



“Critically evaluate how new technology has turned the music industry from a product to a service sector.”

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Introduction

The music industry has always had a symbiotic relationship with technology. Despite vain attempts to lead and control developments in technology, the reality is that the relationship is almost exclusively in the reverse: new technology leads, and indeed, shapes the music industry.

This relationship runs deep and has done since Thomas Edison invented the phonograph in 1877, bringing the very existence of a 'music industry' into existence (Stross, 2010). Since then, developments in technology such as radio, amplification, synthesisers, CDs, DAWs, digitalisation and the MP3, and now digital streaming have continuously impacted and changed the way music is created, distributed, consumed, and performed – changing the very nature of the industry itself.

This essay will begin by defining what is meant by the music industry and which aspects of it will be discussed in particular. It will argue how new technology has changed the industry into a service-based sector by studying the history of the relationship between technology and the recorded music industry and studying how piracy and file-sharing undermined a century-long industry. Finally it will conclude that transforming into a service-based sector was the only way the music industry could regain control of its product and comment on the slowness of the whole industry to adopt the MP3 format, arguing that if it had embraced the technology sooner it could possibly have avoided this loss of control.

'The music industry' is a broad term which encompasses three subindustries: the recorded music industry, the music licensing (publishing) industry, and the live music industry (Wikström, 2013). Traditionally speaking, the recorded music and music licensing industries are product-based sectors, with a tangible copy of a recorded piece of music being the product in the former, and the licensing/ownership rights to a particular song or piece of music being the product in the latter. The live music industry is a service-based sector as fans pay for musicians and artists to provide them with the service of entertaining them for the duration of a concert.

This has been the status quo within these subindustries since they first came into existence: since the phonograph facilitated the recording and copying of recorded music, since copyright laws protected the rights of music creators, thus turning their music into a product, and since the first live music performances. This essay will look at how new technology has completely disrupted the status quo, turning it from a product-based sector to a service sector, within what has traditionally been the most significant and profitable of the three subindustries: the recorded music industry.

The Recorded Music Industry and its Relationship with New Technology

It is easy to underestimate the importance and influence of new technologies throughout the history of the recorded music industry. Almost all aspects of the industry, the recording, copying, distribution and consumption of music, have always been facilitated and/or improved by the development of new technologies. The relationship goes right back to the

earliest beginnings of the music industry, when Thomas Edison's new technology, the Phonograph, created the potential for copies of recorded music, records, to be produced, distributed and sold. As a direct consequence of this new technology the fundamental nature of the recorded music industry in the twentieth century was formed.

Although developments in technology altered the nature and quality of certain aspects within this process, the process itself remained more or less the same. The development and subsequent popularity of the radio allowed music to be transmitted to a much wider audience than those who could afford a phonograph, thus introducing recorded music to the masses. Developments in multitrack recording and stereophonic sound improved the overall quality and realism of recordings and the development of tape created the first opportunity to edit recordings. Cassette tapes and Sony's Walkman of the 1980s made music portable for the first time, before Phillips and Sony's development of the CD, utilising hi-fi and digital technology, practically wiped out demand for vinyl records and cassettes (Herzog, 2014). However, whatever the prevailing format at the time, the principle of individuals having to purchase copies of their favourite records (which they probably heard first on the radio) remained more or less unchanged.

In the last twenty years, however, new technologies have completely altered the fundamental nature of the recorded music industry. The digitalisation of music with the invention of the MP3 has led to three new, fast-moving eras in the consumption and distribution of recorded music: pirating and file-sharing, digital downloads, and now digital streaming. Not only have these eras moved the music industry away from physical sales, it has also enacted the shift from a product-based industry, selling copies of music in the form of records or CDs, to a service-based industry, whereby consumers access a large database of music providing the service of supplying music.

Such is the closeness in relationship between new technology and the recorded music industry that, while it seems that the music industry has been bound by the constraints of technological capability, the reality is that technology has actually dictated the path and nature of the music industry. As a means of retaining control of the recorded music industry, the major companies in the industry are constantly trying to control the development and release of new technology, as evidenced by the Walkman and the CD by Sony and Philips.

The CD is the best example of the success the music industry can enjoy when it controls the development of technology. The CD proved incredibly popular and dramatically cut production costs compared to the relatively expensive vinyl records and cassette tapes, resulting in soaring revenues and profits and culminating in the music industry's most successful year in 1999, as in Figure One (Key Production, 2020) (Routley, 2018). The music industry had such great success with the CD that it became resistant to accept or embrace any other new technology which may threaten the format, namely the MP2 and MP3. In doing so, the music industry surrendered its control of technology and began to lose control of the industry as a whole, as the MP3, like the CD had before it, wiped out the predecessor formats (see Figure One).

However, unlike the CD or any new technologies throughout the twentieth century, the MP3 also completely flipped the recording music industry on its head, destroying its traditional product-based model through pirating and file-sharing: suddenly all music could be accessed, completely free, by anyone, and so consumers no longer relied on the traditional music industry to supply and distribute them with their favourite music. The devastating impact of file-sharing and piracy was almost instant, and so it is no coincidence that the year Sean Fanning founded Napster was the same year (1999) that the music industry enjoyed its highest ever revenue, before file-sharing brought the numbers crashing down at the turn of the century (Routley, 2018). It was the beginning of the end for the CD and for the recorded music industry as a product-based sector.

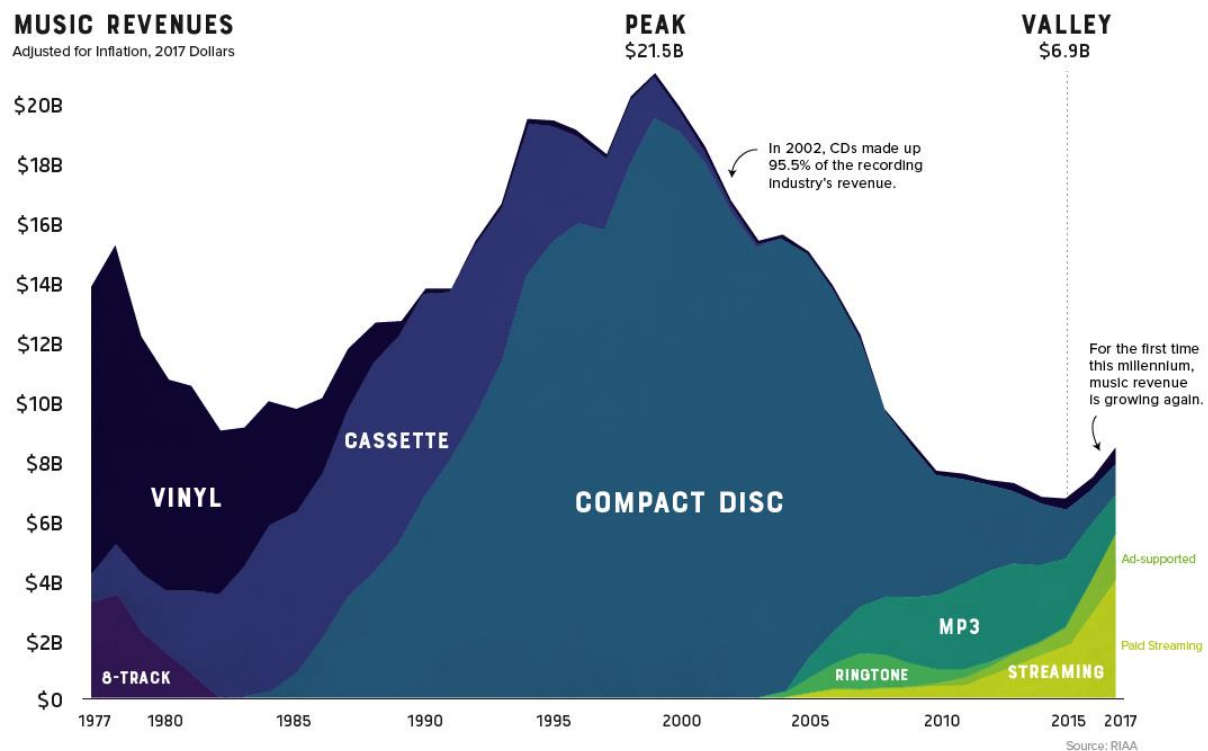


Figure One (Routley, 2018)

Piracy and The Rise of Streaming Services

The MP3 format and file-sharing did not introduce the concept of illegally copying music and sharing it, but, in combination with the World Wide Web, the impact of copying and sharing this technology was immeasurably more destructive than ever before. Although the average consumer could not copy their own vinyl without owning the masters, which the music industry kept under lock and key, they could relatively easily rip CDs and give or sell them to friends. However, the process of distributing copied CDs was laborious. It required purchasing blank CDs, owning a CD duplicating tower (in order to copy CDs in any volume), and attempting to sell or distribute these copied CDs would be difficult without alerting the police or authorities. Not only would the production costs of sharing this number of CDs be impossibly high, but a single person would be unable to distribute the copies due to geographical reasons; not forgetting that the police and music industry would attempt to, and quite easily, stop this person as soon as their activities were discovered.

In contrast, copying and sharing MP3s was both effortless and infinite; there is no extra cost to copying and sharing an MP3 to a million people as there is to copy it to just your friend. The reality of this meant that one person, as evidenced by Bennie 'Dell' Lydell Glover in Stephen Witt's *How The Music Got Free* (2016), could copy and share an MP3 file with the entire world; something entirely infeasible with any physical product like CDs. Dell Glover, 'the greatest music pirate of all time', 'was the primary source of contact for hundreds of millions of duplicated mp3 files – perhaps even billions.' At the peak of the piracy crisis 'there was scarcely a person under the age of 30 who couldn't trace music on their iPod back to him', such was the global extent of piracy (Witt, 2016, p.252). When a single pirate can relatively effortlessly steal and share such volume of music with the whole world, there can be no doubt that at the turn of the century the music industry had lost all control of the distribution of its own product.

This loss of control is evidenced in the revenue figures for the recorded music industry. Globally, there was a swift and definite decline in all physical music sales, of which CDs made up 95.5% (in 2002), a point corroborated by Figure One and Figure Two. As in Figure 2, the IFPI calculate that sales in physical music more than halved between 2001 and 2009 and fell by over two-thirds between 2001 and 2012. This trend has continued into the following decade and remains true today, as physical sales in 2018 are almost one-fifth of what they were in 2001.

Global Recorded Music Industry Revenues 2001-2018 (US\$ Billions)

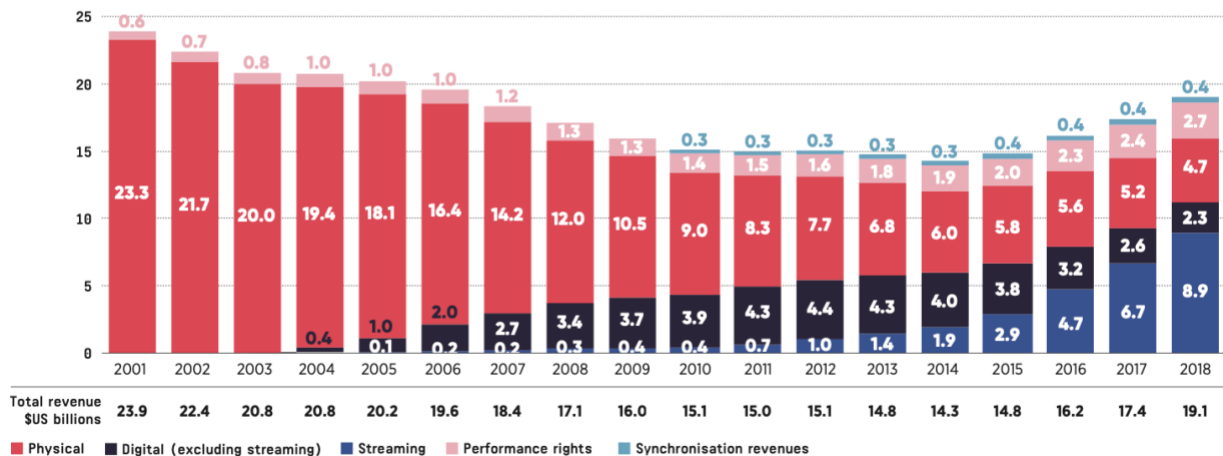


Figure Two (IFPI, 2019)

Having said this, the overnight destruction of demand for physical copies of music was arguably not the most significant repercussion of the MP3 and Napster. The pirating and file-sharing era revealed something about the nature of consumer demand for recorded music, the knowledge of which has given rise to streaming services, thus turning the recorded music industry from a product-based sector to a service-based sector. Although the music being free was undoubtedly a big positive for some people, it was not the major attraction of pirated music for the majority. In fact, the pirates and file-sharing websites, such as Napster, showed that consumers enjoyed the accessibility of having all music available to them at the click of button. All successful file-sharing sites had one thing in common: ease of access to the MP3 files. Any file-sharing sites requiring too much effort on the part of the user proved significantly less popular than those where the music was easily and readily accessible. More so than getting the music for free, consumers wanted access to every song ever recorded from the comfort of their own home, a service that no record shop or retailer could have provided selling CDs or Vinyl. This argument is supported by findings in IFPI's recent 2019 report, which found the main reason people use streaming services is because they have 'instant access to millions of songs' (IFPI, 2019).

The change in mindset that this realisation brought about proved the beginning of a change towards the music industry needing to be a service-based, rather than product-based, sector. The demand for easy access to all recorded music, which music in the form of digital MP3 files now made possible, was what Napster, Pirate Bay, and later Apple and Spotify, realised.

With the music industry's reluctance to embrace the MP3, it took an outsider, Apple, to first monetise music in the form of a digital file when they, following a long struggle with the music industry, opened the iTunes Store in 2003 (England, 2015). This was the first step towards the recorded music industry becoming a service sector. Although the iTunes Store sold music as a product in the form of a digital file, it lay the groundwork for a legitimate

service, unlike Napster and Pirate Bay, which provided consumers with all the music ever recorded, fulfilling all their ‘long tail’ demands (Anderson, 2007).

As shown in Figure One and Figure Two, the sale of digital files became popular quite quickly, though not popular enough to stem the tide of year-on-year revenue decreases. The development of streaming services such as Last FM, Pandora, Soundcloud, and then Spotify in 2008, began to introduce the idea of having a large music database funded by advertising, thus removing the need for consumers to purchase individual tracks or albums as they did with the iTunes Store, and instead giving them ‘free’ access to every track as a service (Gil, 2016). On the whole the user experience for these services was very similar to Napster and Pirate Bay, but it was legitimate and removed the need to individually download the desired MP3s, and so proved popular. The model these early streaming services utilised was also the first example of the recorded music industry distributing music in the form of an accessible database service rather than individual products.

Referring to Figures One and Two again, the rise of streaming revenues was relatively slow between 2005 and 2010, rising to only \$0.4 billion, mainly due to the low revenues of a purely ad-based streaming (see Figure One). The introduction of paid subscriptions however, in what has become a Freemium and Premium business model, has increased streaming revenues to \$8.9 billion in 2018, and can surely be considered to have saved the recorded music industry as total revenues have begun to increase again following almost two decades of consistent falls. Furthermore, as more people turn to paid, subscription-based streaming services the level of pirating activity has steadily decreased, as evidenced in Figure Three.

Streaming Music Revenue and Music P2P User Penetration, US, 2013 to 2017

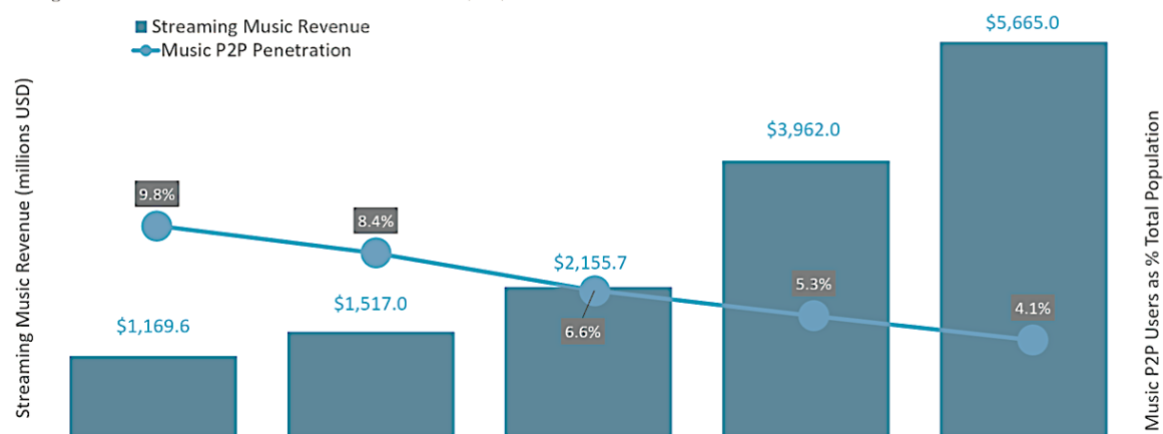


Figure Three (DiMA, 2018)

The current trend, indicated in Figures One and Two, is that streaming revenues are increasing year-on-year and do not show signs of slowing down. Furthermore, streaming is the most popular method of consuming music among younger people, while older generations make up the majority of CD sales, as shown in Figures Four and Five. With younger people clearly preferring streaming services to CDs, it is reasonable to predict that streaming services are only going to become increasingly prominent as the main method of consuming recorded music in the future.

Audio streaming engagement by age group

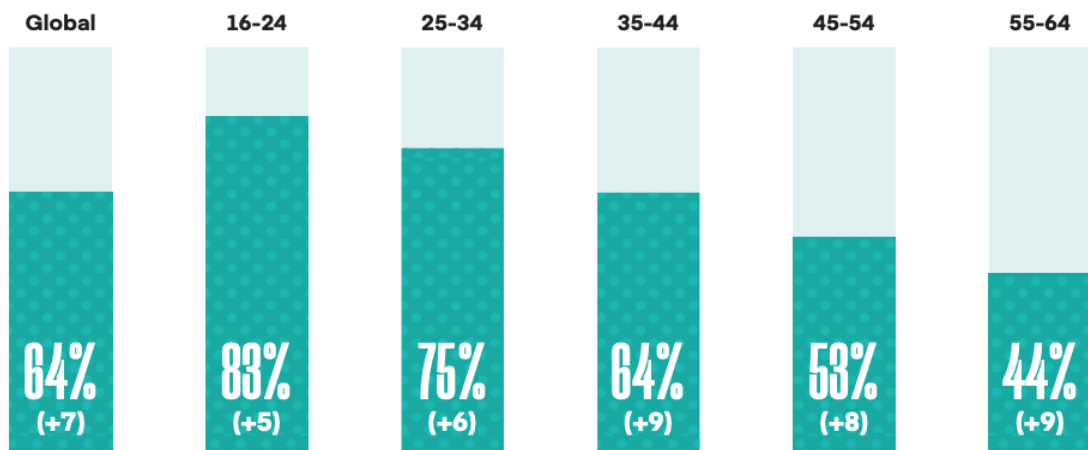


Figure Four (IFPI, 2019)

Distribution of CD buyers in the United States in 2018, by age

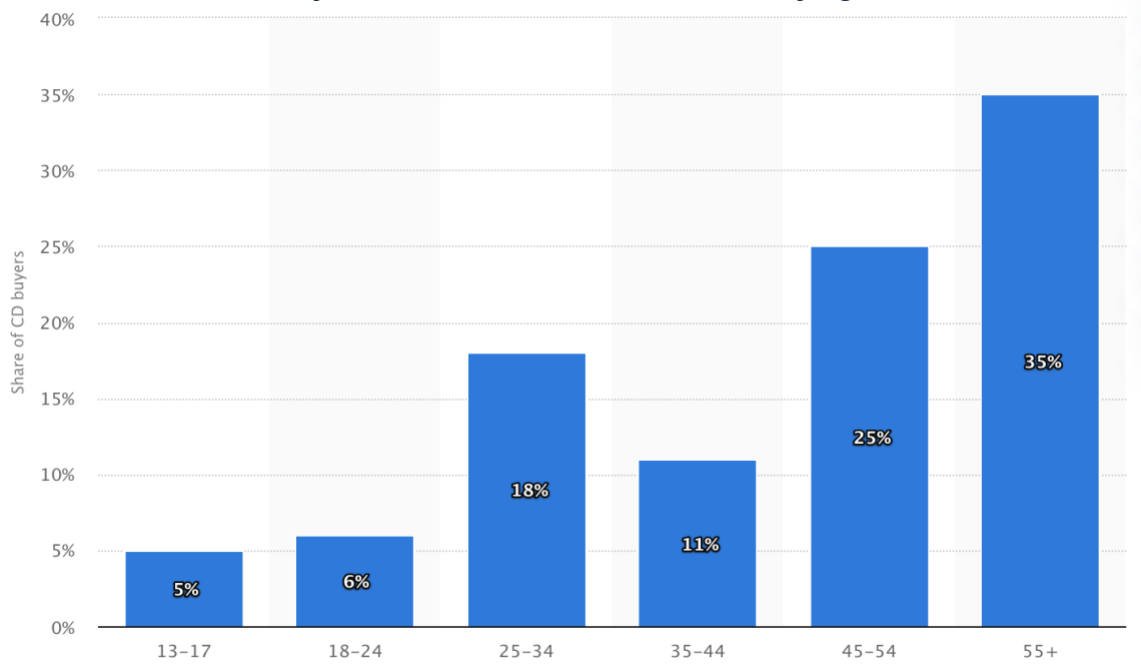


Figure Five (Watson, 2019)

Conclusion

The rise of digital streaming platforms such as Spotify and Apple Music has moved the recorded music industry from an exclusively product-based sector, to one which relies heavily on a service-based model. The popularity of these services has not only flipped the industry on its head but also saved it from year-on-year falls in revenue. It is not uncommon for new technology formats to usurp and take precedence over older ones, but what was unprecedented about the MP3 and internet was that they caused the entire industry to buckle, forcing it to reinvent itself. As a direct consequence of the development of this technology, the recorded music industry lost control of the distribution of its own product, in turn rendering the traditional product-based industry model dysfunctional. Attempting to sell a product which people can access for free, and more crucially which people feel entitled to access for free, is a futile exercise. Therefore, while there is no doubt that streaming services have saved the recorded music industry, it should also be argued that the industry had little choice but to become a service sector.

If the recorded music industry had embraced the new technology of the MP3 and internet-age, could it have avoided its dramatic decline, and would the industry have remained a solely product-based sector? Could the industry have adopted an iTunes-style online store in which they could set their own prices and would never have had to relinquish so much control of the industry to Apple and Spotify? It is very difficult to know what could have been, especially given that the birth of the internet was such a volatile period for all industries. There must be consensus, however, that the recorded music industry should be willing to learn from its mistakes and be much more embracing of new technology in the future.

2,685 Words

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