A Dynamic Model of Crowdfunding

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Abstract

We propose a theoretical model to analyze the dynamics of investment behaviors in the crowdfunding platforms where each investor can observe the aggregate amount of investment pledged before her. When a project has quality uncertainty, information about decisions made by other investors might convey some information about the quality to the successors. Such transmission of information might enable better decisions to be made, but it is also quite likely that information cascade impede better information aggregation. We show that introduction of the popular *all-or-nothing* scheme put out the investors' incentive to herd while the funding goal is yet to be reached. The logic is as follows: larger amount of pledges itself is a good information, but on the other hand, since the goal is close at hand, the project is likely to be funded even when it is of bad quality. After the funding goal is met, the investment behaviors exhibit information cascade, under some condition on the form of population uncertainty. It presents a new issue on the existence of aggregate information cascade by Guarino et al.(2011). We also examine a static version of our model and show that the difference between these models is negligible with diminishing population uncertainty. Finally, we also show that the crowdfunding scheme succeeds in information aggregation to some degree.

Keywords: crowdfunding, information cascade, social learning
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