Fewer streams but longer songs?
Attention economics and the pandemic effects on music listening

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1. Introduction

Since the second half of 2010s, music streaming has been the main source of revenues from recorded music. Yet, the emergence and continued growth of music streaming and the associated algorithms raises controversies around its impact on the artists and the character of the music itself. The first of these concerns is as old as the music industry and refers to how music is monetized and what is the distribution of the revenues. The second points that the renumeration systems and algorithms increasingly define how music is produced and promoted.

Indeed, most of the streaming services renumerate artists in a way that incentives shorter and more repeatable songs. Major digital distributors such as Spotify collect subscription fees and then pay the artists based on the share of their plays among all the plays of the users. This carries two implications. First, that the money paid by an individual subscriber goes to the most popular artists, even if that subscriber themselves only listens to a few niche bands. Second, that shorter songs have it easier to accumulate large number of plays (and conversely to collect more money) than longer songs.

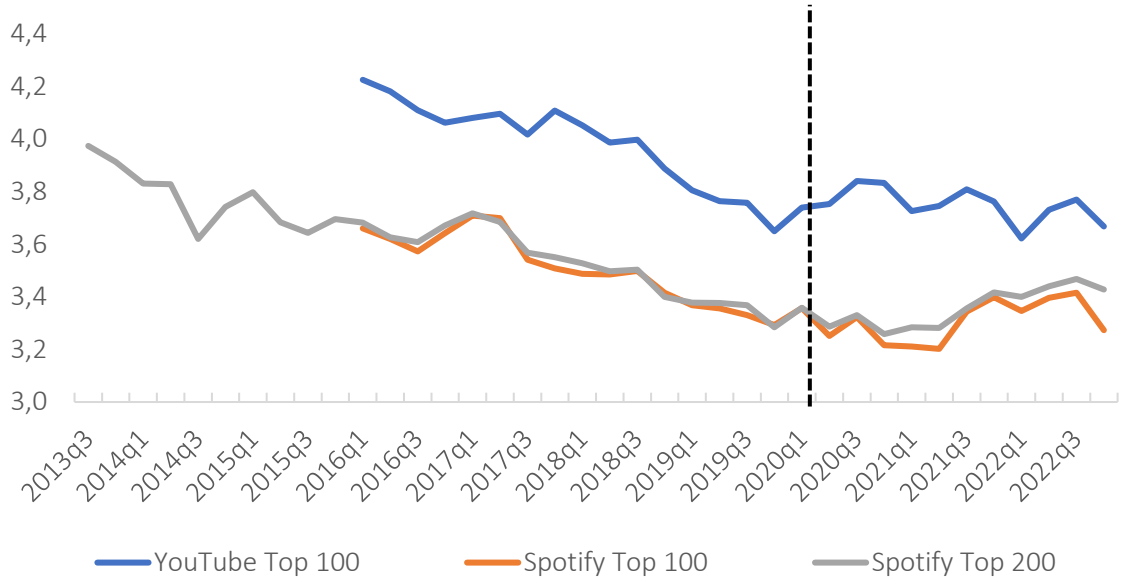
These incentives, joint by the growing understanding of how to 'game' the algorithms or craft a song in a way to maximise its audience, contributed to what some call "Spotifycore", "streambait" or (more neutrally) "culture optimization" (Morris, 2020). Indeed, data from music charts since the 1990s show a consistent decline in average song length, with a sharper decline in the second half of 2010s. Beyond that, even the number of words in song titles decreased – potentially in a move to make the titles easier to pass to voice-controlled devices (see Ball, 2020 for a discussion on these trends). These changes took place in spite of the simultaneous growth in acoustic diversity of popular music since the introduction of Spotify (Bourreau et al., 2021).

Another important perspective on the recent changes in the music industry comes through the lens of attention economics. Simon (1971) proposed to treat attention as a scarce resource that is consumed by increasing amounts of information. This concept is increasingly relevant, with the advent of the internet, mobile devices and broad digitization. Depleted attention can affect consumers' decisions, including the amount of consideration that goes into them. This, in turn, explains why recommendation systems and short-length content (such as short videos) define most of the current digital landscape. It also gives additional rationale for the production of short-length, easy to remember and consume music.

Many of the progressing processes in the creative industries were disrupted by the onset of the COVID-19 pandemic. This seems also true for the trends in song length, which suddenly reversed (or came to a halt) after the pandemic announcement. Two potential explanations for this phenomenon are tightly linked to the concepts mentioned in prior paragraphs. On the one hand, the pandemic and the associated restrictions could have primarily disrupted larger producers, potentially delaying the supply of music tailored for the algorithms. On the other hand, the increased time budgets induced by the pandemic (e.g. due to work from home and restrictions on activities) might have relaxed the effects of attention scarcity on consumer choices.

We study these perspectives using Spotify and YouTube charts data, as well as building on prior studies of the effects of the pandemic on the streaming business (Sim et al., 2022). While prior studies considered the effects on the stream volume from a variety of angles (concluding that the numbers of streams decreased due to the pandemic), they have not looked at the changing length of the consumed songs. We replicate prior approaches but extend the analysis in three ways: a) by analysing the effects on the song length and total music consumption (measured in minutes and not streams); b) by extending the period of the analysis beyond the first months of the pandemic; c) by analysing data for YouTube more comparable to the Spotify charts information.

Figure 1. Mean duration of songs from global Spotify and YouTube charts (in minutes)



Note: Spotify Top 100 included for a more analogous comparison with YouTube Top 100. The mean durations are weighted with stream counts. Quarters represent means from weekly data. The vertical line shows the pandemic announcement

We find that reduced mobility during the pandemic contributed to the drop of streaming numbers both on Spotify and YouTube. However, it simultaneously increased the length of the streamed tracks, which for the case of YouTube means that the net change in music listening is not distinguishable from no effects. We also find that the titles of the most popular songs became longer in periods of reduced mobility.

(In progress[1]) We run several robustness checks modelled after the study of Sim et al. (2022), including an analysis of delays in releases of top artists. We also show that the simultaneous growth of TikTok – the largest change in the music industry over that period – was unlikely to contribute to a growth in song length among the top tracks.

2. Literature Review

2.1. Attention economics and creative sectors

The concept of attention has been introduced to the economic sciences by Simon (1971) who stated that *"a wealth of information creates a poverty of attention and a need to allocate the attention effectively among the overabundance of information sources that might consume it"* (pp. 40-41). Festre and Garrouste (2015) describe the concept in further details, borrowing from Simon's (1982) concepts of bounded rationality based on cognitive limits. This approach highlights that constraint attention resources adversely affect the capabilities for choice-making.

The implications of these notions become clearer in the current times of internet, mobile technologies and digitization of content. Unsurprisingly, the concept of "attention economy" gained new traction with the advent of the internet digitization, with the first usage of term in this context attributed to Goldhaber (1997). Waldfogel (2017) argues that the digitization in the creative sectors has brought

[1] Some of the robustness checks are still in progress, though the ones already conducted confirm our findings. Sim et al. (2022) found no effects of the pandemic on releases among the top artists, but we aim to validate this finding with a dataset covering a longer period of the pandemic.

about a growing abundance of new and high-quality products. As he notes, one of the more important of current challenges is product discovery – i.e. the challenge of navigating the large number of new titles. Indeed, industry experts argue that with the current overabundance of content, attention has become the scarcest resource among the consumers, leaving no time for consumers to explore the available options. In this new attention economy, consumer-side product discovery is substituted by time-saving recommendation algorithms and tailoring content to fit within the depleted attention resources.

Taylor (2014) studies attention scarcity in the context of markets with ads. He points to limited effectiveness of advertising in presence of attention scarcity, attributing it to overabundant communication. Consequently, Taylor (2014) advocates for the "economics of marshalling and managing attention" as a means of retaining the value of attention and the viability of such markets. In similar vein, Webster (2014) integrates the consumer-side cognitive viewpoint with the firm-side attention-directing perspective. The resulting "marketplace of attention" describes the mechanisms of audience creation in the digital market, with the interplay between media, media users and tools gaining exceptional importance (Webster 2014, p. 10). Thus, in the era of digital media abundance, new types of targeting (contextual, behavioural and social) as well as personalisation become crucial to achieve success.

Finally, some studies consider the negative impacts of attention scarcity on consumer behaviour. Che and Mierendorff (2019) show that in the context of news sources, limited attention may lead to decision makers choosing mostly sources that reaffirm their initial beliefs, as seeking out a more diverse viewpoint would require higher levels of available attention. The model also shows that the effects may be different for those with strong prior beliefs than to those with more moderate beliefs, with the latter more likely to seek out the opposite viewpoint. While the model is presented in the context of news media, it could also be applied to the choice problem in the context of digital media providers, potentially contributing to homogenization and simplification of culture and consumption.

Within the context of creative sectors, depleted attention means that content providers compete not only for the money but also for the time of the consumers. Indeed, already in 2019, the CEO of Netflix wrote in a letter to investors "*We compete with (and lose to) Fortnite [a video game] more than HBO*" (Netflix, 2019). This statement made headlines in various outlets, marking a start of a new concept of a market – one where competition does not pertain only to largely similar sets of goods, but can actually involve very different types of content that fight for the same scarce resource – attention. This view is reinforced by some industry experts arguing that we have indeed already reached peak attention (i.e. that there is no more free time for additional consumption; see Mulligan, 2019) and with increasing reports of the so-called 'subscription fatigue' - a growing frustration with subscription services due to their number, their combined price, the way the content is increasingly spread, the overwhelming choice, increasing searching costs and difficult management of several subscriptions (Gilsenan, 2019; Westcott et al., 2019; Inman, 2019).

Some data points to changes both in supply of creative content and demand for creative content. Flipsnack (2015) found books in the NYT bestseller lists increased in length from 320 pages to 407 between 1999 and 2014, but Wordsrated (2022) noted that the top 3 decreased in length from 437.5 in 2011 to 386 in 2021, attributing it to decreased attention spans of the readers. Ball (2020) notes a gradual decrease of average song length on US & Canada Billboard since the 1990s with a raid decrease in the second half of 2010s. He also points to a drop in the song title length in recent years, pointing to a trend of tailoring music content to algorithms and voice-controlled devices. Finally, Gauvin (2017) analysed 303 US Top 10 singles from 1986 to 2015, looking for evidence of "attention-grabbing" strategies. He found a decrease in numbers of words in titles, an increase of main tempos, decrease of time before the voice enters and decrease of time before the titles mentioned.[2] He did not, however, find any differences in these regards between the more and the less popular songs within albums.

[2] He also checks for a change in self-focus in lyrics but finds no relationships.

2.2. Pandemic, time for leisure and the music industry

The COVID-19 pandemic carried disrupting effects across most domains of life and across the creative industries. Beyond its direct dramatic effects, it has also pushed labour markets towards work from home, often banning the mobility to workplaces altogether. The imposed restrictions affected mobility of the populations and translated into shifts in time allocations. DeFilippis et al. (2020) found that the pandemic decreased the time spent on work meetings but that the average workday increased. This finding is in line with those of Aksoy et al. (2023) for 27 countries, who found that reduced commuting (due to work from home arrangements) contributed to large time savings of of an average of 2 hours per week per worker in 2021 and 2022. Of the time saved, app. 40% went to work and app. 34% to leisure. In a study of UK, Roberts (2020) also found an "abrupt, unprecedented in scale" increase in leisure during the pandemic.

It is difficult to predict how these shifts affected recorded music consumption. On the one hand, increased leisure time could be spend on, i.a., music consumption. Such effects were found for some other sectors like video gaming, and with the demand for VOD streaming services soaring to a point where they were asked to reduce streaming quality within the EU due to traffic congestion (Feldmann et al., 2020). On the other, the changes also affected the typical modes of music consumption, with a complete cancellation of live events, and disruption of everyday routines. Nielsen (2017) noted that 29% of music listeners consumed music in their cars. Responders surveyed by IFPI (2019, 2020) listed driving a car as the top activity while listening to music in 2018 and 2019, while younger listeners listed commuting to work and education as the primary activity. Another effect may come from disrupted production cycles, that could have delayed music releases, similarly to those in the movie industry (Nhamo et al., 2020).

The complicated nature of these relationships likely contributes to the variation in research findings. Several survey studies find positive effects on music consumption. IFPI (2018, 2021, 2022) notes consistent growth in hours spent on music listening, with an average of 17.8 hours in 2018, 18 hours in 2019, 18.4 hours in 2020 and 20.1 hours in 2021. Denk et al. (2022) surveyed German consumers, comparing the winter of 2018/19 with that of 2020/21. They found a reduction in consumer spending on music (especially for live events and physical recordings). They also note an overall decrease in the hours of music consumption, but an increase for premium subscription services. Finally, Sim et al. (2022) look at charts data and conclude that music streaming decreased due to the pandemic, mainly due to the reduced mobility that it induced.

The disruption from the pandemic could also carry other effects on music consumption patterns. IFPI (2021) notes that 65% of their respondents said that over the pandemic they had taken the time to discover new music. Kim et al. (2023) show that disrupting routines contributes to music exploration. Among the factors they consider, they include COVID-19 lockdowns and reopenings and noting their effects on music exploration. Sim et al. (2022) noted lower successfulness of new releases in the first months of the pandemic, and also showed reported no evidence of release delays over that time window.

2.3. Hypotheses

Noting the negative relationship observed by Sim et al. (2022) using actual streaming data, we hypothesise that the pandemic and its implications did decrease streaming consumption. However, taking into the account attention economics perspective and the increased time on leisure we also propose that the pandemic could have affected the type of music consumed. Notably, if the prior trends in song length and title length were partially driven by depleted attention spans of music consumers, the increased leisure time could contribute to larger discovery of tracks that do not conform with these

trends. Such effects could also explain the discrepancy between the findings of Sim et al. (2022) and those of IFPI (2022) or Denk et al. (2022), whereas the number of streams of the top tracks could drop, with a simultaneous increase in the hours of music consumption resulting from longer music pieces consumed.

3. Data

To verify our hypotheses we collect data on music consumption from Spotify and YouTube charts and connect them with song-level information from the Spotify API and daily country-level information on mobility (Google Mobility Tracker). Depending on the type of analysis performed, we sometimes use either the daily or weekly Spotify charts. Our primary variables of interest are numbers of streams, song durations and numbers of words in title. We calculate weekly totals of streams at a country level from the charts. We also calculate stream-weighted mean song durations and total play times (numbers of streams multiplied by song length for each song in the chart and then aggregated). Finally, we calculate the average title lengths (numbers of words) of the songs in charts. In the regressions, we take the logarithms of the streams and durations.

Depending on the analysis type, we use different data periods. We start with a replication of the Sim et al. (2022) study that covers the time from June 2018 to May 2020. The analyses with the Google mobility variables cover the period from February 2020 to May 2020 in the replication and the period from 2020 to December 2021 in the extended sample. We specify any divergence from these along with the results.

For most of the analyses we repeat the approach for three dependent variables: calculated for the whole sample of Top 200 Spotify charts; Top 100 YouTube charts or Top 100 Spotify charts restricted to the countries with YouTube charts data. This allows us to compare the YouTube and Spotify results for the same level of ranks and the exact same of countries and periods.

Google Mobility Reports offer changes in mobility as related to: retail and recreation, grocery and pharmacy, parks, transit stations, workplaces and residential (i.e. for places of residence). These measures are highly correlated, with most of the mobility types dropping jointly and residential staying simultaneously increasing. Thus, instead of considering them separately, we conduct a principal component analysis and take the first component as a joint measure of mobility. Accordingly with intuition, it is positively related to the outward mobility and negatively to staying at home, with the exact eigenvalues listed below. The first component accounts for app. 85% of the variation in the short period sample and 71% in the longer period sample (see Table 1).

Table 1. Principal component analysis eigenvalues

	Grocery and pharmacy	Parks	Transit stations	Retail and recreation	Workplaces	Residential
Feb 2020 – May 2020	0.41	0.31	0.43	0.43	0.42	-0.43
Feb 2020 – Dec 2021	0.46	0.42	0.26	0.45	0.40	-0.43

3.1. Additional data

We conduct series of robustness checks and additional analyses to provide better support for our findings. This includes TikTok charts data from Chartmetric for the period of April 2021 to October 2022 across 18 countries. We also collect daily Spotify charts and information about the artists and all of their album releases from the Spotify API to analyse release delays during the pandemic. For further robustness checks, we also consider collecting live performance information from services such as Setlist.fm.

4. Results

Sim et al. (2022) study the effects of the pandemic on streaming through a variety of approaches, including using data on COVID-19 cases and deaths; imposed restrictions; and mobility. They also conduct a set of robustness checks, including looking at the effects of weekends versus workdays, or the effects on YouTube with supplementary data. As a starting point we build on the their methods and codes they kindly share to deliver our results. However, we go on to extend our sample, specifications and approaches, which we discuss below. We also omit parts of their analysis and focus on the ones that seemed most crucial for their conclusions. Our extensions focus on three angles:

1) The primary focus of Sim et al. (2022) was on the number of streams in the charts and how it changed over time in relation to pandemic-related factors. We additionally look at the mean song duration of the tracks in the charts (calculated using stream counts as weights), the total playtime (i.e. number of streams times track length) and the number of words in song titles.
2) In their main analysis, Sim et al. (2022) worked with weekly charts for the Spotify Top 200. Additionally, they considered the effects on YouTube with data taken from Soundcharts for the artists who also had their songs appear on Spotify Top 200 charts. Their variable of interest in this additional analysis is artist view count. However, based on their results for Spotify, Sim et al. (2022) state that the effects on streaming might differ for top-ranking and lower-ranking songs. As such, their analysis for YouTube might not be entirely comparable to their main results due to a different approach (artist popularity instead of song popularity) and different sample (artists high-ranking on Spotify are not necessarily high-ranking on YouTube).

   To include YouTube, we instead get our information from a more similar data source, namely the YouTube top 100 weekly song charts, which include the numbers of views. This allows us both to look at the high-ranking tracks for YouTube and to apply the exact same methodology to our Spotify and YouTube samples.

   For even greater comparability, we additionally conduct analyses for the top 100 songs on Spotify (instead of top 200) and for a reduced sample of countries that also have data for YouTube. At the same time, we reduce the sample of countries in the YouTube analysis to those that contain data for Spotify charts as well. Thus, for the regressions of Spotify Top 100 and YouTube Top 100 the sample of countries is and periods is exactly the same.

3) Most of the analyses conducted by Sim et al. (2022) consider the period of up to May 2020. While this seems enough to measure the immediate effects of the pandemic, it is unclear if the effects persisted throughout the further months. The relationships might have evolved as countries accrued basic understanding of managing the pandemic, as the vaccines became available, or as production issues and delays might have had a different bearing after longer time periods. We thus extend the data in parts of our analysis up to the end of 2021. We use the exact same sources for our information on COVID-19 cases and deaths, as well as Google Mobility to ensure maximum comparability with the initial study.

At the same time we choose to omit some of the approaches considered by Sim et al. (2022). In their study, the authors consider various forms of restrictions and the pandemic severity. Eventually, however, they conclude that the main relationship boils down to the reduced mobility. This is, perhaps, not surprising as the mobility measures reflect actual change in consumer behaviour during the period of the pandemic and likely accounts for much of the effects of the pandemic severity (which translates into behaviour and restrictions) and the restrictions (which affect the mobility). Moreover, prior reports on listeners behaviour clearly indicate that music listening is largely related to how much the consumers are travelling in various modes of transport. As such, we focus our analyses on the effects of changes in

mobility. Importantly, these results generally hold if we introduce pandemic severity and restrictions as additional controls.[3]

4.1. Effects of pandemic declaration

As an initial analysis, Sim et al. (2022) focus on the period from June 2018 to May 2020, i.e. two full years with one overlapping with the first months of the pandemic. They identify the effects of the pandemic with a Difference-in-Differences setting, whereas the pandemic weeks are compared to the same weeks from the prior year. The resulting coefficients show the magnitude of change after March 11 that was associated with the pandemic start rather than seasonal effects or general trends. Additionally, Sim et al. (2022) gradually introduce a number of fixed effects to their base regression and rely on the full set of these effects for their robustness checks and sensitivity analyses. For brevity, we only include regression results with the full range of these effects.

Table 2. reports the results of these regressions for the Spotify Top 200, the Spotify Top 100 with reduced sample of countries and the YouTube Top 100. The dependent variables are consecutively: the logarithm of the total number of streams; the logarithm of the duration in minutes; the logarithm of the total play time in minutes; number of words in title.

Table 2. Regression of streams, song duration, play time and words in title on pandemic declaration

	Spotify Top 200	Spotify Top 100	YouTube Top 100
	Dependent variable: ln(streams)		
Pandemic declaration	-0.133***	-0.127***	-0.0322
	(0.0169)	(0.0225)	(0.0228)
	Dependent variable: ln(duration)		
Pandemic declaration	-0.00270	0.0131	0.0490***
	(0.00528)	(0.00814)	(0.00682)
	Dependent variable: ln(play time)		
Pandemic declaration	-0.136***	-0.114***	0.0168
	(0.0182)	(0.0260)	(0.0225)
	Dependent variable: words in title		
Pandemic declaration	-0.133***	-0.154***	-0.0431
	(0.0166)	(0.0289)	(0.0258)
N	6240	3846	3846

Note: Spotify Top 100 and YouTube Top 100 are calculated for the sample of countries containing information on both the Spotify and YouTube weekly charts. As in Sim et al. (2022) all regressions include fixed effects for countries, pandemic period in each country, and 2020 second year of data in each country.

Replicating the base result of Sim et al. (2022), we find evidence of negative pandemic effects for both the Spotify Top 200 and the Spotify Top 100. The results for YouTube streaming prove statistically non-significant although the relationship is also negative. Moreover, we find a strong positive and statistically significant relationship between the pandemic start and the length of tracks appearing in the YouTube Top 100 charts. Pandemic declaration was also related to shorter song names in Spotify Charts with a negative relationship also for YouTube, but without statistical significance.

4.2. Effects of mobility reductions

For further evidence, we follow Sim et al. (2022) and include the measure of mobility as an independent variable. Indeed, mobility was largely affected by the pandemic and is the main factor that could

[3] Results will be added in the appendix of further versions of this paper.

contribute to a change in music consumption. Higher mobility translates into more opportunities for music listening (e.g. in transit or in car) but also higher constraints on attention due to less time for leisure and free music discovery. Table 3 reports the findings of the regressions with mobility indicators.

Table 3. Regression of streams, song duration, play time and words in title on mobility

	Spotify Top 200	Spotify Top 100	YouTube Top 100
	Dependent variable: ln(streams)		
Mobility	0.041***	0.048***	0.021***
	(0.005)	(0.006)	(0.007)
	Dependent variable: ln(duration)		
Mobility	0.002***	0.003***	0.000
	(0.001)	(0.001)	(0.002)
	Dependent variable: ln(play time)		
Mobility	0.043***	0.051***	0.022***
	(0.004)	(0.005)	(0.007)
	Dependent variable: words in title		
Mobility	-0.016***	-0.017***	-0.003
	(0.003)	(0.006)	(0.006)
N	885	690	690

Note: Spotify Top 100 and YouTube Top 100 are calculated for the sample of countries containing information on both the Spotify and YouTube weekly charts. As in Sim et al. (2022) all regressions include fixed effects for countries and common week fixed effects.

We find a positive relationship between the general mobility and music streaming numbers. This finding confirms that higher mobility goes hand in hand with larger streaming volumes. However, we find that higher mobility is also related to longer songs in the Spotify charts, contrarily to our expectations. At the same time, higher mobility is negatively related to the length of song titles, with more commuting associated with songs of shorter names – in line with the hypothesis of shorter attention or higher reliance on voice-controlled devices.

4.3. Effects of mobility reductions – extended period

The study of Sim et al. (2022) covered the period of up to May 2020. As such, it considered only two and a half months of the pandemic. However, the pandemic lasted far longer and as such it is likely that some if its effects only took place over time. Moreover, looking only at the mobility within such a short timeframe could mean introduction seasonal effects contributing both to shifts in mobility and in music listening. As such we extend the original analysis with period up to December 2021.[4] These results are covered in Table 4.

Consistently with prior approaches we find a positive relationship between mobility and music listening. This indicates that COVID-19-induced drops in mobility (or those induced by shifts to working from home) decreased music consumption. At the same time, we find evidence o shorter songs on both Spotify and YouTube Top 100 charts, as well as evidence of shorter titles associated with higher mobility.

In all specifications, our analysis carries only a small impact on the total play time of the songs in the charts. However, should the results for song durations be stronger for less popular songs, it is possible that the net effect beyond the top charts could have an opposite direction.

[4] We also considered periods going into 2022, with similar conclusions.

Additionally, we study the effects on other diversity measures, finding that reduced mobility made listeners pick on average older music and music with higher acoustic diversity. In total, these finding highlight that higher attention capabilities affect music choices in several dimensions indicating higher diversity of choices.

Table 4. Regression of streams, song duration, play time and words in title on mobility with 2021

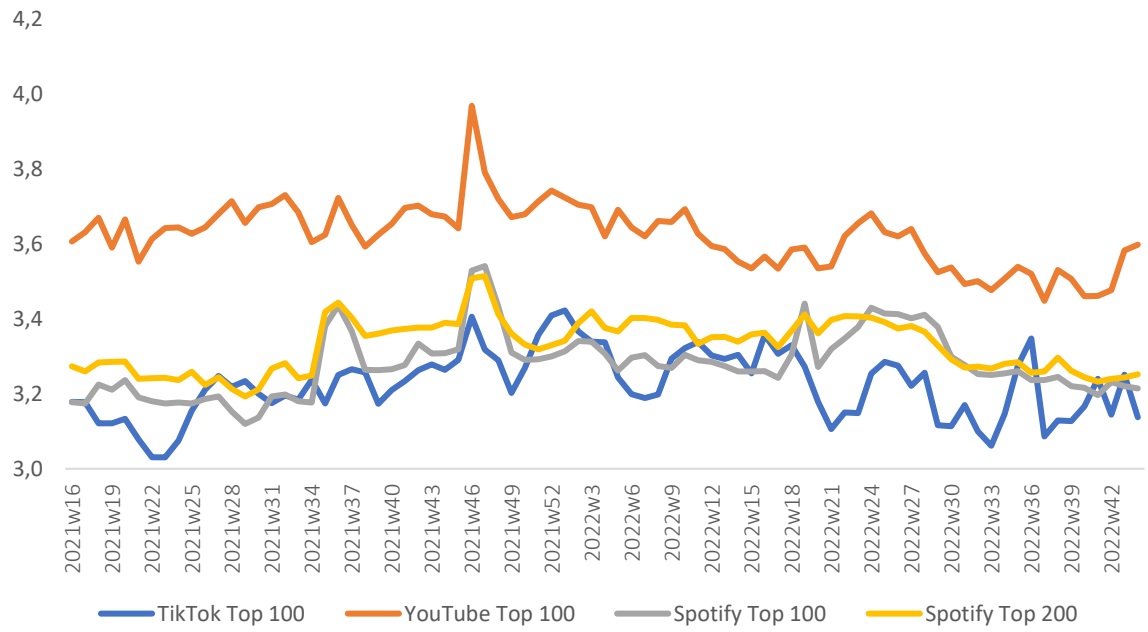
	Spotify Top 200	Spotify Top 100	YouTube Top 100
	Dependent variable: ln(streams)		
Mobility	0.035***	0.033***	0.044***
	(0.006)	(0.007)	(0.007)
	Dependent variable: ln(duration)		
Mobility	-0.001	-0.002*	-0.005***
	(0.001)	(0.001)	(0.001)
	Dependent variable: ln(play time)		
Mobility	0.034***	0.031***	0.039***
	(0.006)	(0.006)	(0.006)
	Dependent variable: words in title		
Mobility	-0.024***	-0.041***	-0.020***
	(0.005)	(0.007)	(0.004)
	Dependent variable: release date (year)		
Mobility	0.22***	0.35***	-
	(0.04)	(0.05)	-
	Dependent variable: acoustic diversity		
Mobility	-0.004***	-0.004***	-
	(0.0002)	(0.0002)	-
N	6481	4868	4868

Note: Spotify Top 100 and YouTube Top 100 are calculated for the sample of countries containing information on both the Spotify and YouTube weekly charts.

4.4. TikTok virality and song characteristics

While the pandemic influenced the time and attention budgets of music consumers, the industry was simultaneously affected by the rapid growth of the TikTok social media platform. TikTok rose to prominence due to the virality of its short-form video that often include snippets of songs – called sounds. According to company filings, the platform had approximately 55 million monthly active users in January 2018, but 271 million in December 2018, 508 million by December 2019, 689 million by July 2020 and more than 1 billion by September 2021. It has been widely discussed in media and recent research that TikTok might promote and increase discovery of certain tracks through the exposure it provides. If this is the case, it could affect the length of songs reaching the charts on Spotify and YouTube.

Figure 2. Median duration (minutes) of chart songs



Note: we use the median length for this comparison as some of the songs appearing on TikTok are matched to outlying objects on Spotify that can last for up to 109 minutes (as well as some lasting less than 1 minute).

To verify whether this might occur, we collected weekly top 100 chart data for TikTok for 18 countries for which we also have YouTube and Spotify charts data, for the periods of week April 2021 to October 2022. We compare the average (median) lengths of songs in each chart over the period finding that songs trending on TikTok are shorter than those making it to the top of music streaming services. This is confirmed through both parametric and non-parametric tests, but can be easily inferred from the visual representation as well (see Figure 2).

As such, we conclude that if TikTok indeed promotes specific tracks through exposure, the observed changes in song lengths happen in spite of the rapid growth of TikTok and not because of it.

5. Conclusions and implications

Our findings provide some of the first evidence of the influence of attention economics on music consumption patterns. Using information from streaming services charts and mobility shifts induced by the COVID-19 pandemic, we show that lower commuting translated into both a decrease in streaming numbers and an increase in the length of consumed songs. Moreover, in line with the principles of song tailoring towards the attention budget, we showed that the pandemic also boosted the popularity of songs that are on average: older, more acoustically diverse and with longer titles. This suggests a boost in music exploration resulting from longer leisure times.

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