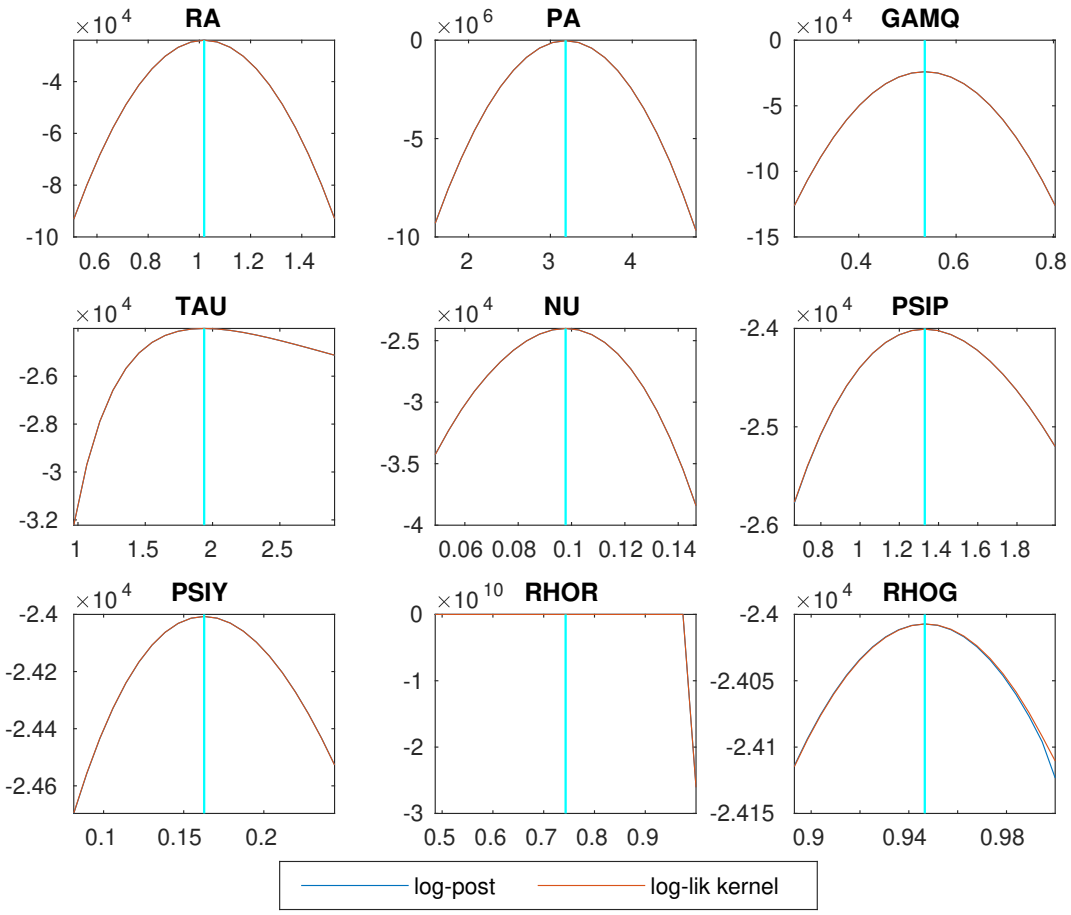

Figure 1: Check plots.

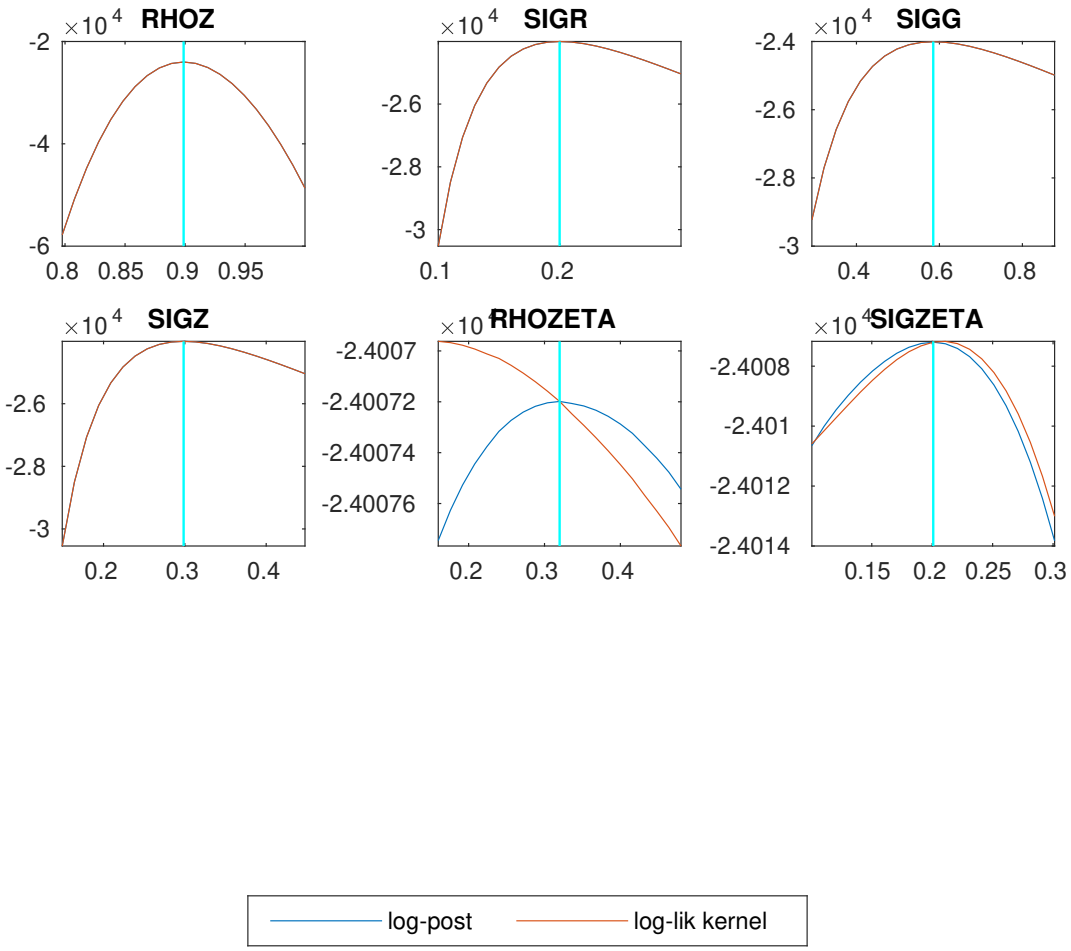

Figure 2: Check plots.

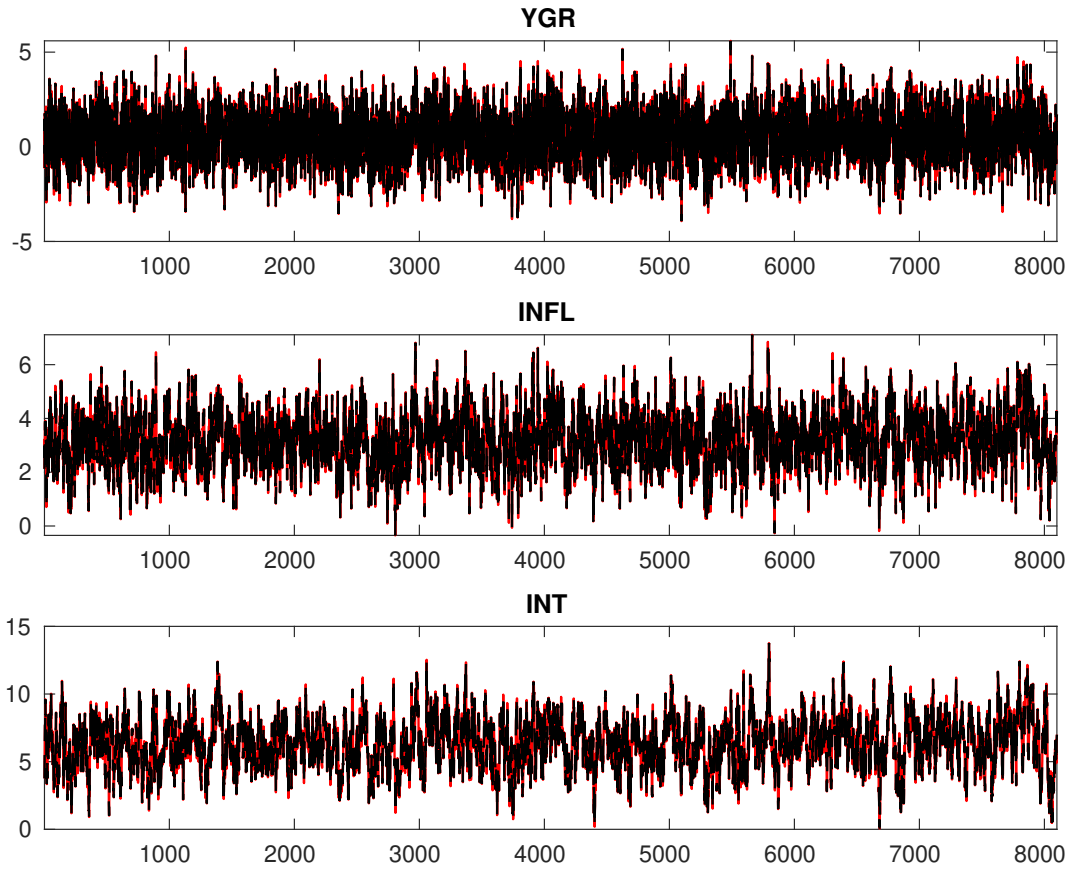

Figure 3: Historical and smoothed variables.

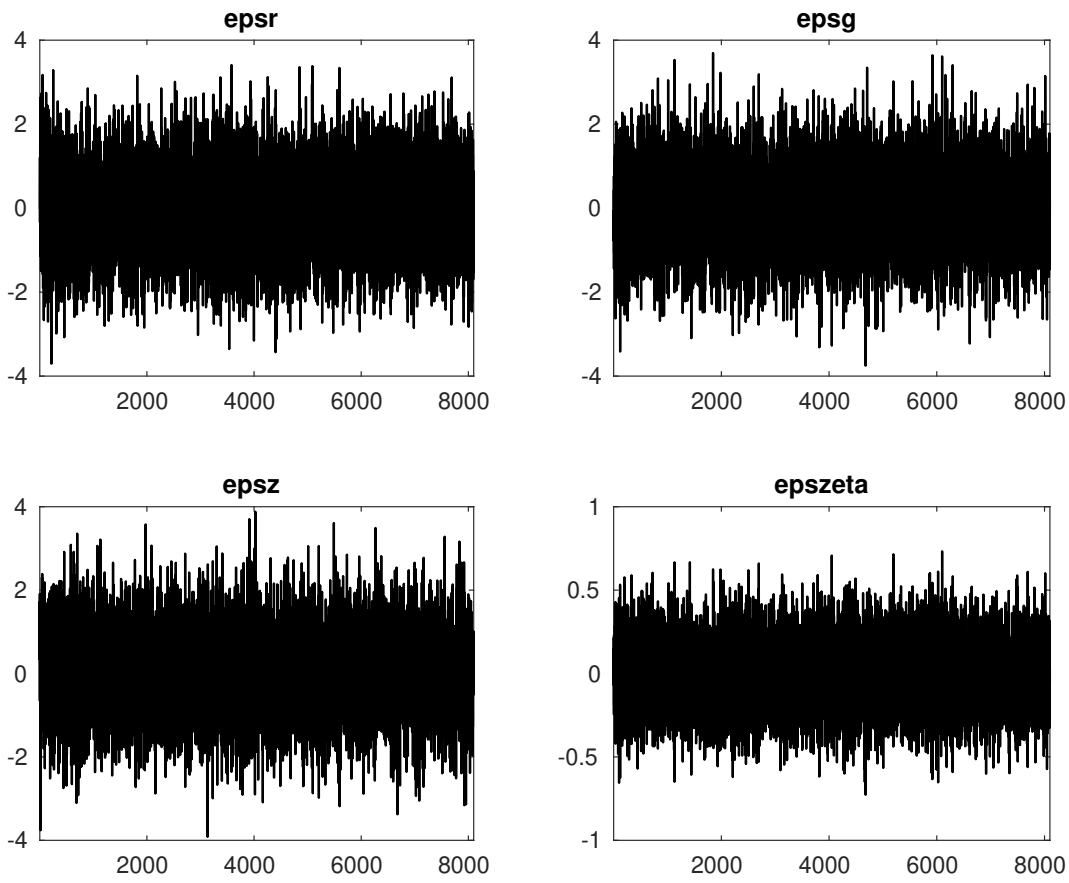

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	619.874	619.866	618.809	594.789
$\pi^{(A)}$	624.124	624.872	623.201	601.193
$\gamma^{(Q)}$	598.007	601.231	598.102	574.359
τ	623.043	616.581	586.195	581.405
ν	584.780	577.158	544.156	538.465
ψ_π	712.664	705.013	708.289	701.525
ψ_y	697.244	688.644	691.357	682.849
ρ_R	214.694	209.192	167.847	175.964
ρ_g	121.494	117.150	131.635	114.970
ρ_z	273.745	271.301	225.370	229.300
σ_R	94.532	85.191	90.407	74.439
σ_g	443.119	410.355	466.308	416.177
σ_z	178.859	166.462	153.606	151.774
ρ_ζ	715.019	708.989	703.919	706.499
σ_ζ	606.296	581.424	623.898	592.664

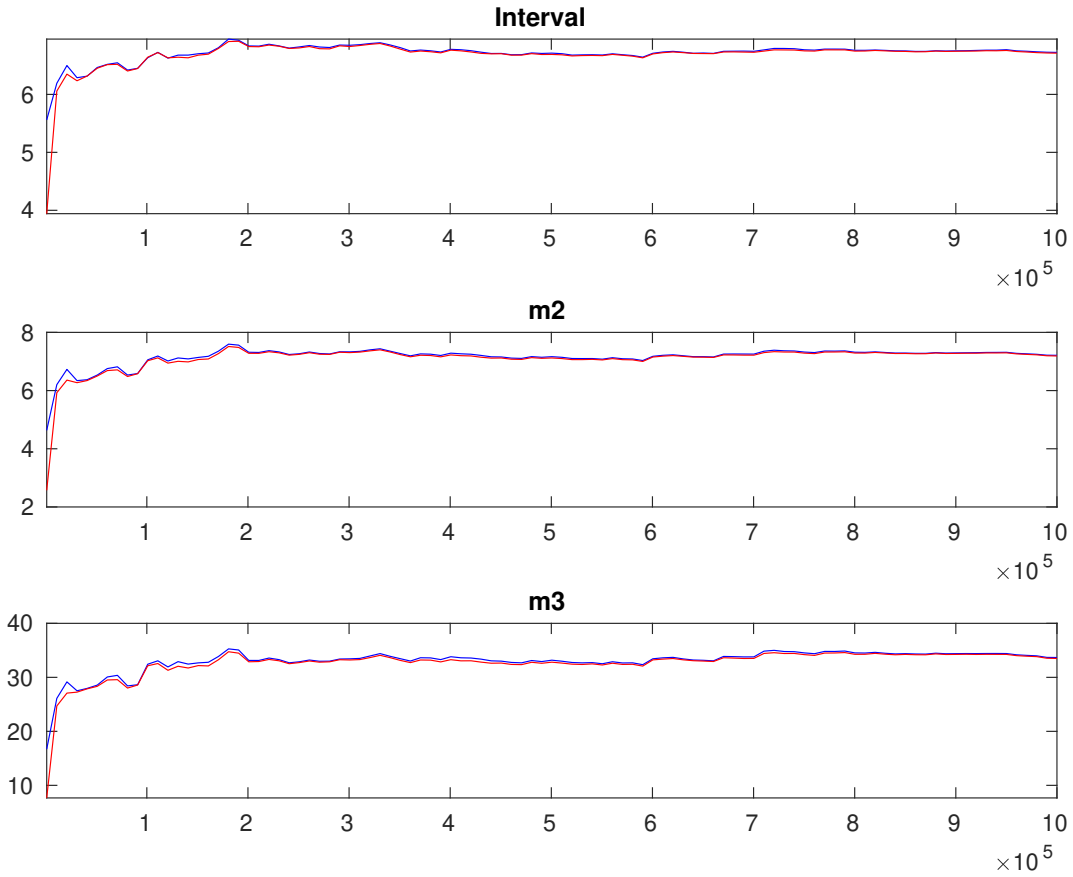

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.020	0.0850	0.8834	1.1612
$\pi^{(A)}$	gamm	4.000	2.0000	3.185	0.0421	3.1161	3.2539
$\gamma^{(Q)}$	norm	0.400	0.2000	0.535	0.0325	0.4823	0.5888
τ	gamm	2.000	0.5000	1.948	0.0583	1.8500	2.0428
ν	beta	0.100	0.0500	0.098	0.0021	0.0946	0.1017
ψ_π	gamm	1.500	0.2500	1.354	0.1995	1.0334	1.6857
ψ_y	gamm	0.500	0.2500	0.159	0.0385	0.0948	0.2207
ρ_R	beta	0.500	0.2000	0.744	0.0052	0.7354	0.7524
ρ_g	beta	0.800	0.1000	0.947	0.0039	0.9405	0.9534
ρ_z	beta	0.660	0.1500	0.899	0.0024	0.8952	0.9030
σ_R	invg	0.300	4.0000	0.200	0.0017	0.1969	0.2025
σ_g	invg	0.400	4.0000	0.585	0.0096	0.5692	0.5998
σ_z	invg	0.400	4.0000	0.299	0.0029	0.2939	0.3036
ρ_ζ	beta	0.500	0.2000	0.379	0.1540	0.1254	0.6300
σ_ζ	invg	0.300	4.0000	0.201	0.0644	0.0934	0.3000

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.0188	0.0151
$\pi^{(A)}$	gamm	4.000	2.0000	3.1859	0.0058
$\gamma^{(Q)}$	norm	0.400	0.2000	0.5357	0.0075
τ	gamm	2.000	0.5000	1.9377	0.0084
ν	beta	0.100	0.0500	0.0978	0.0006
ψ_π	gamm	1.500	0.2500	1.3299	0.0142
ψ_y	gamm	0.500	0.2500	0.1628	0.0056
ρ_R	beta	0.500	0.2000	0.7432	0.0038
ρ_g	beta	0.800	0.1000	0.9465	0.0040
ρ_z	beta	0.660	0.1500	0.8988	0.0016
σ_R	invg	0.300	4.0000	0.1997	0.0016
σ_g	invg	0.400	4.0000	0.5851	0.0067
σ_z	invg	0.400	4.0000	0.2985	0.0025
ρ_ζ	beta	0.500	0.2000	0.3199	0.0110
σ_ζ	invg	0.300	4.0000	0.2009	0.0088

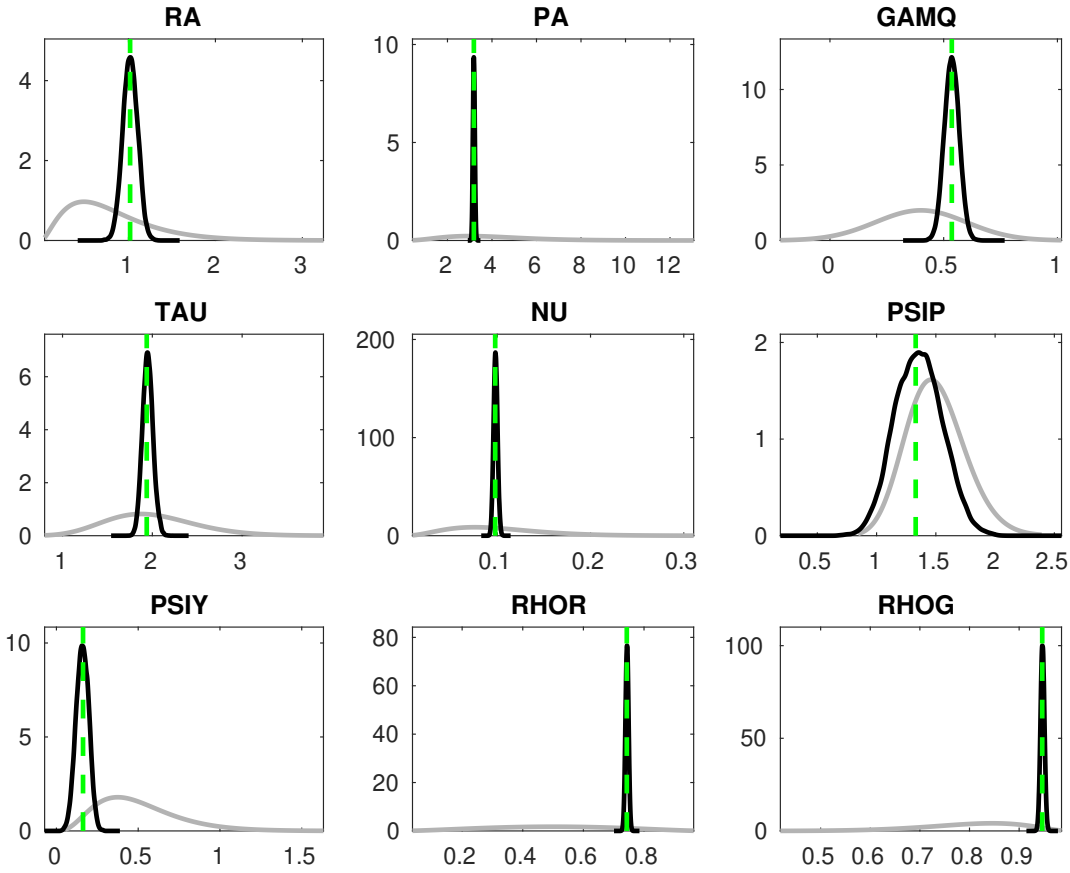

Figure 6: Priors and posteriors.

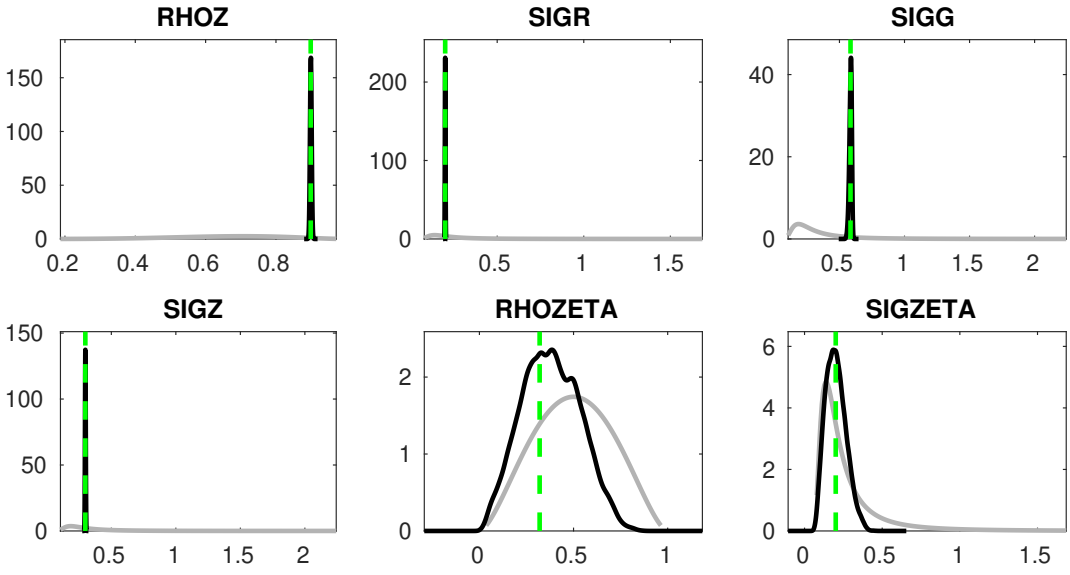

Figure 7: Priors and posteriors.

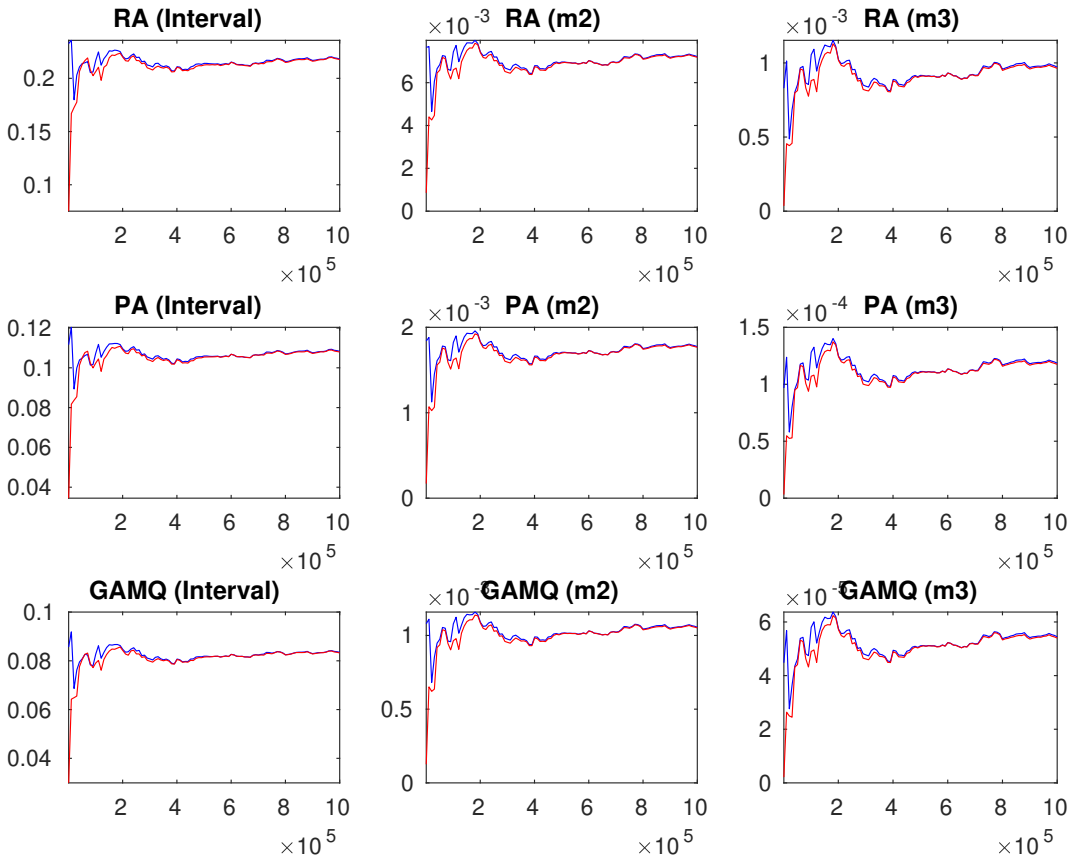

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

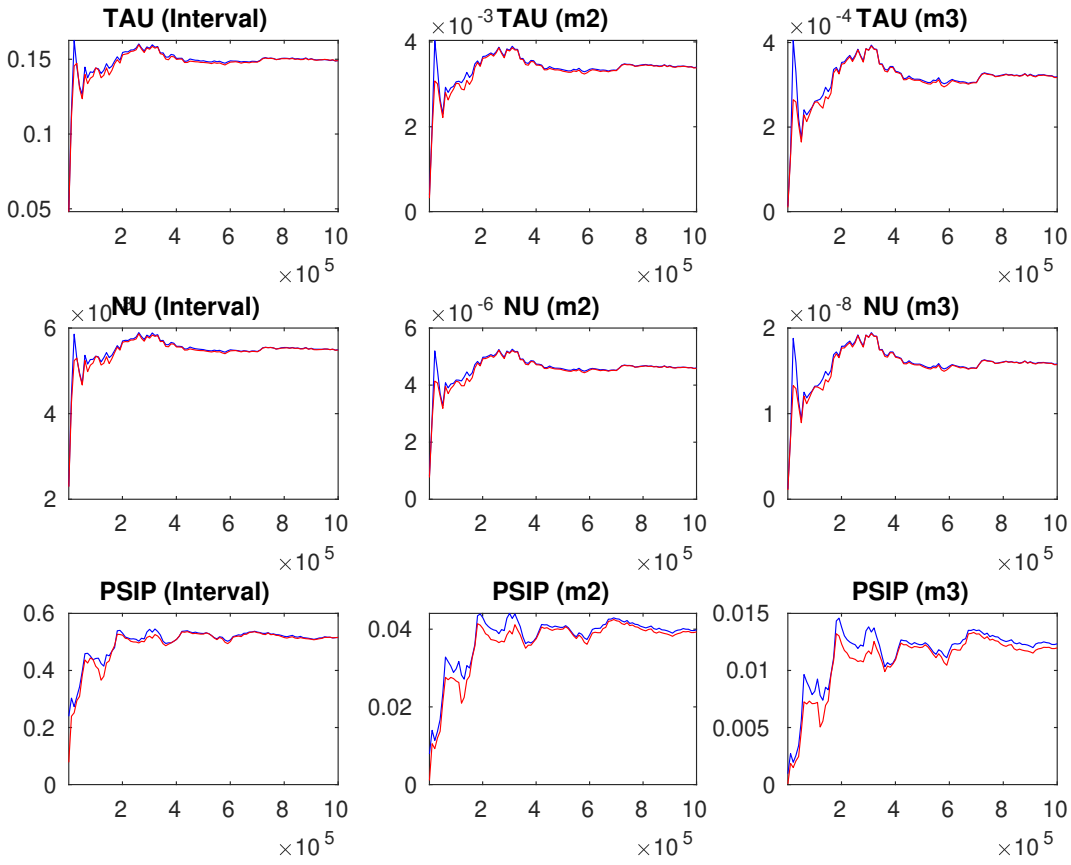

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

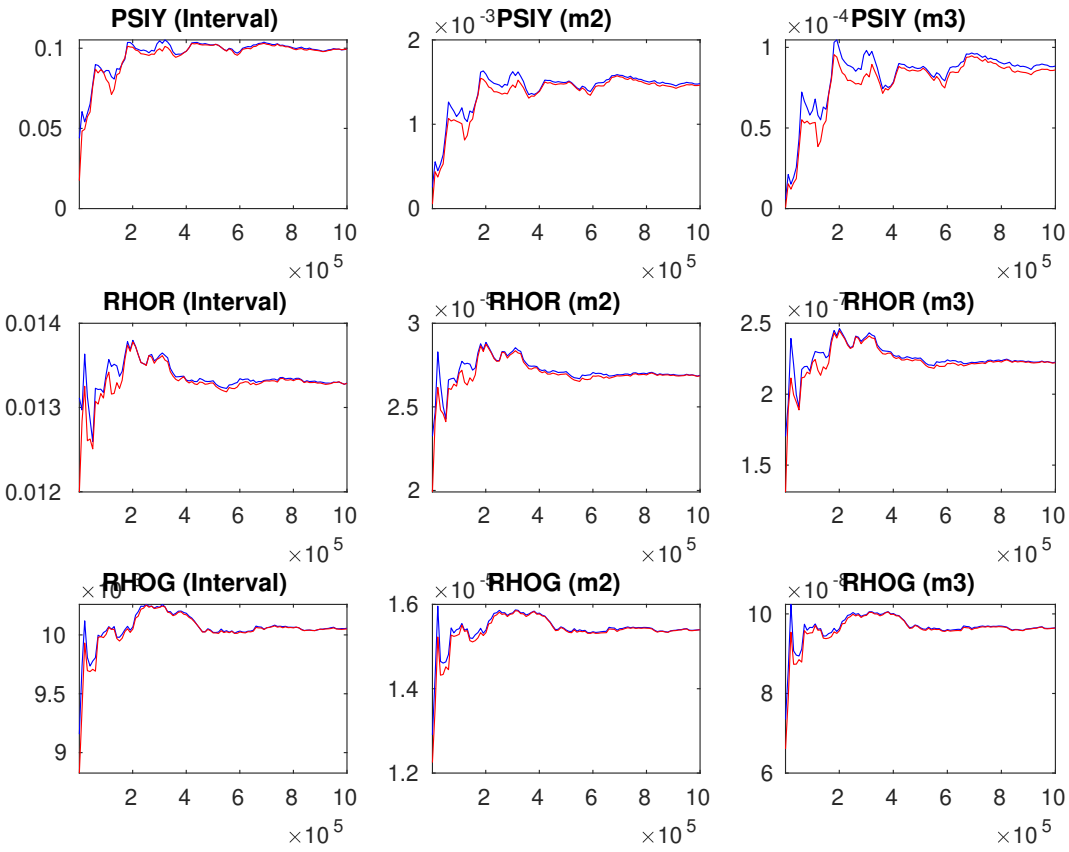

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

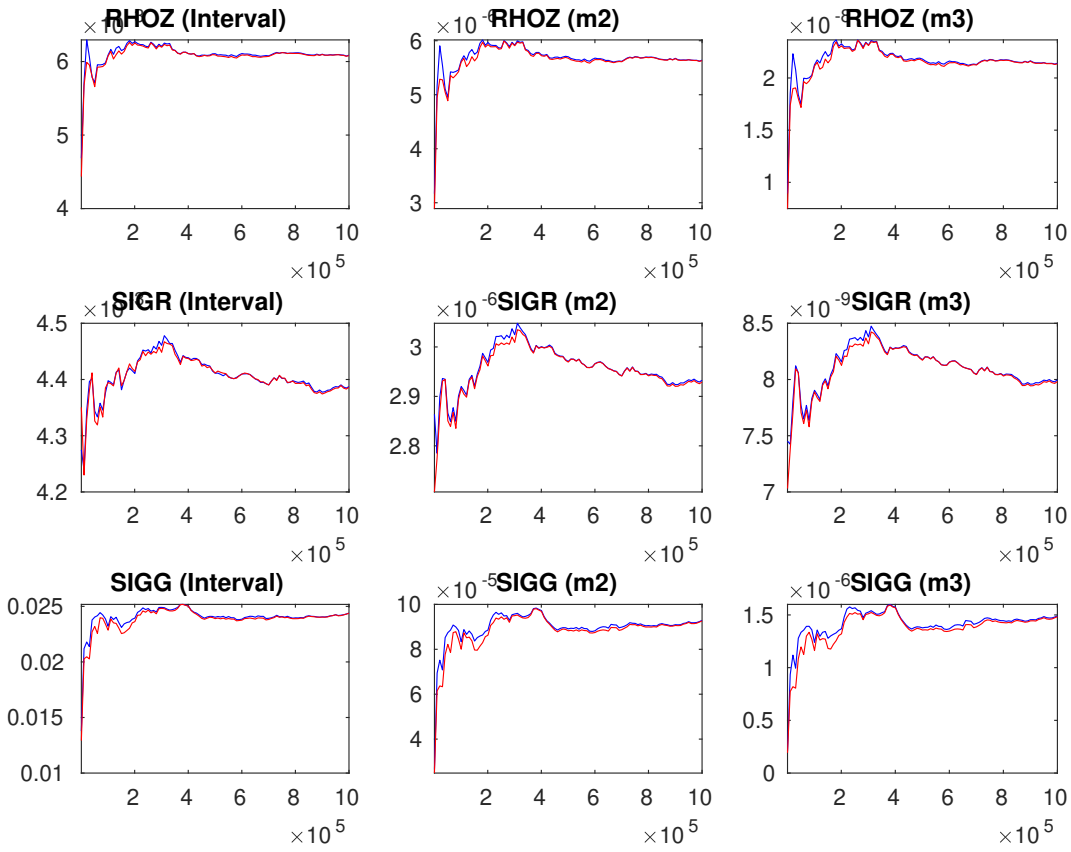

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

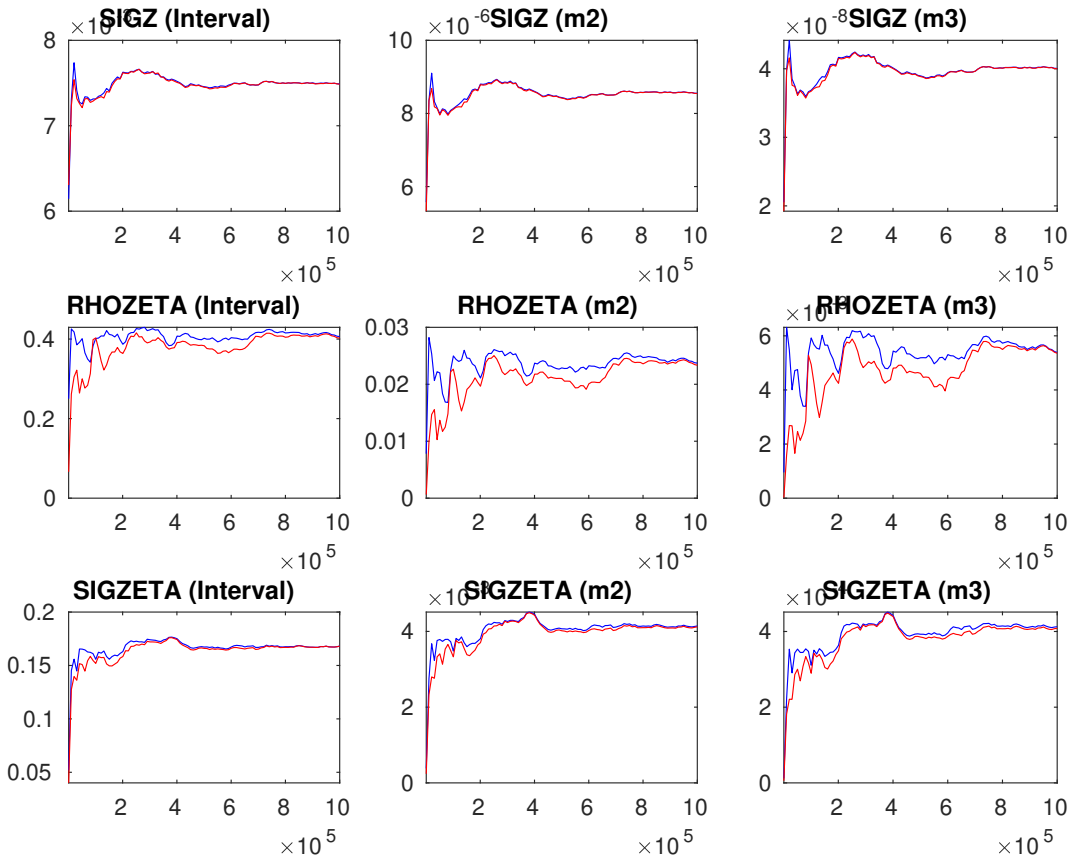

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.