Matching in Networks with Bilateral Contracts

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April 2010

Abstract

We introduce a model in which firms trade goods via bilateral contracts which specify a buyer, a seller, and the terms of the exchange. This setting subsumes (many-to-many) matching with contracts, as well as supply chain matching. When firms' relationships do not exhibit a supply chain structure, stable allocations need not exist. By contrast, in the presence of supply chain structure, a natural substitutability condition characterizes the maximal domain of firm preferences for which stable allocations always exist. Furthermore, the classical lattice structure, rural hospitals theorem, and one-sided strategy-proofness results all generalize to this setting.

JEL Classification: C78, D4, L14

Keywords: Matching, Networks, Stability, Quasisubmodularity, Substitutes

*The authors are grateful for the helpful comments of Drew Fudenberg, Jason D. Hartline, Sonia Jaffe, Fuhito Kojima, Paul Milgrom, Muriel Niederle, Alvin E. Roth, Alexander Westkamp, E. Glen Weyl, and seminar audiences at Chicago, Harvard, Northwestern, and Stanford. Additionally, Kominers gratefully acknowledges the support of a National Science Foundation Graduate Research Fellowship. Please e-mail comments or suggestions to hatfield@stanford.edu or skominers@hbs.edu.