

Appendix 5: Posterior summaries and trace plots

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Table A5: Posterior summaries, including the mean, standard deviation, 95% credibility interval (highest density interval), \hat{R} , and effective sample size. Descriptions of parameters can be found in Table 1. More information about parameter ρ can be found in Appendix 2.1.

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parameter	mean	sd	95 CI	Rhat	ESS
$\log(\mu^A)$	3.627	0.057	(3.512, 3.734)	1.04	403
σ^A	0.2857	0.0248	(0.2373, 0.3339)	1.03	515
μ^R	9.398	2.689	(3.924, 14.429)	1.08	313
σ^R	4.994	0.68	(3.638, 6.23)	1.00	1487
x_∞	82.63	1.15	(80.27, 84.74)	1.06	120
k	1.163	0.066	(1.042, 1.29)	1.07	158
A	1.978	0.18	(1.619, 2.313)	1.04	169
d_s	-0.8014	0.0126	(-0.8248, -0.7756)	1.02	636
σ^G	2.813	0.238	(2.37, 3.252)	1.07	148
β_1	0.01689	0.02249	(0, 0.06655)	1.05	233
β_2	0.0006537	0.0011207	(0, 0.0028413)	1.06	1086
β_3	0.0006363	0.001008	(0, 0.0027801)	1.00	2037
β_4	0.005053	0.007643	(0, 0.020887)	1.03	739
β_5	0.001997	0.003301	(0, 0.008677)	1.02	2581
α	5.695	5.384	(0, 16.745)	1.01	951
β_α	0.4077	0.2795	(0.0546, 0.97)	1.02	1299

(continued)

parameter	mean	sd	95 CI	Rhat	ESS
β_θ	85.75	40.83	(16.66, 150)	1.01	1146
α_1^o	1.855	0.405	(1.114, 2.68)	1.06	264
α_2^o	1.593	0.472	(0.721, 2.53)	1.02	736
α_3^o	1.5	0.375	(0.83, 2.267)	1.05	289
α_α^o	33.85	11.31	(12.66, 50)	1.00	14959
α_θ^o	21.76	9.16	(3.89, 38.67)	1.02	1183
h_F^{max}	0.0003087	1.75e-05	(0.0002746, 0.0003425)	1.01	2882
h_M^{max}	0.0003555	5.59e-05	(0.000252, 0.0004678)	1.01	819
h_S^{max}	0.004668	0.000388	(0.003897, 0.005422)	1.00	5171
h_F^k	0.2845	0.0476	(0.201, 0.379)	1.00	6730
h_S^k	0.3388	0.0462	(0.2551, 0.4329)	1.01	3857
h_F^0	42.69	1.78	(39.17, 46.19)	1.02	831
h_S^0	48.22	1.37	(45.55, 50.88)	1.01	2350
h_M^A	46.59	0.66	(45.29, 47.86)	1.01	1433
h_M^σ	6.392	0.379	(5.665, 7.142)	1.00	7653
ρ	0.03918	0.00741	(0.02512, 0.05414)	1.00	30984
λ^A	352.1	71.5	(262.1, 508.1)	1.04	373
λ_1^R	1276	469	(527, 2200)	1.06	507
λ_2^R	51.24	12.3	(29, 75.21)	1.01	1850
λ_3^R	2267	624	(1221, 3468)	1.04	621
λ_4^R	120.8	51.3	(39.3, 222.2)	1.02	1133
μ^λ	852.4	845.9	(1.1, 2384)	1.01	8365
μ^σ	2142	1522	(417, 5424)	1.01	5578

Figure A5: Trace plots of posterior samples. Colors refer to separate chains. Descriptions of parameters can be found in Table 1.

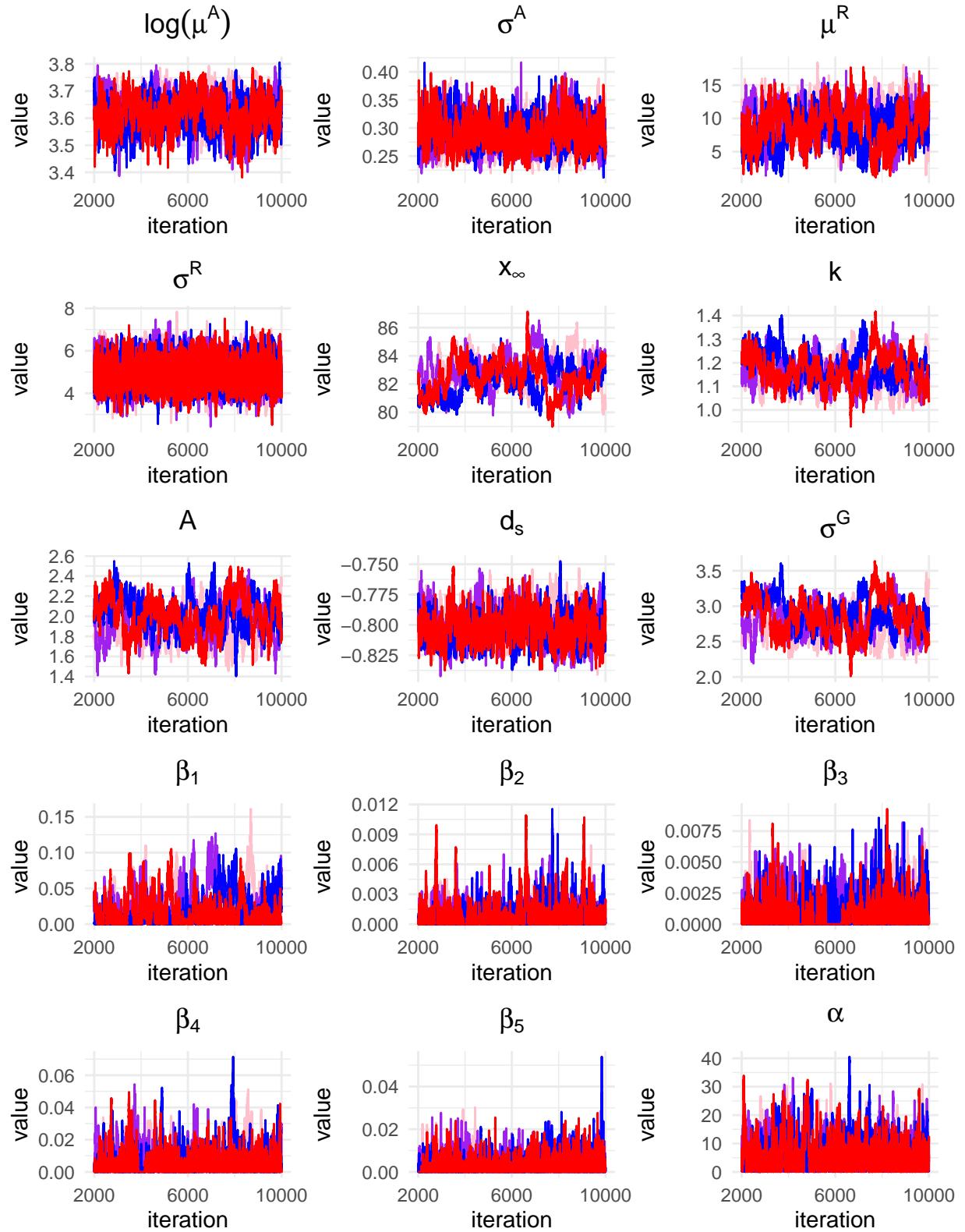


Figure A5 continued.

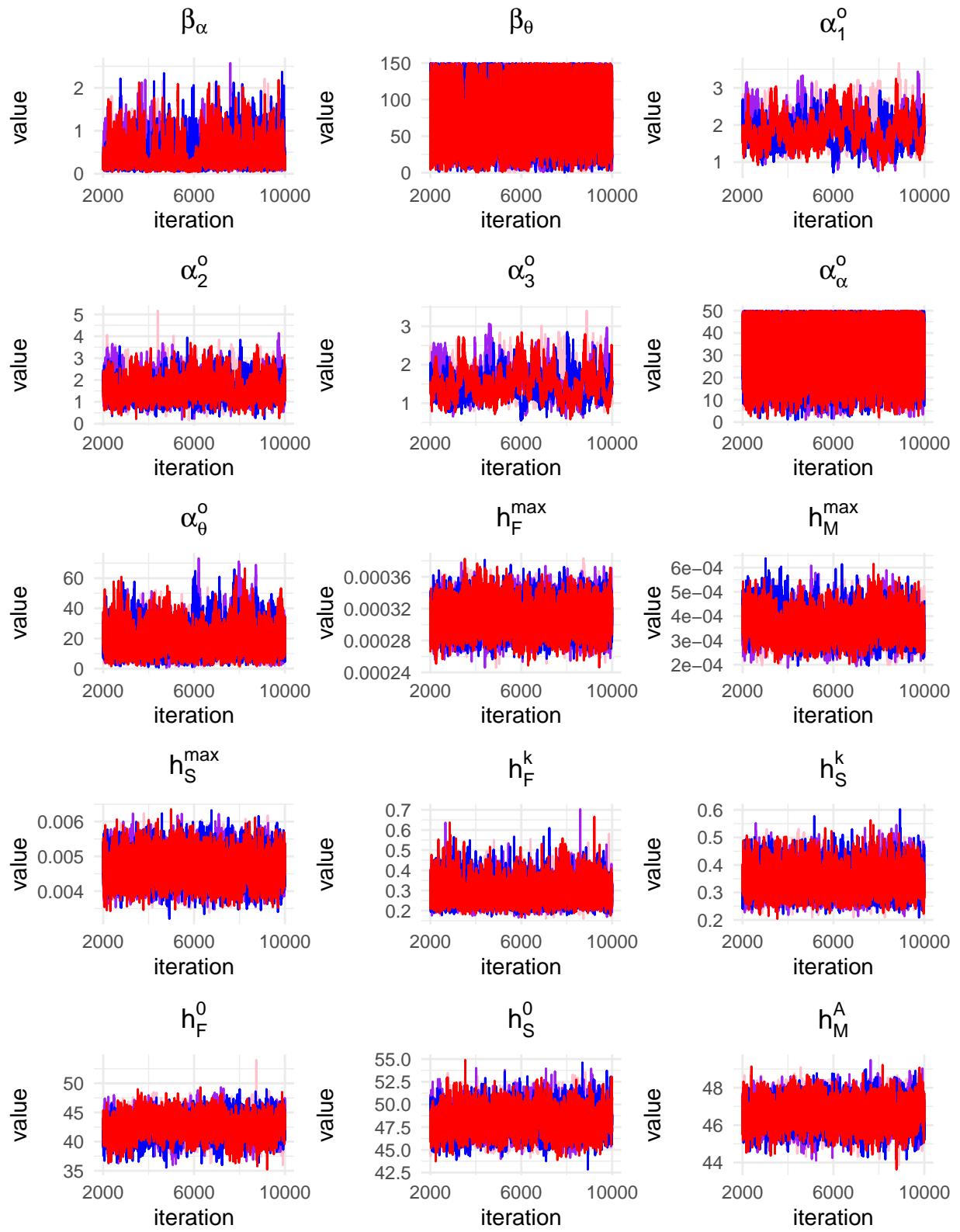


Figure A5 continued.

