

Perfectly reproducible



Reproducibility Certificate

This is to certify that the results in the paper below have been assessed and found to meet the requirements of the cascad reproducibility policy for a rating of RRR.

Non-Standard Errors

Authors: Albert J. Menkveld, Anna Dreber, Felix Holzmeister, Juergen Huber, Magnus Johannesson, Michael Kirchler, Sebastian Neusüss, Michael Razen, Utz Weitzel

Type of certification: Paper (Free Trial)

Certification date: 11/24/2021



Major Concerns:

None. We reproduced the results with perfect accuracy.

Minor Concerns:

November 24, 2021 - cascad#211



Execution Report

Title: Non-Standard Errors Authors: Albert J. Menkveld , Anna Dreber, Felix Holzmeister, Jürgen Huber, Magnus Johannesson, Michael Kirchler, Sebastian Neusüss, Michael Razen, Utz Weitzel et al.

Full reference: Menkveld Albert J., Dreber Anna, Holzmeister Felix, Huber Jürgen, Magnus Johannesson, Kirchler Michael, Neusüss Sebastian, Razen Michael, Weitzel Utz, et al. "Non-Standard Errors", SSRN Working paper, November 23, 2021.

The structure and contents of this execution report provided by **cascad** for the certification are similar to those recommended by the <u>AEA Data Editor</u>.

1. DATA DESCRIPTION

This study relies on data collected from 164 teams that had to test six hypotheses on the same sample. It uses those their results to measure and explain the size of non-standard errors. For a thorough description of the data collected, please refer to section 2 of the paper.

2. CODE DESCRIPTION

For the purpose of this certification, we aimed to check the results displayed in Tables 1-5, OA.1-OA.13 and in Figures 1-5.

The replication materials are divided into four self-explanatory subfolders: "code", "input", "output" and "temp". A single Python script, "execute-pre-analysis-plan-v30.py", generates all the results.

3. REPLICATION STEPS

The replication material was downloaded from the repository, and run using Python 3.9 on a computer with 16GB RAM, intel[®] Core[™] i9-9900K CPU @3.60-5.00GHz, Nvidia Geforce RTX 2060, and Linux (Debian 11 distribution). We encountered no issues during the replication.

4. FINDINGS

We reproduced all figures and tables with perfect accuracy.

4.1. TABLE 1: SUMMARY STATISTICS

Original:

| I and (u): Quanty of the #inteup con | · | _ |
|--|-------------------|--------------------|
| | Research teams | Peer evaluators |
| Fraction with top econ/finance publications (see footnote 4) | 0.31 | 0.85 |
| Fraction including at least associate/full professor | 0.52 | 0.88 |
| Experience empirical-finance research (low-high, 1-10) | 8.1 (1.7) | 8.4 (1.8) |
| Experience market-liquidity research (low-high, 1-10) | 6.9 (2.4) | 7.8 (2.3) |
| Relevant experience (average of the above two items) | 7.5 (1.3) | 8.1 (1.7) |
| Fraction with "big data" experience (>#fincap sample) | 0.65 | 0.88 |
| Fraction teams consisting of two members (maximum team size) | 0.79 | |
| Number of observations | 164 | 34 |

Panel (a): Quality of the #fincap community

Panel (b): Quality of the analysis of research teams

| | Research teams |
|---|-------------------|
| Reproducibility score according to Cascad (low-high, 0-100) | 64.5 (43.7) |
| Paper quality as judged by peer evaluators (low-high, 0-10) | 6.2 (2.0) |

| | RT-H1 Efficiency | RT-H2 RSpread | RT-H3 Client Volume | RT-H4 Client RSpread | RT-H5 Client MOrders | RT-He Clien GTR |
|--------------------------------|---------------------|------------------|---------------------------|----------------------------|----------------------------|-----------------------|
| Estimate effect size | | | | | | |
| Mean | 446.3 | -1,093.4 | -3.5 | -38,276.1 | -3.5 | -87.1 |
| Mean (wins.) ^a | -7.4 | 9.0 | -2.6 | -2.1 | -0.3 | -27.0 |
| Mean (trim) ^b | -6.2 | 5.4 | -2.7 | 0.6 | -0.2 | -22. |
| SD | 5,817.5 | 14,537.2 | 9.4 | 490,024.2 | 37.6 | 728. |
| SD (wins.) ^a | 20.6 | 49.5 | 1.8 | 46.8 | 1.1 | 187. |
| SD (trim)b | 16.6 | 29.0 | 1.5 | 24.9 | 0.9 | 128. |
| Min | -171.1 | -186,074.5 | -117.5 | -6,275,383.0 | -452.9 | -8,254. |
| Q(0.10) | -23.7 | -6.9 | -3.8 | -6.7 | -1.6 | -192. |
| Q(0.25) | -6.2 | -3.6 | -3.5 | -2.1 | -0.6 | -18. |
| Median | -1.1 | -0.0 | -3.3 | 0.1 | -0.0 | 0. |
| Q(0.75) | 0.5 | 3.9 | -2.4 | 3.8 | 0.2 | 3. |
| Q(0.90) | 3.7 | 21.5 | -2.4 | 20.4 | 1.0 | 56. |
| Max | | | 8.7 | | | 1,119. |
| Standard error | 74,491.1 | 4,124.0 | 0.7 | 870.2 | 69.5 | 1,119. |
| Mean | 469.7 | 1 105 2 | 3.7 | 28 202 0 | 6.0 | 140 |
| Mean (wins.) ^a | 468.7 13.2 | 1,195.3 23.5 | | 38,302.0 26.9 | 6.2 1.7 | 148. |
| | | | 1.4 | | | 104. |
| Mean (trim) ^b SD | 10.8 | 16.4 | 1.3 | 18.8 | 1.4 | 80. 526. |
| | 5,810.6 | 14,711.9 | 29.5 | 489,929.5 | 40.1 | |
| SD (wins.) ^a | 27.0 | 60.8 | 1.6 | 75.3 | 2.6 | 237. |
| SD (trim) ^b | 21.2 | 38.8 | 1.3 | 53.1 | 1.7 | 174. |
| Min | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0. |
| Q(0.10) | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0. |
| Q(0.25) | 0.5 | 1.1 | 0.3 | 1.2 | 0.2 | 0. |
| Median | 2.5 | 5.0 | 1.4 | 4.4 | 1.0 | 9. |
| Q(0.75) | 9.3 | 13.9 | 2.0 | 14.3 | 2.4 | 77. |
| Q(0.90) | 44.7 | 39.6 | 2.2 | 31.2 | 3.1 | 235. |
| Max | 74,425.5 | 188,404.1 | 378.8 | 6,274,203.0 | 463.7 | 4,836. |
| t-value | | | | | | |
| Mean | -3.6 | 35.3 | -47.1 | 24.3 | -5.7 | -2. |
| Mean (wins.) ^a | -1.4 | -1.3 | -13.3 | -0.4 | 0.2 | -0. |
| Mean (trim) ^b | -1.1 | -1.0 | -11.6 | -0.3 | 0.0 | -0. |
| SD | 28.4 | 541.2 | 269.9 | 406.0 | 60.1 | 21. |
| SD (wins.) ^a | 5.2 | 4.1 | 25.4 | 3.0 | 4.2 | 2. |
| SD (trim) ^b | 3.4 | 3.3 | 22.0 | 2.4 | 2.6 | 1. |
| Min | -322.3 | -764.6 | -2,770.6 | -852.6 | -631.6 | -191. |
| Q(0.10) | -4.7 | -5.7 | -37.4 | -3.5 | -2.3 | -1. |
| Q(0.25) | -1.9 | -1.5 | -11.5 | -1.0 | -0.6 | -1. |
| Median | -0.7 | -0.1 | -1.8 | 0.1 | 0.0 | 0. |
| Q(0.75) | 0.3 | 0.8 | -1.6 | 1.0 | 0.8 | 0. |
| Q(0.90) | 1.7 | 1.5 | -0.3 | 1.6 | 1.7 | 1. |
| Max | 51.6 | 6,880.5 | 29.5 | 5,119.5 | 89.6 | 100. |
| More t-value statistics | | | | | | |
| t <-1.96 | 23.8% | 22.6% | 45.7% | 17.7% | 11.0% | 9.89 |
| t>1.96 | 8.5% | 6.1% | 3.7% | 9.1% | 9.8% | 3.09 |
| t >1.96 | 32.3% | 28.7% | 49.4% | 26.8% | 20.7% | 12.89 |
| Relative size NSE (wins.)c | | | | | | |
| NSE/SE ratio | 1.6 | 2.1 | 1.3 | 1.7 | 0.6 | 1. |

Panel (c): Dispersion across teams of estimates, SEs, and t-values

^a: Winsorized at 2.5%-97.5%. ^b: Trimmed at 2.5%-97.5%. ^c: The non-standard error of effect size is compared to the mean standard error of effect size for the winsorized sample.

Reproduced:

| | Research teams | Peer evaluators |
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| Fraction with top econ/finance publications (see footnote 4) | 0.31 | 0.85 |
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| Experience market-liquidity research (low-high, 1-10) | 6.9 (2.4) | 7.8 (2.3) |
| Relevant experience (average of the above two items) | 7.5 (1.3) | 8.1 (1.7) |
| Fraction with "big data" experience (>#fincap sample) | 0.65 | 0.88 |
| Fraction teams consisting of two members (maximum team size) | 0.79 | |
| Number of observations | 164 | 34 |

Panel (a): Quality of the #fincap community

Panel (b): Quality of the analysis of research teams

| | Research teams |
|---|-------------------|
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| Paper quality as judged by peer evaluators (low-high, 0-10) | 6.2 (2.0) |

| | RT-H1 Efficiency | RT-H2 RSpread | RT-H3 Client Volume | RT-H4 Client RSpread | RT-H5 Client MOrders | RT-He Clien GTR |
|--|---------------------|------------------|---------------------------|----------------------------|----------------------------|-----------------------|
| Estimate effect size | | | | | | |
| Mean | 446.3 | -1,093.4 | -3.5 | -38,276.1 | -3.5 | -87.1 |
| Mean (wins.) ^a | -7.4 | 9.0 | -2.6 | -2.1 | -0.3 | -27.6 |
| Mean (trim) ^b | -6.2 | 5.4 | -2.7 | 0.6 | -0.2 | -22.1 |
| SD | 5,817.5 | 14,537.2 | 9.4 | 490,024.2 | 37.6 | 728.9 |
| SD (wins.) ^a | 20.6 | 49.5 | 1.8 | 46.8 | 1.1 | 187.8 |
| SD (trim) ^b | 16.6 | 29.0 | 1.5 | 24.9 | 0.9 | 128.7 |
| Min | -171.1 | -186,074.5 | -117.5 | -6,275,383.0 | -452.9 | -8,254.9 |
| Q(0.10) | -23.7 | -6.9 | -3.8 | -6.7 | -1.6 | -192. |
| Q(0.25) | -6.2 | -3.6 | -3.5 | -2.1 | -0.6 | -18. |
| Median | -1.1 | -0.0 | -3.3 | 0.1 | -0.0 | 0. |
| Q(0.75) | 0.5 | 3.9 | -2.4 | 3.8 | 0.2 | 3.1 |
| Q(0.90) | 3.7 | 21.5 | -0.1 | 20.4 | 1.0 | 56. |
| Max | 74,491.1 | 4,124.0 | 8.7 | 870.2 | 69.5 | 1,119.0 |
| Standard error | 74,451.1 | 4,124.0 | 0.7 | 070.2 | 00.0 | 1,110. |
| Mean | 468.7 | 1,195.3 | 3.7 | 38,302.0 | 6.2 | 148. |
| Mean (wins.) ^a | 13.2 | 23.5 | 1.4 | 26.9 | 1.7 | 104. |
| Mean (trim) ^b | 10.8 | 16.4 | 1.3 | 18.8 | 1.4 | 80. |
| SD | 5,810.6 | 14,711.9 | 29.5 | 489,929.5 | 40.1 | 526. |
| SD (wins.) ^a | 27.0 | 60.8 | 1.6 | 409,929.5 | 2.6 | 237. |
| | | | | | | |
| SD (trim) ^b Min | 21.2 0.0 | 38.8 | 1.3 | 53.1 | 1.7 | 174. |
| | | 0.0 | 0.0 | 0.0 | 0.0 | 0. |
| Q(0.10) | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0. |
| Q(0.25) | 0.5 | 1.1 | 0.3 | 1.2 | 0.2 | 0. |
| Median | 2.5 | 5.0 | 1.4 | 4.4 | 1.0 | 9. |
| Q(0.75) | 9.3 | 13.9 | 2.0 | 14.3 | 2.4 | 77. |
| Q(0.90) | 44.7 | 39.6 | 2.2 | 31.2 | 3.1 | 235. |
| Max | 74,425.5 | 188,404.1 | 378.8 | 6,274,203.0 | 463.7 | 4,836. |
| t-value | | | | | | |
| Mean | -3.6 | 35.3 | -47.1 | 24.3 | -5.7 | -2. |
| Mean (wins.) ^a | -1.4 | -1.3 | -13.3 | -0.4 | 0.2 | -0. |
| Mean (trim) ^b | -1.1 | -1.0 | -11.6 | -0.3 | 0.0 | -0. |
| SD SD | 28.4 | 541.2 | 269.9 | 406.0 | 60.1 | 21. |
| SD (wins.) ^a | 5.2 | 4.1 | 25.4 | 3.0 | 4.2 | 2. |
| SD (trim) ^b | 3.4 | 3.3 | 22.0 | 2.4 | 2.6 | 1. |
| Min | -322.3 | -764.6 | -2,770.6 | -852.6 | -631.6 | -191. |
| Q(0.10) | -4.7 | -5.7 | -37.4 | -3.5 | -2.3 | -1. |
| Q(0.25) | -1.9 | -1.5 | -11.5 | -1.0 | -0.6 | -1. |
| Median | -0.7 | -0.1 | -1.8 | 0.1 | 0.0 | 0. |
| Q(0.75) | 0.3 | 0.8 | -1.6 | 1.0 | 0.8 | 0. |
| Q(0.90) | 1.7 | 1.5 | -0.3 | 1.6 | 1.7 | 1. |
| Max | 51.6 | 6,880.5 | 29.5 | 5,119.5 | 89.6 | 100. |
| More t-value statistics | | | | | | |
| t <-1.96 | 23.8% | 22.6% | 45.7% | 17.7% | 11.0% | 9.8% |
| t>1.96 | 8.5% | 6.1% | 3.7% | 9.1% | 9.8% | 3.09 |
| t >1.96 | 32.3% | 28.7% | 49.4% | 26.8% | 20.7% | 12.89 |
| Relative size NSE (wins.) ^c | | | | | | |
| NSE/SE ratio | 1.6 | 2.1 | 1.3 | 1.7 | 0.6 | 1. |

Panel (c): Dispersion across teams of estimates, SEs, and t-values

^a: Winsorized at 2.5%-97.5%. ^b: Trimmed at 2.5%-97.5%. ^c: The non-standard error of effect size is compared to the mean standard error of effect size for the winsorized sample.

Panel (a): Correlation team quality measures

| | Publications | Experience | Big Data | Position | #Members |
|--------------|--------------|------------|----------|----------|----------|
| Publications | | 0.34 | 0.10 | 0.54 | 0.30 |
| Experience | | | -0.18 | 0.25 | 0.12 |
| Big Data | | | | 0.14 | 0.14 |
| Position | | | | | 0.16 |

Panel (b): Fraction of variance explained

| | PC1 | PC2 | PC3 | PC4 | PC5 |
|--------------------|-------|-------|-------|-------|------|
| Variance explained | 38.3% | 23.6% | 17.1% | 12.4% | 8.6% |

Panel (c): Loading of principal components on variables

| | Publications | Experience | Big Data | Position | #Members |
|-----|--------------|------------|----------|----------|----------|
| PC1 | 0.61 | 0.40 | 0.13 | 0.55 | 0.37 |
| PC2 | -0.01 | -0.55 | 0.79 | 0.05 | 0.26 |
| PC3 | -0.10 | 0.06 | -0.21 | -0.46 | 0.86 |
| PC4 | -0.20 | 0.71 | 0.56 | -0.35 | -0.12 |
| PC5 | -0.76 | 0.14 | -0.02 | 0.60 | 0.22 |

Panel (a): Correlation team quality measures

| 1 41 | Tallet (d). Correlation deality measures | | | | | | |
|--------------|--|------------|----------|----------|----------|--|--|
| | Publications | Experience | Big Data | Position | #Members | | |
| Publications | | 0.34 | 0.10 | 0.54 | 0.30 | | |
| Experience | | | -0.18 | 0.25 | 0.12 | | |
| Big Data | | | | 0.14 | 0.14 | | |
| Position | | | | | 0.16 | | |

| Panel (b): | Fraction (| of variance | explained |
|------------|------------|-------------|-----------|

| | PC1 | PC2 | PC3 | PC4 | PC5 |
|--------------------|-------|-------|-------|-------|------|
| Variance explained | 38.3% | 23.6% | 17.1% | 12.4% | 8.6% |

Panel (c): Loading of principal components on variables

| | Publications | Experience | Big Data | Position | #Members |
|-----|--------------|------------|----------|----------|----------|
| PC1 | 0.61 | 0.40 | 0.13 | 0.55 | 0.37 |
| PC2 | -0.01 | -0.55 | 0.79 | 0.05 | 0.26 |
| PC3 | -0.10 | 0.06 | -0.21 | -0.46 | 0.86 |
| PC4 | -0.20 | 0.71 | 0.56 | -0.35 | -0.12 |
| PC5 | -0.76 | 0.14 | -0.02 | 0.60 | 0.22 |

Panel (a): Estimates

| | Raw | Wins | Raw Winsorized | | Trimmed | |
|--------------------------------------|-----------------|-----------------|---------------------|-----------------|---------------------|--|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% | |
| Team quality (standardized) | 0.01 (0.06) | -0.13 (0.07) | -0.16* (0.08) | -0.12 (0.06) | -0.12 (0.08) | |
| Reproducibility score (standardized) | -0.13 (0.07) | -0.15 (0.09) | -0.24** (0.08) | -0.13 (0.09) | -0.08 (0.08) | |
| Average rating (standardized) | -0.12 (0.07) | -0.14 (0.10) | -0.18 (0.09) | -0.17 (0.11) | -0.17 (0.09) | |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes | |
| R ² | 0.95 | 0.73 | 0.65 | 0.72 | 0.63 | |
| #Observations | 984 | 984 | 984 | 972 | 936 | |

Panel (b): t-values

| | Raw | Wins | sorized | Trim | med |
|--------------------------------------|-----------------|-----------------|---------------------|------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Team quality (standardized) | -0.00 (0.08) | -0.01 (0.09) | 0.00 (0.11) | -0.05 (0.09) | 0.05 (0.10) |
| Reproducibility score (standardized) | -0.12 (0.09) | -0.18 (0.09) | -0.23* (0.11) | -0.21* (0.08) | -0.09 (0.10) |
| Average rating (standardized) | -0.15 (0.12) | -0.21 (0.13) | -0.09 (0.12) | -0.01 (0.10) | 0.02 (0.11) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.71 | 0.49 | 0.37 | 0.49 | 0.32 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

Reproduced:

| | Raw Winsorized | | | Trim | med |
|--------------------------------------|-----------------|-----------------|---------------------|-----------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Team quality (standardized) | 0.01 (0.06) | -0.13 (0.07) | -0.16* (0.08) | -0.12 (0.06) | -0.12 (0.08) |
| Reproducibility score (standardized) | -0.13 (0.07) | -0.15 (0.09) | -0.24** (0.08) | -0.13 (0.09) | -0.08 (0.08) |
| Average rating (standardized) | -0.12 (0.07) | -0.14 (0.10) | -0.18 (0.09) | -0.17 (0.11) | -0.17 (0.09) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.95 | 0.73 | 0.65 | 0.72 | 0.63 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

| | Raw | Wins | sorized | Trim | med |
|--------------------------------------|-----------------|-----------------|---------------------|------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Team quality (standardized) | -0.00 (0.08) | -0.01 (0.09) | 0.00 (0.11) | -0.05 (0.09) | 0.05 (0.10) |
| Reproducibility score (standardized) | -0.12 (0.09) | -0.18 (0.09) | -0.23* (0.11) | -0.21* (0.08) | -0.09 (0.10) |
| Average rating (standardized) | -0.15 (0.12) | -0.21 (0.13) | -0.09 (0.12) | -0.01 (0.10) | 0.02 (0.11) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.71 | 0.49 | 0.37 | 0.49 | 0.32 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

| | Raw | Winse | orized | Trimmed | | |
|-------------------------------|-------------------|-------------------|---------------------|-------------------|---------------------|--|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% | |
| Dummy Stage 2 - Dummy Stage 1 | -0.11* (0.05) | -0.24* (0.09) | -0.29* (0.11) | -0.30** (0.10) | -0.21* (0.11) | |
| Dummy Stage 3 - Dummy Stage 2 | 0.04 (0.03) | -0.26** (0.07) | -0.40** (0.09) | -0.21* (0.09) | -0.40** (0.09) | |
| Dummy Stage 4 - Dummy Stage 3 | -0.10** (0.03) | -0.26** (0.05) | -0.38** (0.06) | -0.25** (0.05) | -0.39** (0.06) | |
| Dummy Stage 4 - Dummy Stage 1 | -0.17* (0.06) | -0.75** (0.10) | -1.07** (0.12) | -0.76** (0.10) | -1.00** (0.12) | |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes | |
| R ² | 0.96 | 0.58 | 0.51 | 0.54 | 0.50 | |
| #Observations | 3,936 | 3,936 | 3,936 | 3,888 | 3,744 | |

| | Raw | Winso | orized | Trimmed | | |
|-------------------------------|-------------------|-------------------|---------------------|-------------------|---------------------|--|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% | |
| Dummy Stage 2 - Dummy Stage 1 | -0.01 (0.07) | 0.04 (0.09) | 0.28** (0.09) | 0.10 (0.08) | 0.24* (0.08) | |
| Dummy Stage 3 - Dummy Stage 2 | -0.20** (0.06) | -0.23* (0.09) | -0.08 (0.08) | -0.14 (0.09) | 0.14 (0.07) | |
| Dummy Stage 4 - Dummy Stage 3 | -0.06 (0.03) | -0.32** (0.05) | -0.61** (0.08) | -0.43** (0.07) | -0.73** (0.09) | |
| Dummy Stage 4 - Dummy Stage 1 | -0.26** (0.09) | -0.51** (0.11) | -0.41** (0.12) | -0.46** (0.11) | -0.36** (0.12) | |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes | |
| R ² | 0.76 | 0.57 | 0.42 | 0.47 | 0.39 | |
| #Observations | 3,936 | 3,936 | 3,936 | 3,888 | 3,744 | |

Reproduced:

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Panel (a): Estimates

| | Raw | Winse | orized | Trimm | ned |
|-------------------------------|-------------------|-------------------|---------------------|-------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Dummy Stage 2 - Dummy Stage 1 | -0.11* (0.05) | -0.24* (0.09) | -0.29* (0.11) | -0.30** (0.10) | -0.21* (0.11) |
| Dummy Stage 3 - Dummy Stage 2 | 0.04 (0.03) | -0.26** (0.07) | -0.40** (0.09) | -0.21* (0.09) | -0.40* (0.09) |
| Dummy Stage 4 - Dummy Stage 3 | -0.10** (0.03) | -0.26** (0.05) | -0.38** (0.06) | -0.25** (0.05) | -0.39* |
| Dummy Stage 4 - Dummy Stage 1 | -0.17* (0.06) | -0.75** (0.10) | -1.07** (0.12) | -0.76** (0.10) | -1.00* (0.12) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.96 | 0.58 | 0.51 | 0.54 | 0.50 |
| #Observations | 3,936 | 3.936 | 3,936 | 3.888 | 3,744 |

Panel (b): t-values

| | Raw | Winso | orized | Trimm | ned |
|-------------------------------|-------------------|-------------------|---------------------|-------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Dummy Stage 2 - Dummy Stage 1 | -0.01 (0.07) | 0.04 (0.09) | 0.28** (0.09) | 0.10 (0.08) | 0.24* (0.08) |
| Dummy Stage 3 - Dummy Stage 2 | -0.20** (0.06) | -0.23* (0.09) | -0.08 (0.08) | -0.14 (0.09) | 0.14 (0.07) |
| Dummy Stage 4 - Dummy Stage 3 | -0.06 (0.03) | -0.32** (0.05) | -0.61** (0.08) | -0.43** (0.07) | -0.73** (0.09) |
| Dummy Stage 4 - Dummy Stage 1 | -0.26** (0.09) | -0.51** (0.11) | -0.41** (0.12) | -0.46** (0.11) | -0.36** (0.12) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.76 | 0.57 | 0.42 | 0.47 | 0.39 |
| #Observations | 3,936 | 3,936 | 3,936 | 3,888 | 3,744 |

| | RT-H1 Efficiency | RT-H2 RSpread | RT-H3 Client Volume | RT-H4 Client RSpread | RT-H5 Client MOrders | RT-H6 Client GTR | All |
|----------|---------------------|------------------|---------------------------|----------------------------|----------------------------|------------------------|----------|
| Estimate | -99.5%** | -95.4%** | -9.0% | -97.5%** | -45.3% | -83.3%** | -71.7%** |
| | (0.00) | (0.00) | (0.64) | (0.00) | (0.50) | (0.00) | (0.00) |
| t-value | 15.9% | -96.0%** | -92.4%** | -97.1%** | -86.0%** | -68.2%** | -70.6%** |
| | (0.19) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |

| | RT-H1 Efficiency | RT-H2 RSpread | RT-H3 Client Volume | RT-H4 Client RSpread | RT-H5 Client MOrders | RT-H6 Client GTR | All |
|----------|---------------------|------------------|---------------------------|----------------------------|----------------------------|------------------------|----------|
| Estimate | -99.5%** | -95.4%** | -9.0% | -97.5%** | -45.3% | -83.3%** | -71.7%** |
| | (0.00) | (0.00) | (0.64) | (0.00) | (0.50) | (0.00) | (0.00) |
| t-value | 15.9% | -96.0%** | -92.4%** | -97.1%** | -86.0%** | -68.2%** | -70.6%** |
| | (0.19) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |



Residence of peer evaluators

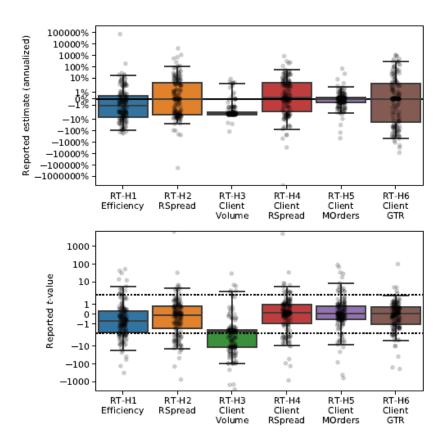


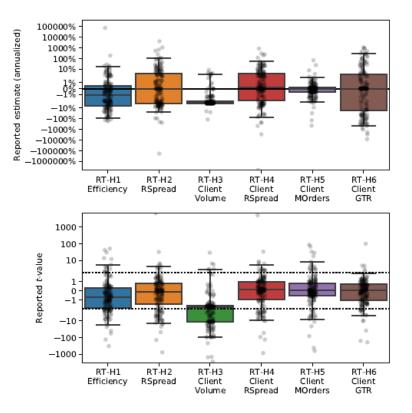
Residence of research-team members



Residence of peer evaluators





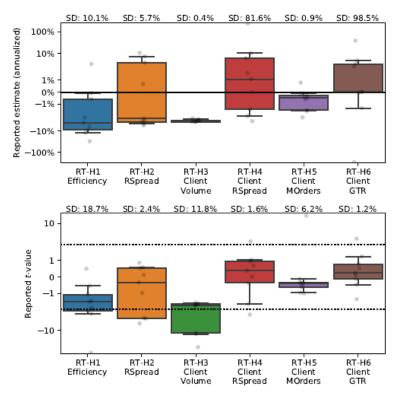


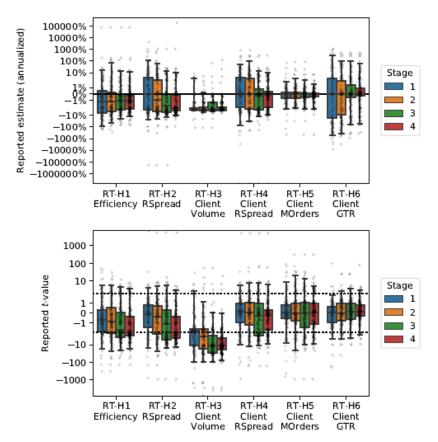
SD: 10.1% SD: 81.6% SD: 0.9% SD: 5.7% SD: 0.4% SD: 98.5% 100% Reported estimate (annualized) 10% 1% 0% -1% -10% -100% RT-H1 Efficiency RT-H2 RT-H3 RT-H6 RT-H4 RT-H5 RSpread Client Client Client Client MOrders Volume RSpread GTR SD: 18.7% SD: 2.4% SD: 11.8% SD: 1.6% SD: 6.2% SD: 1.2% 10 Reported t-value 1 0 -10RT-H1 Efficiency RT-H5 Client MOrders RT-H6 Client GTR RT-H2 RT-H3 RT-H4 Client RSpread Client RSpread

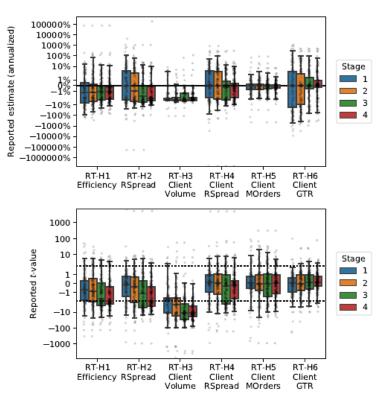
Volume

Original:

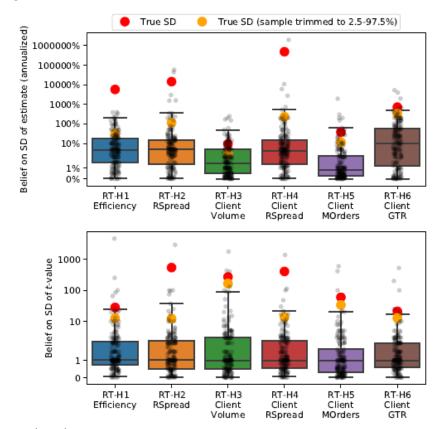
Reproduced:



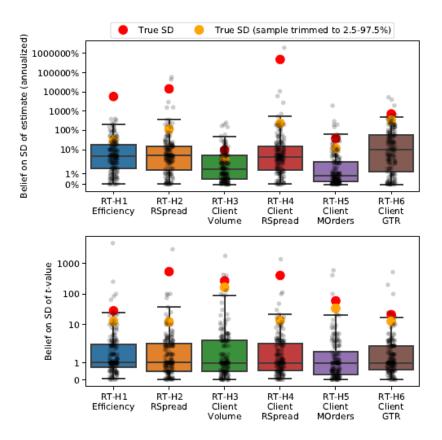




4.10. FIGURE 5: DISPERSION RESEARCH TEAM BELIEFS



Original:



4.11. TABLE OA.1: SUMMARY STATISTICS STAGE-2 DISPERSION

Original:

| | RT-H1 Efficiency | RT-H2 RSpread | RT-H3 Client Volume | RT-H4 Client RSpread | RT-H5 Client MOrders | RT-H6 Client GTR |
|----------------------------|---------------------|------------------|---------------------------|----------------------------|----------------------------|------------------------|
| Estimate effect size | | | | | | |
| Mean | 451.2 | -1,122.2 | -3.6 | -38,254.7 | 0.4 | -37.1 |
| Mean (wins.) ^a | -1.0 | 2.3 | -2.8 | 4.3 | -0.1 | -25.1 |
| Mean (trim) ^b | -2.0 | 1.0 | -2.8 | 2.4 | -0.2 | -18.3 |
| SD | 5,817.1 | 14,531.4 | 9.2 | 490,025.9 | 7.5 | 264.7 |
| SD (wins.) ^a | 22.3 | 17.3 | 1.4 | 23.5 | 1.6 | 97.9 |
| SD (trim) ^b | 13.6 | 11.9 | 1.3 | 14.9 | 1.1 | 75.6 |
| Min | -291.3 | -186,074.5 | -117.5 | -6,275,383.0 | -30.8 | -3,024.9 |
| Q(0.10) | -13.1 | -7.7 | -3.8 | -5.8 | -1.8 | -83.4 |
| Q(0.25) | -4.4 | -4.7 | -3.7 | -2.7 | -0.6 | -9.4 |
| Median | -1.2 | -0.9 | -3.3 | 0.0 | -0.0 | -0.0 |
| Q(0.75) | 0.3 | 2.5 | -2.1 | 3.5 | 0.2 | 2.1 |
| Q(0.90) | 3.4 | 12.6 | -0.3 | 14.2 | 1.1 | 33.7 |
| Max | 74,491.1 | 1,098.0 | 4.8 | 870.2 | 86.1 | 486.5 |
| Standard error | | - | | | | |
| Mean | 462.2 | 1,166.4 | 3.5 | 38,279.4 | 2.0 | 86.3 |
| Mean (wins.) ^a | 8.3 | 16.2 | 1.1 | 12.9 | 1.1 | 60.6 |
| Mean (trim) ^b | 7.0 | 11.1 | 1.0 | 9.8 | 1.0 | 43.6 |
| SD | 5,811.0 | 14,710.6 | 29.6 | 489,931.2 | 8.0 | 308.4 |
| SD (wins.) ^a | 16.4 | 44.2 | 1.6 | 30.7 | 1.4 | 151.7 |
| SD (trim) ^b | 13.9 | 29.1 | 1.2 | 22.8 | 1.2 | 101.1 |
| Min | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Q(0.10) | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Q(0.25) | 0.4 | 0.5 | 0.1 | 0.7 | 0.1 | 0.3 |
| Median | 1.4 | 3.3 | 0.4 | 3.0 | 0.5 | 4.9 |
| Q(0.75) | 5.8 | 8.4 | 1.9 | 9.0 | 1.4 | 45.5 |
| Q(0.90) | 29.0 | 28.5 | 2.0 | 24.7 | 2.8 | 160.7 |
| Max | 74,425.5 | 188,404.1 | 378.8 | 6,274,203.0 | 86.1 | 2,740.2 |
| t-value | | | | | | |
| Mean | -4.8 | 24.9 | -99.4 | 28.8 | -3.5 | -0.1 |
| Mean (wins.) ^a | -2.6 | -2.5 | -53.5 | -0.6 | 0.2 | -0.2 |
| Mean (trim) ^b | -1.8 | -1.8 | -22.3 | -0.5 | 0.0 | -0.1 |
| SD | 28.4 | 434.5 | 627.1 | 400.5 | 73.8 | 4.4 |
| SD (wins.) ^a | 8.5 | 7.5 | 227.8 | 3.9 | 7.6 | 1.6 |
| SD (trim) ^b | 5.4 | 5.0 | 107.5 | 3.1 | 5.1 | 1.3 |
| Min | -322.3 | -907.7 | -7,208.7 | -160.0 | -876.2 | -38.3 |
| Q(0.10) | -7.3 | -8.4 | -45.4 | -5.0 | -3.7 | -2.0 |
| Q(0.25) | -2.3 | -2.5 | -17.4 | -1.2 | -0.8 | -0.8 |
| Median | -0.8 | -0.4 | -3.5 | 0.0 | -0.1 | -0.0 |
| Q(0.75) | 0.5 | 0.7 | -1.7 | 1.0 | 1.0 | 1.0 |
| Q(0.90) | 2.3 | 1.6 | -0.4 | 2.5 | 3.1 | 1.4 |
| Max | 30.8 | 5,479.5 | 56.1 | 5,120.8 | 318.8 | 25.2 |
| More t-value statistics | | | | , | | |
| t <-1.96 | 30.5% | 29.3% | 57.3% | 19.5% | 14.0% | 10.4% |
| t>1.96 | 13.4% | 7.3% | 3.0% | 11.6% | 15.2% | 4.9% |
| t > 1.96 | 43.9% | 36.6% | 60.4% | 31.1% | 29.3% | 15.2% |
| Relative size NSE (wins.)c | | | | | | |
| NSE/SE ratio | 2.7 | 1.1 | 1.3 | 1.8 | 1.5 | 1.6 |

| | RT-H1 Efficiency | RT-H2 RSpread | RT-H3 Client Volume | RT-H4 Client RSpread | RT-H5 Client MOrders | RT-H6 Client GTR |
|---|---------------------|------------------|---------------------------|----------------------------|----------------------------|------------------------|
| Estimate effect size | | | | | | |
| Mean | 451.2 | -1,122.2 | -3.6 | -38,254.7 | 0.4 | -37.1 |
| Mean (wins.) ^a | -1.0 | 2.3 | -2.8 | 4.3 | -0.1 | -25.1 |
| Mean (trim) ^b | -2.0 | 1.0 | -2.8 | 2.4 | -0.2 | -18.3 |
| SD | 5,817.1 | 14,531.4 | 9.2 | 490,025.9 | 7.5 | 264.7 |
| SD (wins.) ^a | 22.3 | 17.3 | 1.4 | 23.5 | 1.6 | 97.9 |
| SD (trim) ^b | 13.6 | 11.9 | 1.3 | 14.9 | 1.1 | 75.6 |
| Min | -291.3 | -186,074.5 | -117.5 | -6,275,383.0 | -30.8 | -3,024.9 |
| Q(0.10) | -13.1 | -7.7 | -3.8 | -5.8 | -1.8 | -83.4 |
| Q(0.25) | -4.4 | -4.7 | -3.7 | -2.7 | -0.6 | -9.4 |
| Median | -1.2 | -0.9 | -3.3 | 0.0 | -0.0 | -0.0 |
| Q(0.75) | 0.3 | 2.5 | -2.1 | 3.5 | 0.2 | 2.1 |
| Q(0.90) | 3.4 | 12.6 | -0.3 | 14.2 | 1.1 | 33.7 |
| Max | 74,491.1 | 1,098.0 | 4.8 | 870.2 | 86.1 | 486.5 |
| Standard error | , | ., | | | | |
| Mean | 462.2 | 1,166.4 | 3.5 | 38,279.4 | 2.0 | 86.3 |
| Mean (wins.) ^a | 8.3 | 16.2 | 1.1 | 12.9 | 1.1 | 60.6 |
| Mean (trim) ^b | 7.0 | 11.1 | 1.0 | 9.8 | 1.0 | 43.6 |
| SD | 5,811.0 | 14,710.6 | 29.6 | 489,931.2 | 8.0 | 308.4 |
| SD (wins.) ^a | 16.4 | 44.2 | 1.6 | 30.7 | 1.4 | 151.7 |
| SD (trim) ^b | 13.9 | 29.1 | 1.2 | 22.8 | 1.2 | 101.1 |
| Min | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Q(0.10) | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Q(0.25) | 0.4 | 0.5 | 0.1 | 0.7 | 0.1 | 0.3 |
| Median | 1.4 | 3.3 | 0.4 | 3.0 | 0.5 | 4.9 |
| Q(0.75) | 5.8 | 8.4 | 1.9 | 9.0 | 1.4 | 45.5 |
| Q(0.90) | 29.0 | 28.5 | 2.0 | 24.7 | 2.8 | 160.7 |
| Max | 74,425.5 | 188,404.1 | 378.8 | 6,274,203.0 | 86.1 | 2,740.2 |
| t-value | 74,420.0 | 100,404.1 | 370.0 | 0,274,203.0 | 00.1 | 2,740.2 |
| Mean | -4.8 | 24.9 | -99.4 | 28.8 | -3.5 | -0.1 |
| Mean (wins.) ^a | -4.0 | -2.5 | -53.5 | -0.6 | 0.2 | -0.2 |
| Mean (trim) ^b | -1.8 | -2.5 | -22.3 | -0.5 | 0.2 | -0.2 |
| SD | 28.4 | 434.5 | 627.1 | 400.5 | 73.8 | 4.4 |
| SD (wins.) ^a | 20.4 | 434.5 | 227.8 | 400.5 | 7.6 | 4.4 |
| SD (trim) ^b | 5.4 | 5.0 | | | 5.1 | |
| Min | -322.3 | | 107.5 | 3.1 | | 1.3 |
| | | -907.7 | -7,208.7 | -160.0 | -876.2 | -38.3 |
| Q(0.10) | -7.3 | -8.4 | -45.4 | -5.0 | -3.7 | -2.0 |
| Q(0.25) | -2.3 | -2.5 | -17.4 -3.5 | -1.2 | -0.8 | -0.8 |
| Median | -0.8 | -0.4 | | 0.0 | -0.1 | -0.0 |
| Q(0.75) | 0.5 | 0.7 | -1.7 | 1.0 | 1.0 | 1.0 |
| Q(0.90) | 2.3 | 1.6 | -0.4 | 2.5 | 3.1 | 1.4 |
| Max Mara t value statistics | 30.8 | 5,479.5 | 56.1 | 5,120.8 | 318.8 | 25.2 |
| More t-value statistics | 00.50 | 00.00/ | E7 00/ | 10.5% | 14.00/ | 10.40/ |
| t <-1.96 | 30.5% | 29.3% | 57.3% | 19.5% | 14.0% | 10.4% |
| t > 1.96 | 13.4% | 7.3% | 3.0% | 11.6% | 15.2% | 4.9% |
| t > 1.96 Relative size NEE (wine)6 | 43.9% | 36.6% | 60.4% | 31.1% | 29.3% | 15.2% |
| Relative size NSE (wins.) ^c | 07 | | 1.0 | 10 | 1.5 | 10 |
| NSE/SE ratio | 2.7 | 1.1 | 1.3 | 1.8 | 1.5 | 1.6 |

4.12. TABLE OA.2: SUMMARY STATISTICS STAGE-3 DISPERSION

| | RT-H1 Efficiency | RT-H2 RSpread | RT-H3 Client Volume | RT-H4 Client RSpread | RT-H5 Client MOrders | RT-H6 Client GTR |
|--|---------------------|------------------|---------------------------|----------------------------|----------------------------|------------------------|
| Estimate effect size | | | | | | |
| Mean | 453.4 | -1,130.6 | -3.1 | -38,263.4 | -2.4 | -2.4 |
| Mean (wins.) ^a | -1.8 | -1.9 | -2.8 | -0.6 | -0.2 | 1.3 |
| Mean (trim) ^b | -1.6 | -1.9 | -2.8 | -0.8 | -0.2 | 0.6 |
| SD | 5,816.9 | 14,530.5 | 10.7 | 490,025.2 | 36.2 | 105.9 |
| SD (wins.) ^a | 6.9 | 7.1 | 1.4 | 5.7 | 1.1 | 26.6 |
| SD (trim) ^b | 4.9 | 5.4 | 1.3 | 4.6 | 0.9 | 19.1 |
| Min | -70.5 | -186,074.0 | -117.5 | -6,275,383.0 | -452.9 | -898.7 |
| Q(0.10) | -6.7 | -8.0 | -3.9 | -7.1 | -1.7 | -15.1 |
| Q(0.25) | -3.2 | -5.7 | -3.8 | -3.4 | -0.6 | -0.5 |
| Median | -1.0 | -1.8 | -3.3 | -0.3 | -0.0 | 0.0 |
| Q(0.75) | -0.0 | 0.0 | -1.3 | 0.8 | 0.2 | 1.4 |
| Q(0.90) | 2.2 | 5.5 | -0.4 | 5.3 | 0.9 | 12.8 |
| Max | 74,491.1 | 1,098.0 | 66.7 | 302.4 | 86.1 | 486.5 |
| Standard error | , | ., | | | | |
| Mean | 458.6 | 1,156.2 | 3.0 | 38,264.0 | 4.2 | 40.5 |
| Mean (wins.) ^a | 4.8 | 5.5 | 0.6 | 6.4 | 0.8 | 28.9 |
| Mean (trim) ^b | 3.4 | 4.0 | 0.5 | 4.0 | 0.6 | 19.8 |
| SD | 5,811.3 | 14,711.3 | 29.6 | 489,932.4 | 36.8 | 149.5 |
| SD (wins.) ^a | 13.2 | 13.8 | 0.8 | 19.3 | 1.6 | 80.2 |
| SD (trim) ^b | 9.4 | 9.0 | 0.7 | 10.6 | 1.0 | 53.5 |
| Min | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Q(0.10) | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| Q(0.25) | 0.3 | 0.4 | 0.1 | 0.4 | 0.1 | 0.0 |
| Median | 0.6 | 1.1 | 0.2 | 1.2 | 0.3 | 1.6 |
| Q(0.75) | 2.1 | 3.8 | 0.7 | 3.4 | 0.7 | 8.0 |
| Q(0.90) | 7.9 | 10.0 | 2.0 | 10.1 | 1.9 | 58.5 |
| Max | 74,425.5 | 188,404.0 | 378.8 | 6,274,203.0 | 463.7 | 1,149.3 |
| t-value | 74,420.0 | 100,404.0 | 575.5 | 0,274,200.0 | 400.7 | 1,145.5 |
| Mean | -3.7 | 25.2 | -56.5 | 29.8 | -3.3 | 0.3 |
| Mean (wins.)ª | -2.7 | -2.6 | -18.1 | -1.1 | 0.0 | 0.1 |
| Mean (trim) ^b | -2.4 | -2.5 | -16.7 | -1.0 | -0.1 | 0.1 |
| SD | 12.5 | 434.4 | 363.3 | 400.3 | 73.2 | 3.3 |
| SD (wins.) ^a | 5.5 | 4.8 | 21.3 | 400.3 | 4.8 | 1.6 |
| SD (trim) ^b | 4.4 | 4.0 | 18.0 | 3.3 | 3.5 | 1.3 |
| Min | -131.7 | -908.3 | -3,800.0 | -160.0 | -876.2 | -10.2 |
| | -131.7 | | - | | -676.2 | |
| Q(0.10) | | -8.8 -5.1 | -36.5 -28.5 | -5.5 -2.9 | -4.2 | -1.6 -0.6 |
| Q(0.25) | -3.8 | | | | | |
| Median | -1.8 | -1.2 | -11.1 | -0.3 | -0.0 | 0.1 |
| Q(0.75) | 0.1 | 0.3 | -3.1 | 0.9 | 1.0 | 1.0 |
| Q(0.90) Max | 2.2 11.9 | 1.6 5 470 5 | -1.4 | 2.5 | 3.5 | 1.6 |
| | 11.9 | 5,479.5 | 56.1 | 5,120.8 | 318.8 | 25.2 |
| More t-value statistics | 45.40 | 44.50 | 77 40/ | 00.50/ | 00.10/ | 7.00/ |
| t <-1.96 | 45.1% | 44.5% | 77.4% | 33.5% | 20.1% | 7.9% |
| t >1.96 | 11.0% | 8.5% | 1.8% | 12.8% | 15.9% | 7.3% |
| t > 1.96 Polativo cizo NSE (winc) ⁶ | 56.1% | 53.0% | 79.3% | 46.3% | 36.0% | 15.2% |
| Relative size NSE (wins.) ^c NSE/SE ratio | 1.4 | 1.3 | 2.3 | 0.9 | 1.4 | 0.9 |
| NOE/OE TANU | 1.4 | 1.3 | 2.3 | 0.9 | 1.4 | 0.9 |

| | RT-H1 | RT-H2 | RT-H3 Client | RT-H4 Client | RT-H5 Client | RT-H6 Client |
|--|------------|------------|-----------------|-----------------|-----------------|-----------------|
| | Efficiency | RSpread | Volume | RSpread | MOrders | GTR |
| Estimate effect size | | | | | | |
| Mean | 453.4 | -1,130.6 | -3.1 | -38,263.4 | -2.4 | -2.4 |
| Mean (wins.) ^a | -1.8 | -1.9 | -2.8 | -0.6 | -0.2 | 1.3 |
| Mean (trim) ^b | -1.6 | -1.9 | -2.8 | -0.8 | -0.2 | 0.6 |
| SD | 5,816.9 | 14,530.5 | 10.7 | 490,025.2 | 36.2 | 105.9 |
| SD (wins.) ^a | 6.9 | 7.1 | 1.4 | 5.7 | 1.1 | 26.6 |
| SD (trim) ^b | 4.9 | 5.4 | 1.3 | 4.6 | 0.9 | 19.1 |
| Min | -70.5 | -186,074.0 | -117.5 | -6,275,383.0 | -452.9 | -898.7 |
| Q(0.10) | -6.7 | -8.0 | -3.9 | -7.1 | -1.7 | -15.1 |
| Q(0.25) | -3.2 | -5.7 | -3.8 | -3.4 | -0.6 | -0.5 |
| Median | -1.0 | -1.8 | -3.3 | -0.3 | -0.0 | 0.0 |
| Q(0.75) | -0.0 | 0.0 | -1.3 | 0.8 | 0.2 | 1.4 |
| Q(0.90) | 2.2 | 5.5 | -0.4 | 5.3 | 0.9 | 12.8 |
| Max | 74,491.1 | 1,098.0 | 66.7 | 302.4 | 86.1 | 486.5 |
| Standard error | | | | | | |
| Mean | 458.6 | 1,156.2 | 3.0 | 38,264.0 | 4.2 | 40.5 |
| Mean (wins.) ^a | 4.8 | 5.5 | 0.6 | 6.4 | 0.8 | 28.9 |
| Mean (trim) ^b | 3.4 | 4.0 | 0.5 | 4.0 | 0.6 | 19.8 |
| SD | 5,811.3 | 14,711.3 | 29.6 | 489,932.4 | 36.8 | 149.5 |
| SD (wins.) ^a | 13.2 | 13.8 | 0.8 | 19.3 | 1.6 | 80.2 |
| SD (trim) ^b | 9.4 | 9.0 | 0.7 | 10.6 | 1.0 | 53.5 |
| Min | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Q(0.10) | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| Q(0.25) | 0.3 | 0.4 | 0.1 | 0.4 | 0.1 | 0.0 |
| Median | 0.6 | 1.1 | 0.2 | 1.2 | 0.3 | 1.6 |
| Q(0.75) | 2.1 | 3.8 | 0.7 | 3.4 | 0.7 | 8.0 |
| Q(0.90) | 7.9 | 10.0 | 2.0 | 10.1 | 1.9 | 58.5 |
| Max | 74,425.5 | 188,404.0 | 378.8 | 6,274,203.0 | 463.7 | 1,149.3 |
| t-value | | | | | | |
| Mean | -3.7 | 25.2 | -56.5 | 29.8 | -3.3 | 0.3 |
| Mean (wins.) ^a | -2.7 | -2.6 | -18.1 | -1.1 | 0.0 | 0.1 |
| Mean (trim) ^b | -2.4 | -2.5 | -16.7 | -1.0 | -0.1 | 0.1 |
| SD | 12.5 | 434.4 | 363.3 | 400.3 | 73.2 | 3.3 |
| SD (wins.) ^a | 5.5 | 4.8 | 21.3 | 4.1 | 4.8 | 1.6 |
| SD (trim) ^b | 4.4 | 4.2 | 18.0 | 3.3 | 3.5 | 1.3 |
| Min | -131.7 | -908.3 | -3,800.0 | -160.0 | -876.2 | -10.2 |
| Q(0.10) | -7.9 | -8.8 | -36.5 | -5.5 | -4.2 | -1.6 |
| Q(0.25) | -3.8 | -5.1 | -28.5 | -2.9 | -1.5 | -0.6 |
| Median | -1.8 | -1.2 | -11.1 | -0.3 | -0.0 | 0.1 |
| Q(0.75) | 0.1 | 0.3 | -3.1 | 0.9 | 1.0 | 1.0 |
| Q(0.90) | 2.2 | 1.6 | -1.4 | 2.5 | 3.5 | 1.6 |
| Max | 11.9 | 5,479.5 | 56.1 | 5,120.8 | 318.8 | 25.2 |
| More t-value statistics | | | | | | |
| t <-1.96 | 45.1% | 44.5% | 77.4% | 33.5% | 20.1% | 7.9% |
| t>1.96 | 11.0% | 8.5% | 1.8% | 12.8% | 15.9% | 7.3% |
| t >1.96 | 56.1% | 53.0% | 79.3% | 46.3% | 36.0% | 15.2% |
| Relative size NSE (wins.) ^c | | | | | | |
| NSE/SE ratio | 1.4 | 1.3 | 2.3 | 0.9 | 1.4 | 0.9 |

4.13. TABLE OA.3: SUMMARY STATISTICS STAGE-4 DISPERSION

Original:

| | RT-H1 Efficiency | RT-H2 RSpread | RT-H3 Client Volume | RT-H4 Client RSpread | RT-H5 Client MOrders | RT-H6 Client GTR |
|--|---------------------|------------------|---------------------------|----------------------------|----------------------------|------------------------|
| Estimate effect size | | | | | | |
| Mean | 453.5 | 1,138.6 | -1.8 | -38,263.2 | -2.9 | 4.9 |
| Mean (wins.) ^a | -1.7 | -2.1 | -2.7 | -0.7 | -0.2 | 1.5 |
| Mean (trim) ^b | -1.6 | -2.2 | -2.7 | -0.7 | -0.2 | 0.7 |
| SD | 5,816.9 | 14,529.9 | 9.6 | 490,025.2 | 35.4 | 71.2 |
| SD (wins.) ^a | 5.2 | 4.6 | 1.2 | 4.2 | 0.9 | 21.9 |
| SD (trim) ^b | 3.6 | 3.7 | 1.1 | 3.5 | 0.8 | 13.4 |
| Min | -70.5 | -90.1 | -6.9 | -6,275,383.0 | -452.9 | -360.7 |
| Q(0.10) | -6.2 | -6.9 | -3.8 | -5.8 | -1.3 | -5.0 |
| Q(0.25) | -2.8 | -4.4 | -3.8 | -2.0 | -0.5 | -0.2 |
| Median | -1.1 | -2.3 | -2.9 | -0.2 | 0.0 | 0.0 |
| Q(0.75) | -0.2 | -0.1 | -2.0 | 0.4 | 0.1 | 0.8 |
| Q(0.90) | 1.2 | 2.2 | -1.1 | 3.6 | 0.8 | 5.7 |
| Max | 74,491.1 | 186,074.5 | 117.5 | 302.4 | 7.1 | 486.5 |
| Standard error | 74,451.1 | 100,074.0 | 117.5 | 002.4 | 7.1 | 400.5 |
| Mean | 457.9 | 1,155.3 | 3.0 | 38,261.5 | 3.5 | 24.7 |
| Mean (wins.) ^a | 4.2 | 4.6 | 0.5 | 3.2 | 0.6 | 17.8 |
| Mean (trim) ^b | 2.7 | 3.0 | 0.5 | 2.5 | 0.5 | 13.2 |
| SD | 5,811.4 | 14,711.4 | 29.6 | 489,932.6 | 36.2 | 88.8 |
| SD (wins.) ^a | 12.6 | 12.7 | 0.7 | 403,332.0 | 0.8 | 47.1 |
| SD (trim) ^b | 8.3 | 6.8 | 0.6 | 4.3 | 0.8 | 36.5 |
| Min | 0.0 | 0.0 | 0.0 | 4.3 | 0.7 | 0.0 |
| Q(0.10) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Q(0.25) | 0.1 | 0.6 | 0.1 | 0.6 | 0.1 | 0.0 |
| Median | 0.5 | 1.2 | 0.1 | 1.3 | 0.3 | 2.0 |
| Q(0.75) | 1.5 | 3.0 | 0.5 | 2.7 | 0.6 | 5.2 |
| Q(0.90) | 5.2 | 7.0 | 1.8 | 5.5 | 1.2 | 46.6 |
| Max | 74,425.5 | 188,404.1 | 378.8 | 6,274,203.0 | 463.7 | 786.1 |
| t-value | 74,425.5 | 100,404.1 | 370.0 | 0,274,203.0 | 403.7 | 700.1 |
| Mean | -3.7 | 25.1 | -54.7 | 29.7 | -3.6 | 0.6 |
| Mean (wins.) ^a | -3.7 | -2.7 | -16.1 | -0.8 | -0.2 | 0.8 |
| Mean (trim) ^b | -2.0 | -2.5 | -14.6 | -0.7 | -0.2 | 0.2 |
| SD | 12.1 | 434.4 | 363.4 | 400.2 | 73.0 | 6.4 |
| SD (wins.) ^a | 4.7 | 434.4 | 19.0 | 400.2 | 3.0 | 1.2 |
| SD (trim) ^b | 3.7 | 3.2 | 14.9 | 2.4 | 2.4 | 1.0 |
| Min | -131.7 | -911.2 | -3,801.4 | -159.8 | -876.2 | -9.0 |
| | | | | | | |
| Q(0.10) | -7.5 | -8.0 -4.0 | -33.5 | -3.6 -1.8 | -3.6 -1.1 | -1.3 |
| Q(0.25) | -3.1 | -4.0 | -18.5 | | | -0.3 |
| Median | -2.0 | | -11.5 | -0.2 | 0.0 | 0.1 |
| Q(0.75) | -0.4 | -0.4 | -4.1 | 0.3 | 1.0 | 0.8 |
| Q(0.90) | 1.8 | 0.8 | -1.7 | 1.8 | 2.9 | 1.4 |
| Max Mara t value statistics | 8.0 | 5,479.5 | 19.5 | 5,120.8 | 318.8 | 80.2 |
| More t-value statistics | E1 00/ | 40.00/ | 04.00/ | 00.00/ | 15.09/ | 6 70/ |
| t <-1.96 | 51.8% | 48.8% | 84.8% | 23.2% | 15.9% | 6.7% |
| t>1.96 | 9.8% | 4.9% | 1.8% | 9.1% | 15.2% | 6.1% |
| t >1.96 Relative size NSE (wins.) ^c | 61.6% | 53.7% | 86.6% | 32.3% | 31.1% | 12.8% |
| NSE/SE ratio | 1.2 | 1.0 | 2.4 | 1.3 | 1.5 | 1.2 |

| | RT-H1 Efficiency | RT-H2 RSpread | RT-H3 Client Volume | RT-H4 Client RSpread | RT-H5 Client MOrders | RT-H(Clien GTR |
|--|---------------------|------------------|---------------------------|----------------------------|----------------------------|-----------------------|
| Estimate effect size | | | | | | |
| Mean | 453.5 | 1,138.6 | -1.8 | -38,263.2 | -2.9 | 4.9 |
| Mean (wins.) ^a | -1.7 | -2.1 | -2.7 | -0.7 | -0.2 | 1.5 |
| Mean (trim) ^b | -1.6 | -2.2 | -2.7 | -0.7 | -0.2 | 0.7 |
| SD | 5,816.9 | 14,529.9 | 9.6 | 490,025.2 | 35.4 | 71.2 |
| SD (wins.) ^a | 5.2 | 4.6 | 1.2 | 4.2 | 0.9 | 21.9 |
| SD (trim) ^b | 3.6 | 3.7 | 1.1 | 3.5 | 0.8 | 13. |
| Min | -70.5 | -90.1 | -6.9 | -6,275,383.0 | -452.9 | -360. |
| Q(0.10) | -6.2 | -6.9 | -3.8 | -5.8 | -1.3 | -5. |
| Q(0.25) | -2.8 | -4.4 | -3.8 | -2.0 | -0.5 | -0. |
| Median | -2.0 | -4.4 | -3.6 | -0.2 | -0.5 | -0. |
| Q(0.75) | -0.2 | -2.3 | -2.9 | -0.2 | 0.0 | 0. |
| | | | | | | |
| Q(0.90) | 1.2 | 2.2 | -1.1 | 3.6 | 0.8 | 5. |
| Max | 74,491.1 | 186,074.5 | 117.5 | 302.4 | 7.1 | 486. |
| Standard error | 457.0 | 4 455 0 | | | | ~ |
| Mean | 457.9 | 1,155.3 | 3.0 | 38,261.5 | 3.5 | 24. |
| Mean (wins.) ^a | 4.2 | 4.6 | 0.5 | 3.2 | 0.6 | 17. |
| Mean (trim) ^b | 2.7 | 3.0 | 0.5 | 2.5 | 0.5 | 13. |
| SD | 5,811.4 | 14,711.4 | 29.6 | 489,932.6 | 36.2 | 88. |
| SD (wins.) ^a | 12.6 | 12.7 | 0.7 | 6.5 | 0.8 | 47. |
| SD (trim) ^b | 8.3 | 6.8 | 0.6 | 4.3 | 0.7 | 36. |
| Min | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0. |
| Q(0.10) | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0. |
| Q(0.25) | 0.3 | 0.6 | 0.1 | 0.6 | 0.1 | 0. |
| Median | 0.5 | 1.2 | 0.3 | 1.3 | 0.3 | 2. |
| Q(0.75) | 1.5 | 3.0 | 0.5 | 2.7 | 0.6 | 5. |
| Q(0.90) | 5.2 | 7.0 | 1.8 | 5.5 | 1.2 | 46. |
| Max | 74,425.5 | 188,404.1 | 378.8 | 6,274,203.0 | 463.7 | 786. |
| t-value | | - | | | | |
| Mean | -3.7 | 25.1 | -54.7 | 29.7 | -3.6 | 0. |
| Mean (wins.) ^a | -2.6 | -2.7 | -16.1 | -0.8 | -0.2 | 0. |
| Mean (trim) ^b | -2.4 | -2.5 | -14.6 | -0.7 | -0.2 | 0. |
| SD | 12.1 | 434.4 | 363.4 | 400.2 | 73.0 | 6. |
| SD (wins.) ^a | 4.7 | 3.7 | 19.0 | 3.1 | 3.0 | 1. |
| SD (trim) ^b | 3.7 | 3.2 | 14.9 | 2.4 | 2.4 | 1. |
| Min | -131.7 | -911.2 | -3,801.4 | -159.8 | -876.2 | -9 |
| Q(0.10) | -7.5 | -8.0 | -33.5 | -3.6 | -3.6 | -1. |
| Q(0.10) Q(0.25) | -3.1 | -4.0 | -18.5 | -1.8 | -1.1 | -0. |
| Median | -2.0 | -1.9 | -11.5 | -0.2 | 0.0 | 0. |
| Q(0.75) | -2.0 | -0.4 | -4.1 | 0.3 | 1.0 | 0. |
| | | | | | | |
| Q(0.90) | 1.8 | 0.8 | -1.7 | 1.8 | 2.9 | 1. |
| Max Mara t value statistics | 8.0 | 5,479.5 | 19.5 | 5,120.8 | 318.8 | 80. |
| More t-value statistics | E1 00/ | 40.00/ | 04.00/ | 00.02 | 15.00/ | 0.70 |
| t <-1.96 | 51.8% | 48.8% | 84.8% | 23.2% | 15.9% | 6.79 |
| t>1.96 | 9.8% | 4.9% | 1.8% | 9.1% | 15.2% | 6.19 |
| t >1.96 Relative size NCE (wine V | 61.6% | 53.7% | 86.6% | 32.3% | 31.1% | 12.89 |
| Relative size NSE (wins.) ^c | | | | | | |
| NSE/SE ratio | 1.2 | 1.0 | 2.4 | 1.3 | 1.5 | 1. |

4.14. TABLE OA.4: STAGE-1 ERROR-VARIANCE REGRESSIONS INCLUDING ALL TEAM-QUALITY VARIABLES INSTEAD OF THEIR FIRST PRINCIPAL COMPONENT

Original:

| Panel (a): Estimates | | | | | | | |
|---|-----------------|-------------------------|-------------------------------|--------------------------|----------------------------|--|--|
| | Raw | Wins 1% to 99% | orized 2.5% to 97.5% | Trimi 1% to 99% | med 2.5% to 97.5% | | |
| Top publications (standardized) | -0.04 (0.08) | -0.03 (0.12) | -0.02 (0.09) | 0.03 (0.11) | 0.07 (0.09) | | |
| Experience in field (standardized) | 0.07 (0.07) | -0.03 (0.08) | 0.05 (0.08) | -0.01 (0.07) | -0.05 (0.08) | | |
| Experience with big data (standardized) | 0.07 | -0.11 | 0.01 | -0.09 | -0.03 | | |
| | (0.07) | (0.08) | (0.08) | (0.08) | (0.08) | | |
| Academic seniority (standardized) | 0.00 | -0.05 | -0.21* | -0.10 | -0.14 | | |
| | (0.08) | (0.13) | (0.09) | (0.11) | (0.09) | | |
| Team size (1 or 2 members) (standardized) | -0.03 | -0.05 | -0.03 | -0.10 | -0.08 | | |
| | (0.07) | (0.08) | (0.08) | (0.07) | (0.09) | | |
| Reproducibility score (standardized) | -0.12 | -0.17 | -0.25** | -0.14 | -0.10 | | |
| | (0.07) | (0.09) | (0.08) | (0.09) | (0.08) | | |
| Average rating (standardized) | -0.11 | -0.15 | -0.16 | -0.17 | -0.16 | | |
| | (0.08) | (0.10) | (0.09) | (0.11) | (0.10) | | |
| RT-hypotheses dummies R ² | Yes | Yes | Yes | Yes | Yes | | |
| #~ | 0.95 | 0.73 | 0.65 | 0.72 | 0.63 | | |
| #Observations | 984 | 984 | 984 | 972 | 936 | | |

| | Raw | Wins | orized | Trimn | ned |
|---|-----------------|------------------|---------------------|-------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Top publications (standardized) | -0.08 (0.08) | -0.07 (0.09) | 0.04 (0.11) | -0.07 (0.09) | 0.06 (0.11) |
| Experience in field (standardized) | 0.11 (0.06) | 0.12 (0.09) | -0.00 (0.11) | -0.02 (0.09) | 0.04 (0.11) |
| Experience with big data (standardized) | -0.07 (0.10) | -0.18 (0.12) | -0.22 (0.13) | -0.23* (0.11) | -0.16 (0.10) |
| Academic seniority (standardized) | 0.05 (0.06) | 0.07 (0.07) | 0.01 (0.11) | 0.10 (0.08) | 0.01 (0.11) |
| Team size (1 or 2 members) (standardized) | -0.04 (0.07) | -0.05 (0.09) | 0.00 (0.11) | -0.01 (0.08) | 0.00 (0.11) |
| Reproducibility score (standardized) | -0.12 (0.09) | -0.19* (0.09) | -0.25* (0.10) | -0.22** (0.08) | -0.11 (0.10) |
| Average rating (standardized) | -0.16 (0.11) | -0.22 (0.13) | -0.11 (0.12) | -0.04 (0.10) | 0.00 (0.10) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.72 | 0.50 | 0.37 | 0.49 | 0.32 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

Reproduced:

Panel (a): Estimates

| | Raw Winsorized | | | Trimmed | |
|---|-----------------|-----------------|---------------------|-----------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Top publications (standardized) | -0.04 (0.08) | -0.03 (0.12) | -0.02 (0.09) | 0.03 | 0.07 |
| Experience in field (standardized) | 0.07 (0.07) | -0.03 (0.08) | 0.05 (0.08) | -0.01 (0.07) | -0.05 |
| Experience with big data (standardized) | 0.07 (0.07) | -0.11 (0.08) | 0.01 (0.08) | -0.09 (0.08) | -0.03 (0.08) |
| Academic seniority (standardized) | 0.00 (0.08) | -0.05 (0.13) | -0.21* (0.09) | -0.10 (0.11) | -0.14 (0.09) |
| Team size (1 or 2 members) (standardized) | -0.03 (0.07) | -0.05 (0.08) | -0.03 (0.08) | -0.10 (0.07) | -0.08 (0.09) |
| Reproducibility score (standardized) | -0.12 (0.07) | -0.17 (0.09) | -0.25** (0.08) | -0.14 (0.09) | -0.10 (0.08) |
| Average rating (standardized) | -0.11 (0.08) | -0.15 (0.10) | -0.16 (0.09) | -0.17 (0.11) | -0.16 |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.95 | 0.73 | 0.65 | 0.72 | 0.63 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

| | Raw | Wins | orized | Trimm | ned |
|---|-----------------|------------------|---------------------|-------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Top publications (standardized) | -0.08 (0.08) | -0.07 (0.09) | 0.04 (0.11) | -0.07 (0.09) | 0.06 (0.11) |
| Experience in field (standardized) | 0.11 (0.06) | 0.12 (0.09) | -0.00 (0.11) | -0.02 (0.09) | 0.04 (0.11) |
| Experience with big data (standardized) | -0.07 (0.10) | -0.18 (0.12) | -0.22 (0.13) | -0.23* (0.11) | -0.16 (0.10) |
| Academic seniority (standardized) | 0.05 (0.06) | 0.07 (0.07) | 0.01 (0.11) | 0.10 (0.08) | 0.01 (0.11) |
| Team size (1 or 2 members) (standardized) | -0.04 (0.07) | -0.05 (0.09) | 0.00 (0.11) | -0.01 (0.08) | 0.00 (0.11) |
| Reproducibility score (standardized) | -0.12 (0.09) | -0.19* (0.09) | -0.25* (0.10) | -0.22** (0.08) | -0.11 (0.10) |
| Average rating (standardized) | -0.16 (0.11) | -0.22 (0.13) | -0.11 (0.12) | -0.04 (0.10) | 0.00 (0.10) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.72 | 0.50 | 0.37 | 0.49 | 0.32 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

4.15. TABLE OA.5: STAGE-1 ERROR-VARIANCE REGRESSIONS FOR A SINGLE TEAM QUALITY VARIABLE (TOP PUBLICATIONS) INSTEAD OF THEIR FIRST PRINCIPAL COMPONENT

Original:

| Panel (a): Estimates | | | | | | | | | |
|--------------------------------------|-----------------|-----------------|---------------------|-----------------|---------------------|--|--|--|--|
| | Raw | Winsorized | | Trimmed | | | | | |
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% | | | | |
| Top publications (standardized) | -0.01 (0.06) | -0.09 (0.08) | -0.12 (0.08) | -0.06 (0.07) | -0.05 (0.08) | | | | |
| Reproducibility score (standardized) | -0.13 (0.07) | -0.15 (0.09) | -0.23** (0.08) | -0.12 (0.08) | -0.07 (0.08) | | | | |
| Average rating (standardized) | -0.12 (0.07) | -0.16 (0.10) | -0.20* (0.09) | -0.19 (0.11) | -0.19* (0.09) | | | | |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes | | | | |
| R ² | 0.95 | 0.73 | 0.65 | 0.72 | 0.63 | | | | |
| #Observations | 984 | 984 | 984 | 972 | 936 | | | | |

Panel (b): t-values

| | Raw | Raw Winsorized | | Trimmed | |
|--------------------------------------|-----------------|-----------------|---------------------|------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Top publications (standardized) | -0.04 (0.07) | -0.04 (0.09) | 0.03 (0.10) | -0.06 (0.09) | 0.06 (0.10) |
| Reproducibility score (standardized) | -0.12 (0.09) | -0.18 (0.10) | -0.23* (0.11) | -0.20* (0.08) | -0.10 (0.10) |
| Average rating (standardized) | -0.14 (0.12) | -0.20 (0.13) | -0.10 (0.13) | -0.01 (0.10) | 0.03 (0.11) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.71 | 0.49 | 0.37 | 0.49 | 0.32 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

Reproduced:

Panel (a): Estimates

| | Raw Winsorized | | Raw Winsorized | | Trim | Trimmed | |
|--------------------------------------|-----------------|-----------------|---------------------|-----------------|---------------------|---------|--|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% | | |
| Top publications (standardized) | -0.01 (0.06) | -0.09 (0.08) | -0.12 (0.08) | -0.06 (0.07) | -0.05 (0.08) | | |
| Reproducibility score (standardized) | -0.13 (0.07) | -0.15 (0.09) | -0.23** (0.08) | -0.12 (0.08) | -0.07 (0.08) | | |
| Average rating (standardized) | -0.12 (0.07) | -0.16 (0.10) | -0.20* (0.09) | -0.19 (0.11) | -0.19* (0.09) | | |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes | | |
| R ² | 0.95 | 0.73 | 0.65 | 0.72 | 0.63 | | |
| #Observations | 984 | 984 | 984 | 972 | 936 | | |

| | Raw | Raw Winsorized | | Trimmed | |
|--------------------------------------|-----------------|-----------------|---------------------|------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Top publications (standardized) | -0.04 (0.07) | -0.04 (0.09) | 0.03 (0.10) | -0.06 (0.09) | 0.06 (0.10) |
| Reproducibility score (standardized) | -0.12 (0.09) | -0.18 (0.10) | -0.23* (0.11) | -0.20* (0.08) | -0.10 (0.10) |
| Average rating (standardized) | -0.14 (0.12) | -0.20 (0.13) | -0.10 (0.13) | -0.01 (0.10) | 0.03 (0.11) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.71 | 0.49 | 0.37 | 0.49 | 0.32 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

4.16. TABLE OA.6: STAGE-1 ERROR-VARIANCE REGRESSIONS FOR A SINGLE TEAM QUALITY VARIABLE (EXPERTISE IN THE FIELD) INSTEAD OF THEIR FIRST PRINCIPAL COMPONENT

Original:

| | Raw | Wins | sorized | Trim | med |
|--------------------------------------|-----------------|-----------------|---------------------|-----------------|------------------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Experience in field (standardized) | 0.04 (0.06) | -0.04 (0.07) | -0.01 (0.07) | -0.02 (0.07) | -0.06 (0.07) |
| Reproducibility score (standardized) | -0.13 (0.07) | -0.15 (0.09) | -0.23** (0.08) | -0.12 (0.08) | -0.07 (0.08) |
| Average rating (standardized) | -0.13 (0.08) | -0.17 (0.11) | -0.22* (0.10) | -0.20 (0.11) | -0.19 [*] (0.09) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.95 | 0.73 | 0.65 | 0.72 | 0.63 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

Panel (b): *t*-values

| | Raw | Wins | sorized | Trim | med |
|--------------------------------------|-----------------|-----------------|---------------------|------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Experience in field (standardized) | 0.10 (0.06) | 0.13 (0.08) | 0.05 (0.11) | 0.02 (0.09) | 0.09 (0.11) |
| Reproducibility score (standardized) | -0.11 (0.09) | -0.18 (0.10) | -0.23* (0.11) | -0.20* (0.08) | -0.09 (0.10) |
| Average rating (standardized) | -0.17 (0.12) | -0.23 (0.14) | -0.10 (0.13) | -0.02 (0.10) | 0.03 (0.10) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.71 | 0.49 | 0.37 | 0.49 | 0.32 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

Reproduced:

Panel (a): Estimates

| | Raw Winsorized | | | Trimmed | |
|--------------------------------------|-----------------|-----------------|---------------------|-----------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Experience in field (standardized) | 0.04 (0.06) | -0.04 (0.07) | -0.01 (0.07) | -0.02 (0.07) | -0.06 (0.07) |
| Reproducibility score (standardized) | -0.13 (0.07) | -0.15 (0.09) | -0.23** (0.08) | -0.12 (0.08) | -0.07 (0.08) |
| Average rating (standardized) | -0.13 (0.08) | -0.17 (0.11) | -0.22* (0.10) | -0.20 (0.11) | -0.19* (0.09) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.95 | 0.73 | 0.65 | 0.72 | 0.63 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

| | Raw | Raw Winsorized | | Trimmed | |
|--------------------------------------|-----------------|-----------------|---------------------|------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Experience in field (standardized) | 0.10 (0.06) | 0.13 (0.08) | 0.05 (0.11) | 0.02 (0.09) | 0.09 (0.11) |
| Reproducibility score (standardized) | -0.11 (0.09) | -0.18 (0.10) | -0.23* (0.11) | -0.20* (0.08) | -0.09 (0.10) |
| Average rating (standardized) | -0.17 (0.12) | -0.23 (0.14) | -0.10 (0.13) | -0.02 (0.10) | 0.03 (0.10) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.71 | 0.49 | 0.37 | 0.49 | 0.32 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

4.17. TABLE OA.7: STAGE-1 ERROR-VARIANCE REGRESSIONS FOR A SINGLE TEAM QUALITY VARIABLE (EXPERIENCE WITH BIG DATA) INSTEAD OF THEIR FIRST PRINCIPAL COMPONENT

Original:

| Panel (a): Estimates | | | | | | | | | |
|---|-----------------|-------------------------|-------------------------------|-------------------------|----------------------------|--|--|--|--|
| | Raw | Wins 1% to 99% | orized 2.5% to 97.5% | Trim 1% to 99% | med 2.5% to 97.5% | | | | |
| Experience with big data (standardized) | 0.05 | -0.12 (0.08) | -0.04 (0.08) | -0.11 (0.08) | -0.04 (0.08) | | | | |
| Reproducibility score (standardized) | -0.12 (0.07) | -0.16 (0.09) | -0.23** (0.08) | -0.13 (0.09) | -0.08 (0.08) | | | | |
| Average rating (standardized) | -0.12 (0.08) | -0.18 (0.10) | -0.23* (0.09) | -0.21 (0.11) | -0.21* (0.09) | | | | |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes | | | | |
| R ² | 0.95 | 0.73 | 0.65 | 0.72 | 0.63 | | | | |
| #Observations | 984 | 984 | 984 | 972 | 936 | | | | |

| Panel (b): <i>t</i> -values | | | | | | | | | |
|---|-----------------|------------------|---------------------|-------------------|---------------------|--|--|--|--|
| | Raw Winsorized | | | Trimmed | | | | | |
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% | | | | |
| Experience with big data (standardized) | -0.09 (0.10) | -0.20 (0.13) | -0.21 (0.13) | -0.22 (0.11) | -0.16 (0.10) | | | | |
| Reproducibility score (standardized) | -0.13 (0.09) | -0.20* (0.10) | -0.25* (0.10) | -0.23** (0.08) | -0.12 (0.10) | | | | |
| Average rating (standardized) | -0.16 (0.12) | -0.22 (0.13) | -0.10 (0.12) | -0.04 (0.09) | 0.03 (0.10) | | | | |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes | | | | |
| R ² #Observations | 0.71 984 | 0.50 984 | 0.37 984 | 0.49 972 | 0.32 936 | | | | |

Reproduced:

Panel (a): Estimates

| | Raw Winsorized | | Trimmed | | |
|---|----------------|-----------------|---------------------|-----------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Experience with big data (standardized) | 0.05 (0.07) | -0.12 (0.08) | -0.04 (0.08) | -0.11 (0.08) | -0.04 (0.08) |
| Reproducibility score (standardized) | -0.12 (0.07) | -0.16 (0.09) | -0.23** (0.08) | -0.13 (0.09) | -0.08 (0.08) |
| Average rating (standardized) | -0.12 (0.08) | -0.18 (0.10) | -0.23* (0.09) | -0.21 (0.11) | -0.21* (0.09) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.95 | 0.73 | 0.65 | 0.72 | 0.63 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

| | Raw | Winsorized | | Trimmed | |
|---|-----------------|------------------|---------------------|-------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Experience with big data (standardized) | -0.09 (0.10) | -0.20 (0.13) | -0.21 (0.13) | -0.22 (0.11) | -0.16 (0.10) |
| Reproducibility score (standardized) | -0.13 (0.09) | -0.20* (0.10) | -0.25* (0.10) | -0.23** (0.08) | -0.12 (0.10) |
| Average rating (standardized) | -0.16 (0.12) | -0.22 (0.13) | -0.10 (0.12) | -0.04 (0.09) | 0.03 (0.10) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.71 | 0.50 | 0.37 | 0.49 | 0.32 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

4.18. TABLE OA.8: STAGE-1 ERROR-VARIANCE REGRESSIONS FOR A SINGLE TEAM QUALITY VARIABLE (ACADEMIC SENIORITY) INSTEAD OF THEIR FIRST PRINCIPAL COMPONENT

Original:

| 1 dilei | (a): Est Baw | Wins | Trimmed | | |
|--------------------------------------|-----------------|-----------------|---------------------|-----------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Academic seniority (standardized) | 0.01 (0.06) | -0.09 (0.08) | -0.21* (0.08) | -0.11 (0.08) | -0.13 (0.08) |
| Reproducibility score (standardized) | -0.13 (0.07) | -0.15 (0.09) | -0.25** (0.08) | -0.13 (0.09) | -0.09 (0.08) |
| Average rating (standardized) | -0.12 (0.07) | -0.15 (0.10) | -0.17 (0.09) | -0.17 (0.11) | -0.17 (0.09) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.95 | 0.73 | 0.65 | 0.72 | 0.63 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

Panel (b): *t*-values

| | Raw | Wins | sorized | Trim | med |
|--------------------------------------|-----------------|-----------------|---------------------|------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Academic seniority (standardized) | 0.02 (0.07) | 0.02 (0.09) | 0.00 (0.10) | 0.02 (0.09) | 0.03 (0.10) |
| Reproducibility score (standardized) | -0.12 (0.09) | -0.18 (0.09) | -0.23* (0.11) | -0.20* (0.08) | -0.09 (0.10) |
| Average rating (standardized) | -0.16 (0.12) | -0.22 (0.13) | -0.09 (0.13) | -0.03 (0.10) | 0.03 (0.10) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.71 | 0.49 | 0.37 | 0.49 | 0.32 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

Panel (a): Estimates Trimmed % 2.5% Raw Winsorized 1% to 99% 2.5% 1% to 99% to 97.5% to 97.5% 0.01 (0.06) -0.13 (0.07) -0.09 (0.08) -0.21* (0.08) -0.13 (0.08) Academic seniority (standardized) -0.11 (0.08) -0.15 (0.09) -0.25** (0.08) -0.13 (0.09) -0.09 (0.08) Reproducibility score (standardized) -0.12 (0.07) Yes -0.15 (0.10) Yes -0.17 (0.09) -0.17 (0.11) Yes -0.17 (0.09) Yes Average rating (standardized) RT-hypotheses dummies Yes R² 0.95 0.73 0.65 0.72 0.63 #Observations 984 984 984 972 936

| D 1 | | | |
|-------|------|------|-----|
| Panel | (b): | t-va | ues |

| Taller (b): r-values | | | | | | |
|---|-----------------|-----------------|---------------------|------------------|---------------------|--|
| | Raw | Winsorized | | Trimmed | | |
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% | |
| Academic seniority (standardized) | 0.02 (0.07) | 0.02 (0.09) | 0.00 (0.10) | 0.02 (0.09) | 0.03 (0.10) | |
| Reproducibility score (standardized) | -0.12 (0.09) | -0.18 (0.09) | -0.23* (0.11) | -0.20* (0.08) | -0.09 (0.10) | |
| Average rating (standardized) | -0.16 (0.12) | -0.22 (0.13) | -0.09 (0.13) | -0.03 (0.10) | 0.03 (0.10) | |
| RT-hypotheses dummies R ² | Yes 0.71 | Yes 0.49 | Yes 0.37 | Yes 0.49 | Yes 0.32 | |
| #Observations | 984 | 984 | 984 | 972 | 936 | |

4.19. TABLE OA.9: STAGE-1 ERROR-VARIANCE REGRESSIONS FOR A SINGLE TEAM QUALITY VARIABLE (ONE OR TWO MEMBERS IN TEAM) INSTEAD OF THEIR FIRST PRINCIPAL COMPONENT

Original:

| Panel (a): Estimates | | | | | | | |
|---|-----------------|-------------------------|-------------------------------|-------------------------|----------------------------|--|--|
| | Raw | Wins 1% to 99% | orized 2.5% to 97.5% | Trim 1% to 99% | med 2.5% to 97.5% | | |
| Team size (1 or 2 members) (standardized) | -0.02 (0.07) | -0.08 (0.08) | -0.06 (0.08) | -0.12 (0.07) | -0.09 (0.09) | | |
| Reproducibility score (standardized) | -0.13 (0.07) | -0.15 (0.09) | -0.23** (0.08) | -0.12 (0.08) | -0.07 (0.08) | | |
| Average rating (standardized) | -0.12 (0.07) | -0.16 (0.10) | -0.21* (0.09) | -0.18 (0.10) | -0.19* (0.09) | | |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes | | |
| R ² | 0.95 | 0.73 | 0.65 | 0.72 | 0.63 | | |
| #Observations | 984 | 984 | 984 | 972 | 936 | | |

Panel (b): t-values

| | Raw Winsorized | | Trimmed | | |
|---|-----------------|-----------------|---------------------|------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Team size (1 or 2 members) (standardized) | -0.05 (0.07) | -0.08 (0.08) | -0.01 (0.11) | -0.05 (0.07) | 0.00 (0.11) |
| Reproducibility score (standardized) | -0.12 (0.09) | -0.18 (0.10) | -0.23* (0.11) | -0.20* (0.08) | -0.10 (0.10) |
| Average rating (standardized) | -0.14 (0.11) | -0.20 (0.12) | -0.09 (0.12) | -0.01 (0.09) | 0.04 (0.10) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.71 | 0.49 | 0.37 | 0.49 | 0.32 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

Reproduced:

Panel (a): Estimates

| | Raw | | | Trimmed | |
|---|-----------------|-----------------|---------------------|-----------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Team size (1 or 2 members) (standardized) | -0.02 (0.07) | -0.08 (0.08) | -0.06 (0.08) | -0.12 (0.07) | -0.09 (0.09) |
| Reproducibility score (standardized) | -0.13 (0.07) | -0.15 (0.09) | -0.23** (0.08) | -0.12 (0.08) | -0.07 (0.08) |
| Average rating (standardized) | -0.12 (0.07) | -0.16 (0.10) | -0.21* (0.09) | -0.18 (0.10) | -0.19* (0.09) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.95 | 0.73 | 0.65 | 0.72 | 0.63 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

| | Raw | Raw Winsorized | | Trimmed | |
|---|-----------------|-----------------|---------------------|------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Team size (1 or 2 members) (standardized) | -0.05 (0.07) | -0.08 (0.08) | -0.01 (0.11) | -0.05 (0.07) | 0.00 (0.11) |
| Reproducibility score (standardized) | -0.12 (0.09) | -0.18 (0.10) | -0.23* (0.11) | -0.20* (0.08) | -0.10 (0.10) |
| Average rating (standardized) | -0.14 (0.11) | -0.20 (0.12) | -0.09 (0.12) | -0.01 (0.09) | 0.04 (0.10) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.71 | 0.49 | 0.37 | 0.49 | 0.32 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

| 1 anei | (a): Est Raw | Winsorized | | Trimmed | |
|--------------------------------------|-----------------|------------------|---------------------|-----------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Team quality (standardized) | -0.01 (0.06) | -0.14* (0.07) | -0.16* (0.08) | -0.11 (0.06) | -0.13 (0.08) |
| Reproducibility score (standardized) | -0.13 (0.07) | -0.18* (0.09) | -0.22* (0.08) | -0.10 (0.08) | -0.08 (0.08) |
| Average rating (standardized) | -0.13 (0.07) | -0.14 (0.10) | -0.16 (0.09) | -0.19 (0.10) | -0.13 (0.10) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.95 | 0.73 | 0.66 | 0.73 | 0.63 |
| #Observations | 996 | 996 | 996 | 984 | 948 |

Panel (b): t-values

| | Raw | Wins | sorized | Trimmed | |
|--------------------------------------|-----------------|-----------------|---------------------|------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Team quality (standardized) | 0.01 (0.08) | 0.01 (0.09) | 0.04 (0.11) | -0.02 (0.09) | 0.08 (0.09) |
| Reproducibility score (standardized) | -0.11 (0.09) | -0.15 (0.09) | -0.21* (0.11) | -0.18* (0.08) | -0.10 |
| Average rating (standardized) | -0.15 (0.11) | -0.16 (0.13) | -0.10 (0.12) | -0.01 (0.10) | -0.03 |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.71 | 0.51 | 0.37 | 0.49 | 0.34 |
| #Observations | 996 | 996 | 996 | 984 | 948 |

Panel (a): Estimates

| | Raw | Raw Winsorized | | Trimmed | |
|--------------------------------------|-----------------|------------------|---------------------|-----------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Team quality (standardized) | -0.01 (0.06) | -0.14* (0.07) | -0.16* (0.08) | -0.11 (0.06) | -0.13 (0.08) |
| Reproducibility score (standardized) | -0.13 (0.07) | -0.18* (0.09) | -0.22* (0.08) | -0.10 (0.08) | -0.08 (0.08) |
| Average rating (standardized) | -0.13 (0.07) | -0.14 (0.10) | -0.16 (0.09) | -0.19 (0.10) | -0.13 (0.10) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.95 | 0.73 | 0.66 | 0.73 | 0.63 |
| #Observations | 996 | 996 | 996 | 984 | 948 |

| Panel (| Ъ |): 1 | t-val | lues |
|---------|---|------|-------|------|
| | | | | |

| (0). t-v | alues | | | Faller (b). <i>t</i> -values | | | | | | | |
|-----------------|---|---|--|--|--|--|--|--|--|--|--|
| Raw | Winsorized | | Trimmed | | | | | | | | |
| | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% | | | | | | | |
| 0.01 (0.08) | 0.01 (0.09) | 0.04 (0.11) | -0.02 (0.09) | 0.08 (0.09) | | | | | | | |
| -0.11 (0.09) | -0.15 (0.09) | -0.21* (0.11) | -0.18* (0.08) | -0.10 (0.10) | | | | | | | |
| -0.15 (0.11) | -0.16 (0.13) | -0.10 (0.12) | -0.01 (0.10) | -0.03 (0.10) | | | | | | | |
| Yes | Yes | Yes | Yes | Yes | | | | | | | |
| 0.71 | 0.51 | 0.37 | 0.49 | 0.34 | | | | | | | |
| 996 | 996 | 996 | 984 | 948 | | | | | | | |
| | 0.01 (0.08) -0.11 (0.09) -0.15 (0.11) Yes 0.71 | Raw Wins 1% to 99% 0.01 0.01 (0.08) (0.09) -0.11 -0.15 (0.09) (0.09) -0.15 -0.16 (0.11) (0.13) Yes Yes 0.71 0.51 | Raw Winsorized 1% 2.5% to to 99% 97.5% 0.01 0.01 0.04 (0.08) (0.09) (0.11) -0.11 -0.15 -0.21* (0.09) (0.11) -0.15 -0.15 -0.16 -0.10 (0.11) (0.13) (0.12) Yes Yes Yes 0.71 0.51 0.37 | Raw Winsorized to Triminal to 1% 2.5% 1% 1% 2.5% 1% 10 to to 99% 97.5% 99% 0.01 0.01 0.04 -0.02 (0.08) (0.09) (0.11) (0.09) -0.11 -0.15 -0.21* -0.18* (0.09) (0.11) (0.08) -0.01 -0.15 -0.16 -0.10 -0.01 (0.11) (0.13) (0.12) (0.10) Yes Yes Yes Yes 0.71 0.51 0.37 0.49 | | | | | | | |

| Panel (a): Estimates | | | | | | | | |
|-------------------------------|-------------------|-------------------|---------------------|-------------------|---------------------|--|--|--|
| | Raw | Winse | orized | Trimn | ned | | | |
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% | | | |
| Dummy Stage 2 - Dummy Stage 1 | -0.13* (0.05) | -0.23* (0.09) | -0.29* (0.11) | -0.29** (0.10) | -0.23* (0.11) | | | |
| Dummy Stage 3 - Dummy Stage 2 | 0.00 (0.03) | -0.26** (0.07) | -0.41** (0.10) | -0.24** (0.08) | -0.40** (0.09) | | | |
| Dummy Stage 4 - Dummy Stage 3 | -0.11** (0.03) | -0.26** (0.05) | -0.40** (0.06) | -0.27** (0.05) | -0.40** (0.06) | | | |
| Dummy Stage 4 - Dummy Stage 1 | -0.24** (0.06) | -0.75** (0.10) | -1.10** (0.13) | -0.80** (0.11) | -1.02** (0.12) | | | |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes | | | |
| R ² | 0.95 | 0.58 | 0.49 | 0.53 | 0.49 | | | |
| #Observations | 3,984 | 3,984 | 3,984 | 3,936 | 3,792 | | | |

| Panel (b): <i>t</i> -values | | | | | | | |
|---|-------------------|-------------------|---------------------|-------------------|---------------------|--|--|
| | Raw | Winsorized | | Trimmed | | | |
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% | | |
| Dummy Stage 2 - Dummy Stage 1 | -0.01 (0.07) | 0.05 | 0.27** (0.09) | 0.10 (0.08) | 0.23** (0.08) | | |
| Dummy Stage 3 - Dummy Stage 2 | -0.20** (0.06) | -0.22* (0.09) | -0.07 (0.08) | -0.12 (0.09) | 0.11 (0.07) | | |
| Dummy Stage 4 - Dummy Stage 3 | -0.06* (0.03) | -0.34** (0.05) | -0.59** (0.08) | -0.41** (0.06) | -0.78** (0.10) | | |
| Dummy Stage 4 - Dummy Stage 1 | -0.27** (0.09) | -0.52** (0.12) | -0.39** (0.11) | -0.43** (0.10) | -0.44** (0.13) | | |
| RT-hypotheses dummies R ² | Yes 0.76 | Yes 0.56 | Yes 0.43 | Yes 0.48 | Yes 0.39 | | |
| #Observations | 3,984 | 3,984 | 3,984 | 3,936 | 3,792 | | |

| Panel (a): Estimates | | | | | | | |
|-------------------------------|-------------------|-------------------|---------------------|-------------------|---------------------|--|--|
| | Raw | Winsorized | | Trimmed | | | |
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% | | |
| Dummy Stage 2 - Dummy Stage 1 | -0.13* (0.05) | -0.23* (0.09) | -0.29* (0.11) | -0.29** (0.10) | -0.23* (0.11) | | |
| Dummy Stage 3 - Dummy Stage 2 | 0.00 (0.03) | -0.26** (0.07) | -0.41** (0.10) | -0.24** (0.08) | -0.40** (0.09) | | |
| Dummy Stage 4 - Dummy Stage 3 | -0.11** (0.03) | -0.26** (0.05) | -0.40** (0.06) | -0.27** (0.05) | -0.40** (0.06) | | |
| Dummy Stage 4 - Dummy Stage 1 | -0.24** (0.06) | -0.75** (0.10) | -1.10** (0.13) | -0.80** (0.11) | -1.02** (0.12) | | |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes | | |
| R ² | 0.95 | 0.58 | 0.49 | 0.53 | 0.49 | | |
| #Observations | 3,984 | 3,984 | 3,984 | 3,936 | 3,792 | | |

Panel (b): *t*-values

| | Raw | Winsorized | | Trimmed | |
|-------------------------------|-------------------|-------------------|---------------------|-------------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Dummy Stage 2 - Dummy Stage 1 | -0.01 (0.07) | 0.05 (0.09) | 0.27** (0.09) | 0.10 (0.08) | 0.23** (0.08) |
| Dummy Stage 3 - Dummy Stage 2 | -0.20** (0.06) | -0.22* (0.09) | -0.07 (0.08) | -0.12 (0.09) | 0.11 (0.07) |
| Dummy Stage 4 - Dummy Stage 3 | -0.06* (0.03) | -0.34** (0.05) | -0.59** (0.08) | -0.41** (0.06) | -0.78** (0.10) |
| Dummy Stage 4 - Dummy Stage 1 | -0.27** (0.09) | -0.52** (0.12) | -0.39** (0.11) | -0.43** (0.10) | -0.44** (0.13) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.76 | 0.56 | 0.43 | 0.48 | 0.39 |
| #Observations | 3,984 | 3,984 | 3,984 | 3,936 | 3,792 |

| Panel (a): Standard errors | | | | | | | |
|---|--------------|-------------------------|-------------------------------|-------------------------|----------------------------|--|--|
| | Raw | Wins 1% to 99% | orized 2.5% to 97.5% | Trim 1% to 99% | med 2.5% to 97.5% | | |
| Team quality (standardized) | 0.05 (0.04) | 0.04 (0.05) | 0.08 | 0.05 | 0.10 (0.09) | | |
| Reproducibility score (standardized) | -0.03 (0.06) | -0.02 (0.06) | -0.03 (0.08) | 0.00 (0.07) | 0.03 (0.07) | | |
| Average rating (standardized) | 0.06 (0.06) | 0.01 (0.07) | -0.01 (0.08) | 0.01 (0.07) | 0.07 (0.08) | | |
| RT-hypotheses dummies R ² | Yes 0.97 | Yes 0.84 | Yes 0.78 | Yes 0.83 | Yes 0.75 | | |
| #Observations | 984 | 984 | 984 | 972 | 936 | | |

Reproduced:

Panel (a): Standard errors

| | Raw | Winsorized | | Trimmed | |
|--------------------------------------|--------------|-----------------|---------------------|-----------------|---------------------|
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% |
| Team quality (standardized) | 0.05 (0.04) | 0.04 (0.05) | 0.08 (0.08) | 0.05 (0.06) | 0.10 (0.09) |
| Reproducibility score (standardized) | -0.03 (0.06) | -0.02 (0.06) | -0.03 (0.08) | 0.00 (0.07) | 0.03 (0.07) |
| Average rating (standardized) | 0.06 (0.06) | 0.01 (0.07) | -0.01 (0.08) | 0.01 (0.07) | 0.07 (0.08) |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes |
| R ² | 0.97 | 0.84 | 0.78 | 0.83 | 0.75 |
| #Observations | 984 | 984 | 984 | 972 | 936 |

| Panel (a): Standard errrs | | | | | | |
|-------------------------------|------------------|-----------------|---------------------|-----------------|---------------------|--|
| | Raw | Winsorized | | Trimmed | | |
| | | 1% to 99% | 2.5% to 97.5% | 1% to 99% | 2.5% to 97.5% | |
| Dummy Stage 2 - Dummy Stage 1 | 0.04 (0.04) | 0.03 (0.07) | -0.09 (0.08) | 0.03 (0.08) | -0.17* (0.08) | |
| Dummy Stage 3 - Dummy Stage 2 | 0.16** (0.03) | 0.17** (0.05) | 0.05 (0.06) | 0.14* (0.06) | -0.04 (0.06) | |
| Dummy Stage 4 - Dummy Stage 3 | -0.01 (0.02) | -0.02 (0.03) | -0.03 (0.03) | -0.04 (0.03) | -0.01 (0.04) | |
| Dummy Stage 4 - Dummy Stage 1 | 0.19** (0.04) | 0.18* (0.08) | -0.08 (0.09) | 0.13 (0.09) | -0.23* (0.09) | |
| RT-hypotheses dummies | Yes | Yes | Yes | Yes | Yes | |
| R ² | 0.97 | 0.81 | 0.76 | 0.77 | 0.73 | |
| #Observations | 3,936 | 3,936 | 3,936 | 3,888 | 3,744 | |

Raw Winsorized Trimmed 1% 2.5% 1% 2.5% to 97.5% to 99% to 97.5% to 99% 0.04 (0.04) 0.03 (0.07) -0.09 (0.08) 0.03 (0.08) -0.17* (0.08) Dummy Stage 2 - Dummy Stage 1 0.16** (0.03) 0.17** (0.05) 0.14* -0.04 (0.06) Dummy Stage 3 - Dummy Stage 2 0.05 (0.06)-0.01 (0.02) -0.03 (0.03) -0.01 (0.04) Dummy Stage 4 - Dummy Stage 3 -0.02 (0.03) -0.04 (0.03) -0.08 (0.09) -0.23* (0.09) Dummy Stage 4 - Dummy Stage 1 0.19** (0.04) 0.18* (0.08) 0.13 (0.09) RT-hypotheses dummies Yes Yes Yes Yes Yes R² 0.97 0.81 0.76 0.77 0.73 #Observations 3,936 3,936 3,936 3,888 3,744

Panel (a): Standard errrs