

CIRANO note based on a report written by Claudia Keser, Andreas Markstädter, and Martin Schmidt, January 2015

In a public-good experiment with heterogeneous endowments, we investigate if and how the contribution level as well as the previously observed “fair-share” rule of equal contributions relative to one’s endowment (Hofmeyr et al., 2007; Keser et al., 2014) may be influenced by minimum-contribution requirements. We consider three minimum-contribution schedules (MCS), which are motivated by common tax structures to be found in real-life settings. The *FixMin* schedule requires the same absolute contribution by all players, *RelMin* requests the contribution of equal shares of the endowment, and *ProgMin* asks for minimum contributions that progressively increase with the endowment.

The results of our experiment suggest the potential of MCS to exert expressive power. They seem to communicate relations of fair contributions by the different endowment types. By setting an appropriate norm, they might increase group contributions relative to the situation without minimum-contribution requirements. It turns out that this is particularly true for *ProgMin*, which is likely perceived as the most fair among the three MCS considered. *RelMin* and *FixMin* show contribution levels that are not significantly above the one without minimum-contribution requirements. Defining motivational crowding-out by policy intervention as a reduction in the percentage of the freely disposable endowment that is contributed, we find significant motivational crowding-out in *FixMin* but not in *RelMin* or *ProgMin*.

On the individual level, we find support for the “fair-share” rule in *RelMin*. This rule cannot be detected in *FixMin* and *ProgMin*, due to norm setting through the (inverted) progressivity in both MCS. In the regressive *FixMin* treatment average relative contributions are significantly higher for less wealthy players and in *ProgMin* average relative contributions are higher for more wealthy players. Obviously, the “fair-share” norm can be eroded through a deliberate intervention.

In spite of these strong results, we advise caution generalizing our findings, in particular with respect to public policy. The response of contributions in a public-good game with heterogeneous endowments to mandatory minimum contributions may not be the same as the response of real economic factors as, for example, labor supply to changes in tax rates. In particular, in our experiment, heterogeneous endowments were randomly allocated to all participants in a group. Thus, participants neither had to supply their endowments by themselves nor to work for them. Although our study is able to show that the progressive minimum-contribution schedule performed best in our public-good setting in terms of overall contribution rates, we are not able to predict, which degree of progression would work best in a public-good environment, where endowments must be earned.

The full study is available on CIRANO's Website at:

<http://www.cirano.qc.ca/pdf/publication/2014s-47.pdf>