The Role of Social Norms in Anti-Coordination with Asymmetric Income Distribution

Pietro Guarnieri* Lorenzo Spadoni†

Long abstract

In an anti-coordination problem, individuals face a situation where there is a negative network externality. As more people undertake the same action or consume a particular good, it leads to a cost or reduced benefit for each individual. Anti-coordination problems imply social dilemmas that are pervasive in situations where resources or services are shared, and their effectiveness or utility diminishes as more people use them. This can be observed in sectors such as transportation, where heavy traffic results in longer commute times and more crowded public transportation, reducing the convenience for individual commuters. Similarly, it can apply to communication networks where increased usage may lead to slower data speeds or overcrowded channels, impacting the quality of service for users. Typically, congestion occurs when a certain threshold in the number of consumers is reached. This is the case, for instance, of the overuse of energy, wherein excess of demand can cause power outages if a certain threshold is overcome.

In this experimental study, we investigate the influence of social norms on anti-coordination behavior in scenarios with asymmetric income distribution. Previous research demonstrates that individuals can successfully anti-coordinate by alternately making sacrifices (Diekmann & Przepiorka, 2016), targeting those better positioned for the sacrifice, such as those with lower associated costs (Diekmann & Przepiorka, 2016) or higher endowments (Cherry et al., 2013). Guarnieri & Spadoni (2024) explore the role of social norms in anti-coordination, finding that individuals often act according to personal beliefs and social empirical expectations, rather than maximizing payoffs. We extend this literature by eliciting social norms conditioned on different endowments using the Krupka & Weber (2013) method. This approach allows us to demonstrate that wealth distribution is not merely a focal point for anti-coordination (Cherry et al., 2013), but also a trigger for anti-coordination based on commonly perceived notions of the right thing to do. Our experimental design includes two distinct games with three players, manipulating the number of high-income participants exogenously: the Volunteer Dilemma (Diekmann, 1985), where

*Department of Economics and Management, University of Pisa, Via Cosimo Ridolfi 10, 56124, Pisa, Italy. pietro.guarnieri@ec.unipi.it., ORCID: 0000-0001-5107-7305.

†Department of Economics and Law, University of Cassino and Southern Lazio, Via S. Angelo, Loc. Folcara, 03043 Cassino (FR), Italy, email: lorenzo.spadoni@unicas.it, ORCID: 0000-0002-1208-2897.

the social optimum involves two players receiving higher payoffs, and the novel Deserver Dilemma, where the social optimum results in only one player obtaining a higher payoff.

Allowing for these two games, we aim to shed light on how social norms influence anti-coordination in different contexts of income distribution and to assess the relative impact of economic incentives and norms on individual behaviors. Our findings are expected to contribute to the understanding of how individuals navigate social dilemmas when economic inequalities are present, and how social norms can either facilitate or hinder the achievement of socially optimal outcomes. This research has potential implications for both legal and economic institutions, as it suggests that policies aimed at promoting (anti)coordination and social welfare need to account for the social norms that influence individual behavior in asymmetric contexts.

In conclusion, this study underscores the importance of social norms in shaping economic behavior, particularly in scenarios where individuals must make sacrifices for the collective good in the presence of income disparities. The use of experimental methods to elicit these norms provides a deeper understanding of the mechanisms through which wealth distribution and social expectations interact to influence anti-coordination behavior. This research contributes to the broader discourse on the role of social norms in social institutions and on the mechanisms to better align individual behavior with socially desirable outcomes.

Keywords: anti-coordination games, social expectations, normative beliefs

JEL: C90, D83, D84, D91

References

Cherry, T. L., Cotten, S. J., & Kroll, S. (2013). Heterogeneity, coordination and the provision of best-shot public goods. *Experimental Economics*, *16*, 497–510.

Diekmann, A. (1985). Volunteer's dilemma. *Journal of conflict resolution*, *29*(4), 605–610.

Diekmann, A. & Przepiorka, W. (2016). "Take one for the team!" individual heterogeneity and the emergence of latent norms in a volunteer's dilemma. *Social Forces*, *94*(3), 1309–1333.

Guarnieri, P. & Spadoni, L. (2024). Norms and anti-coordination: elicitation and priming in an El Farol Bar Game experiment. *Discussion Papers, Department of Economics and Management – University of Pisa, n. 303*.

Krupka, E. L. & Weber, R. A. (2013). Identifying social norms using coordination games: Why does dictator game sharing vary? *Journal of the European Economic Association*, *11*(3), 495–524.