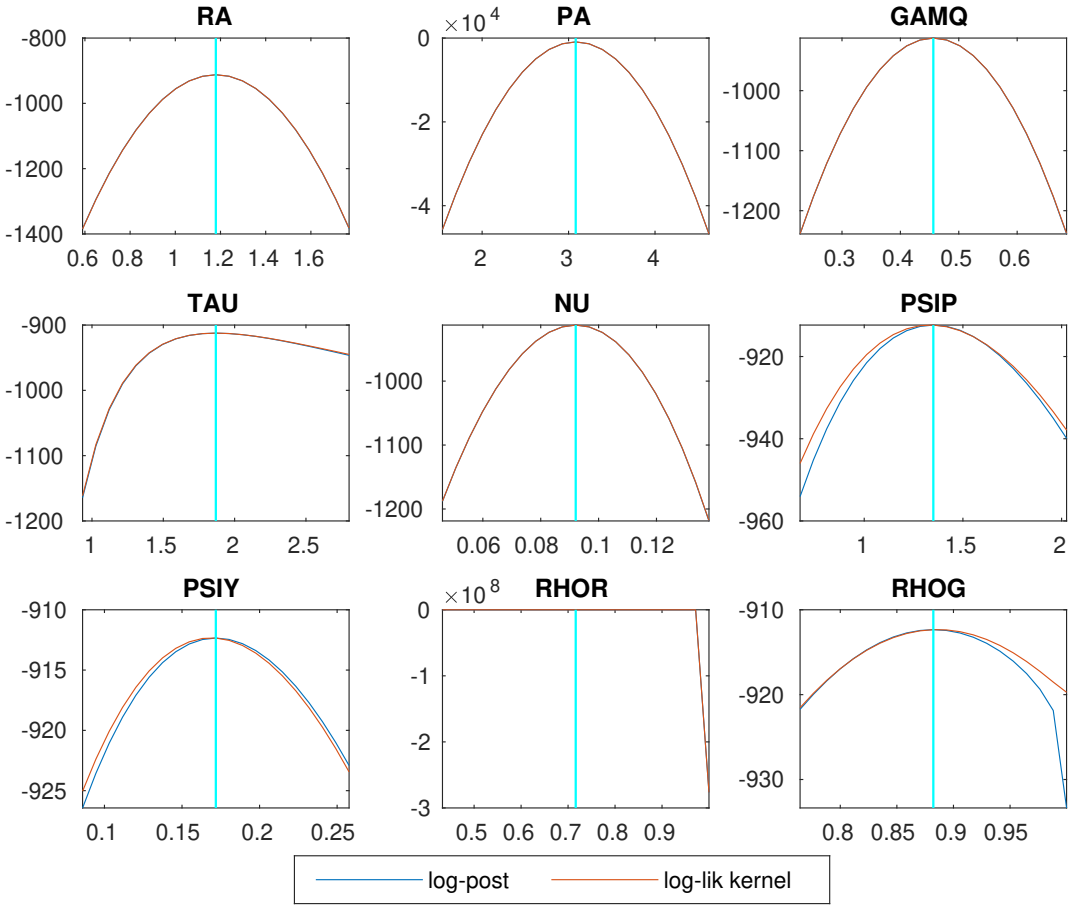

Figure 1: Check plots.

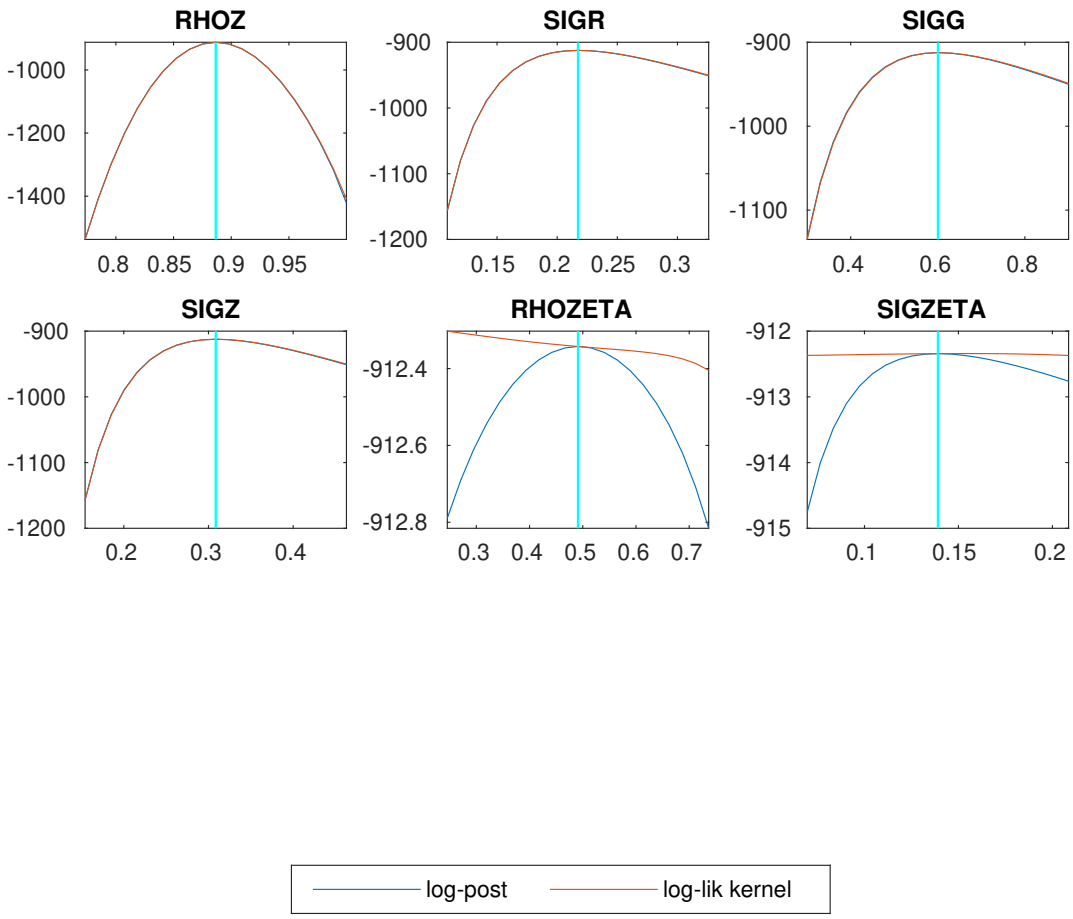

Figure 2: Check plots.

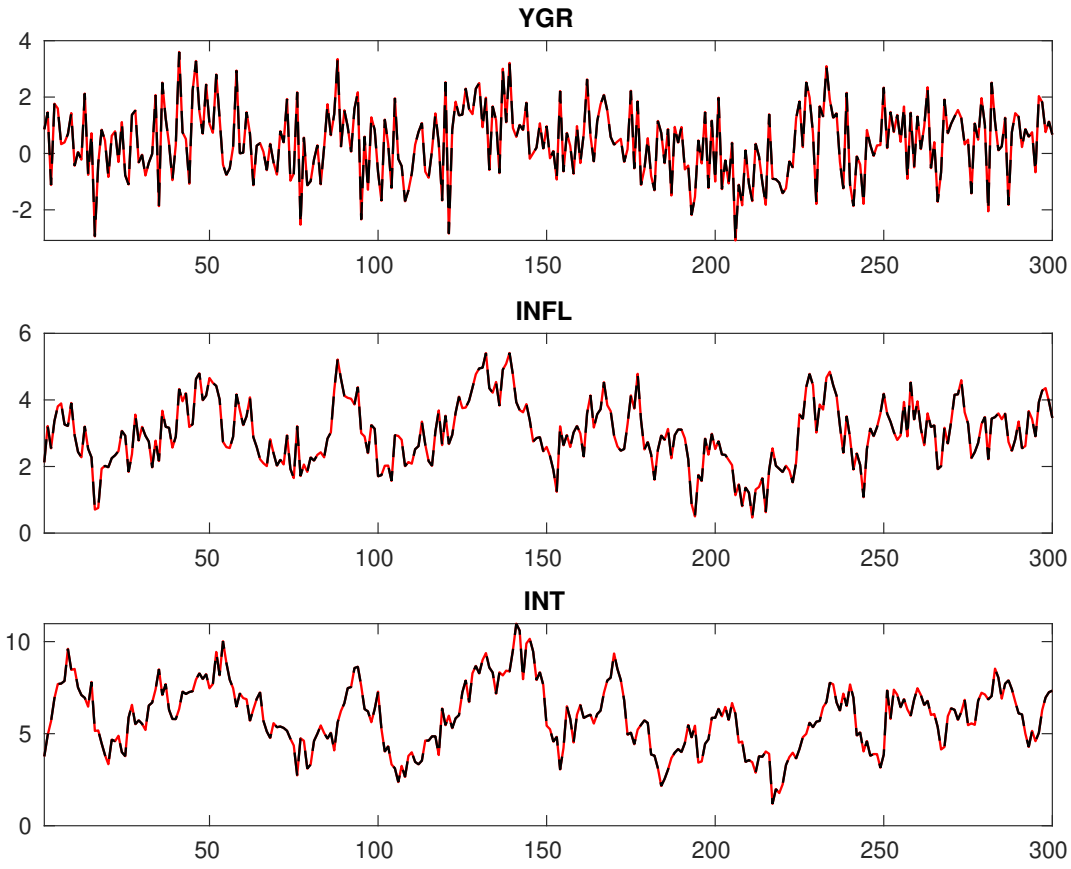

Figure 3: Historical and smoothed variables.

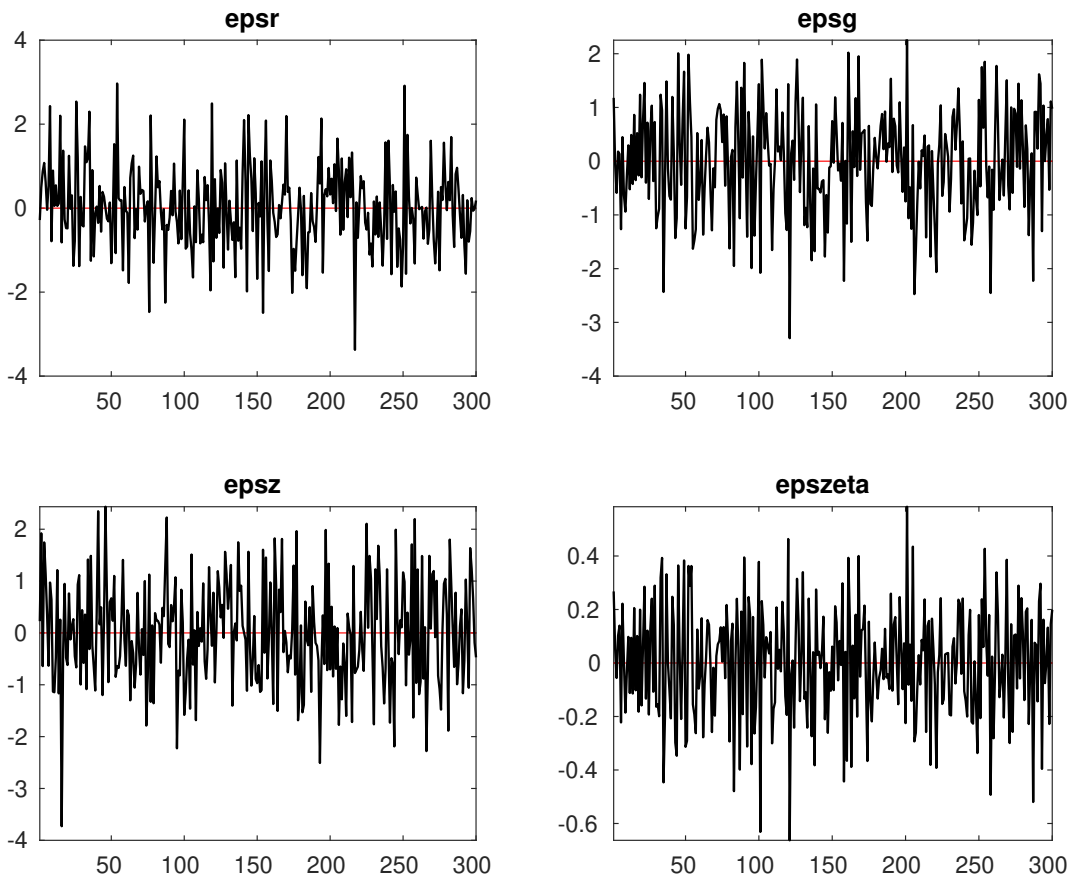

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	86.616	82.476	83.745	83.095
$\pi^{(A)}$	88.978	86.170	89.160	85.291
$\gamma^{(Q)}$	86.089	84.677	89.510	82.988
τ	76.194	79.429	80.470	68.800
ν	78.260	81.630	81.258	69.317
ψ_π	65.133	65.504	69.122	63.719
ψ_y	68.385	69.998	68.664	69.710
ρ_R	86.879	80.248	83.762	82.824
ρ_g	75.845	79.193	83.411	83.060
ρ_z	90.355	83.919	79.249	79.092
σ_R	64.446	65.396	70.329	71.059
σ_g	95.706	101.719	117.365	95.461
σ_z	81.779	80.648	80.198	79.142
ρ_ζ	72.122	75.105	76.323	81.538
σ_ζ	93.881	110.471	108.234	97.543

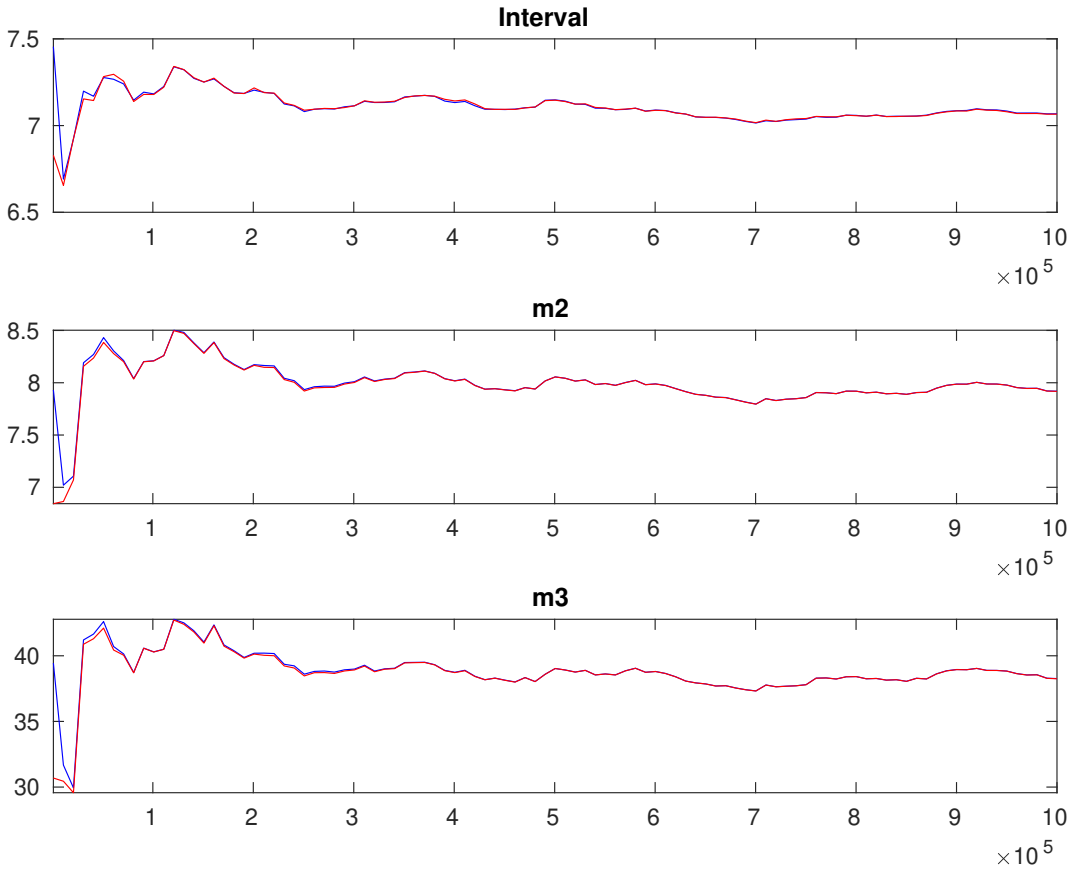

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.188	0.3140	0.6769	1.7120
$\pi^{(A)}$	gamm	4.000	2.0000	3.079	0.1457	2.8388	3.3196
$\gamma^{(Q)}$	norm	0.400	0.2000	0.455	0.1176	0.2610	0.6481
τ	gamm	2.000	0.5000	1.958	0.2898	1.4841	2.4229
ν	beta	0.100	0.0500	0.095	0.0102	0.0783	0.1115
ψ_π	gamm	1.500	0.2500	1.369	0.2076	1.0292	1.7085
ψ_y	gamm	0.500	0.2500	0.181	0.0559	0.0879	0.2698
ρ_R	beta	0.500	0.2000	0.723	0.0274	0.6778	0.7679
ρ_g	beta	0.800	0.1000	0.894	0.0284	0.8475	0.9410
ρ_z	beta	0.660	0.1500	0.891	0.0129	0.8697	0.9121
σ_R	invg	0.300	4.0000	0.219	0.0098	0.2029	0.2349
σ_g	invg	0.400	4.0000	0.595	0.0330	0.5456	0.6491
σ_z	invg	0.400	4.0000	0.312	0.0185	0.2815	0.3421
ρ_ζ	beta	0.500	0.2000	0.494	0.1970	0.1692	0.8124
σ_ζ	invg	0.300	4.0000	0.224	0.1177	0.0741	0.3889

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.1793	0.3143
$\pi^{(A)}$	gamm	4.000	2.0000	3.0827	0.1455
$\gamma^{(Q)}$	norm	0.400	0.2000	0.4564	0.1198
τ	gamm	2.000	0.5000	1.8683	0.3096
ν	beta	0.100	0.0500	0.0921	0.0106
ψ_π	gamm	1.500	0.2500	1.3501	0.2211
ψ_y	gamm	0.500	0.2500	0.1718	0.0587
ρ_R	beta	0.500	0.2000	0.7163	0.0261
ρ_g	beta	0.800	0.1000	0.8822	0.0282
ρ_z	beta	0.660	0.1500	0.8866	0.0127
σ_R	invg	0.300	4.0000	0.2173	0.0099
σ_g	invg	0.400	4.0000	0.6003	0.0309
σ_z	invg	0.400	4.0000	0.3086	0.0181
ρ_ζ	beta	0.500	0.2000	0.4910	0.1940
σ_ζ	invg	0.300	4.0000	0.1391	0.1251

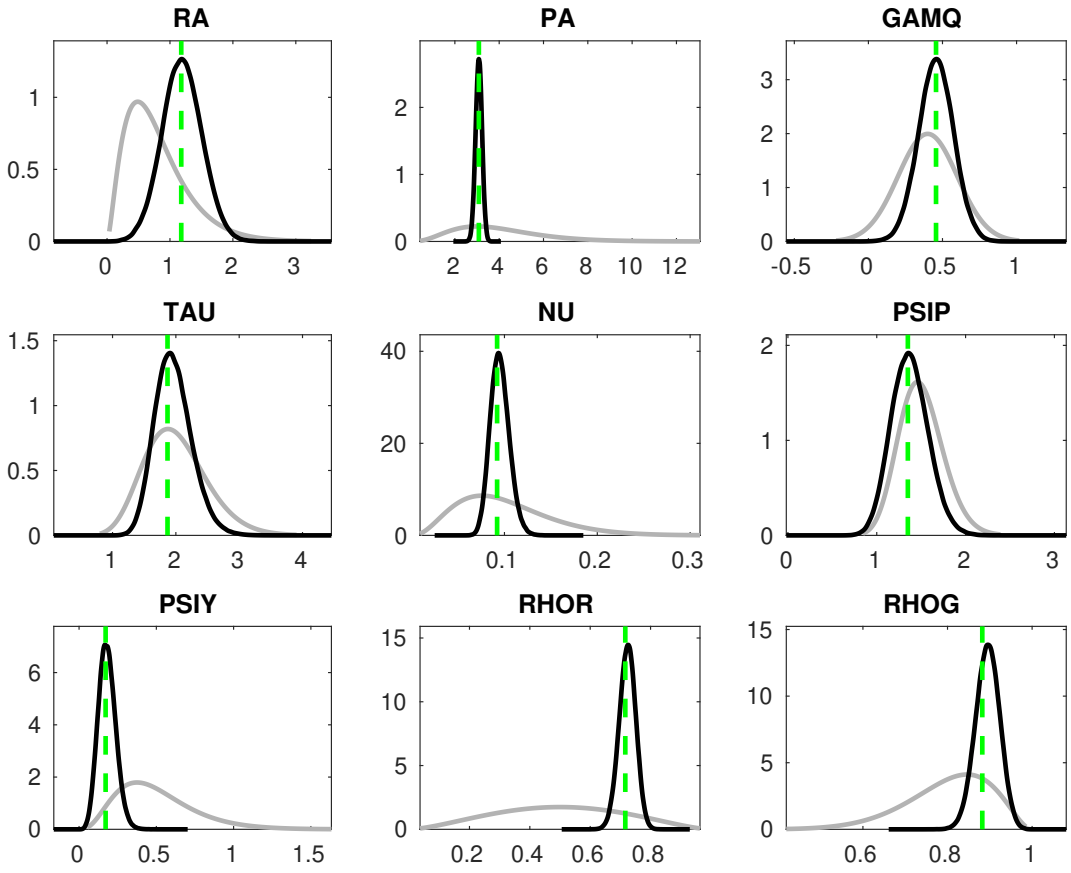

Figure 6: Priors and posteriors.

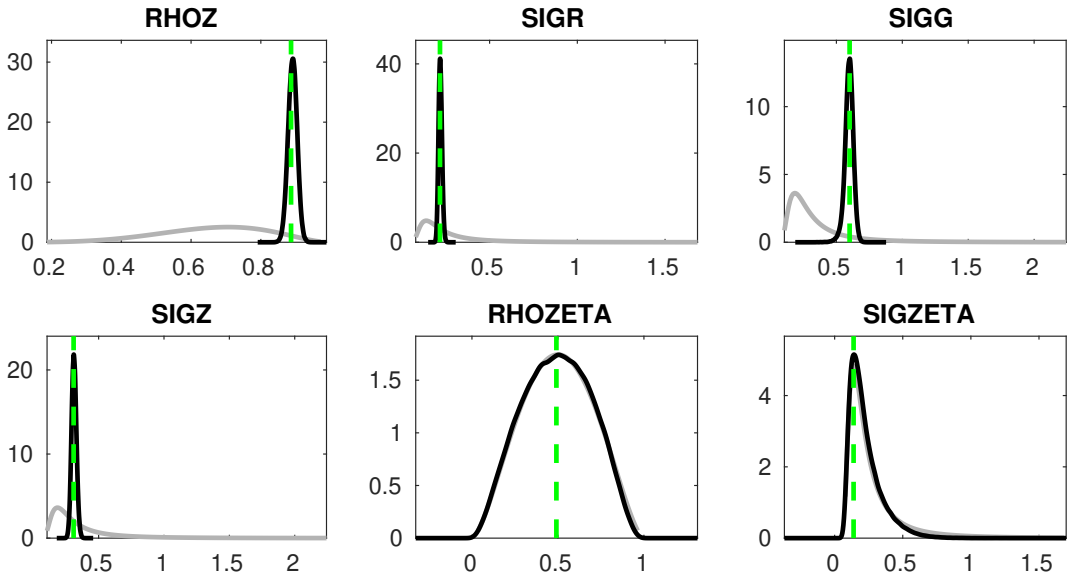

Figure 7: Priors and posteriors.

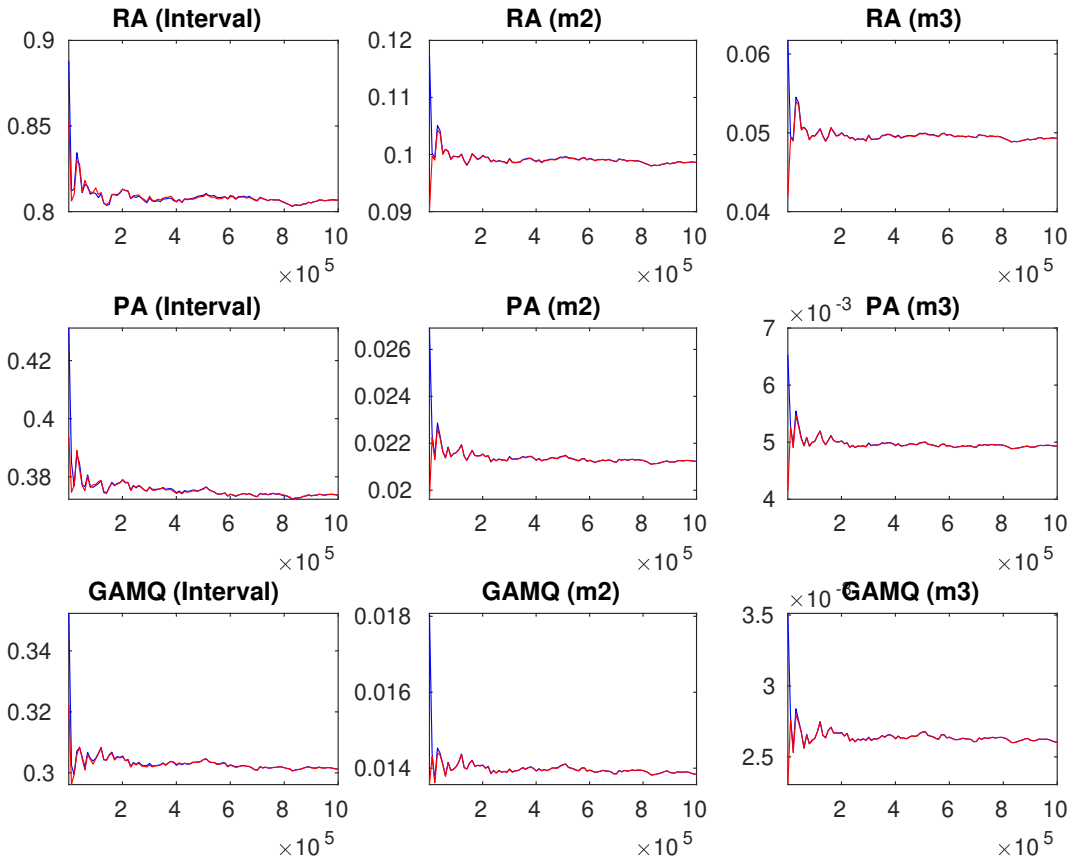

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

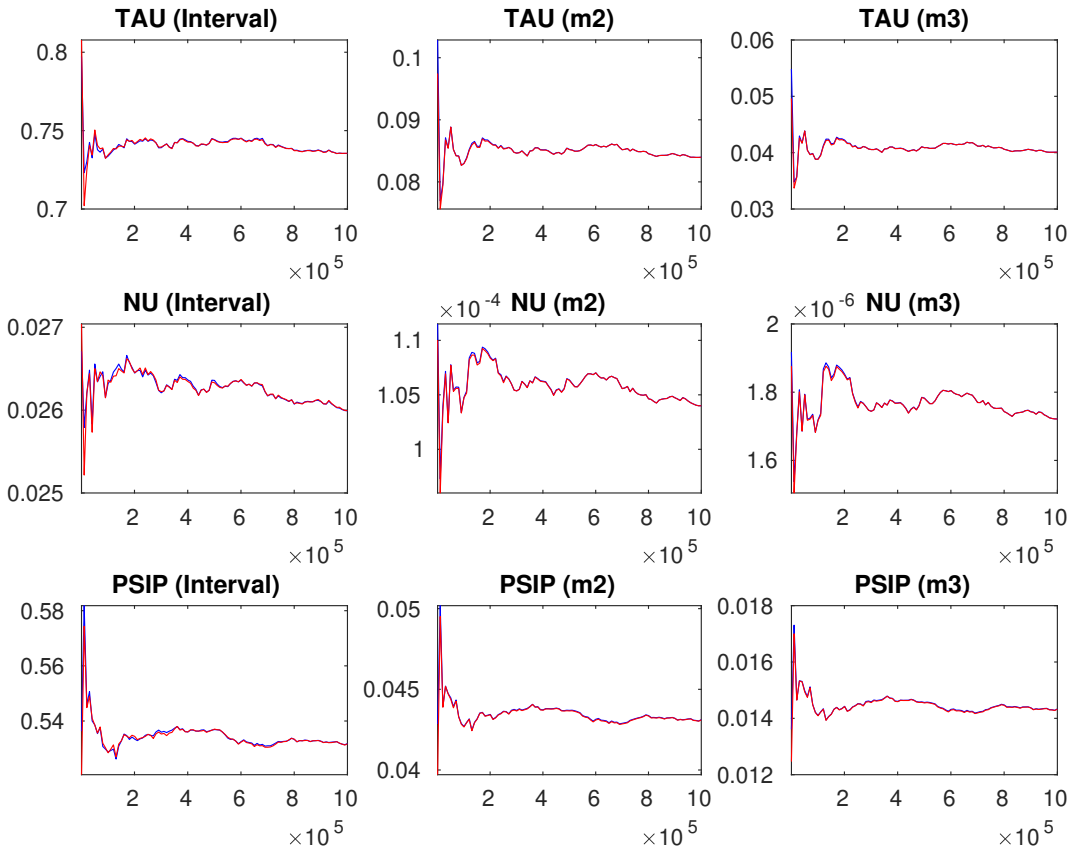

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

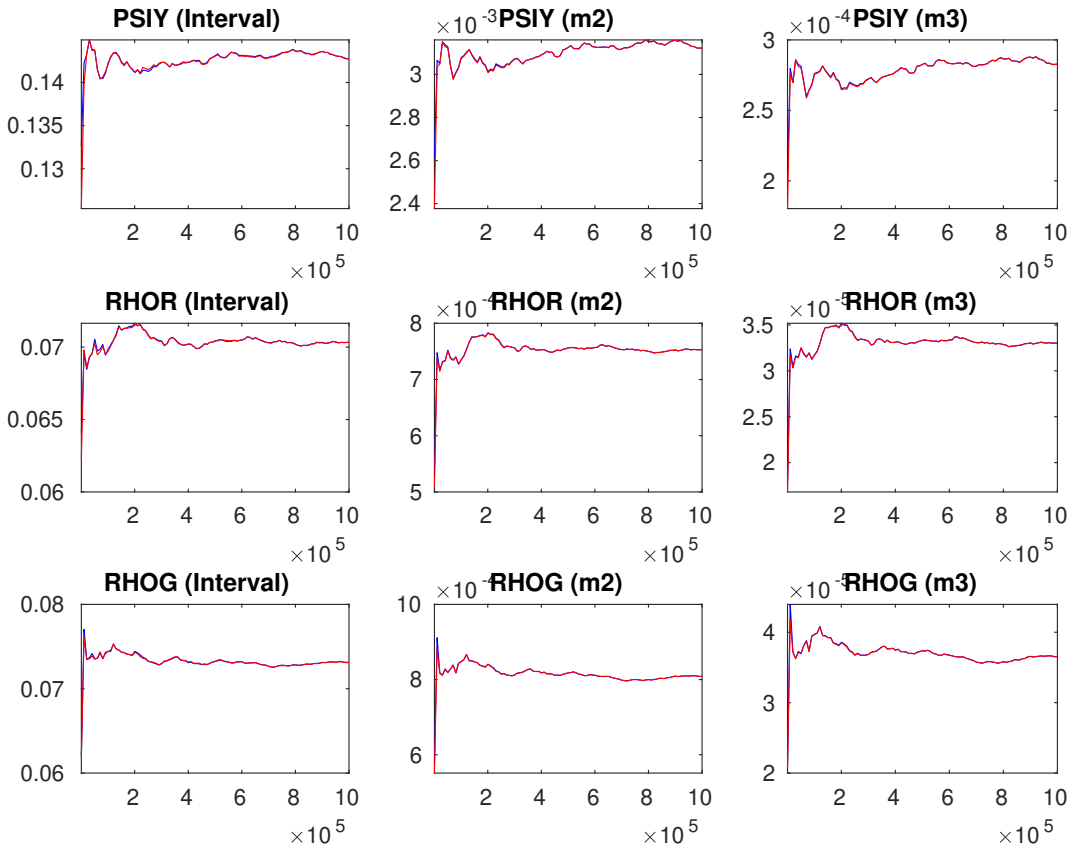

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

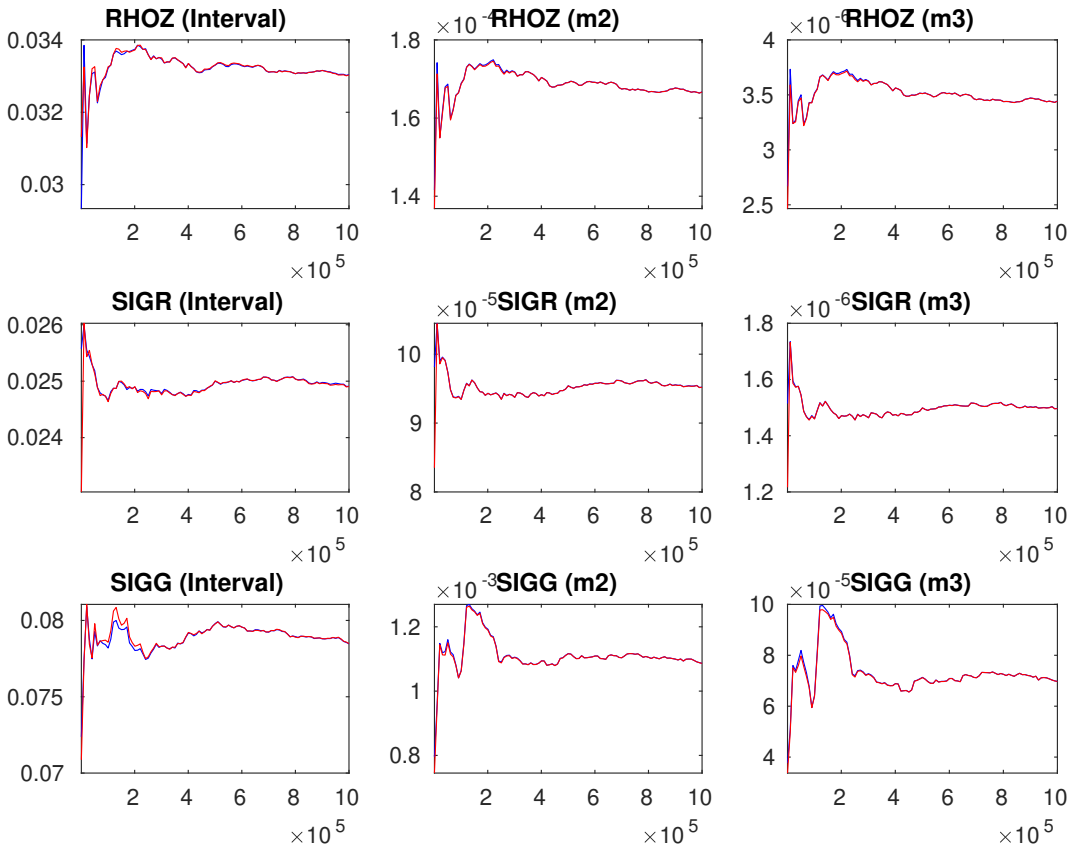

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

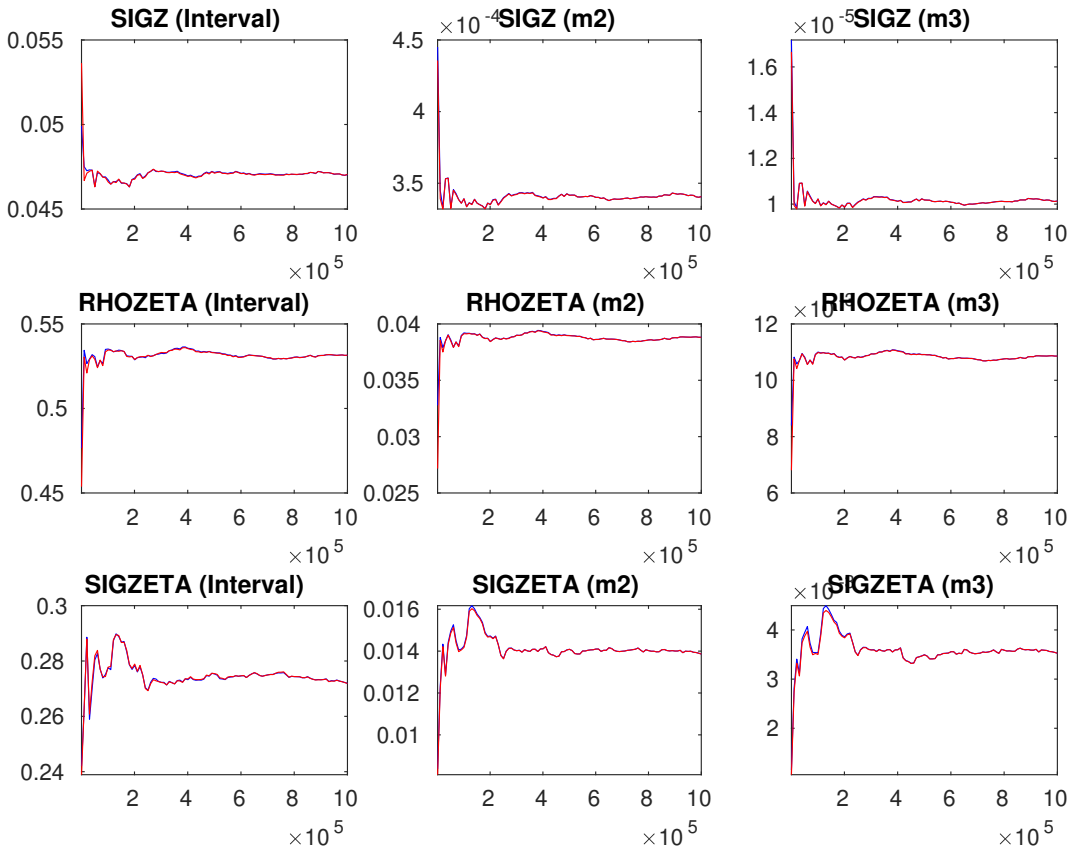

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.