Pre-registration: Robustness experiment "Reference dependence"

Shallow Meritocracy

(previously: Redistributive Behavior When Circumstances Shape Choices)

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1 Background

The existing evidence in this project shows that individuals accept inequalities caused by the "choice effect of circumstances", even though they typically reject circumstances' direct effect on payment inequality. In other words, even though unequal circumstances are typically considered as unfair, the unequal outcomes they generate through their effect on choices are evaluated as fair. Put simply, choices "launder" circumstances, and *unfair* unequal opportunities can result in *fair* unequal outcomes. I also show that individuals are aware of and anticipate the choice effect of circumstances.

The central feature of the experimental design is a between-subject comparison of redistributive behavior in two types of inequality situations:

Control The circumstances to which worker A and worker B react are *identical*. They have the same piece-rate expectations. The piece-rate can be either high ($0.50) or low ($0.10) with 50% probability each. Ultimately, worker A receives piece-rate of $0.50, and worker B receives $0.10.

Treatment Worker A reacts to *different* circumstances than worker B. Worker A already knows that he/she receives a piece-rate of $0.50, and worker B knows that he/she receives a piece-rate of $0.10. That is, they have different piece-rate expectations.

Thus, the design systematically varies the expected circumstances to which workers react but keeps constant which piece-rate they ultimately earn. If workers react to the same circumstances, their effort choices are directly comparable. If workers, however, react to different circumstances, circumstances exert a differential impact on their choices. Contrasting redistributive behavior across these two situation types illustrate whether or not spectators take this into account. They should

redistribute a higher payment share to the disadvantaged worker B in *treatment* than in *control* to compensate the disadvantaged worker for the disadvantageous choice effect of circumstances.

A possible concern for the results is that the following mechanism confounds the treatment effect: In control, both workers do not know which piece-rate they receive until the end of the task. Then, worker A receives good news, while worker B receives bad news. If their utility depends on the realization of the piece-rate relative to their expectations, that is if their utility is reference-dependent, then the uncertainty in the *control* condition increases the utility of worker A, but decreases the utility of worker B, conditional on their effort choices. This might be relevant for spectators' redistribution decisions who would then tend to assign a higher payment share to worker B in *control* than in *treatment* to compensate him/her for the bad news of a low piece-rate. Any such effect would run opposite to a treatment effect and could therefore conceal its existence.

Therefore, I plan to run an additional robustness experiment that tests whether this "reference dependence" mechanism exists.

2 Experimental design

I shut off the choice effect of circumstances but not the possible effect of reference dependence. In the experiment, workers make no choice at all. Instead, all workers have to complete 10 tasks. Since there is no choice, there is no choice effect of circumstances. The possible effect of reference-dependence, however, still exists. In *control*, worker B receives bad news, while worker A receives good news relative to their expectations. Thus, the possible confounding effect of reference dependence is still present. If it really exists, spectators should redistribute more money to worker B in *control* than in the *treatment* condition.

Control Worker A receives piece-rate of \$0.50, and worker B receives \$0.10, but they learn about this only after the completed all ten tasks.

Treatment Worker A knows that he/she receives a piece-rate of \$0.50, and worker B knows that he/she receives a piece-rate of \$0.10, before they start working on the tasks.

No strategy method is employed. Instead, spectators redistribute earnings in the only scenario that occurs: Both workers complete 10 tasks, worker A earns a piece-rate of \$0.50, and worker B earns a piece-rate of \$0.10.

Randomization method Randomization done by a computer in an online survey.

Randomization unit Individual.

Is the treatment clustered? No.

3 Hypothesis

Redistribution does not differ across the two treatments.

4 Main outcome variable

The main outcome variable is the difference in the shares p that are distributed to the workers: $\Delta_s p = \frac{p_A - p_B}{p_A + p_B}$, where Δ_s means "share difference".

5 Statistical tests

To test for the equality of redistributive behavior across treatments, I plan to run the following regression:

$$\Delta_s p_{it} = \alpha + \beta 1_t + \varepsilon_{it}$$

where i is an individual, t is the treatment, and 1_t is a treatment dummy that takes value 1 in the *treatment* condition. I use robust standard errors and a two-sided test.

6 Sampling

Sample size About 600 respondents (300 per treatment). The sample includes data from a technical pilot with 82 respondents. The pilot data were collected in February 2021, 15-16.

Intervention dates I plan to collect the data from the 16th of February, 2021 (right after the pre-analysis plan has been uploaded) to 28th of February, 2021.

7 Exclusion criteria

Survey responses will be excluded from the analysis if the respondent

- does not complete the redistribution decision
- has already participated in the study
- spends to little time on reading the experimental instructions in part 1 before the treatment variation is introduced (drop respondents with less than 30 seconds reading time)

8 Experimental instructions

I uploaded the full experimental instructions under *Supporting Documents and Materials*.