

« Bilateral link formation with competition : An experimental study »

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In this paper we design a laboratory experiment to investigate two-sided link formation in a dynamic setting where payoffs are fully heterogeneous across players and depend on direct links only. Our link-formation rule is decentralized and requires mutual consent - additionally, players can make link offers and counter-offers as in a Beckerian marriage market. This link-formation rule, which essentially introduces competition by allowing players to deviate in coalitions of size two, corresponds to the strong pairwise stability proposed by Belleflamme and Bloch (2004), and offers two advantages in our context : first, it better represents the decision making mechanisms behind a large set of decentralized real-life markets (*e.g.*, academic job market, housing market). Second, it rules out equilibria multiplicity and path dependence in a large class of games with the heterogeneous payoff structure outlined above.

We bring this link-formation game to the lab, limiting our attention to payoff matrices for which the equilibrium is unique, and hence does not depend on experimental conditions. The game is designed in such a way that if participants play a myopic best response, they reach the unique equilibrium configuration. We test whether this equilibrium is indeed obtained in the laboratory, and how different experimental conditions (*e.g.* the amount of information about other players' payoffs, or the network configuration at departure) affect the structure of the emerging network.

Our results show that the equilibrium configuration is reached in most cases, but not as fast as myopic best response would suggest. We find that the observed departures from myopic best response are mostly due to : imperfect information on other's payoffs, self-censoring, and satisficing heuristics.