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Embedding Games with Strategic Complements into Games with Strategic Substitutes

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Abstract

Games with strategic substitutes (GSS) are generally **less tractable** than games with strategic complements (GSC). This paper revisits the GSC versus GSS comparison by establishing a novel connection between them. We show through a network perspective that, when the strategy set of each player is the product of some **linearly ordered sets that are order isomorphic to subsets of the real space**, every GSC can be embedded into a GSS, such that the set of pure strategy Nash equilibria of the former is a projection of that of the latter. In comparison, no GSS with multiple pure strategy Nash equilibria can be embedded into any GSC. In this sense, the class of GSS is broader than the class of GSC.

Keywords. Strategic complements; Strategic substitutes; Supermodular Games; Embedding; Network games

JEL classification. C72

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