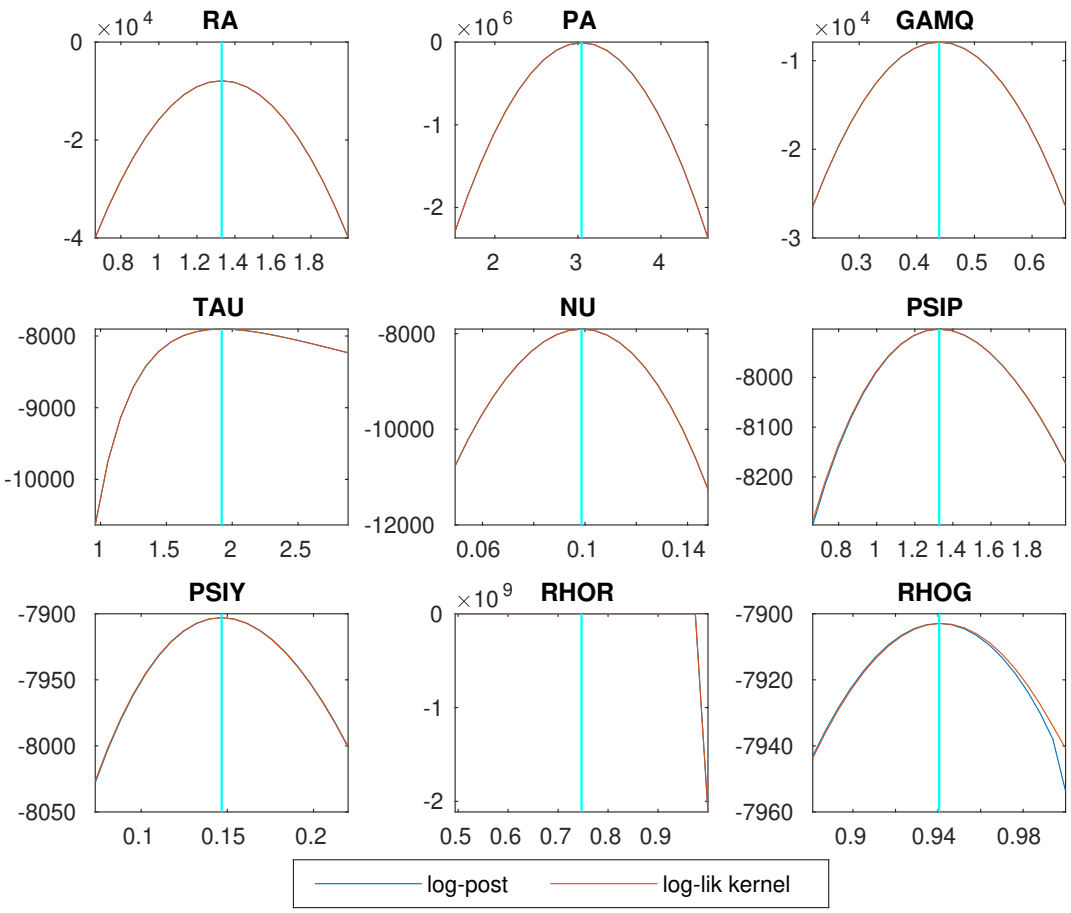

Figure 1: Check plots.

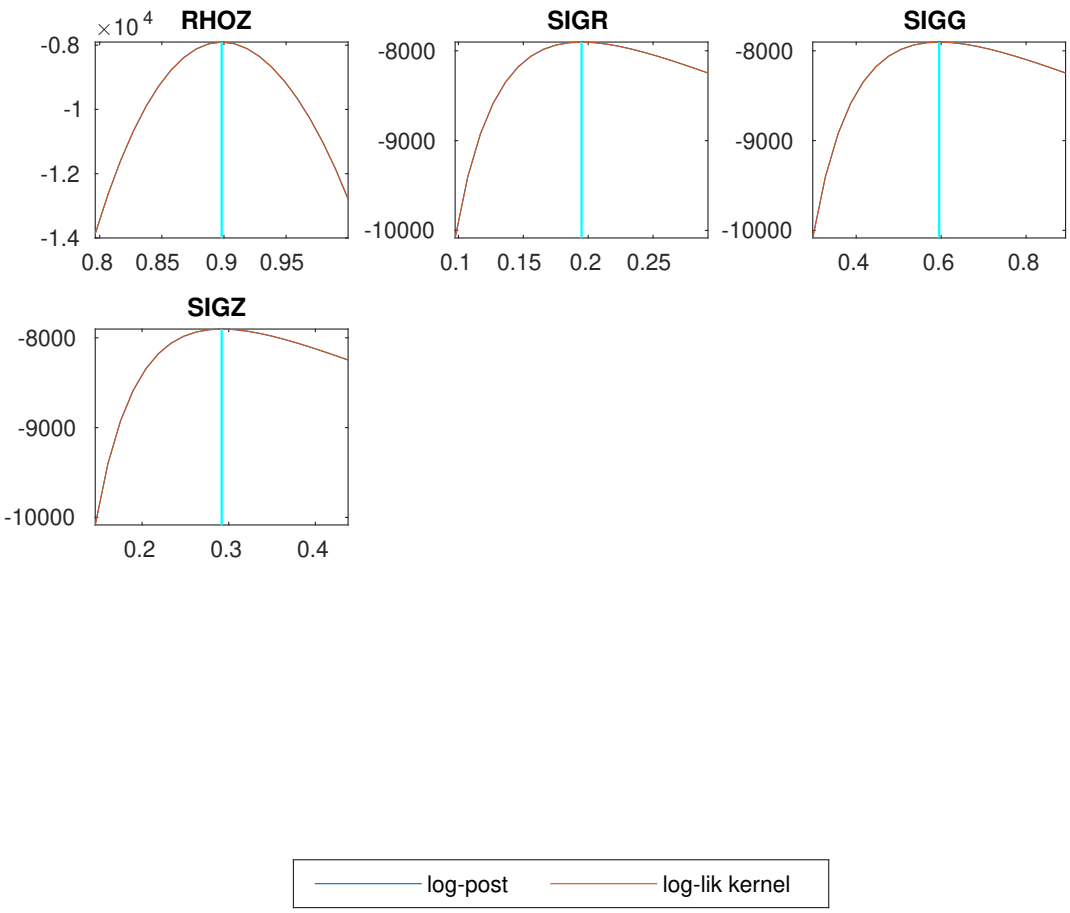

Figure 2: Check plots.

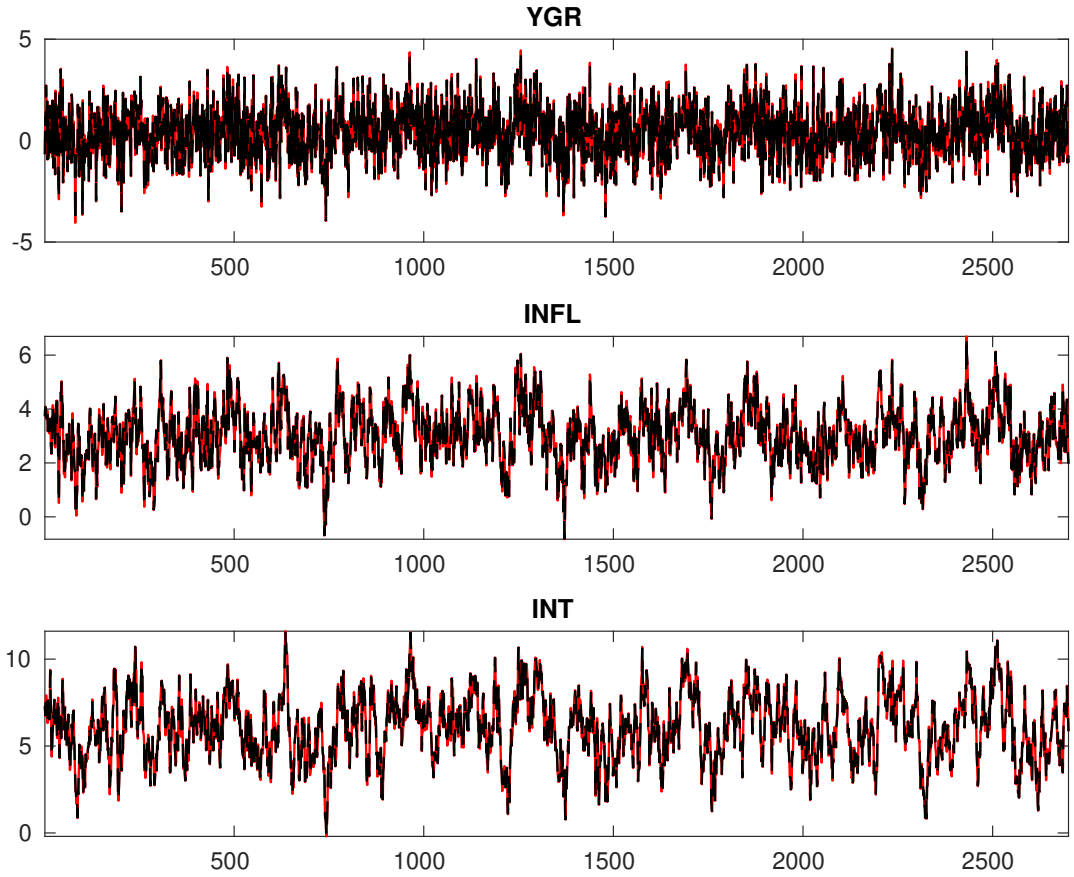

Figure 3: Historical and smoothed variables.

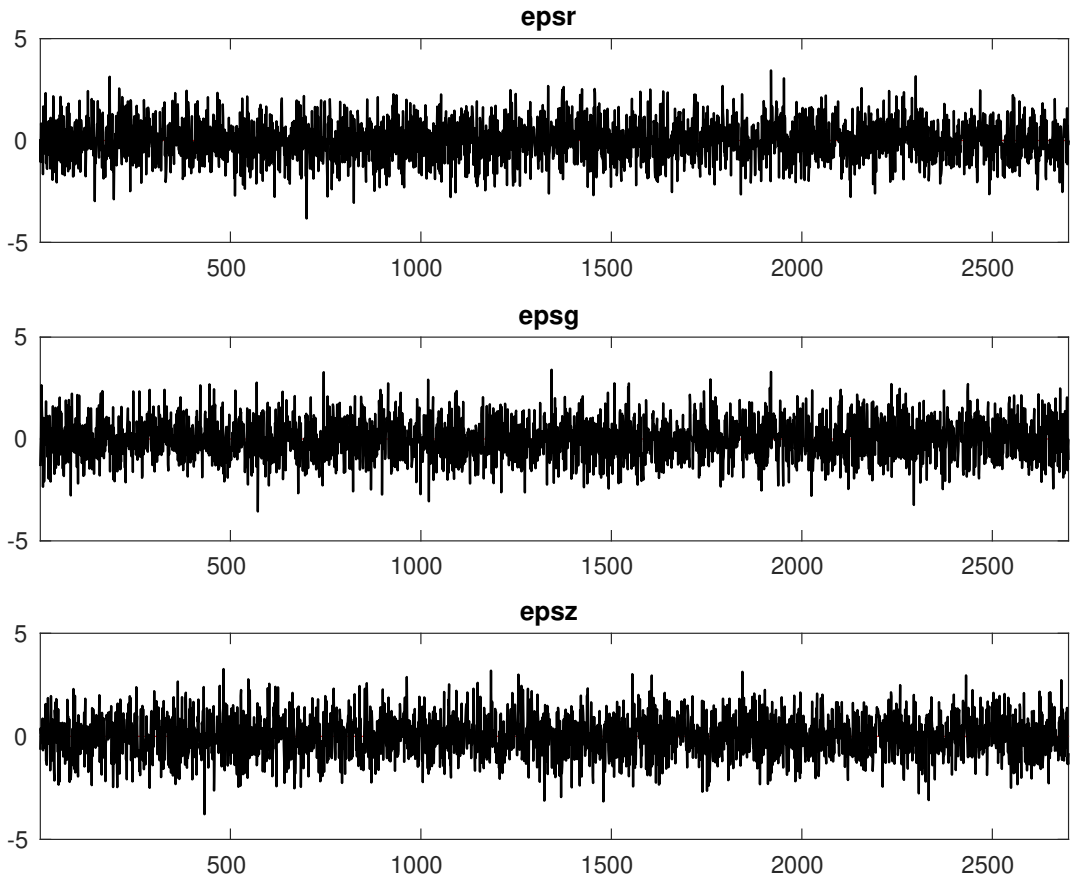

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	68.775	69.145	67.526	73.679
$\pi^{(A)}$	71.241	70.668	68.844	74.821
$\gamma^{(Q)}$	72.823	71.457	69.584	74.764
τ	60.166	56.335	51.223	51.792
ν	60.996	57.359	53.567	51.660
ψ_π	57.128	57.131	56.968	56.500
ψ_y	53.007	54.937	54.982	53.701
ρ_R	52.811	49.321	46.206	50.199
ρ_g	46.402	45.331	46.924	50.603
ρ_z	52.782	53.793	46.943	49.310
σ_R	49.746	44.210	45.233	46.196
σ_g	48.602	51.332	53.424	45.277
σ_z	55.500	57.234	57.360	52.736

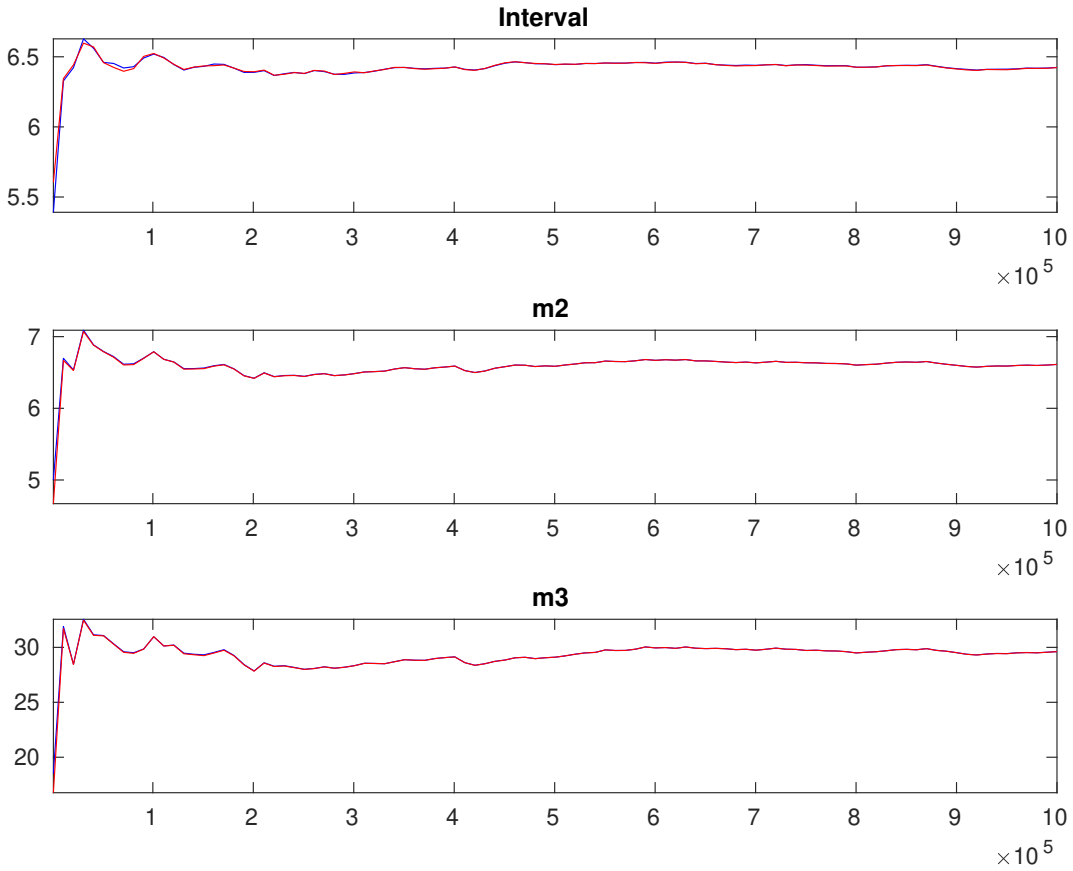

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.329	0.1429	1.0952	1.5651
$\pi^{(A)}$	gamm	4.000	2.0000	3.044	0.0703	2.9286	3.1596
$\gamma^{(Q)}$	norm	0.400	0.2000	0.439	0.0532	0.3509	0.5256
τ	gamm	2.000	0.5000	1.940	0.1008	1.7736	2.1029
ν	beta	0.100	0.0500	0.099	0.0038	0.0930	0.1055
ψ_π	gamm	1.500	0.2500	1.338	0.1941	1.0159	1.6547
ψ_y	gamm	0.500	0.2500	0.146	0.0376	0.0845	0.2084
ρ_R	beta	0.500	0.2000	0.748	0.0088	0.7337	0.7625
ρ_g	beta	0.800	0.1000	0.942	0.0067	0.9308	0.9528
ρ_z	beta	0.660	0.1500	0.899	0.0042	0.8919	0.9058
σ_R	invg	0.300	4.0000	0.195	0.0029	0.1903	0.1997
σ_g	invg	0.400	4.0000	0.596	0.0082	0.5826	0.6095
σ_z	invg	0.400	4.0000	0.292	0.0050	0.2838	0.3004

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.3303	0.1267
$\pi^{(A)}$	gamm	4.000	2.0000	3.0440	0.0617
$\gamma^{(Q)}$	norm	0.400	0.2000	0.4388	0.0464
τ	gamm	2.000	0.5000	1.9198	0.0958
ν	beta	0.100	0.0500	0.0986	0.0036
ψ_π	gamm	1.500	0.2500	1.3278	0.1763
ψ_y	gamm	0.500	0.2500	0.1467	0.0350
ρ_R	beta	0.500	0.2000	0.7469	0.0087
ρ_g	beta	0.800	0.1000	0.9405	0.0067
ρ_z	beta	0.660	0.1500	0.8981	0.0042
σ_R	invg	0.300	4.0000	0.1949	0.0029
σ_g	invg	0.400	4.0000	0.5953	0.0080
σ_z	invg	0.400	4.0000	0.2919	0.0048

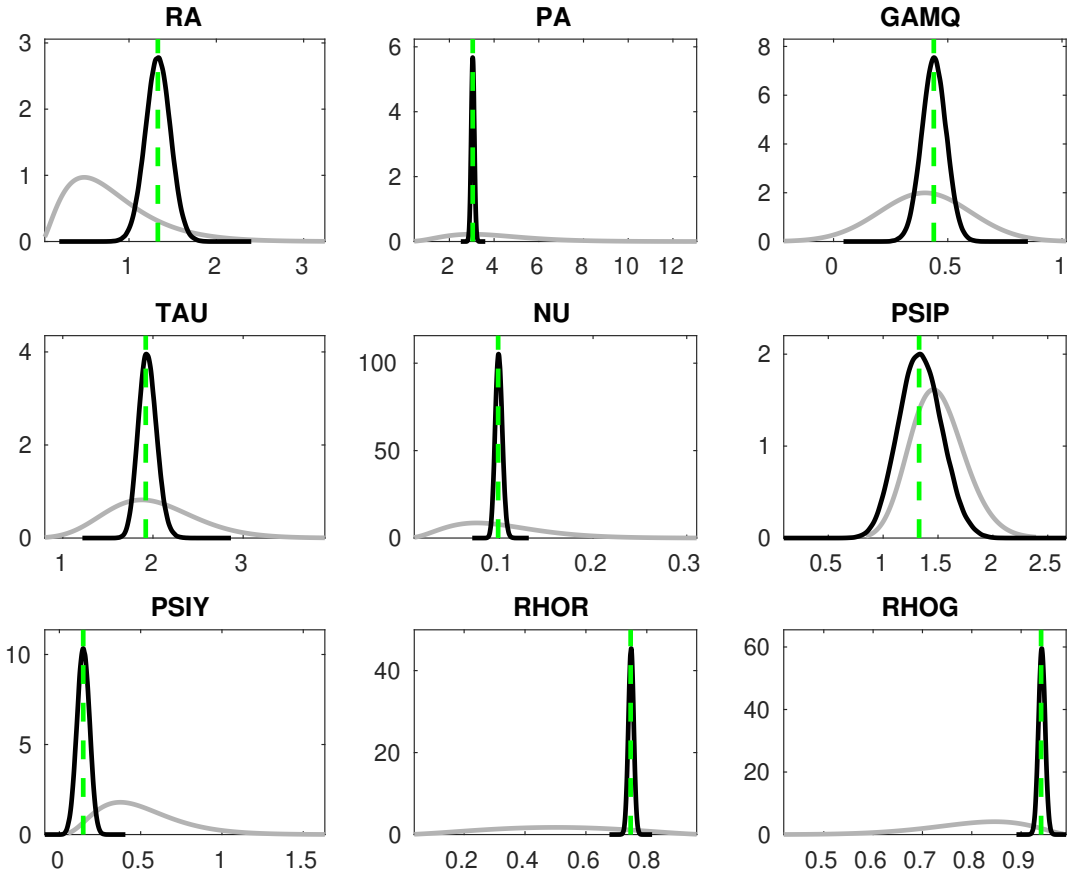

Figure 6: Priors and posteriors.

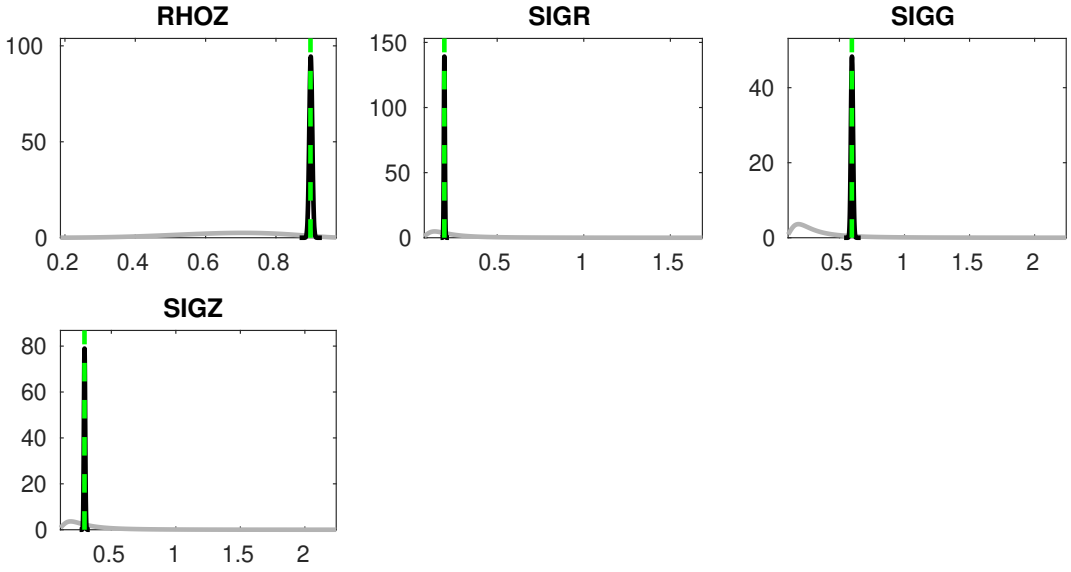

Figure 7: Priors and posteriors.

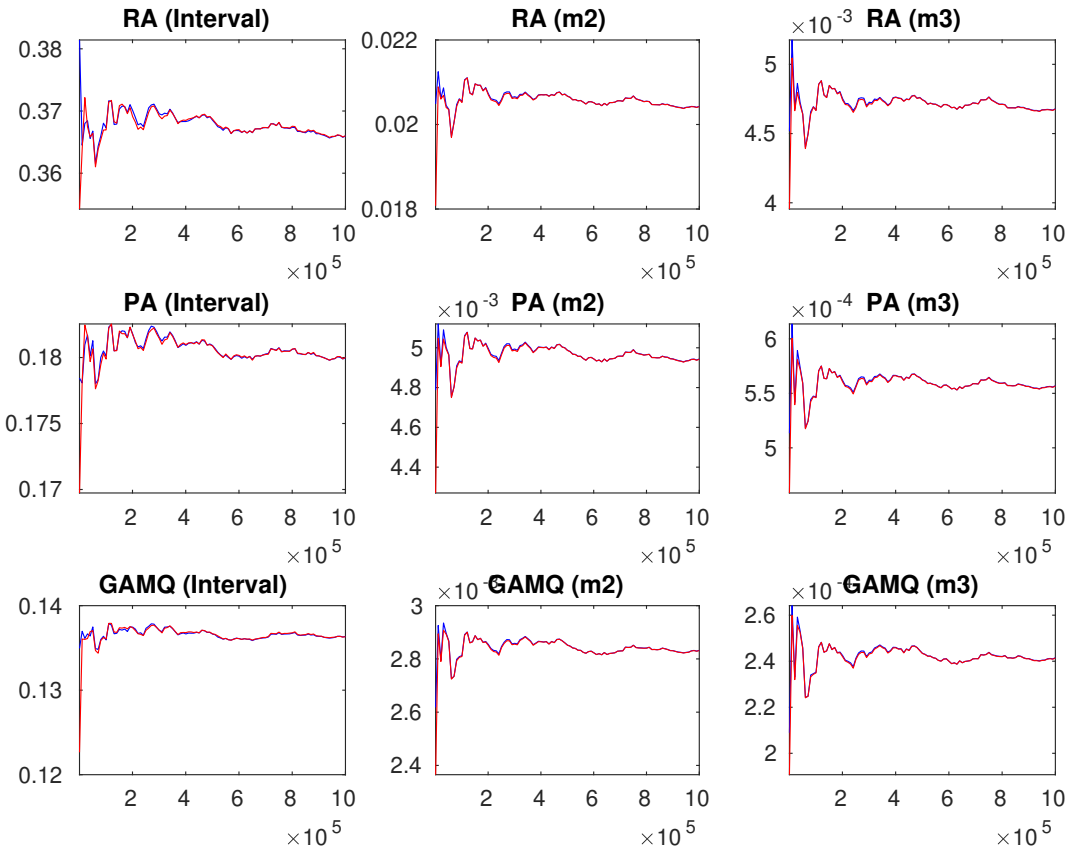

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

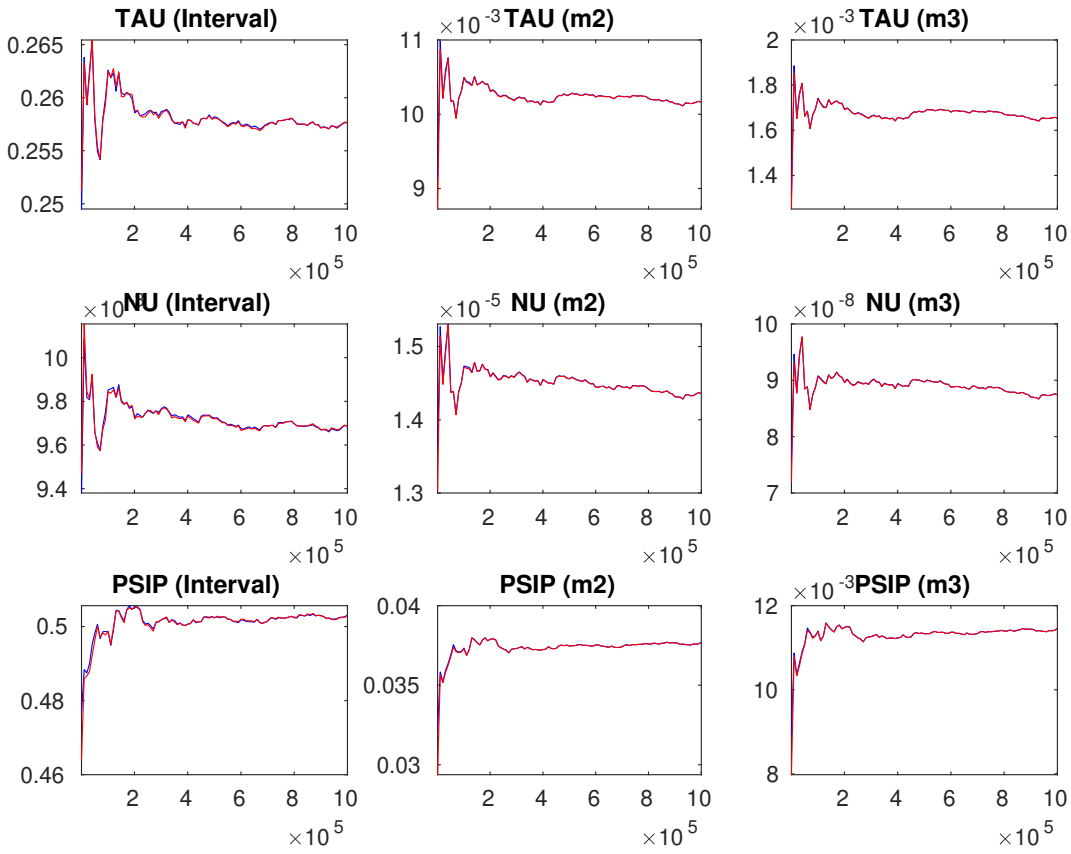

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

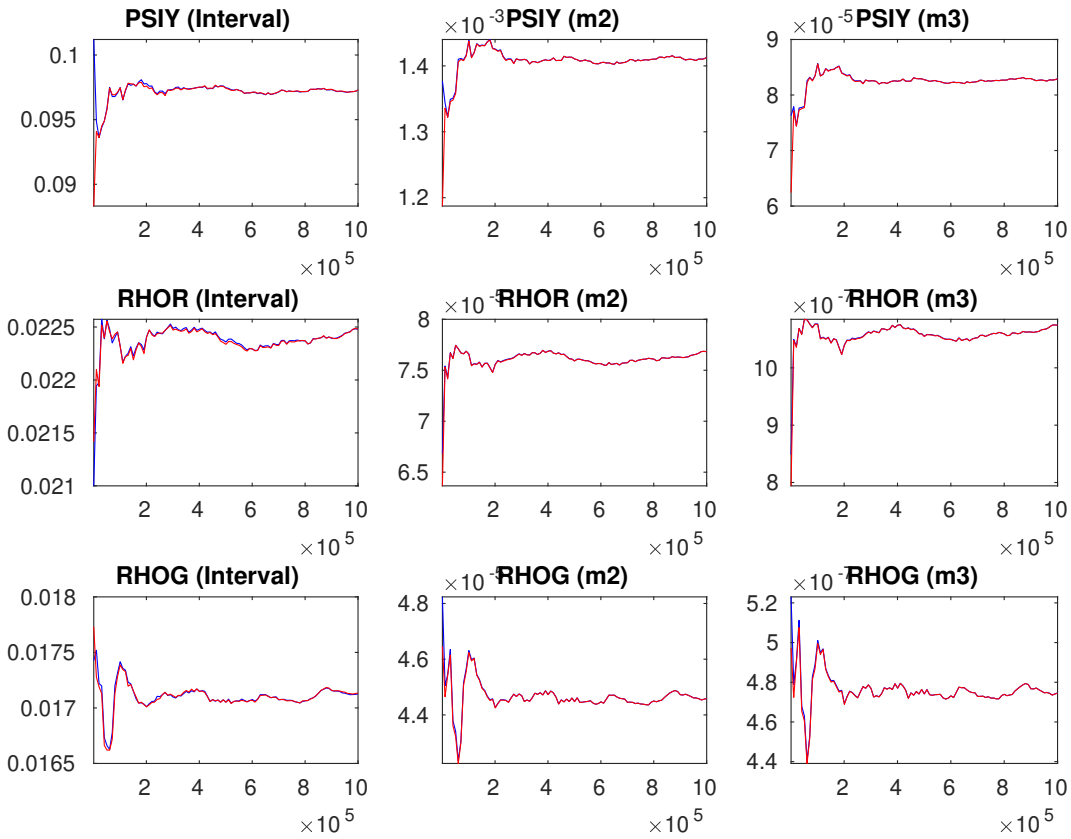

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

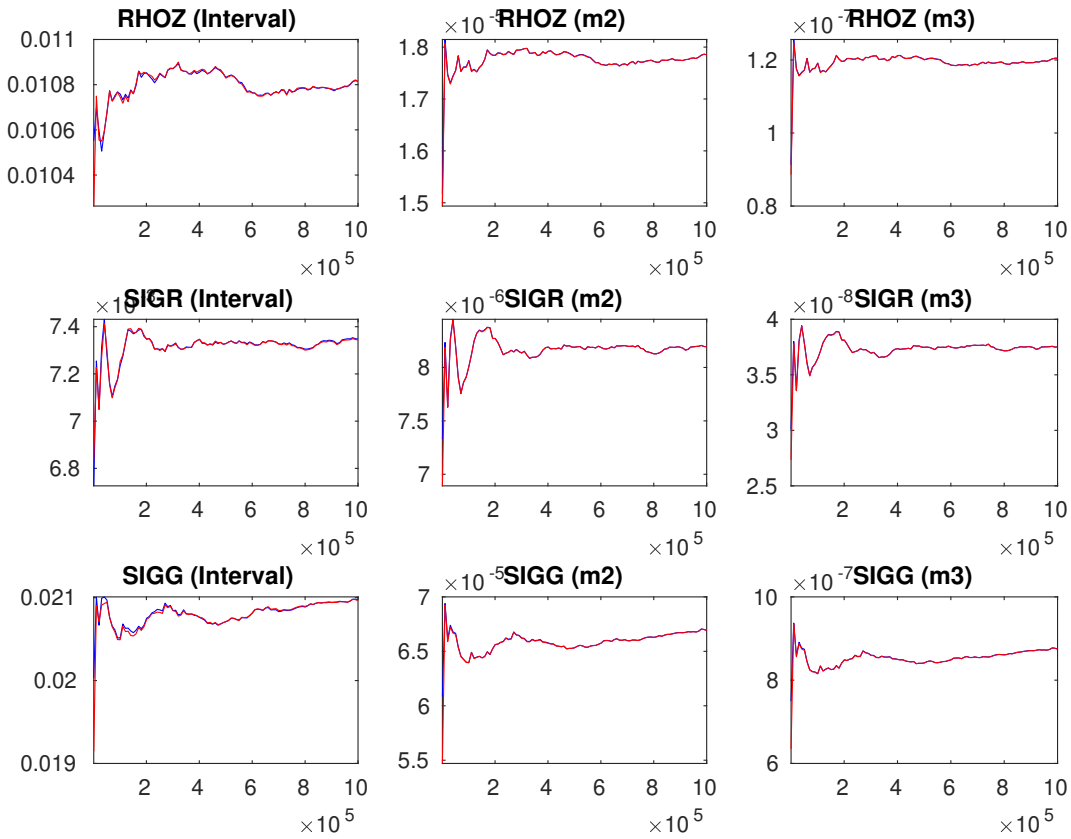

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

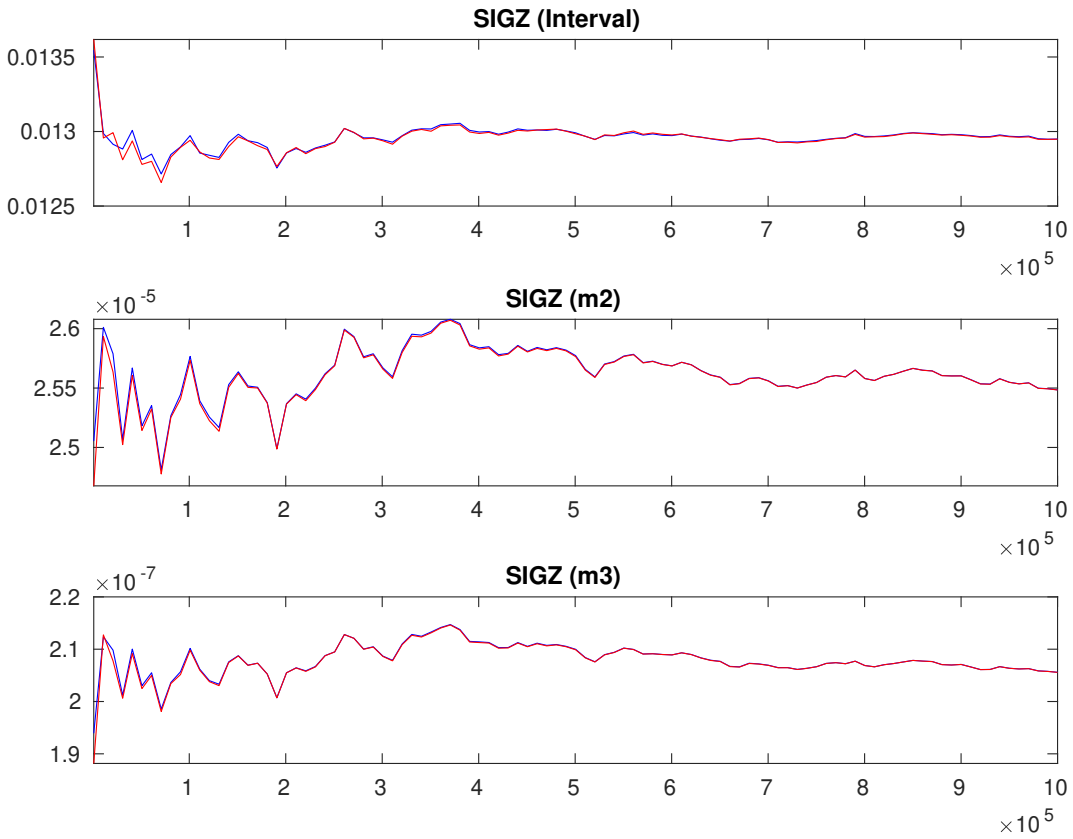

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.