

Secure Implementation in Public Good Economies ^{*}

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Abstract

In public good economies, we study the possibility of secure implementation (Saijo, Sjöström, and Yamato (2007)). We consider the problems of the provision of one discrete public good for the following four cases: (i) the public good is non-excludable and agents' preferences are quasi-linear, (ii) the public good is non-excludable and agents' preferences are linear, (iii) the public good is excludable and agents' preferences are quasi-linear, and (iv) the public good is excludable and agents' preferences are linear. For each cases, we characterize securely implementable social choice functions: a social choice function is securely implementable if and only if it is constant.

Key words: Secure implementation, Dominant strategy implementation, Nash implementation, Public good, Strategy-proofness.

JEL classification: C72, C78, D61, D71, H41.

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