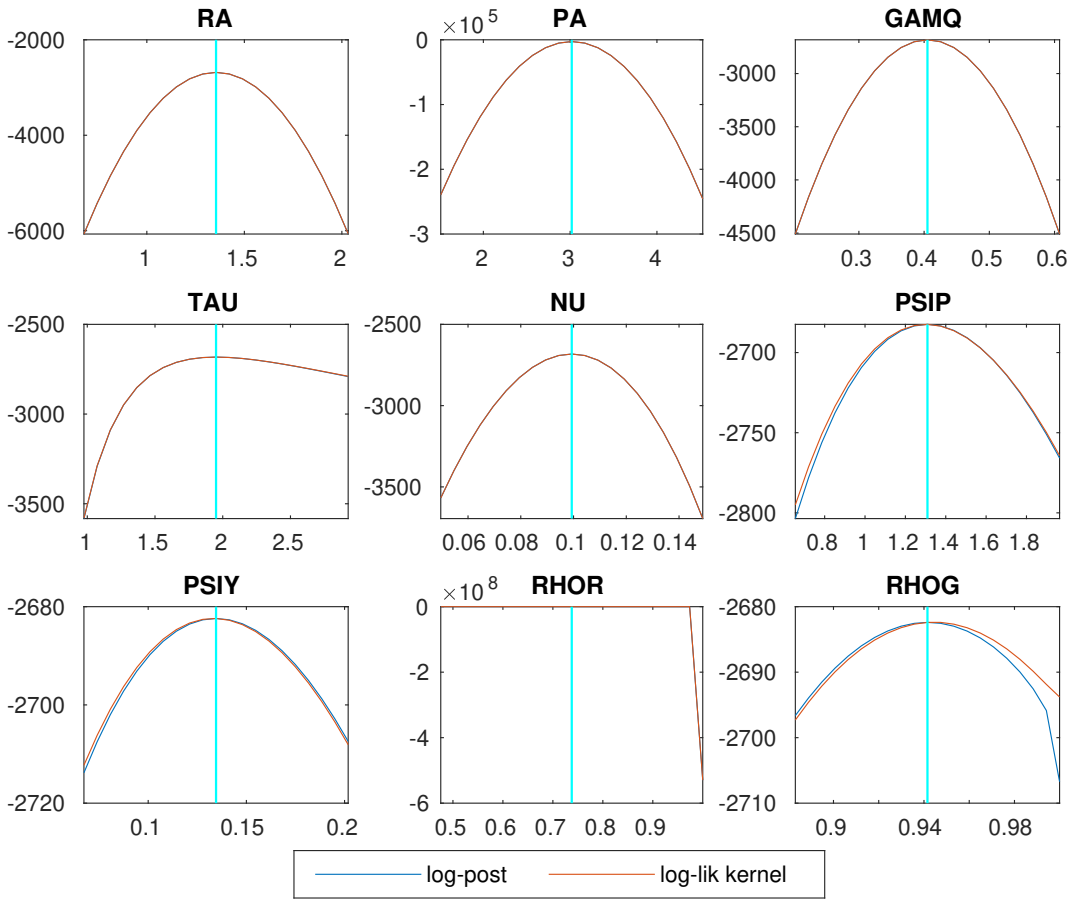

Figure 1: Check plots.

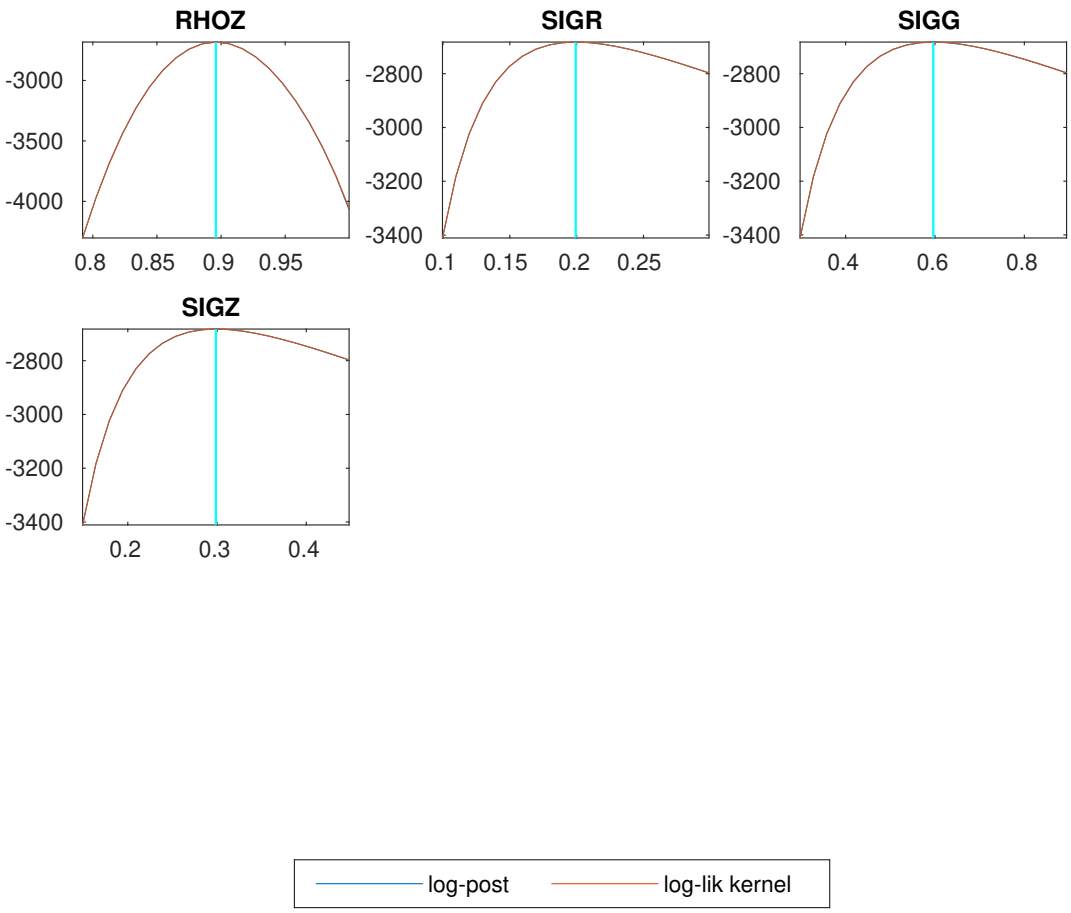

Figure 2: Check plots.

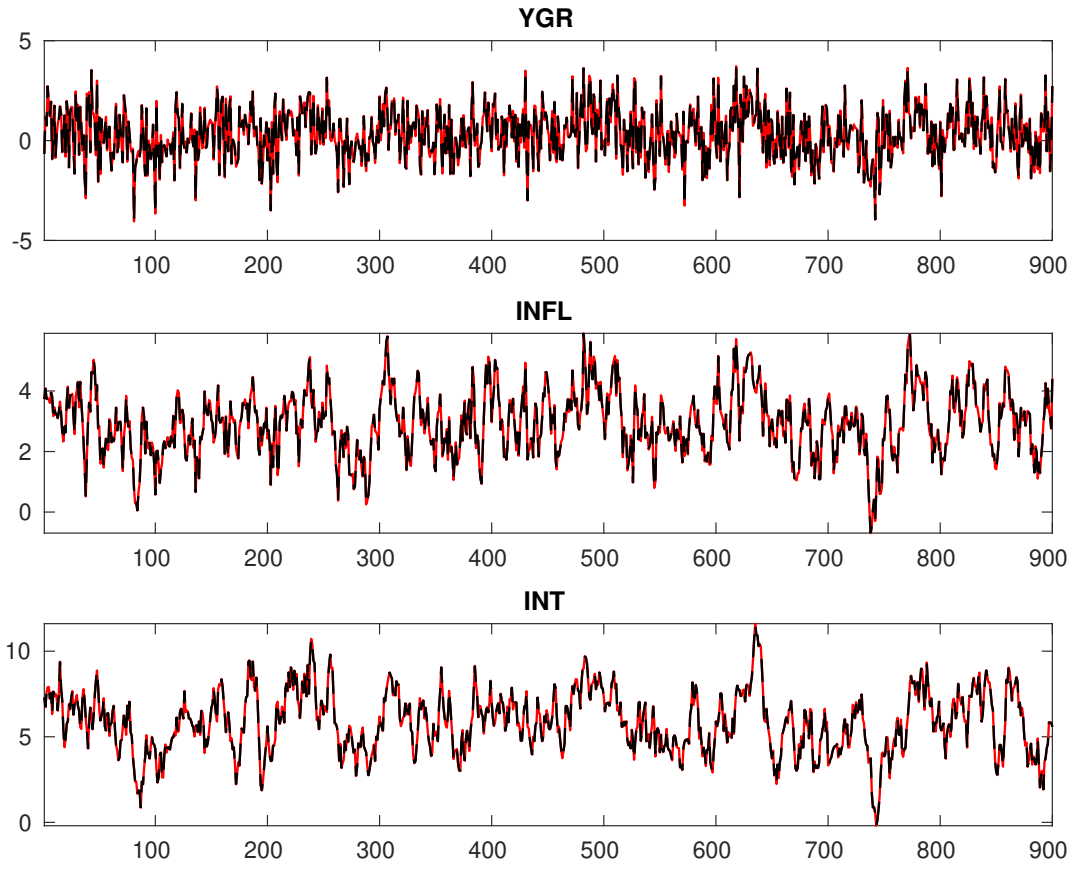

Figure 3: Historical and smoothed variables.

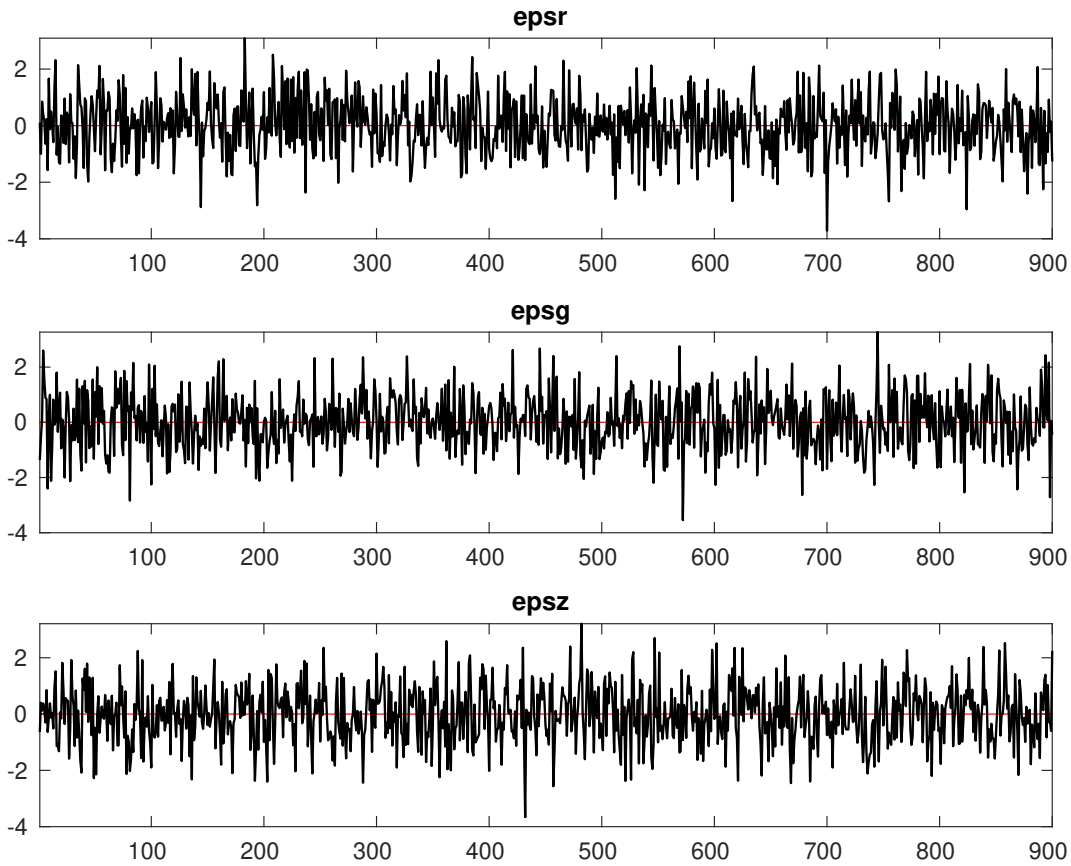

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	581.895	589.296	586.355	591.680
$\pi^{(A)}$	581.087	588.823	587.028	590.779
$\gamma^{(Q)}$	546.577	556.003	553.757	556.384
τ	476.759	450.466	443.587	479.589
ν	443.929	415.546	410.509	444.588
ψ_π	221.478	209.056	213.393	226.326
ψ_y	153.289	146.671	150.480	162.151
ρ_R	152.378	141.210	136.650	150.885
ρ_g	51.176	47.204	43.337	52.020
ρ_z	238.480	220.458	209.450	233.427
σ_R	60.960	55.043	57.379	53.736
σ_g	42.239	49.552	51.690	50.876
σ_z	115.149	100.747	105.999	117.779

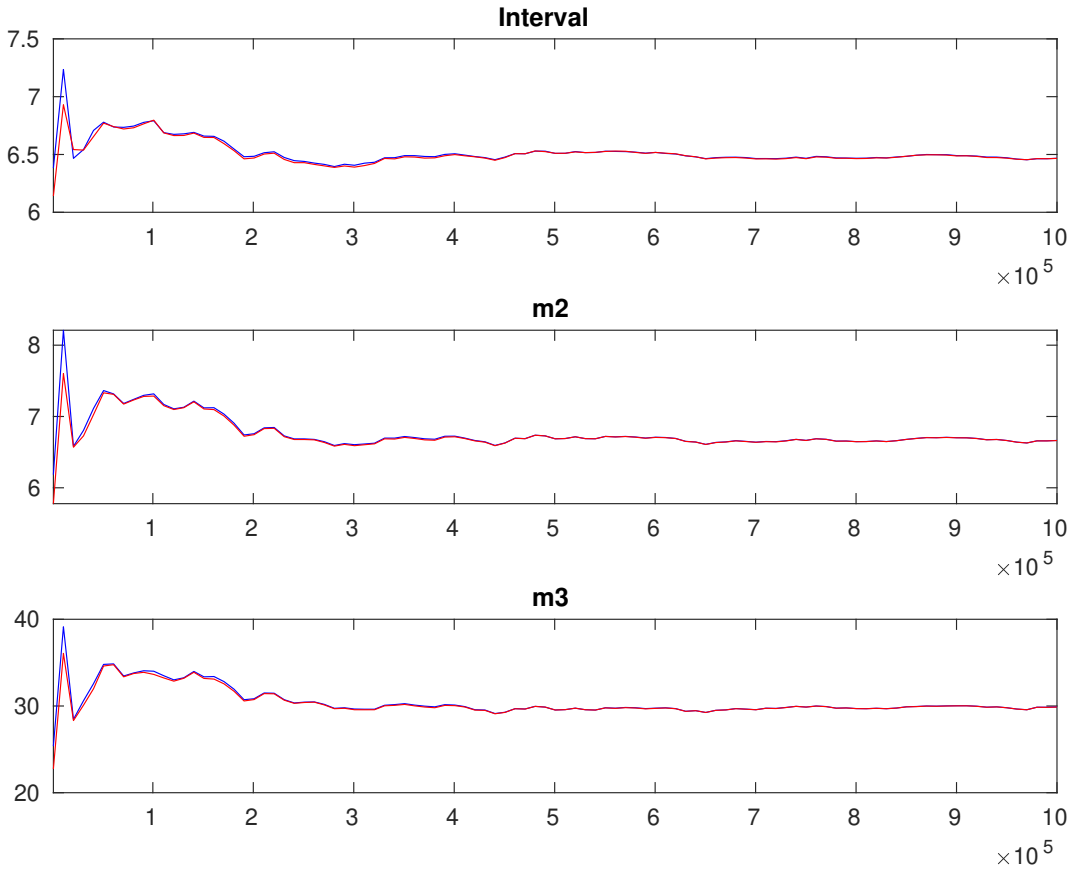

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.350	0.2343	0.9666	1.7346
$\pi^{(A)}$	gamm	4.000	2.0000	3.021	0.1145	2.8331	3.2087
$\gamma^{(Q)}$	norm	0.400	0.2000	0.407	0.0848	0.2699	0.5480
τ	gamm	2.000	0.5000	2.007	0.1816	1.7129	2.3037
ν	beta	0.100	0.0500	0.101	0.0068	0.0902	0.1122
ψ_π	gamm	1.500	0.2500	1.317	0.1883	1.0043	1.6245
ψ_y	gamm	0.500	0.2500	0.137	0.0392	0.0726	0.2018
ρ_R	beta	0.500	0.2000	0.741	0.0153	0.7158	0.7662
ρ_g	beta	0.800	0.1000	0.945	0.0111	0.9275	0.9640
ρ_z	beta	0.660	0.1500	0.898	0.0076	0.8854	0.9105
σ_R	invg	0.300	4.0000	0.200	0.0051	0.1914	0.2080
σ_g	invg	0.400	4.0000	0.599	0.0141	0.5753	0.6218
σ_z	invg	0.400	4.0000	0.300	0.0100	0.2838	0.3168

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.3549	0.0455
$\pi^{(A)}$	gamm	4.000	2.0000	3.0186	0.0201
$\gamma^{(Q)}$	norm	0.400	0.2000	0.4051	0.0261
τ	gamm	2.000	0.5000	1.9507	0.0495
ν	beta	0.100	0.0500	0.0993	0.0024
ψ_π	gamm	1.500	0.2500	1.3094	0.0981
ψ_y	gamm	0.500	0.2500	0.1346	0.0297
ρ_R	beta	0.500	0.2000	0.7378	0.0114
ρ_g	beta	0.800	0.1000	0.9415	0.0120
ρ_z	beta	0.660	0.1500	0.8959	0.0056
σ_R	invg	0.300	4.0000	0.1993	0.0051
σ_g	invg	0.400	4.0000	0.5963	0.0142
σ_z	invg	0.400	4.0000	0.2987	0.0103

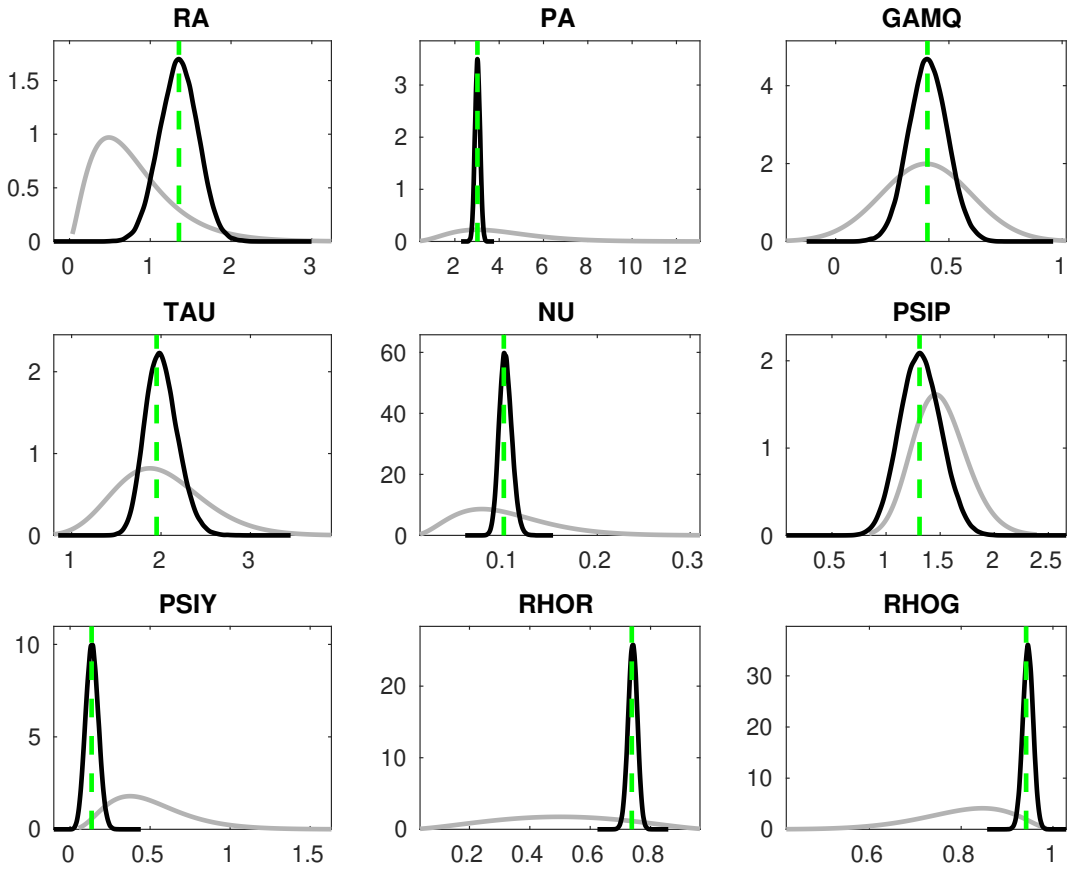

Figure 6: Priors and posteriors.

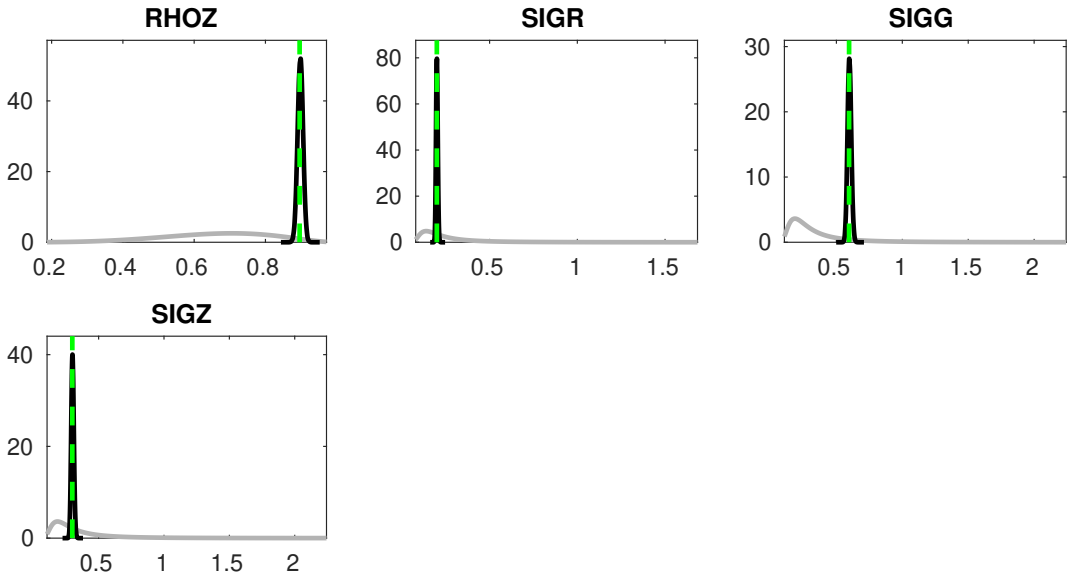

Figure 7: Priors and posteriors.

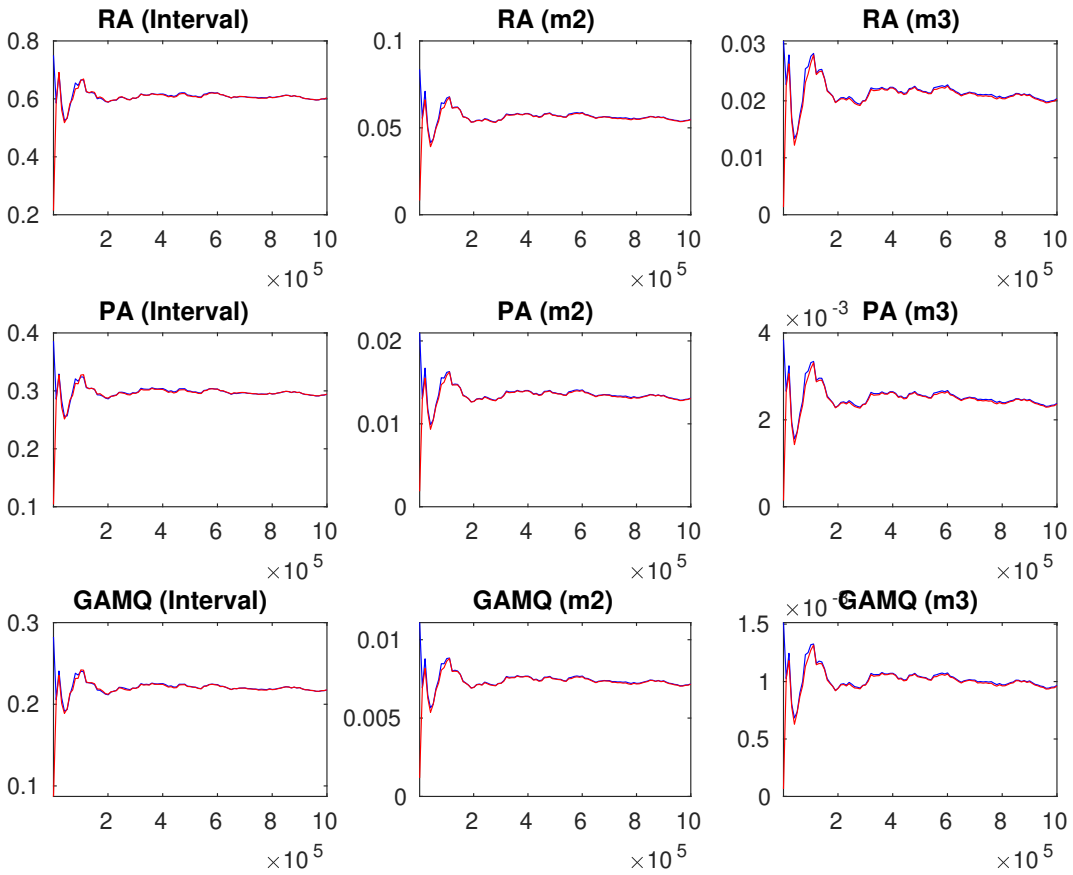

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

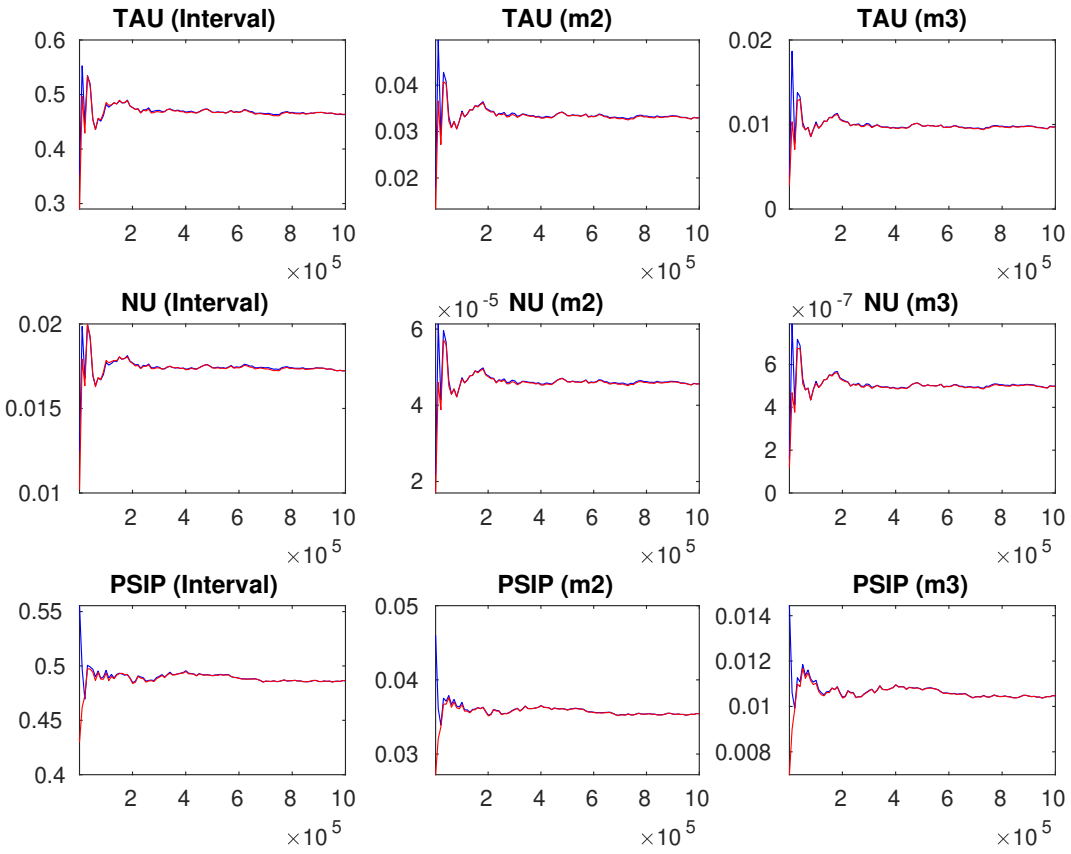

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

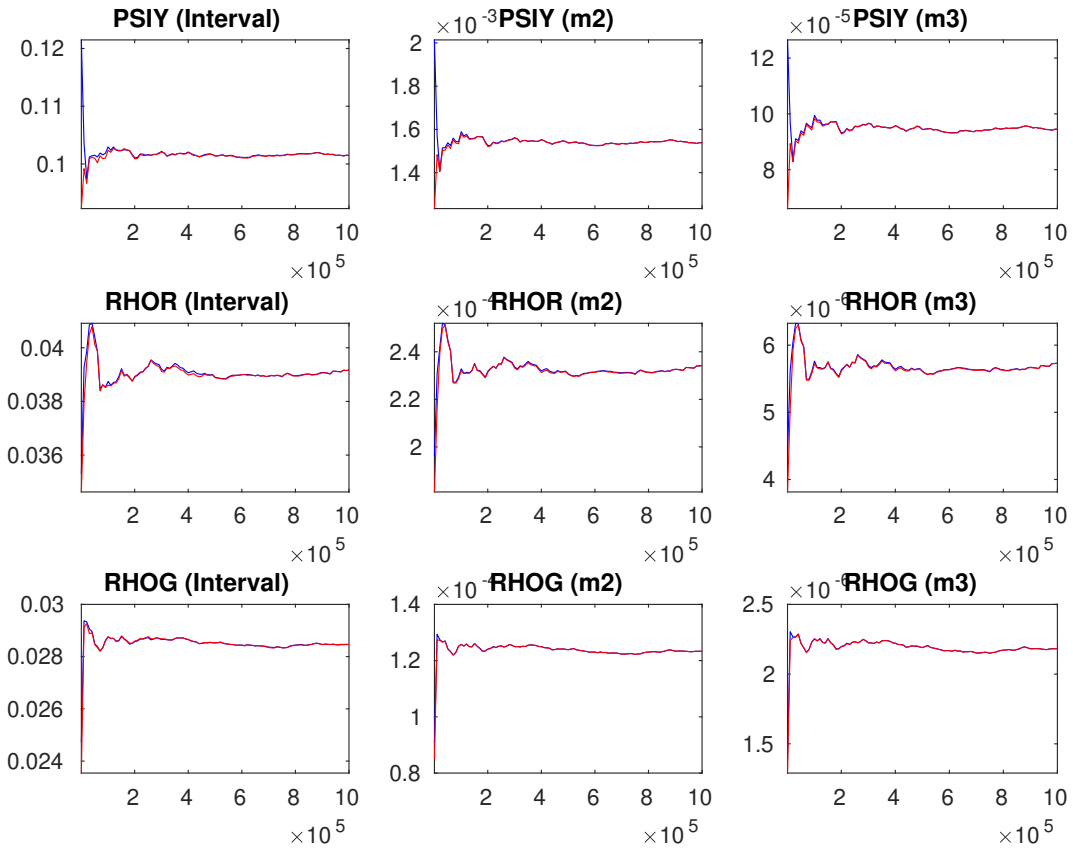

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

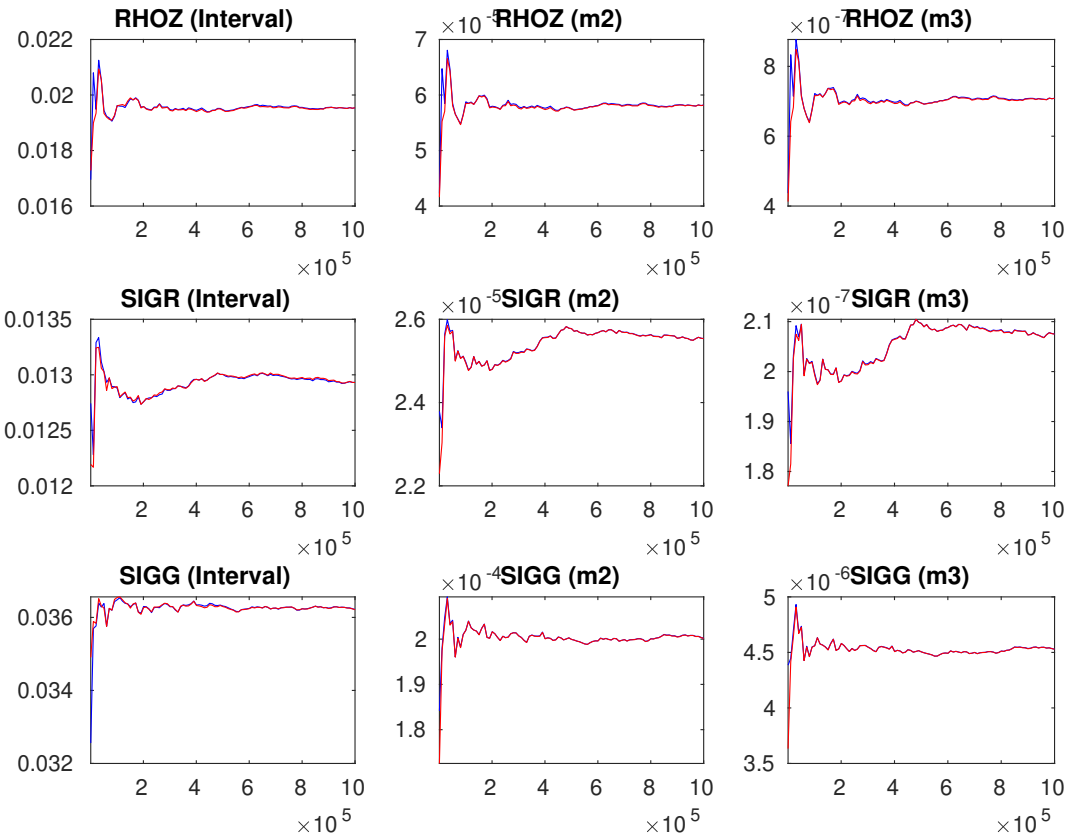

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

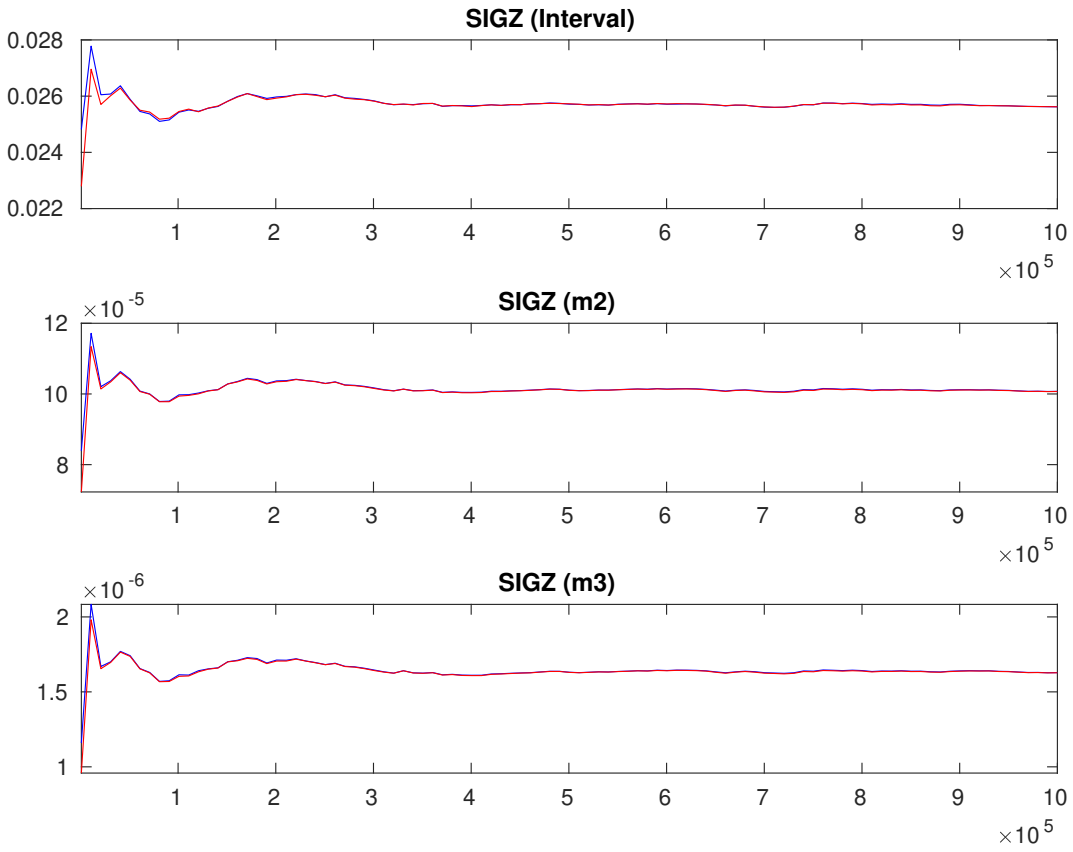

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.