

The mediation and spillover effects of mobility on digital entertainment activities during the pandemic

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The mediation and spillover effects of mobility on digital entertainment activities during the pandemic

Abstract

We use individual-level mobile app usage data from 100,000 smartphone subscribers of a major carrier in China to study the impact of the COVID-19 pandemic outbreak and subsequent lockdowns (and relaxations) on usage of the top 656 entertainment apps (e.g., games, music, short form video, etc.). We quantify changes in digital entertainment activities under different lockdown policies in China, and find that despite having more free time, people use entertainment apps less during lockdown. Mobile entertainment also recovered more slowly than physical mobility after lockdowns ended. We further use city foot traffic as a mediator to identify the degree to which the usage of different apps depends on physical mobility. Overall, we use the quasi-experimental impact of lockdowns to separate mobility and pandemic effects, and show that physical mobility is a basic driver for most of mobile digital entertainment activities. In addition, we quantify spillover effects of mobility and the inter-dependence of different digital entertainment activities, which further verify the relationship between physical and digital entertainment activities.

Subject Areas: *Electronic Commerce and Internet Marketing, Entertainment Marketing*

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