

‘Matching the Vibe’: Effects of Sharing Playlists

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Abstract

In times of unbundled music sales and cloud-based streaming services, the compilation of songs (i.e., the playlist) may be considered a commodity itself. The idea of a set of songs culled from different sources and recorded onto a single cassette dates back to the days of the mixtape, but has now reemerged in form of playlists, as a feature on online music streaming services. This paper discusses the consequences of unbundled music sales, while focussing on the economic effects of trading/sharing playlists.

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1 Introduction

Although digital technologies facilitated the unbundled distribution of music, listeners still prefer an array of songs over a single piece of music. The idea of a set of songs culled from different sources dates back to the days of the mixtape, but only now has become separable from the music and effectively tradeable. Economically, playlists are consumer-selected bundles (whereas the traditional album may be considered a bundle recommended by the record producer). Drawing from recent literature on the theory of bundling digital goods, this paper will focus on bundling digital music, with an emphasis on the differences in outcome depending on who gets to assemble the bundle – seller (i.e. record producer), consumer, or a third-party middleman. If there are numerous sellers offering a variety of digital music both bundled and unbundled, one may assume that easily tradable playlists reduce the consumer’s search costs for ‘sound-alike music’ from different artists, thereby also reducing market concentration on the supply side. Complementing to recent two-sided market analyses, I will also investigate the effect of playlist constructing middlemen on the suppliers choice either to charge the consumer or to offer a free-of-charge access funded by advertising.

This paper is organized as follows: at first, I will quickly summarize the effects of unbundling on music sales. Then, I continue analyse how search costs for consumers have risen and why they become increasingly important. Finally, I

explain why and how playlists nowadays can be considered tradable goods. Due to time limitations, this paper does not contain a mathematical model but merely a verbal sketch of ideas. The argument may be formalized in later versions of this paper.

2 Unbundling of music

In the days before the internet, and as a matter of fact even years afterwards, the predominant channel of distributing music included a physical medium (e.g., compact disc) containing on average a dozen songs. In economic terms, these albums were bundled goods, i.e. bundles of songs. So, to recall the theoretical implications of bundling for the following argument: in the presence of heterogeneous consumer preferences, bundling is an instrument for price discrimination (Schmalensee, 1984). The bundling producer takes advantage of the variance in reservation prices across and within consumers (Elberse, 2010). According to (Schmalensee, 1984, p. 228), (pure) bundling “operates by reducing the effective dispersion in buyers’ tastes,” which will “enhance profits by permitting more efficient capture of consumers’ surplus” as long as people’s reservation prices are not perfectly positively correlated. Mixed bundling, he argues (p. 229), enables a seller to “reduce effective heterogeneity among buyers with high reservation prices” for two (or more) of the bundled items “while still selling at a high markup

to those buyers willing to pay a high price for only one of the goods.”

To illustrate how bundling can increase revenues, let’s consider a simple example, say an album with only two songs. Fan A considers song 1 to be worth €5, but is only willing to pay €1 for song 2. Fan B is willing to buy song 2 for €4, but is unwilling to pay anything more than €2 to get song 1. If this is known to the producer, and he prices separately, he maximizes revenue with a price of €5 for song 1 and €4 for song 2, with total revenue equaling €9. But he bundles the songs together and prices the album (bundle) at €6, both fans will purchase the bundle and revenue will equal €12. The reason this works is because there is a large difference in how much each is willing to pay. By combining the products, both consumers end up buying both products Zhu and MacQuarrie (2003).

This price discrimination mechanism is particularly true for music, since its demand is highly heterogeneous. Individuals have differing perceptions of a particular album’s value and are willing to pay varying amounts depending on their musical taste, but the industry generally only charges a single price, mostly because the producer can hardly determine every consumer’s reservation price and sell the same product to each one separately. One may also argue, that bundling in this case was not a result of the producer’s decision to discriminate consumers, but rather due to the evident economies of scope in distribution technology. Simply put, to cut a dozen songs on a CD costs much less than cutting each of these

songs on a separate 'single' CD. This may be somewhat similar to what Chae (1992) described as a "natural bundle".

The large body of work on bundling in economics has traditionally focused on a monopoly seller seeking to bundle two or more products (Adams and Yellen, 1976; Schmalensee, 1984; Bakos and Brynjolfsson, 1999). In this case, there's only the price discrimination effect of bundling. But in a setup of numerous sellers there is another effect, iff all of them are selling only bundled products. Assume they are facing a consumer with a limited budget and a distinctive taste in music, who's looking to buy as many songs as possible. From each 10-to-12 song album (bundle) on the market, he only likes one or maybe two songs (i.e., he's willing to pay more than €1 to consume them), while being neutral in regard to the others,¹ which is a fair assumption since even hit albums contain both popular songs and relatively unknown songs. Ignoring all other costs of transactions for the sake of the argument, optimal scenario here would be the consumer cherry-picking his favorite individual songs across the market. However, since all producers only offer bundles (which are priced close to or above his reservation prices for single songs), the consumer ends up buying either nothing or a single album which suits his taste of music the closest.

¹He may dislike all of them, but for model considerations it is fair to assume a zero-gain in utility at worst, rather than a decrease in utility stemming from disliked items in the bundle. In other words, the consumer simply does not listen to songs he does not like from that album.

To illustrate this point, let's construct a plain example. There are n producers, each selling a 10-to-12 song albums for €10. The fan, whose consumption is limited by say a €15 budget constraint, only identifies one or two songs on these albums for which he would pay up to €5 if sold individually, while valuing all other songs at €1 or below. In the setup of bundled-product sellers only, he ends up buying a single album that happened to include at least two songs he preferred plus unfavored filler songs, resulting in a perceived album utility of just above his reservation price. Now had he the option of individual purchases, with producers pricing single songs at €1-2 each, he would cull as much of his favorite songs as his budget allows him to, ending up with a consumer selected bundle or mixtape.

It is fairly obvious that the latter not only improves the consumer's outcome, but also increases competition on the supply side. While it may not necessarily lead to less market concentration – since it is possible to construct scenarios in which a sufficiently large number of consumers have developed music tastes in such manner that all album sales is distributed evenly among producers, and would remain so if producers adopted unbundled selling – it may result in some sort of internal pressure on music producers, i.e. not to compose filler songs of little or no value to most consumers. However, this effect, while straightforward to assume, is hard to detect, let alone verify, since it would require an objective scale to determine a song's "quality". Yet, even (Elberse, 2010, p. 121) concludes

that “the common practice of bundling – for example, 11 marginally appealing titles with 1 highly attractive ‘hit’ item in the hopes that the latter will drive bundle sales—may quickly lose its power.”

3 Increasing search costs

In the scenario sketched above, unbundled music song sales would enable consumers to widely distribute purchases among producers. Obviously, amid the ascendance of digital distribution over the internet, these considerations gain importance. Market data used by Elberse (2010), albeit somewhat dated, suggest that unbundled digital MP3 sales continue to replace ‘traditional’ album revenue. And while sales of digital tracks through services like iTunes have risen both significantly and steadily, that rise is not enough to offset the plunge in album sales (Leeds, 2005).

While this may be attributed to an array of factors – among other things inadequate pricing, lack of convenient digital services, possibly even online piracy (Rob and Waldfogel 2006) or a general fade of interest in music – I now want to draw attention to the transaction costs of music purchase, namely the search costs of finding songs that match one’s personal preferences. It seems only fair to assume that people do not want to listen to a small number of songs, let alone the same song, over and over again, but a rather large personal collection. And

while people surely are better off cherry-picking their favorite songs from music producers' repertoire instead of buying entire albums with good and not-so-good songs, they're now facing the problem of identifying those preferred songs.

One could reasonably assume the consumer's search costs for a single song do not significantly differ from search costs for an entire album. So it is fair to conclude, that search costs for sound-alike music are increasingly significant. Possibly, although to my knowledge not tested as of yet, increasing search costs are at least a considerable factor contributing to the recent overall decrease of music sales. My hypothesis shall be at this point, that consumers still request and prefer to consume music in bundles, although not the traditional producer-enssembled album. At least the latter part is supported by (again, somewhat dated) market data, according to which actual CD sales – although in steady decline by double-digit percentages on a yearly basis, for the past decade – still accounted for roughly 90 percent of the full albums purchased; meaning that online, consumers rarely choose to buy an entire album, or (in other words) prefer the playlist culled and recommended by the producer.

Instead, consumers increasingly buy individual MP3 songs, but even more so turn to recommendation services. While there have always been music reviews in journalistic publications like *Rolling Stone*, digital recommendation services are vastly different in the sense that they provide a considerably large number of

sound-alike music for any given song (discussed as early as Pachet and Roy 1999). Also, music blogs turn out to be increasingly important in music distribution. As observed by Dhar and Chang (2009), “future sales are positively correlated with (a) the volume of blog posts”. From an economic perspective, these entities significantly reduce search costs on the consumer’s side.

Also, in that same mold of third-party middlemen, the just recently developed and ever-increasing number of music streaming services provide bundles of songs, even though they may vary in their *modus operandi*. While some only allow to chose an artist or a genre after which they deliver a continuous stream of sound-alike music (e.g., lastfm) – which is somewhat comparable to a genre-specific radio station –, others allow consumption of concrete songs on demand (e.g., Spotify). Additionally, and more important in the context of this paper, some of them allow the usage of user-generated playlists.

Just to mention it: we may consider streaming services as consumption of music, even though not all of them charge their customers – usually with some sort of monthly flat-fee –, instead raising revenue by embedding advertising within their music stream (see Thomes 2011 for an economic analysis).

4 Trading playlists

Just recently, online music streaming service Spotify introduced a new feature, the “Play Button”.² It allows people (among other things) to publish their individual playlist on any website, whereby – on some other user’s demand – Spotify delivers the appertaining music stream. While the concept is not entirely new, it somewhat illustrates the future trend in (online) music consumption. Already prior to Spotify’s new feature, there were numerous services enabling users to share what not until now has become a tradeable good: the playlist.

The idea of a set of songs culled from different sources dates back to the days of the mixtape. Whether from the radio, LPs, or other cassettes, songs on a mixtape were often assembled for social purposes: to evoke a certain mood, to alleviate the boredom of a road trip, or to give to a love interest (Nicholson, 2010). While technically both duplicable and tradable, the mixtape as a bundle of songs has been held off the market. Copyright law in basically all countries worldwide prohibits consumer generated mixtapes from being re-published, and therefore from re-entering the market. And without internet technology, the mere list of tracks itself (i.e. without the songs) offered little to no utility to the consumer. This may explain why, to my knowledge, there is no economic literature on the effects consumer created mixtapes/playlists as of now.

²Announced on April 11, 2012, see www.spotify.com/us/about/play/.

On most of the available services,³ playlists are shared for free, i.e. neither the creator/uploader receives any payment from the hosting service or music stream provider, nor does said provider charge listeners/downloaders of these playlists anything. This, of course, only applies to ad-financed services. In recent developments, music player software like Tomahawk⁴ goes even further, culling music from various sources throughout the internet when fed with a rich-data playlist file. It can, of course, only include songs from freely-accessible (and therefore ad-financed) sources, thereby excluding fee-charging services, and in a larger perspective providing an incentive for these services to switch their business model.

The economic consequences seem quite obvious, although they have yet to be formally explored. First and foremost, this drastically reduces search costs of sound-alike music for consumers, even though at one point at least *one* consumer has to conduct the search necessary to compile a playlist. This consumer's motivation seems unclear from a classical economic point of view, but may follow the same patterns as do contributions to open source software or editable-by-anyone online encyclopedias (i.e. Wikipedia), which is the expectation one's own contribution (to a larger project, or database) may encourage others to do the same. Under that assumption, the playlist creator's return is the utility he gains from

³Such as ShareMyPlaylist.com.

⁴See www.tomahawk-player.org.

other users creations of playlists.

A second effect may be further deconcentration on the supply side, depending of course on which songs each playlists consists of. But it is straightforward to assume that consumer generated playlists are characterized by a larger variety of artists and/or producers, at least on average. This may especially hold true for software that also includes multiple streaming services.

5 *Preliminary conclusion*

Drawing from recent literature on the theory of bundling digital goods, this paper has focused on bundling digital music and its competitive implications. Emphasis was on the differences in outcome depending on who gets to assemble the bundle – seller (i.e. record producer), consumer, or a third-party middleman.

Not until now, with the advent of digital technology, the mere list of tracks on the mixtape (i.e., the playlist) became a tradable good. This not only affects distribution of music, but also consumption behavior. If there are numerous sellers, offering a variety of digital music both bundled and unbundled, one may assume that easily tradeable playlists reduce the consumer's search costs and hence facilitate differentiation of listening habits rather than a “pensée unique” mainstream, thereby also reducing market concentration on the supply side.

Complementing to recent two-market analyses of music streaming services, I

also investigated the effect of playlist constructing middlemen on the suppliers choice either to charge the consumer or to offer a free-of-charge access funded by advertising.

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