README

Created on March 12, 2025. For questions and assistance, contact Philip Brookins at philip.brookins@moore.sc.edu.

This replication package for manuscript "Group size and threshold uncertainty in common-pool resource dilemmas," written by Philip Brookins and Weston Watts, includes the following elements:

- **Data**: source, brief description, and citation information
- **Analysis**: Stata and R files that use data to generate results and figures
- **Output**: results and figures that appear in the main text and appendix
- **README**: this readme file, readme.pdf, describing replication procedures

Data

The data comes from two published experimental studies:

- de Kwaadsteniet, E. W., Van Dijk, E., Wit, A., & De Cremer, D. (2008). How many of us are there?': Group size uncertainty and social value orientations in common resource dilemmas. Group Processes & Intergroup Relations, 11(3), 387-399.
  - The data file is a Stata Dataset titled study1data.dta
  - The file study1.txt is identical to study1data.dta, but in a format more easily utilized by the R file used to produce figures
- Kidwai, A. H., & de Oliveira, A. C. (2020). Threshold and group size uncertainty in common-pool resources: An experimental study. Public Finance Review, 48(6), 751-777.
  - The data file is a Stata Dataset titled kidwai_data.dta
  - Using kidwai_data.dta, the data was subsetted into .txt files to more easily produce figures in R
    - Group size uncertainty only: gu2.txt, gu4.txt, gu6.txt, gu8.txt
    - Low group size uncertainty and threshold uncertainty: low10.txt, low70.txt, low250.txt, low450.txt, low1400.txt, low1800.txt
    - High group size uncertainty and threshold uncertainty: high10.txt, high70.txt, high250.txt, high450.txt, high1400.txt, high1800.txt

    - No group size uncertainty and threshold uncertainty: none10.txt, none70.txt, none250.txt, none450.txt, none1400.txt, none1800.txt

Analysis

Statistical analyses performed using the data described above from each study are simple and utilized the statistical software Stata SE 16.1 and R 4.2.1. The Software requirements:

- **Stata SE 16.1**: Windows 7, 8, 10, or 11 (64-bit), 64-bit x86-64 processor, at least 2 GB of RAM, minimum of 2 GB of disk space, 1024p×768p resolution or higher display
- **R 4.2.1**: Windows 7 or higher, 64-bit x86-64 processor, at least 2 GB of RAM, minimum of 175 MB of disk space, 1024p×768p resolution or higher display

There are two Stata do-files (.do) used to perform the statistical analysis and one R file used to generate figures:

- **deKwaadsteniet_et_al_analysis.do**: uses study1data.dta to perform a single t-test that compares means between treatments (runtime below 5 seconds)
- **kidwai_deOliveira_analysis.do**: uses kidwai_data.dta for summary statistics and regression results (runtime below 5 seconds)
- **CPR_figures.R**: uses .txt data to generate all manuscript figures as .pdf subfigures (runtime approximately 10 seconds)
    - Figure 1: kwaad_c.pdf and kwaad_u.pdf
    - Figure 2: kidwai_gu.pdf and kidwai_gu_NO.pdf
    - Figure 3: gu2.pdf, gu4.pdf, gu6.pdf, and gu8.pdf
    - Figure 4: kidwai_fig1.pdf
    - Figure 5: low10.pdf, high10.pdf, low70.pdf, high70.pdf, low250.pdf, and high250.pdf
    - Figure 6: low450.pdf, high450.pdf, low1400.pdf, high1400.pdf, low1800.pdf, and high1800.pdf
    - Figure 7: TU_on_R.pdf
    - Figure 8: none10.pdf, none70.pdf, none250.pdf, none450.pdf, none1400.pdf, and none1800.pdf

Output

Run R file CPR_figures.R to generate all pdf figures listed above.