Distribution of gamma1 Estimates

N = 500, Replications = 200

True = −0.8

Density

Estimated gamma1

Estimator
- 2SLS (Lewbel)
- OLS (Biased)

2SLS Consistency: Estimates by Sample Size

Estimates should concentrate around true value as N increases

2SLS Performance by Heteroscedasticity Strength

Stronger heteroscedasticity should improve precision

Distribution of First-Stage F-Statistics
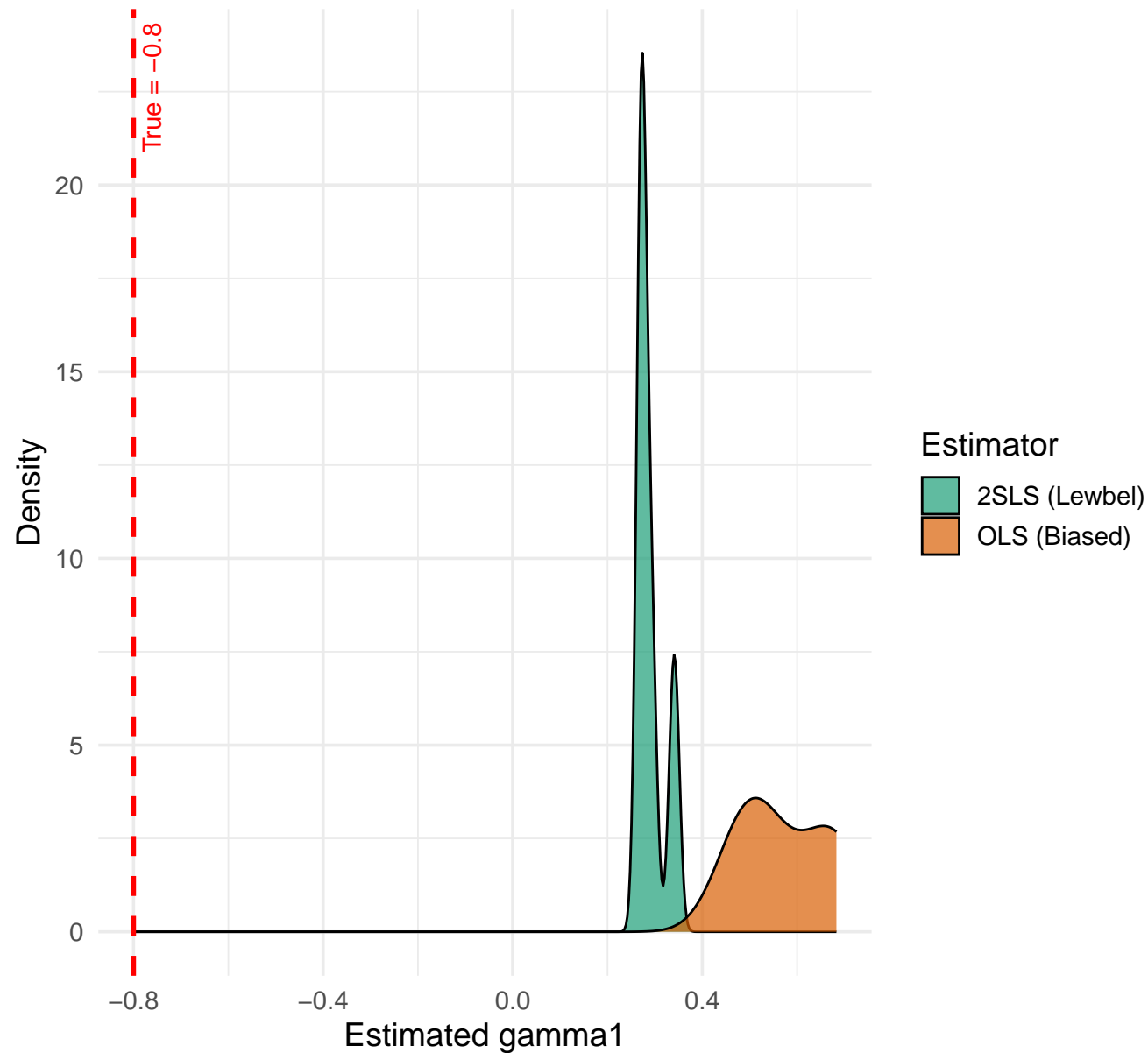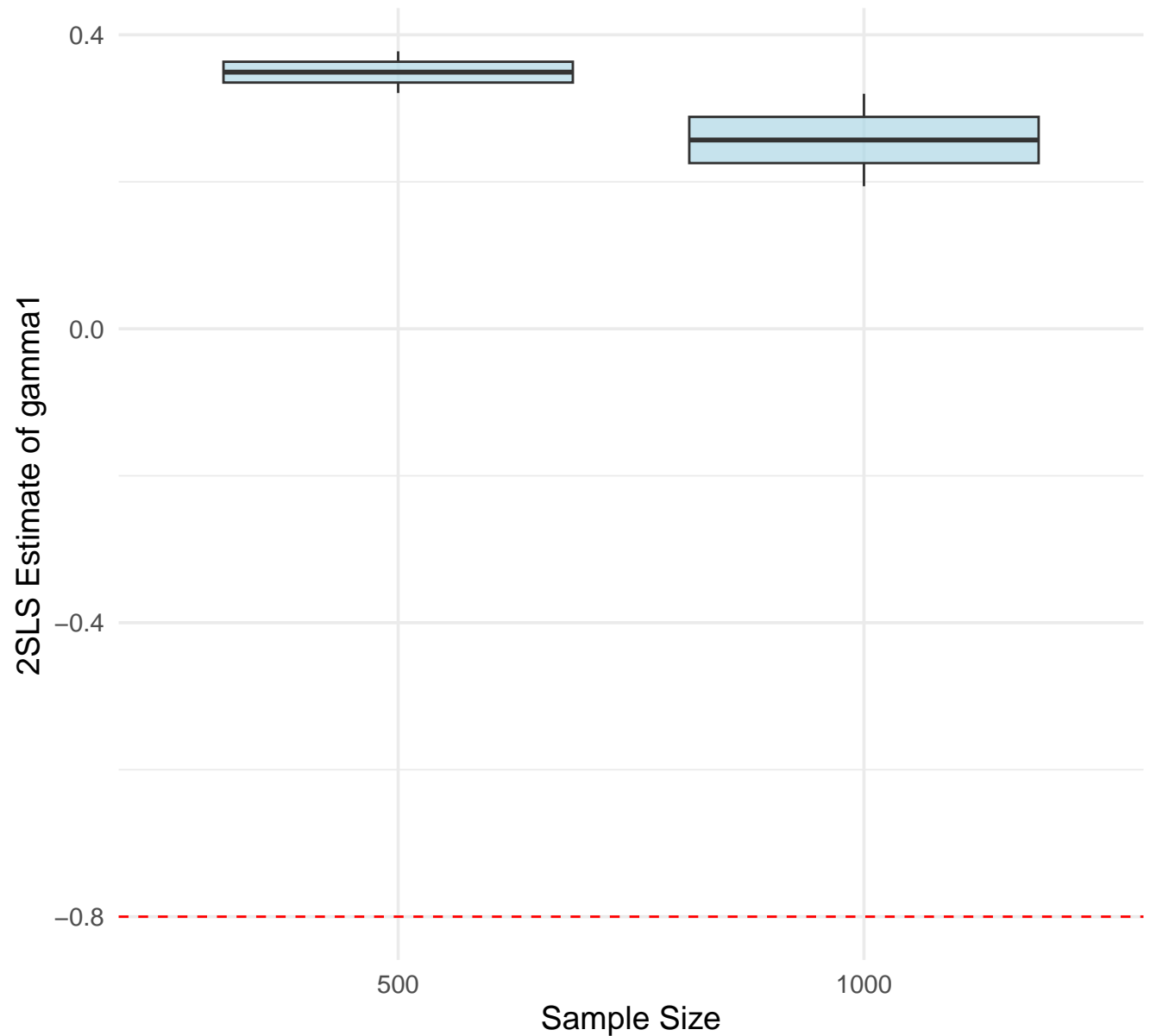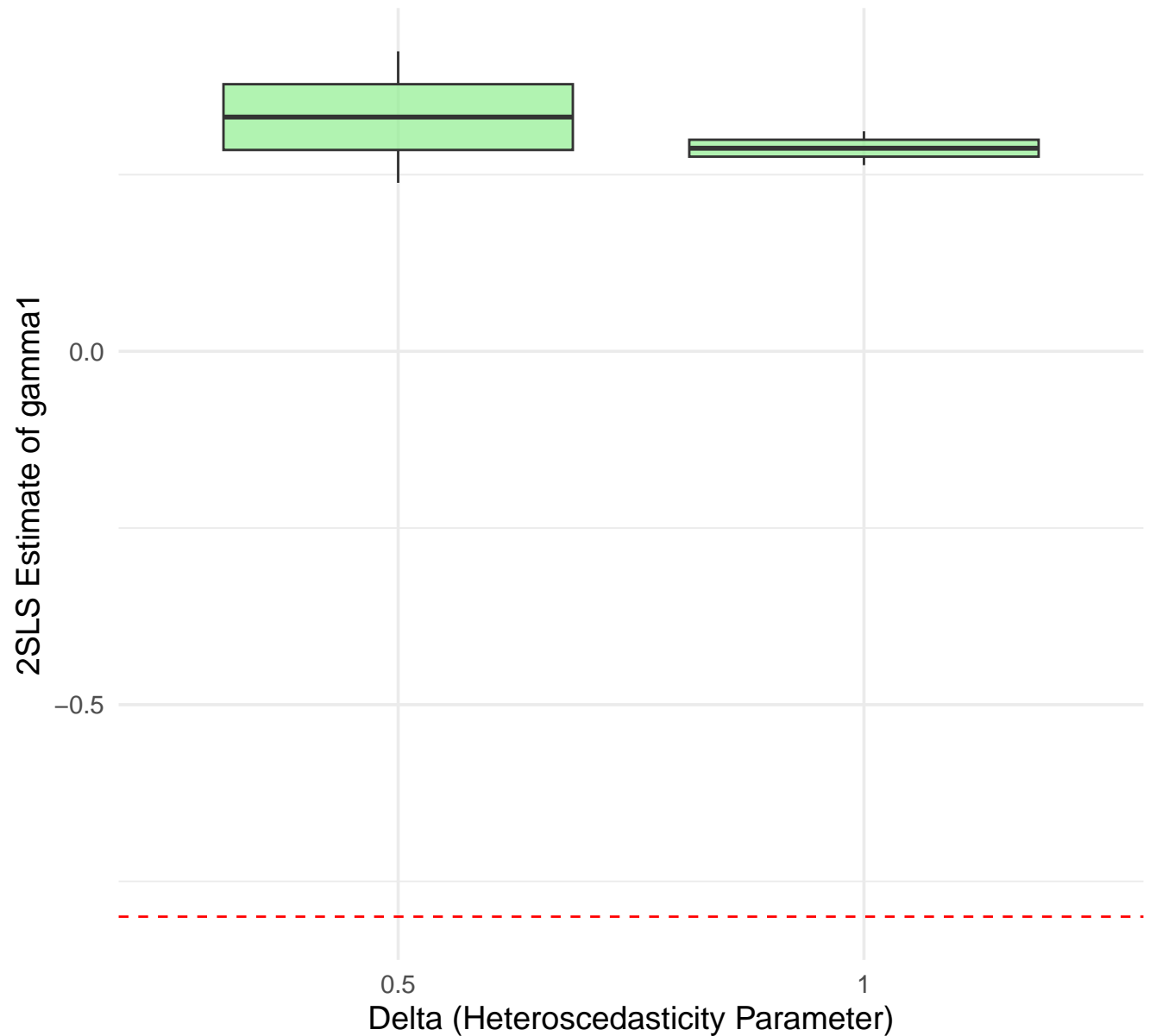60.0% have F < 10 (weak instrument threshold)

Distribution of gamma1 Estimates

N = 500, Replications = 2

2SLS Consistency: Estimates by Sample Size

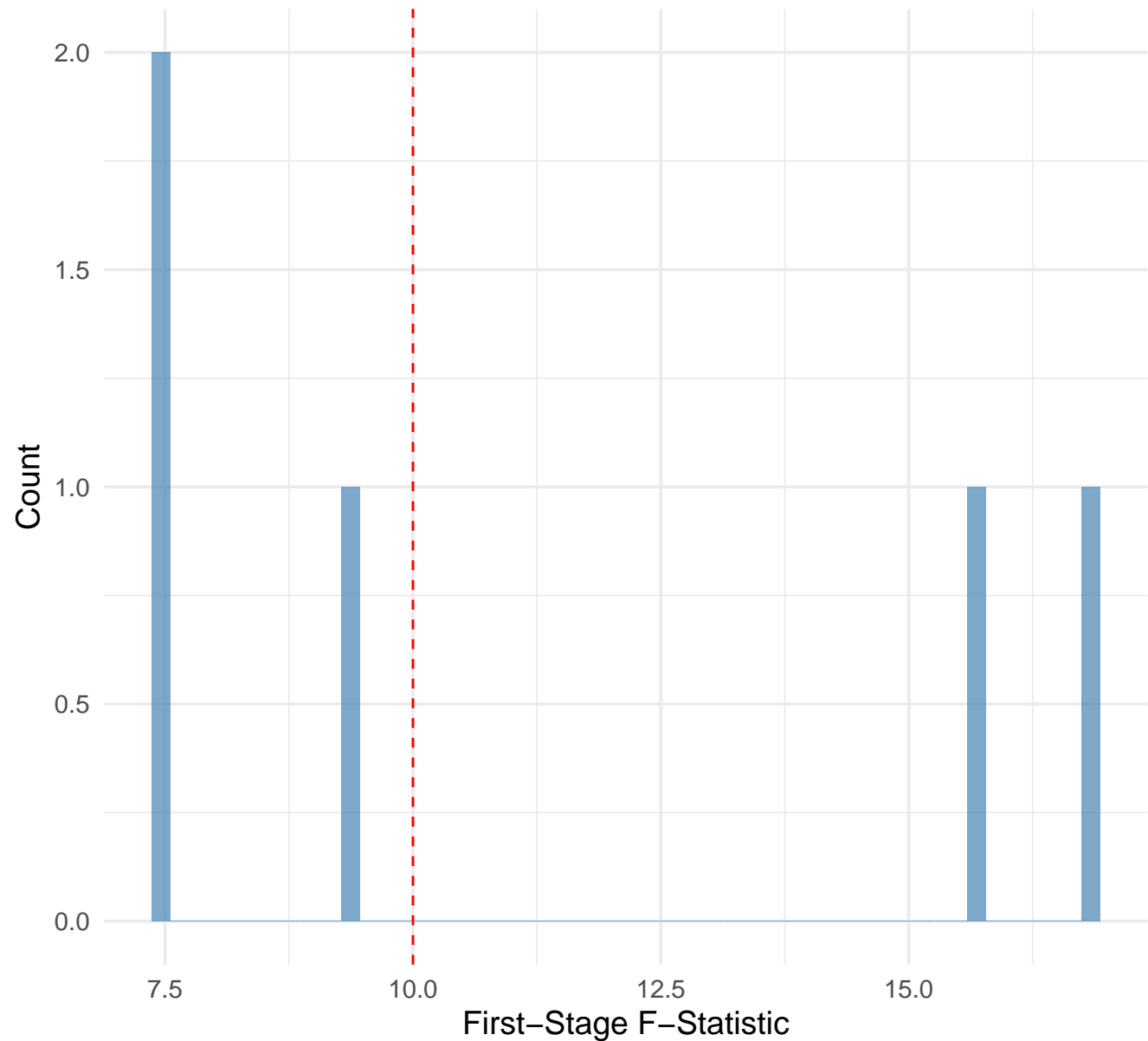Estimates should concentrate around true value as N increases

2SLS Performance by Heteroscedasticity Strength

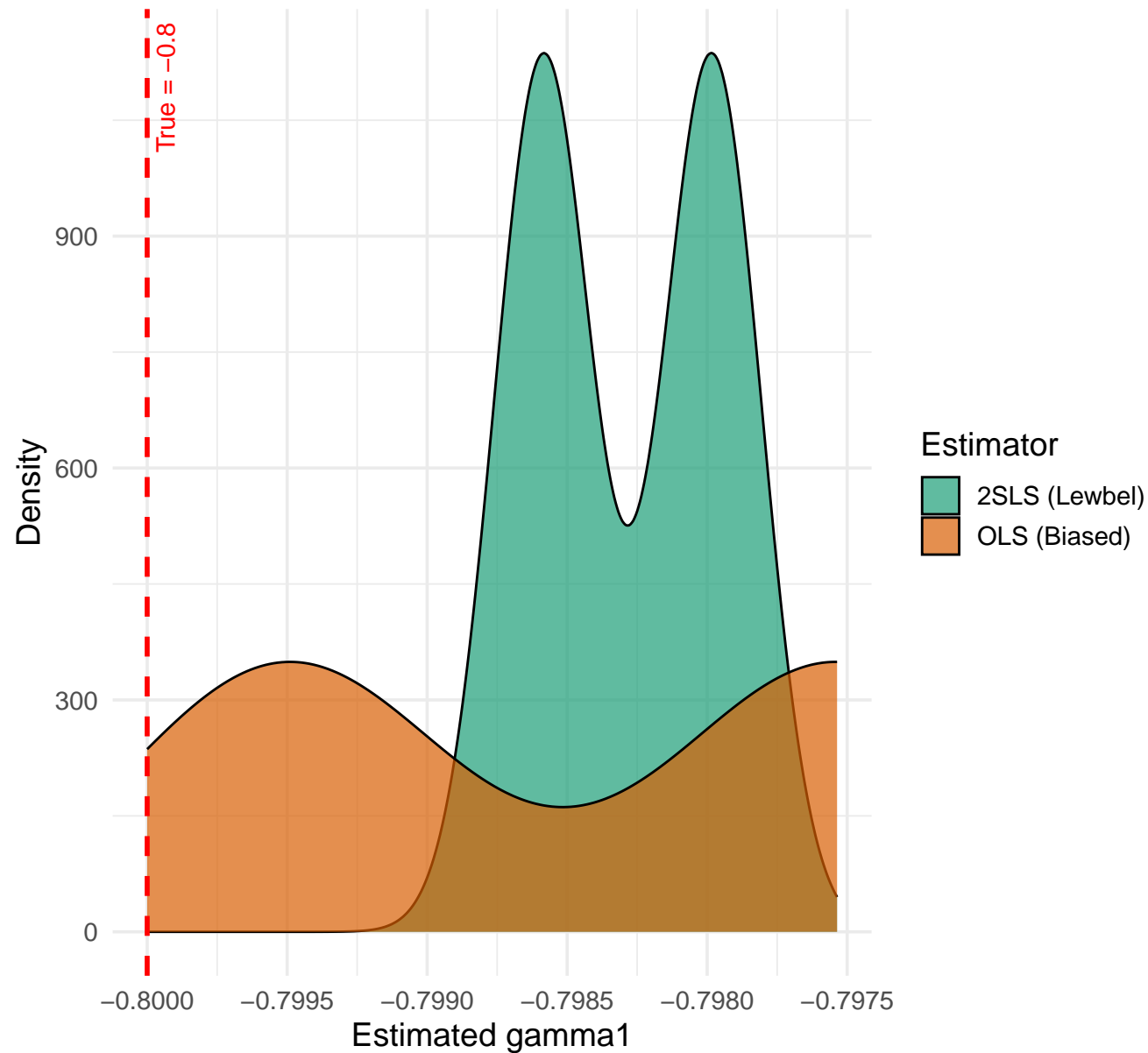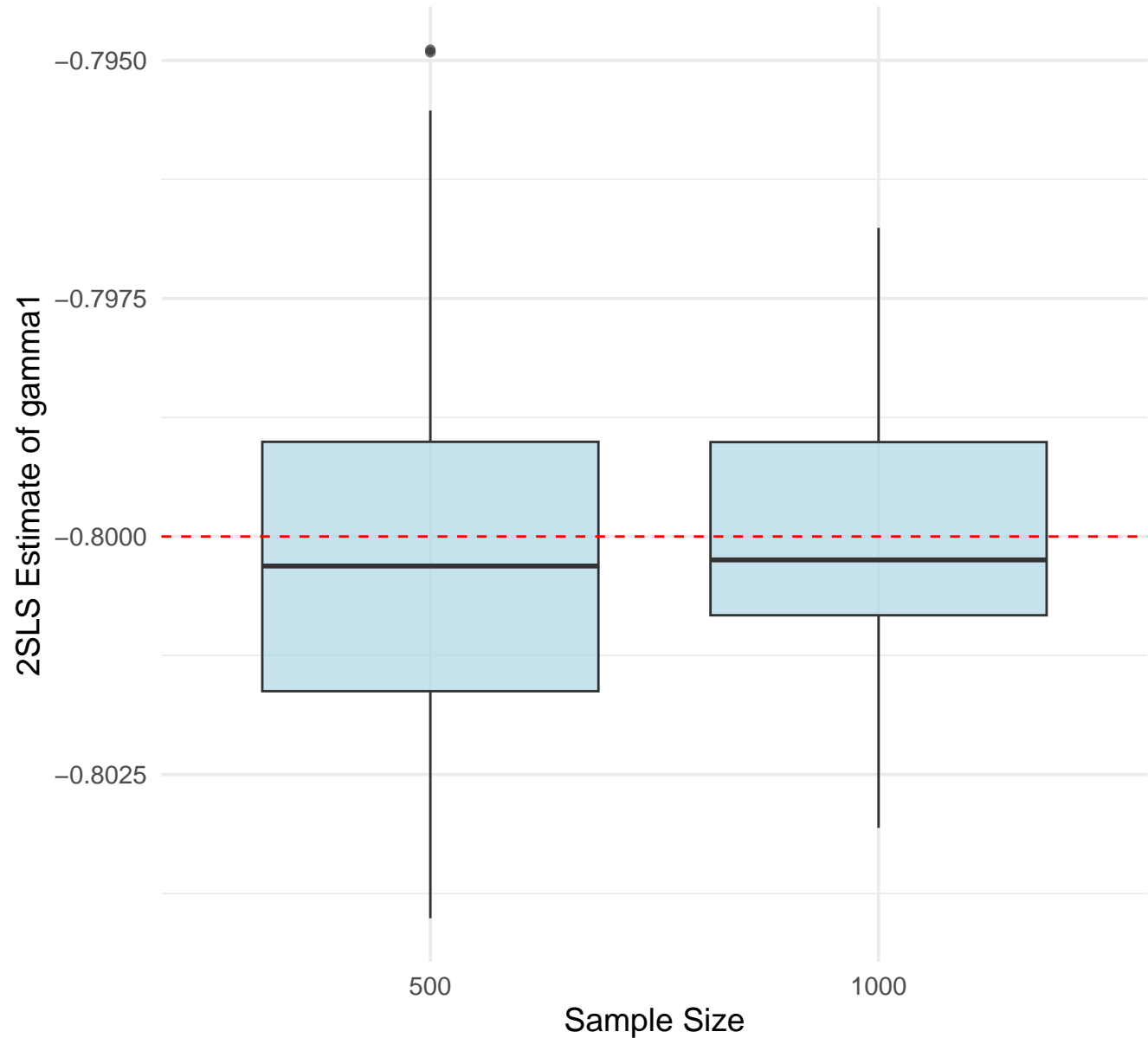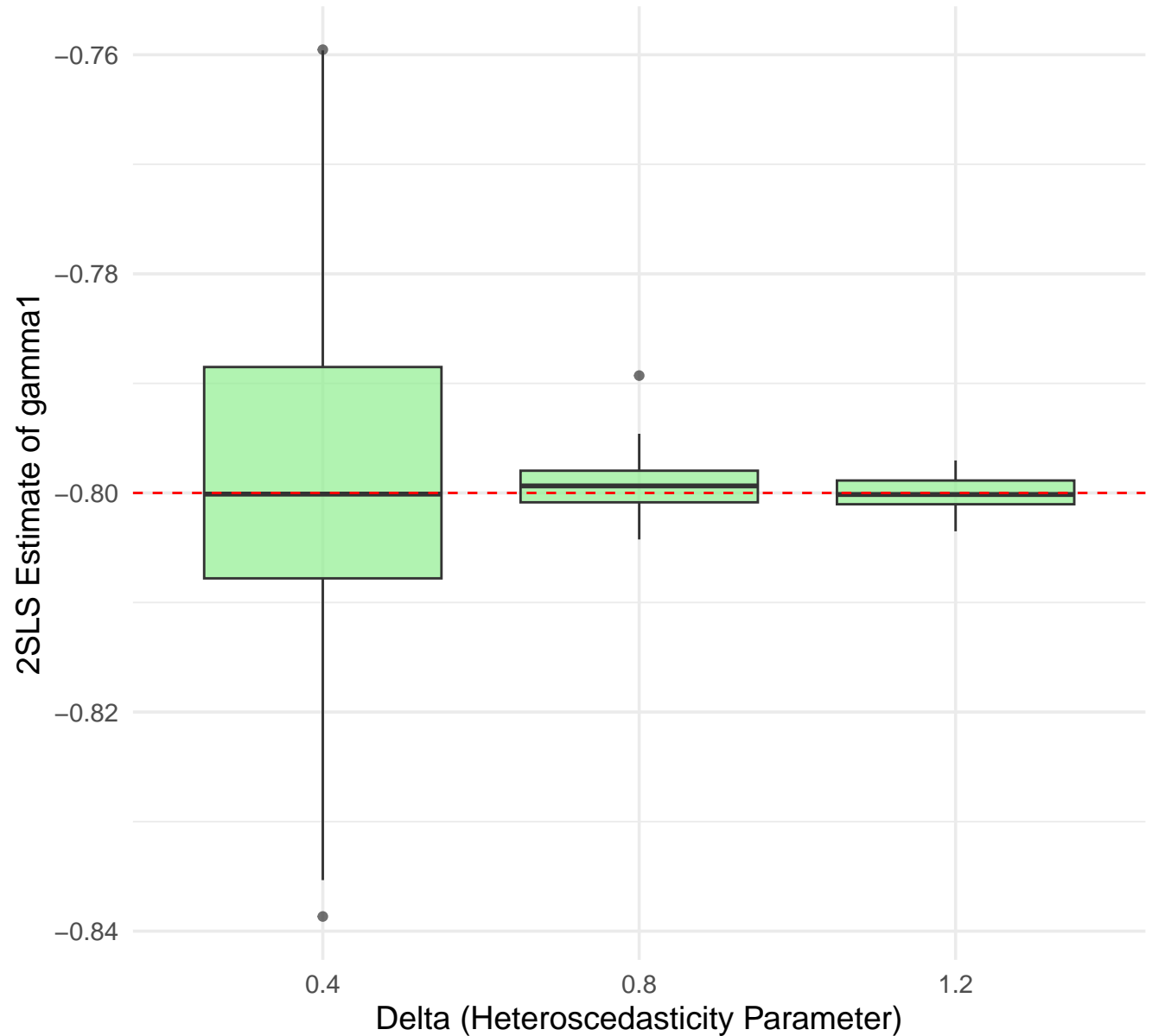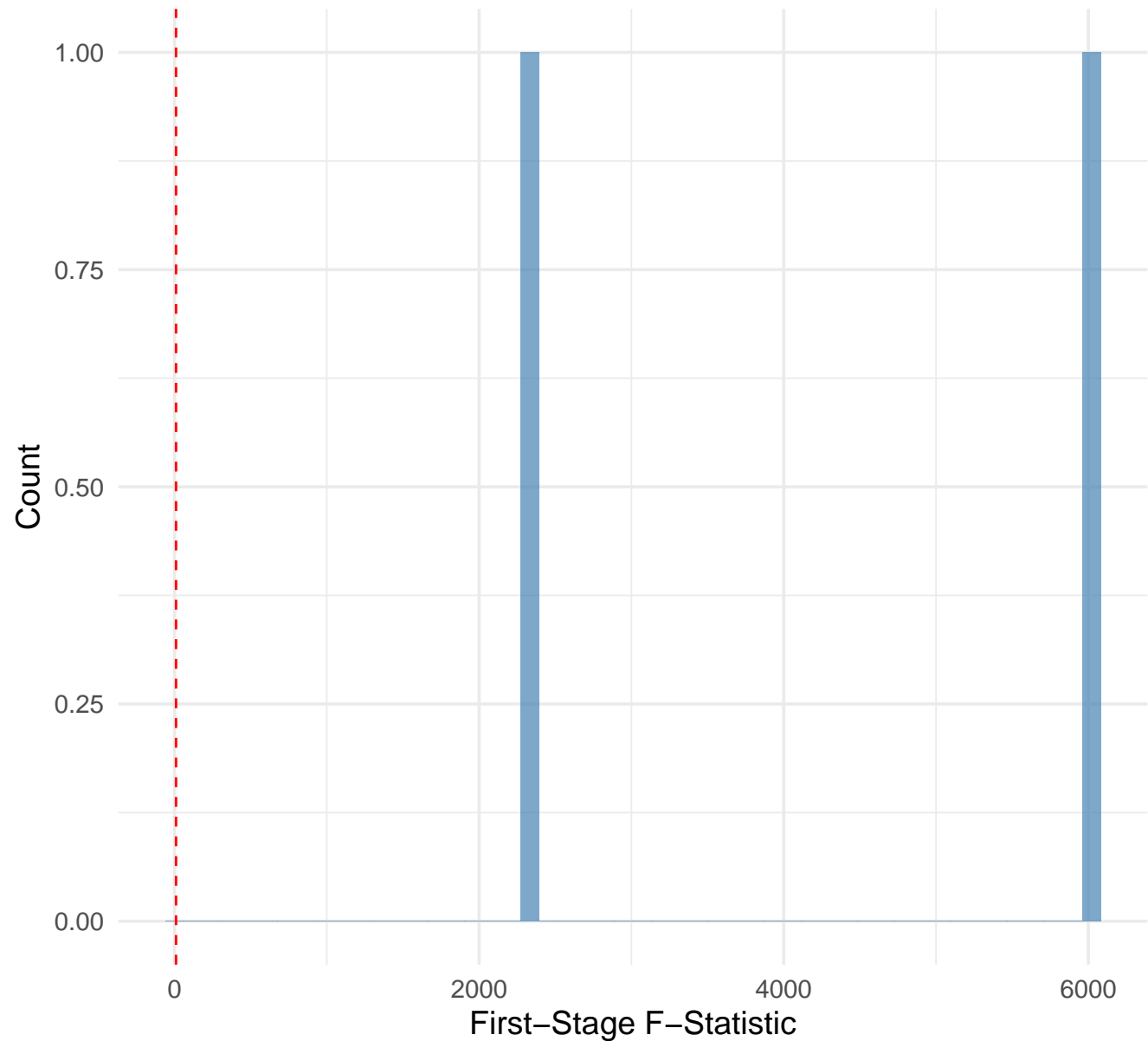Stronger heteroscedasticity should improve precision

2SLS Estimate of gamma1

Delta (Heteroscedasticity Parameter)

Distribution of First−Stage F−Statistics

0.0% have F < 10 (weak instrument threshold)

Set Identification Bounds with Bootstrap Confidence Intervals

Blue: point estimates, Gray: 95% CIs based on bootstrap SEs