Analyzing the Impact of Incentive Structure on the Diffusion of Mobile Social Games: A Randomized Field Experiment

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Abstract

The massive growth in online social networking has revitalized academic interest in the power of social contagion as a force for individual and collective action. Recent literature (Aral and Walker 2011a, Bapna and Umyarov 2015) has causally established that peer-effects are ‘at-work’ in the general population of users of online social networks. Having established the causal existence of peer effects, it becomes natural to evolve towards asking how can we create, perhaps even maximize, social contagion using specific mechanisms that may be at work in spreading peer influence. To answer this question, we conduct a randomized filed experiment to examine how one such important mechanism of social contagion – offline word-of-mouth – can be triggered using economic incentives. Our research design involves manipulations of how the monetary reward is shared between the inviter and the invitee of the referral: selfish reward (inviter gets all), equal reward (50-50 split), and generous reward (invitee gets all). The unique context of our experiment, mobile social gaming, allows us to measure offline WOM as a driver for the adoption of digital goods. Our results show that in the aggregate general population, the generous pro-social referral reward schemes dominate purely selfish schemes in creating offline word-of-mouth. Further heterogeneity analysis help establish that while the generous reward scheme increases the number of adopters in general, the equal split reward scheme increases the number of adopters only for new users. Selfish reward schemes did not perform well among any user group, which lends support to metaperception theory that predicts that guilt accumulation in social contexts can inhibit referrals. The results can help in designing effective referral reward schemes for viral adoption in the digital world.

Keywords: social contagion, viral marketing, referral incentive design, offline WOM

(joint work with Alok Gupta, Jae Jung, and Soumya Sen)