Reproducible Research Repository

Diffusion in social networks: Experimental evidence on information sharing vs persuasion

Fifth Submission: RR_IND_2025_371
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This review verifies the reproducibility of the exhibits included in the paper *"Diffusion in social networks: Experimental evidence on information sharing vs persuasion"*.

Contents in this review:

1. Main findings
2. List of exhibits and reproducibility status
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Main findings

- **Every exhibit has been reproduced accurately.**
- The code was successfully executed on a new computer after:
  1. Changing the global directory path in *main.do*.
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.
- The code takes approximately 12 hours to run.
- We conducted our reproducibility analysis based on the paper shared by the authors by email on August 06th, 2025.
- **Verification Process and Data Handling**:
  - The reproducibility package includes 01 type of data: open data.
  - Open data is included in the public reproducibility package.
  - *data_hash_report.csv* lists the SHA256 hashes of all files in the Data folder to support data integrity checks.
- **Reproducibility Summary**:
  - **Data**: All data sources are publicly available and included in the reproducibility package.
  - **Code**: All code files (from cleaning to analysis) are included in the reproducibility package.
  - **Outputs**: All outputs are generated by code included in the reproducibility package.
  - **Dependencies environment**: The reviewers created a new environment using the latest versions of dependencies available at the moment of the review.

List of exhibits and reproducibility status

Results in the Main Section of the Paper

- **Figure 1** Does not apply. The exhibit does not show analysis results.
- **Figure 2** Does not apply. The exhibit does not show analysis results.
- **Figure 3** Does not apply. The exhibit does not show analysis results.
- **Figure 4** Does not apply. The exhibit does not show analysis results.
- **Figure 5a** Reproduced. The exhibit was compared against *Fig_signup.png*.
- **Figure 5b** Reproduced. The exhibit was compared against *Fig_takeup.png*.
- **Figure 5c** Reproduced. The exhibit was compared against *Fig_saving_sg_passbook.png*.
- **Figure 5d** Reproduced. The exhibit was compared against *Fig_saving_passbook.png*.
- **Figure 5e** Reproduced. The exhibit was compared against *Fig_awareness_sg_score.png*.
- **Figure 5f** Reproduced. The exhibit was compared against *Fig_awareness_saving_score.png*.
- **Table 1** Reproduced. The exhibit was compared against *Tab1_MHT.tex*.
- **Table 2** Reproduced. Values highlighted in green do not match. The exhibit was compared against *Tab2_MHT.tex*.
- **Table 3** Reproduced. Values highlighted in green do not match. The exhibit was compared against *Tab3_MHT.tex*.
- **Table 4, Panel A** Reproduced. The exhibit was compared against *Tab4_A_MHT.tex*.
- **Table 4, Panel B** Reproduced. The exhibit was compared against *Tab4_B_MHT.tex*.
- **Table 5** Reproduced. The exhibit was compared against *Tab5_MHT.tex*.
- **Table 6** Reproduced. Highlighted values do not match. The exhibit was compared against
- **Table 7** Reproduced The exhibit was compared against *Tab7_MHT.tex*.

Results in the Annex

For the Appendix, we did not review every exhibit. Instead, we randomly selected 10 exhibits from the remaining datasets to assess the appendix. Our review was based on those 10 exhibits. Since they were chosen randomly, we are operating under the assumption that if all randomly selected exhibits are reproducible, then the rest should be as well. The seed used to generate the random selection was 187966, the Stata version used was 18.5, and the exhibits selected were: 2 (Figure D2), 3 (Figure D3), 12 (Table G9), 14 (Table I1) 16 (Figure I1), 17 (Figure I2), 22 (Table I7), 23 (Figure I3), 26 (Table I10) and 27 (Table I11). Some of these exhibits contain sub figures, so a total of 20 sub exhibits were verified.

- **Figure D2** Does not apply. The exhibit does not produce analysis results.

- **Figure D3** Does not apply. The exhibit does not produce analysis results.
- **Table G9** Reproduced. The exhibit was compared against *table_G9.xls*.
- **Table G10** Reproduced. The exhibit was compared against *table_G10.xls*.
- **Table I1** Reproduced. The exhibit was compared against *table_I1.xls*.
- **Figure I1a** Reproduced. The exhibit was compared against *pass_self_C_group_B.png*.
- **Figure I1b** Reproduced. The exhibit was compared against *pass_self_C+_group_B.png*.
- **Figure I1c** Reproduced. The exhibit was compared against *pass_self_I_group_B.png*.
- **Figure I1d** Reproduced. The exhibit was compared against *pass_self_P_group_B.png*.
- **Figure I1e** Reproduced. The exhibit was compared against *pass_self_I+P_group_B.png*.
- **Figure I1f** Reproduced. The exhibit was compared against *pass_self_all_group_B.png*.
- **Figure I2a** Reproduced. This exhibit was compared against *pass_self_C_group_A.png*
- **Figure I2b** Reproduced. This exhibit was compared against *pass_self_C+_group_A.png*
- **Figure I2c** Reproduced. This exhibit was compared against *pass_self_I_group_A.png*
- **Figure I2d** Reproduced. This exhibit was compared against *pass_self_P_group_A.png*
- **Figure I2e** Reproduced. This exhibit was compared against *pass_self_I+P_group_A.png*
- **Figure I2f** Reproduced. This exhibit was compared against *pass_self_all_group_A.png*
- **Table I7, Panel A** Reproduced. This exhibit was compared against *table_I7_panel_A.tex*
- **Table I7, Panel B** Reproduced. This exhibit was compared against *table_I7_panel_B.tex*
- **Table I7, Panel C** Reproduced. This exhibit was compared against *table_I7_panel_C.tex*
- **Figure I3** Reproduced. This exhibit was compared against *situation_group_A_B_post.png*
- **Table I10** Reproduced. The exhibit was compared against *table_I10.tex*.
- **Table I11** Reproduced. The exhibit was compared against *table_I11.tex*.

Reproduction Environment

Paper exhibits were reproduced on a computer with the following specifications:

- OS: Windows 11 Enterprise, version 23H2
- Processor: Intel(R) Xeon(R) Platinum 8562Y+ 2.80GHz (2 processors)
- Memory available: 32 GB
- Software version: Stata (StataNow) 18.5 MP-Parallel Edition