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**MARKET STRUCTURE AND THE INCENTIVES TO
INNOVATE IN THE NORWEGIAN MUSIC INDUSTRY**

by

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Abstract

In this thesis, I study market structure and incentives to innovate in the Norwegian music industry. The industry has gone through significant changes since the year 2000. Every part of the value chain has been disrupted by technology, and the barriers to entry have decreased. However, major labels seem to have kept their market share. I define product and process innovation as respectively the release of a new artist and the release of a subsequent album. A product innovation gives the label the ability to release subsequent process innovations, which is needed for the label to recoup the investment of the product innovation. I demonstrate how market structure affects the incentives to invest in product and process innovation by using a logistic regression. My results show that independent labels invest two times more than major labels in product innovations. The objective for all labels is to release a product in the market with an innovative sound. The major labels will benefit from the first innovation by releasing multiple subsequent process innovations that allow them to benefit from diminishing cost. The independent label will release the first album, but cannot compete in the market for the second album because of lack of capital, less access to promotion channels and a small existing music catalogue. Competition in process innovations is too intense, so the independent labels will therefore continue to compete in product innovations by targeting the subculture and re-segmenting their portion of the market while major labels reap the larger benefits from process innovations, which maintains their market share.

Preface

The thesis is written as part of the Double Degree programme between the Norwegian School of Economics and Louvain School of Management.

The music industry is interesting to study. Despite its relatively small size, it affects almost all consumers in some way. The last thirteen years have changed the entire value chain and forced labels to rethink their existence. It is important for me study an area that catches my interest. Music has always been a passion of mine, and I therefore decided to study how innovation was affected by the market structure in the industry.

The research question is ambitious and comprehensive. I have applied non-traditional methods to define and measure innovation. This has made the work challenging, but also very interesting. I would like to thank the executives at Universal Music Norway and EMI Music Norway for allowing me to interview them, Gramo for providing me with information on album releases, Rockipedia for granting me access to their music database, and TONO for the preliminary interviews about the music industry.

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Terminology:

Record label: A firm that coordinates the production, distribution, marketing and promotion of recorded music

Major label: A record label that owns its own distribution facilities

Independent label (“Indie”): An independent label that distributes music through a major’s distribution system or through an independent distribution facility

1 Introduction

1.1 Background

Incentives to innovate and market structure are closely related. As intensity increases, firms are more likely to undertake product innovations to flee competition. If differentiation is already high, firms prefer to undertake process innovations. Decreasing profits and increasing number of record labels summarize the last 13 years of the music industry. Music revenues have hit the bottom and are finally starting to increase, thanks to the labels' embrace of digital technology. Since the golden age in the late 90s, the Norwegian industry revenues have dropped from 980 million NOK to 389 million NOK in 2012 (IFPI, 2013a), and the industry blames illegal file sharing. The subject has raised debates among researchers, musicians, and the industry itself. Everyone has an opinion about the trend. The effect of file sharing is rather ambiguous, although the companies in the industry tried to protect themselves by filing lawsuits against music consumers, hoping that file sharing would dwindle. It did not. While labels had the opportunity to develop a new distribution service that met the demand of their consumers, they did not. As the labels were busy suing their consumers, Apple launched its iTunes Music Store in 2003, capturing a significant portion of the digital market they could have secured themselves. But it was when Spotify launched its service in the American market that the global revenues stopped decreasing. The labels' problem was that they now had given away the very profitable distribution chain.

The last thirteen years have disrupted every part of the record industry's value chain: creation, production, reproduction and distribution. The changes have forced firms out of business, consolidation of the major labels, but also opened up for new firms to enter the mature music market. Digital technology has decreased the barriers to entry, but the profit distribution from digital music services has increased the importance of economies of scale. There were released 935 Norwegian albums in 2000, but 1324 in 2012. If we include the numbers for digital releases, the supply has increased from 986 to 1847. A simple calculation of the average revenue per album using the total industry sales shows that the average revenue has decreased from 197 676 NOK in 2003 to 84 178 NOK in 2012. When accounting for the market share for

major and independent labels, the distribution of revenues is probably much different. On an international level, the market share of the major labels has decreased from 2010 to 2011. Interestingly, the artist Adele takes much of the credit. She was one of the most successful artists in 2010 and signed to an independent label. Independent labels' market share increased from 23,2% in 2010 to 25,2 percent in 2011 (Musicandcopyright, 2012). Nevertheless, the major labels still hold a significant market share. This is not necessarily negative. According to Schumpeter (1942), monopolists are better positioned than firms in perfect competition to undertake investments in research and development (R&D) because they have the economies of scale and significant knowledge of the market. Arrow (1976), however, believes firms in perfect competition have larger incentives to innovate than monopolists, as investing in products that give them exclusive rights of use generates relatively larger profits compared to the situation in perfect competition.

I demonstrate that independent labels release two times more product innovations than major labels. Innovation in the music industry is investing in new albums from existing artists or new artists. Investing in subsequent albums of existing artists is defined as process innovation whereby investing in new artists is defined as product innovation. Investing in an album gives the label exclusive rights to sell and distribute the album, thus giving the label monopoly power in the market for each album. I will use a list of all Norwegian releases since 2000. I will look at the evolution in product versus process innovations and how the type of label affects the supply of the different types of innovation. I have interviewed artist and repertoire executives (A&R) in two major labels in the Norwegian music industry in order to get a more detailed picture of the dynamics between major and independent labels as well as the investment process in the labels.

1.2 Research Question

The music industry is very appealing for me because I have a passion for music as well as working experience in artist management. When I followed the course “Economics of Innovation” with professor Paul Belleflamme at Louvain School of Management, I came up with my research question. The course challenges students on topics within economic analysis of intellectual property, R&D, and innovation. The course concentrates primarily on information goods and knowledge, and I was especially interested in the relationship between market structure and incentives to innovate. I asked myself whether I could study how market structure affects incentives to innovate in the music industry, which led me to the following research question:

How can market structure explain the incentives to innovate in the Norwegian music industry?

I will try to answer the research question by answering the following sub-questions:

How can we define innovation in the recording industry?

What is the market structure of the Norwegian recording market?

How has the market structure been affected by technological changes?

How is the innovation behavior of today’s labels?

1.3 Objectives of the Thesis

I have chosen to study the Norwegian record market because it is one of the pioneer markets in digital music distribution (Dredge, 2013). While other music markets still rely mostly on physical sales, digital sales are the primary source of income in the Norwegian market. The recording industry is interesting to study because the products they produce take part of consumers’ everyday life. The digitization of the industry has disrupted every part of the value chain, forcing the labels to rethink how they produce and distribute music. The objective of the thesis is to understand the importance of the different roles of the Norwegian record labels. Mapping the behavior of the record labels can help us understand the impact created by the different labels. We may gain insight on what labels focus on product innovations whereas others focus on process innovations. I will look into the different labels, the

competition among the labels, the business model of the labels and the technological development in the market.

1.4 Structure

In this chapter, I have introduced the research question and the research design. In the next chapter, I will introduce the market and the market structure for recorded music in Norway. I will look at the players in the market as well as the value chain of the record industry. In Chapter 3, I will present the theoretical framework in the thesis. I start by defining what innovation is. I will then present different theories explaining how market structure affects innovation. Chapter 4 presents the research model. Chapter 5 presents the methodology of the thesis, Chapter 6 presents the results and analysis. Chapter 7 presents the discussion of the results and Chapter 8 contains the conclusion.

APA 6th edition referencing has been used throughout the thesis.

2 The Music Industry

2.1 The Music Industry

The music industry consists of several sectors. When we talk about the record industry, it is easy to talk about it as the music industry. However, the record industry only represents a small portion of the total revenue in the industry. The live-market, promotion market and publishing market are large markets that collect significant revenues every year. These markets, and especially the live-market, have become more important as the record industry's profits have decreased (Connolly & Krueger, 2006). One reason we talk about the record industry as the music industry is because the record industry has been the gatekeeper for producing the world's most famous celebrities; and it still is. Of the top ten most followed Twitter accounts worldwide, eight out of ten are music artists (Twitter.com, 2013). This thesis will concentrate on the Norwegian market for recorded music. By Norwegian, I mean the *production, distribution and consumption* of Norwegian artists by Norwegian consumers. Music is an international product, but most music is consumed locally (J Waldfogel & Ferreira, 2010). Very few artists appeal to a large international population. Most Norwegian artists concentrate on a Norwegian audience. The same applies for South Africa, Germany or France. "Competition in most of the media industry's different segments is national or language specific. The different markets are characterized by strong competition with continuously shifting market shares" (Dimpfel, Habann, & Algesheimer, 2002, p. 267). Even with the increased simplicity of distributing music across borders, Waldfogel et al. (2010) have found no evidence that new communication channels reduce the consumption of domestic music. Recent numbers from IFPI¹ on the Norwegian market support this argument (see Figure 1). In fact, the share of domestic music has actually increased with the shift to digital distribution from 22,3% in 2003 to 36,2% in 2012 (IFPI, 2013a). Every country has its own type of music, which is formed through culture and language. With digital distribution, any artist is more or less available in every country, but consumer preferences remain the same.

¹ The International Federation of the Phonographic Industry (IFPI) represents the recording industry worldwide. IFPI promotes the members interests by coordinating strategies within anti piracy, lobbying, litigation and public relations. They also publish comprehensive global statistics on the industry (IFPI, 2013b).

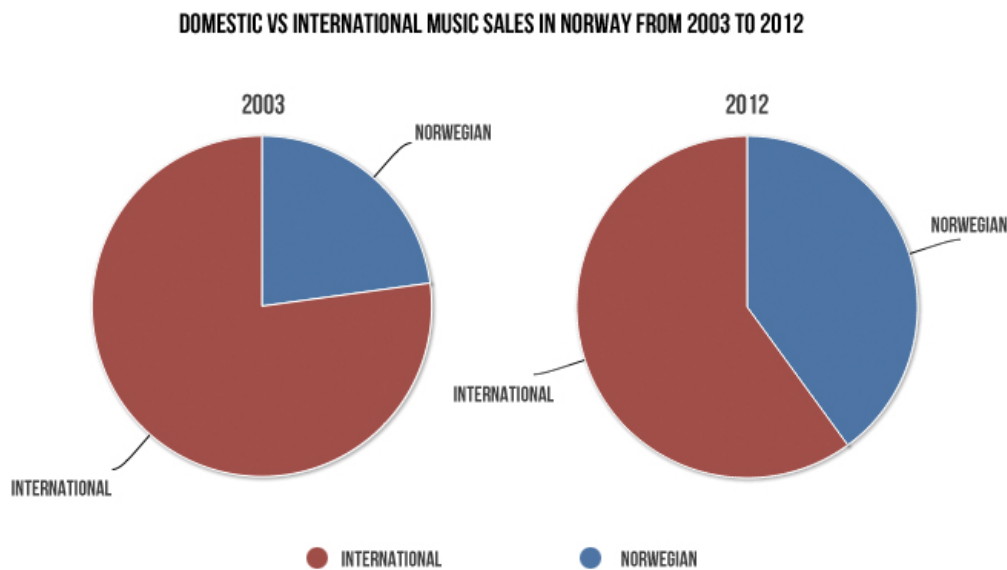


Figure 1 Domestic vs International music sales in Norway. Source: IFPI.no (2013)

2.2 The Recording Industry

The Norwegian record industry is relatively small. The yearly turnover for the industry was 379 million NOK in 2012 (IFPI, 2013a). If the live market is included, the turnover is significantly higher. The live market is not part of this study, but the two markets are naturally closely related. As the record industry has survived severe structural changes since the year 2000, the live market has become more important for artists than it was before. In an interview with the NRK (Norwegian Broadcasting Corporation), a Norwegian artist said “In the 90s, we played concerts to promote CDs; today we sell music to promote our concerts” (Hofseth, 2009). Ticket revenues seem to have replaced the position of record revenues for artists. However, the record industry is still important, as it represents the investors for an artist’s career.

There are four large producers in the record industry and hundreds of small producers. The record industry is an *oligopoly* (Hutchison, Allen, & Macy, 2010). I will explain this classification further in Chapter 6. An oligopoly is a market structure defined by a few producers that compete on price or quantity with homogenous or differentiated products (Krugman & Wells, 2008). The record industry is a mature

market characterized by a fixed number of producers, lack of innovation, and slow growth. We distinguish between two types of record producers: Major labels (“majors”) and independent labels (“indies”). A major is originally defined as a label that owns its own distribution channel (Knab, 2010). An independent label is defined as a label that is not affiliated with a major label and that distributes its music through alternative distribution networks (Knab, 2010). From 1980 until today, the record industry has gone through several mergers, resulting in four major labels which control as much as 80 percent of the worldwide market for recorded music today (Hutchison et al., 2010). We will give a brief description of the four major labels.

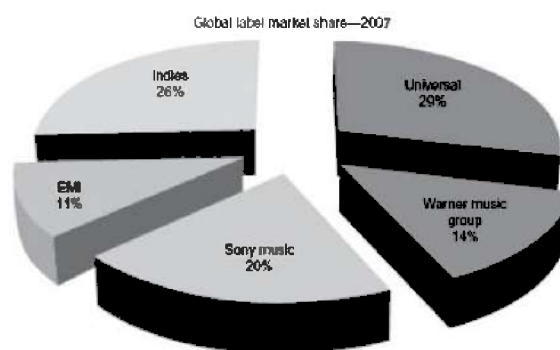


Figure 2 Market shares international record labels. Source: Hutchison, Allen & Macy 2010

Universal Music Group (UMG) is the largest of the four labels, representing around 30% of the total market share. The label comprises more than 20 labels, such as Def Jam, Motown, Island Records, Lost Highway Records, MCA Nashville, Mercury Records, Polydor Records, Universal Music Latino, and Verve Music Group. It represents artists such as U2, Rolling Stones, Lady Gaga, Eminem, Odd Nordstoga, Jarle Bernhoft and A-ha (Universalmusic.no, 2013).

Warner Music Group (WMG) is one of the oldest music labels, and is listed on the New York Stock Exchange (NYSE.com, 2013). WMG was purchased by a group of private investors from AOL – Time Warner. Asylum, Atlantic, Nonesuch, Fueled and Warner Bros are some of the labels under Warner’s umbrella. Warner recently bought a share of EMI Music from Universal Music, the label Parlophone Label Group (Sisaro, 2013). Warner represent artists such as Josh Groban, Linkin Park, Red Hot Chili Peppers and Muse (Music, 2013)

Entertainment Music Industries (EMI) is the smallest label of the big four. Their story stretches back to 1887 (Emimusic.com, 2013), and in Norway they hold the rights to the first Norwegian record ever produced (Savio, J. pers. comm., 11 April 2013). EMI is the home of the sub levels such as Blue Note and Virgin. The artist rooster contains among other the Beatles, Coldplay, Pink Floyd, Kylie Minogue and Norah Jones. The firm was once listed on the New York Stock Exchange, but the label faced financial distress and was acquired by Citigroup in 2011 (Perpetua, 2011). Recently, EMI was acquired by Universal Music but had to sell a division within EMI in order to get the approval from the European Commission (Vivendi.com, 2013).

Sony Music Entertainment (SME) is the second largest record label. They represent artists such as Alicia Keys, Paul Simon, Michael Jackson and Ke\$ha. They are home to several labels: Columbia Nashville, Epic Records, RCA Records, Legacy Records, and Masterworks. The company was founded in 1991 by Sony Corporation America (a subsidiary of Sony Corporation), which bought the famous CBS Records (Sony, 2013). SME later merged with Bertelsmann Music Group in 2004, which was at the time the fifth major record label (Sony, 2013).

The number of major labels has decreased as a result of the consolidation in the industry. EMI Music has been sold and split between the three other majors, but I will treat it as separate unit in line with the other three as the merger is not yet initiated.

	1995	2007
Number of firms	4,982	11,833
Number of employees	15,407	21,023
<i>Average number of employees per firm</i>	3,09	1,78
<i>Labour productivity</i>	44,8	67,3

Table 1 Number of firms, employees and labour productivity in EU 27 music industry, 1997-2007. Source: Leurdijk & Nieuwenhuis, 2011

Independent Labels

Independent labels hold the last portion of about 25 percent of the market. The definition of an independent label is however unclear. Some labels have several employees and have operations in several countries while others are self-employed

one-man labels. Table 1 lists the increase in the number of employees and firms in the European music market. The number of firms in the music industry has more than doubled from 1997 to 2005 while the number of employees per firm has almost reduced by a half. Note that this is the number for the music industry, and not the record industry but the trend in Norwegian market is the same. The numbers in this paper show that in 2000, there were 361 labels that released at least one album. In 2012, the number had increased to 569. A list of the Norwegian independent labels can be found in appendix o. We will give an introduction to the history of the industry before we present the value chain and then the theoretical framework. The history shows how technology has shaped the industry from the beginning of the 1900 until today.

2.3 History of the Recording Industry

The history of the record industry starts at the end of the 19th century in New York. History shows that file sharing is by far the only innovation that disrupted the industry's business model. The area of Tin Pan Alley in New York was the gathering place for composers, lyricists, music publishers, and talent scouts. The block on 28th Street between Broadway and 6th Avenue assembled the epicenter of songwriting and music publishing in New York ("Tin Pan Alley: 1880-1953," n.d.). Among the composers from Tin Pan Alley, we find names such as Irving Berlin, George Gershwin, and Cole Porter (Hofseth, 2011), whose songs can be found in any Jazz Standard book. The cluster of different players in the popular music industry encouraged collaboration, which has resulted in many of the most popular songs in the American popular music history. Sheet music had increased in popularity because of the introduction of the piano in middle class family homes. This was the start of the publishing industry, an important part of the music industry that has become extremely profitable in recent years.

As the radio and recorded music gained importance during the 1920s, artists' interpretations of songs became more important than sheet music. With increasing popularity for recorded music, composers at Tin Pan Alley lost their position in the market, replaced by the new record labels. The industry was in its initial steps and the business model of the music industry we know today was established. Artists

gave firms the copyright of their work in return for a salary. They had created an industry that sought to gain profit on artists that wanted to become popular. Record technology was not well developed at the time. The major record labels we know today have their roots from this period. The first record manufacturers were Victor and Columbia (both taken over by Sony). They had no technology for copying records so several phonographs were lined up in the studio while the band was playing. One can imagine how many times each album had to be played. There was no exclusivity between the labels. Each artist could choose what label to work with. The more successful labels ensured to get deals with the most attractive artists. They were sometimes paid more than what the labels would manage to make on the record, but records were considered a long-term investment, since the rights to the music belonged to the labels (Hofseth, 2011).

Different record formats were developed with ambiguous success. It was first with the introduction of the vinyl-player in the early 60s that the sales took off (Hofseth, 2011). Music was at the time released as singles with one hit-song and an additional song on the B-side of the record. Once the LP record that allowed artists to put more songs into a record was released, artists could release more songs that would not have been profitable enough to be sold alone. Artists had discovered the economics of bundling. The album had several advantages. Labels could charge a higher price because it contained several songs. Furthermore, economies of scale allowed labels to gain on distribution and marketing, as the cost of marketing and distribution per song was lower for album songs than for single songs (Hofseth, 2011). Investors opened their eyes for the profitability of the industry and levered the operations for international expansion. The record was not longer the only product, but also the shows for promotion and merchandise (Smith, 2012).

The introduction of the cassette is referred to as “the Internet of the 70’s” (Hofseth, 2011, sec. 9). Cassettes were small in size and allowed consumers to easily copy albums or make mix tapes of their favorite songs. The cassette was the first democratization of music publishing and music listening and they were much cheaper to produce than the vinyl albums. People could bring the music anywhere with the portable Walkman. The record industry was not happy, as people could copy cassettes rather than buy them. This led to several campaigns against home copying

and resulted in the Norwegian Parliament imposing an additional tax on every empty cassette to outweigh the private copying, according to the Norwegian Parliament (St. Meld. 2, 1988).

In the mid 1980s, the Compact Disc (CD) was released. The CD had the same robustness as the cassette, but did not have all the noise and crackling. It quickly became the preferred music format for its convenience and quality. Record labels embraced the CD, and record sales peaked during this period, which lasted until the beginning of the millennium. Consumers were not entirely happy though, as copying a CD seemed more difficult than with cassettes. People had become used to creating mix tapes and sharing their favorite albums with friends. The CD missed an important factor. The CD burner was the product that would change that (Knopper, 2009). The labels had fought against copying since the cassette, but fighting the CD burner seemed tougher. During the late 90s, the software industry was on its way up. Sony had a foot in both industries. The CD burner was very important for the software industry. Although it allowed people to make illegal copies of software products, the software industry would not agree to stop the development of the CD burner, so Sony had no choice. Without Sony on their side, the other labels could not fight the battle alone (Knopper, 2009). They had to find other ways to fight illegal copying. The CD burner could potentially disrupt their extremely profitable business model. So they invented the DRM.

Digital Rights Management (DRM) is software included on CDs that prevented people from copying it (Layton, 2013). The copy protection makes it impossible for users to copy CD's. Such protection is still in use today by several firms to control the circulation of illegal copies. However, the first protections were easy to circumvent. With the launch of Napster, DRM had little effect.

Napster

Napster made big changes in the music industry. It disrupted the record labels' business model and represents the beginning of the shift towards digital distribution of music. It is referred to as the David vs. Goliath battle, and the consumers gathered around Napster to support its existence (Knopper, 2009). Sean Fanning and Shawn Parker launched Napster in 1999. It was established as a company in 1999 with

Fanning's uncle as CEO. His uncle was an entrepreneur who never really succeeded with his inventions. But at the time Napster was launched, Fanning was still in college and needed someone with knowledge on how to run a company to help him get connections. Napster was not the first service that allowed people to share music online. People had already put up several sites with their music collection. But the convenience of Napster quickly attracted thousands of users. Napster became known in the industry and was approached by several venture capitalists (Knopper, 2009). Eileen Richardson, partner at JK&B Capital in Chicago joined the executive board of Napster and initiated contact with the five largest record labels at the time (Knopper, 2009). Napster's history is well known. It ended with several lawsuits from the major record labels and went bankrupt. However, Napster could have been the optimal solution to fight piracy at the time. Napster had meetings with all the major labels, trying to establish a business model that the labels and Napster could agree upon. Although this was new to the labels, they were not as reluctant as the history says. There were several deal proposals on the table for the majors investing in Napster, but the problem was stubbornness on both sides that resulted in the labels walking away (Knopper, 2009). Instead of investing in a service with 30 million users, the labels left "billions and billions of dollars on the table by suing Napster (...) It was the moment that the record labels killed themselves", says Jeff Kwatinetz, chief executive officer of the Firm¹ (Knopper, 2009, p. 143). The RIAA² tried to maintain a good image of the industry by telling that file sharing was stealing (Knopper, 2009). Many of them hoped that file sharing would go away when the lawsuit concluded and they could continue with the profitable CD sales. It took as long as three years from Napster's beginning until the record labels signed the first legal contract with a digital downloading service.

Steve Jobs launched the iTunes Apple Store in 2003. Labels spent most of their time trying to fight illegal file sharing services instead of building a new way to distribute music online. At the time, people had gotten used to digital downloading. Jobs

¹ The Firm is a management company in Los Angeles representing artists like Korn, Linkin Park, Mandy Moore and Ice Cube (Knopper, 2009)

² Recording Industry of America (RIAA) is the trade organisation that represents the major record labels in the record industry. RIAA works to protect intellectual property rights, monitor and review relevant laws and perform research about the industry (RIAA, 2013).

presented to the labels a service that allowed people to download every song they wanted (Knopper, 2009). It was legal and included DRM copy protection to prevent people from copying the downloaded songs. The labels knew they had no other choice than to agree (Knopper, 2009). People were still buying CDs, but downloading was an increasing trend they could not turn around, as new illegal file sharing services were established right after Napster was shut down. They had spent the last three years suing their consumers instead of offering a legal alternative to file sharing. The labels jumped on the boat, but left the previously profitable distribution behind. Apple captured that part of the value chain.

To summarize the historical view of the record industry, the labels have gone through several disruptive phases. None of the new product introductions have been launched without some obstacles. Radio and records disrupted the profitable publishing industry in the 1920s. The cassette democratized people's listening habits and allowed consumers to copy their albums. The industry responded by introducing a tax on every blank cassette sold. The industry tried to introduce a similar tax on blank CDs when the CD burner was launched, but it never went through. The industry answered to digital technology by suing their consumers for sharing files online rather than develop a legal service to profit on the digital trend. The history has affected every part of the value chain, which we will give a closer look.

2.4 Value Chain

Digital technology has changed the original value chain of the industry. The value chain describes a chain of activities performed by a firm that is linked to the competitive position of the firm (Porter, 1985). I have split the value chain in four major parts: Discovering talent, production, Distribution, and Marketing and Sales. The four chain links have all been affected by technology. I will therefore present both the old and the new value chain and highlight the differences.

The traditional value chain is denoted as the "analogue" value chain, and the new value chain is denoted as "digital". The analogue value chain was fixed and all the steps were performed by the label. In order to release an album, artists had to go

through all steps of the value chain to release an album. The digital value chain allows artists to perform some of the steps on their own or with another partner.

Discovering Talent

The first step is the creation phase, where labels discover artists and the artists write songs. In the analogue model, labels received demo tapes from artists. If they received something they liked, they went to see the artist perform live.

The digital chain has made it easier for labels to discover new artists, as they upload their content via Youtube or Soundcloud. It has also increased the number of artists who approach labels. Technology can give labels a better picture of the quality of the artist, but the industry stress the importance of watching artists perform live (IFPI, 2012).

Production

Once the artist has signed a contract, they join the label's artist pool. There were three types of record contracts under the analogue model: Artist contract, licensing contract and distribution contract (Savio, 2013).

Artist Contract

In an artist contract, the label pays for all the costs related to the album release: Recording, production, marketing, and promotion. The label gets full rights to the album, and artists will get return from the sales when the entire investment is recouped. In return for giving away the ownership, the artist gets an advance payment.

Licensing

Under licensing contracts, the artist licenses the album to the record label. The artist may have financed the recording and production of the album and the rights belong to the artist, but the label takes care of marketing, sales, and promotion. Artists are given an advance payment also in these contracts.

Distribution

The third type is distribution. In this case, the label only ensures the album is available in store. The label markets the album to the distributors and the stores, but is not involved in promotion and marketing of the album.

Contracts under the digital chain are more flexible. They can be hybrid versions of the models above. They are no longer written in stone, as neither artists nor labels want to sign a contract with each other for a too long period (Savio, 2013)

Promotion and Sales

Promotion involves contacting radio stations, arranging interviews with journalists, TV performances, and concerts before a release. Internet has made it easier to promote an artist to a larger audience, but there are also more people competing for consumers' attention. Marketing in the analogue model meant expensive radio and TV commercials and marketing through posters and product placement in record stores. It required large investments to make an artist succeed. Labels rarely do TV commercials for album releases anymore. Most marketing is done through digital advertising and promotion has become more important (Savio, 2013)

Distribution

Once a release is produced, labels distribute the album through their distribution network or through another distributor. The physical distributor distributes the album to record stores, grocery stores and any other store where they sell music records. The digital distributor delivers to several digital aggregators, such as streaming services, downloading services and mobile phone companies that allow song to be downloaded to mobile phones. Digital distribution has decreased the fixed and marginal cost of music. There are no longer any reproduction costs or storage costs of music in the digital distribution chain.

Today's value chain is a hybrid of the analogue and the digital chain. Since CDs and physical products are still produced and represent an important part of the music revenues, the analogue distribution is still present, but the digital distribution is becoming more and more important.

3 Theory

The theoretical framework stems from the field of Industrial Organization. Innovation is the dependent variable of my study while the independent variable is market structure. I will start this chapter by introducing different definitions on innovation. I will then introduce the market structures monopoly, oligopoly, and perfect competition and demonstrate how they are linked to innovation. Finally, I will look at how the different market structures affects the incentives to innovate.

3.1 What is Innovation?

Innovation has many definitions. The definitions that will follow describe innovation through the impact it creates for the innovator or for the society. “Innovation is the generation, development and adaption of an idea or behavior, new to the adopting organization” (Damanpour, 1996). Schumpeter emphasized the entrepreneurial side of innovation, defining it as the “introduction of new products, new means of production or new forms of organisation” (Schumpeter, 1942, p. 82). Innovations can be continuous incremental advances in technology that slowly replace existing technology, or they may be discontinuous (also known as radical): “a major technological change resulting in the creation of a technology for a particular industry” (Hamilton & Singh, 1992, p. 15). The latter has a much greater impact on the market. These definitions focus on the introduction of something new, original or improved, may it be a product or a production method. Others put more emphasis on the value created by innovations. An innovation affects not only the innovator, but also its surroundings. “Innovation is conceived as means of changing an organization, either as a response to changes in the external environment, or as a pre-emptive action to influence the environment” (Damanpour, 1996). Barack Obama defined it as “the creation of something that improves the way we live our lives” (Nussbaum, 2007). The social surplus of an innovation can be derived depending on the type of innovation. Brown’s (2003) (as cited in Assink, 2006, p. 218) definition of innovation includes all the aspects of innovation that we will cover in this thesis. “An innovation is a successfully exploited radical new product, process, or concept that significantly transforms the demand and needs of an existing market or industry, disrupts its former key players and creates whole new business practices

or markets with significant societal impact.” The latter definition covers the areas of innovation that will be explored in this thesis. The next section will describe the different types of innovation.

3.1.1 Types of Innovation

I will first introduce the two types of innovation that is normally used in the literature of Industrial Organization: Process innovation, as I have defined as the introduction of new albums to the market; and product innovation, as I have defined as the introduction of new artists to the market. Process and product innovation will be used as a terminology for the release of albums and release of new artists. The last type of innovation is disruptive innovation.

3.1.1.1 Process Innovation

Innovation can be defined along two dimensions: the internal dimension and the external dimension (Scocco, 2013). A process innovation is “the generation and introduction of a new production process” (Belleflamme & Peitz, 2010, p. 481). A new process allows firms to decrease the marginal cost of production and reap the profit generated by the increased difference between price and marginal cost. The reason firms innovate can be explained through the accumulation of knowledge they acquire by operating in an industry. Process innovations often build on the existing knowledge within the firm. As firms operate in the market, they capture information about the market and its consumers, allowing them to perform more precise innovations that increase the quality of the products offered. Firms gather information about how consumers use their products, where they use it and what they believe the products are missing. The external dimension involves modest changes in technology in the market, and innovations are often upgrades of existing products. Any electronic producer can be used as an example for this dimension. Samsung releases new mobile phone upgrades twice a year with small technological upgrades. Process innovations are less risky than product innovation that we will introduce later. “Incremental innovation development remains within the boundaries of the existing market and technology or processes of an organisation and carries lower financial and market-acceptance risks” than radical innovations (Assink, 2006, p. 217).

Process innovations can be further classified in two groups according to their impact on market structure: drastic innovation and non-drastic innovation (Belleflamme & Peitz, 2010). A drastic innovation reduces the marginal cost of a product to the extent that it creates a monopoly where the monopoly price is below the marginal cost of the competitors. This gives the innovator monopoly power. Non-drastic innovations reduce the marginal cost for the innovator compared to its competitors, giving the innovator a competitive advantage in production (Belleflamme & Peitz, 2010).

The incentive to innovate is defined as the difference in profits before and after the innovation (Helmers, 2009).

3.1.1.2 Product Innovation

Leifer (2001) (as cited in Assink, 2006, p. 218) defines product innovation as “a product, process or service with either unprecedented performance features or familiar features that offers significant improvements in performance or cost that transform existing markets or create new ones.” Product innovation can be classified along the two dimensions we used above. Along the internal dimension, radical innovations require new knowledge or complete replacement of existing knowledge in order to release a new innovation. On the external dimension, radical innovations will introduce large technological advancements, in some cases creating substitutes of the existing technology or in other cases making existing technology obsolete. Belleflamme and Peitz (2010) demonstrate that product innovation is only an extreme form of process innovation. If we assume the product already existed in the market, the cost of production was so expensive that a process innovation was required for the product to become available. I will later explain more about product innovations, but first I will concentrate on process innovations.

3.1.1.3 Disruptive Innovation

Process and product innovation can be linked to the theory on disruptive innovation. “Disruptive innovation is an innovation that helps create a new market and value network, and eventually goes on to disrupt an existing market and value network”

(Christensen, 2013). The term refers to an innovation that ends up transforming the market in a way no one would expect. Disruptive innovation differs from process innovation and product innovation in that it creates a new value network (Christensen, 2013). A value network is a redefinition of the value chain. Where the value chain defines the way a firm creates value, the value network describes how a firm creates value through its processes and its peers (Allee, 2000). Christensen distinguishes between disruptive innovation and sustaining innovation. The latter innovation is a group of process innovation and product innovation we defined above. Christensen defines sustaining innovation as technology that targets high-demand customers who continuously demand improved performance over existing solutions. Such innovations become available through the normal pace of year-by-year improvements, or as new break-through technology products (Christensen, 2013). Sustaining innovations is the introduction of something new, whereas disruptive innovations make use of products that already exist. They appear in two types: New market disruptions and low-end disruptions.

New market disruptions enable a new set of customers to use a product or an innovation (Christensen, 2013). A good example is when Canon released its first desktop photocopier, as it allowed people to make copies in their own office or at home. The result was the people started copying more than before. “New-market disruptors’ challenge is to create a value network where it is the non-consumption, not the incumbent, that must be overcome” (Christensen, 2013). The non-consumption market is disruptive to the entire market. It is therefore harder for an incumbent to compete with an entrant targeting this market because its market position acts as a barrier to entry the market.

Low-end disruptions concentrate on the bottom level of the mainstream market. They are most often low-cost business models that seek to reduce the marginal cost of production. Low cost airlines like Ryan Air and EasyJet are examples of low-end disruptions. They challenged the existing airline companies by establishing one or more bases to maximize the number of destinations rather than operate hubs as the mainline carriers. They stripped down the added services, purchased a new fuel-efficient fleet, and charged extra for meals and priority boarding to lower their marginal cost below their competitors. Initially, incumbents do not recognize the

disruption as a threat, and will therefore not respond to their entrance in the market. Responding to competitors' innovation behavior leads us over to the dynamics between competitors in a market, which we will discuss in the next part.

3.2 Market structure

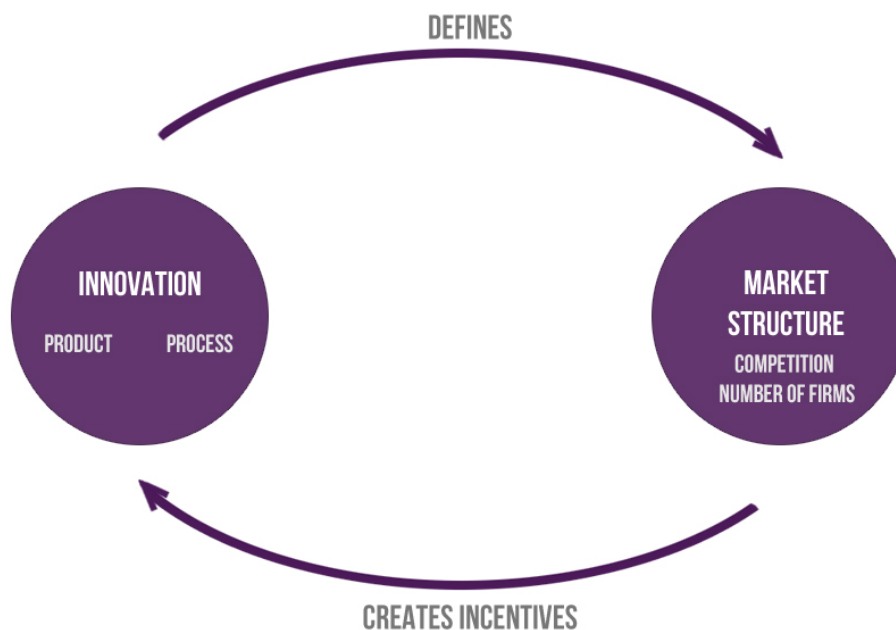


Figure 3 Market structure and innovation

Market structure is defined by the number of suppliers, the type of competition in a market, the barriers to entry, and substitutability between products. The ongoing debate in the literature is what market structure is the most optimal to foster innovation. Market structure and innovation is a two-way relationship in that they affect each other. Market structures create incentives to innovate, but the market structure can also be an outcome of innovation. If the innovator has a patent in the innovation, the innovator is granted monopoly for the new product if it is a drastic process innovation or if it is a product innovation. We will concentrate on how market structure affects the incentives to innovate. However, some of the models I will present assume a defined market structure is the natural outcome of the cyclical innovation process. We will therefore touch into the subject. The debate stretches between two extremes of market structure: perfectly competitive markets and monopoly markets. The latter has seen to gain much support from theory, but

empirical evidence suggest otherwise (Sastry, 2005). I will start by presenting the theory favoring monopoly and then continue with the model favoring perfect competitive market. Note that the underlying assumptions in the two models are not equal, and therefore cannot be compared as perfect substitutes.

3.2.1 Creative destruction

Creative destruction was termed by Joseph Schumpeter in 1943 in the book “Capitalism, Socialism and Democracy”. Schumpeter was the first thinker to write about entrepreneurship and the role of innovation in firms’ growth. Schumpeter makes a distinction between process innovation and product innovation. Where inventions are new products launched on the market, entrepreneurial innovation is not only the introduction of new products, but also new means of production or new forms of organisation (Schumpeter, 1942, p. 82). Innovation leads to destruction of existing markets, as new innovations replace old technologies, skills and ideas, making them obsolete (Liberty, 2013). Destruction is the necessary condition for further growth. New innovations will lead to the destruction of existing products or methods of production. Several industries have gone through periods of creative destruction. Take the horseshoe industry for example. When the automobile industry gained a foothold, several employees in the horseshoe industry lost their jobs because people bought cars instead. Unemployment and relocation occurred as a result of the introduction of the new technology, but created even more employments in the long run (Nathan, 2013, para. 9). Creative destruction is a natural process that happens in cycles, replacing existing technology and processes with improved technology, creating new jobs and maintaining economic growth that benefits the society through increasing total surplus.

Schumpeter did not put much emphasis on markets in perfect competition. Perfect competition assumes all firms in an industry produce homogenous goods at the same price, which equals marginal cost. Perfect competition remains in the eyes of Schumpeter only as an ideal situation that maximizes social welfare, but which can never be achieved. “Perfect competition is and has always has been temporarily suspended whenever anything new is being introduced – automatically or by measures devised for the purpose – even in otherwise perfectly competitive

conditions” (Schumpeter, 1942, p. 105). It makes no sense to study innovation under perfect competition, as introduction of a new innovation violates the assumption behind perfect competition in that all firms are homogenous. Studying oligopolies and monopolies gives more appropriate results. Schumpeter argued that monopolies are better suited to undertake innovations because the market structure creates larger incentives for monopolists than for perfect competitive firms. The incentive to invest in a process innovation can be represented as:

$$\pi^m(c_1) - \pi^m(c_0) \equiv \Delta^m$$

where c_0 is the marginal cost with the old technology and c_1 is the marginal cost with the new technology (Helmers, 2009).

Schumpeter’s theory has gained support from numerous economists (Blundell, Griffith, & Reenen, 1999; Denicol, 2001; Etro, 2004; Gilbert, 2006), and several factors argue in favor of monopoly being a catalyst for innovation. First of all, monopolists have large capacity. They have the economies of scale that enables them to gain larger profits from any innovation. Blundell et al. (as cited in Sastry, 2005) have studied the relationship between the firms’ market share and investments in R&D. The result was positive. Not only do larger firms innovate more, they also benefited more from their investments in R&D (Blundell et al., 1999). They can spread the cost over a larger quantity produced (Helmers, 2009). Second, being the sole producer allows the firm to charge prices well above marginal cost, creating larger incentives than under perfect competition. Third, monopolists are not threatened by imitation by their competitors (Sastry, 2005). Under perfect competition, firms can easily imitate their competitors, resulting in more intense competition. Monopolists are naturally protected from imitation, thus creating larger profits as they can charge higher prices. Fourth, monopolists are better positioned to succeed with R&D because they have more in-depth understanding of their products and the demand of the customers, allowing them to undertake more precise investment decisions (Sastry, 2005). There are other factors that influence monopolists’ incentive to undertake innovation, but we will describe these factors more in detail after we have introduced the model favoring perfect competition.

3.2.2 Perfectly Competitive Markets

Arrow represents the other side of the discussion. In 1962, Kenneth D. Arrow demonstrated that the “incentives to invent is less under monopolistic than under competitive conditions” (Arrow, 1976, p. 157). Arrow shows that the incentive to innovate is larger when competition exists pre-innovation than under monopoly because there is no “replacement effect” for competitive firms. The monopolist’s innovation is in a way self-cannibalizing as it replaces some of the monopolist’s existing market with the new technology, hence the replacement effect. The competitor has only an upside through investing in the innovation. He has no profits to lose, as its pre-innovation price is set to marginal cost. Assuming competitive firms can capture the same profits as a monopolist with the same innovation, their returns are relatively higher.

Arrow’s (1976) model is based on several assumptions. First, the model only covers process innovations, meaning that the new marginal cost from the process innovation is lower than the original marginal cost. For a non-drastic innovation, the innovator gains a competitive advantage over its competitors. His market share remains the same, but he will gain from the profit generated through a decreased marginal cost. For a drastic innovation, the innovator is granted monopoly power, thus the incentive is represented by the monopoly profit with the new innovation. Second, firms produce a homogenous good and have the same marginal cost pre-innovation. The only incentive to innovate is the potential profit achieved by the new invention and there is only one successful innovator. The model assumes the innovator enjoys exclusive property rights to the invention. The competitive firm is assumed to earn no profit using the old technology, hence destructing the old source of income. The same applies to the monopolist, but since the monopolist already gains a profit, the replacement effect makes his incentive relatively lower than for the firm in perfect competition.

These are the two points of view of the relationship between market structure and innovation. Note that I have only mentioned process innovation so far. Product innovation will be described later. In the next section, we will look at how incentives to innovate change in a monopoly threatened by entry.

3.2.3 Monopoly Threatened by Entry

How does the incentive to innovate change in a monopoly that is threatened by entry? Gilbert and Newberry (1982) explore this question in the article Preemptive Patenting and the Persistence of Monopoly. In their model, there is one monopolist with an old technology in competition with a potential entrant about a new innovation. The new technology is invented at an independent research lab, and the two firms engage in a bidding process for the patent. The firm that obtains the patent for the innovation is granted monopoly for the new product. Each firm's incentive to innovate depends on the additional profit generated by the innovation. The incentive is determined by the difference in profits with and without the patent. For the entrants, the pre-innovation profit is zero. If he enters, the monopolist and the entrant will compete with each other, the entrant with the new technology and the monopolist with the old technology. The maximum amount the entrant is willing to bid is the duopoly profit with two firms:

$$\pi^d(c_1, c_0)$$

The maximum amount the monopolist is willing to bid is the difference between the monopoly profit and the duopoly profit:

$$\pi^m(c_1) - \pi^d(c_0, c_1)$$

When we compare the two equations together, we get:

$$\pi^m(c_1) - \pi^d(c_0, c_1) \geq \pi^d(c_1, c_0)$$

From the equation, we can see that the monopolist has a stronger (but weak) incentive to innovate than the entrant when he is threatened by entry. Gilbert and Newberry call this the "efficiency effect" (Gilbert & Newberry, 1982). The monopolist has an incentive to maintain monopoly and will therefore place a larger bid to preempt entry.

The model is based on a set of assumptions (Helmers, 2009). First, it assumes the successful innovator is granted exclusive property rights. Second, the model assumes the firm with the highest bid gets the innovation. The firms are treated equally, saying that they have equal opportunity to acquire the innovation (Gilbert & Newberry, 1982). However, this argument requires innovation to take place outside of the firm because both firms have the opportunity to bid for the innovation. This may not be the case in several situations. R&D can take place within the firm. This

assumption would require all innovation to take place in individual research groups that sell patents on new technology. Furthermore, the entrants can exclusively enter the market through acquisition of the patent (Helmets, 2009). The model assumes the monopolist will gain no profits on its old technology (Helmets, 2009). The innovation is therefore totally destructive of the old market. The last factor assumes there are no constraints in financing the investment (Helmets, 2009). The assumption is rather unrealistic, as monopolists generally have significantly larger access to capital markets than entrants.

I will summarize what we know so far. We have talked about three different market structures: Innovation in monopoly, innovation in perfect competition, and innovation in markets where an incumbent is threatened by entry. For process innovations under:

- **Monopoly:** a monopolist's incentive to innovate is defined by the difference between the monopoly profits with the new marginal cost and the profits with old marginal cost. The model assumes the old technology is obsolete once the new technology is introduced
- **Perfect competition:**
 - o *Drastic:* The incentive is defined by the monopoly profits
 - o *Non-drastic:* The incentive to invest is defined by the difference between profits in perfect competition and profits with the decreased marginal cost
- **Monopoly threatened by entry:** The incentive for the monopolist is defined by the difference between the monopoly profit with the old technology and monopolist's profit if the rival enters the market

These models are simplified versions of the reality. When we include more variables in the study, the outcome may change. Etro (2004) has used the same approach as Gilbert and Newberry (1982), but uses a Stackelberg model. The incumbent has first-mover advantage for any new technology because he is the leader of the market and has by definition discovered the latest technology. Assuming no barriers to entry, Etro (2004) gets the same results as Gilbert and Newberry (1982). However, when entry barriers are present the case is different. With entry barriers, the incumbent is not threatened by competition from entrants, and the incentives to innovate is reduced (Etro, 2004, p. 283). This makes sense. Entry barriers create a natural

protection for competition, thus reducing the incentives to invest in R&D. So far, we cannot conclude on an optimal market structure for innovation. Including other variables may change to optimal outcome. We will look more into how a firm can build up its innovation capabilities, and how that may affect the incentives to innovate.

3.2.4 Innovation Capability

Henderson (1993) makes a distinction between market structure and the capabilities to invent. Besides the competitive advantage gained through economies of scale, monopoly power places incumbents in a position to acquire more information than entrants. Capabilities to invest in R&D increase with the accumulation of information firms acquire by operating in a market. Firms operating in an industry have more information about the market, its consumers and the existing technology than potential entrants. For entrants, access to such information is expensive and difficult to acquire. The information acquired by the established corporations is used to guide the future development of new products and new innovations. The information is considered an asset to the firm. The knowledge is closely related to the firm's existing products. New innovations from the firm are therefore incremental, small changes that improve the existing product. "Incremental innovation is, in this context, defined as routine, predictable change that is a logical extension of existing knowledge" (Henderson, 1993, p. 251). The organisation builds structures and routines to become efficient in gathering more knowledge about their product and the market. Henderson's argument supports Schumpeter's theory that monopolies are better equipped to undertake innovation decisions. But the same assets that create incentives to undertake incremental innovations creates proportional disadvantage in developing radical product innovations. Janis Curtis expressed this in an article on Forbes.com: "I don't think that the person who first invented bottle water, went to the consumer and asked whether they would like their tap water in plastic bottles so that they could pay a dollar or more for the privilege" (Curtis, 2013, para. 6). The theory assumes the consumer knows its own preferences. Several products may never have been invented if firms were required to know the consumers' opinion before doing an innovation decision. Take the iPad for example. Arguing that consumers had a need for the iPad before it came to the market is a

poor argument to explain its success. Whether the product generates a need or whether a product is an outcome of a need is a never-ending discussion. To get back to our discussion, information about the market and the consumers may not always be an asset that fosters innovation. They reduce the incumbents' efficiency in exploiting radical innovations (Henderson, 1993). Because the monopolists' structure is built up based on their current position, responding to aggressive entrants may be difficult. Their large size makes it tougher to handle competition faced by entrants on new markets. An innovation is radical if it requires the firms to process quite different information" (Henderson, 1993, p. 251). Following Henderson's argument, monopolists are better equipped to undertake incremental innovations because they have attained deep knowledge in the market about their product. However, the same asset creates a barrier to exploit radical innovations, placing monopolists in a position of being leapfrogged by new entrants. Gilbert and Newberry also discuss monopolists' threat of being leapfrogged by entrants, but they assume monopolists are aware of the threat and will invest more to preempt entry. The capability variable is however not part of their model. Henderson argues that the reason former literature has failed to give a definite answer is because research has failed to "integrate theories of heterogeneous research capabilities into neoclassic theories of investment behavior" (Henderson, 1993, p. 249). It clearly gives a reasonable explanation to why empirical studies fail to support theories favoring monopolies as the optimal market structure for innovation.

I will include a last factor that is especially relevant to the music industry and that has large effects on the incentives to innovate, intellectual property.

3.2.5 Incentives to Invest In Product Innovation

Analysis of product innovations is more difficult because products are differentiated. Differentiation opens the model for other variables that may affect the incentive to innovate. First of all, a product innovation includes an identical replacement effect for both the monopolist as well as the competitive firm, however the effect is larger for the monopolist as it steals profits from the existing product (Gilbert, 2006). Second, product innovations allow firms to differentiate vertically and price-discriminate between consumers. Greenstein and Ramey (1998) (as cited in Gilbert,

2006, p. 167) show that monopolists have potentially more to gain from product innovations than competitors because it allows them to create different markets for their customers, separating them and charging prices according to their willingness to pay. In an article by Pia Weiss (2003), the author examines the effects of the degree of competition on firm's incentives to innovate in differentiated products. Weiss presents the innovation choice through the fashion industry, which every season is faced with the question whether to design a new collection, reorganize the collection or do nothing. The author demonstrates that firms favor process innovation if the degree of differentiation is high. Similar to the contrary situation, when product differentiation is low, firms prefer product innovation. Competition intensity decreases with the level of differentiation. Firms are less likely to release a product innovation when they have close to monopoly power in the market. Firms in perfect competition have relatively more to gain from product innovation because it grants them larger profits the more the product is differentiated from existing products. Ebiina and Shimizu (2008) have also studied innovation in differentiated markets, but they have assumed a duopoly in a spatial Cournot model where the level of investment in R&D is endogenous. They have assumed firms are allowed to invest in subsequent process innovations following the release of a product innovation. Their model includes transport costs. Their results show that when transport cost is present, firms are less willing to invest in product innovations. The results are similar to Weiss. When firms locate as far apart from each other as possible, the incentive to invest in product innovation decreases because the products are already differentiated and the competition is less intense.

3.3 Empirical Results

Empirical research does not support that large firms are better positioned to undertake innovation because of economies of scale, risk diversification and knowledge of the market. Schumpeter receives theoretical support, but little empirical support. However, this does not mean that competition creates larger incentives to innovate than large firms. It is difficult to measure the effect of innovation when the way innovation is measured differs in every situation. "Firm heterogeneity makes it difficult to identify a stable relationship between innovation and a firm's competitive position" (Hashmi & Biesebroeck, 2012). The methods that

have been used can be classified as measuring input or output (Symeonidis, 1996). Output measures include the number of patents or investments in R&D. Input measures are not solid because they are subject to error of accounting and financial reporting practices (Symeonidis, 1996). Neither is the number of patents, as they may vary in economic value. Measuring investments in research and development is another method, but this favors the large firms that have an R&D department. Small firms may not have a distinct R&D department, and these firms may be neglected (Symeonidis, 1996). We could count the number of significant innovations per firm, but innovations vary in size, which makes it difficult to find an equal measure among firms. Literature on microeconomics and industrial organization often measure creative destruction by looking at entry and exit patterns in an industry, and firm turnover is used in the macroeconomic literature (Mazzucato & Tancioni, 2005). Mazzucato and Tancioni (2005) argue that if the goal is to measure creative destruction, it is as important to look at relative changes in firms position in the market, as it measures the battle between firms. This could be an interesting approach to the music industry, but it would require that we have sales data on the industry. I will describe how I will measure innovation in the next chapter after I have summarized the theory that has been discussed so far.

3.4 Summary

The incentive to invest in innovation is defined by the additional profits a firm can earn by investing in a new innovation. We have defined three types of innovation, process, product and disruptive innovation. A process innovation allows a firm to benefit from a decrease in marginal cost. A product innovation is the introduction of a radical product to the market. A disruptive innovation is either a new radical product or an innovative business models that take advantage of existing products and sell them in new markets or target the low-cost segment of the industry. Incentives to invest in process innovations are higher for competitors than for monopolists in the setting where the monopolist is protected from entry and competition by other firms. When firms can bid on the innovation, the outcome is reversed. Most emphasize has been placed on process innovation because it is the most present in the literature. It is easier to measure because product innovation includes a different set of variables. Competitors and incumbents can both benefit

from introducing product innovations, but if the product makes the existing products obsolete, the results correlates with process innovation (Gilbert, 2006).

4 The Model

I will explore the relationship between market structure and innovation in the record industry. The theory I have presented above gives an ambiguous relationship between market structure and innovation. Monopolies seem to foster process innovation in the case where the monopolist is threatened by entry, however if entry barriers are present, competition seems to create larger incentives to innovate. Unfortunately, there is no monotone relationship between market structure and innovation, because factors such as barriers to entry or differentiation affect the outcome. Product innovations make the case more difficult, because both the competitor and the monopolist are affected by the replacement effect, given that the new technology makes the old technology obsolete. To explore this relationship, I will measure the two types of innovation in the music industry. Innovation is the dependent variable whereas factors on market structure are the independent variables. The independent variable is divided in two categories, product innovation and process innovation.



Figure 4 Innovation model in the record industry

I have divided the value chain in product innovation and process innovation (see Figure 4). I consider the release of a new artist to the market as a product innovation. The artist possesses certain characteristics that differentiate her from the existing artists in the market. Once the artist is released, the label can choose to release subsequent albums, which I define as process innovations. The label can theoretically release an unlimited number of process innovations after the artist is released in the market. The process innovation is therefore represented in the model as a cyclical process. I assume that the old product still remains in the market when a process innovation is released.

4.1 Product Innovation – Discovering New Talent

Product innovation has been defined as the introduction of a product that offers a set of characteristics that differentiates it from the existing products in the market. I consider the release of an artist that has never been released in the market before as a product innovation. The artist offers something new that differentiates her from the established artists in the market. It is a product with a set of characteristics that consumers may like or not. A product innovation involves more risk than a process innovation, as the firm usually knows how consumers will respond to a process innovation. However, a product innovation allows the label to benefit from subsequent process innovations. The potential profits may therefore be larger. The incentive to innovate is determined by the difference between the profits before the innovation is launched and the profits after.

4.2 Process Innovation – New Albums

A process innovation is, as I explained in the theoretical chapter, an innovation that decreases the marginal cost of production, so that $c_1 < c_0$. The following model from Belleflamme & Peitz (2010) demonstrates how we can determine the size of the innovation and the incentive to innovate for a drastic innovation. If we have an inverse demand function, $P(q) = a - q$, the Cournot profit is the following:

$$\pi_{proc_i} = \left(\frac{a - nc_i + \sum_{i \neq j} c_j}{n + 1} \right)^2$$

If we assume the marginal cost is equal for all firms in the initial stage, $c_i = c_j = c$, the profit function becomes

$$\pi_{pre} = \left(\frac{a - c}{n + 1} \right)^2$$

The profit depends on the size of the market, a , and the marginal cost, c . If the marginal cost decreases from c_0 to c_1 , the new profit function becomes

$$\pi_{post} = \left(\frac{a - nc_1 + (n - 1)c_0}{n + 1} \right)^2$$

The incentive to innovate is the difference between the profits with and without the innovation, $I = \pi_{post} - \pi_{pre}$. We assumed that the innovation is non-drastic. In that

case, the monopoly price corresponding to c_1 is larger than the initial cost, c_0 , so that $\frac{a+c_1}{2} > c_0$, which is the same as $c_0 - c_1 < a - c_0$. $a - c_0$ measures the size of the initial market, and $c_0 - c_1$ measures the absolute size of the innovation. We thus have the relative size of the innovation so that:

$$\theta \equiv \frac{c_0 - c_1}{a - c_0}$$

I consider an artist's second, third, fourth or any other consecutive release as a process innovation. There are two reasons that support this assumption.

First, digital distribution has reduced the marginal cost of music reproduction to zero. Following the model above, there is actually no marginal cost to decrease if we want to release a new album for an artist. However, when an artist with an existing catalogue (an artist with one or more previous releases) releases a new album, the artist does not only generate sales from the new album, but it increases streams and sales of the entire catalogue. A new album reminds the consumers about an artist and its old content, and increases the streams for the entire catalogue.

Second, the firm's profit in the pre-situation depends on the difference between market size and the marginal cost, $a - c$. Since $c_1 < c_0$, the difference between the market size and the marginal cost increases with a process innovation. Process innovation can therefore be defined as a change in the difference between market size and marginal cost. If we assume a new album released to the market is increasing the size of the market, rather than decreasing marginal cost, it changes the difference between the market size and the marginal cost. Since process innovation is defined as an increase in the relationship between market size and marginal cost, we can define the release of a new album as process innovation.

In order to measure the degree of investment in product innovation and process innovation by major labels and independent labels, I will use logistic regression to see if the type of innovation can be explained by certain factors on market structure.

4.3 Independent Variables on Market Structure

I have very few secondary data on the market structure. I will therefore use a combination of secondary and primary data to describe the market structure. The dependent variable is a binary variable for the type of innovation: 1 is product innovation and 0 is process innovation. The independent variables in the regression are a binary variable for the type of label, a sales success variable and album reviews. I will describe the market structure based on the interviews with two major labels.

4.3.1 Market Structure

Market structure will be described through demand for music, the type of competition in the market, market concentration, research capabilities and barriers to entry.

4.3.2 Type of Label

Major Labels

I will concentrate on the type of firms in the music industry, respectively major labels and independent labels. Major labels have a large catalogue and easy access to capital in order to finance new musical acts. They used to control almost 80 percent of the industry's total revenue, and still accounts for the majority of the revenues. A major label is different from an independent label in that is a multinational firm. On a national level, they work with releasing national artists as well as promoting international acts signed on their label. Because of the large market power of major labels, they fit well with the description of a monopolist, or a firm with a degree of monopoly power.

Independent Labels

There are hundreds of independent labels, and they vary significantly in size. They may be one-man labels or large labels that release the same amount as major labels, but with a limited international appearance. Independent labels do not have a large catalogue to benefit from, and can therefore not rely on old content to survive. They have to produce new music to survive in the industry, and therefore they are more

reactive to new trends and continuously search for new opportunities. Because of the small size, they are not bound by the organizational boundaries of the major labels.

4.3.3 Sales Success variable

Sales success is determined by whether an album has been listed on the hit list, VG-lista, or not. Since the list is generated based on music sales, it measures the relative sales of an album. Process innovations are more likely to be listed on the hit list, given that the previous album was a success. If the first album was a failure, the label is less likely to invest in a second album with the same artist. Although an album may be unsuccessful in terms of sales, the artist may be successful according to other variables, for example live concerts. However, the study is limited to the recording industry. Since their mission is to produce music, variables outside the recording industry will be excluded. I therefore created a performance ratio for every album that takes into account the number of weeks the album was listed as well as the ranking number.

4.3.4 Music Reviews

Album reviews can determine the quality of an album. The same line of reasoning applies to reviews as for hit lists - process innovations are more likely to get reviewed than product innovations because the artist is already known in the market. Far from all albums are reviewed. The selection is not random. I assume journalists pick albums from artists they are already familiar with or from labels with a good track record of releasing innovations.

4.4 Empirical Model

I will measure how the type of innovation depends on the market structure through a logistic regression model. Logistic models measures the relationship between a dependent variable and independent variables where the dependent variable is a binary variable. Product innovation will be denoted as 1 and process innovation will be denoted as 0. The regression takes the form

$$w^T x = w_0 + w_1 x_1 + w_2 x_2 + w_3 x_3$$

where the coefficients we want to measure are given as the probability of the variables' effect on the dependent variable, $P(Y|x)$. I have used logistic instead of ordinary least squares because the dependent variable is binomial.

I have denoted every product innovation as 1 and every process innovation as 0. Every major label has also been denoted as 1 and every independent label as 0. Regression variables can be found in appendix 10.2.

5 Methodology

5.1 Research Design

Research design is a map of procedures describing how you will answer the research question. It contains the objectives of the research, the sources of data and the constraints of the research (Saunders, Lewis, & Thornhill, 2009). Choosing an optimal research design depends on the research question. There are generally three types of research design: Exploratory, descriptive and explanatory (Saunders et al., 2009). An exploratory study questions phenomena to seek what is happening in the situation studied. It starts with a broad focus that is narrowed down as the research progresses. Descriptive studies give a broad picture of a specific situation, but are rarely used without additional studies (Saunders et al., 2009). Explanatory studies seek to establish relationship between variables in order to study the relationship between the variables. Our research is an explanatory study in which we aim to explain how market structure has an effect on the incentives to innovate in the music industry.

There are two approaches on how to go about solving the research question: Deductive method and inductive method (Saunders et al., 2009). Deductive method is the logical approach where you define a hypothesis you will test and then explain the results with theoretical models. Inductive approach is the bottom-up approach where you first collect and analyze the data and then develop a theory based on the results of the research. This thesis will use a deductive approach to answer the research question. We have collected literature on a topic that we will test against the gathered data.

How the data is collected depends on the research strategy. The research strategy is a search strategy; the strategy for how you will go about gathering and analyzing the information for your study. Some strategies fit within the inductive approach while others fit better within the deductive approach (Saunders et al., 2009). The most used strategies are experiment, survey, case study, action research, grounded theory, ethnography, and archival research (Saunders et al., 2009). Our research is a case study of the Norwegian record industry where I will explain the pattern observed in

the industry through a set of theories. Case study is often used for explanatory strategies as they allow to answer the questions “why”, “what” and “how” (Saunders et al., 2009). I will triangulate multiple sources of data to ensure that the data actually describes what I want to study (Saunders et al., 2009). I will collect quantitative data on music reviews and hit lists while we will collect qualitative data through interviews with a sample of the record labels. Quantitative method is a systematical research of numerical data that seek to establish a relationship between the data through statistical techniques (Saunders et al., 2009). As I am interested in finding an innovation pattern within the industry, a quantitative approach allows me to look for relationship between variables for a large sample. Qualitative method is a way to gather in-depth understanding of a specific situation through the use of non-standardized data (Saunders et al., 2009), such as interviews, observations and documents. A qualitative method gives you a more detailed description of a situation and is useful for complex topics. I will use a multiple method, combining quantitative and qualitative research. Tashakorri and Teddlie (2003) (Saunders et al., 2009, p. 153) argue that “multiple methods are useful if they provide better opportunities for you to answer your research questions and where they allow you to better evaluate the extent to which your research findings can be trusted and inferences made from them.” Multiple data allows me to ensure I study something meaningful. I performed preliminary interviews with several people in the music industry before I decided upon a research question. When the research question was set and I knew I was able to get all the quantitative data needed, I performed new interviews with record labels to go more in depth on the topic I had chosen. A mixed method of quantitative and qualitative analysis gives the researcher a wealth of data that allows him to discover findings he may not have anticipated (Saunders et al., 2009). Because few researchers have looked into the topic of this thesis, the qualitative interviews allow me to ensure that the quantitative data measure something meaningful.

5.2 Data Collection

Data are structured in categories depending on where they come from. Primary data is data collected primarily for this thesis. Secondary data is information that have been collected for another purpose, which may include everything from raw data to

published articles or reports (Saunders et al., 2009). I will use a mix of primary and secondary data. Because secondary data is collected for another purpose than this assignment, it is important to be critical about the reliability of the data, as I do not know how the data has been collected or the quality of the data.

The primary data are the interviews with the record labels. The secondary data are the music reviews and the hit lists which are raw-data, as well as newspaper articles, research articles and reports which are processed data. I tried to get access to sales data for every record release, but this was not possible, nor were numbers on quantity sold.

5.3 Interview Data

I chose to perform interviews with some of the labels in the Norwegian record industry. Interviews can give an insight to the industry that I would not be able to get through secondary data such as news articles and reports. Since I wanted to find out the underlying reasons for why and how labels make investment decisions in new music, interviews allow me to identify whether there are more variables than the ones used in the empirical study that explains the investment behavior of the labels. The interviews were semi-structured, meaning that the researcher has a list of themes and questions he wants to discuss, but the questions and the order of the questions may vary from interview to interview (Saunders et al., 2009). Semi-structured interviews allow the researcher to ask additional questions to explore the answers of the interviewee. Semi-structured interviews are very helpful in explanatory studies, as they help to understand the relationship between variables (Saunders et al., 2009).

5.3.1 Interview Sample

There are two types of sampling techniques: Probability samples and non-probability samples (Saunders et al., 2009). Probability samples imply equal probability for each case being selected and that it is known. Non-probability samples mean the probability of each case being selected is not known, which means it is not possible to generalize the results to the entire population on a statistical ground (Saunders et al., 2009). Probability samples are most used in quantitative research where you want to generalize results about a sample to the entire population. Non-probability, or non-

random sampling, is often used in qualitative studies where probability samples are not possible, such as case studies (Saunders et al., 2009). I have chosen to use non-random samples for the interviews because in order to understand the relationship between the variables in the study, I had to interview specific stakeholders that had knowledge about the variables. A random selection of people in the industry would not make sense. There are three techniques to select the appropriate sample: Quota sampling, purposive sampling and convenience sampling (Saunders et al., 2009). I will use purposive or judgmental sample, as it allows me to select the case I believe are most suited to answer my questions. Judgmental samples are often very useful “when you want to select cases that are particularly informative” (Saunders et al., 2009, p. 239). It was important for me to get interviews with the employees within the record labels that were central in the investment decisions. These employees are often A&R¹ managers, or in the independent labels, they are often the CEO of the label.

The interviews were thorough and gave me an in-depth understanding of the Norwegian record industry. The respondents have been in the industry for several years in several different positions. It would have been better to get at least one interview with an independent label, but it was impossible within the time limits of this thesis.

The following table contains the respondents.

Record label	Name	Position	Type of label
Universal Music	Yngve Næss	A&R Manager	Major
EMI Music	Jarle Savio	A&R Manager	Major

Table 2 Interview respondents

5.3.2 Interview Situation

Solid preparation is necessary in order to perform a successful interview (Saunders et al., 2009). I made an interview guide (appendix 10.6) that was used through the three interviews. I split the questions in four categories, the first concerning the

¹ Artist and repertoire (A&R) executive is the title of someone in a label that takes care of the artists in a label. It is the person that takes the decisions about which artists to invest in.

market for new music, the second concerning the label, the third concerning the new streaming platforms, and the fourth concerning innovation in the industry. I started by asking general questions about the market. Then I followed up with how they made decisions about music investments. I tried to identify how they perceived the dynamics between major labels and independent labels and then I asked them how they would define innovation in the music industry. My definition of innovation in the music industry is somewhat untraditional, so I wanted to understand how they defined innovation in the music industry.

Before I started the interview, I introduced myself and the research topic. I explained the background for my choice of topic to give them an idea of what I knew about the industry. I then explained the structure of the interview. Since I wanted to know how they defined innovation in the industry, I did not want to tell them too much about what definition I would outline in the thesis to avoid influencing their responses. The interviews were performed at the respective respondents' offices in Oslo. The interviews were recorded and later transcribed. They were performed in Norwegian, but later translated to English by the author. The transcriptions were sent back to the respondents so that they could agree on the English translation of their answers. The respondents seemed to be unaffected by the audio recording of the interview. In general, participants may be stressed by the fact that their voice is recorded, but this did not seem as a problem in this case (Saunders et al., 2009). I took notes during the interview, both as a backup if I encountered technical problems with the audio recording and to be able to ask additional questions based on what the respondents answer. Taking notes also allows you to record information about the respondent's physical reactions (Saunders et al., 2009). The last interview was made through Skype because we were not able to schedule a meeting the week I was in Oslo doing the other interviews. Phone interviews make it more difficult to record information about the physical reactions as well as building trust with the respondent (Saunders et al., 2009). However, I am satisfied with the interviews and got significantly more information than I anticipated.

5.4 Secondary Data

The secondary data for the thesis is used in the quantitative part. Measuring innovation is often done by measuring each firm's R&D expenditure or yearly

differences in market share (Mazzucato & Tancioni, 2005), but such data are not publicly available for the music industry. I have therefore obtained a list of all releases since year 2000 as well as a measure of the album's popularity. I will explain more on this in the next section.

5.4.1 List of Albums

The data gathered are documentary secondary data (Saunders et al., 2009). I have obtained a list of Norwegian releases from Gramo¹ from 2000 to 2012. The list contains information about an album's title, artist, catalogue number, publishing date and the record label. I was first not able to get the list from Gramo, so I collected a list of albums based on the database from Rockipedia.no. Rockipedia is a site driven by a rock museum in Trondheim Norway called Rockheim (it means "home of the rock") that collects information about Norwegian music history. The database also relies on contribution by users, but the library is regularly updated with new releases from the museum. I was able to extract their data using an API². Once they sent me a list of all the registered labels, I created a query that searched through every release from the label on the list. The list contains 25 313 releases from 1928 and until today. I noticed that as many as 3985 albums were categorized under the label "Unknown" and it lacked several albums compared to the list I received from Gramo. I could therefore only use the list to create a numerator for every album, which tells what number in line the album is. With the numerator, I know whether an album is an artist's first or second album, and thereby whether it is a product or a process innovation.

¹ Gramo is the joint collection society for Norwegian artists, musicians and producers. The organization collects remuneration from hotels, cafés, radio stations; users of music in public areas (Gramo, 2013).

² API: Application Programming Interface is a protocol that allows software components to communicate with each other. API's are offered by several sites that stores information others may want access to, i.e. Facebook, Google, Youtube, Last.fm and Soundcloud. APIs have predefined routines that tells you what kind of data you are allowed to extract.

5.4.2 Reviews

The reviews are professional critiques of music albums. These are gathered through Popyoular, a web-crawling firm that gathers information about music reviews from national and international newspapers and magazines (Popyoular, 2013). Popyoular did not have information about what country the reviewed releases come from, so I had to send them a list with the album reviews I wanted. I received the list from Gramo relatively late, so I had to use the list from Rockipedia. I then matched the list I received with the album list from Gramo, which gave me 2035 reviews from 2005 to 2012. Journalists use different scales when they rate albums. The reviews come from several sources. Popyoular has therefore converted them to a scale from 1 to 10, and the score I have obtained is the average score for every release. The reviews are discrete numerical data (Saunders et al., 2009), or ranked data, where 1 is the lowest score and 10 is the best. When ranked data have equal distance between each value, they can be analyzed as if they were interval data (Saunders et al., 2009). The reviews give us two types of information. First, it gives us a professional music journalist's subjective opinion about the album. Second, it acts as a sort of quality filter. Newspapers get requests every day about reviewing albums that are released. Only a few of these albums are reviewed and published in the newspaper. We do not know how journalists pick the albums they review, but we assume that it is more likely that artists journalists have heard of are more likely to get reviewed than unknown artists. This is also where the role of the label comes in. A part of an album promotion is to get reviewed. Labels send releases to journalists to get them reviewed. We assume that labels that are known for releasing quality content are more likely to get their albums released.

5.4.3 Sales Data

Billboard releases weekly charts with data of the most popular artists in the American market. The corresponding list on the Norwegian market is VG Lista, published by the the Norwegian newspaper, "Verdens Gang" (VG). The list is generated by weekly sales number from IFPI. The numbers are based on physical and digital sales. The four lists published are: Top 10 Norwegian songs, Top 30 Norwegian albums, Top 20 singles and Top 40 albums. We will concentrate on the Top 30 Norwegian albums as the Top 40 list contains foreign albums.

I assume that the longer an album stays on VG-lista, the more it sells and creates profits to the label. It is in the label's interest to have their release listed on the list for as long as possible. The longer the album is on the list, the larger the incentive. However, it is different whether the album is listed number one or number 30 in the entire period. I will therefore create a score index that defines the value of being listed:

$$S = \sum_1^n \left(\frac{1}{r_n}\right)$$

where n is the week number and r_n is the weekly ranking.

5.4.4 Filter Data

The list of releases contains all registered releases in the Norwegian market, which means that releases that have not been registered in Gramo's database is not included in the study. The list may contain some noise, and can therefore be filtered in order to obtain a list of *quality music*. The noise comes from the large number of one-man labels that have only released one or two album during the last 13 years. These labels have an important role in the music industry, but they can disturb the results. I will therefore perform analysis with an unfiltered list and a filtered list. To filter the list, I will only pick the albums that have either been listed on VG-lista or been reviewed by a newspaper. VG-lista is the relative measure of sales while the review is a measure of quality. It is reasonable to think that the two variables are not independent. If an album is listed on the hit list, it is more likely to have been reviewed, but not the other way around. Niche music can receive very good rating, but may not necessarily be listen on the hit list.

5.5 Reliability

As the information is secondary data, I cannot know for sure the level of quality of the data. The reviews may be the data where reliability can be an issue, but the reviews do not represent an important part of the thesis. I assume that the list of albums from Gramo is reliable, as Gramo is the official register of Norwegian albums.

5.6 Validity

Gramo pointed out an interesting remark about the album data that may affect the validity of the results. Gramo's lists only contain information about the last label that contributed to an album. This means that we cannot tell whether the album is licensed from an indie label to a major label or whether the major label owns the album. If the label is licensed from an independent label to a major label, we cannot know who has invested in the album. The distribution through a major label can either be a licensing deal, where the major label has paid an advancement to the artist for the album, or it may be a distribution deal where the major label only distributes the album through its physical and digital channels. This factor will create a positive bias towards major labels, as they will account for more albums than what they actually have produced. This effect is possibly larger for earlier releases when more independent labels distributed through majors' distribution channels. Several independent labels rely on other distribution channels on the digital platform. This can give an impression of major labels taking more risk than they actually do.

5.7 Generalizability

The study concerns the Norwegian market for recorded music. The Norwegian market may have different characteristics than other record markets, and for the study to be generalized to other markets, the differences in market structure must be taken into account. The Norwegian labels meet frequently in the market and can easily observe each other's strategies. Norway is a small economy that takes the international market as given. Norwegian artists will rarely be able to compete on an international level like American artists. There are several reasons behind this argument. First, several Norwegian artists sing in Norwegian. Only the Nordic countries understand the language, and the music may therefore have less appeal in non-Norwegian speaking countries. Second, becoming an international artist requires access to significant capital. According to IFPI, breaking an artist through a major label in the American market requires \$1,4 million in investments (IFPI, 2012). Third, Norway is together with Sweden one of the pioneer markets in adopting streaming services and digital advertising. Some markets still rely on the old model. In Germany for example, the primary distribution is physical and the labels still use television commercials to promote new albums.

6 Results and Analysis

In this chapter, I will present the findings from the interviews and the empirical study of the product and process innovations in the music industry. I will start by presenting the results on the dependent variable, innovation. I will then present the results on the explanatory variables.

6.1 Innovation in the Music industry

6.1.1 Defining Innovation

I wanted to know how the respondents would define innovation to see if there is reason to believe that releasing new music can be defined as innovation. I asked them how they would define innovation in the record industry. Both respondents relate innovation to separate elements in the value chain. Yngve Næss at Universal Music distinguishes between two types of innovation in the industry:

“The technological part of the industry, how people can stream and download music today, is one of the most innovative changes in the industry today. The second one is what we do every day, to release new music”. Yngve Næss, A&R Executive, Universal Music.

The first relates to innovation in distribution of music while the second relates to innovation in the creation element of the value chain. Næss elaborates the latter part further, saying that innovation is to:

“Develop and succeed with new artists. But innovation can also be to find new artists and not succeed. Whether they succeed or not is not always important, but having the opportunity to spot new talent and bring their product to the market is how I would define innovation in the music industry”. Yngve Næss, A&R Executive, Universal.

His definition strengthens my definition of innovation. Universal does not distinguish between new artists and existing artists, but he perceives the discovery and release of new music as innovation. While Næss refers to finding and succeeded

with new artists, Jarle Savio from EMI Music puts more emphasis on the promotion part of the value chain:

“Since we work with music every day, we do not see a new song as an innovation. But for outsiders, it may be seen as innovation. Innovation for us is new ways of promoting artists”, Jarle Savio, EMI Music.

Savio refers to a promotion project they did with one of their artists last year. They encouraged the fans to create a cover version of the artist’s new single and send it to EMI. The person with the best contribution got a record single contract with the label. The project was a huge success and attracted lots of attention. The artist even received an innovation award at the yearly Spellemannsprisen¹. Savio seems to acknowledge that production and discovery of new music can be perceived as innovation, but that his personal definition of innovation is different. He continues to elaborate on the incentives to innovate, and argues that the incentive to release successful innovations in the industry comes from each employee’s personal interest on promoting quality music:

“I would say it’s personal. My personal trigger is to find a new artist, develop her and release her to the public”. Jarle Savio, A&R Executive EMI Music.

The respondents agreed that innovation in the music industry could be described as the creation, production, distribution and promotion of music, which correlate with the definition of innovation outlined in chapter 4. They do not distinguish between product and process innovation, but EMI confirms my assumption that new releases increase the sales of older releases:

“What is interesting is that once an artist releases a new song or an album, the entire catalogue of that artist increases in streams”, Jarle Savio, A&R Executive EMI Music.

¹ Spellemannsprisen is an award given to Norwegian artists and authors that have made an outstanding musical achievement in the last year (Spellemann, 2013). The award corresponds to the American Grammy Award.

The statement confirms the assumption behind my definition of process innovation. A new release increases the sales of old releases. There is no replacement effect present, but rather a catalyst effect. New music revitalizes old music. According to Assink's (2006) definition on process innovation in Chapter 3, process innovations "carry lower financial and market-acceptance risk". As streaming increases the effect of a process innovation, labels should have larger incentives to undertake process innovations than product innovations. Since this trend is present for all EMIs new releases, I assume that the effect is present also for other labels. The effect may however differ depending on the type of artist.

I will continue to look at releasing new music as product innovations and releasing albums from existing innovations as process innovations. I will go further into what product and process innovation the labels invest in.

6.1.2 Product versus process innovation investments

I was interested in knowing how the labels choose what artists and projects to invest in. I asked the respondents about how many artists they worked with, how many albums they released in a year and how many of the releases came from new artists.

We release 10 to 15 Norwegian albums per year. A third of these are debutants. They may be new to EMI, but they may have released an EP at another label or on their own. Several of our new artists have already released an EP¹ or an album, which is very wise. That way, we see that they know what it takes to produce and promote an album, and it shows that they are willing to work hard. Jarle Savio, EMI Music.

At first sight, the number of releases seems relatively low for a major company, but when we take into account the fact that they also work with releases from international artists in the Norwegian market, the number increases. We notice two things from the statement above. One third of their releases come from new artist, which means that the number of process innovations is larger than the number of

¹ Extended play (EP) is a recording that contains more songs than a single, but which is too short to be considered a studio album (LP).

product innovations. Second, several of the new artists have started their career at independent labels or released an album on their own. This is an interesting observation that can be interpreted in several ways. It means that what a major label perceives as a product innovation may actually be a process innovation in the market. If this is a trend, we will see a larger amount of product innovations in independent labels than in major labels. Furthermore, it could mean that major labels use independent labels as a way to recruit new artists to their firm. This reduces the major labels' risk of investment in new artists, because the major label knows already whether the artist has an audience or not. Savio at EMI confirms this strategy:

“We want to be the best. We prefer to work longer with every artist, sign fewer artists, but it means that we have to pick the artists that can succeed. We have to succeed with 70% of the artists”, Jarle Savio, EMI Music.

Yngve Næss at Universal acknowledges that independent labels are important suppliers of product innovations:

“Working with indie labels allows us to get access the music defined as “cred music””, Yngve Næss, Universal Music.

Universal is larger than EMI and intuitively work with a larger pool of artists.

We develop as many artists as we are capable of working with. It depends on the number of employees, our obligations with existing artists and how the market is for new music. We sign two to four new artists per year at Universal and have approximately 35 local Norwegian artists under contract”, Yngve Næss, Universal Music.

Universal and EMI acknowledge that investing in new artists are risky. When an artist signs with a label, they often agree on production of one album with options for subsequent albums later. These contracts are more flexible now than in the analogue

¹ Cred is a slang word for credible.

era, with options for one or two albums, compared to three or four earlier. For new artists, option on a second album is necessary, as the profits from the first release rarely covers the album investment.

“You seldom make money on the first album. It takes time to build a career.” EMI Music

Product innovations do not seem to be profitable, or at least not for major labels. However, when the discounted future process innovations following a product innovation are taken into account, the number may become positive. This correlates well with the model from Ebina and Shimizu (2008) introduced in chapter 3. They modelled the incentives to innovate where firms could decide between process and product innovation. If products are differentiated, firms will prefer to invest in process innovations. The choice can be thought of as a choice between a long-term and a short-term investment. This assumption is however false, because a process innovation can also be long-term in that today’s investment in a process innovation increases the likelihood of selling more of a subsequent process innovation. If competition is intense, differentiation is preferred, but if products are already differentiated, firms will prefer process innovations. Differentiation is an important factor, which I will describe further in the section on market structure. It seems that independent labels are more likely to supply the market with product innovations:

“The new innovative and very different musical products that have been released in the industry have probably come from the sub culture, or indie labels.” Yngve Næss, Universal Music.

The results above indicate that major labels invest more in process innovation than in product innovation. Furthermore, it seems like independent labels invest more in product innovations than major labels. According to the theory above, one explanation is that independent labels differentiate their products to flee competition. I will test this in the empirical section. If they flee competition, it must be because it is too intense and that they do not manage to compete with major labels. As pointed out by Savio, EMI recruits artists from independent labels. That way, the independent label carries the market risk and the financial risk with the

product innovation, while the major label only carries the financial risk of the process innovation. I will in the next section confirm whether these results have support in the empirical data.

6.1.3 Market Overview

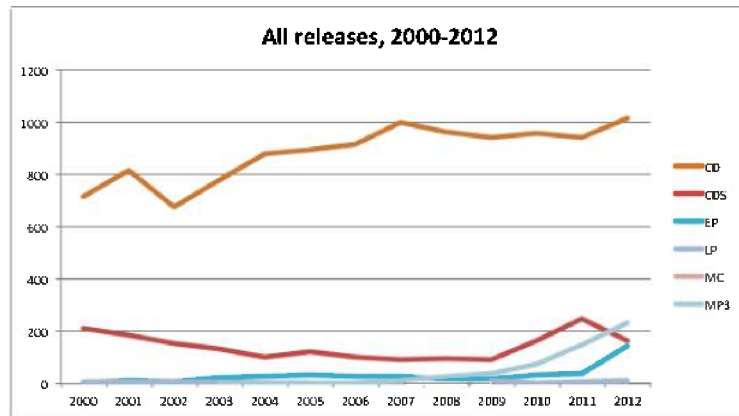


Figure 5 All Norwegian music releases from 2000 to 2012

I will in this section give a general overview of the releases. There were released 13834 albums from Norwegian artists in the period 2000 to 2012. This number includes all types of albums released on CD. The number is even higher if we include digital releases and singles. The yearly supply has increased from 934 in 2000 to 1182 in 2012. Figure 5 clearly demonstrates a positive trend in the number of releases. Although singles have regained importance with digital distribution (Joel Waldfogel, 2011), they have been excluded from the study because data such as music reviews on singles was not possible to get, as journalists rarely review singles. The period studied is from 2006 to 2012, because that is the only period in which I have data on the hit lists. The total number of releases is then 8008.

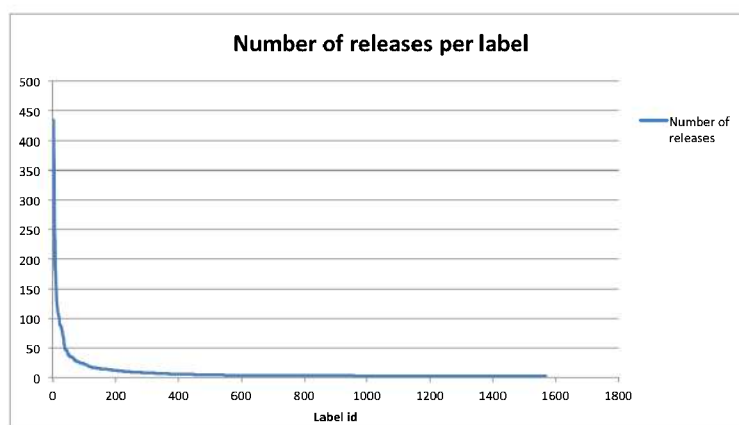


Figure 6 Number of releases per label ranked by size

The list includes releases from all 3032 labels. Four of these are the major labels. Figure 6 draws a picture of the concentration in the industry. If the number of releases represented the market share in the industry, a small number of firms has a very large market share compared to the others. The number of labels that released at least one album per year from 2000 to 2012 is only 13 labels. Some labels have shut down while others started after 2000, but the low number of labels gives an indication of how many labels that stay in the industry in the longer run.

A large share of the labels has only released one or two albums during the period. These labels are often artists releasing albums on their own label. Major labels have several sub-labels, depending on the genre of the music. I have therefore grouped all majors' sub labels under their respective mother label. The average number of albums produced is two, which makes no sense to study because of the large number of one-man labels. We can see that the head of the tail is concentrated on a few labels. Second, the tail shows a relatively small number of releases per album. A small number of labels accounts for a large part of the album released. Interestingly, none of the major labels holds the top position in the number of releases. The label with most releases is the independent label Tylden. Second comes Universal, followed by Sony and EMI. Tylden is an independent Norwegian label that releases dance band music (Tylden, 2013). The firm was established in 1994 and initially distributed their records through Universal. When Universal, together with the other major labels moved most of their distribution storage facilities to Sweden, they established their own distribution firm together with some other independent labels (Tylden, 2013). Despite the large number of releases, I will treat Tylden as an independent label because they have no international activity on the same level as the majors.

6.1.3.1 Album Reviews

Reviews overview

Variable	Observations	Mean	Standard deviation	Min	Max
Review score	1199	6.803503	1.294629	1.7	10

Table 3 Reviews

The list contains reviews of 2035 albums from 2000 to 2012, but only the period from 2006 to 2012 will be studied because I have no data on the hit list from 2000 to 2005. The number of reviews is therefore limited to 1199. The data is the average score given by one or more newspapers and magazines. The mean is 6,80, which means that most albums that are reviewed get a positive rating.

Music reviews have played a crucial role in the same way radio had on breaking artists in the market. An album review could be a “make it or break it” for many artists. A bad review does not mean the project is dead, but it requires more work from the artist to demonstrate the quality of its music. With music available online, this has changed. Universal and EMI agree that reviews are still important, but they do not dictate the future stars in the industry.

“The effect is not as strong today as it was earlier. People can listen to the song on any streaming service and make up their own opinion at the same time the review is published”, Yngve Næss, A&R Executive Universal

Consumers were unable to verify the quality of an album until after they purchased the album in the physical age. Reviews therefore served as a sales pitch for new albums. With streaming services, consumers can make up their own opinion once the album is released. If they only like a few songs on the album, they are not forced to buy the entire album to listen to the songs they like. The effect of the score on the scale seems to give different effects. Both extremes of the scale can capture listeners’ attention:

“It can stop everything. 3¹ is the most boring rating. It doesn’t say anything about a release. Getting 1 can give two opposite effects. It stops everything or it gets people’s attention. Getting a score of 1 and a full page in a newspaper catches the listeners’ attention”. Jarle Savio, A&R Executive EMI Music.

The debut album of the band Departure is a great example of a band that may have benefited from a bad release. The album was rated 1 out of 6 in the Norwegian radio

¹ Norwegian album reviews are most often rated between 1 and 6, where 1 is the lowest score and 6 is the highest.

station NRK P3. The review was published on the radio station’s website with the title “Cut my ears off”, referring to the horrible quality of the album that made the journalist say he preferred to cut his ears off rather than listen to their music. It obviously attracted several readers that had to hear the album (Klev, 2013). Reviews have a promotional effect, but the effect depends on the type of music and how established the artist is.

“Sissel Kyrkjebø is an established artist with broad audience and has released albums since she was 18 years old. But her audience needs to know that she released an album. If no one tells them, they won’t necessarily look for her new album”, Yngve Næss, A&R Executive, Universal Music

Established artists that have released music most of the audience is familiar with have to convince the audience to buy the new album. If the seventh or eighth album receives a bad review, people may think that they already have the first six albums, so they do not need to buy the seventh, especially since it received a bad rating.

“Do you need one more Springsteen album when you already have 14? The fans would die to get the 15th album. Some others wouldn’t care”, Yngve Næss, A&R Executive Universal Music

There is no clear effect on how reviews affect the popularity of an album. For some artists it is an important promotional tool while for others, reviews have less effect. Digital distribution has made it easier for the consumer to check whether they agree or disagree with the review, and a bad review today does not necessarily mean that the project is a failure.

6.1.3.2 Hit Lists

VG lista overview

Variable	Observations	Mean	Standard deviation	Min	Max
Weeks on the list	1337	7.667	9.028	1.7	62

Table 4: VG-lista overview

A general overview of the data (table 4) shows that the average number of weeks an album stays on the list is 7,7 weeks. The average number does not tell us much, as the dispersion is relatively large. The median number is 4 weeks, which means that most of the albums that are listed only stay for a short period of time, while a few stay very long and pull up the average. 90 percent of the releases stay on the list less than 20 weeks. The maximum number on the list is 62 weeks, but only one album reached that high. The label that occur most frequently on the list is Universal. From 2006 to 2012, Universal had 68 albums on the list, Sony had 63, Tylden had 56, EMI had 43 and Warner had 34. There are 502 labels that have one or more albums listed on VG-lista. To measure each label's success, I could create a relative sales success ratio. If N_l is the total number of albums released per label, l , and V_l is the total number of albums listed on VG-lista per label, the success rate s_l for each label in terms of sales such that $s_l = \frac{V_l}{N_l}$. However, this measure would favor independent labels with very few releases. There are some independent labels whose one and only release has been listed on VG-lista. They will therefore receive a 100 percent success rate, so the method is not appropriate as the labels differ so significantly in size and characteristics. If I only take into account the ten largest labels measured by albums released, the ratio makes more sense, but the measure neglects the performance of each album. Being listed on VG-lista does not say how the album performed compared to the other albums that were listed. This should be taken into account so I created a hit list ratio as mentioned in the methodology chapter.

The average album ratios can be found in appendix 10.1. Labels with the highest ratios are independent labels, but so are also the labels with the lowest ratios. An important observation to outline is that most of the independent labels in the top position only have released one album, or they have only had one album on the hit list. The large number of independent labels ranked in the top positions indicates that it is possible to release an album and attain a high score on the hit lists without the help of a major label. The VG score ratio will be used in the next section where I use a logistic regression to measure the relationship between market structure and innovation.

6.1.4 Empirical Model

This section contains the results from the empirical study where I study the relationship between innovation and market structure.

In table 5, I have lined up innovation for the two types of labels. The table shows all releases from 2000 to 2012, releases from 2006 to 2012 and a filtered set of albums that have either been reviewed or been listed on the hit list from 2006 to 2012. For both types of label, there are more process innovations than product innovations. This can be found by tallying the row sums and comparing them. The results make sense. If labels were to invest more in product innovation than in process innovation, it would mean that they would only produce one album for most of their artists. Universal and EMI expressed in the previous section that labels have to release a process innovation in order to recoup the investment of the product innovation. Overall, independent labels release more albums than majors, but the proportion of process innovation to product innovation is higher for major labels versus independent labels for each segmentation (2000-2012, 2006-2012, and quality). The majors' ratio is about 2 to 1 for the unfiltered lists and 3 to 1 for the filtered list. I performed a Chi-square test to assess the independence between the variables. This was done to see whether it makes sense to study the relationship between the variables. The results from the test can be found in appendix 10.2.1. According to the test, the variables are dependent, which means that label is a factor in determining if an album will be a process or a product innovation.

2000-2012			
Innovation	Major	Independent	Total
Product	309	6444	6753
Process	761	6291	7052
Total	1070	12735	13805
2006-2012			
Innovation	Major	Independent	Total
Product	119	3625	3744
Process	336	3915	4251
Total	455	7540	7995

Quality albums 2006-2012			
Innovation	Major	Independent	Total
Product	56	505	561
Process	180	981	1161
Total	236	1486	1722

Table 5 The number of innovations by the type of label. Innovations over the total period and innovations over the period there is data on reviews and hit list.

In the following analysis, I will only use the numbers from 2006 to 2012. I first performed a t-test to look for any differences in the proportion between the investments of major labels and independent labels. The results can be found in appendix 10.4. I tested the null hypothesis saying that means of the samples are equal. The alternative hypothesis is that they are not. Based on the results, we can reject the null hypothesis. The mean for group 0, which is the group of independent labels shows a mean of 0,48, while group 1 which represents the major labels shows a mean of 0,26, and the results are statistically significant. On average, 48 of every 100 albums from an independent label are new artist releases, where as for major labels only 26 of every 100 albums are new product innovations. Therefore, independent labels are releasing nearly twice as many new artist product innovations than major labels. The problem with a t-test is that it does not take into account other variables that may explain the dependent variable. Therefore, I will use a logistic regression to account for other variables.

The dependent variable of a logistic regression is a binary variable that takes the value 1 or 0. If the value is 1, it means the innovation is a product innovation. If it is 0, it means the album is a process innovation. I am aware of the false dichotomy fallacy. This will be explained under section 7.4 Limitations and future research.

6.1.4.1 Logistic Regression of Albums 2006-2012

Appendix 10.5.1 includes the regression results for all albums released between 2006 and 2012. The odds ratio measures how much more major labels invest in product innovations than independent labels. If the odds ratio is below 1, it means that major labels invest less in product innovations than independent labels. For the variable on label type, we get an odds ratio of 0,46. The ratio is statistically significant with p-

values equal to zero. These results support the t-test. Independent labels are 2.1739 ($=1/0,46$) times more likely to invest in a product innovation than the major labels. The dummy variables for year 2006, 2007, 2010 and 2012 are not significant because of collinearity between the variables. The odds ratio for reviews is 0,91 and the odds ratio for the VG-lista score is 0,869. Both the latter odds ratios are statistically significant. However, I discovered that these numbers do not tell my much. I did a new regression with a dummy variable for whether an album had been listed on VG-lista and a dummy for whether the album had been reviewed. The results are shown in appendix 10.5.2. The odds ratio for the type of label has not changed much, 0,48. The odds ratio for being listed on the hit list is 0,61 and the odds ratio being reviewed is 0,55. The interpretation of the odds ratios is that not being reviewed makes it 1,82 ($=1/0,55$) times more likely that the album is a product innovation, not being listed makes it 1,63 ($=1/0,61$) times more likely that the album is a product innovation.

It could be useful to check whether there is any collinearity between these two variables. It is reasonable to believe that albums that are listen on VG-lista are more likely to also be reviewed by a newspaper. I did two simple correlations. The first between the dummy variables for being reviewed and for being listed on the hit list. The results can be found in appendix 10.3.2, and shows a correlation of 0.32. The correlation is positive, but not very strong. The second correlation is between the hit list score and the review score. The result can be found in appendix 10.3.1, and shows a correlation of 0,19, which is relatively low. A higher score on the hit list does not necessarily mean it has received a good rating, but the results may be affected by the fact that I have included all albums from 2006 to 2012. Based on the two correlations, I cannot draw any conclusions on the relationship between reviews and the hit lists because the results are not strong.

The marginal effects in a logistic regression measure how much the odds variable change with an increase in the variable of 1. The marginal effect of the coefficient for the type of label is -0,181. This means that if the variable increases from 0 to 1, meaning that we switch from an independent label to a major label, the odds of the album being a product innovation decreases by 0,181. I did a second regression on the filtered list to see if that would change the results. The odds ratio for the type of label is 0,64, which means that the independent labels are 1,563 ($=1/0,64$) times

more likely to invest in product innovation than major labels. The other factors remain as in the first regression. What we see is that when we take into account the fact that an album has been rated as quality, the proportion changes, as the several of the one-man labels have been filtered out. But the independent labels are still more likely to invest in product innovations than major labels.

The results that major labels invest more in process innovations than product innovations were expected. If major labels would invest more in product innovations, they would have to frequently change the pool of artists. It is easier for labels to predict the outcome of a process innovation than a product innovation, as they already have information on the audience. The interesting results from this section is that independent labels invest at least two times more in product innovations than major labels. When I use the filtered list, the independent labels invest 50 percent more. These results confirm what was expressed by EMI and Universal in the section on process and product innovation; most product innovations come from independent labels. The following section on the market structure may help explain why we see this trend.

6.2 The Market Structure

This section will describe the independent variables of the market structure that may explain why we see that independent labels are two times more likely to invest in product innovations than major labels.

6.2.1 Demand for Music

The market seems to recover from the drop in sales during the first ten years of the millennia. Consumers are getting more willing to pay for music as a product, and producing music is again becoming profitable, according to EMI Music and Universal Music. Profits are lower than they used to be, but it is possible to release music and make money on it. EMI and Universal are unisonous on that the market for new music has not been better in many years.

“The market is very good. There has never been listened to more music today than before”, A&R Executive, EMI Music

“The market for Norwegian music is good. We have more releases in 2012 and 2013 than in many years, but it is more challenging to reach the audience”, A&R Executive Universal Music Norway.

EMI describes the demand side of the market while Universal describes the supply side. As there have never been listened to more music, demand has never been higher. If demand has never been higher, it is reasonable to believe that supply has increased as well to meet the demand of the consumers, unless prices have increased. The latter is unreasonable as physical sales have dropped significantly and digital sales are becoming the primary source of music sales, which charge a significantly lower unit price (IFPI, 2013a). Yngve Næss at Universal confirms that the supply has increased, although the numbers in our study show otherwise. But, total supply of Norwegian music has increased from 2000 to 2012. The largest drop in the number of releases occurred during 2002, but over the period, the yearly supply of new albums has increased by 41,6% over 12 years. The significant increase is due to the increase in independent labels. Jarle Savio says EMI experiences an increase in the supply of demos they receive from unsigned artists, which he says is affected by lots of noise:

“The challenge is that there is lots of noise. Since everyone can produce a song on their own computer, there is produced a lot of crap. But the market for releasing new music is good”, Jarle Savio, A&R Executive, EMI Music.

The barriers to record music have decreased. Cheaper technology has made it easier for consumers to produce and release their own content. EMI has opened a Soundcloud account where anyone can submit his or her music. Soundcloud is a service that allows users to upload music content that becomes available to the public for free. It is being used by several artists, especially young artists, and is very popular for DJs and artists that make remixes of other songs (Soundcloud, 2013). However, decreasing barriers to record do not seem to have increased quality:

“99% of the content is crap because everyone can record a demo. Since it’s so easy to record an album, the quality decreases”.

It is important to distinguish between home production and professional production. Very few home productions will be released without being re-recorded in a professional studio. Cheaper technology has made it easier for labels to discover new talent, but it has also created more noise, making it more difficult to find talent.

So far, it seems like the Norwegian music market is good. The major labels have started to make money again on their music. The next section will present the concentration in the industry.

6.2.2 Concentration and Rivalry

“I do not feel we’re in direct competition with the other major labels. The industry is so small that I see the others more as colleagues.” Yngve Næss, A&R Executive Universal Music.

Although Næss may not perceive labels as competing with each other, their artists are competing for consumers’ attention. With an increasing number of artists, the competition has become more intense.

“Streaming platforms treat artists equally. It is therefore more challenging for Norwegian releases to compete with international releases, as the international releases most often generate far more streams than Norwegian music”, Yngve Næss, A&R Executive Universal Music.

Streaming treats artists equally. Quantity has become more important with the digital downloading and streaming services, not only for mainstream artists, but also niche artists. The price of an album is fixed, and is set by either the record store or the digital intermediary. With marginal costs approaching zero, quantity is becoming more important. It is reasonable to believe that consumers have a certain limit on how much music they can consume. As artists require consumers to listen to more of their music, competition for the consumers becomes more intense. The odds will naturally be in favor of the artists with a broader appeal.

Streaming services are known for paying low fees to artists. The fee system has created large debates in the Norwegian music industry, especially among independent labels. The streaming services pay very little per stream, and for artists that do not make music that is streamed in large quantity, streaming services pay a poor salary to artists compared to the CD. Because quantity is important on streaming services, major labels have a competitive advantage over independent labels because they can benefit from a large catalogue. Economies of scale in the music industry may never have been as important as today. EMI and Universal stated in the previous section that the market for music is very good. The independent labels however feel it is very difficult to survive as the profits from streaming is very low (Hillestad, 2012). Some independent labels have even chosen to withdraw their catalogue from the streaming services because they are not able to recoup the investment in new music with the fees streaming services generate (Rognerød, 2012). Streaming has made the competitive environment more intense. However, major labels seem to be protected from the competition to a certain degree, as they can benefit from having a large catalogue. It is easy to have your music distributed on streaming services, but it is difficult to make money unless you get a large amount of streams.

6.2.3 Decreased Barriers to Entry

“Earlier, we could pay to get a success. Today, we have to work for it”. Jarle Savio, A&R Executive EMI Music.

Marketing and selling music in the physical age may have been easier if you were a large label with a large catalogue and access to capital. As pointed out by Savio above, a success depended on the level of investment. Only the large labels were able to use television commercials for album releases because of the large costs. Television was one of the most efficient marketing channels, and albums promoted on television got significantly more publicity than the other albums. If you had the resources to pay for television commercials and the access to radio stations, you had greater chance of succeeding with your releases. Technology has changed that. First, the profit potential through streaming and downloading has changed. Digital sales do not generate the same level of profits as physical sales, so the large cost for the television

commercials cannot be justified. Second, alternative marketing channels through Internet and social media have gained importance.

“We have almost stopped with TV-commercials”, Jarle Savio, A&R Executive, EMI Music.

This trend should benefit independent labels. Television commercials were perceived as the primary way to break an artist in the market in 2001 (Holen, 2001). It was easier to promote an album in the physical age because the audience could not know the quality of the album until after the purchase. Streaming makes the market transparent, and consumers can observe the quality right away.

Advertising through social media is becoming more important for record labels. It is more democratic, as everyone has the same initial opportunity to reach the same audience for a very low price. As pointed out in Chapter 2, major labels and radio stations were the gatekeepers between artists and consumers. Internet and social media changed that. In theory, anyone has equal opportunity to reach the same number of audience through Internet and social media. However, as the barriers to reach an audience are lowered, more artists compete for the same audience. In theory, labels compete on equal terms with the artist that just recorded an album in his living room. Universal and EMI agree that it has become harder to reach the audience, but there are certain benefits of marketing several releases than only one, as you build up knowledge on what works and what does not work. I will describe this further in the section on research capabilities.

Barriers to Entry in Production

I already made the distinction between a professional production and a home production. The latter has become much easier. But the cost of producing a professional album in a studio has remained at the same level. Most of the costs related to producing a professional album is labor cost, such as hiring producers, musicians and mastering of the record. Universal gave this example of a possible cost structure:

“Most releases cost between 200 000 to 350 000 NOK. This includes production, mastering and hiring musicians. It is possible to record an album for less. Indie labels may be able to record an album for 75 000 to 150 000.”

On top of that comes marketing and promotion. Fixed costs normally do not affect incentives to innovate. However, they can act as a barrier to entry for competitors. If the costs above represent the costs of breaking an artist in the Norwegian market, by definition the barriers to entry, independent labels with limited access to capital may try to find alternative methods to produce an album to reduce the costs, or differentiate the music so that it does not compete directly with the major labels.

From the theory chapter, we saw that when barriers to entry are high, monopolists are less likely to invest in innovations because they are naturally protected from competition, and the investment would incur a replacement effect on the old technology. If the model holds, we would expect to see a lower degree of innovation from major labels in the period of the physical age. From what we saw from the supply of new music, the supply trend from major labels was negative from 2000 to 2012, while the independent labels increased their supply. The barriers to produce, distribute, promote and market music have decreased. Lower barriers have increased the number of labels in the market. With more labels come more competition, but it seems like the major labels are sheltered from competition. So far, streaming is mostly profitable for major labels because they benefit of a large catalogue that generates millions of streams.

6.2.4 Financial Risk

There is considerable risk involved in investing in music, and technology seems to have increased the riskiness of investments.

“The investment is maybe fully financed up to 24 months after the release. In the CD-era, the investment could be fully recouped after only two to four weeks”, Jarle Savio, A&R Executive EMI Music.

It takes more time before an investment is fully recouped, which can create cash flow challenges, especially for smaller labels.

“For us that have a large catalogue, cash flow is not a problem, but for Indie labels, cash flow is a problem. Indies’ strategy has been to produce an album, release it and hopefully sell 1000 units, which is the break-even for most albums. The revenue from every album is invested in the next album, and this is how Indies normally do it. It’s not a million dollar business, but that is not their goal. Once an investment is recouped, they invest in the next. And since the recoupment now takes longer time, it creates cash flow problems for indie labels. Right now, it’s tougher for them”, Jarle Savio, A&R Executive, EMI Music.

Universal agrees with EMI that cash flow is not a problem for them. For the small labels that are run by one or two passionate people with limited finances, cash flow constraints pose a problem. It either forces the labels to reduce investments or find alternative methods to release content. Cash flow challenges may explain the increase in singles and EPs, as it allows the label to see the consumers’ demand before investing in an entire album.

6.2.5 Research Capabilities

“We realized some years ago that if we wanted to survive in the new music industry, we had to acknowledge that we are a knowledge firm”. Jarle Savio, A&R Executive EMI Music.

Technology has been disruptive to the record industry in several ways. Napster was a catalyst that put all labels on the sideline. Major labels did not have the knowledge to respond to the technological progression and were therefore trying the best they could to protect their position by counteracting file sharing. However, it seems like they are recovering and are building new structures that allows them to respond faster to market changes:

“Several employees had to go. But the ones who stayed changed. We hired several new young employees that were willing to change the company, and we succeeded.

We just delivered the best numbers since 1969 in Norway". Jarle Savio, A&R executive, EMI Music.

Savio explains how EMI Music went through the years of decreasing music revenues. Few of their employees had any technology knowledge, and they had to hire new people to be able to understand how technology would transform the industry in the future. Building up internal knowledge may explain EMI's recent increase in profits. They have focused on building an organisation that acquires knowledge about the new music environment. They are using new tools to measure how people consume music and measure what makes a project successful. I was interested to know whether there were any tasks they did not do themselves. Savio mentioned there was a trend some years ago that labels outsourced promotion:

"...that was not a good idea, especially digital promotion. If we outsource promotion, we won't learn anything about it. Then it 's better to hire more people to do it in-house instead of paying someone else to learn what we could learn", A&R Executive, EMI Music.

Research capabilities refer to how capable a firm is to capture information about the market, their consumers and technological trends that they can transform into new innovate products. According to Christensen (2013), established firms with large market power are better positioned to undertake sustaining innovations because they have more information about the market and can react to competitors' moves faster than others. They also have the economies of scale that enables them to produce more efficiently than entrants. EMI fits Christensen's description. The trend that they have started to capture information about its consumers and the market would allow them to perform more precise process innovations in the future and increase the likelihood of success. I do not have enough data to measure the difference in total profits for EMI between 2000 and 2012, but as the number of releases in 2000 was 33 and the number of releases in 2012 was 12, knowing that 2012 was their best year since 1969, their profits per album have increased. Whether this is because they are actually more efficient or if it is because they are making more profits on their old catalogue is hard to know. But building up knowledge on the market and the consumers allow them to profit more from their catalogue.

I cannot generalize EMI's experience to the other three major labels, but EMI seems to build up a structure within their label that allows them to acquire more knowledge about their operations, which can foster more process innovations. This may seem as a profitable strategy, and may become even more important in the following years. Independent labels are smaller and may not operate on the same professional level as major labels:

“People who start indie labels have a passion for music, but since the labels are small, they have little flexibility if their life situation change or they need stable income.” Yngve Næss, A&R Executive Universal Music.

The structure of an independent label can make it difficult to survive in the long run. However, it seems like they possess other capabilities that major labels do not have:

“In terms of profits, we generate far more profits than any of the other labels in Norway. But in terms of creativity, indie labels have several competencies and may work more closely with the artist to create very good musical products. The fact that they often have limited capital also shows that they manage to create in several occasions better products than us, but with less capital. People that work in indie labels are valuable, and they are often attractive for us to hire.” Yngve Næss, A&R Executive Universal Music.

Næss acknowledges that independent labels have certain capabilities that allow them to create new musical products that outperform major labels in some way:

“The new innovative and very different musical products that have been released in the industry have probably come from the sub culture, or indie labels.” Yngve Næss, Universal Music.

Major labels seem to build a structure that allows them to acquire knowledge about the market and their consumers so that they can release new and more precise process innovations that allows them to reap larger profits. Independent labels however have a different set of knowledge that allows them to challenge the major

labels on music quality and discover talent major labels cannot find. The lack of capital, access to promotion and advertising channels and organisation structure may explain their difficulty of boosting the artist's career in the long run, and artists may therefore switch label after a an album or two.

“Many artists start their career in an indie label before being picked up by a major label.” Yngve Næss, Universal Music.

This may explain why the independent labels invest more in product innovations than major labels.

6.3 Results Summary

The respondents define innovation in the music industry as finding, producing and releasing talents to the market. Every new process innovation increases the streams of older content, which creates an additional profit incentive to undertake process innovations. Major labels prefer to invest in artists that have previous experience with another label, or released music on their own as a way to reduce risk. The empirical part shows two things. First, major and independent labels invest more in process innovations than product innovations. This is normal, or else they would have to replace their pool of artists after every release. Second, independent labels are two times more likely to undertake product innovations than major labels. If I use the filtered quality list, the number is 1,5. This is interesting because the respondents express that several of their new artists come from independent labels. If that is a trend, then independent labels account for the product innovations while major labels benefit from the process innovations.

The second part of the results describes the market structure. The market structure in the record industry can be defined by lower barriers to entry in production, distribution, promotion and marketing of music. There is an increasing number of labels, thus increasing intensity. Major labels report on larger revenues while independent labels struggle to make money on digital streaming. Major labels benefit from economies of scale, and their large catalogue gives them a competitive advantage over independent labels. Streaming has increased the recoupment time

for album investments, making it tougher for independent labels to rely solely on sales revenues. While majors' overall position is somewhat protected because of their large catalogue, they have to compete on equal terms in marketing and promotion of music.

7 Discussion and implications

7.1 Discussion of the results

The research question of this thesis is to explain how market structure affects the incentives to innovate in the Norwegian music industry. I will in this section relate the results to the theoretical framework from Chapter 3.

7.1.1 Disruptive Technology

I will first distinguish between how technology has been disruptive to the industry's value chain and innovation in the music industry. New technology is also innovation in the music industry, but it can be seen as an external innovation while the release of new music can be seen as internal innovation. The introduction of radical technology relates to Christensen's (2013) model on disruptive innovations while the production of process and product innovation relates to the theories on market structure and incentives to innovate. Figure 7 below is an updated version of Figure 3 in the theory section, with technology as an external innovation that affects the market structure. Since the technological inventions that have disrupted the industry did not come from the industry itself, I have illustrated them as external. However, as demonstrated by the figure, the innovation affects the market structure, which eventually goes on to affect the release of new product and process innovations in new music.

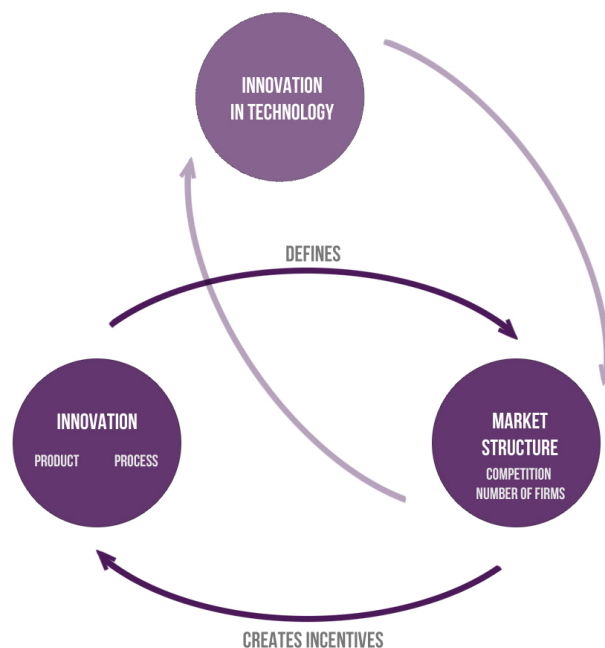


Figure 7 Market structure and the incentives to innovate with technology

The music industry has been defined as an oligopoly with a few large labels that dominates the market and several small labels. The large labels have had significant market power for a long period of time, but I have throughout the thesis pointed out how technology has disrupted all the parts of the value chain and tried to see whether this has affected the market power of the labels. To conclude that technology has put the major labels on the sideline is too easy, and not necessarily true. I earlier said that because they failed to react to the technological development in the distribution of music, they lost the profitable distribution chain. This is partly true. Distribution is still done through the company, but the new streaming and downloading services have taken over the delivery of the product to the final consumer. The situation is the same as in the physical era, except that there are no transportation cost and reproduction cost. However, the major labels have bought stocks in Spotify, and control around 19% of the company (Jerräng, 2009). This means that they now control a fifth part of the value chain, consumption. They can gain insight in what consumers listen to, what music they like, and how they listen to music. Streaming services also offer this service to independent labels, but the major labels have an ownership in the streaming services that allows them to keep control of the entire value chain. Because of their significant size, they have this opportunity to regain control over distribution by buying their way back into position. The total effect of new technological innovations is ambiguous. In some cases, it has decreased the barriers to entry so that new labels can enter more easily. More competition decreases monopoly power and is assumed to benefit consumers. On the other hand, it has increased the importance of economies of scale, and the major labels' position seems to have remained stable. I will go more into how the changes in the market structure affects the incentives to innovate and relate it to the theoretical models.

Major labels share the characteristics of monopolists in that they are large firms with easy access to capital and a solid structure that enables them to benefit from economies of scale. On the other hand, they are slow in responding to new innovations that fall outside the existing knowledge within the firm. As pointed out by Henderson (1993), incumbents have built up an organizational structure that enables them to capture information about their existing operations. They can easily react to changes in the market, but the knowledge is at the same time a barrier to invent new innovations that carries different characteristics than what they are

already familiar with. Napster was a disruptive innovation that fell outside the existing knowledge of the major labels. When Napster was launched, the major labels did not see Napster as a threat to the industry, but more as an illegal service they wanted to shut down as soon as possible. They did not see the new value chain Napster brought into the market. The story fits Christensen's (2013) definition of a disruptive innovation. Incumbents do not acknowledge the newcomer as a threat until it becomes so big that it is unavoidable. Then it is too late to respond, because the newcomer has launched a product or a service that becomes the standard in the industry, and the incumbents already lie far behind to be able to respond in the new competitive environment. There were no single label that came after Napster and used their technology to distribute music to consumers, but several. As Napster had created a market for digital music that replaced the physical CD sales, the labels that took advantage of this technology should be able to capture market shares from the major labels as consumers shifted to a digital platform and major labels were too slow to respond to the new technology. This would be true in the music industry if Arrow's (1976) replacement effect would be present. Arrow assumed that every new innovation implies a replacement effect on existing technology, in the sense that new technology makes old technology obsolete. Digital distribution replaced physical distribution, meaning that digital distribution became the preferred platform for consumers. However, if the replacement effect is present in the production of new music, product or process innovations, it means that every new album release would replace an old release. With increasing competition, we would expect to see independent labels capturing market shares from major labels, since they adapted more quickly to the new platform and supplied music on a platform consumers preferred. This would assume the quality of all releases is equal, but they are not. While the replacement effect is present in the distribution of music, it is unrealistic to assume the replacement effect is present in the production of new music. The absence of the replacement effect can explain why major labels have maintained their large market share. Furthermore, consumers have a limitation in how many artists they can listen to, and they prefer to listen to music they are already familiar with. For labels with a catalogue containing music consumers like, this is positive, especially if it is large and dominates the market, as they have the opportunity to supply the music on their own terms. Copyright gives the label monopoly power in the supply of their product. With no replacement effect in new music, copyright helps

major labels maintain their position in the market as long as there is a demand for their products.

The reasoning above assumes that music does not depreciate and that major labels do not need to invest in new music. However, music does depreciate (Joel Waldfogel, 2011). Consumers have a preference towards new music. The majors' catalogue will therefore depreciate, and it is necessary to invest in new music to maintain the market share. The absence of the replacement effect and copyright seem to be two factors that can explain how they have kept their market share throughout the disruptive period of the industry, as well as the fact that they have bought their way into the streaming services. However, the catalogue has been built up over several years. As they have decreased their investments in new music the last years because of reducing profitability, this may hurt the firm in the long run. Today's process innovations are the result of earlier product innovations. If the number of future product innovations decreases, it will lead to a lower number of process innovations, unless the major label purchases artists from independent labels.

7.1.2 Market Structure and the Incentives to Innovate

The disruption has led to a decrease in barriers to enter the industry and more firms have entered the market. The numbers of yearly albums released and the number of labels have increased, and it is reasonable to say that competition has become more intense. In Gilbert and Newberry's (1982) model on monopolies threatened by entry, the monopolist will invest more in process innovations to deter entry from the competitors. If entry barriers are high, the monopolist's incentives to undertake innovation investments are lower than if the entry barriers are low. I assume the major labels act as monopolists and that independent labels are entrants. As technology has decreased the barriers to enter the industry, this would imply increasing incentives for major labels to invest in process innovations. The model assumes that the monopolist and the competitor compete for the innovation through a bidding process. The label that places the highest bid will get the innovation, which will according to the model be the major label. If the model holds, we would see an increase in the supply of new process innovations from major labels. What we see is the opposite. Major labels have decreased their investments in new albums, process

and product innovations. However, they seem to have become more efficient. The model assumes the replacement effect is present, which may be the reason we do not see any increase in process innovations from major labels. The model may not be appropriate to describe innovation in the music industry. First of all, because it assumes the replacement effect, second because it does not take into account product innovations, except saying that product innovations would also generate a replacement effect for entrants as well as monopolists. The incentive to maintain market share can therefore not be confirmed in this case. Another factor that may explain majors' preference towards process innovations are research capabilities.

Henderson's (1993) theory on research capabilities say that monopolists are better positioned to undertake process innovations because they have built organizational structures that captures information about the market and the consumers. Major labels seem to build structures that allow them to capture more information about the market and their consumers. Furthermore, they have the economies of scale and a long history that have provided them with deep knowledge about how to release and make money on music. They would therefore have a competitive advantage in process innovations. This reasoning follows the model of Christensen (2013) and Schumpeter (1942). However, the same accumulated knowledge creates disadvantages in releasing product innovations. Independent labels have a different set of skills that allows them come up with new radical music artists that are differentiated from the products of the major labels. They are not bound by organizational structure that reduce their creativity. According to Christensen (2013), entrants should only compete with major labels on process innovations in the case where the innovation requires a set of skills that are hard to copy and if the entrant has a competitive advantage in producing and supplying the innovative product. If not, they will be outperformed by incumbents. Following Weiss (2003) model, if we assume there were two separate markets where all new entrants produced product innovations while major firms produced process innovations, independent labels would prefer to join the market for process innovations in order to flee competition from the other labels because differentiation among independent labels are already high. However, the independent labels that compete on process innovations will see that they are quickly outperformed by major labels because major labels have competitive advantage in releasing process innovations. As I

demonstrated in the previous chapter, independent labels lack access to capital, an organizational that acquires knowledge about its consumers, and access to promotion and advertising channels. The ones that compete with major labels on process innovations will face low profits and intense competition because competition is based on quantity, and require larger efforts and financials to invest in marketing and promotion to get the required level of quantity for the innovation to become profitable. Instead, they may release product innovations and benefit from differentiating the product from the most popular music and sell it with additional services and merchandise. The downside of mainly investing in product innovations is that they generate less profit than process innovations, although they include an option for subsequent product innovations. How independent labels manage to survive by primarily targeting product innovations is not answered in this thesis. If the products are differentiated from mainstream popular music, they are more likely to receive government funding for recording an album than major albums releasing popular music. Furthermore, independent labels may gain from other sources of revenue in the record deals, such as live revenues.

The reasoning above outlines two different investment approaches in the industry: The objective for all labels is to release a product in the market with an innovative sound. The major labels will benefit from the first innovation by releasing multiple subsequent process innovations that allow him to benefit from diminishing cost. The independent label will release the first album, but cannot compete in the market for the second album because of lack of capital, less access to promotion channels and a small existing catalogue. The independent label will therefore continue to stay competitive by target the sub culture and re-segmenting their portion of the market while major labels reap the larger benefits from process innovations.

7.2 Theoretical Implications

Empirical results have so far failed to support either monopoly markets or competitive markets as the most optimal to foster innovation. One possible explanation as I outlined in the theory chapter is the lack of common measures of innovation. Given that major labels are monopolists and independent labels are firms in competitive markets, this study shows that monopolists focus more on

process innovations than competitors. This supports Christensen's (2013) theory on disruptive innovations and Henderson's (1993) theory on research capabilities. My results do not show that monopolists increase investments in innovation when they are threatened by entry, Gilbert & Newberry's (1982) propose. There may be several reasons for the lack of support. The threat of entry may not be credible. If major labels do not consider the entry of new labels as a threat, they will not invest more in process innovations. Furthermore, I have excluded the replacement effect. Including it would increase major labels' incentives to innovate. They would gain from the new innovations, but they would at the same time replace the existing innovation. The general models however only takes into consideration process innovation. Product innovation can be included in Gilbert & Newberry's (1982) model, but this would only mean that the replacement effect would be present for monopolists as well as entrants. Weiss (2003) and Ebina & Shimizu's (2008) models are better to explain the incentives to innovate, because they both take into account product innovations.

The interesting theoretical implication in this thesis is what I have termed as the *catalyst effect*. It is the opposite effect of the replacement effect, meaning that every new process innovation increases the value of the existing products. Firms with an existing portfolio of products are more likely to undertake process innovations rather than product innovations because process innovations generate profits not only on the new product, but also on the existing portfolio. Both innovations imply financial risk, but process innovation does not have the same level of market risk as a product innovation. However, the catalogue cannot maintain the same value for an unlimited future, so it is reasonable to assume that it depreciates over time. Following Ebina & Shimizu's (2008) model, product innovations include the option to benefit from future process innovations if the first innovation is successful. The balance between investments in product and process innovations determines the long-term profit to the firm, as the firm has to release product innovations to add value to their product portfolio.

Whether these findings can be generalized to other industries remains to be researched further. The firm may be able to vertically differentiate the new and the old product to divide consumers after their willingness to pay. When Apple launches a new iPhone, they do not scrap the old model, but they reduce the hard drive storage

on the phone and decrease its price. That way, they target two segments of the market according to consumers' willingness to pay and sell more units than if they only sold the new product.

7.3 Managerial Implications

The major labels seem to have adapted to digital distribution. They have more to gain from process innovations, and streaming makes process innovations even more profitable because of the catalyst effect a new release has on existing content. The effect also applies to independent labels, but profits from streaming is still so low that with only a few releases in their catalogue, independent labels will either decrease the investments in an album or find alternative methods to sell and distribute music than through the standard streaming services. Niche artists have a different audience that may be willing to pay more for the music. Furthermore, niche music is more likely to receive government subsidies than popular music. As long as profits from streaming remain low, government subsidies create an incentive to differentiate music as it reduces the risk of investing in a new album.

The industry is in a hybrid phase with both physical and digital distribution. How the situation becomes when only distribution is digital is difficult to say. According to the participants in the interview, the largest group of consumers on streaming services is young people between 15 and 25 years old. Today's situation favors labels with large catalogues because the payment for every stream is very small. When more consumers shift to streaming, the picture may become different. There may also emerge new profit sharing models that make streaming more profitable for niche artists.

Majors' position is protected by their catalogue, but only temporary. Waldfogel (2011) demonstrates that music consumers have a preference towards new music. They would eventually have to renew their catalogue in order to fit the preferences of a younger audience. The number of releases from major labels in 2012 is almost half the level in 2000. As the catalogue depreciates, independent labels can have better chances of gaining a larger market share.

When a label undertakes an investment, it has to balance the choice between investing in process innovations and product innovations. Labels can more easily gain profits from process innovations, but product innovations are necessary to position the label in order to gain from process innovations in the future. What would have been interesting to study is the investment behavior of major labels in the long run, and the ratio between product and process innovations. If the ratio of process innovations to product innovations has increased, it means that major labels benefit more from old content. If they innovate less today, it means that their position may be threatened by independent labels in the future if independent labels manage to build up a successful music catalogue.

7.4 Limitations and Future Research

The thesis is written as a part of the double degree master program within the time limitation of six months. In order to limit the scope of the thesis, I have chosen to concentrate on the relationship between market structure and innovation in the record industry. There is an increasing number of studies on the relationship between market structure and incentive to innovate because there is no linear relationship. Firms' heterogeneity makes it difficult to draw a general conclusion on how market structure affects the incentives to innovate. I have used an unconventional method to define and to measure innovation, but it allowed me to look into an area that others have not researched before. The thesis is limited to the Norwegian record industry. The Norwegian market is relatively small compared to other countries. Results from the thesis can therefore not directly be generalized to other markets. However, the small size has given me the chance to interview with some of the most central persons in the industry. I assume that the general effects of digitization of the record industry have similar effect on the Norwegian industry as in other western countries. I did not get the chance to interview an independent label. This would have given me the opportunity to get a more balanced picture of the industry.

I had very little empirical data on the market structure. With more variables, the empirical research could be strengthened. Furthermore, innovation was defined as either process innovation or product innovation using a dichotomous variable. Only

allowing for two options increases the threat of painting a black and white picture of innovation in the industry when there may be other options available. One example is “Best of” albums. They may be album compilations of several artists. They are definitely process innovations, but they cannot be allocated to any specific artist. The reasoning is the same for the categorization of labels. The major labels are relatively equal, but the independent labels vary significantly in size and characteristics. A better measure could be market shares. This was not possible to measure, because I did not have access to sales data.

I have not included copyright. The general textbook model on patent protection and incentives to innovate says that stronger patent protection increase the incentives to innovate, as it generates more profits to the innovator because of the temporary monopoly power given to the innovator. File sharing has decreased the strength of copyright, and according to theory, supply of music should therefore decrease. It has not, and this relationship in the perspective of market structure could be looked into in future research.

7.4.1 Future Research

This thesis has laid a foundation for future research on innovation in the music industry. It touches several areas that can be further researched. First, the empirical research can be strengthened with more independent variables. Genre has possibly an effect, as independent labels may be genre specific. Second, the effect new albums have on sales of old content is interesting. This effect can be related to other markets, such as the e-book market. Third, an area I did not touch upon, but which is a natural part of the debate on incentives to innovate is intellectual property. With an increasing number of DJs and remixes, do remixes increase the surplus of the remix and the original song, or does the copyright decrease the surplus for both the DJ and the rights-holder? Fourth, Joel Waldfogel demonstrates in the article “Free entry and social inefficiency in Radio broadcasting” that free entry leads to social inefficiency. Is the effect the same in the music industry? Fifth, what is the effect of recommendation systems through social media on music consumption?

8 Conclusion

In this thesis, I study how market structure can explain the incentives to innovate in the Norwegian music industry. Product innovation is defined as investments in new artists that possess a set of characteristics that differentiates he or she from the existing artists in the market. Process innovation is defined as investments in subsequent album releases of an artist. Since a subsequent album release increases the size of the market as well as the sales of the old catalogue through streaming services, it generates the same effect as a process innovation defined under Cournot with a change in marginal cost, although I assume marginal cost is constant. A product innovation gives the opportunity to benefit from subsequent process innovations, which is needed for the label to recoup the investment of the product innovation. By using a logistic regression, I show that independent labels invest two times more than major labels in product innovations.

The music industry is an oligopoly with four large labels and thousands of independent labels. Technology has decreased the barriers to entry in the industry, which has led to an increase in the number of artists and labels. Independent labels account for the increase in yearly music releases, as major labels have decreased their output. Nevertheless, the four major labels seem to have kept their market share stable. Streaming services have forced artists to compete in quantity, creating competitive advantage for labels with large catalogues. This makes it tougher for niche artists and small artists to compete on streaming platforms, as streaming has increased the importance of economies in scale. Major labels are in a better position to undertake process innovations because of their existing catalogue, access to capital and research capabilities. On the other hand, this may limit their ability to find new innovative artists, which may be why independent labels account for more product innovations than major labels.

The objective for all labels is to release a product in the market with an innovative sound. The major labels will benefit from the first innovation by releasing multiple subsequent process innovations that allow them to benefit from diminishing cost. The independent label will release the first album, but cannot compete in the market for the second album because of lack of capital, less access to promotion channels and a small existing music catalogue. Competition in process innovations is too

intense, so the independent labels will therefore continue to compete in product innovations by targeting the subculture and re-segmenting their portion of the market while major labels reap the larger benefits from process innovations, which maintains their market share.

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10 Appendices

10.1 Appendix – List of Norwegian labels

Label	Number 2000-2012	Number 2006-2012	Albums on VG Lista	Sales: Success rate	Average album ratio
TYLDEN	435	243	56	23.05 %	0.426
Universal	378	202	68	33.66 %	1.801
Sony	355	158	63	39.87 %	1.617
EMI	276	75	43	57.33 %	1.650
UKJENT NORSK PLATEMERKE	238	36	4	11.11 %	0.223
GRAPPA RECORDS (NORSK)	231	162	30	18.52 %	0.694
SIMAX	184	87	11	12.64 %	0.570
DAWORKS	177	147	17	11.56 %	0.256
Warner	149	79	34	43.04 %	1.865
LYNOR	146	40	7	17.50 %	0.925
MTG (NORSK)	129	109	12	11.01 %	1.389
KIRKELIG KULTURVERKSTED	127	97	21	21.65 %	1.113
TALIK	117	92	4	4.35 %	1.227
RUNE GRAMMOFON	115	82	16	19.51 %	0.609
HEILO (NORSK)	112	64	7	10.94 %	0.655
2L	108	66	6	9.09 %	0.204
HOT CLUB RECORDS (NORSK)	106	22	2	9.09 %	0.158
MASTER MUSIC	103	55	6	10.91 %	2.674
NORCD	102	70	3	4.29 %	0.099
ETNISK MUSIKKLUBB	100	73	2	2.74 %	0.272
CURLING LEGS PRODUCTIONS (NORSK)	89	33	7	21.21 %	0.825
FOR-X (NORSK)	88	21	5	23.81 %	0.368
NORDIC RECORDS	87	59	7	11.86 %	0.111
CCAP	84	60	3	5.00 %	0.565
COSMOS	84	38	16	42.11 %	1.850
INDIE RECORDINGS	84	83	26	31.33 %	0.529
BEATSERVICE	83	37	3	8.11 %	0.168
JAZZLAND RECORDINGS	81	42	12	28.57 %	0.182
VOICES OF WONDER (NORSK)	81	68	18	26.47 %	0.327
SMALLTOWN SUPERSOUND	77	51	9	17.65 %	0.335
MUSIC BUSINESS	72	62	32	51.61 %	0.929

NORWAY AS					
AURORA (NORSK)	71	36	2	5.56 %	0.061
GRAMMOFON	69	63	20	31.75 %	0.737
BIG DIPPER RECORDS	68	24	6	25.00 %	0.488
BARNESELSKAPET	57	28	2	7.14 %	0.412
LYDBOKFORLAGET AS	56	14	2	14.29 %	0.723
LAWO CLASSICS	54	54	0	0.00 %	#N/A
AIMSOUNDCITY	48	32	4	12.50 %	0.705
METRONOMICON AUDIO	48	31	0	0.00 %	#N/A
JAZZAWAY RECORDS	47	23	2	8.70 %	10.675
PONCA JAZZ RECORDS	47	37	1	2.70 %	0.042
BIG BOX RECORDS	46	44	11	25.00 %	1.085
NORMANN RECORDS	45	28	3	10.71 %	1.683
TRUST ME RECORDS	45	18	9	50.00 %	0.594
MIND THE GAP (NORSK)	44	6	3	50.00 %	0.868
FYSISK FORMAT	41	41	4	9.76 %	1.023
GEMINI (NORSK)	41	9	0	0.00 %	#N/A
RACING JUNIOR	40	12	8	66.67 %	1.318
DAT (SAMISK)	39	30	0	0.00 %	#N/A
BERGEN DIGITAL STUDIO	38	20	0	0.00 %	#N/A
BLUE MOOD	38	23	4	17.39 %	0.355
KARMAKOSMETIX	38	36	2	5.56 %	0.160
VIA MUSIC	38	12	6	50.00 %	0.699
CROSTOWN RECORDS	36	26	2	7.69 %	0.485
Perfect Pop Records	36	5	2	40.00 %	0.051
C+C RECORDS	35	10	3	30.00 %	3.224
NORSK AMERIKANER	35	31	8	25.81 %	0.284
PHAT FUEL RECORDS	35	35	0	0.00 %	#N/A

#N/A signifies labels without any albums on the hit list.

10.2 Appendix – Variables

Variable Symbol	Description	Source
Title	Title of the album	Gramo
Artist	Artist or band	Gramo
Label	Label that released the album	Gramo
Mother label	Non-subsidiary major label	Gramo
Dummy major	1=Major label, 0=independent	
Year	Calendar year	Gramo
Number in line	Album number of the artist	Generated
Dummy process/product	1=product innovation; 0=process innovation	Generated
VG-lista	1=listed; 0=not listed	Lista.vg.no
VG-score	Composite score based upon the ranking on the hit-list as well as the number of weeks listed	Generated
Reviewed_dummy	1=reviewed in newspaper; 0=no	
Review	Review score by newspaper; ranges from 1 to 10	Youpopular

10.2.1 Chi Square test for product versus product innovation

Chi-square test

	Independent	Major	Total
Process	3915	336	4251
Product	3625	119	3744
Total	7540	455	7995

Pearson chi2(1)	=	82.828	Pr =	0
Fisher's exact exact	=			0
1-sided Fisher's exact	=			0

10.5 Appendix – Regression analysis

10.5.1 Regression of the type of innovation as dependent variable

Number of obs	7995
LR chi2(9)	242.66
Prob > chi2	0
Pseudo R2	0.022

Log likelihood = -5404.2976

Logistic regression for the type of innovation

Dummy variable (product or process)	Odds Ratio	Std. Err.	z	P>z	[95% Conf. Interval]	
Type of label (major or independent)	0.4605565	0.0516403	-6.91	0	0.3696929	0.5737527
Review score	0.9068738	0.0090733	-9.77	0	0.8892637	0.9248326
VG score	0.8691065	0.0368101	-3.31	0.001	0.7998734	0.9443322
year2006	0.8767779	0.0739257	-1.56	0.119	0.7432251	1.034329
year2007	0.9230909	0.0761164	-0.97	0.332	0.7853368	1.085008
year2008	0.779452	0.0651717	-2.98	0.003	0.6616351	0.9182485
year2009	0.7492046	0.0631883	-3.42	0.001	0.6350526	0.8838757
year2010	0.9226496	0.0753516	-0.99	0.324	0.7861769	1.082813
year2011	0.8282466	0.0666941	-2.34	0.019	0.7073219	0.9698447
year2012	1 (omitted)					
_cons	1.176035	0.0656901	2.9	0.004	1.054082	1.312097

note: year2012 omitted because of collinearity

10.5.1.1 Marginal effect of coefficients

Marginal effect

dy/dx w.r.t Type of label, Review dummy, VG dummy, year2006, year2007, year2008, year2009, year2010, year2011, year2012

	Delta-method				Number of observations	
	dy/dx	Std. Error	z	P> z	[95% conf Interval]	
label_type	-0.1813708	0.0279409	-6.49	0	-0.2361339	-0.1266077
VGLista	-0.1240606	0.0194712	-6.37	0	-0.1622234	-0.0858978
Review_dummy	-0.1506022	0.017707	-8.51	0	-0.1853073	-0.1158971
year2006 (dummy)	-0.0317577	0.0210235	-1.51	0.131	-0.072963	0.0094477
year2007 (dummy)	-0.0193619	0.0205712	-0.94	0.347	-0.0596807	0.0209569
year2008 (dummy)	-0.063944	0.020844	-3.07	0.002	-0.1047975	-0.0230906
year2009 (dummy)	-0.0725285	0.0210267	-3.45	0.001	-0.11374	-0.031317
year2010 (dummy)	-0.018286	0.0203695	-0.9	0.369	-0.0582096	0.0216375
year2011 (dummy)	-0.0469632	0.0200757	-2.34	0.019	-0.0863108	-0.0076156
year2012 (dummy)	0 (omitted)					

10.5.2 2nd Regression of the type of innovation as dependent variable

Number of obs 7995
 LR chi2(9) 275.51
 Prob > chi2 0
 Pseudo R2 0.0249

Log likelihood = -5387.8701

Logistic regression for the type of innovation

Dummy variable (product or process innovation)	Odds Ratio	Std. Err.	z	P>z	[95% Conf. Interval]	
Type of label (major or independent)	.4823662	0.0542023	-6.49	0.000	0.387016	0.6012074
VGLista (dummy variable)	.6073297	0.0475501	-6.37	0.000	0.520932	0.708057
Review (dummy variable)	.5458713	0.038874	-8.5	0.000	0.474758	0.6276365
year2006 (dummy)	.8801565	0.0743796	-1.51	0.131	0.745808	1.038706
year2007 (dummy)	.9251229	0.0764977	-0.94	0.347	0.786709	1.087889
year2008 (dummy)	.7733417	0.0647952	-3.07	0.002	0.656225	0.9113606
year2009 (dummy)	.7471113	0.0631464	-3.45	0.001	0.633055	0.8817175
year2010 (dummy)	.9291325	0.0760761	-0.9	0.369	0.791375	1.09087
year2011 (dummy)	.8279711	0.066815	2.34	0.019	0.706847	0.9698506
year2012 (dummy)	1 (omitted)					
Constant	1.212325	0.0681576	3.42	0.001	1.085836	1.35355

note: year2012 omitted because of collinearity

10.5.3 Regression, quality filtered list

Number of o 1722
 LR chi2(7) 19.36
 Prob > chi2 0.0071
 Pseudo R2 0.0089

Log likelihood = -1077.1634

0.014

Logistic regression for the type of innovation

Dummy variable (product or process)	Odds Ratio	Std. Err.	z	P>z	[95% Conf. Interval]	
Type of label (major or independent)	0.6402643	0.1063143	-2.69	0.007	0.4624017	0.8865417
Review score	0.9588814	0.0151544	-2.66	0.008	0.9296346	0.9890484
VG score	0.9123757	0.0382048	-2.19	0.029	0.840486	0.9904144
year2006 (dummy)	0.6600745	0.1364412	-2.01	0.044	0.4401946	0.9897858
year2007 (dummy)	0.852927	0.1751148	-0.77	0.438	0.570363	1.275476
year2008 (dummy)	0.6371832	0.1311489	-2.19	0.029	0.4256619	0.9538141
year2009 (dummy)	0.7060778	0.1425129	-1.72	0.085	0.4753881	1.048713
year2010 (dummy)	0.708973	0.1428862	-1.71	0.088	0.4776159	1.052399
year2011 (dummy)	0.7041174	0.1434554	-1.72	0.085	0.4723055	1.049705
year2012 (dummy)	1 (omitted)					
Constant	0.8858761	0.1447492	-0.74	0.458	0.6431163	1.220272

10.6 Appendix Interview guide

Intervjuguide for majorselskaper

Disposisjon:

1. Introduksjon: Litt om meg og bakgrunn for valg av oppgaven
2. Forklare hvordan jeg ønsker å bruke dataene og hva jeg kommer til å måle
3. Intervju: Forklare struktur på intervjuet

Ønsker i oppgaven å se på hvorvidt det er noe forskjell mellom investeringsmønsteret til store plateselskap eller små plateselskap. Hva vektlegger små selskaper, og hva vektlegger de store.

Markedet

1. Hvordan er markedet for å utgi nye album i dag?
 - Hvor stor andel av albumlanseringene kommer fra nye artister fremfor katalogartister?

Selskapet

2. Har selskapet noe spesielt sjangerfokus?
3. Hvordan jobber dere med å finne nye artister?
4. Hvilke tjenester tilbyr dere til artistene (booking, mm)
5. Hvilke funksjoner har dere i selskapet? Hva gjør dere selv, hva outsourcer dere?
6. Hvordan ser en artistkontrakt ut?
 - Er det forskjeller på re-signering av artister eller ny-signering?
 - Hvor lange kontrakter har dere med artister?
7. Hvor lenge jobber dere med en artist?
9. Hvilke format slipper dere ut musikk på?
 - Er det noen endring hvorvidt dere satser på singler/album kontra tidligere?
10. I forhold til streaming, hvilke aldersgruppe er mest aktive?
11. Hvordan måler dere suksessfaktor for artister eller album/singel?
12. Hvilke av deres artister, nye eller gamle, streames mest/selges mest?
Katalogartister eller unge nye?
13. Hva har musikkanmeldelser å si for utgivelsene?

14. Hvilke ekstra tjenester får artister av å bruke et label kontra å slippe albumet selv?

15. Hvilke fordeler har man ved et majorselskap kontra et indieselskap?

Musikkplattform og distribusjon

16. Vil man konvergere mot én plattform, eller vil man ha flere plattformer? Er dagens plattformer de fremtidig gjeldende plattformene?

17. Spillelister har fått større fotfeste. Hvilken påvirkning har dette på salg av musikk og satsningen på nye artister? (er det forskjellig avhengig av sjanger?)

Innovasjon

18. Hvordan vil du definere innovasjon blant plateselskaper?

19. Hvem vil du si er de største driverne for innovasjon i bransjen?

20. Når i stadiet investerer plateselskapet i en artist? Før de har hatt utgivelse eller etter første release?

21. Long tail prinsippet til John Anderson sier jo at det vil være et marked for nisjene fordi etterspørselen vil øke siden de plutselig blir gjort tilgjengelig for alle. Samtidig sier man at volum er den primære driveren for å overleve i streamingverdenen.

Hvilken av disse motsetningene er det Anderson ikke har forstått?

22. Hva gjør selskapet for å holde seg oppdatert på ny musikk? Om man ser på ny musikk som innovasjon i bransjen

23. Hva koster det å produsere en låt, et album? Er det dyrere i dag enn for 10 år siden?