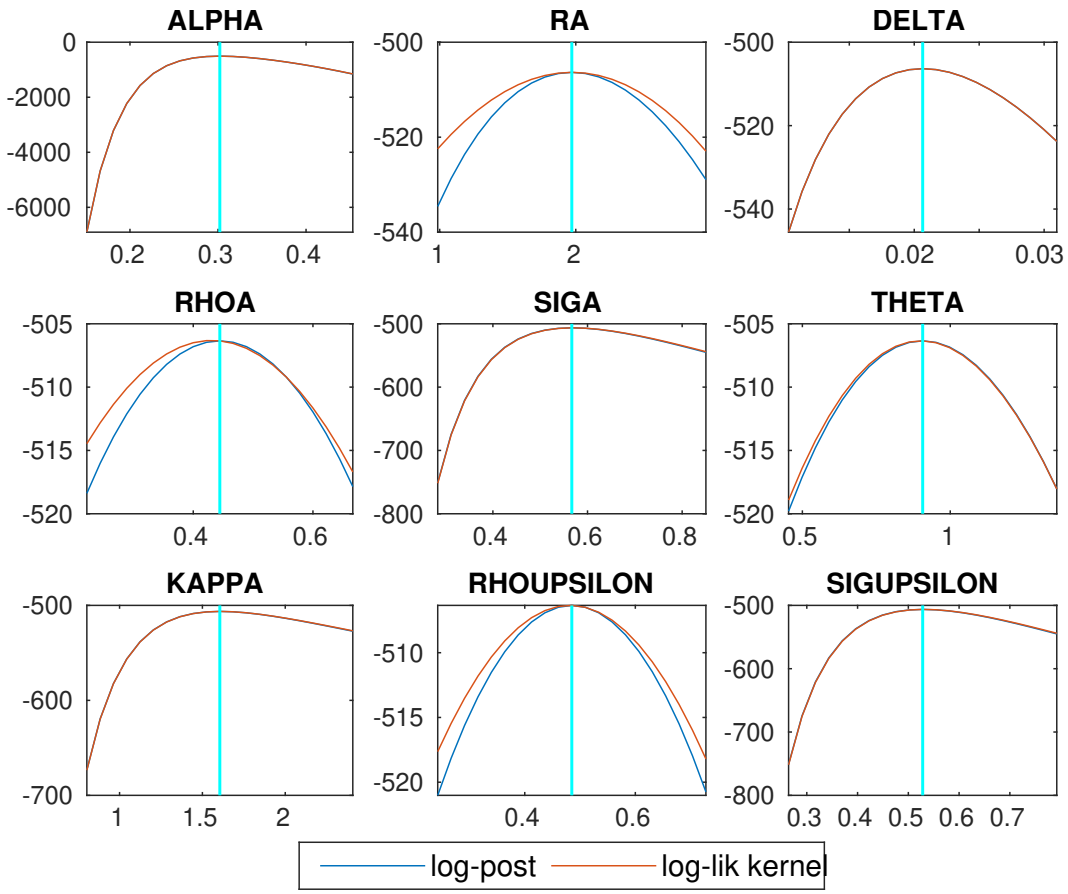

Figure 1: Check plots.

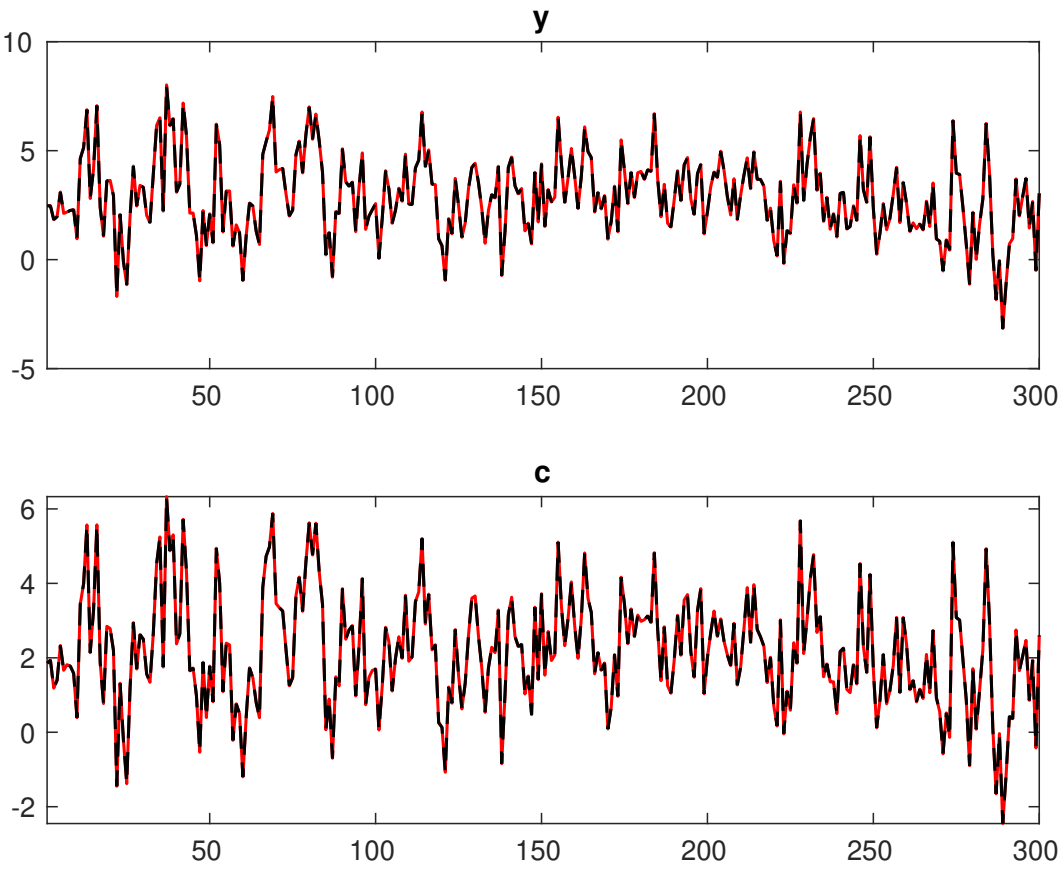

Figure 2: Historical and smoothed variables.

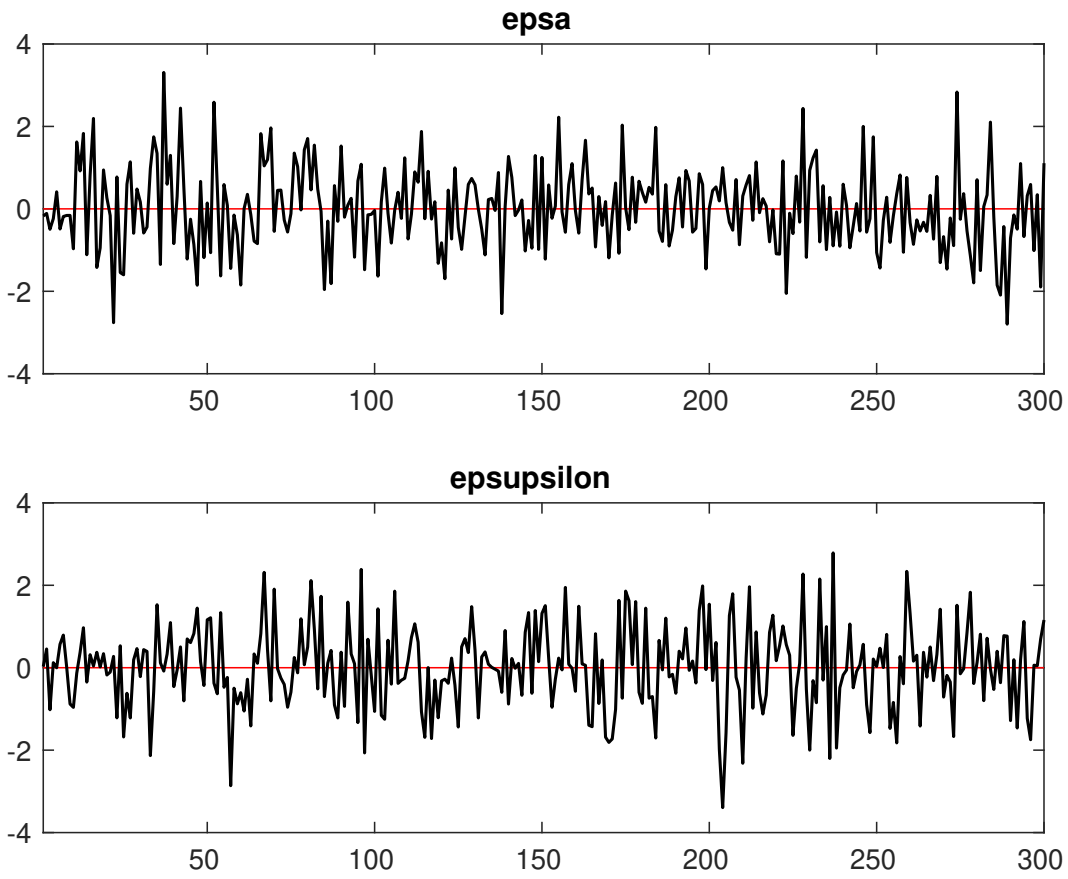

Figure 3: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
α	35.470	36.923	35.520	34.000
r_A	31.036	31.077	31.918	31.730
δ	54.962	53.699	66.211	51.417
ρ_A	28.316	32.214	31.876	32.736
σ_A	47.505	48.541	52.998	44.744
θ	151.706	150.813	124.603	171.427
κ	126.200	123.897	111.132	142.196
ρ_υ	31.891	29.661	29.640	31.955
σ_υ	76.288	78.773	70.522	85.782

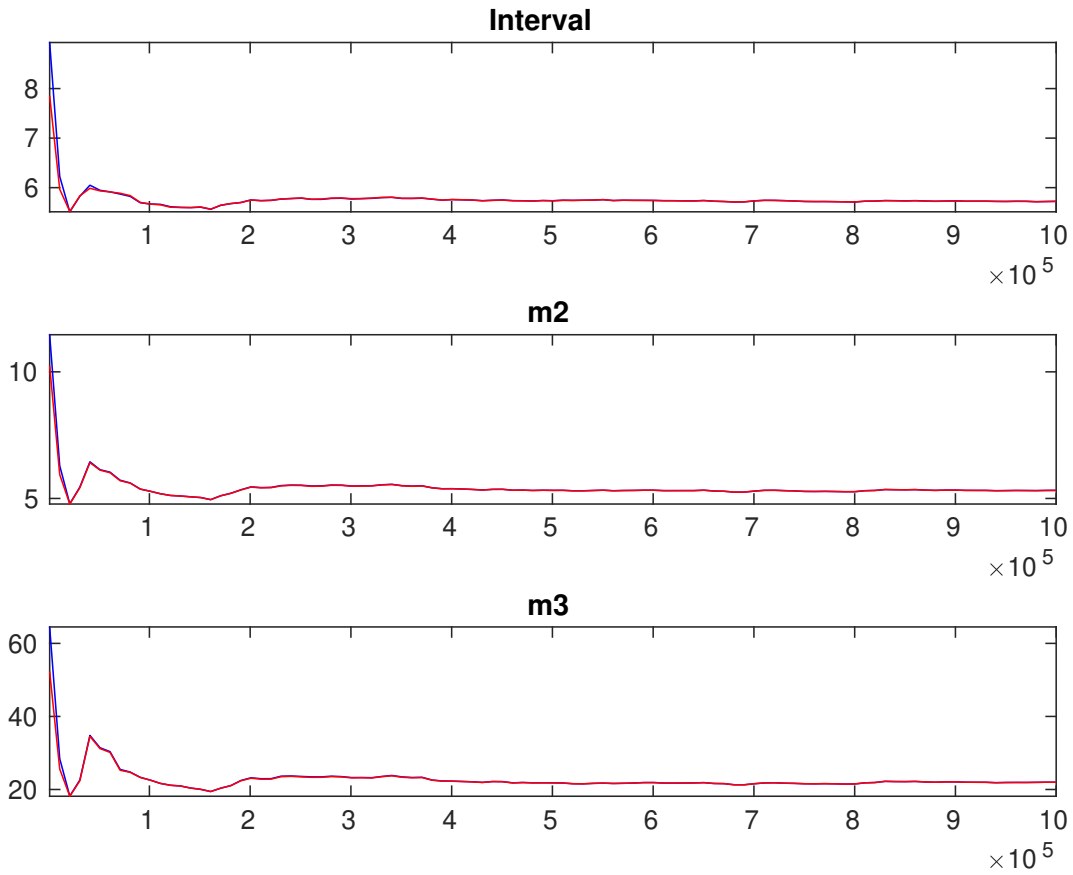

Figure 4: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

Table 2: Results from Metropolis-Hastings (parameters)

	Prior			Posterior			
	Dist.	Mean	Stdev.	Mean	Stdev.	HPD inf	HPD sup
α	norm	0.300	0.0500	0.301	0.0074	0.2885	0.3128
r_A	gamm	2.000	0.2500	2.011	0.2510	1.5993	2.4200
δ	unif	0.500	0.2887	0.023	0.0040	0.0163	0.0288
ρ_A	beta	0.500	0.1000	0.448	0.0467	0.3710	0.5245
σ_A	invg	0.600	2.0000	0.594	0.0560	0.5059	0.6848
θ	gamm	1.500	0.7500	1.498	0.7309	0.3808	2.5816
κ	gamm	2.000	1.5000	1.823	0.3056	1.3570	2.2877
ρ_υ	beta	0.500	0.1000	0.489	0.0460	0.4133	0.5647
σ_υ	invg	0.600	2.0000	0.635	0.1205	0.4394	0.8225

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
α	norm	0.300	0.0500	0.3021	0.0073
r_A	gamm	2.000	0.2500	1.9709	0.2472
δ	unif	0.500	0.2887	0.0206	0.0032
ρ_A	beta	0.500	0.1000	0.4444	0.0465
σ_A	invg	0.600	2.0000	0.5668	0.0481
θ	gamm	1.500	0.7500	0.9068	0.5387
κ	gamm	2.000	1.5000	1.6051	0.2223
ρ_υ	beta	0.500	0.1000	0.4851	0.0457
σ_υ	invg	0.600	2.0000	0.5283	0.1043

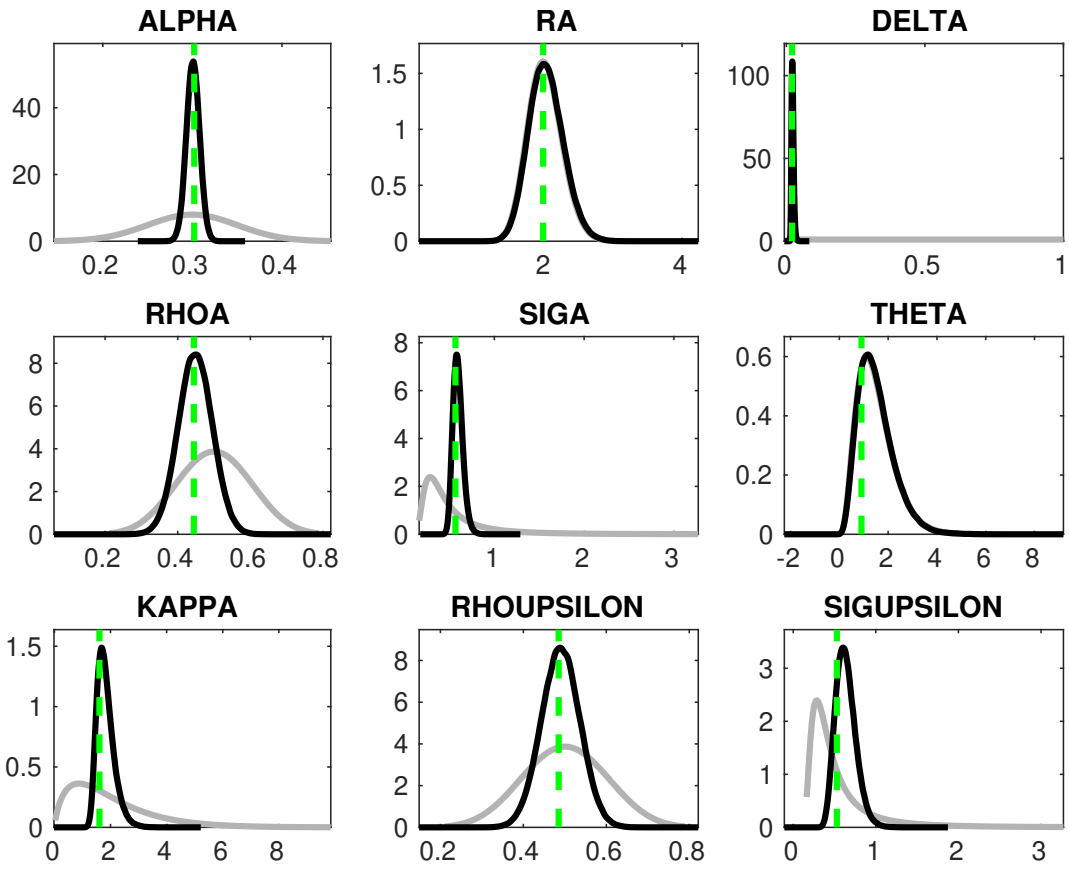

Figure 5: Priors and posteriors.

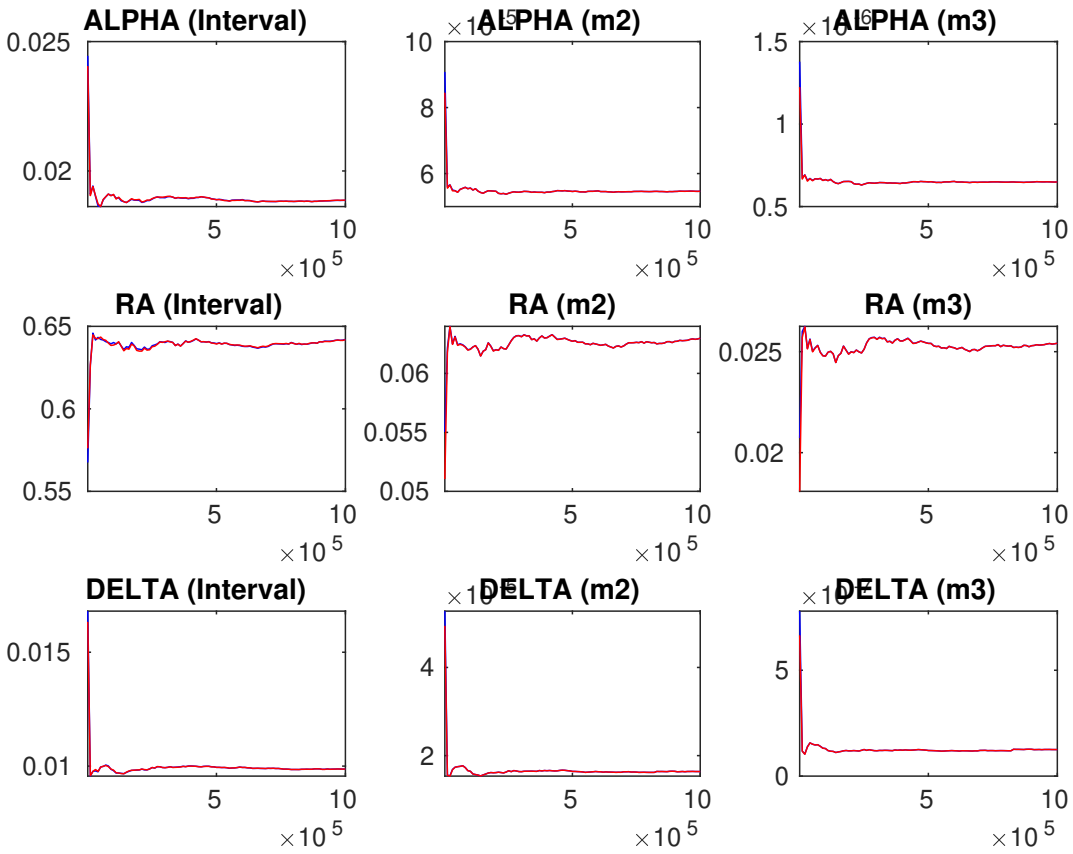

Figure 6: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

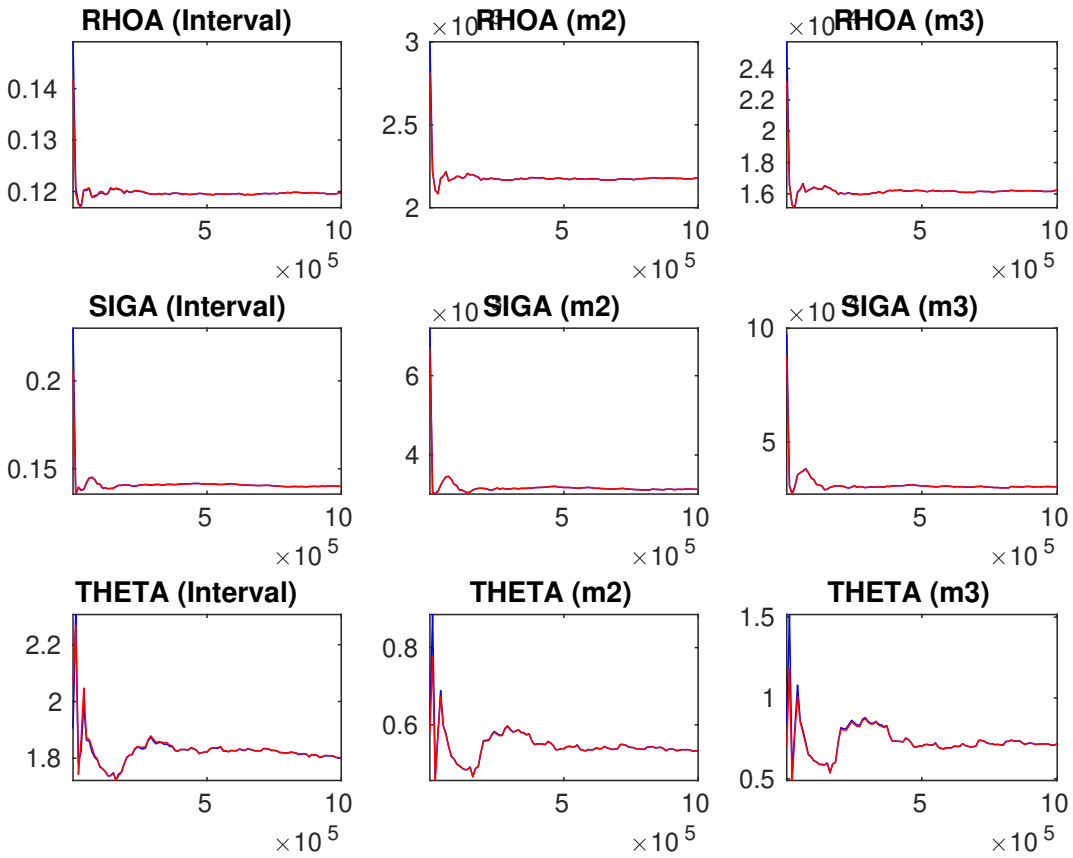

Figure 7: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

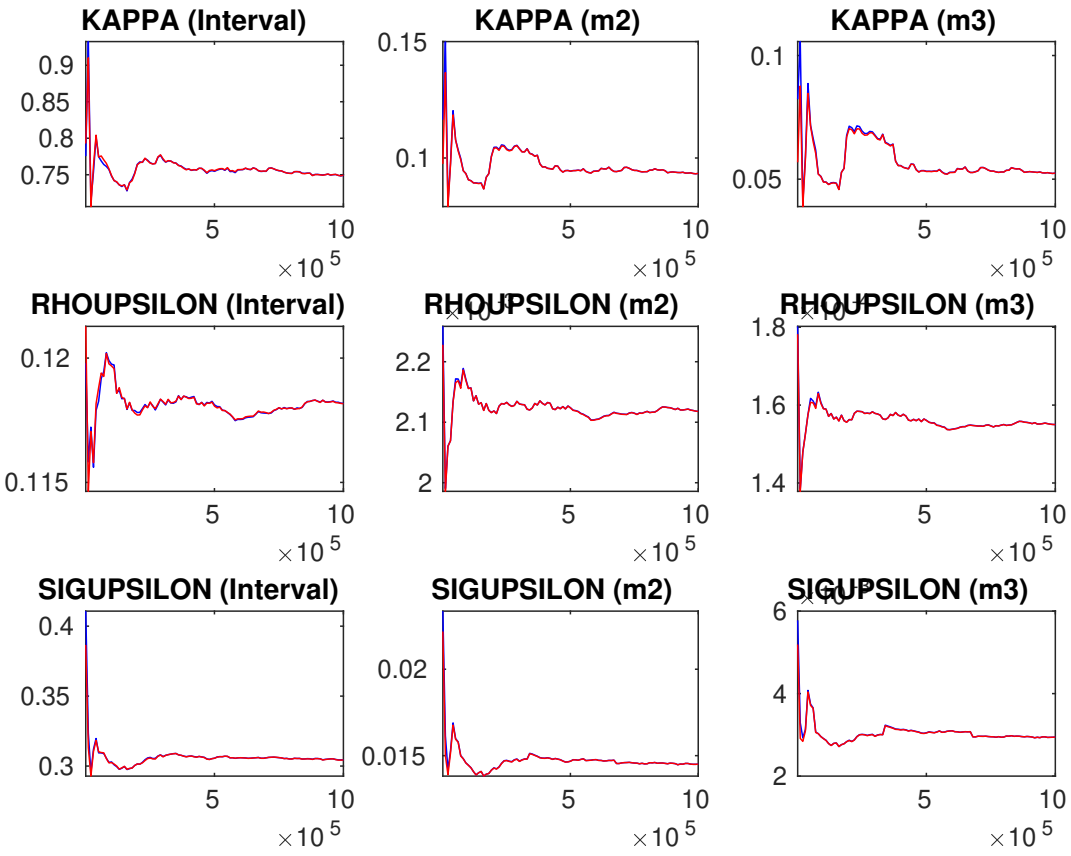

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.