

Table 1: Simulation performance under the alternative for varying sample sizes and outlier magnitudes for a Normal Distribution when the dependent variable is a cross-sectional process and 5% of the sample is outlier-contaminated. Estimation was carried out with 1 regressor.

n	$\rho$	Outl. Prop.	Level	$\gamma_c$	# Regressors	Rejection Frequency for $\lambda$			
						2	3	4	6
100	0	0.05	0.01	0.05	1	0.118	0.392	0.578	0.604
200	0	0.05	0.01	0.05	1	0.138	0.516	0.706	0.667
300	0	0.05	0.01	0.05	1	0.181	0.646	0.836	0.793
400	0	0.05	0.01	0.05	1	0.226	0.750	0.907	0.867
500	0	0.05	0.01	0.05	1	0.279	0.833	0.952	0.924

Table 2: Simulation performance under the alternative for varying sample sizes and outlier magnitudes for a Normal Distribution when the dependent variable is a stationary autoregressive process with coefficient of 0.5 on the autoregressive term and 5% of the sample is outlier-contaminated. Estimation was carried out with 1 regressor.

n	$\rho$	Outl. Prop.	Level	$\gamma_c$	# Regressors	Rejection Frequency for $\lambda$			
						2	3	4	6
100	0.5	0.05	0.01	0.05	1	0.115	0.377	0.566	0.586
200	0.5	0.05	0.01	0.05	1	0.124	0.482	0.677	0.641
300	0.5	0.05	0.01	0.05	1	0.162	0.615	0.814	0.756
400	0.5	0.05	0.01	0.05	1	0.202	0.713	0.894	0.850
500	0.5	0.05	0.01	0.05	1	0.245	0.797	0.941	0.908

Table 3: Simulation performance of the bootstrap tests under the null of no distortion when the reference distribution does and does not match the error distribution in the DGP using non-parametric bootstrapping.

n # Regressors $\rho$ Level $\gamma_c$ Parametric							Rejection Frequency						
							Asymp.	Raw			Clean		
								$L_1$	$L_2$	Variance	$L_1$	$L_2$	Variance
Normal Distribution													
50	5	0.0	0.05	0.05	Non-Parametric	0.433	0.001	0.002	0.002	0.029	0.026	0.175	
100	5	0.0	0.05	0.05	Non-Parametric	0.121	0.001	0.001	0.009	0.030	0.030	0.409	
200	5	0.0	0.05	0.05	Non-Parametric	0.053	0.000	0.000	0.012	0.026	0.025	0.413	
400	5	0.0	0.05	0.05	Non-Parametric	0.063	0.000	0.000	0.028	0.033	0.036	0.334	
50	5	0.5	0.05	0.05	Non-Parametric	0.459	0.002	0.002	0.004	0.004	0.003	0.009	
100	5	0.5	0.05	0.05	Non-Parametric	0.142	0.001	0.001	0.004	0.000	0.000	0.012	
200	5	0.5	0.05	0.05	Non-Parametric	0.071	0.000	0.000	0.023	0.000	0.000	0.029	
400	5	0.5	0.05	0.05	Non-Parametric	0.054	0.000	0.000	0.033	0.000	0.000	0.041	
$t_3$	Distribution												
50	5	0.0	0.05	0.05	Non-Parametric	0.725	0.000	0.000	0.001	0.139	0.143	0.451	
100	5	0.0	0.05	0.05	Non-Parametric	0.614	0.000	0.000	0.011	0.268	0.279	0.721	
200	5	0.0	0.05	0.05	Non-Parametric	0.608	0.000	0.000	0.055	0.271	0.281	0.731	
400	5	0.0	0.05	0.05	Non-Parametric	0.650	0.000	0.000	0.070	0.293	0.318	0.731	
50	5	0.5	0.05	0.05	Non-Parametric	0.758	0.000	0.000	0.000	0.000	0.000	0.014	
100	5	0.5	0.05	0.05	Non-Parametric	0.605	0.000	0.000	0.023	0.002	0.003	0.056	
200	5	0.5	0.05	0.05	Non-Parametric	0.614	0.000	0.000	0.084	0.001	0.001	0.108	
400	5	0.5	0.05	0.05	Non-Parametric	0.667	0.000	0.000	0.091	0.001	0.001	0.104	
Log-normal Distribution													
400	5	0.0	0.05	0.05	Non-Parametric	1.000	0.000	0.000	0.992	NA	NA	NA	

Table 4: Simulation performance of the bootstrap tests under the null of no distortion when the reference distribution does and does not match the error distribution in the DGP using non-parametric bootstrapping.

n	# Regressors	$\rho$	Level	$\gamma_c$	Parametric	Rejection Frequency			
						Asymp.	Clean		
							$L_1$	$L_2$	Variance
Normal Distribution									
50	5	0.0	0.05	0.05	Parametric	0.397	0.178	0.184	0.344
100	5	0.0	0.05	0.05	Parametric	0.128	0.186	0.195	0.315
200	5	0.0	0.05	0.05	Parametric	0.074	0.179	0.193	0.273
400	5	0.0	0.05	0.05	Parametric	0.053	0.147	0.166	0.234
50	5	0.5	0.05	0.05	Parametric	0.441	0.207	0.222	0.395
100	5	0.5	0.05	0.05	Parametric	0.124	0.182	0.180	0.317
200	5	0.5	0.05	0.05	Parametric	0.082	0.174	0.179	0.284
400	5	0.5	0.05	0.05	Parametric	0.057	0.149	0.148	0.223
$t_3$	Distribution								
50	5	0.0	0.05	0.05	Parametric	0.722	0.447	0.452	0.624
100	5	0.0	0.05	0.05	Parametric	0.617	0.556	0.576	0.702
200	5	0.0	0.05	0.05	Parametric	0.590	0.563	0.587	0.688
400	5	0.0	0.05	0.05	Parametric	0.603	0.577	0.601	0.685
50	5	0.5	0.05	0.05	Parametric	0.730	0.467	0.488	0.632
100	5	0.5	0.05	0.05	Parametric	0.646	0.551	0.584	0.704
200	5	0.5	0.05	0.05	Parametric	0.633	0.565	0.583	0.691
400	5	0.5	0.05	0.05	Parametric	0.666	0.589	0.626	0.716

Table 5: Simulation performance under the alternative for varying sample sizes when using the bootstrap implementations of our test (for outlier magnitude of 2 SD of the error term) using Non-Parametric Bootstraps.

$\lambda$ n    # Regressors $\rho$ Level $\gamma_c$ Parametric								Rejection Frequency						
								Asymp.	Raw			Clean		
									$L_1$	$L_2$	Variance	$L_1$	$L_2$	Variance
Normal Distribution														
2	50	5	0.0	0.01	0.05	Non-Parametric	0.320	0.000	0.000	0.000	0.006	0.008	0.124	
2	100	5	0.0	0.01	0.05	Non-Parametric	0.102	0.000	0.000	0.002	0.022	0.022	0.368	
2	200	5	0.0	0.01	0.05	Non-Parametric	0.114	0.000	0.000	0.012	0.024	0.026	0.452	
2	400	5	0.0	0.01	0.05	Non-Parametric	0.234	0.000	0.000	0.098	0.032	0.056	0.560	
2	50	5	0.0	0.05	0.05	Non-Parametric	0.488	0.000	0.000	0.002	0.024	0.028	0.194	
2	100	5	0.0	0.05	0.05	Non-Parametric	0.214	0.000	0.000	0.018	0.064	0.068	0.494	
2	200	5	0.0	0.05	0.05	Non-Parametric	0.266	0.000	0.000	0.086	0.084	0.110	0.614	
2	400	5	0.0	0.05	0.05	Non-Parametric	0.462	0.000	0.000	0.230	0.146	0.208	0.732	
2	50	5	0.5	0.01	0.05	Non-Parametric	0.436	0.000	0.000	0.000	0.000	0.000	0.002	
2	100	5	0.5	0.01	0.05	Non-Parametric	0.124	0.000	0.000	0.002	0.000	0.000	0.014	
2	200	5	0.5	0.01	0.05	Non-Parametric	0.132	0.000	0.000	0.024	0.000	0.000	0.048	
2	400	5	0.5	0.01	0.05	Non-Parametric	0.238	0.000	0.000	0.122	0.000	0.000	0.108	
2	50	5	0.5	0.05	0.05	Non-Parametric	0.564	0.000	0.000	0.002	0.002	0.002	0.008	
2	100	5	0.5	0.05	0.05	Non-Parametric	0.262	0.000	0.000	0.004	0.000	0.000	0.034	
2	200	5	0.5	0.05	0.05	Non-Parametric	0.284	0.000	0.000	0.078	0.000	0.000	0.140	
2	400	5	0.5	0.05	0.05	Non-Parametric	0.430	0.000	0.000	0.276	0.000	0.000	0.318	
$t_3$ Distribution														
2	50	5	0.0	0.01	0.05	Non-Parametric	0.554	0.000	0.000	0.000	NA	NA	NA	
2	100	5	0.0	0.01	0.05	Non-Parametric	0.390	0.000	0.000	0.002	NA	NA	NA	
2	200	5	0.0	0.01	0.05	Non-Parametric	0.352	0.000	0.000	0.012	NA	NA	NA	
2	400	5	0.0	0.01	0.05	Non-Parametric	0.330	0.000	0.000	0.010	NA	NA	NA	
2	50	5	0.0	0.05	0.05	Non-Parametric	0.678	0.000	0.000	0.002	NA	NA	NA	
2	100	5	0.0	0.05	0.05	Non-Parametric	0.546	0.000	0.000	0.016	NA	NA	NA	
2	200	5	0.0	0.05	0.05	Non-Parametric	0.528	0.000	0.000	0.048	NA	NA	NA	
2	400	5	0.0	0.05	0.05	Non-Parametric	0.516	0.000	0.000	0.046	NA	NA	NA	
2	50	5	0.5	0.01	0.05	Non-Parametric	0.562	0.000	0.000	0.000	NA	NA	NA	
2	100	5	0.5	0.01	0.05	Non-Parametric	0.418	0.000	0.000	0.000	NA	NA	NA	
2	200	5	0.5	0.01	0.05	Non-Parametric	0.368	0.000	0.000	0.010	NA	NA	NA	
2	400	5	0.5	0.01	0.05	Non-Parametric	0.434	0.000	0.000	0.016	NA	NA	NA	
2	50	5	0.5	0.05	0.05	Non-Parametric	0.694	0.004	0.000	0.002	NA	NA	NA	
2	100	5	0.5	0.05	0.05	Non-Parametric	0.584	0.000	0.000	0.012	NA	NA	NA	
2	200	5	0.5	0.05	0.05	Non-Parametric	0.540	0.000	0.000	0.066	NA	NA	NA	
2	400	5	0.5	0.05	0.05	Non-Parametric	0.618	0.000	0.000	0.068	NA	NA	NA	

Table 6: Simulation performance under the alternative for varying sample sizes when using the bootstrap implementations of our test (for outlier magnitude of 4 SD of the error term) using Non-Parametric Bootstraps.

$\lambda$ n # Regressors $\rho$ Level $\gamma_c$ Parametric								Rejection Frequency						
								Asymp.	Raw			Clean		
									$L_1$	$L_2$	Variance	$L_1$	$L_2$	Variance
Normal Distribution														
4	50	5	0.0	0.01	0.05	Non-Parametric	0.840	0.000	0.000	0.002	0.040	0.036	0.524	
4	100	5	0.0	0.01	0.05	Non-Parametric	0.924	0.000	0.000	0.178	0.332	0.468	0.948	
4	200	5	0.0	0.01	0.05	Non-Parametric	1.000	0.000	0.000	0.938	0.478	0.738	1.000	
4	400	5	0.0	0.01	0.05	Non-Parametric	1.000	0.000	0.000	1.000	0.782	0.992	1.000	
4	50	5	0.0	0.05	0.05	Non-Parametric	0.912	0.002	0.002	0.002	0.194	0.196	0.686	
4	100	5	0.0	0.05	0.05	Non-Parametric	0.972	0.000	0.000	0.452	0.574	0.690	0.984	
4	200	5	0.0	0.05	0.05	Non-Parametric	1.000	0.000	0.000	0.992	0.728	0.904	1.000	
4	400	5	0.0	0.05	0.05	Non-Parametric	1.000	0.000	0.000	1.000	0.932	0.998	1.000	
4	50	5	0.5	0.01	0.05	Non-Parametric	0.868	0.000	0.000	0.000	0.000	0.000	0.002	
4	100	5	0.5	0.01	0.05	Non-Parametric	0.930	0.000	0.000	0.114	0.000	0.000	0.204	
4	200	5	0.5	0.01	0.05	Non-Parametric	0.998	0.000	0.000	0.902	0.000	0.000	0.900	
4	400	5	0.5	0.01	0.05	Non-Parametric	1.000	0.000	0.000	1.000	0.000	0.000	1.000	
4	50	5	0.5	0.05	0.05	Non-Parametric	0.926	0.000	0.000	0.000	0.000	0.000	0.010	
4	100	5	0.5	0.05	0.05	Non-Parametric	0.972	0.000	0.000	0.372	0.000	0.000	0.434	
4	200	5	0.5	0.05	0.05	Non-Parametric	1.000	0.000	0.000	0.974	0.000	0.000	0.990	
4	400	5	0.5	0.05	0.05	Non-Parametric	1.000	0.000	0.000	1.000	0.000	0.000	1.000	
$t_3$ Distribution														
4	50	5	0.0	0.01	0.05	Non-Parametric	0.722	0.000	0.000	0.000	NA	NA	NA	
4	100	5	0.0	0.01	0.05	Non-Parametric	0.564	0.000	0.000	0.026	NA	NA	NA	
4	200	5	0.0	0.01	0.05	Non-Parametric	0.636	0.000	0.000	0.140	NA	NA	NA	
4	400	5	0.0	0.01	0.05	Non-Parametric	0.802	0.000	0.000	0.368	NA	NA	NA	
4	50	5	0.0	0.05	0.05	Non-Parametric	0.812	0.004	0.002	0.006	NA	NA	NA	
4	100	5	0.0	0.05	0.05	Non-Parametric	0.692	0.000	0.000	0.090	NA	NA	NA	
4	200	5	0.0	0.05	0.05	Non-Parametric	0.794	0.000	0.000	0.314	NA	NA	NA	
4	400	5	0.0	0.05	0.05	Non-Parametric	0.890	0.000	0.000	0.558	NA	NA	NA	
4	50	5	0.5	0.01	0.05	Non-Parametric	0.708	0.000	0.000	0.000	NA	NA	NA	
4	100	5	0.5	0.01	0.05	Non-Parametric	0.648	0.000	0.000	0.020	NA	NA	NA	
4	200	5	0.5	0.01	0.05	Non-Parametric	0.674	0.000	0.000	0.182	NA	NA	NA	
4	400	5	0.5	0.01	0.05	Non-Parametric	0.808	0.000	0.000	0.380	NA	NA	NA	
4	50	5	0.5	0.05	0.05	Non-Parametric	0.802	0.000	0.000	0.000	NA	NA	NA	
4	100	5	0.5	0.05	0.05	Non-Parametric	0.804	0.000	0.000	0.100	NA	NA	NA	
4	200	5	0.5	0.05	0.05	Non-Parametric	0.798	0.000	0.000	0.344	NA	NA	NA	
4	400	5	0.5	0.05	0.05	Non-Parametric	0.904	0.000	0.000	0.606	NA	NA	NA	

Table 7: Simulation performance under the alternative for varying sample sizes when using the bootstrap implementations of our test (for outlier magnitude of 6 SD of the error term) using Non-Parametric Bootstraps.

$\lambda$ n    # Regressors $\rho$ Level $\gamma_c$ Parametric								Rejection Frequency						
								Asymp.	Raw			Clean		
									$L_1$	$L_2$	Variance	$L_1$	$L_2$	Variance
Normal Distribution														
6	50	5	0.0	0.01	0.05	Non-Parametric	0.998	0.000	0.000	0.000	0.372	0.392	0.938	
6	100	5	0.0	0.01	0.05	Non-Parametric	1.000	0.000	0.000	0.506	0.790	0.880	1.000	
6	200	5	0.0	0.01	0.05	Non-Parametric	1.000	0.000	0.000	1.000	0.964	0.998	1.000	
6	400	5	0.0	0.01	0.05	Non-Parametric	1.000	0.000	0.000	1.000	1.000	1.000	1.000	
6	50	5	0.0	0.05	0.05	Non-Parametric	0.998	0.000	0.000	0.004	0.694	0.766	0.976	
6	100	5	0.0	0.05	0.05	Non-Parametric	1.000	0.000	0.000	0.886	0.926	0.962	1.000	
6	200	5	0.0	0.05	0.05	Non-Parametric	1.000	0.000	0.000	1.000	0.988	1.000	1.000	
6	400	5	0.0	0.05	0.05	Non-Parametric	1.000	0.000	0.000	1.000	1.000	1.000	1.000	
6	50	5	0.5	0.01	0.05	Non-Parametric	0.990	0.000	0.000	0.000	0.000	0.000	0.010	
6	100	5	0.5	0.01	0.05	Non-Parametric	1.000	0.000	0.000	0.504	0.000	0.000	0.562	
6	200	5	0.5	0.01	0.05	Non-Parametric	1.000	0.000	0.000	1.000	0.000	0.000	1.000	
6	400	5	0.5	0.01	0.05	Non-Parametric	1.000	0.000	0.000	1.000	0.000	0.000	1.000	
6	50	5	0.5	0.05	0.05	Non-Parametric	0.994	0.000	0.000	0.000	0.000	0.000	0.036	
6	100	5	0.5	0.05	0.05	Non-Parametric	1.000	0.000	0.000	0.844	0.000	0.000	0.844	
6	200	5	0.5	0.05	0.05	Non-Parametric	1.000	0.000	0.000	1.000	0.000	0.000	1.000	
6	400	5	0.5	0.05	0.05	Non-Parametric	1.000	0.000	0.000	1.000	0.000	0.000	1.000	
$t_3$ Distribution														
6	50	5	0.0	0.01	0.05	Non-Parametric	0.930	0.000	0.000	0.000	NA	NA	NA	
6	100	5	0.0	0.01	0.05	Non-Parametric	0.926	0.000	0.000	0.198	NA	NA	NA	
6	200	5	0.0	0.01	0.05	Non-Parametric	0.978	0.000	0.000	0.756	NA	NA	NA	
6	400	5	0.0	0.01	0.05	Non-Parametric	0.994	0.000	0.000	0.934	NA	NA	NA	
6	50	5	0.0	0.05	0.05	Non-Parametric	0.964	0.000	0.000	0.006	NA	NA	NA	
6	100	5	0.0	0.05	0.05	Non-Parametric	0.970	0.000	0.000	0.480	NA	NA	NA	
6	200	5	0.0	0.05	0.05	Non-Parametric	0.988	0.000	0.000	0.886	NA	NA	NA	
6	400	5	0.0	0.05	0.05	Non-Parametric	0.998	0.000	0.000	0.954	NA	NA	NA	
6	50	5	0.5	0.01	0.05	Non-Parametric	0.916	0.000	0.000	0.000	NA	NA	NA	
6	100	5	0.5	0.01	0.05	Non-Parametric	0.956	0.000	0.000	0.170	NA	NA	NA	
6	200	5	0.5	0.01	0.05	Non-Parametric	0.992	0.000	0.000	0.758	NA	NA	NA	
6	400	5	0.5	0.01	0.05	Non-Parametric	0.996	0.000	0.000	0.934	NA	NA	NA	
6	50	5	0.5	0.05	0.05	Non-Parametric	0.960	0.000	0.000	0.000	NA	NA	NA	
6	100	5	0.5	0.05	0.05	Non-Parametric	0.984	0.000	0.000	0.464	NA	NA	NA	
6	200	5	0.5	0.05	0.05	Non-Parametric	0.994	0.000	0.000	0.866	NA	NA	NA	
6	400	5	0.5	0.05	0.05	Non-Parametric	0.998	0.000	0.000	0.968	NA	NA	NA	

Table 8: Simulation performance under the alternative for varying sample sizes when using the bootstrap implementations of our test (for outlier magnitude of 2 SD of the error term) using Parametric Bootstraps.

$\lambda$	n	# Regressors	$\rho$	Level	$\gamma_c$	Parametric	Rejection Frequency				
							Asymp.	Clean			
								$L_1$	$L_2$	Variance	
Normal Distribution											
2	50	5	0.0	0.01	0.05	Parametric	0.360	0.112	0.128	0.314	
2	100	5	0.0	0.01	0.05	Parametric	0.114	0.104	0.118	0.286	
2	200	5	0.0	0.01	0.05	Parametric	0.112	0.156	0.186	0.362	
2	400	5	0.0	0.01	0.05	Parametric	0.232	0.216	0.304	0.532	
2	50	5	0.0	0.05	0.05	Parametric	0.484	0.258	0.254	0.418	
2	100	5	0.0	0.05	0.05	Parametric	0.230	0.260	0.268	0.446	
2	200	5	0.0	0.05	0.05	Parametric	0.270	0.350	0.406	0.560	
2	400	5	0.0	0.05	0.05	Parametric	0.470	0.460	0.538	0.718	
2	50	5	0.5	0.01	0.05	Parametric	0.396	0.110	0.116	0.330	
2	100	5	0.5	0.01	0.05	Parametric	0.160	0.128	0.130	0.316	
2	200	5	0.5	0.01	0.05	Parametric	0.112	0.138	0.142	0.314	
2	400	5	0.5	0.01	0.05	Parametric	0.220	0.198	0.260	0.484	
2	50	5	0.5	0.05	0.05	Parametric	0.526	0.272	0.270	0.460	
2	100	5	0.5	0.05	0.05	Parametric	0.280	0.318	0.298	0.448	
2	200	5	0.5	0.05	0.05	Parametric	0.256	0.310	0.322	0.500	
2	400	5	0.5	0.05	0.05	Parametric	0.410	0.410	0.470	0.664	

Table 9: Simulation performance under the alternative for varying sample sizes when using the bootstrap implementations of our test (for outlier magnitude of 4 SD of the error term) using Parametric Bootstraps.

$\lambda$	n	# Regressors	$\rho$	Level	$\gamma_c$	Parametric	Rejection Frequency			
							Asymp.	Clean		
								$L_1$	$L_2$	Variance
Normal Distribution										
4	50	5	0.0	0.01	0.05	Parametric	0.864	0.402	0.454	0.794
4	100	5	0.0	0.01	0.05	Parametric	0.954	0.710	0.832	0.970
4	200	5	0.0	0.01	0.05	Parametric	0.996	0.908	0.980	1.000
4	400	5	0.0	0.01	0.05	Parametric	1.000	0.980	0.998	1.000
4	50	5	0.0	0.05	0.05	Parametric	0.920	0.672	0.706	0.868
4	100	5	0.0	0.05	0.05	Parametric	0.978	0.892	0.942	0.990
4	200	5	0.0	0.05	0.05	Parametric	1.000	0.974	0.996	1.000
4	400	5	0.0	0.05	0.05	Parametric	1.000	1.000	1.000	1.000
4	50	5	0.5	0.01	0.05	Parametric	0.844	0.390	0.434	0.762
4	100	5	0.5	0.01	0.05	Parametric	0.944	0.700	0.810	0.972
4	200	5	0.5	0.01	0.05	Parametric	0.996	0.878	0.972	0.998
4	400	5	0.5	0.01	0.05	Parametric	1.000	0.990	1.000	1.000
4	50	5	0.5	0.05	0.05	Parametric	0.908	0.670	0.722	0.846
4	100	5	0.5	0.05	0.05	Parametric	0.984	0.892	0.952	0.990
4	200	5	0.5	0.05	0.05	Parametric	1.000	0.960	0.996	1.000
4	400	5	0.5	0.05	0.05	Parametric	1.000	0.998	1.000	1.000

Table 10: Simulation performance under the alternative for varying sample sizes when using the bootstrap implementations of our test (for outlier magnitude of 6 SD of the error term) using Parametric Bootstraps.

$\lambda$	n	# Regressors	$\rho$	Level	$\gamma_c$	Parametric	Rejection Frequency			
							Asymp.	Clean		
								$L_1$	$L_2$	Variance
Normal Distribution										
6	50	5	0.0	0.01	0.05	Parametric	0.992	0.852	0.912	0.986
6	100	5	0.0	0.01	0.05	Parametric	1.000	0.988	0.998	1.000
6	200	5	0.0	0.01	0.05	Parametric	1.000	0.998	1.000	1.000
6	400	5	0.0	0.01	0.05	Parametric	1.000	1.000	1.000	1.000
6	50	5	0.0	0.05	0.05	Parametric	0.998	0.962	0.980	0.990
6	100	5	0.0	0.05	0.05	Parametric	1.000	1.000	1.000	1.000
6	200	5	0.0	0.05	0.05	Parametric	1.000	1.000	1.000	1.000
6	400	5	0.0	0.05	0.05	Parametric	1.000	1.000	1.000	1.000
6	50	5	0.5	0.01	0.05	Parametric	0.994	0.846	0.890	0.976
6	100	5	0.5	0.01	0.05	Parametric	1.000	0.982	0.994	0.998
6	200	5	0.5	0.01	0.05	Parametric	1.000	1.000	1.000	1.000
6	400	5	0.5	0.01	0.05	Parametric	1.000	1.000	1.000	1.000
6	50	5	0.5	0.05	0.05	Parametric	0.998	0.944	0.956	0.990
6	100	5	0.5	0.05	0.05	Parametric	1.000	0.998	0.998	1.000
6	200	5	0.5	0.05	0.05	Parametric	1.000	1.000	1.000	1.000
6	400	5	0.5	0.05	0.05	Parametric	1.000	1.000	1.000	1.000



Table 11: Simulation performance under the alternative for varying sample sizes when using the bootstrap implementations of our test for a Bad Leverage Point (outlier magnitude of 2 SD of the error term) using Non-Parametric Bootstraps.

$\lambda$	n	# Regressors	$\rho$	Level	$\gamma_c$	Parametric	Rejection Frequency									
							Asymp.	Raw			Clean					
								$L_1$	$L_2$	Variance	$L_1$	$L_2$	Variance			
Normal Distribution																
2	50		1	0	0.01	0.05	Non-Parametric	0.212	0.000	0.000	0.004	0.038	0.040	0.190		
2	100		1	0	0.01	0.05	Non-Parametric	0.106	0.000	0.000	0.008	0.040	0.046	0.190		
2	200		1	0	0.01	0.05	Non-Parametric	0.148	0.000	0.000	0.014	0.062	0.056	0.176		
2	400		1	0	0.01	0.05	Non-Parametric	0.202	0.000	0.000	0.048	0.068	0.074	0.206		
2	50		1	0	0.05	0.05	Non-Parametric	0.328	0.000	0.000	0.028	0.104	0.116	0.280		
2	100		1	0	0.05	0.05	Non-Parametric	0.234	0.000	0.000	0.040	0.140	0.132	0.304		
2	200		1	0	0.05	0.05	Non-Parametric	0.258	0.000	0.000	0.092	0.128	0.130	0.320		
2	400		1	0	0.05	0.05	Non-Parametric	0.364	0.000	0.000	0.168	0.184	0.184	0.358		

Table 12: Simulation performance under the alternative for varying sample sizes when using the bootstrap implementations of our test for a Bad Leverage Point (outlier magnitude of 4 SD of the error term) using Non-Parametric Bootstraps.

$\lambda$	n	# Regressors	$\rho$	Level	$\gamma_c$	Parametric	Rejection Frequency							
							Asymp.	Raw			Clean			
								$L_1$	$L_2$	Variance	$L_1$	$L_2$	Variance	
Normal Distribution														
4	50		1	0	0.01	0.05	Non-Parametric	0.652	0.000	0.000	0.006	0.350	0.408	0.576
4	100		1	0	0.01	0.05	Non-Parametric	0.584	0.000	0.000	0.052	0.134	0.128	0.242
4	200		1	0	0.01	0.05	Non-Parametric	0.698	0.000	0.000	0.066	0.062	0.052	0.238
4	400		1	0	0.01	0.05	Non-Parametric	0.904	0.000	0.000	0.196	0.038	0.026	0.396
4	50		1	0	0.05	0.05	Non-Parametric	0.760	0.002	0.002	0.092	0.496	0.528	0.630
4	100		1	0	0.05	0.05	Non-Parametric	0.668	0.008	0.008	0.178	0.212	0.214	0.376
4	200		1	0	0.05	0.05	Non-Parametric	0.790	0.000	0.000	0.228	0.102	0.100	0.404
4	400		1	0	0.05	0.05	Non-Parametric	0.964	0.000	0.000	0.478	0.102	0.084	0.590

Table 13: Simulation performance under the alternative for varying sample sizes when using the bootstrap implementations of our test for a Bad Leverage Point (outlier magnitude of 6 SD of the error term) using Non-Parametric Bootstraps.

$\lambda$	n	# Regressors	$\rho$	Level	$\gamma_c$	Parametric	Rejection Frequency							
							Asymp.	Raw			Clean			
								$L_1$	$L_2$	Variance	$L_1$	$L_2$	Variance	
Normal Distribution														
6	50		1	0	0.01	0.05	Non-Parametric	0.764	0.000	0.000	0.000	0.564	0.612	0.660
6	100		1	0	0.01	0.05	Non-Parametric	0.614	0.000	0.000	0.014	0.070	0.072	0.128
6	200		1	0	0.01	0.05	Non-Parametric	0.672	0.000	0.000	0.022	0.002	0.002	0.070
6	400		1	0	0.01	0.05	Non-Parametric	0.874	0.000	0.000	0.042	0.000	0.000	0.080
6	50		1	0	0.05	0.05	Non-Parametric	0.840	0.002	0.000	0.092	0.628	0.648	0.680
6	100		1	0	0.05	0.05	Non-Parametric	0.732	0.010	0.010	0.050	0.092	0.082	0.194
6	200		1	0	0.05	0.05	Non-Parametric	0.768	0.000	0.000	0.072	0.006	0.006	0.194
6	400		1	0	0.05	0.05	Non-Parametric	0.928	0.000	0.000	0.124	0.000	0.000	0.174