



Digital music and the “death of the long tail”

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ABSTRACT

Digital distribution is a new technology that is revolutionizing the pop-rock music market. Extensive debate exists on the long tail theory that predicts a niche strategy in the pop-rock market versus the conventional wisdom of a “superstar effect” that predicts skewness in the market outcomes for artists. Our research tests the empirical evidence of such effects and elaborates on how the firms respond to this disruptive technological revolution and how this response changes strategic management.

1. Introduction

The new technology of digital distribution is changing the pop-rock music market. In the middle of the last decade Chris Anderson (Anderson, 2006) stated that the death of the CD and the dematerialization of music had created a long tail of marginal non-hits. The aggregate demand for these non-hits gave birth to important and valorized niches of pop-rock songs and memorabilia. This phenomenon has promoted the democratization of the access to cultural goods.

But, growing evidence exists on the persistence of the so-called superstar effect. The impact of live music has renewed the relevance of highly extravagant outcomes for the privileged group of really great stars. The “winner takes all” effect dominates the music market, and streaming as a form of digital distribution fuels this effect. This new technology is posing several new issues to the development of the market and cultural policy.

Our fundamental research questions then are: Is there empirical evidence of the long tail or superstar effect in the pop-rock music market? How did enterprises adapt their business strategies to this online technological revolution? Therefore, we examine different sources of data on the pop-rock market, such as the revenues from digital music sales and live music performances, to confirm the importance of the “winner takes all” effect and the persistence of important niches in alternative pop-rock music.

2. Conceptual framework

2.1. “Endroducing ...” the long tail

“Endroducing ...” was the debut album of DJ Shadow. It was first

released by Mo'Wax Records and later reissued in 2005 by Island Records. It was the first album created entirely by using samples from other albums. In one of his more acclaimed articles, Chris Anderson (2004), editor of *Wired* magazine, posed the following question: What caused a generation of the industry's best consumers of pop-rock music to abandon the record stores? Multinational labels screamed that piracy was the fundamental reason behind the current situation—Napster and other online networks of shared music files had driven the sector into an underground economy of stolen music that led to the physical death of the CD. This allegation was right to a certain extent. At the time, the belief was that about 10 million users of shared music files existed. But the explanation was not complete. As Anderson (2006) noticed, the answer also had to do with the spectacular development of new technologies of music production and distribution, and their effects. Online distribution did not just move teenagers away from the registration boxes of record stores; new digital forms of distribution offered a diversity of unprecedented alternative choices of musical products that young people could easily access.

What could explain this situation? In traditional logistics, a central idea is that stores have limited space to sell goods (the greatest hits and bestsellers) because space is expensive. But online retailers (like iTunes or Amazon) can stock virtually everything. According to Anderson, the new distribution mechanisms in the early 2000s, from digital downloading to sharing peer-to-peer, could guarantee an immense supply of products of very special niches that could overcome traditional hits. “Online” reduces the production and distribution costs because of the simplification of the problems of organization, stock accommodation, and product presentation to the consumer. Without the logistic limitations of the available physical space, some products and services,

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usually seen as marginal, could be as economically attractive as the “mainstream” ones. Therefore, one can find thousands of niches of pop-rock products (songs and memorabilia) and an infinite number of marginal books that retailers traditionally neglected in favor of the great successes and bestsellers. And, what is interesting is that they sell, and the sales of these niche products are sometimes practically equivalent in terms of value to the “greatest hits.”

This development is what Anderson called the “long tail” of the demand curve of pop-rock music. This concept can be generalized to other goods and cultural services: The long tail means that the potential aggregate demand from the marginal markets in pop-rock music that individually were not profitable in the traditional market can, with online distribution, compete with the better-known artists. Successfully applying this strategy, firms can realize significant profits from selling small volumes of hard-to-find items to many customers, instead of only selling large volumes of a reduced number of popular items. The total sales of this large number of “non-hit items” correspond to the long tail. The long tail, which is also known as a *heavy tail* or *power-law tail*, has gained popularity in the last decade as a retailing concept that describes this “niche strategy.”

By contrast, the tradition of logistics studies points to the so-called “rule of 80/20.” This rule means that about 20% of the products of a company corresponds to 80% of sales. Given a large enough availability of choice and a large population of customers, the selection and buying pattern of the population results in a so-called “Pareto distribution” that shows that the market will create a certain degree of inequality by favoring the upper 20% of the items (“hits” or “head”) against the other 80% (“long tail/non-hits”). This rule then is also known as the “Pareto principle.”

Pitt (2010a) notes that the work of Anderson came out just as the wave of mergers and acquisitions in the music industry and deregulation in TV and radio were sweeping the industry. At that time, many potential investors were interested in maximizing the economic value of copyrights in the record companies' catalogs. Since the 80s, older recording artists have comeback through concerts, the new releases of old records, and the “sampling” of old hits by Hip Hop and Rap artists. Music executives began looking at Anderson's ideas as a new means to value “evergreen” catalogs and obscure forgotten gems.

Other researchers, mimicking “hello-goodbye” songs, called these new directions “hello long tail, goodbye Pareto principle.” For example, Brynjolfsson, Hu, and Smith (2003) used a log-linear curve on an XY graph to describe the relation between Amazon.com sales and its sales ranking. They found that a large proportion of Amazon's book sales came from obscure books that were not available in brick-and-mortar stores. Then, they quantified the potential value of the long tail to consumers and showed that while most of the discussion about the value of the Internet to consumers had revolved around lower prices, the fundamental issue should rest on the evaluation of consumer benefits. They showed that the consumer surplus from access to increased product variety in online book stores was 10 times larger than their benefit from access to lower prices online.

Brynjolfsson, Hu, and Simester (2007) investigated how demand-side factors contributed to the long tail phenomenon and were the first to model how a reduction in search costs affected the concentration in product sales. They found that internet purchases made by consumers with prior internet experience were more skewed toward obscure products than those of consumers who had no such experience. Brynjolfsson, Hu, and Smith (2010) stated that the long tail had grown longer over time, with niche books accounting for a larger share of total sales. Their analyses showed that by 2008, niche books accounted for 36.7% of Amazon's sales, and they generated a consumer surplus that increased at least five-fold from 2000 to 2008. Peltier and Moreau (2012) found that online information and distribution tools had an impact on consumer's book purchasing decisions that led them to shift somewhat from bestsellers to medium or low sellers. The long tail phenomenon in the French book market was not very economically

significant yet but the sales of niche products were experiencing strong growth.

2.2. The “winner takes all”—The superstar effect

Anderson argued that products in low demand could collectively become a market share that rivaled or exceeded the relatively few current greatest hits, bestsellers, and blockbusters. But, is that true? In fact, reason and conventional wisdom stress that a small number of artists earn most of the sales. In 1981, Rosen described the so-called superstar effect in a certain kind of market where a concentration of output existed among a few individuals at the top that led to very large rewards. This idea is similar to the “Pareto principle.” In the case of music, Rosen (1981) defined the phenomenon of superstars: “...wherein relatively small numbers of people earn enormous amounts of money and dominate activities in which they engage.” He also pointed out that in the market for classical music, performers of first rank comprised a limited handful and had large incomes. He highlighted that substantial differences in income existed between them and those in the second rank, even though most consumers would have difficulty detecting more than minor differences in a *blind* hearing. This last statement is very interesting: An experienced manager would say that a superstar has a much higher marginal benefit than an ordinary performer. Rosen therefore observed that small differences in talent at the top of the distribution translated into large differences in revenue. Generally, the marginal benefit of goods decreases with every additional unit (this explains Goosen's first law of diminishing marginal utility), but superstars provide the critical tipping point in terms of potential performance that distinguishes a team from its competitors. The marginal utility for the team becomes very high and for the superstar higher than that of any of his or her teammates, and the salary reflects this premium. This premium means we have something like a “winner takes it all” (famous ABBA song title) effect.

Curiously, the idea of a “superstar economy” is very old. In the *Principles of Economics*, Marshall (1890) tried to explain why some businessmen accumulated great fortunes at the same time that the incomes of ordinary artisans and others fell. Krueger (2013) notes that, ironically, Marshall's example of a profession where the best performers were unable to achieve a superstar effect was, precisely, music. Marshall gave the example of Elizabeth Billington, a great soprano of the nineteenth century. According to Marshall, Mrs. Billington was unlikely to make the same kind of fortune as some businessmen were making. Of course, now we must add that she did not have access to a microphone and amplifier or to CDs, MTV, iTunes, Spotify, and so on. So, she could not reach more than a small audience and, therefore, her ability to dominate the market was limited. According to Krueger, the music industry is a microcosm of what is happening in the US economy at large—increasingly becoming “a winner takes all” economy.

Four factors are important in generating such a superstar economy and all affect the pop-rock music market: technology, scale, luck, and the erosion of social norms that compresses prices and incomes. Rosen developed his theoretical analysis on the fact that imperfect substitution and scale of production drove the superstar effect. The scale factor means that in the performing arts, reaching a larger audience is important. In the music industry, technological changes through the centuries, from amplification, radio, records, music videos, CDs to iPods, have allowed the best performers to reach wider audiences with higher fidelity. These changes increased the notoriety of the most popular artists.

As recorded music became cheaper to replicate and difficult to police, the associated cut in the revenue of the performers caused them to raise the prices of live performances. Krueger (2013) stressed that only social pressures could check this rise in prices. Most people do not want to think that their favorite performers are greedy; so, many artists are reluctant to raise prices above certain limits to avoid sending their fans away and damaging their reputations. This fear means that demand

depends on the perception of fairness. The prices that rose too much in certain cases have met a backlash from many fans who feel that rock and roll is straying from its roots, which is a risk for the entire industry.

Luck is also very relevant and plays a major role in this industry. Even the experts have difficulty picking winners. The recent example of Sixto Rodriguez (his life and career is the basis for the movie “Searching for Sugar Man”) is very demonstrative of how the effects of good and bad luck are magnified in a superstar economy: Between 1970 and 1975 he recorded two albums and a collection of songs. All were commercial flops, so he left the business. But he had huge success in South Africa where his music became an anthem for the anti-apartheid movement. He never heard about his fame. Almost 40 years later, listeners re-discovered his songs as long forgotten gems and, finally, he found success.

Important psychological theories exist that try to explain this phenomenon. According to Roger Caillois (2000), “superstars” are not accidentally a conspicuous phenomenon in our culture, but inherently part of a *meritocratic* society. Superstars are created “by the interplay between mass media, free enterprise, and competition” and are produced by a mixture of effort and chance. In his words, the “superstar has extraordinary natural talent augmented by an even more extraordinary perseverance and drive.” In the case of performing arts where “small and relative differences are of decisive importance for winning or losing,” chance can play a big role. Caillois notes that the role of luck in superstardom is paradoxical, given that the West is such a predominantly meritocratic society that valorizes the role of work, competition, activity, and determination. Superstars cannot merely be successful, they must be richly rewarded. Their material reward is a necessary ingredient in their glory. It is crucial for the public to identify with the star. The “excellence” of the superstars’ private lives and extravagant incomes play an important psychological “compensating mechanism” for the public: We all want to believe that their fame and fortune are only a question of luck—we all have the merit, but “some guys have all the luck” (name of another classic song by The Persuaders 1973 and Rod Stewart 1984).

The literature includes several studies that support the “superstar” effect in general or specifically (see, e.g., Candela, Castellani, Pattitoni, & DiLascio, 2016; Crain & Tollison, 2002; Meiseberg, 2014).

In the pop-rock music area, Connolly and Krueger (2005) found that superstars received the lion’s share of live concert revenues. Giles (2007) found that some popular tunes were dramatically more successful than others. Even the tunes that went to the top, substantial differences existed, so the income in the music industry is highly skewed and asymmetrical. Pitt (2010b), in a study about royalty incomes of the so-called “performing rights organizations,” argued that little evidence existed on smaller niches dominating or replacing the superstars. Taking another area of cultural goods, movies, Walls (2005) found that this market had a “winner takes all” property where a small proportion of successful films earned most of the box-office revenues. Furthermore, extreme events dominated the average return on films, namely those films that integrated the longer upper tail of distribution returns.

3. Methodology

According to Delen and Zolbanin (2018), the availability of massive data in the recent past has enabled data-driven decision-making and has created new questions that can be complementarily addressed with methods other than the traditional statistical analysis that focuses on modeling and explanation. Causal-explanatory statistical modeling and statistical inference methods (to test a causal hypothesis and to evaluate the explanatory power of underlying models) have generated important insights into management but can, nowadays, be complemented with other emerging business analytics paradigms. Business analytics is the general process of exploring and analyzing data to discover new and meaningful patterns. This process entails the collection, storage, analysis, and interpretation of data to make better decisions and to improve

organizational performance.

Proper techniques in analytics are determined by the problem and the data. Several dimensions in analytics include the domain of investigation, methods, and orientation. The orientation refers to the line of thought and divides the common taxonomy of analytics techniques into three subdimensions: descriptive, predictive, and prescriptive.

Descriptive analytics, also called business reporting, is the preliminary stage of data processing that creates a summary of historical data to yield useful information about performance and to prepare the data for further research and analysis. This stage examines the data’s content to answer the questions of “what happened?” or “what is happening?” Descriptive analytics entail traditional business intelligence and visualization techniques that helps researchers to identify nontrivial patterns and relations. Predictive analytics refer to the building and assessment of algorithmic models that aim at empirical, rather than theoretical, predictions. Prescriptive analytics aims to find the best course of action under the circumstances to improve recommendations and to provide better decisions. The expected outcome of business analytics is to complement the traditional business research in discovering new relations to be used and to develop new theories to be tested.

Given the extraordinary and rapid evolution of pop music market as a result of the introduction and vulgarization of digital technology; given the immense repertory of data collected by business organizations (other than the very insufficient official data on the sector); given the interesting information on business in all different dimensions (creativity, financial performance, firms strategy, life-career of performers) reflected in the news of important magazines and journals that are not usually used by researchers; and facing our research questions; therefore, we use this kind of business analytics technique.

In this context, we collected interviews and press declarations from CEOs, A&R (Artists and Repertoire) executives, marketing managers from record labels, independent label entrepreneurs, agents, and performers. These data predominantly came from reviews such as UNCUT, MOJO, Rolling Stone, Les Inrockuptibles, and Blitz but also from the music dossiers of daily journals and magazines. The interviews and statements were subject to a content analysis to set the categories and dimensions that could depict fundamental drivers, guidelines, and strategic axes in the business development of the firms in their technological integration into the digital economy.

At the same time, we used data from important reports of leading market organizations in the pop-rock music arena: from IFPI (International Federation of Phonographic Industry) and RIAA (Recording Industry Association of America), from research centers like MIDiA, and from important sites like *AllMusic* and *Pitchfork*. These data were filtered and interpreted to gain information about the persistence of the superstar effect in this market or the prevalence of new niches as indicated by the long tail theory. Our analysis paid special attention to new models of business in the marketing domain (Fox, 2004; Jones, 2002; Santos, 2016; Vaccaro & Cohn, 2004), to the signals that reflected a new strategy for adapting to change, and to the effects of a disruptive technology in the sense of Christensen’s thesis (Christensen, 1997). See, also, Sousa and Rocha (2018).

4. Results/discussion

Our analysis depicts three dimensions in strategic development that are particularly important to the market strategy of music companies facing difficulties and that managers clearly embrace:

- the new importance given to live music;
- the adoption of a policy for digital music that is undergoing strong investment due to the persistence of the superstar effect;
- a strategic diversification in marginal markets without conveying support for the long tail theory but profiting from the powers of certain markets, particularly independent production.

4.1. Superstar effect on live music

Now that most music we listen to is prerecorded, the world's best performers are literally everywhere, and seeing them in concert is a unique and most desirable experience. In this dematerialized market, concert revenues in particular provide empirical evidence of the superstar effect.

Concerts relate to two central aspects of cultural consumption: the specific characteristics of cultural products that consumers experience rather than conventionally consume, and the presence of new technologies. These products are short lived with each copyrighted title having a “brief moment in the sun” (Grant & Wood, 2004). Within weeks, the demand for a pop-rock product can fall sharply, although evergreen catalogs can also become popular again. In this context, the music industry has experienced a profound shift in the last 30 years.

Krueger (2005) and Connolly and Krueger (2005) used the Pollstar database on the developments in the concert industry from 1981 to 2003 in the US and show that the top 5% of revenue generators took in 62% of the concert revenues in 1982, and 84% in 2003, as demand for superstar performers increased.

The Pollstar data and data from IFPI and RIAA reports show that the share of concert revenue taken by the top 1% of performers more than doubled in this period. At the same time, the data indicate that the price of the average concert ticket increased by nearly 400% from the early 80s to 2012, faster than the accumulated inflation (about 150%) in the same period (see, also, Krueger, 2013).

The “superstardom” of big stadium concerts is also reflected in other related aspects. For example, some important pop groups and artists are adopting new forms of distribution for their music, such as auctioning their music on the internet. Evidence exists that for the most popular artists and groups, the revenues generated by live concerts are more important than the traditional production of a CD, which used to be the only venue for new songs. What is curious is that these “independent” oriented strategies are becoming “peacefully” adopted by the managers of record labels too.

A further data analysis shows more signals of the superstar effect. In the US, the top 1% of artists in the music industry received about 26% of the concert revenue in 1982; by 2003, this percentage had doubled. Meanwhile, the prices of concerts went up more than inflation, and concerts became a much bigger source of income for the top stars than CD sales: of the 35 top earners, only four made more money from recordings than live concerts; the other 31, as a whole, had an income from touring that exceeded records sales by a ratio of 7.5 to 1 in 2002 (Connolly & Krueger, 2005).

The gross revenue from live music performances worldwide was the largest in 2017 when it reached US\$5.65 billion. In that year, the most successful tour in North America was U2's. Their tour generated gross revenue of over US\$176 million and sold over 1.5 million tickets. The tickets cost an average of US\$84.63. According to the Statista site, the industry is expected to grow further in the coming years as the annual growth rate for the sales of live music tickets is estimated at 5.23% between 2015 and 2020.

The explanation for this situation has its roots in the so-called “Bowie Theory.” Before the advent of illegal downloads, artists had an incentive to underprice their concerts, because bigger audiences translated into higher record sales. But now, technology has severed the link between the two products in that performers and their managers need to make more money from concerts and feel less constrained in setting high ticket prices. David Bowie was the first to spot this tendency. In June 2002, Bowie told the New York Times that “music itself is going to become like running water or electricity.” Further, he advised his fellow performers: “You'd better be prepared for doing a lot of touring because that's really the only unique situation that's going to be left.” Furthermore, some of the biggest concert draws tend to be performers such as Bowie, the Rolling Stones, U2, Paul McCartney, and Madonna. Many of these artists' latest albums are often greeted with

some indifference, but the gigs are really impressive in terms of dates, number of tickets sold, glamor of the shows (stage paraphernalia, lights, music dancers), and of course revenues.

So, does that mean the end of creativity? Not necessarily, according to Professor Krueger. In fact, this new situation should lead to more creativity in terms of live performances. “A concert is more than just an artist and a microphone. Look at all the light shows at a U2 concert,” he states. That does not mean the creativity in new songs and in the diversity of solutions for the composers and performers cannot also be an important step to get the public and the media's attention. In the music business, being well-known or being consistently in public view means being in demand. This demand in turn results in new gigs and greater sophistication in the shows, all putting upward pressure on ticket prices.

4.2. New trends in digital music

Discussion about the persistence of the superstar effect in the pop-rock market has important developments one can depict with data from IFPI and RIAA. Several reports stress an important evolution in global digital music. See IFPI (2017, 2015, 2014, 2013, 2010). According to IFPI's Global Music Report 2017, the global revenues for recorded music increased by 5.9% in 2016. This was the highest rate since IFPI began tracking the market in 1997. Total revenues in 2016 amounted to US \$15.7 billion. At the end of 2016, 112 million users used paid streaming services that increased the services' revenues by 60.4%. Digital income in this year accounted for half the global music industry's annual revenue for the first time. The growth in streaming more than offset the decline in downloads (–20.5%) and in physical revenues (–7.6%).

The overall picture reflects that the industry is working to return to sustainable growth after a 15-year period of crisis during which revenues dropped by nearly 40%. The new form of accessing music, streaming, is helping to drive growth in developing markets; China, India, and Mexico are seeing strong revenue growth (more than 20%). Further, the revenues from physical formats have declined but they still account for 34% of the global market and are particularly important in the markets of Japan and Germany.

According to Frances Moore, CEO of IFPI, record companies have fueled this revenue growth through ongoing investment, not only in artists, but also in support of digital platforms and services that has led to the licensing of over 40 million music tracks. “The industry's growth follows years of investment and innovation by music companies in an effort to drive a robust and dynamic digital music market.” Thus, after a period of confusion introduced by the disruption of digital production and distribution, the industry has taken hold of the reins and has adapted to the new changes by investing in the very development it had once seen as a threat.

But some problems persist. Moore advises: “Music's potential is limitless, but more must be done to safeguard the value of music and to reward creativity.” The global industry is continuing to tackle the illegal distribution of music that undermines its recovery. IFPI has identified 19.2 million URLs with infringement content and has made 339 million requests to Google to delist the offending sites.

The idea of a fair digital marketplace garners a singular relevance when the fundamental problem is the so-called “value gap.” This gap depicts the growing mismatch between the value that upload services, such as YouTube, extract from music and the revenue returned to those who are creating the music and investing in the sector. The music industry sees this gap as the biggest threat to its sustainability. In fact, the upload video streaming services, which benefit from the misapplication of the law, comprise the world's largest on-demand music audience. According to IFPI, this audience is conservatively estimated as more than 900 million users. The revenues that return to copyright holders amounted to US\$553 million, whereas a much smaller user base of 212 million users of audio subscription services (paid and ad-supported), with licenses negotiated on fair terms, contributed more than US\$3.9

billion. Frances Moore stresses that “safe harbor” legislation dating from the internet's early days is being abused by upload services that are not licensing music on a fair basis. From publicly available data, IFPI estimates that Spotify paid record companies US\$20 per user in 2015; by contrast it is estimated that YouTube returned less than US\$1 for each music user.

The European Commission has identified the value gap as a market distortion that needs a legislative fix and has proposed draft legislation to be discussed in the Council of Ministers and in the European Parliament. In the US, artists; managers; and songwriters such as established acts like Taylor Swift, Katy Perry, Maroon 5, and Carole King have petitioned Congress to reform outdated safe harbor laws.

On the demand side of the market, important characteristics have emerged. Fans worldwide are increasingly engaged with audio streaming—globally 45% are listening to a licensed audio streaming service; 90% of paid audio streamers listen to music using a smartphone; young fans remain highly engaged with music despite an abundance of competing media (around 85% of 13- to 15-year olds use streaming services); and 40% of consumers access unlicensed music. For a better evaluation, see, for example, IFPI's music consumer insight report “Connecting with music” that examines the ways in which fans are engaging with recorded music across 13 of the world's leading markets.

While physical sales remain significant in certain territories and regional markets (Sinclair & Tinson, 2017), streaming clearly has become the key driver of growth. Fans are now engaged in several formats from the vinyl revival to [musical.ly](#). The transformation has created an exciting environment for music fans who benefit from new and evolving services and for the artists who have more ways to connect with their fans and more forms and opportunities to share their work. And areas for future business development also exist; for example, the revenue from performance rights that is generated by broadcasters and public venues using recorded music grew to US\$2.2 billion in 2016. This revenue is only around 14% of the market and remains significantly undervalued.

From these fundamental patterns of supply and demand, a picture of the music industry begins to form in which growth occurs along three lines—“Connecting people,” “Music on the move,” and “Fueling live music”:

- Artists dominate digital and social platforms. In April 2016 the top three most followed people on Twitter were musicians and the most popular videos on YouTube were also by musicians.
- Listening on the move is a core activity for users of smartphones and tablets; smartphones are now more popular than MP3 players for listening to music.
- Investment in artists by record companies is fueling successful live music careers, and the live music industry is benefiting from this investment.

Thus, the record label managers have adopted a development strategy that intends to overcome the disruptive effects of the new technologies and to successfully use them in their favor to create digital music.

The story of the recorded music industry over the last two decades is one of the transformations from physical to digital, from downloads to streaming, from ownership to access, from years of decline to sustainable growth. The global recording industry is seeing modest growth after more than a decade of significant decline. Years of investment and innovation have begun to reward an industry that shifted from adapting to the digital age, to driving it. Record companies are the largest investors in artists and are transforming how they work in the digital age. Data from 2015 shows US\$4.5 billion invested in A&R and marketing by record labels annually. Record labels worldwide have licensed more than 380 diverse digital music services.

Finally, what is exciting is that the key development in the market now is competition. According to Will Page, director of economics at

Spotify, “what is especially key is that *competition is based around market growing, not market stealing*.” Spotify remains the global leader in streaming, but Apple Music has made huge progress recently along with Amazon Music Unlimited, Pandora, and Tencent Music Entertainment/QQ Music (in China). To Michael Nash, director of digital strategy from Universal Music, the idea that the business is now mature and only needs to consolidate is wrong: now “competition is about expanding the consumer base, it is about competing in the next 100 million subscribers, not competing for the existing 100 million.” This is the “Sign of the Times” (the name of a Prince song) in the pop-rock music market.

4.3. The death of the long tail?

Do these new developments mean that we are facing “the death of the long tail?” Digital music contradicts Anderson's expectations of the middle 2000s. In 2014, MIDiA Consulting published a report from Mark Mulligan with the explicit title “The Death of the Long Tail. The Superstar Music Economy” (MIDiA, 2014). Using data from leading music services, distributors, record labels, and artists' managers, Mulligan's research team developed a market model that quantified the share of each revenue stream that goes to artists. The key findings were very relevant:

- First, the total global income for artists from recorded music in 2013 amounted to US\$2.8 billion that was up slightly from 2012 but was under the US\$3.8 billion in 2000. This result shows that the industry's transformation has only been modestly successful so far.
- The artists' share of total income grew from 14% in 2000 to 17% in 2013. This is a modest but important variation that is driven by factors such as higher revenue shares on some digital deals for artists.

However, artists' recorded music income in 2013 was far more diverse than it was in 2000 when physical music sales accounted for 99% of revenues. Although 17% may sound like a poor deal for the artist, we must highlight that many revenue stakeholders exist in the music value chain. For an average \$0.99 single, less than half goes to the label and artist combined. Sales tax, retailers, and publishers account for the rest. While this is an average, plenty of artists have much less favorable deals and others significantly higher (including many independent artists). The label's high share is due in part to the fact that they have rosters of artists (many do not deliver profits).

Mulligan and his team find that the recorded music market is a “superstar artists' economy.” According to their data, they find that the top 1% of music by superstars accounts for 77% of all artist revenues. So, this is not an 80/20 Pareto's Law but something much more pronounced. In this sense, *the long tail is dead*.

However, the democratization of the access to music, both on the supply and demand sides, and the vastness of music catalogs created by digital distribution should translate into a dilution of the superstar effect and the development of niches as Anderson proposed.

But the opposite is also true because of the rapid growth in digital music and two associated effects:

First, we have the so-called “Tyranny of Choice.” Digital music catalogs typically have 25 million or more tracks and are growing at a rate of 100,000 tracks per month. More tracks mean, paradoxically, less discovery; so much choice exists that effectively no choice exists at all. The democratization of access to music has delivered great benefits for artists but has contributed to greater confusion among fans. The tyranny of choice leads to mainstream consumers “flocking, like the sheep they are, to the familiar and easy to find” (MIDiA, 2014), which usually is the superstar catalogs.

Second, a dilution in quality exist. More people making more music does not mean more quality. The interesting effect of DIY (Do It Yourself) exists and is present in most of the fundamental pop music movements in the new millennium, from rap to RnB from dance music

to world music. Record labels act as crucial arbiters of quality and taste that filter the best from the rest, even if examples of complete “blindness” occur in some A&R. The fact is that in DIY, a risk of a “self-congratulation echo chamber from friends, family and uber fans” can occur. Of the tracks purchased on iTunes, customers downloaded 94% of them 100 times or less. From a full catalog of 25 million tracks, the core catalog represents only 20% (that is 5 million tracks); the frequented catalog of tracks is only a part of the core catalog (5% of the total = 1.25 million tracks); and the superstar catalog, the one that is usually accessed, is no more than 1% (250,000 tracks). A key to the superstar effect was the transition and the bias of digital platforms toward the top 1%. The online platforms’ algorithms for recommending music based on previous selections (Spotify is a good example of these practices) emphasizes the superstar effect. And this concentration is not limited to streaming and downloads. According to the Next Big Sound, the top 1% also account for nearly 80% of YouTube and Vevo videos. On the radio, the concentration is even more pronounced; the average radio broadcaster plays around 15,000 unique tracks a year, only 0.01% of the total available tracks. This percentage means that the usual claim about the “dictatorship of the radio playlists” is spot on.

Further, the superstar economy does not manifest equally across different platforms. Physical music has the weakest concentration in the top 1% while still representing 75% of all revenues. By contrast, superstar artists feel the benefit of streaming services much more profoundly.

Finally, our analysis shows that the superstar economy does not mean an absolute domination by major label artists. Many independent artists have broken into the top 1%. Independent labels such as Glassnote, Big Machine, and XL Recordings with artists like Mumford and Sons, Taylor Swift, or Adele have had their share of hits by superstars in recent years. Adele was one of the top five selling artists in 2016, after being number one in 2012; Taylor Swift was number one in 2014. That is also interesting because many independent labels give their artists larger shares of streaming revenue, sometimes as high as 50% of net revenue, which seems good news for those who argue against the value gap.

5. Conclusions

This study draws the following basic conclusions:

When trying to answer the fundamental question of descriptive analytics “what is happening?”, we find that the new technology in digital distribution has changed the pop-rock market. After 15 years of crisis, the industry is working to return to sustainable growth. The new form of accessing music, streaming, is helping to drive that growth even if the physical sector is still important in some leading markets.

The “dynamic capabilities” perspective (Teece, Pisano, & Amy, 1997) is defined as “the firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments.” In order to meet new challenges, organizations and their employees need the capability to learn quickly and to build strategic assets. New strategic assets such as technology and customer feedback have to be integrated within the company, and the existing strategic assets have to be transformed or reconfigured. According to Teece, three types of managerial activities can make a capability dynamic: *sensing* (identifying and assessing opportunities outside your company), *seizing* (mobilizing your resources to capture value from those opportunities), and *transforming* (continuous renewal).

Using the words of Teece, “a useful theory is one with some descriptive validity that helps integrate and relate disparate ideas that you know are important, (it) provides an intellectual structure for business people to start thinking systematically about why companies succeed, or fail” (Teece et al., 1997).

That is what we are trying to do. The dematerialization of music has created the possibility of a long tail of marginal non-hits and has given birth to important and valorized niches in the pop-rock market, but at

the same time, evidence exists of the persistence of the so-called “superstar effect” in live music and in the explosion of “streaming.” To address the changes that this disruptive technology brings, the strategic management in the sector has made massive investments in digital music and artists’ careers to adapt to consumers’ new relation with music products and new forms of accessing and enjoying them. This change means that companies can focus their strategy on superstars (the persistence of “the winner takes all” effect is even more pronounced in digital music) but it is also important to pay attention to long tail niches and the way independent firms work, to be in line with the so-called “signature processes” or “the way things are done around here.”

Policy prescriptions and recommendations do not stop at the company level. What are the implications of these features for public policies is, of course, a fundamental issue. As we said, Anderson uses the term *long tail* to describe music consumption in certain niches markets that are highly skewed. In this sense, the long tail has significant implications for cultural policy. Where the opportunity cost of storage and distribution is high, only the most popular products are sold; but where the long tail works, the tastes of the minorities become available and individuals are presented with a wider bundle of choices. The long tail presents opportunities for various suppliers to introduce products in the niche category and to encourage the diversification of products. Niche products open opportunities for suppliers while concomitantly satisfying the demands of many individuals. Given that popularity is currently determined by the lowest common denominator, a long tail model may lead to an important improvement in the society’s level of culture. At the end, the conventional profit-making business model may “cease” to exist; instead, people tend to come up with products for other reasons, like individual expression, rather than monetary benefit. In this way, the long tail opens up a large space for creativity and cultural diversity and that is why Anderson’s predictions seemed so inclusive and democratic in the yearly 2000s.

As we have seen, it seems doubtful that we are facing the “fall of the greatest hits”; in fact, the superstar effect still stands. However, there are interesting signals that remind us of the “promises of abundance” and cultural democracy that the long tail theory announced. The growth of niches in the actual pop-rock industry is clear and, in this sense, Anderson had some credibility. A characteristic of this new market is the extraordinary development of different genres in pop-rock music and the immense capacity of the composers and performers to make mixtures and “to destroy the old to get something new.” This capacity of “recycling” is one of the most interesting aspects of this new phase, at least in terms of creativity. The diversity in genres sometimes outlaws the uniformity and concentration of revenues.

Another interesting feature of the market is the most significant shares of independent labels, which indicates a substantial decrease in the traditional “dictatorship” of big major labels. Excessive pollution of digital music catalogs is the other side of the coin that serves only to strengthen the top 1% and make the tyranny of choice the absolute power. Music services need now to take a good look at their catalogs and ask if their ability to boast millions of tracks is really worth the inconvenience it creates for users. As we said, the role of identifying quality from record labels, including the major and independent labels, seems essential.

Ultimately, the relatively “niche” group of engaged music “aficionados” are the ones who have the most interest in discovering as diverse a range of music as possible. The mainstream consumers want to go directly to the “greatest hits.” So, radio has an important role, especially for “author radio programs,” in identifying new and different types of pop music. After all, diversity in pop-rock music was always fundamental.

The limitations of this study are the immense diversity of data and information to select and analyze but also the inadequacy of existing theoretical frameworks to study such cases. Our contribution in the process of data exploration and interpretation is to discover new and

meaningful patterns that have relevance in order to make better decisions and improve organizational performance.

More research is needed, and its lessons must be applied to other cultural goods. Technological change is re-shaping the market. The phenomenon of the dematerialization of the music poses new problems that constitute interesting routes for further research:

- One important issue is the subject of the property rights of the creative (composers and performers). The possibility of “free-riding” and copyright infringement introduces a series of important concerns. Especially, to what extent is the logic of the “free riders” not incompatible with the necessary economic incentives that are due to the activity of creation and their practitioners?
- What are the effects of this dematerialization process in terms of property concentration in the market? We have seen a lot of mergers between the great labels in the market. Will this process continue? What are the impacts in terms of the diversity in choices for the consumers?

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