

ANNOUNCEMENT

Bachelor Thesis

KEYWORDS

- Music Industry
- Digital Distribution
- Playlists
- Causal Impact
- Music Streaming

TOPIC: THE IMPACT OF PLAYLISTS ON DEMAND – AN ANALYSIS OF MUSIC STREAMING DATA

Although playlists are rapidly gaining importance as a new marketing tool in the music industry, their causal effects on demand remain unclear. Various reasons complicate the measurement of causal effects of playlists from observational data, including (1) unobserved confounders (i.e., variables that affect both the outcome and the predictor), (2) reverse causality (i.e., do playlists influence the success of a track, or does the success of a track influence the inclusion on a playlist?), and (3) lack of knowledge about counterfactuals in the absence of controlled experimental settings (e.g., what would have happened in the absence of the inclusion on a playlist).

Therefore, the goal of this bachelor thesis is to empirically investigate the causal effect of a playlist inclusion on a song's demand (i.e., streams, revenue uplift). The analysis will be based on a large panel data set, comprising playlist and streaming information for a period over a period of more than two years. To identify the streaming service effect, the Causal Impact method will be used using the statistical software R.

LITERATURE:

- **Aguiar, L., & Waldfogel, J. (2018).** Platforms, Promotion, and Product Discovery: Evidence from Spotify Playlists. JRC Digital Economy Working Paper 2018-04.
- **Cai, H., Chen, Y., & Fang, H. (2009).** Observational Learning: Evidence from a Randomized Natural Field Experiment. *American Economic Review*, 99(3), 864-882.
- **CausalImpact:** An R package for causal inference using Bayesian structural time-series models. (<https://google.github.io/CausalImpact/CausalImpact.html>)
- **Datta, H., Knox, G., & Bronnenberg, B. J. (2017).** Changing Their Tune: How Consumers' Adoption of Online Streaming Affects Music Consumption and Discovery. *Marketing Science*, 1-17.
- **Rosario, A. B., Sotgiu, F., de Valck, K., & Bijmolt, T. H. (2016).** The Effect of Electronic Word of Mouth on Sales: A Meta-Analytic Review of Platform, Product, and Metric Factors. *Journal of Marketing Research*, 53, 297-318.

- **Salganik, M. J., Dodds, P. S., & Watts, D. J. (2006).** Experimental Study of Inequality and Unpredictability in an Artificial Cultural Market. *Science*, 311, 854-856.

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APPLICATIONS

Applications with CV and transcript of records should be sent to Nils Wlömert (nils.wloemert@wu.ac.at).