

Co-evolution of Network Growth and Group Formation: Evidence form a Professional Social Networking Service

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Abstract

This study examines how the introduction of “group” functionality in a professional social networking site influences user engagement (“stickiness”) and how group formation co-evolves with overall network growth. Using a unique longitudinal dataset from a professional network, we compare users’ activity levels before and after joining groups. A linear mixed-effect regression model incorporating user characteristics, group attributes, and heterogeneous user- and group-level random effects is employed to identify stickiness and co-evolution effects. Group membership significantly increases user engagement, especially visit frequency, and enhances users’ ability to attract new members. Interaction effects indicate that users who join more groups or belong to groups with denser internal structures become substantially more active. Certain group topics also promote higher engagement and greater attraction of new users. This study provides evidence of the joint dynamics between subgroup formation and network growth. The user level model clarifies how group features can strategically enhance platform stickiness and expand the network.

Track: Digital Marketing & Social Media