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**Implementation in partial equilibrium.** (English) Zbl 1400.91165

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Summary: Consider a society with a finite number of sectors (social issues or commodities). In a partial equilibrium (PE) mechanism a sector authority (SA) aims to elicit agents' preference rankings for outcomes at hand, presuming separability of preferences, while such presumption is false in general and such isolated rankings might be artifacts. This paper studies what can be Nash implemented if we take such misspecification of PE analysis as a given institutional constraint. The objective is to uncover the kinds of complementarity across sectors that this institutional constraint is able to accommodate. Thus, in our implementation model there are several SAs, agents are constrained to submit their rankings to each SA separately and, moreover, SAs cannot communicate with each other. When a social choice rule (SCR) can be Nash implemented by a product set of PE mechanisms, we say that it can be Nash implemented in PE. We identify necessary conditions for SCRs to be Nash implemented in PE and show that they are also sufficient under a domain condition which identifies the kinds of admissible complementarities. Thus, the Nash implementation in PE of SCRs is examined in auction and matching environments.

**MSC:**

[91B14](#) Social choice

[91B32](#) Resource and cost allocation (including fair division, apportionment, etc.)

Cited in **2** Documents

**Keywords:**

[implementation](#); [partial equilibrium](#); [complementarity](#); [income effect](#)

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