

# 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 [AEA Data Editor](#).

## 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:

#### Panel (a): Quality of the #fincap community

	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 (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)

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

	RT-H1 Efficiency	RT-H2 RSpread	RT-H3 Client Volume	RT-H4 Client RSpread	RT-H5 Client MOrders	RT-H6 Client GTR
<i>Estimate effect size</i>						
Mean	446.3	-1,093.4	-3.5	-38,276.1	-3.5	-87.1
Mean (wins.) <sup>a</sup>	-7.4	9.0	-2.6	-2.1	-0.3	-27.6
Mean (trim) <sup>b</sup>	-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	728.5
SD (wins.) <sup>a</sup>	20.6	49.5	1.8	46.8	1.1	187.8
SD (trim) <sup>b</sup>	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	-8,254.5
Q(0.10)	-23.7	-6.9	-3.8	-6.7	-1.6	-192.1
Q(0.25)	-6.2	-3.6	-3.5	-2.1	-0.6	-18.2
Median	-1.1	-0.0	-3.3	0.1	-0.0	0.0
Q(0.75)	0.5	3.9	-2.4	3.8	0.2	3.2
Q(0.90)	3.7	21.5	-0.1	20.4	1.0	56.5
Max	74,491.1	4,124.0	8.7	870.2	69.5	1,119.0
<i>Standard error</i>						
Mean	468.7	1,195.3	3.7	38,302.0	6.2	148.2
Mean (wins.) <sup>a</sup>	13.2	23.5	1.4	26.9	1.7	104.8
Mean (trim) <sup>b</sup>	10.8	16.4	1.3	18.8	1.4	80.7
SD	5,810.6	14,711.9	29.5	489,929.5	40.1	526.0
SD (wins.) <sup>a</sup>	27.0	60.8	1.6	75.3	2.6	237.5
SD (trim) <sup>b</sup>	21.2	38.8	1.3	53.1	1.7	174.1
Min	0.0	0.0	0.0	0.0	0.0	0.0
Q(0.10)	0.1	0.2	0.1	0.2	0.1	0.0
Q(0.25)	0.5	1.1	0.3	1.2	0.2	0.7
Median	2.5	5.0	1.4	4.4	1.0	9.7
Q(0.75)	9.3	13.9	2.0	14.3	2.4	77.1
Q(0.90)	44.7	39.6	2.2	31.2	3.1	235.4
Max	74,425.5	188,404.1	378.8	6,274,203.0	463.7	4,836.2
<i>t-value</i>						
Mean	-3.6	35.3	-47.1	24.3	-5.7	-2.0
Mean (wins.) <sup>a</sup>	-1.4	-1.3	-13.3	-0.4	0.2	-0.4
Mean (trim) <sup>b</sup>	-1.1	-1.0	-11.6	-0.3	0.0	-0.2
SD	28.4	541.2	269.9	406.0	60.1	21.2
SD (wins.) <sup>a</sup>	5.2	4.1	25.4	3.0	4.2	2.0
SD (trim) <sup>b</sup>	3.4	3.3	22.0	2.4	2.6	1.4
Min	-322.3	-764.6	-2,770.6	-852.6	-631.6	-191.7
Q(0.10)	-4.7	-5.7	-37.4	-3.5	-2.3	-1.7
Q(0.25)	-1.9	-1.5	-11.5	-1.0	-0.6	-1.0
Median	-0.7	-0.1	-1.8	0.1	0.0	0.0
Q(0.75)	0.3	0.8	-1.6	1.0	0.8	0.7
Q(0.90)	1.7	1.5	-0.3	1.6	1.7	1.2
Max	51.6	6,880.5	29.5	5,119.5	89.6	100.6
<i>More t-value statistics</i>						
<i>t</i> < -1.96	23.8%	22.6%	45.7%	17.7%	11.0%	9.8%
<i>t</i> > 1.96	8.5%	6.1%	3.7%	9.1%	9.8%	3.0%
<i>t</i>   > 1.96	32.3%	28.7%	49.4%	26.8%	20.7%	12.8%
<i>Relative size NSE (wins.)<sup>c</sup></i>						
NSE/SE ratio	1.6	2.1	1.3	1.7	0.6	1.8

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

Reproduced:

### Panel (a): Quality of the #fincap community

	Research teams	Peer evaluators
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Fraction including at least associate/full professor	0.52	0.88
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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 (b): Quality of the analysis of research teams

	Research teams
Reproducibility score according to Cascad (low-high, 0-100)	64.5 (43.7)
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Panel (c): Dispersion across teams of estimates, SEs, and *t*-values

	RT-H1 Efficiency	RT-H2 RSpread	RT-H3 Client Volume	RT-H4 Client RSpread	RT-H5 Client MOrders	RT-H6 Client GTR
<i>Estimate effect size</i>						
Mean	446.3	-1,093.4	-3.5	-38,276.1	-3.5	-87.1
Mean (wins.) <sup>a</sup>	-7.4	9.0	-2.6	-2.1	-0.3	-27.6
Mean (trim) <sup>b</sup>	-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	728.5
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Min	-171.1	-186,074.5	-117.5	-6,275,383.0	-452.9	-8,254.5
Q(0.10)	-23.7	-6.9	-3.8	-6.7	-1.6	-192.1
Q(0.25)	-6.2	-3.6	-3.5	-2.1	-0.6	-18.2
Median	-1.1	-0.0	-3.3	0.1	-0.0	0.0
Q(0.75)	0.5	3.9	-2.4	3.8	0.2	3.2
Q(0.90)	3.7	21.5	-0.1	20.4	1.0	56.5
Max	74,491.1	4,124.0	8.7	870.2	69.5	1,119.0
<i>Standard error</i>						
Mean	468.7	1,195.3	3.7	38,302.0	6.2	148.2
Mean (wins.) <sup>a</sup>	13.2	23.5	1.4	26.9	1.7	104.8
Mean (trim) <sup>b</sup>	10.8	16.4	1.3	18.8	1.4	80.7
SD	5,810.6	14,711.9	29.5	489,929.5	40.1	526.0
SD (wins.) <sup>a</sup>	27.0	60.8	1.6	75.3	2.6	237.5
SD (trim) <sup>b</sup>	21.2	38.8	1.3	53.1	1.7	174.1
Min	0.0	0.0	0.0	0.0	0.0	0.0
Q(0.10)	0.1	0.2	0.1	0.2	0.1	0.0
Q(0.25)	0.5	1.1	0.3	1.2	0.2	0.7
Median	2.5	5.0	1.4	4.4	1.0	9.7
Q(0.75)	9.3	13.9	2.0	14.3	2.4	77.1
Q(0.90)	44.7	39.6	2.2	31.2	3.1	235.4
Max	74,425.5	188,404.1	378.8	6,274,203.0	463.7	4,836.2
<i>t-value</i>						
Mean	-3.6	35.3	-47.1	24.3	-5.7	-2.0
Mean (wins.) <sup>a</sup>	-1.4	-1.3	-13.3	-0.4	0.2	-0.4
Mean (trim) <sup>b</sup>	-1.1	-1.0	-11.6	-0.3	0.0	-0.2
SD	28.4	541.2	269.9	406.0	60.1	21.2
SD (wins.) <sup>a</sup>	5.2	4.1	25.4	3.0	4.2	2.0
SD (trim) <sup>b</sup>	3.4	3.3	22.0	2.4	2.6	1.4
Min	-322.3	-764.6	-2,770.6	-852.6	-631.6	-191.7
Q(0.10)	-4.7	-5.7	-37.4	-3.5	-2.3	-1.7
Q(0.25)	-1.9	-1.5	-11.5	-1.0	-0.6	-1.0
Median	-0.7	-0.1	-1.8	0.1	0.0	0.0
Q(0.75)	0.3	0.8	-1.6	1.0	0.8	0.7
Q(0.90)	1.7	1.5	-0.3	1.6	1.7	1.2
Max	51.6	6,880.5	29.5	5,119.5	89.6	100.6
<i>More t-value statistics</i>						
<i>t</i> < -1.96	23.8%	22.6%	45.7%	17.7%	11.0%	9.8%
<i>t</i> > 1.96	8.5%	6.1%	3.7%	9.1%	9.8%	3.0%
<i>t</i>   > 1.96	32.3%	28.7%	49.4%	26.8%	20.7%	12.8%
<i>Relative size NSE (wins.)<sup>c</sup></i>						
NSE/SE ratio	1.6	2.1	1.3	1.7	0.6	1.8

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

#### 4.2. TABLE 2: PRINCIPAL COMPONENT ANALYSIS TEAM QUALITY

Original:

**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

Reproduced:

**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

### 4.3. TABLE 3: STAGE-1 ERROR-VARIANCE REGRESSIONS

Original:

**Panel (a): Estimates**

	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 <sup>2</sup>	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 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 <sup>2</sup>	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%
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 <sup>2</sup>	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 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 <sup>2</sup>	0.71	0.49	0.37	0.49	0.32
#Observations	984	984	984	972	936

4.4. TABLE 4: ALL-STAGES ERROR-VARIANCE REGRESSIONS

Original:

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	-0.11* (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 <sup>2</sup>	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	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)	0.04 (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 <sup>2</sup>	0.76	0.57	0.42	0.47	0.39
#Observations	3,936	3,936	3,936	3,888	3,744



Reproduced:

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	-0.11* (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 <sup>2</sup>	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	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)	0.04 (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 <sup>2</sup>	0.76	0.57	0.42	0.47	0.39
#Observations	3,936	3,936	3,936	3,888	3,744

4.5. TABLE 5: DISPERSION ON RESEARCH TEAM BELIEFS

Original:

	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%** (0.00)	-95.4%** (0.00)	-9.0% (0.64)	-97.5%** (0.00)	-45.3% (0.50)	-83.3%** (0.00)	-71.7%** (0.00)
t-value	15.9% (0.19)	-96.0%** (0.00)	-92.4%** (0.00)	-97.1%** (0.00)	-86.0%** (0.00)	-68.2%** (0.00)	-70.6%** (0.00)

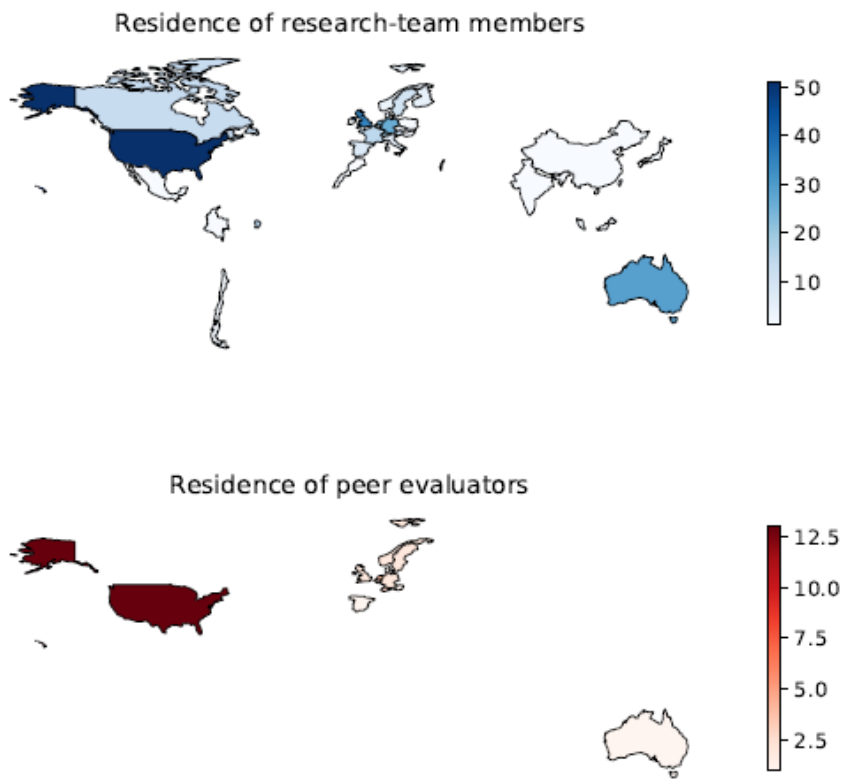
Reproduced:

	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%** (0.00)	-95.4%** (0.00)	-9.0% (0.64)	-97.5%** (0.00)	-45.3% (0.50)	-83.3%** (0.00)	-71.7%** (0.00)
t-value	15.9% (0.19)	-96.0%** (0.00)	-92.4%** (0.00)	-97.1%** (0.00)	-86.0%** (0.00)	-68.2%** (0.00)	-70.6%** (0.00)

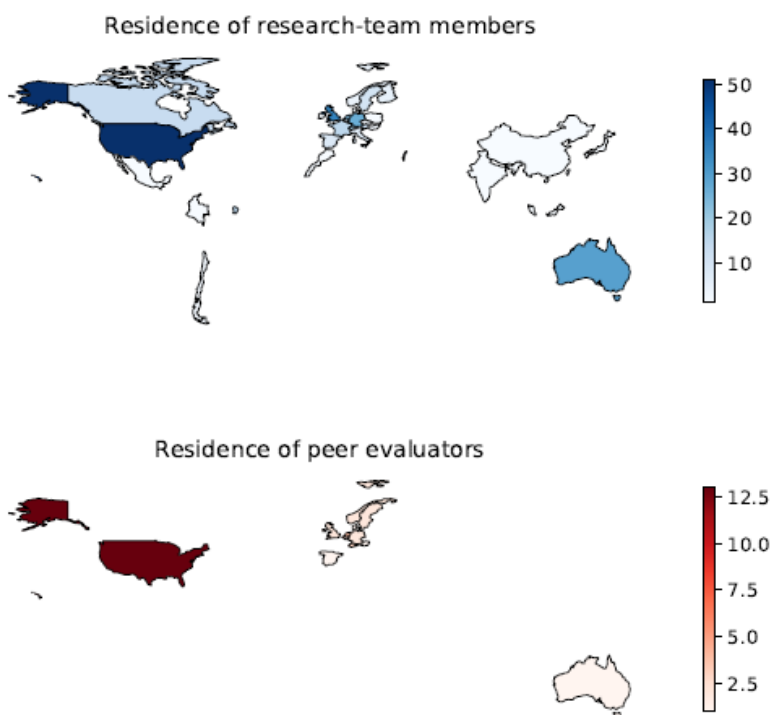
#### 4.6. FIGURE 1: COUNTRIES OF #FINCAP COMMUNITY

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Original:

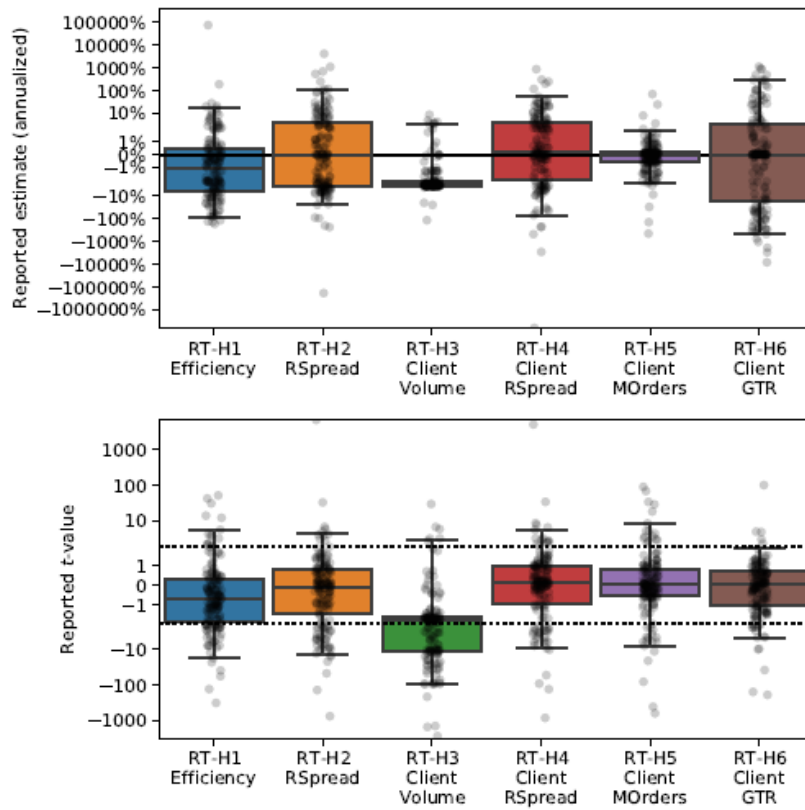


Reproduced:

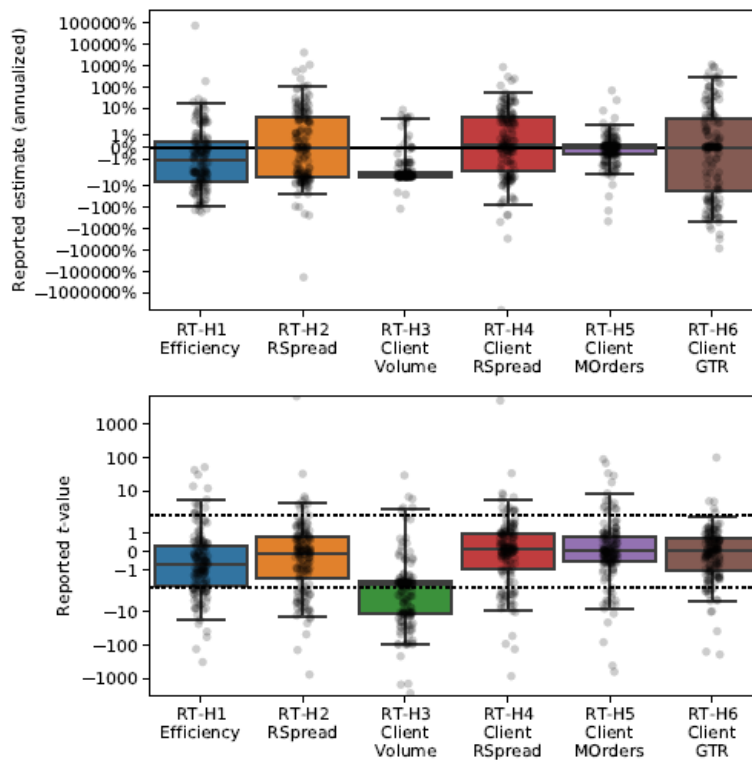


#### 4.7. FIGURE 2: DISPERSION IN RESEARCH-TEAM ESTIMATES

Original:

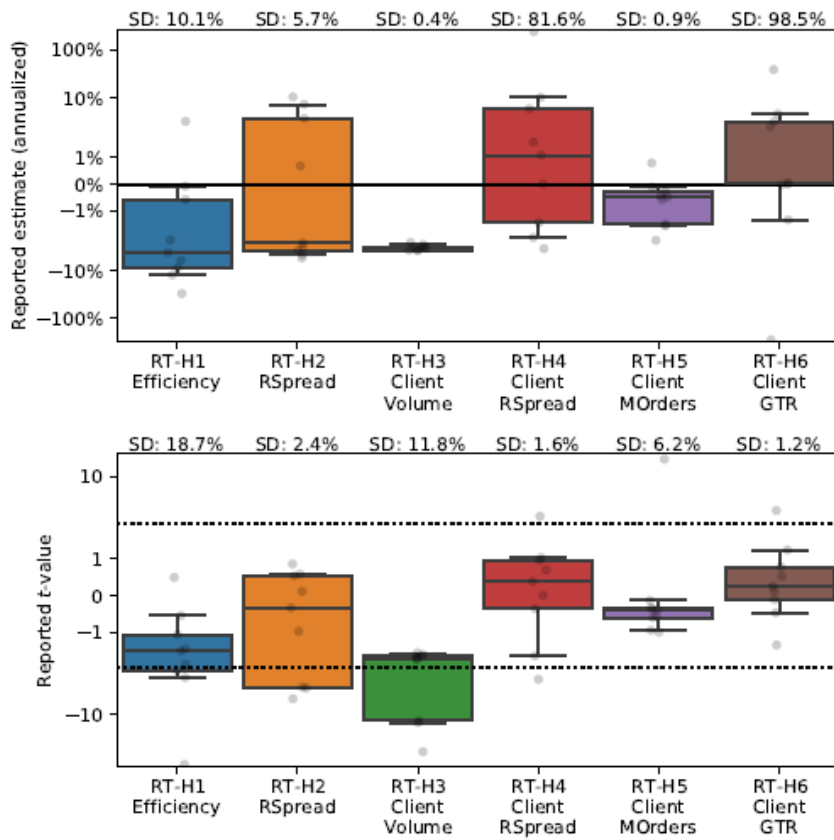


Reproduced:

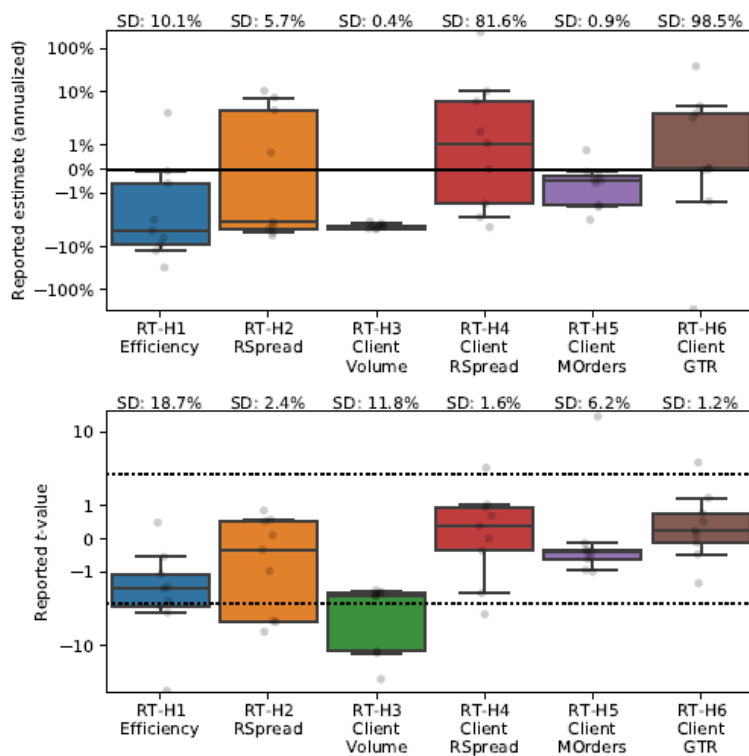


4.8. FIGURE 3: DISPERSION RESEARCH-TEAM ESTIMATES: A HIGH-QUALITY SUBSET

Original:

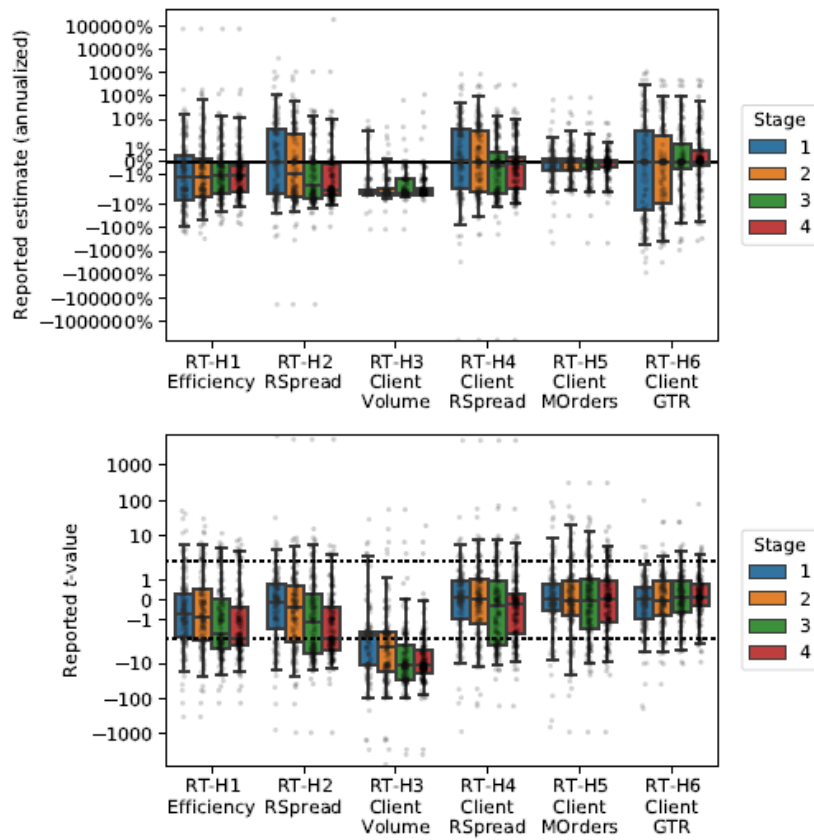


Reproduced:

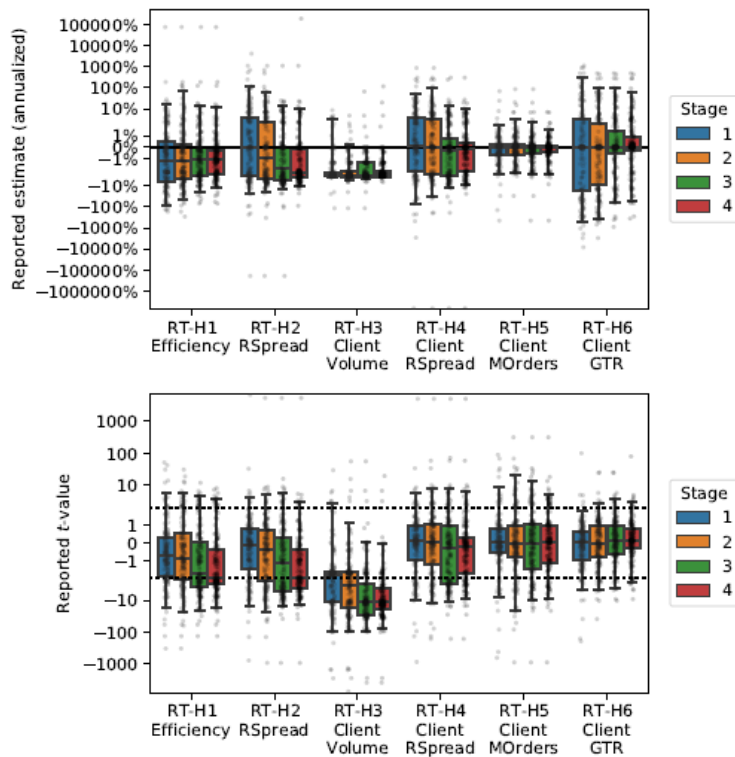


#### 4.9. FIGURE 4: DISPERSION RESEARCH TEAM ESTIMATES ACROSS ALL STAGES

Original:

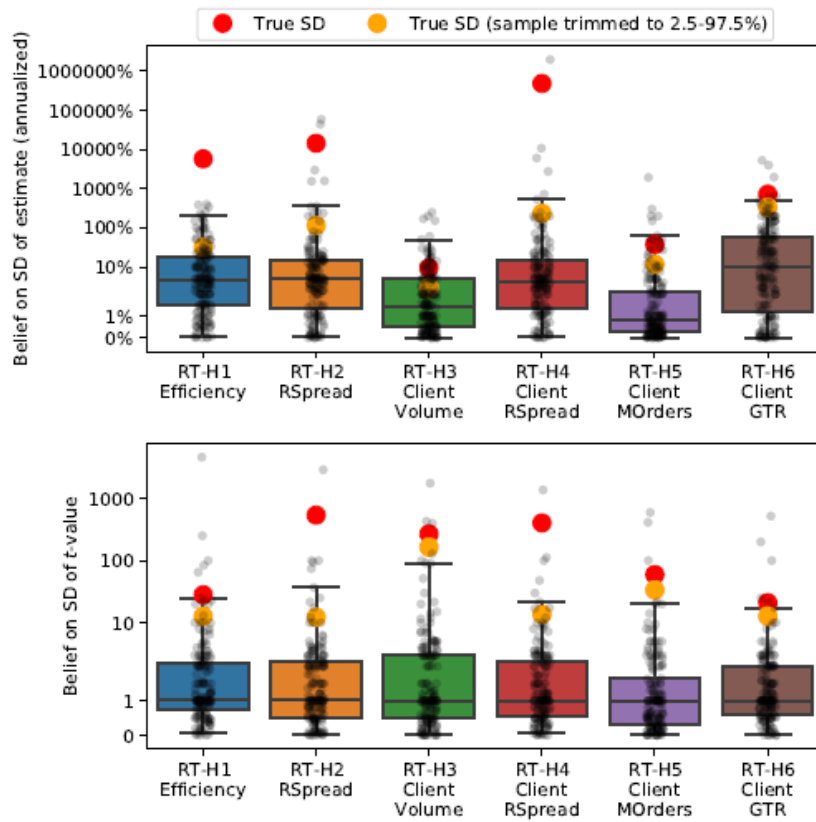


Reproduced:

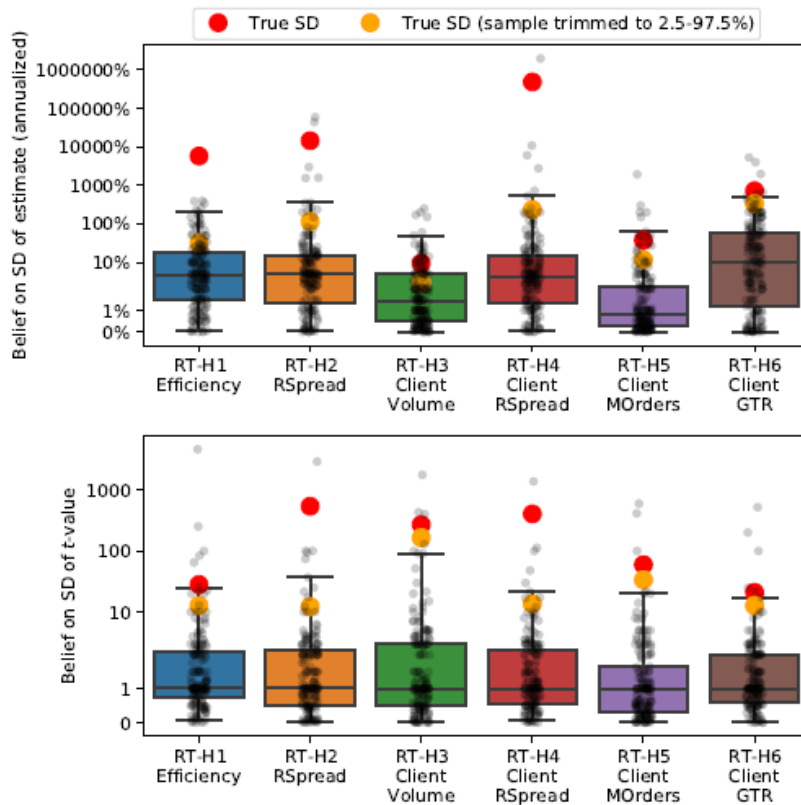


#### 4.10. FIGURE 5: DISPERSION RESEARCH TEAM BELIEFS

Original:



Reproduced:



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
<i>Estimate effect size</i>						
Mean	451.2	-1,122.2	-3.6	-38,254.7	0.4	-37.1
Mean (wins.) <sup>a</sup>	-1.0	2.3	-2.8	4.3	-0.1	-25.1
Mean (trim) <sup>b</sup>	-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.) <sup>a</sup>	22.3	17.3	1.4	23.5	1.6	97.9
SD (trim) <sup>b</sup>	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
<i>Standard error</i>						
Mean	462.2	1,166.4	3.5	38,279.4	2.0	86.3
Mean (wins.) <sup>a</sup>	8.3	16.2	1.1	12.9	1.1	60.6
Mean (trim) <sup>b</sup>	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.) <sup>a</sup>	16.4	44.2	1.6	30.7	1.4	151.7
SD (trim) <sup>b</sup>	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
<i>t-value</i>						
Mean	-4.8	24.9	-99.4	28.8	-3.5	-0.1
Mean (wins.) <sup>a</sup>	-2.6	-2.5	-53.5	-0.6	0.2	-0.2
Mean (trim) <sup>b</sup>	-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.) <sup>a</sup>	8.5	7.5	227.8	3.9	7.6	1.6
SD (trim) <sup>b</sup>	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
<i>More t-value statistics</i>						
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%
<i>Relative size NSE (wins.)<sup>c</sup></i>						
NSE/SE ratio	2.7	1.1	1.3	1.8	1.5	1.6



Reproduced:

	RT-H1 Efficiency	RT-H2 RSpread	RT-H3 Client Volume	RT-H4 Client RSpread	RT-H5 Client MOrders	RT-H6 Client GTR
<i>Estimate effect size</i>						
Mean	451.2	-1,122.2	-3.6	-38,254.7	0.4	-37.1
Mean (wins.) <sup>a</sup>	-1.0	2.3	-2.8	4.3	-0.1	-25.1
Mean (trim) <sup>b</sup>	-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.) <sup>a</sup>	22.3	17.3	1.4	23.5	1.6	97.9
SD (trim) <sup>b</sup>	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
<i>Standard error</i>						
Mean	462.2	1,166.4	3.5	38,279.4	2.0	86.3
Mean (wins.) <sup>a</sup>	8.3	16.2	1.1	12.9	1.1	60.6
Mean (trim) <sup>b</sup>	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.) <sup>a</sup>	16.4	44.2	1.6	30.7	1.4	151.7
SD (trim) <sup>b</sup>	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
<i>t-value</i>						
Mean	-4.8	24.9	-99.4	28.8	-3.5	-0.1
Mean (wins.) <sup>a</sup>	-2.6	-2.5	-53.5	-0.6	0.2	-0.2
Mean (trim) <sup>b</sup>	-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.) <sup>a</sup>	8.5	7.5	227.8	3.9	7.6	1.6
SD (trim) <sup>b</sup>	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
<i>More t-value statistics</i>						
<i>t</i> < -1.96	30.5%	29.3%	57.3%	19.5%	14.0%	10.4%
<i>t</i> > 1.96	13.4%	7.3%	3.0%	11.6%	15.2%	4.9%
<i>t</i>   > 1.96	43.9%	36.6%	60.4%	31.1%	29.3%	15.2%
<i>Relative size NSE (wins.)<sup>c</sup></i>						
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

Original:

	RT-H1 Efficiency	RT-H2 RSpread	RT-H3 Client Volume	RT-H4 Client RSpread	RT-H5 Client MOrders	RT-H6 Client GTR
<i>Estimate effect size</i>						
Mean	453.4	-1,130.6	-3.1	-38,263.4	-2.4	-2.4
Mean (wins.) <sup>a</sup>	-1.8	-1.9	-2.8	-0.6	-0.2	1.3
Mean (trim) <sup>b</sup>	-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.) <sup>a</sup>	6.9	7.1	1.4	5.7	1.1	26.6
SD (trim) <sup>b</sup>	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
<i>Standard error</i>						
Mean	458.6	1,156.2	3.0	38,264.0	4.2	40.5
Mean (wins.) <sup>a</sup>	4.8	5.5	0.6	6.4	0.8	28.9
Mean (trim) <sup>b</sup>	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.) <sup>a</sup>	13.2	13.8	0.8	19.3	1.6	80.2
SD (trim) <sup>b</sup>	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
<i>t-value</i>						
Mean	-3.7	25.2	-56.5	29.8	-3.3	0.3
Mean (wins.) <sup>a</sup>	-2.7	-2.6	-18.1	-1.1	0.0	0.1
Mean (trim) <sup>b</sup>	-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.) <sup>a</sup>	5.5	4.8	21.3	4.1	4.8	1.6
SD (trim) <sup>b</sup>	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
<i>More t-value statistics</i>						
$t < -1.96$	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%
<i>Relative size NSE (wins.)<sup>c</sup></i>						
NSE/SE ratio	1.4	1.3	2.3	0.9	1.4	0.9

Reproduced:

	RT-H1 Efficiency	RT-H2 RSpread	RT-H3 Client Volume	RT-H4 Client RSpread	RT-H5 Client MOrders	RT-H6 Client GTR
<i>Estimate effect size</i>						
Mean	453.4	-1,130.6	-3.1	-38,263.4	-2.4	-2.4
Mean (wins.) <sup>a</sup>	-1.8	-1.9	-2.8	-0.6	-0.2	1.3
Mean (trim) <sup>b</sup>	-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.) <sup>a</sup>	6.9	7.1	1.4	5.7	1.1	26.6
SD (trim) <sup>b</sup>	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
<i>Standard error</i>						
Mean	458.6	1,156.2	3.0	38,264.0	4.2	40.5
Mean (wins.) <sup>a</sup>	4.8	5.5	0.6	6.4	0.8	28.9
Mean (trim) <sup>b</sup>	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.) <sup>a</sup>	13.2	13.8	0.8	19.3	1.6	80.2
SD (trim) <sup>b</sup>	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
<i>t-value</i>						
Mean	-3.7	25.2	-56.5	29.8	-3.3	0.3
Mean (wins.) <sup>a</sup>	-2.7	-2.6	-18.1	-1.1	0.0	0.1
Mean (trim) <sup>b</sup>	-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.) <sup>a</sup>	5.5	4.8	21.3	4.1	4.8	1.6
SD (trim) <sup>b</sup>	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
<i>More t-value statistics</i>						
$t < -1.96$	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%
<i>Relative size NSE (wins.)<sup>c</sup></i>						
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
<i>Estimate effect size</i>						
Mean	453.5	1,138.6	-1.8	-38,263.2	-2.9	4.9
Mean (wins.) <sup>a</sup>	-1.7	-2.1	-2.7	-0.7	-0.2	1.5
Mean (trim) <sup>b</sup>	-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.) <sup>a</sup>	5.2	4.6	1.2	4.2	0.9	21.9
SD (trim) <sup>b</sup>	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
<i>Standard error</i>						
Mean	457.9	1,155.3	3.0	38,261.5	3.5	24.7
Mean (wins.) <sup>a</sup>	4.2	4.6	0.5	3.2	0.6	17.8
Mean (trim) <sup>b</sup>	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.) <sup>a</sup>	12.6	12.7	0.7	6.5	0.8	47.1
SD (trim) <sup>b</sup>	8.3	6.8	0.6	4.3	0.7	36.5
Min	0.0	0.0	0.0	0.0	0.0	0.0
Q(0.10)	0.1	0.1	0.1	0.0	0.1	0.0
Q(0.25)	0.3	0.6	0.1	0.6	0.1	0.1
Median	0.5	1.2	0.3	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
<i>t-value</i>						
Mean	-3.7	25.1	-54.7	29.7	-3.6	0.6
Mean (wins.) <sup>a</sup>	-2.6	-2.7	-16.1	-0.8	-0.2	0.2
Mean (trim) <sup>b</sup>	-2.4	-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.) <sup>a</sup>	4.7	3.7	19.0	3.1	3.0	1.2
SD (trim) <sup>b</sup>	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	-33.5	-3.6	-3.6	-1.3
Q(0.25)	-3.1	-4.0	-18.5	-1.8	-1.1	-0.3
Median	-2.0	-1.9	-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	8.0	5,479.5	19.5	5,120.8	318.8	80.2
<i>More t-value statistics</i>						
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	61.6%	53.7%	86.6%	32.3%	31.1%	12.8%
<i>Relative size NSE (wins.)<sup>c</sup></i>						
NSE/SE ratio	1.2	1.0	2.4	1.3	1.5	1.2

Reproduced:

	RT-H1 Efficiency	RT-H2 RSpread	RT-H3 Client Volume	RT-H4 Client RSpread	RT-H5 Client MOrders	RT-H6 Client GTR
<i>Estimate effect size</i>						
Mean	453.5	1,138.6	-1.8	-38,263.2	-2.9	4.9
Mean (wins.) <sup>a</sup>	-1.7	-2.1	-2.7	-0.7	-0.2	1.5
Mean (trim) <sup>b</sup>	-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.) <sup>a</sup>	5.2	4.6	1.2	4.2	0.9	21.9
SD (trim) <sup>b</sup>	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
<i>Standard error</i>						
Mean	457.9	1,155.3	3.0	38,261.5	3.5	24.7
Mean (wins.) <sup>a</sup>	4.2	4.6	0.5	3.2	0.6	17.8
Mean (trim) <sup>b</sup>	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.) <sup>a</sup>	12.6	12.7	0.7	6.5	0.8	47.1
SD (trim) <sup>b</sup>	8.3	6.8	0.6	4.3	0.7	36.5
Min	0.0	0.0	0.0	0.0	0.0	0.0
Q(0.10)	0.1	0.1	0.1	0.0	0.1	0.0
Q(0.25)	0.3	0.6	0.1	0.6	0.1	0.1
Median	0.5	1.2	0.3	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
<i>t-value</i>						
Mean	-3.7	25.1	-54.7	29.7	-3.6	0.6
Mean (wins.) <sup>a</sup>	-2.6	-2.7	-16.1	-0.8	-0.2	0.2
Mean (trim) <sup>b</sup>	-2.4	-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.) <sup>a</sup>	4.7	3.7	19.0	3.1	3.0	1.2
SD (trim) <sup>b</sup>	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	-33.5	-3.6	-3.6	-1.3
Q(0.25)	-3.1	-4.0	-18.5	-1.8	-1.1	-0.3
Median	-2.0	-1.9	-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	8.0	5,479.5	19.5	5,120.8	318.8	80.2
<i>More t-value statistics</i>						
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	61.6%	53.7%	86.6%	32.3%	31.1%	12.8%
<i>Relative size NSE (wins.)<sup>c</sup></i>						
NSE/SE ratio	1.2	1.0	2.4	1.3	1.5	1.2

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	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 (0.11)	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 (0.07)	-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 (0.10)
RT-hypotheses dummies	Yes	Yes	Yes	Yes	Yes
R <sup>2</sup>	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%
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 <sup>2</sup>	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 (0.11)	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 (0.07)	-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 (0.10)
RT-hypotheses dummies	Yes	Yes	Yes	Yes	Yes
R <sup>2</sup>	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%
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 <sup>2</sup>	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 <sup>2</sup>	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%
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 <sup>2</sup>	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%
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 <sup>2</sup>	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%
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 <sup>2</sup>	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:

**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 <sup>2</sup>	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%
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 <sup>2</sup>	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 <sup>2</sup>	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%
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 <sup>2</sup>	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	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 <sup>2</sup>	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%
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 <sup>2</sup>	0.71	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%
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 <sup>2</sup>	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%
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 <sup>2</sup>	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:

**Panel (a): Estimates**

	Raw	Winsorized		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 <sup>2</sup>	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%
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 <sup>2</sup>	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%
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 <sup>2</sup>	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%
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 <sup>2</sup>	0.71	0.49	0.37	0.49	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	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)	-0.02 (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 <sup>2</sup>	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 <sup>2</sup>	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%
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 <sup>2</sup>	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 <sup>2</sup>	0.71	0.49	0.37	0.49	0.32
#Observations	984	984	984	972	936

4.20. TABLE OA.10: STAGE-1 ERROR-VARIANCE REGRESSIONS FOR UNBALANCED SAMPLE

Original:

**Panel (a): Estimates**

	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 <sup>2</sup>	0.95	0.73	0.66	0.73	0.63
#Observations	996	996	996	984	948

**Panel (b): *t*-values**

	Raw	Winsorized		Trimmed	
		1% to 99%	2.5% to 97.5%	1% to 99%	2.5% to 97.5%
Team quality (standardized)	0.01 (0.08)	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 (0.10)
Average rating (standardized)	-0.15 (0.11)	-0.16 (0.13)	-0.10 (0.12)	-0.01 (0.10)	-0.03 (0.10)
RT-hypotheses dummies	Yes	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.71	0.51	0.37	0.49	0.34
#Observations	996	996	996	984	948

Reproduced:

**Panel (a): Estimates**

	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 <sup>2</sup>	0.95	0.73	0.66	0.73	0.63
#Observations	996	996	996	984	948

**Panel (b): *t*-values**

	Raw	Winsorized		Trimmed	
		1% to 99%	2.5% to 97.5%	1% to 99%	2.5% to 97.5%
Team quality (standardized)	0.01 (0.08)	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 (0.10)
Average rating (standardized)	-0.15 (0.11)	-0.16 (0.13)	-0.10 (0.12)	-0.01 (0.10)	-0.03 (0.10)
RT-hypotheses dummies	Yes	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.71	0.51	0.37	0.49	0.34
#Observations	996	996	996	984	948

4.21. TABLE OA.11: ALL-STAGES ERROR-VARIANCE REGRESSIONS FOR UNBALANCED SAMPLE

Original:

**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 <sup>2</sup>	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 <sup>2</sup>	0.76	0.56	0.43	0.48	0.39
#Observations	3,984	3,984	3,984	3,936	3,792

Reproduced:

**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 <sup>2</sup>	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 <sup>2</sup>	0.76	0.56	0.43	0.48	0.39
#Observations	3,984	3,984	3,984	3,936	3,792

## 4.22. TABLE OA.12: STAGE-1 ERROR-VARIANCE REGRESSIONS

Original:

**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 <sup>2</sup>	0.97	0.84	0.78	0.83	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 <sup>2</sup>	0.97	0.84	0.78	0.83	0.75
#Observations	984	984	984	972	936

4.23. TABLE OA.13: ALL-STAGES ERROR-VARIANCE REGRESSIONS

Original:

**Panel (a): Standard errors**

	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 <sup>2</sup>	0.97	0.81	0.76	0.77	0.73
#Observations	3,936	3,936	3,936	3,888	3,744

Reproduced:

**Panel (a): Standard errors**

	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 <sup>2</sup>	0.97	0.81	0.76	0.77	0.73
#Observations	3,936	3,936	3,936	3,888	3,744