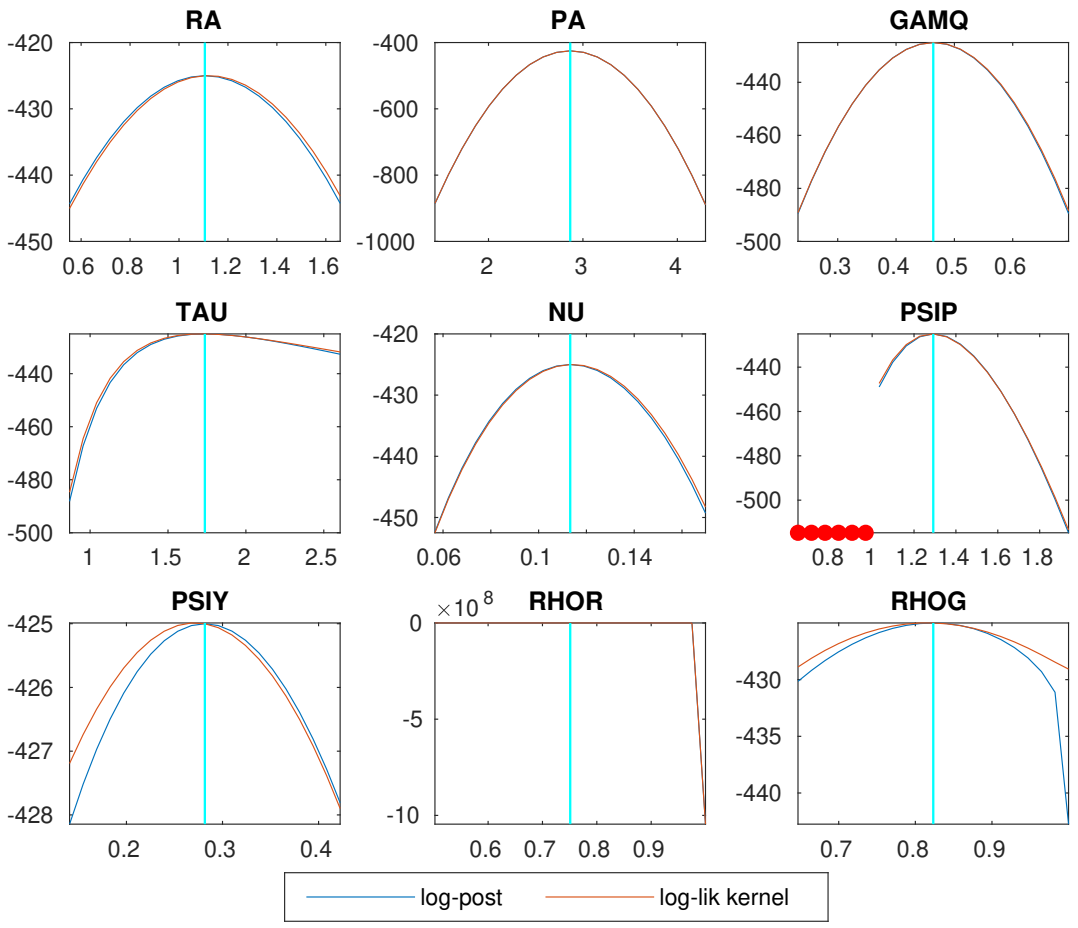

Figure 1: Check plots.

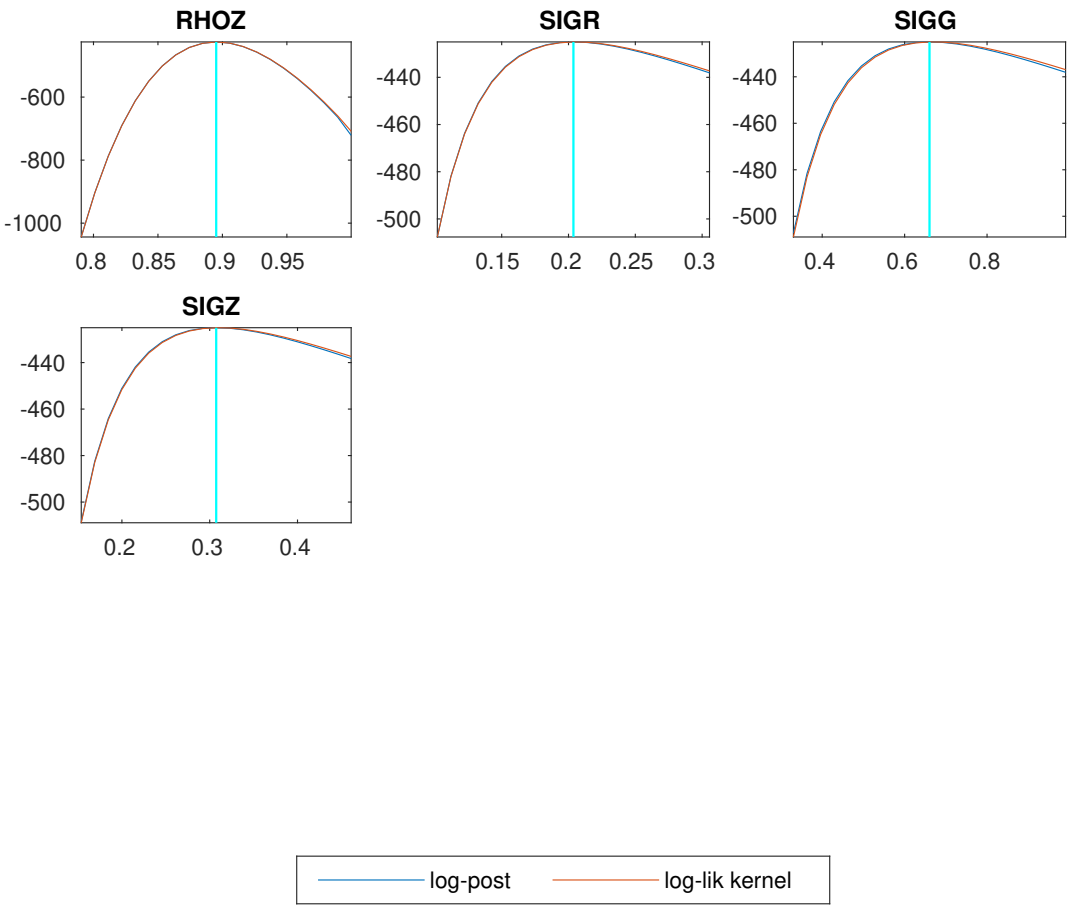

Figure 2: Check plots.

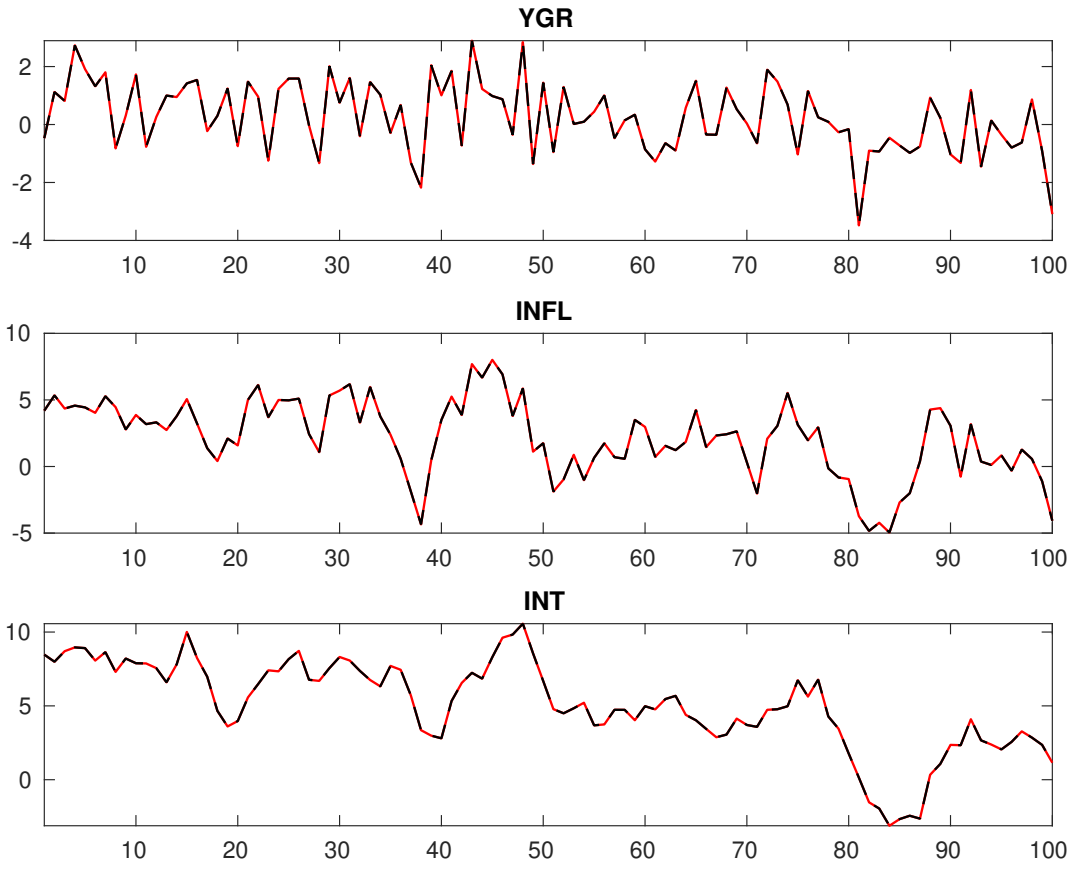

Figure 3: Historical and smoothed variables.

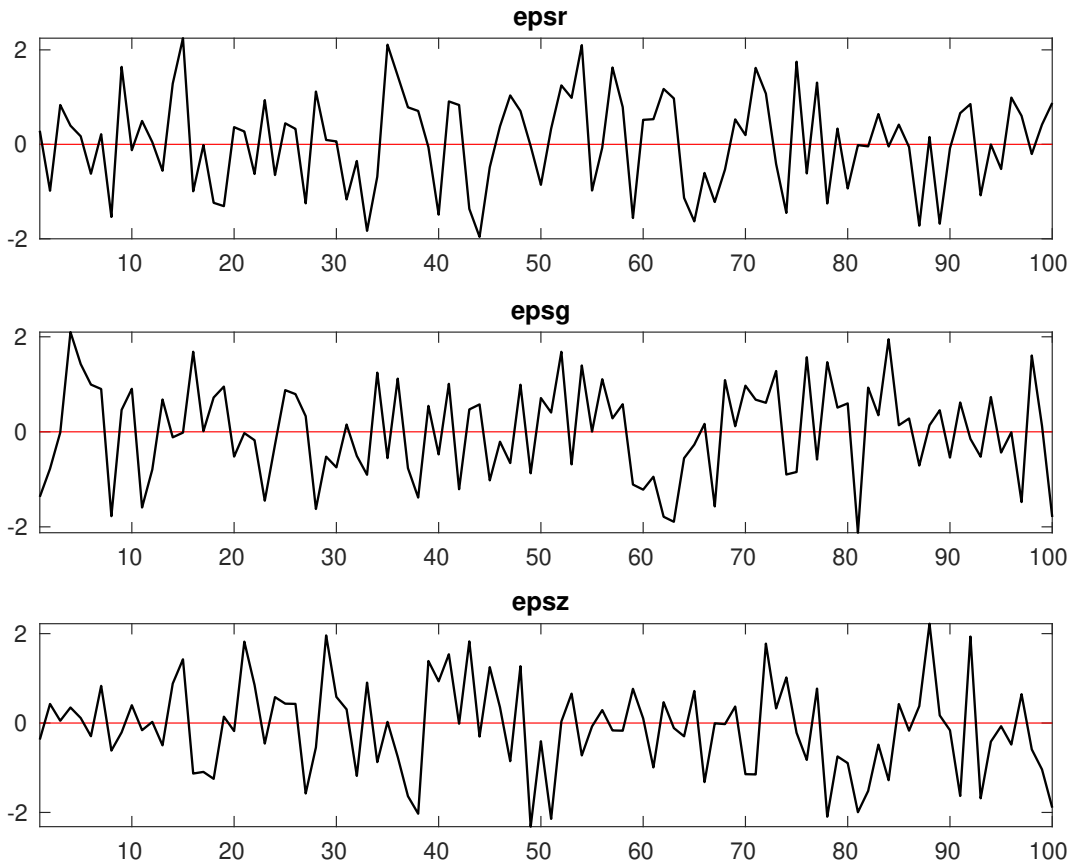

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	61.511	64.199	60.262	58.077
$\pi^{(A)}$	67.194	66.076	63.718	60.057
$\gamma^{(Q)}$	67.752	66.846	63.116	63.031
τ	63.193	62.847	57.107	55.506
ν	67.928	69.250	65.609	67.132
ψ_π	61.457	59.966	56.793	60.001
ψ_y	62.375	60.677	64.231	59.996
ρ_R	62.821	67.003	61.552	64.681
ρ_g	57.106	60.061	63.459	60.099
ρ_z	68.885	73.574	65.975	67.254
σ_R	57.909	53.836	58.378	58.504
σ_g	59.431	58.847	62.927	58.975
σ_z	54.464	57.606	54.777	58.257

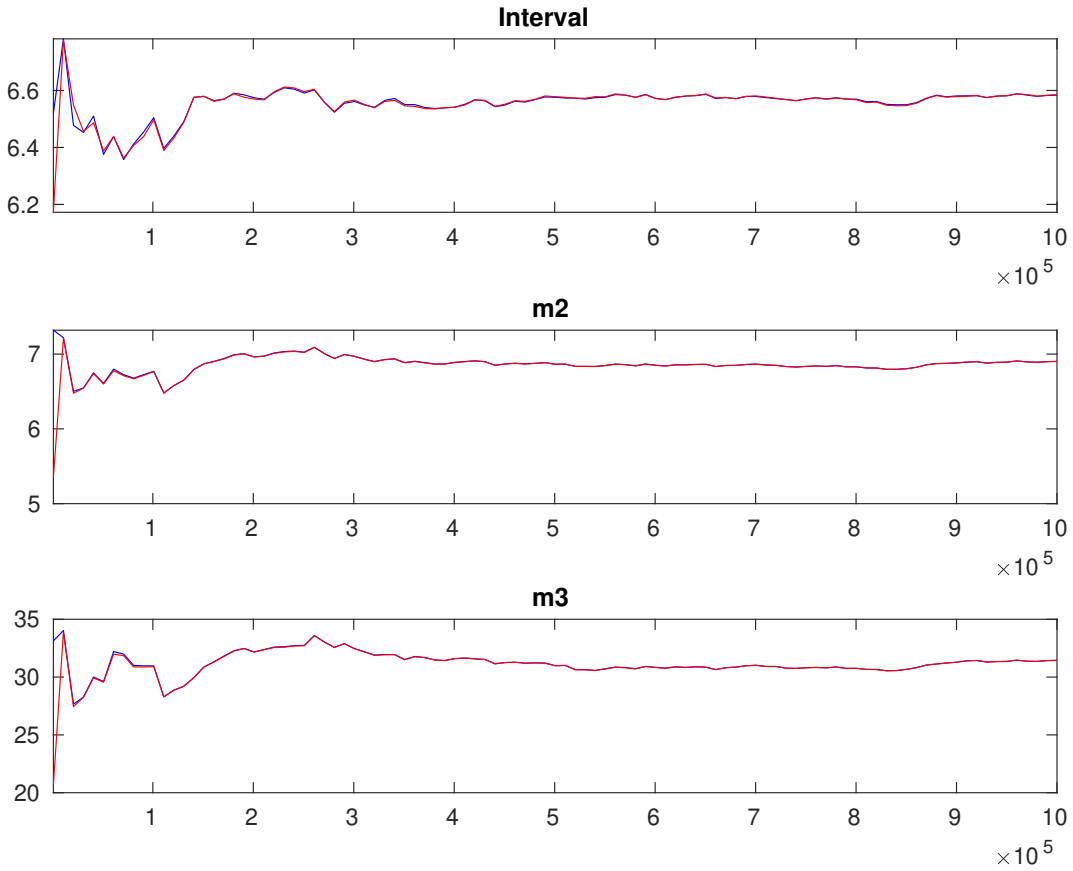

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.134	0.3707	0.5126	1.7346
$\pi^{(A)}$	gamm	4.000	2.0000	2.837	0.4738	2.0550	3.6116
$\gamma^{(Q)}$	norm	0.400	0.2000	0.458	0.1422	0.2240	0.6905
τ	gamm	2.000	0.5000	1.897	0.3518	1.3287	2.4659
ν	beta	0.100	0.0500	0.124	0.0293	0.0766	0.1705
ψ_π	gamm	1.500	0.2500	1.305	0.1410	1.0653	1.5281
ψ_y	gamm	0.500	0.2500	0.344	0.1590	0.0927	0.5819
ρ_R	beta	0.500	0.2000	0.759	0.0286	0.7112	0.8053
ρ_g	beta	0.800	0.1000	0.847	0.0543	0.7587	0.9369
ρ_z	beta	0.660	0.1500	0.901	0.0168	0.8732	0.9285
σ_R	invg	0.300	4.0000	0.210	0.0166	0.1827	0.2363
σ_g	invg	0.400	4.0000	0.684	0.0496	0.6024	0.7637
σ_z	invg	0.400	4.0000	0.317	0.0318	0.2646	0.3681

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.1057	0.3655
$\pi^{(A)}$	gamm	4.000	2.0000	2.8655	0.4676
$\gamma^{(Q)}$	norm	0.400	0.2000	0.4638	0.1401
τ	gamm	2.000	0.5000	1.7366	0.3629
ν	beta	0.100	0.0500	0.1132	0.0287
ψ_π	gamm	1.500	0.2500	1.2919	0.1382
ψ_y	gamm	0.500	0.2500	0.2816	0.1615
ρ_R	beta	0.500	0.2000	0.7511	0.0285
ρ_g	beta	0.800	0.1000	0.8234	0.0566
ρ_z	beta	0.660	0.1500	0.8952	0.0164
σ_R	invg	0.300	4.0000	0.2037	0.0169
σ_g	invg	0.400	4.0000	0.6604	0.0476
σ_z	invg	0.400	4.0000	0.3074	0.0330

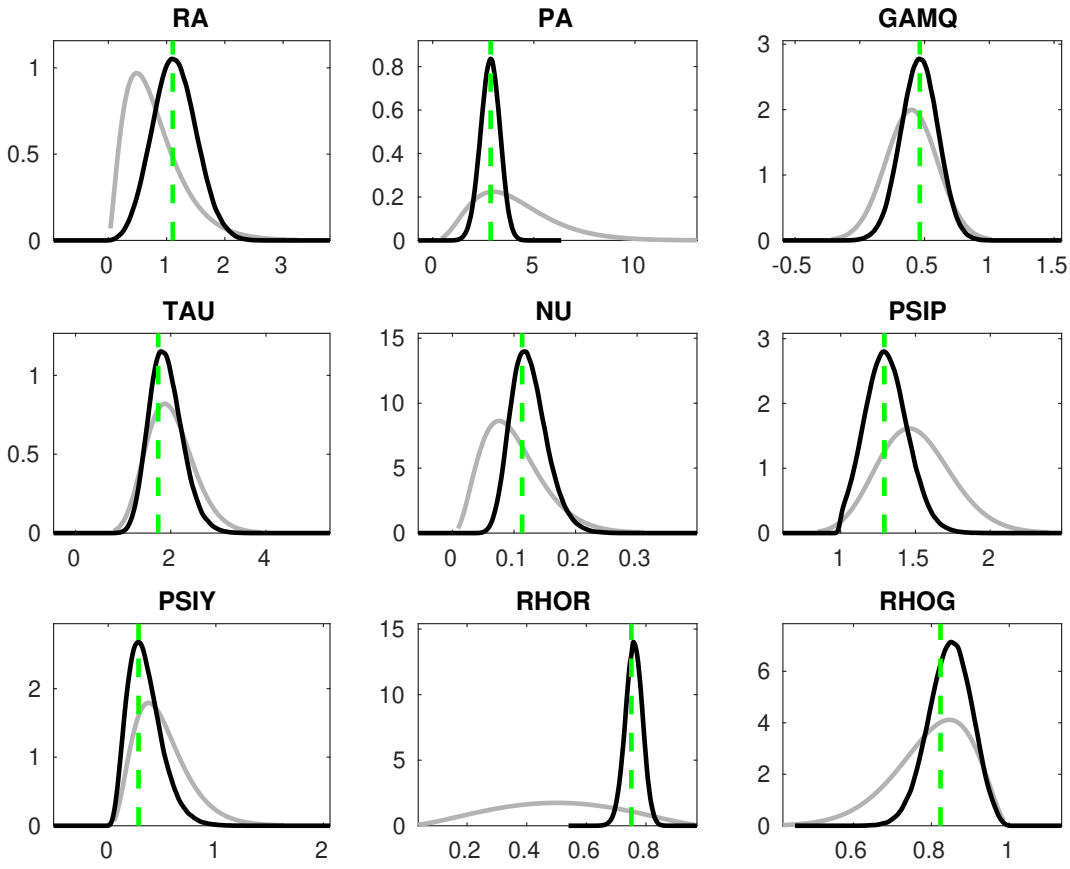

Figure 6: Priors and posteriors.

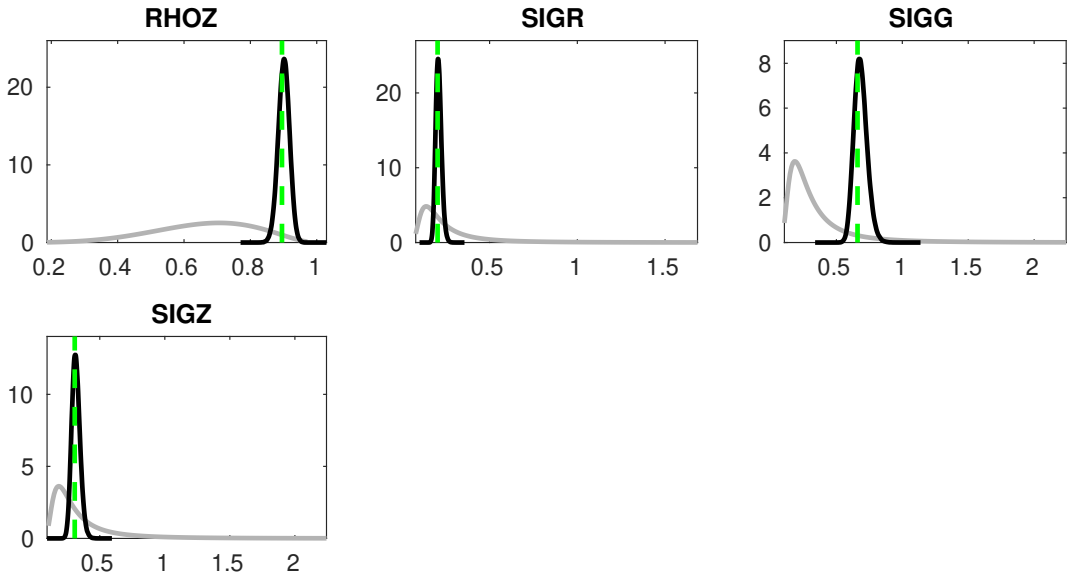

Figure 7: Priors and posteriors.

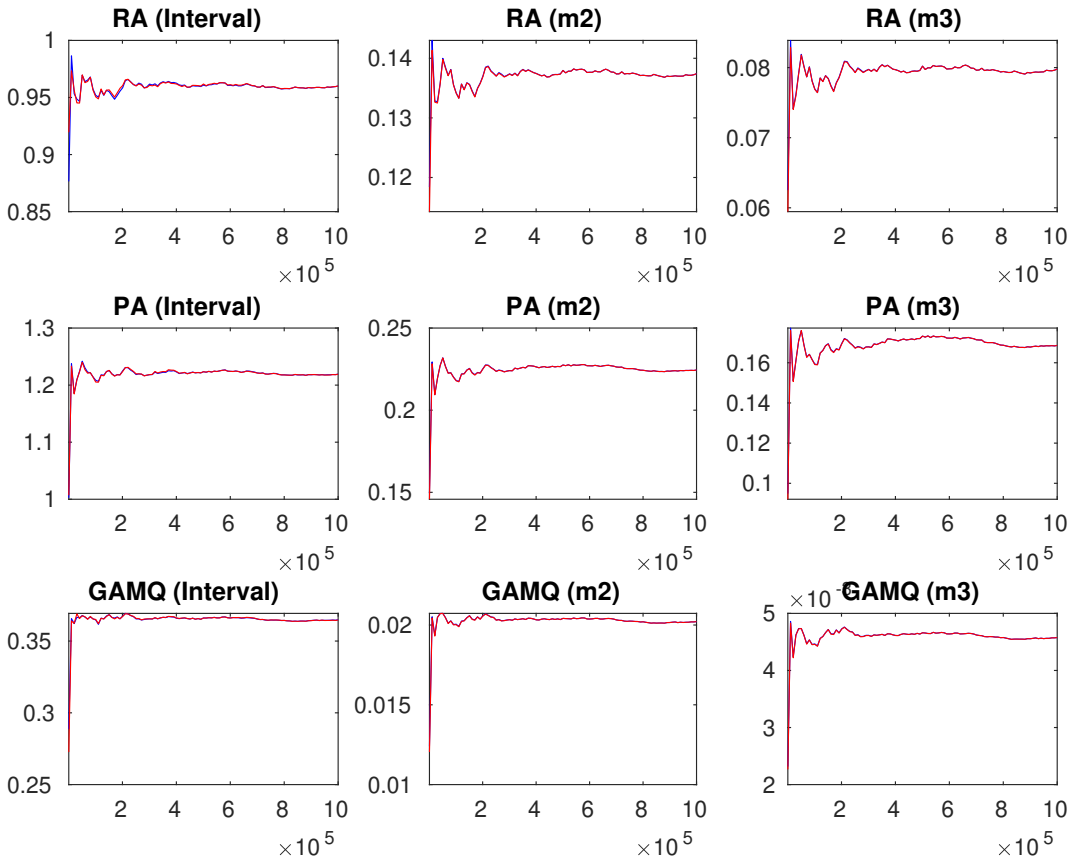

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

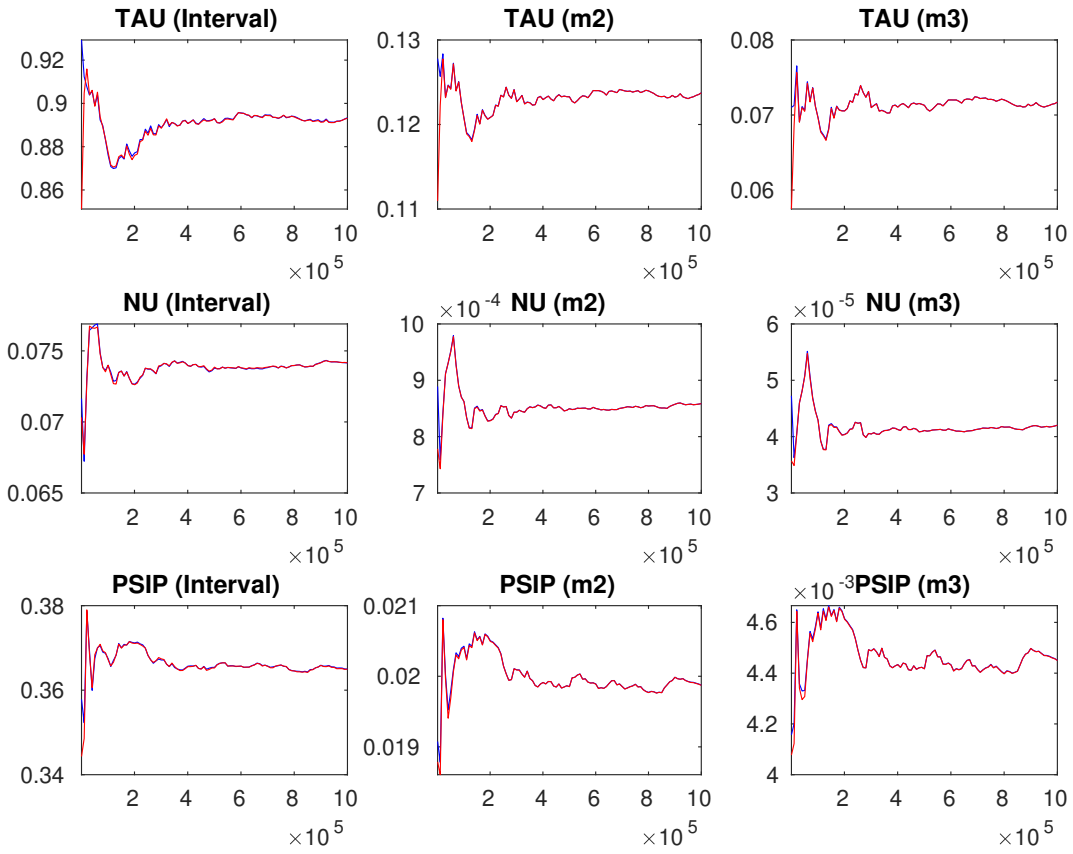

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

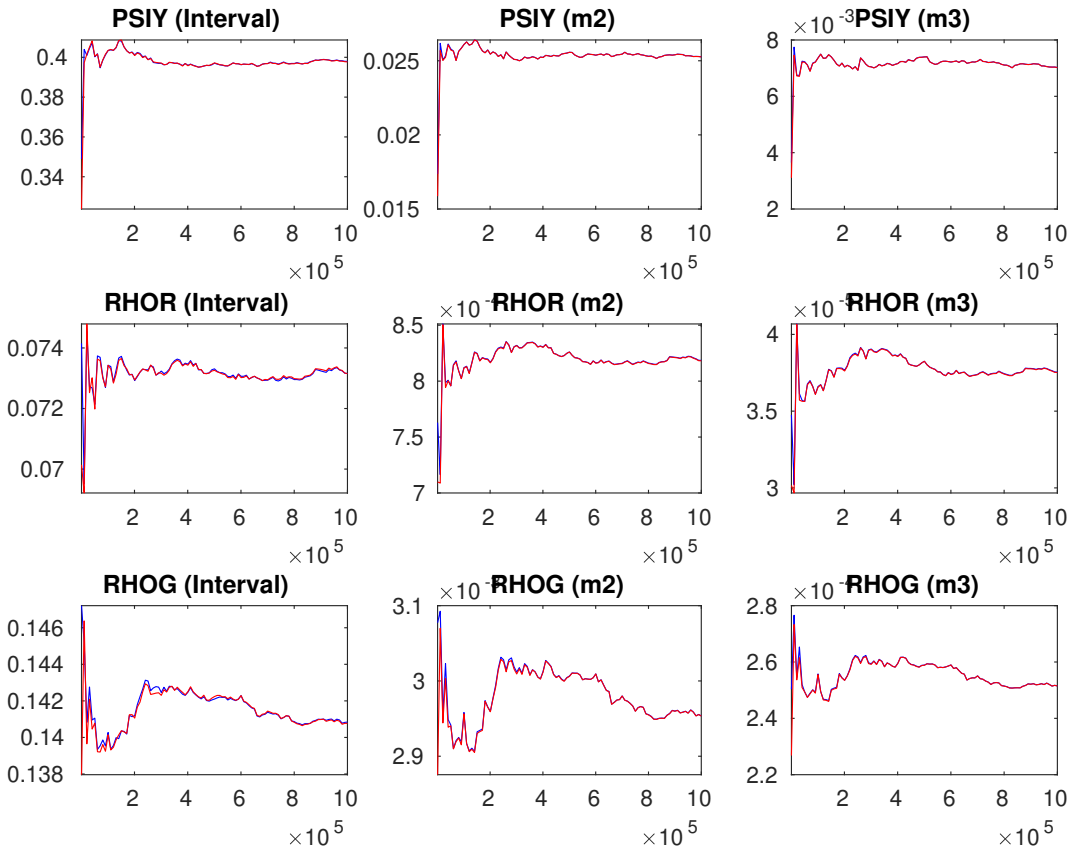

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

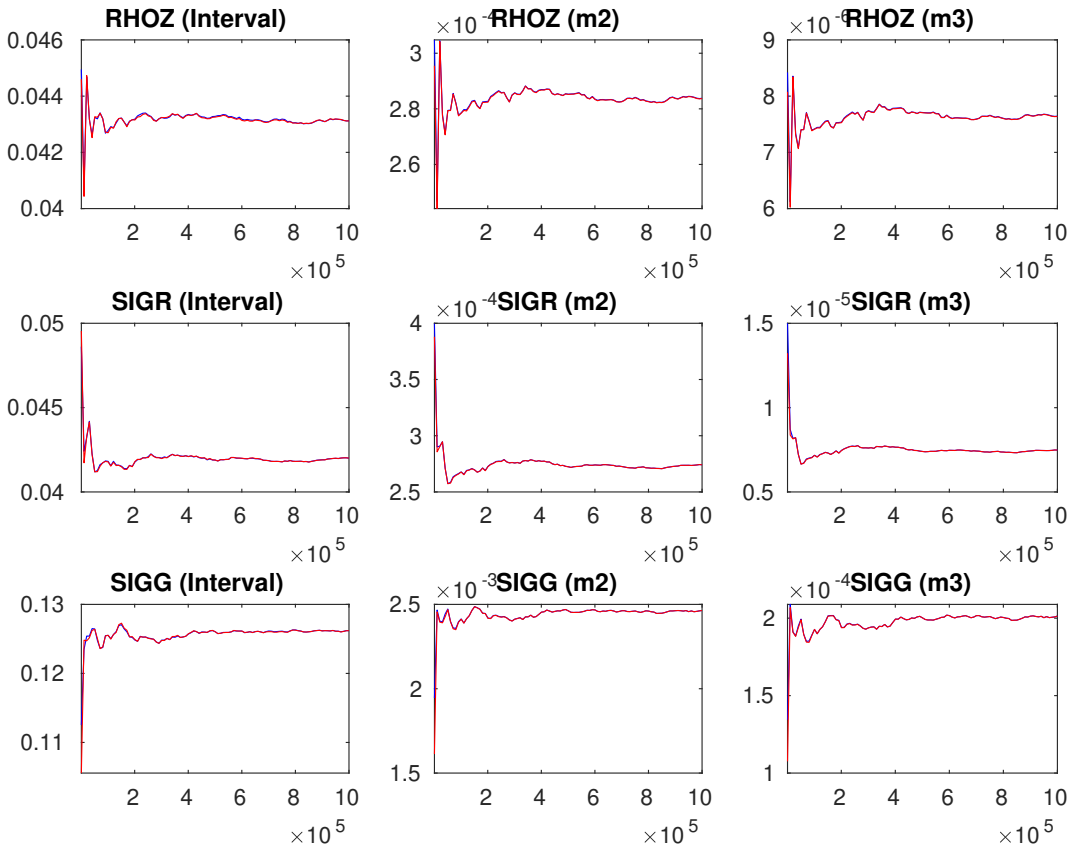

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

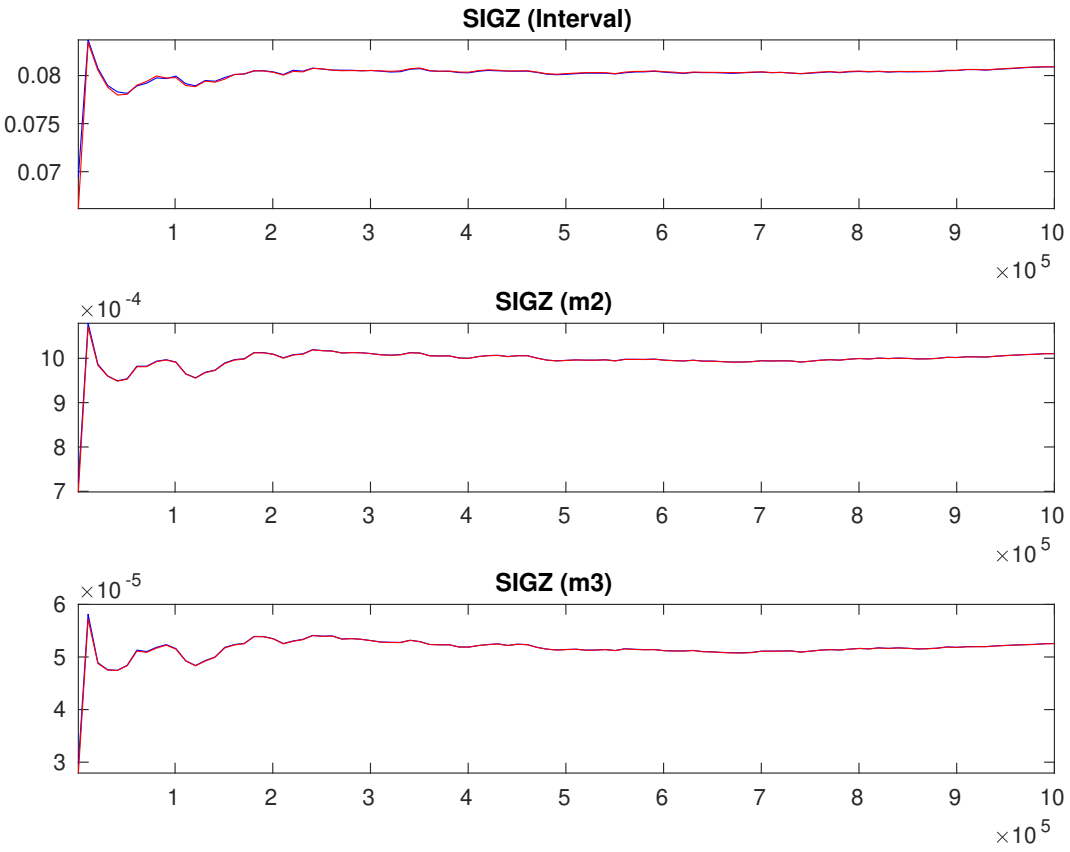

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.