

Playing to the Algorithm: How Spotify's Recommendations Shape Music Production*

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Abstract

I examine how recommender systems have influenced the music industry and shaped music production over the last decade. Using a structural model of the recorded music industry, I analyze consumer behavior, platform recommendations, and rightsholder release decision. I estimate a fixed cost of \$80 thousand for songs entering Spotify's Top 200, with a 26% gross profit margin. Counterfactual analysis shows that with randomized recommendations, fewer songs enter the market, reducing consumer welfare by 4%. The songs that do enter would be 8 seconds longer on average and more heterogeneous in length. Popularity-based recommendations would generate a superstar effect, increasing gross profit margins for songs that enter the market to 48%, but reducing consumer welfare by 16%. While recommender systems have reduced overall variety in music, they have enabled additional entry and increased consumer welfare.

Keywords: Recommender Systems, Economics of Platforms, Digital Economics, Music Economics

JEL Codes: D43, L15, Z11

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