

The Formation of Societies with Linear Utilities

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Resumo/Abstract:

We study a finite decision model where the utility function is an additive combination of a personal valuation component and an interaction component. Individuals are characterized according to these two components (their valuation type and externality type), and also according to their crowding type (how they influence others). We study how positive externalities lead to type symmetries in the set of Nash equilibria, while negative externalities allow the existence of equilibria that are not type-symmetric. In particular, we show that positive externalities lead to equilibria having a unique partition into a minimum number of societies (similar individuals using the same strategy); and negative externalities lead to equilibria with multiple societal partitions, some with the maximum number of societies. Acknowledgements: This work is financed by National Funds through the FCT - Fundao para a Cincia e a Tecnologia (Portuguese Foundation for Science and Technology) within project "Dynamics, optimization and modelling/ PTDC/MAT-NAN/6890/2014. Renato Soeiro acknowledges the support of FCT through a Ph.D. grant with reference SFRH/BD/88742/2012.