

Cost sharing mechanism for a good with positive or negative network externalities

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Abstract

Efficient mechanisms for provision of binary excludable public goods are investigated in a number of literatures. In particular, Massó et al. (2015) showed that an equal cost sharing mechanism, called the equal cost sharing with maximal participation (ECSMP) mechanism, is the most efficient in the class of mechanisms satisfying some preferable properties; strategy-proofness, individual rationality, no-deficit, and weak demand monotonicity. This study extends Massó et al. (2015) to provision of goods with positive or negative externalities. It turns out that, if an environment satisfies a kind of monotonicity, even for provision of goods with externalities, the ECSMP mechanism is the most efficient, in the sense that it minimize maximal welfare loss in the class of mechanisms satisfying the above properties. Moreover, for each preference profile, the ECSMP mechanism maximizes social welfare in the class of mechanisms additionally satisfying symmetry.

keywords: Network externalities, equal cost sharing mechanism, welfare maximizing.

References

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