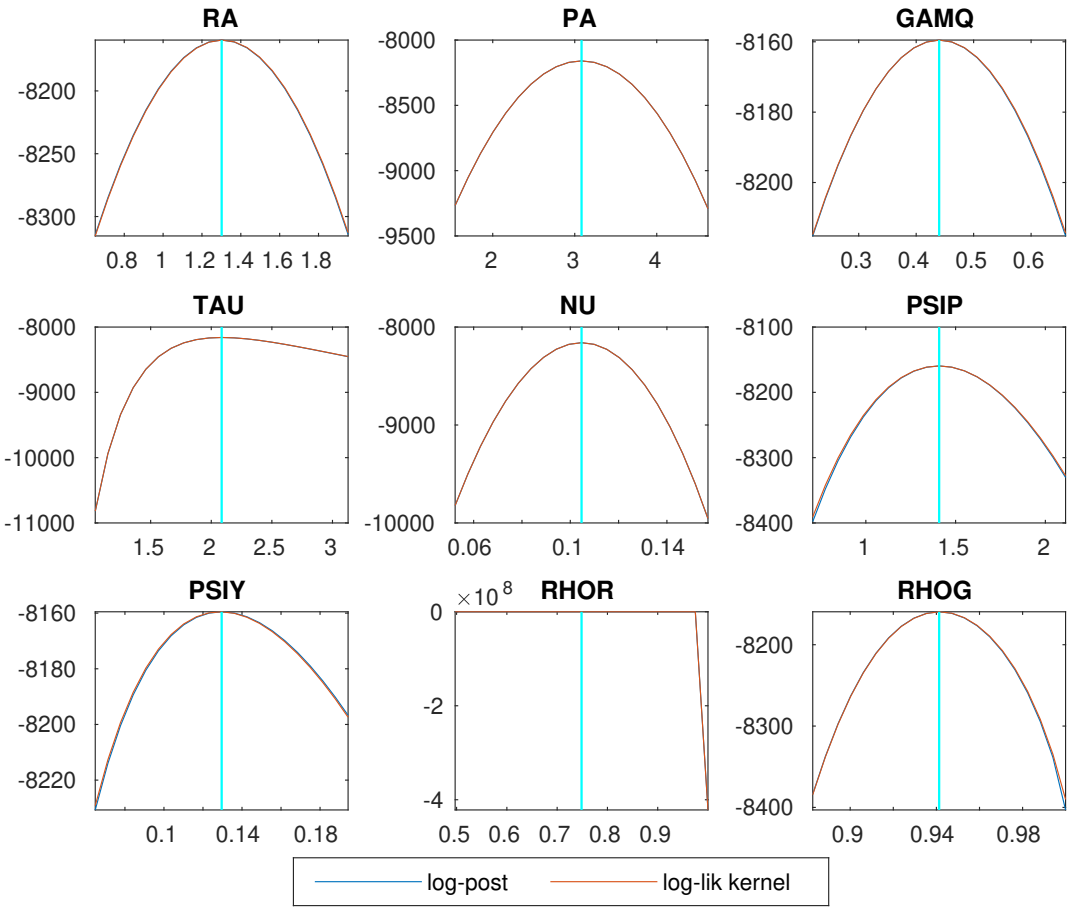

Figure 1: Check plots.

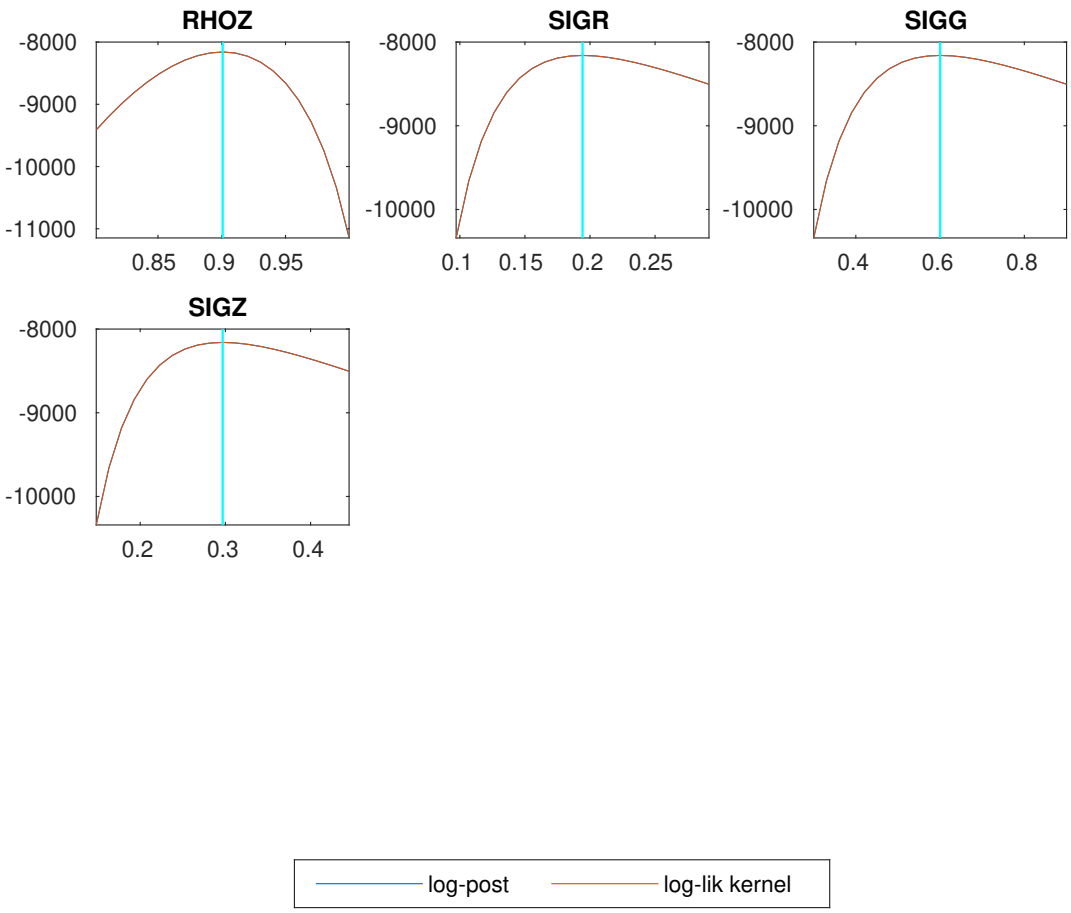

Figure 2: Check plots.

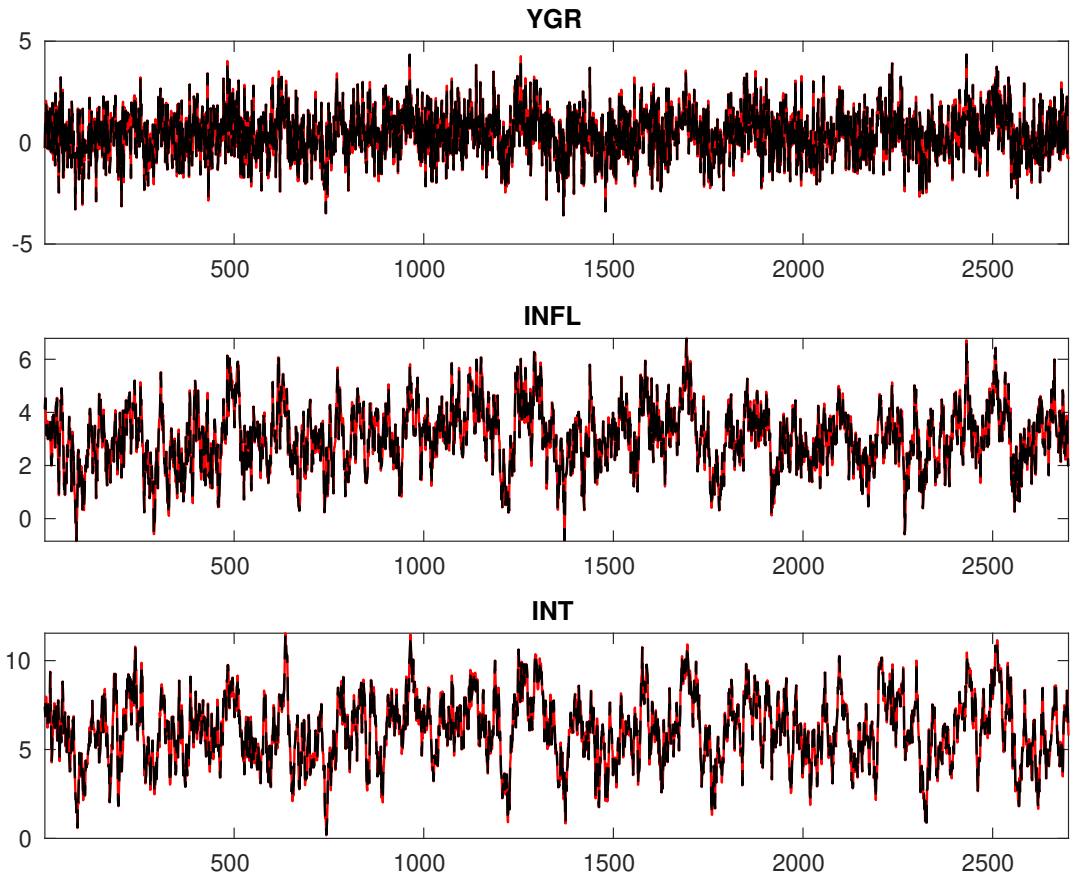

Figure 3: Historical and smoothed variables.

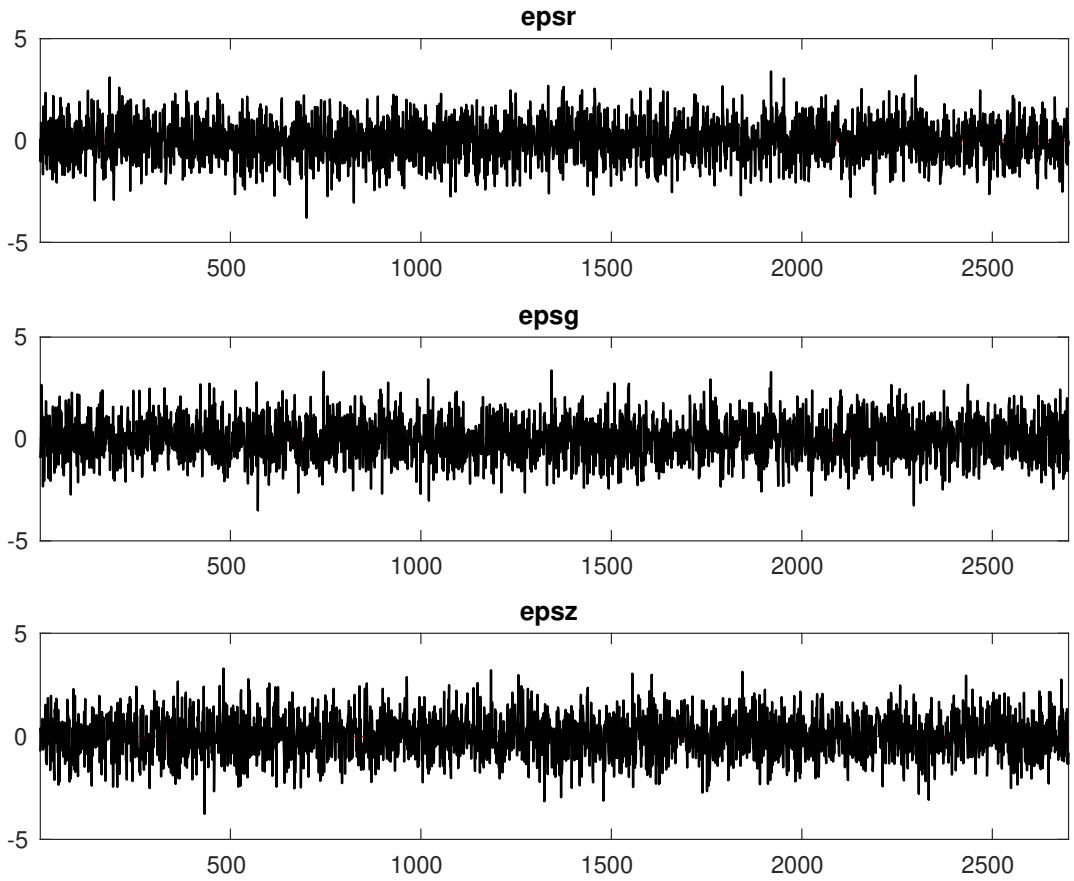

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	45.500	42.244	44.331	43.802
$\pi^{(A)}$	46.362	42.609	46.289	45.054
$\gamma^{(Q)}$	45.023	42.444	43.508	44.011
τ	48.817	44.455	46.042	43.436
ν	48.311	43.147	46.260	42.788
ψ_π	43.790	43.174	42.961	46.929
ψ_y	47.231	48.458	45.383	45.828
ρ_R	44.116	44.492	42.903	44.926
ρ_g	43.607	44.165	42.227	44.559
ρ_z	43.611	42.970	44.305	41.390
σ_R	41.381	41.027	43.774	40.839
σ_g	40.089	43.299	41.341	44.170
σ_z	43.907	45.837	45.687	43.266

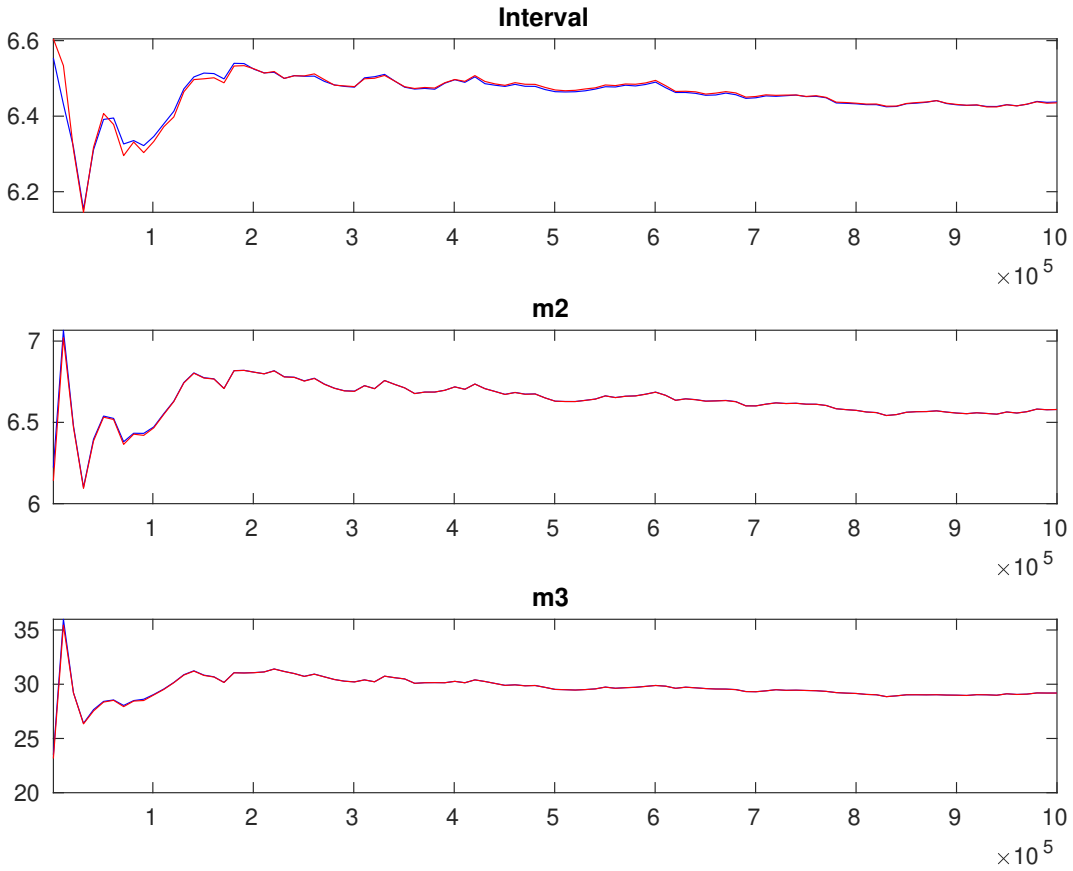

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.301	0.1545	1.0509	1.5586
$\pi^{(A)}$	gamm	4.000	2.0000	3.083	0.0905	2.9333	3.2309
$\gamma^{(Q)}$	norm	0.400	0.2000	0.440	0.0551	0.3486	0.5296
τ	gamm	2.000	0.5000	2.109	0.1305	1.8960	2.3229
ν	beta	0.100	0.0500	0.106	0.0047	0.0979	0.1132
ψ_π	gamm	1.500	0.2500	1.409	0.0830	1.2720	1.5451
ψ_y	gamm	0.500	0.2500	0.132	0.0159	0.1060	0.1579
ρ_R	beta	0.500	0.2000	0.750	0.0094	0.7347	0.7656
ρ_g	beta	0.800	0.1000	0.942	0.0051	0.9335	0.9501
ρ_z	beta	0.660	0.1500	0.901	0.0046	0.8938	0.9089
σ_R	invg	0.300	4.0000	0.194	0.0028	0.1898	0.1992
σ_g	invg	0.400	4.0000	0.601	0.0091	0.5857	0.6155
σ_z	invg	0.400	4.0000	0.298	0.0079	0.2853	0.3112

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.3014	0.1537
$\pi^{(A)}$	gamm	4.000	2.0000	3.0830	0.0894
$\gamma^{(Q)}$	norm	0.400	0.2000	0.4400	0.0546
τ	gamm	2.000	0.5000	2.0858	0.1277
ν	beta	0.100	0.0500	0.1047	0.0046
ψ_π	gamm	1.500	0.2500	1.4084	0.0824
ψ_y	gamm	0.500	0.2500	0.1296	0.0155
ρ_R	beta	0.500	0.2000	0.7485	0.0093
ρ_g	beta	0.800	0.1000	0.9413	0.0051
ρ_z	beta	0.660	0.1500	0.9007	0.0046
σ_R	invg	0.300	4.0000	0.1943	0.0028
σ_g	invg	0.400	4.0000	0.6002	0.0090
σ_z	invg	0.400	4.0000	0.2968	0.0078

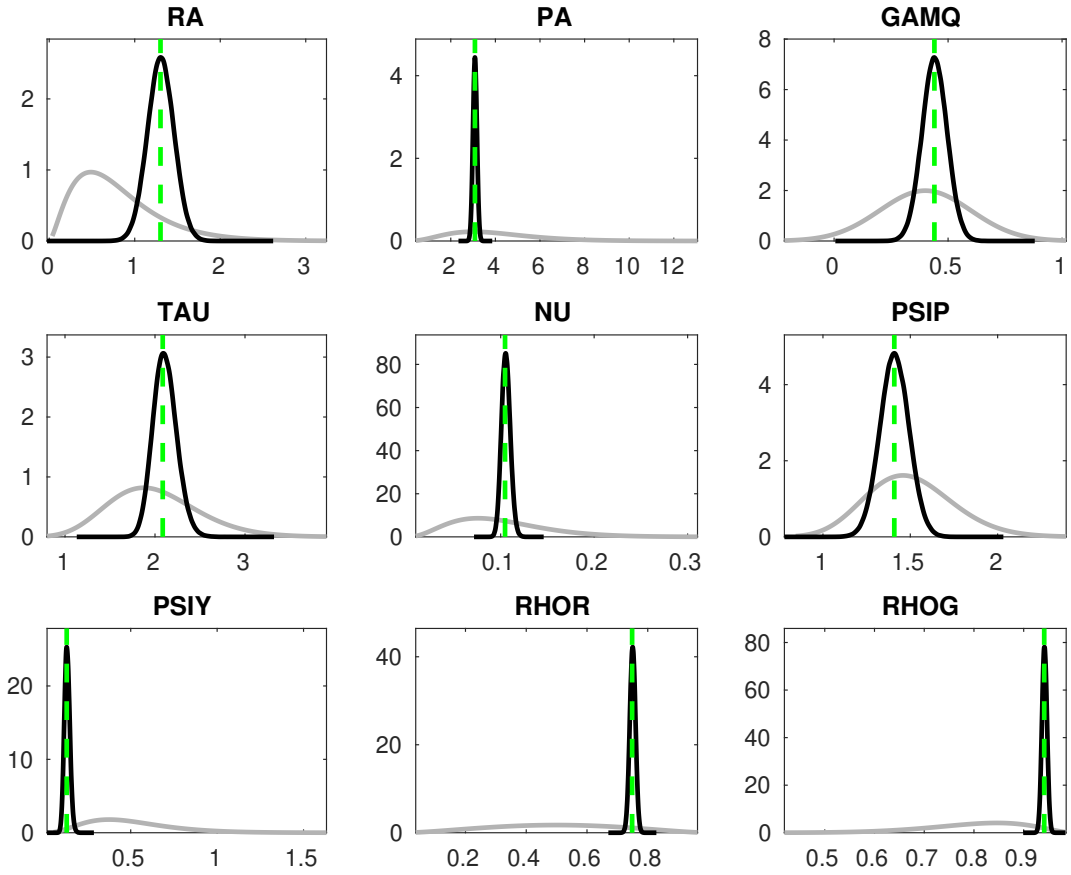

Figure 6: Priors and posteriors.

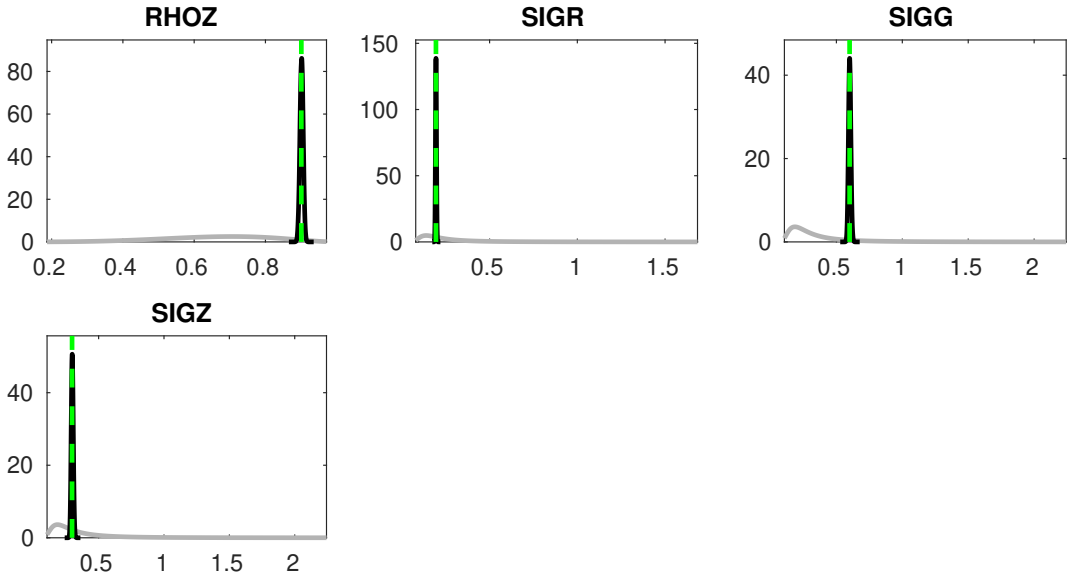

Figure 7: Priors and posteriors.

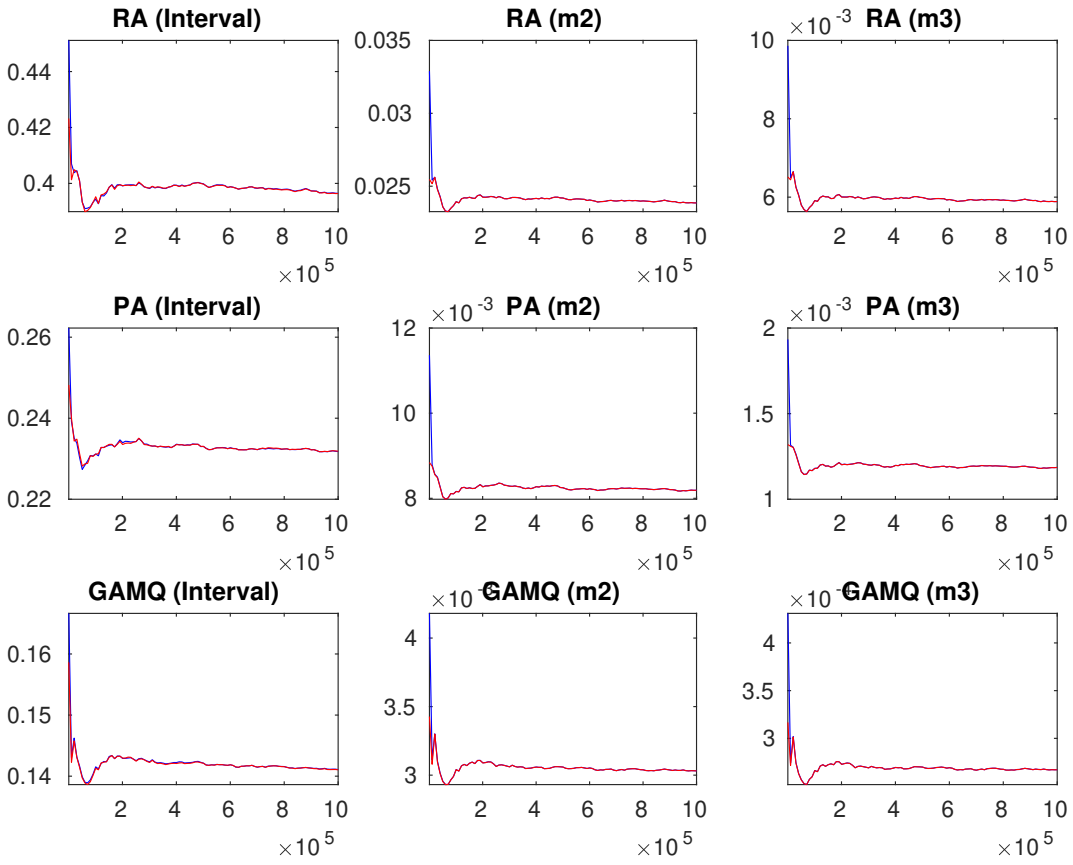

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

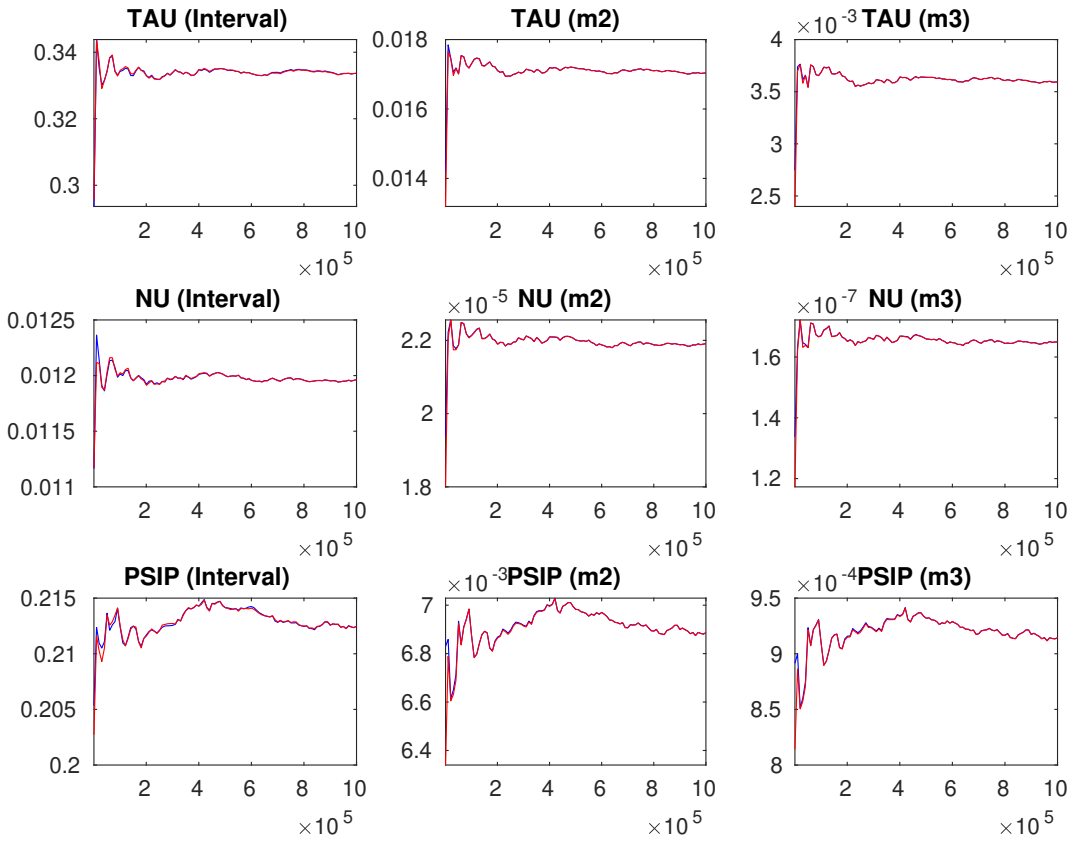

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

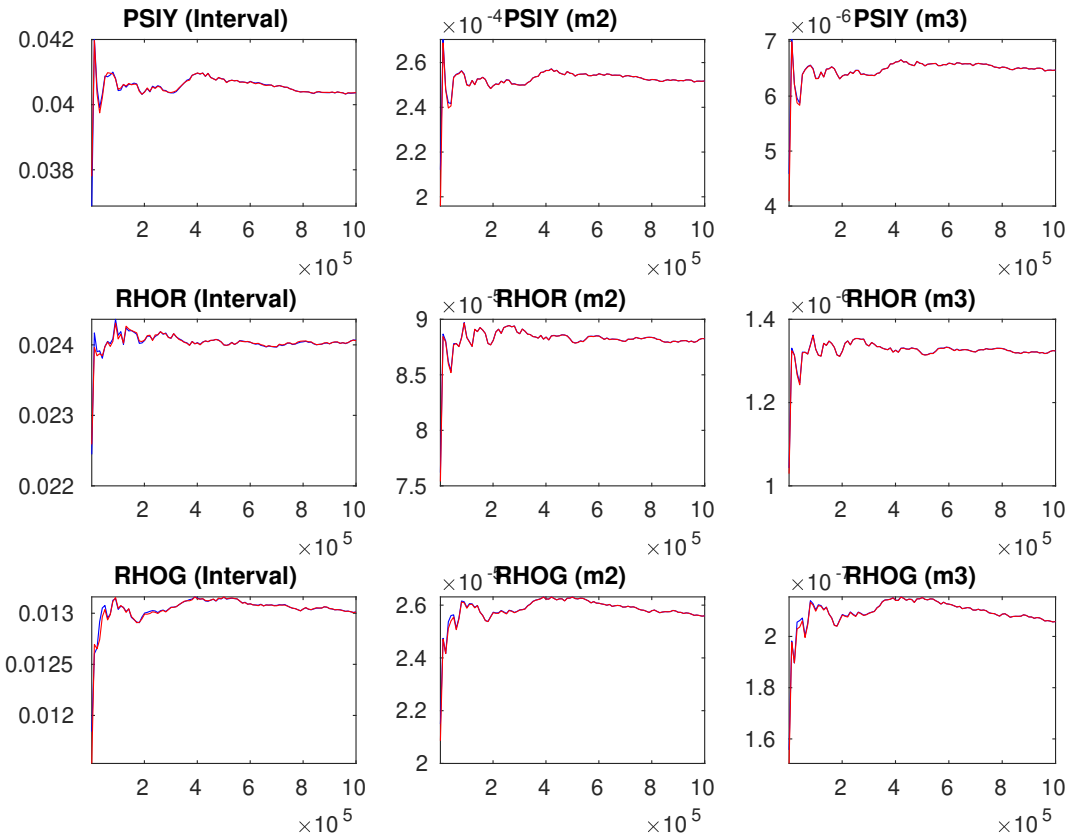

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

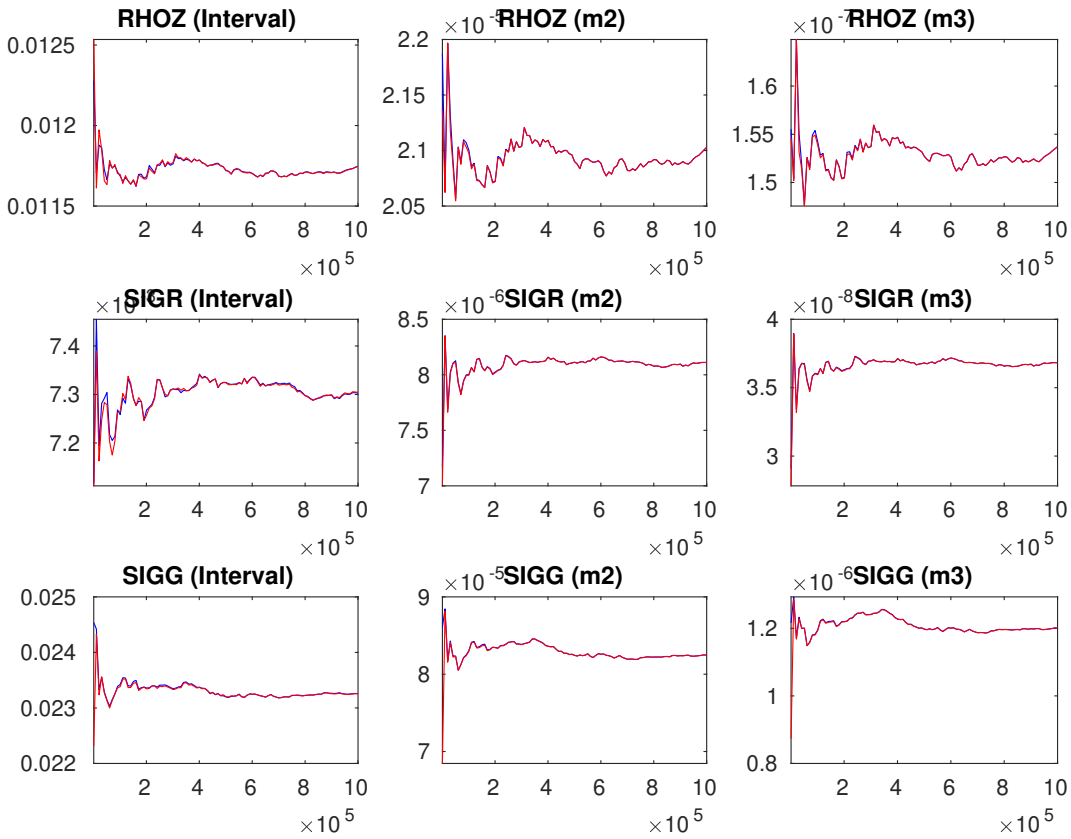

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

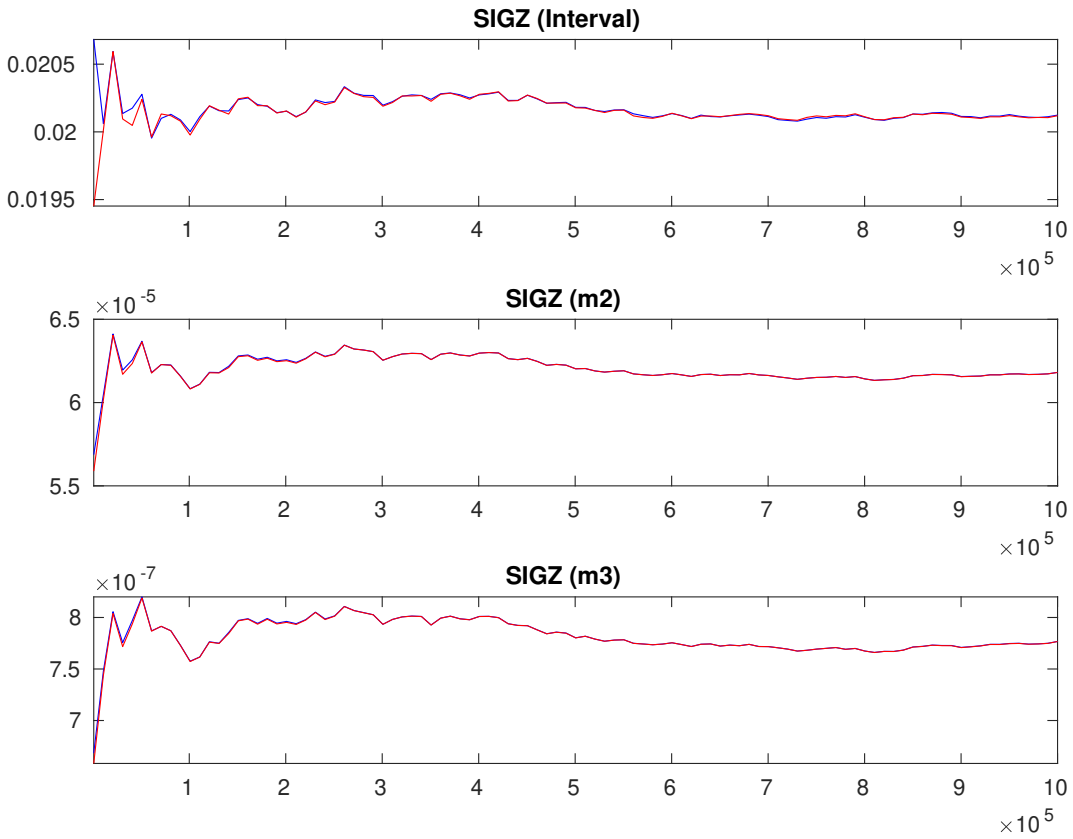

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.