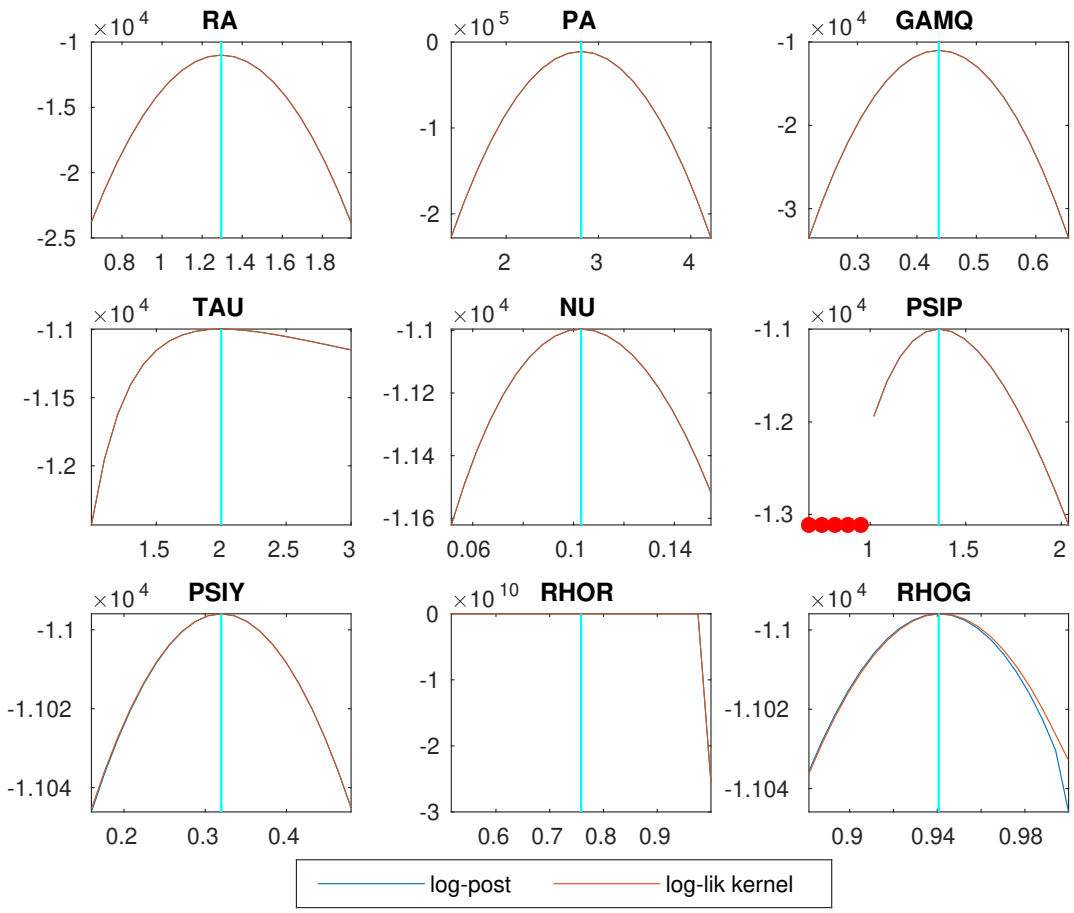

Figure 1: Check plots.

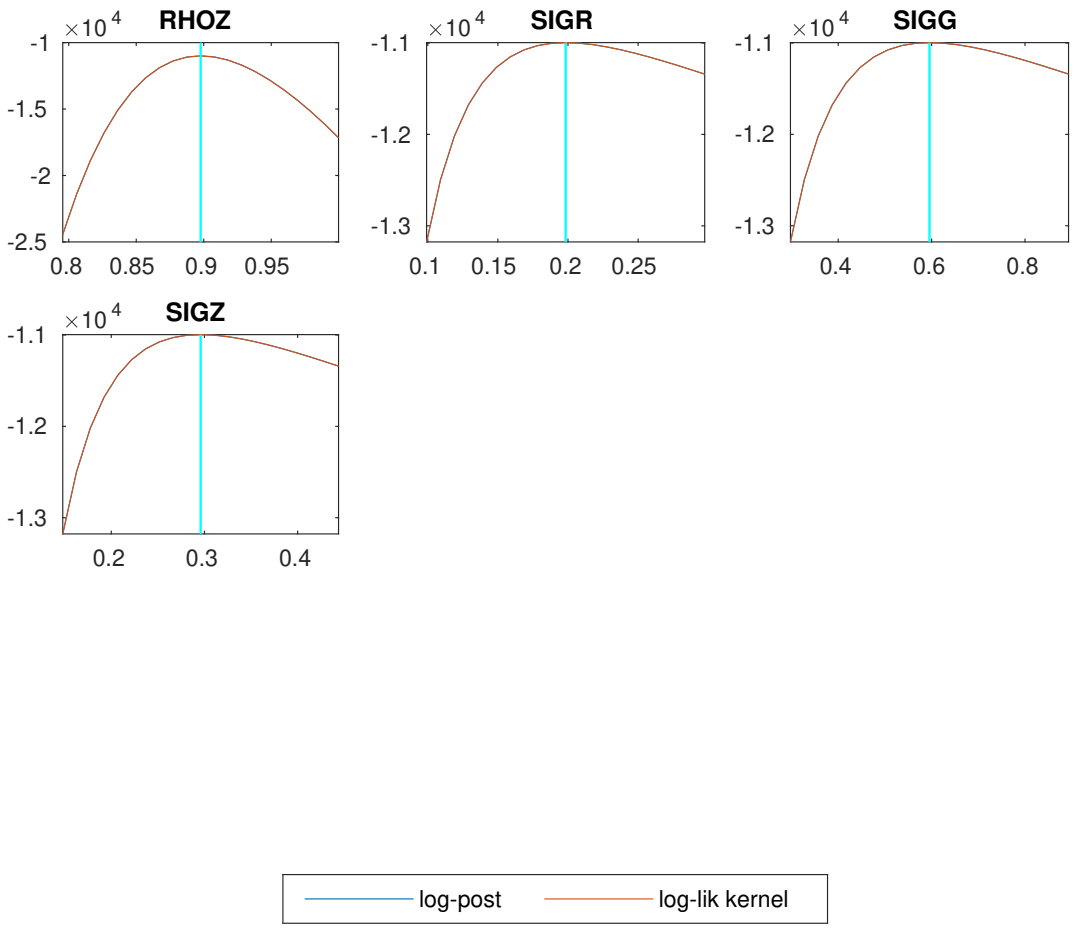

Figure 2: Check plots.

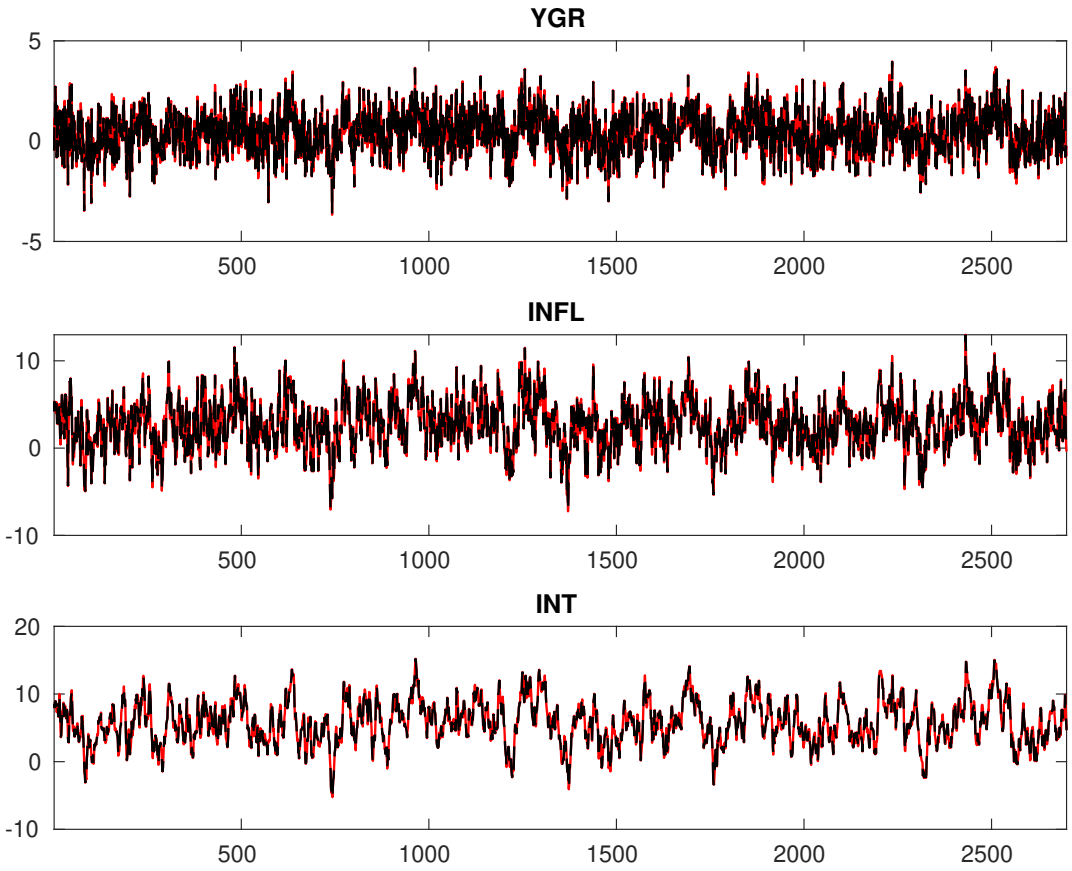

Figure 3: Historical and smoothed variables.

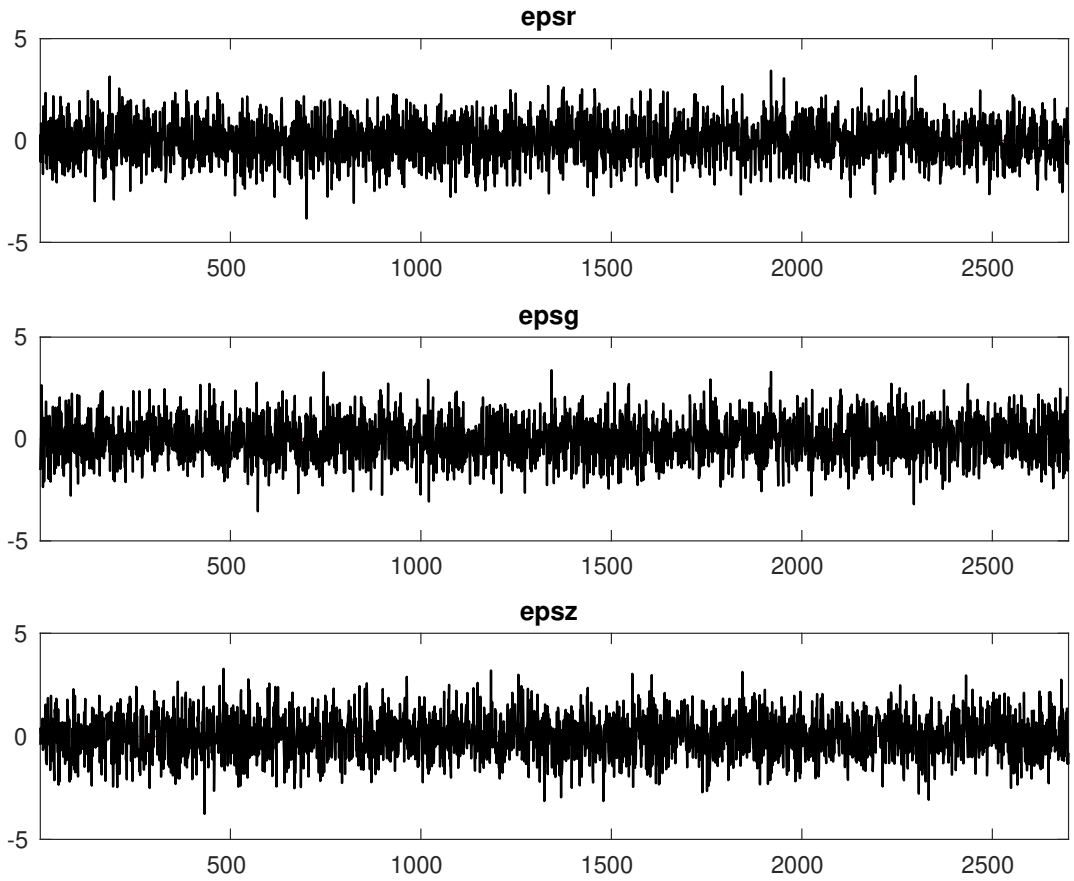

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	54.814	56.579	57.079	56.282
$\pi^{(A)}$	56.132	57.997	57.315	58.695
$\gamma^{(Q)}$	56.892	58.598	57.049	59.856
τ	56.746	52.834	51.602	53.471
ν	57.301	54.969	51.722	52.595
ψ_π	58.982	53.416	54.036	57.392
ψ_y	57.417	52.677	54.144	56.083
ρ_R	56.299	53.115	54.974	55.210
ρ_g	54.273	49.289	48.390	51.677
ρ_z	57.569	54.639	55.323	53.778
σ_R	52.011	49.722	52.073	49.570
σ_g	51.831	52.051	50.249	50.235
σ_z	51.259	50.482	50.547	48.159

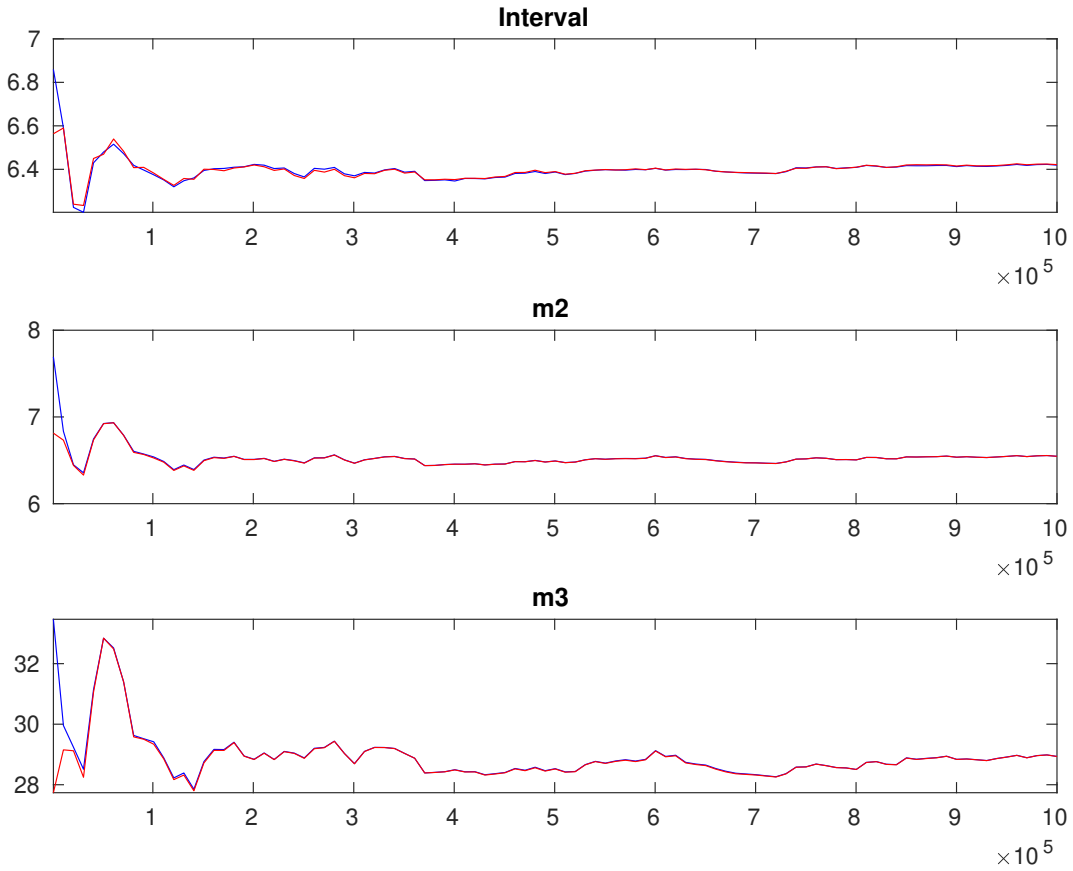

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.294	0.1268	1.0813	1.4982
$\pi^{(A)}$	gamm	4.000	2.0000	2.813	0.1744	2.5269	3.1001
$\gamma^{(Q)}$	norm	0.400	0.2000	0.437	0.0532	0.3494	0.5241
τ	gamm	2.000	0.5000	2.027	0.1227	1.8244	2.2264
ν	beta	0.100	0.0500	0.105	0.0077	0.0919	0.1172
ψ_π	gamm	1.500	0.2500	1.330	0.0950	1.1772	1.4827
ψ_y	gamm	0.500	0.2500	0.376	0.1642	0.1085	0.6296
ρ_R	beta	0.500	0.2000	0.762	0.0107	0.7443	0.7792
ρ_g	beta	0.800	0.1000	0.942	0.0067	0.9308	0.9530
ρ_z	beta	0.660	0.1500	0.898	0.0036	0.8923	0.9041
σ_R	invg	0.300	4.0000	0.199	0.0038	0.1928	0.2054
σ_g	invg	0.400	4.0000	0.596	0.0081	0.5828	0.6096
σ_z	invg	0.400	4.0000	0.297	0.0064	0.2865	0.3076

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.2953	0.1270
$\pi^{(A)}$	gamm	4.000	2.0000	2.8121	0.1746
$\gamma^{(Q)}$	norm	0.400	0.2000	0.4367	0.0532
τ	gamm	2.000	0.5000	2.0000	0.1198
ν	beta	0.100	0.0500	0.1030	0.0075
ψ_π	gamm	1.500	0.2500	1.3587	0.0930
ψ_y	gamm	0.500	0.2500	0.3197	0.1635
ρ_R	beta	0.500	0.2000	0.7584	0.0105
ρ_g	beta	0.800	0.1000	0.9407	0.0066
ρ_z	beta	0.660	0.1500	0.8977	0.0034
σ_R	invg	0.300	4.0000	0.1983	0.0038
σ_g	invg	0.400	4.0000	0.5955	0.0079
σ_z	invg	0.400	4.0000	0.2959	0.0064

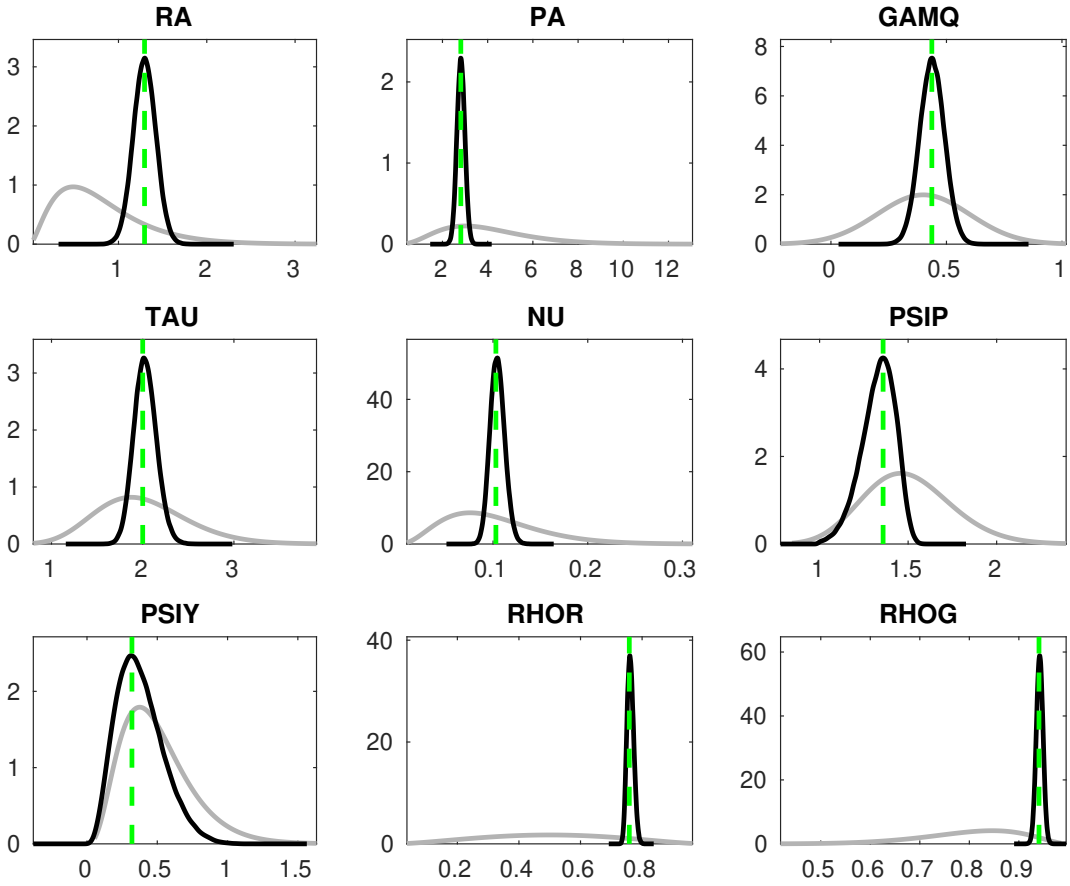

Figure 6: Priors and posteriors.

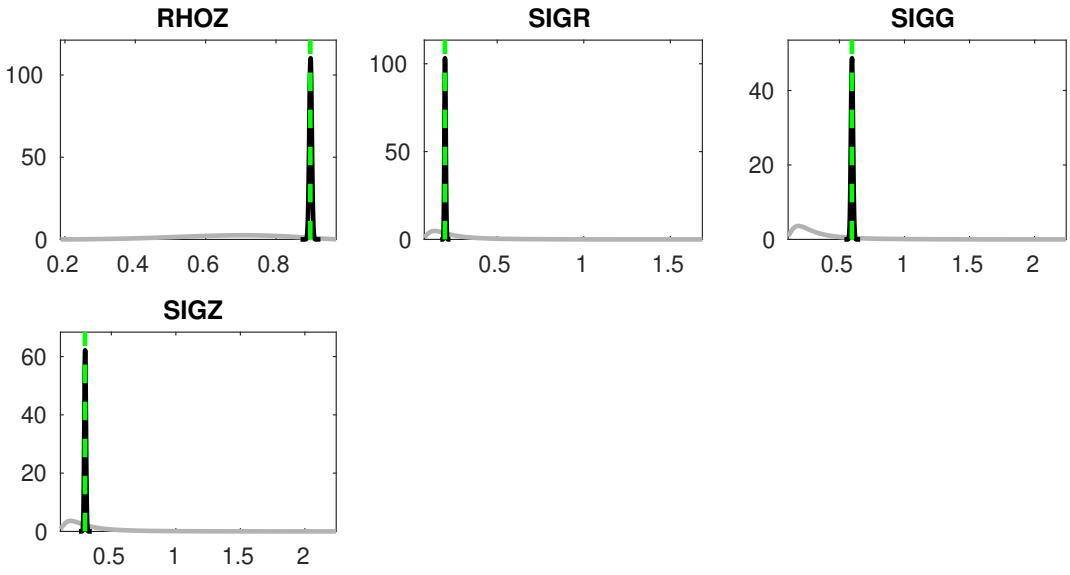

Figure 7: Priors and posteriors.

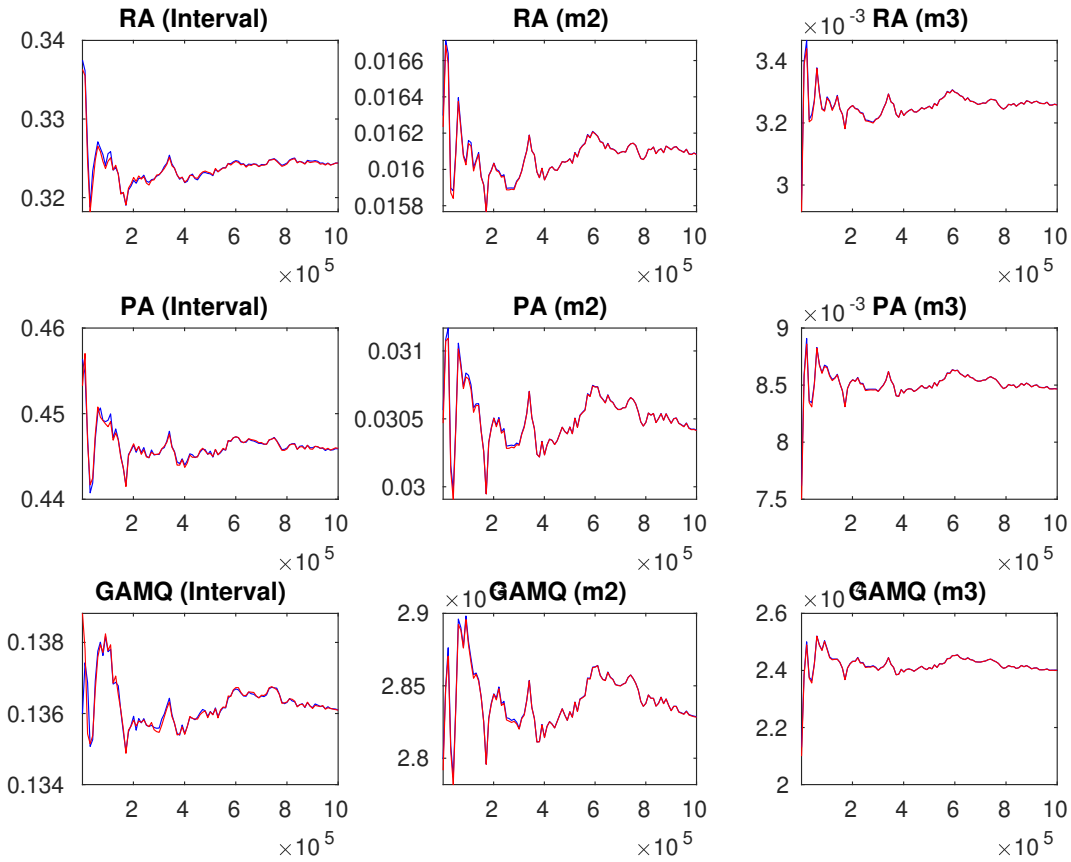

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

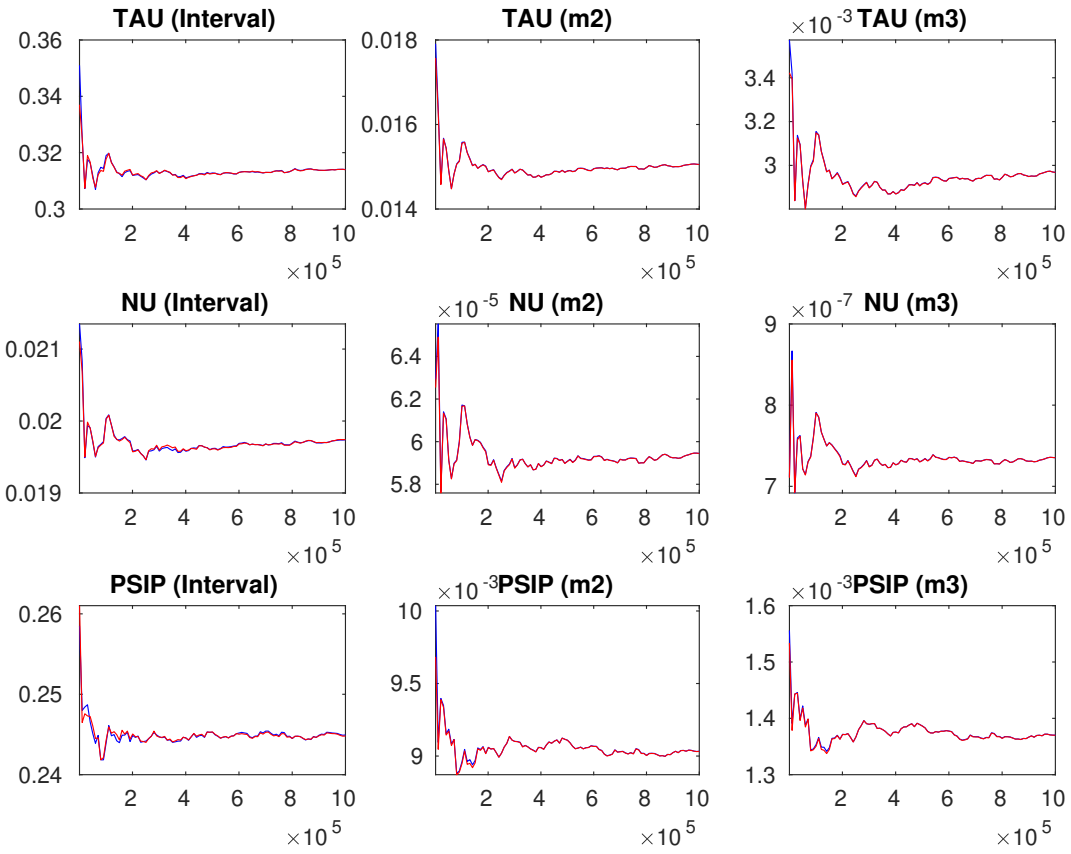

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

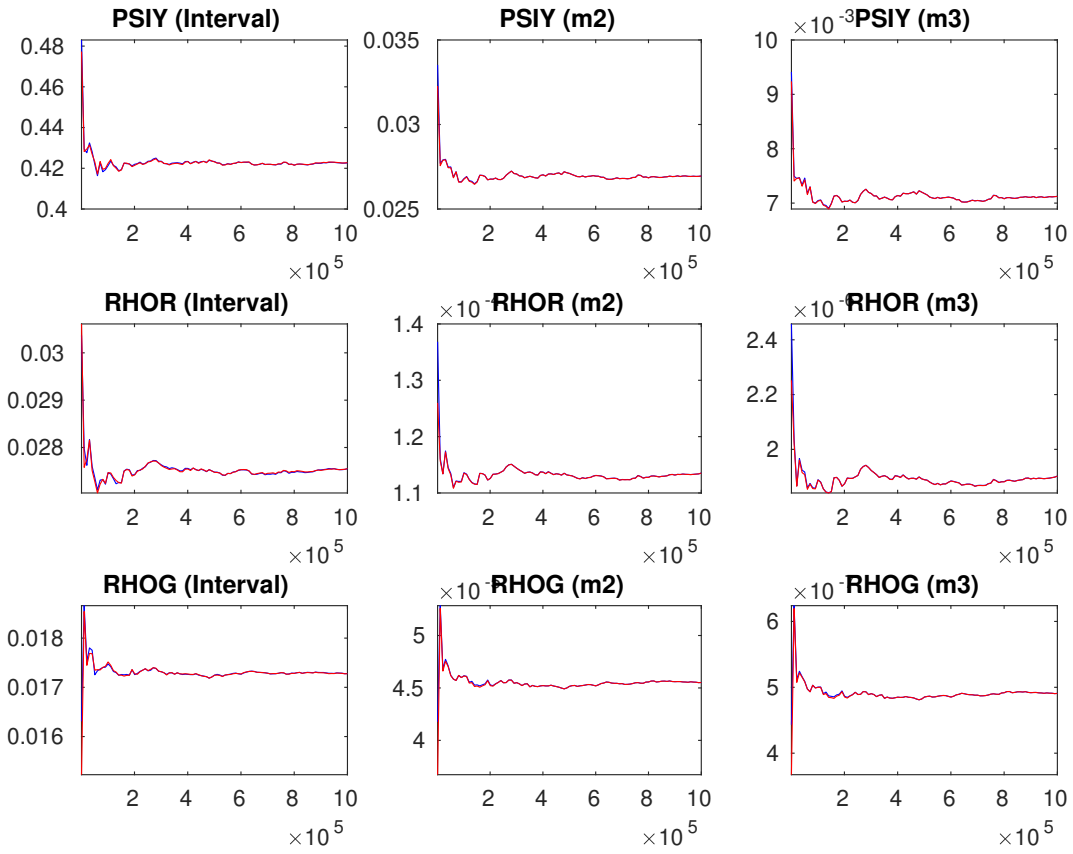

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

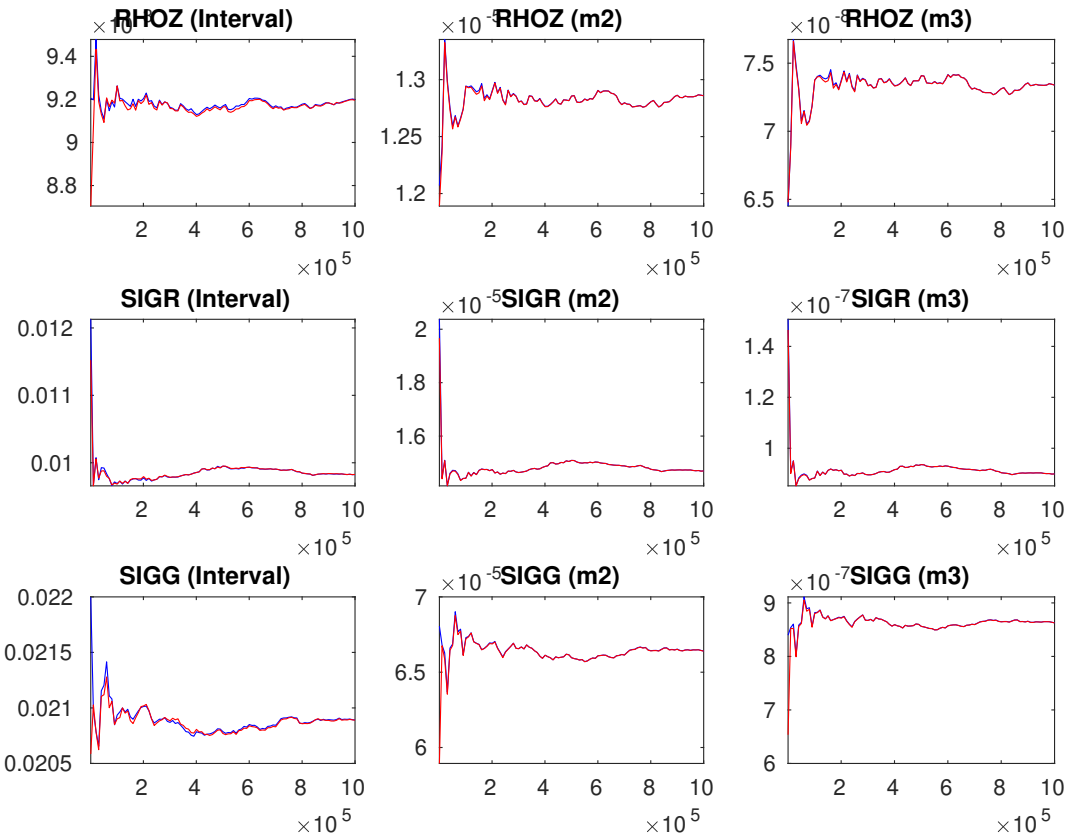

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

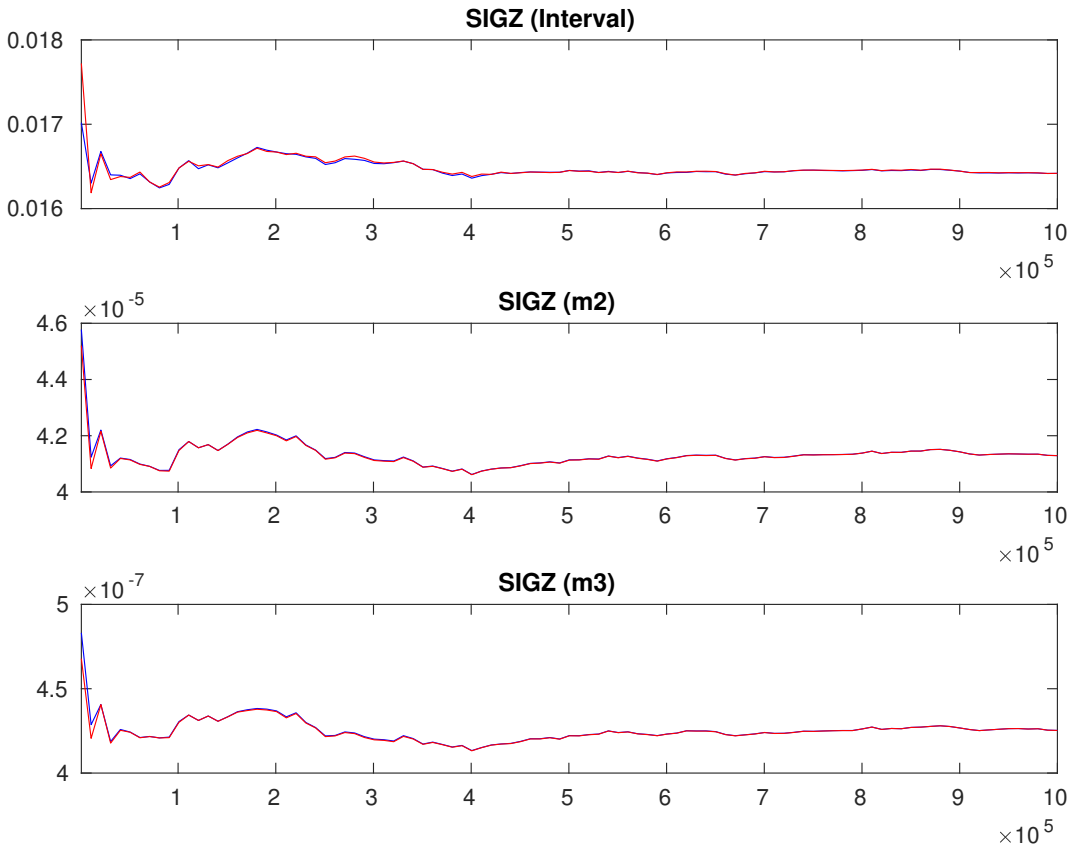

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.