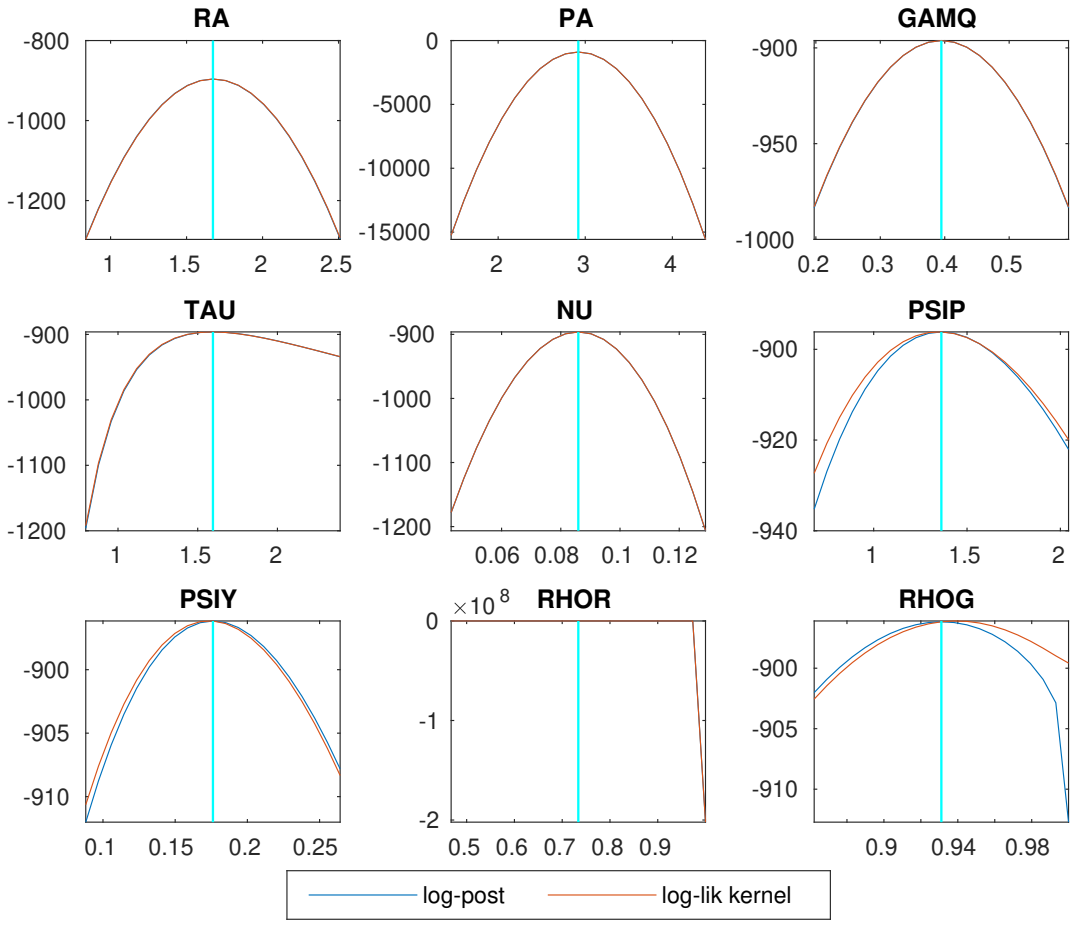

Figure 1: Check plots.

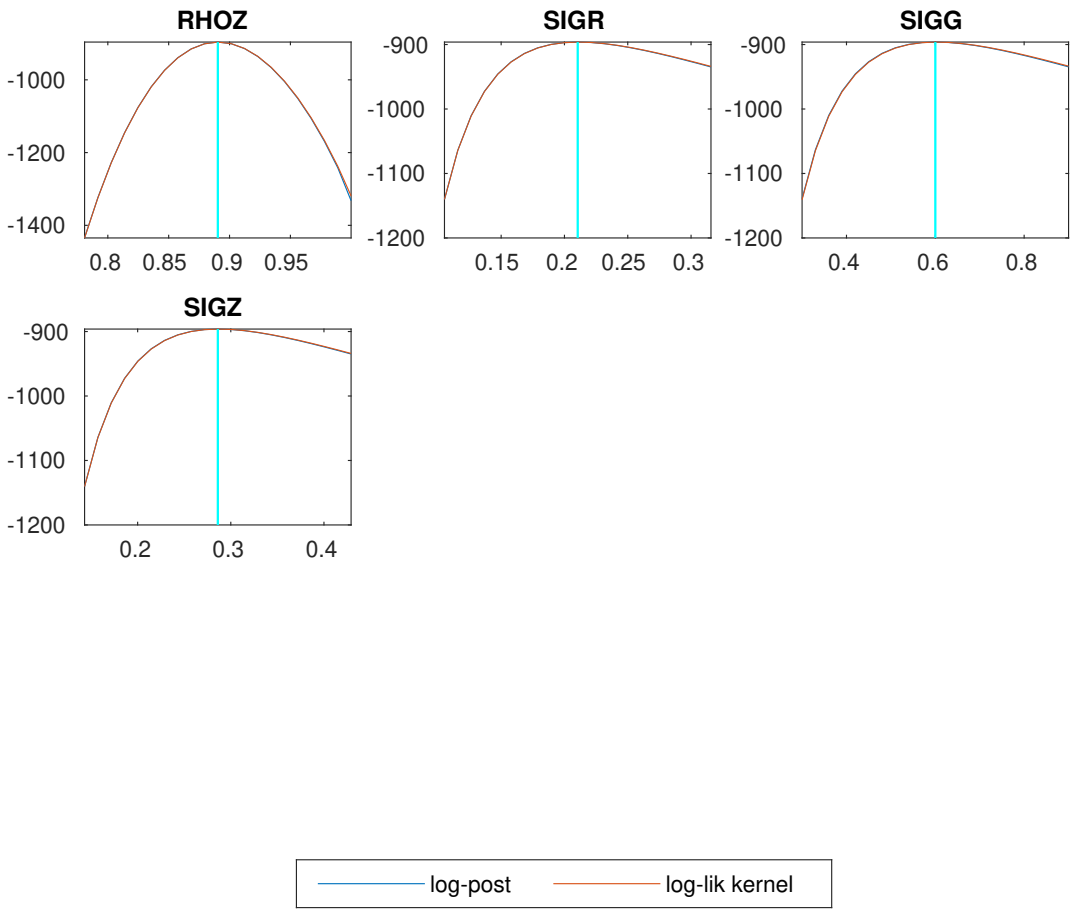

Figure 2: Check plots.

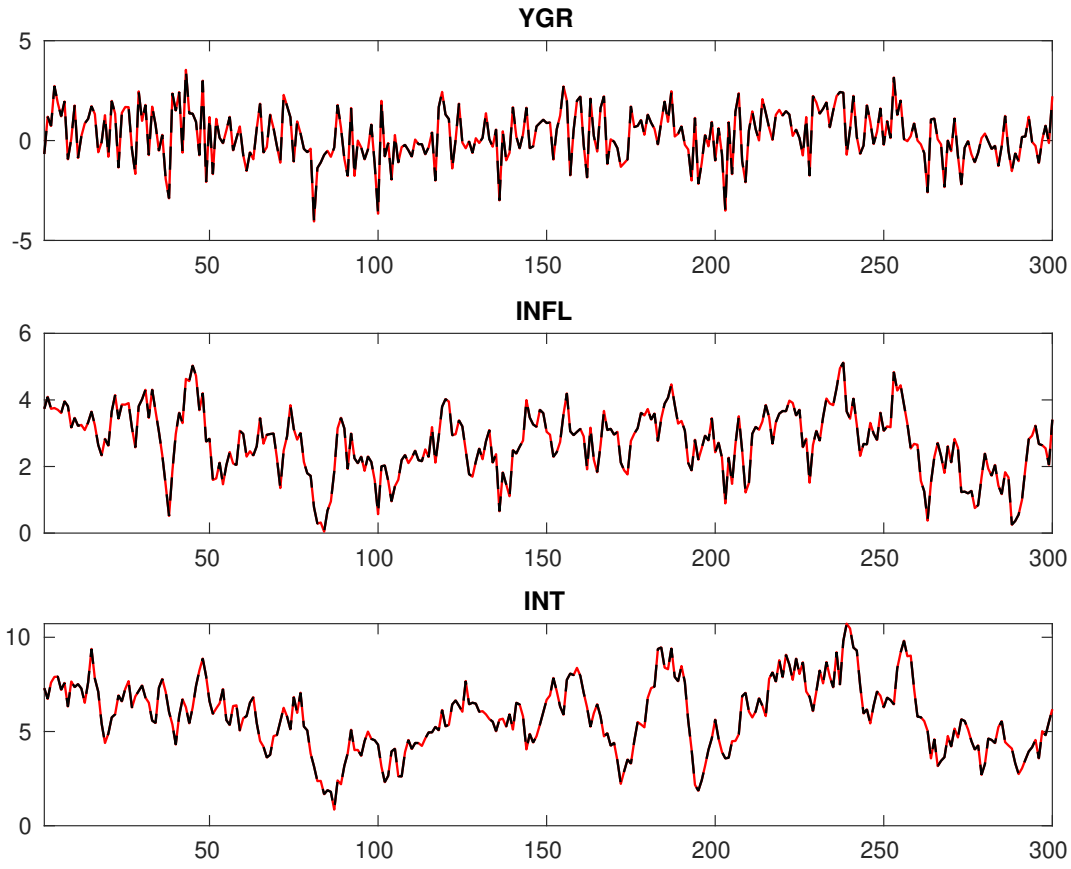

Figure 3: Historical and smoothed variables.

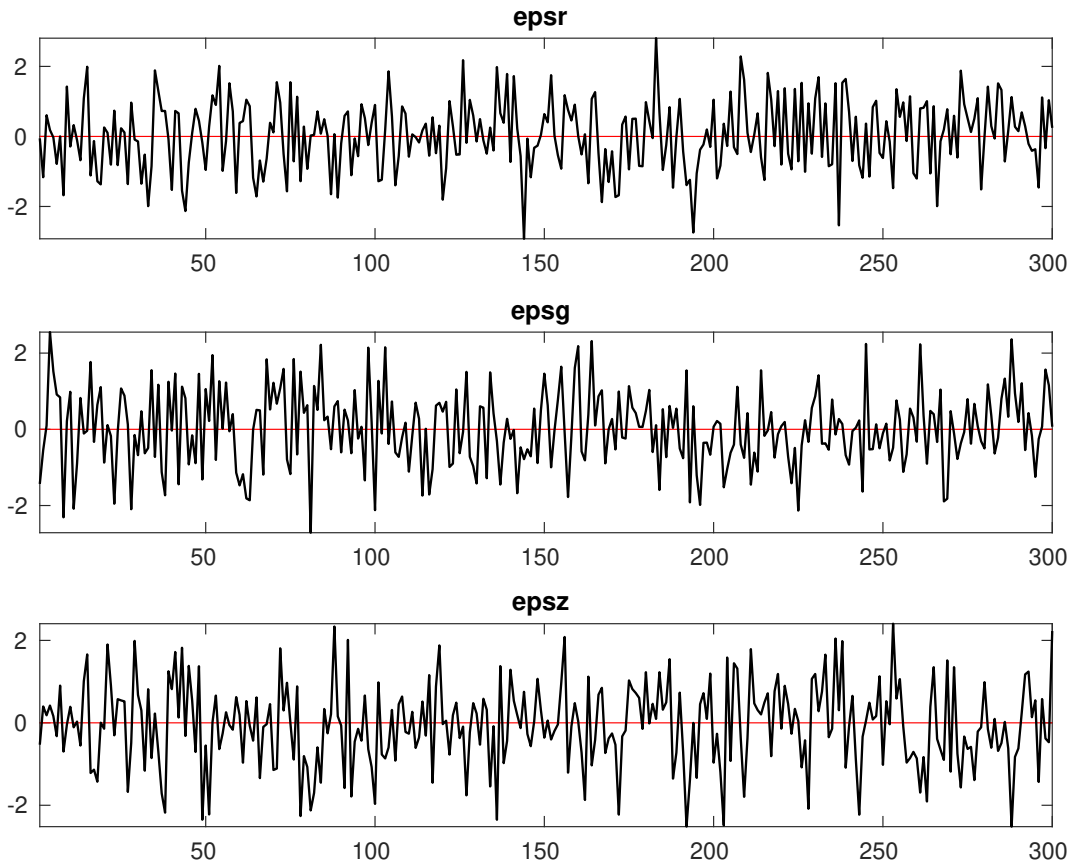

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	59.268	59.145	55.061	58.526
$\pi^{(A)}$	61.649	62.822	57.508	62.614
$\gamma^{(Q)}$	61.606	64.884	57.553	64.181
τ	60.382	56.741	55.205	57.661
ν	58.005	57.471	54.456	57.816
ψ_π	53.653	49.339	53.726	57.189
ψ_y	55.614	57.173	57.869	58.308
ρ_R	57.928	53.793	54.196	59.490
ρ_g	57.657	58.974	54.762	56.396
ρ_z	60.858	62.789	58.622	62.239
σ_R	48.654	47.755	49.574	49.888
σ_g	51.343	48.945	50.841	49.594
σ_z	50.801	54.893	48.951	53.725

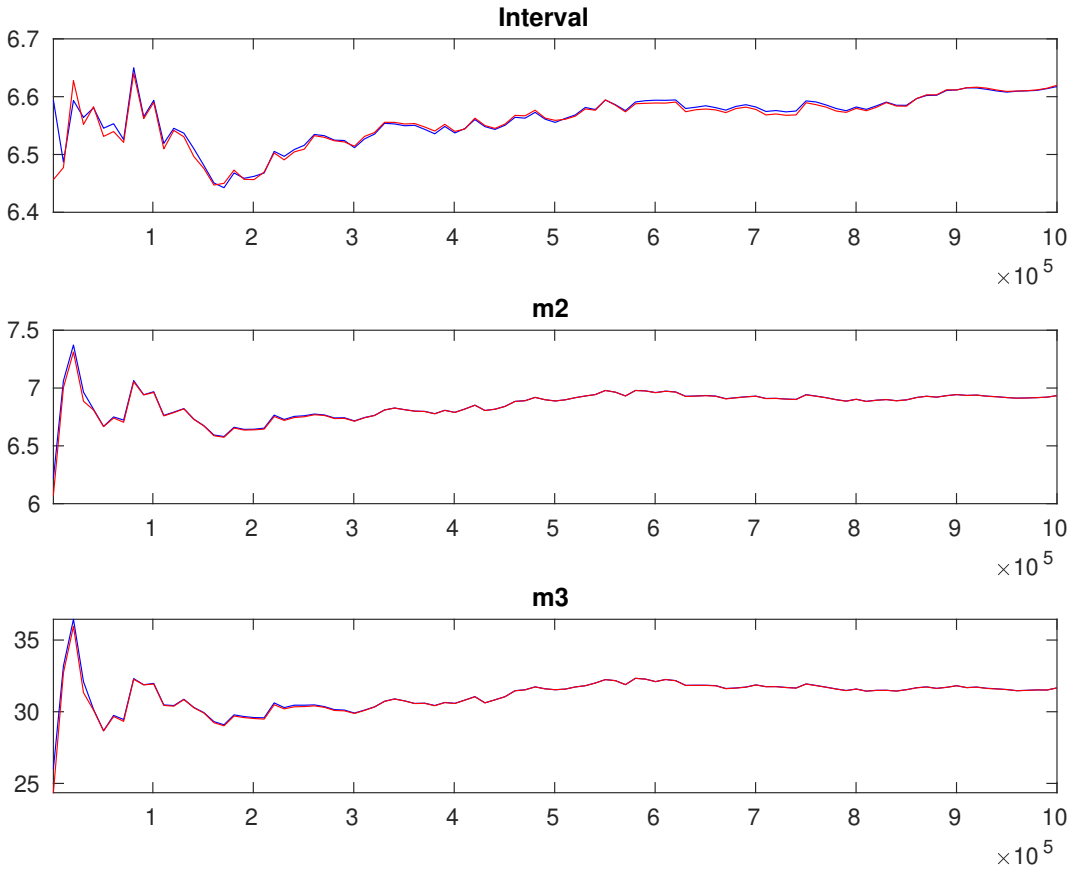

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.656	0.3147	1.1402	2.1725
$\pi^{(A)}$	gamm	4.000	2.0000	2.928	0.1513	2.6794	3.1767
$\gamma^{(Q)}$	norm	0.400	0.2000	0.402	0.1208	0.2011	0.5982
τ	gamm	2.000	0.5000	1.703	0.2596	1.2817	2.1187
ν	beta	0.100	0.0500	0.090	0.0102	0.0729	0.1060
ψ_π	gamm	1.500	0.2500	1.385	0.2115	1.0348	1.7267
ψ_y	gamm	0.500	0.2500	0.183	0.0541	0.0913	0.2676
ρ_R	beta	0.500	0.2000	0.740	0.0266	0.6956	0.7829
ρ_g	beta	0.800	0.1000	0.939	0.0201	0.9057	0.9718
ρ_z	beta	0.660	0.1500	0.895	0.0131	0.8735	0.9165
σ_R	invg	0.300	4.0000	0.212	0.0095	0.1966	0.2278
σ_g	invg	0.400	4.0000	0.607	0.0251	0.5649	0.6471
σ_z	invg	0.400	4.0000	0.290	0.0182	0.2603	0.3196

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.6736	0.3049
$\pi^{(A)}$	gamm	4.000	2.0000	2.9203	0.1445
$\gamma^{(Q)}$	norm	0.400	0.2000	0.3948	0.1155
τ	gamm	2.000	0.5000	1.5955	0.2588
ν	beta	0.100	0.0500	0.0859	0.0102
ψ_π	gamm	1.500	0.2500	1.3625	0.2029
ψ_y	gamm	0.500	0.2500	0.1762	0.0505
ρ_R	beta	0.500	0.2000	0.7337	0.0255
ρ_g	beta	0.800	0.1000	0.9311	0.0201
ρ_z	beta	0.660	0.1500	0.8904	0.0123
σ_R	invg	0.300	4.0000	0.2105	0.0099
σ_g	invg	0.400	4.0000	0.6000	0.0256
σ_z	invg	0.400	4.0000	0.2861	0.0189

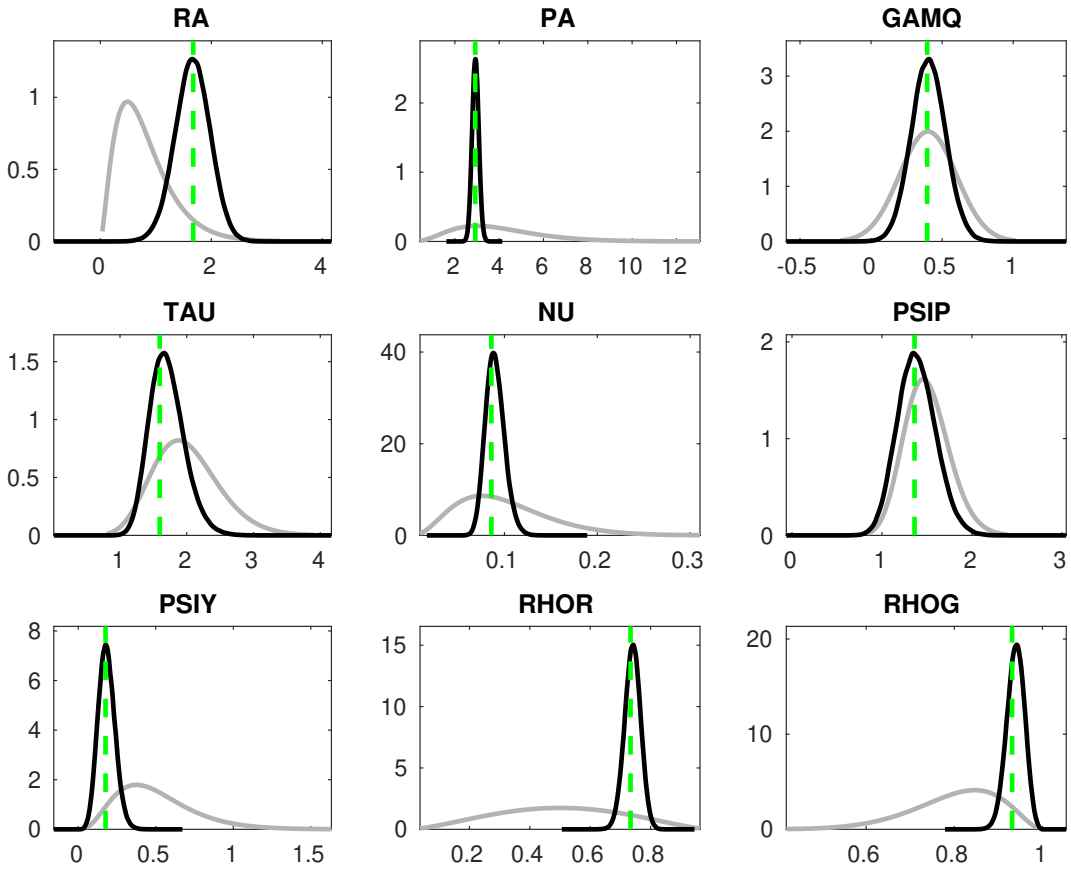

Figure 6: Priors and posteriors.

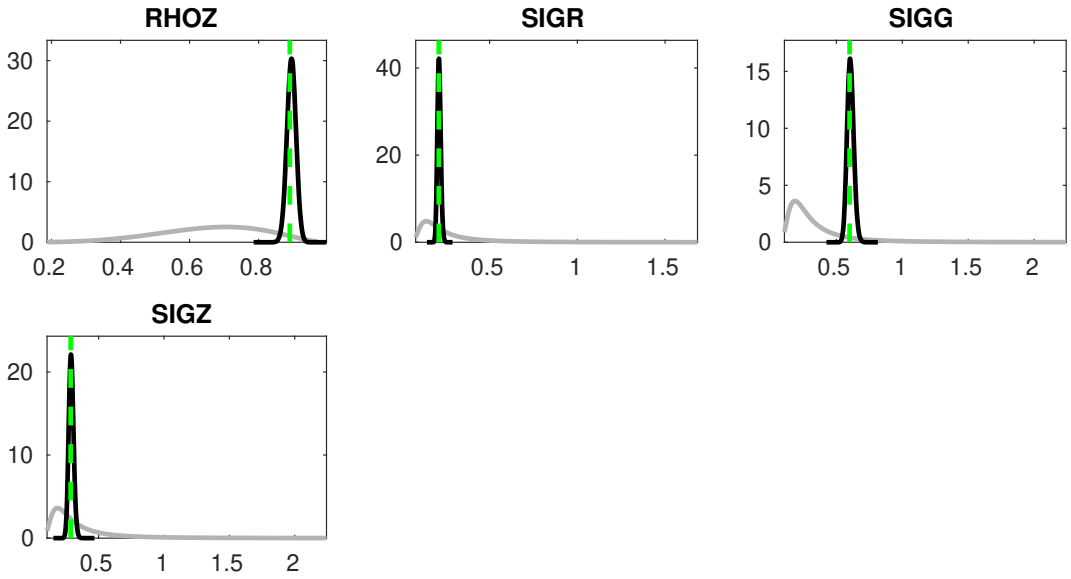

Figure 7: Priors and posteriors.

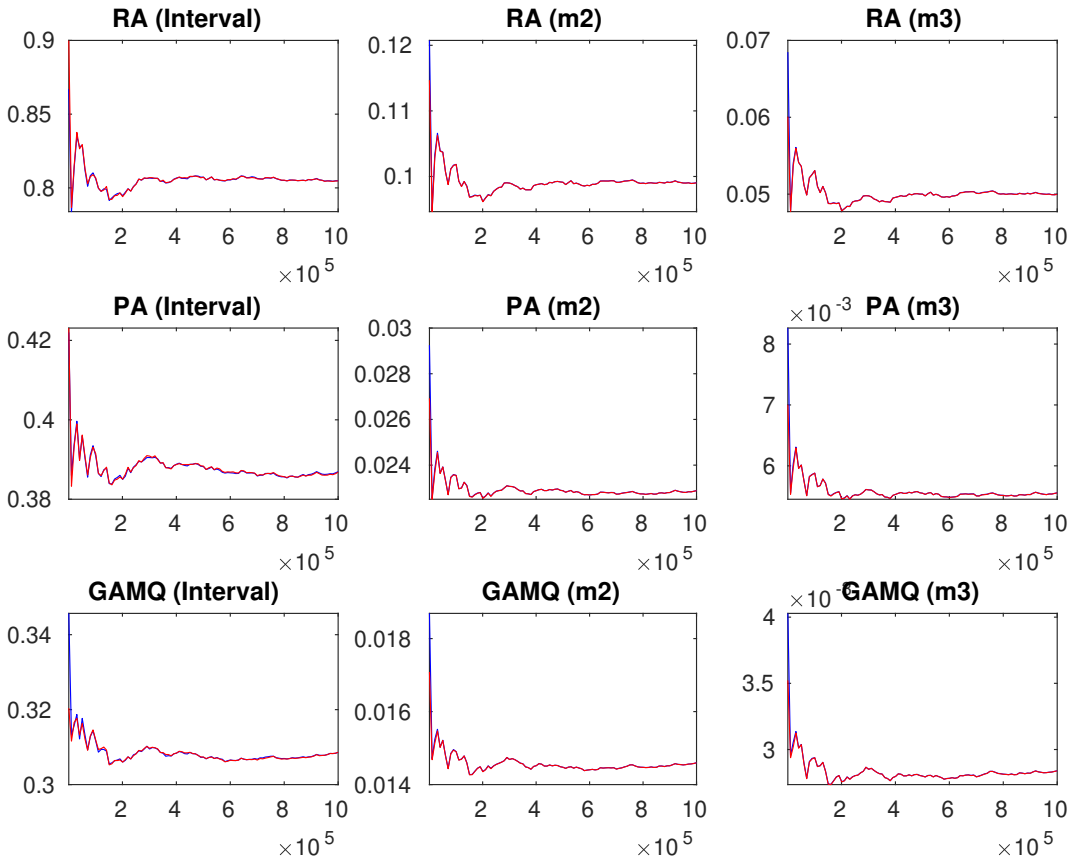

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

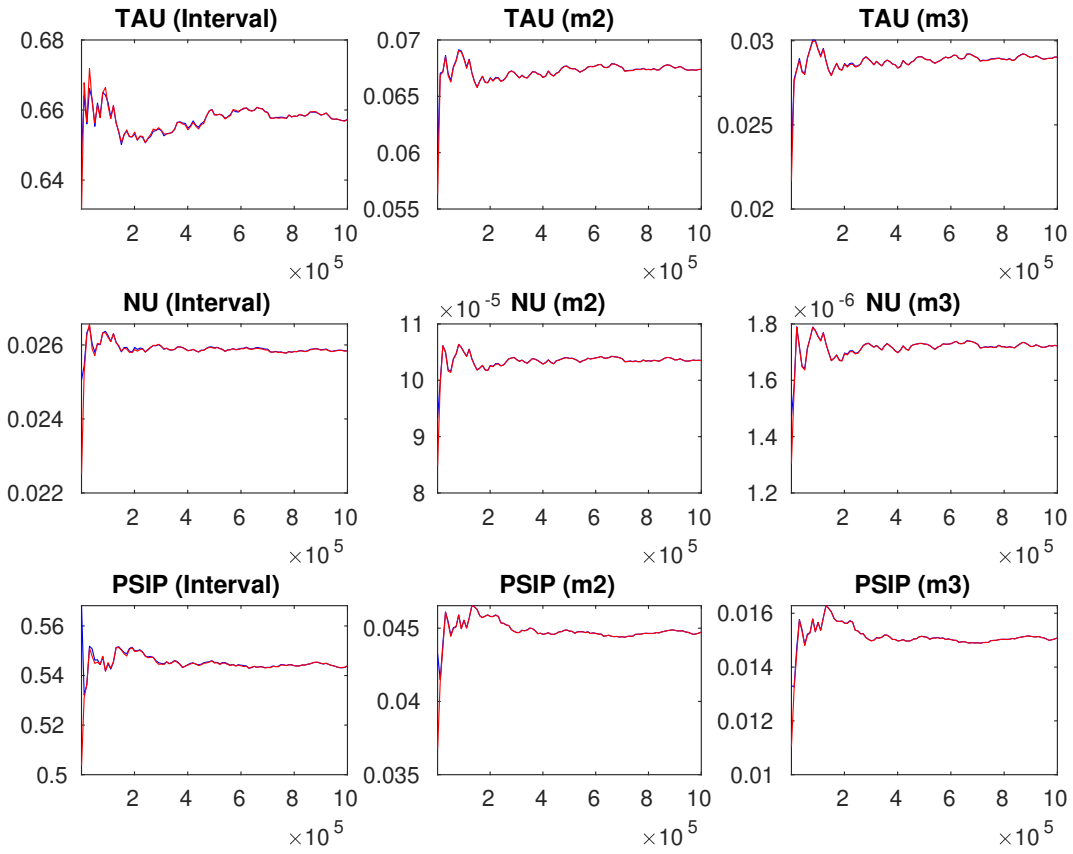

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

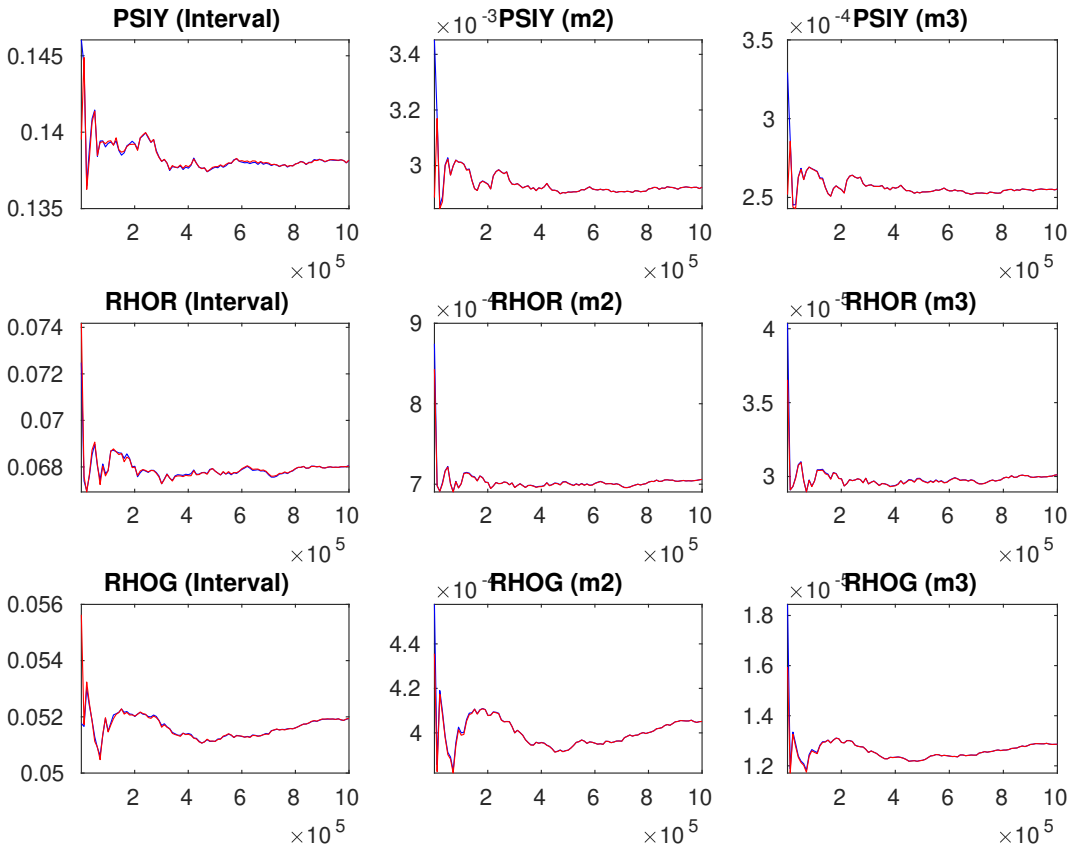

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

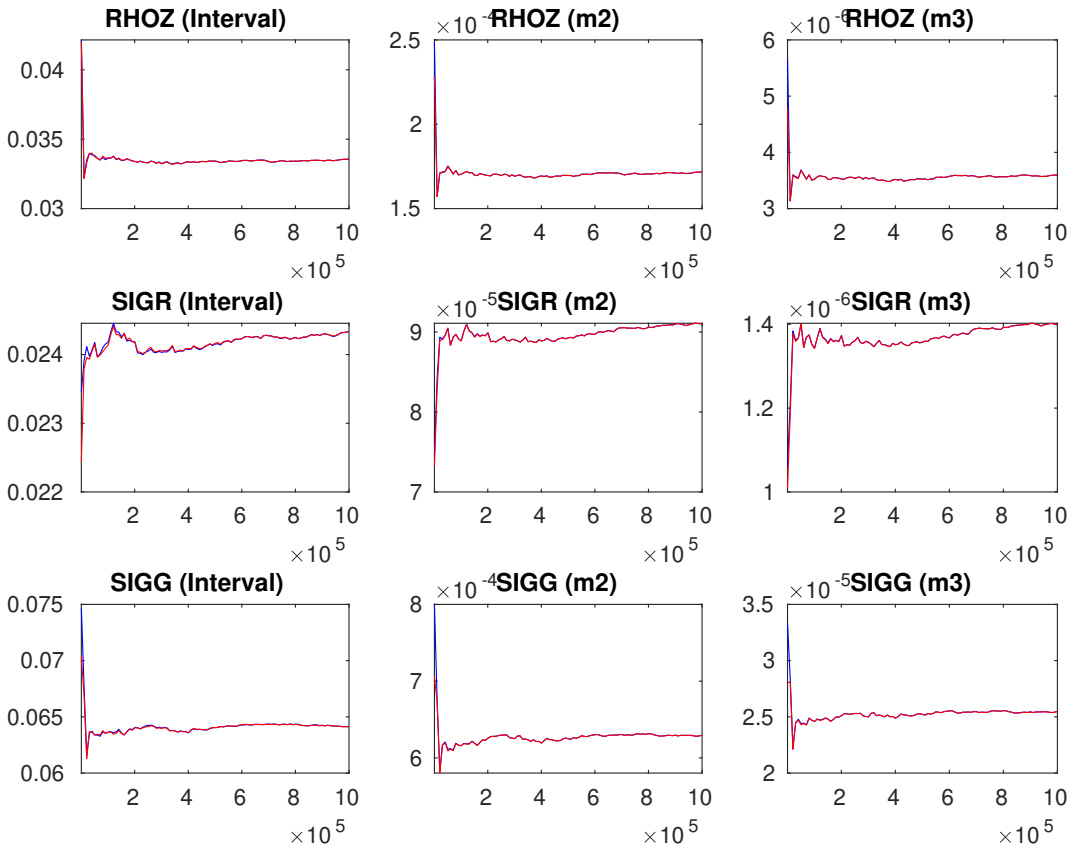

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

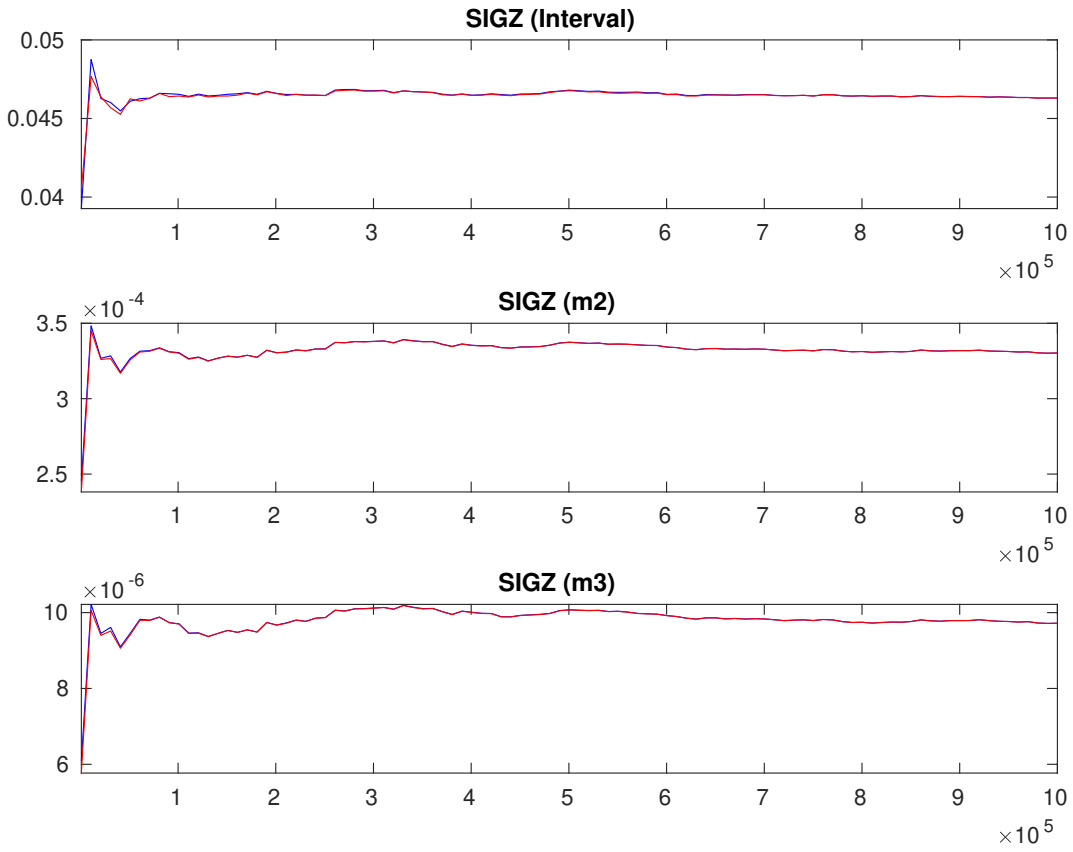

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.