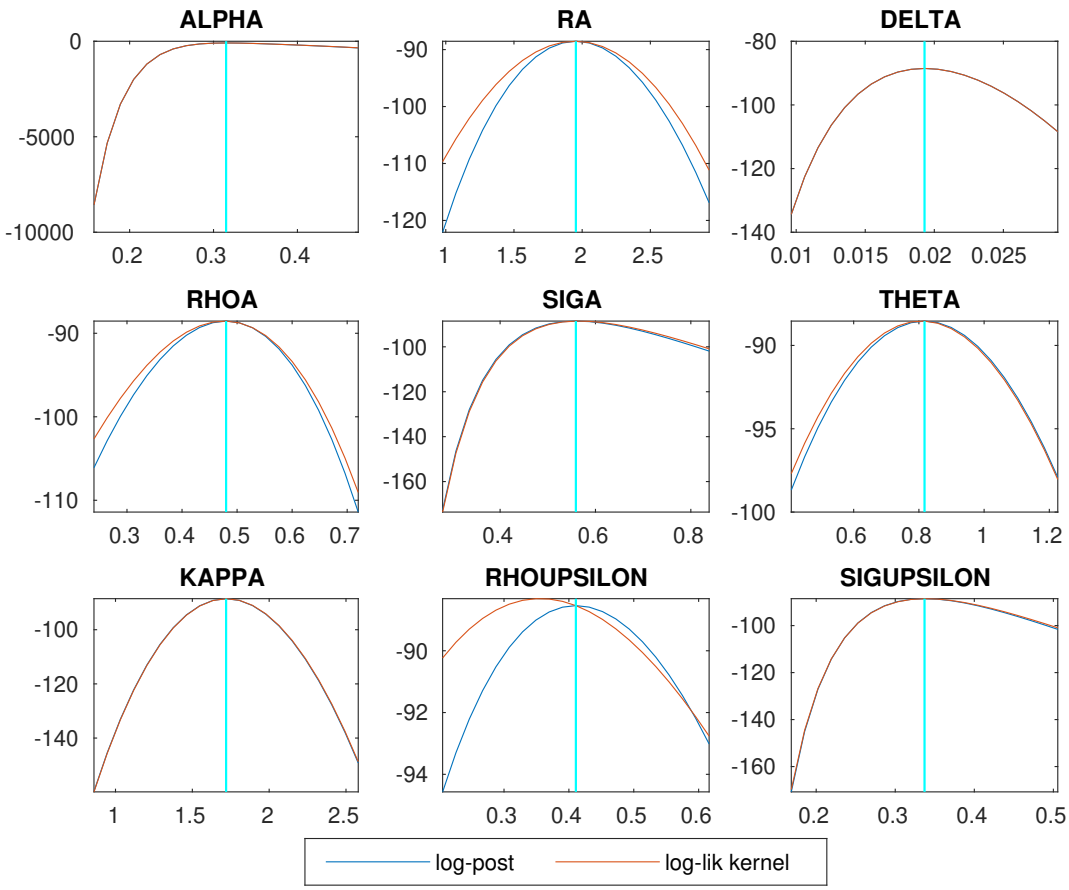

Figure 1: Check plots.

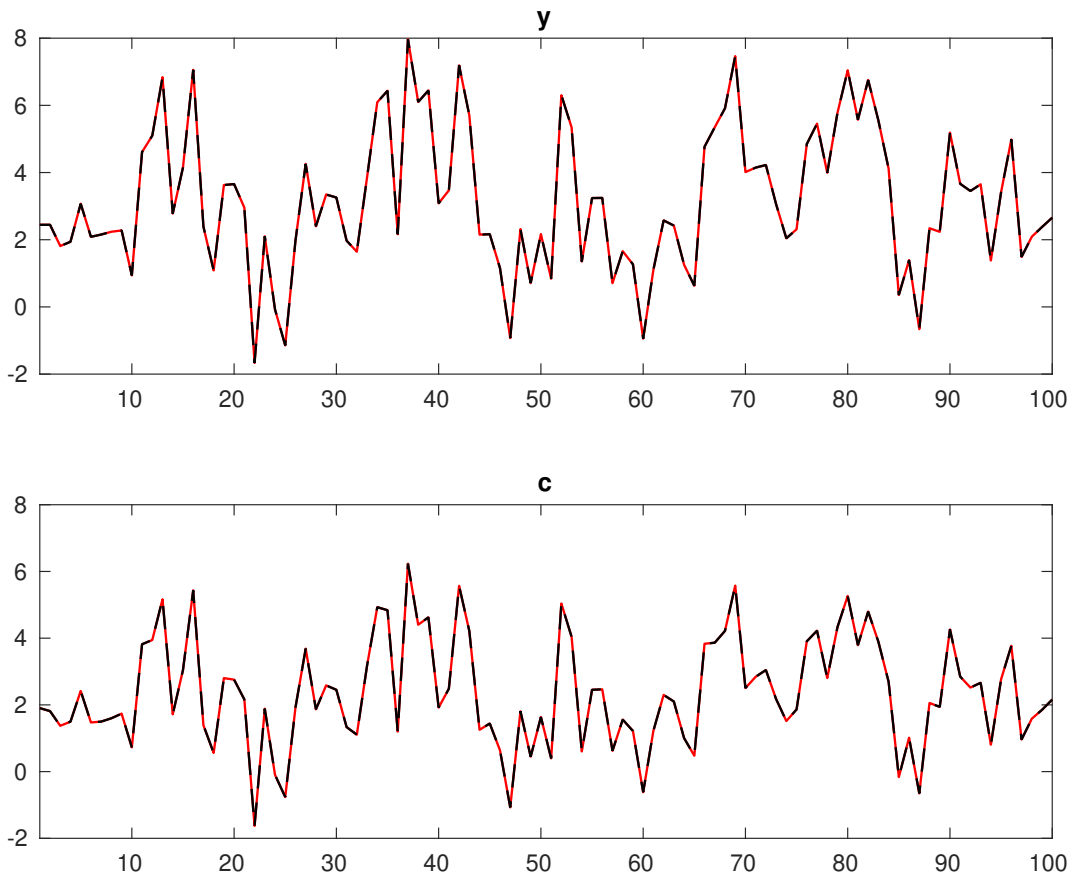

Figure 2: Historical and smoothed variables.

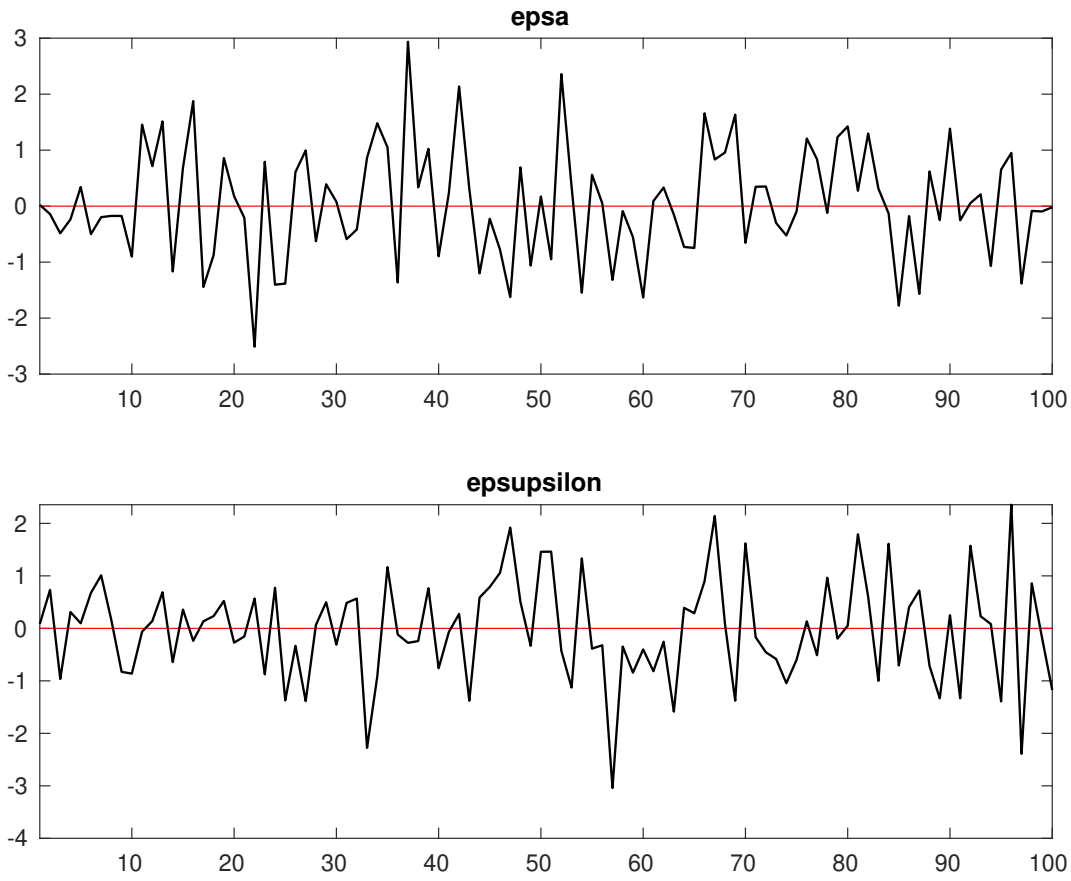

Figure 3: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
α	83.628	67.381	222.531	76.361
r_A	28.739	29.156	23.942	28.342
δ	185.969	136.357	603.680	168.919
ρ_A	36.036	39.777	56.306	34.916
σ_A	132.291	108.499	453.733	119.803
θ	76.782	62.805	89.498	54.508
κ	60.444	61.776	105.266	53.190
ρ_υ	34.004	35.685	39.541	30.028
σ_υ	135.958	125.008	427.964	107.619

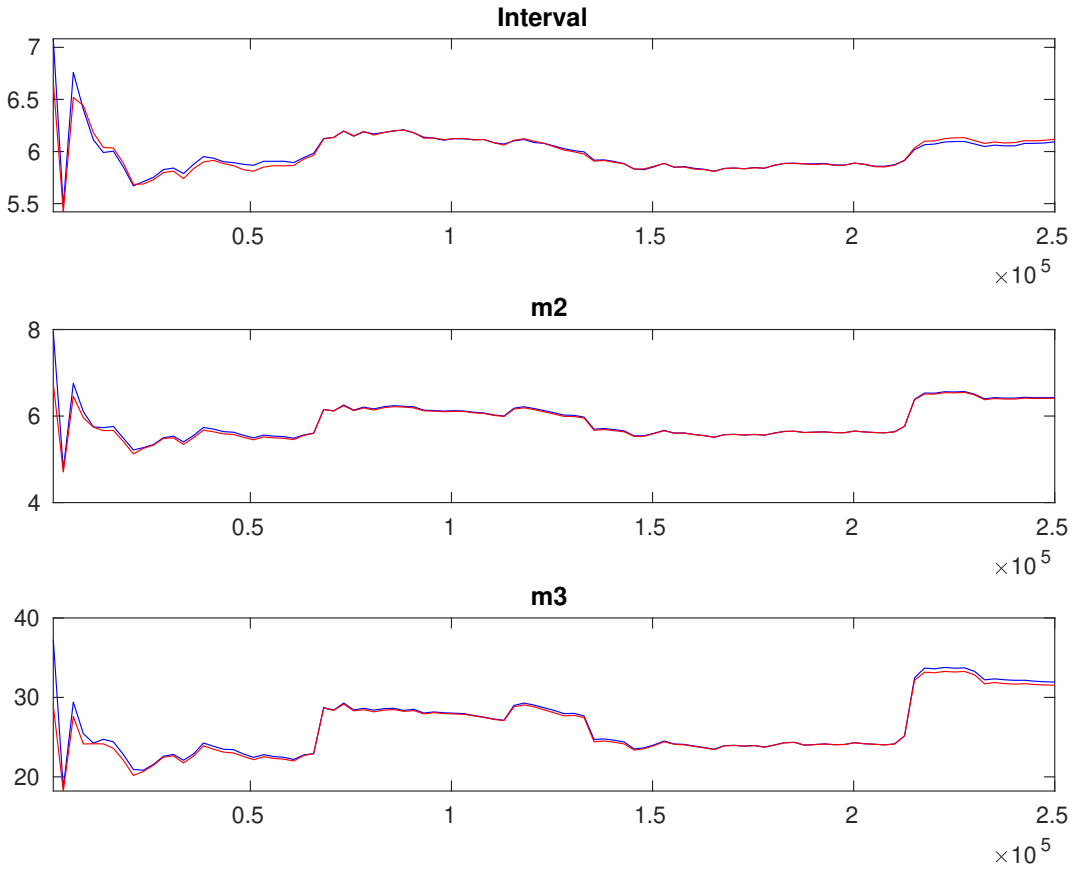

Figure 4: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

Table 2: Results from Metropolis-Hastings (parameters)

	Prior			Posterior			
	Dist.	Mean	Stdev.	Mean	Stdev.	HPD inf	HPD sup
α	norm	0.300	0.0500	0.310	0.0122	0.2901	0.3299
r_A	gamm	2.000	0.2500	1.987	0.2468	1.5782	2.3847
δ	unif	0.500	0.2887	0.023	0.0071	0.0148	0.0303
ρ_A	beta	0.500	0.1000	0.505	0.0662	0.3960	0.6141
σ_A	invg	0.600	4.0000	0.630	0.1146	0.4623	0.7858
θ	gamm	1.500	0.7500	0.954	0.2392	0.5867	1.3212
κ	gamm	2.000	1.5000	1.859	0.2423	1.4745	2.2322
ρ_υ	beta	0.500	0.1000	0.432	0.0733	0.3118	0.5536
σ_υ	invg	0.600	4.0000	0.418	0.1011	0.2717	0.5489

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
α	norm	0.300	0.0500	0.3150	0.0108
r_A	gamm	2.000	0.2500	1.9539	0.2454
δ	unif	0.500	0.2887	0.0193	0.0031
ρ_A	beta	0.500	0.1000	0.4801	0.0647
σ_A	invg	0.600	4.0000	0.5589	0.0734
θ	gamm	1.500	0.7500	0.8173	0.1803
κ	gamm	2.000	1.5000	1.7198	0.1911
ρ_υ	beta	0.500	0.1000	0.4108	0.0723
σ_υ	invg	0.600	4.0000	0.3370	0.0567

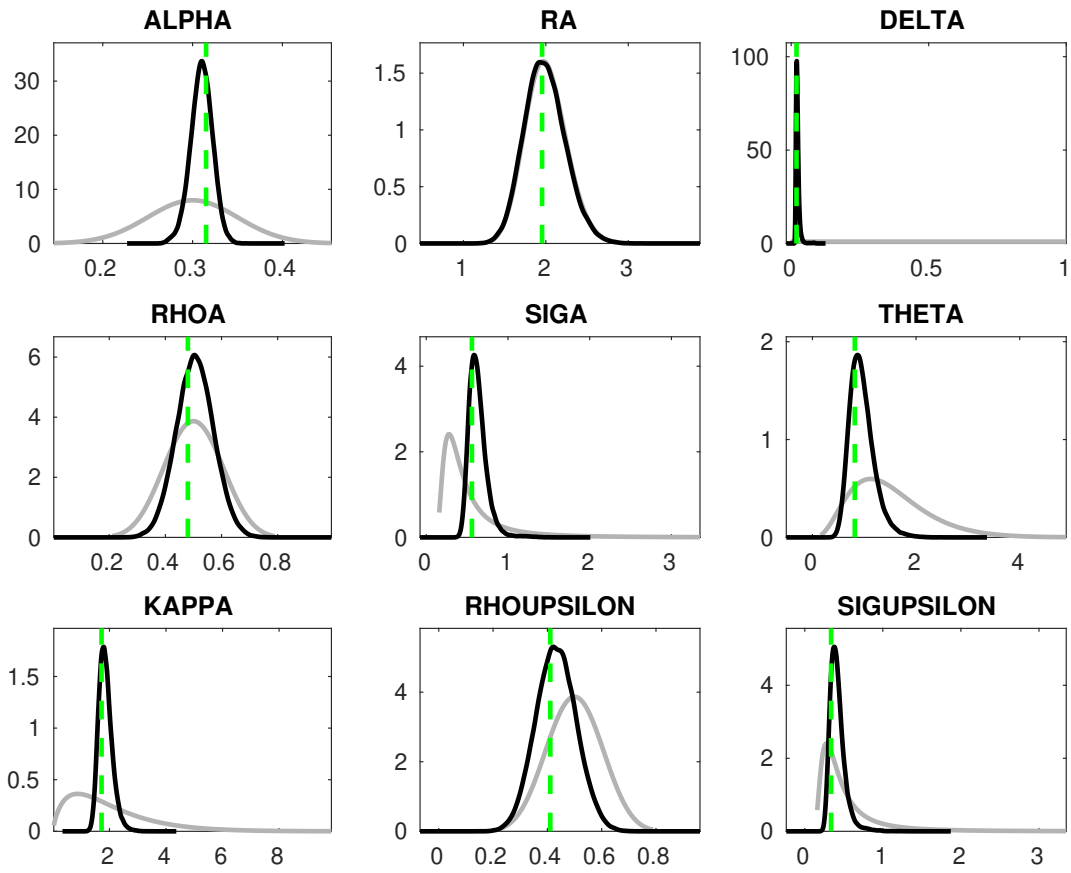

Figure 5: Priors and posteriors.

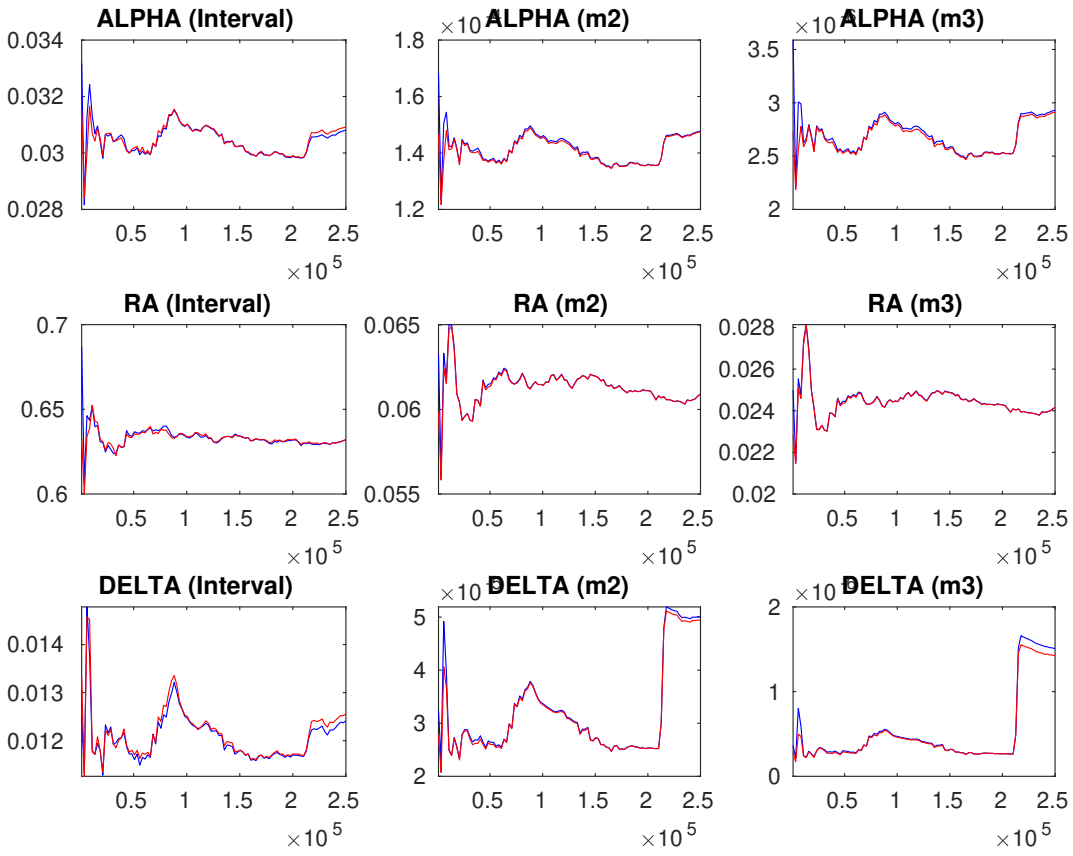

Figure 6: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

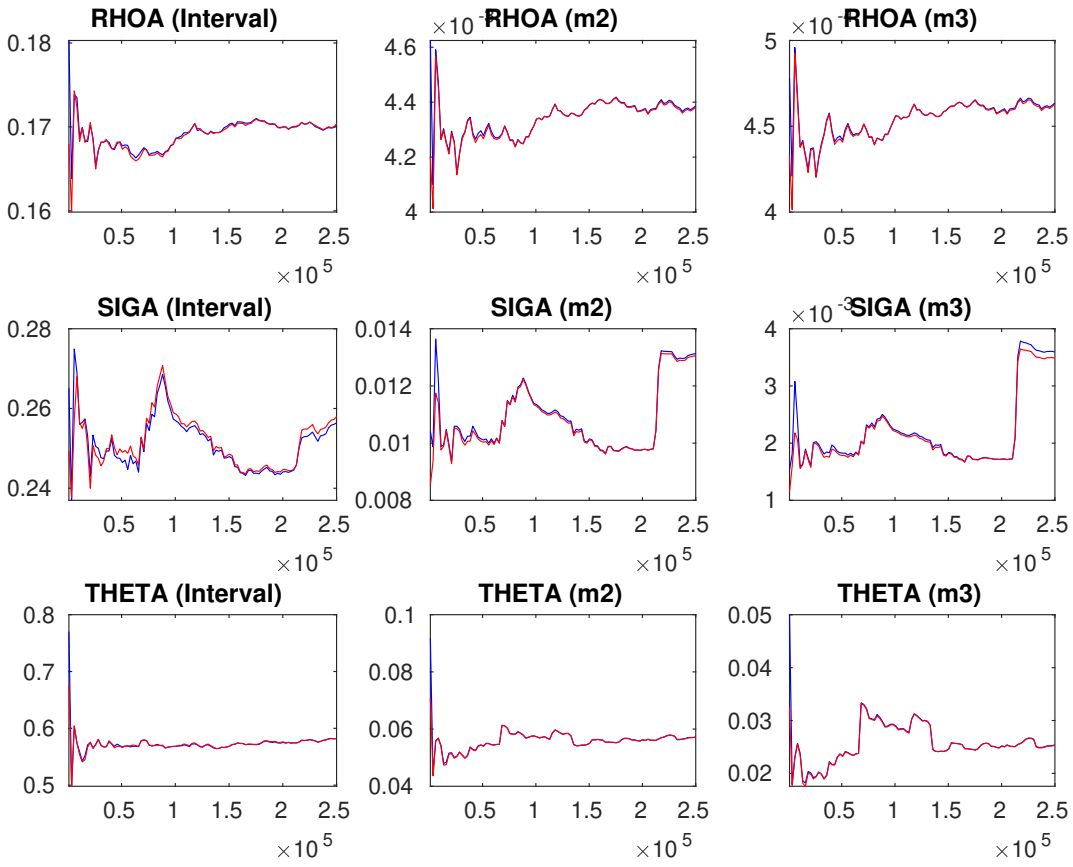

Figure 7: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

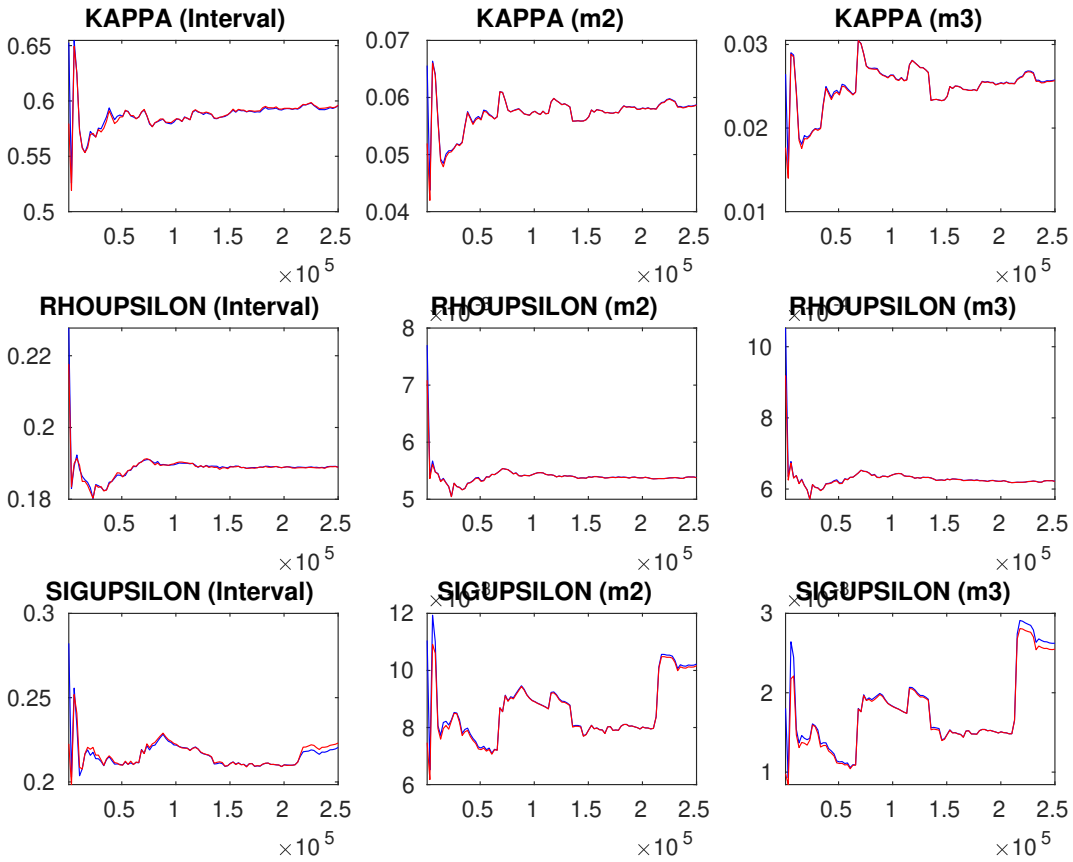

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.