Supplement S8. MCMC summary statistics and WAIC for the modified model (1).

```
> #### MCMC summary statistics and WAIC
>
> calculateWAIC(CmyMCMC)
Compiling
  [Note] This may take a minute.
  [Note] Use 'showCompilerOutput = TRUE' to see C++ compilation details.
Calculating WAIC.
nimbleList object of type waicList
Field "WAIC":
[1] 2471.407
Field "lppd":
[1] -1050.193
Field "pWAIC":
[1] 185.5103
> MCMCsummary(mcmcb,params=c('a','MV','Env','sig2V','sig2R','covE',
+    'covEV','sig2','HMRPVG','Sup',
+    'rhoE','rhoEV'),
+     n.eff=FALSE)
                  mean          sd         2.5%         50%       97.5%
a[1]         28.3208562  4.02653090  20.31659105  28.3134551  36.2666612
a[2]         50.3235111  3.78949964  42.79604046  50.3228833  57.8439087
MV[1, 1]     25.1629716  4.07468000  17.11036009  25.1644656  33.2517542
MV[2, 1]     28.2195691  4.03211785  20.19808659  28.2185735  36.1902702
MV[3, 1]     28.9132710  4.02254098  20.95367502  28.9042449  36.8830724
MV[4, 1]     28.3307109  4.02432277  20.37443705  28.3215842  36.2780522
MV[5, 1]     29.1637939  4.02444150  21.15677110  29.1668941  37.0860092
MV[6, 1]     28.1037425  4.03060801  20.09580026  28.1008635  36.0371353
MV[7, 1]     30.3155267  4.04167145  22.30255331  30.3170481  38.2711518
MV[1, 2]     49.5516544  3.86879465  41.92760415  49.5437735  57.2239187
MV[2, 2]     54.7267752  4.00864241  46.82753184  54.7151154  62.6844319
MV[3, 2]     49.8167608  3.83432998  42.21055656  49.8240340  57.3812084
MV[4, 2]     50.3479655  3.84093777  42.75052816  50.3475916  57.9314031
MV[5, 2]     50.6391265  3.83812298  43.07339277  50.6371911  58.2702966
MV[6, 2]     45.9574293  4.00534839  38.03769339  45.9645004  53.8916678
MV[7, 2]     51.2688465  3.85259901  43.67456613  51.2703240  58.9032744
Env[1, 1]    10.0881957  1.82471758   6.46390046  10.0933542  13.7730162
Env[2, 1]    10.2925860  1.83150283   6.69171275  10.2823541  13.9001340
Env[3, 1]    41.5098415  1.84543660  37.89149635  41.5119182  45.1522952
Env[4, 1]    44.5614636  2.54993999  39.54348841  44.5709370  49.5654439
Env[5, 1]    19.4532866  1.86231862  15.77695073  19.4554187  23.1201041
Env[6, 1]    32.3394020  1.89232067  28.60529185  32.3438762  36.0536525
Env[7, 1]    52.7955711  1.93214244  48.98838881  52.7893926  56.6165490
Env[8, 1]    22.9401958  1.87404629  19.26222395  22.9276070  26.6807530
Env[9, 1]    21.7051288  1.83383387  18.08972110  21.7118254  25.3262174
Env[10, 1]   28.4210346  1.87151883  24.70530592  28.4332971  32.0547165
Env[11, 1]   38.9983547  1.98365513  35.10179856  39.0001523  42.9021960
Env[12, 1]   16.6290288  1.88191421  12.95629318  16.6238199  20.3481325
Env[1, 2]    38.2887749  3.01332704  32.34251674  38.3017828  44.2019844
Env[2, 2]    33.1245369  3.04242475  27.19233441  33.1037574  39.1502941
Env[3, 2]    56.1475883  3.02900738  50.18197308  56.1441409  62.0548894
Env[4, 2]    59.6422689  3.11973135  53.53413878  59.6398229  65.7942800
Env[5, 2]    36.9164323  3.07307295  30.82734603  36.9168197  42.9190706
Env[6, 2]    53.3986133  3.07947571  47.31933956  53.4126166  59.4266416
Env[7, 2]    63.7538028  3.13679658  57.56223507  63.7564181  69.8995253
Env[8, 2]    64.0989256  3.36270639  57.48115585  64.1184414  70.6641974
Env[9, 2]    42.5085037  3.01145744  36.58774086  42.5033481  48.4790278
Env[10, 2]   37.4690159  3.05915588  31.39372800  37.4872736  43.4461236
Env[11, 2]   53.6437516  3.08564477  47.54998558  53.6504043  59.7552413
Env[12, 2]   64.9725612  3.17667943  58.70874166  64.9762965  71.2008363
```

sig2V[1]	6.1269929	6.89912158	0.63338979	4.2546380	23.0125883
sig2V[2]	15.6621042	16.51018016	1.16696860	11.1907690	57.0892350
sig2R[1]	1.8992900	0.83183578	0.78114413	1.7397358	3.9587052
sig2R[2]	2.3067668	1.03602720	0.90078097	2.1095989	4.8809168
covE[1, 1]	186.5918253	84.26630585	84.31520861	167.5612405	398.2752585
covE[2, 1]	89.4987384	59.14269247	8.40462061	78.4476761	236.9409830
covE[1, 2]	89.4987384	59.14269247	8.40462061	78.4476761	236.9409830
covE[2, 2]	144.4849702	67.70086438	62.21847679	129.2720780	317.6351392
covEV[1, 1]	13.5236025	3.12648005	8.36934190	13.1871737	20.5511122
covEV[2, 1]	12.6595303	3.87319688	6.08385666	12.3040558	21.2821859
covEV[1, 2]	12.6595303	3.87319688	6.08385666	12.3040558	21.2821859
covEV[2, 2]	46.6406062	9.31173671	31.55317775	45.5906556	67.8354992
sig2[1]	0.2800420	0.12396448	0.12935244	0.2521193	0.5925590
sig2[2]	0.4694049	0.20653415	0.21658824	0.4231317	0.9917948
sig2[3]	2.2377801	1.00039594	1.02413361	2.0140427	4.7522691
sig2[4]	68.1169852	26.58670281	32.42874130	62.9284953	134.3362183
sig2[5]	2.3765483	1.00407843	1.12214191	2.1596997	4.9113423
sig2[6]	4.9920470	2.12082788	2.35276995	4.5291871	10.3221010
sig2[7]	7.9666962	3.58051898	3.61066920	7.1622843	16.9953057
sig2[8]	3.0812131	1.33012180	1.43417544	2.7893663	6.4328741
sig2[9]	0.9131655	0.40966424	0.41849019	0.8211501	1.9565674
sig2[10]	3.0955134	1.40021499	1.40717328	2.7781046	6.6682229
sig2[11]	12.4787061	7.58018316	4.59665116	10.4333620	32.6392959
sig2[12]	3.4346407	1.62935029	1.50050681	3.0562318	7.6528108
sig2[13]	3.2931463	1.44945677	1.52640211	2.9683893	6.9736814
sig2[14]	2.7571631	1.19067943	1.28432059	2.4940653	5.7718920
sig2[15]	2.6556986	1.24925046	1.19177039	2.3668646	5.8110293
sig2[16]	13.6696935	5.66599223	6.48584574	12.4655008	27.9652208
sig2[17]	7.7019481	3.24806645	3.63408747	7.0005192	15.7789786
sig2[18]	14.4426317	6.44113751	6.67231364	13.0106510	30.6579122
sig2[19]	17.5251631	7.78951346	8.02486517	15.7819096	37.3619212
sig2[20]	46.2848840	17.87899745	22.79825200	42.6503408	91.2911809
sig2[21]	3.6549100	1.61751079	1.67459825	3.2898210	7.7893697
sig2[22]	3.6782151	1.58161500	1.72177993	3.3299331	7.6531064
sig2[23]	10.2177426	4.21475322	4.88613205	9.3174066	20.8730369
sig2[24]	13.1440577	6.80338893	5.51835872	11.4710514	30.5751683
HMRPVG[1, 1]	0.8348662	0.04160122	0.75499566	0.8337781	0.9226751
HMRPVG[2, 1]	1.0203457	0.04912241	0.92799432	1.0181836	1.1271218
HMRPVG[3, 1]	1.0072284	0.05120971	0.91201839	1.0047658	1.1190642
HMRPVG[4, 1]	0.9491151	0.04951665	0.85716330	0.9467552	1.0564587
HMRPVG[5, 1]	1.0419490	0.05129941	0.94688275	1.0393533	1.1536617
HMRPVG[6, 1]	0.9822632	0.04707844	0.89385458	0.9802327	1.0839639
HMRPVG[7, 1]	1.0507852	0.05467640	0.94989737	1.0479061	1.1711426
HMRPVG[1, 2]	0.9541391	0.03414225	0.88965362	0.9528773	1.0257501
HMRPVG[2, 2]	1.1151403	0.03962616	1.04120289	1.1131932	1.2001286
HMRPVG[3, 2]	0.9746904	0.03528563	0.90808943	0.9733708	1.0492750
HMRPVG[4, 2]	0.9876845	0.03556023	0.92059300	0.9863325	1.0631877
HMRPVG[5, 2]	0.9730026	0.03583501	0.90553124	0.9715279	1.0489263
HMRPVG[6, 2]	0.8648615	0.03131213	0.80490437	0.8640120	0.9300110
HMRPVG[7, 2]	1.0242410	0.03670672	0.95539237	1.0227536	1.1025338
Sup[1, 1]	53.6593460	8.04573018	38.38081228	53.4604318	70.0554795
Sup[2, 1]	19.8280128	4.89667445	10.20762119	19.8738026	29.3908679
Sup[3, 1]	11.7658615	3.11434774	6.43456494	11.4956339	18.6140576
Sup[4, 1]	17.2649442	2.75734643	12.29012375	17.1069763	23.1422681
Sup[5, 1]	11.7083069	3.14479129	6.41056109	11.4111751	18.6891470
Sup[6, 1]	32.3644963	7.00308907	18.02785737	32.6476208	45.4783294
Sup[7, 1]	4.6661178	1.22578544	2.98416971	4.4271020	7.7866721
Sup[1, 2]	92.9285928	11.23493330	72.21195027	92.5022207	116.2214873
Sup[2, 2]	18.4256869	4.36844639	10.65187198	18.1466366	27.8186325
Sup[3, 2]	73.1021070	10.23396482	54.53994755	72.5965474	94.4814202
Sup[4, 2]	65.9298446	8.58399592	49.84558560	65.6449379	83.6678305

Sup[5, 2]	54.8697398	6.02196297	44.09323491	54.5194264	67.7390053
Sup[6, 2]	182.8801155	17.63559509	149.00893690	182.6233028	218.2065104
Sup[7, 2]	48.0563865	7.78889206	33.80837440	47.7365358	64.3312126
rhoE	0.5327948	0.19903926	0.06643639	0.5623070	0.8347804
rhoEV	0.5035401	0.10411958	0.28121738	0.5107464	0.6858971

	Rhat
a[1]	1.00
a[2]	1.00
MV[1, 1]	1.00
MV[2, 1]	1.00
MV[3, 1]	1.00
MV[4, 1]	1.00
MV[5, 1]	1.00
MV[6, 1]	1.00
MV[7, 1]	1.00
MV[1, 2]	1.00
MV[2, 2]	1.00
MV[3, 2]	1.00
MV[4, 2]	1.00
MV[5, 2]	1.00
MV[6, 2]	1.00
MV[7, 2]	1.00
Env[1, 1]	1.00
Env[2, 1]	1.00
Env[3, 1]	1.00
Env[4, 1]	1.00
Env[5, 1]	1.00
Env[6, 1]	1.00
Env[7, 1]	1.00
Env[8, 1]	1.00
Env[9, 1]	1.00
Env[10, 1]	1.00
Env[11, 1]	1.00
Env[12, 1]	1.00
Env[1, 2]	1.00
Env[2, 2]	1.00
Env[3, 2]	1.00
Env[4, 2]	1.00
Env[5, 2]	1.00
Env[6, 2]	1.00
Env[7, 2]	1.00
Env[8, 2]	1.00
Env[9, 2]	1.00
Env[10, 2]	1.00
Env[11, 2]	1.00
Env[12, 2]	1.00
sig2V[1]	1.00
sig2V[2]	1.00
sig2R[1]	1.00
sig2R[2]	1.00
covE[1, 1]	1.00
covE[2, 1]	1.00
covE[1, 2]	1.00
covE[2, 2]	1.00
covEV[1, 1]	1.00
covEV[2, 1]	1.00
covEV[1, 2]	1.00
covEV[2, 2]	1.00
sig2[1]	1.00
sig2[2]	1.00
sig2[3]	1.00

```
sig2[4]      1.00
sig2[5]      1.00
sig2[6]      1.00
sig2[7]      1.00
sig2[8]      1.00
sig2[9]      1.00
sig2[10]     1.00
sig2[11]     1.00
sig2[12]     1.00
sig2[13]     1.00
sig2[14]     1.00
sig2[15]     1.00
sig2[16]     1.00
sig2[17]     1.00
sig2[18]     1.00
sig2[19]     1.00
sig2[20]     1.00
sig2[21]     1.00
sig2[22]     1.00
sig2[23]     1.00
sig2[24]     1.00
HMRPVG[1, 1] 1.00
HMRPVG[2, 1] 1.00
HMRPVG[3, 1] 1.00
HMRPVG[4, 1] 1.00
HMRPVG[5, 1] 1.00
HMRPVG[6, 1] 1.00
HMRPVG[7, 1] 1.00
HMRPVG[1, 2] 1.01
HMRPVG[2, 2] 1.01
HMRPVG[3, 2] 1.01
HMRPVG[4, 2] 1.01
HMRPVG[5, 2] 1.01
HMRPVG[6, 2] 1.01
HMRPVG[7, 2] 1.00
Sup[1, 1]    1.00
Sup[2, 1]    1.00
Sup[3, 1]    1.00
Sup[4, 1]    1.00
Sup[5, 1]    1.00
Sup[6, 1]    1.00
Sup[7, 1]    1.00
Sup[1, 2]    1.00
Sup[2, 2]    1.00
Sup[3, 2]    1.00
Sup[4, 2]    1.00
Sup[5, 2]    1.00
Sup[6, 2]    1.00
Sup[7, 2]    1.00
rhoE         1.00
rhoEV        1.00
>
> ###### Diagnostic plots
> gelman.diag(mcmcb,multivariate=FALSE)
Potential scale reduction factors:

             Point est. Upper C.I.
Env[1, 1]          1.00       1.01
Env[2, 1]          1.00       1.01
Env[3, 1]          1.00       1.00
Env[4, 1]          1.00       1.00
```

Env[5, 1]	1.00	1.00
Env[6, 1]	1.00	1.00
Env[7, 1]	1.00	1.00
Env[8, 1]	1.00	1.00
Env[9, 1]	1.00	1.00
Env[10, 1]	1.00	1.00
Env[11, 1]	1.00	1.00
Env[12, 1]	1.00	1.00
Env[1, 2]	1.00	1.00
Env[2, 2]	1.00	1.01
Env[3, 2]	1.00	1.02
Env[4, 2]	1.00	1.00
Env[5, 2]	1.00	1.01
Env[6, 2]	1.00	1.00
Env[7, 2]	1.00	1.01
Env[8, 2]	1.00	1.01
Env[9, 2]	1.00	1.00
Env[10, 2]	1.00	1.02
Env[11, 2]	1.00	1.01
Env[12, 2]	1.00	1.00
HMRPVG[1, 1]	1.00	1.00
HMRPVG[2, 1]	1.00	1.00
HMRPVG[3, 1]	1.00	1.00
HMRPVG[4, 1]	1.00	1.00
HMRPVG[5, 1]	1.00	1.00
HMRPVG[6, 1]	1.00	1.00
HMRPVG[7, 1]	1.00	1.00
HMRPVG[1, 2]	1.01	1.02
HMRPVG[2, 2]	1.01	1.02
HMRPVG[3, 2]	1.01	1.02
HMRPVG[4, 2]	1.01	1.02
HMRPVG[5, 2]	1.01	1.02
HMRPVG[6, 2]	1.01	1.02
HMRPVG[7, 2]	1.00	1.02
MV[1, 1]	1.00	1.00
MV[2, 1]	1.00	1.00
MV[3, 1]	1.00	1.00
MV[4, 1]	1.00	1.00
MV[5, 1]	1.00	1.00
MV[6, 1]	1.00	1.00
MV[7, 1]	1.00	1.00
MV[1, 2]	1.00	1.00
MV[2, 2]	1.00	1.00
MV[3, 2]	1.00	1.00
MV[4, 2]	1.00	1.00
MV[5, 2]	1.00	1.00
MV[6, 2]	1.00	1.00
MV[7, 2]	1.00	1.00
Sup[1, 1]	1.00	1.00
Sup[2, 1]	1.00	1.00
Sup[3, 1]	1.00	1.00
Sup[4, 1]	1.00	1.00
Sup[5, 1]	1.00	1.00
Sup[6, 1]	1.00	1.00
Sup[7, 1]	1.00	1.00
Sup[1, 2]	1.00	1.00
Sup[2, 2]	1.00	1.00
Sup[3, 2]	1.00	1.00
Sup[4, 2]	1.00	1.00
Sup[5, 2]	1.00	1.00
Sup[6, 2]	1.00	1.00

Sup[7, 2]	1.00	1.00
a[1]	1.00	1.00
a[2]	1.00	1.00
b[1, 1, 1]	1.00	1.00
b[2, 1, 1]	1.00	1.00
b[3, 1, 1]	1.00	1.00
b[1, 2, 1]	1.00	1.00
b[2, 2, 1]	1.00	1.00
b[3, 2, 1]	1.00	1.00
b[1, 3, 1]	1.00	1.00
b[2, 3, 1]	1.00	1.00
b[3, 3, 1]	1.00	1.00
b[1, 4, 1]	1.00	1.00
b[2, 4, 1]	1.00	1.00
b[3, 4, 1]	1.00	1.00
b[1, 5, 1]	1.00	1.00
b[2, 5, 1]	1.00	1.00
b[3, 5, 1]	1.00	1.00
b[1, 6, 1]	1.00	1.00
b[2, 6, 1]	1.00	1.00
b[3, 6, 1]	1.00	1.00
b[1, 7, 1]	1.00	1.00
b[2, 7, 1]	1.00	1.00
b[3, 7, 1]	1.00	1.00
b[1, 8, 1]	1.00	1.00
b[2, 8, 1]	1.00	1.00
b[3, 8, 1]	1.00	1.00
b[1, 9, 1]	1.00	1.00
b[2, 9, 1]	1.00	1.00
b[3, 9, 1]	1.00	1.00
b[1, 10, 1]	1.00	1.00
b[2, 10, 1]	1.00	1.00
b[3, 10, 1]	1.00	1.00
b[1, 11, 1]	1.00	1.00
b[2, 11, 1]	1.00	1.00
b[3, 11, 1]	1.00	1.00
b[1, 12, 1]	1.00	1.00
b[2, 12, 1]	1.00	1.00
b[3, 12, 1]	1.00	1.00
b[1, 1, 2]	1.00	1.00
b[2, 1, 2]	1.00	1.00
b[3, 1, 2]	1.00	1.00
b[1, 2, 2]	1.00	1.00
b[2, 2, 2]	1.00	1.00
b[3, 2, 2]	1.00	1.00
b[1, 3, 2]	1.00	1.00
b[2, 3, 2]	1.00	1.00
b[3, 3, 2]	1.00	1.00
b[1, 4, 2]	1.00	1.00
b[2, 4, 2]	1.00	1.00
b[3, 4, 2]	1.00	1.00
b[1, 5, 2]	1.00	1.00
b[2, 5, 2]	1.00	1.00
b[3, 5, 2]	1.00	1.00
b[1, 6, 2]	1.00	1.00
b[2, 6, 2]	1.00	1.00
b[3, 6, 2]	1.00	1.00
b[1, 7, 2]	1.00	1.00
b[2, 7, 2]	1.00	1.00
b[3, 7, 2]	1.00	1.00
b[1, 8, 2]	1.00	1.00

b[2, 8, 2]	1.00	1.00
b[3, 8, 2]	1.00	1.00
b[1, 9, 2]	1.00	1.00
b[2, 9, 2]	1.00	1.00
b[3, 9, 2]	1.00	1.00
b[1, 10, 2]	1.00	1.00
b[2, 10, 2]	1.00	1.00
b[3, 10, 2]	1.00	1.00
b[1, 11, 2]	1.00	1.00
b[2, 11, 2]	1.00	1.00
b[3, 11, 2]	1.00	1.00
b[1, 12, 2]	1.00	1.00
b[2, 12, 2]	1.00	1.00
b[3, 12, 2]	1.00	1.00
covE[1, 1]	1.00	1.00
covE[2, 1]	1.00	1.00
covE[1, 2]	1.00	1.00
covE[2, 2]	1.00	1.00
covEV[1, 1]	1.00	1.00
covEV[2, 1]	1.00	1.00
covEV[1, 2]	1.00	1.00
covEV[2, 2]	1.00	1.00
ge[1, 1, 1]	1.00	1.00
ge[2, 1, 1]	1.00	1.00
ge[3, 1, 1]	1.00	1.01
ge[4, 1, 1]	1.00	1.00
ge[5, 1, 1]	1.00	1.00
ge[6, 1, 1]	1.00	1.00
ge[7, 1, 1]	1.00	1.00
ge[8, 1, 1]	1.00	1.00
ge[9, 1, 1]	1.00	1.00
ge[10, 1, 1]	1.00	1.00
ge[11, 1, 1]	1.00	1.00
ge[12, 1, 1]	1.00	1.00
ge[1, 2, 1]	1.00	1.01
ge[2, 2, 1]	1.00	1.01
ge[3, 2, 1]	1.00	1.00
ge[4, 2, 1]	1.00	1.00
ge[5, 2, 1]	1.00	1.00
ge[6, 2, 1]	1.00	1.00
ge[7, 2, 1]	1.00	1.00
ge[8, 2, 1]	1.00	1.00
ge[9, 2, 1]	1.00	1.00
ge[10, 2, 1]	1.00	1.00
ge[11, 2, 1]	1.00	1.00
ge[12, 2, 1]	1.00	1.00
ge[1, 3, 1]	1.00	1.01
ge[2, 3, 1]	1.00	1.01
ge[3, 3, 1]	1.00	1.00
ge[4, 3, 1]	1.00	1.00
ge[5, 3, 1]	1.00	1.00
ge[6, 3, 1]	1.00	1.00
ge[7, 3, 1]	1.00	1.00
ge[8, 3, 1]	1.00	1.00
ge[9, 3, 1]	1.00	1.00
ge[10, 3, 1]	1.00	1.00
ge[11, 3, 1]	1.00	1.00
ge[12, 3, 1]	1.00	1.00
ge[1, 4, 1]	1.00	1.01
ge[2, 4, 1]	1.00	1.01
ge[3, 4, 1]	1.00	1.00

ge[4, 4, 1]	1.00	1.00
ge[5, 4, 1]	1.00	1.00
ge[6, 4, 1]	1.00	1.00
ge[7, 4, 1]	1.00	1.00
ge[8, 4, 1]	1.00	1.00
ge[9, 4, 1]	1.00	1.00
ge[10, 4, 1]	1.00	1.00
ge[11, 4, 1]	1.00	1.00
ge[12, 4, 1]	1.00	1.00
ge[1, 5, 1]	1.00	1.01
ge[2, 5, 1]	1.00	1.01
ge[3, 5, 1]	1.00	1.01
ge[4, 5, 1]	1.00	1.00
ge[5, 5, 1]	1.00	1.00
ge[6, 5, 1]	1.00	1.00
ge[7, 5, 1]	1.00	1.00
ge[8, 5, 1]	1.00	1.00
ge[9, 5, 1]	1.00	1.00
ge[10, 5, 1]	1.00	1.00
ge[11, 5, 1]	1.00	1.00
ge[12, 5, 1]	1.00	1.00
ge[1, 6, 1]	1.00	1.01
ge[2, 6, 1]	1.00	1.01
ge[3, 6, 1]	1.00	1.01
ge[4, 6, 1]	1.00	1.00
ge[5, 6, 1]	1.00	1.00
ge[6, 6, 1]	1.00	1.00
ge[7, 6, 1]	1.00	1.00
ge[8, 6, 1]	1.00	1.00
ge[9, 6, 1]	1.00	1.00
ge[10, 6, 1]	1.00	1.00
ge[11, 6, 1]	1.00	1.00
ge[12, 6, 1]	1.00	1.00
ge[1, 7, 1]	1.00	1.01
ge[2, 7, 1]	1.00	1.01
ge[3, 7, 1]	1.00	1.00
ge[4, 7, 1]	1.00	1.00
ge[5, 7, 1]	1.00	1.00
ge[6, 7, 1]	1.00	1.00
ge[7, 7, 1]	1.00	1.00
ge[8, 7, 1]	1.00	1.00
ge[9, 7, 1]	1.00	1.00
ge[10, 7, 1]	1.00	1.00
ge[11, 7, 1]	1.00	1.00
ge[12, 7, 1]	1.00	1.00
ge[1, 1, 2]	1.00	1.00
ge[2, 1, 2]	1.00	1.00
ge[3, 1, 2]	1.00	1.01
ge[4, 1, 2]	1.00	1.00
ge[5, 1, 2]	1.00	1.00
ge[6, 1, 2]	1.00	1.00
ge[7, 1, 2]	1.00	1.00
ge[8, 1, 2]	1.00	1.00
ge[9, 1, 2]	1.00	1.00
ge[10, 1, 2]	1.00	1.01
ge[11, 1, 2]	1.00	1.00
ge[12, 1, 2]	1.00	1.00
ge[1, 2, 2]	1.00	1.00
ge[2, 2, 2]	1.00	1.00
ge[3, 2, 2]	1.00	1.00
ge[4, 2, 2]	1.00	1.00

ge[5, 2, 2]	1.00	1.00
ge[6, 2, 2]	1.00	1.00
ge[7, 2, 2]	1.00	1.00
ge[8, 2, 2]	1.00	1.00
ge[9, 2, 2]	1.00	1.00
ge[10, 2, 2]	1.00	1.00
ge[11, 2, 2]	1.00	1.00
ge[12, 2, 2]	1.00	1.00
ge[1, 3, 2]	1.00	1.00
ge[2, 3, 2]	1.00	1.00
ge[3, 3, 2]	1.00	1.01
ge[4, 3, 2]	1.00	1.00
ge[5, 3, 2]	1.00	1.00
ge[6, 3, 2]	1.00	1.00
ge[7, 3, 2]	1.00	1.00
ge[8, 3, 2]	1.00	1.00
ge[9, 3, 2]	1.00	1.00
ge[10, 3, 2]	1.00	1.00
ge[11, 3, 2]	1.00	1.00
ge[12, 3, 2]	1.00	1.00
ge[1, 4, 2]	1.00	1.00
ge[2, 4, 2]	1.00	1.00
ge[3, 4, 2]	1.00	1.01
ge[4, 4, 2]	1.00	1.00
ge[5, 4, 2]	1.00	1.00
ge[6, 4, 2]	1.00	1.00
ge[7, 4, 2]	1.00	1.00
ge[8, 4, 2]	1.00	1.00
ge[9, 4, 2]	1.00	1.00
ge[10, 4, 2]	1.00	1.00
ge[11, 4, 2]	1.00	1.00
ge[12, 4, 2]	1.00	1.00
ge[1, 5, 2]	1.00	1.00
ge[2, 5, 2]	1.00	1.00
ge[3, 5, 2]	1.00	1.01
ge[4, 5, 2]	1.00	1.00
ge[5, 5, 2]	1.00	1.00
ge[6, 5, 2]	1.00	1.00
ge[7, 5, 2]	1.00	1.00
ge[8, 5, 2]	1.00	1.00
ge[9, 5, 2]	1.00	1.00
ge[10, 5, 2]	1.00	1.00
ge[11, 5, 2]	1.00	1.00
ge[12, 5, 2]	1.00	1.00
ge[1, 6, 2]	1.00	1.00
ge[2, 6, 2]	1.00	1.00
ge[3, 6, 2]	1.00	1.01
ge[4, 6, 2]	1.00	1.00
ge[5, 6, 2]	1.00	1.00
ge[6, 6, 2]	1.00	1.00
ge[7, 6, 2]	1.00	1.00
ge[8, 6, 2]	1.00	1.00
ge[9, 6, 2]	1.00	1.00
ge[10, 6, 2]	1.00	1.00
ge[11, 6, 2]	1.00	1.00
ge[12, 6, 2]	1.00	1.00
ge[1, 7, 2]	1.00	1.00
ge[2, 7, 2]	1.00	1.00
ge[3, 7, 2]	1.00	1.01
ge[4, 7, 2]	1.00	1.00
ge[5, 7, 2]	1.00	1.00

ge[6, 7, 2]	1.00	1.00
ge[7, 7, 2]	1.00	1.00
ge[8, 7, 2]	1.00	1.00
ge[9, 7, 2]	1.00	1.00
ge[10, 7, 2]	1.00	1.00
ge[11, 7, 2]	1.00	1.00
ge[12, 7, 2]	1.00	1.00
ksige[1]	1.00	1.00
ksige[2]	1.00	1.00
rhoE	1.00	1.00
rhoEV	1.00	1.00
sig2[1]	1.00	1.00
sig2[2]	1.00	1.00
sig2[3]	1.00	1.00
sig2[4]	1.00	1.00
sig2[5]	1.00	1.00
sig2[6]	1.00	1.00
sig2[7]	1.00	1.00
sig2[8]	1.00	1.00
sig2[9]	1.00	1.00
sig2[10]	1.00	1.00
sig2[11]	1.00	1.00
sig2[12]	1.00	1.00
sig2[13]	1.00	1.00
sig2[14]	1.00	1.00
sig2[15]	1.00	1.00
sig2[16]	1.00	1.00
sig2[17]	1.00	1.00
sig2[18]	1.00	1.00
sig2[19]	1.00	1.00
sig2[20]	1.00	1.00
sig2[21]	1.00	1.00
sig2[22]	1.00	1.00
sig2[23]	1.00	1.00
sig2[24]	1.00	1.00
sig2R[1]	1.00	1.00
sig2R[2]	1.00	1.00
sig2V[1]	1.00	1.00
sig2V[2]	1.00	1.00
sigR[1]	1.00	1.00
sigR[2]	1.00	1.00
sigV[1]	1.00	1.00
sigV[2]	1.00	1.00
tau[1]	1.00	1.00
tau[2]	1.00	1.00
tau[3]	1.00	1.00
tau[4]	1.00	1.00
tau[5]	1.00	1.00
tau[6]	1.00	1.00
tau[7]	1.00	1.00
tau[8]	1.00	1.00
tau[9]	1.00	1.00
tau[10]	1.00	1.00
tau[11]	1.00	1.00
tau[12]	1.00	1.00
tau[13]	1.00	1.00
tau[14]	1.00	1.00
tau[15]	1.00	1.00
tau[16]	1.00	1.00
tau[17]	1.00	1.00
tau[18]	1.00	1.00

```
tau[19]            1.00       1.00
tau[20]            1.00       1.00
tau[21]            1.00       1.00
tau[22]            1.00       1.00
tau[23]            1.00       1.00
tau[24]            1.00       1.00
va[1, 1]           1.00       1.00
va[2, 1]           1.00       1.00
va[3, 1]           1.00       1.00
va[4, 1]           1.00       1.00
va[5, 1]           1.00       1.00
va[6, 1]           1.00       1.00
va[7, 1]           1.00       1.00
va[1, 2]           1.00       1.00
va[2, 2]           1.00       1.01
va[3, 2]           1.00       1.01
va[4, 2]           1.00       1.01
va[5, 2]           1.00       1.01
va[6, 2]           1.00       1.01
va[7, 2]           1.00       1.01

> gelman.plot(mcmcb,ask=TRUE)
> plot(mcmcb,ask=TRUE)
>
>
> ###### Generated quantities
>
> means<-MCMCchains(mcmcb,params='MV')
> mew1<-MCMCchains(mcmcb,params=c('MV[1, 1]','MV[5,
1]'),ISB=FALSE,exact=TRUE)
> mean1<-rowMeans(mew1)
> mew2<-MCMCchains(mcmcb,params=c('MV[1, 1]','MV[2, 1]','MV[3, 1]',
+     'MV[4, 1]','MV[5, 1]','MV[6, 1]','MV[7, 1]'),
+     ISB=FALSE,exact=TRUE)
> mean2<-rowMeans(mew2)
> mew3<-MCMCchains(mcmcb,params=c('MV[1, 2]','MV[2, 2]','MV[3, 2]',
+     'MV[4, 2]','MV[5, 2]','MV[6, 2]','MV[7, 2]'),
+     ISB=FALSE,exact=TRUE)
> mean3<-rowMeans(mew3)
> ind1<-matrix(nrow=length(means[,1]),ncol=7)
> ind2<-matrix(nrow=length(means[,1]),ncol=7)
> ind3<-matrix(nrow=length(means[,1]),ncol=7)
> for(i in 1:length(means[,1])){
+  for(j in 1:7){
+    ind1[i,j]<-ifelse(means[i,j]>mean1[i],1,0)
+    ind2[i,j]<-ifelse(means[i,j]>mean2[i],1,0)
+    ind3[i,j]<-ifelse(means[i,j+7]>mean3[i],1,0)
+  }
+ }
> colMeans(ind1)
[1] 0.005194667 0.810389333 0.929493333 0.843232000 0.994805333 0.790986667
[7] 0.992501333
> colMeans(ind2)
[1] 0.002378667 0.460330667 0.754101333 0.504533333 0.835712000 0.405952000
[7] 0.983626667
> colMeans(ind3)
[1] 0.312928000 0.990784000 0.367776000 0.505450667 0.579274667 0.009397333
[7] 0.723189333
```