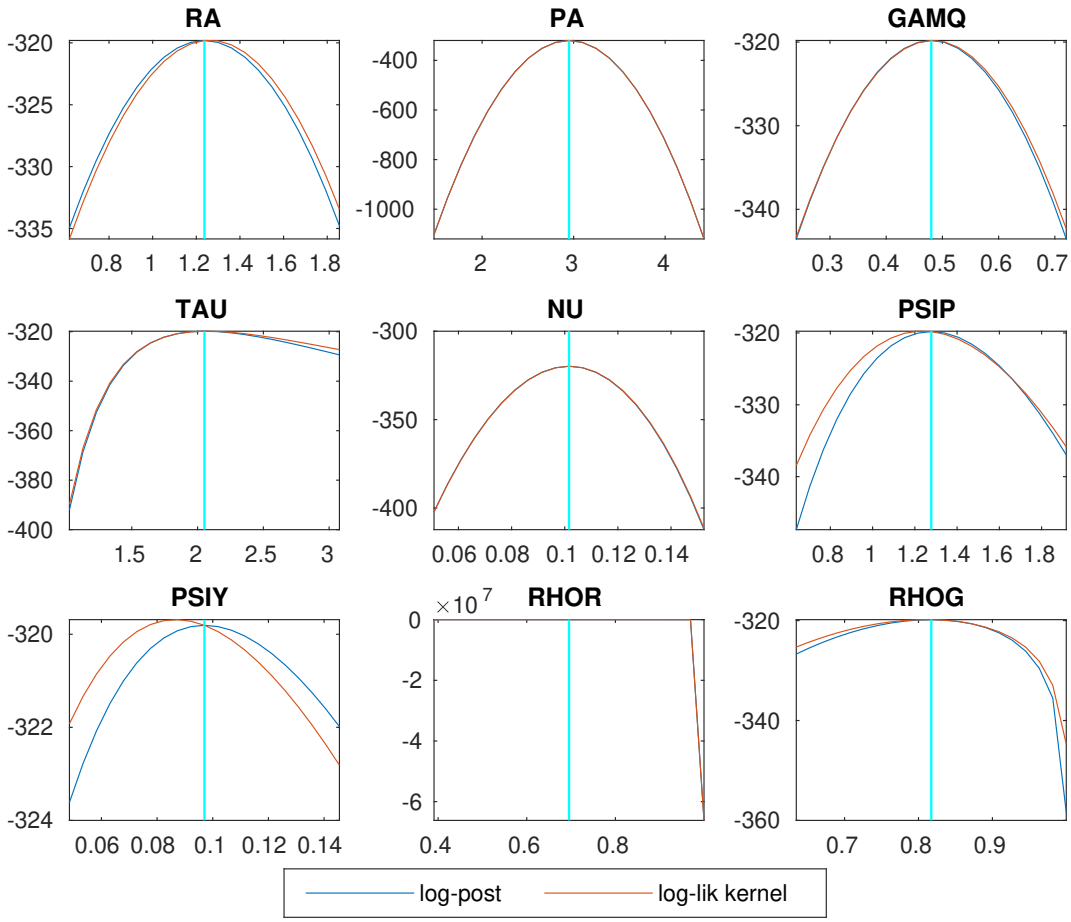

Figure 1: Check plots.

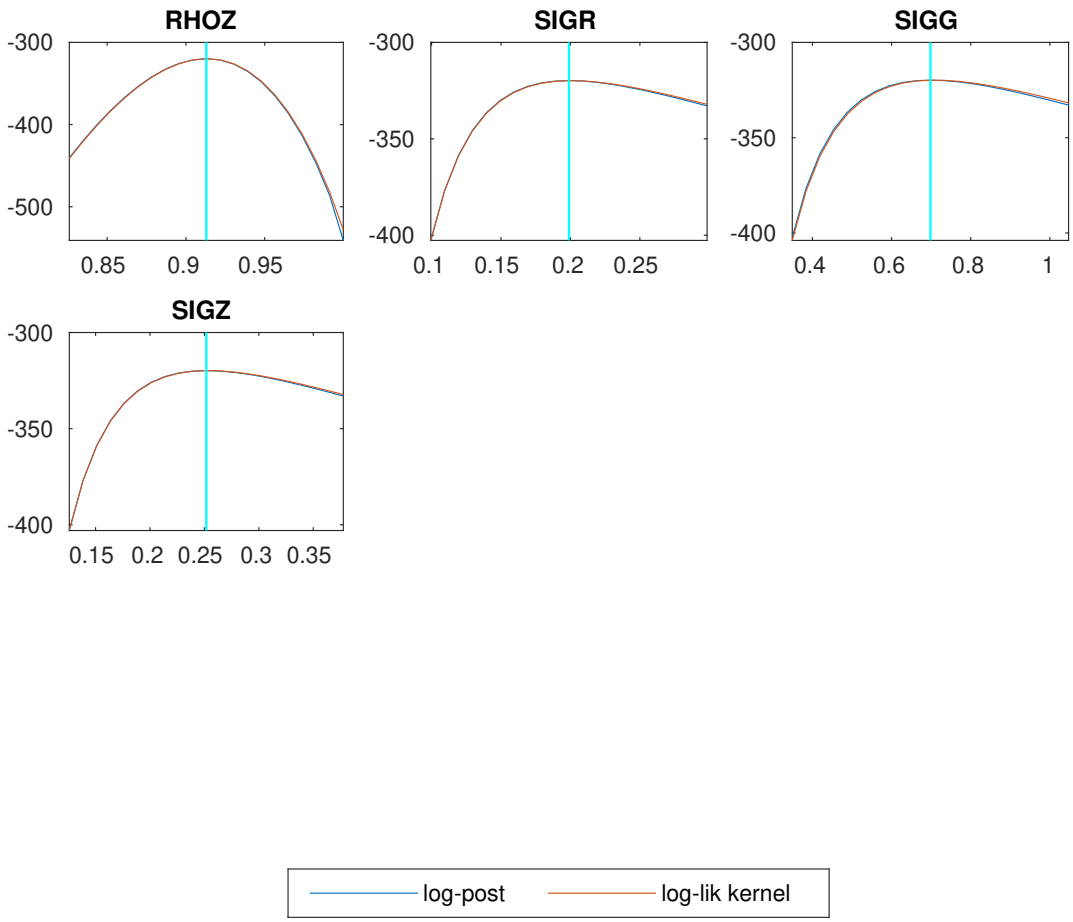

Figure 2: Check plots.

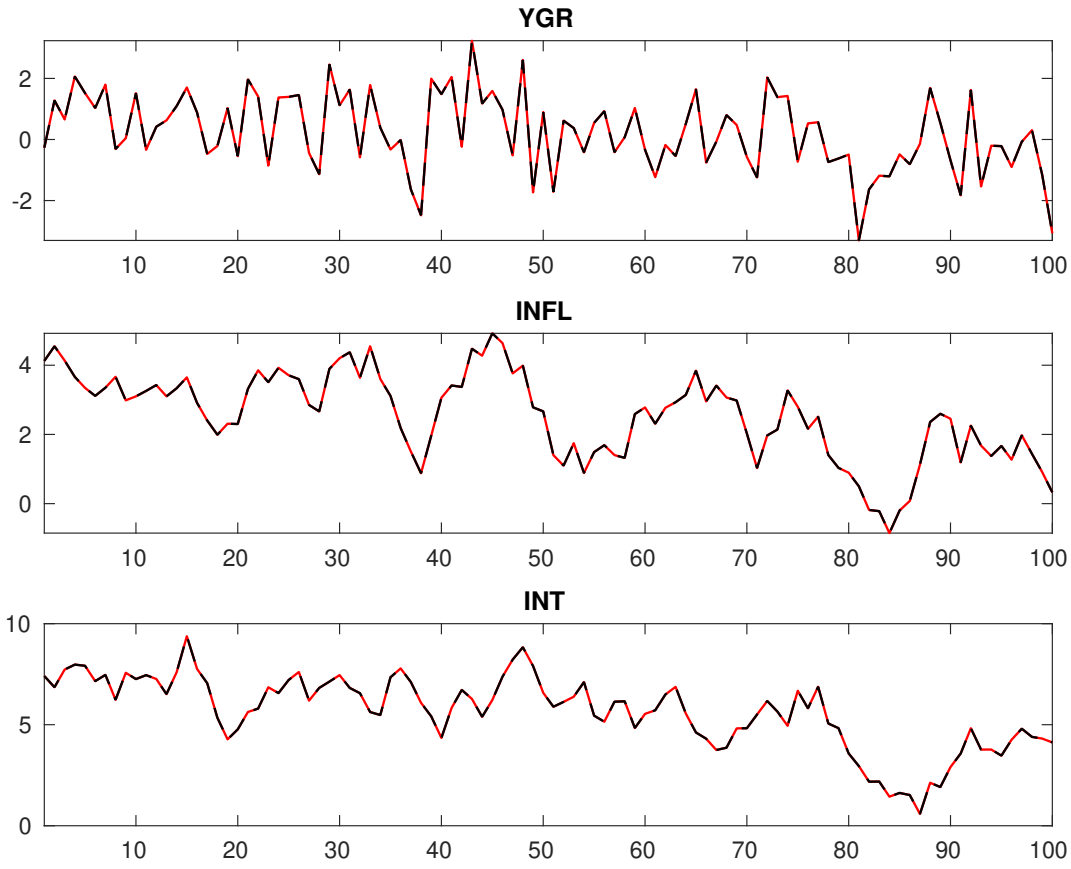

Figure 3: Historical and smoothed variables.

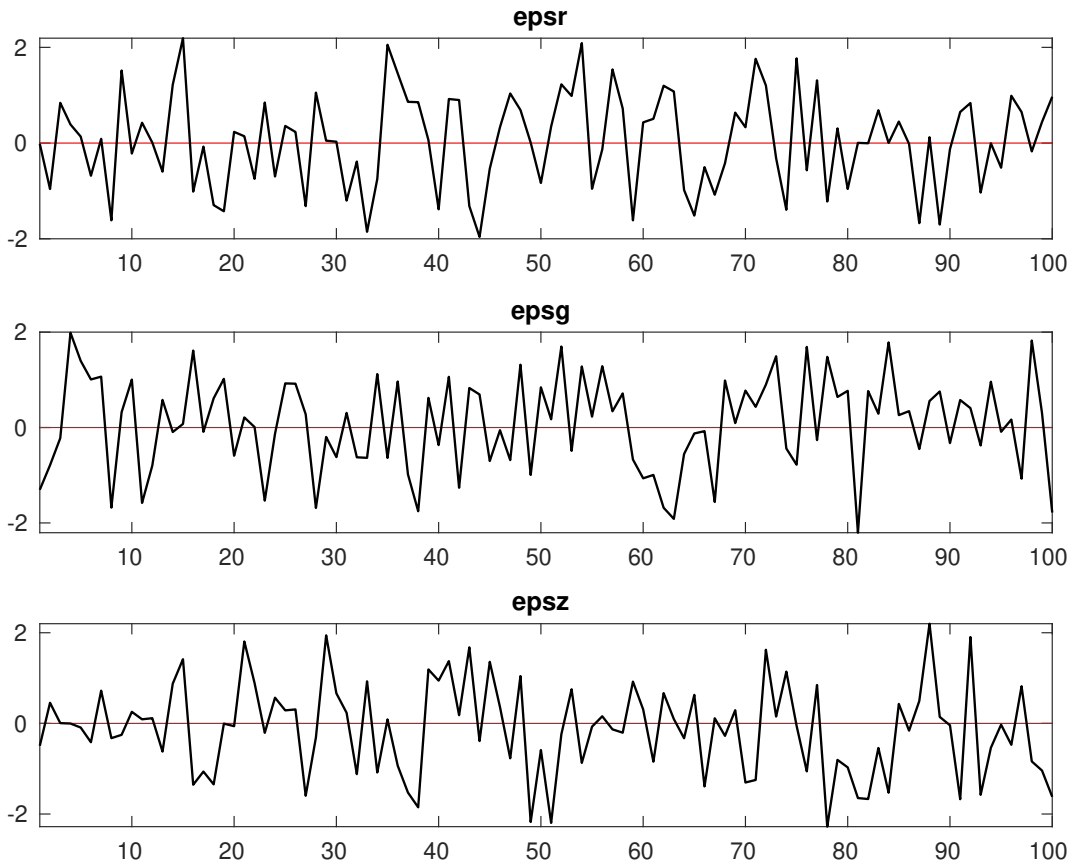

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	46.959	44.573	50.440	47.545
$\pi^{(A)}$	75.843	81.314	85.676	99.221
$\gamma^{(Q)}$	69.042	66.432	75.921	68.122
τ	73.763	77.031	71.274	66.003
ν	70.057	68.043	68.923	63.155
ψ_π	55.810	62.417	59.876	54.141
ψ_y	182.149	340.489	220.451	191.521
ρ_R	98.314	127.376	111.053	99.087
ρ_g	140.057	159.072	148.071	132.547
ρ_z	74.625	115.578	93.736	79.057
σ_R	60.224	60.766	62.519	57.013
σ_g	70.905	87.075	80.139	77.531
σ_z	161.880	252.060	211.863	171.979

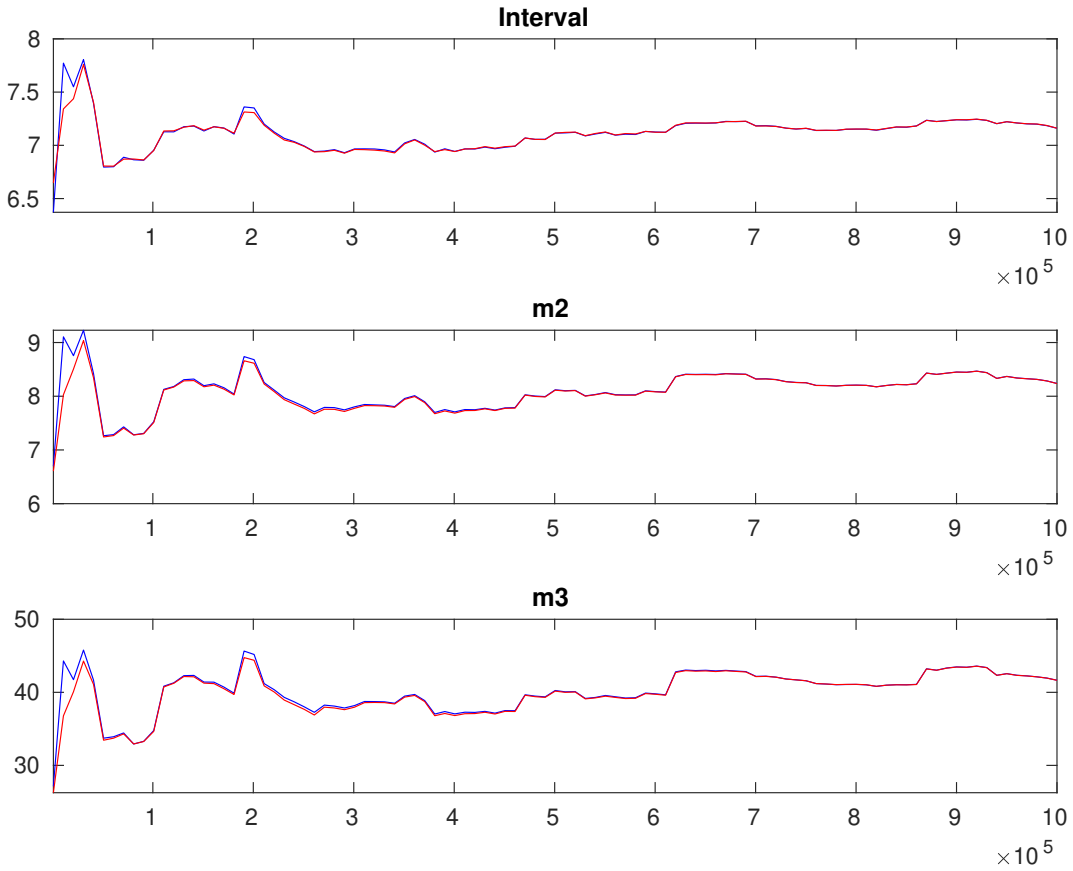

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.260	0.4249	0.5407	1.9397
$\pi^{(A)}$	gamm	4.000	2.0000	2.946	0.2630	2.5196	3.3807
$\gamma^{(Q)}$	norm	0.400	0.2000	0.470	0.1501	0.2233	0.7165
τ	gamm	2.000	0.5000	2.100	0.4256	1.4074	2.7762
ν	beta	0.100	0.0500	0.107	0.0156	0.0815	0.1322
ψ_π	gamm	1.500	0.2500	1.302	0.1894	0.9911	1.6089
ψ_y	gamm	0.500	0.2500	0.134	0.0600	0.0451	0.2171
ρ_R	beta	0.500	0.2000	0.715	0.0477	0.6366	0.7929
ρ_g	beta	0.800	0.1000	0.854	0.0509	0.7713	0.9367
ρ_z	beta	0.660	0.1500	0.918	0.0171	0.8911	0.9462
σ_R	invg	0.300	4.0000	0.206	0.0157	0.1798	0.2307
σ_g	invg	0.400	4.0000	0.723	0.0558	0.6323	0.8127
σ_z	invg	0.400	4.0000	0.268	0.0318	0.2185	0.3159

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.2372	0.4404
$\pi^{(A)}$	gamm	4.000	2.0000	2.9495	0.2584
$\gamma^{(Q)}$	norm	0.400	0.2000	0.4802	0.1464
τ	gamm	2.000	0.5000	2.0521	0.4137
ν	beta	0.100	0.0500	0.1016	0.0146
ψ_π	gamm	1.500	0.2500	1.2778	0.1814
ψ_y	gamm	0.500	0.2500	0.0970	0.0419
ρ_R	beta	0.500	0.2000	0.6954	0.0450
ρ_g	beta	0.800	0.1000	0.8173	0.0567
ρ_z	beta	0.660	0.1500	0.9129	0.0158
σ_R	invg	0.300	4.0000	0.1989	0.0146
σ_g	invg	0.400	4.0000	0.6982	0.0500
σ_z	invg	0.400	4.0000	0.2517	0.0226

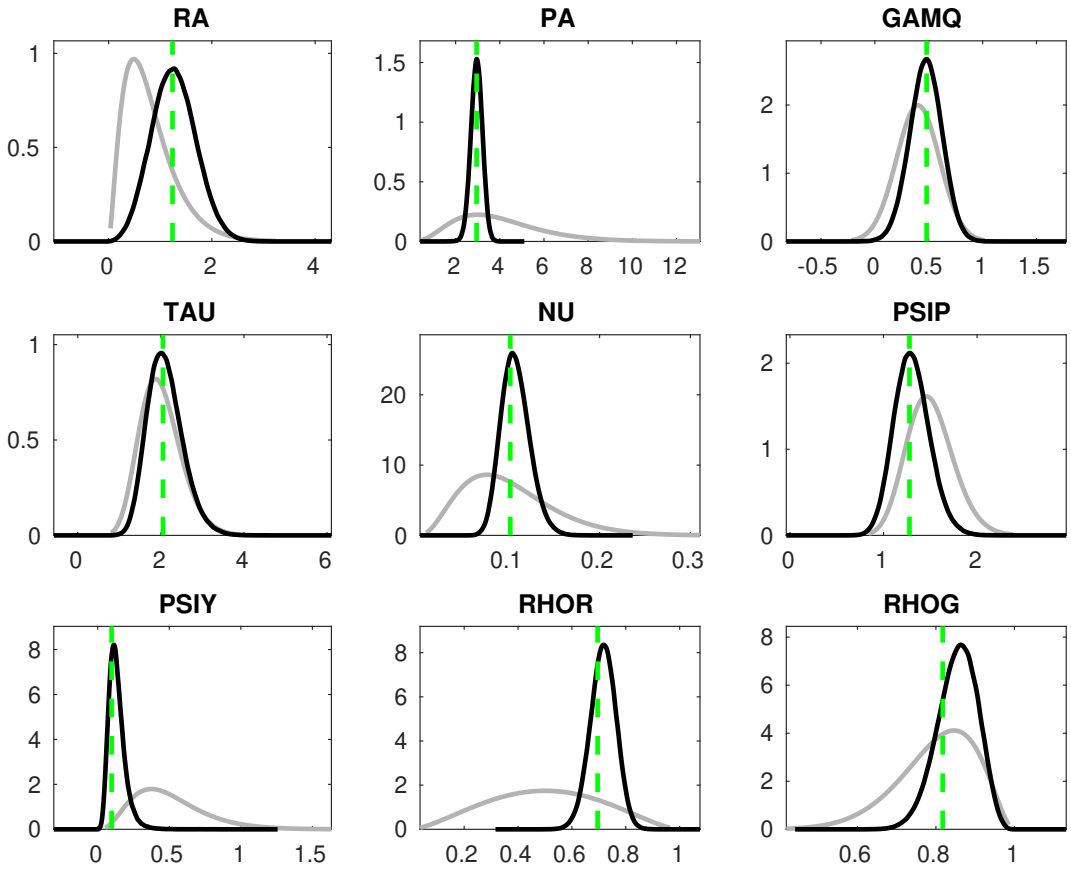

Figure 6: Priors and posteriors.

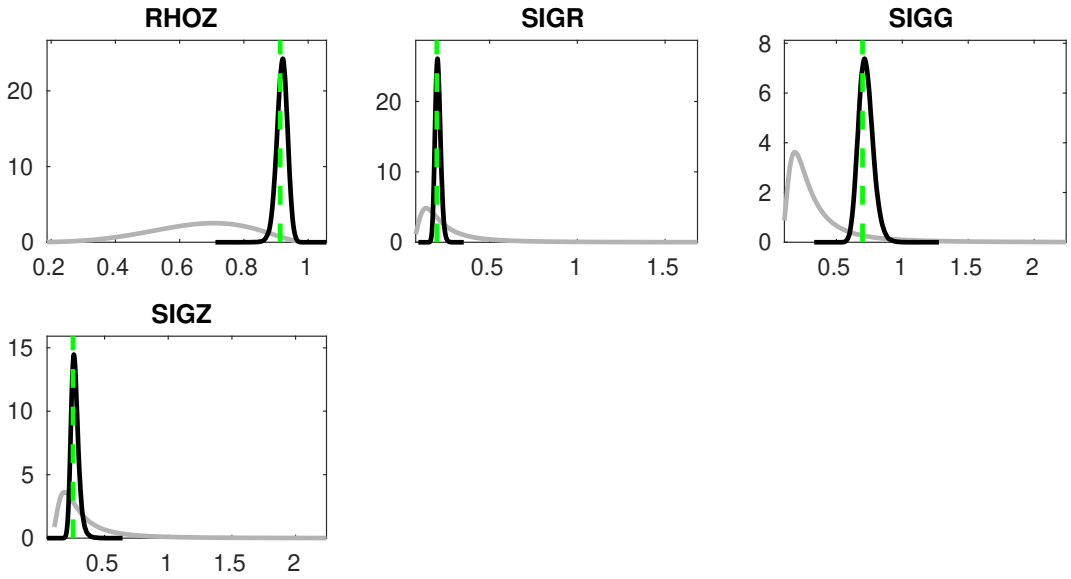

Figure 7: Priors and posteriors.

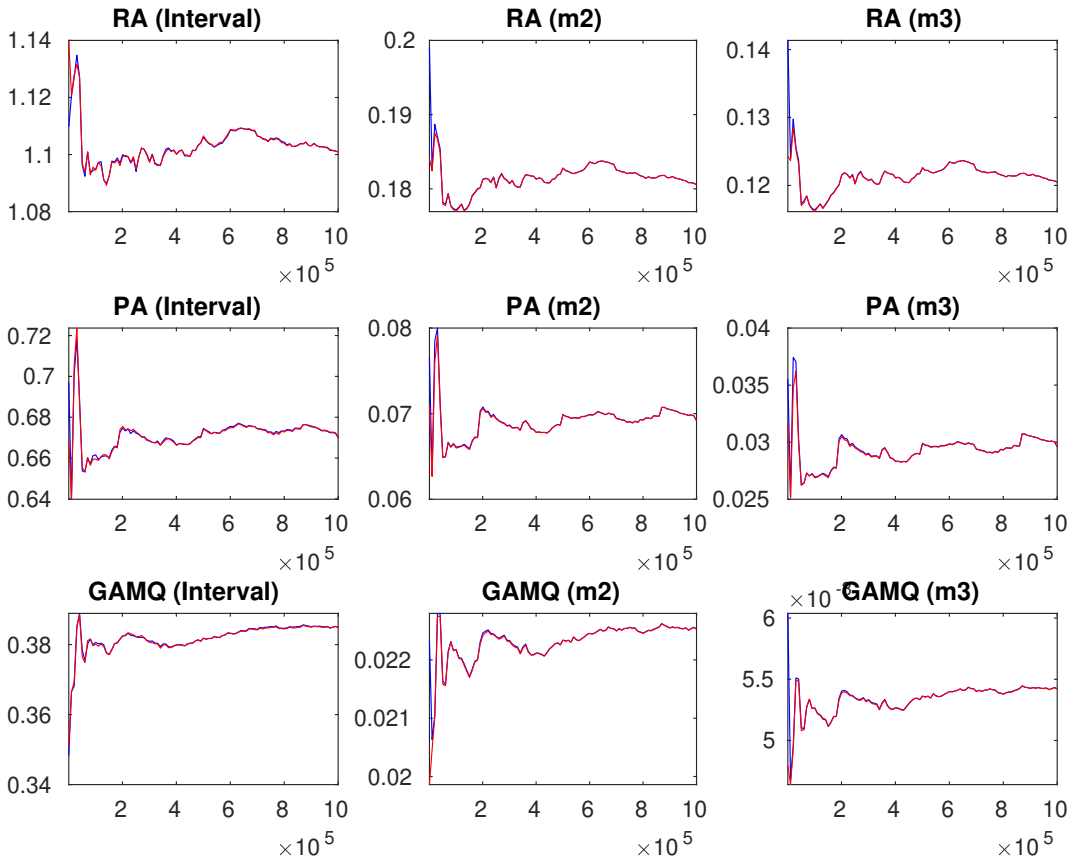

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

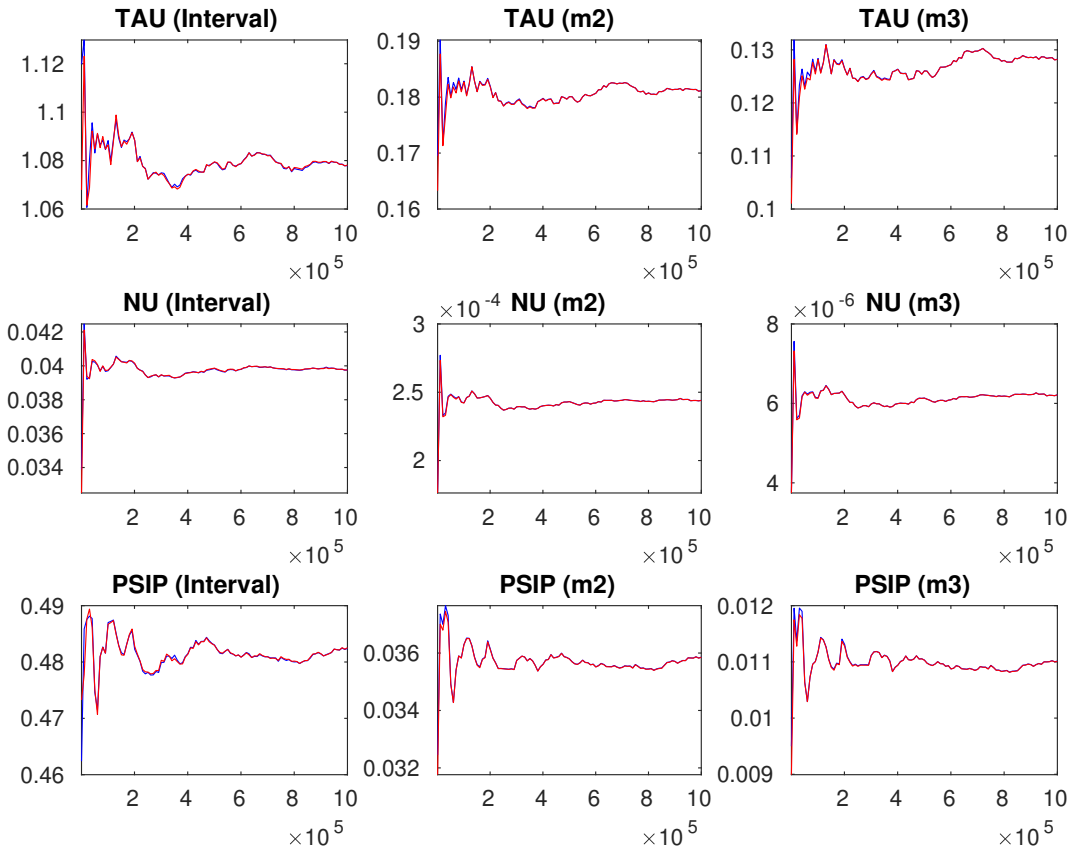

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

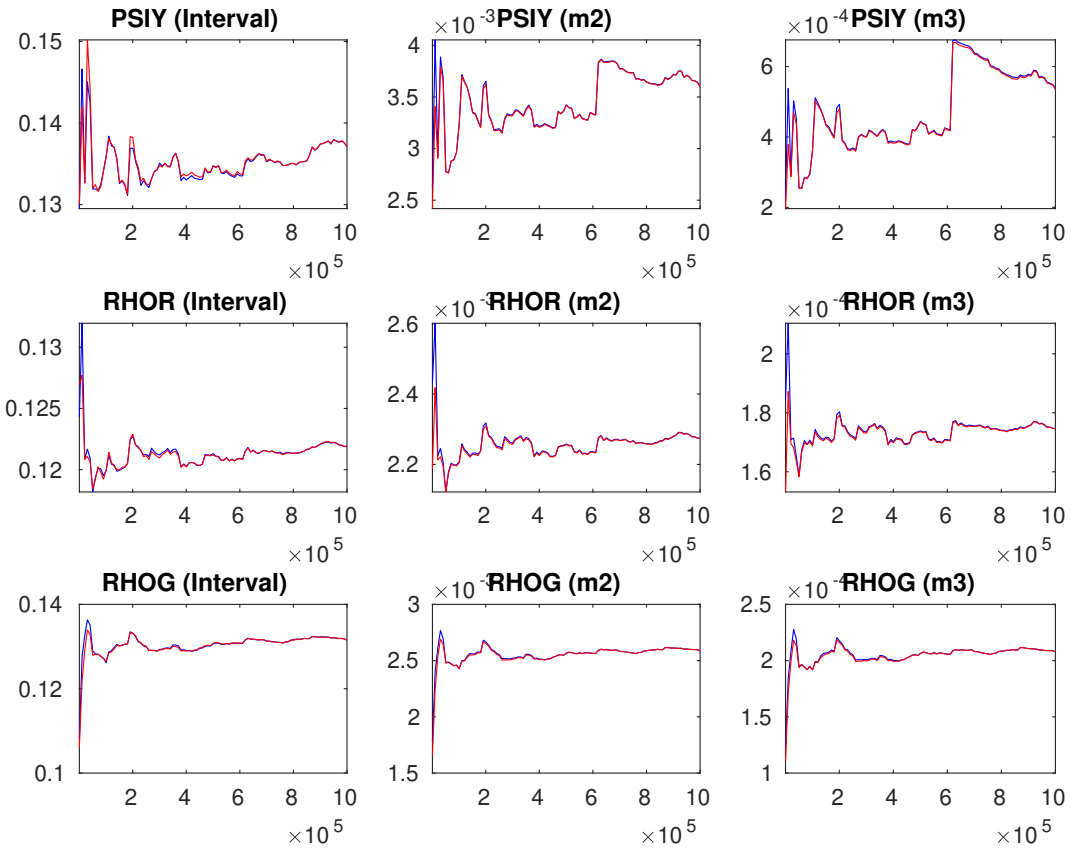

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

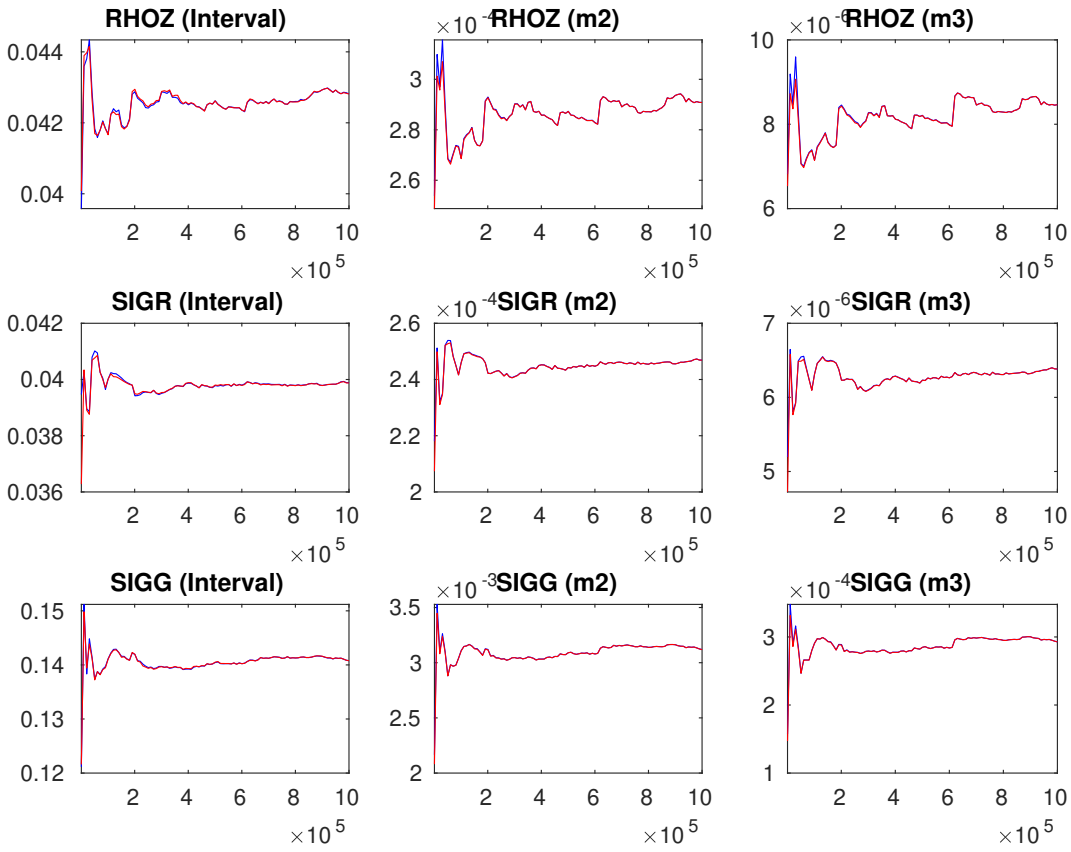

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

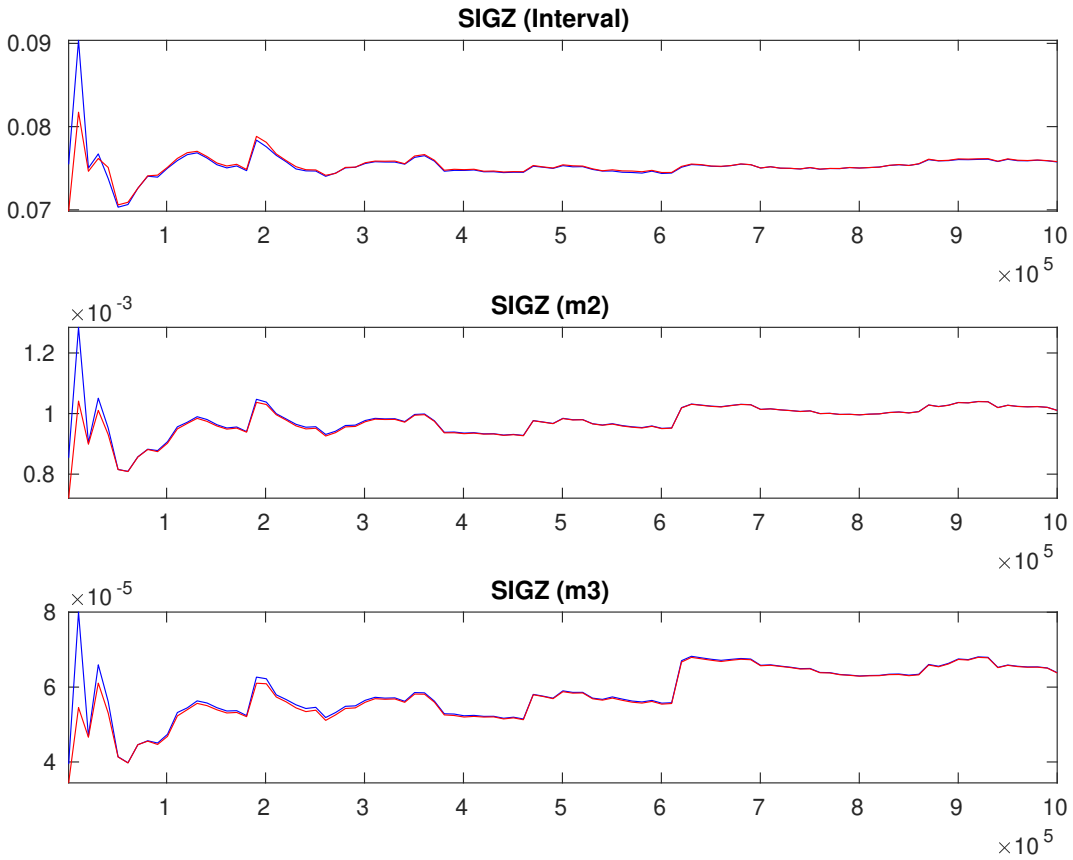

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.