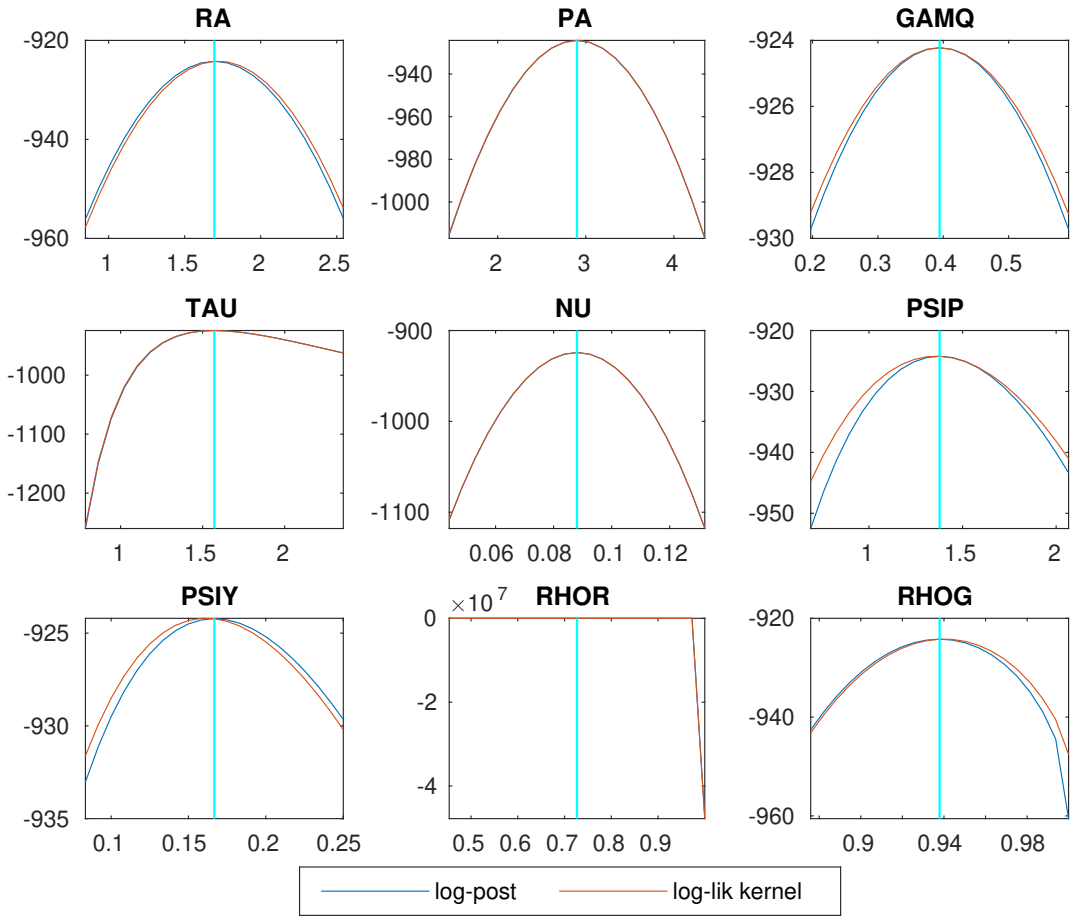

Figure 1: Check plots.

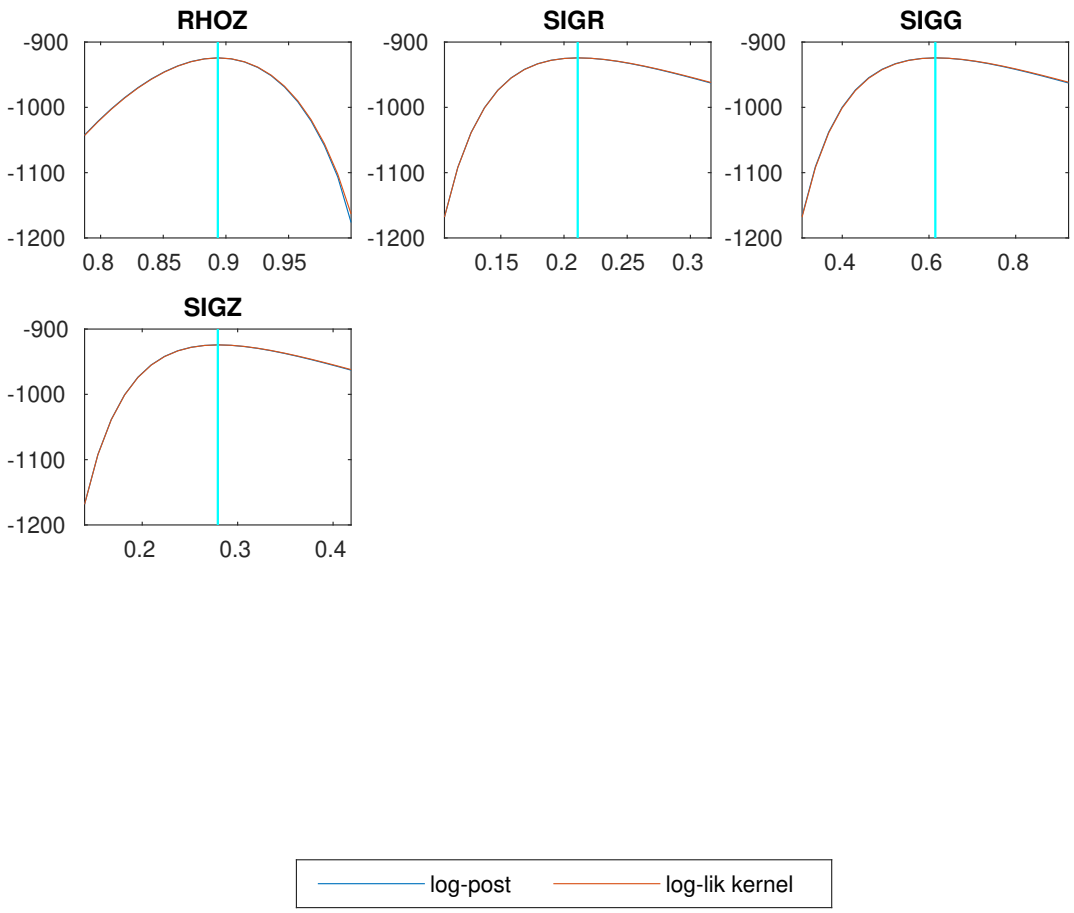

Figure 2: Check plots.

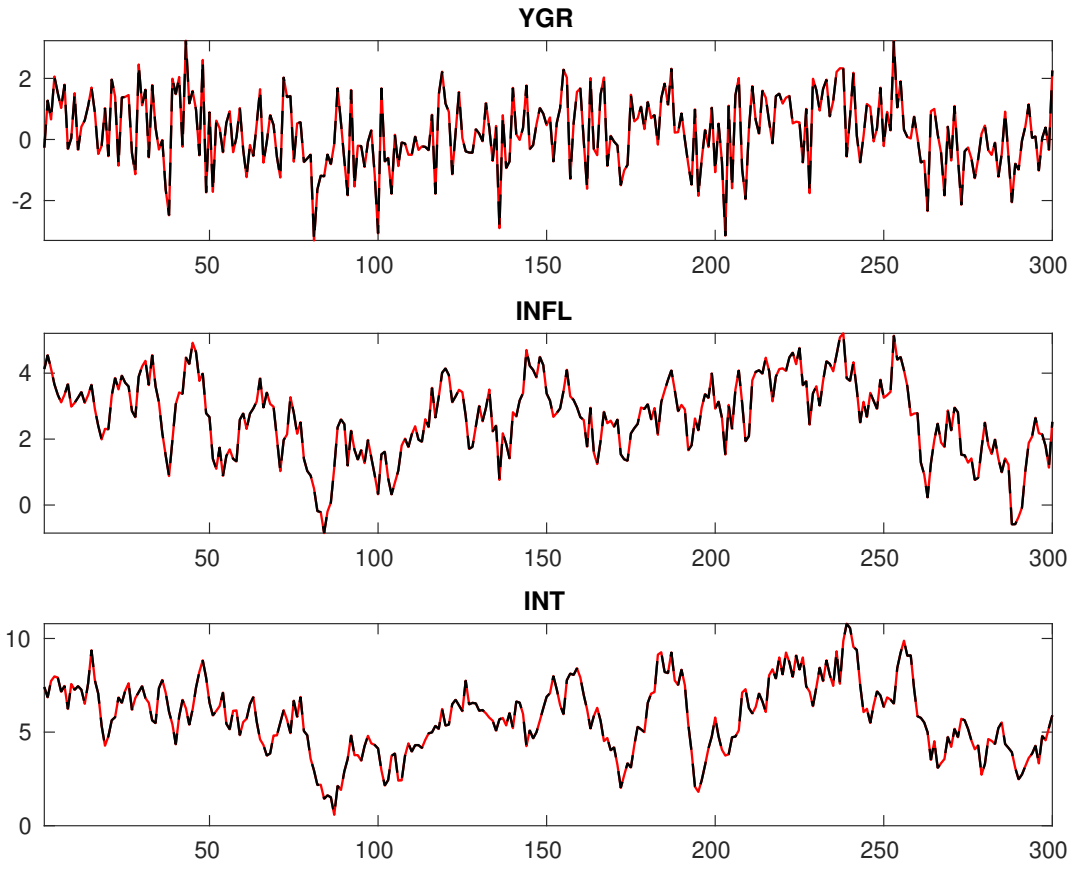

Figure 3: Historical and smoothed variables.

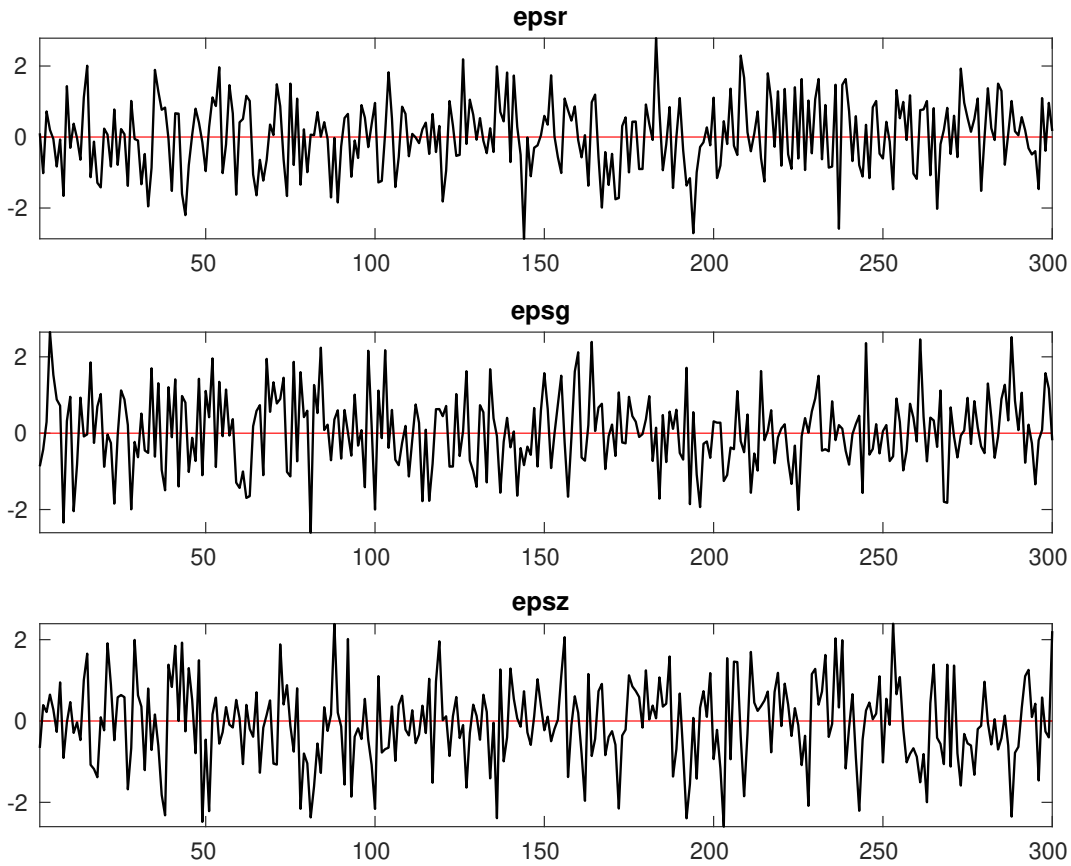

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	46.122	48.326	45.571	49.279
$\pi^{(A)}$	62.563	61.966	64.289	70.145
$\gamma^{(Q)}$	46.122	48.026	48.096	47.936
τ	57.145	60.087	60.610	57.001
ν	53.912	56.693	54.632	53.710
ψ_π	48.556	44.605	48.706	49.314
ψ_y	101.030	81.762	103.640	88.421
ρ_R	62.046	58.404	59.626	54.313
ρ_g	52.190	47.431	50.830	51.655
ρ_z	48.939	52.929	51.806	51.609
σ_R	49.530	51.937	49.568	52.427
σ_g	46.858	53.170	50.647	51.106
σ_z	66.522	56.744	57.052	59.914

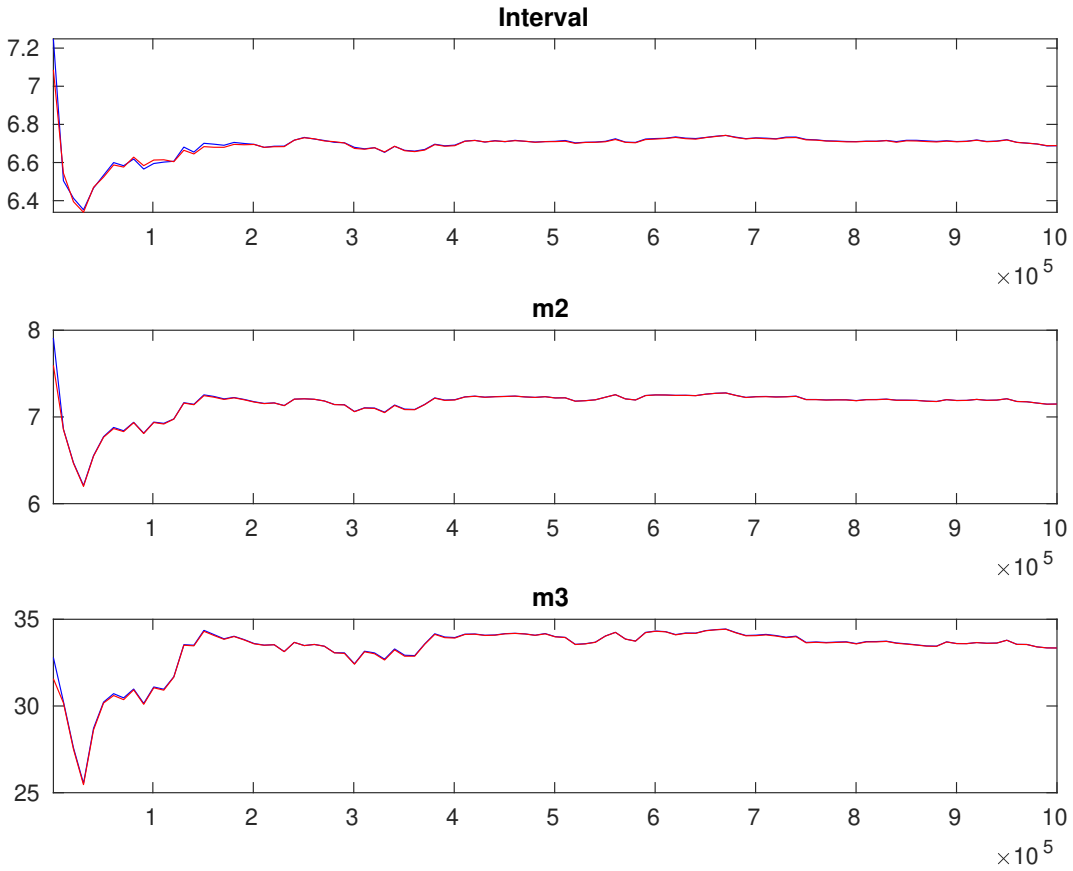

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.677	0.3343	1.1327	2.2342
$\pi^{(A)}$	gamm	4.000	2.0000	2.917	0.2605	2.4913	3.3416
$\gamma^{(Q)}$	norm	0.400	0.2000	0.400	0.1215	0.2022	0.6013
τ	gamm	2.000	0.5000	1.650	0.2591	1.2233	2.0546
ν	beta	0.100	0.0500	0.092	0.0102	0.0752	0.1084
ψ_π	gamm	1.500	0.2500	1.389	0.1819	1.0871	1.6842
ψ_y	gamm	0.500	0.2500	0.194	0.0625	0.0950	0.2886
ρ_R	beta	0.500	0.2000	0.739	0.0301	0.6897	0.7885
ρ_g	beta	0.800	0.1000	0.942	0.0140	0.9187	0.9647
ρ_z	beta	0.660	0.1500	0.895	0.0150	0.8703	0.9192
σ_R	invg	0.300	4.0000	0.213	0.0097	0.1969	0.2287
σ_g	invg	0.400	4.0000	0.623	0.0306	0.5721	0.6719
σ_z	invg	0.400	4.0000	0.292	0.0249	0.2510	0.3322

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.6952	0.3257
$\pi^{(A)}$	gamm	4.000	2.0000	2.9006	0.2280
$\gamma^{(Q)}$	norm	0.400	0.2000	0.3944	0.1173
τ	gamm	2.000	0.5000	1.5714	0.2427
ν	beta	0.100	0.0500	0.0881	0.0097
ψ_π	gamm	1.500	0.2500	1.3776	0.1785
ψ_y	gamm	0.500	0.2500	0.1668	0.0516
ρ_R	beta	0.500	0.2000	0.7266	0.0294
ρ_g	beta	0.800	0.1000	0.9379	0.0143
ρ_z	beta	0.660	0.1500	0.8935	0.0142
σ_R	invg	0.300	4.0000	0.2109	0.0094
σ_g	invg	0.400	4.0000	0.6146	0.0289
σ_z	invg	0.400	4.0000	0.2792	0.0229

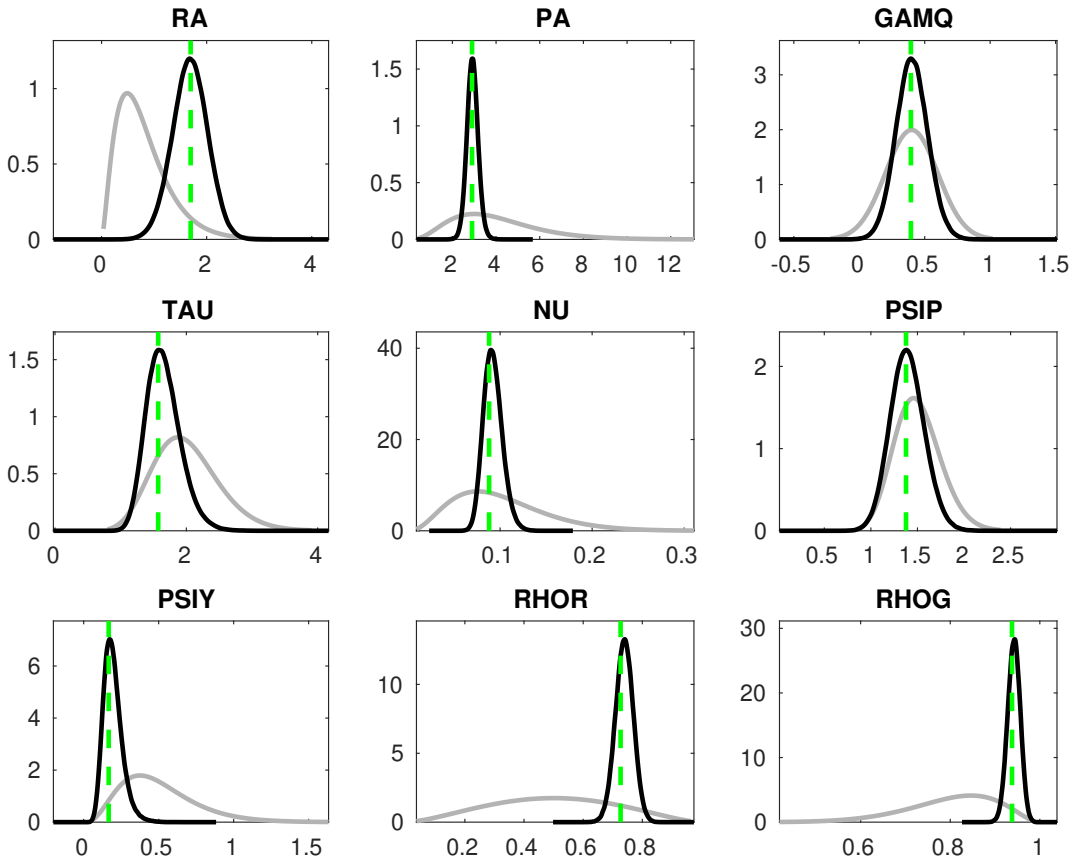

Figure 6: Priors and posteriors.

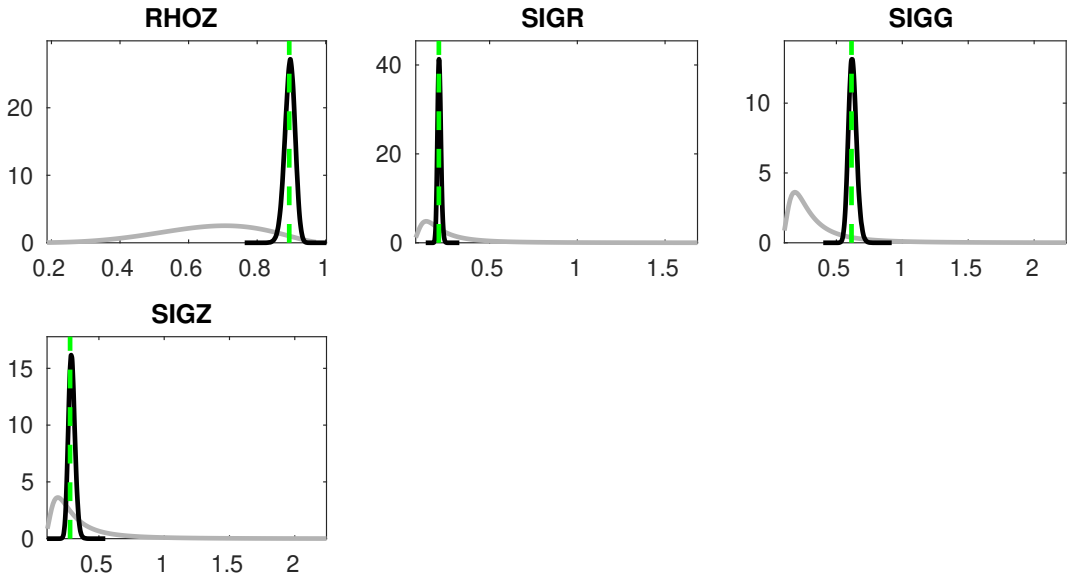

Figure 7: Priors and posteriors.

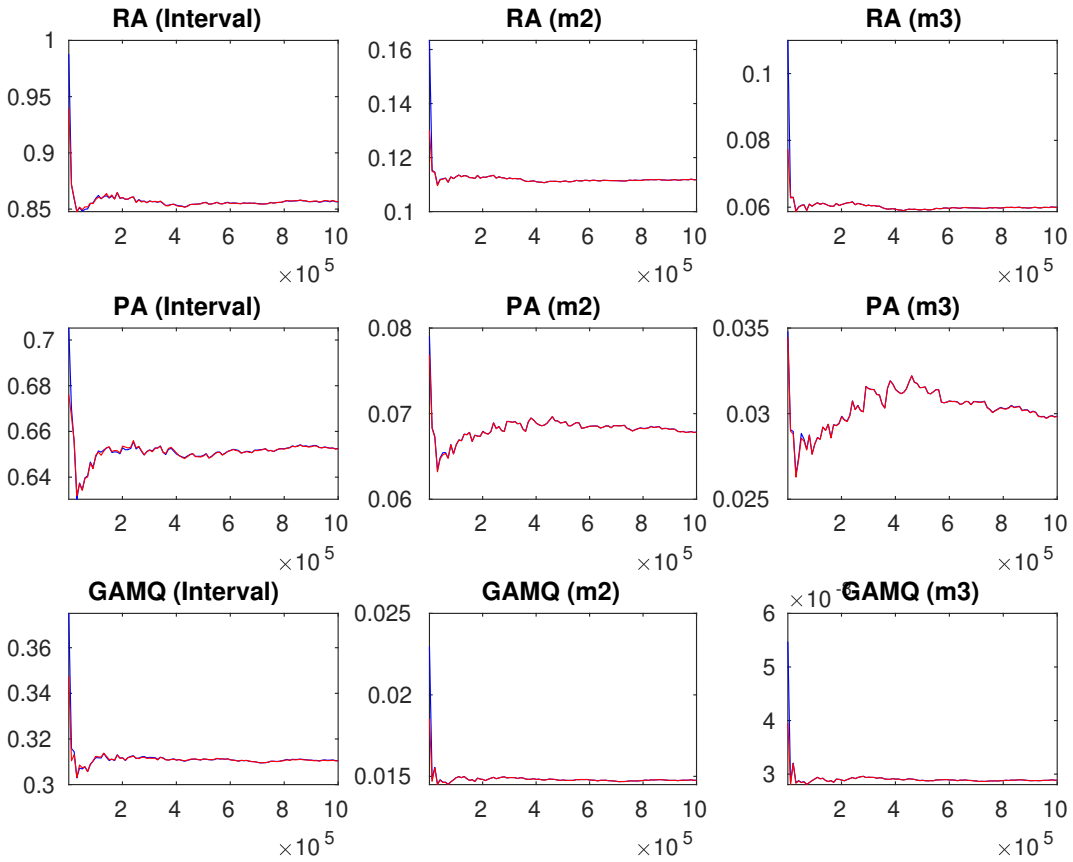

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

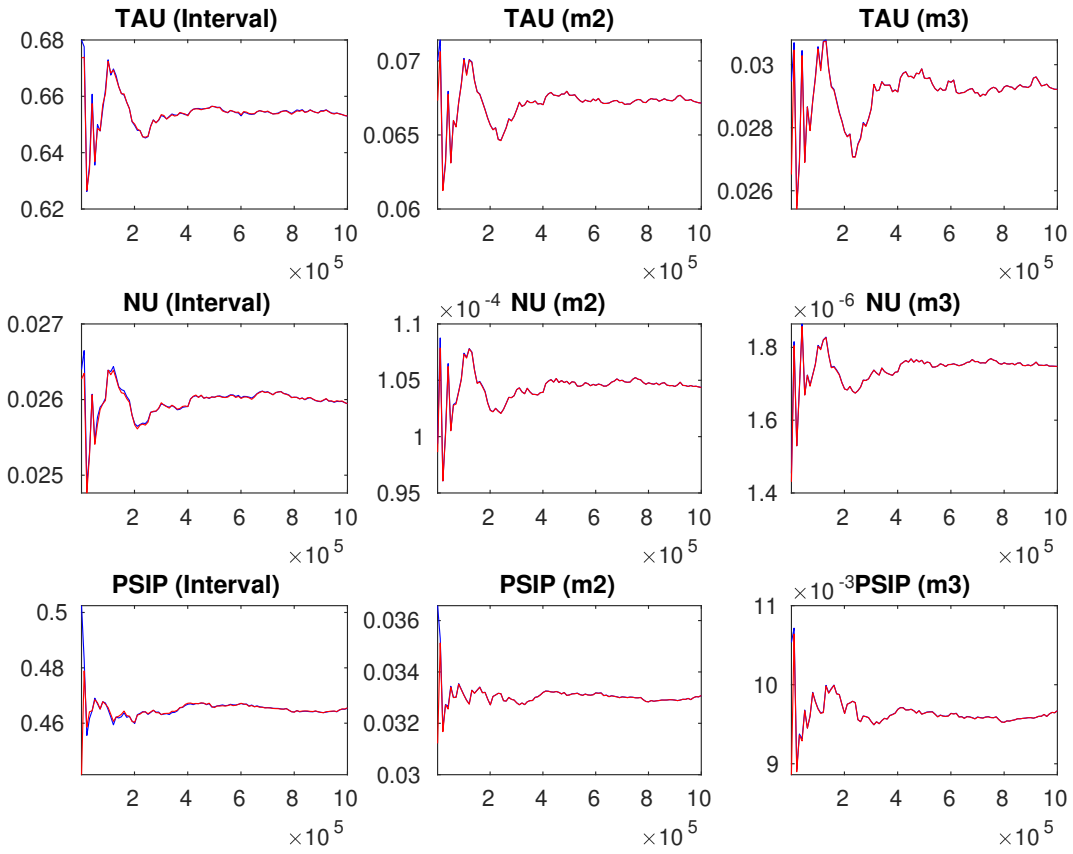

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

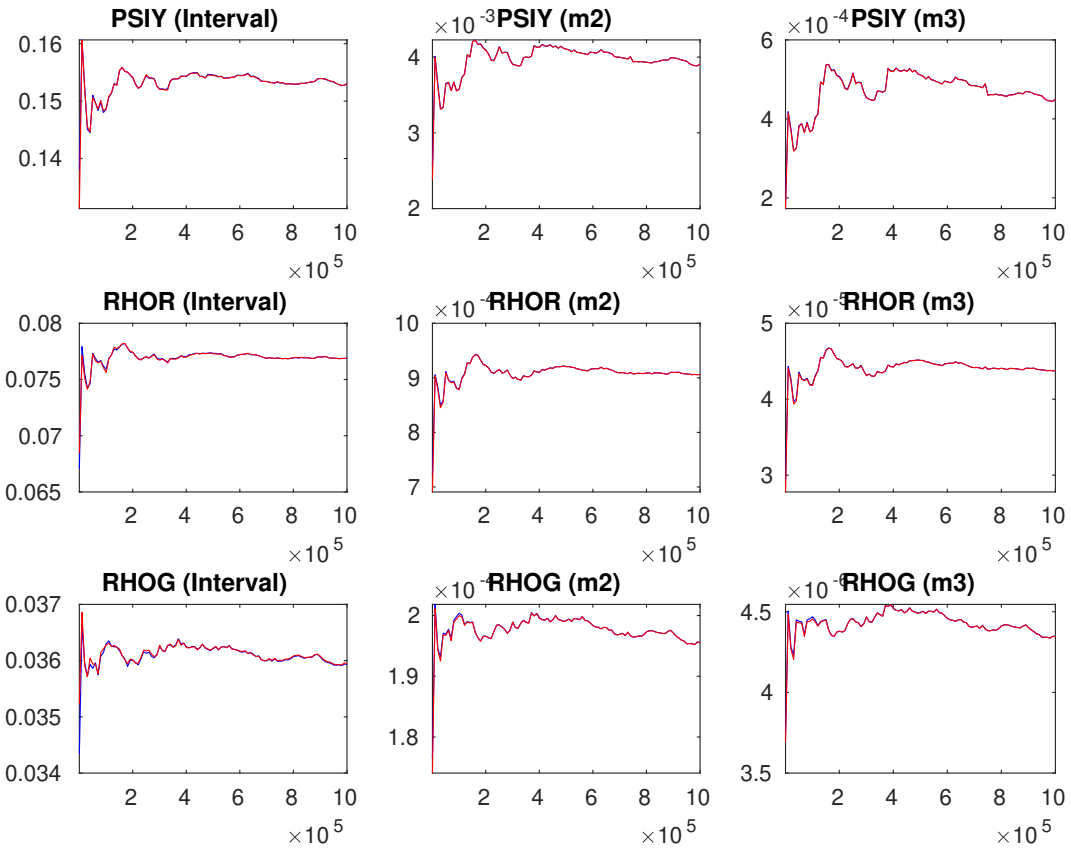

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

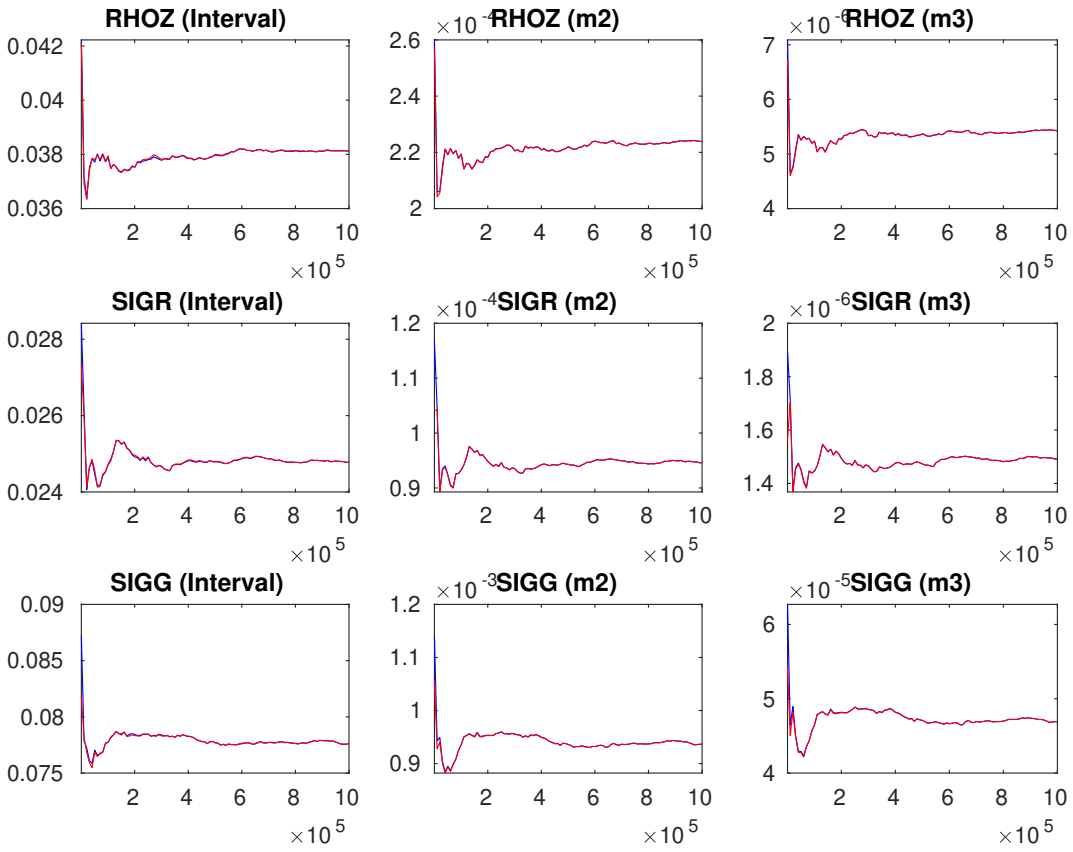

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

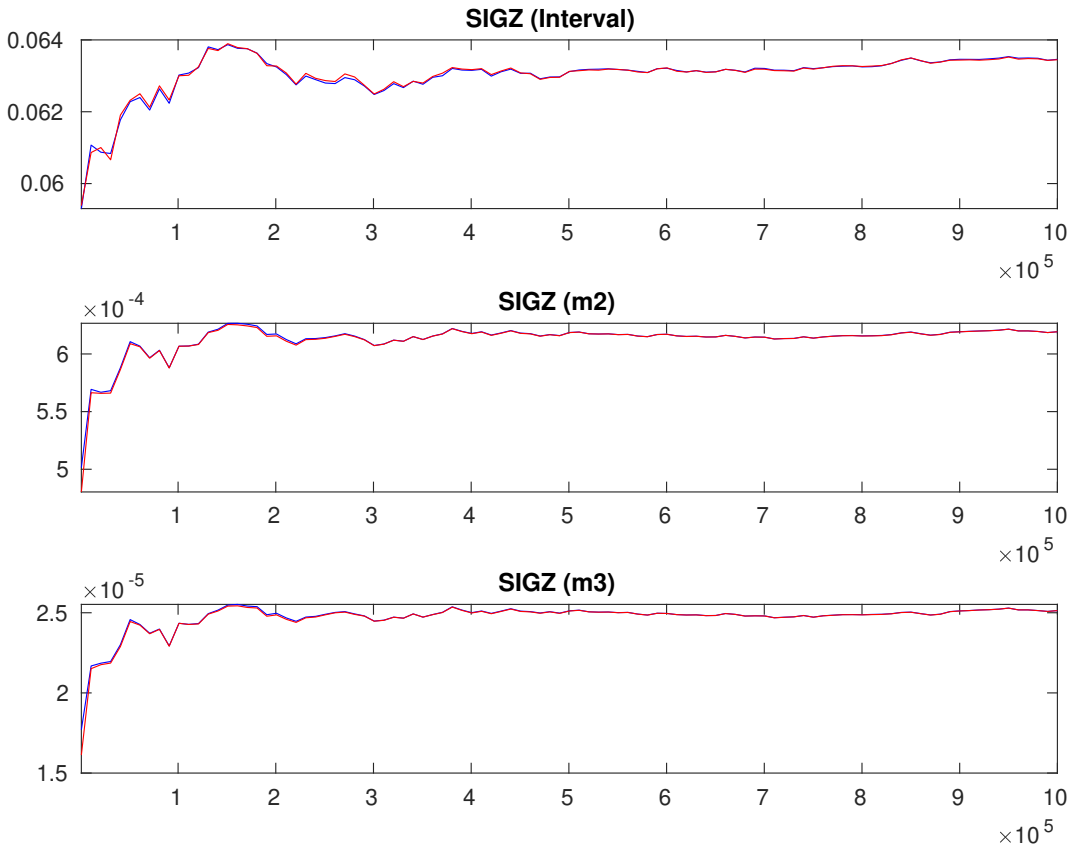

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.