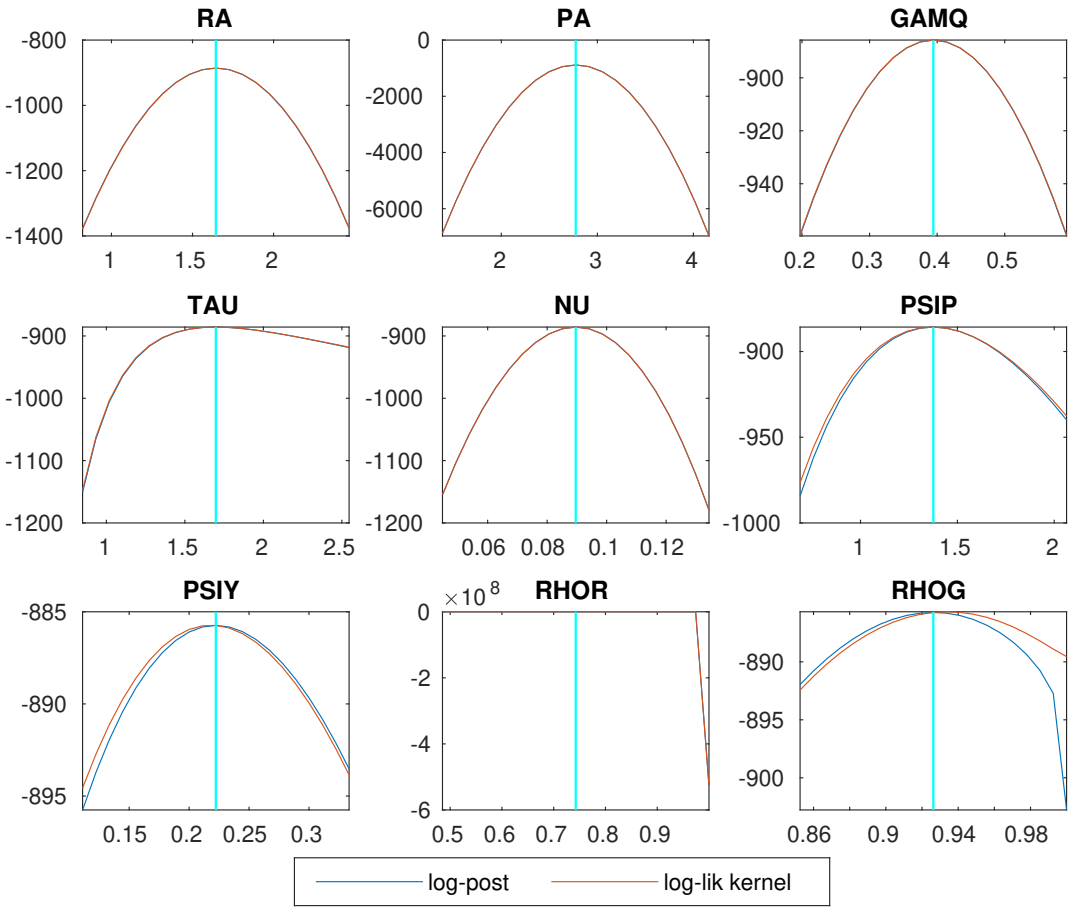

Figure 1: Check plots.

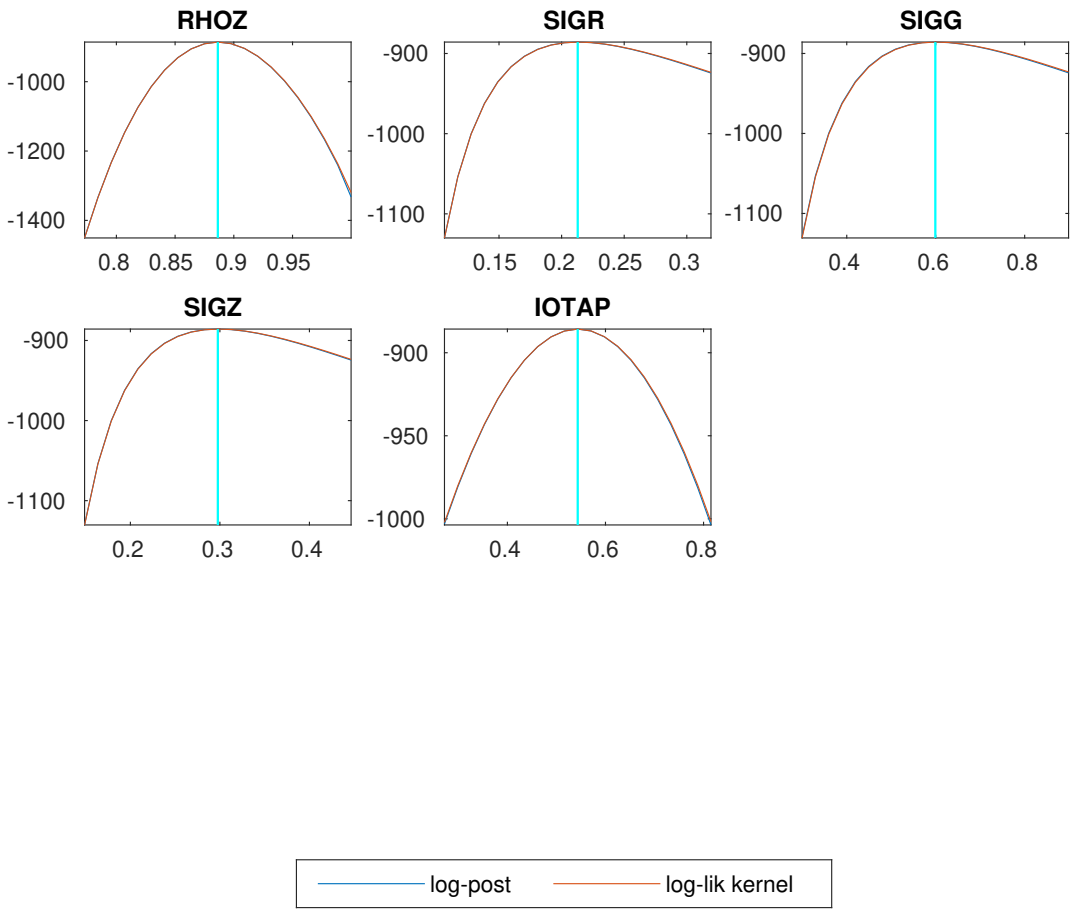

Figure 2: Check plots.

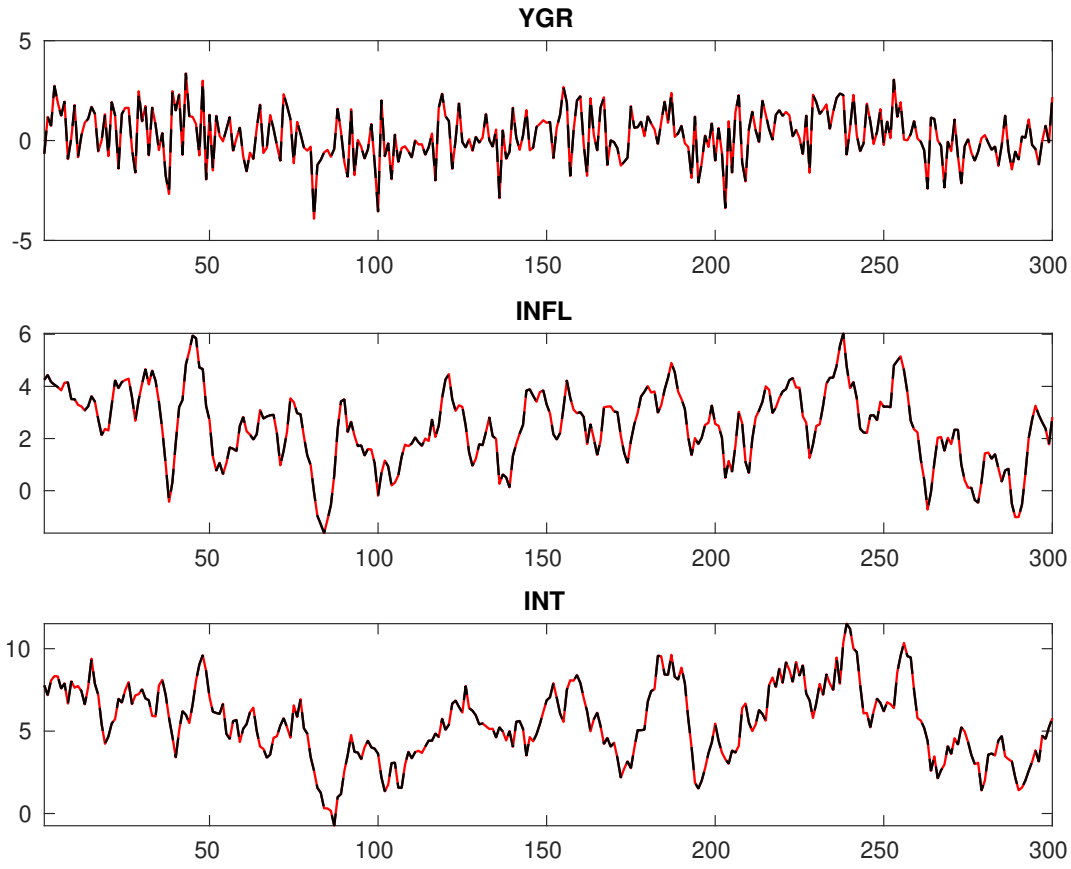

Figure 3: Historical and smoothed variables.

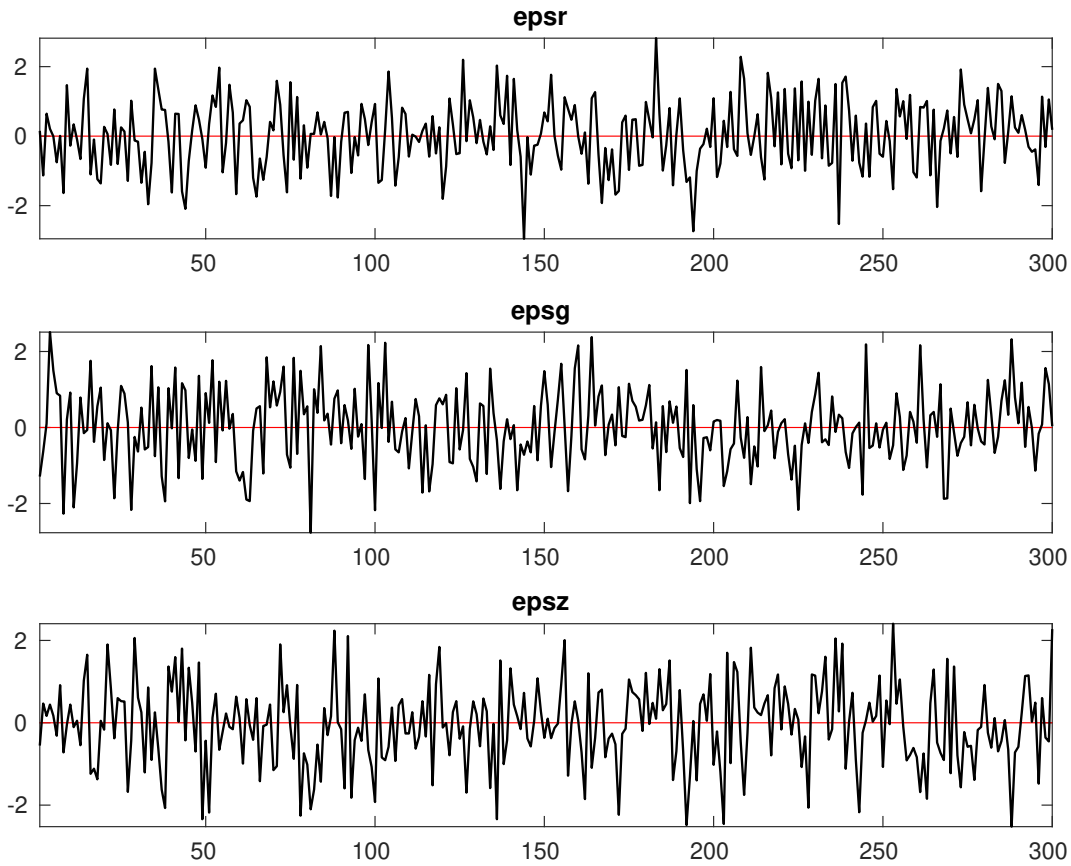

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	64.194	61.279	66.967	66.544
$\pi^{(A)}$	65.692	63.646	68.719	68.273
$\gamma^{(Q)}$	68.233	66.136	69.211	71.752
τ	56.624	59.715	63.500	67.113
ν	53.300	58.445	57.446	63.416
ψ_π	59.743	61.546	61.552	59.116
ψ_y	61.008	59.489	59.991	62.220
ρ_R	62.847	58.614	60.254	63.043
ρ_g	66.101	64.151	69.513	66.185
ρ_z	63.205	64.307	61.209	65.804
σ_R	60.477	63.287	64.264	63.426
σ_g	62.527	62.637	59.572	63.690
σ_z	58.120	60.830	60.256	63.179
ι_p	60.123	60.383	65.939	63.599

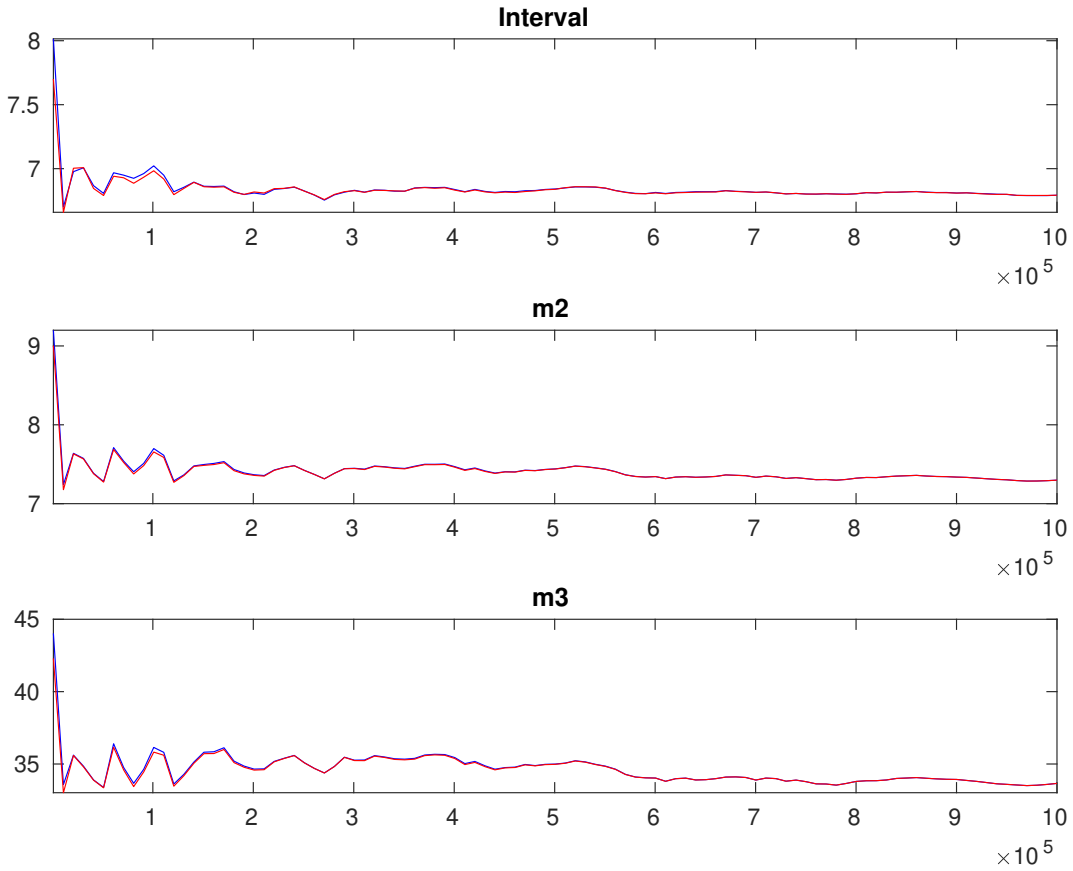

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.628	0.3068	1.1261	2.1354
$\pi^{(A)}$	gamm	4.000	2.0000	2.785	0.2276	2.4072	3.1561
$\gamma^{(Q)}$	norm	0.400	0.2000	0.402	0.1199	0.2070	0.6012
τ	gamm	2.000	0.5000	1.810	0.2586	1.3950	2.2303
ν	beta	0.100	0.0500	0.093	0.0090	0.0782	0.1074
ψ_π	gamm	1.500	0.2500	1.382	0.1741	1.0922	1.6642
ψ_y	gamm	0.500	0.2500	0.242	0.0868	0.0988	0.3777
ρ_R	beta	0.500	0.2000	0.748	0.0245	0.7082	0.7887
ρ_g	beta	0.800	0.1000	0.934	0.0213	0.8998	0.9699
ρ_z	beta	0.660	0.1500	0.889	0.0140	0.8660	0.9120
σ_R	invg	0.300	4.0000	0.215	0.0100	0.1989	0.2314
σ_g	invg	0.400	4.0000	0.606	0.0250	0.5650	0.6469
σ_z	invg	0.400	4.0000	0.306	0.0248	0.2651	0.3455
ι_p	beta	0.500	0.1500	0.550	0.0358	0.4907	0.6082

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.6438	0.2980
$\pi^{(A)}$	gamm	4.000	2.0000	2.7749	0.2206
$\gamma^{(Q)}$	norm	0.400	0.2000	0.3943	0.1156
τ	gamm	2.000	0.5000	1.6972	0.2644
ν	beta	0.100	0.0500	0.0896	0.0093
ψ_π	gamm	1.500	0.2500	1.3758	0.1667
ψ_y	gamm	0.500	0.2500	0.2223	0.0888
ρ_R	beta	0.500	0.2000	0.7426	0.0247
ρ_g	beta	0.800	0.1000	0.9263	0.0205
ρ_z	beta	0.660	0.1500	0.8864	0.0140
σ_R	invg	0.300	4.0000	0.2129	0.0097
σ_g	invg	0.400	4.0000	0.5991	0.0239
σ_z	invg	0.400	4.0000	0.2977	0.0252
ι_p	beta	0.500	0.1500	0.5434	0.0349

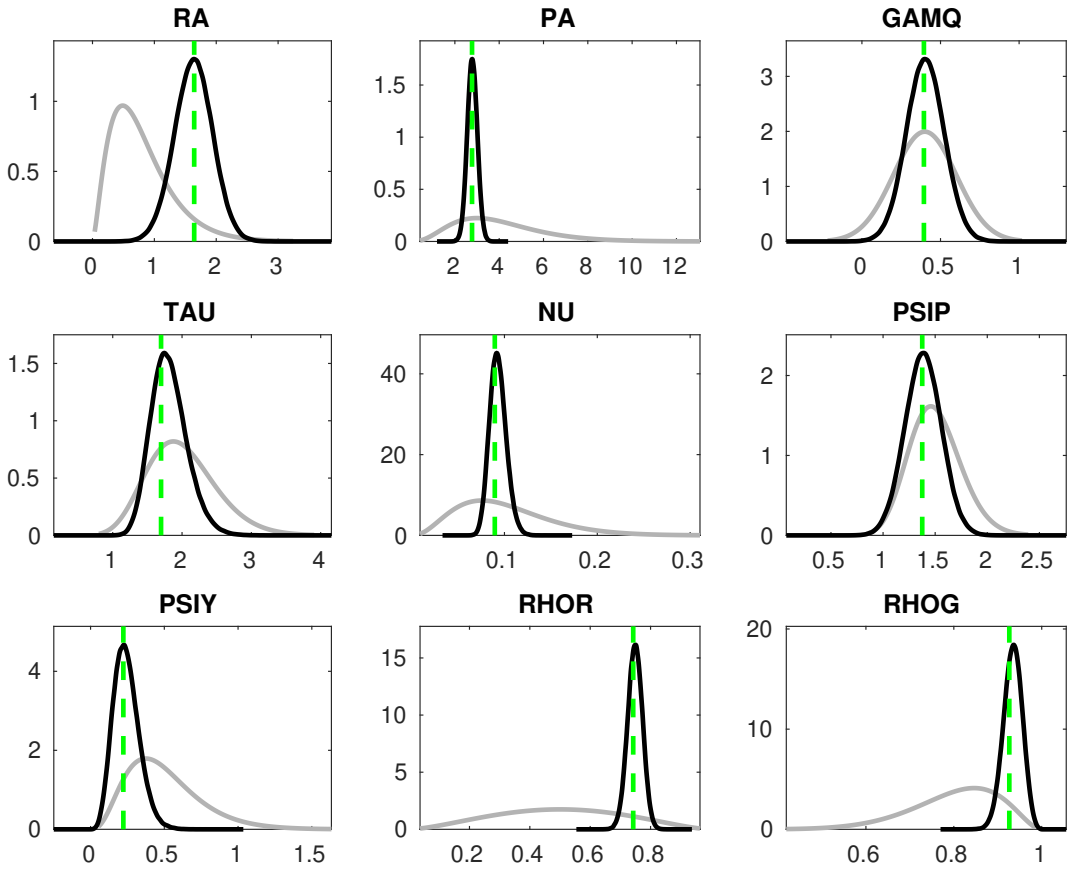

Figure 6: Priors and posteriors.

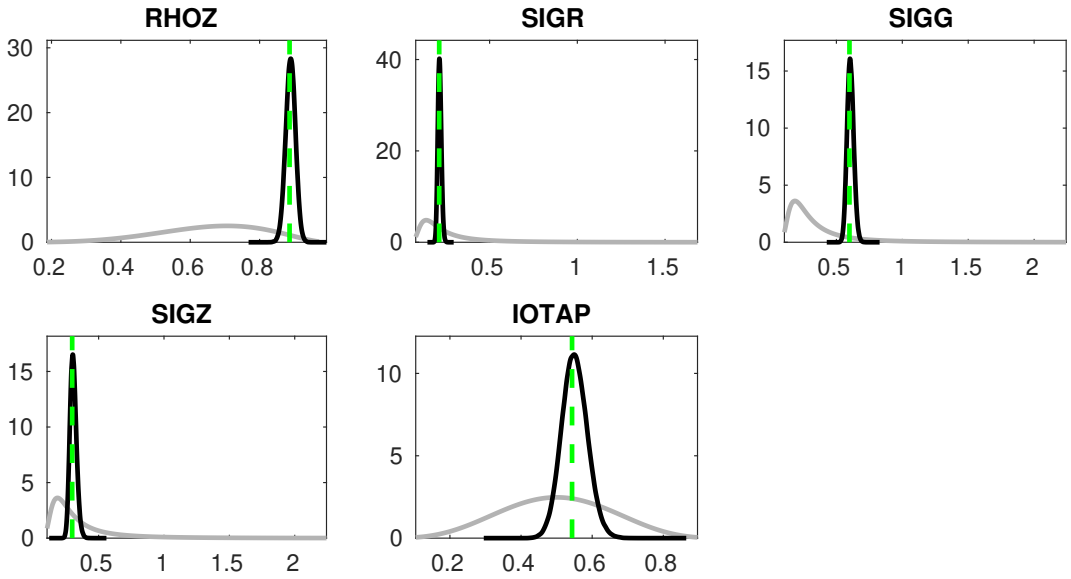

Figure 7: Priors and posteriors.

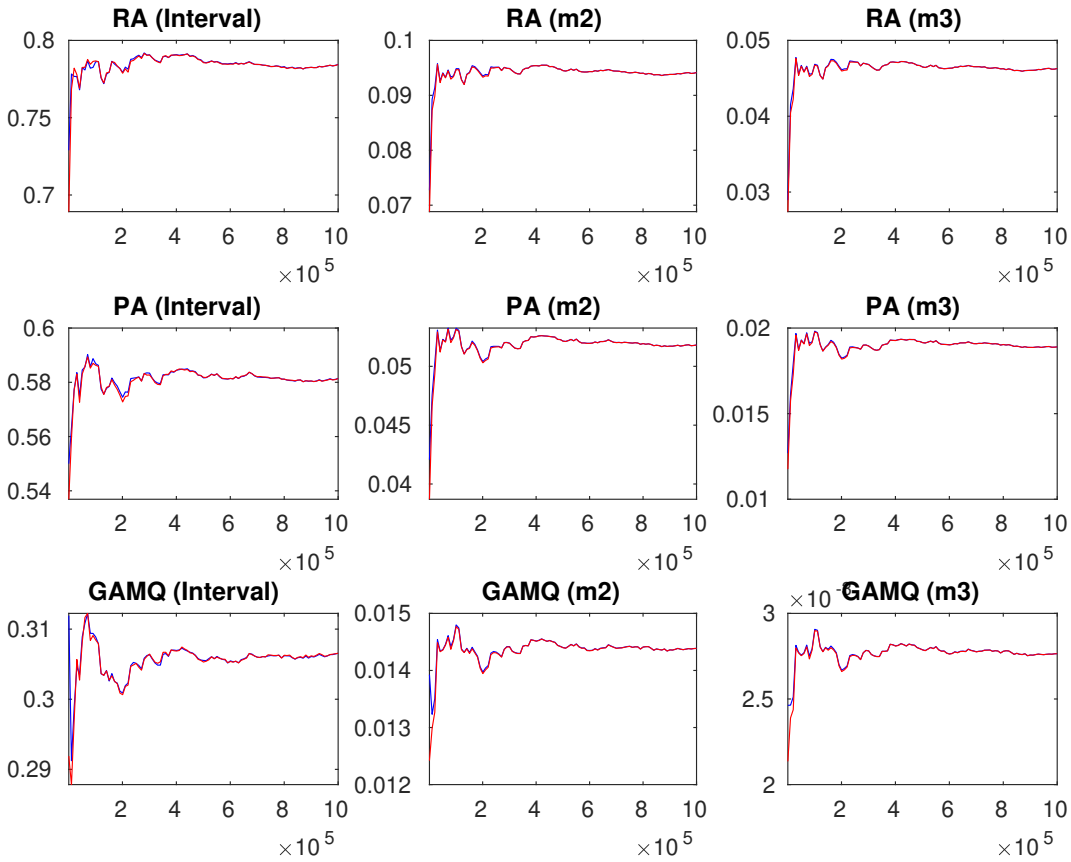

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

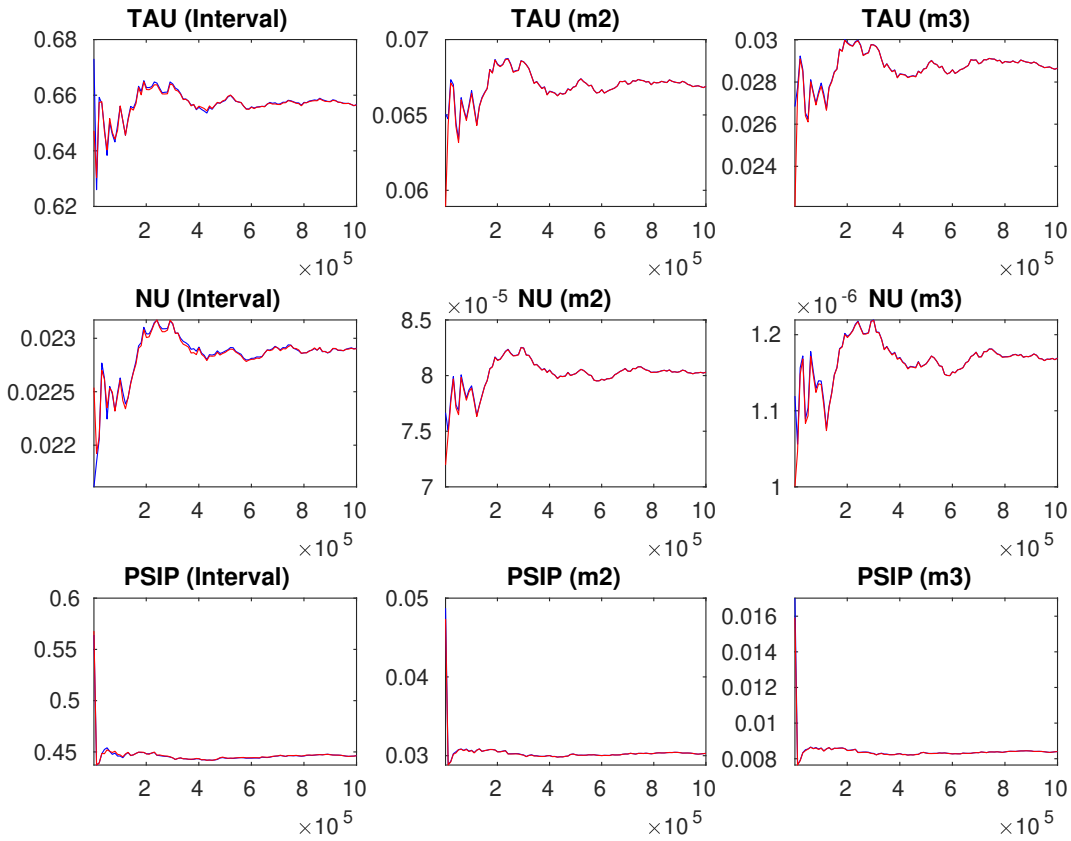

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

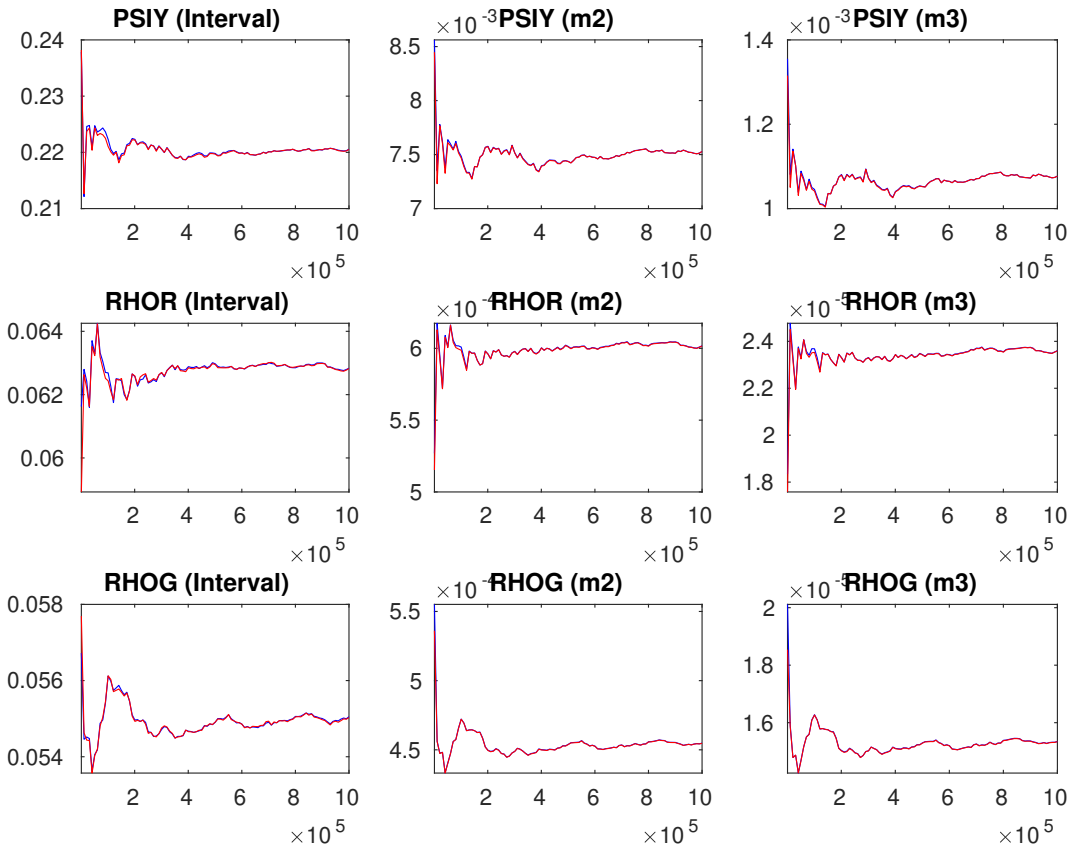

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

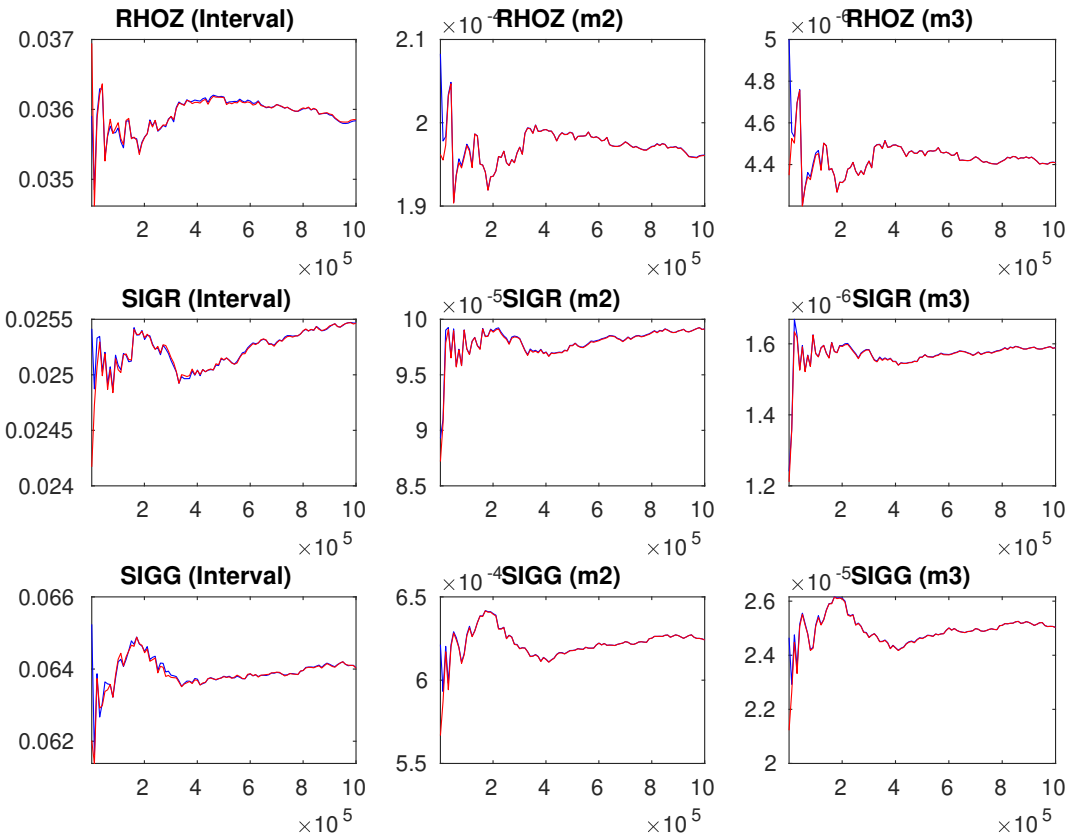

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

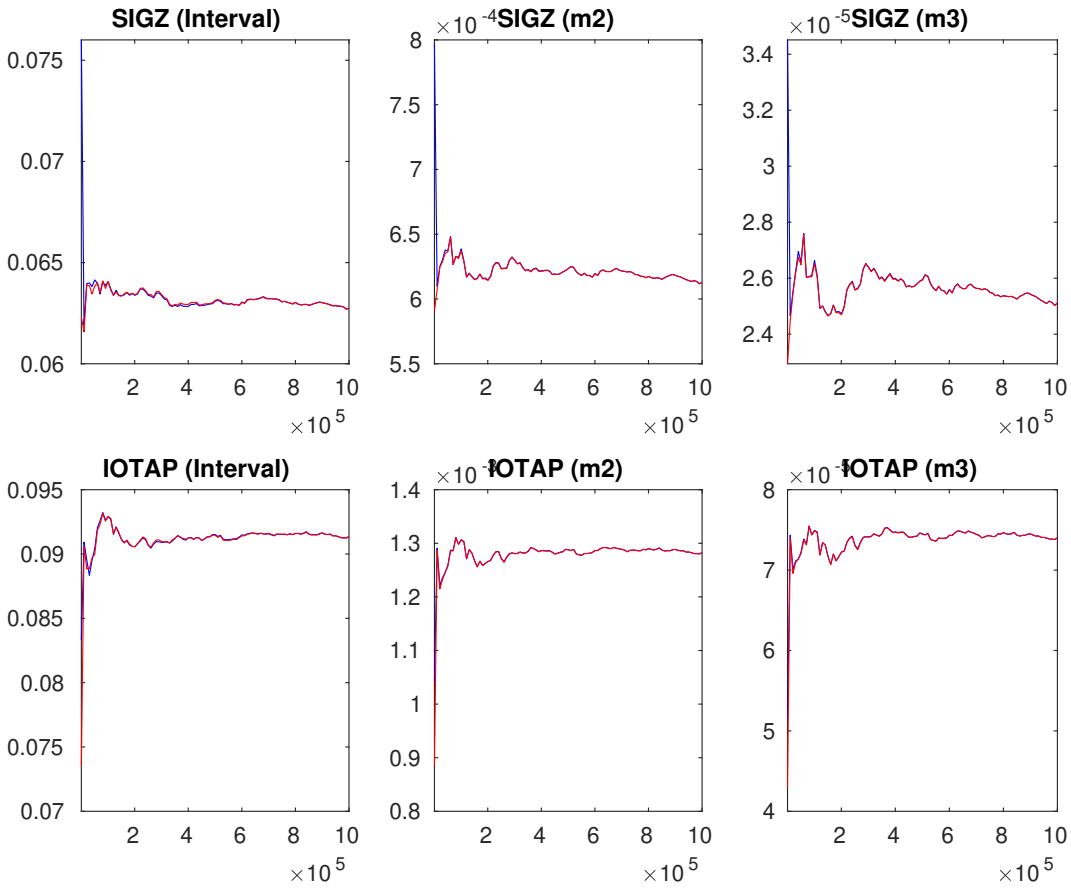

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.