Supplemental materials accompanying "Correcting for bias in psychology: A comparison of meta-analytic methods"

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This is supplementary material for:

Carter, E. C., Schönbrodt, F. D., Hilgard, J., & Gervais, W. (2017). *Correcting for bias in psychology: A comparison of meta-analytic methods.* Retrieved from https://osf.io/rf3ys

It provides technical details and an extended discussion.

Supplemental methods

Effect size estimates

Each observation in a meta-analytic data set must include, at a minimum, an estimate of the effect size and an estimate of the variance of that effect size estimate. Because meta-analyses are usually applied to studies with dependent variables measured on different scales, effect size estimates are typically standardized. To synthesize the observed studies, one would need to first transform the results of each study into an effect size measure such as the standardized mean difference, or Cohen's d, given as

$$d = \frac{M_1 - M_2}{S},$$

where M_1 and M_2 are the means of the two groups and S is the pooled standard error of the two groups. S can be calculated as

$$S = \sqrt{\frac{(n_1 - 1)v_1 + (n_2 - 1)v_2}{(n_1 + n_2 - 2)}},$$

where n and v are the sample sizes and variances of the groups. For Cohen's d, the variance can be calculated as

$$v_d = \frac{n_1 + n_2}{n_2 n_2} + \frac{d^2}{2(n_1 + n_2 - 2)} \cdot \frac{n_1 + n_2}{n_2 n_2 - 2}.$$

We calculated effect size estimates at the study-level using the above formulas.

Funnel plots

The influence of bias in meta-analysis can sometimes be seen by comparing the effect size estimates to the standard errors of those estimates (or some other indicator of sample size) with a funnel plot (Light & Pillemer, 1984). In a typical funnel plot, the reported effect size is plotted on the x-axis and the standard error is plotted on the inverted y-axis. The most precise estimates (i.e., those with the smallest standard error and largest sample) will tend to converge on the true effect size, whereas the more imprecise estimates will spread evenly on either side of the true effect, with studies equally likely to overestimate as underestimate the true effect. That is, the amount of deviation from the true effect increases as estimates become more imprecise, leading to a funnel-like pattern (Figure 1A). In the presence of bias, fewer studies will be present in the lower corner of the funnel where results would be non-significant or of the wrong sign (Figure 1B). In this case, the funnel plot will appear asymmetrical, with more imprecise studies finding larger effects than more precise studies. The blue triangle displays the region of non-significant studies. In the case of complete publication bias (i.e., only significant studies entered the published literature), no studies are present in the non-significant region. In this way, a funnel plot can reveal patterns that may indicate bias.

Figure 1A shows funnel plots of simulated meta-analytic data sets. These data sets vary in the true values of the underlying effect, δ, and heterogeneity, given as the standard deviation of the the distribution of true effects, τ. Note that in this panel, none of these meta-analyses have been affected by bias, and the difference between the random-effects model estimate (marked as a solid vertical line and a "X" along the horizontal axis) and the true value (marked as a dashed vertical line and a filled dot) is very close to zero. Figure 1B, in contrast, shows newly generated samples from these same conditions but under complete publication bias. Note the clear rightward asymmetry of the funnel plots in Figure 1B as compared to in Figure 1A, as well as the resulting overestimation in the random-effects model estimates: Along the horizontal axis, each X has been shifted to the right of the true value.

As is illustrated in Figure 1B, publication bias induces a relationship – in this case, a positive correlation – between effect size estimates and their standard errors. However, such a correlation can also have benign causes. It may be, for example, that expensive, small-sample manipulations have stronger effects than inexpensive, large-sample manipulations. Similarly, when a literature contains both large and small effects, and researchers use power analyses to plan their samples sizes accordingly, the large effects will be studied with smaller, less-precise samples. Sequential designs can also induce this correlation (Lakens, 2014; Schönbrodt, Wagenmakers, Zehetleitner, & Perugini, 2015): Studies measuring a large effect can stop early for efficacy, whereas studies measuring a small effect can stop at later stages of the sequential design after continuing data collection. Finally, sometimes a relationship between effect size and standard error is built into the calculation of an effect size's precision (e.g., see the equation for Cohen's d above, which includes sample size, as well as Macaskill, Walter, & Irwig, 2001; Peters, Sutton, Jones, Abrams, & Rushton, 2006). In these scenarios, effect size and standard error would also be correlated, but not because of bias.

Because this correlation between sample size and effect size can have several causes, some bias-inducing and others benign, such a correlation is typically called a "small-study effect" (Sterne, Gavaghan, & Egger, 2000). Such small-study effects do not necessarily indicate publication bias or QRPs. Because several of the methods we examine here adjust for small-study effects generally as though such effects always represent publication bias, they may overadjust under certain conditions.

Comparing 10,000 to 1,000 simulation iterations

Simulations were run with 10,000 replications for a selection of conditions (i.e., 10,000 meta-analyses were generated for each condition). Then, these 10,000 runs were divided in 10 batches of 1000 simulations each. Figures 2 and 3 show points for each of the 10 batches. One can see that they are virtually identical, as the points of the different batches overlap.

Details of the simulated QRP environments

We studied four forms of QRPs: (1) Optional removal of outliers, (2) optional selection between two dependent variables, (3) optional use of moderators, and (4) optional stopping. Each data set that would have QRPs applied to it was designed to simulate a study with a two-by-two (experimental group vs. the control group; level one of the moderator vs. level two of the moderator) design and two dependent variables. Each dependent variable was measured across n observations. The moderator divided the simulated data set in half in a way that was independent of the dependent variable (i.e., the moderator had no main effect on the dependent variable) and the treatment (i.e., no collinearity between moderator and treatment). The two dependent variables were correlated at $r = 0.50$.

QRPs were applied in an algorithmic process that simulated the behavior of a researcher fishing for statistical significance. For the "full QRP treatment", the simulated researcher first tested the main effect of experimental manipulation (i.e., experimental vs. control group) on the first dependent variable. If this effect was not statistically significant and positive, the simulated researcher removed outliers (defined as observations with an absolute value z-score greater than 2). If this second test was not positive and significant, the simulated researcher moved to the second dependent variable and repeated the above steps. If no positive and significant effect was found using the second dependent variable, the researcher moved back to the first dependent variable and tested for an interaction effect between the experimental manipulation and the moderator. In the presence of a significant interaction, the researcher compared the experimental and control groups in only the subgroup defined by the first level of the moderator. This examination was conducted first with and then without outliers. In the absence of a positive and significant effect, the researcher moved to the second dependent variable, first checking for an interaction effect. If no positive significant effect was found, the researcher moved to the subgroup defined by the second level of the moderator and repeated the above steps.

If none of these analyses produced a positive and significant effect, the first test (experimental vs. control on the first dependent variable with outliers untouched and no division by the moderator) was taken as the final result. However, the simulated researcher could also opt to collect some additional amount of data, with new observations split evenly between each of the four cells. After each additional collection effort, the QRPs described above were repeated. Thus, for each data collection effort, simulated researchers could potentially apply 12 comparisons.

To organize different levels of severity, we created three types of *individual QRP strategies* a simulated researcher could adopt: (1) pure (no use of QRPs); (2) moderate (optional dependent variables and the addition of three observations per cell for up to three data collection efforts); and (3) aggressive (use of optional outliers, optional dependent variables, optional moderators, and the addition of three observations per cell for up to five data collection efforts).

Technical notes: PET, PEESE, PET-PEESE

The key difference between PET and PEESE is the way in which small-study effects are modeled–PET assumes that the effect of bias is constant with respect to the standard error, whereas PEESE assumes that bias gets weaker as the standard error gets smaller. These assumptions have profound implications for the applicability and results of these techniques. Simulation studies find that PET outperforms PEESE when the true underlying effect is zero, as it underestimates the size of non-zero true effects, whereas PEESE outperforms PET when the true underlying effect is non-zero, as it overestimates the size of null effects (Stanley & Doucouliagos, 2014). As advocated by (Stanley, 2017), we used a one-sided test for PET significance for the conditional aspect of PET-PEESE–that is, H_0 for the intercept term in PET is $b_0 < 0$ with $\alpha = 0.10$.

The typical effect of PET and PEESE in the presence of publication bias is a downward correction of the meta-analytic estimate. When no publication bias is present, however, it can happen that random variations in the sample induce a *negative* correlation between sample size and effect size, which leads to an upward correction. In the current simulations we kept these upward corrections. In an applied setting, however, we recommend that analysts be very skeptical when PET or PEESE have a slope of the reversed sign.

Notably, both PET and PEESE are examples of weighted-least squares meta-regression and are therefore distinct in some ways from the fixed- and random-effects meta-analysis models described above. The specifics of this difference are discussed in detail elsewhere (Thompson & Sharp, 1999; Stanley & Doucouliagos, 2015); however, in practice, the result of the difference is that the estimates from weighted-least squares meta-regression models will have relatively larger standard errors, and thus, relatively wider confidence intervals than standard meta-analysis models. This is not necessarily a negative in the face of heterogeneity and publication bias, and authors have argued for the use of both types of models (Thompson & Sharp, 1999; Stanley & Doucouliagos, 2015; Moreno et al., 2012).

We estimated PET by the formula `PET.lm <- lm(d~sqrt(v), weights=1/v)`. An alternative approach is to use an additive error term, which is akin to the standard meta-analysis: `PET.rma <- rma(yi = d, vi = v, mods=sqrt(v), method="DL")`. The same holds true for PEESE, but replacing `sqrt(v)` with `v`. The interactive app allows to compare the results by switching between both modes of computation, although the differences are mostly negligible.

It is worth noting that the downward bias shown by PET and PEESE when δ was large may be due to the fact that the standard error of d is a function of both the sample size and the observed d (see the equation in the introduction). This relationship between d and its standard error is such that larger d leads to larger standard errors, thereby creating a small-study effect that mimics that of publication bias and leads to an overadjustment.

Technical notes: *p*-curve

We used the test for right skew with the Stouffer method for the hypothesis test of evidential value. A non-significant skew means that H_0: $\delta = 0$ is not rejected. P-curve also provides a test that tests whether the p-curve is flatter than a reference line at 33% power, which can be seen as an indicator for lack of evidence and non-rejection of H_0. Typically both tests agree in the sense that when one test is significant, the other is not. In 1.7% of all simulations, however, both tests were significant, indicating that the p-curve is both flatter than the reference line and steeper than zero. By only considering the skewness test, these cases were treated as H_0 rejections.

By considering only the statistically-significant effect sizes, p-curve exhibits some interesting strengths and weaknesses. As a strength, it provides an effect size estimate that is unaffected by publication bias filters; p-curve considers only the statistically-significant results, so it does not matter whether the published literature censors statistically nonsignificant results. As weaknesses, it considers only a subset of the data, ignoring statistically nonsignificant results, which may reduce its efficiency (McShane, Böckenholt, & Hansen, 2016). Additionally, QRPs may cause either upward or downward bias in the p-curve estimate (van Aert, Wicherts, & van Assen, 2016). Also, p-curve is likely to overestimate the mean effect when there is heterogeneity. This is because studies are more likely to reach statistical significance, and thus be included in p-curve, when the true effect is large, compared to when it is small. Thus, large-effect studies are overrepresented relative to small-effect studies.

Simonsohn, Nelson, and Simmons (2014) address this weakness by stressing a more nuanced, limited interpretation of the p-curve estimate: "It is the average effect size one expects to get if one were to rerun all studies included in the p-curve" (p. 667). In practice, however, one generally hopes to describe the mean effect size of all studies. We apply p-curve in this fashion.

Confidence intervals for p-curve estimates could be computed using a bootstrap. But given that in many conditions only very few significant studies are entered, the bootstrap would have to draw from, say, four significant test statistics, which would not lead to numerically stable estimates.

Technical notes: *p*-uniform

We used the default "P" method from the *puniform* package (van Aert, 2017) for R, which relies on the Irwin-Hall distribution. The package returns a one-tailed p-value by default. As all other methods use two-tailed p-values, we doubled the resulting p-value to achieve comparable results.

As with p-curve, there are not clear recommendations about the minimum number of significant results for p-uniform analysis, but performance was very poor when only few studies were available (see below and van Aert et al., 2016).

Technical notes: 3PSM

We employed the `estimate.onestep.selection.heterogeneous` function provided by McShane et al. (2016) with very general starting values for the optimizer: `expected.d = 0.3`, `max.tau= 0.5`, `p.report = 0.99`. When all studies in a set are significant, this function returns an incomplete covariance matrix. All estimates from these cases were set to missing values.

In rare cases during initial simulations, 3PSM failed to provide a p-value. We ignored 3PSM's performance in these cases and instead treated the instance as missing.

Minimum number of studies for p-curve and p-uniform

Effect size estimates and p-values from p-curve and p-uniform were grouped by the number of significant studies that were entered into the methods. Only groups with more than 10 simulated meta-analyses were used for the plots. Furthermore, we only looked at the conditions without publication bias (because conditions with 60% or 95% publication bias rarely had less than 10 significant studies in each meta-analysis). Based on the results shown figures 4, 5, 6, 7, we decided to keep only p-curve and p-uniform estimates based on $k \geq 4$ significant and directionally consistent studies.

Supplemental discussion

Expectable heterogeneity

Even in the ideal case of exact replications of computer administered experiments, multilab collaborations revealed non-negligible heterogeneity in a large proportion of the investigated effects. For example, 7 of the 14 non-zero effects in ManyLabs 1 (Klein et al., 2014) had I^2 values larger than 25% and 2 of the 6 non-zero effects in ManyLabs 3 (Ebersole et al., 2016). In the more typical case where meta-analyses combine studies that are not exact replications, heterogeneity is even more likely: 79% of all meta-analyses investigated in van Erp, Verhagen, Grasman, and Wagenmakers (2017) had I^2 values larger than 25%, and 41% had I^2 values larger than 75%. I^2 quantifies the percentage of total variation across studies that is due to heterogeneity rather than sampling error (Higgins & Thompson, 2002). Note that τ cannot be directly converted into I^2 values, as they also depend on the precision of the individual studies. In our simulations, $\tau = 0.2$ corresponded to I^2 values around 30–50%, $\tau = 0.4$ to I^2 values around 60–80%.

The effect of QRPs on adjustment

Looking at the performance of random-effects meta-analysis across settings, we make the surprising observation that QRPs have only a small effect in increasing the bias of the estimate above and beyond the influence of publication bias and heterogeneity. This suggests to us that the primary cause of bias in meta-analysis may be the publication filter that favors statistically-significant results. Furthermore, it suggests that in the absence of publication bias, QRPs can be common yet have a relatively small effect on effect size estimates.

As has been noted previously (Simonsohn, 2016), QRPs make it easier to introduce publication bias. For example, suppose we conduct 100 experiments on a null effect, but journals will only publish significant results. In the absence of *p*-hacking, we expect only 5 false positives to be published on average – a relatively poor payoff for the work of running 100 experiments and an impressive act of denial given that we would need to maintain belief in an effect in the face of 95 failed replications. However, in the presence of QRPs that inflate the Type I error from 5% to, say, 60% (Simmons, Nelson, & Simonsohn, 2011), 60 false positives will be published from the hypothetical 100 that were run. This situation is much more likely to occur, and indeed, some have argued that removing QRPs would reduce the impact of publication bias to the point that the field could essentially ignore it (Simonsohn, 2016). Based on our simulation, if QRPs were eliminated–perhaps through the widespread adoption of study pre-registration–it appears that 3PSM would still be the most useful bias-adjusting method to apply.

Overadjustment

As mentioned, all reported results treated $d < 0$ as $d = 0$. However, we explored the influence of keeping negative estimates on bias and RMSE. The strongest differences occurred when estimators showed strong negative bias (e.g., when QRPs were strong) and the true effect size was zero. Influence was slight when $\delta = 0.2$ and minimal for $\delta \geq 0.5$. PET and PET-PEESE were the most affected, followed by *p*-curve, and 3PSM. Overall, this adjustment introduced slight upward bias into the estimation (in addition to those biases caused by selective publication, QRPs, etc.), as there were no negative estimates to cancel out positive estimates caused by sampling error. In total, it seems to be a helpful and reasonable bias-variance trade-off.

The original interpretation of *p*-curve estimation

In their presentation of *p*-curve, Simonsohn et al. (2014) emphasize that, in the presence of heterogeneity, *p*-curve is intended as an estimate of the true effect size among the studies submitted to *p*-curve. *p*-curve may indeed yield an accurate estimate of the true effect size among the *significant* studies, but in our view, the goal is to estimate the average effect of all *conducted* studies. 3PSM appears to give this desired estimate and interpretation.

Ways forward

Researchers can take steps to improve the quality of meta-analytic conclusions regardless of the particular estimation strategy. Some steps are methodological. It may be possible to limit heterogeneity through the application of inclusion criteria. Publication bias can be mitigated by all parties: Meta-analysts can search for and retrieve unpublished research, authors can abstain from QRPs and selective publication, journal editors can publish competent research regardless of the significance of its conclusions, or formalize this route by offering registered reports (Chambers, Feredoes, Muthukumaraswamy, & Etchells, 2014). Other steps regard the presentation of results: Authors can make published findings more transparent, respond to meta-analysts' requests for unpublished data, and encourage other researchers to double-check the coding of studies and the application of methods. Moreover, meta-analysts should use funnel plots to visualize the data and identify outliers. Sensitivity analyses should diagnose those outliers' influence. In any case, all study-level summary data which enters a published meta-analysis should be made open (Lakens, Hilgard, & Staaks, 2016; Moher, Liberati, Tetzlaff, Altman, & Group, 2009).

Furthermore, potentially biased previous meta-analytic results can be usefully integrated with new replication meta-analyses as a means of more fully describing the most credible estimates of the effect of interest given the entire knowledge base (e.g., Carter & McCullough, n.d.).

It is our hope that through the iteration of some form of this process, knowledge about psychological phenomena can be reliably uncovered; however, we also see immense value in the recommendation that researchers in the social sciences become more willing to embrace uncertainty and to adopt more sophisticated methods that more appropriately address the complexities of behavior (Gelman, 2015).

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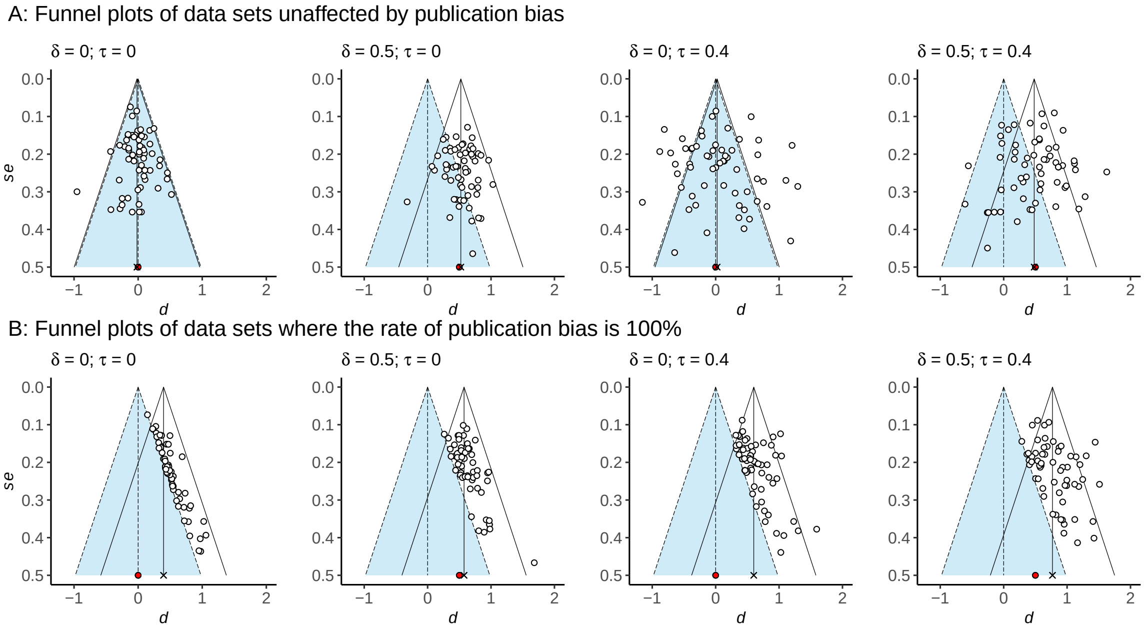

Figure 1. Funnel plots compare the effect size estimate against its standard error across studies. (A) In the absence of publication bias, data points form a symmetrical funnel, conforming closely to the true effect size when the standard error is small and spreading evenly when the standard error is large. Heterogeneity in the true effect size leads to greater spread. (B) Publication bias selectively removes non-statistically-significant effect size estimates. This censorship of small effect size estimates leads to an asymmetrical funnel and overestimation of the true effect size. Figure available at https://osf.io/rf3ys, under a CC-BY4.0 license.

Abbreviation	Meaning
RE	Random-effects meta-analysis
TF	Trim-and-fill
PT	Precision effect test (PET)
PE	Precision effect estimate with standard error (PEESE)
PP	PET-PEESE
PC	*p*-curve
PU	*p*-uniform
3P	Three parameter selection model
qrpEnv	QRP Environment (see main text)

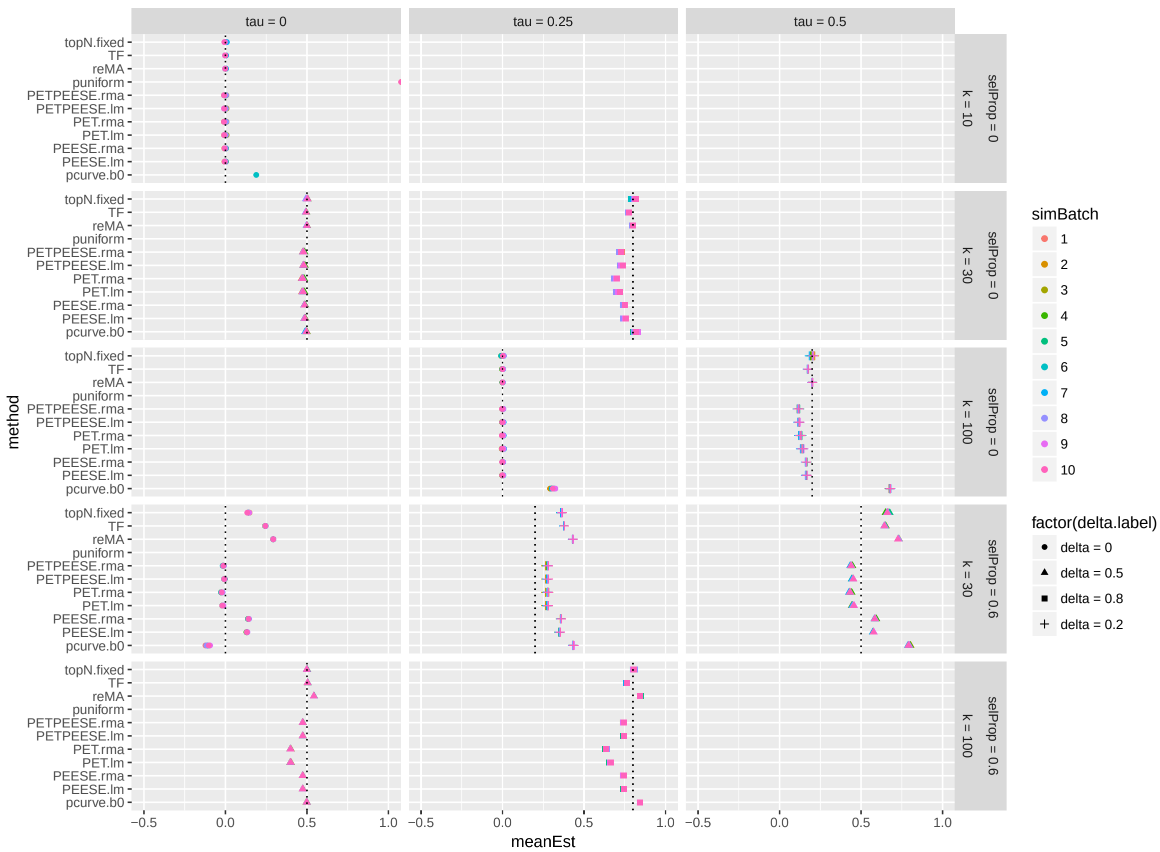

Figure 2. Variance in effect size estimates between simulation batches. Each point summarizes a 1000-simulation batch. Close overplotting of points indicates minimal simulation error at 1000 runs.

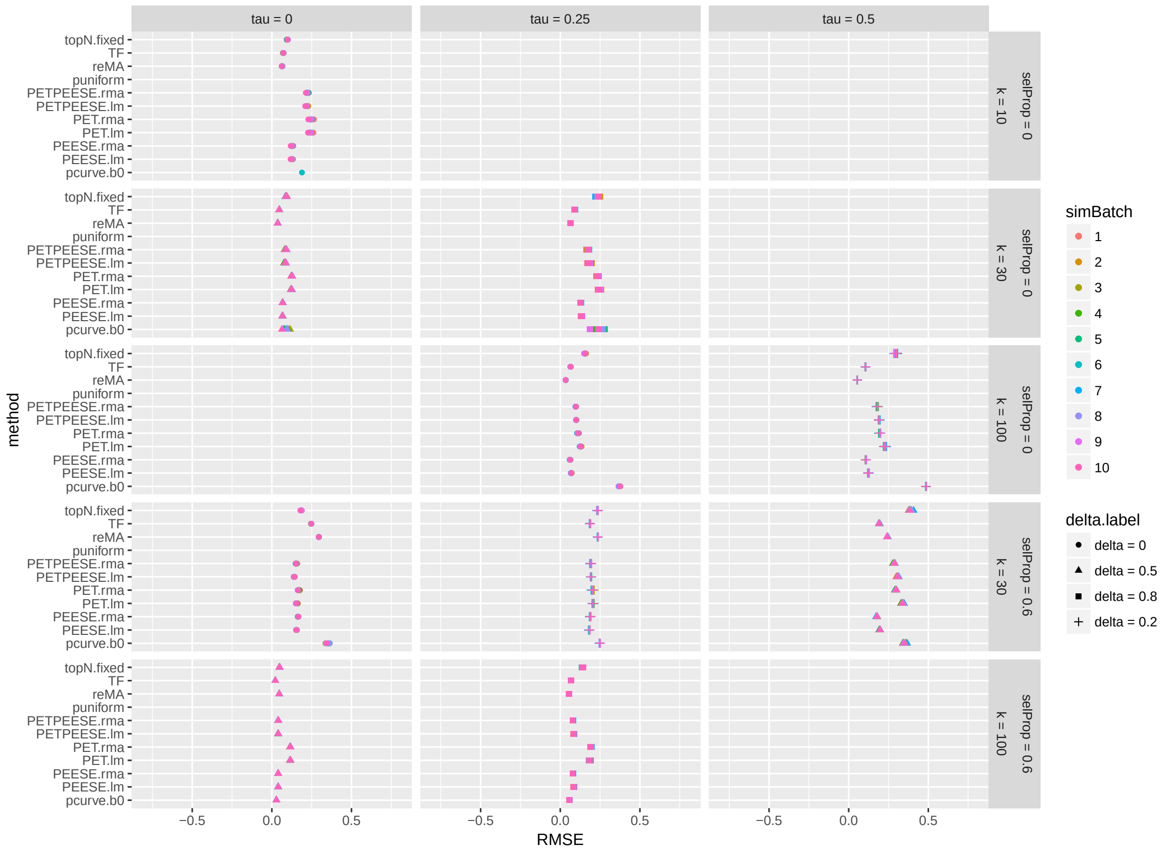

Figure 3. Variance in RMSE estimates between simulation batches. Each point summarizes a 1000-simulation batch. Close overplotting of points indicates minimal simulation error at 1000 runs.

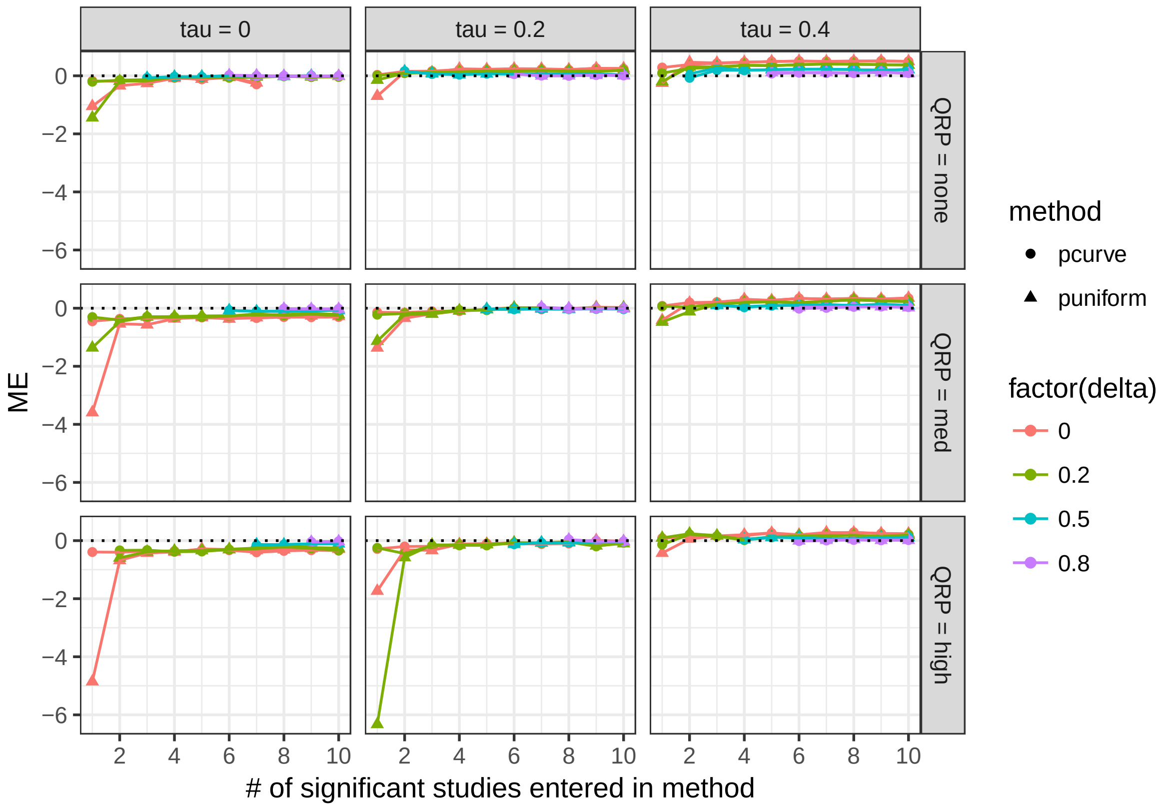

Figure 4. Mean error (ME) in Cohen's d, grouped by number of significant studies. Estimates based on a single significant result show unacceptable downward bias.

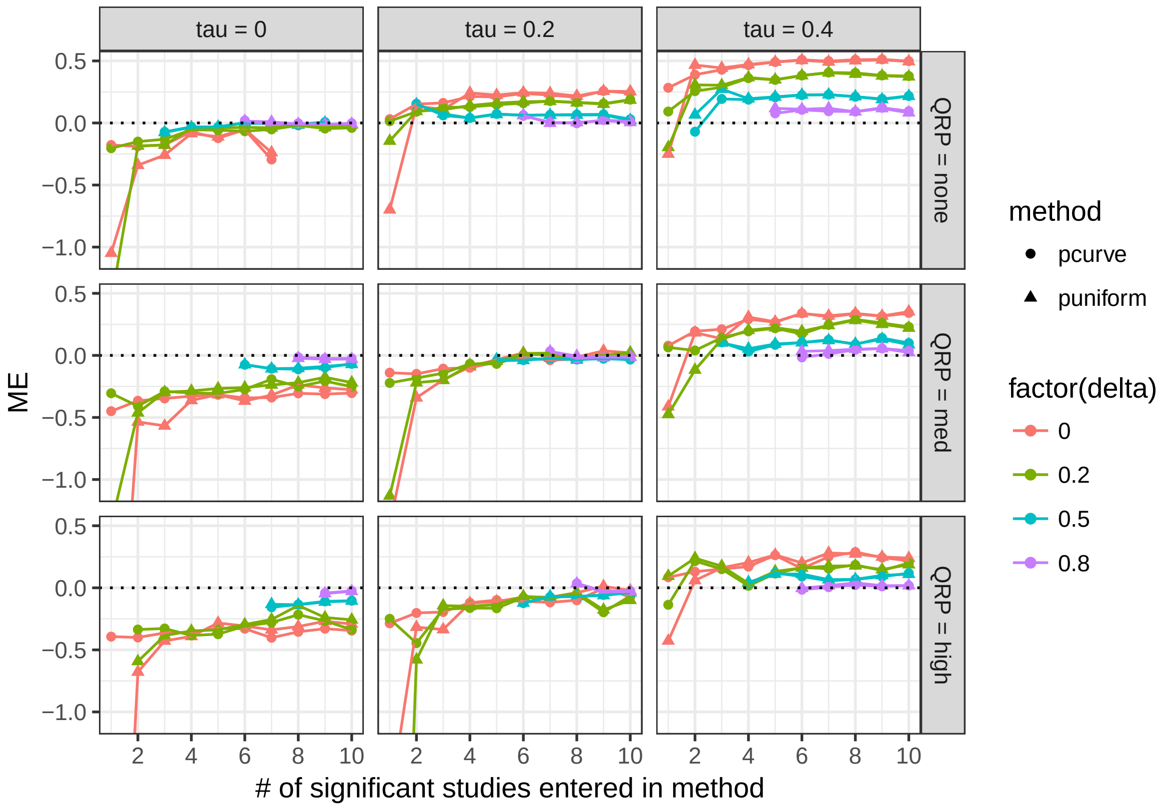

Figure 5. ME in Cohen's d with zoomed y-scale. Estimates based on 3 or fewer significant studies show unacceptable downward bias, even in the absence of QRPs and heterogeneity.

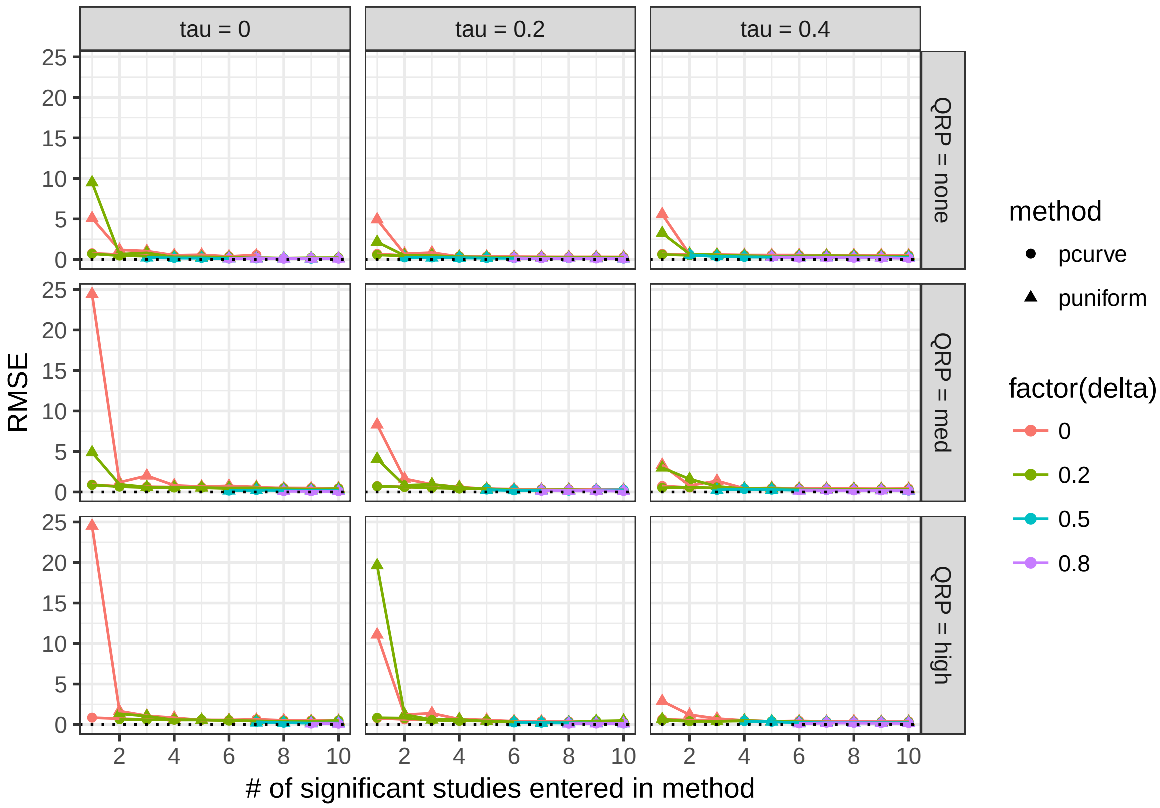

Figure 6. Root mean square error (RMSE) in Cohen's d, grouped by # of significant studies. RMSE is unacceptable when there is one significant result.

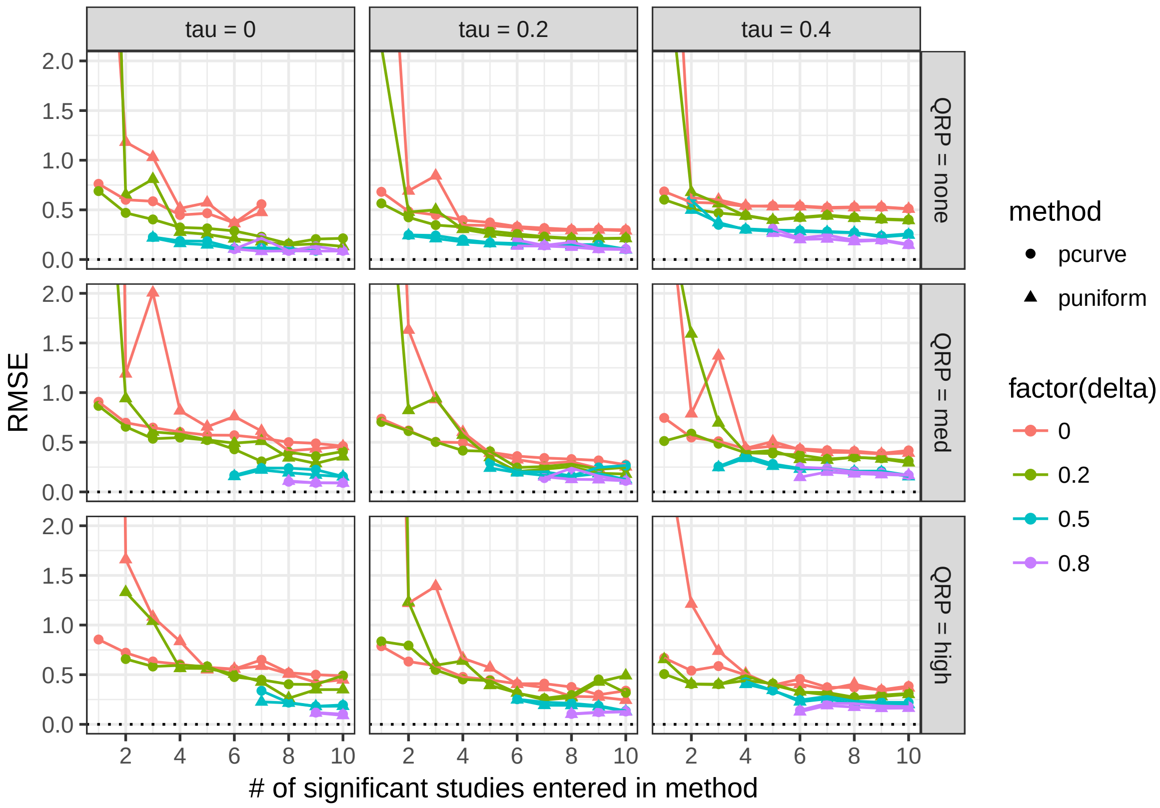

Figure 7. RMSE in Cohen's d with zoomed y-scale. Estimates based on 3 or fewer significant studies show unacceptable and erratic RMSE.

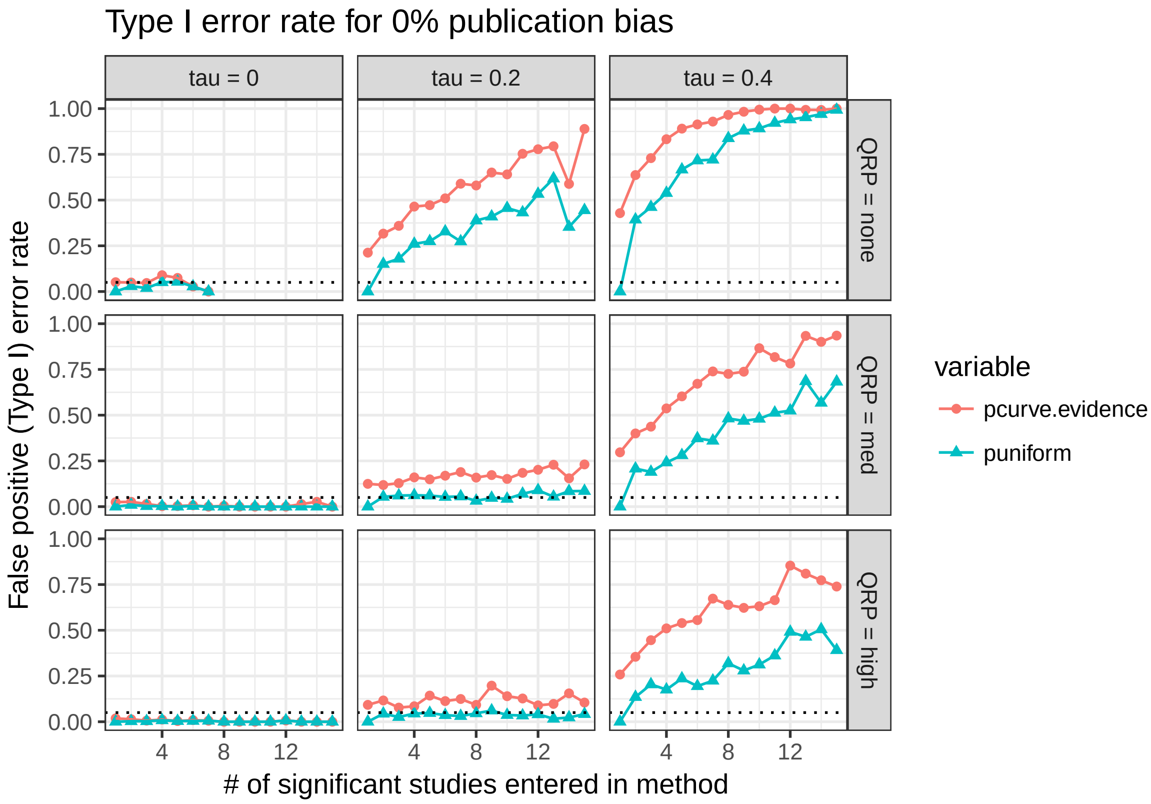

Figure 8. False positive rate (Type I errors)

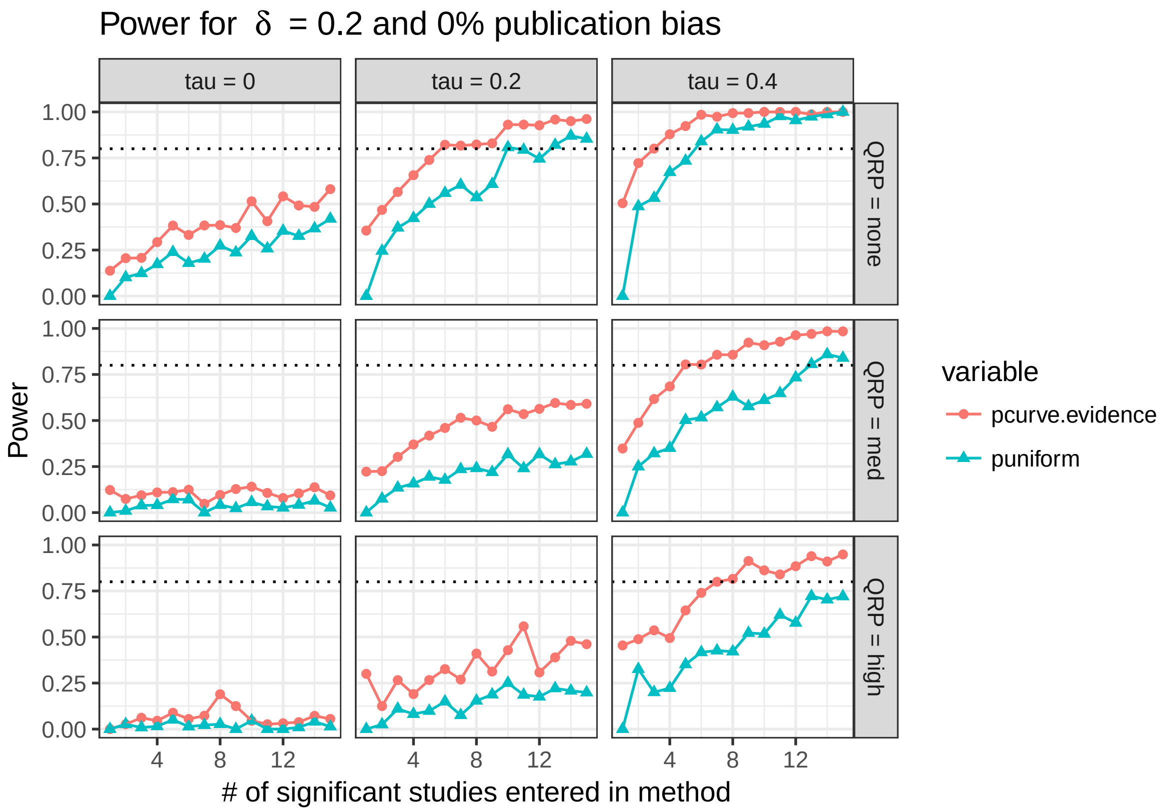

Figure 9. True positive rate (statistical power) for $\delta = 0.2$

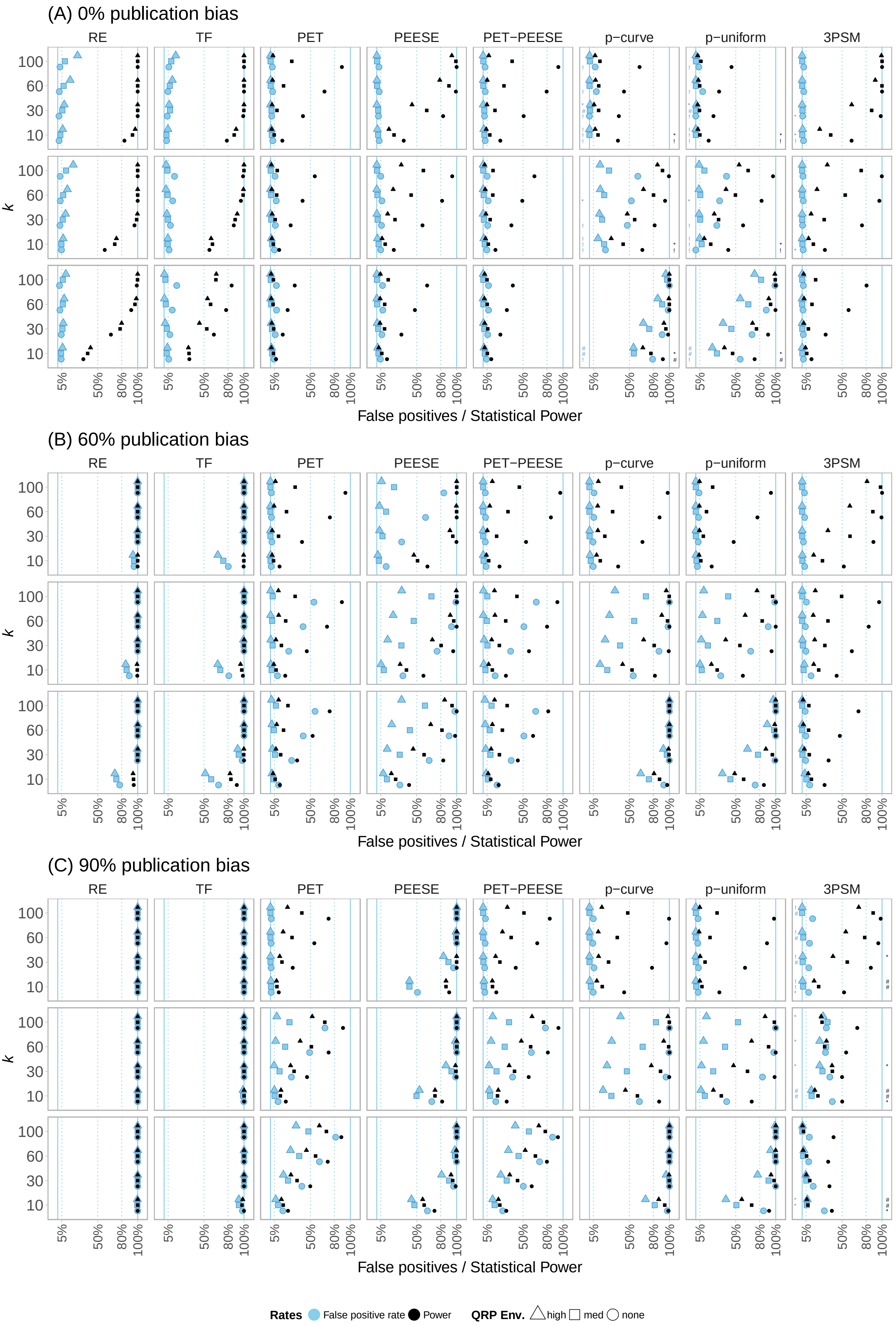

Figure 10. Rejection rates when $\delta = 0$ or $\delta = 0.20$.

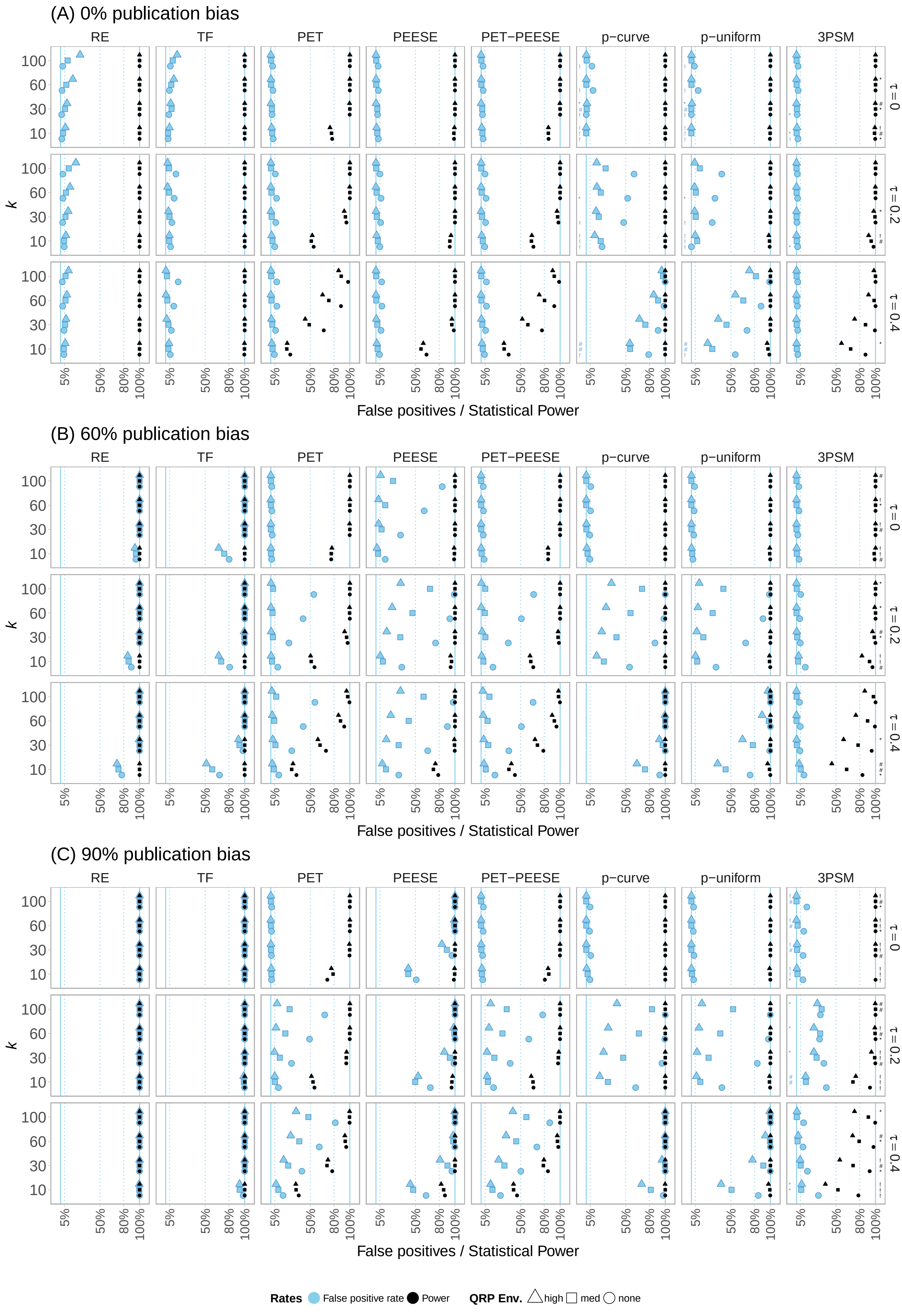

Figure 11. Rejection rates for hypothesis testing when $\delta = 0$ or $\delta = 0.80$.

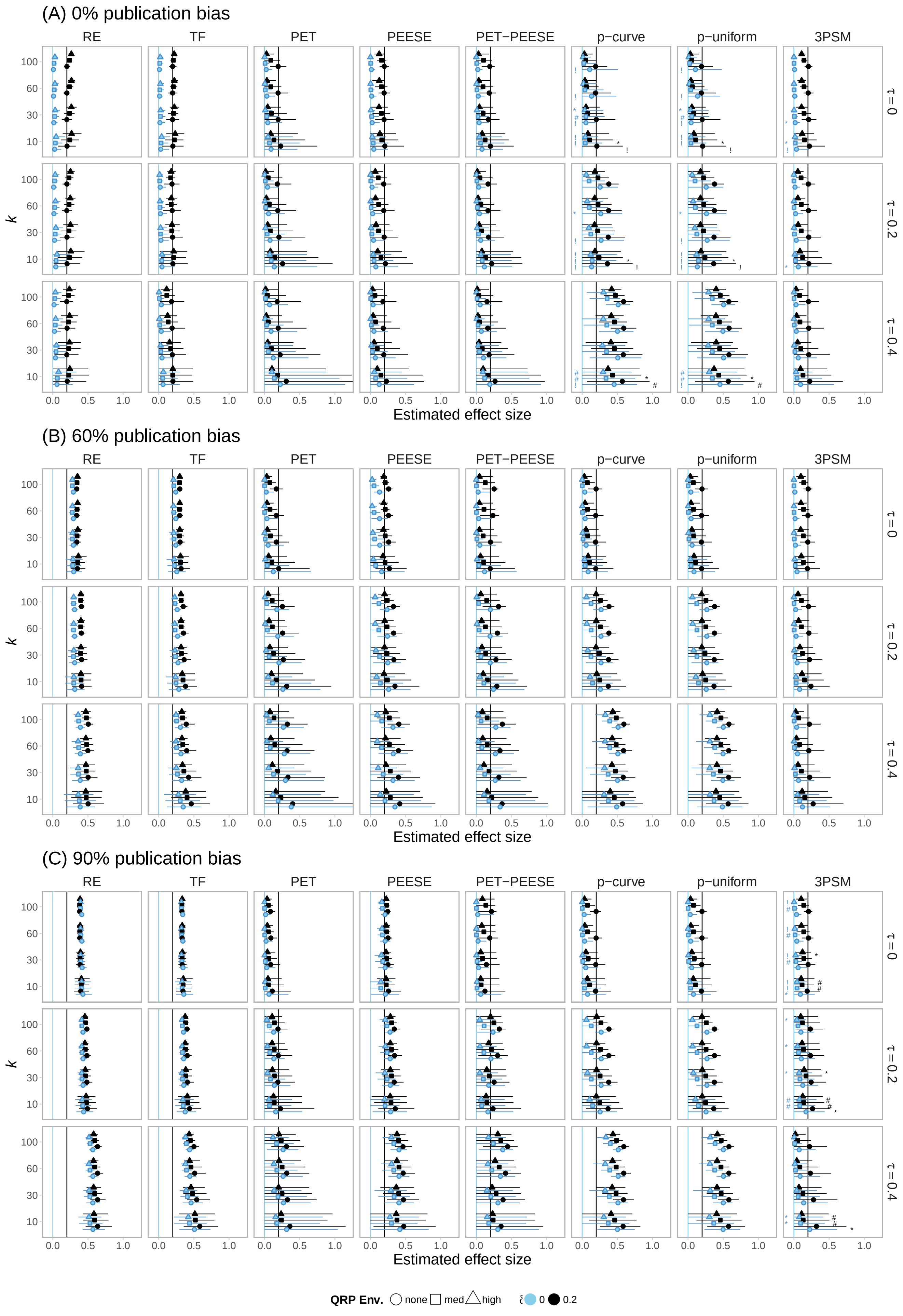

Figure 12. Estimation when $\delta = 0$ or $\delta = 0.20$.

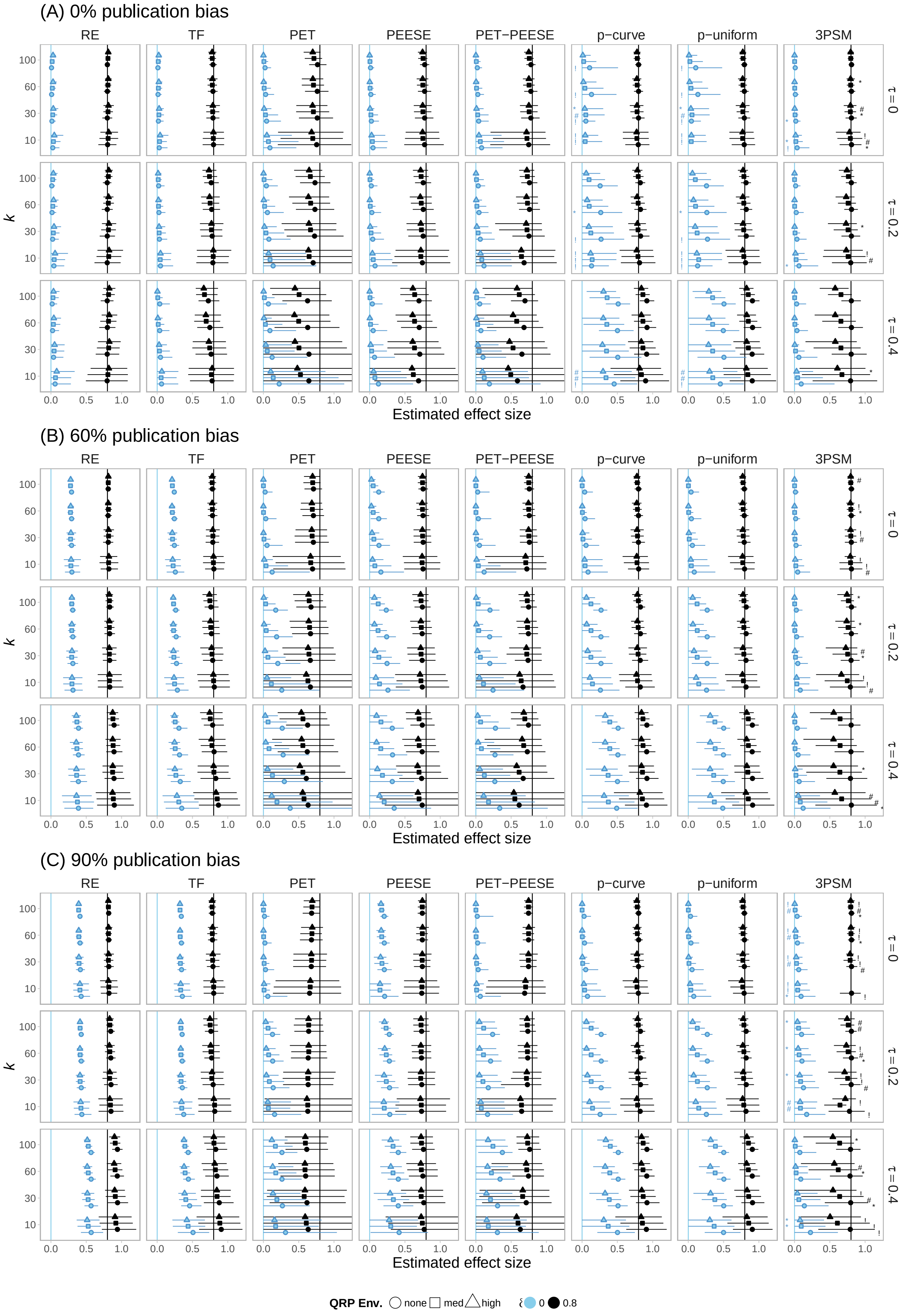

Figure 13. Estimation when $\delta = 0$ or $\delta = 0.80$.

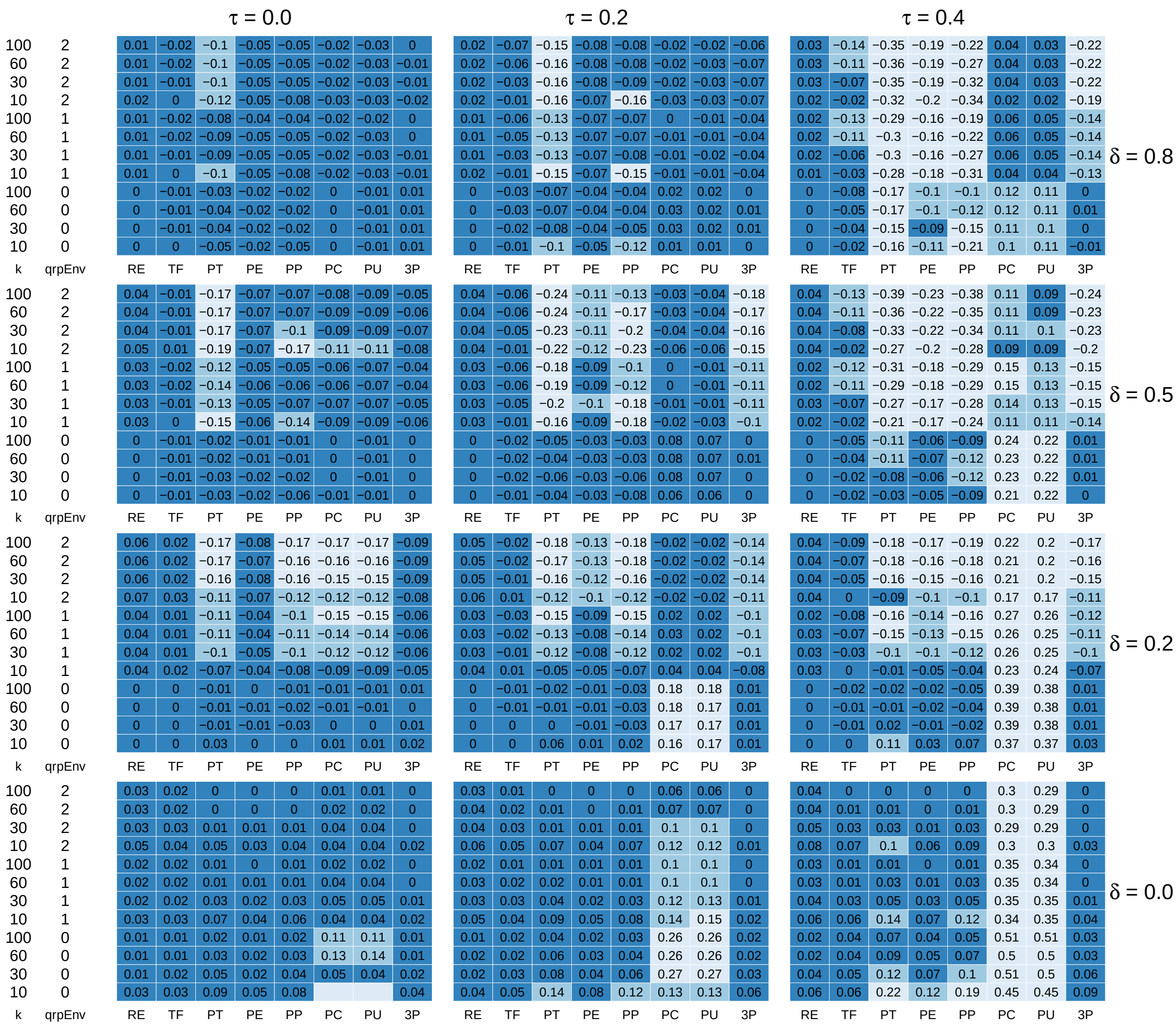

Figure 14. Mean error (ME) for all methods with publication bias at 0% and when *estimates < 0 are set to zero*. Color coding is as follows: darkest = $|ME| < .1$; medium = $.1 \leq |ME| < .15$; lightest = $.15 \leq |ME|$.

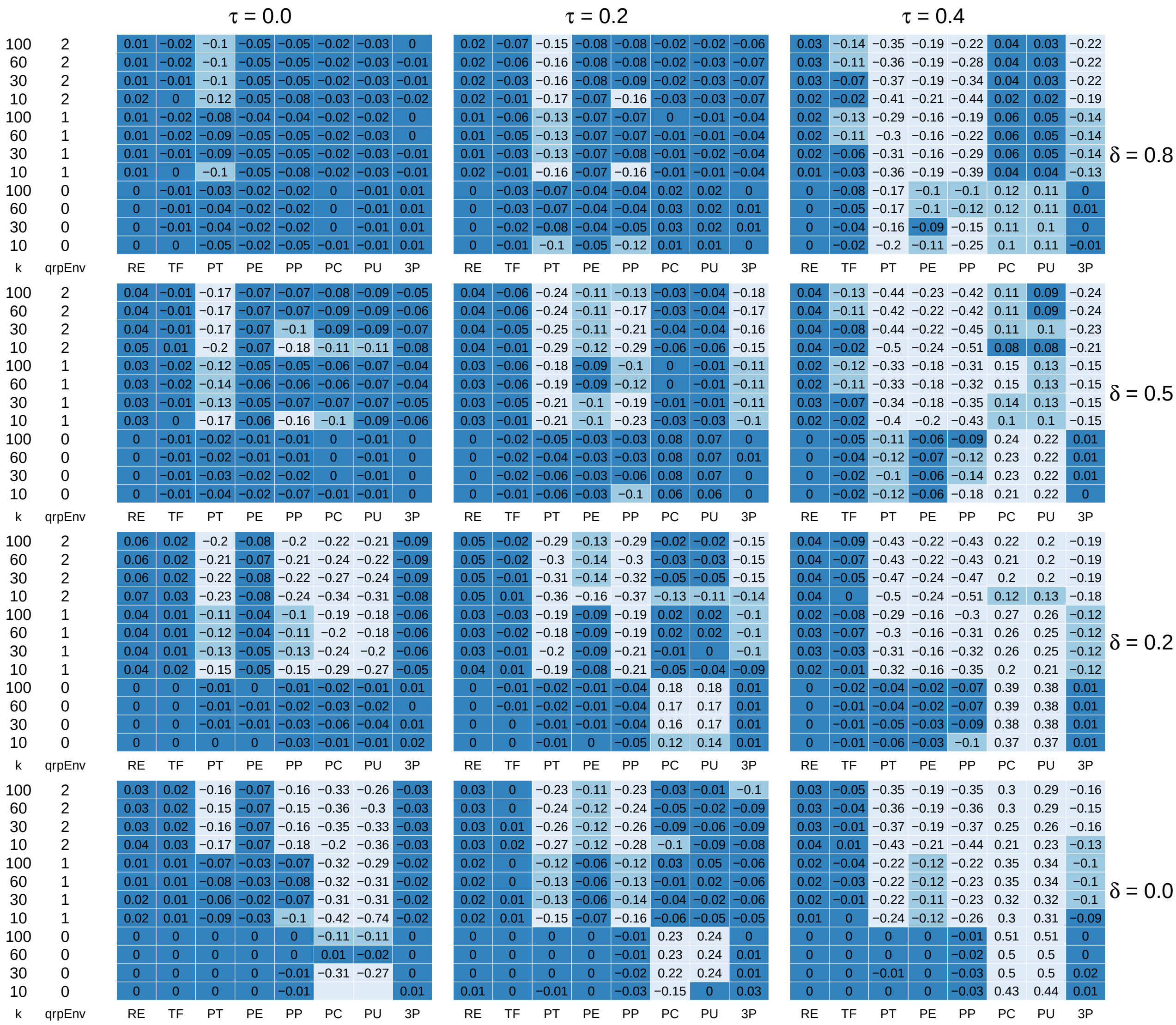

Figure 15. Mean error (ME) for all methods with publication bias at 0%. Color coding is as follows: darkest = $|ME| < .1$; medium = $.1 \leq |ME| < .15$; lightest = $.15 \leq |ME|$

δ = 0.8

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.01	−0.02	−0.1	−0.05	−0.05	−0.02	−0.03	0	0.03	−0.06	−0.16	−0.08	−0.08	−0.02	−0.02	−0.06	0.07	−0.06	−0.26	−0.11	−0.12	0.04	0.03	−0.25
60	2	0.01	−0.02	−0.11	−0.06	−0.06	−0.03	−0.03	−0.01	0.03	−0.04	−0.16	−0.07	−0.07	−0.02	−0.02	−0.06	0.07	−0.03	−0.26	−0.11	−0.14	0.04	0.03	−0.25
30	2	0.02	−0.01	−0.12	−0.05	−0.05	−0.02	−0.03	−0.01	0.03	−0.03	−0.17	−0.08	−0.08	−0.02	−0.03	−0.07	0.08	0	−0.28	−0.12	−0.22	0.04	0.03	−0.25
10	2	0.02	0	−0.13	−0.06	−0.1	−0.03	−0.03	−0.01	0.03	0	−0.19	−0.09	−0.18	−0.03	−0.03	−0.14	0.07	0.03	−0.24	−0.12	−0.26	0.02	0.02	−0.23
100	1	0.01	−0.02	−0.1	−0.05	−0.05	−0.02	−0.02	0	0.03	−0.05	−0.15	−0.07	−0.07	0	−0.01	−0.04	0.08	−0.05	−0.24	−0.1	−0.11	0.06	0.05	−0.15
60	1	0.01	−0.02	−0.11	−0.05	−0.05	−0.02	−0.02	0	0.03	−0.04	−0.15	−0.07	−0.07	−0.01	−0.01	−0.04	0.08	−0.02	−0.24	−0.1	−0.12	0.06	0.05	−0.15
30	1	0.02	−0.01	−0.11	−0.05	−0.05	−0.01	−0.02	0	0.03	−0.02	−0.15	−0.07	−0.08	−0.01	−0.01	−0.05	0.07	0	−0.24	−0.1	−0.19	0.06	0.04	−0.16
10	1	0.02	0	−0.13	−0.06	−0.09	−0.02	−0.03	−0.01	0.03	0	−0.17	−0.07	−0.16	−0.01	−0.02	−0.05	0.08	0.05	−0.22	−0.1	−0.25	0.05	0.05	−0.13
100	0	0.01	−0.02	−0.09	−0.04	−0.04	0	−0.01	0.01	0.03	−0.04	−0.13	−0.05	−0.05	0.03	0.02	0.01	0.09	−0.01	−0.17	−0.05	−0.05	0.12	0.11	0
60	0	0.01	−0.02	−0.09	−0.04	−0.04	0	−0.01	0	0.03	−0.03	−0.13	−0.06	−0.06	0.03	0.02	0.01	0.09	0.01	−0.18	−0.06	−0.07	0.12	0.1	0
30	0	0.01	−0.01	−0.09	−0.04	−0.04	0	−0.01	0	0.03	−0.01	−0.14	−0.06	−0.06	0.02	0.02	0	0.09	0.03	−0.19	−0.06	−0.13	0.12	0.11	−0.01
10	0	0.02	0	−0.1	−0.04	−0.08	0	0	0.01	0.03	0.01	−0.13	−0.05	−0.13	0.02	0.02	−0.01	0.1	0.07	−0.17	−0.06	−0.19	0.11	0.11	0

δ = 0.5

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.05	0	−0.18	−0.06	−0.06	−0.08	−0.08	−0.05	0.09	−0.02	−0.19	−0.06	−0.07	−0.02	−0.03	−0.19	0.16	−0.01	−0.24	−0.06	−0.15	0.12	0.1	−0.28
60	2	0.05	0	−0.18	−0.07	−0.07	−0.08	−0.09	−0.05	0.09	−0.01	−0.2	−0.06	−0.09	−0.02	−0.03	−0.18	0.16	0	−0.23	−0.06	−0.17	0.12	0.1	−0.28
30	2	0.06	0	−0.19	−0.07	−0.09	−0.08	−0.09	−0.06	0.08	0	−0.2	−0.06	−0.14	−0.03	−0.04	−0.17	0.16	0.03	−0.23	−0.07	−0.21	0.12	0.1	−0.25
10	2	0.06	0.03	−0.2	−0.07	−0.16	−0.1	−0.1	−0.1	0.09	0.04	−0.2	−0.07	−0.19	−0.05	−0.05	−0.16	0.16	0.09	−0.19	−0.07	−0.2	0.09	0.09	−0.21
100	1	0.05	0	−0.15	−0.05	−0.05	−0.06	−0.06	−0.03	0.09	−0.01	−0.16	−0.05	−0.05	0.01	0	−0.11	0.16	0	−0.19	−0.03	−0.09	0.15	0.14	−0.19
60	1	0.05	0	−0.15	−0.05	−0.05	−0.06	−0.06	−0.03	0.09	−0.01	−0.17	−0.05	−0.07	0.01	0	−0.12	0.16	0.02	−0.19	−0.04	−0.13	0.15	0.14	−0.18
30	1	0.05	0.01	−0.15	−0.05	−0.07	−0.06	−0.07	−0.04	0.09	0.01	−0.18	−0.05	−0.12	0.01	0	−0.11	0.16	0.05	−0.17	−0.04	−0.16	0.14	0.13	−0.16
10	1	0.06	0.03	−0.19	−0.06	−0.16	−0.06	−0.07	−0.05	0.09	0.04	−0.16	−0.05	−0.16	0	0	−0.09	0.17	0.11	−0.14	−0.03	−0.16	0.13	0.13	−0.13
100	0	0.04	0.01	−0.1	−0.02	−0.02	0	0	0.01	0.09	0.02	−0.09	0	0	0.08	0.07	0.01	0.18	0.06	−0.06	0.05	0.04	0.24	0.22	0.01
60	0	0.04	0	−0.1	−0.03	−0.03	0	−0.01	0	0.09	0.02	−0.09	0	0	0.08	0.08	0.01	0.19	0.08	−0.05	0.05	0.02	0.24	0.22	0.02
30	0	0.05	0.01	−0.1	−0.02	−0.03	0	−0.01	0	0.09	0.04	−0.09	0	−0.03	0.08	0.07	0.01	0.18	0.11	−0.04	0.06	−0.02	0.23	0.22	0.01
10	0	0.05	0.02	−0.11	−0.03	−0.09	−0.01	−0.01	−0.01	0.09	0.06	−0.07	0.01	−0.08	0.07	0.07	0	0.18	0.14	0	0.06	−0.03	0.22	0.22	0.03

δ = 0.2

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.15	0.1	−0.17	−0.01	−0.15	−0.17	−0.17	−0.1	0.2	0.12	−0.15	0	−0.14	0	−0.01	−0.14	0.27	0.13	−0.12	0.02	−0.11	0.24	0.21	−0.17
60	2	0.15	0.1	−0.17	−0.01	−0.16	−0.16	−0.16	−0.1	0.2	0.12	−0.14	0	−0.12	0	0	−0.13	0.27	0.13	−0.11	0.02	−0.11	0.23	0.21	−0.16
30	2	0.15	0.1	−0.16	−0.02	−0.16	−0.15	−0.15	−0.1	0.2	0.12	−0.13	0	−0.12	0	0	−0.11	0.27	0.14	−0.09	0.02	−0.09	0.22	0.21	−0.14
10	2	0.16	0.11	−0.14	−0.02	−0.14	−0.12	−0.11	−0.09	0.2	0.13	−0.1	−0.01	−0.1	0.01	0.01	−0.08	0.27	0.18	−0.04	0.02	−0.05	0.2	0.2	−0.08
100	1	0.14	0.1	−0.12	0.01	−0.07	−0.13	−0.12	−0.06	0.2	0.12	−0.09	0.04	−0.05	0.06	0.05	−0.09	0.28	0.14	−0.07	0.07	−0.05	0.28	0.27	−0.13
60	1	0.14	0.1	−0.12	0.01	−0.09	−0.12	−0.12	−0.06	0.2	0.12	−0.09	0.04	−0.07	0.06	0.05	−0.09	0.28	0.14	−0.05	0.07	−0.05	0.28	0.27	−0.12
30	1	0.14	0.1	−0.12	0.01	−0.1	−0.12	−0.12	−0.07	0.19	0.12	−0.07	0.04	−0.07	0.04	0.04	−0.08	0.27	0.16	−0.02	0.08	−0.02	0.27	0.26	−0.09
10	1	0.15	0.11	−0.1	0.01	−0.09	−0.09	−0.09	−0.06	0.2	0.15	−0.04	0.04	−0.04	0.05	0.05	−0.05	0.27	0.2	0.03	0.08	0.02	0.26	0.25	−0.05
100	0	0.14	0.1	−0.03	0.06	0.05	0	0	0	0.21	0.15	0.05	0.13	0.12	0.18	0.18	0.01	0.3	0.19	0.12	0.2	0.17	0.39	0.38	0.02
60	0	0.14	0.1	−0.03	0.06	0.04	−0.01	−0.01	0	0.21	0.15	0.06	0.13	0.1	0.18	0.18	0.01	0.3	0.2	0.12	0.2	0.14	0.39	0.38	0.01
30	0	0.14	0.1	−0.03	0.06	0	−0.01	−0.01	0	0.21	0.16	0.07	0.13	0.08	0.18	0.17	0.02	0.3	0.23	0.13	0.2	0.12	0.38	0.38	0.02
10	0	0.15	0.12	0	0.07	0	−0.01	−0.01	−0.01	0.21	0.18	0.12	0.15	0.09	0.17	0.17	0.04	0.3	0.26	0.2	0.22	0.17	0.37	0.37	0.07

δ = 0.0

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.28	0.21	0	0.02	0	0	0	0	0.3	0.23	0	0.07	0.01	0.06	0.06	0	0.36	0.25	0.03	0.1	0.03	0.33	0.31	0
60	2	0.28	0.21	0	0.02	0	0	0	0	0.3	0.23	0.01	0.07	0.01	0.06	0.07	0	0.36	0.25	0.03	0.1	0.03	0.33	0.31	0
30	2	0.28	0.21	0	0.03	0	0.01	0.01	0	0.3	0.23	0.02	0.08	0.02	0.08	0.08	0.01	0.36	0.25	0.06	0.11	0.06	0.32	0.31	0.01
10	2	0.29	0.22	0.01	0.04	0.01	0.04	0.03	0.01	0.3	0.24	0.05	0.09	0.05	0.11	0.11	0.03	0.36	0.28	0.12	0.14	0.11	0.31	0.31	0.05
100	1	0.28	0.22	0	0.05	0	0	0	0	0.29	0.23	0.03	0.12	0.03	0.13	0.12	0	0.37	0.25	0.07	0.16	0.07	0.39	0.38	0
60	1	0.28	0.21	0	0.05	0	0	0	0	0.29	0.23	0.04	0.12	0.04	0.13	0.13	0	0.37	0.26	0.08	0.16	0.08	0.39	0.38	0.01
30	1	0.28	0.22	0.01	0.06	0.01	0.01	0.01	0	0.29	0.24	0.06	0.13	0.06	0.12	0.13	0.01	0.36	0.27	0.13	0.18	0.12	0.37	0.36	0.02
10	1	0.28	0.23	0.04	0.07	0.04	0.04	0.04	0.02	0.3	0.25	0.11	0.14	0.11	0.15	0.15	0.03	0.37	0.31	0.19	0.21	0.18	0.37	0.37	0.08
100	0	0.29	0.24	0.02	0.13	0.03	0.04	0.04	0.01	0.31	0.26	0.17	0.24	0.2	0.27	0.27	0.03	0.39	0.31	0.27	0.32	0.28	0.51	0.5	0.04
60	0	0.29	0.24	0.03	0.13	0.03	0.04	0.04	0.02	0.31	0.27	0.19	0.24	0.2	0.27	0.27	0.03	0.39	0.32	0.28	0.32	0.27	0.51	0.5	0.05
30	0	0.29	0.24	0.05	0.13	0.05	0.06	0.06	0.02	0.31	0.27	0.2	0.25	0.2	0.27	0.27	0.05	0.39	0.33	0.3	0.32	0.27	0.5	0.5	0.07
10	0	0.3	0.26	0.12	0.16	0.12	0.08	0.08	0.05	0.31	0.29	0.26	0.26	0.24	0.26	0.26	0.08	0.39	0.35	0.38	0.35	0.34	0.49	0.49	0.12

Figure 16. Mean error (ME) for all methods with publication bias at 60% and when *estimates < 0 are set to zero*. Color coding is as follows: darkest = $|ME| < .1$; medium = $.1 \leq |ME| < .15$; lightest = $.15 \leq |ME|$.

δ = 0.8

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.01	−0.02	−0.1	−0.05	−0.05	−0.02	−0.03	0	0.03	−0.06	−0.16	−0.08	−0.08	−0.02	−0.02	−0.06	0.07	−0.06	−0.26	−0.11	−0.12	0.04	0.03	−0.25
60	2	0.01	−0.02	−0.11	−0.06	−0.06	−0.03	−0.03	−0.01	0.03	−0.04	−0.16	−0.07	−0.07	−0.02	−0.02	−0.06	0.07	−0.03	−0.26	−0.11	−0.15	0.04	0.03	−0.25
30	2	0.02	−0.01	−0.12	−0.05	−0.05	−0.02	−0.03	−0.01	0.03	−0.03	−0.17	−0.08	−0.08	−0.02	−0.03	−0.07	0.08	0	−0.29	−0.12	−0.23	0.04	0.03	−0.25
10	2	0.02	0	−0.13	−0.06	−0.1	−0.03	−0.03	−0.01	0.03	0	−0.2	−0.09	−0.19	−0.03	−0.03	−0.14	0.07	0.03	−0.29	−0.12	−0.31	0.02	0.02	−0.23
100	1	0.01	−0.02	−0.1	−0.05	−0.05	−0.02	−0.02	0	0.03	−0.05	−0.15	−0.07	−0.07	0	−0.01	−0.04	0.08	−0.05	−0.24	−0.1	−0.11	0.06	0.05	−0.15
60	1	0.01	−0.02	−0.11	−0.05	−0.05	−0.02	−0.02	0	0.03	−0.04	−0.15	−0.07	−0.07	−0.01	−0.01	−0.04	0.08	−0.02	−0.24	−0.1	−0.12	0.06	0.05	−0.15
30	1	0.02	−0.01	−0.11	−0.05	−0.05	−0.01	−0.02	0	0.03	−0.02	−0.15	−0.07	−0.08	−0.01	−0.01	−0.05	0.07	0	−0.24	−0.1	−0.19	0.06	0.04	−0.16
10	1	0.02	0	−0.13	−0.06	−0.09	−0.02	−0.03	−0.01	0.03	0	−0.17	−0.07	−0.16	−0.01	−0.02	−0.05	0.08	0.05	−0.27	−0.1	−0.29	0.05	0.05	−0.14
100	0	0.01	−0.02	−0.09	−0.04	−0.04	0	−0.01	0.01	0.03	−0.04	−0.13	−0.05	−0.05	0.03	0.02	0.01	0.09	−0.01	−0.17	−0.05	−0.05	0.12	0.11	0
60	0	0.01	−0.02	−0.09	−0.04	−0.04	0	−0.01	0	0.03	−0.03	−0.13	−0.06	−0.06	0.03	0.02	0.01	0.09	0.01	−0.18	−0.06	−0.07	0.12	0.1	0
30	0	0.01	−0.01	−0.09	−0.04	−0.04	0	−0.01	0	0.03	−0.01	−0.14	−0.06	−0.06	0.02	0.02	0	0.09	0.03	−0.2	−0.06	−0.13	0.12	0.11	−0.01
10	0	0.02	0	−0.11	−0.04	−0.08	0	0	0.01	0.03	0.01	−0.14	−0.05	−0.14	0.02	0.02	−0.01	0.1	0.07	−0.19	−0.06	−0.21	0.11	0.11	0

δ = 0.5

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.05	0	−0.18	−0.06	−0.06	−0.08	−0.08	−0.05	0.09	−0.02	−0.19	−0.06	−0.07	−0.02	−0.03	−0.19	0.16	−0.01	−0.24	−0.06	−0.15	0.12	0.1	−0.28
60	2	0.05	0	−0.18	−0.07	−0.07	−0.08	−0.09	−0.05	0.09	−0.01	−0.2	−0.06	−0.09	−0.02	−0.03	−0.18	0.16	0	−0.24	−0.06	−0.18	0.12	0.1	−0.28
30	2	0.06	0	−0.19	−0.07	−0.09	−0.08	−0.09	−0.06	0.08	0	−0.2	−0.06	−0.14	−0.03	−0.04	−0.17	0.16	0.03	−0.26	−0.07	−0.24	0.12	0.1	−0.27
10	2	0.06	0.03	−0.21	−0.07	−0.17	−0.1	−0.1	−0.1	0.09	0.04	−0.23	−0.07	−0.22	−0.05	−0.05	−0.16	0.16	0.09	−0.3	−0.08	−0.31	0.09	0.09	−0.24
100	1	0.05	0	−0.15	−0.05	−0.05	−0.06	−0.06	−0.03	0.09	−0.01	−0.16	−0.05	−0.05	0.01	0	−0.11	0.16	0	−0.19	−0.03	−0.1	0.15	0.14	−0.19
60	1	0.05	0	−0.15	−0.05	−0.05	−0.06	−0.06	−0.03	0.09	−0.01	−0.17	−0.05	−0.07	0.01	0	−0.12	0.16	0.02	−0.19	−0.04	−0.13	0.15	0.14	−0.18
30	1	0.05	0.01	−0.15	−0.05	−0.07	−0.06	−0.07	−0.04	0.09	0.01	−0.18	−0.05	−0.12	0.01	0	−0.11	0.16	0.05	−0.2	−0.04	−0.18	0.14	0.13	−0.17
10	1	0.06	0.03	−0.19	−0.06	−0.16	−0.06	−0.07	−0.05	0.09	0.04	−0.19	−0.05	−0.18	0	−0.01	−0.09	0.17	0.11	−0.23	−0.04	−0.24	0.13	0.13	−0.15
100	0	0.04	0.01	−0.1	−0.02	−0.02	0	0	0.01	0.09	0.02	−0.09	0	0	0.08	0.07	0.01	0.18	0.06	−0.06	0.05	0.04	0.24	0.22	0.01
60	0	0.04	0	−0.1	−0.03	−0.03	0	−0.01	0	0.09	0.02	−0.09	0	0	0.08	0.08	0.01	0.19	0.08	−0.06	0.05	0.02	0.24	0.22	0.02
30	0	0.05	0.01	−0.1	−0.02	−0.03	0	−0.01	0	0.09	0.04	−0.09	0	−0.04	0.08	0.07	0.01	0.18	0.11	−0.04	0.06	−0.03	0.23	0.22	0.01
10	0	0.05	0.02	−0.12	−0.03	−0.1	−0.01	−0.01	−0.01	0.09	0.06	−0.08	0	−0.1	0.07	0.07	0	0.18	0.14	−0.05	0.06	−0.08	0.22	0.22	0.02

δ = 0.2

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.15	0.1	−0.18	−0.01	−0.17	−0.2	−0.2	−0.1	0.2	0.12	−0.18	0	−0.16	0	−0.01	−0.15	0.27	0.13	−0.18	0.02	−0.17	0.24	0.21	−0.22
60	2	0.15	0.1	−0.18	−0.01	−0.17	−0.21	−0.19	−0.1	0.2	0.12	−0.18	0	−0.17	0	0	−0.14	0.27	0.13	−0.19	0.01	−0.19	0.23	0.21	−0.22
30	2	0.15	0.1	−0.19	−0.02	−0.19	−0.22	−0.2	−0.11	0.2	0.12	−0.19	0	−0.18	−0.01	−0.01	−0.13	0.27	0.14	−0.2	0.01	−0.2	0.22	0.21	−0.2
10	2	0.16	0.11	−0.22	−0.02	−0.22	−0.27	−0.24	−0.1	0.2	0.13	−0.24	−0.02	−0.24	−0.05	−0.04	−0.11	0.27	0.18	−0.28	−0.02	−0.29	0.19	0.19	−0.16
100	1	0.14	0.1	−0.13	0.01	−0.07	−0.13	−0.13	−0.06	0.2	0.12	−0.1	0.04	−0.06	0.06	0.05	−0.09	0.28	0.14	−0.09	0.07	−0.07	0.28	0.27	−0.14
60	1	0.14	0.1	−0.13	0.01	−0.09	−0.14	−0.14	−0.06	0.2	0.12	−0.11	0.04	−0.09	0.06	0.05	−0.09	0.28	0.14	−0.1	0.07	−0.09	0.28	0.27	−0.14
30	1	0.14	0.1	−0.13	0.01	−0.12	−0.17	−0.15	−0.07	0.19	0.12	−0.11	0.03	−0.1	0.04	0.04	−0.08	0.27	0.16	−0.08	0.08	−0.08	0.27	0.26	−0.13
10	1	0.15	0.11	−0.15	0.01	−0.15	−0.19	−0.17	−0.07	0.2	0.15	−0.14	0.03	−0.15	0.02	0.02	−0.07	0.27	0.2	−0.15	0.05	−0.16	0.25	0.24	−0.11
100	0	0.14	0.1	−0.03	0.06	0.05	0	0	0	0.21	0.15	0.05	0.13	0.12	0.18	0.18	0.01	0.3	0.19	0.12	0.2	0.17	0.39	0.38	0.02
60	0	0.14	0.1	−0.03	0.06	0.04	−0.01	−0.01	0	0.21	0.15	0.06	0.13	0.1	0.18	0.18	0.01	0.3	0.2	0.11	0.2	0.13	0.39	0.38	0.01
30	0	0.14	0.1	−0.03	0.06	0	−0.02	−0.01	0	0.21	0.16	0.06	0.13	0.07	0.18	0.17	0.02	0.3	0.23	0.11	0.2	0.1	0.38	0.38	0.02
10	0	0.15	0.12	−0.02	0.07	−0.02	−0.05	−0.04	−0.01	0.21	0.18	0.08	0.15	0.06	0.16	0.16	0.03	0.3	0.26	0.12	0.2	0.08	0.37	0.37	0.04

δ = 0.0

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.28	0.21	−0.24	0.02	−0.24	−0.27	−0.21	−0.06	0.3	0.23	−0.14	0.06	−0.14	0.04	0.05	−0.1	0.36	0.25	−0.12	0.09	−0.12	0.33	0.31	−0.17
60	2	0.28	0.21	−0.25	0.01	−0.25	−0.26	−0.21	−0.06	0.3	0.23	−0.15	0.06	−0.15	0.03	0.04	−0.1	0.36	0.25	−0.14	0.08	−0.14	0.33	0.31	−0.17
30	2	0.28	0.21	−0.26	0.01	−0.26	−0.29	−0.22	−0.06	0.3	0.23	−0.16	0.06	−0.16	0.01	0.03	−0.09	0.36	0.25	−0.16	0.08	−0.16	0.32	0.31	−0.16
10	2	0.29	0.22	−0.34	−0.03	−0.34	−0.32	−0.28	−0.05	0.3	0.24	−0.24	0.03	−0.24	−0.04	−0.02	−0.04	0.36	0.28	−0.24	0.05	−0.24	0.27	0.28	−0.1
100	1	0.28	0.22	−0.17	0.05	−0.17	−0.19	−0.15	−0.04	0.29	0.23	−0.02	0.12	−0.02	0.12	0.12	−0.07	0.37	0.25	0	0.16	0	0.39	0.38	−0.11
60	1	0.28	0.21	−0.17	0.05	−0.17	−0.21	−0.17	−0.04	0.29	0.23	−0.03	0.12	−0.03	0.12	0.12	−0.06	0.37	0.26	−0.02	0.15	−0.02	0.39	0.38	−0.11
30	1	0.28	0.22	−0.17	0.05	−0.17	−0.25	−0.19	−0.04	0.29	0.24	−0.02	0.13	−0.02	0.09	0.1	−0.05	0.36	0.27	0.02	0.17	0.01	0.37	0.36	−0.1
10	1	0.28	0.23	−0.22	0.03	−0.23	−0.3	−0.28	−0.03	0.3	0.25	−0.08	0.1	−0.08	0.05	0.08	−0.05	0.37	0.31	−0.05	0.15	−0.07	0.35	0.36	−0.05
100	0	0.29	0.24	−0.02	0.13	−0.01	0	0.01	0	0.31	0.26	0.17	0.24	0.2	0.27	0.27	0.01	0.39	0.31	0.26	0.32	0.27	0.51	0.5	0.01
60	0	0.29	0.24	−0.02	0.13	−0.02	−0.02	0	0	0.31	0.27	0.18	0.24	0.19	0.27	0.27	0.01	0.39	0.32	0.27	0.32	0.26	0.51	0.5	0.01
30	0	0.29	0.24	−0.02	0.13	−0.02	−0.05	−0.02	0	0.31	0.27	0.19	0.25	0.18	0.27	0.27	0.02	0.39	0.33	0.26	0.32	0.23	0.5	0.5	0.01
10	0	0.3	0.26	−0.01	0.14	−0.01	−0.11	−0.08	0.01	0.31	0.29	0.19	0.25	0.17	0.22	0.23	0.03	0.39	0.35	0.27	0.33	0.23	0.48	0.49	0.03

Figure 17. Mean error (ME) for all methods with publication bias at 60%. Color coding is as follows: darkest = $|ME| < .1$; medium = $.1 \leq |ME| < .15$; lightest = $.15 \leq |ME|$.

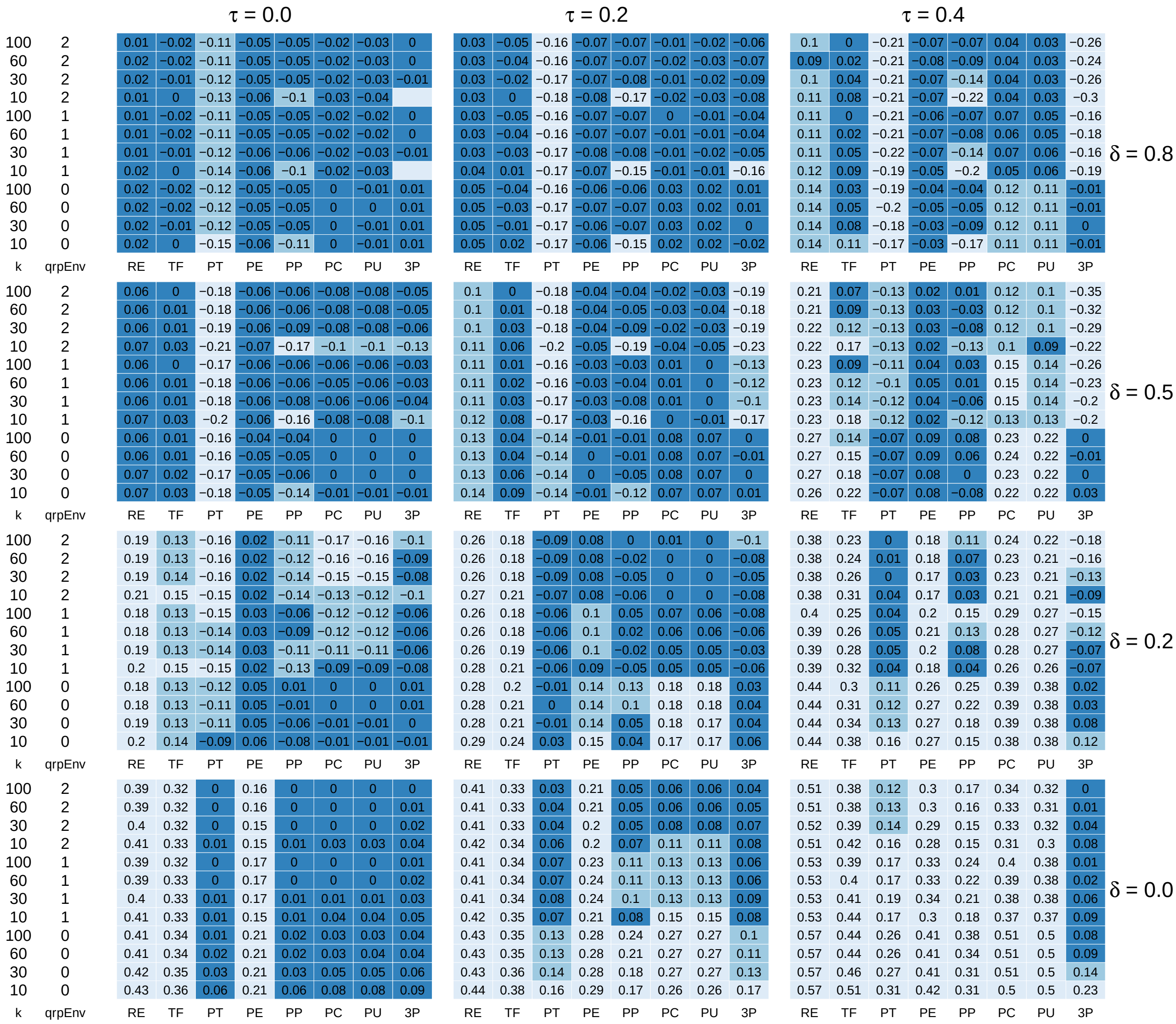

Figure 18. Mean error (ME) for all methods with publication bias at 90% and when *estimates < 0 are set to zero*. Color coding is as follows: darkest = $|ME| < .1$; medium = $.1 \leq |ME| < .15$; lightest = $.15 \leq |ME|$.

$\delta = 0.8$

		$\tau = 0.0$								$\tau = 0.2$								$\tau = 0.4$							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.01	−0.02	−0.11	−0.05	−0.05	−0.02	−0.03	0	0.03	−0.05	−0.16	−0.07	−0.07	−0.01	−0.02	−0.06	0.1	0	−0.21	−0.07	−0.07	0.04	0.03	−0.26
60	2	0.02	−0.02	−0.11	−0.05	−0.05	−0.02	−0.03	0	0.03	−0.04	−0.16	−0.07	−0.07	−0.02	−0.03	−0.07	0.09	0.02	−0.21	−0.08	−0.09	0.04	0.03	−0.24
30	2	0.02	−0.01	−0.12	−0.05	−0.05	−0.02	−0.03	−0.01	0.03	−0.02	−0.17	−0.07	−0.08	−0.01	−0.02	−0.09	0.1	0.04	−0.21	−0.07	−0.14	0.04	0.03	−0.26
10	2	0.01	0	−0.14	−0.06	−0.1	−0.04	−0.04		0.03	0	−0.19	−0.08	−0.17	−0.02	−0.03	−0.08	0.11	0.08	−0.23	−0.07	−0.25	0.04	0.03	−0.3
100	1	0.01	−0.02	−0.11	−0.05	−0.05	−0.02	−0.02	0	0.03	−0.05	−0.16	−0.07	−0.07	0	−0.01	−0.04	0.11	0	−0.21	−0.06	−0.07	0.07	0.05	−0.16
60	1	0.01	−0.02	−0.11	−0.05	−0.05	−0.02	−0.02	0	0.03	−0.04	−0.16	−0.07	−0.07	−0.01	−0.01	−0.04	0.11	0.02	−0.21	−0.07	−0.08	0.06	0.05	−0.18
30	1	0.01	−0.01	−0.12	−0.06	−0.06	−0.02	−0.03	−0.01	0.03	−0.03	−0.17	−0.08	−0.08	−0.01	−0.02	−0.05	0.11	0.05	−0.22	−0.07	−0.14	0.07	0.06	−0.16
10	1	0.02	0	−0.14	−0.06	−0.1	−0.02	−0.03		0.04	0.01	−0.18	−0.07	−0.16	−0.01	−0.01	−0.16	0.12	0.09	−0.21	−0.05	−0.23	0.05	0.06	−0.2
100	0	0.02	−0.02	−0.12	−0.05	−0.05	0	−0.01	0.01	0.05	−0.04	−0.16	−0.06	−0.06	0.03	0.02	0.01	0.14	0.03	−0.19	−0.04	−0.04	0.12	0.11	−0.01
60	0	0.02	−0.02	−0.12	−0.05	−0.05	0	0	0.01	0.05	−0.03	−0.17	−0.07	−0.07	0.03	0.02	0.01	0.14	0.05	−0.2	−0.05	−0.05	0.12	0.11	−0.01
30	0	0.02	−0.01	−0.12	−0.05	−0.05	0	−0.01	0.01	0.05	−0.01	−0.17	−0.06	−0.07	0.03	0.02	0	0.14	0.08	−0.18	−0.03	−0.09	0.12	0.11	−0.01
10	0	0.02	0	−0.15	−0.06	−0.11	0	−0.01	0.01	0.05	0.02	−0.18	−0.06	−0.16	0.02	0.02	−0.02	0.14	0.11	−0.19	−0.03	−0.19	0.11	0.11	−0.01

$\delta = 0.5$

		$\tau = 0.0$								$\tau = 0.2$								$\tau = 0.4$							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.06	0	−0.18	−0.06	−0.06	−0.08	−0.08	−0.05	0.1	0	−0.18	−0.04	−0.04	−0.02	−0.03	−0.19	0.21	0.07	−0.13	0.02	0.01	0.12	0.1	−0.39
60	2	0.06	0.01	−0.18	−0.06	−0.06	−0.08	−0.08	−0.05	0.1	0.01	−0.18	−0.04	−0.05	−0.03	−0.04	−0.18	0.21	0.09	−0.13	0.03	−0.03	0.12	0.1	−0.36
30	2	0.06	0.01	−0.19	−0.06	−0.09	−0.08	−0.08	−0.06	0.1	0.03	−0.18	−0.04	−0.09	−0.02	−0.03	−0.19	0.22	0.12	−0.14	0.03	−0.09	0.12	0.1	−0.34
10	2	0.07	0.03	−0.21	−0.07	−0.17	−0.1	−0.11	−0.13	0.11	0.06	−0.22	−0.05	−0.21	−0.05	−0.05	−0.24	0.22	0.17	−0.17	0.02	−0.18	0.1	0.09	−0.26
100	1	0.06	0	−0.17	−0.06	−0.06	−0.06	−0.06	−0.03	0.11	0.01	−0.16	−0.03	−0.03	0.01	0	−0.13	0.23	0.09	−0.11	0.04	0.03	0.15	0.14	−0.28
60	1	0.06	0.01	−0.18	−0.06	−0.06	−0.05	−0.06	−0.03	0.11	0.02	−0.16	−0.03	−0.04	0.01	0	−0.12	0.23	0.12	−0.1	0.05	0.01	0.15	0.14	−0.25
30	1	0.06	0.01	−0.18	−0.06	−0.08	−0.06	−0.06	−0.04	0.11	0.03	−0.17	−0.03	−0.08	0.01	0	−0.11	0.23	0.14	−0.13	0.04	−0.07	0.15	0.14	−0.22
10	1	0.07	0.03	−0.21	−0.06	−0.16	−0.08	−0.08	−0.1	0.12	0.08	−0.19	−0.03	−0.17	0	−0.01	−0.18	0.23	0.18	−0.17	0.02	−0.17	0.13	0.13	−0.23
100	0	0.06	0.01	−0.16	−0.04	−0.04	0	0	0	0.13	0.04	−0.14	−0.01	−0.01	0.08	0.07	0	0.27	0.14	−0.07	0.09	0.08	0.23	0.22	0
60	0	0.06	0.01	−0.16	−0.05	−0.05	0	0	0	0.13	0.04	−0.14	0	−0.01	0.08	0.07	−0.01	0.27	0.15	−0.07	0.09	0.06	0.24	0.22	−0.01
30	0	0.07	0.02	−0.17	−0.05	−0.06	0	0	0	0.13	0.06	−0.14	0	−0.05	0.08	0.07	0	0.27	0.18	−0.08	0.08	0	0.23	0.22	0
10	0	0.07	0.03	−0.19	−0.05	−0.15	−0.01	−0.01	−0.01	0.14	0.09	−0.16	−0.01	−0.13	0.07	0.07	0.01	0.26	0.22	−0.1	0.08	−0.11	0.22	0.22	0.02

$\delta = 0.2$

		$\tau = 0.0$								$\tau = 0.2$								$\tau = 0.4$							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.19	0.13	−0.17	0.02	−0.12	−0.19	−0.18	−0.1	0.26	0.18	−0.09	0.08	0	0.01	0	−0.12	0.38	0.23	0	0.18	0.1	0.24	0.22	−0.29
60	2	0.19	0.13	−0.17	0.02	−0.13	−0.21	−0.19	−0.09	0.26	0.18	−0.1	0.08	−0.03	0	0	−0.1	0.38	0.24	0	0.18	0.06	0.23	0.21	−0.27
30	2	0.19	0.14	−0.17	0.02	−0.15	−0.21	−0.19	−0.08	0.26	0.18	−0.11	0.08	−0.07	0	0	−0.07	0.38	0.26	−0.03	0.17	0	0.23	0.21	−0.24
10	2	0.21	0.15	−0.19	0.02	−0.17	−0.27	−0.23	−0.1	0.27	0.21	−0.13	0.08	−0.12	−0.05	−0.03	−0.11	0.38	0.31	−0.06	0.16	−0.06	0.2	0.2	−0.18
100	1	0.18	0.13	−0.15	0.03	−0.06	−0.13	−0.13	−0.06	0.26	0.18	−0.06	0.1	0.05	0.07	0.06	−0.09	0.4	0.25	0.03	0.2	0.15	0.29	0.27	−0.21
60	1	0.18	0.13	−0.15	0.03	−0.09	−0.14	−0.13	−0.06	0.26	0.18	−0.07	0.1	0.01	0.06	0.06	−0.07	0.39	0.26	0.04	0.21	0.12	0.28	0.27	−0.18
30	1	0.19	0.13	−0.15	0.03	−0.12	−0.15	−0.13	−0.06	0.26	0.19	−0.07	0.1	−0.03	0.05	0.05	−0.04	0.39	0.28	0.03	0.2	0.06	0.28	0.27	−0.14
10	1	0.2	0.15	−0.18	0.02	−0.16	−0.18	−0.16	−0.09	0.28	0.21	−0.11	0.09	−0.09	0.03	0.03	−0.1	0.39	0.32	−0.05	0.17	−0.05	0.26	0.26	−0.17
100	0	0.18	0.13	−0.12	0.05	0.01	0	0	0.01	0.28	0.2	−0.01	0.14	0.13	0.18	0.18	0.03	0.44	0.3	0.11	0.26	0.25	0.39	0.38	0.02
60	0	0.18	0.13	−0.11	0.05	−0.01	0	0	0.01	0.28	0.21	0	0.14	0.1	0.18	0.18	0.03	0.44	0.31	0.11	0.27	0.21	0.39	0.38	0.02
30	0	0.19	0.13	−0.11	0.05	−0.06	−0.01	−0.01	0	0.28	0.21	−0.02	0.14	0.05	0.18	0.17	0.04	0.44	0.34	0.12	0.27	0.17	0.39	0.38	0.06
10	0	0.2	0.14	−0.11	0.06	−0.09	−0.03	−0.02	−0.02	0.29	0.24	0	0.15	0.02	0.16	0.16	0.04	0.44	0.38	0.11	0.27	0.1	0.38	0.38	0.06

$\delta = 0.0$

		$\tau = 0.0$								$\tau = 0.2$								$\tau = 0.4$							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.39	0.32	−0.1	0.16	−0.1	−0.25	−0.2	−0.01	0.41	0.33	0.01	0.21	0.03	0.05	0.05	0	0.51	0.38	0.11	0.3	0.16	0.34	0.32	−0.2
60	2	0.39	0.32	−0.1	0.16	−0.1	−0.26	−0.21	0.01	0.41	0.33	0.01	0.21	0.02	0.04	0.04	0.01	0.51	0.38	0.11	0.3	0.14	0.33	0.31	−0.17
30	2	0.4	0.32	−0.12	0.15	−0.12	−0.28	−0.22	0.02	0.41	0.33	−0.01	0.2	0	0.02	0.04	0.04	0.52	0.39	0.08	0.29	0.1	0.33	0.31	−0.11
10	2	0.41	0.33	−0.15	0.14	−0.15	−0.31	−0.27	0.04	0.42	0.34	−0.04	0.19	−0.04	−0.02	0.01	0.05	0.51	0.42	0.02	0.26	0.02	0.28	0.29	−0.06
100	1	0.39	0.32	−0.07	0.17	−0.07	−0.18	−0.15	0	0.41	0.34	0.06	0.23	0.1	0.13	0.13	0.01	0.53	0.39	0.16	0.33	0.24	0.4	0.38	−0.14
60	1	0.39	0.33	−0.07	0.17	−0.07	−0.2	−0.16	0.01	0.41	0.34	0.06	0.24	0.1	0.12	0.12	0.02	0.53	0.4	0.16	0.33	0.21	0.39	0.38	−0.13
30	1	0.4	0.33	−0.07	0.17	−0.07	−0.22	−0.17	0.02	0.41	0.34	0.06	0.24	0.08	0.11	0.12	0.05	0.53	0.41	0.17	0.34	0.18	0.38	0.38	−0.07
10	1	0.41	0.33	−0.16	0.14	−0.16	−0.26	−0.22	0.03	0.42	0.35	−0.03	0.2	−0.02	0.08	0.1	0.04	0.53	0.44	0.05	0.29	0.06	0.36	0.36	−0.06
100	0	0.41	0.34	−0.01	0.21	0	0	0.01	0.03	0.43	0.35	0.13	0.28	0.24	0.27	0.27	0.08	0.57	0.44	0.26	0.41	0.37	0.51	0.5	0.03
60	0	0.41	0.34	−0.01	0.21	0	−0.01	0	0.04	0.43	0.35	0.13	0.28	0.21	0.27	0.27	0.08	0.57	0.44	0.26	0.41	0.34	0.51	0.5	0.02
30	0	0.42	0.35	−0.01	0.21	−0.01	−0.02	0	0.05	0.43	0.36	0.13	0.28	0.17	0.27	0.27	0.09	0.57	0.46	0.26	0.41	0.3	0.51	0.5	0.07
10	0	0.43	0.36	−0.02	0.21	−0.02	−0.08	−0.04	0.08	0.44	0.38	0.12	0.28	0.13	0.24	0.24	0.14	0.57	0.51	0.27	0.41	0.26	0.5	0.5	0.13

Figure 19. Mean error (ME) for all methods with publication bias at 90%. Color coding is as follows: darkest = $|ME| < .1$; medium = $.1 \leq |ME| < .15$; lightest = $.15 \leq |ME|$.

δ = 0.8

		τ = 0.0								τ = 0.2								τ = 0.4							
100	2	0.02	0.04	0.12	0.06	0.06	0.03	0.04	0.02	0.03	0.08	0.18	0.09	0.09	0.04	0.04	0.08	0.05	0.16	0.4	0.21	0.27	0.07	0.06	0.25
60	2	0.03	0.04	0.13	0.06	0.06	0.04	0.04	0.03	0.04	0.09	0.22	0.11	0.12	0.05	0.06	0.1	0.06	0.15	0.43	0.23	0.37	0.08	0.08	0.26
30	2	0.04	0.05	0.16	0.08	0.08	0.05	0.06	0.05	0.06	0.09	0.25	0.13	0.17	0.07	0.07	0.13	0.09	0.15	0.47	0.27	0.45	0.1	0.1	0.29
10	2	0.07	0.08	0.25	0.13	0.2	0.1	0.09	0.08	0.1	0.12	0.37	0.2	0.33	0.13	0.12	0.15	0.14	0.17	0.56	0.37	0.53	0.19	0.17	0.31
100	1	0.02	0.03	0.1	0.05	0.05	0.03	0.03	0.02	0.03	0.08	0.17	0.09	0.09	0.04	0.04	0.06	0.05	0.15	0.35	0.19	0.24	0.08	0.07	0.17
60	1	0.03	0.04	0.12	0.06	0.06	0.04	0.04	0.03	0.04	0.08	0.19	0.1	0.1	0.05	0.05	0.08	0.06	0.14	0.38	0.21	0.32	0.09	0.08	0.19
30	1	0.04	0.05	0.15	0.08	0.08	0.05	0.05	0.04	0.05	0.09	0.24	0.12	0.15	0.07	0.07	0.1	0.08	0.14	0.44	0.25	0.41	0.11	0.11	0.22
10	1	0.07	0.08	0.25	0.13	0.2	0.09	0.09	0.09	0.09	0.11	0.37	0.2	0.33	0.13	0.12	0.15	0.14	0.17	0.56	0.37	0.52	0.2	0.18	0.28
100	0	0.02	0.03	0.07	0.04	0.04	0.02	0.02	0.02	0.03	0.06	0.13	0.07	0.07	0.04	0.04	0.04	0.05	0.11	0.25	0.14	0.15	0.13	0.12	0.07
60	0	0.03	0.04	0.09	0.05	0.05	0.03	0.03	0.03	0.04	0.07	0.15	0.09	0.09	0.05	0.05	0.05	0.06	0.11	0.29	0.16	0.21	0.14	0.13	0.09
30	0	0.04	0.05	0.13	0.07	0.07	0.04	0.04	0.04	0.06	0.08	0.21	0.12	0.14	0.07	0.07	0.07	0.09	0.12	0.35	0.2	0.3	0.15	0.14	0.13
10	0	0.07	0.08	0.26	0.14	0.2	0.09	0.09	0.08	0.1	0.11	0.37	0.21	0.31	0.13	0.12	0.13	0.15	0.16	0.53	0.32	0.46	0.22	0.2	0.22
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P

δ = 0.5

100	2	0.04	0.02	0.18	0.07	0.08	0.09	0.09	0.07	0.05	0.07	0.26	0.12	0.17	0.05	0.06	0.19	0.06	0.13	0.41	0.25	0.41	0.12	0.11	0.25
60	2	0.05	0.03	0.19	0.08	0.09	0.1	0.1	0.08	0.06	0.07	0.28	0.13	0.24	0.07	0.07	0.19	0.07	0.13	0.4	0.25	0.39	0.13	0.12	0.26
30	2	0.05	0.04	0.21	0.09	0.15	0.12	0.12	0.1	0.07	0.08	0.3	0.15	0.28	0.1	0.1	0.19	0.09	0.13	0.4	0.28	0.4	0.16	0.15	0.27
10	2	0.07	0.07	0.28	0.13	0.26	0.18	0.18	0.14	0.1	0.11	0.35	0.22	0.34	0.17	0.17	0.22	0.15	0.16	0.45	0.34	0.43	0.23	0.22	0.29
100	1	0.03	0.03	0.14	0.06	0.06	0.07	0.08	0.05	0.04	0.07	0.21	0.1	0.13	0.05	0.05	0.12	0.05	0.13	0.35	0.2	0.34	0.16	0.14	0.17
60	1	0.04	0.03	0.16	0.07	0.08	0.08	0.08	0.06	0.05	0.08	0.23	0.12	0.18	0.06	0.06	0.13	0.06	0.13	0.35	0.22	0.35	0.16	0.15	0.18
30	1	0.05	0.04	0.18	0.08	0.13	0.1	0.1	0.08	0.06	0.08	0.28	0.15	0.26	0.09	0.09	0.14	0.09	0.13	0.37	0.24	0.36	0.18	0.17	0.21
10	1	0.07	0.07	0.26	0.14	0.25	0.18	0.17	0.13	0.09	0.11	0.34	0.22	0.32	0.17	0.16	0.18	0.14	0.16	0.45	0.33	0.41	0.24	0.23	0.27
100	0	0.02	0.03	0.06	0.04	0.04	0.03	0.03	0.03	0.03	0.06	0.12	0.06	0.07	0.09	0.08	0.05	0.05	0.1	0.21	0.12	0.17	0.24	0.23	0.08
60	0	0.02	0.03	0.08	0.05	0.05	0.04	0.04	0.03	0.04	0.06	0.14	0.08	0.09	0.1	0.09	0.06	0.06	0.1	0.25	0.14	0.22	0.25	0.24	0.1
30	0	0.04	0.05	0.12	0.07	0.08	0.06	0.06	0.05	0.05	0.08	0.2	0.11	0.16	0.11	0.11	0.08	0.08	0.11	0.31	0.19	0.27	0.26	0.25	0.13
10	0	0.07	0.08	0.24	0.13	0.2	0.12	0.12	0.09	0.09	0.11	0.31	0.19	0.26	0.16	0.15	0.14	0.15	0.16	0.46	0.3	0.37	0.29	0.28	0.23
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P

δ = 0.2

100	2	0.07	0.03	0.18	0.08	0.18	0.17	0.17	0.09	0.06	0.04	0.19	0.14	0.19	0.08	0.08	0.15	0.06	0.1	0.19	0.18	0.19	0.23	0.21	0.17
60	2	0.07	0.03	0.17	0.09	0.17	0.17	0.17	0.1	0.06	0.04	0.18	0.14	0.18	0.1	0.1	0.15	0.07	0.1	0.19	0.17	0.19	0.24	0.22	0.17
30	2	0.07	0.04	0.17	0.1	0.17	0.16	0.16	0.1	0.07	0.06	0.18	0.15	0.18	0.13	0.13	0.15	0.09	0.1	0.2	0.17	0.19	0.25	0.24	0.17
10	2	0.1	0.07	0.18	0.13	0.17	0.17	0.16	0.11	0.11	0.1	0.2	0.16	0.2	0.18	0.17	0.15	0.14	0.13	0.25	0.19	0.23	0.29	0.29	0.17
100	1	0.04	0.02	0.13	0.05	0.12	0.16	0.16	0.06	0.04	0.04	0.17	0.11	0.16	0.09	0.09	0.11	0.05	0.1	0.18	0.15	0.18	0.28	0.27	0.13
60	1	0.05	0.03	0.13	0.06	0.13	0.16	0.16	0.06	0.05	0.05	0.16	0.11	0.16	0.11	0.11	0.11	0.07	0.1	0.18	0.15	0.18	0.28	0.27	0.14
30	1	0.05	0.04	0.14	0.08	0.14	0.15	0.15	0.07	0.06	0.06	0.17	0.13	0.16	0.14	0.13	0.12	0.09	0.09	0.21	0.16	0.18	0.3	0.29	0.14
10	1	0.08	0.07	0.18	0.12	0.16	0.16	0.16	0.1	0.1	0.09	0.24	0.16	0.21	0.19	0.19	0.14	0.14	0.13	0.34	0.22	0.28	0.33	0.33	0.18
100	0	0.02	0.03	0.06	0.03	0.04	0.09	0.09	0.03	0.03	0.05	0.1	0.06	0.09	0.19	0.19	0.05	0.05	0.09	0.15	0.1	0.12	0.39	0.39	0.08
60	0	0.02	0.03	0.08	0.04	0.06	0.12	0.11	0.04	0.04	0.06	0.13	0.07	0.1	0.2	0.2	0.06	0.06	0.09	0.18	0.12	0.14	0.4	0.4	0.1
30	0	0.04	0.05	0.12	0.07	0.09	0.14	0.14	0.05	0.05	0.07	0.17	0.1	0.13	0.22	0.22	0.09	0.08	0.1	0.25	0.16	0.18	0.41	0.41	0.14
10	0	0.06	0.07	0.21	0.12	0.16	0.16	0.16	0.1	0.1	0.11	0.28	0.17	0.21	0.25	0.24	0.15	0.13	0.14	0.4	0.24	0.32	0.43	0.42	0.2
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P

δ = 0.0

100	2	0.03	0.03	0	0	0	0.04	0.04	0	0.04	0.02	0.01	0.01	0.01	0.1	0.1	0	0.05	0.01	0.02	0.01	0.02	0.32	0.31	0
60	2	0.04	0.03	0.02	0.01	0.02	0.06	0.06	0	0.05	0.03	0.03	0.01	0.02	0.12	0.12	0	0.06	0.02	0.04	0.02	0.03	0.33	0.32	0.01
30	2	0.05	0.04	0.04	0.02	0.03	0.1	0.09	0.01	0.06	0.04	0.05	0.03	0.05	0.16	0.16	0.01	0.08	0.05	0.11	0.05	0.09	0.34	0.33	0.02
10	2	0.07	0.06	0.13	0.07	0.11	0.09	0.09	0.07	0.09	0.08	0.19	0.1	0.16	0.19	0.19	0.04	0.13	0.11	0.28	0.15	0.26	0.37	0.37	0.08
100	1	0.02	0.02	0.02	0.01	0.02	0.06	0.06	0	0.03	0.02	0.03	0.02	0.03	0.14	0.14	0	0.04	0.02	0.05	0.02	0.04	0.37	0.36	0.01
60	1	0.03	0.03	0.03	0.02	0.03	0.09	0.09	0.01	0.04	0.03	0.05	0.03	0.04	0.16	0.15	0.01	0.05	0.03	0.08	0.04	0.07	0.38	0.37	0.02
30	1	0.04	0.04	0.07	0.04	0.06	0.11	0.11	0.02	0.05	0.05	0.09	0.05	0.08	0.19	0.19	0.02	0.07	0.06	0.14	0.07	0.11	0.39	0.39	0.04
10	1	0.06	0.05	0.17	0.09	0.13	0.11	0.1	0.04	0.08	0.07	0.2	0.11	0.17	0.22	0.22	0.06	0.11	0.1	0.34	0.18	0.26	0.41	0.41	0.12
100	0	0.01	0.02	0.04	0.02	0.04	0.19	0.18	0.02	0.02	0.04	0.07	0.04	0.06	0.29	0.29	0.03	0.03	0.06	0.12	0.07	0.09	0.52	0.51	0.05
60	0	0.02	0.02	0.06	0.03	0.05	0.2	0.2	0.02	0.03	0.04	0.1	0.06	0.07	0.31	0.31	0.04	0.04	0.06	0.16	0.09	0.12	0.52	0.51	0.07
30	0	0.02	0.03	0.08	0.04	0.07	0.09	0.08	0.03	0.04	0.05	0.14	0.08	0.1	0.32	0.32	0.06	0.06	0.08	0.22	0.12	0.17	0.54	0.53	0.11
10	0	0.04	0.05	0.17	0.09	0.14			0.08	0.07	0.08	0.26	0.14	0.2	0.2	0.2	0.12	0.1	0.11	0.41	0.22	0.33	0.5	0.5	0.19
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P

Figure 20. Root mean squared error ($RMSE$) for all methods with publication bias at 0% and when *estimates < 0 are set to zero*. Color coding is as follows: darkest = $RMSE <$ .1; medium = $.1 \leq RMSE < .15$; lightest = $.15 \leq RMSE$.

δ = 0.8

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.02	0.04	0.12	0.06	0.06	0.03	0.04	0.02	0.03	0.08	0.18	0.09	0.09	0.04	0.04	0.08	0.05	0.16	0.4	0.21	0.27	0.07	0.06	0.25
60	2	0.03	0.04	0.13	0.06	0.06	0.04	0.04	0.03	0.04	0.09	0.22	0.11	0.12	0.05	0.06	0.1	0.06	0.15	0.44	0.23	0.37	0.08	0.08	0.26
30	2	0.04	0.05	0.16	0.08	0.08	0.05	0.06	0.05	0.06	0.09	0.25	0.13	0.17	0.07	0.07	0.13	0.09	0.15	0.51	0.27	0.48	0.1	0.1	0.3
10	2	0.07	0.08	0.25	0.13	0.2	0.1	0.09	0.08	0.1	0.12	0.38	0.2	0.34	0.13	0.12	0.15	0.14	0.17	0.73	0.39	0.71	0.19	0.17	0.32
100	1	0.02	0.03	0.1	0.05	0.05	0.03	0.03	0.02	0.03	0.08	0.17	0.09	0.09	0.04	0.04	0.06	0.05	0.15	0.35	0.19	0.24	0.08	0.07	0.17
60	1	0.03	0.04	0.12	0.06	0.06	0.04	0.04	0.03	0.04	0.08	0.19	0.1	0.1	0.05	0.05	0.08	0.06	0.14	0.38	0.21	0.32	0.09	0.08	0.19
30	1	0.04	0.05	0.15	0.08	0.08	0.05	0.05	0.04	0.05	0.09	0.24	0.12	0.15	0.07	0.07	0.1	0.08	0.14	0.47	0.25	0.45	0.11	0.11	0.22
10	1	0.07	0.08	0.25	0.13	0.2	0.09	0.09	0.09	0.09	0.11	0.4	0.2	0.36	0.15	0.12	0.16	0.14	0.17	0.7	0.38	0.68	0.2	0.18	0.29
100	0	0.02	0.03	0.07	0.04	0.04	0.02	0.02	0.02	0.03	0.06	0.13	0.07	0.07	0.04	0.04	0.04	0.05	0.11	0.25	0.14	0.15	0.13	0.12	0.07
60	0	0.03	0.04	0.09	0.05	0.05	0.03	0.03	0.03	0.04	0.07	0.15	0.09	0.09	0.05	0.05	0.05	0.06	0.11	0.29	0.16	0.21	0.14	0.13	0.09
30	0	0.04	0.05	0.13	0.07	0.07	0.04	0.04	0.04	0.06	0.08	0.21	0.12	0.14	0.07	0.07	0.07	0.09	0.12	0.36	0.2	0.31	0.15	0.14	0.13
10	0	0.07	0.08	0.26	0.14	0.21	0.12	0.09	0.08	0.1	0.11	0.39	0.21	0.33	0.14	0.12	0.13	0.15	0.16	0.61	0.33	0.56	0.22	0.2	0.22

δ = 0.5

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.04	0.02	0.18	0.07	0.08	0.09	0.09	0.07	0.05	0.07	0.26	0.12	0.17	0.05	0.06	0.19	0.06	0.13	0.48	0.25	0.47	0.12	0.11	0.25
60	2	0.05	0.03	0.19	0.08	0.09	0.1	0.1	0.08	0.06	0.07	0.28	0.13	0.24	0.07	0.07	0.19	0.07	0.13	0.49	0.25	0.49	0.13	0.12	0.26
30	2	0.05	0.04	0.21	0.09	0.16	0.13	0.12	0.1	0.07	0.08	0.32	0.15	0.3	0.1	0.1	0.2	0.09	0.13	0.56	0.29	0.56	0.16	0.15	0.27
10	2	0.07	0.07	0.3	0.13	0.29	0.2	0.19	0.14	0.1	0.11	0.46	0.23	0.45	0.2	0.18	0.23	0.15	0.16	0.77	0.4	0.76	0.26	0.24	0.32
100	1	0.03	0.03	0.14	0.06	0.06	0.07	0.08	0.05	0.04	0.07	0.21	0.1	0.13	0.05	0.05	0.12	0.05	0.13	0.39	0.2	0.37	0.16	0.14	0.17
60	1	0.04	0.03	0.16	0.07	0.08	0.08	0.08	0.06	0.05	0.08	0.23	0.12	0.19	0.06	0.06	0.13	0.06	0.13	0.41	0.22	0.41	0.16	0.15	0.18
30	1	0.05	0.04	0.18	0.08	0.13	0.1	0.1	0.08	0.06	0.08	0.29	0.15	0.28	0.09	0.09	0.14	0.09	0.13	0.48	0.25	0.47	0.18	0.17	0.21
10	1	0.07	0.07	0.3	0.14	0.28	0.22	0.19	0.14	0.09	0.11	0.43	0.22	0.42	0.21	0.17	0.18	0.14	0.16	0.74	0.39	0.72	0.24	0.23	0.29
100	0	0.02	0.03	0.06	0.04	0.04	0.03	0.03	0.03	0.03	0.06	0.12	0.06	0.07	0.09	0.08	0.05	0.05	0.1	0.21	0.12	0.18	0.24	0.23	0.08
60	0	0.02	0.03	0.08	0.05	0.05	0.04	0.04	0.03	0.04	0.06	0.14	0.08	0.09	0.1	0.09	0.06	0.06	0.1	0.26	0.14	0.24	0.25	0.24	0.1
30	0	0.04	0.05	0.12	0.07	0.08	0.06	0.06	0.05	0.05	0.08	0.2	0.11	0.16	0.11	0.11	0.08	0.08	0.11	0.35	0.19	0.31	0.26	0.25	0.13
10	0	0.07	0.08	0.25	0.13	0.21	0.14	0.12	0.09	0.09	0.11	0.35	0.19	0.31	0.16	0.15	0.14	0.15	0.16	0.6	0.33	0.54	0.29	0.28	0.24

δ = 0.2

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.07	0.03	0.22	0.08	0.21	0.25	0.23	0.09	0.06	0.04	0.32	0.15	0.32	0.09	0.09	0.15	0.06	0.1	0.47	0.24	0.47	0.23	0.21	0.2
60	2	0.07	0.03	0.23	0.09	0.23	0.29	0.25	0.1	0.06	0.04	0.34	0.16	0.34	0.13	0.11	0.16	0.07	0.1	0.49	0.25	0.49	0.24	0.22	0.21
30	2	0.07	0.04	0.25	0.1	0.25	0.37	0.3	0.1	0.07	0.06	0.39	0.18	0.39	0.2	0.19	0.16	0.09	0.1	0.58	0.3	0.58	0.26	0.25	0.23
10	2	0.1	0.07	0.36	0.15	0.35	0.53	0.52	0.12	0.11	0.1	0.54	0.26	0.54	0.39	0.42	0.19	0.15	0.14	0.77	0.39	0.76	0.38	0.39	0.27
100	1	0.04	0.02	0.13	0.05	0.13	0.22	0.2	0.06	0.04	0.04	0.23	0.11	0.23	0.09	0.09	0.11	0.05	0.1	0.35	0.18	0.35	0.28	0.27	0.14
60	1	0.05	0.03	0.15	0.06	0.15	0.27	0.23	0.06	0.05	0.05	0.24	0.11	0.24	0.12	0.12	0.11	0.07	0.1	0.39	0.2	0.39	0.28	0.27	0.15
30	1	0.05	0.04	0.18	0.08	0.18	0.38	0.32	0.07	0.06	0.06	0.29	0.14	0.29	0.2	0.17	0.12	0.09	0.1	0.48	0.25	0.47	0.3	0.29	0.18
10	1	0.08	0.07	0.31	0.15	0.3	0.5	0.53	0.1	0.1	0.09	0.42	0.21	0.41	0.38	0.42	0.15	0.15	0.14	0.7	0.36	0.67	0.38	0.38	0.25
100	0	0.02	0.03	0.06	0.03	0.04	0.12	0.1	0.03	0.03	0.05	0.11	0.06	0.1	0.19	0.19	0.05	0.05	0.09	0.18	0.1	0.16	0.39	0.39	0.08
60	0	0.02	0.03	0.08	0.04	0.06	0.19	0.15	0.04	0.04	0.06	0.14	0.08	0.12	0.21	0.2	0.06	0.06	0.1	0.24	0.13	0.21	0.4	0.4	0.1
30	0	0.04	0.05	0.12	0.07	0.1	0.29	0.23	0.05	0.05	0.07	0.19	0.1	0.16	0.24	0.22	0.09	0.08	0.11	0.34	0.19	0.29	0.41	0.41	0.14
10	0	0.06	0.07	0.25	0.13	0.21	0.21	0.2	0.1	0.1	0.11	0.37	0.2	0.32	0.34	0.31	0.15	0.14	0.15	0.6	0.33	0.55	0.43	0.43	0.23

δ = 0.0

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.03	0.03	0.18	0.08	0.18	0.47	0.38	0.04	0.04	0.03	0.26	0.13	0.26	0.22	0.17	0.1	0.05	0.07	0.41	0.21	0.41	0.32	0.31	0.17
60	2	0.04	0.04	0.19	0.09	0.19	0.53	0.48	0.04	0.05	0.04	0.29	0.14	0.29	0.28	0.22	0.1	0.07	0.07	0.44	0.23	0.44	0.33	0.32	0.17
30	2	0.05	0.04	0.22	0.1	0.22	0.58	0.63	0.05	0.07	0.06	0.34	0.16	0.34	0.39	0.39	0.1	0.09	0.09	0.52	0.27	0.52	0.37	0.36	0.19
10	2	0.08	0.07	0.34	0.16	0.34	0.45	0.99	0.09	0.11	0.1	0.53	0.26	0.52	0.47	0.61	0.12	0.16	0.15	0.79	0.4	0.78	0.46	0.46	0.23
100	1	0.02	0.03	0.1	0.05	0.1	0.49	0.49	0.03	0.04	0.04	0.17	0.08	0.17	0.22	0.19	0.07	0.05	0.08	0.29	0.15	0.29	0.37	0.36	0.12
60	1	0.03	0.03	0.12	0.06	0.12	0.56	0.66	0.03	0.04	0.05	0.2	0.1	0.2	0.29	0.24	0.07	0.06	0.08	0.34	0.17	0.33	0.38	0.37	0.13
30	1	0.04	0.05	0.15	0.08	0.15	0.56	0.7	0.04	0.06	0.06	0.25	0.13	0.25	0.39	0.4	0.08	0.09	0.09	0.41	0.21	0.4	0.41	0.41	0.15
10	1	0.07	0.07	0.31	0.15	0.29	0.64	1.25	0.07	0.1	0.1	0.42	0.21	0.41	0.47	0.54	0.12	0.14	0.14	0.68	0.35	0.64	0.44	0.44	0.22
100	0	0.02	0.03	0.06	0.03	0.05	0.46	0.52	0.02	0.03	0.05	0.11	0.06	0.1	0.32	0.3	0.04	0.04	0.09	0.18	0.09	0.15	0.52	0.51	0.07
60	0	0.02	0.03	0.08	0.04	0.07	0.35	0.48	0.03	0.04	0.06	0.14	0.08	0.12	0.35	0.33	0.05	0.06	0.09	0.23	0.13	0.2	0.52	0.51	0.09
30	0	0.04	0.05	0.12	0.06	0.11	0.52	0.44	0.04	0.06	0.08	0.2	0.11	0.17	0.39	0.34	0.08	0.09	0.11	0.32	0.18	0.29	0.54	0.54	0.14
10	0	0.06	0.07	0.24	0.13	0.22			0.09	0.1	0.11	0.37	0.2	0.33	0.51	0.29	0.13	0.14	0.16	0.57	0.32	0.52	0.51	0.51	0.23

Figure 21. Root mean squared error ($RMSE$) for all methods with publication bias at 0%. Color coding is as follows: darkest = $RMSE < .1$; medium = $.1 \leq RMSE < .15$; lightest = $.15 \leq RMSE$.

δ = 0.8

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.02	0.03	0.12	0.06	0.06	0.04	0.04	0.02	0.04	0.08	0.2	0.1	0.1	0.04	0.04	0.08	0.09	0.11	0.32	0.15	0.17	0.07	0.06	0.28
60	2	0.03	0.04	0.14	0.07	0.07	0.04	0.05	0.03	0.04	0.08	0.21	0.1	0.1	0.05	0.05	0.1	0.09	0.11	0.34	0.17	0.24	0.08	0.07	0.3
30	2	0.04	0.05	0.16	0.08	0.09	0.05	0.06	0.04	0.06	0.09	0.25	0.13	0.15	0.07	0.07	0.13	0.1	0.12	0.41	0.2	0.37	0.1	0.09	0.32
10	2	0.07	0.08	0.27	0.14	0.22	0.09	0.09	0.05	0.09	0.12	0.38	0.2	0.34	0.13	0.12	0.21	0.15	0.16	0.52	0.31	0.48	0.18	0.17	0.35
100	1	0.02	0.03	0.12	0.06	0.06	0.03	0.03	0.02	0.04	0.07	0.18	0.09	0.09	0.04	0.04	0.06	0.09	0.1	0.3	0.14	0.16	0.08	0.07	0.19
60	1	0.03	0.04	0.13	0.07	0.07	0.04	0.04	0.03	0.05	0.08	0.2	0.1	0.1	0.05	0.05	0.08	0.1	0.1	0.32	0.15	0.21	0.09	0.08	0.21
30	1	0.04	0.05	0.16	0.08	0.08	0.05	0.05	0.04	0.06	0.08	0.24	0.12	0.15	0.06	0.06	0.11	0.11	0.12	0.38	0.19	0.34	0.11	0.1	0.25
10	1	0.07	0.08	0.27	0.14	0.22	0.09	0.09	0.1	0.09	0.11	0.36	0.19	0.32	0.12	0.12	0.15	0.15	0.16	0.52	0.3	0.48	0.18	0.16	0.29
100	0	0.02	0.03	0.11	0.06	0.06	0.03	0.03	0.02	0.04	0.06	0.16	0.08	0.08	0.04	0.04	0.04	0.1	0.08	0.24	0.1	0.11	0.13	0.12	0.08
60	0	0.03	0.04	0.12	0.06	0.06	0.03	0.03	0.03	0.05	0.07	0.19	0.09	0.09	0.05	0.05	0.05	0.11	0.1	0.28	0.13	0.18	0.13	0.12	0.11
30	0	0.04	0.05	0.15	0.08	0.08	0.05	0.05	0.04	0.06	0.08	0.22	0.11	0.13	0.06	0.06	0.07	0.12	0.11	0.36	0.18	0.3	0.14	0.14	0.15
10	0	0.07	0.07	0.26	0.13	0.21	0.09	0.08	0.08	0.1	0.11	0.36	0.19	0.32	0.11	0.11	0.13	0.16	0.17	0.49	0.28	0.44	0.21	0.19	0.22

δ = 0.5

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.06	0.02	0.19	0.07	0.07	0.09	0.09	0.07	0.09	0.04	0.22	0.08	0.1	0.05	0.05	0.21	0.16	0.06	0.28	0.11	0.25	0.13	0.11	0.3
60	2	0.06	0.03	0.2	0.08	0.09	0.1	0.1	0.08	0.09	0.05	0.23	0.09	0.16	0.06	0.06	0.21	0.17	0.07	0.3	0.13	0.28	0.14	0.12	0.31
30	2	0.06	0.04	0.22	0.08	0.14	0.11	0.11	0.1	0.1	0.07	0.26	0.11	0.23	0.09	0.09	0.22	0.17	0.11	0.33	0.17	0.32	0.15	0.14	0.3
10	2	0.09	0.07	0.27	0.12	0.25	0.17	0.17	0.15	0.12	0.11	0.33	0.18	0.31	0.16	0.16	0.23	0.19	0.18	0.4	0.27	0.38	0.2	0.2	0.31
100	1	0.05	0.02	0.16	0.06	0.06	0.07	0.07	0.04	0.09	0.04	0.19	0.07	0.08	0.04	0.04	0.13	0.17	0.05	0.25	0.09	0.2	0.16	0.15	0.21
60	1	0.05	0.03	0.17	0.07	0.07	0.07	0.07	0.06	0.09	0.04	0.21	0.08	0.14	0.06	0.05	0.15	0.17	0.08	0.27	0.11	0.25	0.16	0.15	0.22
30	1	0.06	0.04	0.19	0.08	0.12	0.09	0.09	0.07	0.1	0.07	0.25	0.11	0.22	0.08	0.08	0.16	0.17	0.12	0.31	0.16	0.3	0.17	0.16	0.24
10	1	0.09	0.07	0.27	0.13	0.25	0.14	0.14	0.13	0.12	0.11	0.32	0.18	0.3	0.14	0.14	0.19	0.2	0.19	0.41	0.26	0.37	0.22	0.21	0.27
100	0	0.05	0.02	0.12	0.04	0.04	0.03	0.03	0.03	0.1	0.04	0.13	0.05	0.05	0.09	0.08	0.05	0.19	0.08	0.16	0.1	0.13	0.24	0.23	0.09
60	0	0.05	0.03	0.13	0.05	0.05	0.04	0.04	0.03	0.1	0.06	0.15	0.06	0.08	0.09	0.09	0.07	0.19	0.12	0.21	0.12	0.18	0.24	0.23	0.11
30	0	0.06	0.04	0.14	0.06	0.08	0.05	0.05	0.05	0.1	0.08	0.2	0.09	0.16	0.1	0.1	0.09	0.2	0.16	0.27	0.16	0.25	0.25	0.24	0.16
10	0	0.08	0.07	0.23	0.11	0.2	0.1	0.1	0.09	0.12	0.12	0.31	0.18	0.27	0.14	0.14	0.16	0.22	0.2	0.41	0.27	0.35	0.27	0.26	0.24

δ = 0.2

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.15	0.1	0.17	0.03	0.17	0.17	0.17	0.11	0.2	0.12	0.16	0.05	0.16	0.07	0.07	0.15	0.27	0.13	0.16	0.09	0.17	0.24	0.22	0.18
60	2	0.15	0.1	0.17	0.03	0.17	0.17	0.17	0.11	0.2	0.12	0.16	0.06	0.16	0.08	0.08	0.15	0.27	0.14	0.17	0.11	0.17	0.24	0.22	0.17
30	2	0.16	0.1	0.17	0.05	0.17	0.16	0.16	0.12	0.2	0.12	0.16	0.09	0.16	0.11	0.11	0.14	0.28	0.15	0.19	0.14	0.18	0.25	0.24	0.17
10	2	0.17	0.12	0.17	0.09	0.17	0.16	0.16	0.13	0.21	0.16	0.19	0.13	0.18	0.16	0.16	0.15	0.29	0.22	0.27	0.21	0.25	0.27	0.27	0.17
100	1	0.14	0.1	0.13	0.03	0.12	0.14	0.14	0.07	0.2	0.12	0.12	0.06	0.13	0.08	0.08	0.11	0.28	0.14	0.14	0.11	0.15	0.29	0.27	0.15
60	1	0.15	0.1	0.13	0.03	0.13	0.14	0.14	0.08	0.2	0.12	0.13	0.07	0.14	0.09	0.09	0.11	0.28	0.15	0.16	0.13	0.17	0.29	0.28	0.14
30	1	0.15	0.1	0.14	0.05	0.14	0.15	0.14	0.09	0.2	0.13	0.15	0.1	0.15	0.12	0.12	0.12	0.28	0.18	0.2	0.17	0.19	0.29	0.28	0.15
10	1	0.16	0.12	0.16	0.1	0.16	0.15	0.15	0.11	0.21	0.17	0.22	0.16	0.2	0.17	0.17	0.14	0.3	0.24	0.31	0.24	0.28	0.32	0.31	0.18
100	0	0.14	0.1	0.06	0.06	0.07	0.05	0.05	0.03	0.21	0.15	0.1	0.14	0.14	0.19	0.18	0.05	0.31	0.2	0.19	0.22	0.22	0.4	0.38	0.09
60	0	0.14	0.1	0.07	0.07	0.08	0.06	0.06	0.04	0.21	0.16	0.13	0.14	0.15	0.19	0.18	0.07	0.3	0.21	0.22	0.22	0.22	0.39	0.38	0.11
30	0	0.14	0.11	0.09	0.08	0.1	0.09	0.08	0.05	0.21	0.17	0.17	0.16	0.17	0.19	0.19	0.1	0.31	0.24	0.28	0.25	0.25	0.39	0.39	0.15
10	0	0.16	0.13	0.17	0.13	0.16	0.13	0.13	0.1	0.22	0.2	0.29	0.22	0.24	0.23	0.22	0.16	0.32	0.29	0.44	0.33	0.36	0.41	0.4	0.23

δ = 0.0

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.28	0.21	0	0.04	0	0	0	0	0.3	0.23	0.02	0.08	0.02	0.08	0.08	0	0.36	0.25	0.06	0.12	0.06	0.34	0.32	0.01
60	2	0.28	0.21	0	0.04	0	0.01	0.01	0	0.3	0.23	0.03	0.09	0.03	0.1	0.09	0.01	0.36	0.25	0.09	0.13	0.08	0.34	0.32	0.01
30	2	0.28	0.22	0.01	0.05	0.01	0.03	0.03	0.01	0.3	0.23	0.06	0.11	0.06	0.12	0.12	0.02	0.37	0.26	0.13	0.16	0.12	0.34	0.33	0.03
10	2	0.29	0.23	0.06	0.08	0.05	0.09	0.08	0.03	0.31	0.25	0.13	0.14	0.13	0.17	0.17	0.07	0.38	0.3	0.26	0.23	0.24	0.37	0.37	0.12
100	1	0.28	0.22	0	0.06	0	0.01	0.01	0	0.3	0.23	0.06	0.13	0.07	0.14	0.14	0.01	0.37	0.26	0.12	0.18	0.12	0.4	0.38	0.01
60	1	0.28	0.22	0.01	0.07	0.01	0.02	0.02	0.01	0.3	0.23	0.08	0.14	0.08	0.15	0.15	0.01	0.37	0.26	0.14	0.19	0.14	0.4	0.39	0.02
30	1	0.28	0.22	0.03	0.08	0.03	0.04	0.04	0.01	0.3	0.24	0.11	0.16	0.11	0.16	0.16	0.03	0.37	0.27	0.21	0.22	0.19	0.39	0.38	0.05
10	1	0.29	0.23	0.12	0.12	0.11	0.1	0.1	0.04	0.31	0.26	0.22	0.2	0.21	0.2	0.2	0.07	0.39	0.33	0.36	0.3	0.33	0.42	0.42	0.16
100	0	0.29	0.24	0.05	0.14	0.05	0.06	0.06	0.02	0.31	0.26	0.2	0.24	0.22	0.27	0.27	0.04	0.39	0.31	0.31	0.33	0.31	0.51	0.5	0.07
60	0	0.29	0.24	0.06	0.14	0.07	0.07	0.07	0.03	0.31	0.27	0.22	0.25	0.23	0.28	0.28	0.05	0.39	0.32	0.33	0.34	0.31	0.51	0.5	0.09
30	0	0.29	0.25	0.1	0.15	0.09	0.09	0.1	0.04	0.31	0.28	0.25	0.26	0.24	0.28	0.28	0.07	0.39	0.33	0.38	0.36	0.34	0.51	0.5	0.11
10	0	0.3	0.26	0.24	0.21	0.21	0.14	0.14	0.08	0.32	0.3	0.36	0.31	0.32	0.3	0.3	0.13	0.4	0.37	0.55	0.43	0.47	0.52	0.51	0.2

Figure 22. Root mean squared error ($RMSE$) for all methods with publication bias at 60% and when *estimates < 0 are set to zero.* Color coding is as follows: darkest = $RMSE < .1$; medium = $.1 \leq RMSE < .15$; lightest = $.15 \leq RMSE$.

δ = 0.8

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.02	0.03	0.12	0.06	0.06	0.04	0.04	0.02	0.04	0.08	0.2	0.1	0.1	0.04	0.04	0.08	0.09	0.11	0.32	0.15	0.17	0.07	0.06	0.28
60	2	0.03	0.04	0.14	0.07	0.07	0.04	0.05	0.03	0.04	0.08	0.21	0.1	0.1	0.05	0.05	0.1	0.09	0.11	0.34	0.17	0.24	0.08	0.07	0.31
30	2	0.04	0.05	0.16	0.08	0.09	0.05	0.06	0.04	0.06	0.09	0.25	0.13	0.15	0.07	0.07	0.13	0.1	0.12	0.42	0.2	0.38	0.1	0.09	0.33
10	2	0.07	0.08	0.28	0.14	0.23	0.09	0.09	0.05	0.09	0.12	0.39	0.2	0.36	0.14	0.12	0.21	0.15	0.16	0.61	0.31	0.57	0.18	0.17	0.36
100	1	0.02	0.03	0.12	0.06	0.06	0.03	0.03	0.02	0.04	0.07	0.18	0.09	0.09	0.04	0.04	0.06	0.09	0.1	0.3	0.14	0.16	0.08	0.07	0.19
60	1	0.03	0.04	0.13	0.07	0.07	0.04	0.04	0.03	0.05	0.08	0.2	0.1	0.1	0.05	0.05	0.08	0.1	0.1	0.32	0.15	0.21	0.09	0.08	0.21
30	1	0.04	0.05	0.16	0.08	0.08	0.05	0.05	0.04	0.06	0.08	0.24	0.12	0.15	0.06	0.06	0.11	0.11	0.12	0.39	0.19	0.35	0.11	0.1	0.26
10	1	0.07	0.08	0.27	0.14	0.22	0.09	0.09	0.1	0.09	0.11	0.38	0.19	0.34	0.12	0.12	0.15	0.15	0.16	0.61	0.31	0.57	0.18	0.16	0.3
100	0	0.02	0.03	0.11	0.06	0.06	0.03	0.03	0.02	0.04	0.06	0.16	0.08	0.08	0.04	0.04	0.04	0.1	0.08	0.24	0.1	0.11	0.13	0.12	0.08
60	0	0.03	0.04	0.12	0.06	0.06	0.03	0.03	0.03	0.05	0.07	0.19	0.09	0.09	0.05	0.05	0.05	0.11	0.1	0.28	0.13	0.18	0.13	0.12	0.11
30	0	0.04	0.05	0.15	0.08	0.08	0.05	0.05	0.04	0.06	0.08	0.22	0.11	0.13	0.06	0.06	0.07	0.12	0.11	0.37	0.18	0.31	0.14	0.14	0.15
10	0	0.07	0.07	0.27	0.13	0.22	0.11	0.08	0.08	0.1	0.11	0.38	0.19	0.34	0.11	0.11	0.13	0.16	0.17	0.54	0.28	0.49	0.21	0.19	0.22

δ = 0.5

k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.06	0.02	0.19	0.07	0.07	0.09	0.09	0.07	0.09	0.04	0.22	0.08	0.1	0.05	0.05	0.21	0.16	0.06	0.29	0.11	0.26	0.13	0.11	0.3
60	2	0.06	0.03	0.2	0.08	0.09	0.1	0.1	0.08	0.09	0.05	0.23	0.09	0.16	0.06	0.06	0.21	0.17	0.07	0.32	0.13	0.3	0.14	0.12	0.32
30	2	0.06	0.04	0.22	0.08	0.14	0.11	0.11	0.1	0.1	0.07	0.27	0.11	0.24	0.09	0.09	0.23	0.17	0.11	0.39	0.17	0.38	0.15	0.14	0.33
10	2	0.09	0.07	0.29	0.12	0.27	0.2	0.17	0.15	0.12	0.11	0.39	0.18	0.38	0.2	0.17	0.23	0.19	0.18	0.59	0.29	0.57	0.21	0.2	0.37
100	1	0.05	0.02	0.16	0.06	0.06	0.07	0.07	0.04	0.09	0.04	0.19	0.07	0.08	0.04	0.04	0.13	0.17	0.05	0.25	0.09	0.21	0.16	0.15	0.21
60	1	0.05	0.03	0.17	0.07	0.07	0.07	0.07	0.06	0.09	0.04	0.21	0.08	0.14	0.06	0.05	0.15	0.17	0.08	0.28	0.11	0.26	0.16	0.15	0.22
30	1	0.06	0.04	0.19	0.08	0.12	0.09	0.09	0.07	0.1	0.07	0.26	0.11	0.23	0.08	0.08	0.17	0.17	0.12	0.36	0.16	0.35	0.17	0.16	0.25
10	1	0.09	0.07	0.29	0.13	0.27	0.15	0.14	0.13	0.12	0.11	0.37	0.18	0.36	0.15	0.14	0.19	0.2	0.19	0.55	0.28	0.53	0.22	0.21	0.3
100	0	0.05	0.02	0.12	0.04	0.04	0.03	0.03	0.03	0.1	0.04	0.13	0.05	0.05	0.09	0.08	0.05	0.19	0.08	0.17	0.1	0.13	0.24	0.23	0.09
60	0	0.05	0.03	0.13	0.05	0.05	0.04	0.04	0.03	0.1	0.06	0.15	0.06	0.08	0.09	0.09	0.07	0.19	0.12	0.21	0.12	0.18	0.24	0.23	0.11
30	0	0.06	0.04	0.14	0.06	0.08	0.05	0.05	0.05	0.1	0.08	0.2	0.09	0.16	0.1	0.1	0.09	0.2	0.16	0.29	0.16	0.26	0.25	0.24	0.16
10	0	0.08	0.07	0.24	0.11	0.22	0.14	0.1	0.09	0.12	0.12	0.34	0.18	0.31	0.14	0.14	0.17	0.22	0.2	0.5	0.27	0.45	0.27	0.26	0.26

δ = 0.2

k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.15	0.1	0.19	0.03	0.18	0.22	0.21	0.11	0.2	0.12	0.2	0.05	0.2	0.07	0.07	0.16	0.27	0.13	0.25	0.09	0.25	0.24	0.22	0.23
60	2	0.15	0.1	0.19	0.03	0.19	0.25	0.21	0.11	0.2	0.12	0.22	0.06	0.22	0.08	0.08	0.16	0.27	0.14	0.29	0.11	0.29	0.24	0.22	0.24
30	2	0.16	0.1	0.22	0.05	0.22	0.29	0.24	0.12	0.2	0.12	0.25	0.09	0.26	0.15	0.13	0.16	0.28	0.15	0.35	0.15	0.35	0.25	0.24	0.25
10	2	0.17	0.12	0.29	0.1	0.29	0.43	0.38	0.14	0.21	0.16	0.41	0.17	0.4	0.3	0.28	0.19	0.29	0.22	0.6	0.28	0.59	0.3	0.28	0.29
100	1	0.14	0.1	0.13	0.03	0.12	0.15	0.15	0.07	0.2	0.12	0.13	0.06	0.14	0.08	0.08	0.11	0.28	0.14	0.19	0.11	0.2	0.29	0.27	0.16
60	1	0.15	0.1	0.14	0.03	0.14	0.17	0.16	0.08	0.2	0.12	0.16	0.07	0.17	0.09	0.09	0.12	0.28	0.15	0.24	0.13	0.24	0.29	0.28	0.18
30	1	0.15	0.1	0.16	0.05	0.16	0.25	0.21	0.09	0.2	0.13	0.21	0.1	0.21	0.13	0.12	0.13	0.28	0.18	0.3	0.17	0.29	0.3	0.28	0.21
10	1	0.16	0.12	0.25	0.1	0.25	0.34	0.3	0.11	0.21	0.17	0.37	0.18	0.36	0.25	0.24	0.17	0.3	0.24	0.54	0.28	0.53	0.33	0.32	0.27
100	0	0.14	0.1	0.06	0.06	0.07	0.05	0.05	0.03	0.21	0.15	0.1	0.14	0.14	0.19	0.18	0.05	0.31	0.2	0.2	0.22	0.22	0.4	0.38	0.09
60	0	0.14	0.1	0.07	0.07	0.08	0.06	0.06	0.04	0.21	0.16	0.13	0.14	0.15	0.19	0.18	0.07	0.3	0.21	0.23	0.22	0.23	0.39	0.38	0.11
30	0	0.14	0.11	0.1	0.08	0.11	0.11	0.1	0.05	0.21	0.17	0.18	0.16	0.17	0.19	0.19	0.1	0.31	0.24	0.31	0.25	0.28	0.39	0.39	0.17
10	0	0.16	0.13	0.21	0.13	0.19	0.25	0.25	0.1	0.22	0.2	0.33	0.22	0.29	0.25	0.24	0.17	0.32	0.29	0.54	0.34	0.47	0.41	0.4	0.28

δ = 0.0

k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.28	0.21	0.25	0.04	0.25	0.33	0.24	0.06	0.3	0.23	0.18	0.08	0.18	0.1	0.09	0.11	0.36	0.25	0.21	0.13	0.21	0.34	0.32	0.18
60	2	0.28	0.21	0.27	0.05	0.27	0.33	0.25	0.07	0.3	0.23	0.21	0.09	0.21	0.14	0.12	0.11	0.36	0.25	0.26	0.14	0.26	0.34	0.32	0.2
30	2	0.28	0.22	0.3	0.07	0.3	0.42	0.31	0.07	0.3	0.23	0.26	0.12	0.26	0.2	0.16	0.11	0.37	0.26	0.35	0.18	0.35	0.34	0.33	0.21
10	2	0.29	0.23	0.45	0.14	0.45	0.53	0.53	0.08	0.31	0.25	0.45	0.19	0.45	0.36	0.33	0.13	0.38	0.3	0.63	0.3	0.62	0.4	0.4	0.25
100	1	0.28	0.22	0.18	0.06	0.18	0.25	0.19	0.04	0.3	0.23	0.11	0.13	0.11	0.14	0.14	0.08	0.37	0.26	0.17	0.18	0.17	0.4	0.38	0.13
60	1	0.28	0.22	0.2	0.07	0.2	0.29	0.22	0.05	0.3	0.23	0.14	0.14	0.14	0.16	0.15	0.08	0.37	0.26	0.22	0.19	0.22	0.4	0.39	0.15
30	1	0.28	0.22	0.22	0.09	0.22	0.37	0.29	0.06	0.3	0.24	0.19	0.16	0.19	0.2	0.18	0.1	0.37	0.27	0.3	0.23	0.29	0.39	0.38	0.17
10	1	0.29	0.23	0.39	0.16	0.38	0.52	0.56	0.08	0.31	0.26	0.4	0.22	0.39	0.33	0.29	0.14	0.39	0.33	0.57	0.33	0.55	0.44	0.42	0.27
100	0	0.29	0.24	0.08	0.14	0.08	0.11	0.09	0.03	0.31	0.26	0.2	0.24	0.22	0.27	0.27	0.05	0.39	0.31	0.31	0.33	0.31	0.51	0.5	0.08
60	0	0.29	0.24	0.11	0.14	0.11	0.14	0.11	0.04	0.31	0.27	0.22	0.25	0.23	0.28	0.28	0.07	0.39	0.32	0.33	0.34	0.32	0.51	0.5	0.11
30	0	0.29	0.25	0.15	0.15	0.15	0.24	0.18	0.05	0.31	0.28	0.26	0.26	0.24	0.29	0.28	0.09	0.39	0.33	0.4	0.36	0.35	0.51	0.5	0.15
10	0	0.3	0.26	0.34	0.22	0.32	0.4	0.37	0.1	0.32	0.3	0.4	0.31	0.37	0.34	0.33	0.16	0.4	0.37	0.62	0.44	0.55	0.52	0.51	0.27

Figure 23. Root mean squared error ($RMSE$) for all methods with publication bias at 60%. Color coding is as follows: darkest = $RMSE < .1$; medium = $.1 \leq RMSE < .15$; lightest = $.15 \leq RMSE$.

δ = 0.8

k	qrpEnv	τ = 0.0								τ = 0.2								τ = 0.4							
		RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.02	0.04	0.12	0.06	0.06	0.04	0.04	0.02	0.04	0.07	0.19	0.09	0.09	0.04	0.04	0.09	0.11	0.09	0.26	0.11	0.11	0.07	0.06	0.31
60	2	0.03	0.04	0.13	0.07	0.07	0.04	0.04	0.03	0.05	0.08	0.21	0.1	0.1	0.05	0.05	0.1	0.11	0.1	0.29	0.13	0.17	0.07	0.07	0.3
30	2	0.04	0.05	0.17	0.08	0.08	0.05	0.06	0.04	0.06	0.09	0.25	0.12	0.14	0.07	0.07	0.13	0.12	0.12	0.35	0.17	0.29	0.1	0.1	0.34
10	2	0.06	0.08	0.26	0.13	0.21	0.1	0.1		0.09	0.12	0.38	0.2	0.33	0.12	0.12	0.17	0.16	0.17	0.5	0.28	0.45	0.17	0.16	0.39
100	1	0.02	0.03	0.13	0.06	0.06	0.03	0.04	0.02	0.04	0.07	0.19	0.09	0.09	0.03	0.04	0.07	0.12	0.09	0.26	0.1	0.11	0.08	0.07	0.21
60	1	0.03	0.04	0.14	0.07	0.07	0.04	0.04	0.03	0.05	0.08	0.2	0.1	0.1	0.05	0.05	0.08	0.12	0.1	0.29	0.13	0.16	0.09	0.08	0.25
30	1	0.04	0.05	0.17	0.08	0.09	0.06	0.05	0.04	0.06	0.09	0.25	0.13	0.15	0.07	0.07	0.1	0.13	0.12	0.35	0.17	0.29	0.11	0.11	0.27
10	1	0.07	0.08	0.27	0.14	0.22	0.09	0.09		0.1	0.11	0.36	0.19	0.32	0.13	0.11	0.19	0.17	0.17	0.48	0.27	0.44	0.18	0.16	0.32
100	0	0.03	0.03	0.13	0.06	0.06	0.03	0.02	0.02	0.05	0.06	0.19	0.08	0.08	0.04	0.04	0.04	0.15	0.09	0.24	0.09	0.09	0.13	0.12	0.09
60	0	0.03	0.04	0.14	0.07	0.07	0.03	0.03	0.03	0.06	0.06	0.21	0.1	0.1	0.05	0.04	0.05	0.15	0.11	0.29	0.12	0.14	0.13	0.12	0.12
30	0	0.04	0.05	0.17	0.08	0.08	0.04	0.04	0.04	0.07	0.08	0.25	0.12	0.14	0.07	0.06	0.08	0.16	0.13	0.33	0.16	0.26	0.15	0.14	0.16
10	0	0.06	0.07	0.28	0.14	0.24	0.08	0.08	0.07	0.1	0.12	0.37	0.19	0.33	0.11	0.11	0.14	0.19	0.19	0.47	0.26	0.42	0.19	0.18	0.21

δ = 0.5

k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.06	0.02	0.19	0.07	0.07	0.09	0.09	0.07	0.1	0.03	0.2	0.06	0.07	0.05	0.05	0.23	0.21	0.1	0.2	0.08	0.13	0.13	0.11	0.38
60	2	0.06	0.03	0.2	0.07	0.07	0.09	0.1	0.08	0.11	0.04	0.21	0.07	0.1	0.06	0.07	0.24	0.22	0.13	0.23	0.1	0.19	0.13	0.12	0.36
30	2	0.07	0.04	0.22	0.08	0.14	0.11	0.11	0.1	0.11	0.07	0.24	0.1	0.19	0.08	0.08	0.24	0.22	0.17	0.28	0.14	0.26	0.15	0.14	0.35
10	2	0.09	0.07	0.28	0.12	0.26	0.17	0.17	0.22	0.13	0.12	0.32	0.16	0.31	0.16	0.16	0.29	0.24	0.22	0.39	0.23	0.35	0.2	0.2	0.32
100	1	0.06	0.02	0.18	0.06	0.06	0.07	0.07	0.05	0.11	0.04	0.19	0.06	0.07	0.04	0.04	0.18	0.23	0.11	0.18	0.08	0.11	0.16	0.15	0.3
60	1	0.06	0.03	0.19	0.07	0.07	0.07	0.07	0.06	0.11	0.05	0.2	0.07	0.1	0.05	0.05	0.18	0.23	0.15	0.21	0.11	0.17	0.17	0.15	0.29
30	1	0.07	0.04	0.21	0.08	0.13	0.09	0.09	0.07	0.12	0.07	0.23	0.09	0.18	0.08	0.08	0.18	0.23	0.18	0.26	0.14	0.25	0.17	0.16	0.29
10	1	0.09	0.07	0.27	0.11	0.25	0.15	0.14	0.16	0.15	0.13	0.31	0.16	0.29	0.15	0.14	0.25	0.26	0.23	0.38	0.23	0.35	0.21	0.2	0.31
100	0	0.06	0.02	0.17	0.05	0.05	0.03	0.03	0.02	0.13	0.05	0.16	0.05	0.05	0.09	0.08	0.06	0.27	0.15	0.16	0.12	0.13	0.24	0.23	0.13
60	0	0.07	0.03	0.18	0.06	0.06	0.03	0.03	0.03	0.13	0.06	0.18	0.06	0.08	0.09	0.08	0.09	0.27	0.18	0.19	0.13	0.17	0.24	0.23	0.16
30	0	0.07	0.04	0.19	0.07	0.1	0.05	0.05	0.05	0.14	0.09	0.21	0.08	0.16	0.1	0.09	0.11	0.27	0.21	0.24	0.16	0.23	0.25	0.24	0.2
10	0	0.09	0.07	0.25	0.11	0.23	0.1	0.1	0.11	0.16	0.13	0.29	0.15	0.27	0.13	0.13	0.15	0.28	0.26	0.36	0.24	0.33	0.26	0.26	0.25

δ = 0.2

k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.19	0.14	0.17	0.03	0.15	0.17	0.17	0.1	0.26	0.18	0.12	0.09	0.13	0.06	0.06	0.15	0.38	0.24	0.12	0.19	0.19	0.24	0.22	0.19
60	2	0.19	0.14	0.16	0.04	0.16	0.17	0.17	0.1	0.26	0.18	0.12	0.1	0.14	0.07	0.07	0.14	0.38	0.24	0.15	0.2	0.2	0.24	0.22	0.18
30	2	0.2	0.14	0.17	0.04	0.16	0.16	0.16	0.1	0.26	0.19	0.14	0.11	0.16	0.1	0.1	0.13	0.38	0.27	0.19	0.2	0.2	0.25	0.23	0.17
10	2	0.21	0.16	0.17	0.07	0.17	0.16	0.16	0.13	0.28	0.22	0.18	0.14	0.18	0.15	0.15	0.14	0.4	0.34	0.29	0.27	0.27	0.28	0.27	0.18
100	1	0.18	0.13	0.15	0.03	0.12	0.13	0.13	0.07	0.26	0.18	0.1	0.11	0.13	0.08	0.08	0.14	0.4	0.25	0.13	0.21	0.21	0.29	0.28	0.16
60	1	0.19	0.13	0.15	0.04	0.14	0.14	0.14	0.08	0.26	0.18	0.11	0.11	0.14	0.09	0.08	0.13	0.39	0.26	0.16	0.22	0.22	0.29	0.28	0.16
30	1	0.19	0.14	0.15	0.05	0.15	0.14	0.13	0.09	0.27	0.19	0.13	0.12	0.15	0.11	0.11	0.13	0.4	0.29	0.2	0.23	0.22	0.3	0.29	0.16
10	1	0.21	0.16	0.16	0.07	0.16	0.14	0.14	0.12	0.29	0.23	0.17	0.15	0.18	0.16	0.16	0.15	0.41	0.35	0.29	0.27	0.27	0.31	0.3	0.17
100	0	0.18	0.13	0.12	0.05	0.08	0.04	0.04	0.03	0.28	0.2	0.07	0.14	0.15	0.18	0.18	0.11	0.44	0.3	0.16	0.27	0.27	0.39	0.38	0.14
60	0	0.19	0.13	0.12	0.06	0.1	0.05	0.05	0.04	0.29	0.21	0.09	0.15	0.16	0.19	0.18	0.12	0.44	0.32	0.19	0.28	0.27	0.39	0.38	0.16
30	0	0.19	0.14	0.13	0.06	0.13	0.08	0.07	0.06	0.29	0.21	0.12	0.15	0.16	0.19	0.19	0.14	0.44	0.35	0.23	0.29	0.27	0.4	0.39	0.21
10	0	0.2	0.16	0.15	0.1	0.15	0.12	0.12	0.1	0.3	0.25	0.2	0.2	0.2	0.21	0.2	0.17	0.45	0.41	0.37	0.35	0.33	0.41	0.4	0.27

δ = 0.0

k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.39	0.32	0	0.16	0	0	0	0.01	0.41	0.33	0.05	0.21	0.09	0.08	0.08	0.07	0.52	0.38	0.16	0.3	0.23	0.34	0.32	0.03
60	2	0.39	0.32	0.01	0.17	0.01	0.01	0.01	0.02	0.41	0.33	0.06	0.22	0.1	0.09	0.09	0.08	0.51	0.38	0.18	0.31	0.23	0.34	0.32	0.06
30	2	0.4	0.32	0.01	0.16	0.01	0.02	0.02	0.04	0.41	0.33	0.08	0.21	0.1	0.11	0.11	0.11	0.52	0.39	0.2	0.31	0.23	0.34	0.33	0.1
10	2	0.41	0.34	0.03	0.17	0.04	0.07	0.06	0.07	0.42	0.35	0.12	0.23	0.14	0.16	0.16	0.12	0.52	0.44	0.29	0.33	0.27	0.36	0.35	0.15
100	1	0.39	0.32	0	0.17	0	0	0	0.02	0.41	0.34	0.09	0.24	0.16	0.14	0.14	0.09	0.53	0.39	0.2	0.34	0.29	0.4	0.39	0.03
60	1	0.4	0.33	0.01	0.17	0.01	0.02	0.02	0.03	0.41	0.34	0.1	0.24	0.16	0.15	0.15	0.1	0.53	0.4	0.22	0.34	0.28	0.4	0.39	0.06
30	1	0.4	0.33	0.03	0.18	0.03	0.03	0.03	0.04	0.41	0.34	0.12	0.24	0.15	0.16	0.16	0.13	0.53	0.41	0.26	0.35	0.28	0.4	0.39	0.12
10	1	0.41	0.34	0.03	0.17	0.04	0.08	0.08	0.08	0.43	0.35	0.13	0.23	0.14	0.2	0.19	0.13	0.53	0.46	0.29	0.35	0.28	0.41	0.4	0.17
100	0	0.41	0.34	0.03	0.21	0.05	0.05	0.05	0.05	0.43	0.35	0.14	0.28	0.26	0.27	0.27	0.14	0.57	0.44	0.28	0.41	0.4	0.51	0.5	0.12
60	0	0.41	0.34	0.04	0.21	0.06	0.06	0.06	0.06	0.43	0.36	0.15	0.28	0.24	0.28	0.27	0.15	0.57	0.44	0.3	0.41	0.38	0.51	0.51	0.14
30	0	0.42	0.35	0.05	0.21	0.07	0.09	0.09	0.08	0.43	0.36	0.17	0.29	0.22	0.28	0.28	0.17	0.57	0.47	0.32	0.42	0.36	0.51	0.51	0.21
10	0	0.43	0.36	0.13	0.24	0.12	0.13	0.13	0.13	0.44	0.38	0.23	0.31	0.23	0.29	0.29	0.22	0.58	0.52	0.43	0.46	0.41	0.52	0.52	0.31

Figure 24. Root mean squared error ($RMSE$) for all methods with publication bias at 90% and when *estimates < 0 are set to zero*. Color coding is as follows: darkest = $RMSE < .1$; medium = $.1 \leq RMSE < .15$; lightest = $.15 \leq RMSE$.

δ = 0.8

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.02	0.04	0.12	0.06	0.06	0.04	0.04	0.02	0.04	0.07	0.19	0.09	0.09	0.04	0.04	0.09	0.11	0.09	0.26	0.11	0.11	0.07	0.06	0.31
60	2	0.03	0.04	0.13	0.07	0.07	0.04	0.04	0.03	0.05	0.08	0.21	0.1	0.1	0.05	0.05	0.1	0.11	0.1	0.29	0.13	0.17	0.07	0.07	0.31
30	2	0.04	0.05	0.17	0.08	0.08	0.05	0.06	0.04	0.06	0.09	0.25	0.12	0.14	0.07	0.07	0.13	0.12	0.12	0.36	0.17	0.3	0.1	0.1	0.35
10	2	0.06	0.08	0.26	0.13	0.22	0.11	0.1		0.09	0.12	0.39	0.2	0.34	0.12	0.12	0.17	0.16	0.17	0.55	0.28	0.51	0.18	0.16	0.4
100	1	0.02	0.03	0.13	0.06	0.06	0.03	0.04	0.02	0.04	0.07	0.19	0.09	0.09	0.03	0.04	0.07	0.12	0.09	0.26	0.1	0.11	0.08	0.07	0.21
60	1	0.03	0.04	0.14	0.07	0.07	0.04	0.04	0.03	0.05	0.08	0.2	0.1	0.1	0.05	0.05	0.08	0.12	0.1	0.29	0.13	0.16	0.09	0.08	0.25
30	1	0.04	0.05	0.17	0.08	0.09	0.08	0.05	0.04	0.06	0.09	0.25	0.13	0.15	0.07	0.07	0.1	0.13	0.12	0.36	0.17	0.29	0.11	0.11	0.28
10	1	0.07	0.08	0.27	0.14	0.22	0.09	0.09		0.1	0.11	0.38	0.19	0.33	0.13	0.11	0.19	0.17	0.17	0.52	0.27	0.49	0.18	0.16	0.34
100	0	0.03	0.03	0.13	0.06	0.06	0.03	0.02	0.02	0.05	0.06	0.19	0.08	0.08	0.04	0.04	0.04	0.15	0.09	0.24	0.09	0.09	0.13	0.12	0.09
60	0	0.03	0.04	0.14	0.07	0.07	0.03	0.03	0.03	0.06	0.06	0.21	0.1	0.1	0.05	0.04	0.05	0.15	0.11	0.29	0.12	0.14	0.13	0.12	0.12
30	0	0.04	0.05	0.17	0.08	0.08	0.04	0.04	0.04	0.07	0.08	0.25	0.12	0.14	0.07	0.06	0.08	0.16	0.13	0.33	0.16	0.27	0.15	0.14	0.16
10	0	0.06	0.07	0.29	0.14	0.24	0.08	0.08	0.07	0.1	0.12	0.38	0.19	0.34	0.11	0.11	0.14	0.19	0.19	0.52	0.27	0.47	0.19	0.18	0.21

δ = 0.5

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.06	0.02	0.19	0.07	0.07	0.09	0.09	0.07	0.1	0.03	0.2	0.06	0.07	0.05	0.05	0.24	0.21	0.1	0.2	0.08	0.13	0.13	0.11	0.43
60	2	0.06	0.03	0.2	0.07	0.07	0.09	0.1	0.08	0.11	0.04	0.21	0.07	0.1	0.06	0.07	0.24	0.22	0.13	0.23	0.1	0.2	0.13	0.12	0.42
30	2	0.07	0.04	0.22	0.08	0.14	0.11	0.11	0.1	0.11	0.07	0.24	0.1	0.19	0.08	0.08	0.25	0.22	0.17	0.3	0.14	0.28	0.15	0.14	0.42
10	2	0.09	0.07	0.29	0.12	0.28	0.19	0.18	0.22	0.13	0.12	0.36	0.16	0.34	0.17	0.17	0.3	0.24	0.22	0.47	0.23	0.44	0.21	0.2	0.38
100	1	0.06	0.02	0.18	0.06	0.06	0.07	0.07	0.05	0.11	0.04	0.19	0.06	0.07	0.04	0.04	0.18	0.23	0.11	0.18	0.08	0.11	0.16	0.15	0.34
60	1	0.06	0.03	0.19	0.07	0.07	0.07	0.07	0.06	0.11	0.05	0.2	0.07	0.1	0.05	0.05	0.18	0.23	0.15	0.21	0.11	0.18	0.17	0.15	0.32
30	1	0.07	0.04	0.21	0.08	0.13	0.1	0.09	0.07	0.12	0.07	0.23	0.09	0.18	0.08	0.08	0.19	0.23	0.18	0.27	0.14	0.26	0.18	0.16	0.33
10	1	0.09	0.07	0.28	0.11	0.26	0.17	0.15	0.16	0.15	0.13	0.34	0.16	0.32	0.15	0.14	0.26	0.26	0.23	0.46	0.24	0.44	0.22	0.2	0.38
100	0	0.06	0.02	0.17	0.05	0.05	0.03	0.03	0.02	0.13	0.05	0.16	0.05	0.05	0.09	0.08	0.06	0.27	0.15	0.16	0.12	0.13	0.24	0.23	0.13
60	0	0.07	0.03	0.18	0.06	0.06	0.03	0.03	0.03	0.13	0.06	0.18	0.06	0.08	0.09	0.08	0.09	0.27	0.18	0.19	0.13	0.17	0.24	0.23	0.16
30	0	0.07	0.04	0.19	0.07	0.1	0.05	0.05	0.05	0.14	0.09	0.21	0.08	0.16	0.1	0.09	0.11	0.27	0.21	0.25	0.16	0.24	0.25	0.24	0.21
10	0	0.09	0.07	0.26	0.11	0.24	0.1	0.1	0.11	0.16	0.13	0.32	0.15	0.3	0.13	0.13	0.16	0.28	0.26	0.42	0.24	0.39	0.26	0.26	0.29

δ = 0.2

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.19	0.14	0.17	0.03	0.16	0.21	0.2	0.1	0.26	0.18	0.12	0.09	0.14	0.06	0.06	0.17	0.38	0.24	0.12	0.19	0.19	0.24	0.22	0.32
60	2	0.19	0.14	0.17	0.04	0.16	0.24	0.21	0.1	0.26	0.18	0.13	0.1	0.15	0.07	0.07	0.17	0.38	0.24	0.17	0.2	0.21	0.24	0.22	0.33
30	2	0.2	0.14	0.18	0.04	0.18	0.28	0.23	0.1	0.26	0.19	0.17	0.11	0.18	0.12	0.11	0.17	0.38	0.27	0.23	0.2	0.24	0.25	0.23	0.33
10	2	0.21	0.16	0.22	0.07	0.22	0.4	0.36	0.14	0.28	0.22	0.27	0.15	0.27	0.28	0.23	0.19	0.4	0.34	0.41	0.27	0.4	0.29	0.28	0.31
100	1	0.18	0.13	0.15	0.03	0.13	0.14	0.14	0.07	0.26	0.18	0.1	0.11	0.13	0.08	0.08	0.15	0.4	0.25	0.13	0.21	0.22	0.29	0.28	0.25
60	1	0.19	0.13	0.15	0.04	0.14	0.16	0.15	0.08	0.26	0.18	0.11	0.11	0.14	0.09	0.08	0.15	0.39	0.26	0.17	0.22	0.23	0.29	0.28	0.26
30	1	0.19	0.14	0.16	0.05	0.16	0.21	0.17	0.09	0.27	0.19	0.14	0.12	0.16	0.11	0.11	0.16	0.4	0.29	0.23	0.23	0.25	0.3	0.29	0.28
10	1	0.21	0.16	0.21	0.07	0.21	0.31	0.27	0.13	0.29	0.23	0.25	0.15	0.25	0.21	0.19	0.21	0.41	0.35	0.41	0.28	0.4	0.31	0.3	0.33
100	0	0.18	0.13	0.12	0.05	0.08	0.04	0.04	0.03	0.28	0.2	0.07	0.14	0.15	0.18	0.18	0.11	0.44	0.3	0.16	0.27	0.27	0.39	0.38	0.15
60	0	0.19	0.13	0.12	0.06	0.1	0.05	0.05	0.04	0.29	0.21	0.09	0.15	0.16	0.19	0.18	0.13	0.44	0.32	0.19	0.28	0.27	0.39	0.38	0.19
30	0	0.19	0.14	0.13	0.06	0.13	0.08	0.08	0.06	0.29	0.21	0.13	0.15	0.17	0.19	0.19	0.16	0.44	0.35	0.24	0.29	0.28	0.4	0.39	0.24
10	0	0.2	0.16	0.17	0.1	0.18	0.19	0.15	0.11	0.3	0.25	0.24	0.2	0.24	0.23	0.21	0.21	0.45	0.41	0.43	0.35	0.4	0.41	0.4	0.36

δ = 0.0

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.39	0.32	0.11	0.16	0.11	0.3	0.22	0.01	0.41	0.33	0.07	0.21	0.11	0.09	0.09	0.1	0.52	0.38	0.16	0.3	0.24	0.34	0.32	0.23
60	2	0.39	0.32	0.11	0.17	0.11	0.32	0.25	0.02	0.41	0.33	0.09	0.22	0.11	0.12	0.1	0.1	0.51	0.38	0.19	0.31	0.24	0.34	0.32	0.24
30	2	0.4	0.32	0.15	0.16	0.15	0.37	0.29	0.04	0.41	0.33	0.13	0.21	0.14	0.17	0.14	0.13	0.52	0.39	0.24	0.31	0.26	0.34	0.33	0.23
10	2	0.41	0.34	0.23	0.17	0.23	0.49	0.46	0.07	0.42	0.35	0.24	0.23	0.25	0.32	0.27	0.15	0.52	0.44	0.4	0.34	0.39	0.38	0.36	0.27
100	1	0.39	0.32	0.09	0.17	0.09	0.23	0.18	0.02	0.41	0.34	0.09	0.24	0.16	0.14	0.14	0.12	0.53	0.39	0.21	0.34	0.29	0.4	0.39	0.2
60	1	0.4	0.33	0.1	0.17	0.1	0.27	0.2	0.03	0.41	0.34	0.11	0.24	0.16	0.15	0.15	0.13	0.53	0.4	0.23	0.34	0.28	0.4	0.39	0.21
30	1	0.4	0.33	0.12	0.18	0.12	0.32	0.24	0.05	0.41	0.34	0.14	0.24	0.16	0.18	0.17	0.15	0.53	0.41	0.27	0.35	0.29	0.4	0.39	0.24
10	1	0.41	0.34	0.24	0.17	0.25	0.46	0.45	0.09	0.43	0.35	0.24	0.23	0.24	0.28	0.25	0.16	0.53	0.46	0.39	0.35	0.39	0.41	0.4	0.31
100	0	0.41	0.34	0.05	0.21	0.07	0.08	0.07	0.05	0.43	0.35	0.14	0.28	0.26	0.27	0.27	0.15	0.57	0.44	0.28	0.41	0.4	0.51	0.5	0.16
60	0	0.41	0.34	0.06	0.21	0.08	0.1	0.09	0.06	0.43	0.36	0.15	0.28	0.24	0.28	0.27	0.16	0.57	0.44	0.3	0.41	0.38	0.51	0.51	0.19
30	0	0.42	0.35	0.09	0.21	0.1	0.17	0.14	0.08	0.43	0.36	0.17	0.29	0.22	0.28	0.28	0.19	0.57	0.47	0.33	0.42	0.37	0.51	0.51	0.25
10	0	0.43	0.36	0.2	0.24	0.2	0.34	0.27	0.13	0.44	0.38	0.26	0.31	0.26	0.3	0.29	0.24	0.58	0.52	0.46	0.46	0.44	0.52	0.52	0.38

Figure 25. Root mean squared error ($RMSE$) for all methods with publication bias at 90%. Color coding is as follows: darkest = $RMSE < .1$; medium = $.1 \leq RMSE < .15$; lightest = $.15 \leq RMSE$.

δ = 0.8

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.93	0.75	0.56	0.62	0.62		0.79	0.95	0.88	0.41	0.5	0.57	0.57		0.85	0.9	0.91	0.18	0.28	0.3	0.3		0.83	0.57
60	2	0.94	0.83	0.74	0.77	0.77		0.85	0.95	0.9	0.54	0.61	0.64	0.64		0.85	0.94	0.93	0.44	0.45	0.46	0.46		0.83	0.81
30	2	0.95	0.87	0.84	0.87	0.87		0.89	0.93	0.92	0.74	0.77	0.79	0.78		0.88	0.98	0.92	0.7	0.69	0.63	0.68		0.86	0.95
10	2	0.96	0.93	0.92	0.92	0.93		0.93	0.94	0.92	0.84	0.88	0.86	0.86		0.91	0.96	0.92	0.86	0.93	0.83	0.92		0.88	0.97
100	1	0.95	0.79	0.7	0.73	0.73		0.84	0.97	0.93	0.46	0.58	0.6	0.6		0.89	0.94	0.93	0.24	0.44	0.43	0.43		0.72	0.79
60	1	0.96	0.84	0.78	0.79	0.79		0.89	0.96	0.92	0.62	0.69	0.72	0.72		0.87	0.95	0.94	0.48	0.57	0.56	0.56		0.78	0.88
30	1	0.97	0.88	0.87	0.89	0.89		0.92	0.97	0.93	0.78	0.79	0.81	0.8		0.9	0.96	0.94	0.77	0.77	0.71	0.76		0.83	0.95
10	1	0.95	0.92	0.93	0.92	0.92		0.93	0.95	0.92	0.86	0.9	0.89	0.9		0.91	0.93	0.93	0.86	0.94	0.86	0.93		0.86	0.95
100	0	0.96	0.86	0.92	0.91	0.91		0.95	0.94	0.93	0.66	0.78	0.78	0.78		0.85	0.92	0.94	0.55	0.67	0.66	0.66		0.29	0.94
60	0	0.97	0.89	0.92	0.92	0.92		0.95	0.95	0.94	0.75	0.85	0.84	0.84		0.89	0.94	0.95	0.71	0.74	0.75	0.75		0.46	0.93
30	0	0.96	0.9	0.92	0.92	0.92		0.96	0.96	0.93	0.84	0.87	0.88	0.88		0.9	0.94	0.94	0.84	0.86	0.83	0.85		0.65	0.95
10	0	0.96	0.92	0.94	0.94	0.94		0.95	0.94	0.92	0.88	0.91	0.9	0.91		0.9	0.9	0.91	0.88	0.94	0.89	0.94		0.81	0.91

δ = 0.5

k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.49	0.91	0.16	0.34	0.34		0.28	0.72	0.67	0.44	0.24	0.32	0.33		0.83	0.22	0.88	0.2	0.28	0.19	0.28		0.55	0.23
60	2	0.68	0.93	0.33	0.53	0.53		0.48	0.81	0.76	0.63	0.41	0.5	0.5		0.85	0.55	0.9	0.49	0.59	0.39	0.58		0.65	0.49
30	2	0.83	0.92	0.61	0.73	0.71		0.7	0.89	0.86	0.82	0.69	0.68	0.71		0.9	0.83	0.91	0.78	0.9	0.62	0.9		0.73	0.78
10	2	0.94	0.94	0.86	0.87	0.87		0.89	0.93	0.91	0.88	0.92	0.85	0.92		0.92	0.9	0.9	0.88	0.97	0.89	0.97		0.81	0.92
100	1	0.74	0.86	0.42	0.61	0.61		0.48	0.82	0.82	0.44	0.45	0.52	0.53		0.9	0.54	0.89	0.26	0.45	0.35	0.42		0.25	0.58
60	1	0.84	0.89	0.55	0.71	0.71		0.66	0.87	0.87	0.64	0.58	0.65	0.64		0.9	0.74	0.92	0.52	0.7	0.54	0.7		0.46	0.74
30	1	0.89	0.92	0.78	0.85	0.84		0.8	0.93	0.91	0.78	0.75	0.72	0.75		0.92	0.87	0.93	0.8	0.92	0.73	0.92		0.64	0.87
10	1	0.94	0.93	0.91	0.9	0.91		0.91	0.94	0.91	0.88	0.95	0.89	0.94		0.92	0.9	0.91	0.87	0.97	0.92	0.97		0.82	0.91
100	0	0.96	0.88	0.93	0.94	0.94		0.95	0.95	0.95	0.71	0.85	0.85	0.85		0.53	0.94	0.93	0.62	0.78	0.78	0.78		0.01	0.94
60	0	0.96	0.89	0.94	0.94	0.94		0.96	0.97	0.94	0.79	0.86	0.86	0.86		0.67	0.94	0.94	0.73	0.85	0.8	0.84		0.08	0.94
30	0	0.97	0.9	0.94	0.94	0.94		0.95	0.96	0.94	0.86	0.89	0.89	0.9		0.78	0.94	0.95	0.86	0.91	0.85	0.92		0.3	0.94
10	0	0.96	0.92	0.96	0.94	0.95		0.96	0.96	0.93	0.9	0.96	0.93	0.95		0.89	0.91	0.91	0.89	0.96	0.94	0.95		0.65	0.9

δ = 0.2

k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.14	0.9	0.31	0.44	0.33		0.46	0.07	0.61	0.9	0.81	0.29	0.81		0.95	0.07	0.87	0.54	1	0.52	1		0.27	0.36
60	2	0.36	0.92	0.72	0.65	0.72		0.88	0.26	0.74	0.94	0.98	0.53	0.98		0.97	0.22	0.9	0.77	1	0.9	1		0.45	0.76
30	2	0.66	0.94	0.97	0.85	0.97		1	0.53	0.84	0.95	0.99	0.88	0.99		0.97	0.54	0.91	0.94	0.98	0.98	1		0.6	0.98
10	2	0.84	0.92	0.99	0.98	0.99		0.99	0.89	0.89	0.93	0.99	0.98	0.98		0.96	0.86	0.94	0.96	0.99	0.99	0.98		0.76	0.98
100	1	0.59	0.94	0.66	0.79	0.66		0.7	0.38	0.82	0.82	0.86	0.55	0.86		0.91	0.32	0.91	0.55	0.99	0.7	1		0.1	0.65
60	1	0.71	0.94	0.89	0.86	0.89		0.97	0.61	0.87	0.9	0.98	0.76	0.98		0.93	0.52	0.91	0.78	0.98	0.91	0.98		0.31	0.83
30	1	0.85	0.95	0.98	0.92	0.98		1	0.77	0.9	0.91	0.99	0.93	0.98		0.94	0.68	0.93	0.95	0.97	0.98	0.97		0.49	0.97
10	1	0.92	0.94	0.99	0.98	0.98		0.99	0.94	0.92	0.93	0.98	0.98	0.97		0.92	0.89	0.94	0.96	0.94	0.96	0.95		0.72	0.96
100	0	0.95	0.87	0.94	0.94	0.94		0.97	0.95	0.93	0.75	0.92	0.88	0.93		0.37	0.94	0.93	0.7	0.95	0.88	0.94		0	0.95
60	0	0.96	0.91	0.98	0.96	0.97		0.98	0.96	0.94	0.78	0.94	0.89	0.94		0.54	0.94	0.94	0.8	0.93	0.92	0.94		0.04	0.94
30	0	0.95	0.9	0.96	0.94	0.96		0.96	0.96	0.93	0.86	0.94	0.93	0.94		0.71	0.93	0.94	0.9	0.92	0.95	0.93		0.23	0.96
10	0	0.96	0.93	0.97	0.96	0.97		0.97	0.97	0.94	0.92	0.94	0.94	0.94		0.81	0.94	0.96	0.95	0.94	0.95	0.95		0.46	0.97

δ = 0.0

k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.73	0.82	1	1	1		0.99	1	0.77	0.95	1	1	1		0.92	1	0.86	0.98	0.97	1	1		0.25	1
60	2	0.82	0.86	0.97	0.98	0.97		1	1	0.85	0.96	1	1	1		0.93	1	0.88	0.98	0.99	1	1		0.43	1
30	2	0.89	0.91	0.99	0.99	0.99		0.97	1	0.87	0.94	0.99	0.99	1		0.92	1	0.89	0.97	0.95	0.97	0.97		0.62	1
10	2	0.91	0.92	0.96	0.97	0.97		1	0.98	0.89	0.92	0.96	0.97	0.97		0.91	1	0.9	0.92	0.95	0.96	0.95		0.74	0.99
100	1	0.88	0.86	0.99	0.99	0.98		0.99	0.99	0.86	0.92	0.98	0.98	0.99		0.84	1	0.9	0.93	0.97	0.97	0.98		0.18	0.98
60	1	0.9	0.88	0.98	0.99	0.98		1	1	0.9	0.92	0.96	0.96	0.96		0.91	0.99	0.9	0.94	0.96	0.98	0.98		0.33	1
30	1	0.92	0.88	0.96	0.95	0.96		1	0.99	0.91	0.91	0.96	0.96	0.96		0.91	0.99	0.9	0.93	0.93	0.93	0.94		0.51	0.99
10	1	0.95	0.95	0.96	0.96	0.96		1	1	0.92	0.92	0.94	0.94	0.94		0.86	0.99	0.92	0.93	0.93	0.94	0.94		0.69	0.99
100	0	0.94	0.88	0.95	0.95	0.95		0.93	0.96	0.94	0.74	0.88	0.9	0.9		0.58	0.98	0.96	0.7	0.85	0.85	0.87		0.01	0.97
60	0	0.96	0.9	0.95	0.94	0.95		0.87	0.96	0.94	0.8	0.86	0.88	0.88		0.66	0.97	0.94	0.79	0.84	0.85	0.86		0.11	0.98
30	0	0.97	0.92	0.97	0.96	0.97		1	0.99	0.95	0.85	0.88	0.88	0.89		0.68	0.99	0.91	0.86	0.88	0.87	0.88		0.28	0.97
10	0	0.97	0.94	0.94	0.94	0.95			0.97	0.91	0.88	0.9	0.9	0.91		1	0.98	0.91	0.88	0.91	0.91	0.91		0.42	0.97

Figure 26. Coverage probability (CP) for all methods with publication bias at 0% and when *estimates < 0 are set to zero*. Color coding is as follows: darkest $= |CP - 0.95| < .01$; medium $= .01 \le |CP - 0.95| < .02$; lightest $= .02 \le |CP - 0.95|$.

		τ = 0.0								τ = 0.2								τ = 0.4								
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	
100	2	0.93	0.75	0.56	0.62	0.62		0.79	0.95	0.88	0.41	0.5	0.57	0.57		0.85	0.9	0.91	0.18	0.28	0.3	0.3		0.83	0.57	δ = 0.8
60	2	0.94	0.83	0.74	0.77	0.77		0.85	0.95	0.9	0.54	0.61	0.64	0.64		0.85	0.94	0.93	0.44	0.43	0.46	0.45		0.83	0.81	
30	2	0.95	0.87	0.84	0.87	0.87		0.89	0.93	0.92	0.74	0.77	0.79	0.78		0.88	0.98	0.92	0.7	0.61	0.63	0.61		0.86	0.95	
10	2	0.96	0.93	0.92	0.92	0.93		0.93	0.94	0.92	0.84	0.86	0.86	0.85		0.91	0.96	0.92	0.86	0.8	0.81	0.8		0.88	0.96	
100	1	0.95	0.79	0.7	0.73	0.73		0.84	0.97	0.93	0.46	0.58	0.6	0.6		0.89	0.94	0.93	0.24	0.43	0.43	0.43		0.72	0.79	
60	1	0.96	0.84	0.78	0.79	0.79		0.89	0.96	0.92	0.62	0.69	0.72	0.72		0.87	0.95	0.94	0.48	0.56	0.56	0.56		0.78	0.88	
30	1	0.97	0.88	0.87	0.89	0.89		0.92	0.97	0.93	0.78	0.79	0.81	0.8		0.9	0.96	0.94	0.77	0.7	0.71	0.7		0.83	0.95	
10	1	0.95	0.92	0.93	0.92	0.92		0.93	0.95	0.92	0.86	0.88	0.89	0.88		0.91	0.93	0.93	0.86	0.83	0.83	0.83		0.86	0.95	
100	0	0.96	0.86	0.92	0.91	0.91		0.95	0.94	0.93	0.66	0.78	0.78	0.78		0.85	0.92	0.94	0.55	0.67	0.66	0.66		0.29	0.94	
60	0	0.97	0.89	0.92	0.92	0.92		0.95	0.95	0.94	0.75	0.85	0.84	0.84		0.89	0.94	0.95	0.71	0.74	0.75	0.75		0.46	0.93	
30	0	0.96	0.9	0.92	0.92	0.92		0.96	0.96	0.93	0.84	0.87	0.88	0.88		0.9	0.94	0.94	0.84	0.84	0.83	0.83		0.65	0.95	
10	0	0.96	0.92	0.93	0.94	0.94		0.95	0.94	0.92	0.88	0.89	0.9	0.89		0.9	0.9	0.91	0.88	0.88	0.88	0.88		0.81	0.91	

k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	
100	2	0.49	0.91	0.16	0.34	0.34		0.28	0.72	0.67	0.44	0.24	0.32	0.32		0.83	0.22	0.88	0.2	0.18	0.19	0.18		0.55	0.23	δ = 0.5
60	2	0.68	0.93	0.33	0.53	0.53		0.48	0.81	0.76	0.63	0.4	0.5	0.48		0.85	0.55	0.9	0.49	0.37	0.39	0.36		0.65	0.48	
30	2	0.83	0.92	0.6	0.73	0.7		0.7	0.89	0.86	0.82	0.62	0.68	0.64		0.9	0.83	0.91	0.78	0.55	0.58	0.55		0.73	0.76	
10	2	0.94	0.94	0.8	0.86	0.81		0.86	0.93	0.91	0.88	0.8	0.83	0.79		0.91	0.89	0.9	0.88	0.77	0.79	0.77		0.81	0.87	
100	1	0.74	0.86	0.42	0.61	0.61		0.48	0.82	0.82	0.44	0.45	0.52	0.52		0.9	0.54	0.89	0.26	0.36	0.35	0.34		0.25	0.58	
60	1	0.84	0.89	0.55	0.71	0.71		0.66	0.87	0.87	0.64	0.57	0.65	0.63		0.9	0.74	0.92	0.52	0.52	0.53	0.52		0.46	0.74	
30	1	0.89	0.92	0.77	0.85	0.84		0.8	0.93	0.91	0.78	0.69	0.72	0.69		0.92	0.87	0.93	0.8	0.69	0.71	0.7		0.64	0.86	
10	1	0.94	0.93	0.87	0.9	0.87		0.88	0.93	0.91	0.88	0.86	0.87	0.85		0.91	0.89	0.91	0.87	0.83	0.83	0.82		0.81	0.88	
100	0	0.96	0.88	0.93	0.94	0.94		0.95	0.95	0.95	0.71	0.85	0.85	0.85		0.53	0.94	0.93	0.62	0.77	0.78	0.77		0.01	0.94	
60	0	0.96	0.89	0.94	0.94	0.94		0.96	0.97	0.94	0.79	0.86	0.86	0.86		0.67	0.94	0.94	0.73	0.8	0.8	0.8		0.08	0.94	
30	0	0.97	0.9	0.94	0.94	0.94		0.95	0.96	0.94	0.86	0.88	0.89	0.89		0.78	0.94	0.95	0.86	0.84	0.85	0.85		0.3	0.94	
10	0	0.96	0.92	0.95	0.94	0.94		0.96	0.96	0.93	0.9	0.92	0.92	0.92		0.89	0.91	0.91	0.89	0.89	0.9	0.89		0.65	0.89	

k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	
100	2	0.14	0.9	0.15	0.44	0.16		0.24	0.07	0.61	0.9	0.19	0.26	0.19		0.93	0.06	0.87	0.53	0.23	0.21	0.23		0.27	0.2	δ = 0.2
60	2	0.36	0.92	0.36	0.65	0.36		0.47	0.26	0.74	0.94	0.36	0.43	0.36		0.93	0.18	0.9	0.76	0.4	0.39	0.4		0.45	0.39	
30	2	0.66	0.94	0.65	0.81	0.65		0.69	0.52	0.84	0.95	0.58	0.65	0.58		0.93	0.41	0.91	0.91	0.57	0.59	0.57		0.61	0.61	
10	2	0.84	0.92	0.86	0.92	0.86		0.87	0.83	0.88	0.92	0.83	0.86	0.82		0.93	0.64	0.91	0.92	0.8	0.83	0.8		0.78	0.72	
100	1	0.59	0.94	0.6	0.79	0.6		0.44	0.38	0.82	0.82	0.46	0.54	0.46		0.9	0.32	0.91	0.54	0.46	0.47	0.46		0.1	0.56	
60	1	0.71	0.94	0.74	0.86	0.74		0.67	0.61	0.87	0.9	0.66	0.71	0.66		0.92	0.51	0.91	0.76	0.59	0.6	0.59		0.31	0.68	
30	1	0.85	0.95	0.86	0.91	0.85		0.81	0.77	0.9	0.91	0.75	0.81	0.75		0.93	0.64	0.93	0.92	0.72	0.73	0.73		0.49	0.77	
10	1	0.92	0.94	0.92	0.94	0.92		0.89	0.91	0.92	0.93	0.9	0.92	0.9		0.91	0.78	0.92	0.93	0.86	0.86	0.86		0.73	0.79	
100	0	0.95	0.87	0.94	0.94	0.94		0.95	0.95	0.93	0.75	0.87	0.88	0.88		0.37	0.94	0.93	0.69	0.83	0.84	0.83		0	0.95	
60	0	0.96	0.91	0.97	0.96	0.96		0.96	0.96	0.94	0.78	0.88	0.88	0.88		0.54	0.94	0.94	0.78	0.83	0.85	0.84		0.04	0.93	
30	0	0.95	0.9	0.93	0.94	0.94		0.94	0.96	0.93	0.86	0.88	0.9	0.89		0.72	0.93	0.93	0.86	0.86	0.86	0.86		0.23	0.93	
10	0	0.96	0.93	0.94	0.93	0.94		0.97	0.97	0.92	0.89	0.92	0.91	0.92		0.81	0.91	0.93	0.91	0.91	0.9	0.91		0.46	0.9	

k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	
100	2	0.75	0.84	0.42	0.47	0.42		0.82	0.53	0.8	0.93	0.41	0.42	0.41		0.93	0.09	0.9	0.8	0.38	0.35	0.38		0.26	0.24	δ = 0.0
60	2	0.84	0.88	0.63	0.68	0.63		0.88	0.7	0.88	0.94	0.57	0.59	0.57		0.93	0.24	0.91	0.9	0.53	0.52	0.54		0.44	0.42	
30	2	0.92	0.92	0.8	0.82	0.8		0.92	0.83	0.89	0.92	0.73	0.75	0.73		0.94	0.46	0.91	0.94	0.7	0.71	0.7		0.65	0.58	
10	2	0.93	0.94	0.9	0.93	0.9		0.91	0.92	0.9	0.92	0.86	0.88	0.86		0.95	0.72	0.9	0.91	0.84	0.85	0.84		0.78	0.73	
100	1	0.91	0.88	0.82	0.86	0.82		0.87	0.84	0.89	0.87	0.7	0.74	0.7		0.88	0.44	0.93	0.76	0.63	0.63	0.63		0.18	0.55	
60	1	0.92	0.89	0.86	0.89	0.86		0.92	0.88	0.93	0.88	0.78	0.82	0.79		0.93	0.56	0.92	0.88	0.71	0.73	0.71		0.34	0.67	
30	1	0.93	0.9	0.91	0.92	0.91		0.93	0.93	0.92	0.9	0.84	0.87	0.84		0.93	0.72	0.93	0.92	0.81	0.83	0.82		0.55	0.76	
10	1	0.95	0.95	0.93	0.94	0.93		0.92	0.93	0.93	0.91	0.92	0.92	0.92		0.89	0.83	0.93	0.93	0.9	0.9	0.9		0.72	0.8	
100	0	0.94	0.87	0.96	0.95	0.96		0.93	0.96	0.95	0.74	0.88	0.9	0.89		0.61	0.94	0.95	0.69	0.86	0.87	0.86		0.01	0.96	
60	0	0.96	0.9	0.95	0.94	0.95		0.9	0.96	0.95	0.8	0.86	0.88	0.87		0.7	0.95	0.95	0.8	0.85	0.86	0.86		0.11	0.95	
30	0	0.97	0.92	0.96	0.95	0.96		1	0.96	0.94	0.85	0.89	0.89	0.89		0.72	0.95	0.92	0.86	0.87	0.87	0.88		0.29	0.93	
10	0	0.97	0.94	0.95	0.95	0.95			0.94	0.92	0.88	0.9	0.91	0.91		1	0.93	0.92	0.89	0.91	0.9	0.91		0.44	0.9	

Figure 27. Coverage probability (CP) for all methods with publication bias at 0%. Color coding is as follows: darkest $= |CP - 0.95| < .01$; medium $= .01 \leq |CP - 0.95| < .02$; lightest $= .02 \leq |CP - 0.95|$.

δ = 0.8

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.92	0.77	0.54	0.6	0.6		0.77	0.94	0.85	0.45	0.45	0.52	0.52		0.83	0.92	0.55	0.43	0.43	0.55	0.55		0.82	0.83
60	2	0.94	0.79	0.65	0.72	0.72		0.81	0.96	0.88	0.64	0.62	0.68	0.68		0.86	0.96	0.71	0.6	0.55	0.65	0.64		0.83	0.95
30	2	0.94	0.86	0.8	0.83	0.83		0.91	0.98	0.9	0.74	0.74	0.78	0.78		0.88	0.98	0.83	0.78	0.69	0.73	0.71		0.86	0.99
10	2	0.96	0.92	0.9	0.91	0.91		0.93	1	0.92	0.84	0.87	0.85	0.86		0.9	0.95	0.88	0.84	0.91	0.84	0.9		0.88	0.98
100	1	0.93	0.76	0.58	0.62	0.62		0.84	0.96	0.83	0.5	0.5	0.6	0.6		0.91	0.95	0.53	0.51	0.47	0.61	0.61		0.7	0.89
60	1	0.94	0.84	0.67	0.74	0.74		0.89	0.95	0.88	0.64	0.65	0.71	0.71		0.9	0.96	0.7	0.68	0.6	0.69	0.69		0.76	0.98
30	1	0.94	0.88	0.82	0.86	0.86		0.92	0.95	0.91	0.77	0.75	0.79	0.79		0.91	0.97	0.83	0.78	0.74	0.76	0.75		0.82	0.98
10	1	0.95	0.9	0.91	0.9	0.9		0.93	0.97	0.91	0.86	0.88	0.87	0.87		0.91	0.95	0.89	0.86	0.91	0.87	0.9		0.86	0.96
100	0	0.92	0.79	0.64	0.71	0.71		0.93	0.94	0.79	0.59	0.61	0.72	0.72		0.87	0.94	0.37	0.69	0.63	0.75	0.75		0.21	0.94
60	0	0.94	0.84	0.78	0.82	0.82		0.94	0.95	0.84	0.71	0.7	0.76	0.76		0.88	0.92	0.58	0.71	0.69	0.79	0.79		0.44	0.93
30	0	0.95	0.89	0.86	0.88	0.88		0.94	0.94	0.9	0.82	0.8	0.84	0.84		0.92	0.94	0.79	0.8	0.77	0.81	0.79		0.61	0.93
10	0	0.96	0.94	0.94	0.94	0.94		0.96	0.95	0.9	0.86	0.9	0.88	0.89		0.9	0.93	0.84	0.84	0.9	0.87	0.89		0.78	0.89

δ = 0.5

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.19	0.93	0.08	0.31	0.31		0.27	0.8	0.07	0.84	0.3	0.59	0.59		0.84	0.59	0.02	0.91	0.48	0.73	0.67		0.42	0.46
60	2	0.42	0.94	0.2	0.48	0.48		0.47	0.85	0.26	0.87	0.45	0.66	0.66		0.89	0.85	0.1	0.89	0.64	0.77	0.65		0.57	0.78
30	2	0.68	0.93	0.45	0.68	0.66		0.73	0.89	0.53	0.83	0.65	0.75	0.69		0.86	0.92	0.41	0.8	0.84	0.84	0.83		0.71	0.96
10	2	0.88	0.92	0.8	0.84	0.83		0.88	0.95	0.79	0.84	0.86	0.83	0.86		0.9	0.94	0.71	0.77	0.94	0.89	0.92		0.81	0.96
100	1	0.26	0.95	0.16	0.48	0.48		0.51	0.88	0.07	0.87	0.4	0.69	0.69		0.92	0.8	0.02	0.92	0.59	0.81	0.73		0.15	0.72
60	1	0.48	0.92	0.34	0.63	0.63		0.68	0.9	0.24	0.88	0.54	0.74	0.73		0.91	0.9	0.09	0.87	0.73	0.86	0.73		0.32	0.9
30	1	0.74	0.92	0.61	0.78	0.77		0.8	0.93	0.51	0.83	0.69	0.8	0.73		0.93	0.96	0.4	0.76	0.88	0.86	0.86		0.57	0.97
10	1	0.88	0.93	0.84	0.87	0.86		0.91	0.95	0.78	0.83	0.9	0.87	0.9		0.93	0.92	0.69	0.76	0.94	0.9	0.91		0.79	0.94
100	0	0.33	0.91	0.52	0.84	0.84		0.94	0.93	0.04	0.85	0.7	0.86	0.86		0.38	0.94	0	0.72	0.83	0.8	0.77		0	0.94
60	0	0.58	0.92	0.67	0.89	0.89		0.96	0.96	0.21	0.79	0.78	0.89	0.88		0.56	0.92	0.04	0.66	0.82	0.81	0.74		0.01	0.92
30	0	0.78	0.91	0.84	0.92	0.91		0.96	0.94	0.48	0.78	0.83	0.88	0.84		0.71	0.9	0.27	0.58	0.89	0.84	0.81		0.16	0.91
10	0	0.93	0.94	0.91	0.93	0.92		0.95	0.96	0.78	0.82	0.92	0.9	0.9		0.86	0.88	0.68	0.73	0.94	0.92	0.91		0.56	0.85

δ = 0.2

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0	0	0.04	0.95	0.16		0.18	0.17	0	0	0.59	0.91	0.51		0.93	0.27	0	0.08	0.98	0.85	0.81		0.07	0.81
60	2	0	0.01	0.27	0.96	0.3		0.53	0.38	0	0.04	0.88	0.9	0.79		0.96	0.62	0	0.3	0.98	0.88	0.83		0.22	0.99
30	2	0	0.22	0.72	0.97	0.72		0.97	0.65	0.01	0.33	0.96	0.93	0.9		0.96	0.89	0.04	0.57	0.96	0.92	0.87		0.44	1
10	2	0.27	0.62	0.94	0.97	0.92		0.99	0.93	0.37	0.65	0.97	0.95	0.91		0.96	0.94	0.44	0.66	0.96	0.94	0.91		0.75	0.97
100	1	0	0	0.3	0.96	0.47		0.44	0.55	0	0	0.82	0.82	0.62		0.79	0.63	0	0.05	0.98	0.76	0.72		0.01	0.91
60	1	0	0.02	0.6	0.97	0.6		0.73	0.69	0	0.04	0.94	0.87	0.81		0.83	0.79	0	0.24	0.96	0.81	0.75		0.06	0.99
30	1	0	0.25	0.89	0.96	0.86		0.98	0.83	0.01	0.34	0.97	0.89	0.85		0.89	0.94	0.04	0.47	0.95	0.85	0.81		0.27	0.99
10	1	0.3	0.63	0.98	0.97	0.95		0.99	0.96	0.34	0.6	0.96	0.92	0.88		0.91	0.93	0.42	0.64	0.96	0.91	0.89		0.62	0.94
100	0	0	0	0.9	0.47	0.45		0.94	0.94	0	0	0.85	0.16	0.15		0.03	0.94	0	0	0.75	0.18	0.19		0	0.95
60	0	0	0.02	0.94	0.68	0.63		0.96	0.96	0	0.02	0.86	0.36	0.35		0.13	0.93	0	0.07	0.81	0.4	0.39		0	0.94
30	0	0	0.21	0.97	0.83	0.8		0.98	0.96	0	0.12	0.91	0.6	0.58		0.43	0.91	0.01	0.24	0.87	0.59	0.57		0.02	0.92
10	0	0.38	0.62	0.98	0.93	0.91		0.96	0.96	0.31	0.47	0.93	0.82	0.8		0.71	0.84	0.35	0.47	0.92	0.84	0.82		0.31	0.84

δ = 0.0

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0	0		0.92			1	1	0	0	0.98	0.65	0.96		0.87	1	0	0	0.95	0.64	0.91		0.03	1
60	2	0	0	1	0.95	1		1	1	0	0	0.99	0.75	0.99		0.88	0.98	0	0	0.93	0.77	0.9		0.1	1
30	2	0	0	1	0.94	1		0.99	1	0	0.01	0.98	0.82	0.94		0.89	0.98	0	0.08	0.92	0.82	0.9		0.34	0.98
10	2	0.06	0.33	0.99	0.97	0.99		0.99	0.99	0.15	0.33	0.99	0.91	0.97		0.91	0.92	0.29	0.48	0.95	0.87	0.9		0.62	0.9
100	1	0	0	1	0.76	1		1	1	0	0	0.94	0.31	0.88		0.57	0.98	0	0	0.87	0.38	0.79		0	0.99
60	1	0	0	1	0.86	1		1	1	0	0	0.95	0.51	0.89		0.7	1	0	0	0.91	0.54	0.83		0.02	1
30	1	0	0	1	0.91	0.99		0.99	1	0	0	0.95	0.66	0.9		0.81	0.96	0	0.07	0.89	0.67	0.83		0.21	0.98
10	1	0.04	0.26	1	0.96	0.97		0.97	0.99	0.14	0.3	0.97	0.88	0.94		0.89	0.95	0.27	0.41	0.92	0.82	0.87		0.54	0.87
100	0	0	0	0.97	0.16	0.93		0.93	0.94	0	0	0.44	0.01	0.31		0.01	0.91	0	0	0.41	0.02	0.3		0	0.93
60	0	0	0	0.97	0.38	0.93		0.94	0.94	0	0	0.56	0.06	0.45		0.09	0.93	0	0	0.55	0.09	0.44		0	0.91
30	0	0	0	0.96	0.67	0.94		0.94	0.97	0	0	0.74	0.24	0.6		0.3	0.92	0	0.02	0.68	0.32	0.57		0.01	0.92
10	0	0.05	0.2	0.98	0.86	0.93		0.96	0.94	0.1	0.19	0.89	0.64	0.81		0.65	0.8	0.22	0.32	0.86	0.67	0.76		0.24	0.83

Figure 28. Coverage probability (CP) for all methods with publication bias at 60% and when *estimates < 0 are set to zero*. Color coding is as follows: darkest = $|CP - 0.95| < .01$; medium = $.01 \leq |CP - 0.95| < .02$; lightest = $.02 \leq |CP - 0.95|$.

δ = 0.8

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.92	0.77	0.54	0.6	0.6		0.77	0.94	0.85	0.45	0.45	0.52	0.52		0.83	0.92	0.55	0.43	0.42	0.55	0.55		0.82	0.83
60	2	0.94	0.79	0.65	0.72	0.72		0.81	0.96	0.88	0.64	0.62	0.68	0.68		0.86	0.96	0.71	0.6	0.54	0.65	0.64		0.83	0.95
30	2	0.94	0.86	0.8	0.83	0.83		0.91	0.98	0.9	0.74	0.74	0.78	0.78		0.88	0.98	0.83	0.78	0.66	0.73	0.68		0.86	0.99
10	2	0.96	0.92	0.9	0.91	0.9		0.93	1	0.92	0.84	0.84	0.85	0.83		0.9	0.95	0.88	0.84	0.83	0.83	0.82		0.88	0.98
100	1	0.93	0.76	0.58	0.62	0.62		0.84	0.96	0.83	0.5	0.5	0.6	0.6		0.91	0.95	0.53	0.51	0.47	0.61	0.61		0.7	0.89
60	1	0.94	0.84	0.67	0.74	0.74		0.89	0.95	0.88	0.64	0.65	0.71	0.71		0.9	0.96	0.7	0.68	0.6	0.69	0.69		0.76	0.98
30	1	0.94	0.88	0.82	0.86	0.86		0.92	0.95	0.91	0.77	0.75	0.79	0.79		0.91	0.97	0.83	0.78	0.72	0.76	0.72		0.82	0.97
10	1	0.95	0.9	0.9	0.9	0.9		0.93	0.97	0.91	0.86	0.87	0.87	0.86		0.91	0.95	0.89	0.86	0.85	0.86	0.84		0.86	0.96
100	0	0.92	0.79	0.64	0.71	0.71		0.93	0.94	0.79	0.59	0.61	0.72	0.72		0.87	0.94	0.37	0.69	0.63	0.75	0.75		0.21	0.94
60	0	0.94	0.84	0.78	0.82	0.82		0.94	0.95	0.84	0.71	0.7	0.76	0.76		0.88	0.92	0.58	0.71	0.69	0.79	0.79		0.44	0.93
30	0	0.95	0.89	0.86	0.88	0.88		0.94	0.94	0.9	0.82	0.8	0.84	0.84		0.92	0.94	0.79	0.8	0.75	0.81	0.77		0.61	0.93
10	0	0.96	0.94	0.93	0.94	0.93		0.96	0.95	0.9	0.86	0.89	0.88	0.88		0.9	0.93	0.84	0.84	0.86	0.87	0.85		0.78	0.89

δ = 0.5

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.19	0.93	0.08	0.31	0.31		0.27	0.8	0.07	0.84	0.3	0.59	0.59		0.84	0.59	0.02	0.91	0.45	0.73	0.62		0.42	0.44
60	2	0.42	0.94	0.2	0.48	0.48		0.47	0.85	0.26	0.87	0.45	0.66	0.65		0.89	0.85	0.1	0.89	0.58	0.77	0.59		0.57	0.74
30	2	0.68	0.93	0.45	0.68	0.66		0.73	0.89	0.53	0.83	0.62	0.75	0.66		0.86	0.92	0.41	0.8	0.69	0.84	0.68		0.71	0.92
10	2	0.88	0.92	0.76	0.84	0.79		0.87	0.95	0.79	0.84	0.78	0.83	0.78		0.89	0.93	0.71	0.77	0.82	0.86	0.81		0.8	0.93
100	1	0.26	0.95	0.16	0.48	0.48		0.51	0.88	0.07	0.87	0.4	0.69	0.69		0.92	0.8	0.02	0.92	0.58	0.81	0.71		0.15	0.72
60	1	0.48	0.92	0.34	0.63	0.63		0.68	0.9	0.24	0.88	0.53	0.74	0.73		0.91	0.9	0.09	0.87	0.69	0.86	0.7		0.32	0.89
30	1	0.74	0.92	0.61	0.78	0.76		0.8	0.93	0.51	0.83	0.67	0.8	0.71		0.93	0.96	0.4	0.76	0.76	0.86	0.75		0.57	0.95
10	1	0.88	0.93	0.81	0.87	0.83		0.91	0.95	0.78	0.83	0.82	0.86	0.82		0.92	0.92	0.69	0.76	0.84	0.88	0.83		0.78	0.93
100	0	0.33	0.91	0.52	0.84	0.84		0.94	0.93	0.04	0.85	0.7	0.86	0.86		0.38	0.94	0	0.72	0.83	0.8	0.77		0	0.94
60	0	0.58	0.92	0.67	0.89	0.89		0.96	0.96	0.21	0.79	0.78	0.89	0.88		0.56	0.92	0.04	0.66	0.81	0.81	0.73		0.01	0.92
30	0	0.78	0.91	0.84	0.92	0.91		0.96	0.94	0.48	0.78	0.82	0.88	0.83		0.71	0.9	0.27	0.58	0.86	0.84	0.78		0.16	0.91
10	0	0.93	0.94	0.9	0.93	0.9		0.95	0.96	0.78	0.82	0.88	0.9	0.86		0.86	0.88	0.68	0.73	0.9	0.91	0.88		0.56	0.85

δ = 0.2

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0	0	0.03	0.95	0.11		0.1	0.17	0	0	0.36	0.91	0.32		0.93	0.23	0	0.08	0.63	0.85	0.54		0.07	0.36
60	2	0	0.01	0.18	0.96	0.19		0.3	0.38	0	0.04	0.54	0.9	0.49		0.94	0.5	0	0.3	0.71	0.86	0.63		0.22	0.58
30	2	0	0.22	0.46	0.97	0.46		0.61	0.62	0.01	0.33	0.7	0.92	0.67		0.92	0.73	0.04	0.57	0.8	0.89	0.76		0.44	0.83
10	2	0.27	0.62	0.79	0.96	0.78		0.85	0.84	0.37	0.65	0.87	0.93	0.84		0.94	0.84	0.44	0.66	0.86	0.9	0.84		0.76	0.92
100	1	0	0	0.28	0.96	0.44		0.38	0.55	0	0	0.7	0.82	0.53		0.78	0.62	0	0.05	0.81	0.76	0.61		0.01	0.71
60	1	0	0.02	0.53	0.97	0.54		0.58	0.69	0	0.04	0.78	0.87	0.68		0.83	0.75	0	0.24	0.82	0.8	0.67		0.06	0.82
30	1	0	0.25	0.75	0.96	0.72		0.75	0.82	0.01	0.34	0.84	0.88	0.75		0.88	0.85	0.04	0.47	0.88	0.84	0.78		0.27	0.88
10	1	0.3	0.63	0.88	0.96	0.86		0.91	0.9	0.34	0.6	0.88	0.9	0.83		0.9	0.89	0.42	0.64	0.91	0.91	0.87		0.62	0.9
100	0	0	0	0.9	0.47	0.45		0.94	0.94	0	0	0.84	0.16	0.15		0.03	0.94	0	0	0.75	0.18	0.2		0	0.94
60	0	0	0.02	0.94	0.68	0.62		0.95	0.96	0	0.02	0.85	0.36	0.35		0.13	0.93	0	0.07	0.8	0.4	0.41		0	0.93
30	0	0	0.21	0.95	0.83	0.79		0.95	0.96	0	0.12	0.9	0.6	0.59		0.43	0.91	0.01	0.24	0.87	0.59	0.6		0.02	0.91
10	0	0.38	0.62	0.96	0.92	0.9		0.94	0.96	0.31	0.47	0.92	0.83	0.81		0.72	0.84	0.35	0.47	0.92	0.84	0.83		0.32	0.84

δ = 0.0

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0	0	0.1	0.94	0.1		0.45	0.22	0	0	0.66	0.69	0.66		0.89	0.29	0	0	0.78	0.69	0.77		0.03	0.43
60	2	0	0	0.26	0.96	0.26		0.66	0.42	0	0	0.74	0.79	0.74		0.91	0.46	0	0	0.82	0.8	0.81		0.11	0.6
30	2	0	0	0.58	0.96	0.58		0.82	0.68	0	0.01	0.82	0.86	0.81		0.92	0.71	0	0.08	0.84	0.85	0.83		0.35	0.8
10	2	0.06	0.33	0.79	0.97	0.79		0.93	0.87	0.15	0.33	0.9	0.93	0.9		0.93	0.91	0.29	0.48	0.9	0.9	0.88		0.66	0.89
100	1	0	0	0.42	0.78	0.42		0.66	0.62	0	0	0.91	0.32	0.88		0.6	0.66	0	0	0.87	0.4	0.83		0	0.74
60	1	0	0	0.61	0.88	0.61		0.77	0.72	0	0	0.91	0.54	0.88		0.73	0.77	0	0	0.88	0.58	0.84		0.02	0.82
30	1	0	0	0.81	0.92	0.81		0.87	0.83	0	0	0.93	0.69	0.9		0.84	0.84	0	0.07	0.9	0.71	0.87		0.22	0.9
10	1	0.04	0.26	0.89	0.96	0.89		0.92	0.92	0.14	0.3	0.92	0.9	0.91		0.91	0.91	0.27	0.41	0.92	0.86	0.9		0.56	0.9
100	0	0	0	0.95	0.16	0.93		0.95	0.96	0	0	0.46	0.01	0.34		0.01	0.93	0	0	0.44	0.02	0.34		0	0.95
60	0	0	0	0.93	0.39	0.92		0.94	0.94	0	0	0.59	0.06	0.49		0.09	0.94	0	0	0.59	0.1	0.49		0	0.93
30	0	0	0	0.95	0.69	0.94		0.94	0.96	0	0	0.77	0.25	0.65		0.31	0.94	0	0.02	0.72	0.34	0.63		0.01	0.93
10	0	0.05	0.2	0.96	0.88	0.93		0.96	0.94	0.1	0.19	0.9	0.67	0.84		0.68	0.87	0.22	0.32	0.89	0.71	0.81		0.25	0.88

Figure 29. Coverage probability (CP) for all methods with publication bias at 60%. Color coding is as follows: darkest $= |CP - 0.95| < .01$; medium $= .01 \leq |CP - 0.95| < .02$; lightest $= .02 \leq |CP - 0.95|$.

δ = 0.8

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.92	0.73	0.5	0.58	0.58		0.78	0.93	0.77	0.48	0.45	0.56	0.56		0.84	0.91	0.27	0.5	0.5	0.67	0.67		0.81	0.97
60	2	0.91	0.81	0.68	0.75	0.75		0.87	0.96	0.85	0.61	0.6	0.66	0.66		0.85	0.95	0.53	0.63	0.6	0.73	0.73		0.85	0.99
30	2	0.94	0.86	0.79	0.84	0.84		0.89	1	0.89	0.75	0.73	0.78	0.78		0.9	0.95	0.69	0.74	0.71	0.79	0.74		0.83	0.99
10	2	0.96	0.93	0.93	0.92	0.93		0.92		0.91	0.84	0.85	0.85	0.85		0.9	1	0.85	0.82	0.9	0.86	0.89		0.86	0.98
100	1	0.92	0.74	0.48	0.57	0.57		0.84	0.96	0.75	0.51	0.46	0.58	0.58		0.9	0.97	0.17	0.57	0.51	0.72	0.72		0.67	0.99
60	1	0.94	0.82	0.68	0.74	0.74		0.88	0.96	0.82	0.64	0.59	0.68	0.68		0.89	0.97	0.43	0.63	0.61	0.75	0.75		0.76	0.99
30	1	0.94	0.87	0.8	0.82	0.82		0.9	0.96	0.89	0.74	0.71	0.77	0.77		0.89	0.96	0.64	0.72	0.72	0.81	0.76		0.78	0.97
10	1	0.96	0.92	0.91	0.91	0.91		0.94		0.9	0.86	0.88	0.87	0.88		0.91	1	0.82	0.8	0.89	0.86	0.88		0.85	1
100	0	0.86	0.81	0.44	0.57	0.57		0.94	0.93	0.57	0.6	0.43	0.61	0.61		0.85	0.93	0.04	0.68	0.55	0.77	0.77		0.2	0.94
60	0	0.91	0.84	0.64	0.72	0.72		0.95	0.95	0.72	0.72	0.58	0.71	0.71		0.89	0.93	0.19	0.63	0.61	0.79	0.79		0.39	0.93
30	0	0.94	0.9	0.81	0.86	0.86		0.96	0.95	0.79	0.79	0.73	0.81	0.8		0.88	0.92	0.47	0.66	0.75	0.82	0.79		0.59	0.89
10	0	0.97	0.94	0.9	0.9	0.9		0.95	0.96	0.88	0.83	0.86	0.86	0.86		0.9	0.91	0.78	0.77	0.9	0.88	0.88		0.78	0.91

δ = 0.5

k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.12	0.93	0.04	0.28	0.28		0.3	0.85	0	0.87	0.27	0.68	0.68		0.83	0.89	0	0.65	0.6	0.8	0.77		0.36	0.95
60	2	0.34	0.91	0.17	0.49	0.49		0.48	0.88	0.07	0.86	0.43	0.73	0.72		0.84	0.96	0	0.59	0.69	0.82	0.71		0.53	0.99
30	2	0.6	0.92	0.39	0.65	0.64		0.73	0.94	0.31	0.79	0.59	0.78	0.72		0.9	0.95	0.06	0.51	0.8	0.82	0.74		0.69	1
10	2	0.87	0.91	0.77	0.81	0.79		0.87	1	0.7	0.79	0.84	0.85	0.82		0.93	0.99	0.45	0.6	0.9	0.88	0.86		0.81	0.98
100	1	0.11	0.93	0.05	0.36	0.36		0.49	0.89	0	0.86	0.34	0.74	0.74		0.92	0.95	0	0.53	0.66	0.79	0.77		0.12	0.97
60	1	0.29	0.91	0.2	0.54	0.54		0.67	0.92	0.04	0.83	0.48	0.8	0.79		0.94	0.97	0	0.49	0.74	0.79	0.71		0.28	0.99
30	1	0.61	0.9	0.46	0.71	0.7		0.8	0.95	0.26	0.78	0.62	0.81	0.74		0.91	0.95	0.03	0.46	0.81	0.84	0.75		0.5	0.98
10	1	0.86	0.93	0.77	0.83	0.8		0.89	1	0.61	0.73	0.85	0.85	0.84		0.91	0.9	0.38	0.52	0.92	0.88	0.87		0.75	0.96
100	0	0.06	0.9	0.09	0.54	0.54		0.95	0.95	0	0.68	0.41	0.86	0.86		0.33	0.91	0	0.14	0.75	0.58	0.57		0	0.91
60	0	0.22	0.9	0.25	0.68	0.68		0.96	0.95	0	0.71	0.57	0.84	0.84		0.53	0.9	0	0.26	0.79	0.69	0.62		0.01	0.91
30	0	0.51	0.9	0.52	0.81	0.8		0.96	0.96	0.12	0.68	0.71	0.86	0.79		0.72	0.88	0.01	0.34	0.85	0.79	0.73		0.12	0.87
10	0	0.86	0.92	0.83	0.9	0.86		0.95	0.94	0.58	0.71	0.9	0.88	0.87		0.85	0.86	0.28	0.44	0.93	0.89	0.87		0.51	0.8

δ = 0.2

k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0	0	0	0.67	0.12		0.12	0.34	0	0	0.55	0.23	0.04		0.92	0.75	0	0	0.88	0.08	0.24		0.03	0.99
60	2	0	0	0.05	0.77	0.14		0.39	0.55	0	0	0.7	0.4	0.24		0.94	0.81	0	0	0.88	0.26	0.4		0.15	0.99
30	2	0	0	0.28	0.84	0.27		0.9	0.86	0	0	0.83	0.58	0.48		0.95	0.83	0	0.01	0.92	0.51	0.58		0.4	0.94
10	2	0.01	0.29	0.7	0.87	0.63		1	0.96	0.02	0.22	0.9	0.78	0.71		0.94	0.95	0.04	0.24	0.9	0.74	0.71		0.69	0.98
100	1	0	0	0.01	0.65	0.23		0.33	0.67	0	0	0.7	0.13	0.04		0.73	0.81	0	0	0.84	0.07	0.18		0	1
60	1	0	0	0.11	0.76	0.21		0.6	0.78	0	0	0.81	0.29	0.22		0.81	0.8	0	0	0.86	0.14	0.3		0.03	0.99
30	1	0	0.01	0.44	0.86	0.39		0.94	0.89	0	0	0.91	0.53	0.53		0.86	0.81	0	0.01	0.9	0.41	0.51		0.17	0.95
10	1	0.01	0.32	0.76	0.86	0.65		1	0.95	0.02	0.22	0.94	0.78	0.75		0.9	0.94	0.04	0.2	0.92	0.72	0.71		0.56	0.95
100	0	0	0	0.09	0.31	0.16		0.96	0.94	0	0	0.87	0.01	0.01		0.01	0.8	0	0	0.69	0	0.06		0	0.9
60	0	0	0	0.28	0.49	0.22		0.96	0.94	0	0	0.86	0.09	0.13		0.07	0.75	0	0	0.77	0.04	0.18		0	0.87
30	0	0	0	0.56	0.74	0.42		0.96	0.94	0	0	0.93	0.33	0.38		0.31	0.7	0	0	0.82	0.19	0.35		0.01	0.81
10	0	0.02	0.33	0.88	0.88	0.78		0.97	0.95	0.01	0.14	0.94	0.68	0.69		0.69	0.7	0.01	0.08	0.88	0.63	0.65		0.22	0.68

δ = 0.0

k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0	0	1	0	1		1	1	0	0	0.86	0	0.79		0.83	0.45	0	0	0.61	0	0.51		0.01	0.92
60	2	0	0	1	0.01	1		1	1	0	0	0.89	0.02	0.83		0.87	0.62	0	0	0.67	0.02	0.59		0.06	0.84
30	2	0	0	0.98	0.17	0.98		1	0.99	0	0	0.91	0.13	0.85		0.89	0.68	0	0	0.76	0.18	0.68		0.22	0.84
10	2	0	0	0.97	0.56	0.94		1	0.99	0	0.01	0.89	0.43	0.83		0.89	0.83	0	0.06	0.88	0.53	0.78		0.59	0.84
100	1	0	0	1	0	1		1	1	0	0	0.71	0	0.61		0.46	0.34	0	0	0.48	0	0.38		0	0.98
60	1	0	0	1	0.01	1		1	0.98	0	0	0.77	0.01	0.66		0.61	0.44	0	0	0.58	0.02	0.48		0	0.94
30	1	0	0	1	0.1	0.99		1	0.99	0	0	0.84	0.06	0.76		0.74	0.6	0	0	0.73	0.09	0.64		0.09	0.86
10	1	0	0	0.96	0.56	0.95		0.98	0.98	0	0.01	0.9	0.47	0.83		0.85	0.81	0	0.06	0.84	0.49	0.76		0.47	0.87
100	0	0	0	0.98	0	0.93		0.95	0.83	0	0	0.31	0	0.21		0	0.57	0	0	0.17	0	0.11		0	0.84
60	0	0	0	0.98	0	0.95		0.96	0.88	0	0	0.48	0	0.36		0.02	0.57	0	0	0.36	0	0.26		0	0.85
30	0	0	0	0.98	0.04	0.96		0.94	0.89	0	0	0.71	0.01	0.59		0.16	0.49	0	0	0.57	0.04	0.45		0	0.78
10	0	0	0	0.98	0.48	0.96		0.94	0.9	0	0	0.87	0.3	0.79		0.58	0.5	0	0.02	0.81	0.35	0.69		0.15	0.6

Figure 30. Coverage probability (CP) for all methods with publication bias at 90% and when *estimates < 0 are set to zero*. Color coding is as follows: darkest = $|CP - 0.95| < .01$; medium = $.01 \leq |CP - 0.95| < .02$; lightest = $.02 \leq |CP - 0.95|$.

δ = 0.8

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.92	0.73	0.5	0.58	0.58		0.78	0.93	0.77	0.48	0.45	0.56	0.56		0.84	0.91	0.27	0.5	0.5	0.67	0.67		0.81	0.96
60	2	0.91	0.81	0.68	0.75	0.75		0.87	0.96	0.85	0.61	0.6	0.66	0.66		0.85	0.95	0.53	0.63	0.6	0.73	0.73		0.85	0.99
30	2	0.94	0.86	0.79	0.84	0.84		0.89	1	0.89	0.75	0.73	0.78	0.78		0.9	0.95	0.69	0.74	0.7	0.79	0.74		0.83	1
10	2	0.96	0.93	0.93	0.92	0.93		0.92		0.91	0.84	0.84	0.85	0.84		0.9	1	0.85	0.82	0.84	0.86	0.83		0.86	0.98
100	1	0.92	0.74	0.48	0.57	0.57		0.84	0.96	0.75	0.51	0.46	0.58	0.58		0.9	0.97	0.17	0.57	0.51	0.72	0.72		0.67	0.99
60	1	0.94	0.82	0.68	0.74	0.74		0.88	0.96	0.82	0.64	0.59	0.68	0.68		0.89	0.97	0.43	0.63	0.61	0.75	0.75		0.76	0.99
30	1	0.94	0.87	0.8	0.82	0.82		0.9	0.96	0.89	0.74	0.71	0.77	0.77		0.89	0.96	0.64	0.72	0.71	0.81	0.75		0.78	0.97
10	1	0.96	0.92	0.9	0.91	0.9		0.94		0.9	0.86	0.86	0.87	0.86		0.91	1	0.82	0.8	0.84	0.86	0.82		0.85	1
100	0	0.86	0.81	0.44	0.57	0.57		0.94	0.93	0.57	0.6	0.43	0.61	0.61		0.85	0.93	0.04	0.68	0.55	0.77	0.77		0.2	0.94
60	0	0.91	0.84	0.64	0.72	0.72		0.95	0.95	0.72	0.72	0.58	0.71	0.71		0.89	0.93	0.19	0.63	0.61	0.79	0.79		0.39	0.93
30	0	0.94	0.9	0.81	0.86	0.86		0.96	0.95	0.79	0.79	0.73	0.81	0.8		0.88	0.92	0.47	0.66	0.74	0.82	0.78		0.59	0.89
10	0	0.97	0.94	0.89	0.9	0.89		0.95	0.96	0.88	0.83	0.84	0.86	0.84		0.9	0.91	0.78	0.77	0.86	0.88	0.84		0.78	0.91

δ = 0.5

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.12	0.93	0.04	0.28	0.28		0.3	0.85	0	0.87	0.27	0.68	0.68		0.83	0.87	0	0.65	0.6	0.8	0.77		0.36	0.82
60	2	0.34	0.91	0.17	0.49	0.49		0.48	0.88	0.07	0.86	0.43	0.73	0.72		0.84	0.95	0	0.59	0.68	0.82	0.7		0.53	0.94
30	2	0.6	0.92	0.39	0.65	0.64		0.73	0.94	0.31	0.79	0.58	0.78	0.71		0.9	0.95	0.06	0.51	0.75	0.82	0.7		0.69	0.98
10	2	0.87	0.91	0.72	0.81	0.74		0.86	1	0.7	0.79	0.76	0.84	0.74		0.91	0.99	0.45	0.6	0.83	0.87	0.79		0.81	0.98
100	1	0.11	0.93	0.05	0.36	0.36		0.49	0.89	0	0.86	0.34	0.74	0.74		0.92	0.94	0	0.53	0.66	0.79	0.77		0.12	0.91
60	1	0.29	0.91	0.2	0.54	0.54		0.67	0.92	0.04	0.83	0.48	0.8	0.79		0.94	0.96	0	0.49	0.73	0.79	0.7		0.28	0.98
30	1	0.61	0.9	0.46	0.71	0.7		0.8	0.95	0.26	0.78	0.62	0.81	0.73		0.91	0.95	0.03	0.46	0.77	0.84	0.72		0.5	0.98
10	1	0.86	0.93	0.73	0.83	0.76		0.88	1	0.61	0.73	0.78	0.85	0.77		0.9	0.87	0.38	0.52	0.83	0.87	0.79		0.75	0.94
100	0	0.06	0.9	0.09	0.54	0.54		0.95	0.95	0	0.68	0.41	0.86	0.86		0.33	0.91	0	0.14	0.75	0.58	0.57		0	0.91
60	0	0.22	0.9	0.25	0.68	0.68		0.96	0.95	0	0.71	0.57	0.84	0.84		0.53	0.9	0	0.26	0.78	0.69	0.61		0.01	0.91
30	0	0.51	0.9	0.52	0.81	0.8		0.96	0.96	0.12	0.68	0.71	0.86	0.78		0.72	0.88	0.01	0.34	0.82	0.79	0.7		0.12	0.87
10	0	0.86	0.92	0.81	0.9	0.84		0.95	0.94	0.58	0.71	0.84	0.88	0.81		0.85	0.86	0.28	0.44	0.89	0.88	0.83		0.51	0.81

δ = 0.2

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0	0	0	0.67	0.11		0.07	0.34	0	0	0.52	0.23	0.04		0.92	0.58	0	0	0.84	0.08	0.23		0.03	0.73
60	2	0	0	0.04	0.77	0.12		0.23	0.55	0	0	0.62	0.4	0.21		0.94	0.75	0	0	0.82	0.26	0.39		0.15	0.85
30	2	0	0	0.19	0.84	0.18		0.55	0.85	0	0	0.7	0.58	0.42		0.92	0.82	0	0.01	0.85	0.51	0.58		0.4	0.93
10	2	0.01	0.29	0.51	0.88	0.48		0.81	0.88	0.02	0.22	0.79	0.78	0.67		0.91	0.92	0.04	0.24	0.87	0.75	0.75		0.69	0.97
100	1	0	0	0.01	0.65	0.22		0.3	0.67	0	0	0.68	0.13	0.04		0.73	0.72	0	0	0.81	0.07	0.17		0	0.89
60	1	0	0	0.1	0.76	0.18		0.49	0.78	0	0	0.76	0.29	0.2		0.81	0.78	0	0	0.83	0.14	0.3		0.03	0.94
30	1	0	0.01	0.37	0.86	0.33		0.74	0.88	0	0	0.82	0.53	0.49		0.85	0.82	0	0.01	0.86	0.41	0.52		0.17	0.95
10	1	0.01	0.32	0.59	0.86	0.53		0.9	0.91	0.02	0.22	0.85	0.78	0.72		0.89	0.92	0.04	0.2	0.89	0.72	0.74		0.56	0.96
100	0	0	0	0.09	0.31	0.16		0.96	0.94	0	0	0.86	0.01	0.01		0.01	0.79	0	0	0.69	0	0.06		0	0.9
60	0	0	0	0.28	0.49	0.22		0.96	0.94	0	0	0.85	0.09	0.12		0.07	0.75	0	0	0.76	0.04	0.19		0	0.88
30	0	0	0	0.52	0.74	0.39		0.94	0.94	0	0	0.89	0.33	0.38		0.31	0.72	0	0	0.81	0.19	0.37		0.01	0.83
10	0	0.02	0.33	0.78	0.88	0.7		0.95	0.94	0.01	0.14	0.9	0.68	0.7		0.69	0.73	0.01	0.08	0.87	0.64	0.69		0.22	0.75

δ = 0.0

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0	0	0.47	0	0.47		0.34	1	0	0	0.88	0	0.84		0.86	0.64	0	0	0.66	0	0.58		0.01	0.73
60	2	0	0	0.7	0.01	0.7		0.54	1	0	0	0.89	0.02	0.86		0.9	0.76	0	0	0.74	0.02	0.67		0.06	0.83
30	2	0	0	0.77	0.17	0.77		0.75	0.99	0	0	0.9	0.14	0.87		0.91	0.78	0	0	0.81	0.19	0.75		0.23	0.92
10	2	0	0	0.87	0.59	0.87		0.88	1	0	0.01	0.9	0.46	0.87		0.92	0.88	0	0.06	0.91	0.56	0.86		0.62	0.94
100	1	0	0	0.7	0	0.7		0.56	1	0	0	0.76	0	0.67		0.47	0.6	0	0	0.52	0	0.42		0	0.88
60	1	0	0	0.8	0.01	0.8		0.7	0.99	0	0	0.8	0.01	0.71		0.63	0.67	0	0	0.63	0.02	0.54		0	0.92
30	1	0	0	0.87	0.1	0.87		0.84	0.99	0	0	0.87	0.06	0.82		0.78	0.74	0	0	0.77	0.1	0.69		0.09	0.93
10	1	0	0	0.87	0.59	0.86		0.91	0.99	0	0.01	0.91	0.5	0.88		0.88	0.88	0	0.06	0.88	0.53	0.83		0.49	0.94
100	0	0	0	0.94	0	0.92		0.96	0.87	0	0	0.32	0	0.22		0	0.68	0	0	0.18	0	0.13		0	0.9
60	0	0	0	0.95	0	0.93		0.96	0.91	0	0	0.51	0	0.4		0.02	0.7	0	0	0.39	0	0.29		0	0.91
30	0	0	0	0.94	0.04	0.93		0.95	0.92	0	0	0.73	0.01	0.63		0.17	0.65	0	0	0.6	0.04	0.49		0	0.85
10	0	0	0	0.94	0.49	0.93		0.95	0.92	0	0	0.88	0.31	0.82		0.61	0.62	0	0.02	0.84	0.37	0.75		0.15	0.72

Figure 31. Coverage probability (CP) for all methods with publication bias at 90%. Color coding is as follows: darkest $= |CP - 0.95| < .01$; medium $= .01 \leq |CP - 0.95| < .02$; lightest $= .02 \leq |CP - 0.95|$.

δ = 0.8

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.86	1	0.91	1	1	0.98
60	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.66	1	0.74	1	1	0.91
30	2	1	1	1	1	1	1	1	1	1	1	0.93	1	0.96	1	1	0.98	1	1	0.44	0.96	0.52	1	1	0.74
10	2	1	1	0.75	0.99	0.85	1	0.99	0.99	1	1	0.52	0.95	0.64	1	0.98	0.91	1	1	0.21	0.6	0.29	1	0.96	0.57
100	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.89	1	0.93	1	1	1
60	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.73	1	0.8	1	1	0.98
30	1	1	1	1	1	1	1	1	1	1	1	0.94	1	0.97	1	1	0.99	1	1	0.49	0.96	0.59	1	1	0.87
10	1	1	1	0.77	0.99	0.85	1	1	0.99	1	1	0.51	0.94	0.64	1	0.99	0.94	1	1	0.2	0.57	0.29	1	0.97	0.69
100	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.98	1	0.99	1	1	1
60	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.89	1	0.93	1	1	1
30	0	1	1	1	1	1	1	1	1	1	1	0.96	1	0.98	1	1	1	1	1	0.67	0.98	0.77	1	1	0.99
10	0	1	1	0.78	0.99	0.85	1	0.99	1	1	1	0.54	0.93	0.66	1	0.99	0.97	1	1	0.25	0.64	0.35	1	0.99	0.87

δ = 0.5

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	1	1	1	1	1	1	1	1	1	1	0.84	1	0.89	1	1	0.99	1	1	0.15	0.91	0.21	1	1	0.83
60	2	1	1	0.98	1	0.99	1	1	0.99	1	1	0.63	1	0.71	1	1	0.92	1	1	0.15	0.78	0.2	1	1	0.64
30	2	1	1	0.82	1	0.87	1	0.95	0.95	1	1	0.44	0.98	0.52	1	0.97	0.75	1	1	0.11	0.51	0.15	1	0.98	0.4
10	2	1	1	0.36	0.9	0.48	0.84	0.61	0.85	1	1	0.17	0.6	0.24	0.88	0.64	0.5	0.95	0.88	0.06	0.21	0.08	0.94	0.73	0.23
100	1	1	1	1	1	1	1	1	1	1	1	0.92	1	0.94	1	1	1	1	1	0.3	0.96	0.38	1	1	0.99
60	1	1	1	0.98	1	0.99	1	1	1	1	1	0.75	1	0.82	1	1	1	1	1	0.24	0.85	0.32	1	1	0.92
30	1	1	1	0.85	1	0.9	1	0.96	0.98	1	1	0.45	0.97	0.56	1	0.97	0.94	1	0.99	0.17	0.61	0.23	1	0.99	0.64
10	1	1	1	0.38	0.86	0.48	0.86	0.65	0.89	1	1	0.18	0.59	0.29	0.9	0.67	0.66	0.94	0.89	0.08	0.25	0.13	0.94	0.74	0.34
100	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.77	1	0.83	1	1	1
60	0	1	1	1	1	1	1	1	1	1	1	0.96	1	0.98	1	1	1	1	1	0.55	0.96	0.65	1	1	1
30	0	1	1	0.94	1	0.96	1	0.99	1	1	1	0.72	1	0.81	1	0.99	1	1	0.99	0.37	0.82	0.46	1	1	0.94
10	0	1	1	0.5	0.9	0.62	0.91	0.79	0.97	0.99	0.99	0.3	0.68	0.42	0.96	0.84	0.88	0.9	0.88	0.17	0.38	0.25	0.98	0.9	0.58

δ = 0.2

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	1	1	0.03	0.94	0.07	0.07	0.02	0.99	1	1	0.01	0.31	0.02	0.85	0.54	0.32	1	0.65	0.01	0.04	0.02	1	0.99	0.02
60	2	1	1	0.03	0.79	0.05	0.08	0.03	0.92	1	0.99	0.02	0.2	0.03	0.68	0.38	0.19	0.98	0.54	0.01	0.04	0.02	0.99	0.91	0.02
30	2	1	1	0.02	0.44	0.05	0.06	0.02	0.62	1	0.92	0.02	0.14	0.04	0.47	0.23	0.11	0.8	0.44	0.02	0.04	0.02	0.93	0.71	0.02
10	2	0.97	0.9	0.02	0.15	0.04	0.07	0.03	0.22	0.73	0.59	0.02	0.07	0.03	0.27	0.11	0.08	0.41	0.3	0.01	0.02	0.02	0.67	0.36	0.04
100	1	1	1	0.27	0.99	0.36	0.13	0.06	1	1	1	0.08	0.58	0.12	0.91	0.66	0.74	1	0.65	0.04	0.14	0.05	1	0.99	0.17
60	1	1	1	0.16	0.9	0.26	0.12	0.05	1	1	0.99	0.08	0.43	0.12	0.8	0.5	0.54	0.97	0.58	0.03	0.1	0.05	1	0.94	0.12
30	1	1	1	0.08	0.62	0.15	0.12	0.05	0.87	0.99	0.89	0.06	0.23	0.09	0.57	0.28	0.28	0.78	0.53	0.04	0.1	0.06	0.96	0.76	0.08
10	1	0.94	0.88	0.05	0.22	0.08	0.11	0.05	0.36	0.71	0.6	0.04	0.1	0.06	0.42	0.19	0.14	0.37	0.31	0.04	0.06	0.05	0.77	0.46	0.06
100	0	1	1	0.89	1	0.94	0.63	0.45	1	1	0.99	0.56	0.94	0.64	0.99	0.97	1	0.99	0.84	0.3	0.63	0.37	1	1	0.81
60	0	1	1	0.68	0.99	0.8	0.43	0.29	1	1	0.96	0.4	0.82	0.49	0.95	0.82	0.97	0.92	0.78	0.22	0.48	0.3	1	1	0.58
30	0	1	0.99	0.41	0.83	0.51	0.37	0.22	0.98	0.96	0.87	0.25	0.57	0.35	0.82	0.59	0.75	0.66	0.62	0.15	0.31	0.22	0.98	0.9	0.29
10	0	0.83	0.78	0.15	0.34	0.22	0.36	0.16	0.62	0.59	0.57	0.11	0.21	0.15	0.66	0.41	0.28	0.32	0.32	0.07	0.13	0.1	0.92	0.74	0.12

δ = 0.0

		τ = 0.0								τ = 0.2								τ = 0.4							
k	qrpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.25	0.14	0	0	0	0	0	0	0.19	0.02	0	0	0	0.13	0.04	0	0.1	0	0	0	0	0.96	0.74	0
60	2	0.16	0.1	0	0	0	0	0	0	0.12	0.02	0	0	0	0.14	0.04	0	0.08	0	0	0	0	0.85	0.56	0
30	2	0.08	0.06	0	0	0	0.01	0.01	0	0.1	0.04	0	0	0	0.12	0.04	0	0.07	0.01	0.01	0	0	0.67	0.34	0
10	2	0.06	0.05	0.01	0.01	0.01	0	0	0.01	0.07	0.05	0.01	0.01	0.01	0.11	0.05	0	0.06	0.04	0.01	0.01	0.01	0.55	0.21	0
100	1	0.09	0.09	0	0	0	0.01	0	0	0.1	0.04	0	0	0	0.24	0.11	0	0.06	0.02	0	0	0	0.97	0.82	0
60	1	0.07	0.07	0	0	0	0	0	0	0.07	0.04	0.01	0.01	0.01	0.18	0.06	0	0.06	0.02	0.01	0	0	0.91	0.66	0
30	1	0.06	0.07	0.01	0.02	0.01	0.01	0	0	0.06	0.05	0.01	0.01	0.01	0.16	0.05	0	0.06	0.04	0.02	0.02	0.02	0.75	0.44	0
10	1	0.03	0.03	0.02	0.02	0.02	0	0	0	0.04	0.04	0.02	0.02	0.02	0.18	0.07	0	0.04	0.03	0.02	0.02	0.02	0.56	0.26	0
100	0	0.03	0.06	0.02	0.03	0.02	0.07	0.04	0.02	0.03	0.13	0.06	0.05	0.05	0.61	0.38	0.01	0.02	0.16	0.08	0.07	0.07	1	0.99	0.02
60	0	0.02	0.05	0.03	0.03	0.03	0.09	0.09	0.02	0.03	0.11	0.07	0.06	0.06	0.52	0.3	0.01	0.03	0.1	0.08	0.08	0.07	0.98	0.88	0.01
30	0	0.02	0.04	0.02	0.02	0.02	0	0	0.01	0.03	0.08	0.06	0.06	0.06	0.47	0.26	0.01	0.04	0.07	0.06	0.06	0.06	0.91	0.7	0.02
10	0	0.02	0.03	0.03	0.03	0.03			0.02	0.05	0.06	0.05	0.05	0.05	0.2	0	0.01	0.04	0.06	0.04	0.04	0.04	0.79	0.56	0.02

Figure 32. Null hypothesis rejection rates (H_0RR) for all methods with publication bias at 0% and when *estimates < 0 are set to zero*. Color coding is as follows: darkest = $H_0RR <$ .50; medium = $.50 \leq H_0RR < .80$; lightest = $.80 \leq H_0RR$. Note: When this $\delta > 0$, H_0RR is statistical power; when $\delta = 0$, H_0RR is Type I error or the false positive rate.

δ = 0.8

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	1	1	1	1	1			1	1	1	1	1	1			1	1	1	0.86	1	0.91			0.98
60	2	1	1	1	1	1			1	1	1	1	1	1			1	1	1	0.66	1	0.74			0.91
30	2	1	1	1	1	1			1	1	1	0.93	1	0.96			0.98	1	1	0.44	0.96	0.52			0.74
10	2	1	1	0.75	0.99	0.85			0.99	1	1	0.52	0.95	0.64			0.91	1	1	0.22	0.6	0.3			0.57
100	1	1	1	1	1	1			1	1	1	1	1	1			1	1	1	0.89	1	0.93			1
60	1	1	1	1	1	1			1	1	1	1	1	1			1	1	1	0.74	1	0.8			0.98
30	1	1	1	1	1	1			1	1	1	0.94	1	0.97			0.99	1	1	0.49	0.96	0.6			0.87
10	1	1	1	0.77	0.99	0.85			0.99	1	1	0.51	0.94	0.64			0.94	1	1	0.21	0.57	0.3			0.69
100	0	1	1	1	1	1			1	1	1	1	1	1			1	1	1	0.98	1	0.99			1
60	0	1	1	1	1	1			1	1	1	1	1	1			1	1	1	0.89	1	0.93			1
30	0	1	1	1	1	1			1	1	1	0.96	1	0.98			1	1	1	0.67	0.98	0.77			0.99
10	0	1	1	0.78	0.99	0.85			1	1	1	0.54	0.93	0.66			0.97	1	1	0.25	0.64	0.35			0.87

δ = 0.5

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	1	1	1	1	1			1	1	1	0.84	1	0.89			0.99	1	1	0.19	0.91	0.25			0.83
60	2	1	1	0.98	1	0.99			0.99	1	1	0.63	1	0.71			0.92	1	1	0.19	0.78	0.24			0.64
30	2	1	1	0.82	1	0.87			0.95	1	1	0.44	0.98	0.52			0.75	1	1	0.16	0.52	0.2			0.4
10	2	1	1	0.37	0.9	0.48			0.85	1	1	0.18	0.6	0.25			0.5	0.95	0.88	0.09	0.21	0.12			0.23
100	1	1	1	1	1	1			1	1	1	0.92	1	0.94			1	1	1	0.31	0.96	0.4			0.99
60	1	1	1	0.98	1	0.99			1	1	1	0.75	1	0.82			1	1	1	0.25	0.85	0.33			0.92
30	1	1	1	0.85	1	0.9			0.98	1	1	0.45	0.97	0.56			0.94	1	0.99	0.19	0.61	0.26			0.64
10	1	1	1	0.39	0.86	0.48			0.89	1	1	0.19	0.59	0.3			0.66	0.94	0.89	0.12	0.25	0.16			0.34
100	0	1	1	1	1	1			1	1	1	1	1	1			1	1	1	0.77	1	0.83			1
60	0	1	1	1	1	1			1	1	1	0.96	1	0.98			1	1	1	0.56	0.96	0.65			1
30	0	1	1	0.94	1	0.96			1	1	1	0.72	1	0.81			1	1	0.99	0.37	0.82	0.46			0.94
10	0	1	1	0.5	0.9	0.62			0.97	0.99	0.99	0.3	0.68	0.42			0.88	0.9	0.88	0.18	0.38	0.26			0.58

δ = 0.2

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	1	1	0.06	0.94	0.1			0.99	1	1	0.23	0.31	0.24			0.32	1	0.65	0.42	0.14	0.44			0.05
60	2	1	1	0.06	0.79	0.09			0.92	1	0.99	0.2	0.21	0.21			0.19	0.98	0.54	0.29	0.11	0.3			0.05
30	2	1	1	0.06	0.44	0.08			0.62	1	0.92	0.17	0.15	0.18			0.12	0.8	0.44	0.23	0.12	0.23			0.06
10	2	0.97	0.9	0.05	0.16	0.07			0.22	0.73	0.59	0.09	0.08	0.11			0.11	0.41	0.3	0.11	0.08	0.12			0.12
100	1	1	1	0.27	0.99	0.36			1	1	1	0.14	0.58	0.18			0.74	1	0.65	0.2	0.16	0.21			0.17
60	1	1	1	0.16	0.9	0.26			1	1	0.99	0.12	0.43	0.16			0.54	0.97	0.58	0.18	0.14	0.2			0.13
30	1	1	1	0.09	0.62	0.16			0.87	0.99	0.89	0.1	0.23	0.13			0.28	0.78	0.53	0.16	0.15	0.18			0.09
10	1	0.94	0.88	0.06	0.22	0.1			0.36	0.71	0.6	0.06	0.11	0.09			0.15	0.38	0.31	0.1	0.09	0.12			0.1
100	0	1	1	0.89	1	0.94			1	1	0.99	0.56	0.94	0.64			1	0.99	0.84	0.31	0.63	0.38			0.81
60	0	1	1	0.68	0.99	0.8			1	1	0.96	0.4	0.82	0.49			0.97	0.92	0.78	0.23	0.48	0.31			0.58
30	0	1	0.99	0.41	0.83	0.51			0.98	0.96	0.87	0.26	0.57	0.36			0.75	0.66	0.62	0.18	0.32	0.24			0.29
10	0	0.83	0.78	0.15	0.34	0.22			0.62	0.59	0.57	0.12	0.22	0.17			0.29	0.32	0.32	0.1	0.15	0.13			0.13

δ = 0.0

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	0.25	0.16	0.58	0.53	0.58			0.47	0.2	0.07	0.59	0.58	0.59			0.91	0.1	0.2	0.62	0.65	0.62			0.76
60	2	0.16	0.12	0.37	0.32	0.37			0.3	0.12	0.06	0.43	0.41	0.43			0.76	0.09	0.1	0.47	0.48	0.46			0.58
30	2	0.08	0.08	0.2	0.18	0.2			0.17	0.11	0.08	0.27	0.25	0.27			0.54	0.09	0.06	0.3	0.29	0.3			0.42
10	2	0.07	0.06	0.1	0.07	0.1			0.08	0.1	0.08	0.14	0.12	0.14			0.28	0.1	0.09	0.16	0.15	0.16			0.27
100	1	0.09	0.12	0.18	0.14	0.18			0.16	0.11	0.13	0.3	0.26	0.3			0.56	0.07	0.24	0.37	0.37	0.37			0.45
60	1	0.08	0.11	0.14	0.11	0.14			0.12	0.07	0.12	0.22	0.18	0.21			0.44	0.08	0.12	0.29	0.27	0.29			0.33
30	1	0.07	0.1	0.09	0.08	0.09			0.07	0.08	0.1	0.16	0.13	0.16			0.28	0.07	0.08	0.19	0.17	0.18			0.24
10	1	0.05	0.05	0.07	0.06	0.07			0.07	0.07	0.09	0.08	0.08	0.08			0.17	0.07	0.07	0.1	0.1	0.1			0.2
100	0	0.06	0.13	0.04	0.05	0.04			0.04	0.05	0.26	0.12	0.1	0.11			0.06	0.05	0.31	0.14	0.13	0.14			0.04
60	0	0.04	0.1	0.05	0.06	0.05			0.04	0.05	0.2	0.14	0.12	0.13			0.05	0.05	0.2	0.15	0.14	0.14			0.05
30	0	0.03	0.08	0.04	0.05	0.04			0.04	0.06	0.15	0.11	0.11	0.11			0.05	0.08	0.14	0.13	0.13	0.12			0.07
10	0	0.03	0.06	0.05	0.05	0.05			0.06	0.08	0.12	0.1	0.09	0.09			0.07	0.08	0.11	0.09	0.1	0.09			0.1

Figure 33. Null hypothesis rejection rates (H_0RR) for all methods with publication bias at 0%. Color coding is as follows: darkest = $H_0RR < .50$; medium = $.50 \leq H_0RR < .80$; lightest = $.80 \leq H_0RR$. Note: When this $\delta > 0$, H_0RR is statistical power; when $\delta = 0$, H_0RR is Type I error or the false positive rate.

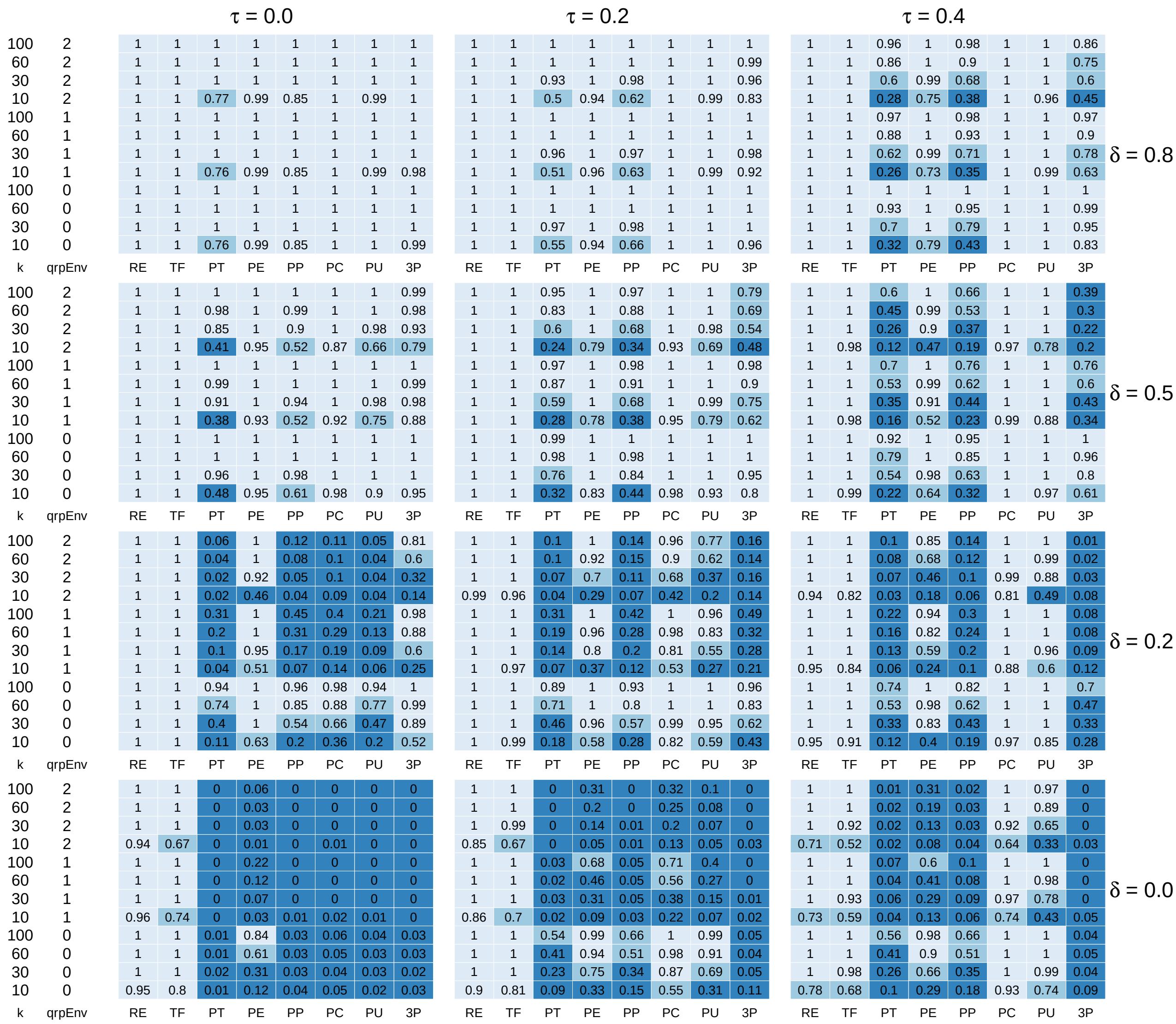

Figure 34. Null hypothesis rejection rates (H_0RR) for all methods with publication bias at 60% and when *estimates < 0 are set to zero*. Color coding is as follows: darkest = H_0RR < .50; medium = .50 $\leq H_0RR <$ .80; lightest = .80 $\leq H_0RR$. Note: When this $\delta > 0$, H_0RR is statistical power; when $\delta = 0$, H_0RR is Type I error or the false positive rate.

		τ = 0.0								τ = 0.2								τ = 0.4							
k	grpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	1	1	1	1	1			1	1	1	1	1	1			1	1	1	0.96	1	0.98			0.86
60	2	1	1	1	1	1			1	1	1	1	1	1			0.99	1	1	0.86	1	0.9			0.75
30	2	1	1	1	1	1			1	1	1	0.93	1	0.98			0.96	1	1	0.6	0.99	0.68			0.6
10	2	1	1	0.77	0.99	0.85			1	1	1	0.5	0.94	0.62			0.83	1	1	0.29	0.75	0.39			0.45
100	1	1	1	1	1	1			1	1	1	1	1	1			1	1	1	0.97	1	0.98			0.97
60	1	1	1	1	1	1			1	1	1	1	1	1			1	1	1	0.88	1	0.93			0.9
30	1	1	1	1	1	1			1	1	1	0.96	1	0.97			0.98	1	1	0.62	0.99	0.71			0.78
10	1	1	1	0.76	0.99	0.85			0.98	1	1	0.51	0.96	0.63			0.92	1	1	0.27	0.73	0.36			0.63
100	0	1	1	1	1	1			1	1	1	1	1	1			1	1	1	1	1	1			1
60	0	1	1	1	1	1			1	1	1	1	1	1			1	1	1	0.93	1	0.95			0.99
30	0	1	1	1	1	1			1	1	1	0.97	1	0.98			1	1	1	0.7	1	0.79			0.95
10	0	1	1	0.76	0.99	0.85			0.99	1	1	0.55	0.94	0.66			0.96	1	1	0.32	0.79	0.43			0.83

δ = 0.8

k	grpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	1	1	1	1	1			0.99	1	1	0.95	1	0.97			0.79	1	1	0.6	1	0.66			0.39
60	2	1	1	0.98	1	0.99			0.98	1	1	0.83	1	0.88			0.69	1	1	0.45	0.99	0.53			0.3
30	2	1	1	0.85	1	0.9			0.93	1	1	0.6	1	0.68			0.54	1	1	0.28	0.9	0.38			0.22
10	2	1	1	0.41	0.95	0.52			0.79	1	1	0.25	0.79	0.35			0.48	1	0.98	0.14	0.47	0.21			0.2
100	1	1	1	1	1	1			1	1	1	0.97	1	0.98			0.98	1	1	0.7	1	0.76			0.76
60	1	1	1	0.99	1	1			0.99	1	1	0.87	1	0.91			0.9	1	1	0.53	0.99	0.62			0.6
30	1	1	1	0.91	1	0.94			0.98	1	1	0.59	1	0.68			0.75	1	1	0.36	0.91	0.46			0.43
10	1	1	1	0.38	0.93	0.52			0.88	1	1	0.28	0.78	0.38			0.62	1	0.98	0.17	0.52	0.24			0.34
100	0	1	1	1	1	1			1	1	1	0.99	1	1			1	1	1	0.92	1	0.95			1
60	0	1	1	1	1	1			1	1	1	0.98	1	0.98			1	1	1	0.79	1	0.85			0.96
30	0	1	1	0.96	1	0.98			1	1	1	0.76	1	0.84			0.95	1	1	0.54	0.98	0.63			0.8
10	0	1	1	0.48	0.95	0.61			0.95	1	1	0.33	0.83	0.44			0.8	1	0.99	0.22	0.64	0.32			0.61

δ = 0.5

k	grpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	1	1	0.07	1	0.12			0.81	1	1	0.14	1	0.18			0.16	1	1	0.17	0.85	0.22			0.03
60	2	1	1	0.06	1	0.1			0.6	1	1	0.15	0.92	0.19			0.14	1	1	0.14	0.68	0.18			0.03
30	2	1	1	0.03	0.92	0.06			0.32	1	1	0.11	0.7	0.15			0.16	1	1	0.12	0.46	0.15			0.04
10	2	1	1	0.05	0.46	0.07			0.14	0.99	0.96	0.08	0.29	0.1			0.15	0.94	0.82	0.1	0.19	0.13			0.09
100	1	1	1	0.31	1	0.45			0.98	1	1	0.32	1	0.43			0.49	1	1	0.24	0.94	0.32			0.08
60	1	1	1	0.2	1	0.31			0.88	1	1	0.2	0.96	0.29			0.32	1	1	0.2	0.82	0.28			0.08
30	1	1	1	0.1	0.95	0.17			0.6	1	1	0.16	0.8	0.23			0.29	1	1	0.15	0.59	0.23			0.09
10	1	1	1	0.06	0.51	0.09			0.26	1	0.97	0.09	0.37	0.14			0.21	0.95	0.84	0.09	0.24	0.12			0.13
100	0	1	1	0.94	1	0.96			1	1	1	0.89	1	0.93			0.96	1	1	0.74	1	0.82			0.7
60	0	1	1	0.74	1	0.85			0.99	1	1	0.71	1	0.8			0.83	1	1	0.53	0.98	0.63			0.47
30	0	1	1	0.4	1	0.54			0.89	1	1	0.46	0.96	0.57			0.62	1	1	0.34	0.83	0.44			0.33
10	0	1	1	0.12	0.63	0.21			0.52	1	0.99	0.19	0.58	0.29			0.43	0.95	0.91	0.13	0.4	0.2			0.28

δ = 0.2

k	grpEnv	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P	RE	TF	PT	PE	PP	PC	PU	3P
100	2	1	1	0.9	0.06	0.9			0.78	1	1	0.34	0.31	0.34			0.71	1	1	0.22	0.31	0.23			0.57
60	2	1	1	0.74	0.04	0.74			0.58	1	1	0.26	0.21	0.26			0.54	1	1	0.18	0.2	0.19			0.4
30	2	1	1	0.42	0.04	0.42			0.32	1	0.99	0.18	0.14	0.19			0.29	1	0.92	0.16	0.15	0.17			0.2
10	2	0.94	0.67	0.21	0.03	0.21			0.13	0.85	0.67	0.1	0.07	0.1			0.09	0.71	0.52	0.1	0.1	0.12			0.11
100	1	1	1	0.58	0.22	0.58			0.38	1	1	0.09	0.68	0.12			0.34	1	1	0.13	0.6	0.17			0.26
60	1	1	1	0.39	0.12	0.39			0.28	1	1	0.09	0.46	0.12			0.23	1	1	0.12	0.42	0.16			0.18
30	1	1	1	0.19	0.08	0.19			0.17	1	1	0.07	0.31	0.1			0.16	1	0.93	0.1	0.29	0.13			0.1
10	1	0.96	0.74	0.11	0.04	0.11			0.08	0.86	0.7	0.08	0.1	0.09			0.09	0.73	0.59	0.08	0.14	0.1			0.1
100	0	1	1	0.05	0.84	0.07			0.04	1	1	0.54	0.99	0.66			0.07	1	1	0.56	0.98	0.66			0.05
60	0	1	1	0.07	0.61	0.08			0.06	1	1	0.41	0.94	0.51			0.06	1	1	0.41	0.9	0.51			0.07
30	0	1	1	0.05	0.31	0.06			0.04	1	1	0.23	0.75	0.35			0.06	1	0.98	0.28	0.66	0.37			0.07
10	0	0.95	0.8	0.04	0.12	0.07			0.06	0.9	0.81	0.1	0.33	0.16			0.13	0.78	0.68	0.11	0.29	0.19			0.12

δ = 0.0

Figure 35. Null hypothesis rejection rates (H_0RR) for all methods with publication bias at 60%. Color coding is as follows: darkest = $H_0RR < .50$; medium = $.50 \leq H_0RR < .80$; lightest = $.80 \leq H_0RR$. Note: When this $\delta > 0$, H_0RR is statistical power; when $\delta = 0$, H_0RR is Type I error or the false positive rate.

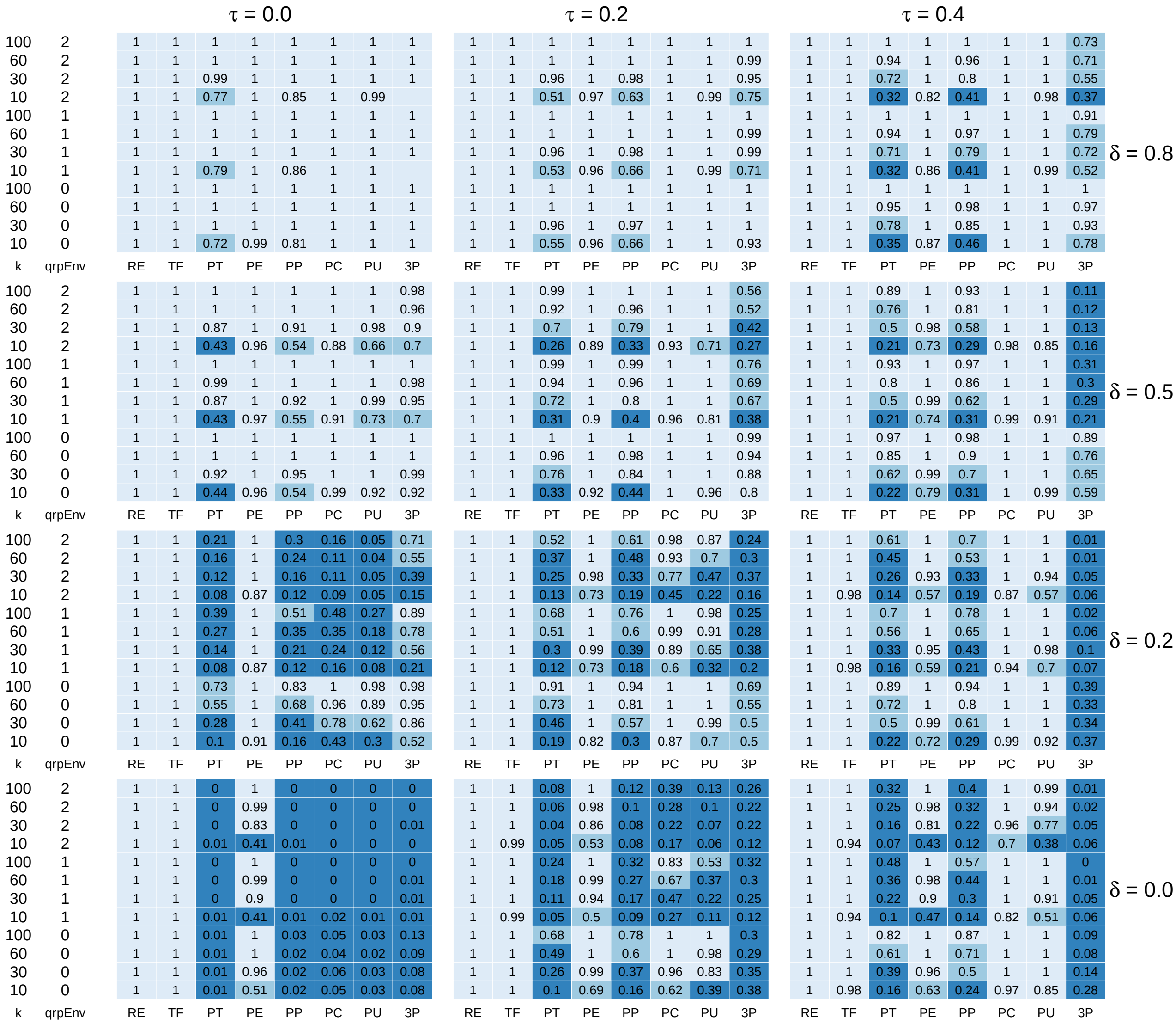

Figure 36. Null hypothesis rejection rates (H_0RR) for all methods with publication bias at 90% and when *estimates < 0 are set to zero*. Color coding is as follows: darkest = $H_0RR < .50$; medium = $.50 \leq H_0RR < .80$; lightest = $.80 \leq H_0RR$. Note: When this $\delta > 0$, H_0RR is statistical power; when $\delta = 0$, H_0RR is Type I error or the false positive rate.

$\delta = 0.8$

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	1	1	1	1	1			1	1	1	1	1	1			1	1	1	1	1	1			0.73
60	2	1	1	1	1	1			1	1	1	1	1	1			0.99	1	1	0.94	1	0.96			0.71
30	2	1	1	0.99	1	1			1	1	1	0.96	1	0.98			0.95	1	1	0.72	1	0.8			0.55
10	2	1	1	0.77	1	0.85				1	1	0.51	0.97	0.63			0.75	1	1	0.32	0.82	0.41			0.37
100	1	1	1	1	1	1			1	1	1	1	1	1			1	1	1	1	1	1			0.91
60	1	1	1	1	1	1			1	1	1	1	1	1			0.99	1	1	0.94	1	0.97			0.79
30	1	1	1	1	1	1			1	1	1	0.96	1	0.98			0.99	1	1	0.71	1	0.79			0.72
10	1	1	1	0.79	1	0.86				1	1	0.53	0.96	0.66			0.71	1	1	0.32	0.86	0.41			0.52
100	0	1	1	1	1	1			1	1	1	1	1	1			1	1	1	1	1	1			1
60	0	1	1	1	1	1			1	1	1	1	1	1			1	1	1	0.95	1	0.98			0.97
30	0	1	1	1	1	1			1	1	1	0.96	1	0.97			1	1	1	0.78	1	0.85			0.93
10	0	1	1	0.72	0.99	0.81			1	1	1	0.55	0.96	0.66			0.93	1	1	0.35	0.87	0.46			0.78

$\delta = 0.5$

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	1	1	1	1	1			0.98	1	1	0.99	1	1			0.56	1	1	0.89	1	0.93			0.11
60	2	1	1	1	1	1			0.96	1	1	0.92	1	0.96			0.52	1	1	0.76	1	0.81			0.12
30	2	1	1	0.87	1	0.91			0.9	1	1	0.7	1	0.79			0.42	1	1	0.5	0.98	0.58			0.13
10	2	1	1	0.43	0.96	0.54			0.7	1	1	0.26	0.89	0.34			0.27	1	1	0.21	0.73	0.29			0.16
100	1	1	1	1	1	1			1	1	1	0.99	1	0.99			0.76	1	1	0.93	1	0.97			0.31
60	1	1	1	0.99	1	1			0.98	1	1	0.94	1	0.96			0.69	1	1	0.8	1	0.86			0.3
30	1	1	1	0.87	1	0.92			0.95	1	1	0.72	1	0.8			0.67	1	1	0.51	0.99	0.62			0.29
10	1	1	1	0.44	0.97	0.55			0.7	1	1	0.31	0.9	0.4			0.38	1	1	0.22	0.74	0.31			0.21
100	0	1	1	1	1	1			1	1	1	1	1	1			0.99	1	1	0.97	1	0.98			0.89
60	0	1	1	1	1	1			1	1	1	0.96	1	0.98			0.94	1	1	0.85	1	0.9			0.76
30	0	1	1	0.92	1	0.95			0.99	1	1	0.76	1	0.84			0.88	1	1	0.62	0.99	0.7			0.65
10	0	1	1	0.44	0.96	0.54			0.92	1	1	0.33	0.92	0.44			0.8	1	1	0.22	0.79	0.31			0.59

$\delta = 0.2$

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	1	1	0.22	1	0.3			0.71	1	1	0.52	1	0.61			0.24	1	1	0.62	1	0.7			0.03
60	2	1	1	0.16	1	0.25			0.55	1	1	0.38	1	0.48			0.3	1	1	0.45	1	0.53			0.04
30	2	1	1	0.12	1	0.16			0.39	1	1	0.26	0.98	0.34			0.37	1	1	0.26	0.93	0.34			0.06
10	2	1	1	0.09	0.87	0.13			0.15	1	1	0.16	0.73	0.21			0.16	1	0.98	0.15	0.57	0.2			0.06
100	1	1	1	0.4	1	0.51			0.89	1	1	0.68	1	0.76			0.25	1	1	0.7	1	0.78			0.02
60	1	1	1	0.27	1	0.36			0.78	1	1	0.51	1	0.6			0.28	1	1	0.57	1	0.66			0.06
30	1	1	1	0.14	1	0.21			0.56	1	1	0.3	0.99	0.4			0.38	1	1	0.34	0.95	0.44			0.1
10	1	1	1	0.1	0.87	0.13			0.21	1	1	0.14	0.73	0.2			0.2	1	0.98	0.18	0.6	0.23			0.07
100	0	1	1	0.73	1	0.83			0.98	1	1	0.91	1	0.94			0.69	1	1	0.89	1	0.94			0.39
60	0	1	1	0.55	1	0.68			0.95	1	1	0.73	1	0.81			0.55	1	1	0.72	1	0.8			0.33
30	0	1	1	0.28	1	0.41			0.86	1	1	0.46	1	0.57			0.5	1	1	0.5	0.99	0.61			0.34
10	0	1	1	0.11	0.91	0.17			0.52	1	1	0.19	0.82	0.3			0.5	1	1	0.23	0.72	0.3			0.37

$\delta = 0.0$

k	qrpEnv	τ = 0.0 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.2 RE	TF	PT	PE	PP	PC	PU	3P	τ = 0.4 RE	TF	PT	PE	PP	PC	PU	3P
100	2	1	1	0.53	1	0.53			0	1	1	0.12	1	0.16			0.36	1	1	0.34	1	0.42			0.27
60	2	1	1	0.3	0.99	0.3			0	1	1	0.11	0.98	0.14			0.24	1	1	0.26	0.98	0.33			0.17
30	2	1	1	0.23	0.83	0.23			0.01	1	1	0.1	0.86	0.13			0.22	1	1	0.19	0.81	0.25			0.08
10	2	1	1	0.13	0.41	0.13			0	1	0.99	0.1	0.54	0.13			0.12	1	0.94	0.09	0.44	0.14			0.06
100	1	1	1	0.3	1	0.3			0	1	1	0.24	1	0.33			0.4	1	1	0.48	1	0.58			0.12
60	1	1	1	0.2	0.99	0.2			0.01	1	1	0.2	0.99	0.29			0.33	1	1	0.37	0.98	0.46			0.08
30	1	1	1	0.13	0.9	0.13			0.01	1	1	0.13	0.94	0.18			0.26	1	1	0.23	0.9	0.31			0.07
10	1	1	1	0.13	0.41	0.14			0.01	1	0.99	0.09	0.5	0.12			0.12	1	0.94	0.12	0.47	0.17			0.06
100	0	1	1	0.06	1	0.08			0.13	1	1	0.68	1	0.78			0.32	1	1	0.82	1	0.87			0.1
60	0	1	1	0.05	1	0.07			0.09	1	1	0.49	1	0.6			0.3	1	1	0.61	1	0.71			0.09
30	0	1	1	0.06	0.96	0.07			0.08	1	1	0.27	0.99	0.37			0.35	1	1	0.4	0.96	0.51			0.15
10	0	1	1	0.06	0.51	0.07			0.08	1	1	0.12	0.69	0.18			0.38	1	0.98	0.16	0.63	0.25			0.28

Figure 37. Null hypothesis rejection rates (H_0RR) for all methods with publication bias at 90%. Color coding is as follows: darkest = $H_0RR < .50$; medium = $.50 \leq H_0RR < .80$; lightest = $.80 \leq H_0RR$. Note: When this $\delta > 0$, H_0RR is statistical power; when $\delta = 0$, H_0RR is Type I error or the false positive rate.