

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
μ^A	3.802	0.044	(3.715, 3.885)	1.04	380
σ^A	0.2141	0.0185	(0.1795, 0.2513)	1.03	572
μ^R	11.23	2.7	(5.8, 16.57)	1.03	491
σ_R	5.054	0.848	(3.52, 6.66)	1.00	1731
x_∞	80.74	0.93	(78.9, 82.53)	1.03	277
k	1.198	0.074	(1.056, 1.35)	1.04	304
A	1.494	0.16	(1.193, 1.8)	1.05	325
d_s	0.245	0.0195	(0.2085, 0.2837)	1.03	516
σ_G	2.768	0.225	(2.301, 3.195)	1.05	229
d_0	0.2106	0.0312	(0.1474, 0.2693)	1.00	2131
σ_w	6.912	0.776	(5.443, 8.442)	1.00	7731
σ_y	3.811	1.826	(0.292, 7.084)	1.00	3967
β	0.001731	0.001673	(0, 0.005167)	1.00	2342
α	9.29	8.91	(0.001, 27.054)	1.01	1218
α_o	3.106	0.516	(2.095, 4.13)	1.03	407
ϵ_1	0.01766	0.08183	(-0.15042, 0.20563)	1.00	2768

(continued)

parameter	mean	sd	95 CI	Rhat	ESS
ϵ_2	-0.0003512	0.0385147	(-0.0611457, 0.0780163)	1.00	6741
ϵ_3	-0.06781	0.11072	(-0.33326, 0.0946)	1.01	3547
σ_o	0.1424	0.2029	(1e-04, 0.457)	1.01	1828
h_F^{max}	0.000179	1.5e-05	(0.0001511, 0.0002098)	1.00	4155
h_M^{max}	0.0003906	6.08e-05	(0.0002767, 0.000513)	1.00	2270
h_S^{max}	0.00394	0.000397	(0.003185, 0.004732)	1.00	2138
h_F^k	0.4942	0.1836	(0.2316, 0.8732)	1.00	4670
h_S^k	0.3447	0.0548	(0.2465, 0.4553)	1.00	5987
h_F^0	35.41	1.97	(31.65, 39.26)	1.00	1440
h_S^0	46.4	1.44	(43.69, 49.31)	1.00	1493
h_M^A	45.11	0.67	(43.76, 46.39)	1.00	1491
h_M^σ	6.445	0.376	(5.732, 7.196)	1.00	15483
ρ	0.03821	0.00739	(0.02395, 0.05258)	1.00	29942
λ^A	438	42.9	(357.8, 524.1)	1.00	2238
λ_1^R	694.1	229	(323.5, 1149.6)	1.00	1047
λ_2^R	50.05	12.47	(28.88, 74.85)	1.00	2286
λ_3^R	1381	321	(841, 2021)	1.01	749
λ_4^R	60.92	24.25	(22.68, 108.44)	1.00	2309
μ^λ	5.415	2.494	(1.008, 9.78)	1.00	12593
μ^σ	3.566	3.866	(0.737, 9.28)	1.00	3543

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

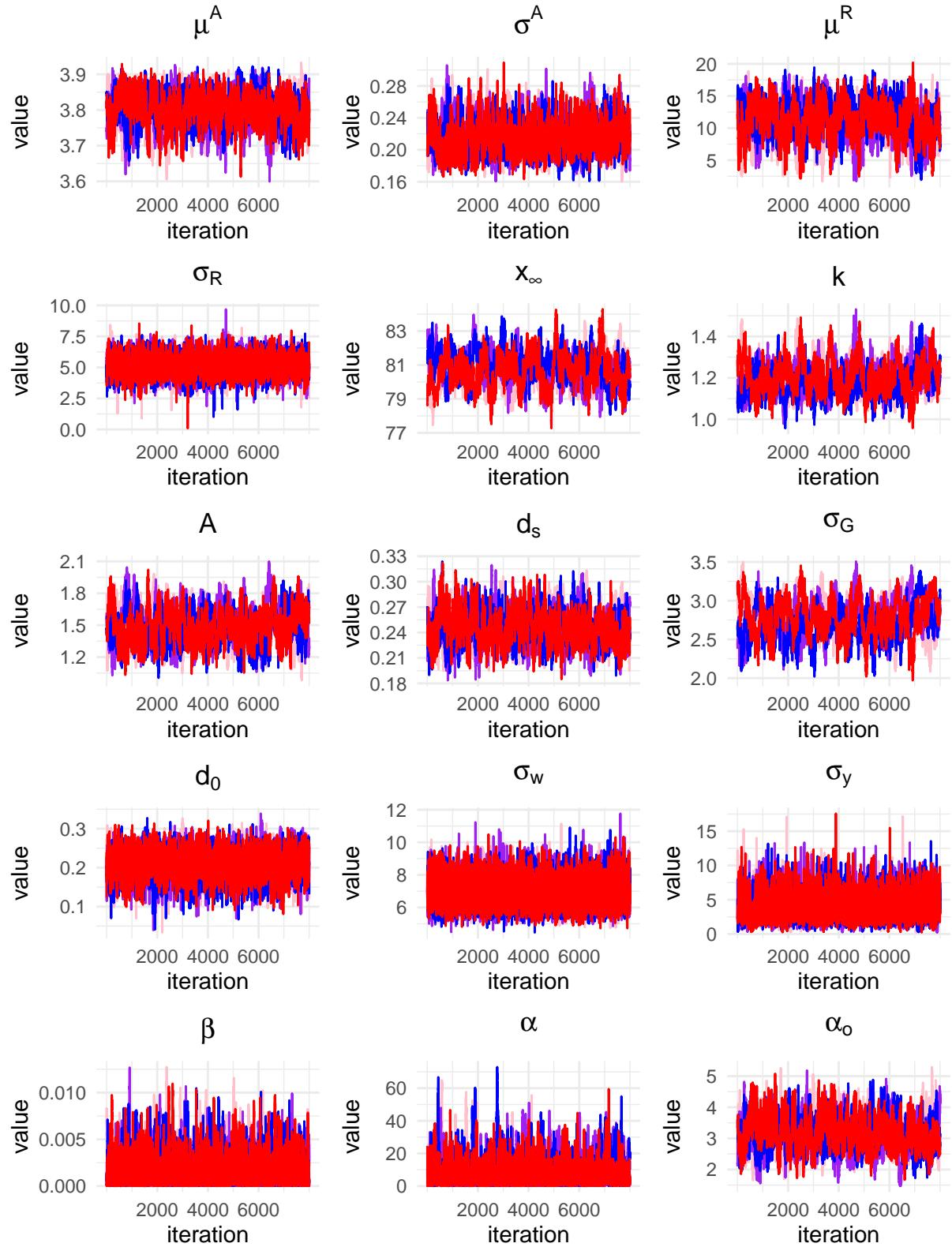


Figure A5 continued.

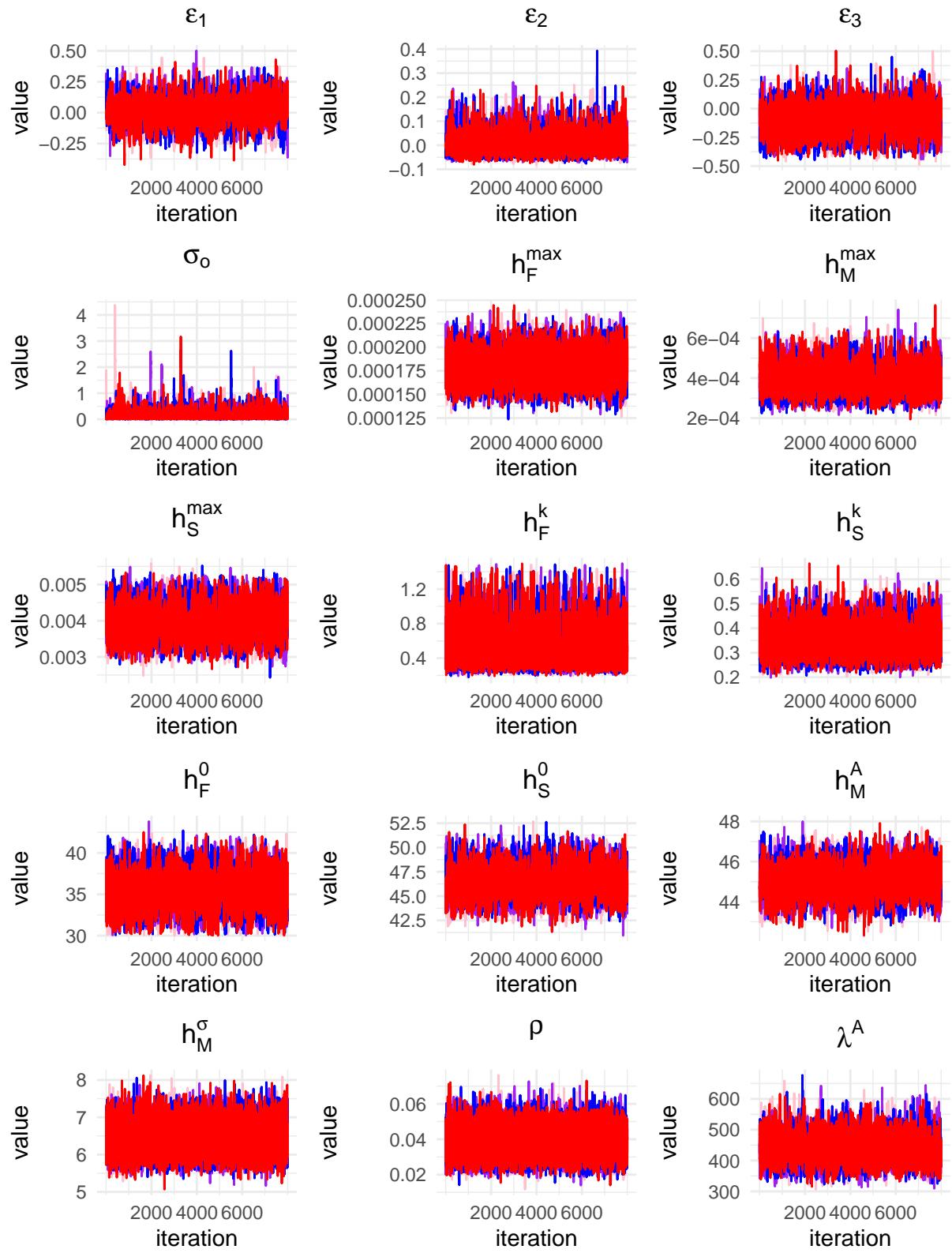


Figure A5 continued.

