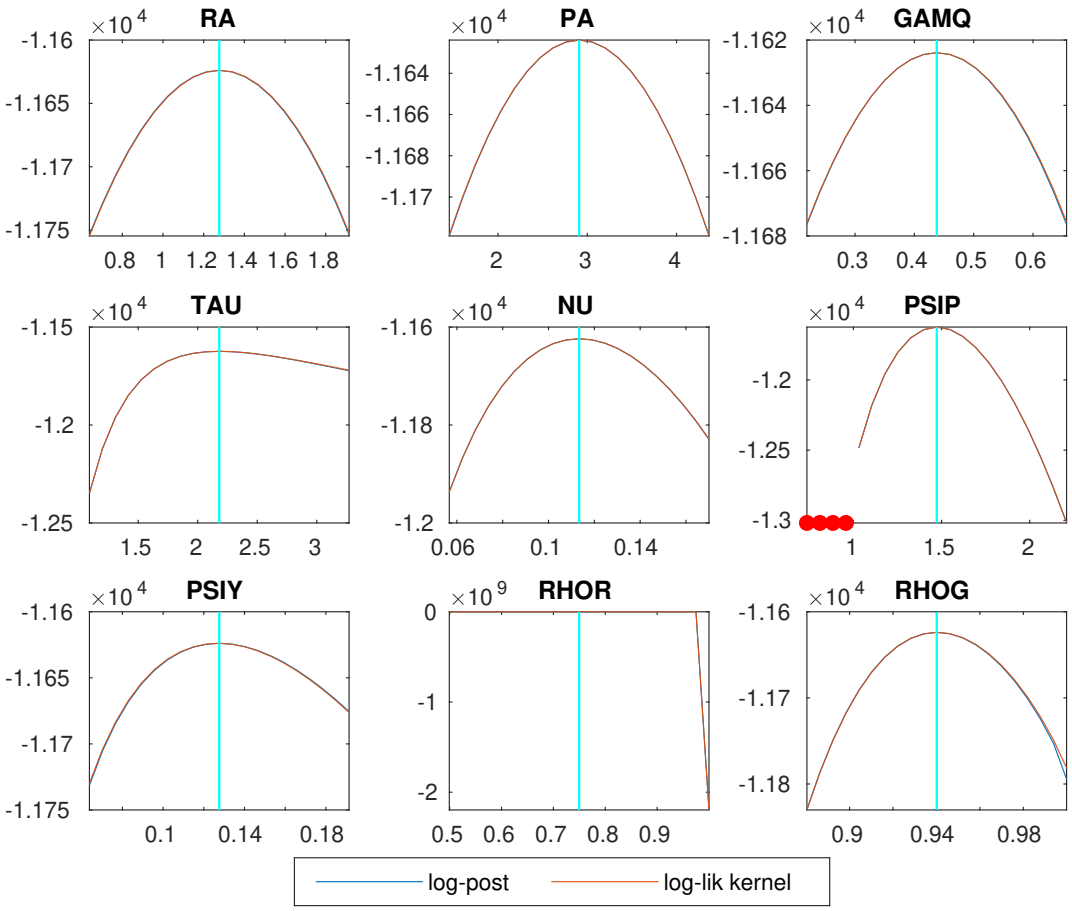

Figure 1: Check plots.

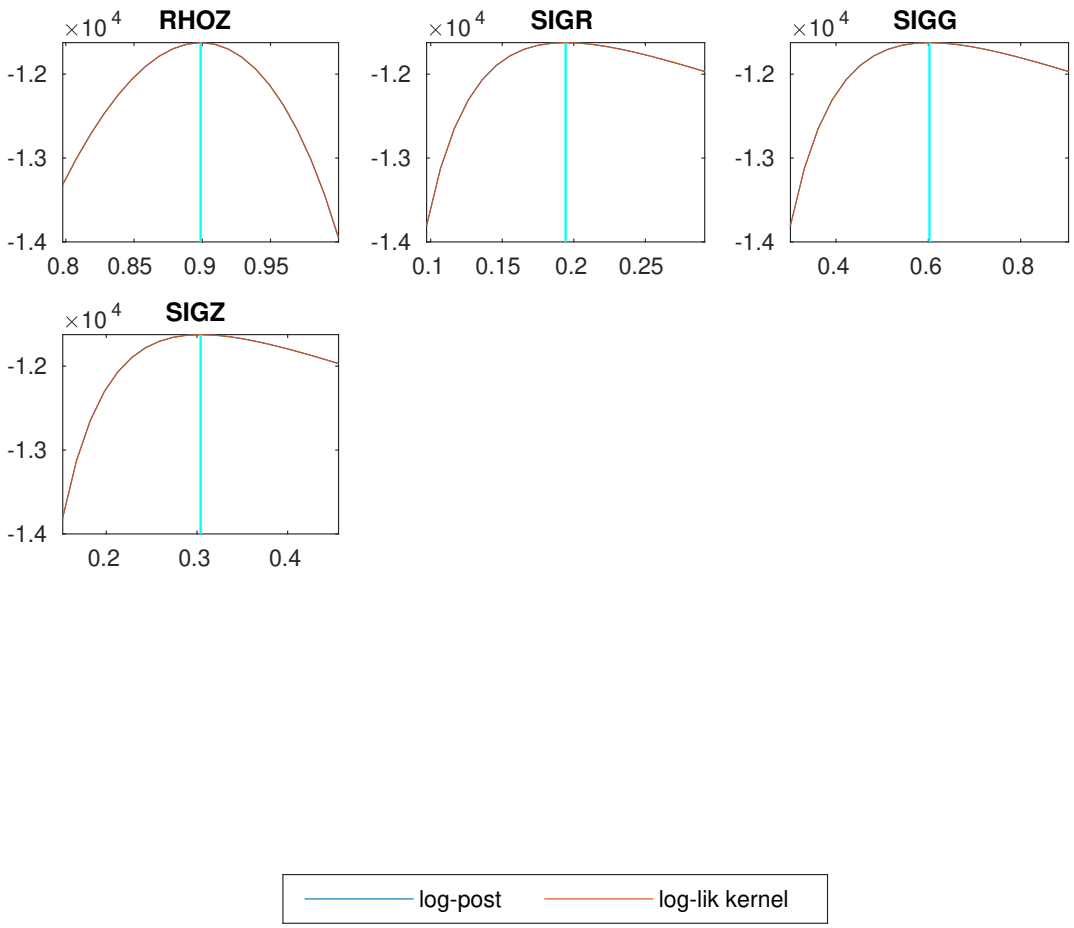

Figure 2: Check plots.

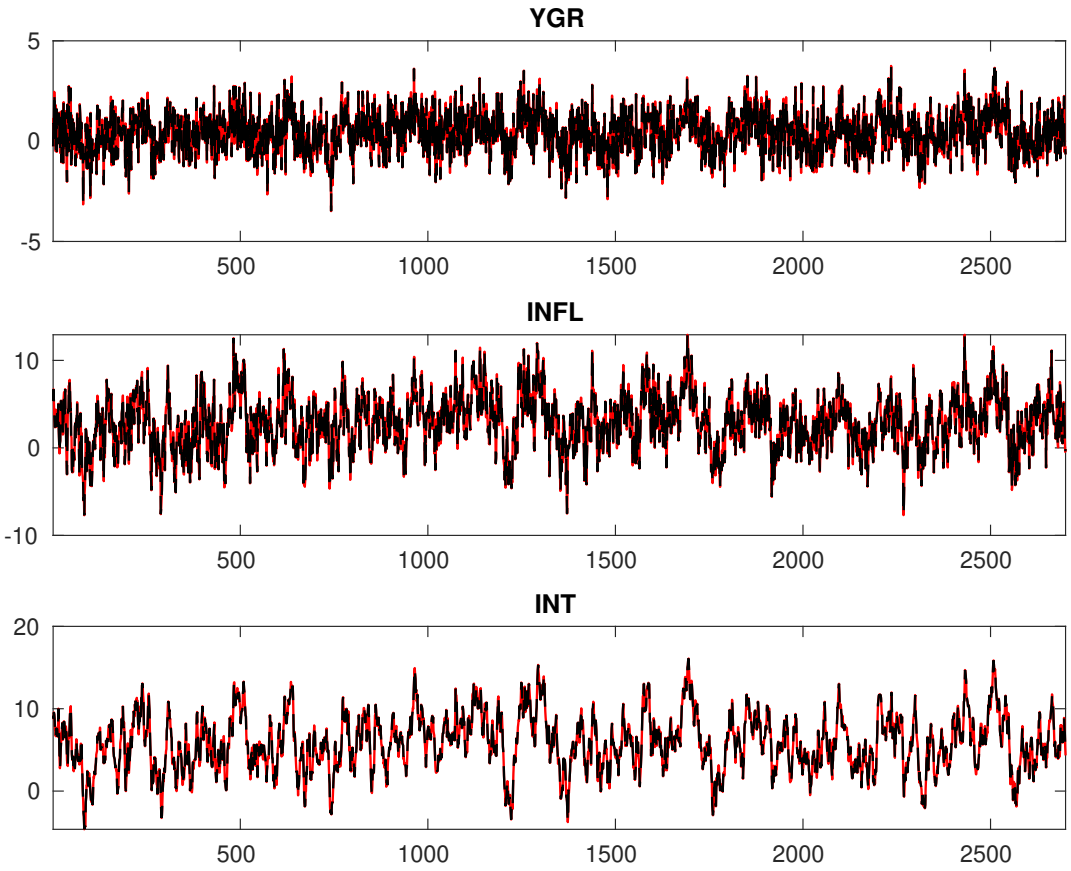

Figure 3: Historical and smoothed variables.

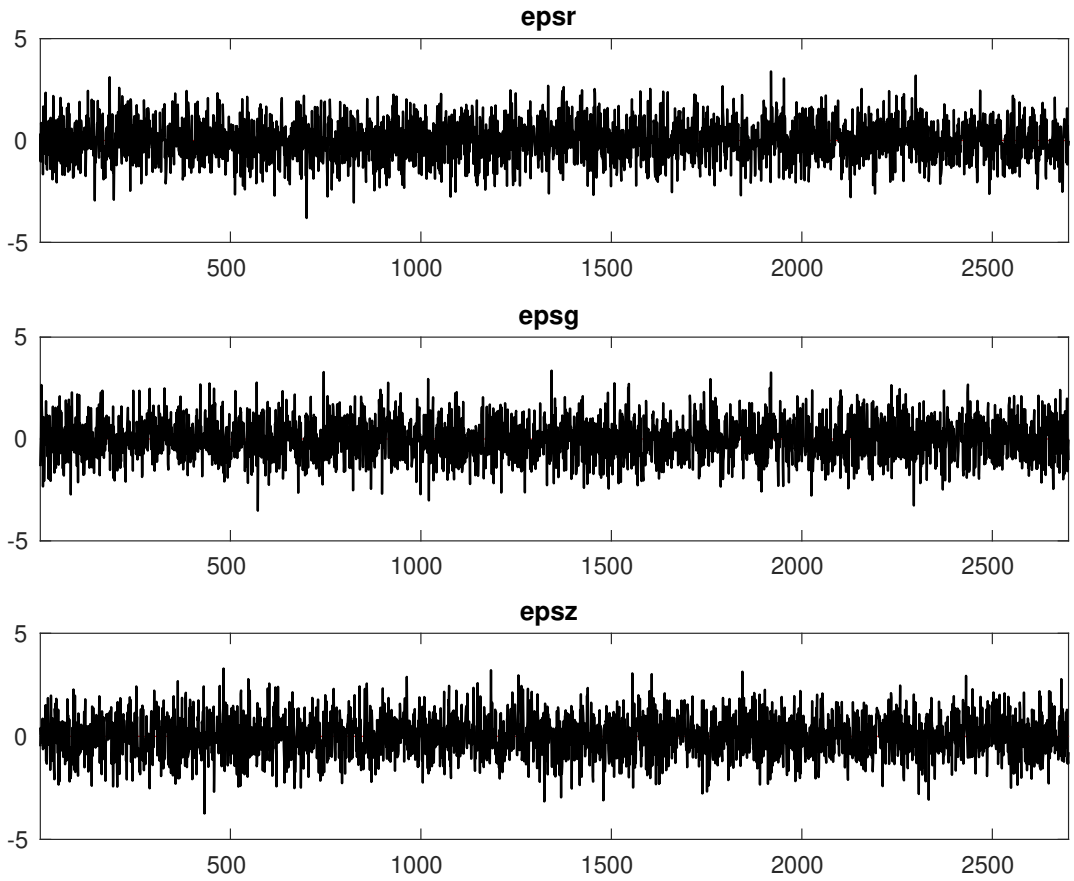

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	44.560	43.294	46.773	44.211
$\pi^{(A)}$	44.060	44.094	48.172	45.881
$\gamma^{(Q)}$	44.157	44.067	45.263	43.632
τ	48.649	43.753	45.486	45.807
ν	46.948	46.328	44.601	46.650
ψ_π	42.945	44.083	42.994	47.581
ψ_y	46.537	46.787	43.538	47.155
ρ_R	43.116	44.585	44.991	44.008
ρ_g	43.367	43.496	39.892	43.856
ρ_z	38.699	44.931	43.080	43.873
σ_R	43.160	40.633	41.882	40.769
σ_g	45.468	43.973	42.659	45.293
σ_z	45.190	46.145	40.514	44.306

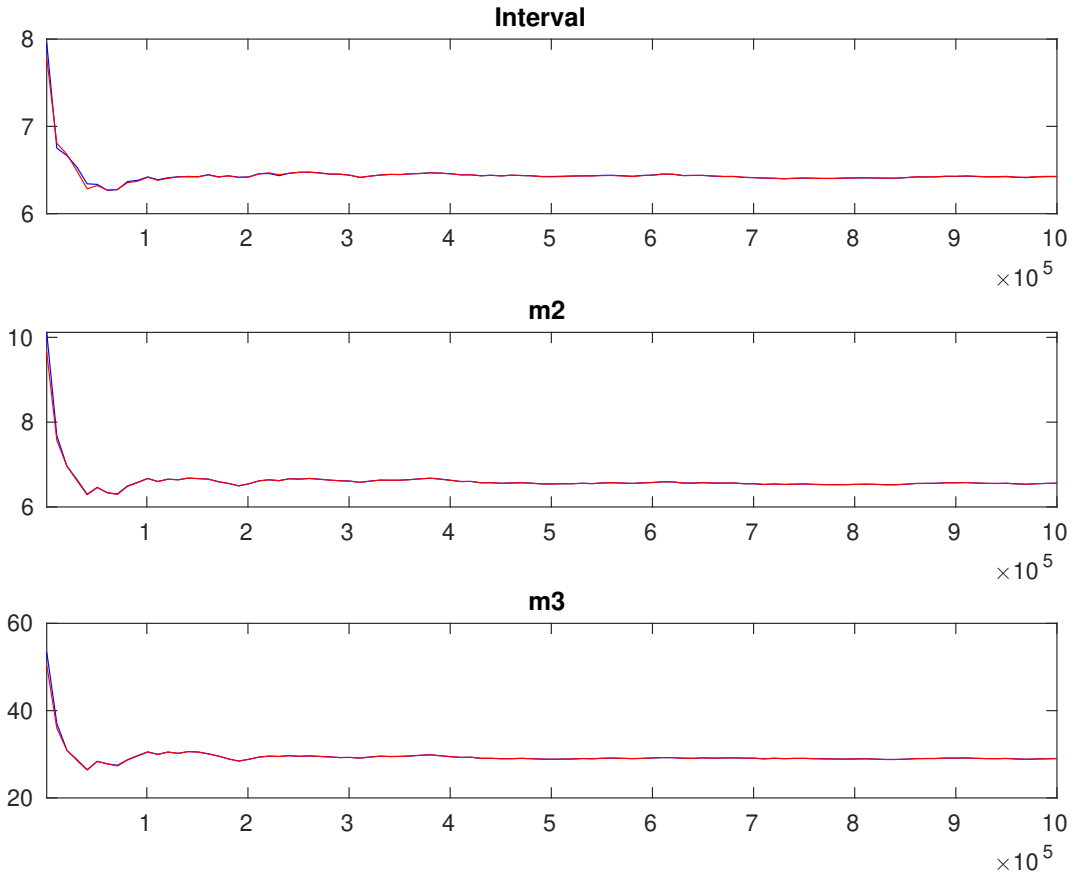

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

Table 2: Results from Metropolis-Hastings (parameters)

	Prior			Posterior			
	Dist.	Mean	Stdev.	Mean	Stdev.	HPD inf	HPD sup
r_A	gamm	0.800	0.5000	1.277	0.1341	1.0559	1.4976
$\pi^{(A)}$	gamm	4.000	2.0000	2.909	0.2264	2.5398	3.2832
$\gamma^{(Q)}$	norm	0.400	0.2000	0.438	0.0550	0.3480	0.5287
τ	gamm	2.000	0.5000	2.208	0.1415	1.9748	2.4379
ν	beta	0.100	0.0500	0.115	0.0089	0.1005	0.1298
ψ_π	gamm	1.500	0.2500	1.476	0.0312	1.4242	1.5266
ψ_y	gamm	0.500	0.2500	0.130	0.0158	0.1043	0.1560
ρ_R	beta	0.500	0.2000	0.751	0.0060	0.7405	0.7603
ρ_g	beta	0.800	0.1000	0.940	0.0060	0.9307	0.9503
ρ_z	beta	0.660	0.1500	0.899	0.0039	0.8928	0.9056
σ_R	invg	0.300	4.0000	0.195	0.0029	0.1898	0.1993
σ_g	invg	0.400	4.0000	0.602	0.0117	0.5827	0.6212
σ_z	invg	0.400	4.0000	0.306	0.0085	0.2916	0.3194

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.2766	0.1334
$\pi^{(A)}$	gamm	4.000	2.0000	2.9088	0.2231
$\gamma^{(Q)}$	norm	0.400	0.2000	0.4377	0.0547
τ	gamm	2.000	0.5000	2.1808	0.1389
ν	beta	0.100	0.0500	0.1134	0.0088
ψ_π	gamm	1.500	0.2500	1.4728	0.0308
ψ_y	gamm	0.500	0.2500	0.1276	0.0159
ρ_R	beta	0.500	0.2000	0.7496	0.0060
ρ_g	beta	0.800	0.1000	0.9401	0.0061
ρ_z	beta	0.660	0.1500	0.8988	0.0039
σ_R	invg	0.300	4.0000	0.1943	0.0029
σ_g	invg	0.400	4.0000	0.6025	0.0117
σ_z	invg	0.400	4.0000	0.3041	0.0084

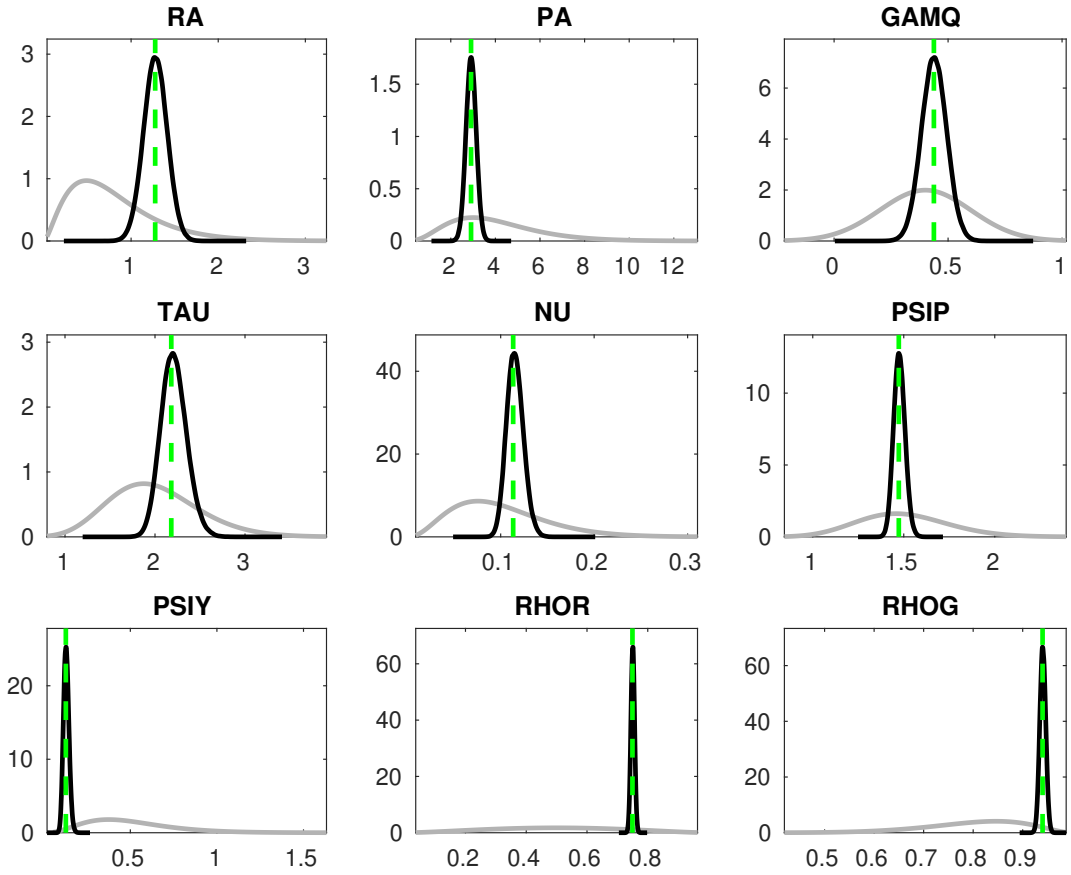

Figure 6: Priors and posteriors.

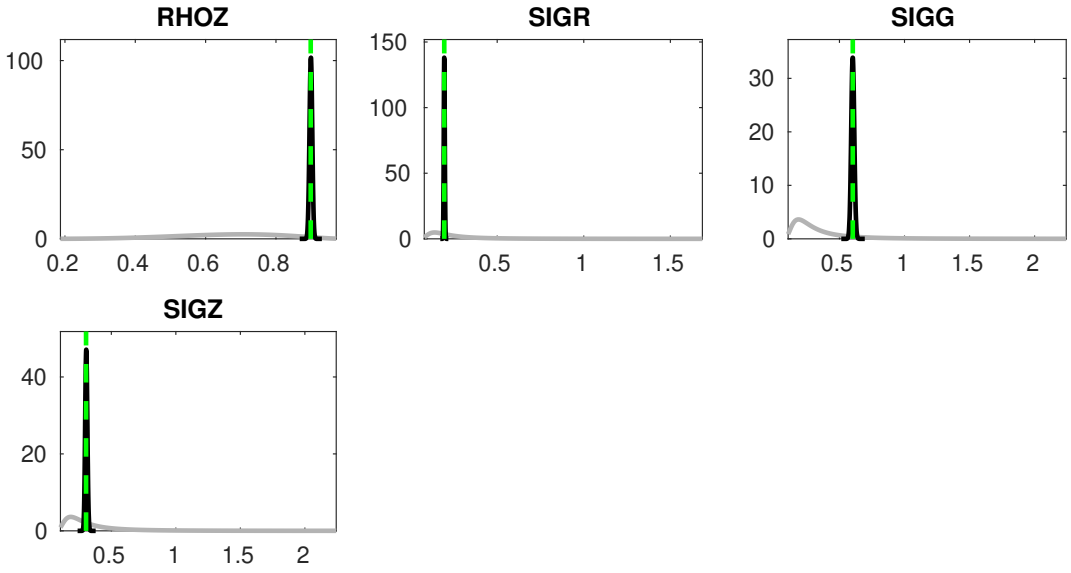

Figure 7: Priors and posteriors.

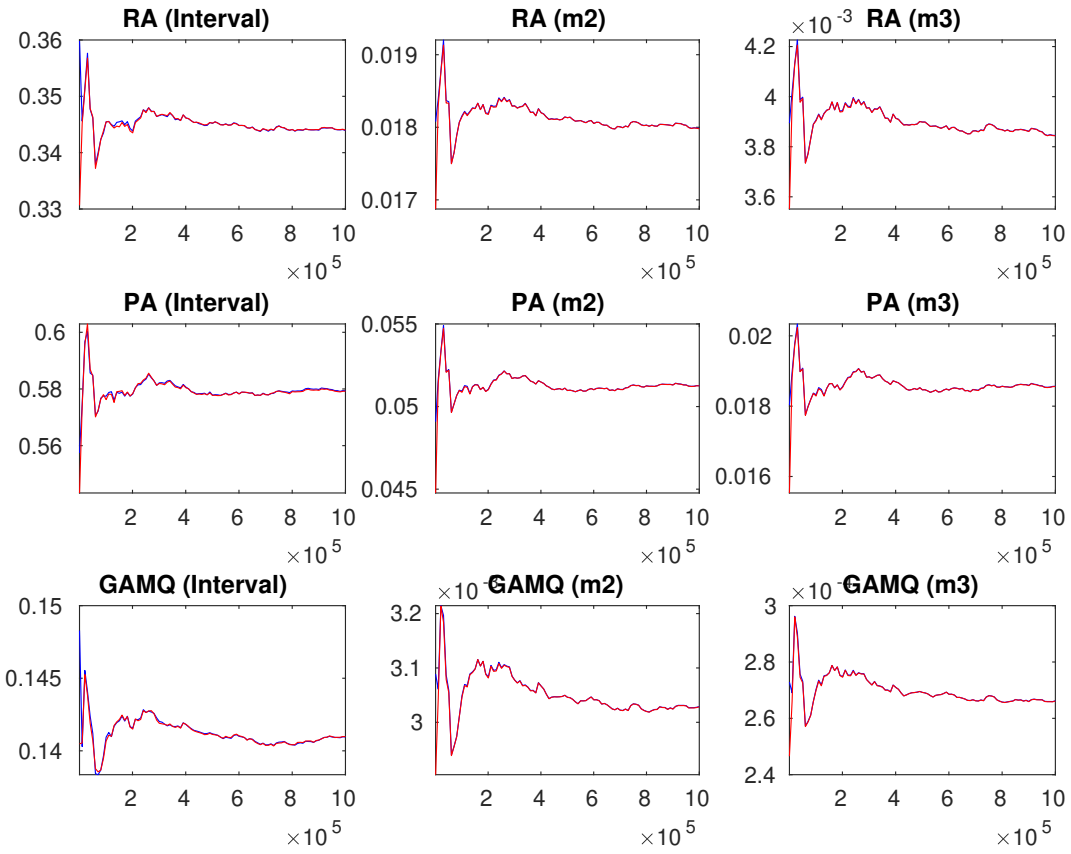

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

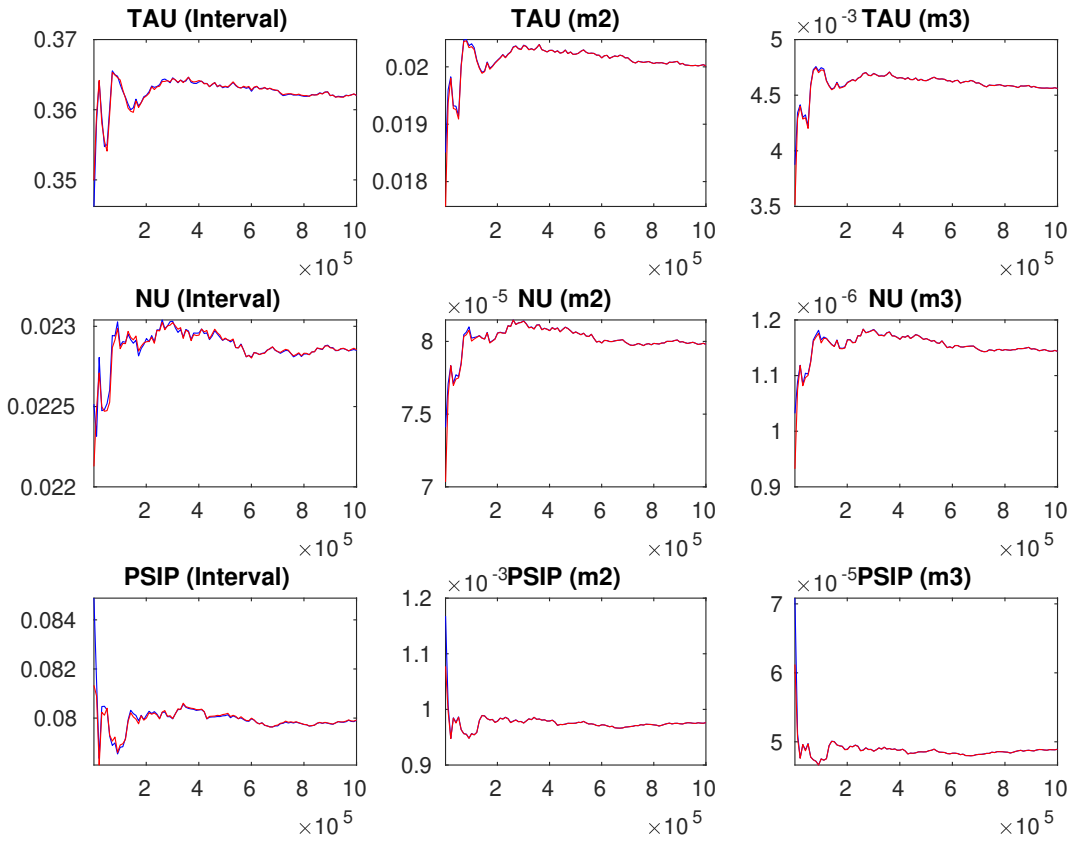

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

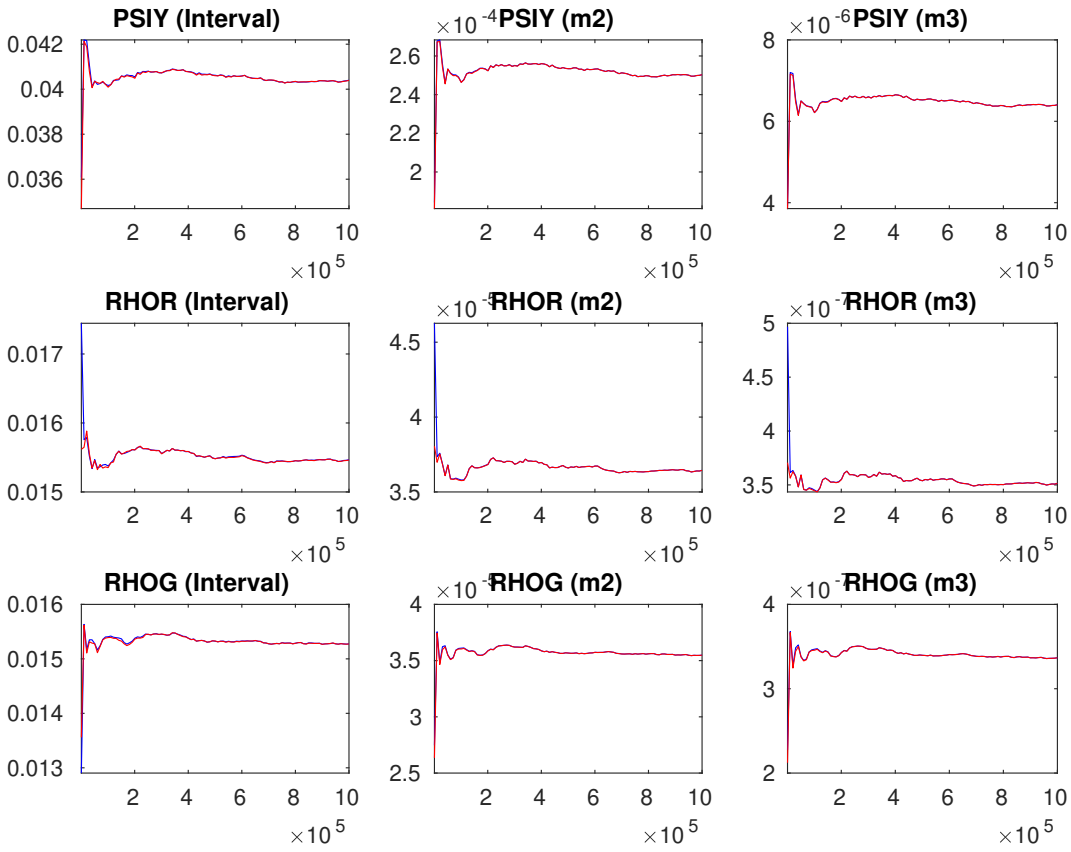

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

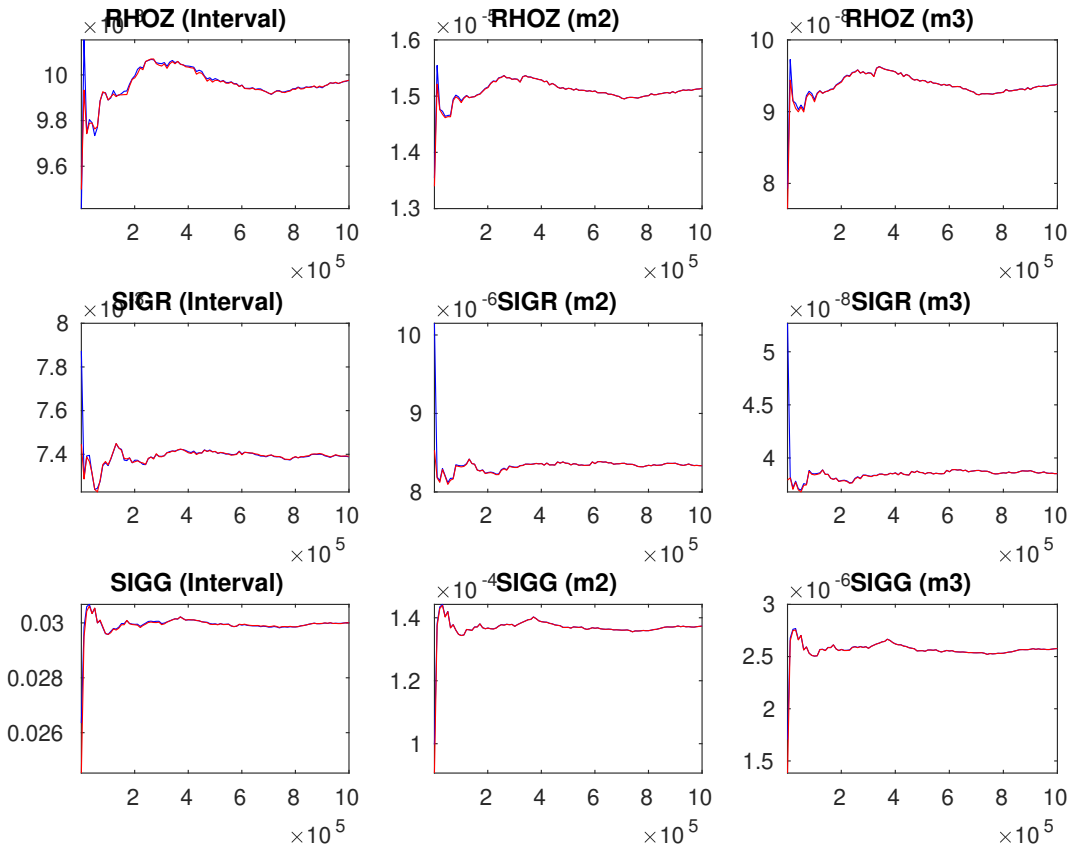

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

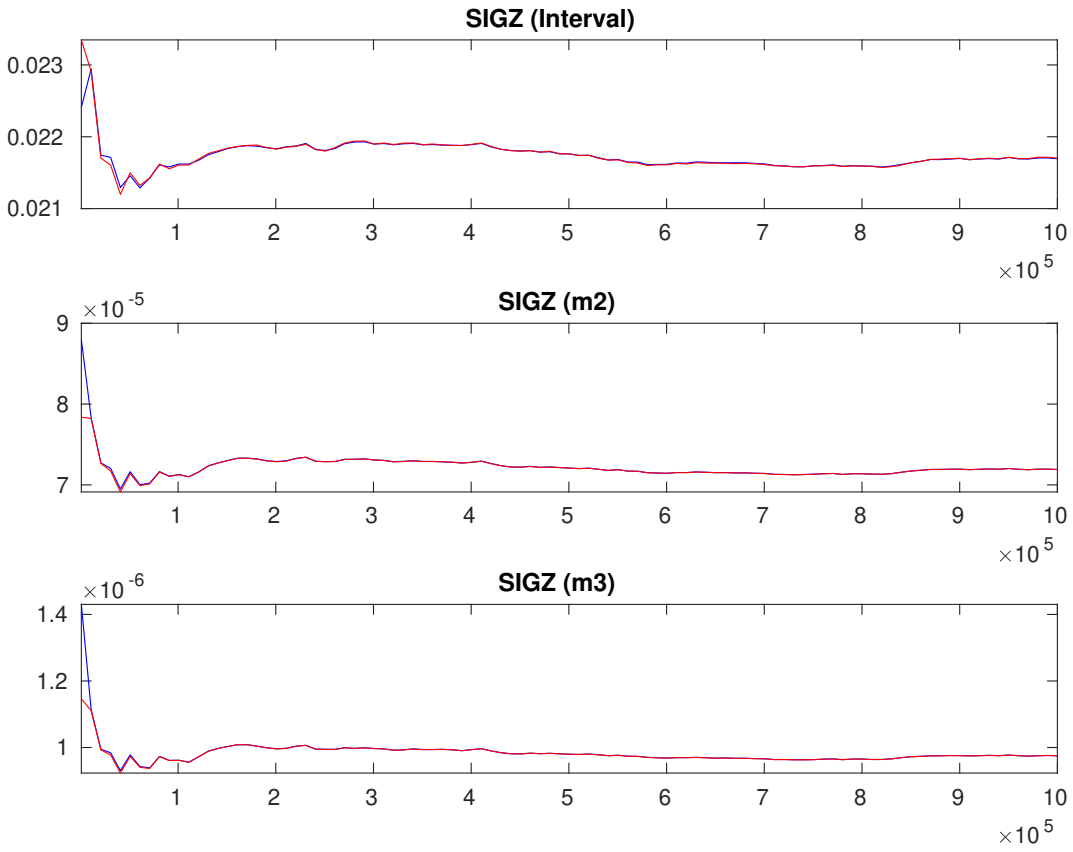

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.