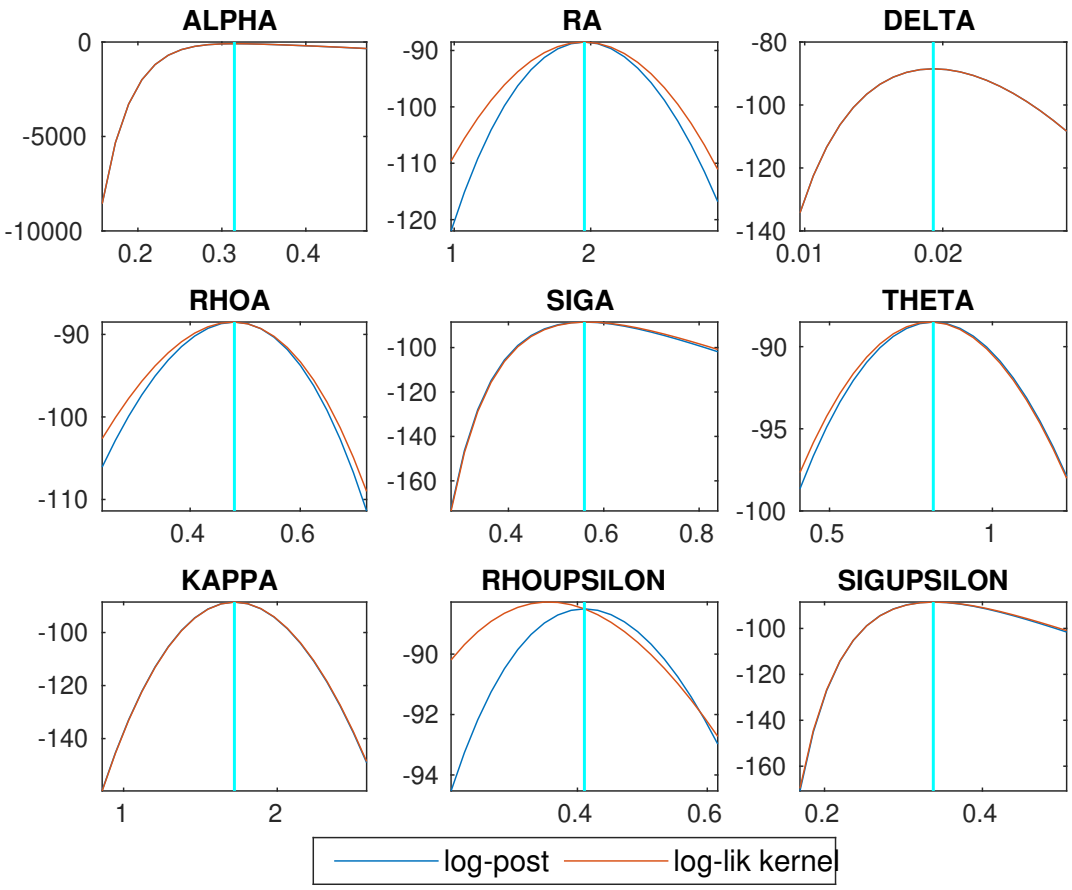

Figure 1: Check plots.

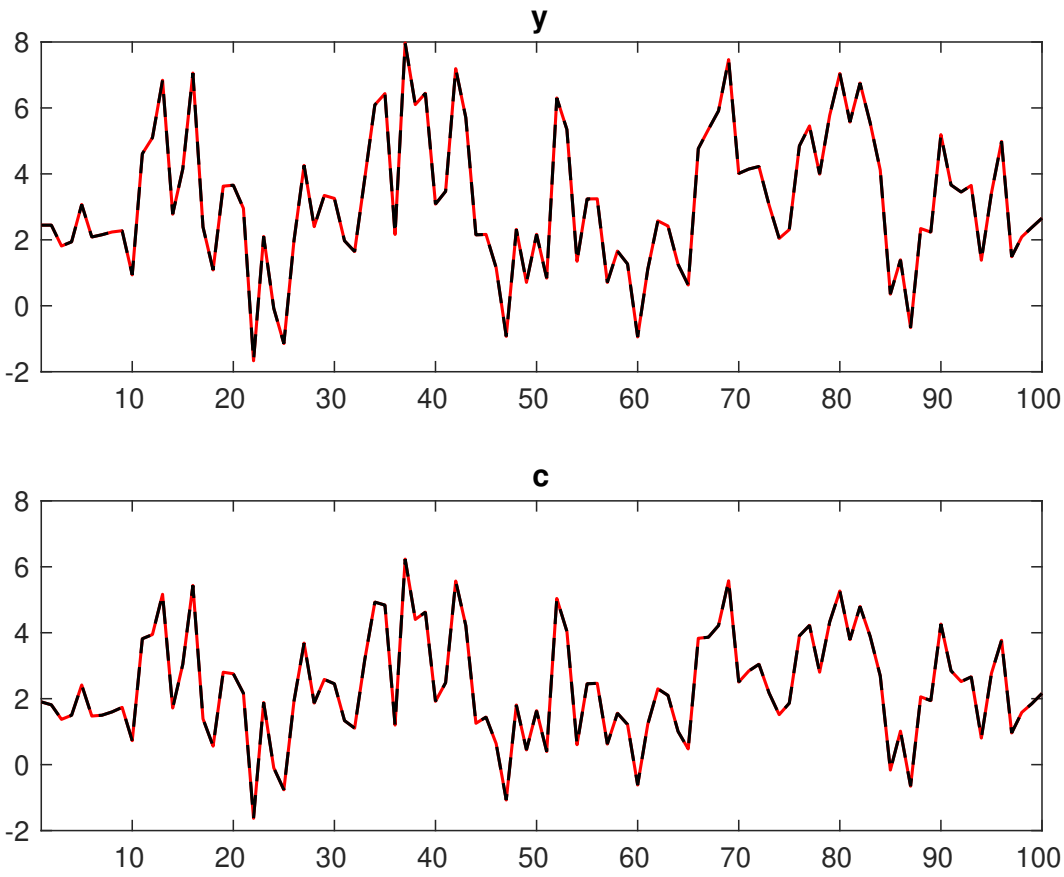

Figure 2: Historical and smoothed variables.

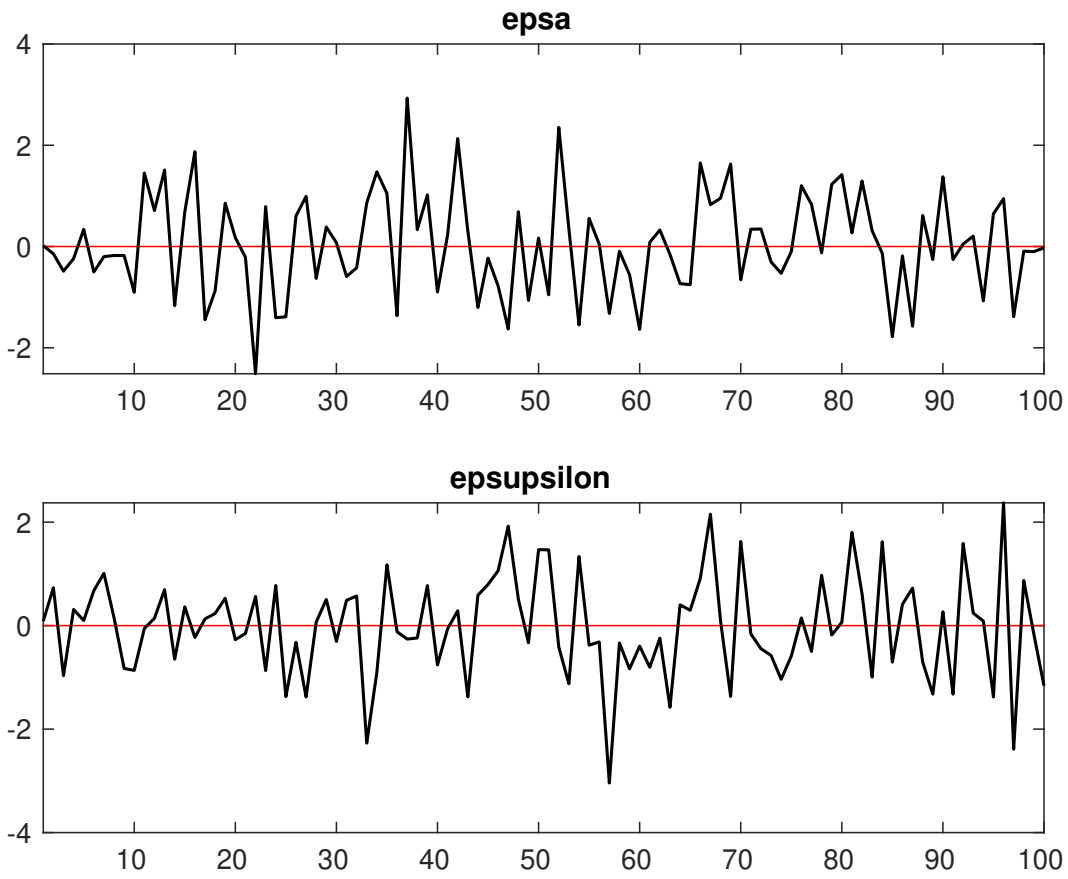

Figure 3: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
α	108.123	96.431	87.930	89.565
r_A	30.765	29.833	32.307	30.989
δ	315.628	279.593	204.553	217.196
ρ_A	37.165	34.948	33.977	35.832
σ_A	203.592	179.617	143.223	151.196
θ	60.147	60.754	65.338	68.614
κ	58.557	55.446	60.737	64.098
ρ_υ	30.017	32.613	33.993	30.630
σ_υ	183.604	143.762	152.528	145.628

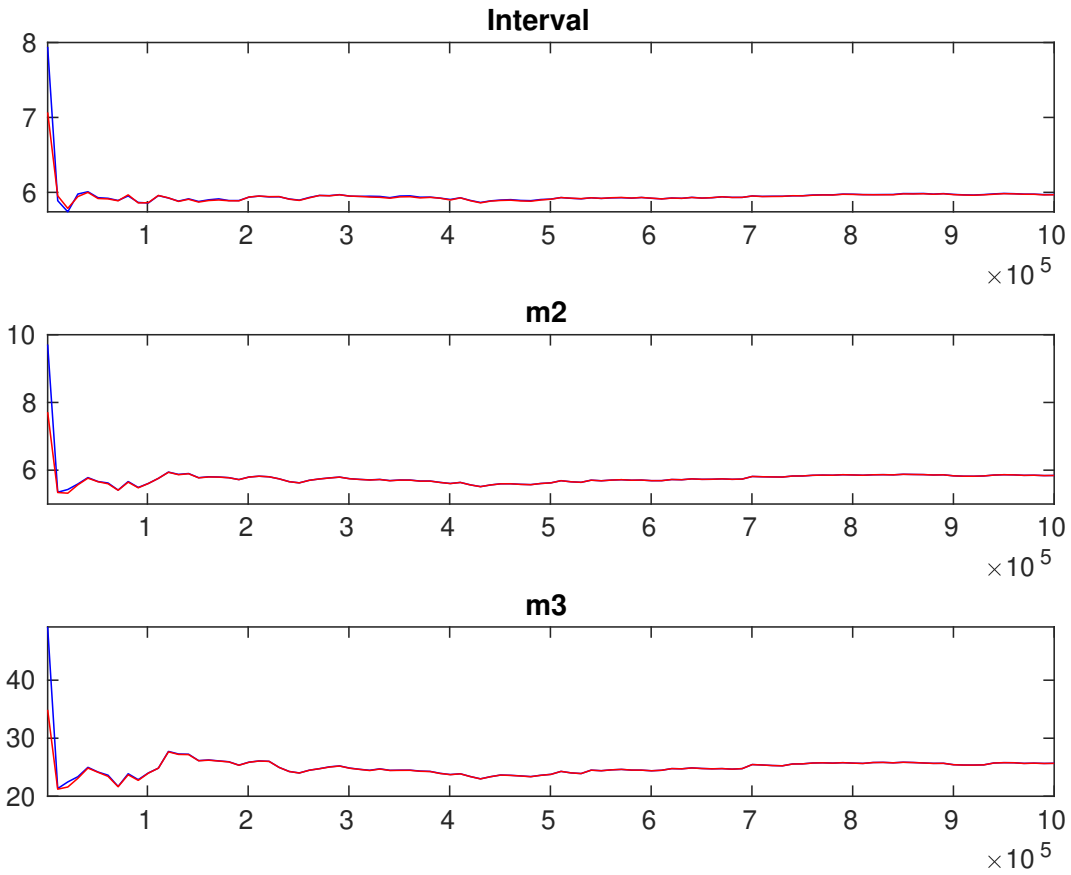

Figure 4: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	0.0119	0.2903	0.3296
r_A	gamm	2.000	0.2500	1.990	0.2473	1.5833	2.3930
δ	unif	0.500	0.2887	0.023	0.0057	0.0149	0.0299
ρ_A	beta	0.500	0.1000	0.504	0.0655	0.3951	0.6103
σ_A	invg	0.600	2.0000	0.626	0.1052	0.4644	0.7825
θ	gamm	1.500	0.7500	0.947	0.2310	0.5855	1.3039
κ	gamm	2.000	1.5000	1.850	0.2325	1.4698	2.2055
ρ_υ	beta	0.500	0.1000	0.432	0.0734	0.3108	0.5526
σ_υ	invg	0.600	2.0000	0.413	0.0905	0.2786	0.5449

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
α	norm	0.300	0.0500	0.3149	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	0.4804	0.0647
σ_A	invg	0.600	2.0000	0.5594	0.0734
θ	gamm	1.500	0.7500	0.8186	0.1805
κ	gamm	2.000	1.5000	1.7211	0.1913
ρ_υ	beta	0.500	0.1000	0.4107	0.0724
σ_υ	invg	0.600	2.0000	0.3378	0.0567

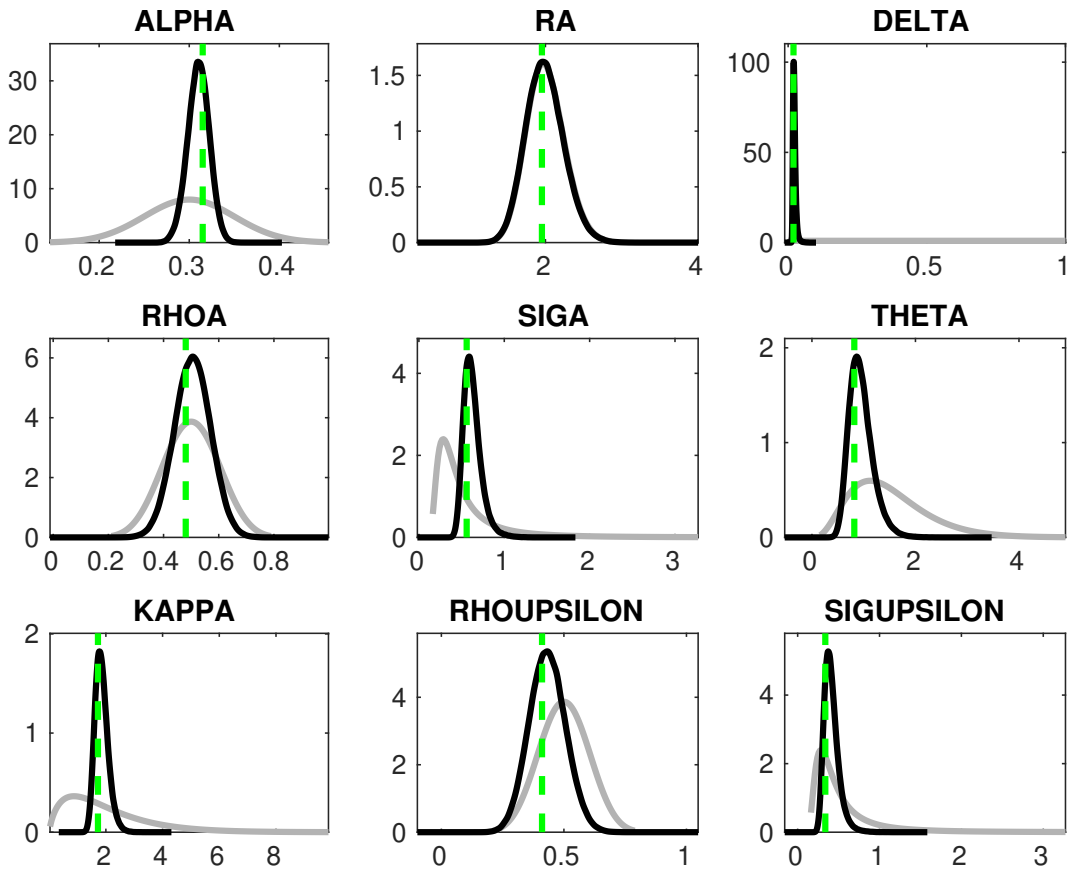

Figure 5: Priors and posteriors.

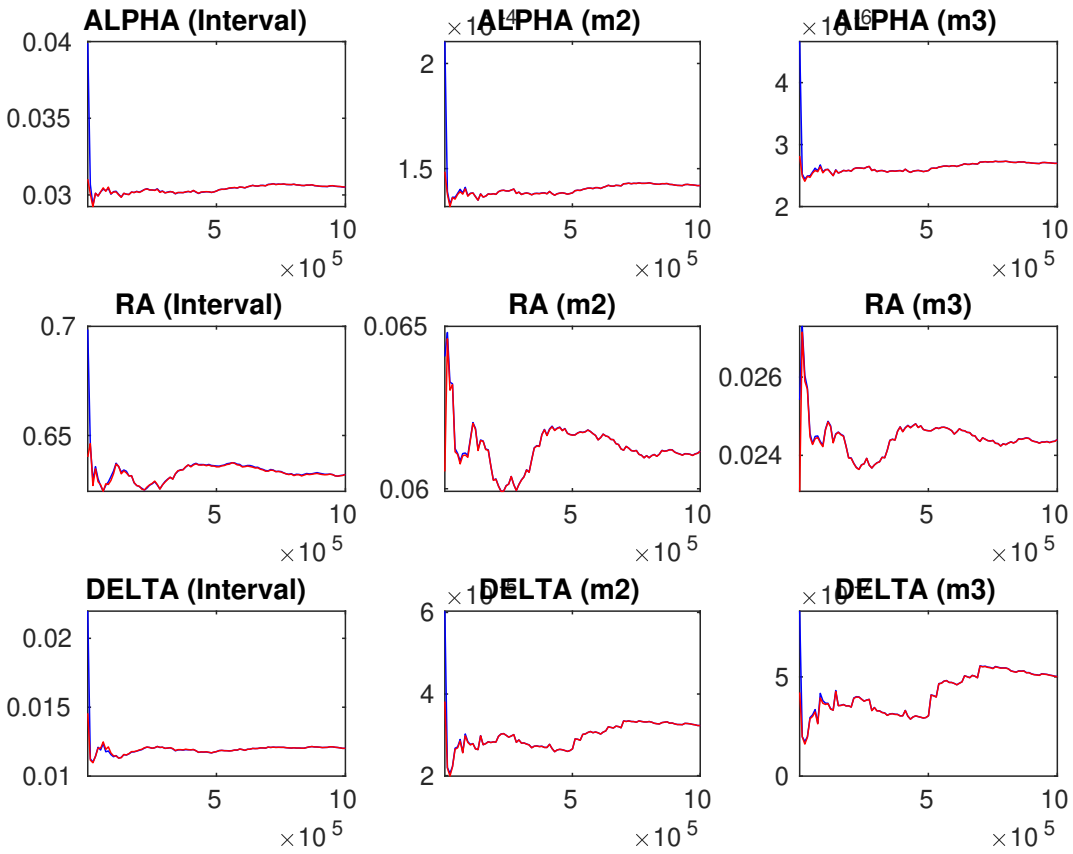

Figure 6: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

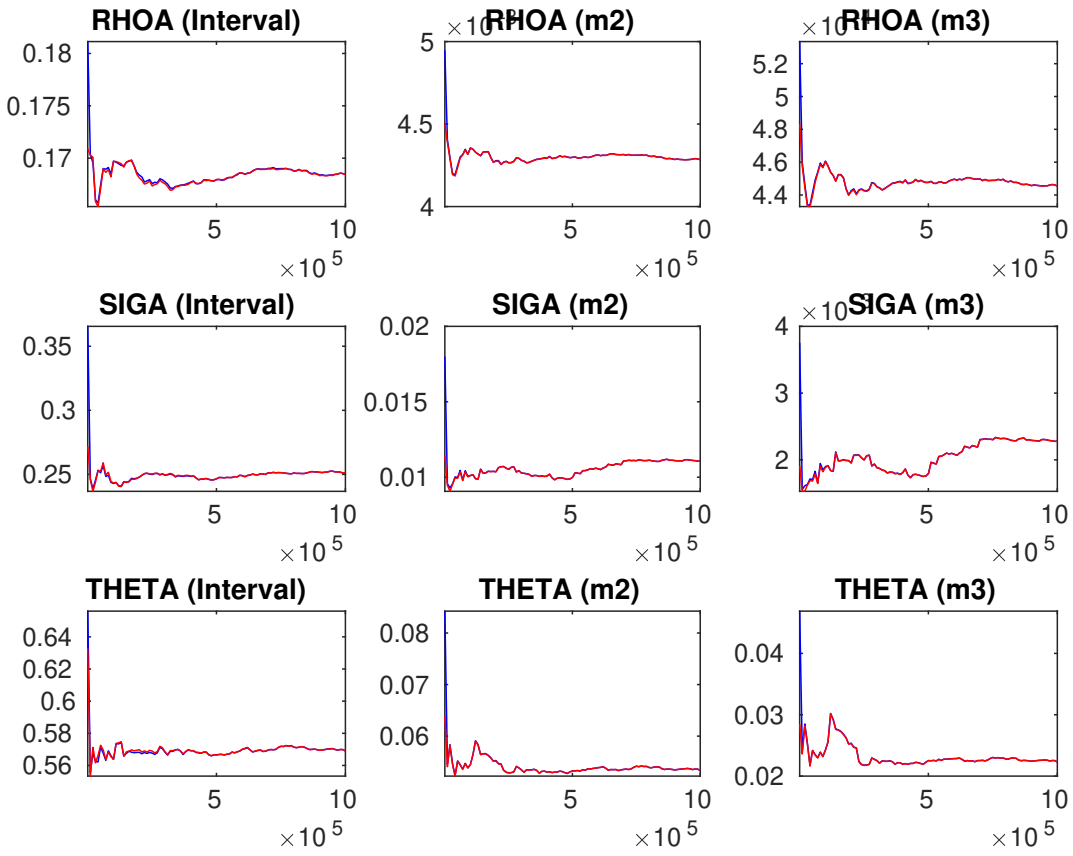

Figure 7: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

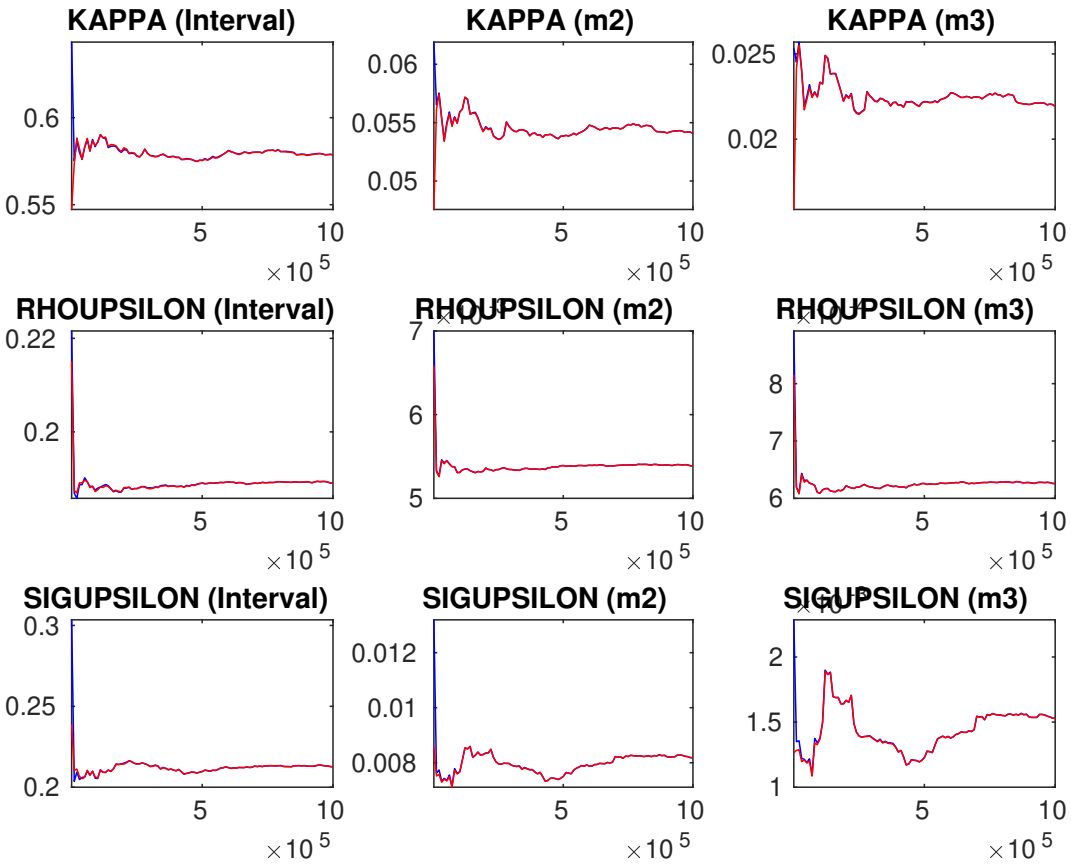

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.