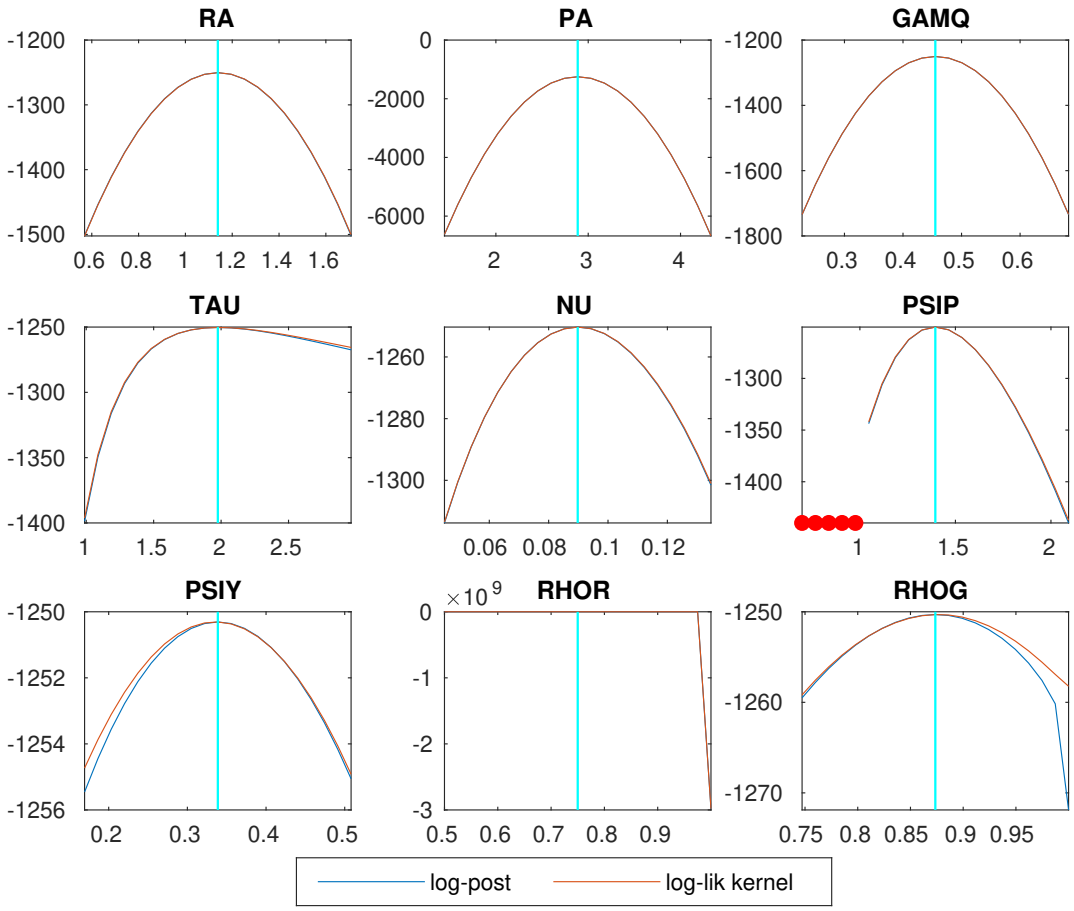

Figure 1: Check plots.

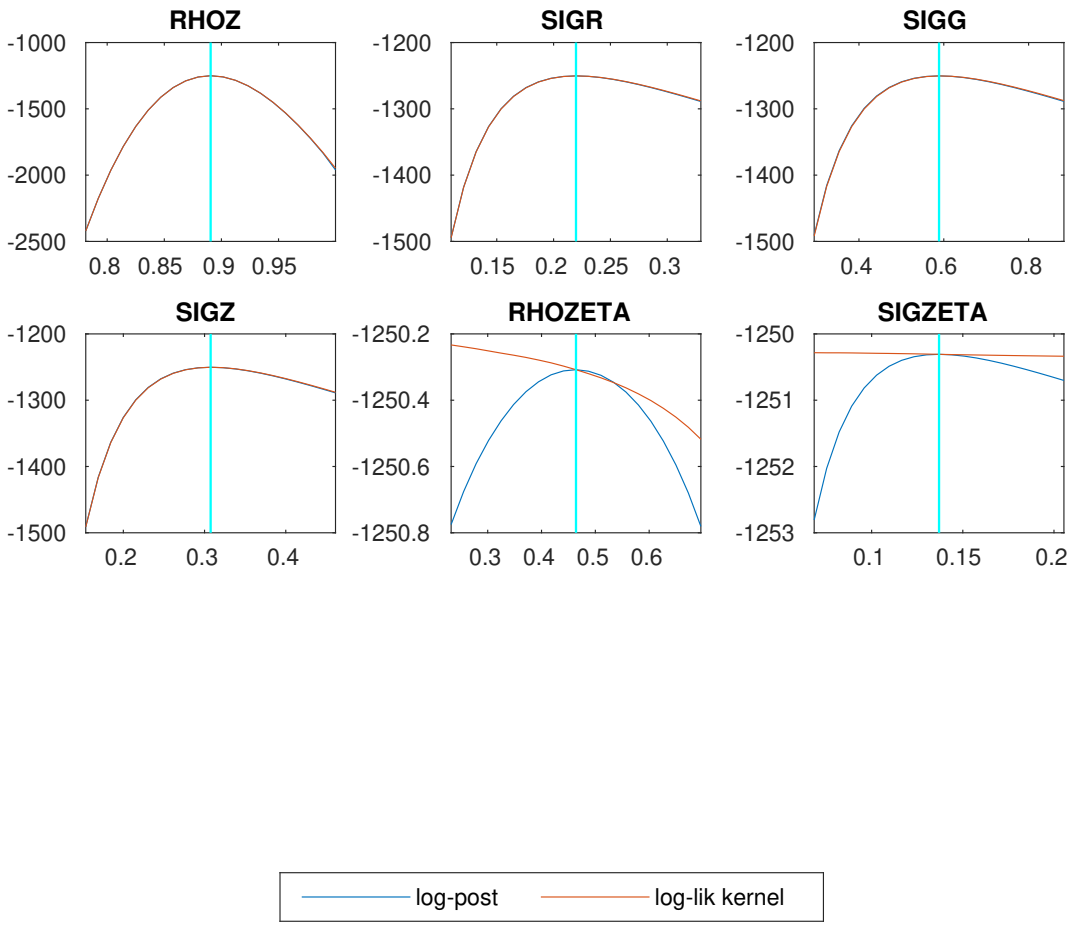

Figure 2: Check plots.

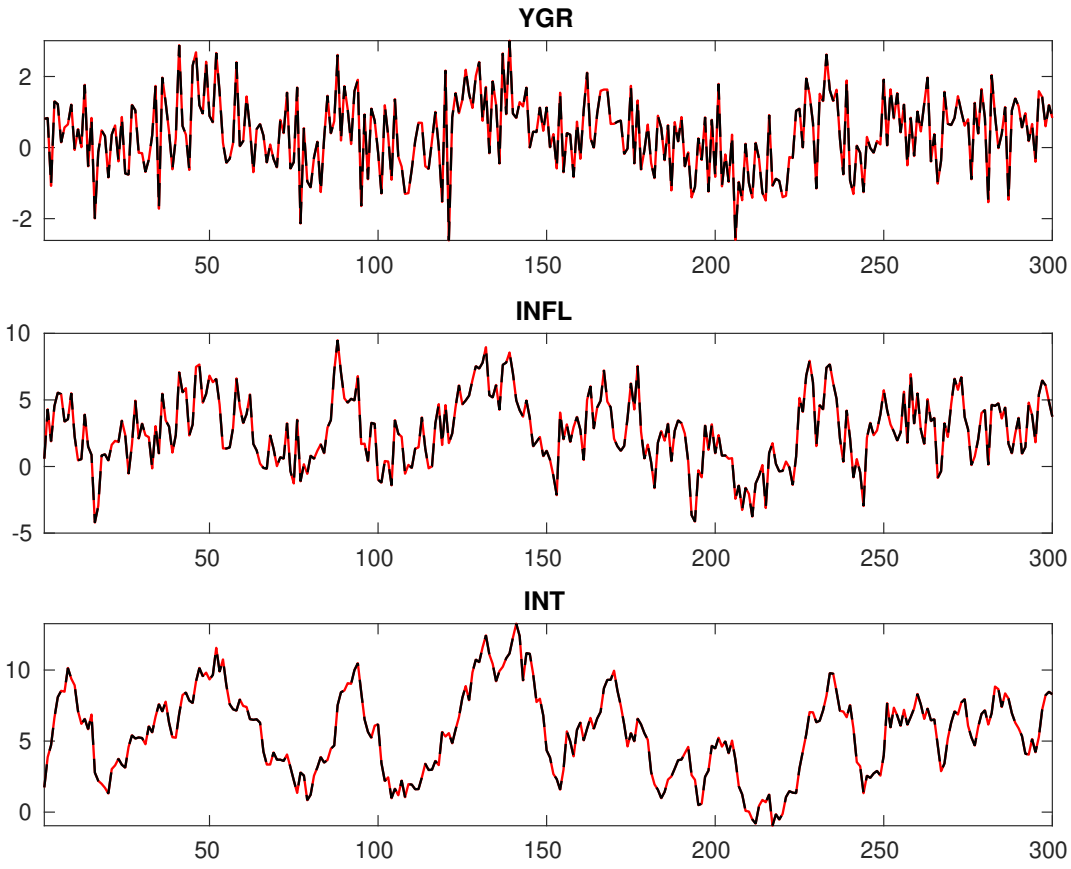

Figure 3: Historical and smoothed variables.

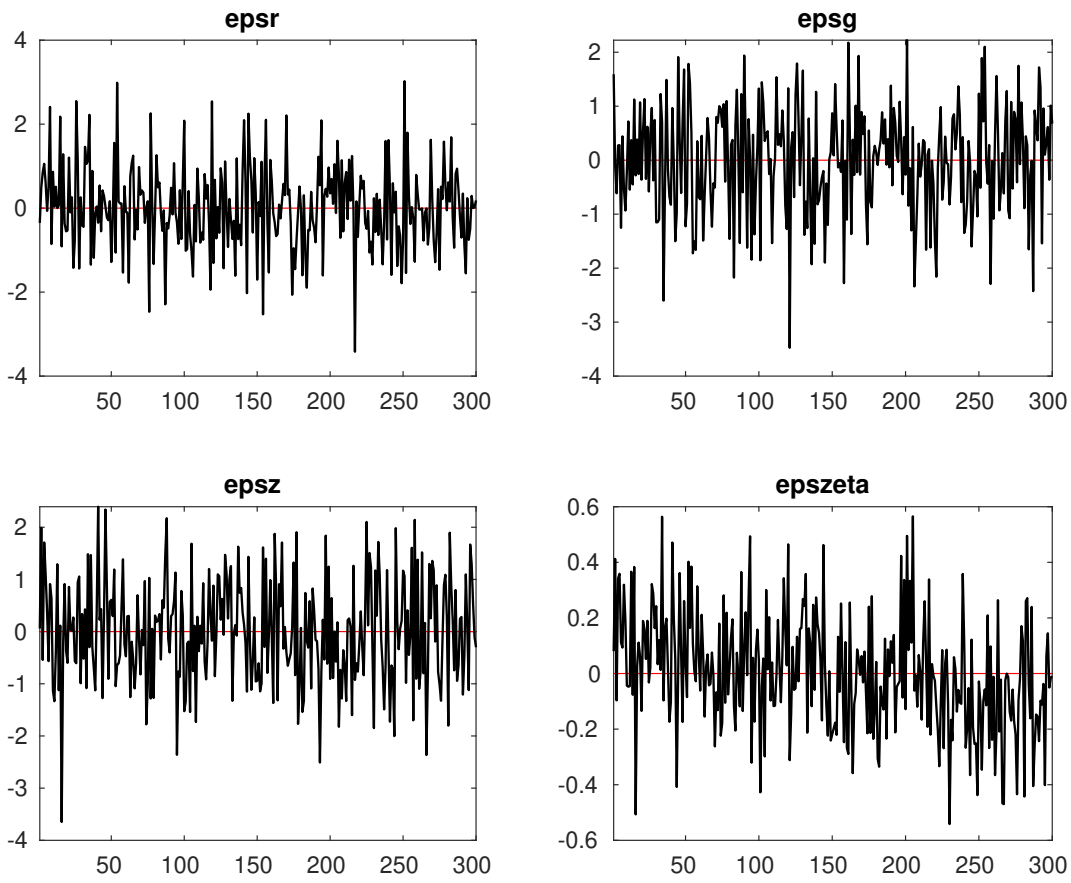

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	349.527	326.899	329.550	315.392
$\pi^{(A)}$	376.615	356.791	357.194	347.743
$\gamma^{(Q)}$	362.163	346.073	345.229	334.266
τ	397.988	350.480	386.187	356.688
ν	285.638	252.221	267.744	260.110
ψ_π	209.579	223.209	219.339	226.656
ψ_y	283.911	318.012	300.595	320.303
ρ_R	120.972	125.931	122.938	130.048
ρ_g	155.890	145.428	165.719	147.692
ρ_z	89.614	88.782	89.754	84.222
σ_R	89.028	101.099	97.836	103.059
σ_g	112.138	89.579	110.737	93.720
σ_z	121.131	117.085	126.658	116.028
ρ_ζ	408.853	401.193	374.202	390.559
σ_ζ	409.046	349.330	409.806	352.269

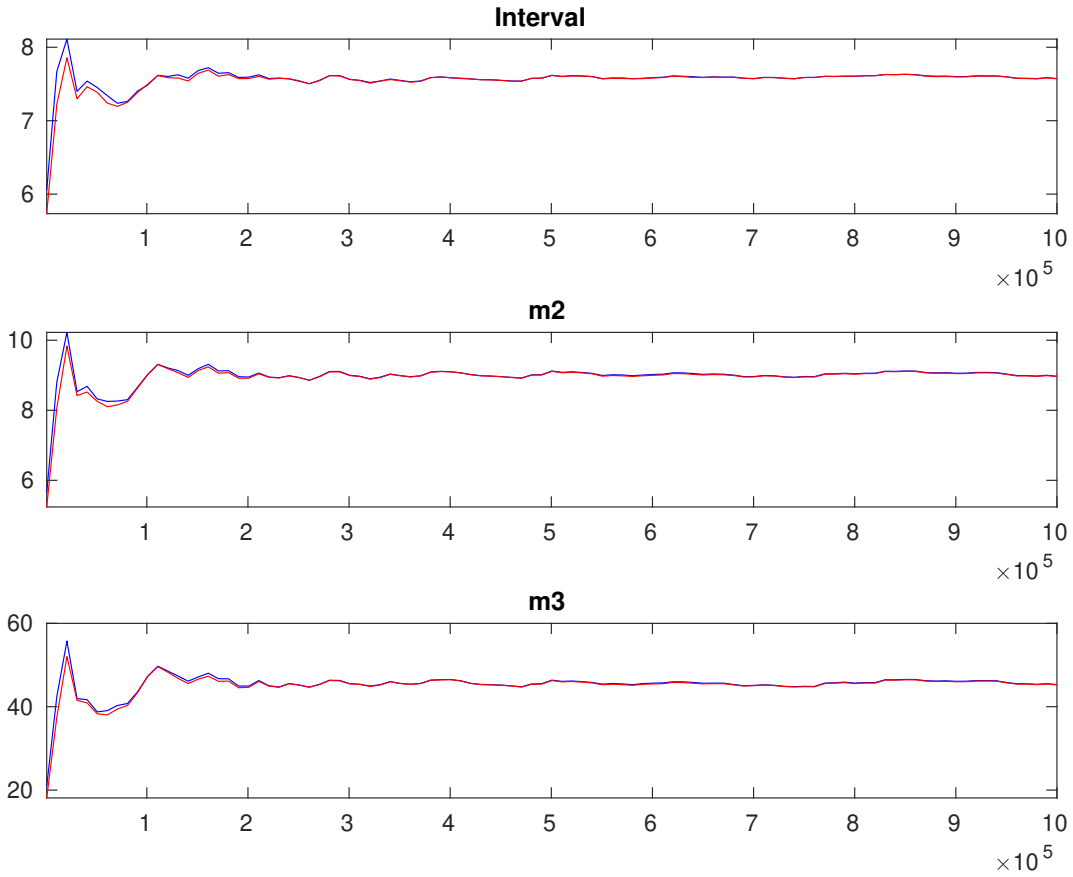

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.149	0.2845	0.6741	1.6097
$\pi^{(A)}$	gamm	4.000	2.0000	2.872	0.3575	2.2853	3.4618
$\gamma^{(Q)}$	norm	0.400	0.2000	0.453	0.1163	0.2640	0.6462
τ	gamm	2.000	0.5000	2.093	0.3221	1.5696	2.6147
ν	beta	0.100	0.0500	0.093	0.0173	0.0652	0.1209
ψ_π	gamm	1.500	0.2500	1.386	0.1253	1.1781	1.5920
ψ_y	gamm	0.500	0.2500	0.413	0.1866	0.1180	0.6993
ρ_R	beta	0.500	0.2000	0.756	0.0194	0.7241	0.7880
ρ_g	beta	0.800	0.1000	0.866	0.0398	0.8047	0.9315
ρ_z	beta	0.660	0.1500	0.893	0.0117	0.8733	0.9118
σ_R	invg	0.300	4.0000	0.222	0.0106	0.2042	0.2388
σ_g	invg	0.400	4.0000	0.586	0.0269	0.5415	0.6300
σ_z	invg	0.400	4.0000	0.307	0.0217	0.2713	0.3424
ρ_ζ	beta	0.500	0.2000	0.504	0.1863	0.1916	0.8065
σ_ζ	invg	0.300	4.0000	0.369	0.2730	0.0718	0.7812

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.1385	0.1752
$\pi^{(A)}$	gamm	4.000	2.0000	2.8864	0.1733
$\gamma^{(Q)}$	norm	0.400	0.2000	0.4552	0.0578
τ	gamm	2.000	0.5000	1.9758	0.1823
ν	beta	0.100	0.0500	0.0898	0.0127
ψ_π	gamm	1.500	0.2500	1.3948	0.0877
ψ_y	gamm	0.500	0.2500	0.3387	0.1013
ρ_R	beta	0.500	0.2000	0.7499	0.0179
ρ_g	beta	0.800	0.1000	0.8736	0.0319
ρ_z	beta	0.660	0.1500	0.8906	0.0115
σ_R	invg	0.300	4.0000	0.2197	0.0101
σ_g	invg	0.400	4.0000	0.5888	0.0261
σ_z	invg	0.400	4.0000	0.3075	0.0200
ρ_ζ	beta	0.500	0.2000	0.4640	0.0711
σ_ζ	invg	0.300	4.0000	0.1370	0.1646

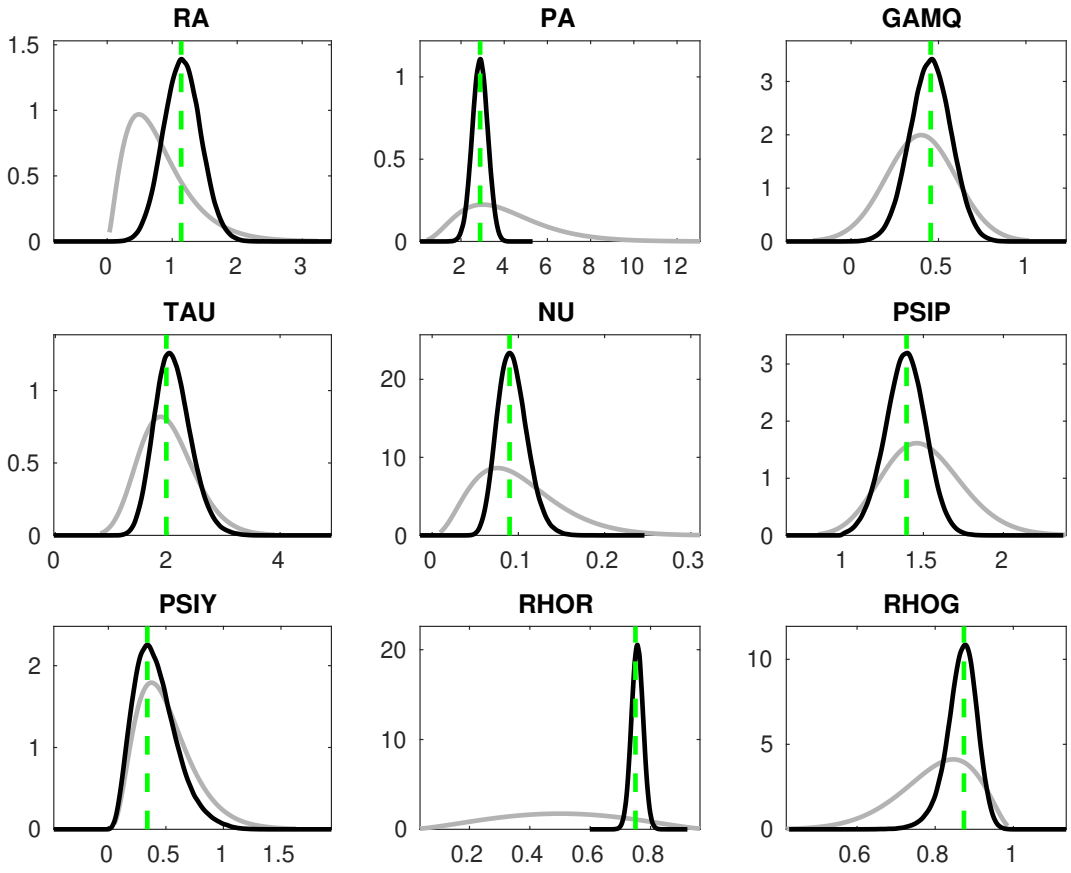

Figure 6: Priors and posteriors.

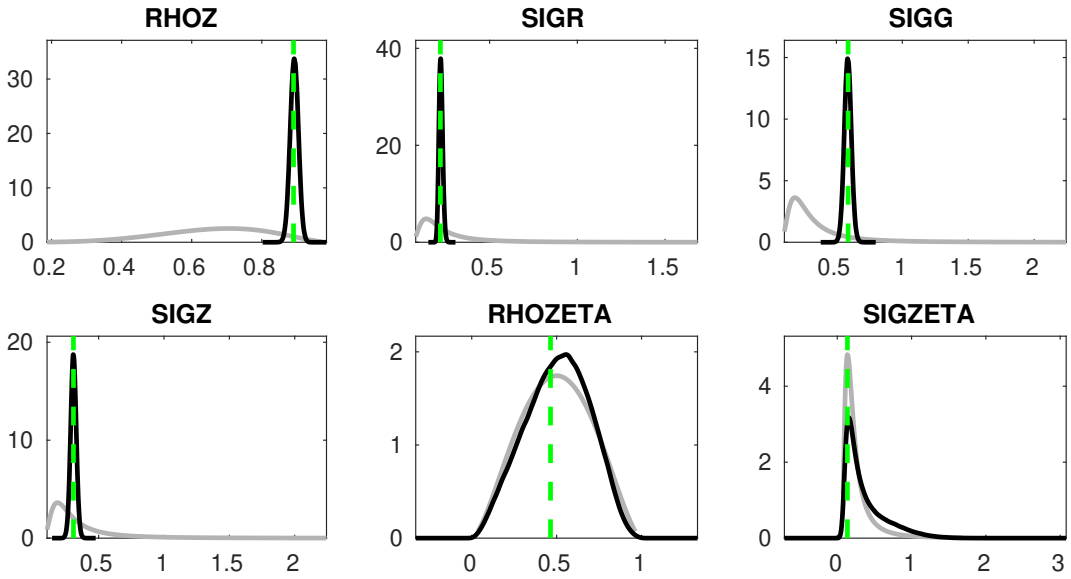

Figure 7: Priors and posteriors.

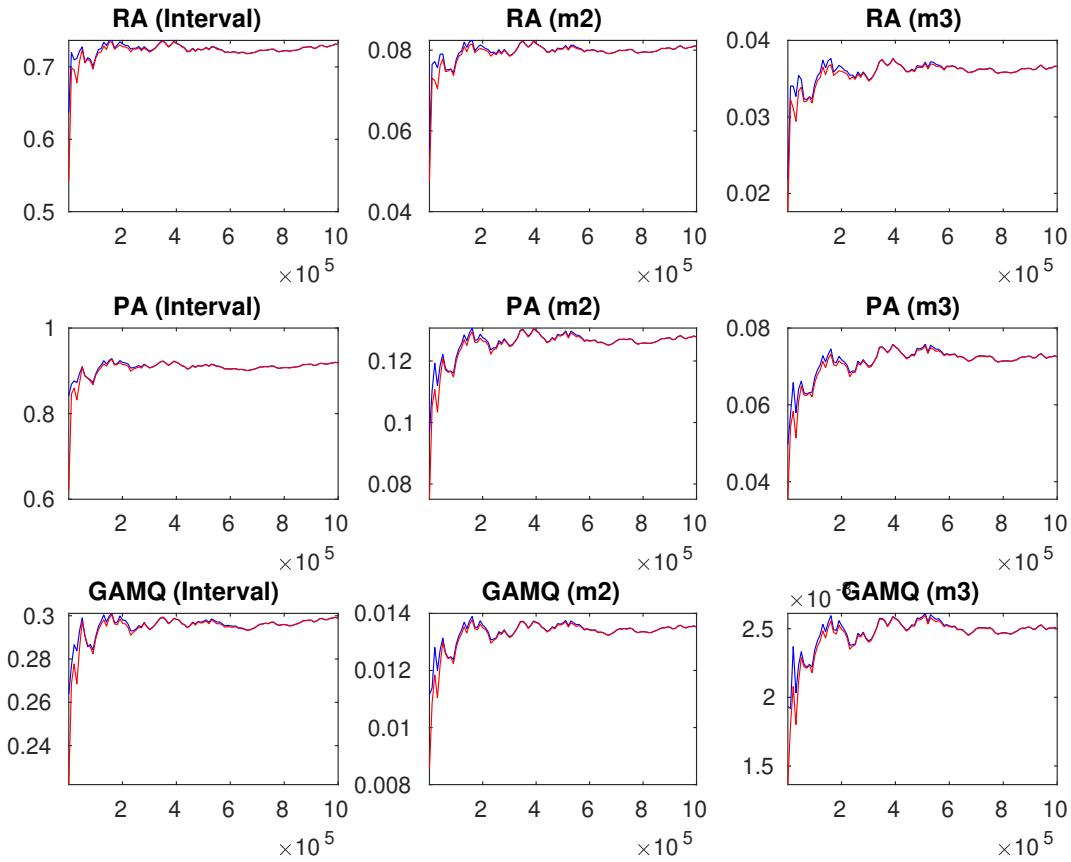

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

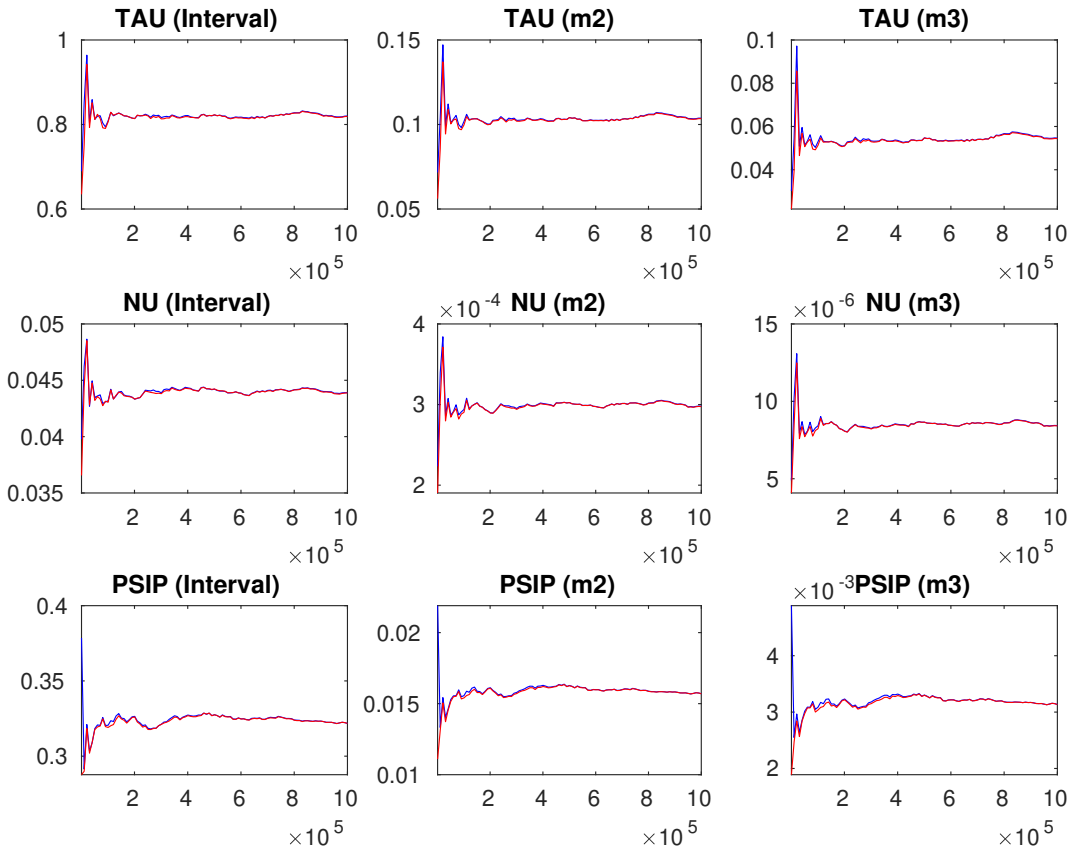

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

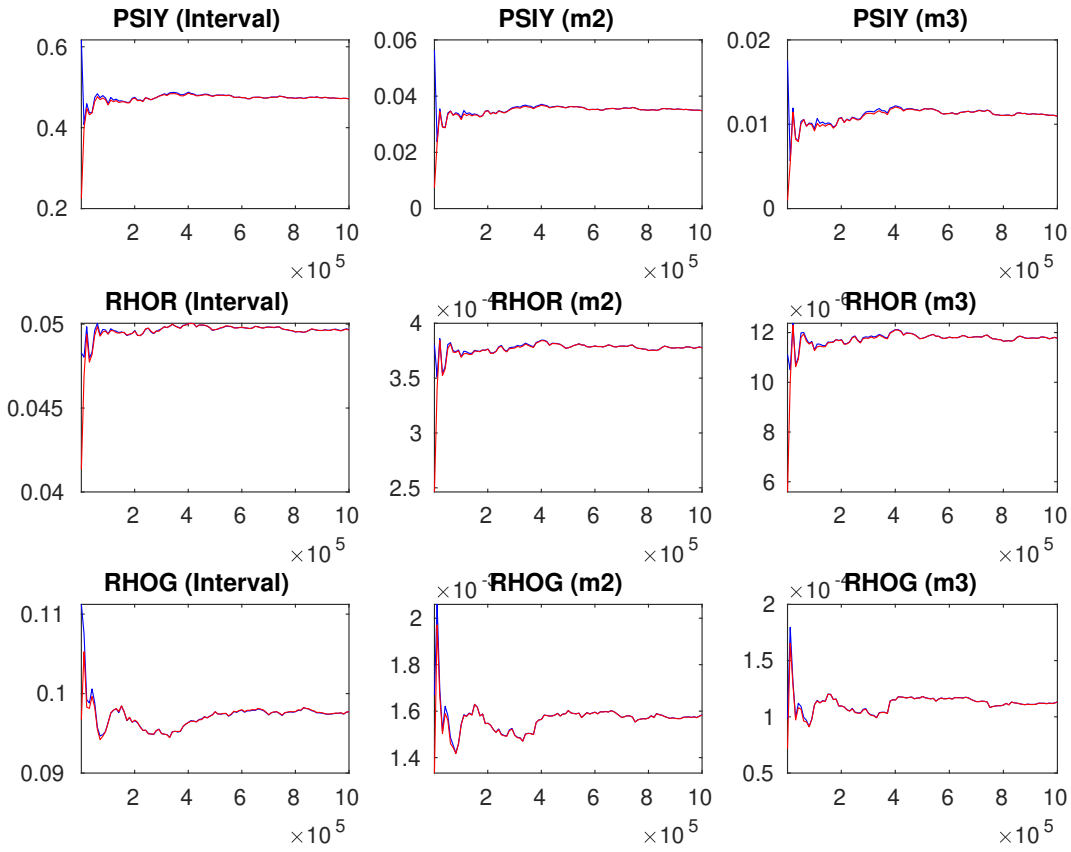

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

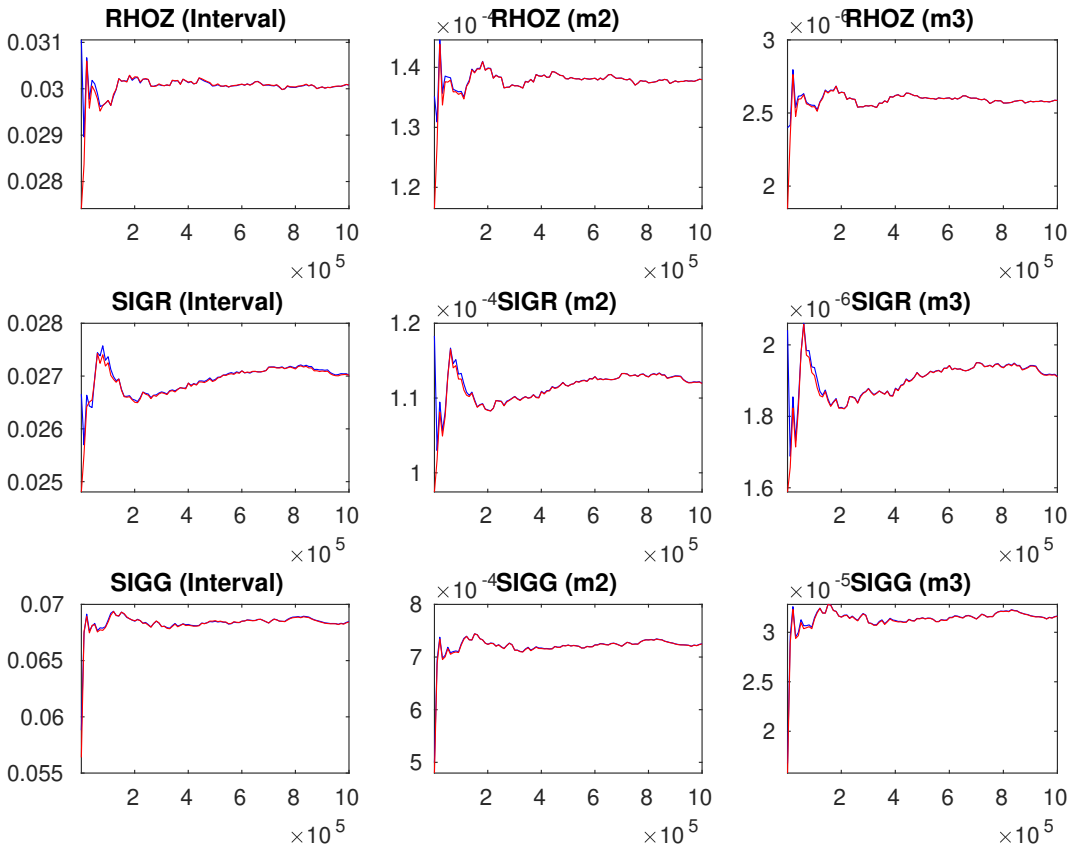

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

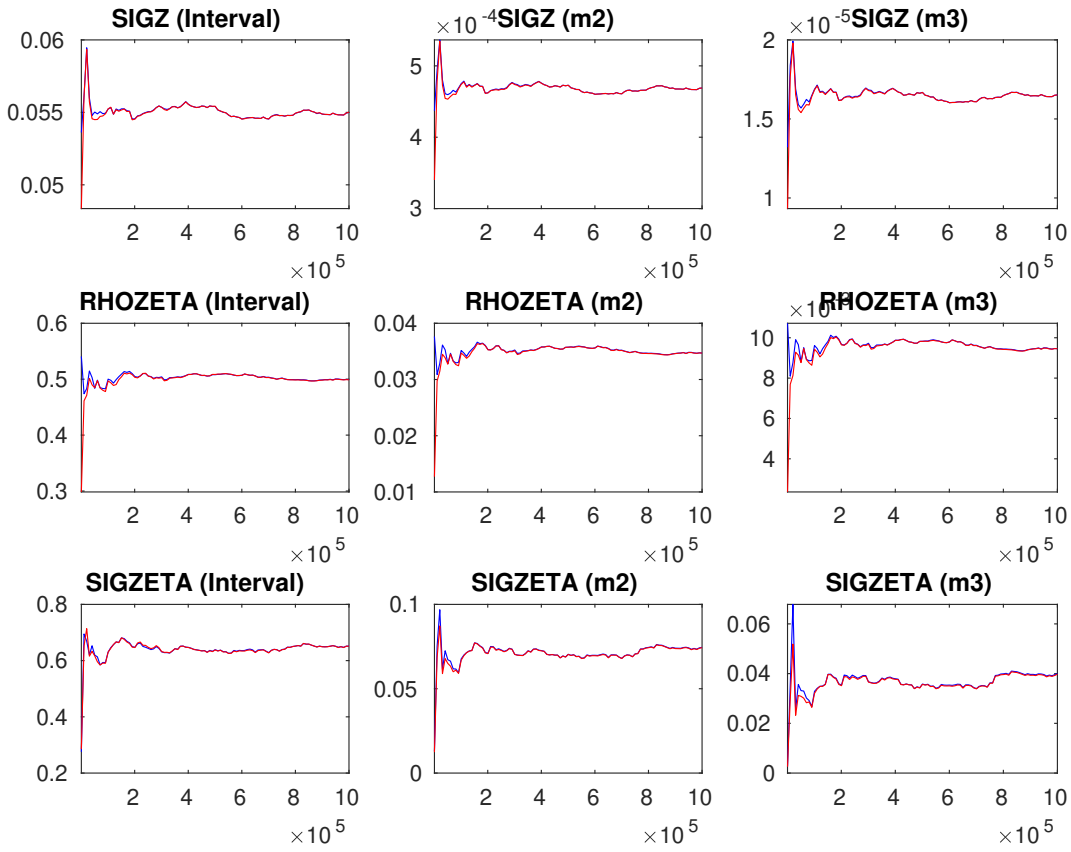

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.