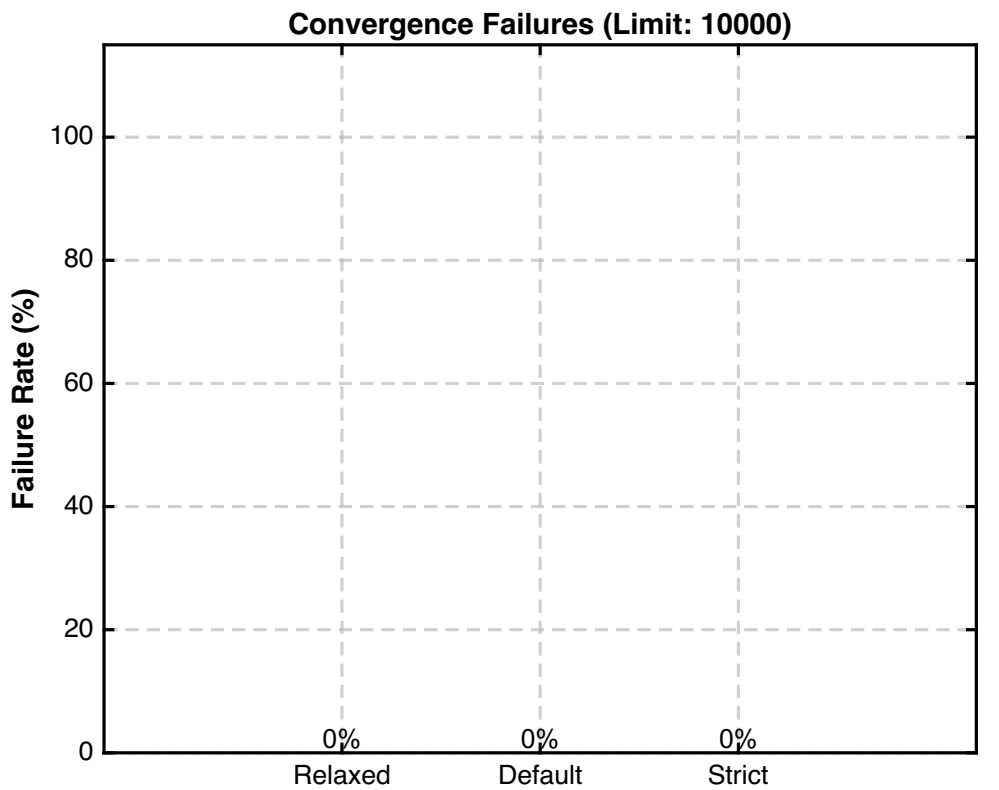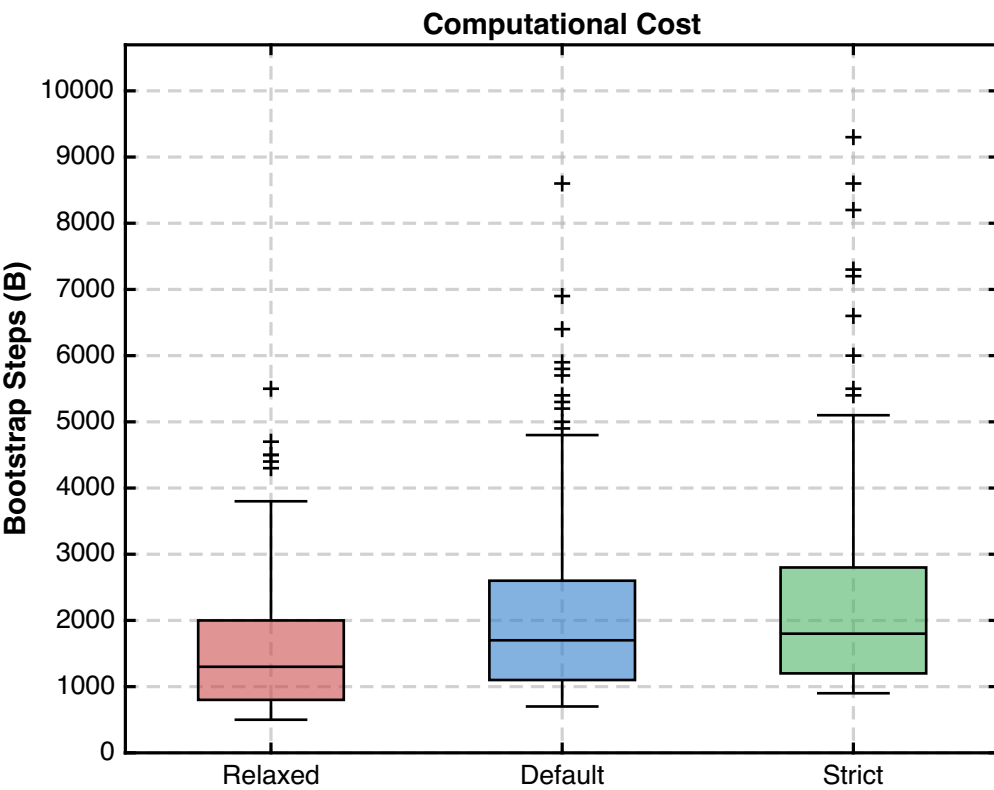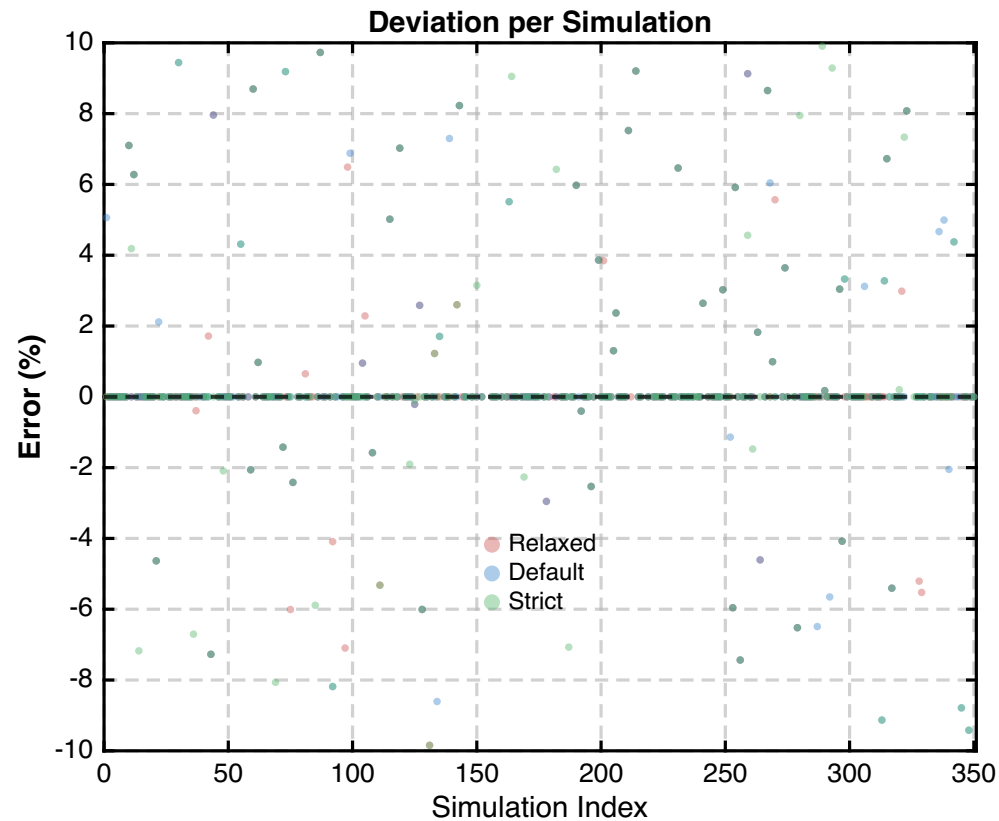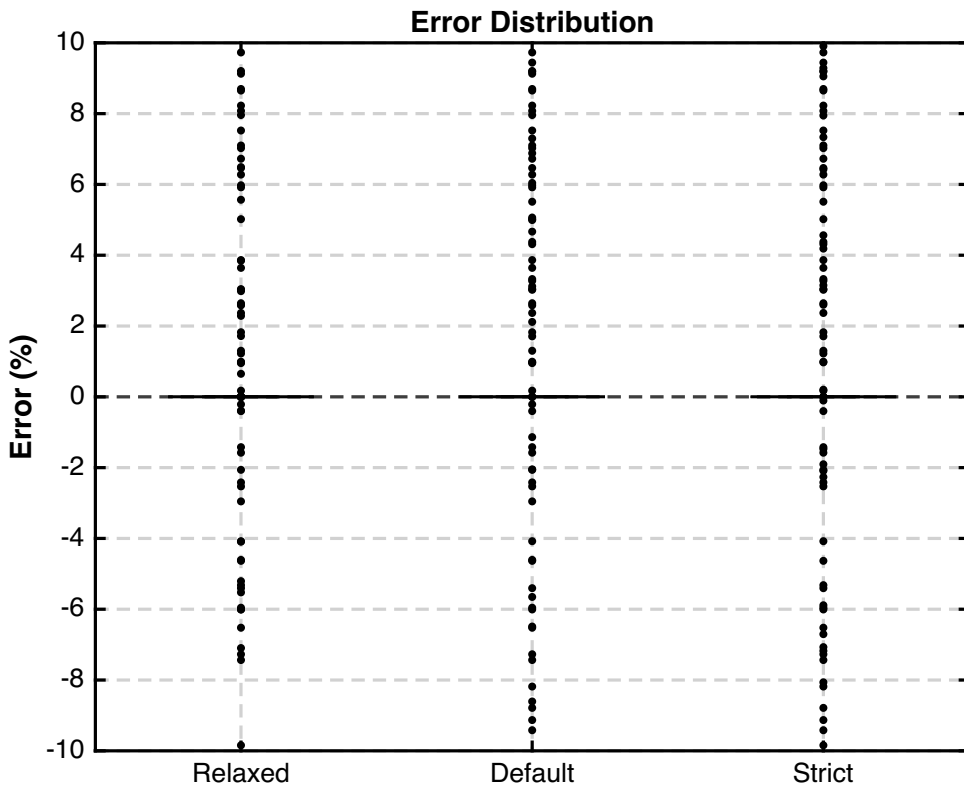# Configuration: Data Scenarios

	Scenario Name	N	Distribution	Data Summary
1	**N = 25 (Normal)**	25	Normal	6 Datasets, Means 10-15, SD = 2.0
2	**N = 50 (Normal)**	50	Normal	6 Datasets, Means 10-15, SD = 2.0
3	**N = 100 (Normal)**	100	Normal	6 Datasets, Means 10-15, SD = 2.0
4	**N = 50 (Skewed)**	50	LogNormal	6 Datasets, Means 2.0-2.5 (Log), SD = 0.4
5	**N = 50 (Likert)**	50	Likert	6 Datasets, Scale 1-7, Means 3-5, SD = 1.5
6	**N = 50 (Bimodal)**	50	Bimodal	6 Datasets, Mix Means 10 & 15, SD = 2.7
7	**N = 50 (Large Effect)**	50	NormalLarge	6 Datasets, Means 10-20.0, SD = 2.0

Configuration: Method Parameters

References (B): Threshold = 15000 | BCa = 30000 | Ranking = 5000

Parameter Set	Relaxed	Default	Strict
1. Bootstrap Thresholds			
Trials (n)	15	25	35
Smoothing (sm)	2	3	4
Streak (st)	2	3	4
Tolerance (tol)	0.010	0.010	0.010
Step Size (B)	100	100	100
B Range	[100-10000]	[100-10000]	[100-10000]
2. BCa Confidence Intervals			
Trials (n)	20	30	40
Smoothing (sm)	2	3	4
Streak (st)	2	3	4
Tolerance (tol)	0.030	0.030	0.030
Step Size (B)	200	200	200
B Range	[100-20000]	[100-20000]	[100-20000]
3. Ranking Stability			
Trials (n)	10	15	20
Smoothing (sm)	2	3	4
Streak (st)	2	3	4
Tolerance (tol)	0.005	0.005	0.005
Step Size (B)	25	25	25
B Range	[50-2000]	[50-2000]	[50-2000]

Thresholds (Delta) Analysis: Global Summary (Ref B = 15000)

Error Distribution

Deviation per Simulation

Computational Cost

Convergence Failures (Limit: 10000)

BCa CI (Width) Analysis: Global Summary (Ref B = 30000)
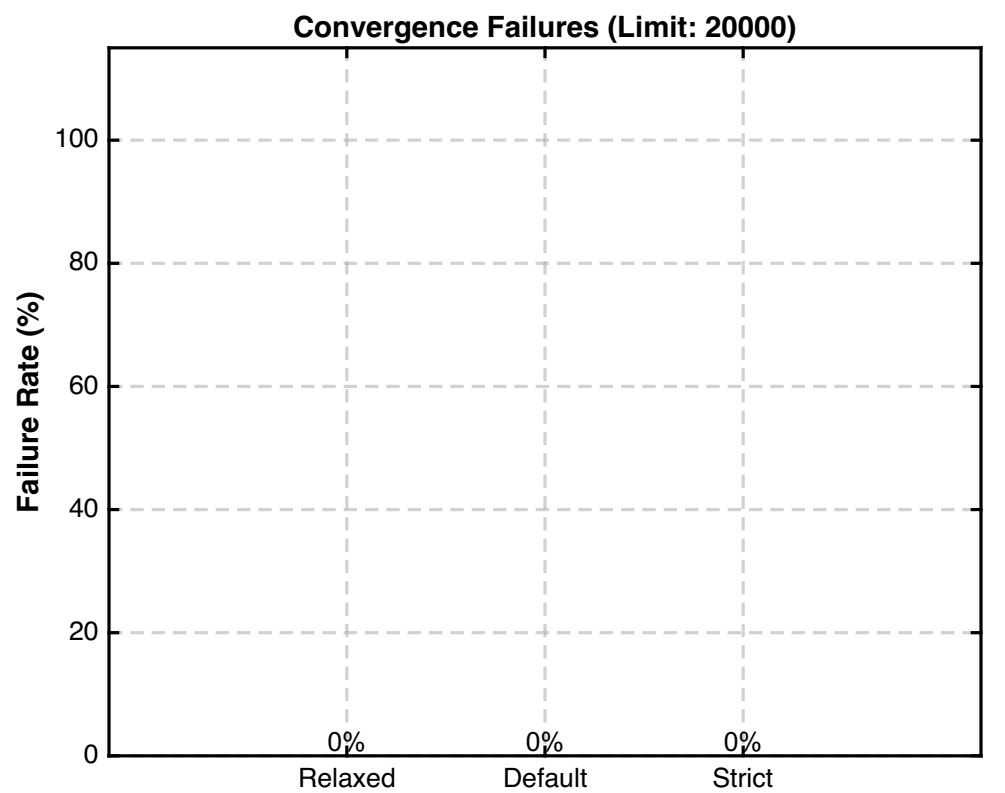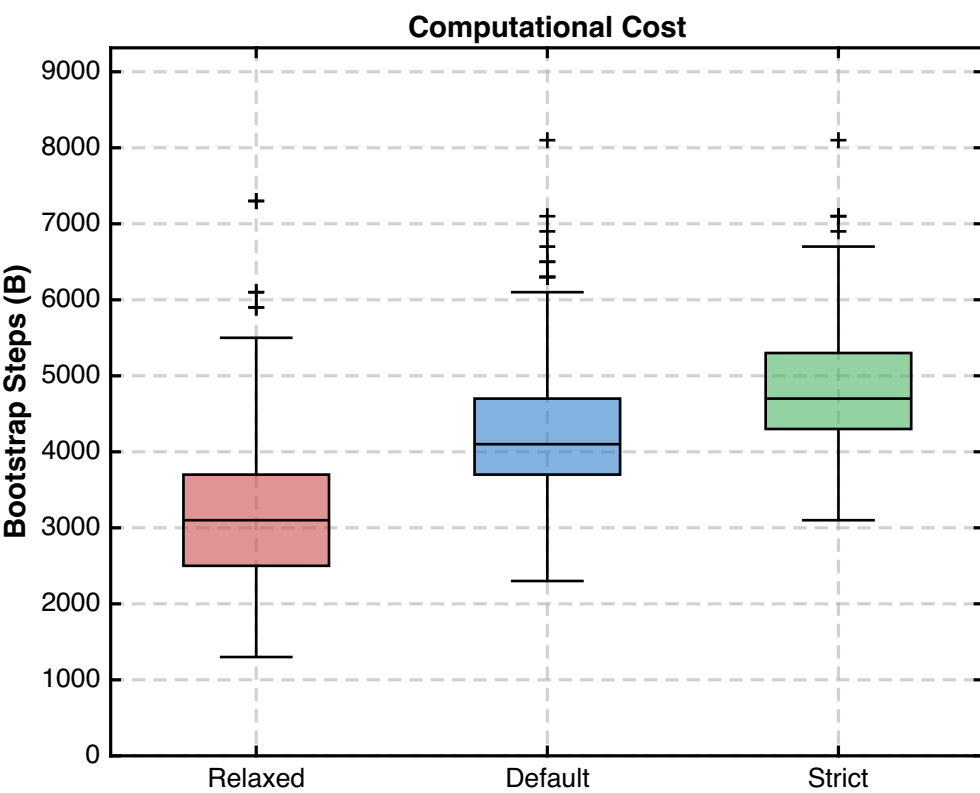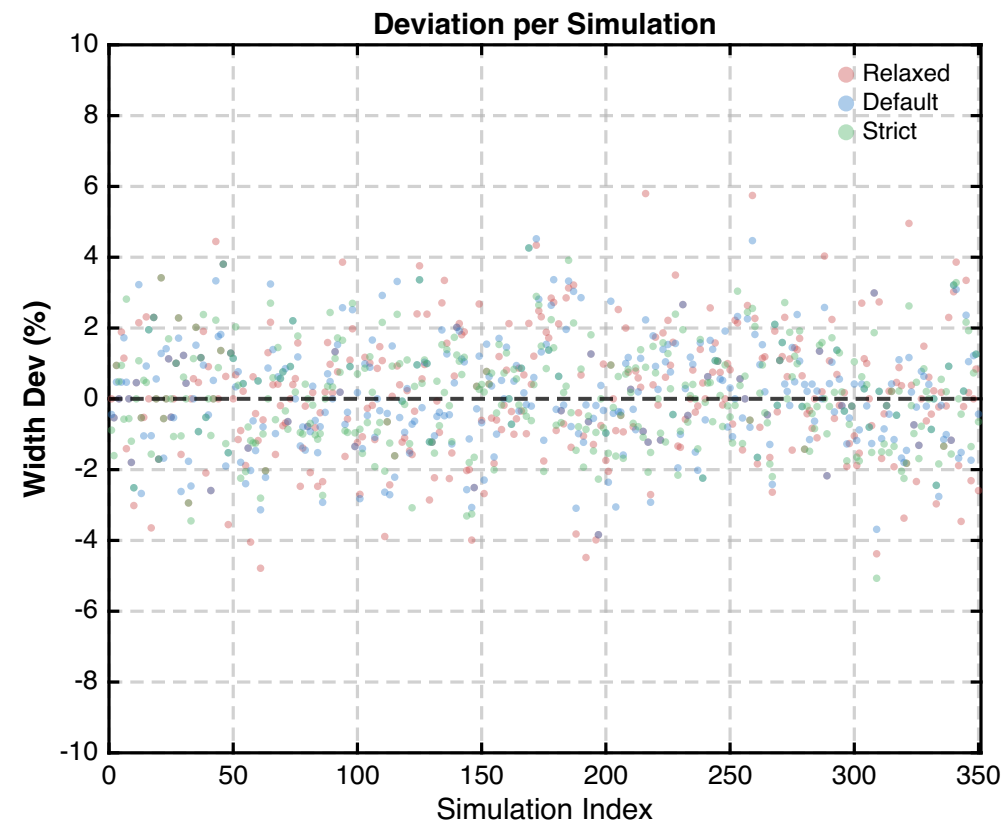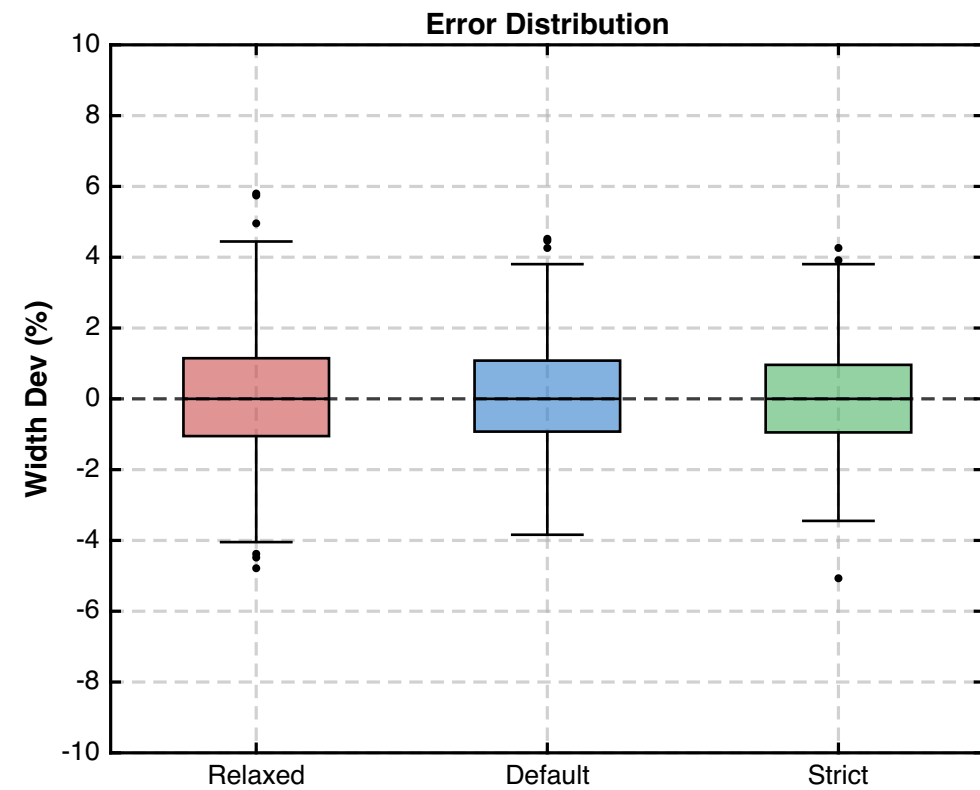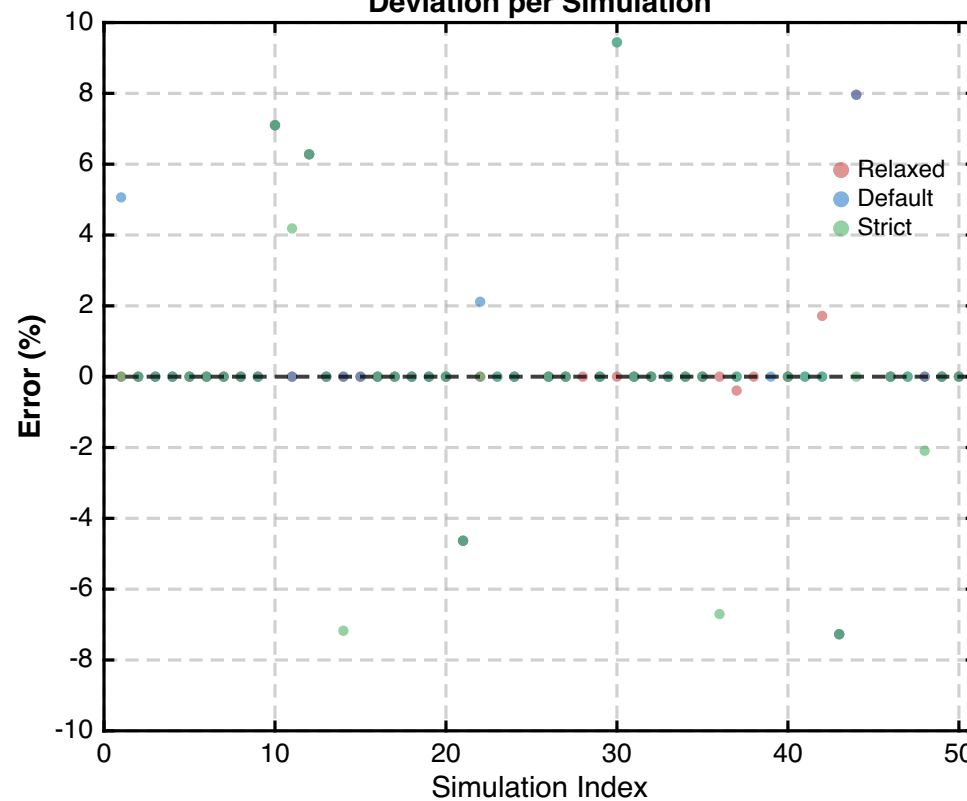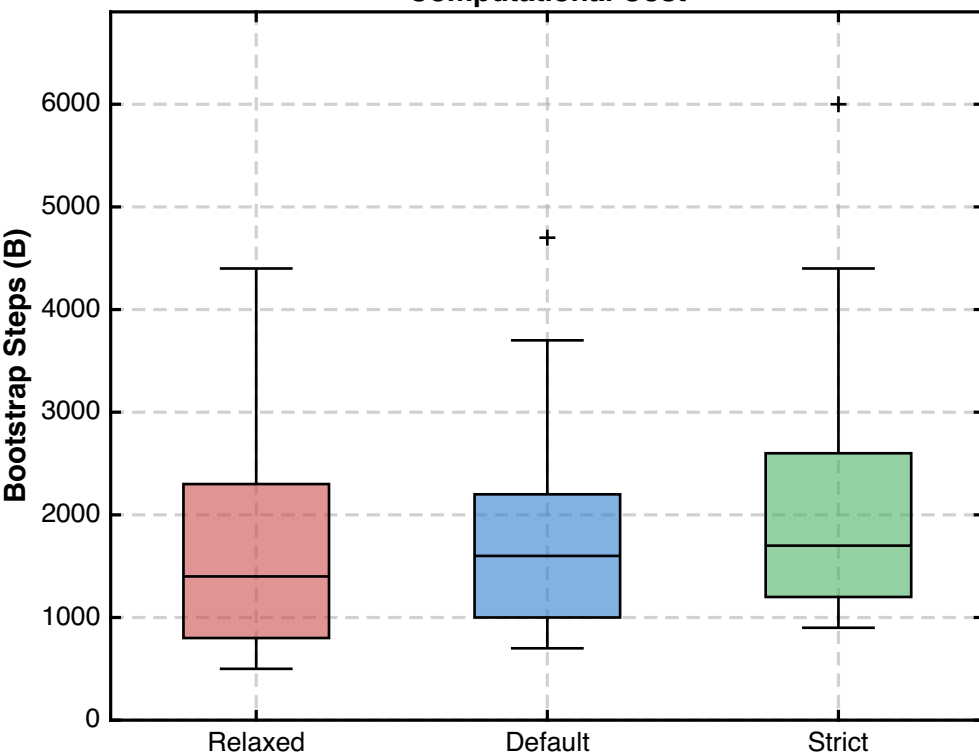
Ranking (Mean) Analysis: Global Summary (Ref B = 5000)
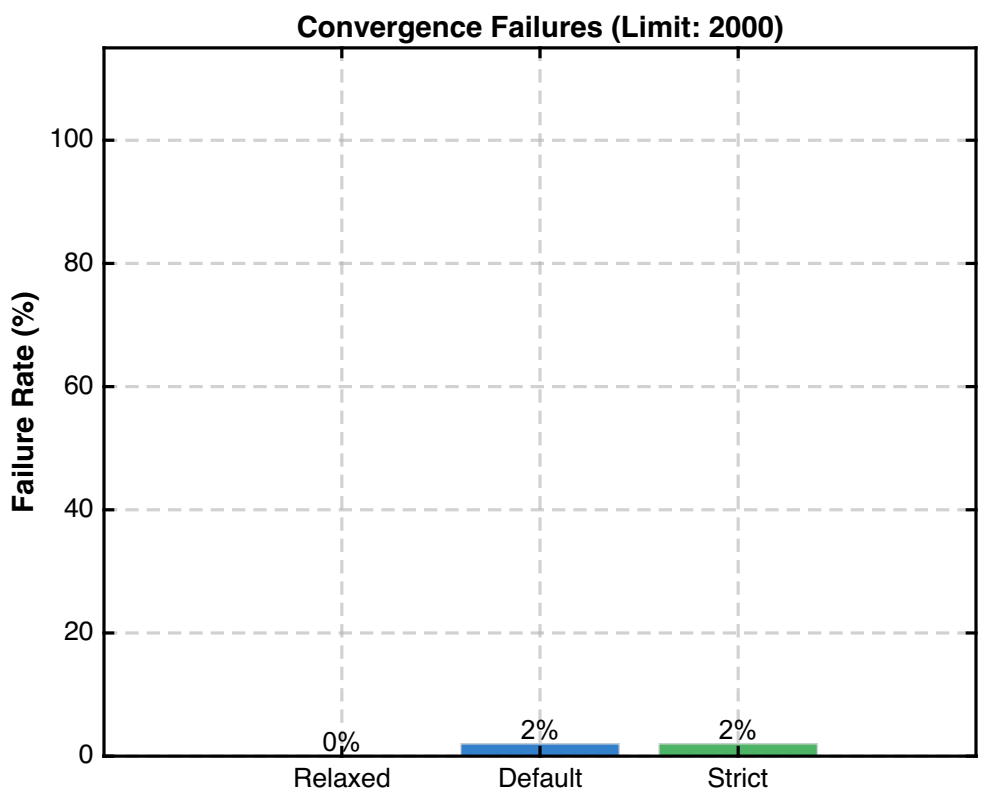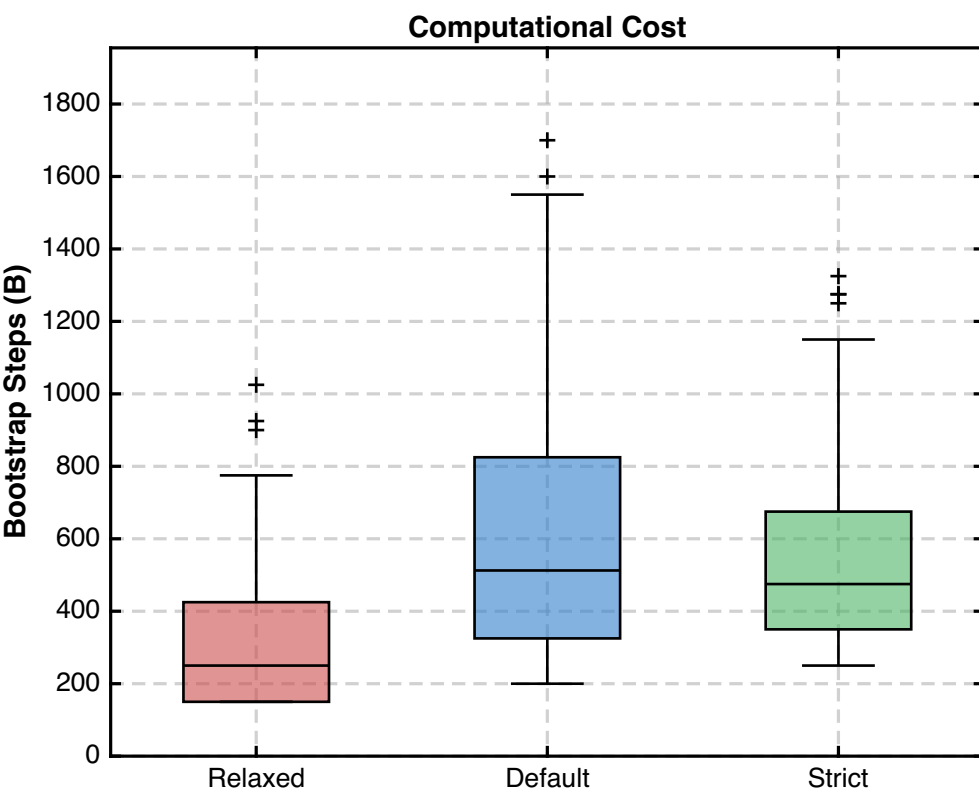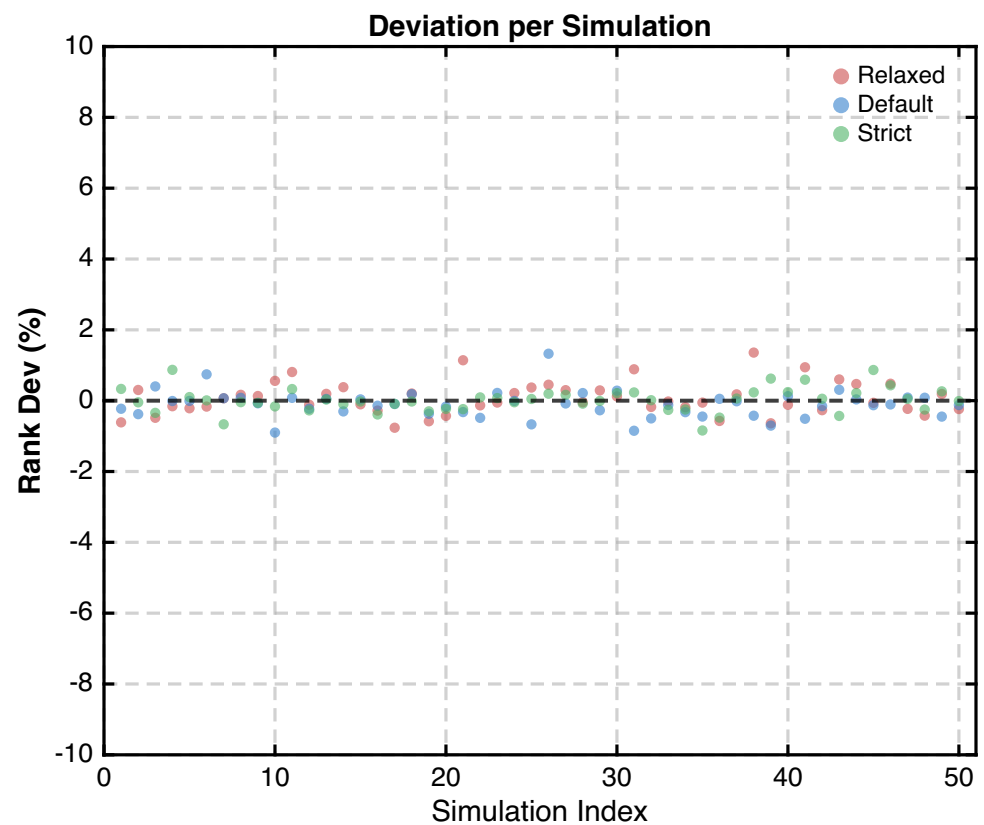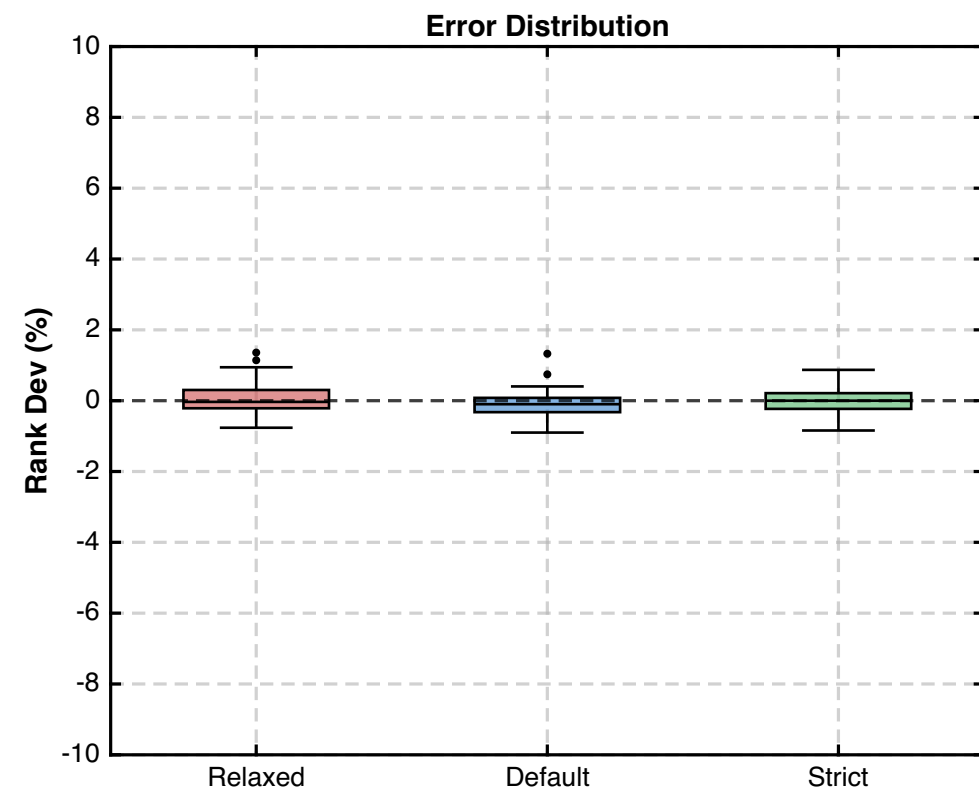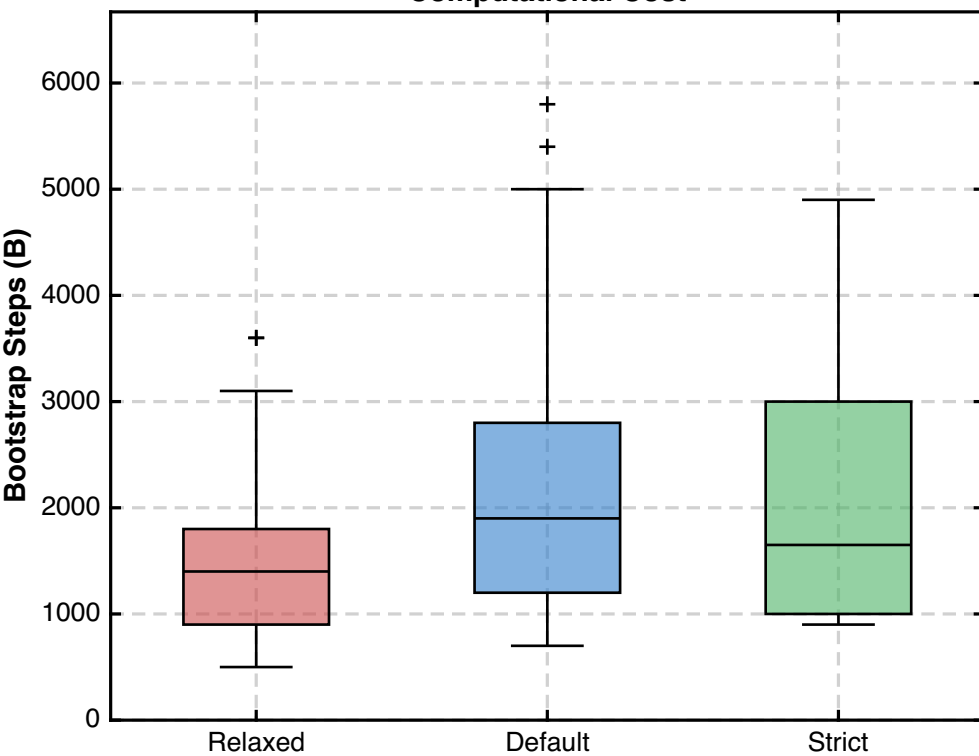
Error Distribution

Deviation per Simulation

Computational Cost

Convergence Failures (Limit: 2000)
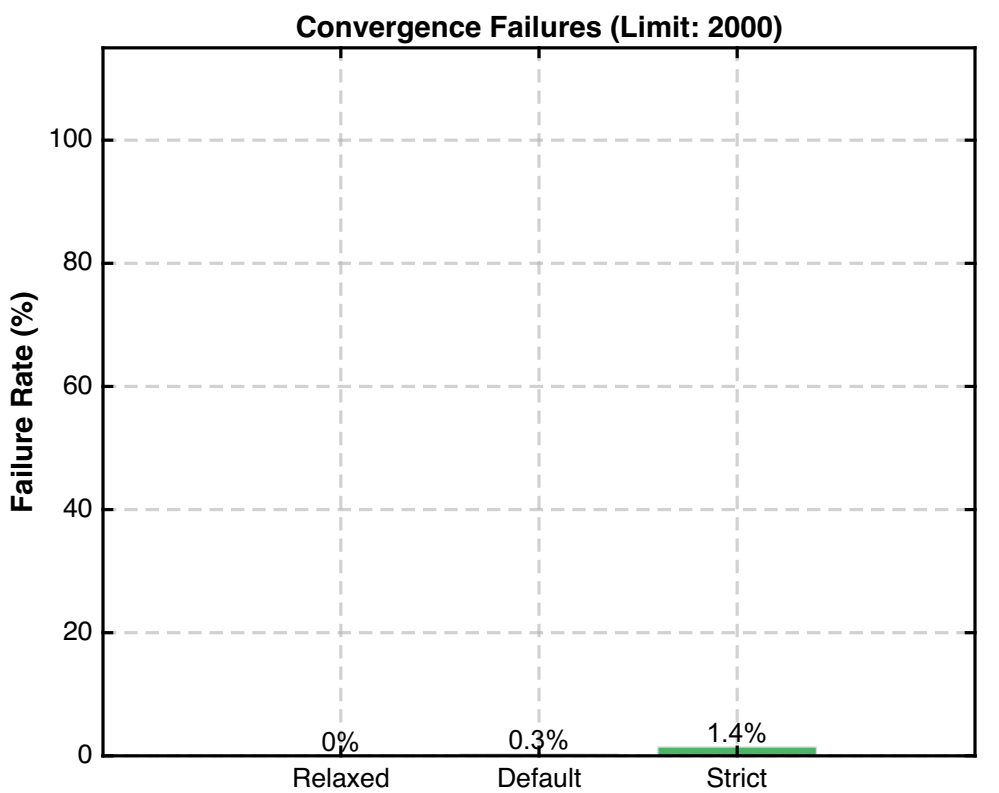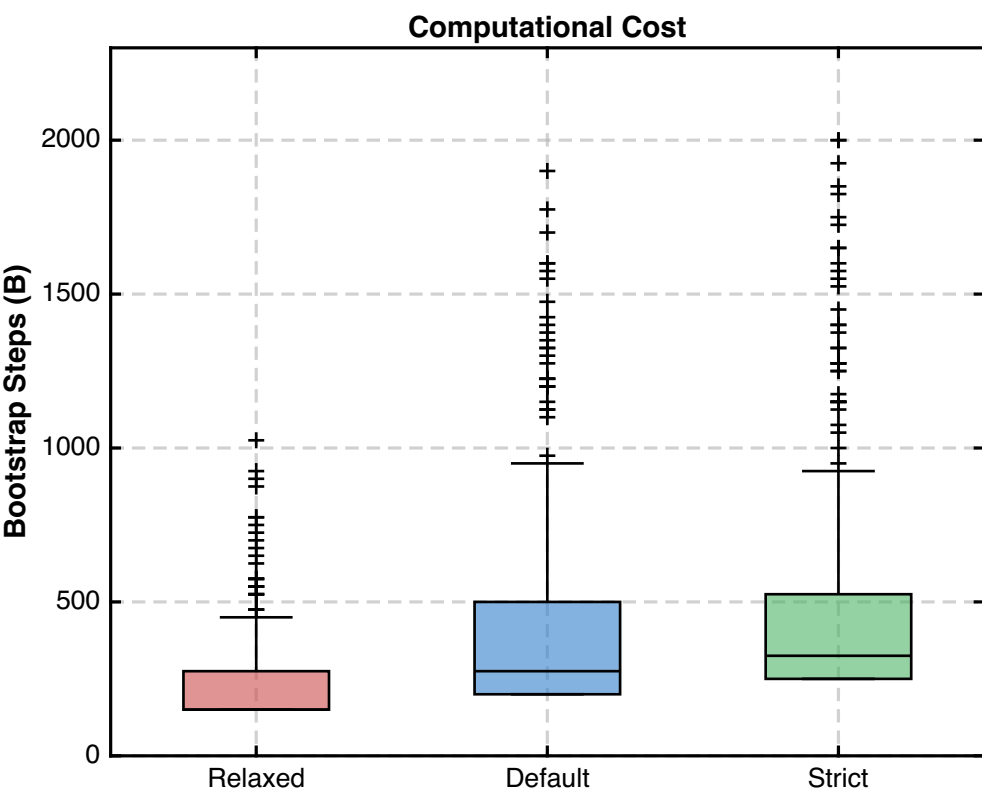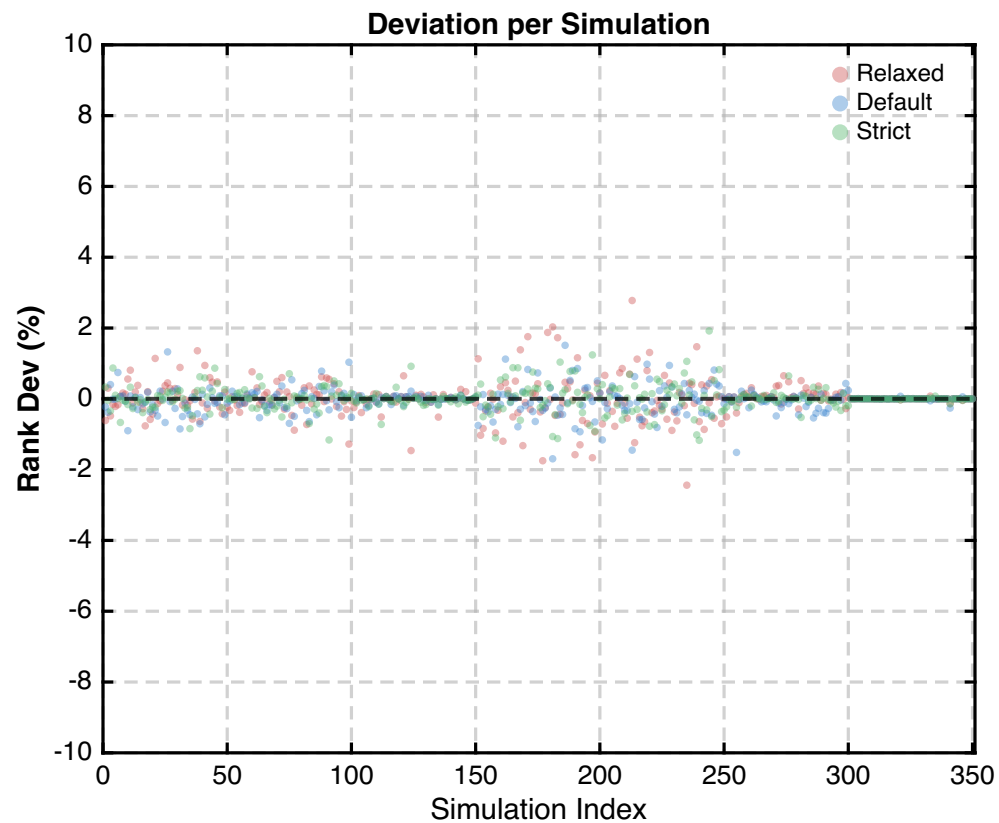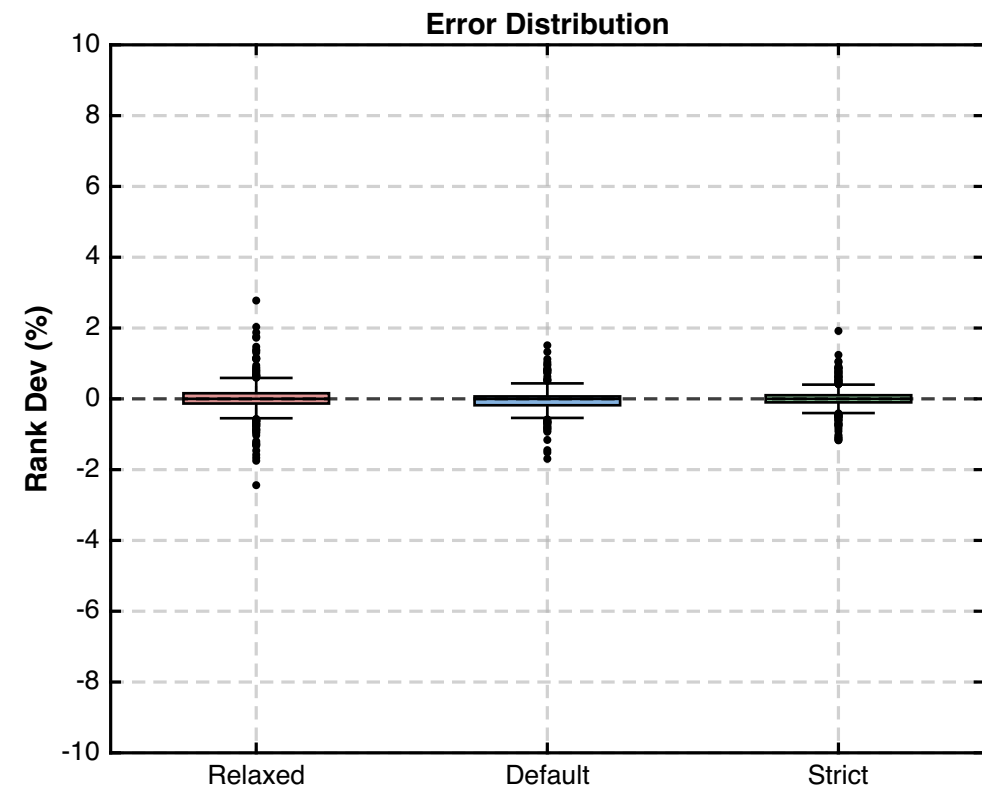
Thresholds (Delta) Analysis: N 25 Normal

BCa CI (Width) Analysis: N 25 Normal

Error Distribution

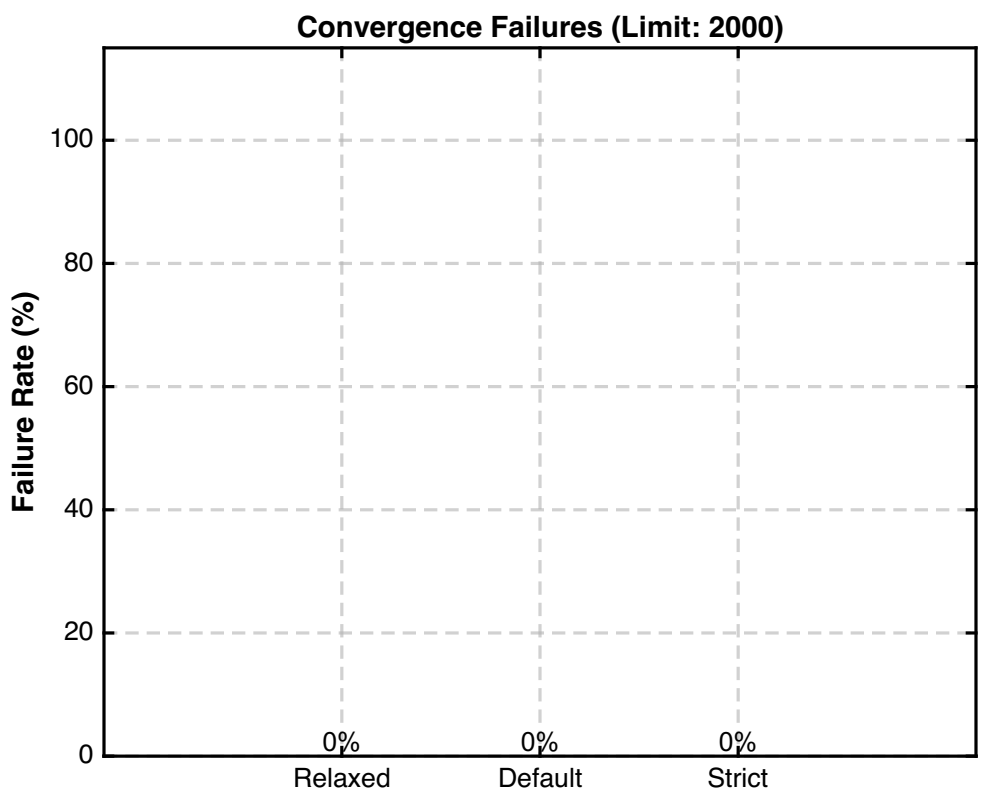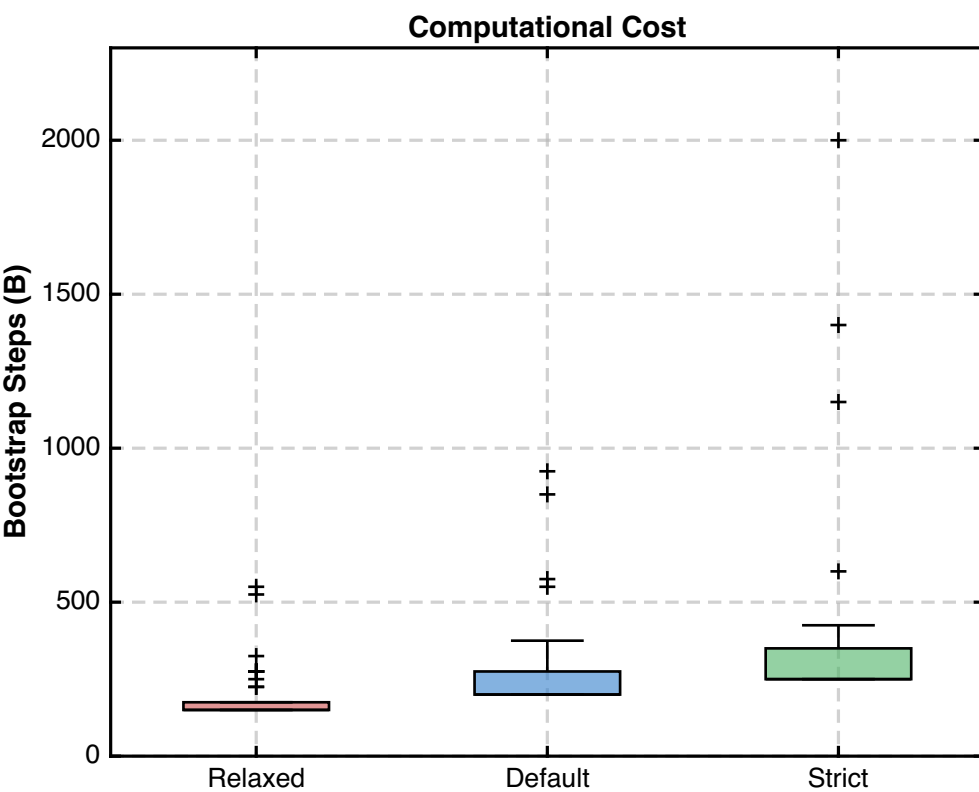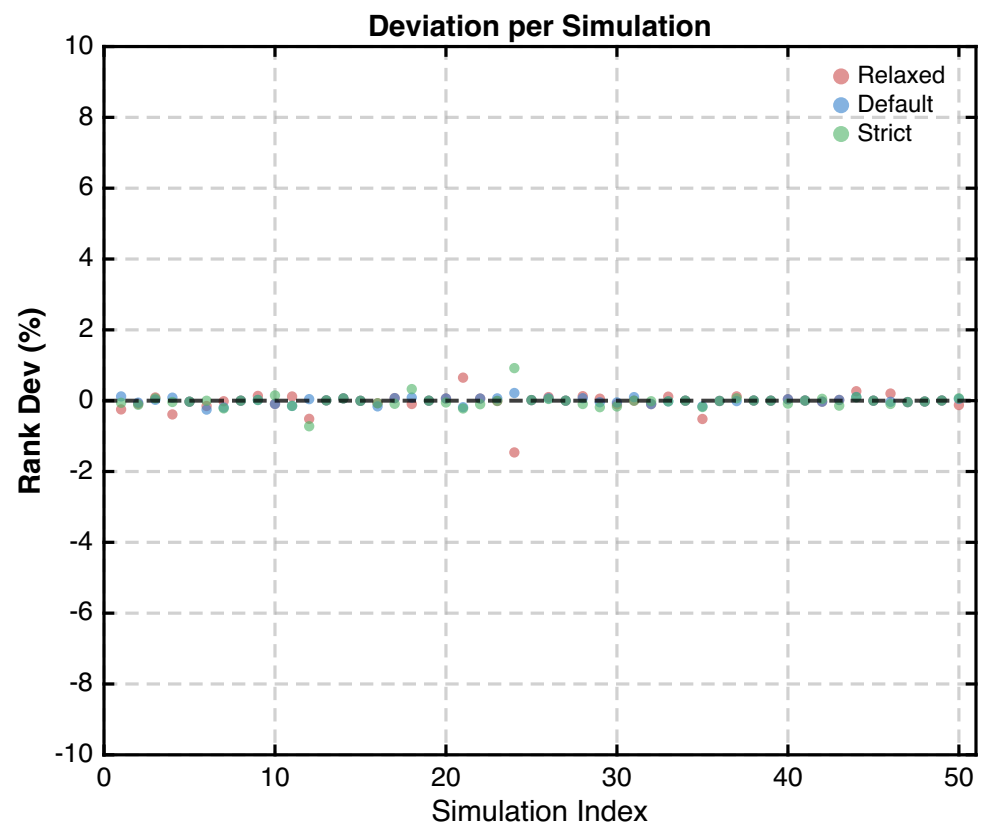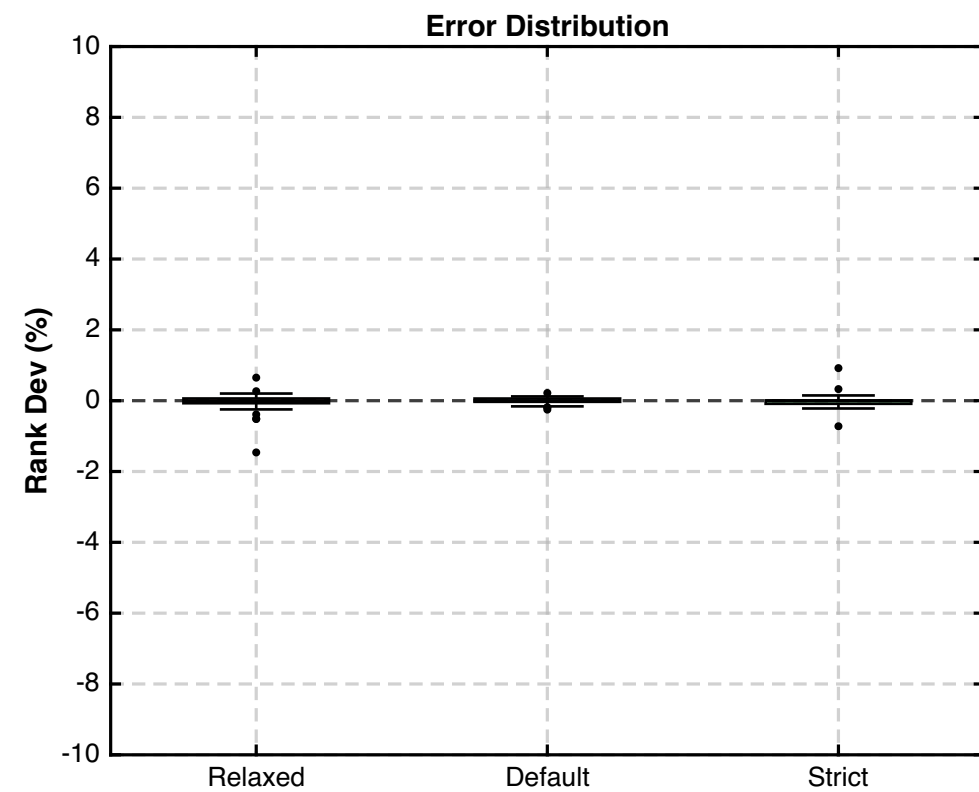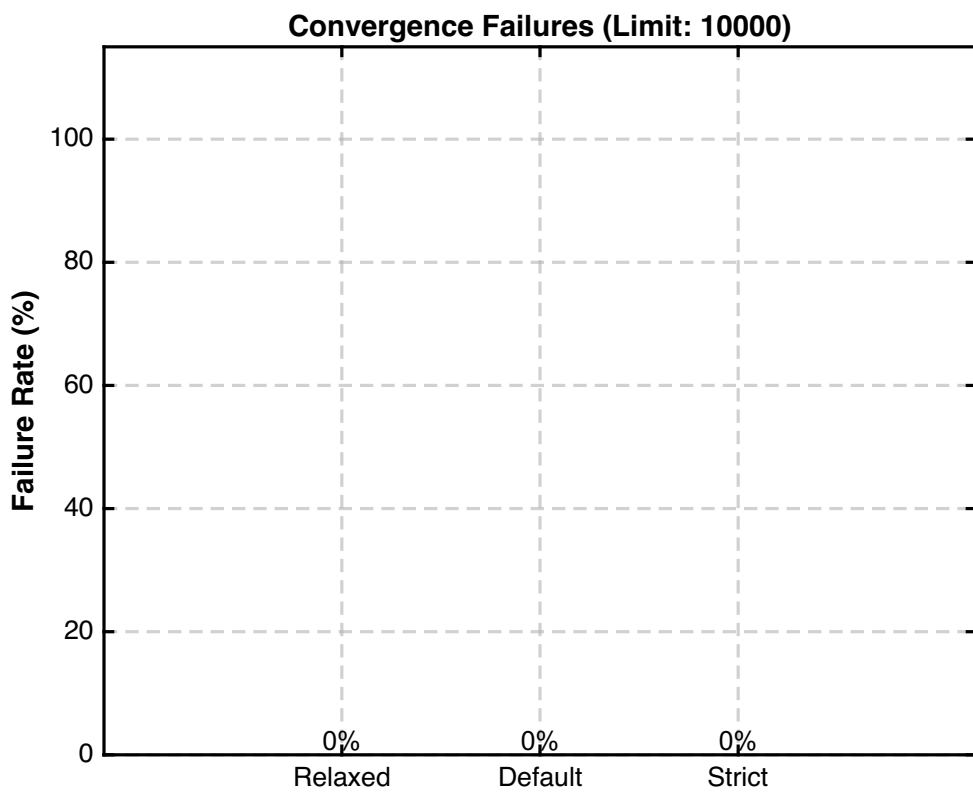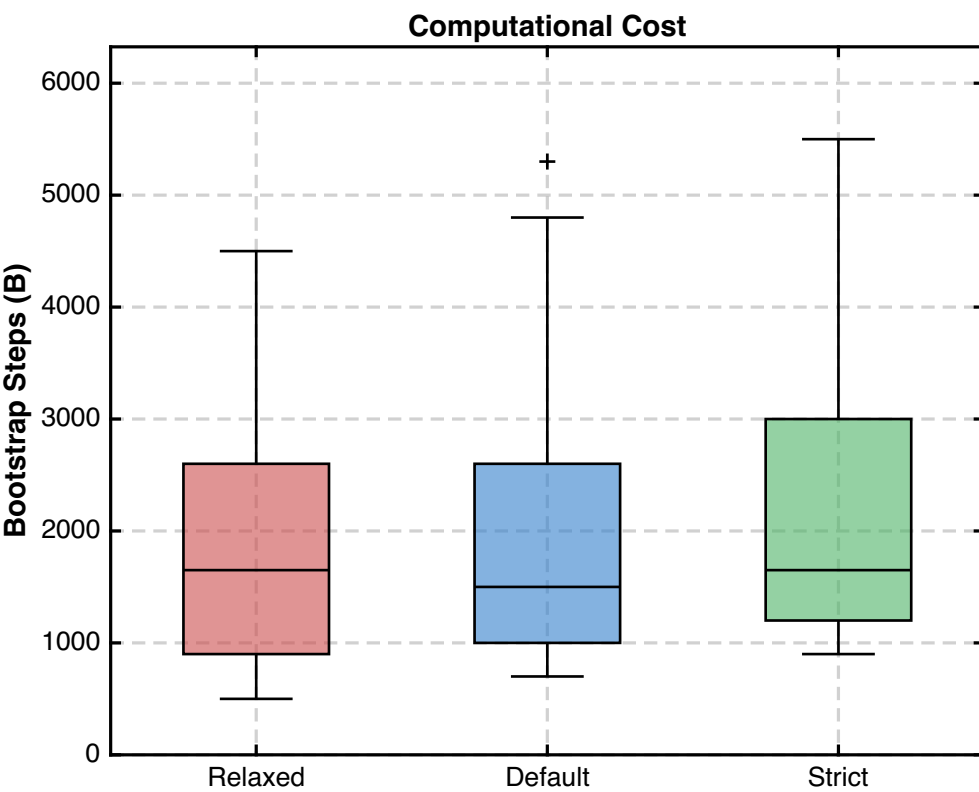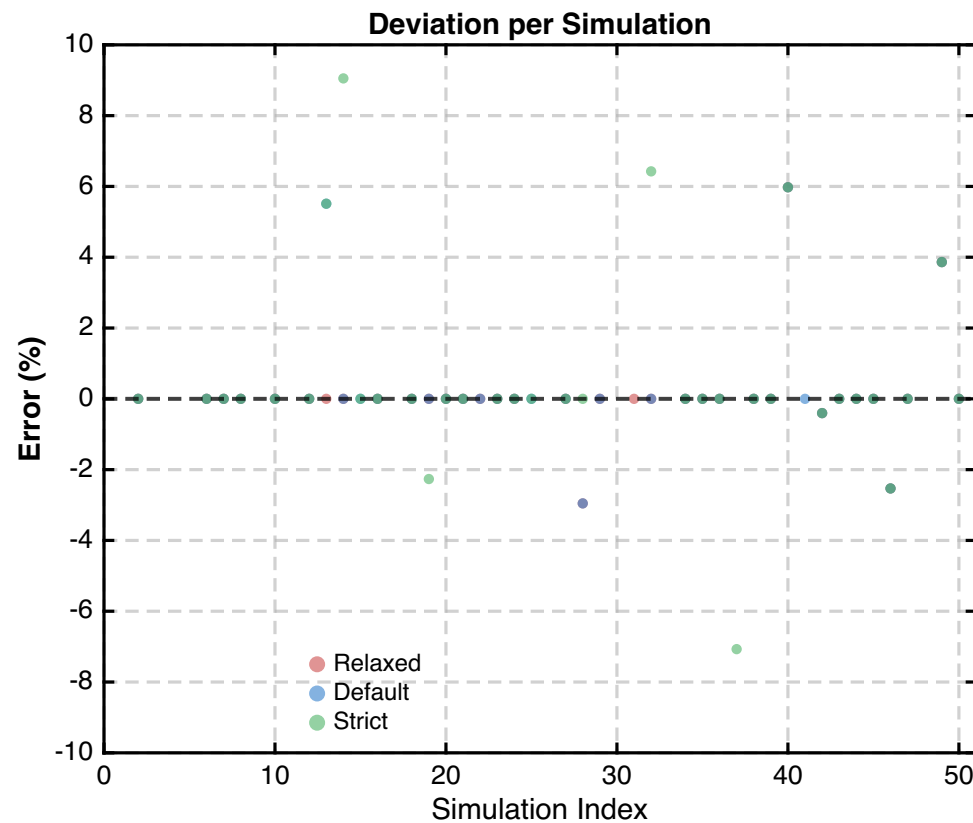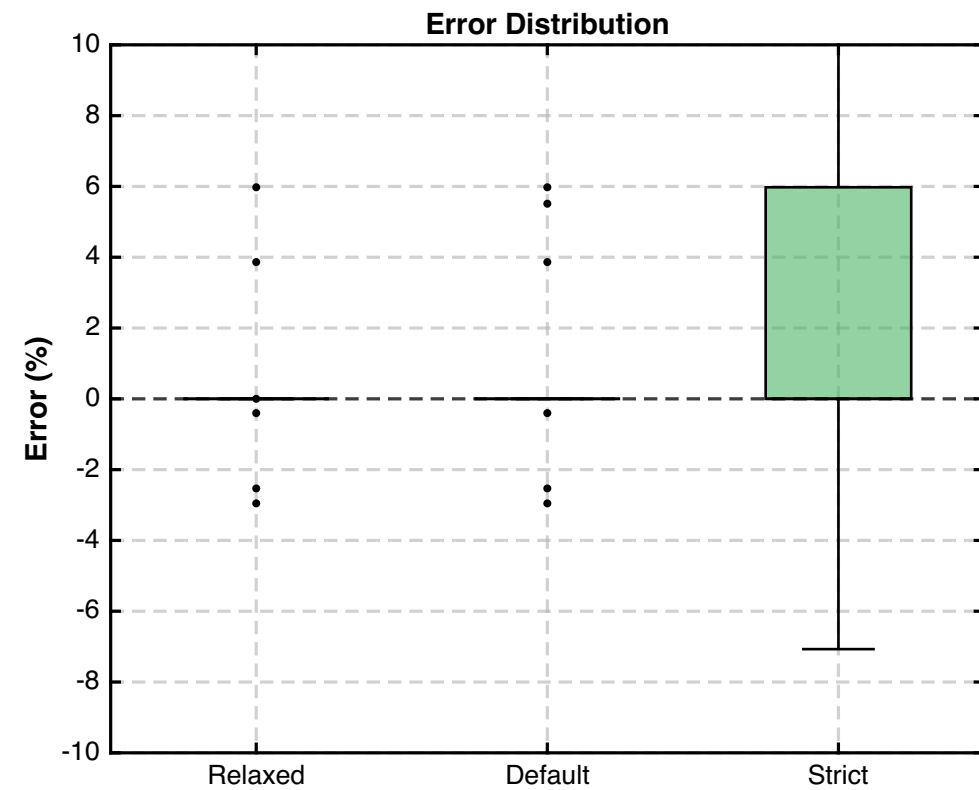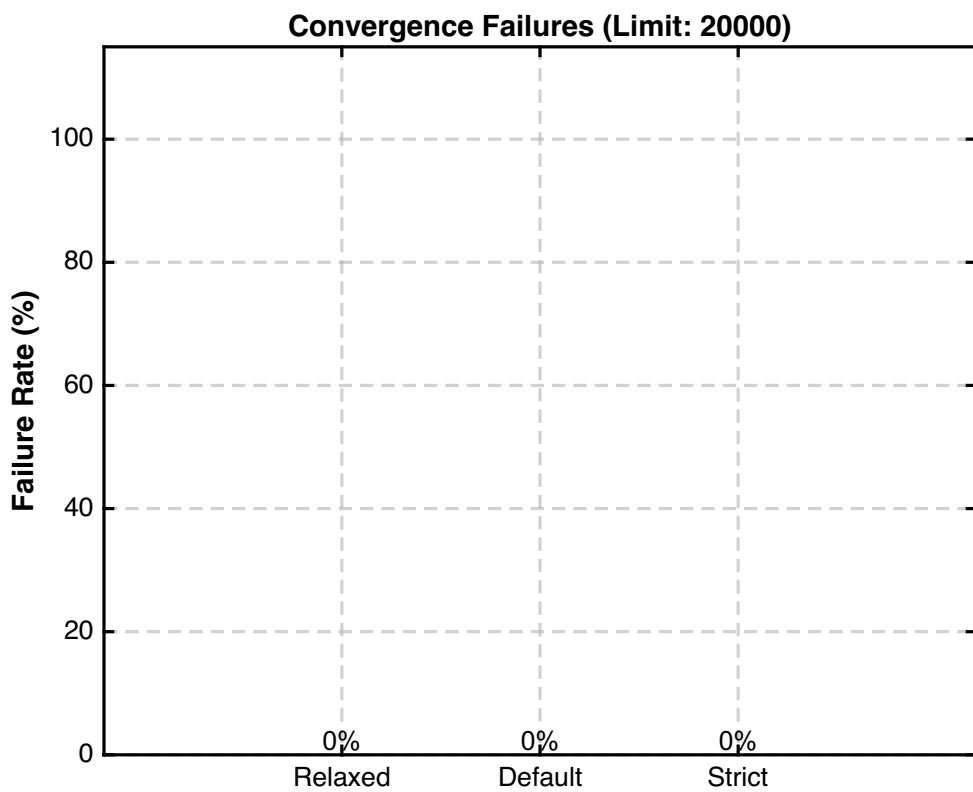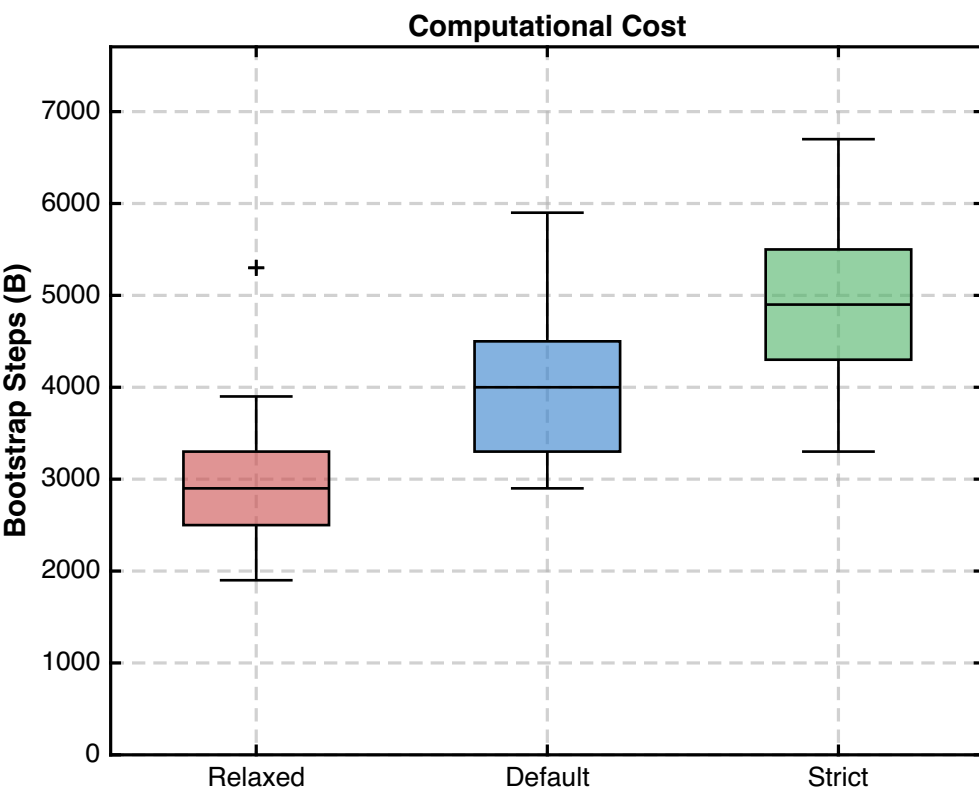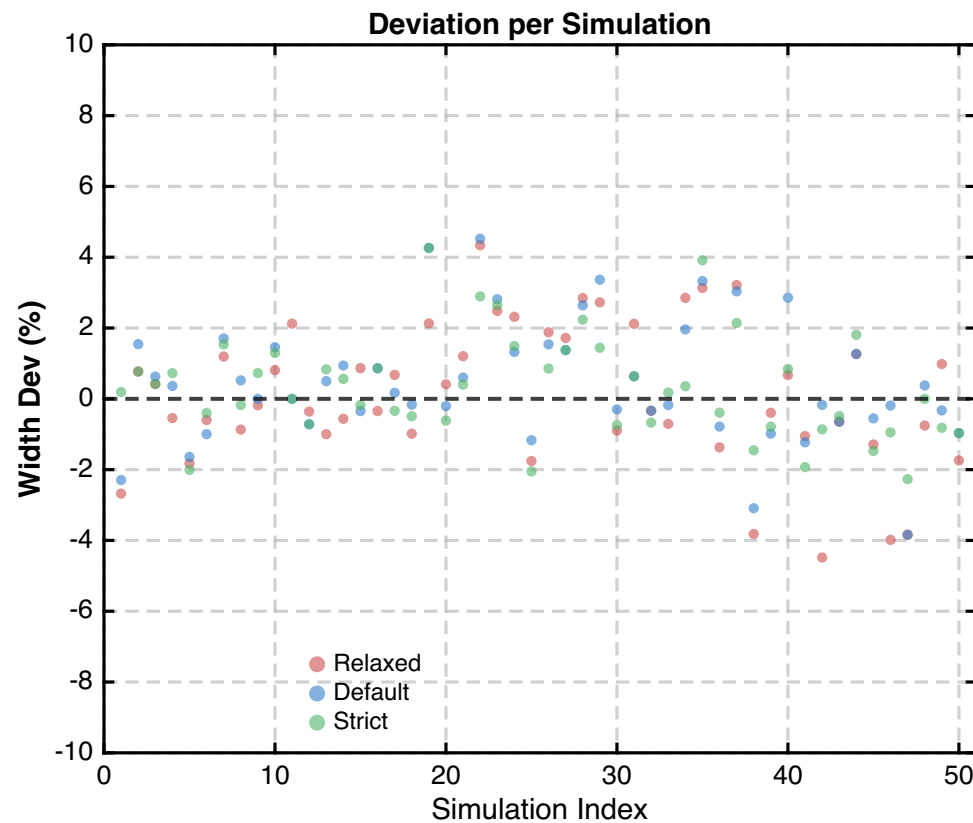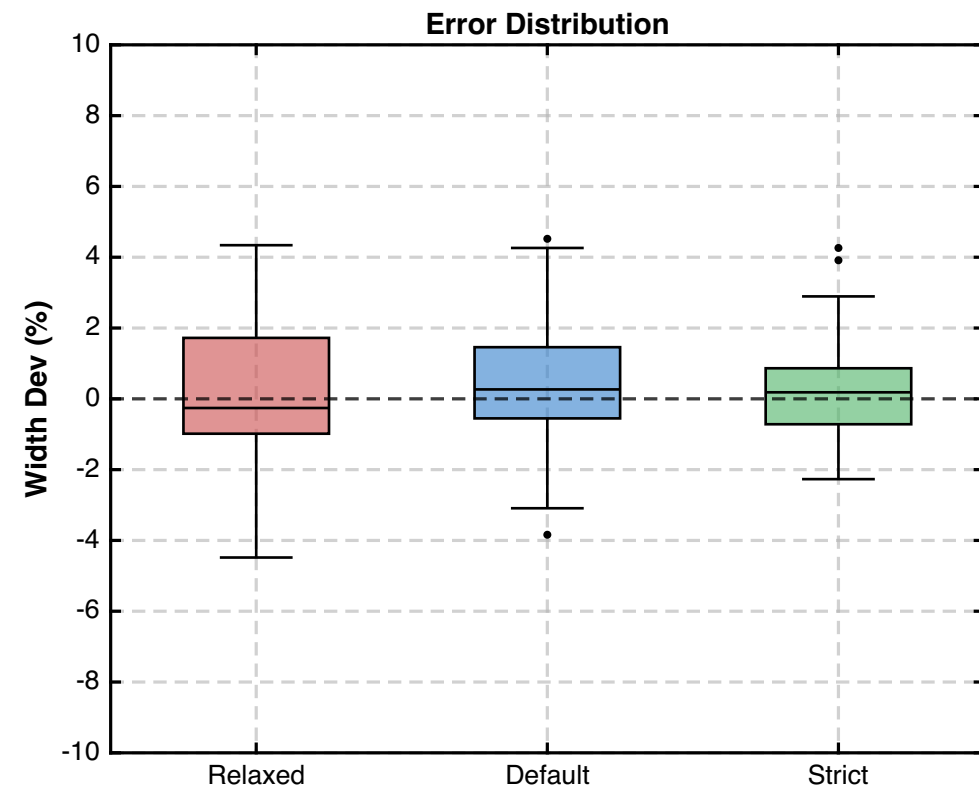Deviation per Simulation

Computational Cost

Convergence Failures (Limit: 20000)
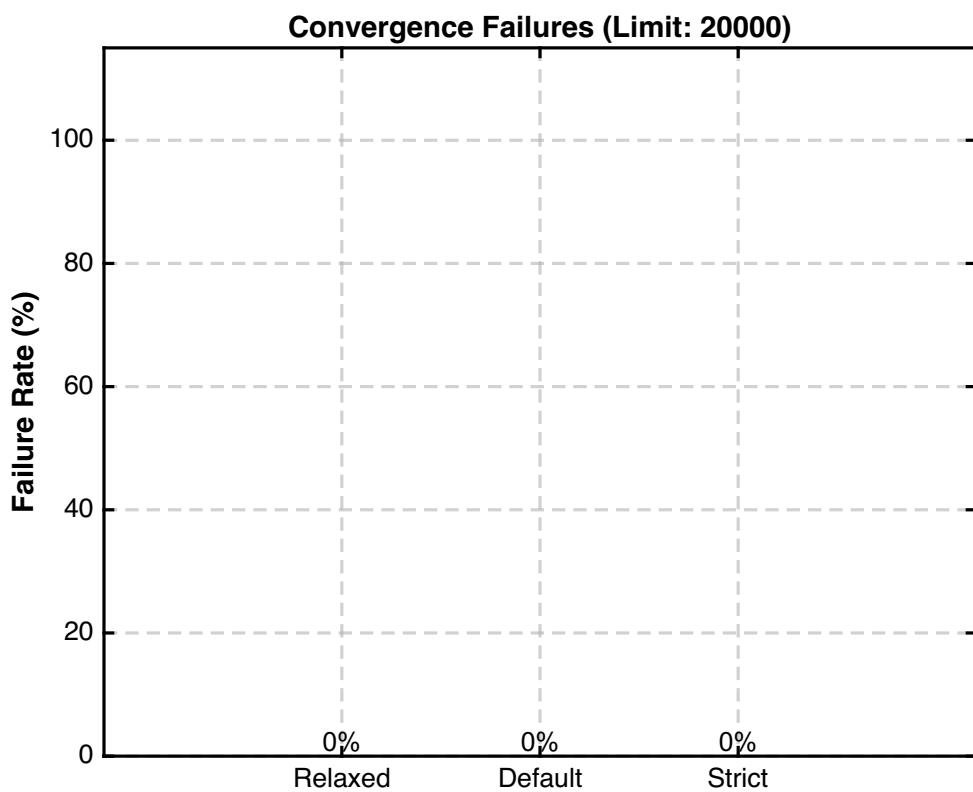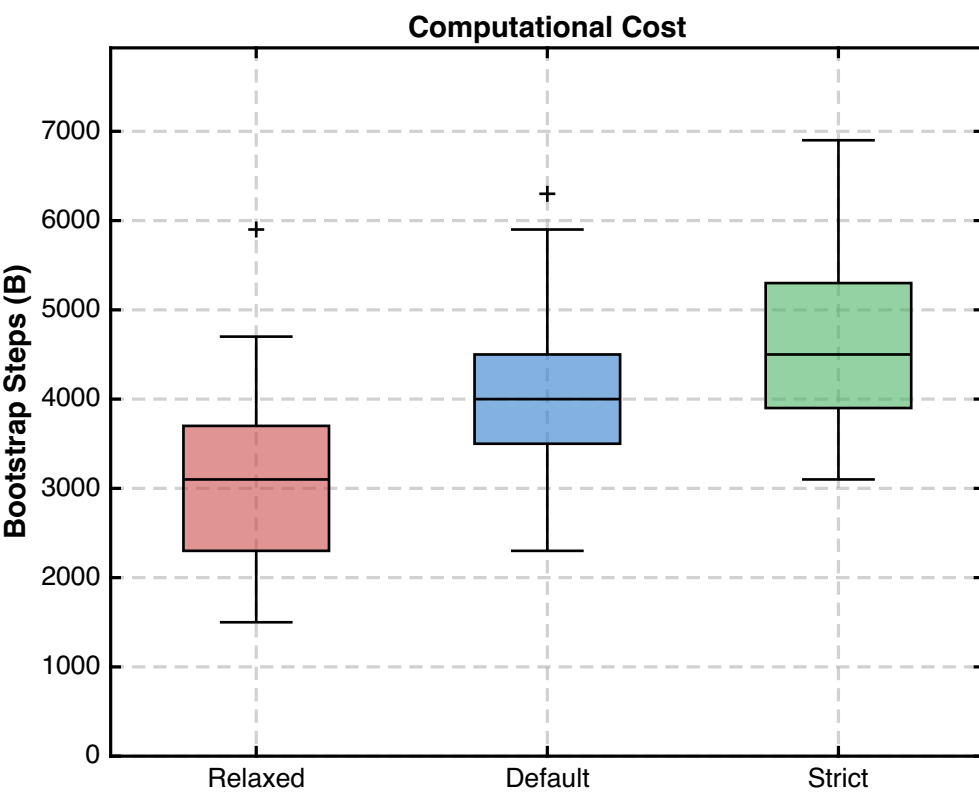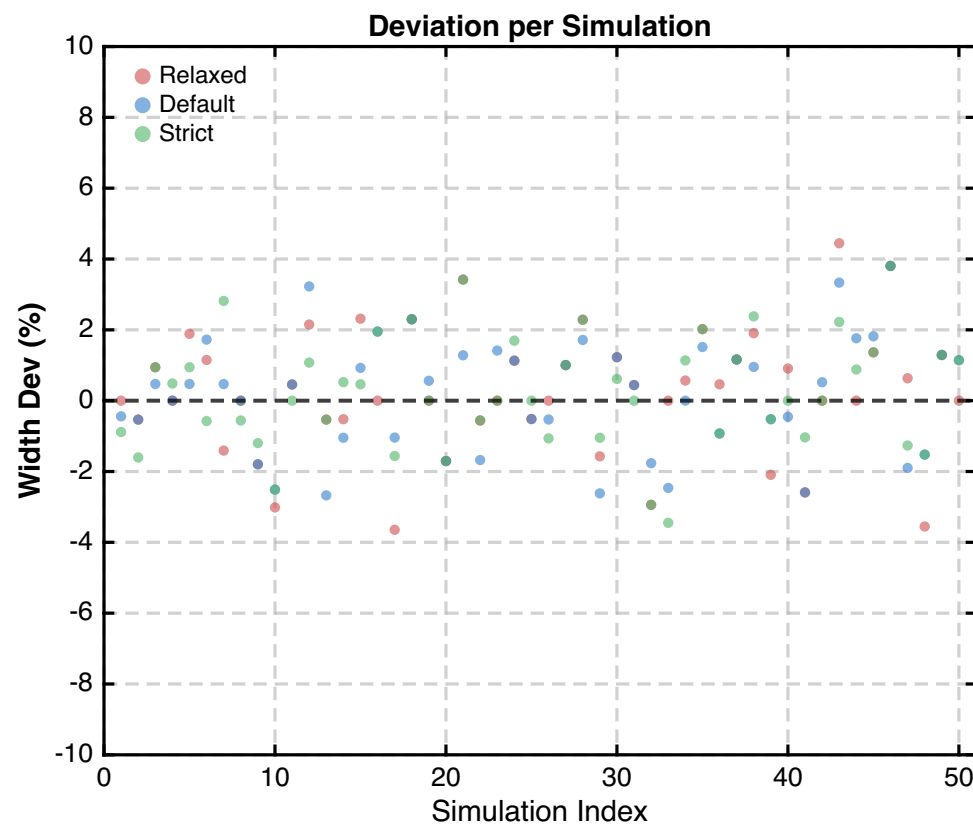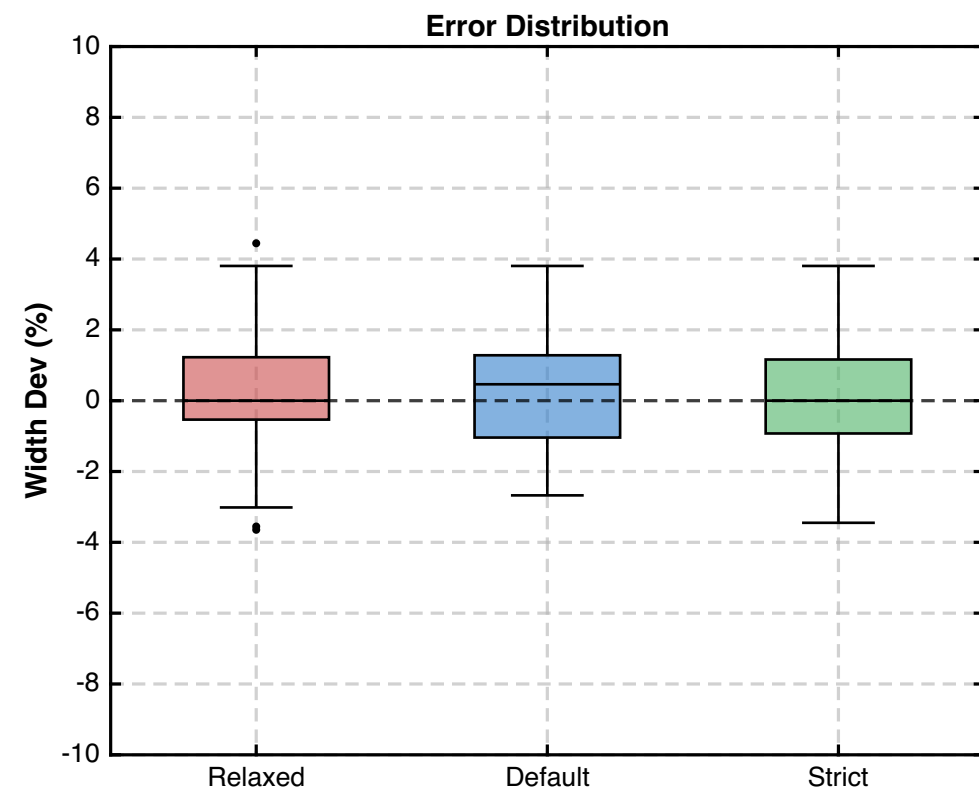
Ranking (Mean) Analysis: N 25 Normal

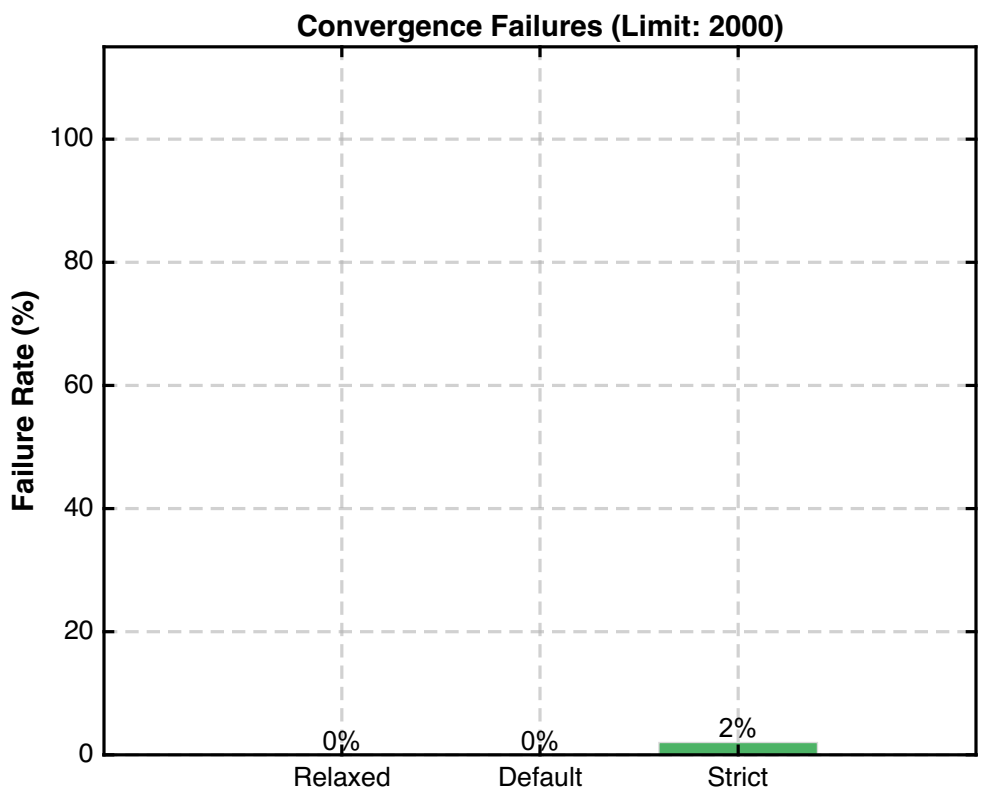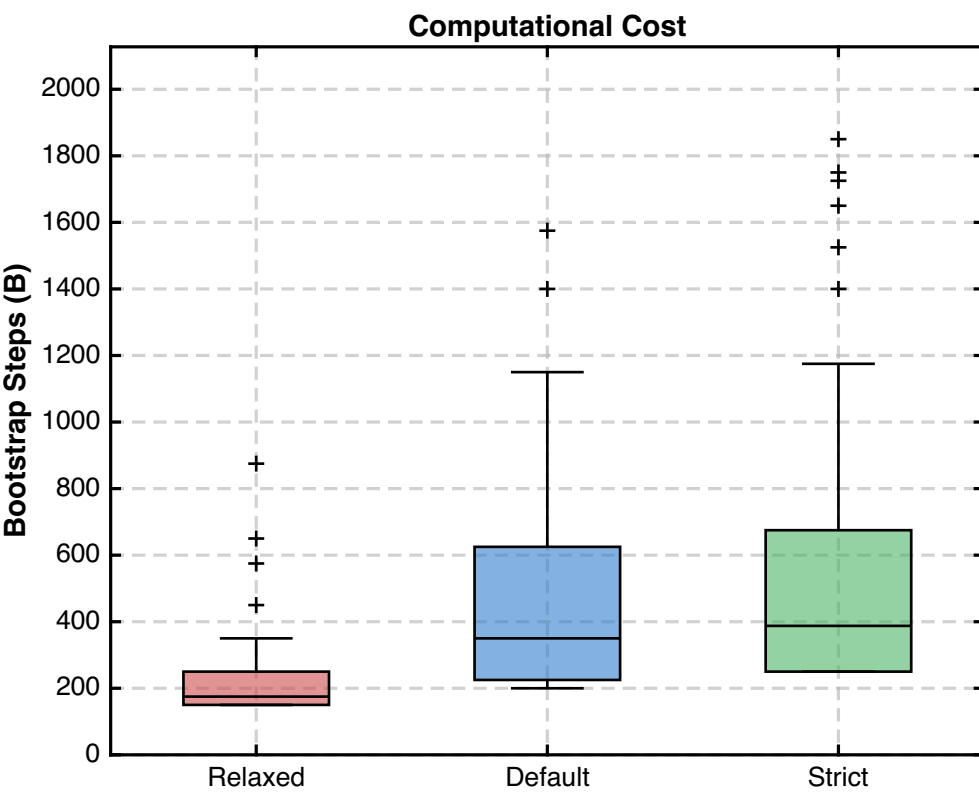**Thresholds (Delta) Analysis: N 50 Normal**

BCa CI (Width) Analysis: N 50 Normal

Error Distribution — Width Dev (%) for Relaxed, Default, Strict

Deviation per Simulation — Width Dev (%) vs Simulation Index; legend: Relaxed, Default, Strict

Computational Cost — Bootstrap Steps (B) for Relaxed, Default, Strict

Convergence Failures (Limit: 20000) — Failure Rate (%): Relaxed 0%, Default 0%, Strict 0%
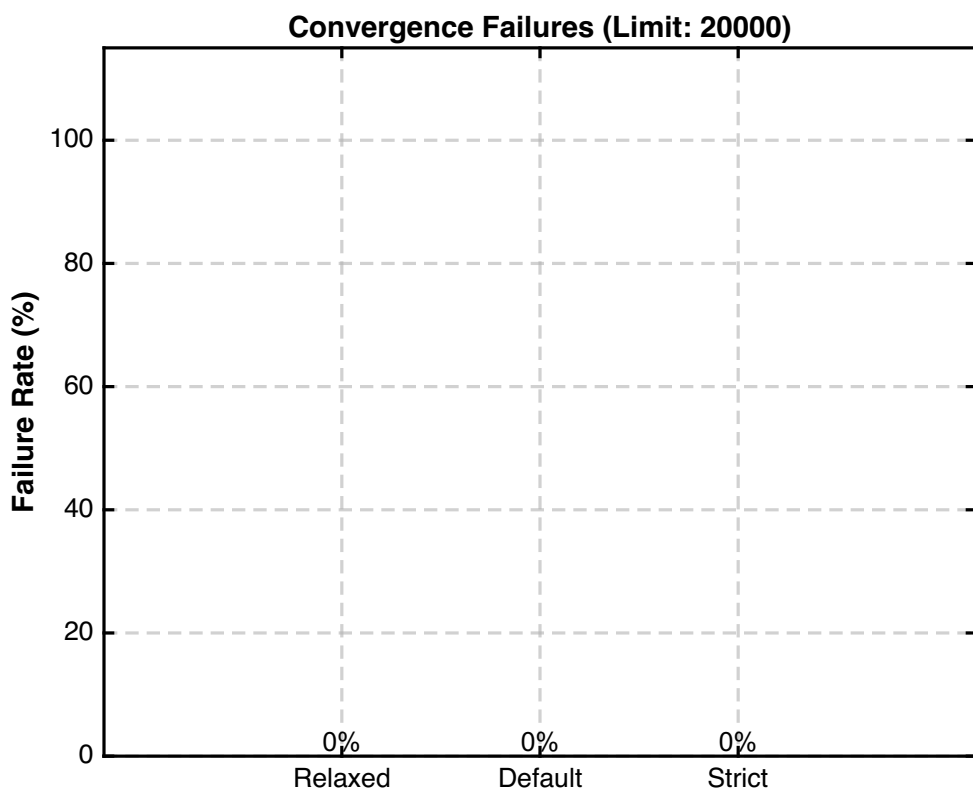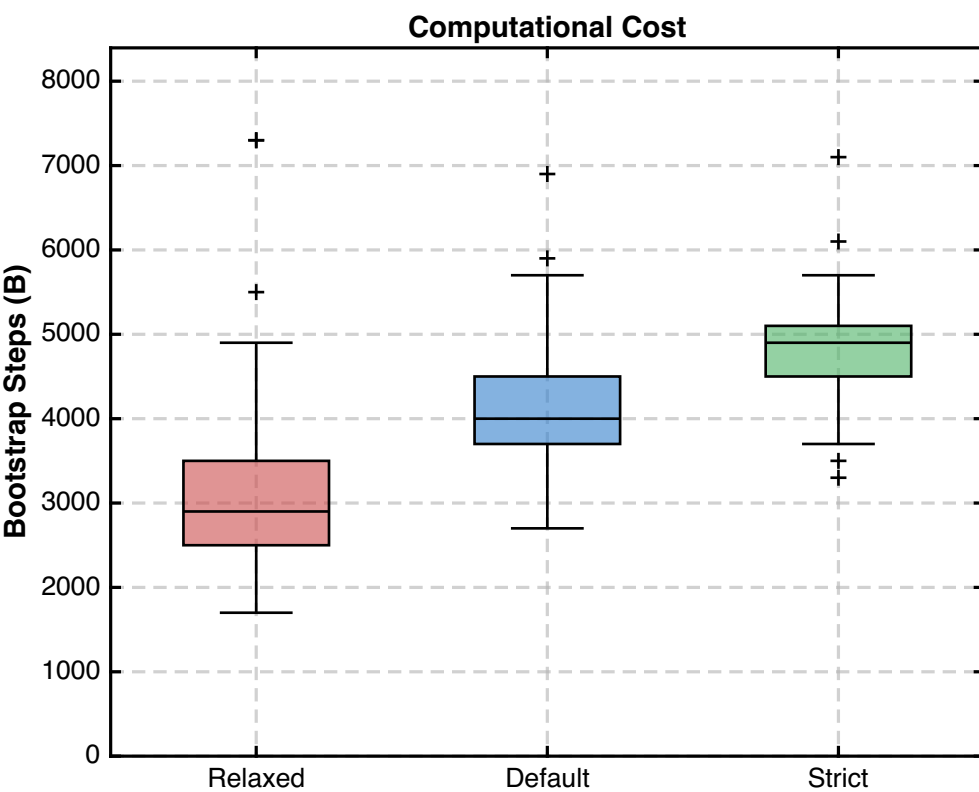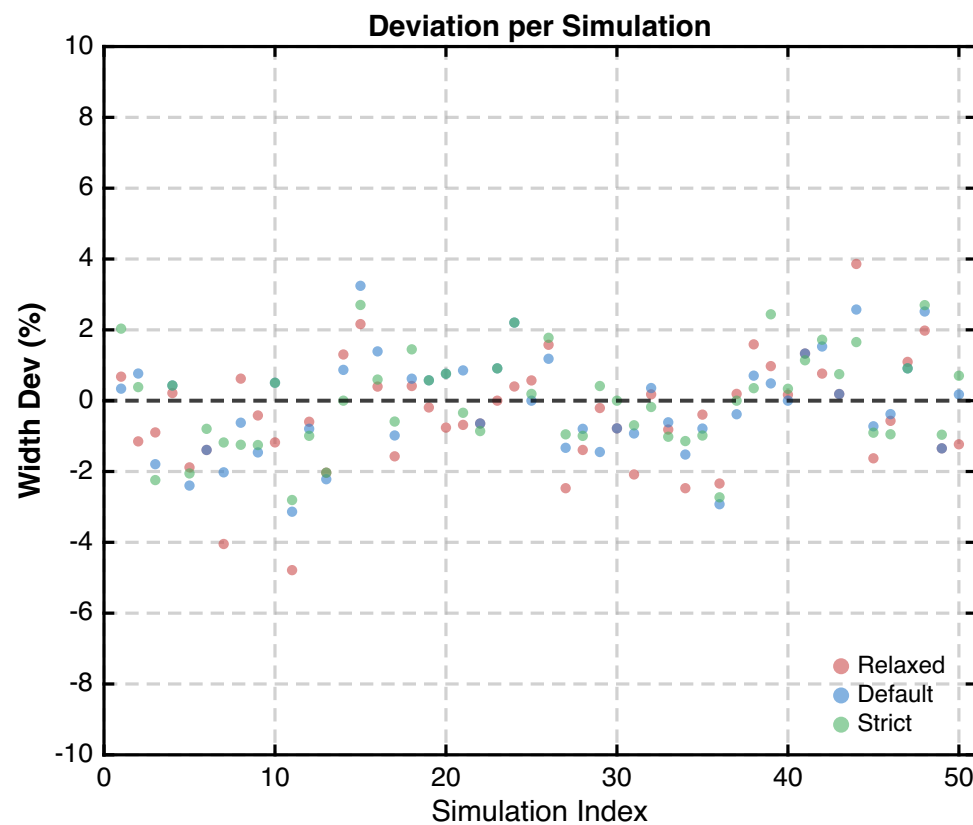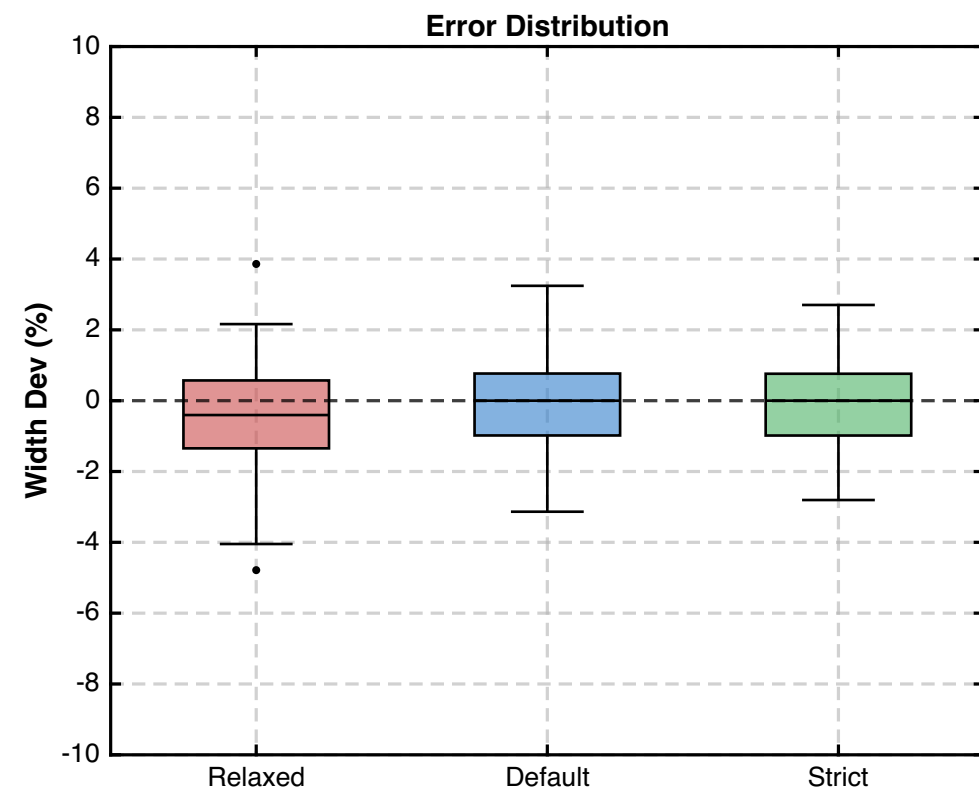
Ranking (Mean) Analysis: N 50 Normal

Thresholds (Delta) Analysis: N 100 Normal
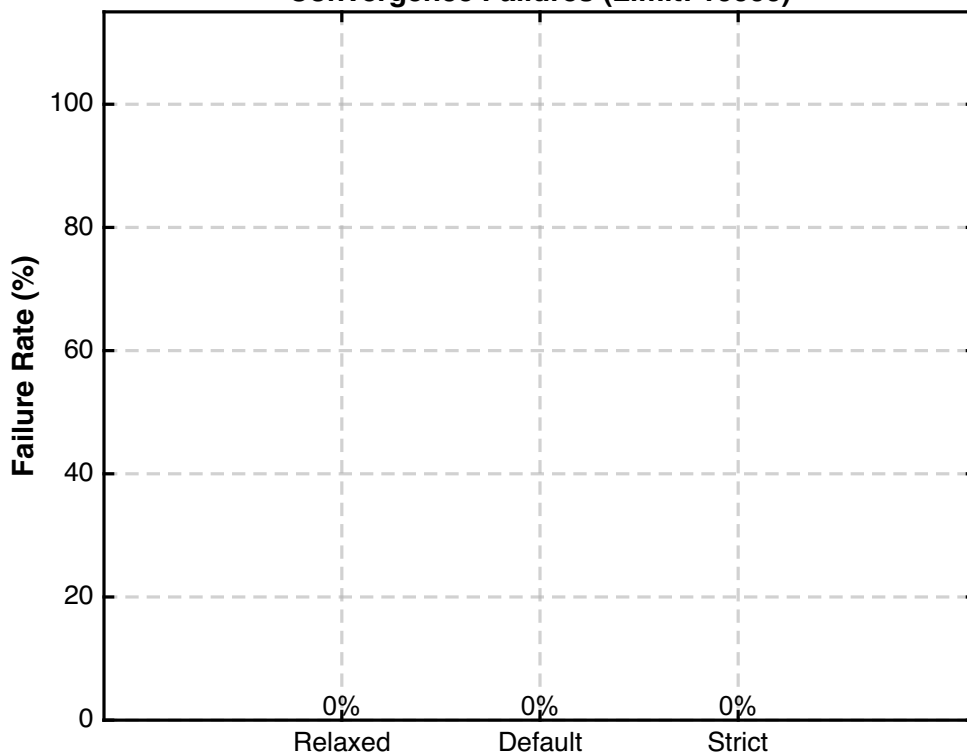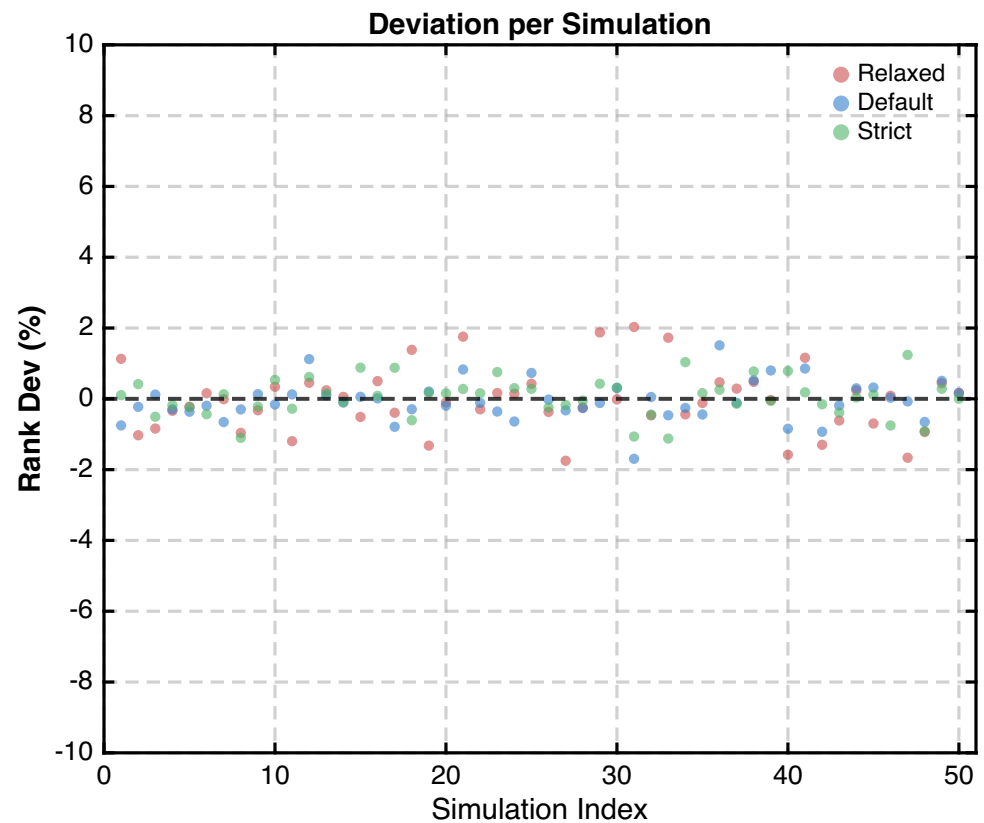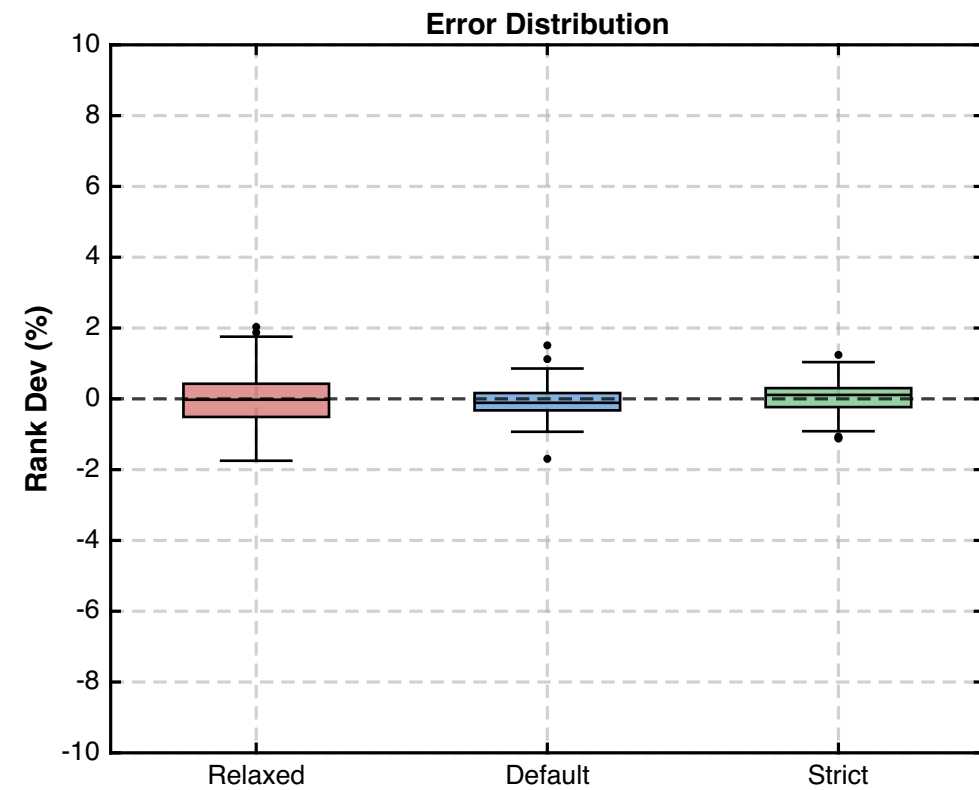
BCa CI (Width) Analysis: N 100 Normal
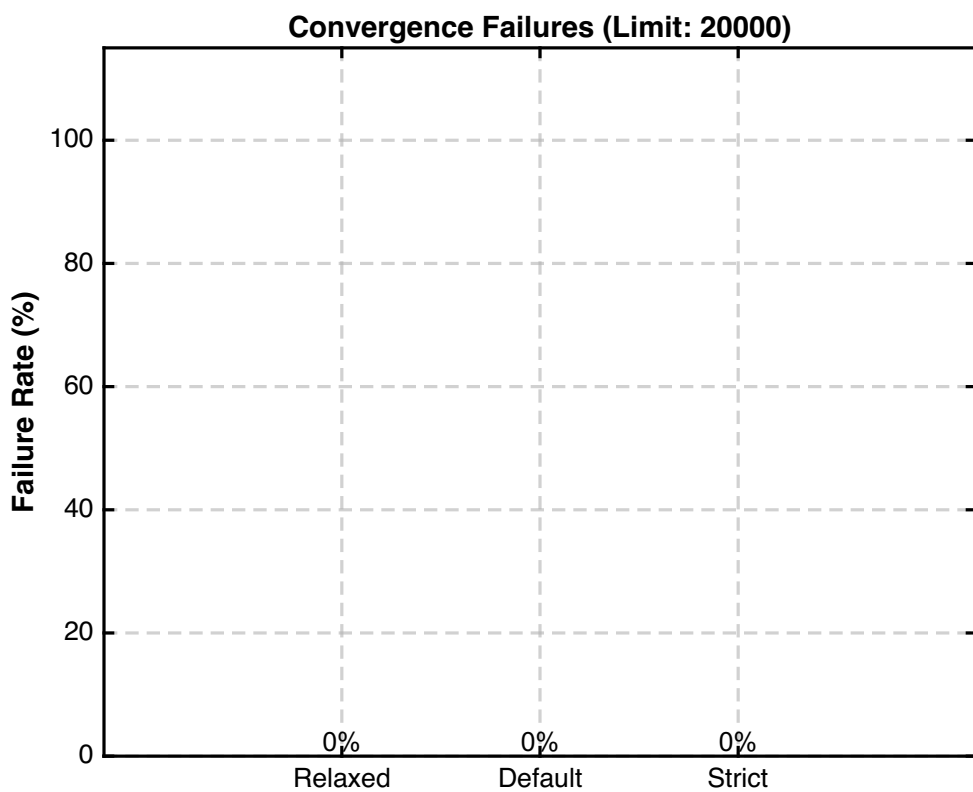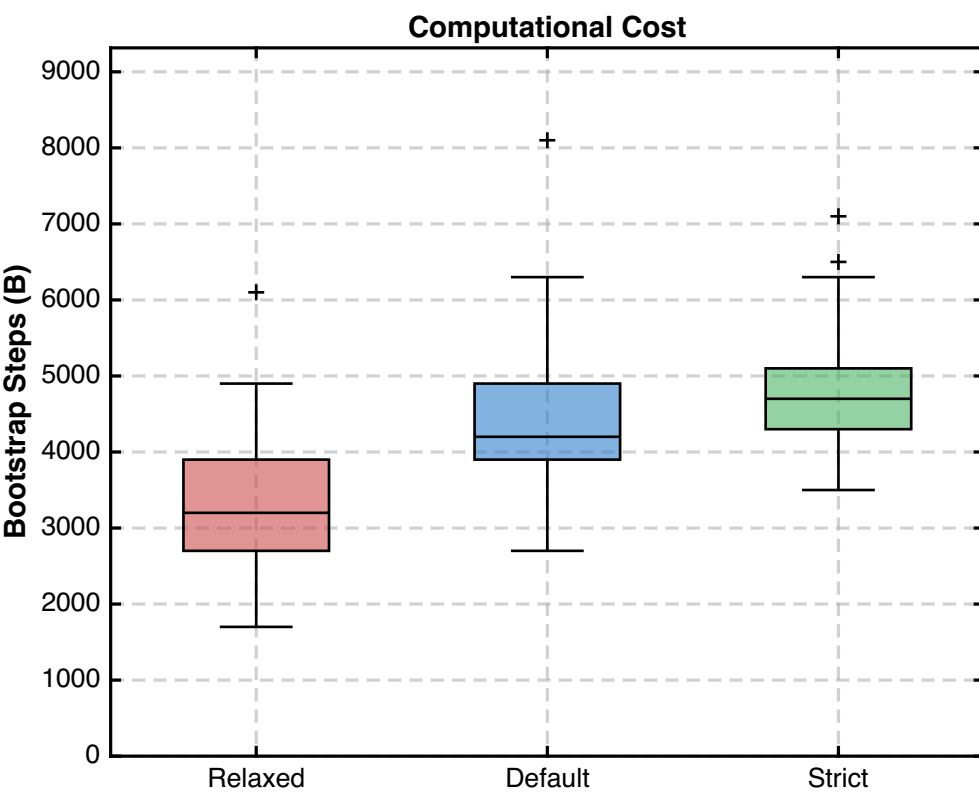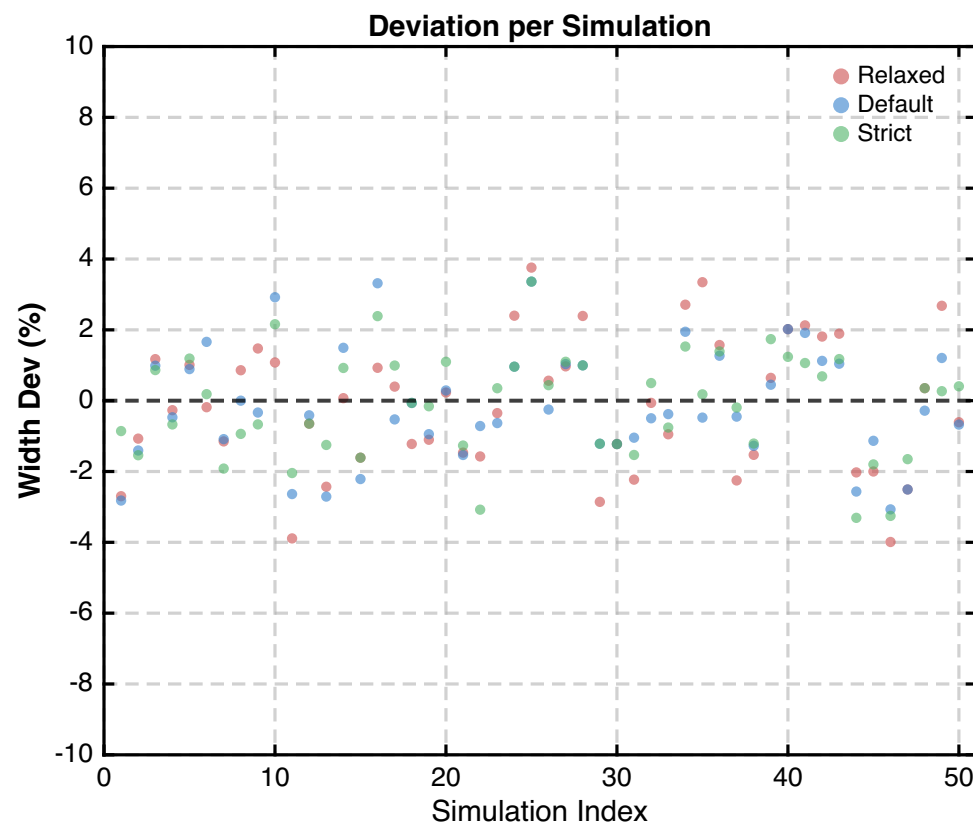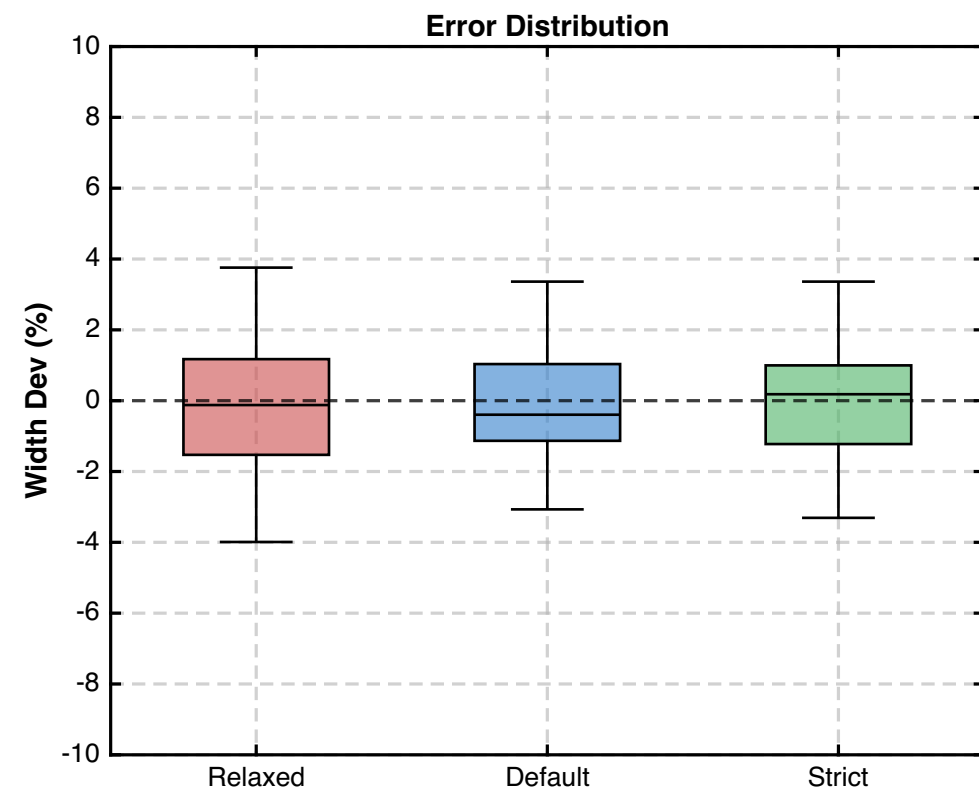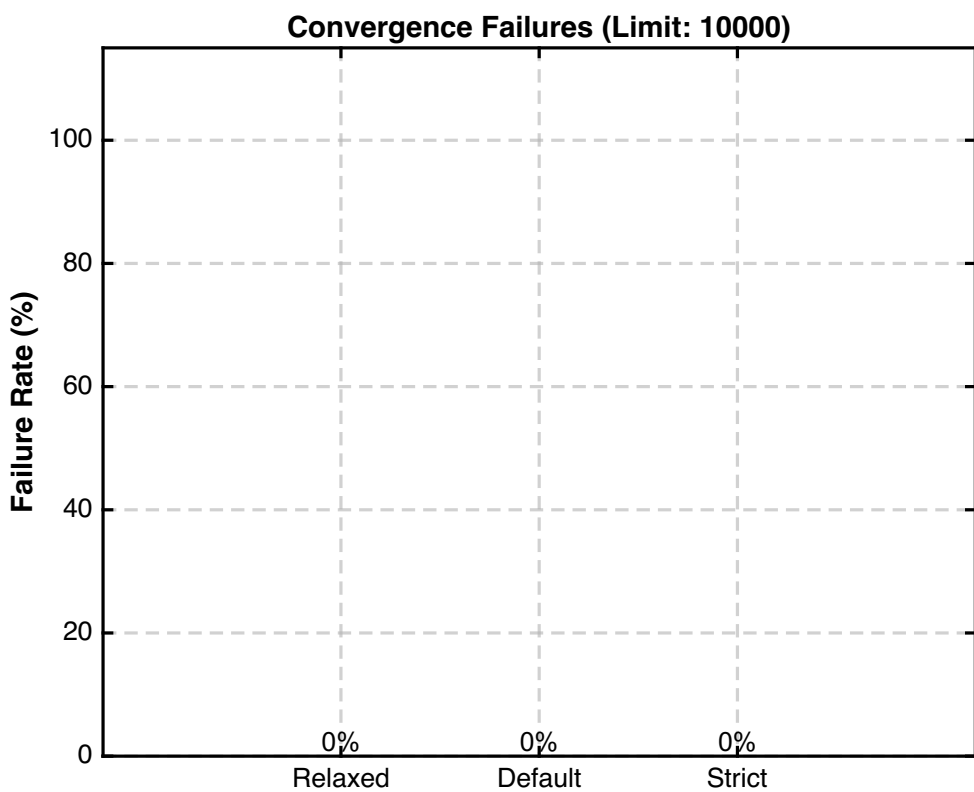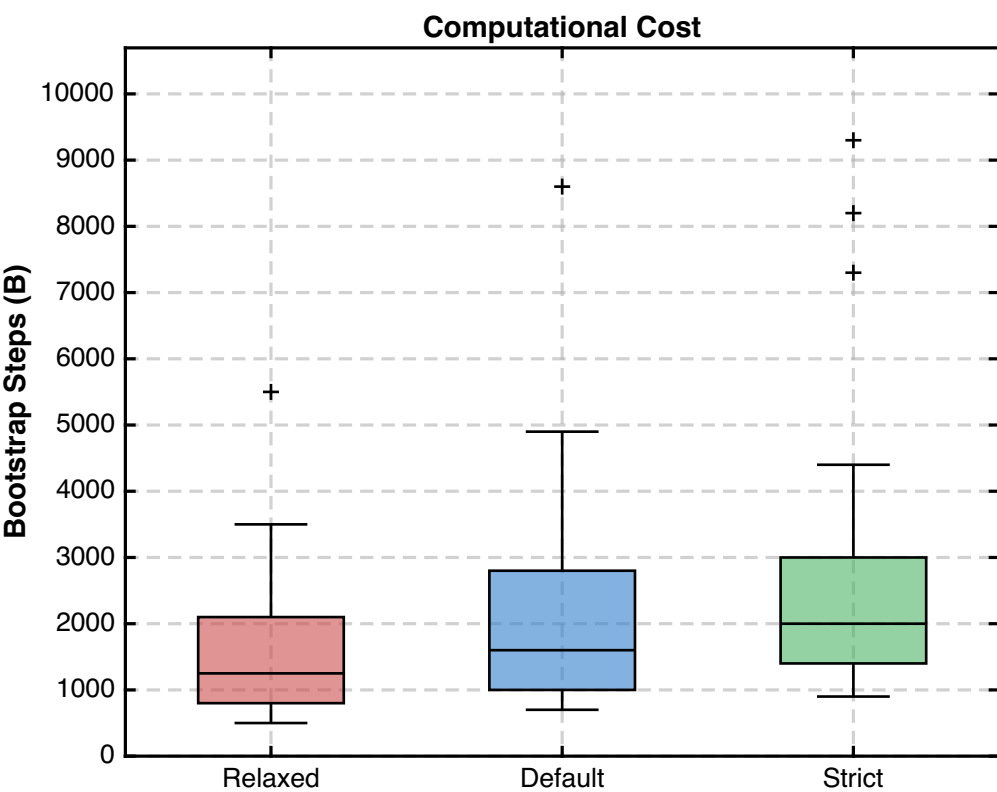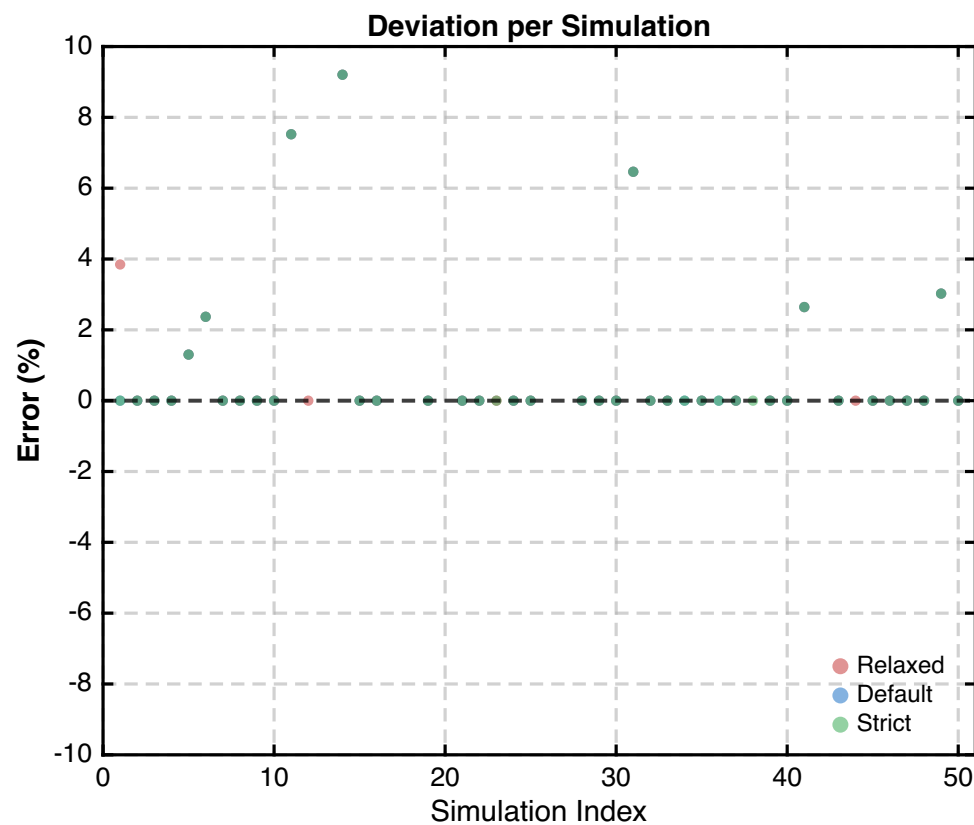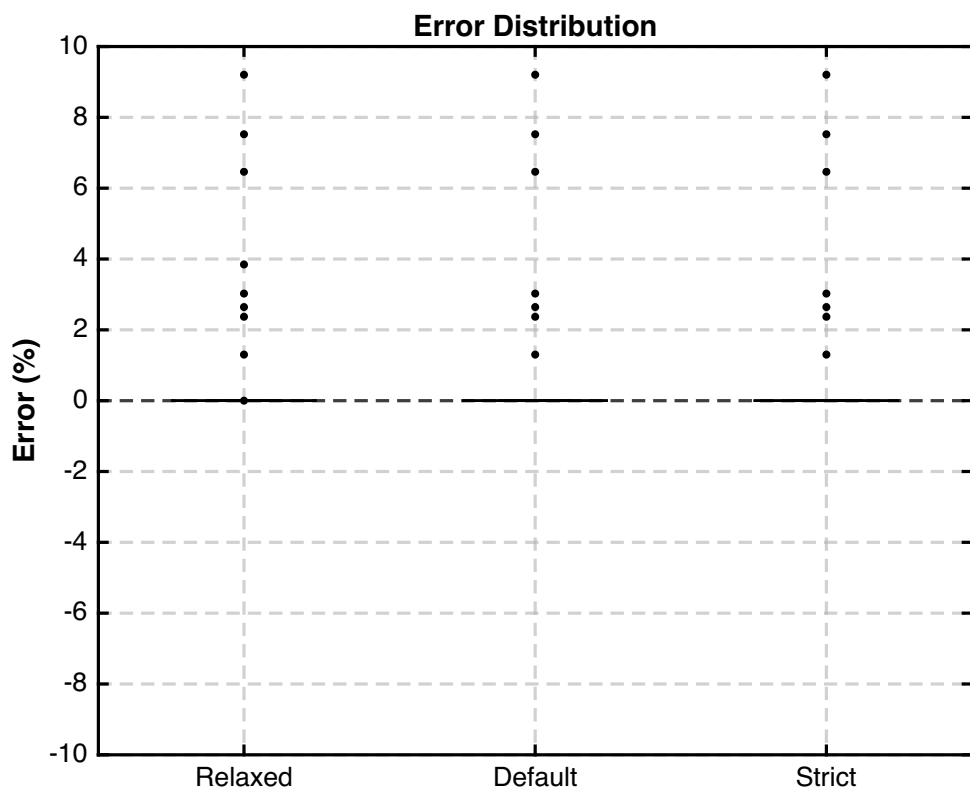
Ranking (Mean) Analysis: N 100 Normal

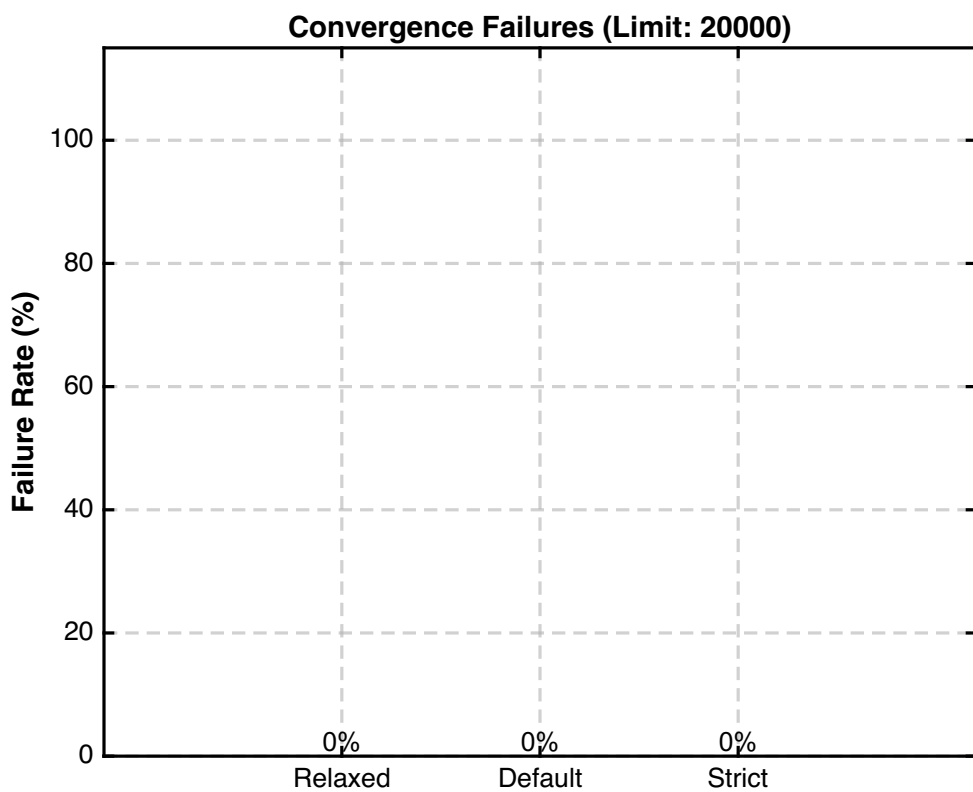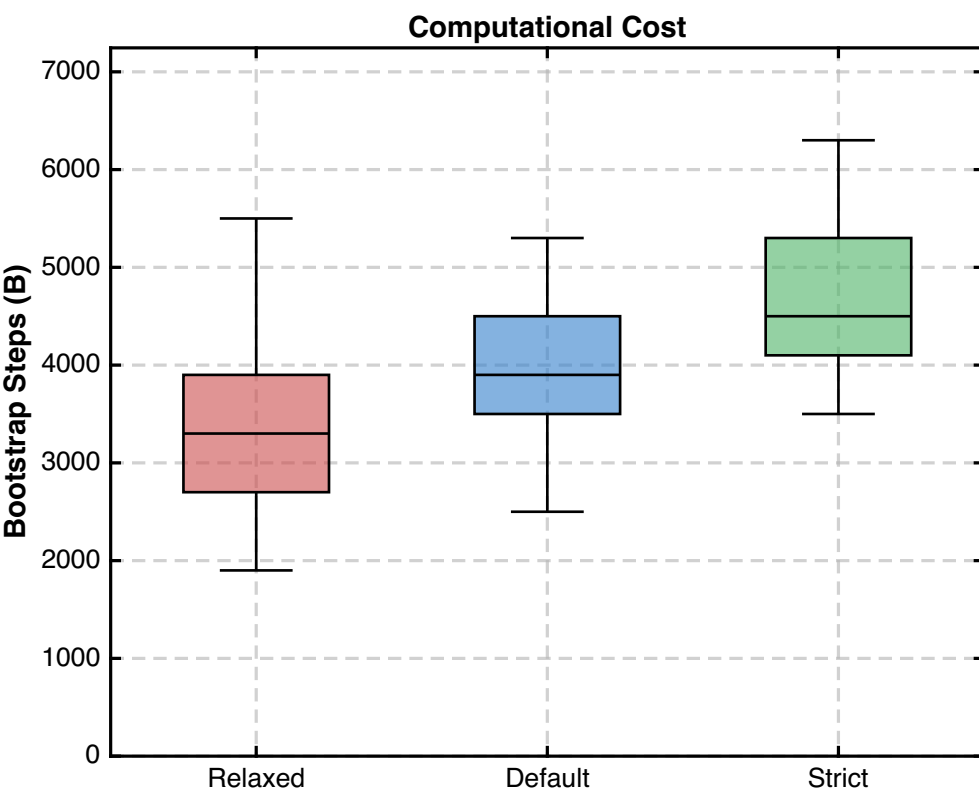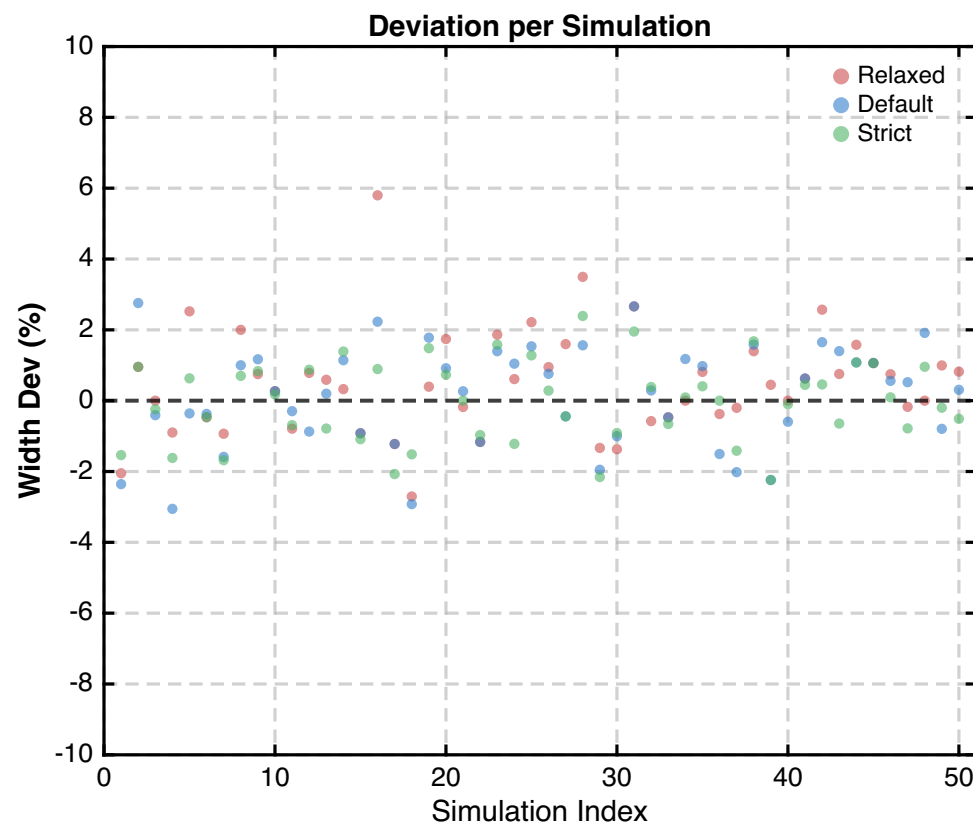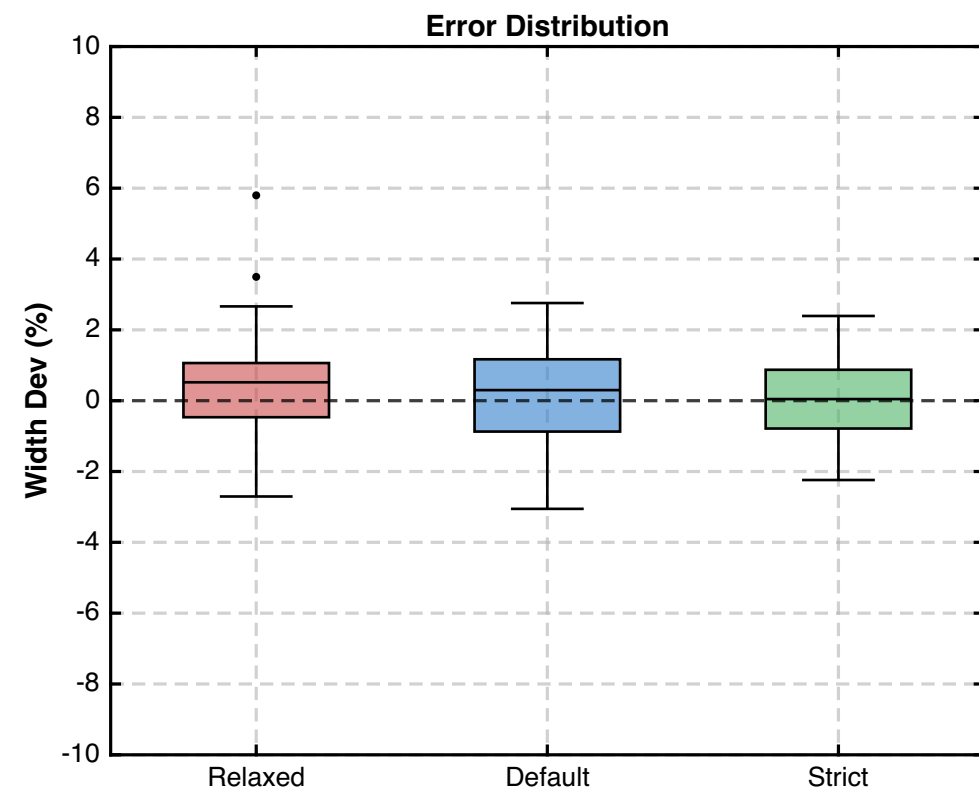Thresholds (Delta) Analysis: N 50 Skewed

BCa CI (Width) Analysis: N 50 Skewed
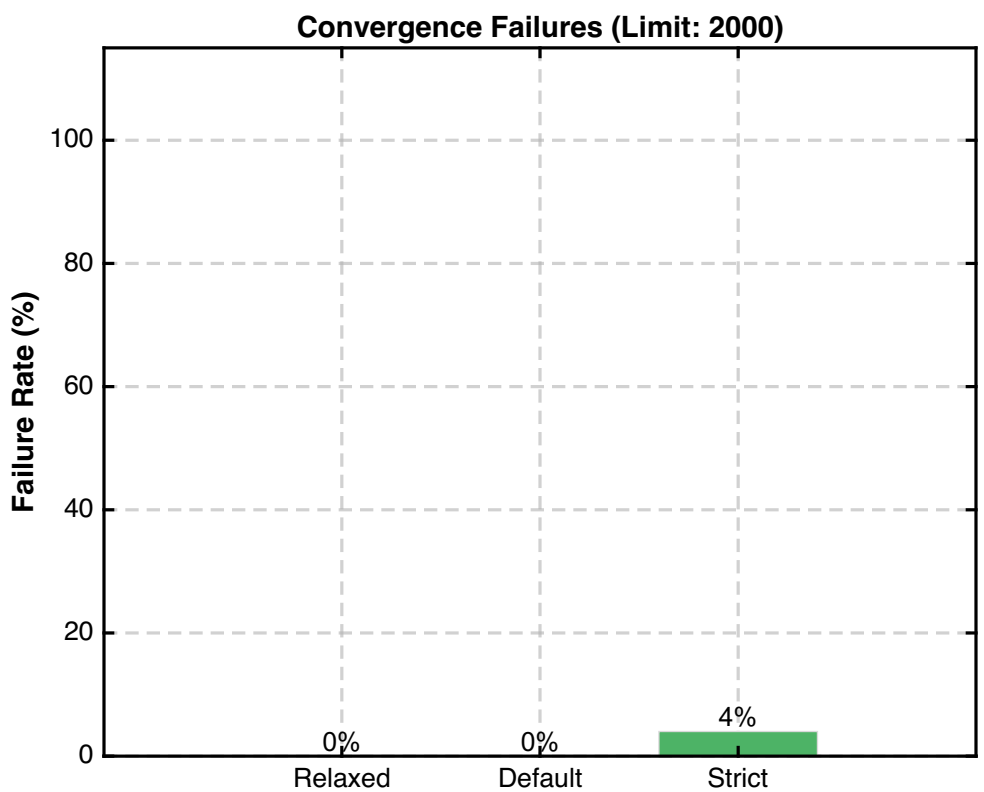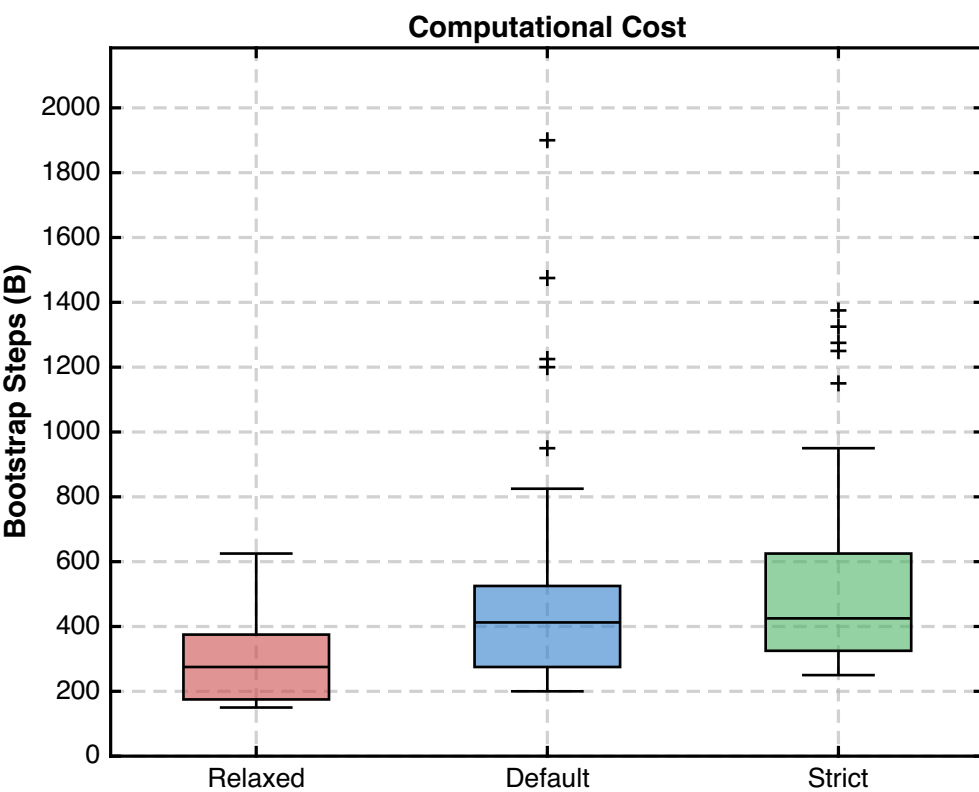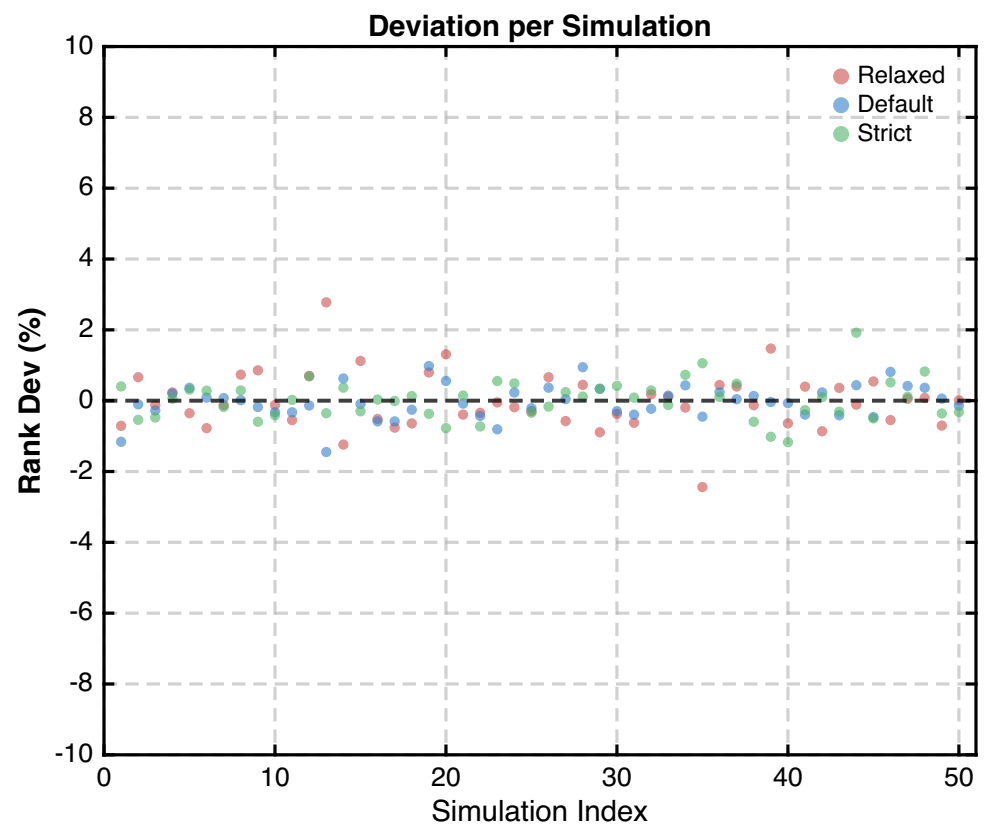
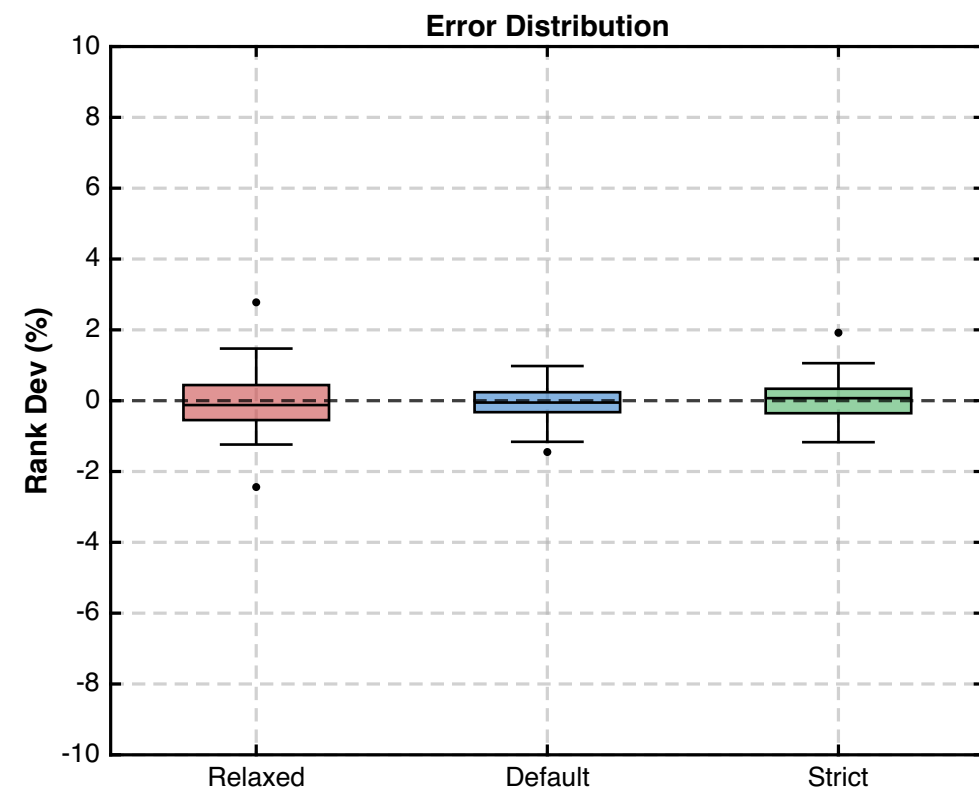Ranking (Mean) Analysis: N 50 Skewed

Thresholds (Delta) Analysis: N 50 Likert

BCa CI (Width) Analysis: N 50 Likert

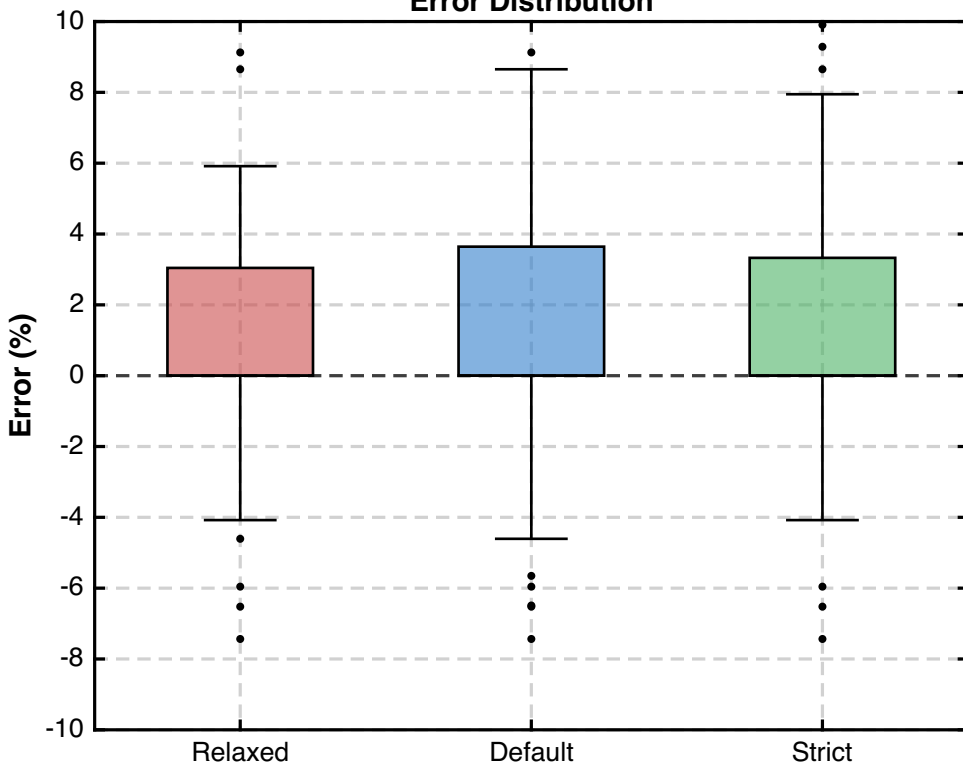Ranking (Mean) Analysis: N 50 Likert

Thresholds (Delta) Analysis: N 50 Bimodal
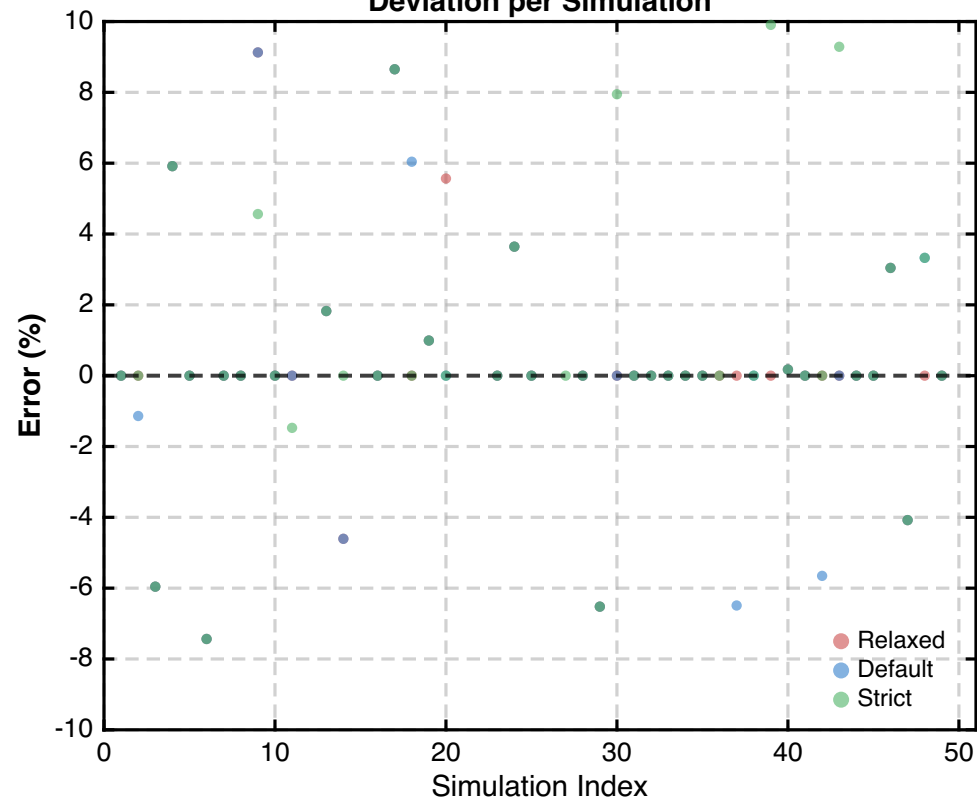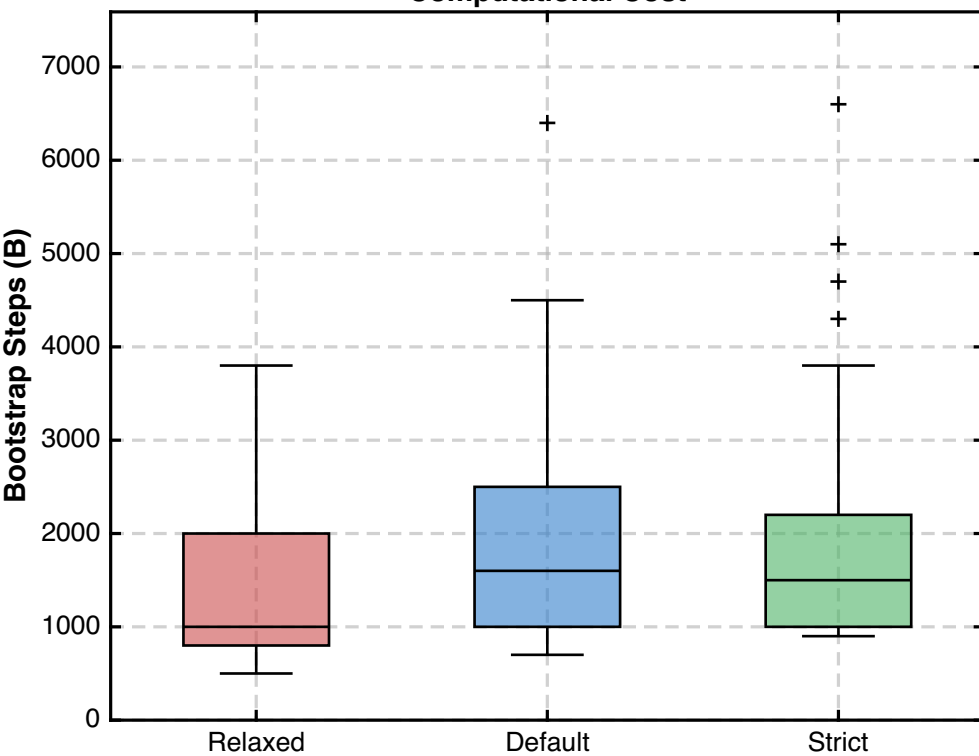
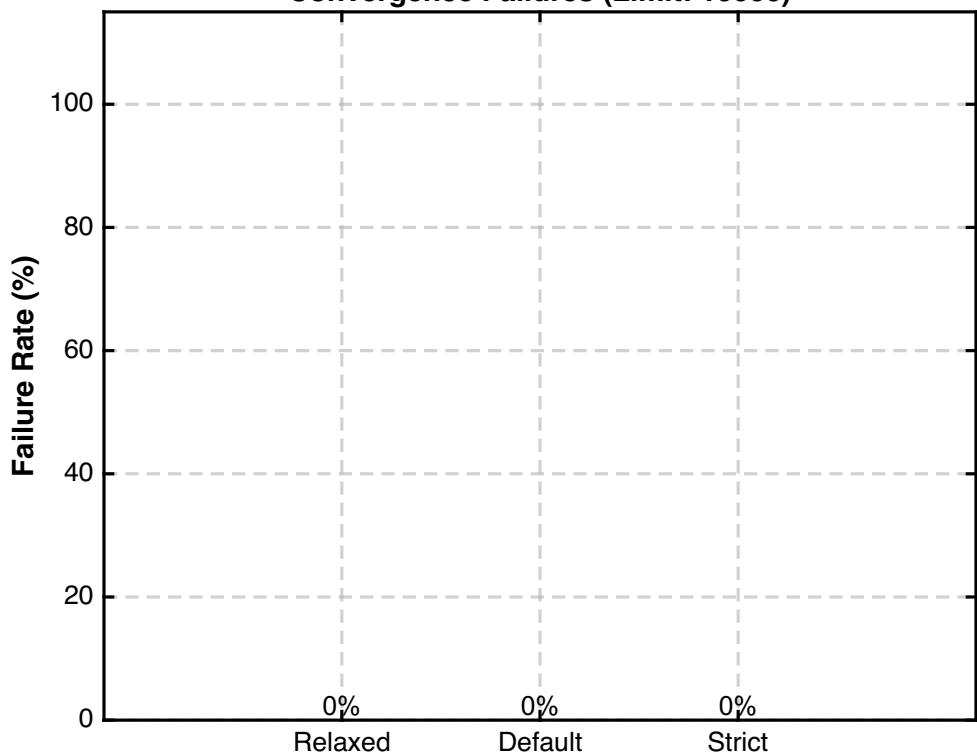## BCa CI (Width) Analysis: N 50 Bimodal

Error Distribution

Deviation per Simulation

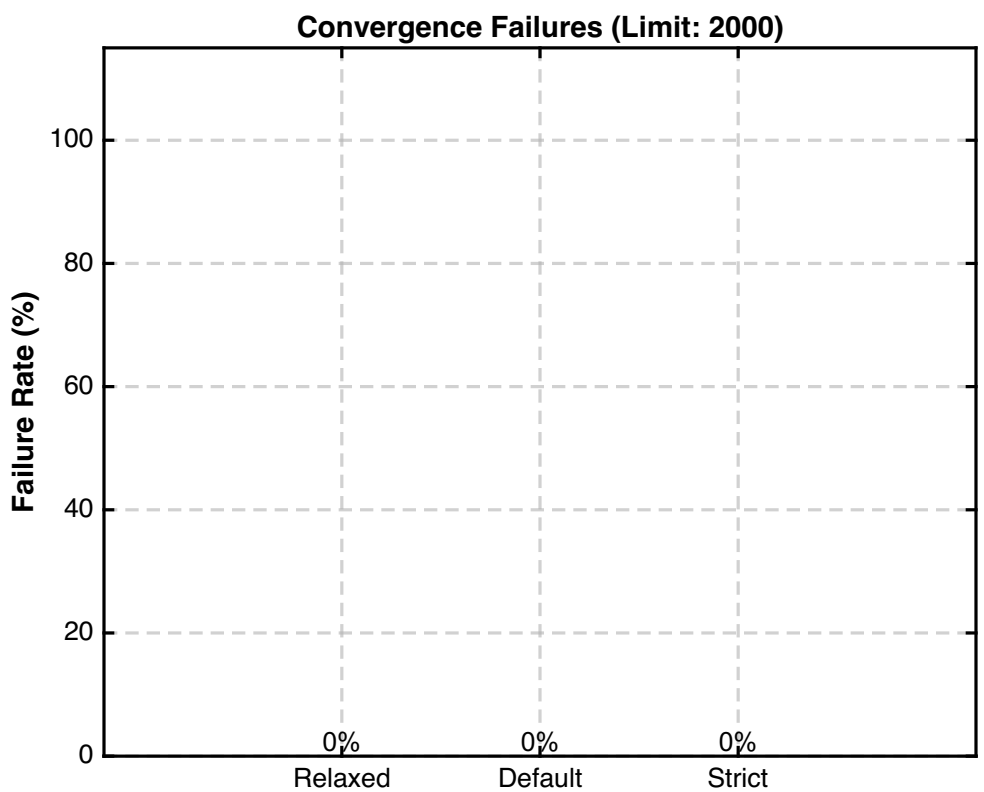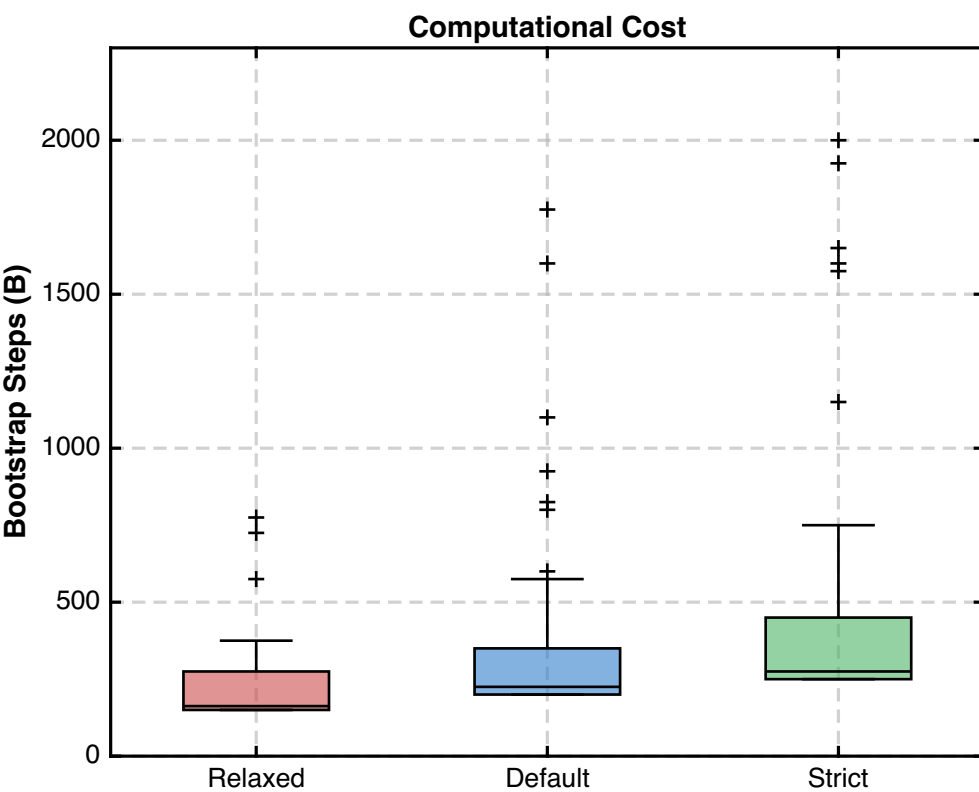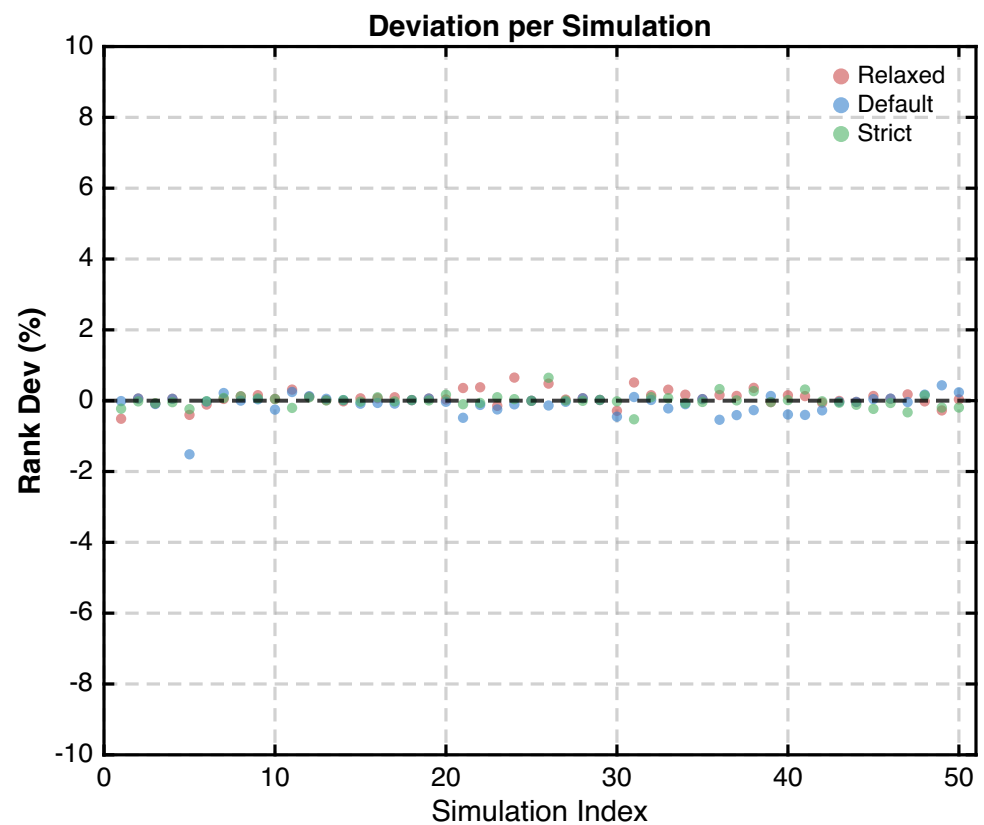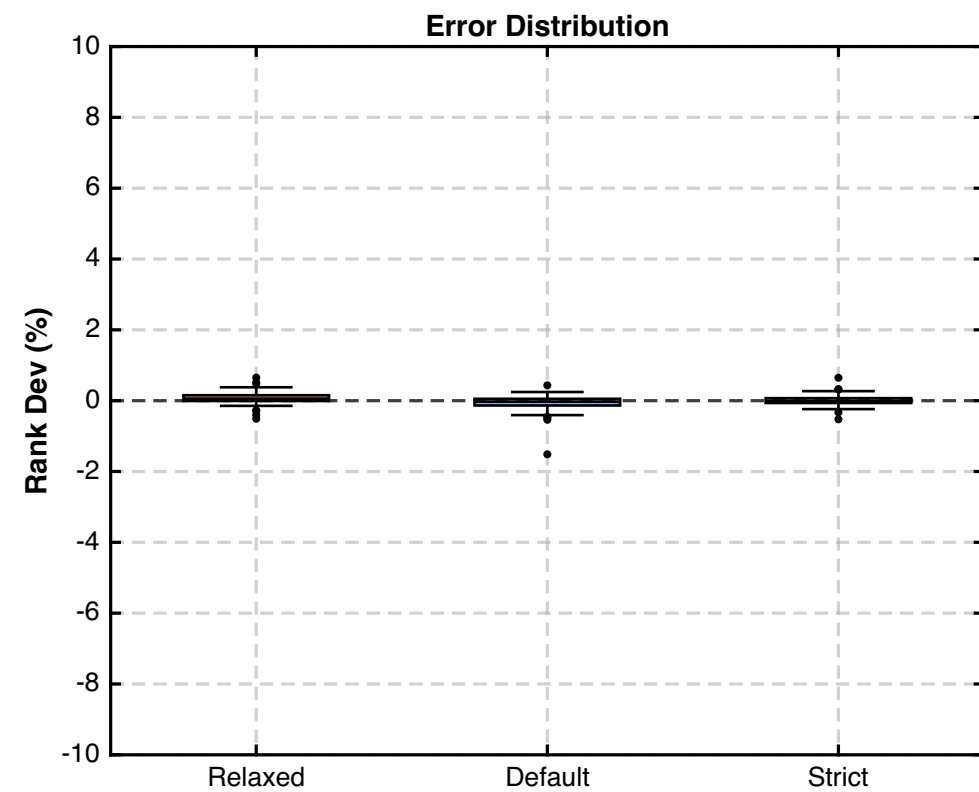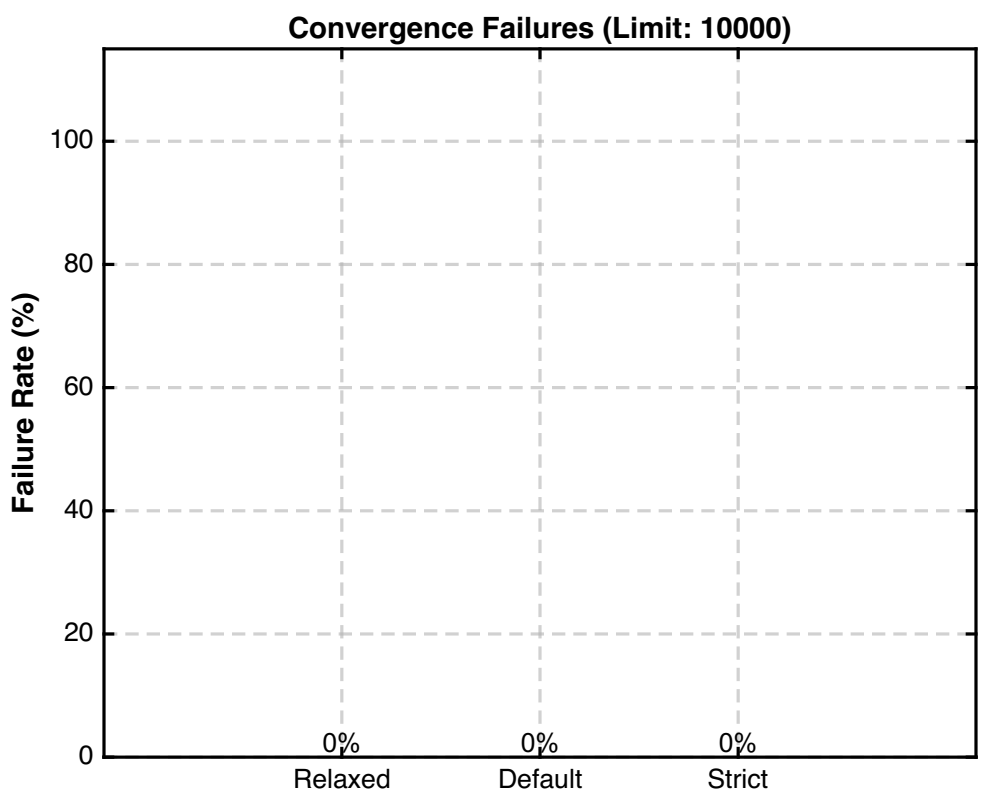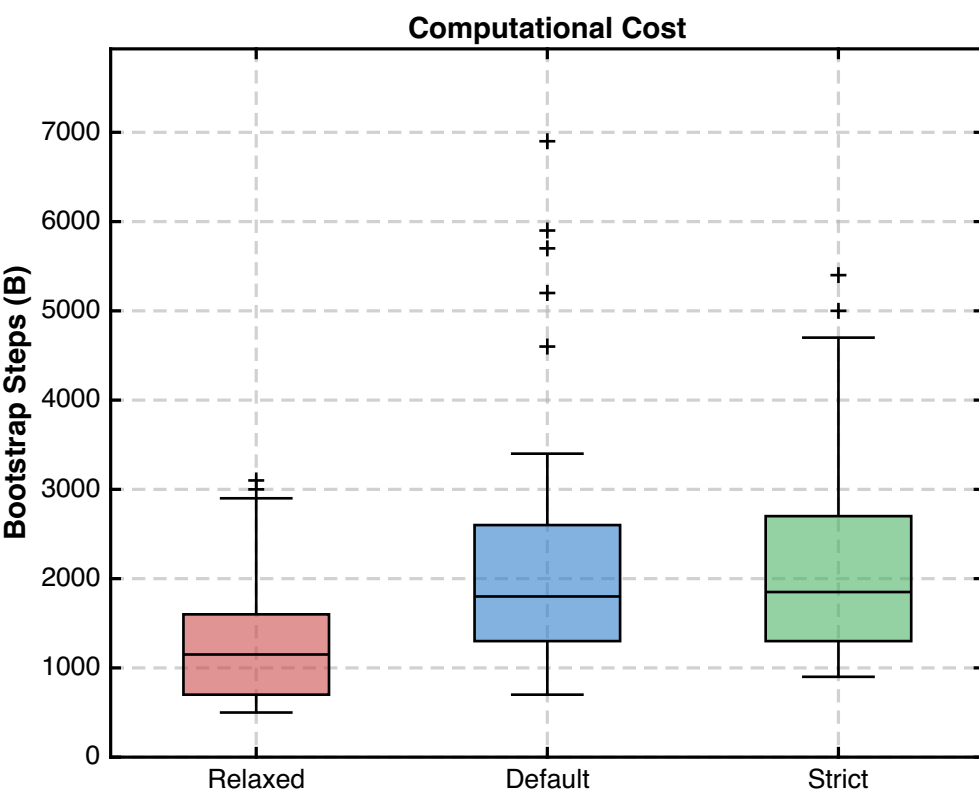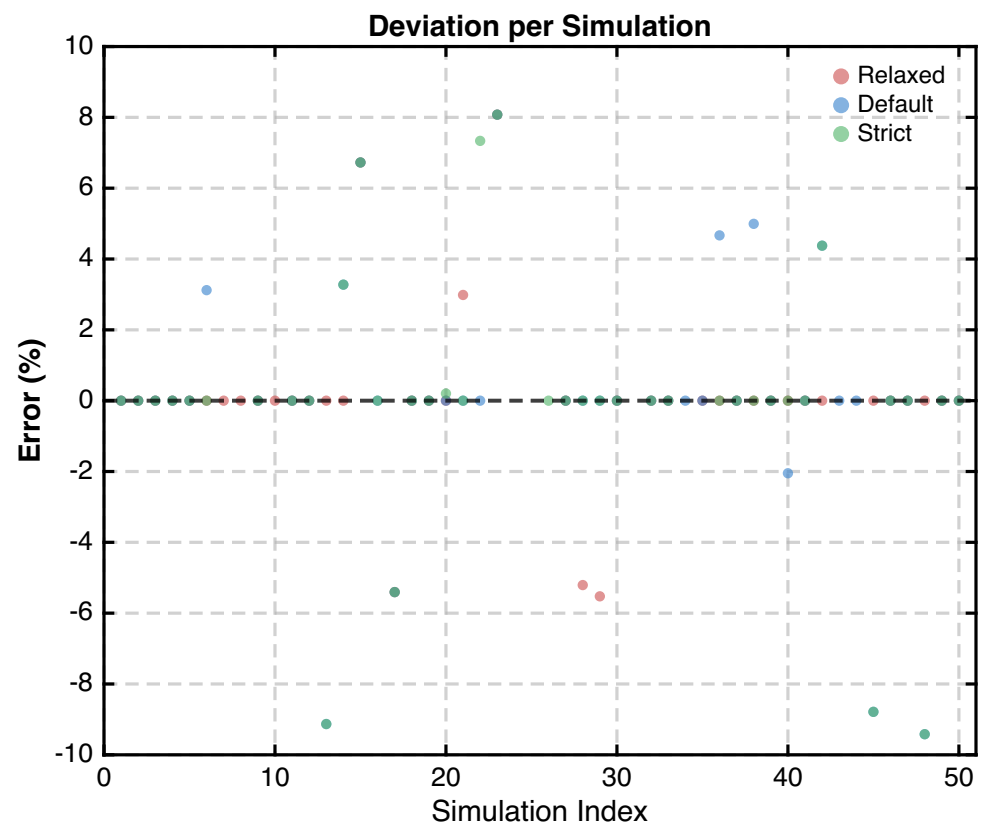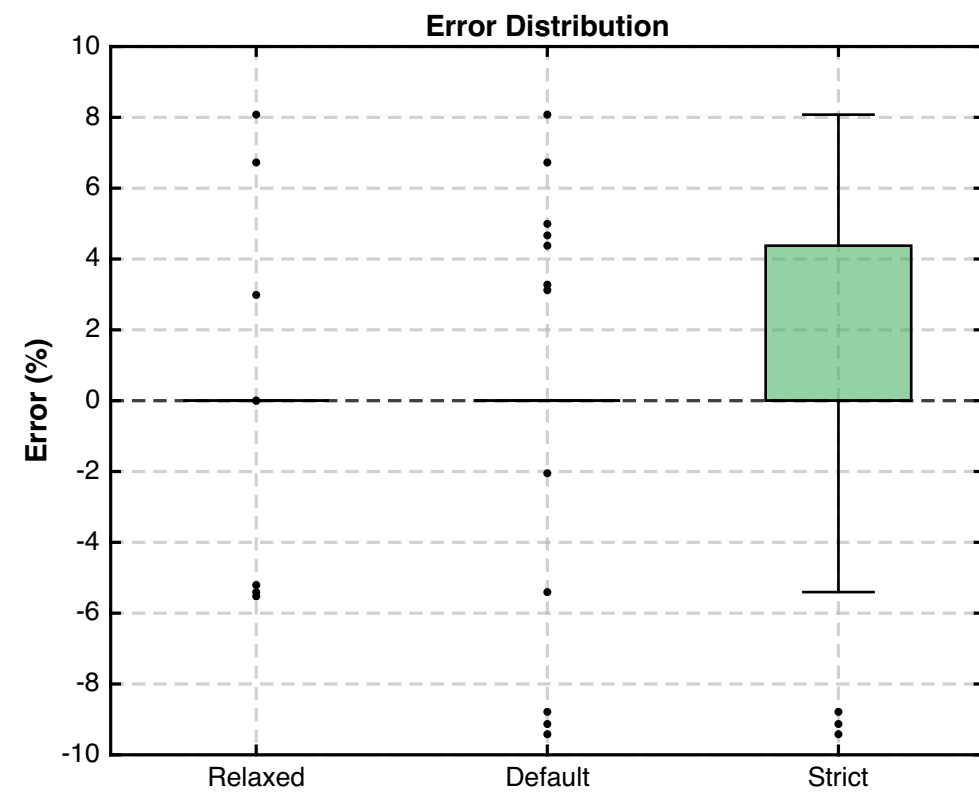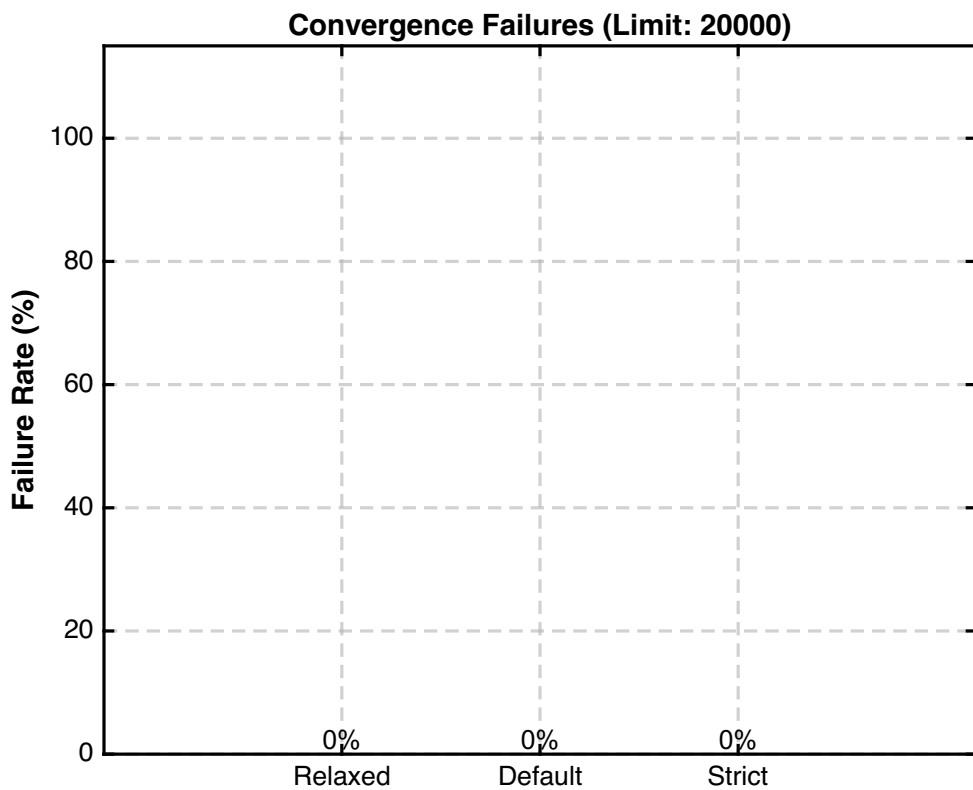### Computational Cost
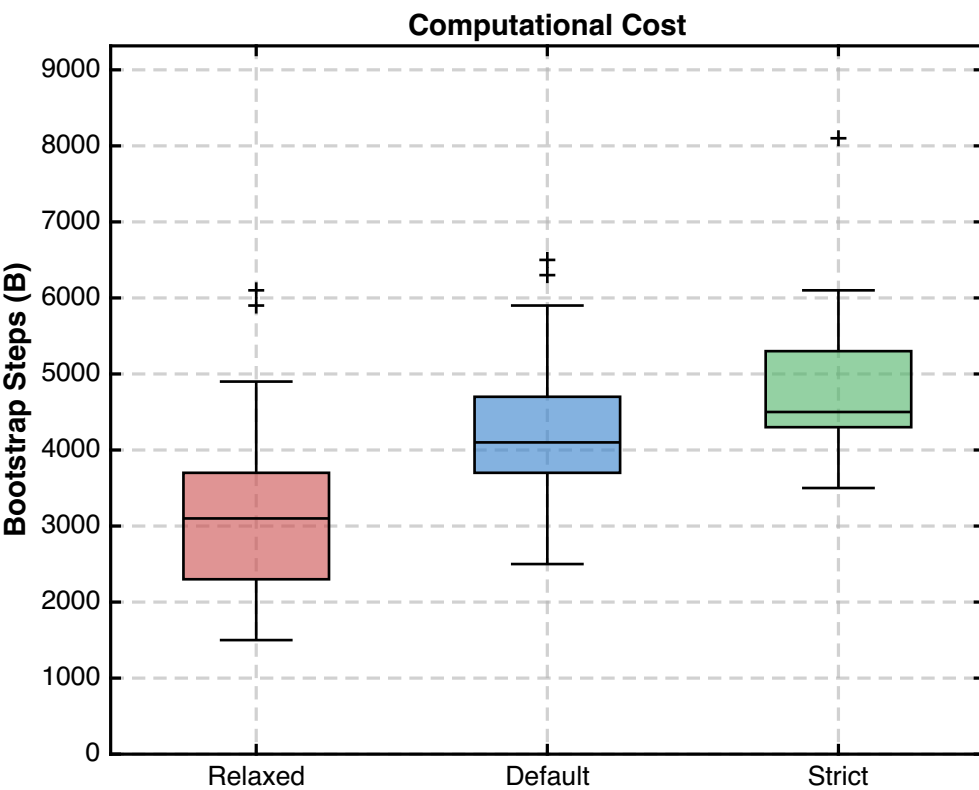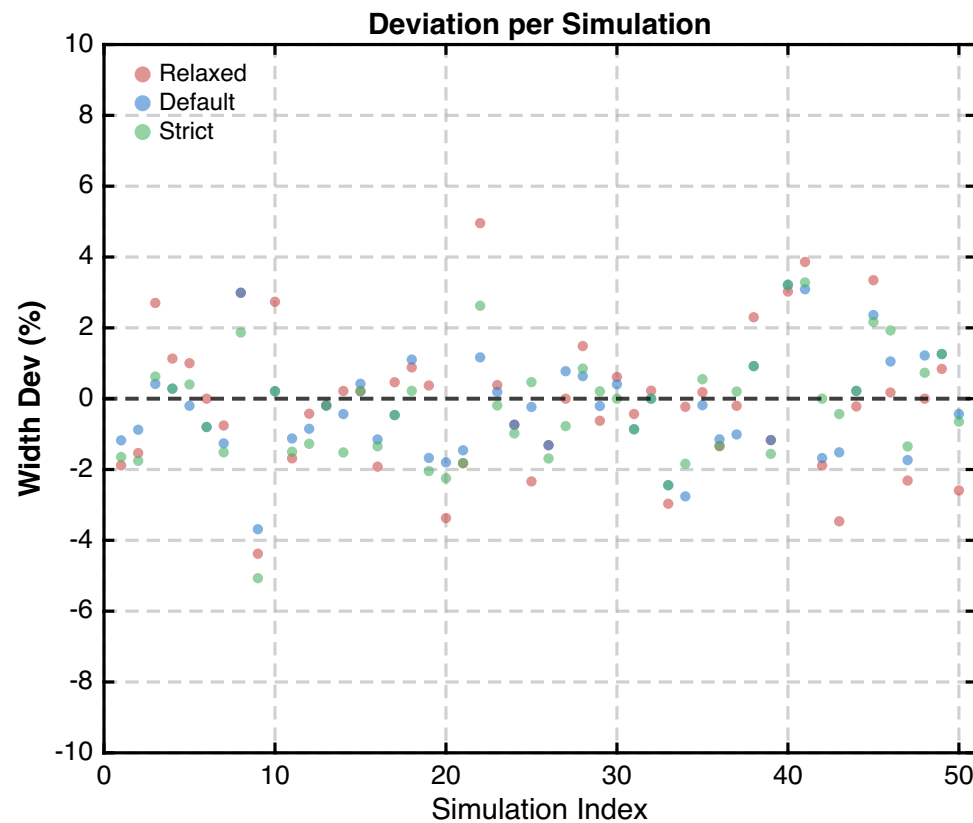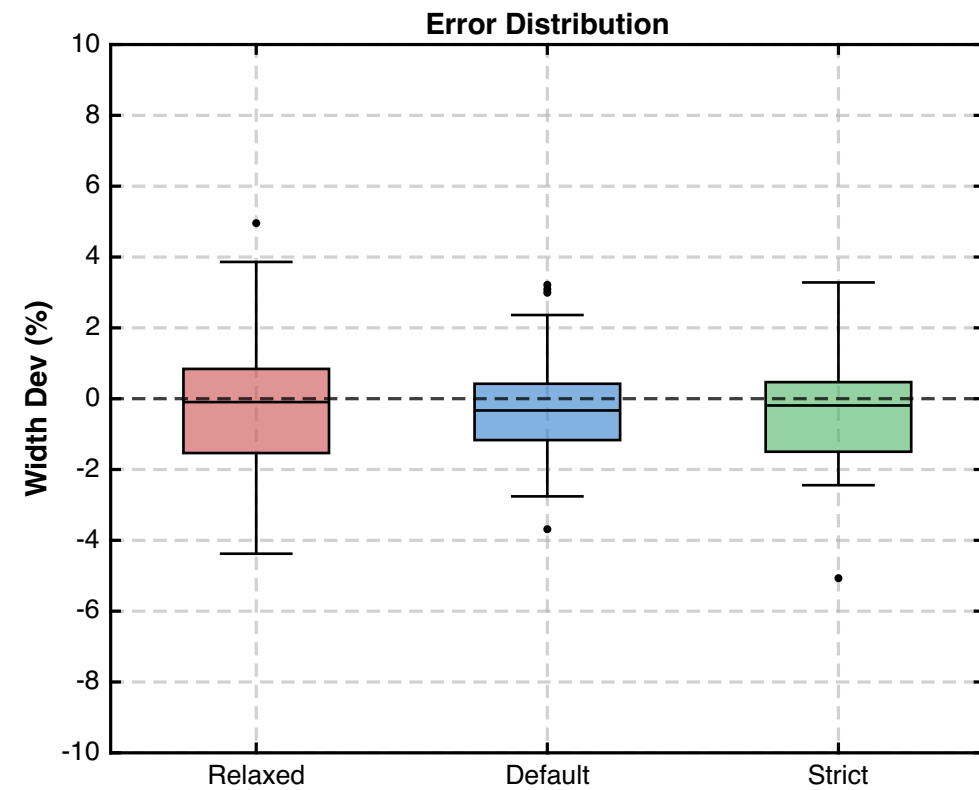
Convergence Failures (Limit: 20000)

Ranking (Mean) Analysis: N 50 Bimodal

Thresholds (Delta) Analysis: N 50 Large Effect

BCa CI (Width) Analysis: N 50 Large Effect

Ranking (Mean) Analysis: N 50 Large Effect

Error Distribution

Deviation per Simulation

Computational Cost

Convergence Failures (Limit: 2000)