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

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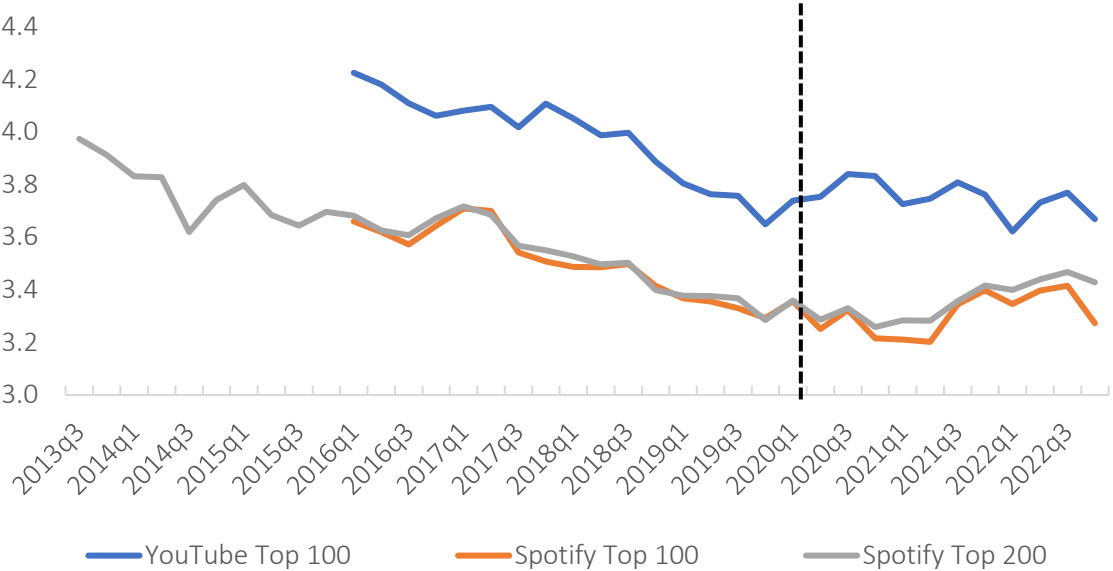
Note: Spotify Top 100 included for a more analogous comparison with YouTube Top 100. The mean durations are weighted with stream counts. Quarters represent means from weekly data. The vertical line shows the pandemic announcement

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.

We run several robustness checks modelled after the study of Sim et al. (2022), showing that potential delays in album releases do not explain these patterns and 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. Instead, if anything, both these factors might have lowered the observed effects.