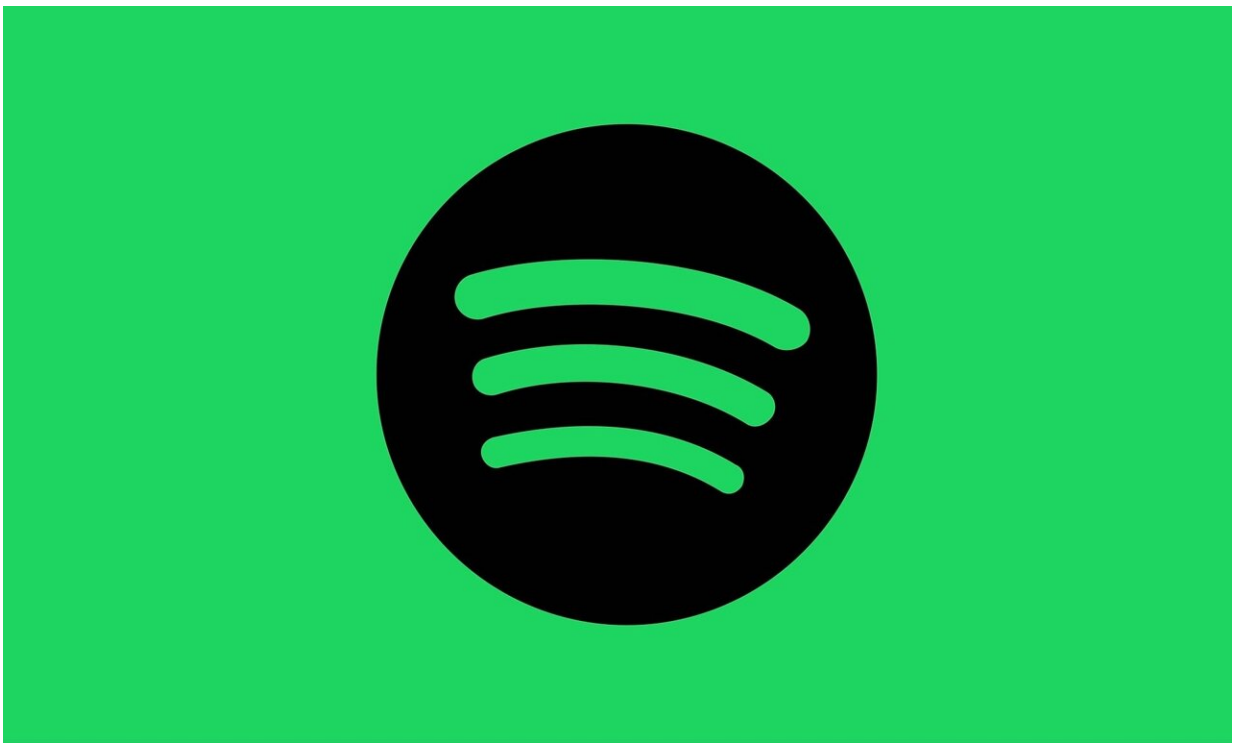


# **Study: Consumption of music streaming declined significantly during COVID-19 lockdowns worldwide**

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The COVID-19 pandemic was expected to change how people consume media. A new study analyzed online music streaming data for top songs for two years in 60 countries, as well as COVID-19 case and lockdown

statistics and daily mobility data, to determine the nature of those changes. The study found that the pandemic significantly reduced the consumption of audio music streaming in many countries.

The study, by researchers at Carnegie Mellon University (CMU), the Korea Advanced Institute of Science and Technology (KAIST), and City University of New York, appears in *Marketing Science*.

"Our work is the first to gauge the impact of COVID-19 on digital streaming consumption in a global context," explains Rahul Telang, professor of information systems at CMU's Heinz College, who coauthored the study. "It upends the popular expectation that online media platforms would benefit from the restrictions put in place during the [pandemic](#), in part because this type of [music](#) consumption is not standalone entertainment, but complements activities that declined during lockdowns, such as commuting."

Worldwide, the economic impacts of COVID-19 shutdowns have been substantial. But amid a market meltdown, some anticipated that demand for digital streaming services would surge since many people were forced to stay at home and work remotely, spending more time online. Moreover, as theaters and live concerts were shuttered, it was anticipated that consumers would be more likely to listen to music at home.

In this study, researchers analyzed streaming data from Spotify, one of the largest music streaming service providers, for weekly top 200 songs during 104 consecutive weeks between June 2018 and May 2020 in 60 countries. They also examined COVID-19 case data from the European Centre for Disease Prevention and Control, data on enforced social distancing measures by governments from the Oxford COVID-19 Government Response Tracker, and country-level data on changes to individuals' time allocation during the pandemic from Google's COVID-19 Community Mobility Reports.

To account for the growth and seasonality of streaming demand, researchers compared weekly streams with those of a comparable week the prior year for each country, comparing 52 weeks from June 1, 2018, to May 30, 2019, with 52 weeks from May 31, 2019, to May 28, 2020.

In more than two-thirds of the countries studied that enforced lockdowns, music streaming volume declined significantly after the lockdowns took effect. On average, audio music consumption decreased 12.5 percent after the World Health Organization (WHO) pandemic declaration on March 11, 2020. As a result, during the pandemic, Spotify lost 692 million euros (\$838 million) of revenue in the first three quarters of 2020.

Reductions in workers' commuting time correlated strongly with the decline in music consumption, the study found, indicating that restricted movement contributed to the shrinkage. In fact, countries with larger decreases in mobility and transit time saw more marked reductions in music streaming after the pandemic. Another factor driving consumption could be that people spent less money on music streaming during the pandemic, a time when many lost income.

The study also examined music consumption through video platforms (e.g., online video channels), using data from YouTube's music streaming platform from July 2019 to October 2020. Consumption via video platforms, which requires more attention and is less complementary to activities like driving, rose during the study period, with unprecedented surges in volume after the WHO's declaration. Based on counts of artists' video views on YouTube, music demand in this medium increased more dramatically in countries with more COVID-19 cases, stricter lockdown policies, and sharper declines in individuals' mobility.

Finally, the study examined how a temporary easing of many COVID-19

restrictions in late April and early May 2020 affected streaming volume. Results suggest a partial rebound in streaming volume in countries with a decrease in COVID-19 cases and with declines in the amount of time people spent at home. Researchers suggest that any resurgence of new cases of the virus could lead to further restrictions and more work from home, which would likely depress streaming demand once more.

"Our findings suggest that the pandemic has changed the environment of media [consumption](#), putting streaming audio music in fiercer competition with other forms of media," notes Jaeung Sim, a Ph.D. candidate in KAIST's College of Business, who led the study. "As such, they provide useful insights and actions that can be put into practice during and after the COVID-19 pandemic." Among the possible actions, the study suggests that platform providers look at new approaches to boost fans' engagement, reconsider the timing of new album releases, and rethink promotion strategies.

**More information:** Virus Shook the Streaming Star: Estimating the COVID-19 Impact on Music Consumption, *Marketing Science* (2021).

Provided by Carnegie Mellon University

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