NYU Stern School of Business
Department of Information, Operations & Management Sciences
INFORMATION SYSTEMS RESEARCH SEMINAR

TOPIC: Is Core-Periphery Network Good for Knowledge Sharing? A Structural Model of Endogenous Network Formation on a Crowdsourced Customer Support Forum
SPEAKER: Param Vir Singh (Carnegie Mellon University)
DATE: Thursday, November 20th
TIME: 4-5:30PM
PLACE: KMC 3-110

ABSTRACT

Many companies have adopted technology driven social learning platforms such as social CRM (crowdsourcing customer support from customers) to support knowledge sharing among customers. A number of these self-evolving online customer support communities have reported the emergence of a core-periphery knowledge sharing network structure. In this study, we investigate why such a structure emerges and its implications for knowledge sharing within the community. We propose a dynamic structural model with endogenized knowledge-sharing and network formation. Our model recognizes the dynamic and interdependent nature of knowledge-seeking-and-sharing decisions and allows them to be driven by knowledge increments and social status building in anticipation of future reciprocal rewards from peers.

Applying this model to a fine grained panel data set from a social customer support forum for a telecom firm, we illustrate that a user in this community values being connected to other well connected individuals. As a result, a user is more inclined to answer questions of those who are in the core (well connected) than the ones who are in the periphery (not well connected). We find that the likelihood that a question receives a solution is high in the community. While it may be construed as a measure of increased efficiency of knowledge sharing in the community, we find that it is in fact a signal of inefficiency of knowledge sharing in the community. We find that users are taking into account the expected likelihood of their questions receiving a solution before asking a question. With the emergence of core-periphery network structure, the peripheral individuals are discouraged from asking questions as their expectation of receiving a solution to their question is very low. Thus, the core-periphery structure has created a barrier to knowledge flow to new customers who need the knowledge the most. Our counterfactuals show that hiding the identity of the knowledge seeker or making the individual contributions obsolete faster helps break the core-periphery structure and improves knowledge sharing in the community.

Joint work with: Yingda Lu, Baohong Sun

BIO

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