Replication Archive – Explanatory Memo

Assessing the Impact of Non-Random Measurement Error on Inference: A Sensitivity Analysis Approach

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The replication archive for the article "Assessing the Impact of Non-Random Measurement Error on Inference: A Sensitivity Analysis Approach" consists of the following files:

1. Monte Carlo simulation of bias induced by non-random measurement error.

   - **montecarlo_bias.R:** Code for the Monte Carlo simulation, produces mc_delta1.pdf, mc_delta2.pdf, and mc_delta3.pdf, which together make up Figure 1; R console output is in log_montecarlo.pdf.
   - **montecarlo_bias_appendix.R:** Code for the Monte Carlo simulation in the Online Appendix, produces mcbias2.pdf, mcbias4.pdf, mcbias6.pdf, and mcbias8.pdf, which together make up Figure 1 of the Online Appendix; R console output is in log_montecarlo _appendix.pdf.

2. Data and Code for "Application: Settler Mortality and Comparative Development"

   - **data_settlermortality.rda:** Dataset for the first application
   - **sensitivity_settlermortality_replication.R:** Code for first application of the sensitivity analysis, produces Soldiers_Data1.pdf and Soldiers_Data2.pdf (which gives Figure 2); Soldiers_stage1.pdf and Soldiers_stage2.pdf (which gives Figure 3); ext1.pdf, ext2.pdf, ext3.pdf (which gives Figure 4); R console output is in log_settlermortality.pdf.
   - **sensitivity_settlermortality_replication_appendix.R:** Code for Online Appendix portion of the first application of the sensitivity analysis, produces Bishops_Data1.pdf and Bishops_Data2.pdf (which gives Figure 5 of the OA); Bishops_stage1.pdf and Bishops_stage2.pdf (which gives Figure 6 of the OA); R console output is in log_settlermortality _appendix.pdf.

3. Data and Code for "Application: Leadership and Democratic Deliberation"

   - **HMS_Data.raw.txt:** Dataset for second application
   - **sensitivity_leadership_replication.R:** Code for second application of the sensitivity analysis, produces leadership_q3_sc1.pdf and leadership_q3_sc2.pdf, which together make up Figure 5; R console output is in log_leadership.pdf.
   - **sensitivity_leadership_replication_appendix.R:** Code for the Online Appendic portion of the second application of the sensitivity analysis, produces leader_simulate_ q3c1sca.pdf and leader_simulate_q3c0sca.pdf (which gives Figure 7 in the OA); leader_ simulate_q3c1scb.pdf and leader_simulate_q3c0scb.pdf (Figure 8 OA); leadership_ext.pdf (Figure 9 OA); leader_ simulate_q4ac1sca.pdf and leader_simulate_q4a0sca.pdf (Figure 10 OA); leader_simulate_ q4ac1scb.pdf and leader_simulate_q4a0scb.pdf (Figure 11 OA); leadership_q4_sc1.pdf and leadership_q4_sc2.pdf (Figure 12 OA); leader_simulate_q7bc1sca.pdf and leader_simulate_q7b0sca.pdf (Figure 13 OA); leader_simulate_q7bc1scb.pdf and leader_

simulate_q7b0scb.pdf (Figure 14 OA); leadership_q7_sc1.pdf and leadership_q7_sc2.pdf (Figure 15 OA); leader_simulate_q11ac1sca.pdf and leader_simulate_q11a0sca.pdf (Figure 16 OA); leader_simulate_q11ac1scb.pdf and leader_simulate_q11a0scb.pdf (Figure 17 OA); leadership_q11_sc1.pdf and leadership_q11_sc2.pdf (Figure 18 OA); R console output is in log_leadership_appendix.pdf.

4. Data and Code for Online Appendix E: "Application: Cellphone Coverage and Political Violence"

   - **data_public.rda:** Dataset for third application. Please note: This is a reduced dataset since the information on cell phone coverage (cell_dum_07) is subject to dissemination restrictions. The data can be purchesed from the GSMA (http://www.gsma.com).
   - **sensitivity_cellphones_replication_appendix.R:** Code for third application of the sensitivity analysis, produces cellphones_descr.pdf (Figure 19 OA); cellphones_m1.pdf and cellphones_m5.pdf (Figure 20 OA); R console output is in log_cellphones_appendix.pdf.