

Additional tables of simulation results for:

“Could It Be Better to Discard 90% of the Data? A Statistical Paradox,”  
*The American Statistician*, 64:70-77.

T. D. Stanley, Stephen B. Jarrell, and Hristos Doucouliagos

**Table 4: Means of Alternative Research Summary Estimators (n=40)**

Heterogeneity*	True effect	Selection Incidence	Simple Average	FEE	REE	Top10	$\hat{\beta}_e$
$I^2=25\%$	0	0%	0.00	0.00	0.00	0.00	0.00
	0	25%	0.23	0.20	0.22	0.14	0.04
	0	50%	0.47	0.39	0.43	0.28	0.06
	0	75%	0.70	0.59	0.63	0.41	0.07
	0	100%	0.94	0.78	0.78	0.55	0.07
	1	0%	1.00	1.00	1.00	1.00	1.00
	1	25%	1.07	1.04	1.04	1.00	0.92
	1	50%	1.13	1.08	1.09	1.01	0.85
	1	75%	1.20	1.11	1.13	1.02	0.77
	1	100%	1.26	1.15	1.16	1.03	0.69
$I^2=58\%$	0	0%	0.00	0.00	0.00	0.00	0.00
	0	25%	0.27	0.22	0.25	0.14	0.04
	0	50%	0.54	0.45	0.51	0.30	0.09
	0	75%	0.81	0.68	0.75	0.48	0.14
	0	100%	1.08	0.91	0.92	0.66	0.20
	1	0%	1.00	1.00	1.00	1.00	1.00
	1	25%	1.10	1.07	1.08	1.02	0.95
	1	50%	1.19	1.13	1.16	1.04	0.88
	1	75%	1.29	1.19	1.23	1.06	0.81
	1	100%	1.39	1.26	1.30	1.08	0.74
$I^2=85\%$	0	0%	0.00	0.00	0.00	0.00	0.00
	0	25%	0.36	0.29	0.34	0.18	0.03
	0	50%	0.72	0.58	0.68	0.39	0.11
	0	75%	1.09	0.89	1.02	0.62	0.22
	0	100%	1.45	1.20	1.29	0.89	0.38
	1	0%	1.00	1.00	1.00	1.00	1.00
	1	25%	1.18	1.13	1.17	1.06	0.97
	1	50%	1.36	1.26	1.33	1.13	0.94
	1	75%	1.55	1.39	1.49	1.18	0.88
	1	100%	1.73	1.52	1.63	1.23	0.81

\* Heterogeneity is measured by  $I^2 = \sigma_h^2 / (\sigma_h^2 + \sigma_e^2)$ . FEE & REE denote the fixed-effects and random-effects estimators, respectively.  $\hat{\beta}_e$  is estimated from equation 1.

**Table 5: Mean Square Errors of Alternative Research Summary Estimators (times 1,000 with n=40)**

Heterogeneity*	True effect	Selection Incidence	Simple Average	FEE	REE	Top10	$\hat{\beta}_e$
$I^2=25\%$	0	0%	7	6	4	28	54
	0	25%	60	43	51	50	48
	0	50%	223	157	188	102	40
	0	75%	492	343	395	190	30
	0	100%	876	604	605	314	15
	1	0%	7	6	6	28	55
	1	25%	10	7	7	27	55
	1	50%	22	10	12	26	70
	1	75%	44	18	21	25	96
	1	100%	72	27	30	24	137
$I^2=58\%$	0	0%	12	11	10	54	104
	0	25%	83	60	73	79	91
	0	50%	299	211	263	144	80
	0	75%	662	467	562	265	69
	0	100%	1168	831	846	456	63
	1	0%	11	11	10	55	103
	1	25%	20	14	16	51	100
	1	50%	46	26	34	48	98
	1	75%	91	47	61	47	107
	1	100%	155	74	96	47	129
$I^2=85\%$	0	0%	32	29	28	131	234
	0	25%	160	107	142	168	211
	0	50%	543	354	483	274	184
	0	75%	1195	797	1047	479	177
	0	100%	2104	1444	1678	829	209
	1	0%	31	28	27	132	238
	1	25%	61	43	52	123	210
	1	50%	179	91	129	118	179
	1	75%	316	173	255	123	156
	1	100%	542	282	414	123	149

\* Heterogeneity is measured by  $I^2 = \sigma_h^2 / (\sigma_h^2 + \sigma_e^2)$ . FEE & REE denote the fixed-effects and random-effects estimators, respectively.  $\hat{\beta}_e$  is estimated from equation 1.