

Abstract

The set of equilibrium networks in the two-way flow model of network formation (Bala and Goyal, 2000) is very sensitive to the introduction of decay. Even if decay is small enough so that equilibrium networks are minimal, the set of equilibrium architectures becomes much richer, especially when the benefit functions are nonlinear. However, not much is known about these architectures. In this paper we remedy this gap in the literature. We characterize the equilibrium architectures. Moreover, we show results on the relative stability of different types of architectures. Three of the results are that (i) at most one player receives multiple links, (ii) the absolute diameter of equilibrium networks can be arbitrarily large, and (iii) large (small) diameter networks are relatively stable under concave (convex) benefit functions.