

Abstract: In two-sided platforms offering user-generated content, users simultaneously act as content creators and consumers. This study focuses on the reciprocal structure of behaviors in both markets. For instance, content creation may encourage interaction with other users, thereby increasing motivation for content consumption, while content consumption can elevate motivation for content creation because they may be inspired from attractive contents. However, prior research has primarily focused on the immediate effects of the interaction between content creation and consumption behaviors, with limited attention given to long-term effects, particularly how these behaviors influence one's future levels of content creation and consumption. To address this gap, this study constructs a model using Gaussian processes to estimate and analyze how content creation (or consumption) behavior affects both dynamics and heterogeneity of user behaviors on the two sided platform, based on empirical data.