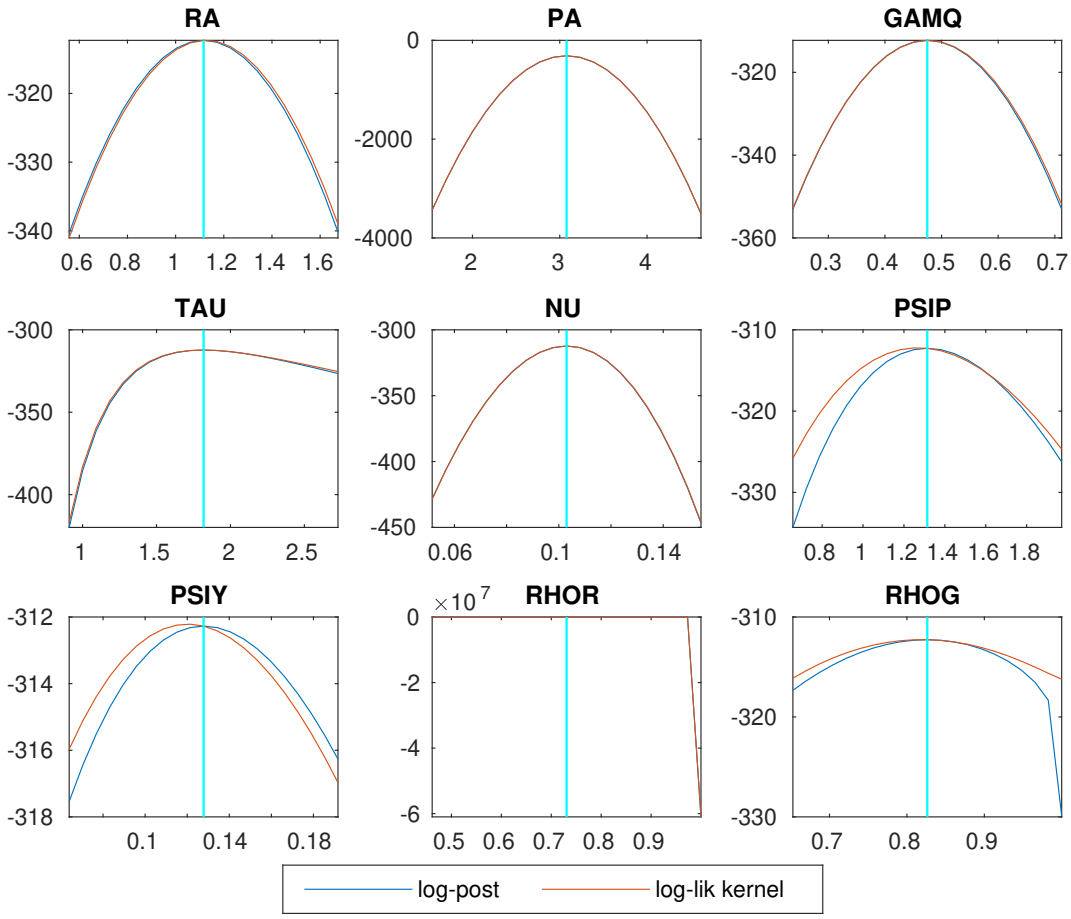

Figure 1: Check plots.

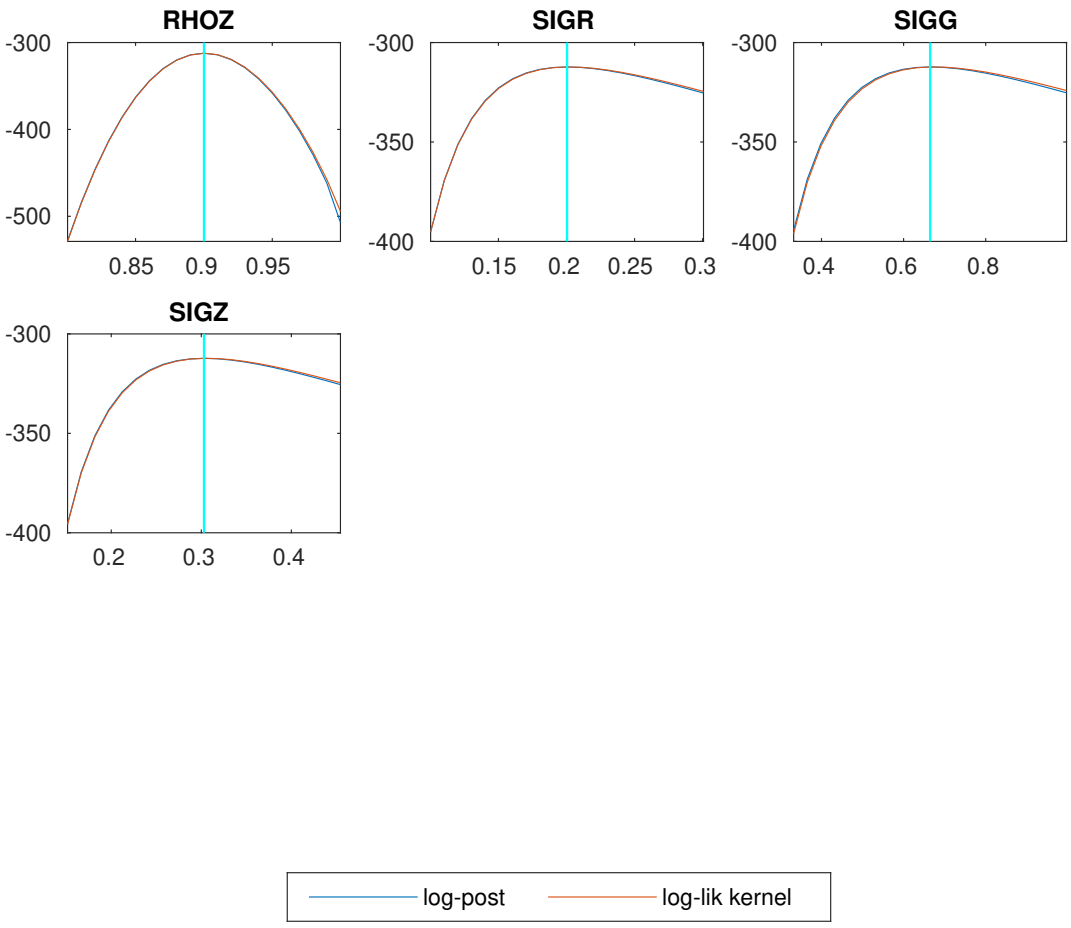

Figure 2: Check plots.

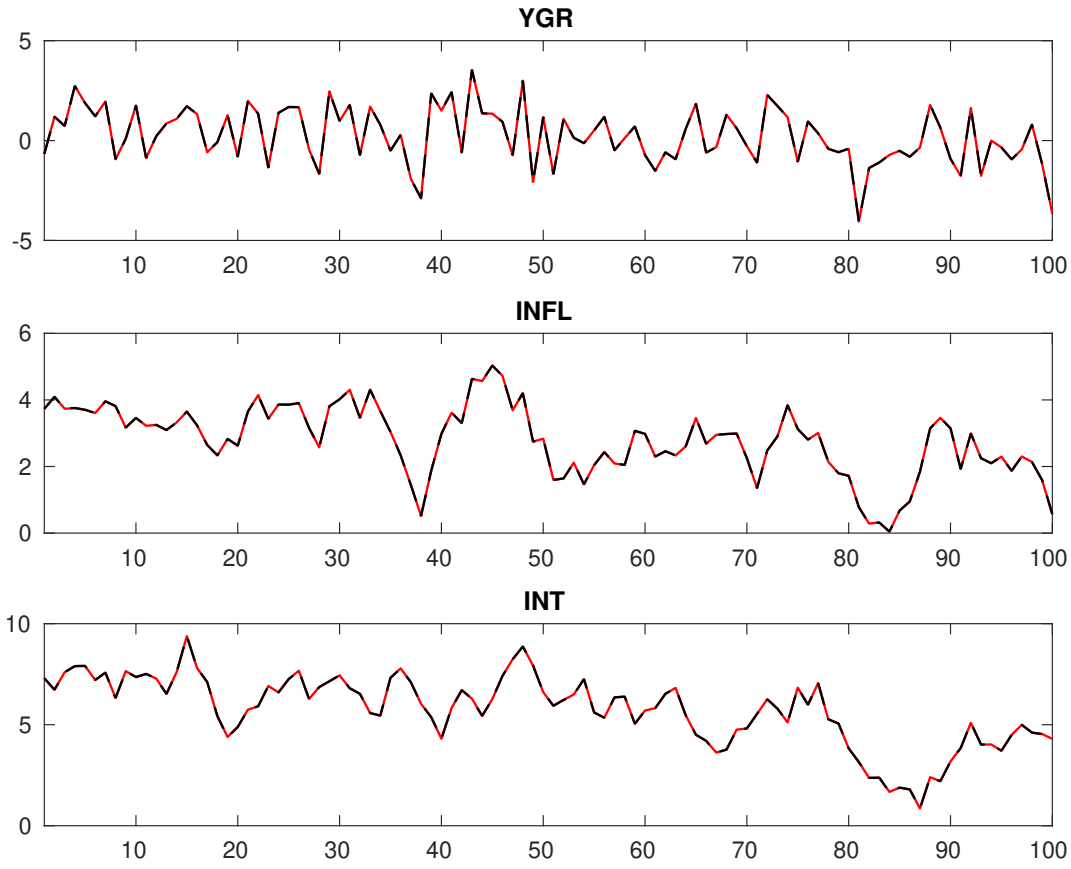

Figure 3: Historical and smoothed variables.

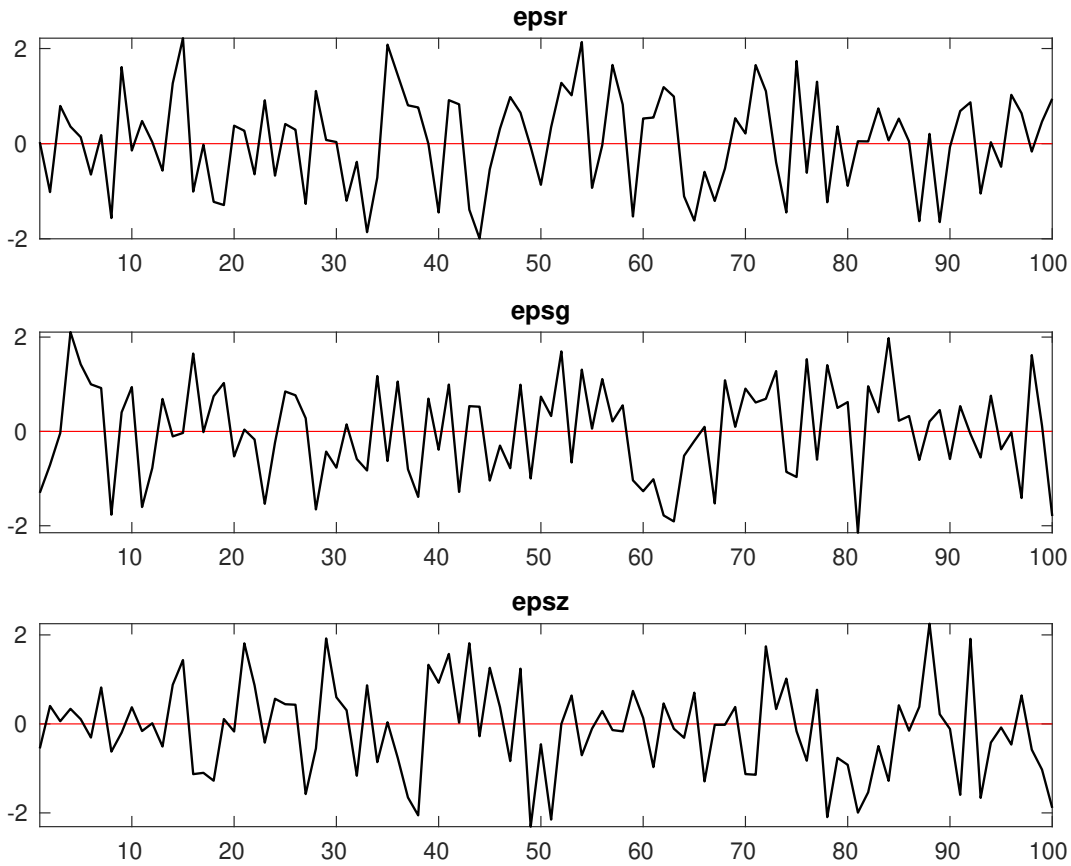

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	57.942	58.369	62.214	60.135
$\pi^{(A)}$	57.032	58.290	61.331	60.027
$\gamma^{(Q)}$	56.152	61.863	61.290	61.739
τ	66.006	64.553	63.208	58.661
ν	67.456	63.934	63.592	58.050
ψ_π	60.126	63.399	59.720	58.621
ψ_y	69.436	68.005	64.936	65.383
ρ_R	63.771	68.255	63.941	60.404
ρ_g	63.308	59.224	61.934	61.823
ρ_z	69.947	71.888	69.743	63.102
σ_R	54.749	56.739	56.681	56.731
σ_g	54.025	54.316	55.788	53.609
σ_z	53.426	56.506	58.811	59.852

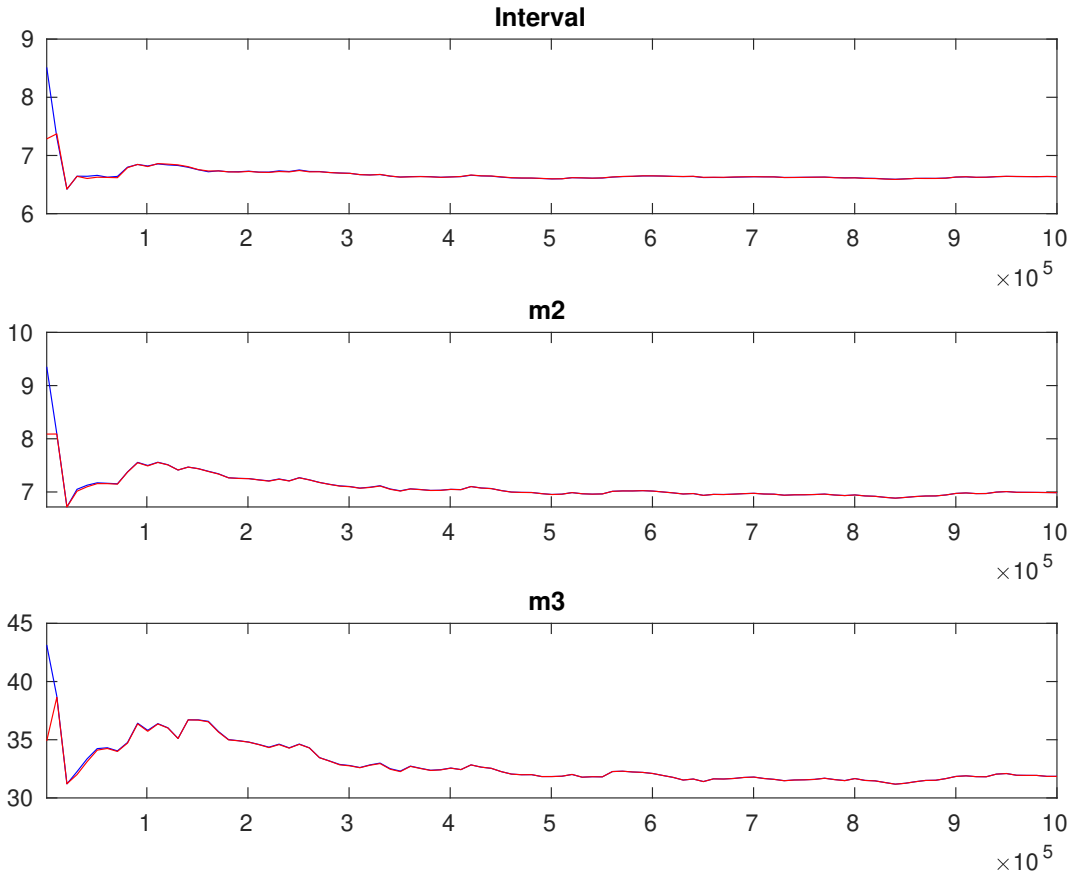

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.160	0.4060	0.4873	1.8211
$\pi^{(A)}$	gamm	4.000	2.0000	3.057	0.1925	2.7393	3.3714
$\gamma^{(Q)}$	norm	0.400	0.2000	0.462	0.1473	0.2209	0.7042
τ	gamm	2.000	0.5000	1.966	0.3841	1.3421	2.5809
ν	beta	0.100	0.0500	0.108	0.0162	0.0808	0.1336
ψ_π	gamm	1.500	0.2500	1.341	0.2094	0.9948	1.6783
ψ_y	gamm	0.500	0.2500	0.150	0.0596	0.0543	0.2417
ρ_R	beta	0.500	0.2000	0.741	0.0427	0.6720	0.8118
ρ_g	beta	0.800	0.1000	0.849	0.0545	0.7623	0.9410
ρ_z	beta	0.660	0.1500	0.906	0.0184	0.8766	0.9370
σ_R	invg	0.300	4.0000	0.206	0.0157	0.1801	0.2309
σ_g	invg	0.400	4.0000	0.687	0.0501	0.6045	0.7677
σ_z	invg	0.400	4.0000	0.310	0.0301	0.2611	0.3588

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.1161	0.4064
$\pi^{(A)}$	gamm	4.000	2.0000	3.0782	0.1987
$\gamma^{(Q)}$	norm	0.400	0.2000	0.4748	0.1517
τ	gamm	2.000	0.5000	1.8184	0.3959
ν	beta	0.100	0.0500	0.1030	0.0164
ψ_π	gamm	1.500	0.2500	1.3141	0.2066
ψ_y	gamm	0.500	0.2500	0.1278	0.0595
ρ_R	beta	0.500	0.2000	0.7307	0.0433
ρ_g	beta	0.800	0.1000	0.8263	0.0566
ρ_z	beta	0.660	0.1500	0.9001	0.0179
σ_R	invg	0.300	4.0000	0.2004	0.0159
σ_g	invg	0.400	4.0000	0.6646	0.0529
σ_z	invg	0.400	4.0000	0.3030	0.0315

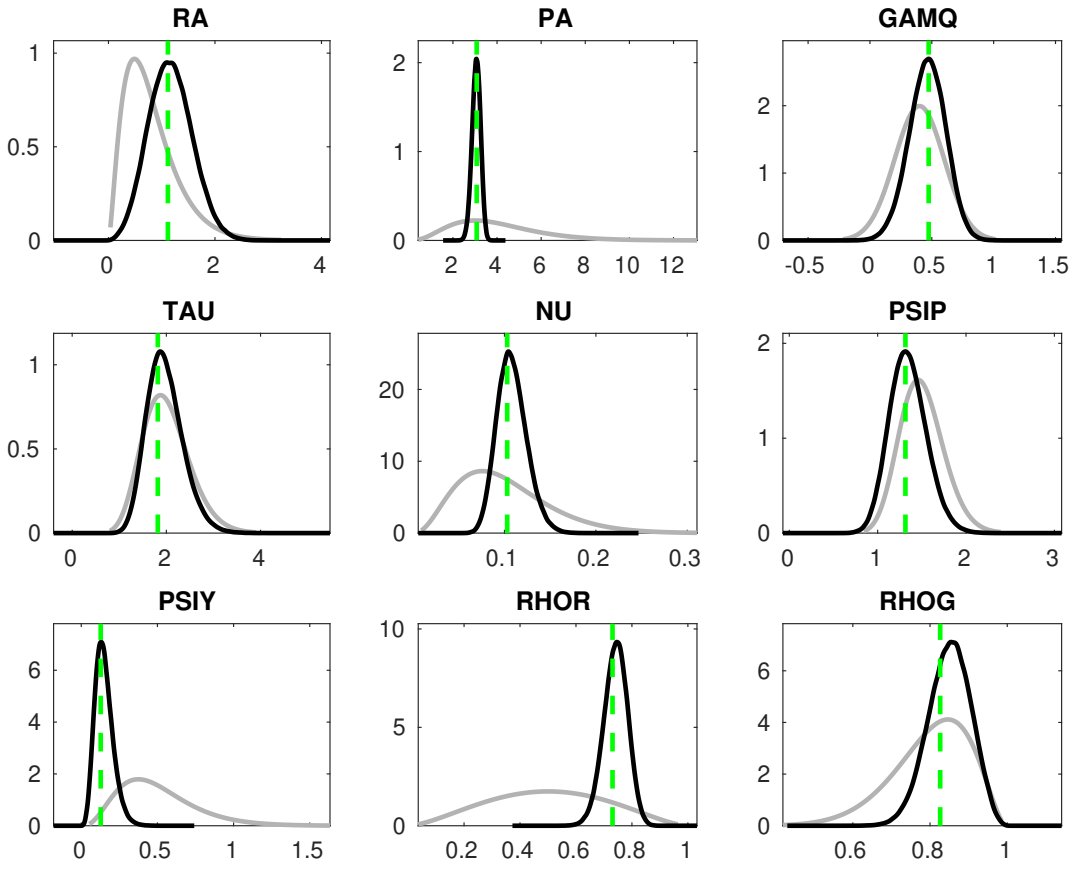

Figure 6: Priors and posteriors.

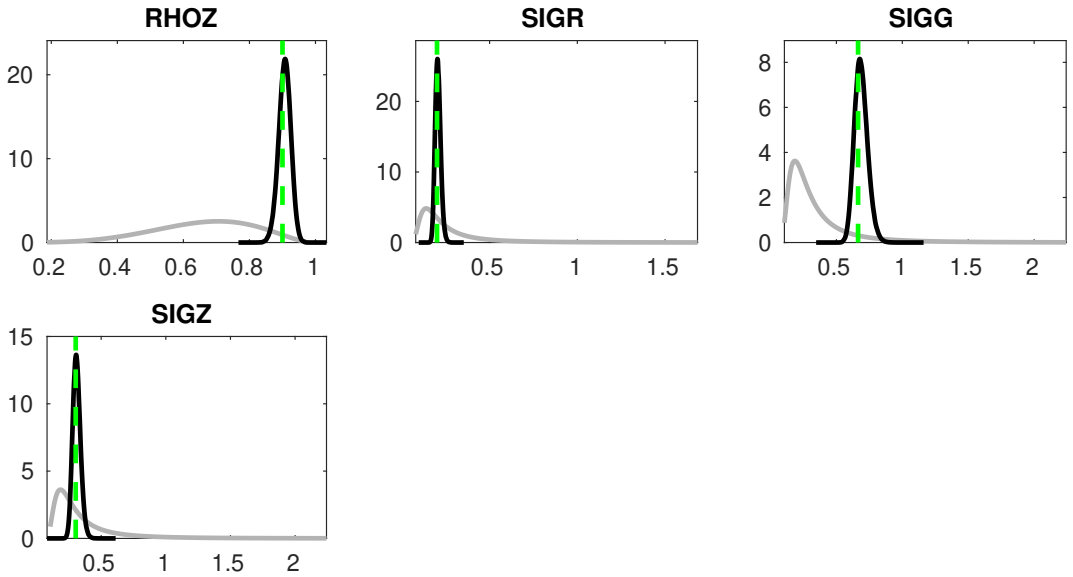

Figure 7: Priors and posteriors.

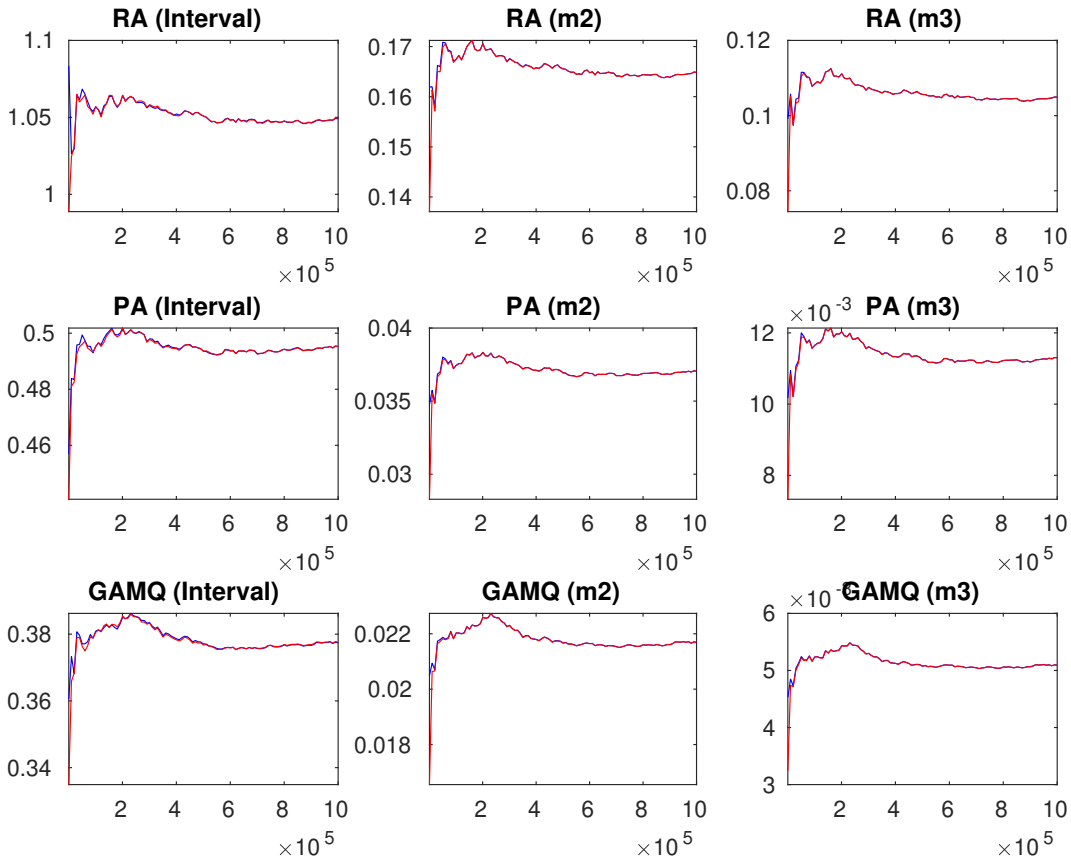

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

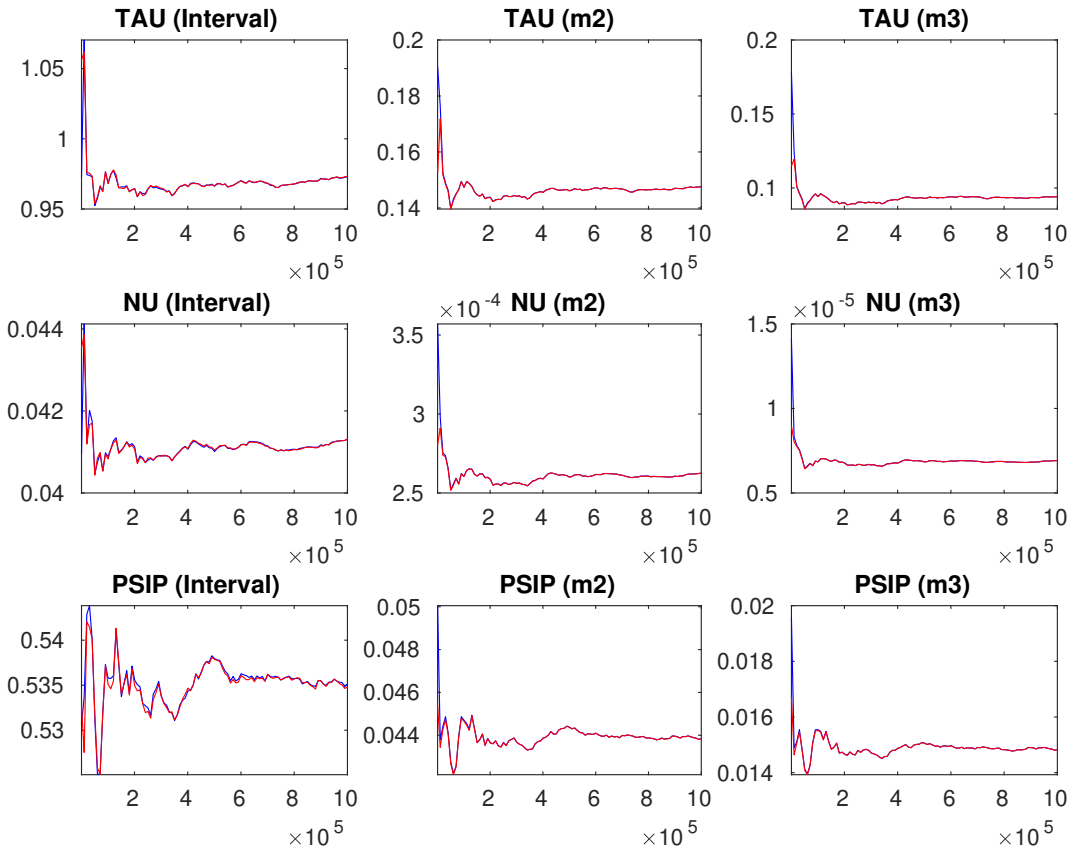

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

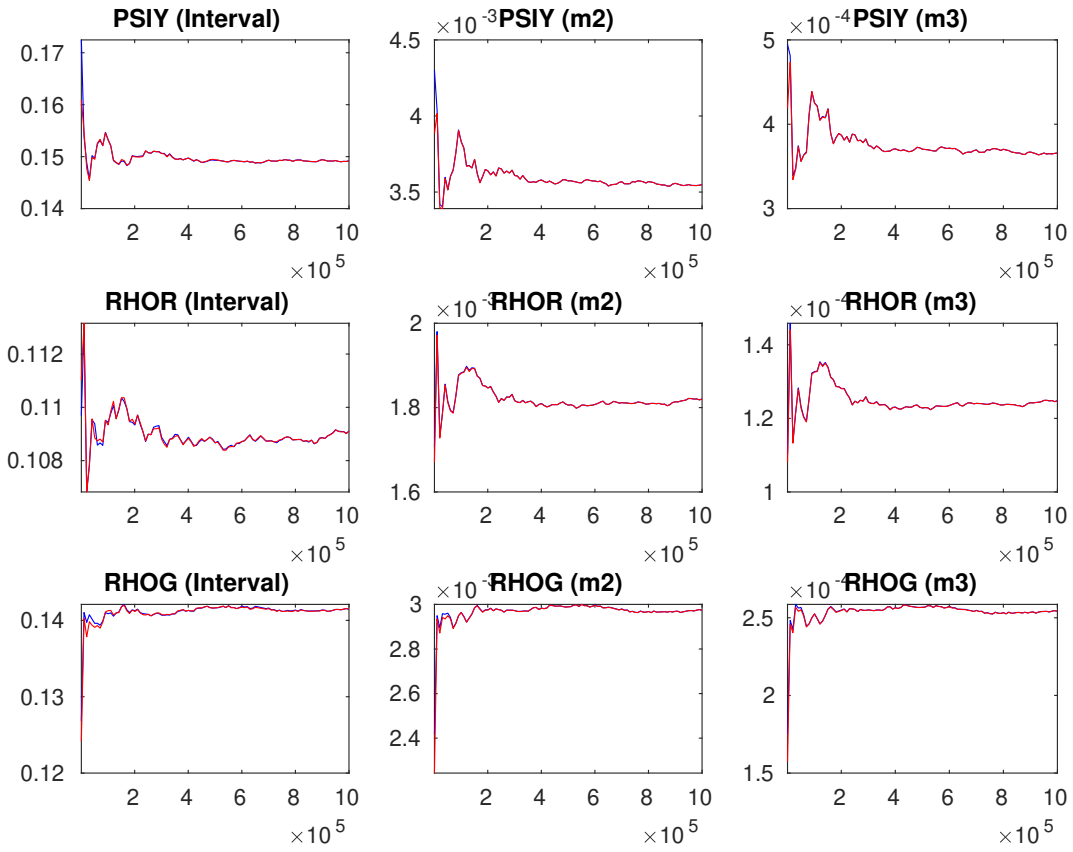

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

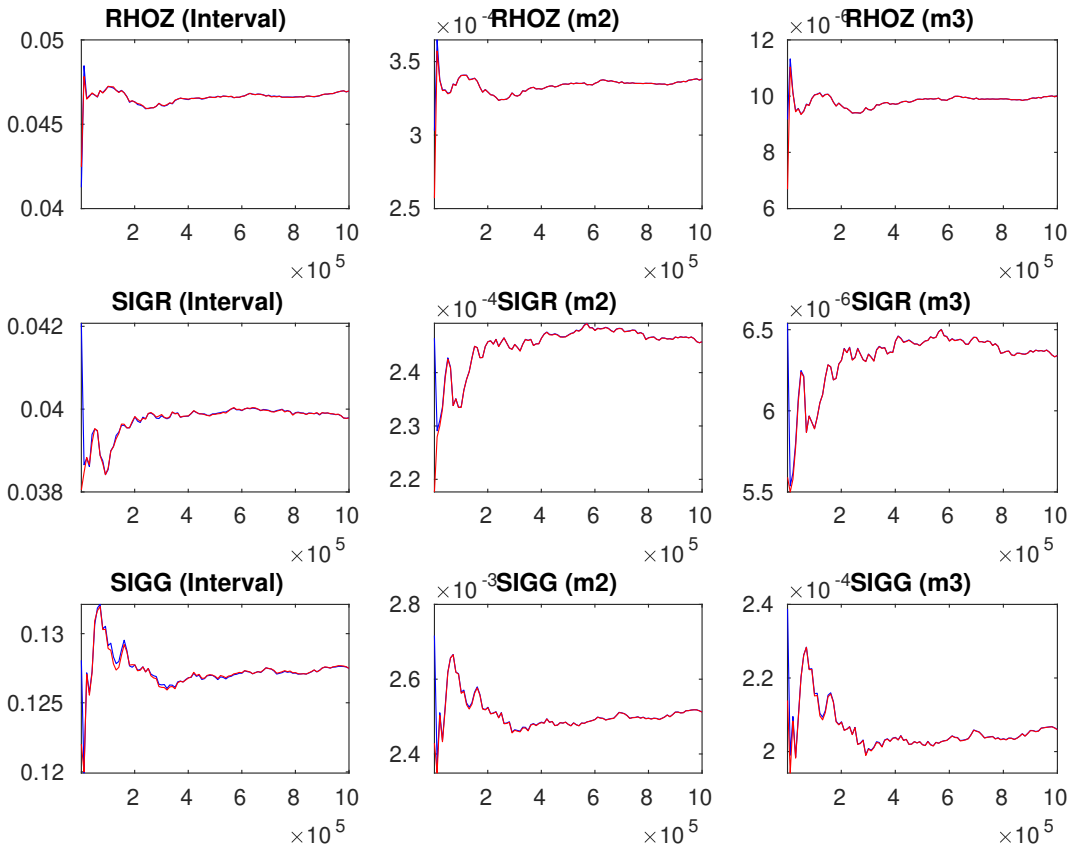

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

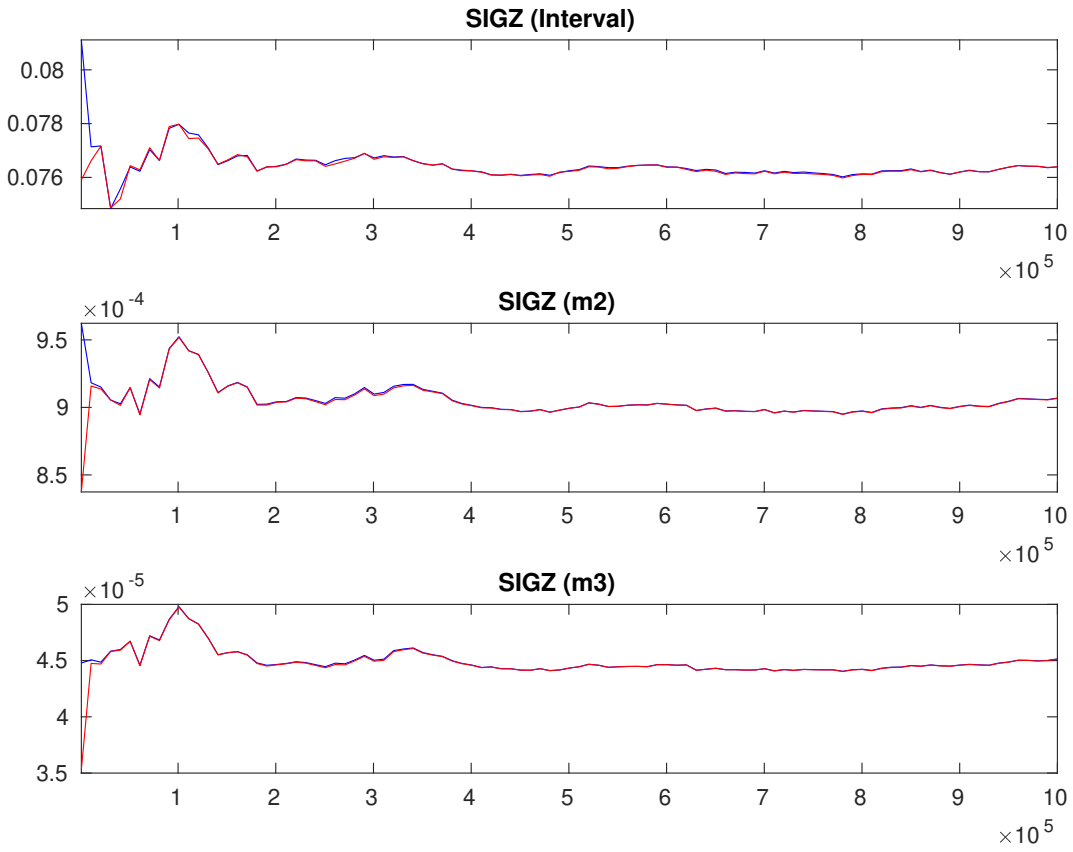

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.