

In this experiment, our goal is to analyze the circumstances under which a policy pushing subjects toward more efficient outcomes, for themselves or for their peers, can backfire. We have in mind, for example the policy aimed at controlling pollution in Mexico City in 1989, by limiting driving time. It compelled many people to “work around” the policy, by purchasing another car, ultimately worsening pollution (Davis, 2008).

Subjects play a quiz game with multiple choice (MC) questions taken from the game show “Who Wants to be a Millionaire.” Questions are either easy or hard, with the latter providing larger payoffs if answered correctly, but subjects can “work around” the difficulty of having to answer a hard question by eliminating 2 of the 4 MC solutions, which decreases the payoff from a correct answer. The payoff effects of answering a hard question and of (not) using the “work around” option can affect the subject who answers and two peers, i.e. members of a fixed group, resulting in a strategic setting similar to a public good game.

In the control design, subjects choose the level of difficulty of each question in their own quiz. In the treatment design, instead, subjects are allowed to choose the level of difficulty of only half of their questions — the other half must be hard; however, they still have the “work around” option. We hence analyze the extent to which a policy intended to increase welfare — by making subjects choose more hard questions — has the unintended consequence of reducing it — pushing them to exploit the “work around” option — taking into account both individual risk taking and self-confidence, on one hand, and social behavior, on the other.