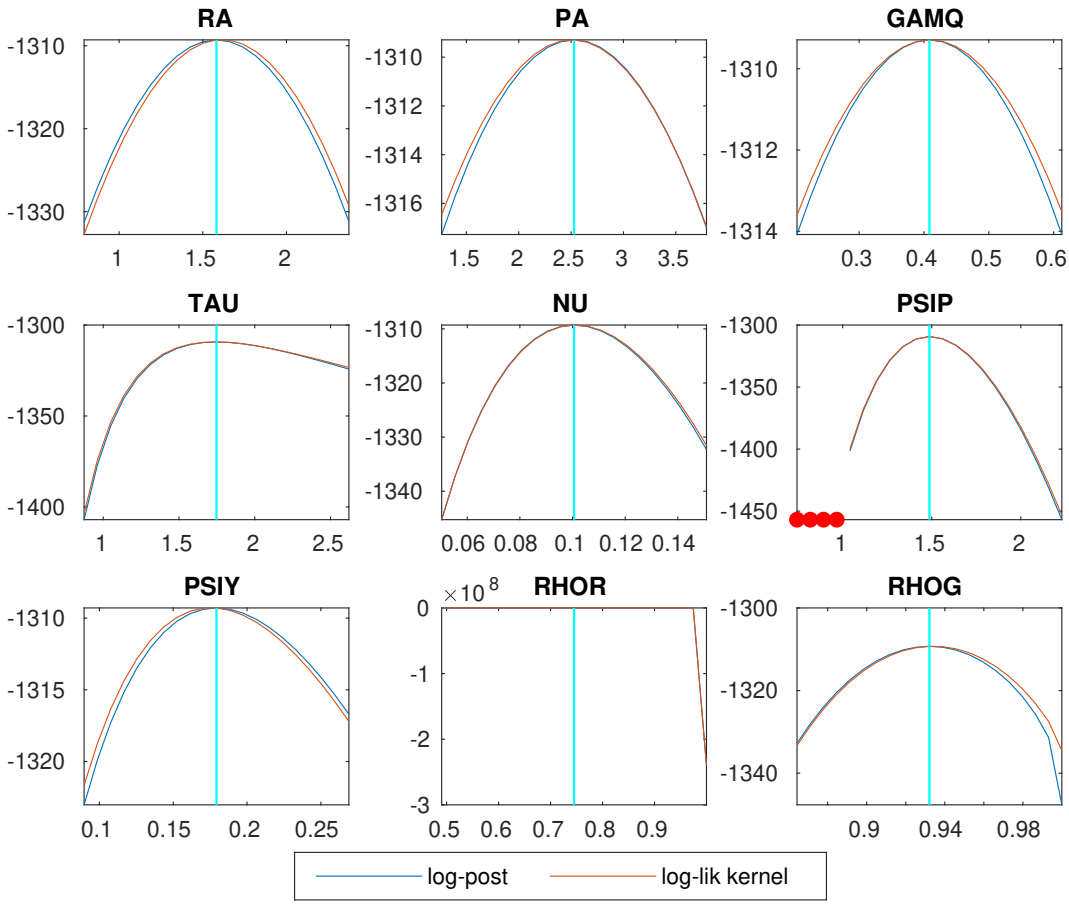

Figure 1: Check plots.

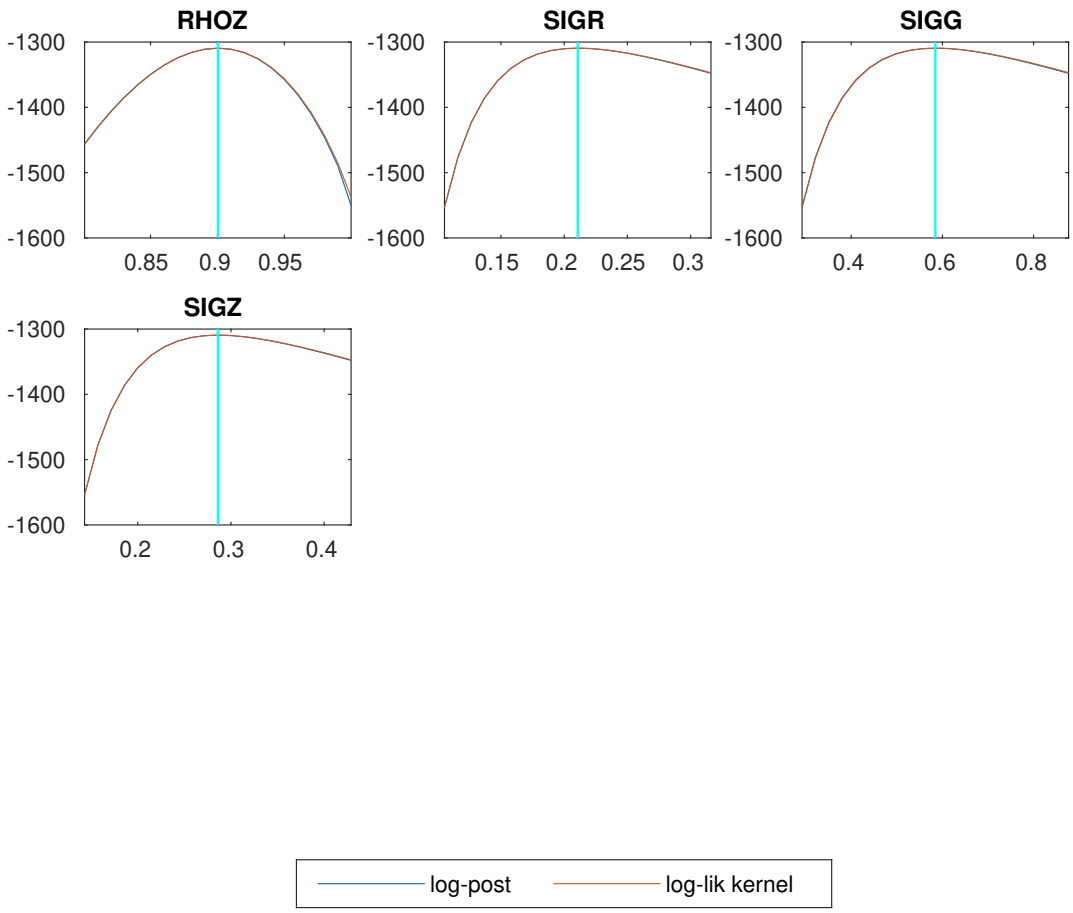

Figure 2: Check plots.

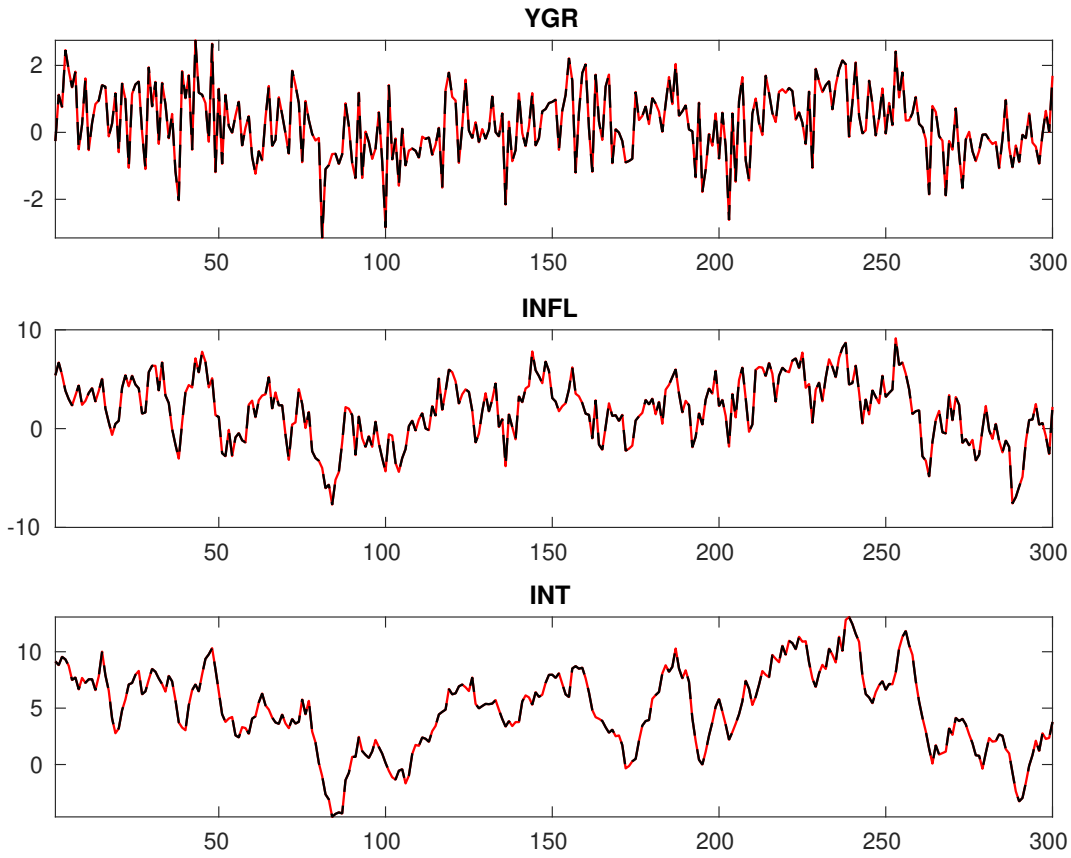

Figure 3: Historical and smoothed variables.

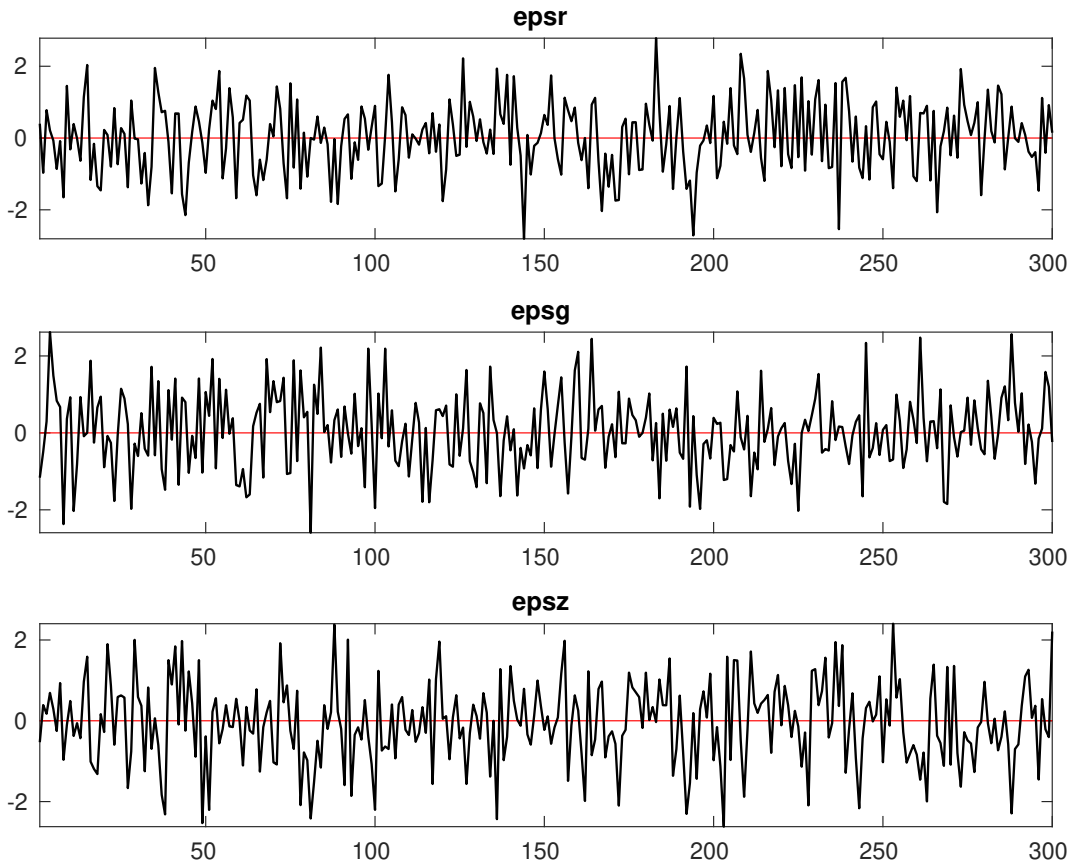

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	48.320	44.900	45.200	45.808
$\pi^{(A)}$	62.690	55.969	58.172	59.542
$\gamma^{(Q)}$	48.352	47.041	48.659	46.740
τ	58.171	62.302	54.361	54.038
ν	61.765	61.253	55.545	57.349
ψ_π	59.350	56.854	55.207	61.696
ψ_y	99.506	107.004	86.119	91.231
ρ_R	57.276	59.153	57.100	57.530
ρ_g	51.167	58.130	53.486	56.889
ρ_z	53.846	53.061	52.009	51.695
σ_R	49.612	47.968	49.665	49.800
σ_g	57.337	64.430	56.061	53.682
σ_z	58.922	58.597	55.033	55.545

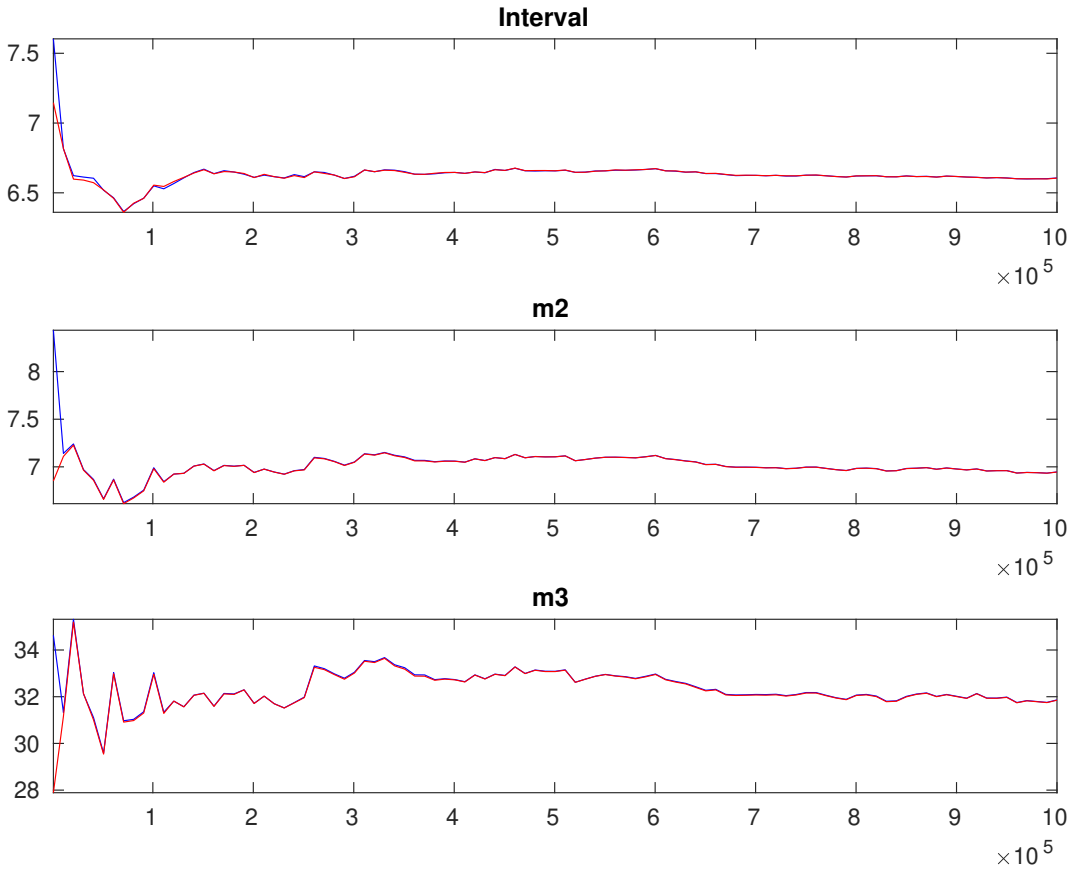

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.561	0.2929	1.0840	2.0474
$\pi^{(A)}$	gamm	4.000	2.0000	2.590	0.6043	1.5976	3.5672
$\gamma^{(Q)}$	norm	0.400	0.2000	0.415	0.1229	0.2124	0.6162
τ	gamm	2.000	0.5000	1.833	0.2668	1.3923	2.2549
ν	beta	0.100	0.0500	0.110	0.0205	0.0758	0.1417
ψ_π	gamm	1.500	0.2500	1.514	0.1018	1.3470	1.6769
ψ_y	gamm	0.500	0.2500	0.210	0.0681	0.1031	0.3149
ρ_R	beta	0.500	0.2000	0.752	0.0193	0.7206	0.7842
ρ_g	beta	0.800	0.1000	0.935	0.0169	0.9075	0.9631
ρ_z	beta	0.660	0.1500	0.901	0.0125	0.8804	0.9213
σ_R	invg	0.300	4.0000	0.213	0.0098	0.1971	0.2290
σ_g	invg	0.400	4.0000	0.579	0.0385	0.5153	0.6416
σ_z	invg	0.400	4.0000	0.298	0.0249	0.2568	0.3380

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.5820	0.2913
$\pi^{(A)}$	gamm	4.000	2.0000	2.5286	0.5528
$\gamma^{(Q)}$	norm	0.400	0.2000	0.4084	0.1199
τ	gamm	2.000	0.5000	1.7475	0.2538
ν	beta	0.100	0.0500	0.1006	0.0190
ψ_π	gamm	1.500	0.2500	1.4866	0.0944
ψ_y	gamm	0.500	0.2500	0.1793	0.0580
ρ_R	beta	0.500	0.2000	0.7452	0.0190
ρ_g	beta	0.800	0.1000	0.9321	0.0172
ρ_z	beta	0.660	0.1500	0.9003	0.0120
σ_R	invg	0.300	4.0000	0.2107	0.0096
σ_g	invg	0.400	4.0000	0.5845	0.0364
σ_z	invg	0.400	4.0000	0.2859	0.0236

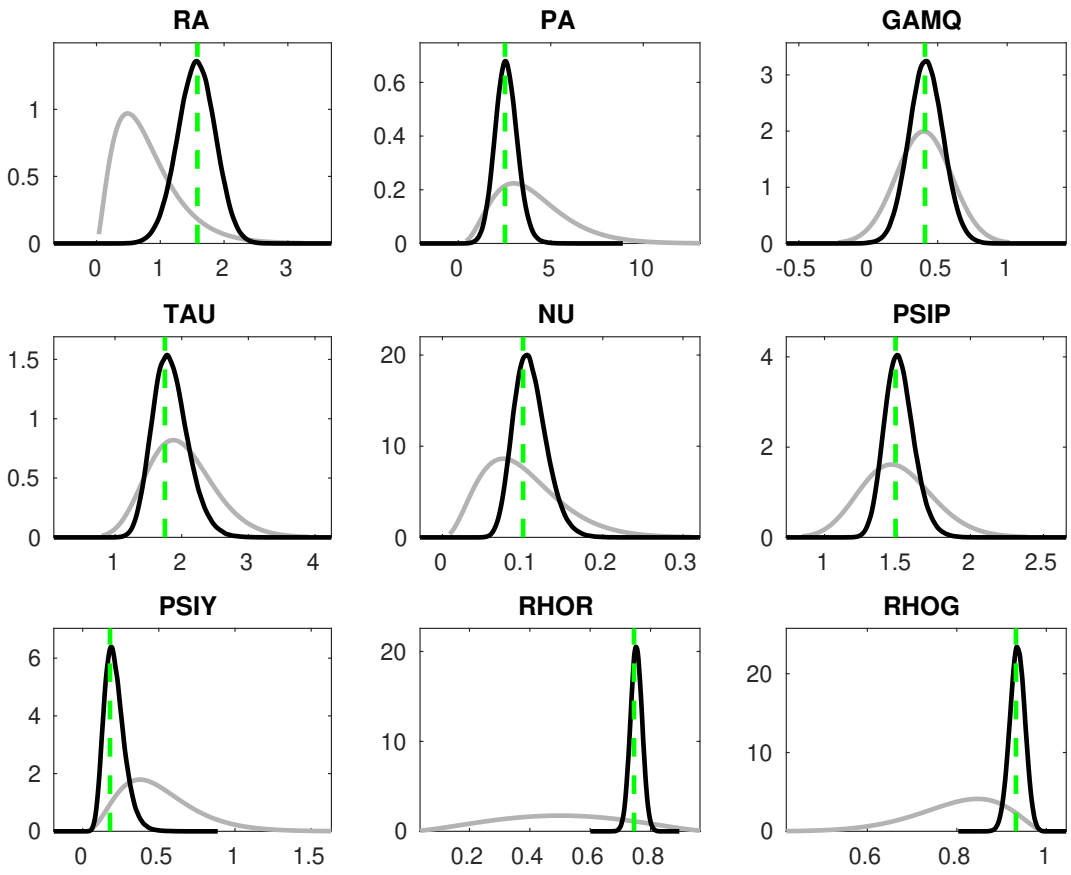

Figure 6: Priors and posteriors.

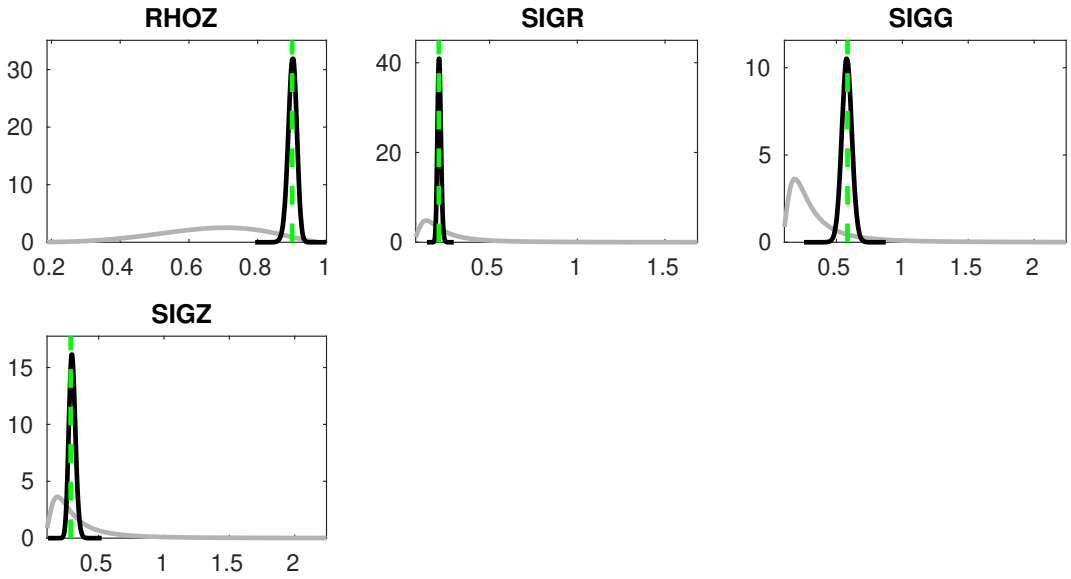

Figure 7: Priors and posteriors.

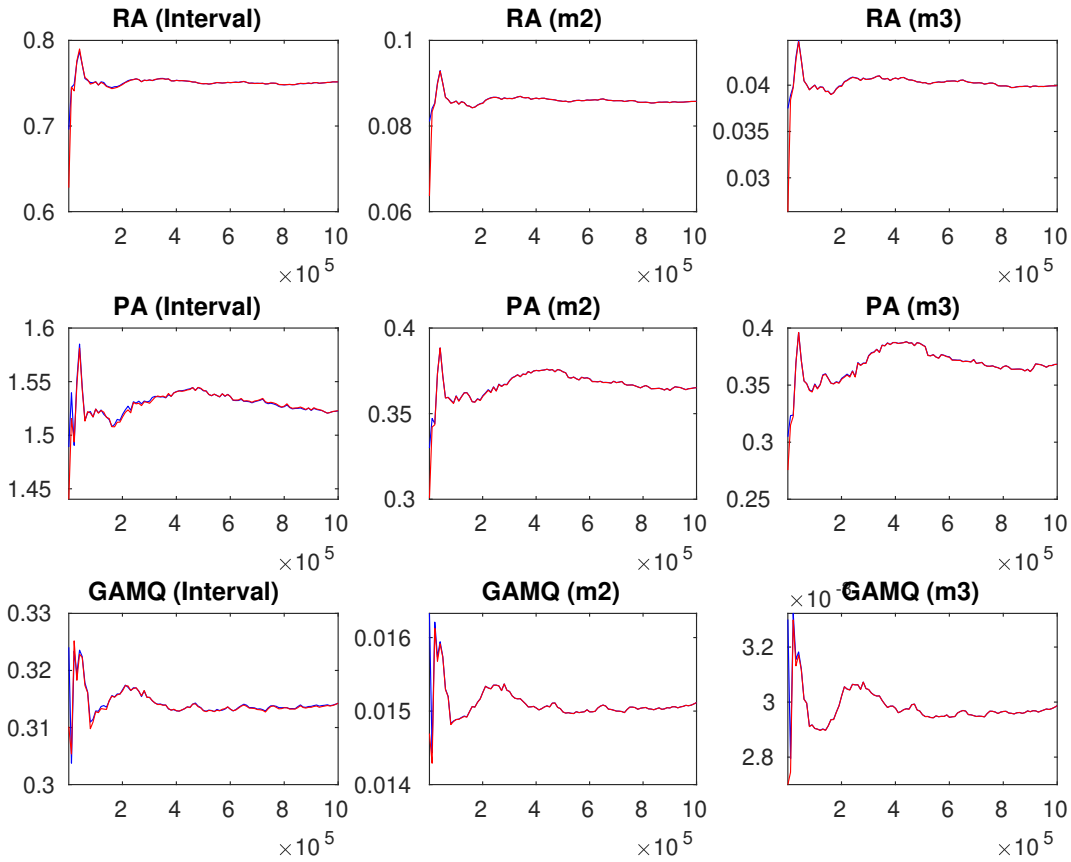

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

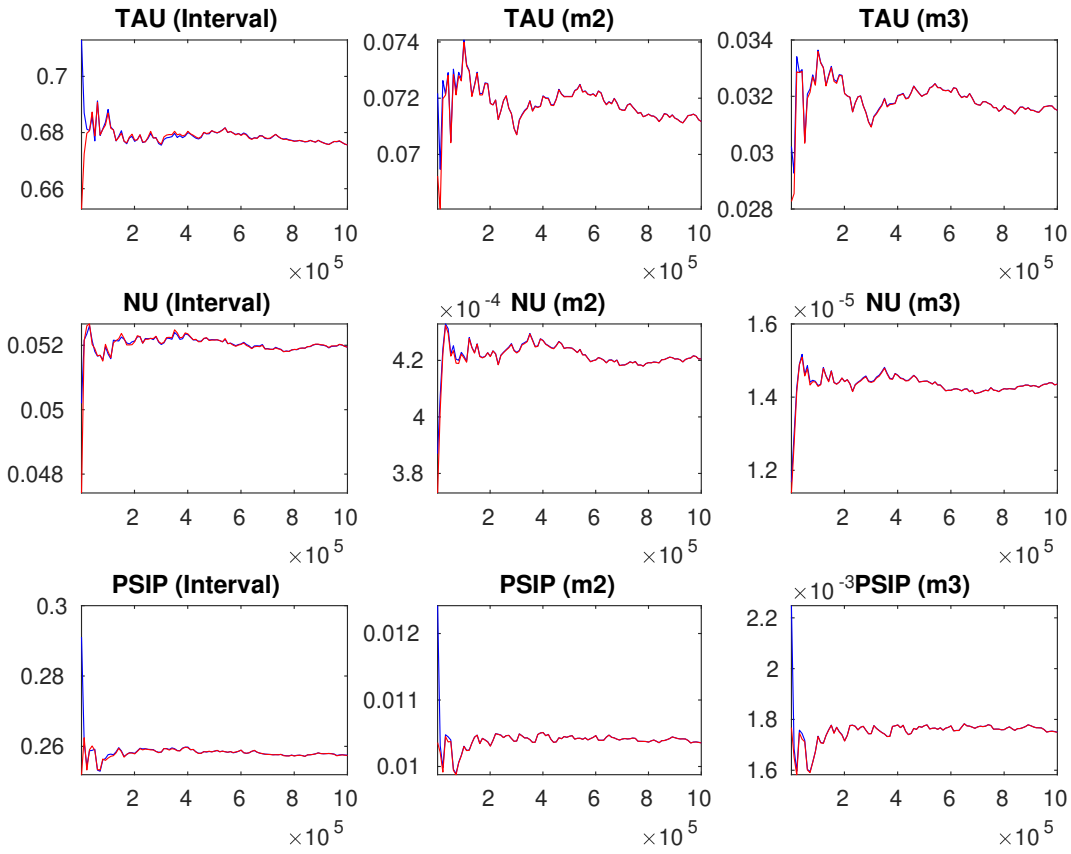

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

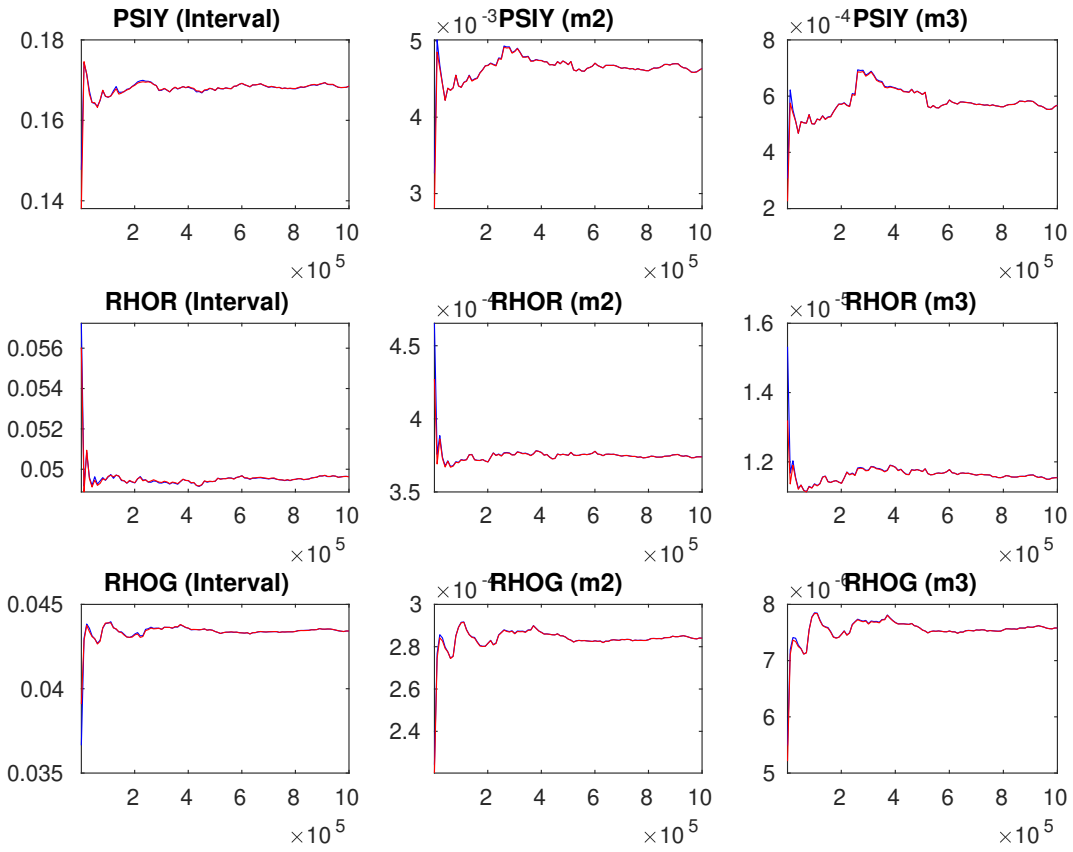

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

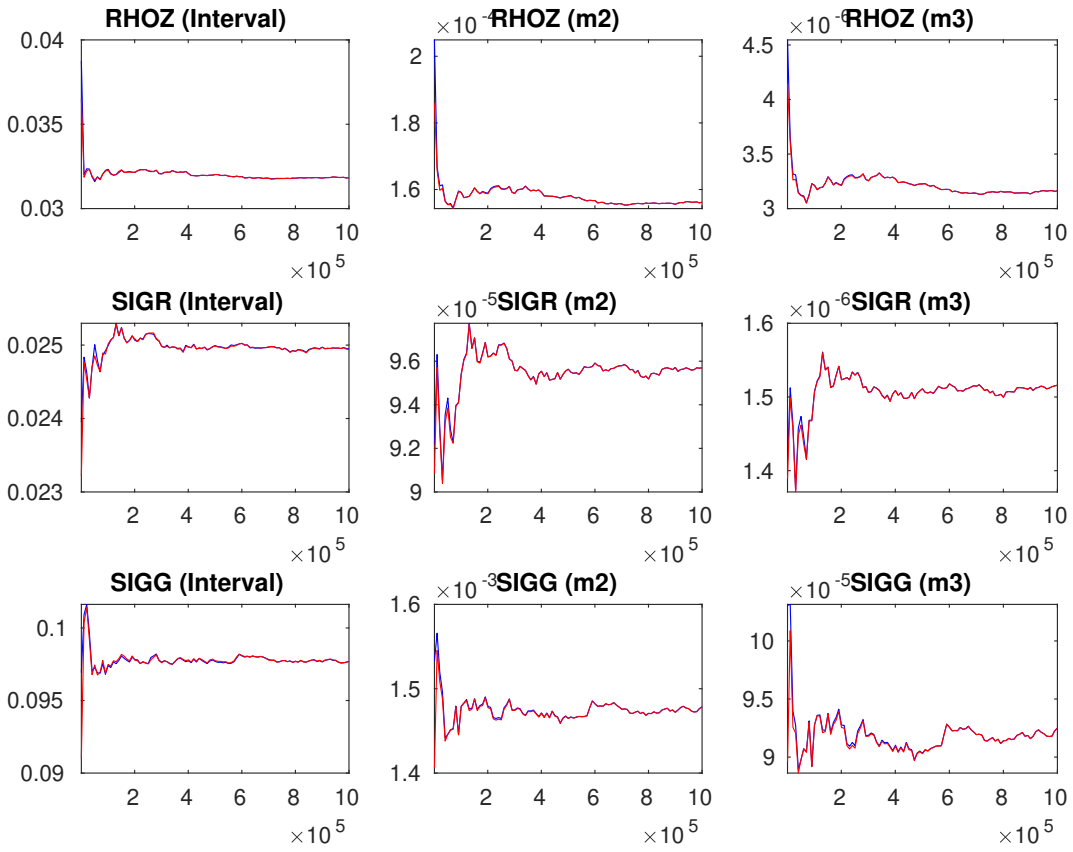

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

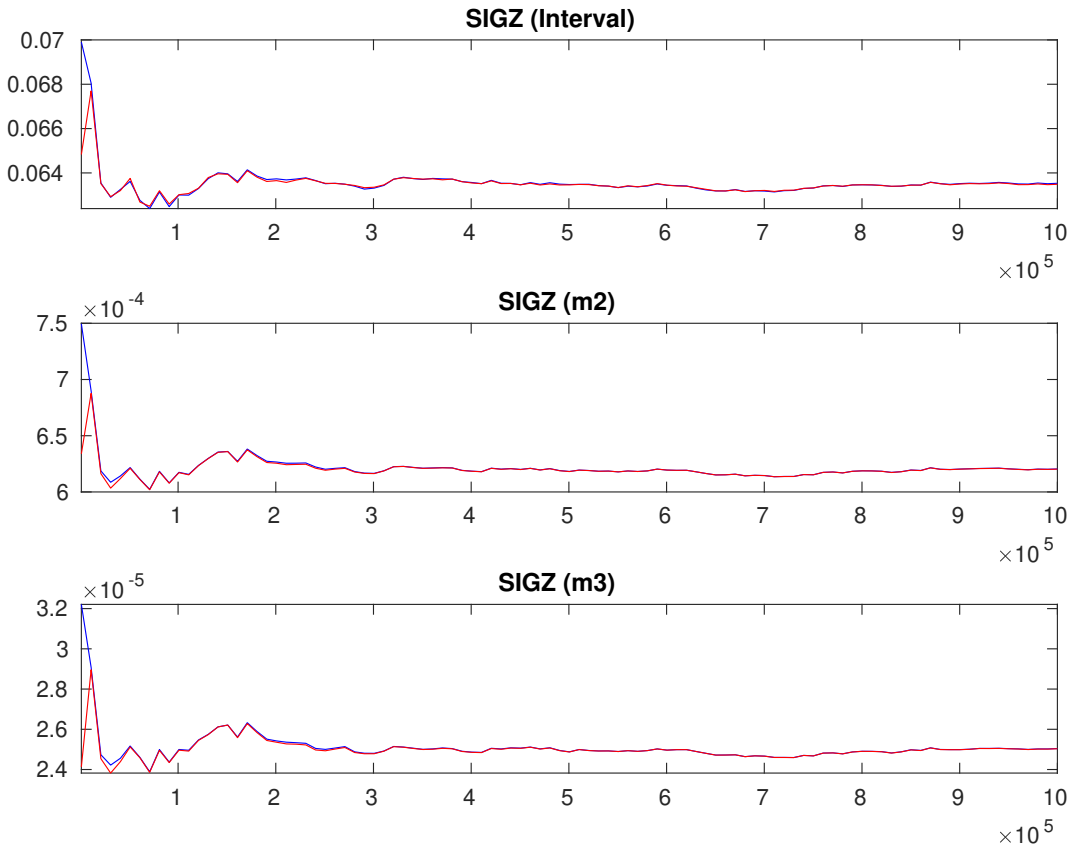

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.