

# Analysis plan

## Testable Hypotheses

1. **H0:** the automatic payment system does not affect the tax compliance of subjects.  
**H1:** the automatic payment system increases (decreases) the tax compliance of subjects.
  - **Outcome Variable:**  $Compliance_{it}$  (take value equal to 1 if the subject  $i$  pays the tax in round  $t$ , 0 otherwise); 1 observation per subject per round.
  - **Non-parametric test:** Chi-square test with 67 observations per treatment (Control and Automatic Payment) on the average individual Compliance.
  - **Regression:** Logit of  $Compliance_{it}$  on Treatment dummy, with and without controls: demographics and altruism questions, risk aversion measure, round fixed effects, standard errors clustered at the subject level. Probit and LPM as robustness checks.
2. **H0:** the automatic payment system does not affect subjects' earnings.  
**H1:** the automatic payment system increases (decreases) subjects' earnings.
  - **Outcome Variable:**  $Earnings_i$  (in ECUs, continuous variable); 1 observation per subject.
  - **Non-parametric test:** Wilcoxon-Mann-Whitney with 67 observations per treatment (Control and Automatic Payment) on the average individual Earnings.
  - **Regression:** OLS of  $Earnings_i$  on Treatment dummy, with and without controls: demographics and altruism questions, risk aversion measure.
3. **H0:** there is no difference in the performance in the effort task between subjects in the two treatments.  
**H1:** subjects who could adhere to the automatic payment system perform better than those who could not join it in the effort task.
  - **Outcome Variable:**  $Performance_{it}$  (number of correct strings answered, discrete variable from 0 to 20); 1 observation per subject per round.
  - **Non-parametric test:** Wilcoxon-Mann-Whitney with 67 observations per treatment (Control and Automatic Payment) on the average individual Performance.
  - **Regression:** OLS of  $Performance_{it}$  on Treatment dummy, with and without controls: demographics and altruism questions, risk aversion measure, round fixed effects, standard errors clustered at the subject level.
  - **Analysis of relevant subgroups:** subjects in the Automatic Payment treatment who adhere to the automatic payments vs those who don't, keeping the round fixed.
4. **H0:** Risk aversion does not influence the use of the automatic system payment.

**H1:** more risk-averse subjects adhere to the automatic system payment more frequently than the others.

- **Outcome Variable:**  $N_{Auto_i}$  (number of rounds in which subject  $i$  adheres to automatic payment); 1 observation per subject.
- **Regression:** OLS of  $N_{Auto_i}$  on Risk Aversion, with and without controls (demographics and altruism questions).

## Secondary analyses

**Compliance across time:** investigate if subjects who initially adhere to the automatic payment system decide to leave it at a certain round to get higher earnings by evading; on the other hand, subjects who initially evade and are immediately caught could behave differently from those who are not caught, meaning that the enforcement of the fine could push non-compliers towards the automatic payment adhesion.