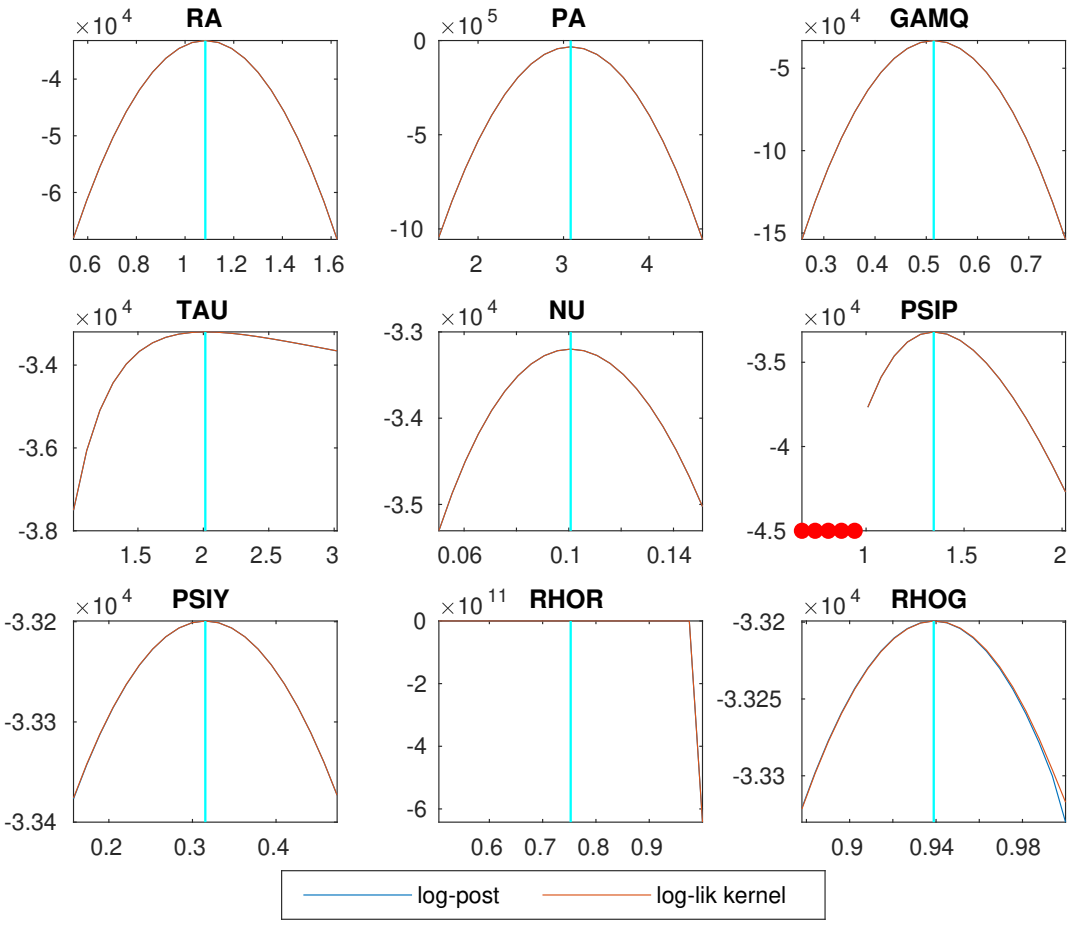

Figure 1: Check plots.

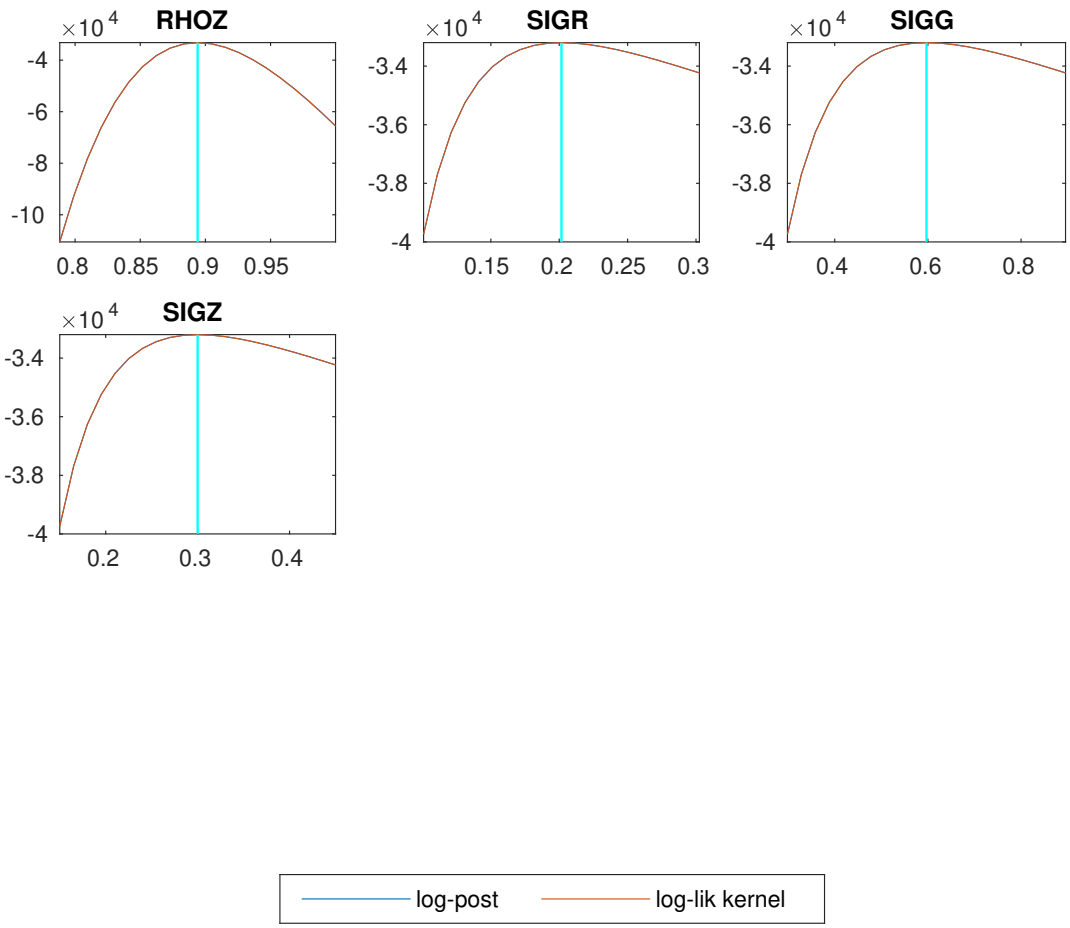

Figure 2: Check plots.

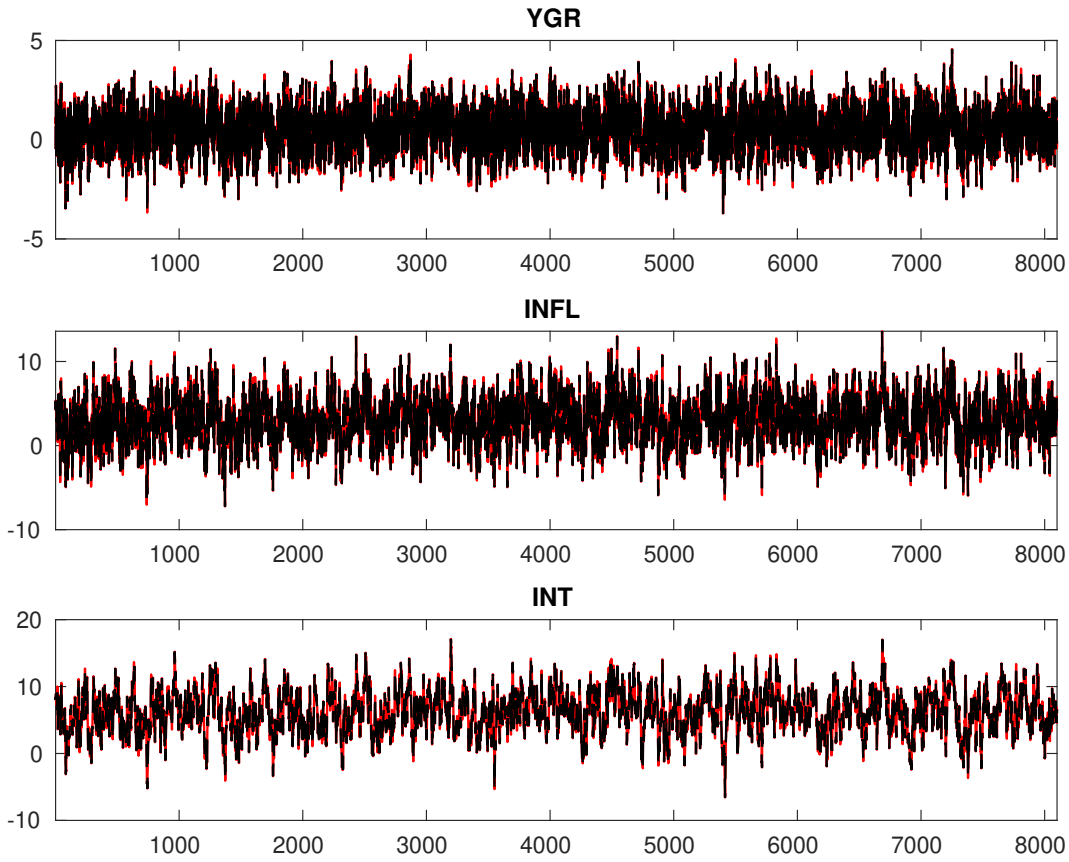

Figure 3: Historical and smoothed variables.

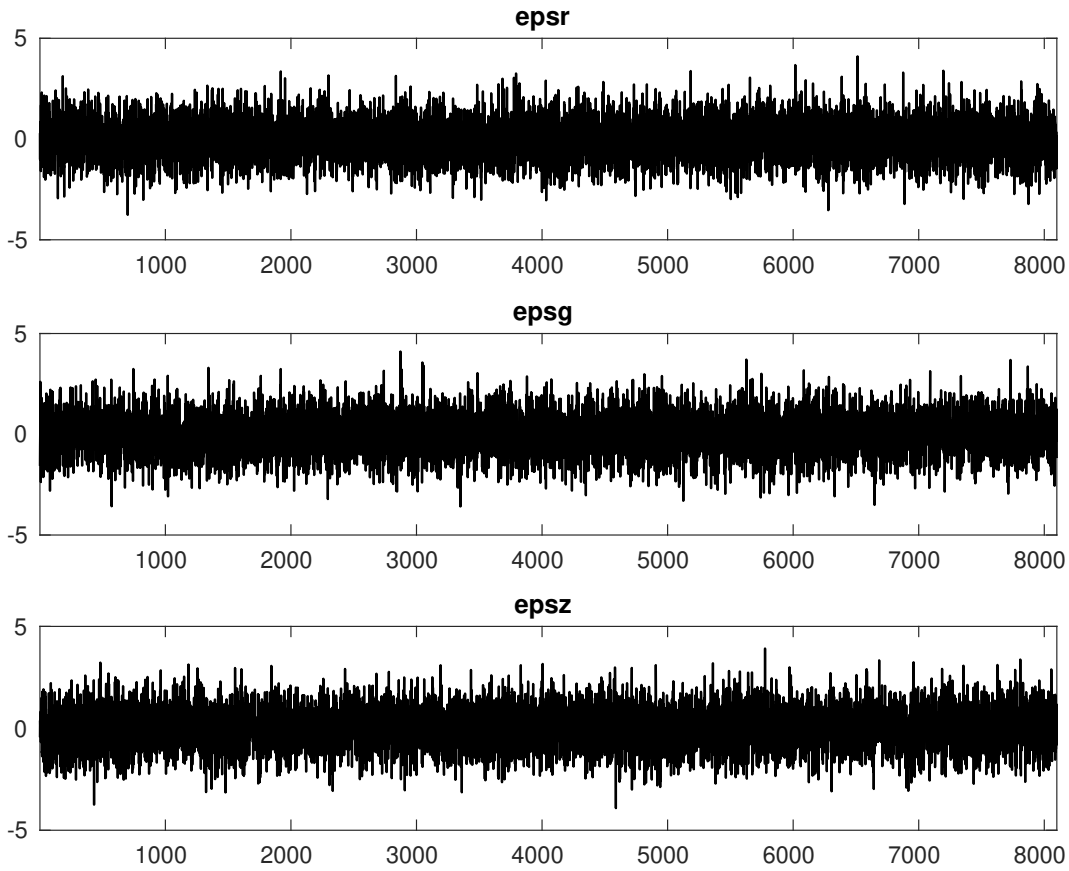

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	596.575	596.007	593.588	596.990
$\pi^{(A)}$	597.562	595.574	596.182	598.947
$\gamma^{(Q)}$	574.271	570.739	573.207	577.118
τ	272.344	305.471	286.040	279.030
ν	236.494	268.248	251.053	241.450
ψ_π	685.134	682.524	689.705	691.017
ψ_y	700.177	700.237	705.196	705.102
ρ_R	619.525	619.054	631.667	632.368
ρ_g	31.426	29.805	32.423	31.763
ρ_z	146.422	160.344	158.151	151.184
σ_R	474.206	459.395	481.273	493.361
σ_g	41.371	44.917	44.355	46.928
σ_z	135.571	152.168	139.611	139.200

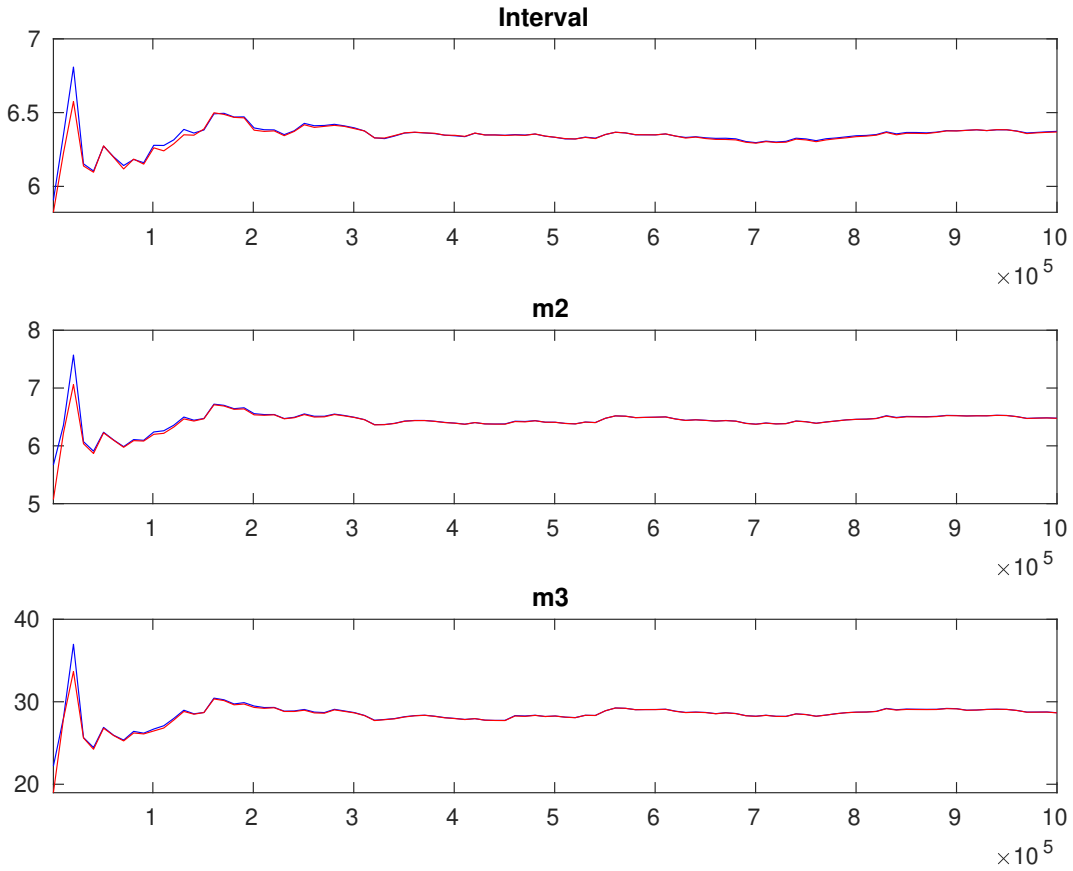

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.081	0.0761	0.9597	1.2079
$\pi^{(A)}$	gamm	4.000	2.0000	3.087	0.1033	2.9134	3.2506
$\gamma^{(Q)}$	norm	0.400	0.2000	0.515	0.0314	0.4631	0.5659
τ	gamm	2.000	0.5000	2.026	0.0708	1.9091	2.1419
ν	beta	0.100	0.0500	0.101	0.0043	0.0942	0.1083
ψ_π	gamm	1.500	0.2500	1.316	0.0912	1.1714	1.4637
ψ_y	gamm	0.500	0.2500	0.370	0.1609	0.1071	0.6209
ρ_R	beta	0.500	0.2000	0.756	0.0095	0.7400	0.7711
ρ_g	beta	0.800	0.1000	0.939	0.0039	0.9330	0.9458
ρ_z	beta	0.660	0.1500	0.894	0.0021	0.8908	0.8977
σ_R	invg	0.300	4.0000	0.202	0.0030	0.1976	0.2074
σ_g	invg	0.400	4.0000	0.597	0.0047	0.5895	0.6050
σ_z	invg	0.400	4.0000	0.300	0.0037	0.2944	0.3065

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.0832	0.0108
$\pi^{(A)}$	gamm	4.000	2.0000	3.0836	0.0154
$\gamma^{(Q)}$	norm	0.400	0.2000	0.5146	0.0069
τ	gamm	2.000	0.5000	2.0151	0.0248
ν	beta	0.100	0.0500	0.1007	0.0021
ψ_π	gamm	1.500	0.2500	1.3453	0.0122
ψ_y	gamm	0.500	0.2500	0.3154	0.0107
ρ_R	beta	0.500	0.2000	0.7526	0.0026
ρ_g	beta	0.800	0.1000	0.9389	0.0040
ρ_z	beta	0.660	0.1500	0.8940	0.0013
σ_R	invg	0.300	4.0000	0.2016	0.0017
σ_g	invg	0.400	4.0000	0.5970	0.0040
σ_z	invg	0.400	4.0000	0.3000	0.0029

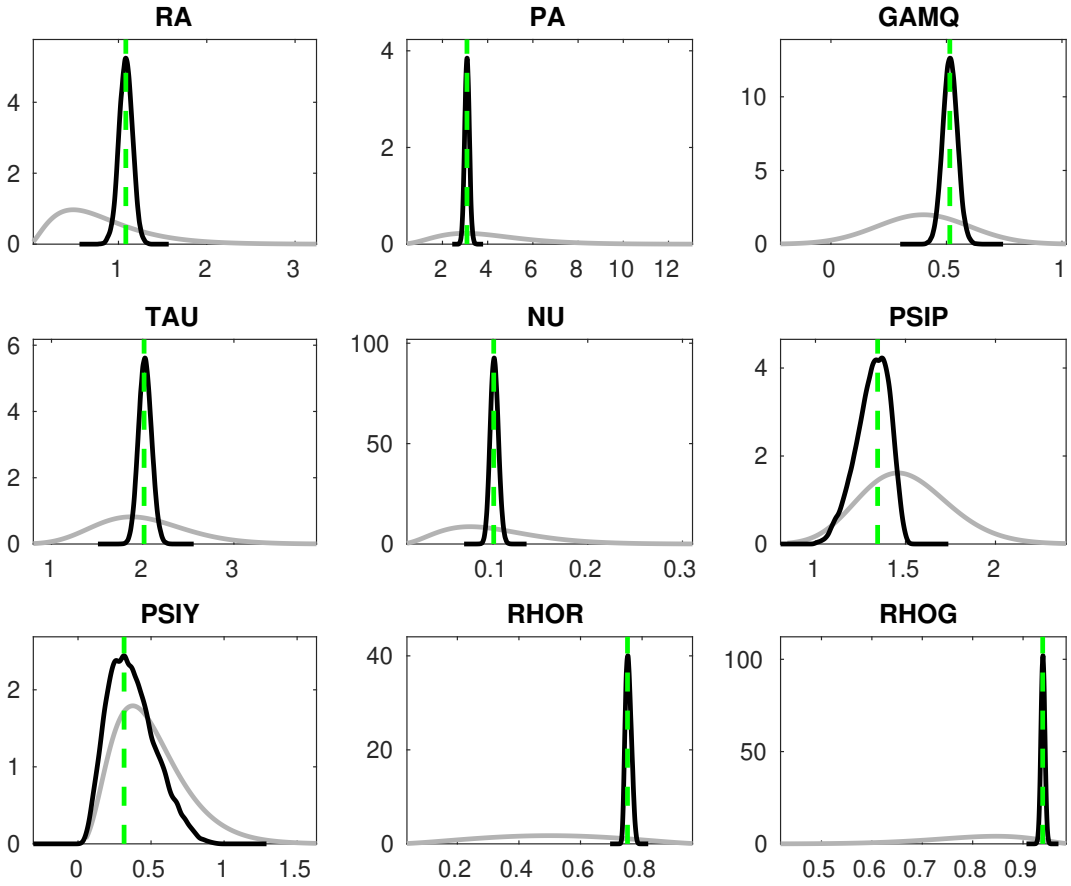

Figure 6: Priors and posteriors.

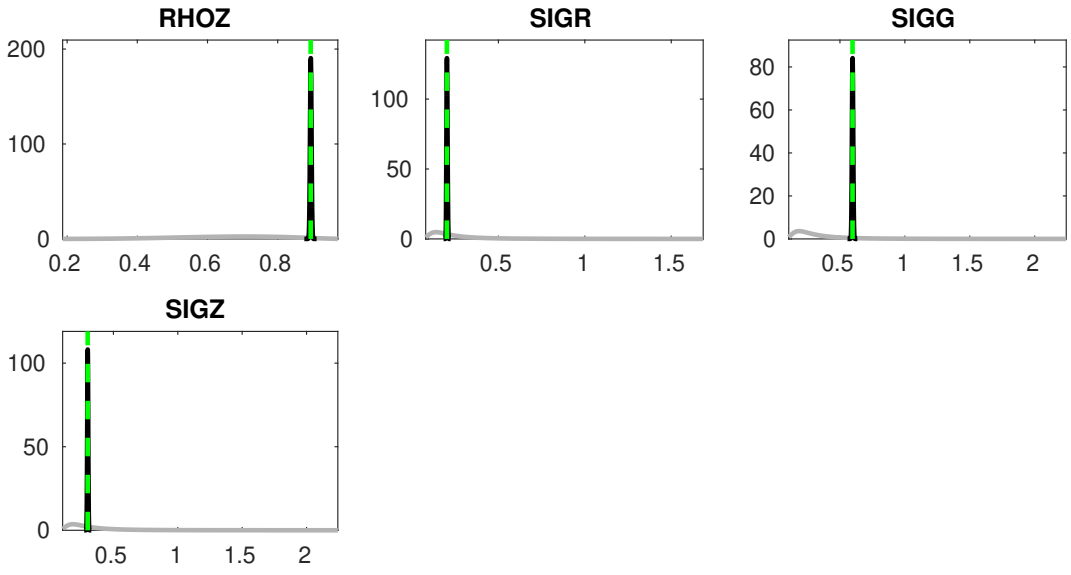

Figure 7: Priors and posteriors.

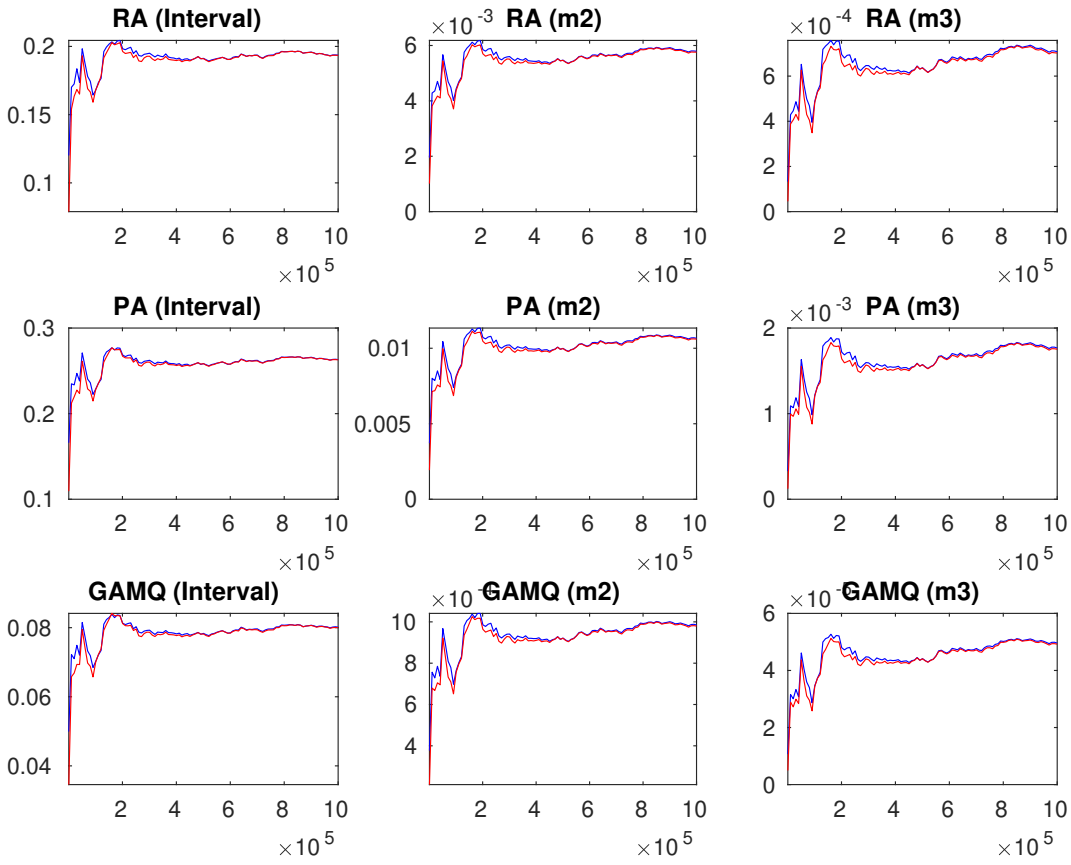

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

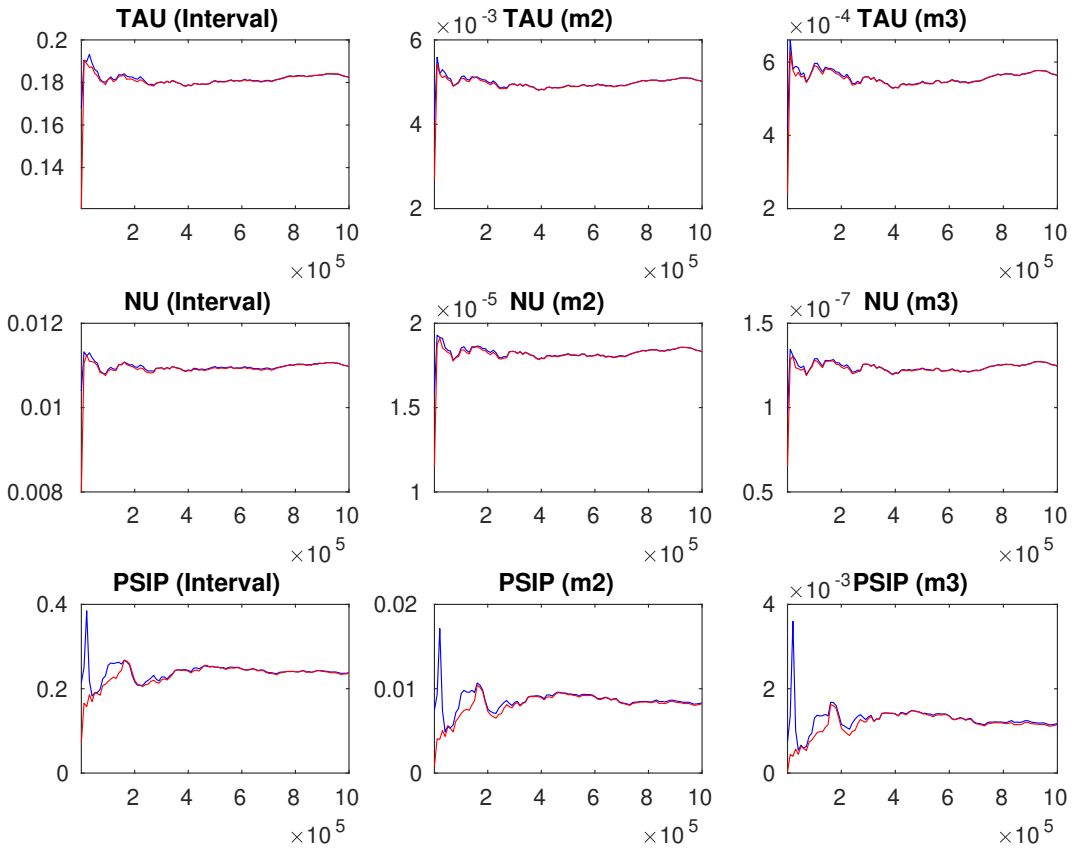

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

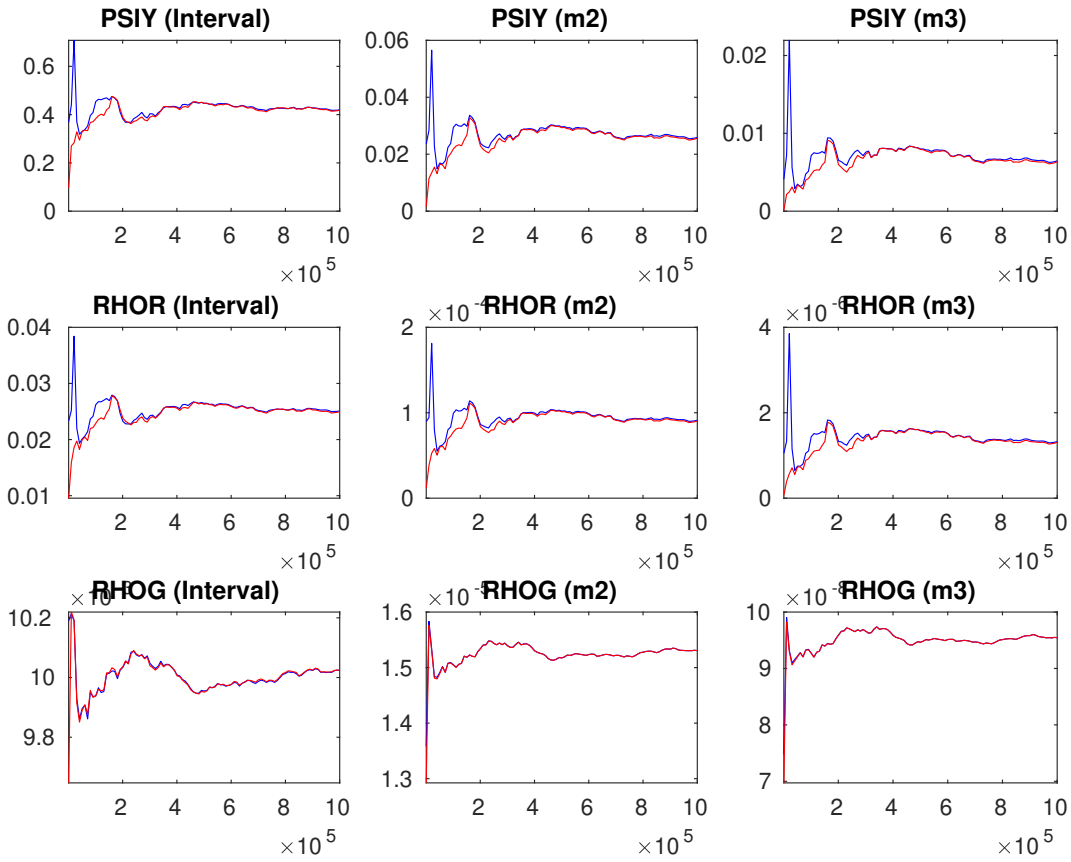

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

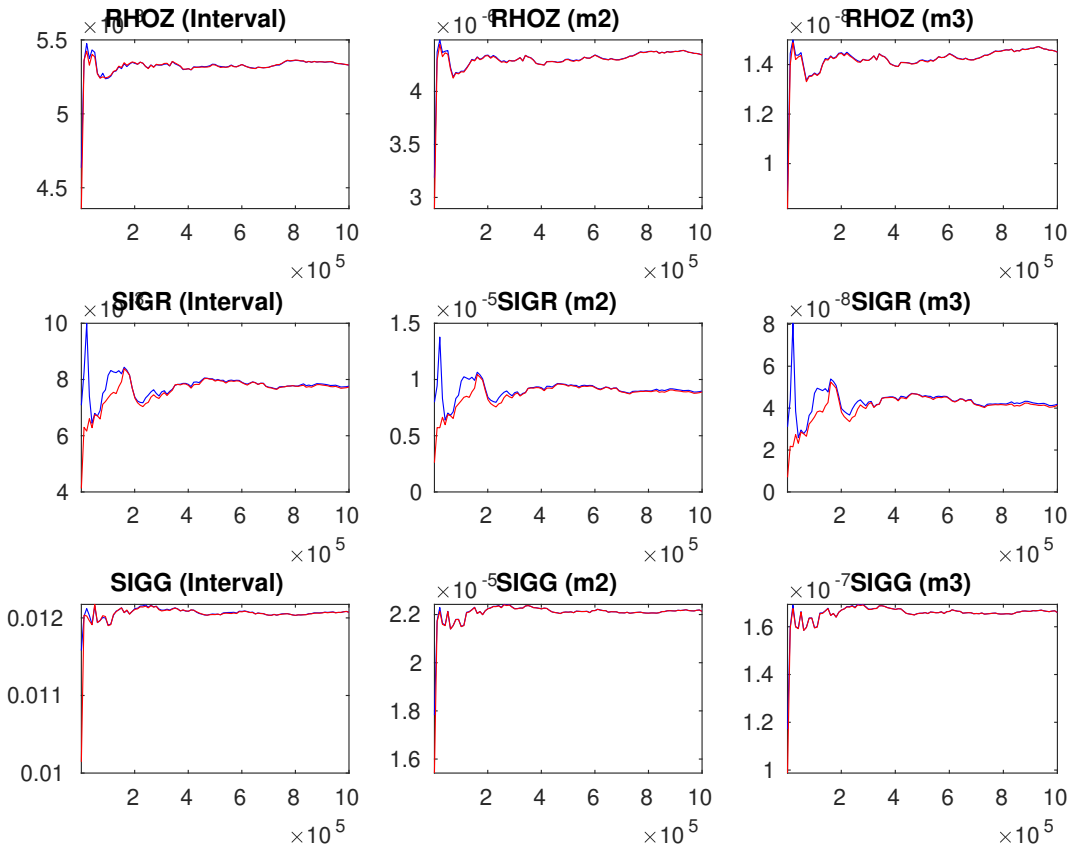

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

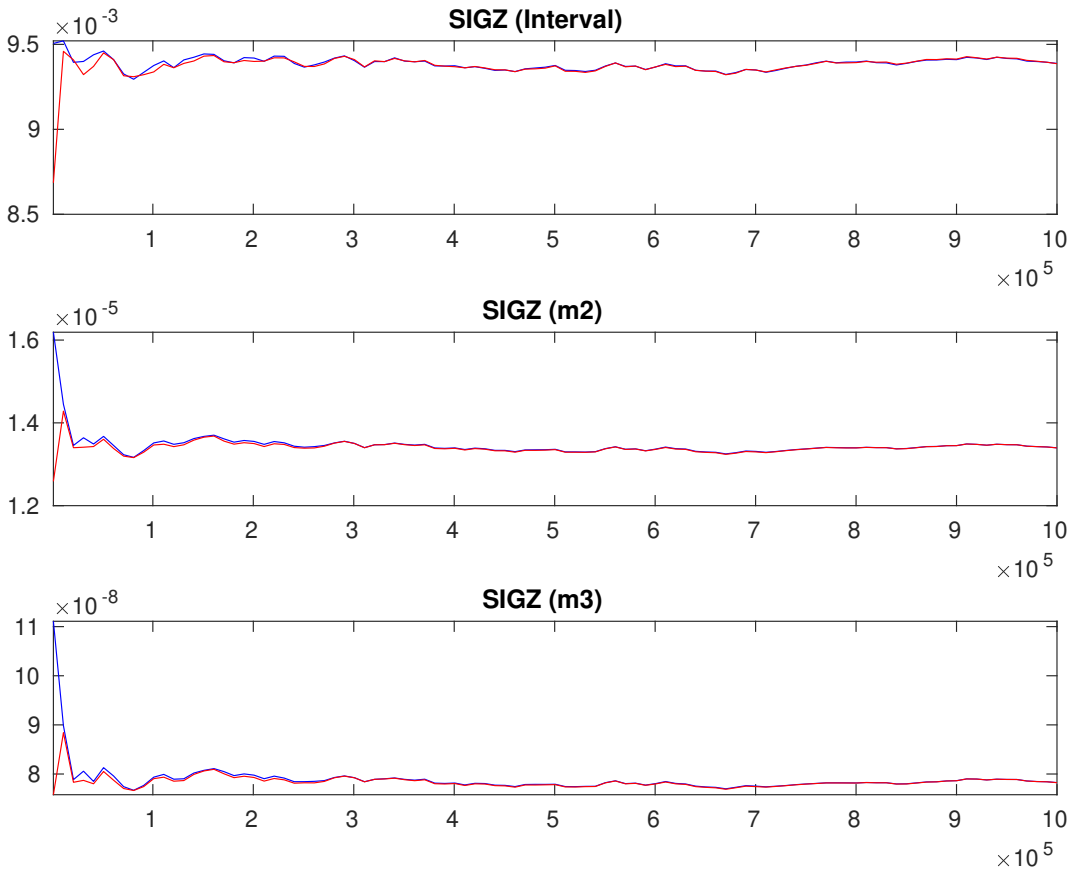

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.