increase the competition in the market even further. Since the music industry has experienced growth in the last two years, new competitors might have an incentive you enter the market because they want to be part of this growth.

In order for Spotify to cope with the increased competition coming from rumoured Google's YouTube Remix market entrance, Spotify has made an equity alliance with Tencent (Spotify, 2017i). This move might increase and stabilize Spotify's market position as a market leader, if YouTube Remix enters the market.

Google might have the ability to confront Spotify's competitive advantage in their music recommendation technology, because Google also has access to many different sources of data, and might be able to make even more precise and relevant music recommendations because of their ability to maybe create better consumer profiling, and establishing an understanding of the consumer's wants and needs. The ability for Spotify to see their music recommendation as a resource for a competitive advantage is going to be further analysed through Jay Barney's resource-based view after this analysis.

When taking *market barriers* into consideration, as I explained in the previous section "bargaining power of suppliers", some of the market barriers in order to enter the music streaming market are to be able to collect licenses from the big three, because of their market share and because of their catalogue of music. If a new market entrant isn't acquiring these licenses they are not able to compete among the other more established music streaming services, because of the new market entrants' supply of music would be inferior. Furthermore, I would still argue that the big three has an interest in providing their music on as many music streaming services as possible, because of the potential reach their

artists could get. This would also depend on the royalty rate that the big three are receiving in order for them to be willing to supply their music. I would still argue that the threat of new market entrants are high, because the big three want to be exposed to as many listeners as possible in order to generate as much revenue as possible.

Threat of substitutes: High

When considering music the consumer has a large variety of substituted products to choose from, when they want to listen to music. Because of the digitalization in the music industry the consumer now have the ability to access music from a variety of sources. According to IFPI there are over 400 online music providers worldwide (*IFPI, 2015: 22*), and these providers are just the legal ones. The consumer also has many options in downloading free pirated music from the increase in stream ripping (IFPI, 2017: 37) or torrents, music lockers (file sharing sites), P2P Networks or listen to music for free on YouTube. Because of the wide variety of substituted products the consumer can choose from, and these products available are very close substitutes, the consumer might be very price sensitive and switch to one substitute to another if the price elasticity change (Grant, 2013: 65).

In order for Spotify to compete with "free", Spotify has made the ad-based subscription model, Spotify Free, available for the consumer. The ad-based subscription model is not profitable, as we will discover later, but it gives the consumer an incentive to use the Spotify platform instead of the wide variety of free substituted products. This is probably why Spotify has made their features available to both Spotify Free and Premium users, and only altering the ad-based business model slightly with audio quality, the delay of new releases for two weeks from artists signed by Universal Music, and only being able to use shuffle mode on mobile devices. Spotify hopes that the consumer will get tired and annoyed by the advertisement, and therefore get the incentive to pay for Spotify Premium. Furthermore, Spotify might not benefit from Spotify Free financially, but they collect data from the user's listening behaviour and their created playlists in order to make better recommendations, as it was explained earlier with "Spotify Discover Weekly". Therefore Spotify Free subscribers along with Spotify Premium subscribers are both contributing to Spotify's competitive advantage in their music recommendations, and the more novel the artists in the user-

generated playlists are, the more novel and niche will Spotify's music recommendations be in order to reach into the long tail, as it was explained throughout this thesis.

Furthermore, in order for Spotify to differentiate itself from the large amount of substituted products in the market, the many features as playlists, Spotify for Artists, Fans First, Release Radar, Fresh Finds and Spotify Discover Weekly, are some of the ways that Spotify is differentiating itself from other product substitutes. Through these features they are optimizing the consumer's surplus and willingness to pay because of the convenience of "filtering" the supply of music and the convenience. In addition, the tools provided for the artists might attract popular artists, head of the long tail artists, because of the efficiency of providing additional cash flows from other activities than digital music itself, towards concerts ect. That was explained in the "Fans First" initiative. It was though doubtful how beneficial these tools were for the niche artists, because of the lack of possible recommendations in the long tail, and the amount of data the niche artist is generating because of its small following.

Further, as I will explain in the resource-based view analysis, I consider Spotify's ability to make music recommendations as a competitive advantage. Because these music recommendations are based on the user's listening behaviour, in order for getting better recommendations, they have to spend time listening to music on the Spotify platform. Since music recommendations might be an incentive for the user to stay on the Spotify platform instead of a substituted product, the user might get fed up with advertisement and make a paid subscription, and increase Spotify's revenue.

Finally, I conclude that because of the many possibilities in order for the consumer to listen to music, and the wide accessibility, I conclude that the threat of substitutes is high.

Bargaining power of buyers: High

As described in the previous paragraph, the buyer has wide accessibility of substituted products to chose from, when the buyer wants to listen to music. Because of the high concentration of substituted products, the buyer's price elasticity may be very sensitive and thereof affect their willingness to pay (WTP). Since the bargaining power of buyers is high,

because their switching costs is very low with the many substituted products offered in the market, music streaming service has to provide services and features in order to increase the buyer's consumer surplus and willingness to pay.

Throughout this thesis, Spotify's features has been described and through the convenience of playlists and music recommendations, Spotify is providing features that can help solve the buyer's paradox of choice. Because of the wide variety of substitutes, it was argued in the resource-based view analysis, that Spotify's competitive advantage over its competitors lays in their ability to solve the buyer's paradox of choice with music recommendations. As described under Chris Anderson's Long Tail because of the digitalization of music, the decreased production costs and access to distribution, this has lead to an explosion in the supply of music. Because of the high bargaining power among the buyers, solving their paradox of choice in the supply of music through music recommendations and playlists might differentiate Spotify among all the substituted products available. This might be able to attract the buyers and increase their consumer surplus and willingness to pay although it might still be difficult because of the bargaining power of buyers. Therefore I conclude that the bargaining power of buyers is high.

Rivalry among existing firms: High

The rivalry among the existing firms in the music streaming market is considered high, because there are many music streaming services which are competing against each other to attract the music consumer. To name a few of the major music streaming services, besides Spotify, that are present in the market, Amazon Music Unlimited, Tidal, Google Play Music, Napster and Apple Music are among the most popular services in the market.

Since many of the tech giants are present in the music streaming market, and because of their product diversification, they're not totally dependent on the success of their music streaming services. Competitors like Apple have a wide variety of products and is generating substantially revenue from its success with the iPhone, iPad and other technical offerings. The same is evident with competitors as Amazon, which is also distributing nearly every imaginable product on their website, and collecting revenue from other sources than music streaming.

Spotify has always been struggling to make a profit, and in fact, Spotify had never been profitable as we will see later in this thesis. Since many of Spotify competitors have diversified across other services than music streaming, they are not as dependent on the revenue generated from this source of revenue. This might be a problem for Spotify in the future if their competitors would offer labels and artists a better royalty rate for supplying their music on their music streaming services than Spotify could offer.

Furthermore, because of many of Spotify's competitors have diversified across many other offerings than music streaming, they have other opportunities in pushing their music streaming services to the consumers. Apple has many other popular products, for example the iPhone, in which they can include or introduce Apple Music to a lot of consumers. Since Apple has such a variety of popular products, it gives more opportunities in giving Apple Music more exposure to many consumers that might benefit Apple Music. The same is also evident with the wide spread of Google's Android operating system for smart phones. This gives Google's music streaming service, Google Play Music, a huge exposure to many consumers.

I conclude that the rivalry among existing firms is high, because of the size and establishment of the other tech giants, and the large amount of other players, that are also present in the market.

Conclusion and summary of Porter's Five Forces

Throughout the analysis using Porter's Five Forces framework, it became evident that the music streaming market is highly competitive. Since the buyers in the music streaming market has a large variety of substituted products to chose from, and low switching costs, it makes the competition for attracting the consumer very intense. Furthermore, the competitors in the music streaming market are consisting of many of the big tech companies. Since competitors as Apple, Google and Amazon are increasingly data-driven; Spotify's competitive advantage in their music recommendation might not be sustainable as we will see in Jay Barney's resource-based view. Since the increasingly data-driven approach among Spotify's competitors, these companies might use their ability to collect data about the consumer's likes and behaviour to also make music recommendations. Because many of

Spotify's competitors can collect data from *alternative resources*, as it is going to be explained in the following analysis, these competitors might develop better music recommendation systems over time.

Furthermore, it was concluded in the Porter's Five Forces analysis that the *market barriers* consisted in acquiring music licenses from the independent musician and the big three. Since the big three has a collective market share of 71.7% it is crucial for new market entrants to acquire the music licenses from the majors. If these licenses aren't acquired by a new market entrant, their supply of music would suffer and not making their music streaming service attractive among the consumers. Since it is assumed that the big three want to reach the music consumer in their preferred channel to access music, I would argue, that they are willing to license music if they get their preferred royalty payments in return. This is going to be reflected in Spotify's financials later in this thesis.

Lastly, the rivalry among existing firms is high because of the many competitors in the music streaming market, and because the buyer has such a large amount of substitute products to chose from. Many of Spotify's competitors are data-driven tech companies, which also are diversified in their product portfolio in contrast to Spotify. This leaves Spotify under pressure and they need to stay innovative in order to produce new features and tools to increase the Spotify user's listening experience, in order to be relevant in the market. Maybe Spotify can differentiate their presence in the market with their competitive advantage, music discovery for now, but how long will it take their competitors to catch up?

In the following analysis of Jay Barney's resource-based view, I'm going to analyse if music discovery can be seen as a resource within Spotify that are able to create a competitive advantage, and if it is sustainable, in the highly competitive music streaming market place concluded in Porter's Five Forces.

Jay Barney's resource-based view

So far I have included a few features on the Spotify platform that possibly can help generate new cash flows, get better tools for market analytics, and help the artist to be discovered and increase the convenience for the listener using the Spotify platform. From the various playlists, fan targeting features and music discovery tools all that these Spotify features has in common is data. As mentioned a couple of times in this thesis, the music industry is being increasingly data-driven because of the increased digitalization. As mentioned earlier in this thesis, music streaming is now contributing for 59% of total digital revenue in the music industry (IFPI, 2017: 12). Since the increased revenue coming from digital music, thereof music steaming, many other digital distribution channels will have the ability to collect data about the consumer's behaviour, where they are located and what kind of music they like etc. When competing firms have the ability to collect data, it is not the data itself that can generate a competitive advantage but how this data is *used* and *interpreted*.

Since I argue that the data itself is not able to create a competitive advantage, because it is becoming a common resource among tech companies in the music industry. I argue that it is the capability of *analysing* and *interpreting* the data that can be seen as a resource. Therefore I'm going to examine how Spotify's acquisition of industry leading music analytic company, The Echo Nest, can be seen as a resource that gives Spotify a competitive advantage, and if this competitive advantage is able to be sustainable in order for Spotify to keep their market leading position.

In the following analysis of Jay Barney's resource-based view, I'm going to use the VRIN-model (**V**aluable, **R**are, **I**mperfect imitability & **N**on-substitutability) framework in order to determine if The Echo Nest can be considered as the resource, because of its capabilities, leading to a competitive advantage, and give some examples through what that has been already described throughout this thesis.

Valuable

In order for a resource to be valuable, it has to improve the firm's effectiveness or efficiency (Barney, 1991: 106). As it was explained in "Spotify Discover Weekly" The Echo Nest was acquired by Spotify on March 11, 2014 which was the main driver for music discovery for its

users (Spotify Financial Statement, 2016: 30). Since the acquisition of The Echo Nest, Spotify released a lot of different music discovery tools for the user, starting with Spotify Discover Weekly (2015) which was credited for an increase from 75 million users to 100 million users and a total stream of 5 billion songs (Spotify, 2017k). Because of the success of Spotify Discover Weekly many other discovery features in Spotify was also released: Fresh Finds (2015), Daily Mix (2016), Summer Rewind (2016) and Time Capsule (2016)(Spotify, 2017g).

Furthermore, it was also explained that the director behind Spotify Discover Weekly, Matthew Ogle, had been working at The Echo Nest and he is explaining how Spotify Discover Weekly is working, so I argue that there is a clear connection from Spotify's acquisition of The Echo Nest to their increased value received from both consumers and artists, because of the increased amount of subscribers after the availability of the new tools and features provided. Therefore I consider The Echo Nest as a valuable resource within Spotify.

Rare

I consider The Echo Nest as a rare resource, because their team consists of high-caliber engineers that are in the forefront of the fields of machine learning and data science (Titlow, 2017). I argue that it is rare to attract and maintain a team of highly skilled individual and be able to deliver world leading music discovery technology, because a human resource is free to move from one firm to another (Grant, 2013: 120), so being able to keep the highly skilled engineers on the Echo Nest team is rare. Furthermore, because of the Echo Nest's highly skilled team of engineers, they have been able to give Spotify a first-mover advantage in their music recommendations that was with accordance with previous Echo Nest employee, Matthew Ogle, had never been done before because of the uniqueness of their music discovery technology (see "Spotify Discover Weekly"). Since The Echo Nest are able to maintain the industry leading engineers in music discovery technology, then it might be very difficult for other competitors to obtain this resource. Because these engineers are a soft asset and can leave when they wish, Spotify might not be able to sustain the competitive advantage generated by their music recommendation technology, because these engineers could potentially get hired by a competitor. Therefore I argue that The Echo Nest can be

seen as a rare resource, but this resource might not lead to a sustainable competitive advantage, because there is the risk involved that key engineers are leaving the company.

Imperfect imitability

According to Barney, an imperfect imitable resource can only be imperfect imitable if the resource consists of either one or a combination of the following reasons: The resource has an *unique historical conditions*, the link between the resource and the competitive advantage is *causally ambiguous* and lastly, if the resource generating a firm's competitive advantage is *socially complex* (Barney, 1991: 107). In the following I will argue for why I only see that the Echo Nest's resource can be seen as a causal ambiguity and is socially complex and give examples of how this affects Spotify's competitive advantage.

Causal ambiguity Is when the firm is able to hide the connection between the resource controlled by the company and their competitive advantage, so the competitors are not able to understand or only have an imperfectly understanding of how the firm use their resource in order to have a competitive advantage (Barney, 1991: 108-109). I would argue that Spotify's Discover Weekly could be an example of causal ambiguity. In the chapter about "Spotify Discover Weekly", Matthew Ogle is explaining how this discovery tool works, but as mentioned in the critique of music recommendation, there's still a lot of unanswered questions about this feature actually works. Since my interview with how effective Spotify Discover Weekly could recommend niche artists in Chris Anderson's Long Tail got denied, I assume that this is because Spotify wants to hide the knowledge of how their music recommendations actually works, because this could also be copied by their competitors and therefore not making music recommendation a competitive advantage.

Since the artists might be a bit sceptical of how efficiently Spotify is able to help the niche artists, Spotify was forced to give some detail about how Spotify Discover Weekly actually worked, but Spotify made sure not to explain everything in to great detail, so the information provided was only able to give an imperfect understanding of their technology.

Social complexity Is how management is not able to imitate the social structure in a work force, because there lays a strong culture among the participants that are very difficult to imitate (Barney, 1991: 110). I argue that The Echo Nest has a very special culture because every employee is very fascinated by music and technology, but this is very difficult to gain an understanding of, because there is not much information available about The Echo Nest's social structure. This would furthermore also require a meeting or a way to observe their work space in order to get a clearer understanding of how their social interference is in order to explain if their organization persists of a unique culture, which generates a very productive and innovative working environment. I would still argue that The Echo Nest may persist of some culture, traditions and social relations (ibid.) that are necessary in order to create industry leading music discovery technology, taking the success of their discovery applications in consideration.

Non-substitutability

For a resource to be able to give the firm a sustained competitive advantage there must be no alternative resources that are able to give the competing firm the same advantage in order to pursue the same strategy (Barney, 1991: 111). Since The Echo Nest is providing its technology to over 400 other applications, Spotify might not be able to consider its music discovery as a sustainable competitive advantage, unless, after the acquisition of The Echo Nest, they secured and was able to gate keep the best features of the music recommendation technology from The Echo Nest for Spotify itself. Furthermore, as it was mentioned earlier, there has been rumoured the possible entrance of Google's YouTube to enter the music streaming market under codename "Remix". If Google considers entering the market, Google might be able to copy Spotify's music discovery strategy and use their own data in order to make maybe better recommendations. As explained earlier, Spotify consider itself to posses the largest set of the users listening data, but Google might use their *alternative resource* of Google searches, the tracking of the Google Android user, and the users general behaviour on the internet etc. to maybe be able to make even better music recommendation through maybe more advanced consumer profiling. Therefore I consider Spotify to have a competitive advantage right now, but it might not be sustainable

in the future because of the future threats of possible new market entrants, and the ability of competitors imitating their competitive advantage in music discovery in the future.

In the following table I have made a summary of the VRIN-model analysis of how The Echo Nest capabilities could be considered as a resource for giving Spotify a competitive advantage:

The Echo Nest's capabilities	Valuable	Rare	Imperfect imitability	Non-substitutability	Result
Music discovery	Yes	Yes	No	No	The Echo Nest's ability to make relevant recommendations might be a competitive advantage now, but not sustainable in the future, because of possible entrants and the presence of other data-driven companies in the market.
Ability to recommend niche artists	Yes	Yes	Yes	Yes	IF The Echo Nest was able to make novel music recommendations, it could be considered as a sustainable competitive advantage. In reality and through the argumentation in this thesis, Spotify can't provide evidence that they're able to do so.
Analytic tools	Yes	No	No	No	Since many of Spotify's competitors are data-driven companies, this capability can easily be copied and can therefore not lead to a competitive advantage.

Table 2: Overview of the VRIN-analysis

Conclusion of the VRIN-model

Through the analysis of looking at data-analytics and music discovery as a resource capable of generating a competitive advantage through Jay Barney's resource-based view, I can conclude that music discovery can be seen as such a resource through The Echo Nest's capabilities. Spotify's many other competitors, as mentioned in the Porter's Five Forces, are data-driven tech companies, so Spotify's competitive advantage in music recommendation

might not be sustainable, because of Spotify's competitors ability to imitate and substitute the resource. The competitors might also have very skilled engineers and experts that are capable of developing even more advanced approaches towards music recommendation through their data. Furthermore, since Spotify's competitors also are data-driven tech companies, these companies might find ways of creating even more relevant music recommendations. Their ability of collecting data from other sources than music listening behaviour could potentially give some better knowledge of knowing the listeners likes or dislikes through other behaviour.

Therefore I conclude that Spotify's resource generated through the capabilities of The Echo Nest might lead to a current competitive advantage, but this competitive advantage might not be sustainable in the future, because of their competitors' capabilities of collecting and analysing data.

In the following section I'm going to analyse Spotify's financial statement in order to determine how the Spotify's business model works, and see how much the cost of revenue through licensing are affecting Spotify's ability to make money.

Spotify's financials

In the following Spotify's profit and loss account is presented from the years 2011-2015 (in thousands USD)(Orbis, 2017), in order to examine Spotify's income. Spotify's income, gross profit and net income from 2016 is presented in the text.

Local registry filing/Consolidated	31/12/2015 th USD	31/12/2014 th USD	31/12/2013 th USD	31/12/2012 th USD	31/12/2011 th USD
	12 months IFRS	12 months IFRS	12 months IFRS	12 months IFRS	12 months IFRS
Exchange rate: EUR/USD	1.08870	1.21410	1.37910	1.31940	1.29390
Profit & loss account					
Operating revenue (Turnover)	2,117,883	1,313,317	1,029,992	94,890	10,383
Sales	2,117,883	1,313,317	1,029,992	n.a.	n.a.
Costs of goods sold	1,767,640	1,063,660	847,489	n.a.	n.a.
Gross profit	350,244	249,657	182,503	n.a.	n.a.
Other operating expenses	551,098	450,093	308,247	n.a.	n.a.
Operating P/L [=EBIT]	-200,854	-200,436	-125,744	-69,750	-55,825
Financial revenue	33,545	30,974	54,473	116	223
Financial expenses	12,069	23,069	2,949	5,234	2,007
Financial P/L	21,476	7,905	51,525	-5,118	-1,785
P/L before tax	-179,379	-192,531	-74,219	-74,868	-57,609
Taxation	9,072	4,465	2,866	2,531	1,164
P/L after tax	-188,451	-196,996	-77,085	-77,399	-58,773
Extr. and other revenue	n.a.	n.a.	n.a.	n.a.	n.a.
Extr. and other expenses	n.a.	n.a.	n.a.	n.a.	n.a.
Extr. and other P/L	n.a.	n.a.	n.a.	n.a.	n.a.
P/L for period [=Net income]	-188,451	-196,996	-77,085	-77,399	-58,773

Table 3: *Spotify's Profit & Loss account, 2011-2015*. *Source: (Orbis, 2017)*

We can see that even though that the revenue is increasing, Spotify's Net Income have always been negative, because the costs of goods sold increases with the revenue. In the latest financial statement from Spotify (Spotify Financial Statement, 2016) revenue continues to increase to €2.93 billion as with the costs of goods sold to €2.48 billion, leaving a gross profit of €450 million. After the operational costs and financial costs have been subtracted, Spotify's Net Income (loss) is -€539.21 million (Spotify Financial Statement, 2016: 8). Please notice, that the numbers from 2016 is in Euros and the above financial statement from 2011-2015 is in US Dollars. The bottom line is that even when Spotify's revenue continues to increase, so do their loss in Net Income. Therefore there might something completely wrong with their current business model, since Spotify isn't able to be profitable.

Furthermore, the increase in revenue for Spotify is in good line with the increase in music streaming growth in the music industry, as we saw in graph 6: *"Streaming Growth Year on Year: 2012-2016"*, in the previous section of this thesis *""Music streaming and the music industry"*.

One might wonder: How come the costs of goods sold are so high, when the intangible assets, the music that Spotify is distributing through their platform, are digital and not physical media reliant on brick-and-mortar-stores?

Royalty payments

The answer to the question is the royalty payments that Spotify pays the right holders of music: The record labels and the independent artists in order to provide their content on their music streaming service. The royalty payments are the primary driver of costs of goods sold with other distribution costs (Spotify Financial Statement, 2016: 17), and account for about 70% of revenue according to Spotify (Levine, 2015; Wlömert & Papies, 2016; Leonard, 2016). Through my own calculations I can see that in Spotify's financial statement from 2016, the cost of revenue consists of 84.64% (€2.48 billion/€2.93 billion) of their revenue.

The royalty payments are calculated using negotiated royalty rates, and are made in accordance with a master license agreement that are based either on paid subscription (Spotify Premium) and revenue from advertisement (Spotify Free) or user/usage measures or a combination of these (Spotify Financial Statement, 2016: 17).

Since the royalty rates are negotiated between Spotify and the record labels or the independent artist, the contracts of the revenue sharing between these actors are confidential. There has been much speculation what the artists or labels actually get paid, but according to Wlömert & Papies, the typical royalty payout the labels receive from the ad-based subscription model is around $1 per 900 streams, or approximately 0.001 EUR per stream (Wlömert & Papies, 2016: 5). Again, these royalty rates are based on the negotiating power the labels or the independent artist have over Spotify, as we saw in the Porter's Five Forces analysis, and vice versa.

Too get an idea of how Spotify's royalty payments works, it is illustrated in the following model:

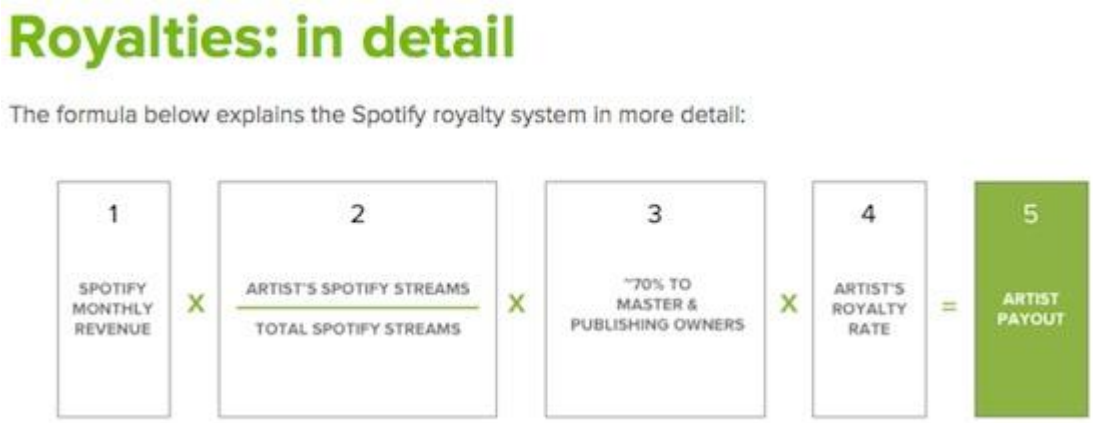


Figure 4:*Royalties in detail. Source: (Claymore, 2013)*

This model was derived from Claymore, which referred to a report made by Spotify in 2013, but which is no longer available on Spotify's website (Claymore, 2013). Since the specific details in the negotiation between Spotify and either the record label or the independent artist are confidential, I assume that this model still is valid.

In the model we can see that there is a correlation between *Spotify Monthly Revenue (1)* and *Artist's Spotify Streams (2)*, in which also is confirmed with Wlömert & Papies (Wlömert & Papies, 2016: 5). We can see that the artist is getting paid in accordance with their share of the *Total Spotify Streams*, and that *70% to Master & Publishing Owners (3)*, which means, that this is the share the record label gets, if the artist is signed. Furthermore, if the artist is independent *70% to Master & Publishing Owners (3)* goes directly to the artist of cause. The last factor, *Artist's Royalty Rate (4)*, was the royalty rate that was negotiated with Spotify in which was explained in one of the previous paragraphs. The last factor in the "Spotify royalty calculator" is the *Artist Payout (5)*, in which is what the artist actually gets paid from having their music on Spotify. The data for calculating the royalty payments are collected through Spotify's platform in order to determine the amount of streams the artists has received (Spotify, 2017b).

In order for Spotify to provide the music content on their music streaming service, they are very dependent on acquiring the licensing from a few numbers of major and minor content owners in order for Spotify to provide its service (Spotify Financial Statement, 2016: 14). As

reflected in the Porter's Five Forces analysis, it was assumed that popular artists which either is signed or independent will have substantial negotiating power over Spotify, because they are creating many streams on Spotify's music streaming service, and therefore is very important for Spotify to generate revenue and attract and keep subscribers on their platform. The niche artist wouldn't have the ability to negotiate because of the niche artist's low popularity.

On the other way around, the major labels, the independent artist or the niche artist are also benefitting from giving rights to the content on Spotify, because of the popularity of the platform and their leadership in the music streaming business. Through Spotify the major labels and independent artist have access to 140 million subscribers including both, Spotify Free and Spotify Premium subscribers.

Since it was explained earlier in part 1 of this thesis, that Spotify's music discovery was biased by popularity, the niche artist might not benefit from putting their music on Spotify because the niche artist is not able to get discovered in the long tail. Furthermore, because of the niche artist's small following the revenue generated for the niche artist might be low and insignificant, because of Spotify's bargaining power in their royalty negotiation.

In the following paragraph I will explain Spotify's twotier business model which is accounting for the majority of Spotify's revenue.

Spotify's twotier business model

As described in the beginning of this part of the thesis, many music streaming services has a twotier subscription model. This is also the case with Spotify, which offers Spotify Premium in which is their paid subscription model and Spotify Free which is their ad-based free subscription model. When we look closer into Spotify's financial statement from 2016, we can see how the revenues streams are collected with their business model:

	2016	2015	2014
		(in € thousands)	
Premium			
Revenue	2,638,493	1,732,306	982,741
Cost of revenue	2,154,708	1,434,245	774,213
Gross profit	**483,785**	**298,061**	**208,528**
Ad-supported			
Revenue	295,011	196,242	102,047
Cost of revenue	328,265	229,840	136,287
Gross profit	**(33,254)**	**(33,598)**	**(34,240)**
Consolidated			
Revenue	2,933,504	1,928,548	1,084,788
Cost of revenue	2,482,973	1,664,085	910,500
Gross profit	**450,531**	**264,463**	**174,288**

Tabel 4 - *Segment Information (6) Source: (Spotify Financial Statement, 2016: page 30)*

From the above section of Spotify's financial statement, 2016, we can see that the cost of revenue is exceeding the revenue generated by the ad-supported business model, Spotify Free. Since the gross profit of the ad-supported business model is negative, it is Spotify's strategy to convert Spotify Free subscribers into paying Spotify Premium subscribers to generate sufficient revenue in order to be profitable (Spotify Financial Statement, 2016: 4). Kim et. al. Argues that profitability in the ad-based business model is a general problem for all music streaming services which provides this service, so it is not only Spotify which is struggling to make revenue with this model (Kim et. al., 2017: 1). On the other hand, the ad-based business model is also attracting a lot of users, which could have illegally downloaded their music, but many are questioning if this model is able to be sustainable and profitable (ibid). According to Wlömert & Papies, the ad-based business model is only beneficial if it can attract inactive consumers who never spend money on music (Wlömert & Papies, 2016: 10). Spotify hopes that they can "lure" the consumer onto their music streaming service with the ad-based business model, and then converting these consumers into paying subscribers in the long run (Spotify Financial Statement, 2016: 2).

One of the ways Spotify recently has tried to give the Spotify Free subscriber an incitement to pay for Spotify Premium, is by delaying new releases from Universal Records by two weeks on the Spotify Free subscription model. Universal Records, which is one of the *big three* as explained earlier, has been putting pressure on Spotify to "window"[7] their new releases by two weeks from Spotify Free (Spotify, 2017f). This is one of the examples of the

[7] Window (verb): To withhold a release from streaming services to maximize sales (Herstand, 2017: 423)

big three's bargaining power as suppliers towards Spotify, because Spotify is very dependent on acquiring music licenses in order to run their service (Spotify Financial Statement, 2016: 4). These considerations were further reflected in the Porter's Five Forces analysis earlier in this thesis.

Spotify has recently made an alliance with Tencent music in order to make a strategic move in the highly competitive music streaming market.

Spotify equity swap with Tencent music

Recently (December 8th 2017) Spotify made an equity swop with Chinese music streaming giant, Tencent music. According to CEO of Spotify, Daniel Ek, this alliance will help both companies increase their growth:

"Spotify and Tencent Music Entertainment see significant opportunities in the global music streaming market for all our users, artists, music and business partners. This transaction will allow both companies to benefit from the global growth of music streaming."

Daniel Ek (Spotify, 2017i)

Chinese Tencent Holdings Limited (Tencent) owns a majority stake in Tencent Music Entertainment (TME), which run the most popular social media platforms in China and they also own the largest digital online music services, QQ Music, KuGou and Kuwo, which provides karaoke, live broadcasts and music streaming with hundreds of millions of users (Tencent, 2017). This equity swap can be seen as an equity alliance, because when both companies buys shares in each other companies, they will both benefit from each other growth (Dyer et. al, 2004: 113). The equity alliance is the strongest form of alliance between two firms, because both firms have an interest in seeing each other grow, so they both can benefit from the return on their investment. Furthermore, an equity alliance can also be seen as a way for each company to learn from each other (ibid). Tencent's music streaming platform QQ has 843 million Monthly Active Users (MAU) and 125 million paying subscribers (Tencent, 2017a), which is only 14,83% of QQ's total MAU. Spotify on the other hand has 140 million MAU and 70 million paying subscribers which consists of 50% of total MAU. Since Spotify's has a higher percentage of paying subscribers in comparison to their MAU,

one of the possible outcomes that Tencent is looking for in this alliance, is maybe to learn from Spotify how they can increase their percentage of paying subscribers. Spotify could possibly increase their market share by using the equity alliance with Tencent to gain entrance to the Chinese market, since Spotify isn't available on the Chinese market yet (Spotify, 2017e). The equity alliance between Tencent and Spotify could also be the first step of Tencent in acquiring Spotify. According to Martin Lau, President at Tencent, the strategic collaboration between the two firms is going to expand their market share:

"We are delighted to facilitate this strategic collaboration between the two largest digital music platforms in the world. Both of us share the same commitment to bringing music and superior entertainment experiences to music lovers, and to expanding the global digital music market for artists and content partners."

Martin Lau (Tencent, 2017)

Another motive for Spotify and Tencent to form an equity alliance could be the rumours of new competitors entering the music streaming market. According to Bloomberg, Google's YouTube is rumoured to launch an on-demand music streaming service in March 2018 going under internal codename "Remix" (Shaw, 2017) as it was presented in the Porter's Five Forces analysis under "threat of new entrants". It is rumoured that YouTube Remix is currently negotiating licenses with the big three (Shaw, 2017), and the International Federation of the Phonographic Industry (IFPI) has always criticised YouTube for its low royalty payments, calling it "the value gap", because it is devaluating music in their opinion and destroying future sustainability in the music industry: *"The value gap is the biggest threat to the future sustainability of the music industry"* (IFPI, 2017: 25). Pressure from IFPI and the big three could possibly give Google an incentive to enter the on-demand music streaming market with YouTube, and with a monthly user base of 1.3 billion users a relative small conversion rate into paying subscribers could give millions of paying subscribers therefore increasing the industry's overall competition with their entrance. These considerations were also further reflected in my previous Porter's Five Forces analysis.

Spotify's rumoured IPO

The CEO of Spotify, Daniel Ek, has long been against the altering of Spotify Free but since Spotify has plans to launch an Initial Public Offering (IPO) to raise more capital for further expansion. Many Wall Street analysts have been questioning Spotify's business model in terms of generating future profitability, and this has also been reflected in their valuation of Spotify.

One of the reasons why Spotify wants to launch an IPO is because Spotify raised $1 billion in convertible debt from private equity funds. In the terms for raising the money, it was a requirement that Spotify would launch an IPO (Hirsch & Dewan, 2017). In the first year the debt would carry a 5% interest rate, and further a 1% increase for every six month until IPO, to a limit of 10% interest (Abboud, 2017). This debt from private equity funds have been putting further pressure on Spotify, but Spotify believes that profitability is just a matter of scale, and that they are able to generate substantial revenue as their reach expands, resulting in their margins will improve over time (Spotify Financial Statement, 2016: 2).

Since the big three owns a combined stake of 16.3% in Spotify, which was mentioned in the beginning of this part of the thesis in "Big three's ownership of Spotify", I would argue that this could potentially scare away future investors. As it was explained earlier in Spotify's financials 2016, Spotify is paying a whopping 84.64% of their revenue in their costs of revenue due to licensing cost Spotify pays the right holders of the copyright (Spotify Financial Statement, 2016: 17). When the big three has a combined market share of 71.7% according to Music Business Worldwide (MBW, 2017), the big three owns the majority of all published music in the market. This might lead to the big three getting a considerable amount of Spotify's costs of revenue through their licensing. Since cost of revenue is an expense and is paid before any other potential share holders, I argue that the big three is benefitting quite a lot of Spotify, even though Spotify isn't profitable. Because the big three might get a considerable big amount of the cost of revenue because of their market share, the big three might not care if Spotify turns out to be profitable at all, since they already get a big piece of the pie. This might hurt future potential shareholders of Spotify, leading to Spotify not being an attractive investment, making a future initial public offering difficult in order to get investors.

Conclusion of part 2

The recent year's growth in the music industry can be credited to music streaming as the key driver for growth in digital revenue, now accountable for 59% of the total digital revenue in the music industry. Furthermore, the big three is still dominating the music streaming market with a combined market share of 71.7% of the music rights in the while industry. Spotify could not be seen as a decentralized music distribution channel since the big three own a 16.3% stake in Spotify's shares, and this ownership might affect Spotify's objectivity in their decisions.

Furthermore, I concluded in the Porter Five Forces analysis that the music streaming market is highly competitive. The large amount of substituted products and the buyer's low switching costs, gives the buyer many opportunities when choosing how to listen to music, either paying or free. The combination of a high bargaining power among the buyer's and the threat of loads of substituted products makes the competition very intense, and further increasing the rivalry among the existing firms in the music streaming market. Further, the music streaming services is very depending on acquiring music licenses that can be considered as market barriers, in order to supply music on their services. When only a few big players, the big three, owns a significant part of the whole music licenses in the music industry, this gives them significant market power.

The increased growth from music streaming in the music industry has also attracted new large players to make their entrance to the market. The rumoured market entrance of Google's YouTube Remix might further intensify the competition in the market. Spotify has tried to face the increased competition with an equity alliance with Tencent Music in order to challenge the new future threat.

Further, Spotify has tried to differentiate from the other competitors in the music streaming market with their acquisition of the music tech company, The Echo Nest. Through acquiring this resource, Spotify is using the Echo Nest in order to use its capabilities to create their competitive advantage in music recommendations, where Spotify Discover Weekly has been the most successful.

Since many of Spotify's competitors are data-driven tech companies, Spotify's competitive advantage through their capabilities of making music recommendation, might not be sustainable in the future. Spotify's competitors might also use their data collecting capabilities from several other sources than the consumer's listening behaviour, and create even more sophisticated music recommendations.

Through Spotify's financials it became clear that Spotify's business model is not able to deliver a profit. Since Spotify's cost of revenue consists of 84.64% of their revenue in 2016, the majority of Spotify's revenue goes to the big three, because they own the majority of the music licenses in the music industry. Furthermore, when the big three's ownership of Spotify and marked shares are taking into consideration, this might affect the niche artist's royalty payments, because the niche artist is not able to negotiate a high royalty rate because of the low popularity and negotiating power of the niche artist.

Lastly, Spotify's rumoured IPO might not attract many investors, because of Spotify's inability to create a profit, and because of the combined stake in the shares of 16.3% from the big three in Spotify. Since the cost of revenue was 84.64% of the revenue in 2016, the big three are getting their peace of the pie, and might not care about Spotify's profitability, hurting future shareholders.

Discussion

In order to know how Spotify is managing to keep their market leader position, Spotify might do something that differentiates them among their competitors. When I was researching Spotify before beginning to write this thesis, I got the impression that Spotify was doing something different with their music recommendations than their competitors was able to do. It was an obvious choice for me, to look further into how advanced Spotify's music recommendations really was, and if Spotify was able to guide the listener into the long tail.

In the first part of the thesis concluded that Spotify's music recommendation capabilities was biased by popularity, therefore losing the ability to make novel recommendations. Thus, not having the capability of providing novel recommendations, Spotify's subscriptions

kept growing after the release of Spotify Discover Weekly, as it was shown in “Spotify Discover Weekly”. Therefore, the average Spotify listener might not care about getting novel music recommendations in the long tail. The average Spotify listener might be happy enough of listening to popular music and get popular recommendations.

As I explained in my methodology, I might have been biased by my own interest in niche music, giving me a pre-judgement in thinking that every music listener wants to discover niche artists in the long tail. This might simply not be the case, since Spotify, is experiencing growth in their subscribers are the launch of the music discovery recommendation systems.

As I concluded in Jay Barney’s resource-based view, Spotify is able to consider their resource in The Echo Nest, as a capability leading to a competitive advantage in music recommendation. This competitive advantage in music recommendations would cease to exists, if the listener didn’t value the music recommendations through Spotify. Therefore, the music recommendations provided by Spotify might be good enough for the average listener, since Spotify experience subscription growth from the launch of their music recommendation features. Therefore the popularity bias in music recommendation systems might only affect a small amount of music enthusiasts that wants novelty in their music recommendations, making the potential revenue from this consumer segment irrelevant for Spotify.

Conclusion of thesis

This thesis has evaluated the wide range of music recommendation tools that Spotify is making available for the listener in order to discover new music. The various music recommendation features in Spotify can be seen as filters sorting through the supply of music, and decreasing the listener's paradox of choice making the supply of music less overwhelming and increasing the consumer's surplus and willingness to pay from the convenience.

This thesis concludes that even though that the analysed recommendation systems Release Radar, Daily Mix, Fresh Finds and Discover Weekly, can be seen as filters, they are not able to provide novel music recommendations. This thesis could not provide any evidence that these music recommendation tools were able to solve the popularity bias, and give the listener discovery of novel niche artist in the long tail.

The main focus was on Spotify's Discover Weekly which was the most popular music recommendation system among the Spotify user in order to discover music. Through the analysis of the information provided by Matthew Ogle, the product director behind Discover Weekly, it was concluded that Spotify can't give any evidence that their music recommendations are advanced enough to find niche artists in the long tail and solve the popularity bias.

Since the big three owns a 16.3% stake in Spotify and own nearly 72% of the total licenses in the music industry, Spotify is very dependent on the big three in acquiring their license in order to supply the majority of music in the music industry. The high bargaining power of the big three concluded that Spotify might be biased in their decisions and ability to provide effective tools and music recommendations for the niche artists.

Through the analysis of Spotify's own study of the increased listening diversification due to the amount of music discovery tools available to the listener, it was concluded that it didn't provide any evidence that the spread in listening diversity would benefit the niche artist.

In the analysis of Jay Barney's resource-based view, it was concluded that Spotify can see their resource provided by The Echo Nest as a capability in order to have a competitive advantage in their music recommendation capabilities. Further, it was concluded that this

competitive advantage might not be sustainable in the future, because of Spotify's data-driven tech competitors' ability to collect data. It was concluded that since the competitors collect data from other sources than music listening behaviour among the consumers, they might be able to make better music recommendation systems in the future, through a more detailed set of data. This concluded that Spotify's competitive advantage in music recommendation might not be sustainable in the future.

I can conclude that since the big three have shares in Spotify, the structure that Spotify provides for the artists might be in the interest of the majors making Spotify's features available benefit popular artists. The structural problem because of the interests of the big three, was furthermore included with David Hesmondhaulgh, that argued that the little niche guy would never win over the big three.

Taking the structural problems into considerations, I can conclude that Spotify's popular playlists might be gate keeping the exposure to millions of followers, because of the big three's shares in Spotify might affect Spotify's opinion in which artists to include and excluding the niche artist because of lack of data, and favouring the artists signed by the big three. Spotify was not able to give reasonable explanations of how they didn't gate keep their playlists.

It was also concluded that the Fans First initiative was a tool to increase cash flows from concerts, merchandise and exclusive physical music, but only in favour of the popular established artists. I conclude from this initiative that Spotify is only providing effective tools in the interests of the big three, and not taking the long tail niche artist into consideration.

The conclusion of the Porter's Five Forces analysis was that the music streaming market is highly competitive due to the many substituted products increasing the buyer's bargaining power and low switching costs between substituted products. Further, the high bargaining power of the suppliers of music was concluded with the market barriers in acquiring music licenses that new entrants to the market had to acquire in order to enter.

In the highly competitive music streaming market, I conclude that Spotify is able to have a competitive advantage with their ability to make music recommendations even though it

was not able to recommend novel niche artists. Spotify's successful music recommendation feature Discover Weekly was still able to give Spotify a significant growth of subscribers.

Since music streaming has been the key driver to growth of digital revenue, accounting now for 59% of total digital revenue, the music industry is attracting new market entrants that could further increase the high competition in the market. I concluded that Google's YouTube Remix's market entrance rumoured to March 2018, might have resulted in the equity alliance between Spotify and Tencent Music in for Spotify to face the increased competition.

Lastly, I conclude that Spotify's inability to generate a profit through their business model might make a possible IPO difficult in attracting investors. Furthermore, the cost of revenue was 84.64% of the revenue in 2016, and since the big three owns shares of 16.3% in Spotify, I conclude that the big three's significant revenue, because of their market share, might affect the return of future investors. The conflict in interests might scare future investors away.

Further research

In my study of Spotify I have come across various elements I could have included in my thesis. Through the delimitation I narrowed my subject down to only focusing on Spotify's abilities in recommending niche artists in the long tail, and how it could affect their position in the market.

In this thesis I wasn't able to provide any qualitative data, because my interview with Spotify got denied[8]. I guess my questions were too critical or asking to many sensitive questions about their business, or simply they didn't have the time. Further, Spotify's rumoured IPO could probably also affect their willingness to provide answers, because they didn't want to scare future investors away.

Through my research of Spotify I have come across several aspects I could have been studying. I ended up by focusing on the niche artist, because of my own background and

[8] See the appendix for the *Spotify Interview Request*

interests. As mentioned in the method, my pre-understanding has had a great influence in what theory and what I have concluded in this thesis. Therefore have this thesis only contributed to a small part of the whole picture.

By only looking at the structure of Spotify and the music industry, I haven't included any of my own empirical data. Through data collection by interviewing or surveying niche artists, I could collect empirical evidence in order to confirm or disapprove the outcome of my thesis. I concluded that Spotify's ability to make novel music recommendations, was based on a structural bias in the music recommendation system, because popularity was seen as relevance in the recommendation. This bias gave the music recommendation an inability to recommend novel niche artists in the long tail.

In the interviews or surveys with niche artists, I could ask them, if they were picked up by any music recommendation systems in Spotify. Since every artist on Spotify, has the ability to see where their listeners comes from through, Spotify for Artists, they could examine their data and give evidence, if music recommendation systems was recommending them.

In order to collect evidence that Spotify is gate keeping their popular playlists, further research could collect data about which artists that was included on these playlists. By looking at a large data sample of Spotify popular playlists, it could be determined how many unknown niche artists where present in these playlists.

As it was explained earlier in this thesis, Spotify Discover Weekly, was generating music recommendations through the 2 billion playlists on the Spotify platform. Further research could collect playlists from Spotify users in order to investigate what basis Spotify Discover Weekly is making their music recommendations on. Through the analysis of these playlists, the research could count how many niche artists, there were present in these playlists. Because of Spotify Discover Weekly's comparison of 2 billion playlists, it might be very difficult to collect a large enough data sample that could be comparable.

In order to investigate, if the niche artist's small bargaining power towards Spotify, resulted in low royalty payments, a survey or interview could be made in order to collect more evidence. In the interview for example, the researcher could ask, if they was allowed to see their royalty payments from Spotify. It could furthermore, also be interesting to ask popular

artists for their royalty payments, and make comparison between the popular and niche artist. This could furthermore collect evidence if popularity has an effect on royalty payments from Spotify. Thus, it might be difficult to get artists to give confidential information, especially if the artist is signed by a label. The label might try to hide the fact, what they actually earn and not make royalty payments to the signed artist transparent, in order to benefit financially.

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Appendix