

Cooperation and Dynamic Network Formation: A Game Theoretic Case Study

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Abstract

Cooperation has been associated with “closely knit” organizations, where members know each other and stay in the organization for a long time. In contrast, we show that cooperation is also possible in a “loosely knit” organization, where members do not know each other well under frequent entry and exit. In particular, we present a case study of a labor union of a quite unusual form, that has the features of the loosely knit organization. The structure of the union closely resembles the OLG repeated game under private monitoring. We collected original data to examine how the network of cooperation has been formed among union members. Finding the mechanism (equilibrium) to sustain cooperation is challenging, because members have limited information about who helped whom. With the help of interviews and data, we identified the mechanism to sustain cooperation in the union, which is surprisingly similar to the belief-free equilibrium identified in the theoretical literature on repeated games with private monitoring.

* This is a work in progress (**no final paper** yet).

Some **preliminary results** were announced in *Proceedings of the National Academy of Sciences*:
http://www.pnas.org/content/111/Supplement_3/10802.full

In my talk, I present analysis based on the comprehensive data set collected after the publication of this paper.