

# Balanced Donor Coordination

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Charity is typically done either by individual donors, who donate money to the charities that they support, or by centralized organizations such as governments or municipalities, which collect the individual contributions and distribute them among a set of charities. On the one hand, individual charity respects the will of the donors but may be inefficient due to a lack of coordination. On the other hand, centralized charity is potentially more efficient but may ignore the will of individual donors.

We present a mechanism that combines the advantages of both methods by distributing the contribution of each donor in an efficient way such that no subset of donors has an incentive to redistribute their donations. Assuming Leontief utilities (i.e., each donor is interested in maximizing an individually weighted minimum of all contributions across the charities), our mechanism is group-strategyproof, preference-monotonic, contribution-monotonic, maximizes Nash welfare, and can be computed using convex programming.

For Leontief utility functions with binary weights, the mechanism we propose is egalitarian both for projects and donors, and can be computed via linear programming and a simple best-response dynamics.

A full version of this paper can be found at <https://arxiv.org/abs/2305.10286>

CCS Concepts: • **Applied computing** → **Economics**; • **Computing methodologies** → **Cooperation and coordination**; • **Theory of computation** → *Algorithmic mechanism design; Exact and approximate computation of equilibria.*

Additional Key Words and Phrases: donor coordination, mechanism design, collective decision making, Leontief preferences

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