In this file we report the first part of the most relevant outputs for the algorithm runs contained in the output table.

In particular, we omitted the case in which the algorithm produced only one cluster.

A1- 1: trend T, deg =1, level = T, Dirichlet, c = 0.001

Number of groups of the chosen cluster configuration: 2

Time series in group 1 : Albania Algeria Bahrain Bangladesh Botswana Brazil Burkina.Faso Cambodia Cameroon Chad Chile China Cyprus Czech.Republic Dominican.Republic Egypt El.Salvador Ethiopia Georgia Ghana Greece Guatemala Honduras Hungary India Indonesia Iran..Islamic.Rep. Italy Japan Jordan Kenya Korea..Rep. Kuwait Kyrgyz.Republic Madagascar Malawi Malaysia Mali Malta Mauritania Mauritius Mexico Morocco Nepal Nigeria Pakistan Paraguay Peru Romania Russian.Federation Saudi.Arabia Singapore Slovak.Republic Thailand Turkey Ukraine United.Arab.Emirates Uruguay Venezuela Yemen

Time series in group 2 : Argentina Australia Austria Belgium Bolivia Bulgaria Canada Colombia Costa.Rica Croatia Denmark Ecuador Estonia Finland France Germany Iceland Ireland Israel Jamaica Kazakhstan Latvia Lesotho Lithuania Luxembourg Moldova Mongolia Namibia Netherlands New.Zealand Nicaragua Norway Panama Philippines Poland Portugal Slovenia South.Africa Spain Sri.Lanka Sweden Switzerland Tanzania Uganda United.Kingdom United.States

HM Measure: 5.63856

$mstar

[1] 2

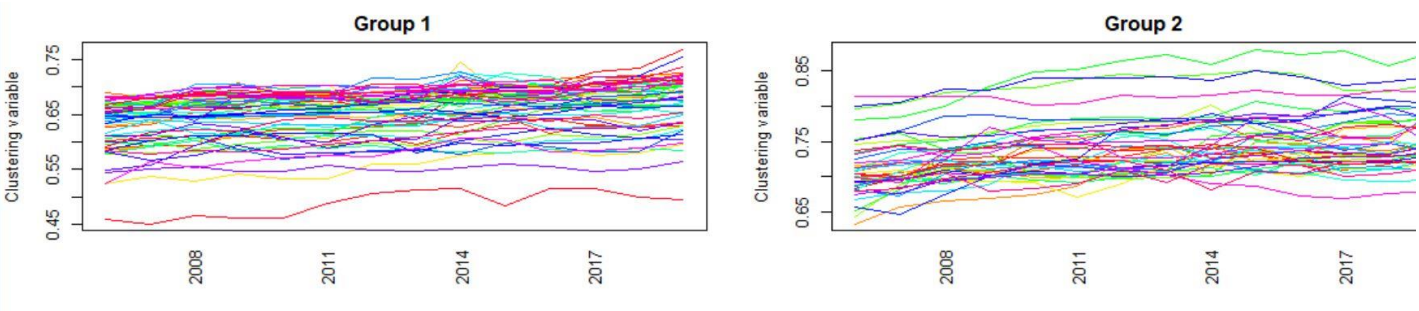
$lpml

[1] 2638.958

set.seed(123)

(tseriesca.out1 <- tseriesca(S, maxiter = 10000, burnin = 1000, thinning = 5, level = T, trend = T, deg = 1, scale = F, c0eps = 0.001, c1eps = 0.001, c0beta = 0.001, c1beta = 0.001, c0alpha = 0.001, c1alpha = 0.001, priora = F,

a = 0, b = 0.01, priorb = T, q0b = 1, q1b = 1, indlpml = T))



A2-1: trend T, deg =1, level = T, Poisson - Dirichlet, c = 0.001

Number of groups of the chosen cluster configuration: 2

Time series in group 1 : Albania Algeria Bahrain Bangladesh Botswana Brazil Burkina.Faso Cambodia Cameroon Chad Chile China Cyprus Czech.Republic Dominican.Republic Egypt El.Salvador Ethiopia Georgia Ghana Greece Guatemala Honduras Hungary India Indonesia Iran..Islamic.Rep. Italy Japan Jordan Kenya Korea..Rep. Kuwait Kyrgyz.Republic Madagascar Malawi Malaysia Mali Malta Mauritania Mauritius Mexico Morocco Nepal Nigeria Pakistan Paraguay Peru Romania Russian.Federation Saudi.Arabia Singapore Slovak.Republic Thailand Turkey Ukraine United.Arab.Emirates Uruguay Venezuela Yemen

Time series in group 2 : Argentina Australia Austria Belgium Bolivia Bulgaria Canada Colombia Costa.Rica Croatia Denmark Ecuador Estonia Finland France Germany Iceland Ireland Israel Jamaica Kazakhstan Latvia Lesotho Lithuania Luxembourg Moldova Mongolia Namibia Netherlands New.Zealand Nicaragua Norway Panama Philippines Poland Portugal Slovenia South.Africa Spain Sri.Lanka Sweden Switzerland Tanzania Uganda United.Kingdom United.States

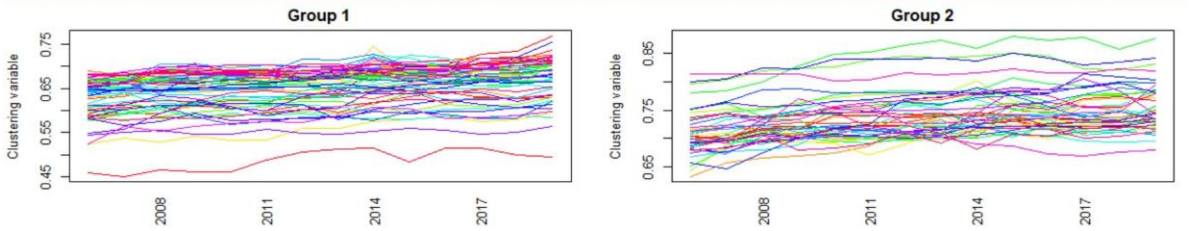
HM Measure: 5.63856

$mstar

[1] 2

$lpml

[1] 2635.509



A3-1: trend T, deg =1, level = T, nStable, c = 0.001

Number of groups of the chosen cluster configuration: 2

Time series in group 1 : Albania Algeria Bahrain Bangladesh Botswana Brazil Burkina.Faso Cambodia Cameroon Chad Chile China Cyprus Czech.Republic Dominican.Republic Egypt El.Salvador Ethiopia Georgia Ghana Greece Guatemala Honduras Hungary India Indonesia Iran..Islamic.Rep. Italy Japan Jordan Kenya Korea..Rep. Kuwait Kyrgyz.Republic Madagascar Malawi Malaysia Mali Malta Mauritania Mauritius Mexico Morocco Nepal Nigeria Pakistan Paraguay Peru Romania Russian.Federation Saudi.Arabia Singapore Slovak.Republic Thailand Turkey Ukraine United.Arab.Emirates Uruguay Venezuela Yemen

Time series in group 2 : Argentina Australia Austria Belgium Bolivia Bulgaria Canada Colombia Costa.Rica Croatia Denmark Ecuador Estonia Finland France Germany Iceland Ireland Israel Jamaica Kazakhstan Latvia Lesotho Lithuania Luxembourg Moldova Mongolia Namibia Netherlands New.Zealand Nicaragua Norway Panama Philippines Poland Portugal Slovenia South.Africa Spain Sri.Lanka Sweden Switzerland Tanzania Uganda United.Kingdom United.States

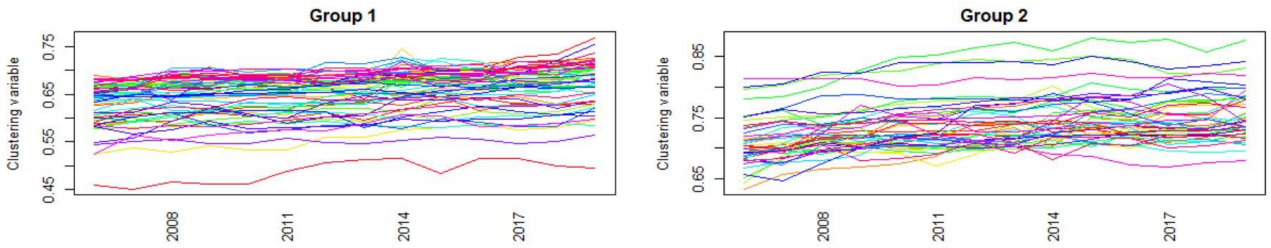
HM Measure: 5.63856

$mstar

[1] 2

$lpml

[1] 2684.272



B1-1: trend T, deg = 2, level = T, Dirichlet, c = 0.001

Time series in group 1: Albania Bangladesh Botswana Brazil Chile China Cyprus Czech.Republic Dominican.Republic El.Salvador Georgia Ghana Greece Honduras Hungary Indonesia Italy Kenya Kyrgyz.Republic Madagascar Malawi Malta Mexico Paraguay Peru Romania Russian.Federation Singapore Slovak.Republic Thailand Ukraine Uruguay Venezuela

Time series in group 2 : Algeria Bahrain Burkina.Faso Cambodia Cameroon Ethiopia Guatemala India Japan Korea..Rep. Kuwait Malaysia Mauritius Nepal Nigeria United.Arab.Emirates

Time series in group 3 : Argentina Australia Austria Bolivia Bulgaria Canada Colombia Costa.Rica Croatia Ecuador Estonia France Israel Jamaica Kazakhstan Lesotho Lithuania Luxembourg Moldova Mongolia Namibia Panama Poland Portugal Slovenia Sri.Lanka Tanzania Uganda United.States

Time series in group 4 : Belgium Denmark Finland Germany Iceland Ireland Latvia Netherlands New.Zealand Nicaragua Norway Philippines South.Africa Spain Sweden Switzerland United.Kingdom

Time series in group 5 : Chad Egypt Iran..Islamic.Rep. Jordan Mali Mauritania Morocco Pakistan Saudi.Arabia Turkey Yemen

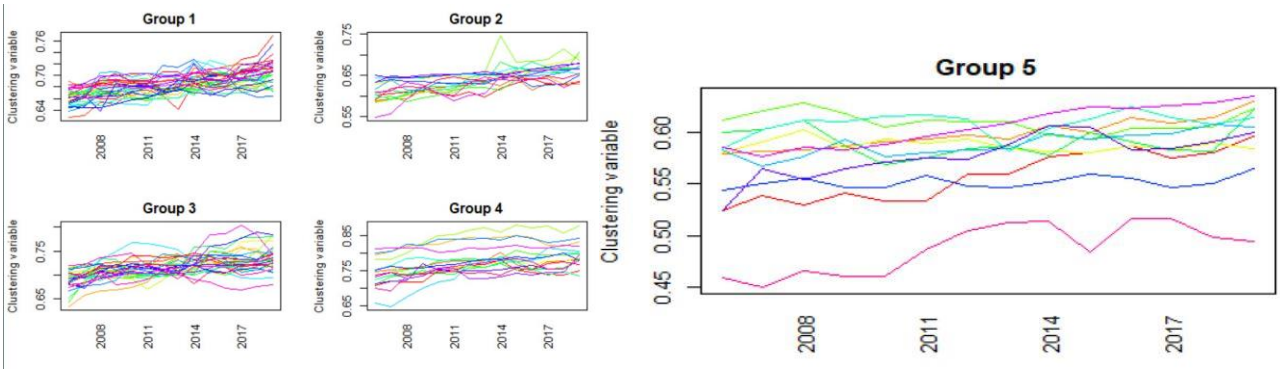
HM Measure: 1.890273

$mstar

[1] 5

$lpml

[1] 3138.575



B1-2: trend T, deg = 2, level = T, Dirichlet, c = 0.01

Number of groups of the chosen cluster configuration: 2

Time series in group 1 : Albania Argentina Australia Austria Bangladesh Belgium Bolivia Botswana Brazil Bulgaria Canada Chile China Colombia Costa.Rica Croatia Cyprus Czech.Republic Denmark Dominican.Republic Ecuador El.Salvador Estonia Finland France Georgia Germany Ghana Greece Honduras Hungary Iceland Indonesia Ireland Israel Italy Jamaica Kazakhstan Kenya Kyrgyz.Republic Latvia Lesotho Lithuania Luxembourg Madagascar Malawi Malta Mexico Moldova Mongolia Namibia Netherlands New.Zealand Nicaragua Norway Panama Paraguay Peru Philippines Poland Portugal Romania Russian.Federation Singapore Slovak.Republic Slovenia South.Africa Spain Sri.Lanka Sweden Switzerland Tanzania Thailand Uganda Ukraine United.Kingdom United.States Uruguay Venezuela

Time series in group 2 : Algeria Bahrain Burkina.Faso Cambodia Cameroon Chad Egypt Ethiopia Guatemala India Iran..Islamic.Rep. Japan Jordan Korea..Rep. Kuwait Malaysia Mali Mauritania Mauritius Morocco Nepal Nigeria Pakistan Saudi.Arabia Turkey United.Arab.Emirates Yemen

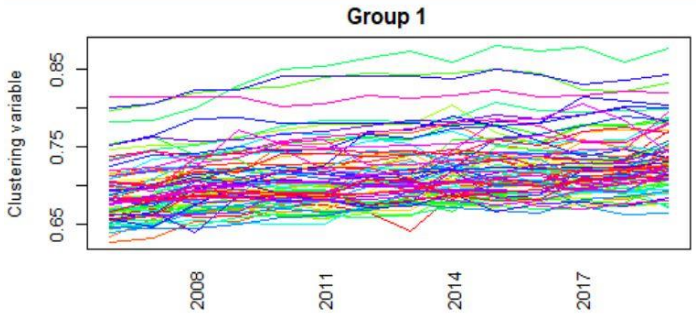
HM Measure: 5.134756

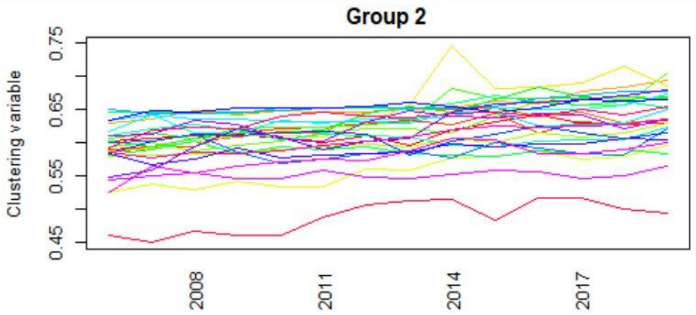
$mstar

[1] 2

$lpml

[1] 2267.479





B2 - 1: trend T, deg = 2, level = T, Poisson dirichlet, c = 0.001

Number of groups of the chosen cluster configuration: 5

Time series in group 1 : Albania Bangladesh Botswana Brazil Chile China Cyprus Czech.Republic Dominican.Republic El.Salvador Georgia Ghana Greece Honduras Hungary Indonesia Italy Kenya Kyrgyz.Republic Madagascar Malawi Malta Mexico Paraguay Peru Romania Russian.Federation Singapore Slovak.Republic Thailand Ukraine Uruguay Venezuela

Time series in group 2 : Algeria Bahrain Burkina.Faso Cambodia Cameroon Ethiopia Guatemala India Japan Korea..Rep. Kuwait Malaysia Mauritius Nepal Nigeria United.Arab.Emirates

Time series in group 3 : Argentina Australia Austria Bolivia Bulgaria Canada Colombia Costa.Rica Croatia Ecuador Estonia France Israel Jamaica Kazakhstan Lesotho Lithuania Luxembourg Moldova Mongolia Namibia Panama Poland Portugal Slovenia Sri.Lanka Tanzania Uganda United.States

Time series in group 4 : Belgium Denmark Finland Germany Iceland Ireland Latvia Netherlands New.Zealand Nicaragua Norway Philippines South.Africa Spain Sweden Switzerland United.Kingdom

Time series in group 5 : Chad Egypt Iran..Islamic.Rep. Jordan Mali Mauritania Morocco Pakistan Saudi.Arabia Turkey Yemen

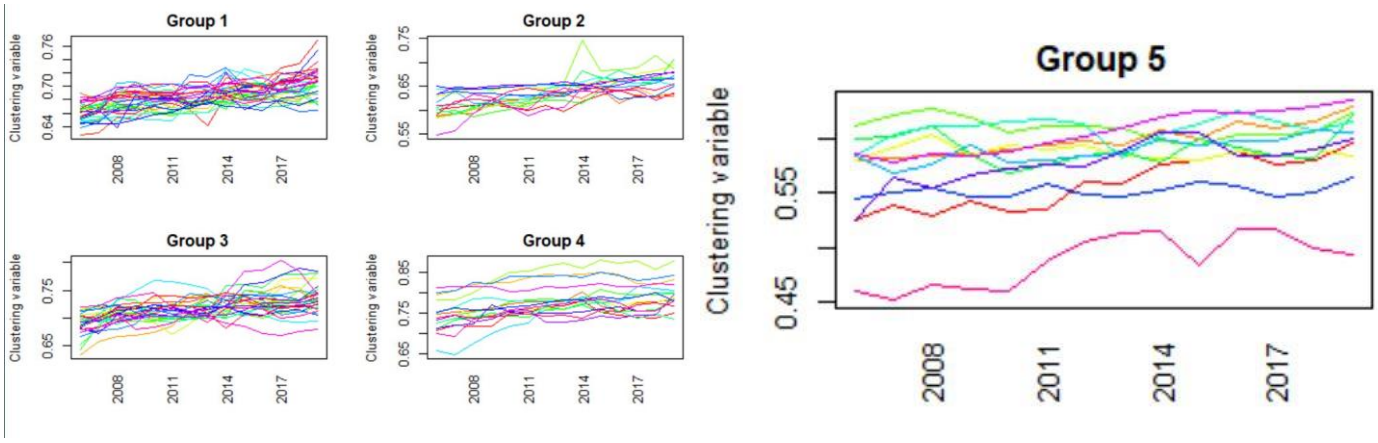
HM Measure: 1.890273

$mstar

[1] 5

$lpml

[1] 2669.556



B2-2: trend T, deg =2, level = T, Poisson Dirichlet, c = 0.01

Number of groups of the chosen cluster configuration: 2

Time series in group 1 : Albania Argentina Australia Austria Bangladesh Belgium Bolivia Botswana Brazil Bulgaria Canada Chile China Colombia Costa.Rica Croatia Cyprus Czech.Republic Denmark Dominican.Republic Ecuador El.Salvador Estonia Finland France Georgia Germany Ghana Greece Honduras Hungary Iceland Indonesia Ireland Israel Italy Jamaica Kazakhstan Kenya Kyrgyz.Republic Latvia Lesotho Lithuania Luxembourg Madagascar Malawi Malaysia Malta Mexico Moldova Mongolia Namibia Netherlands New.Zealand Nicaragua Norway Panama Paraguay Peru Philippines Poland Portugal Romania Russian.Federation Singapore Slovak.Republic Slovenia South.Africa Spain Sri.Lanka Sweden Switzerland Tanzania Thailand Uganda Ukraine United.Kingdom United.States Uruguay Venezuela

Time series in group 2 : Algeria Bahrain Burkina.Faso Cambodia Cameroon Chad Egypt Ethiopia Guatemala India Iran..Islamic.Rep. Japan Jordan Korea..Rep. Kuwait Mali Mauritania Mauritius Morocco Nepal Nigeria Pakistan Saudi.Arabia Turkey United.Arab.Emirates Yemen

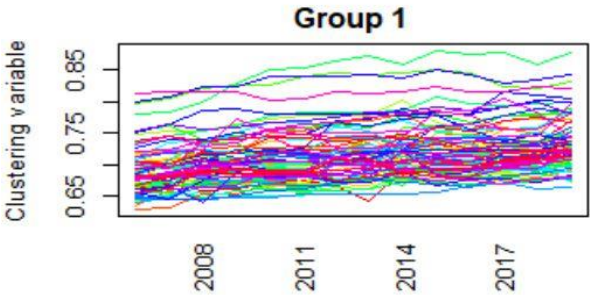
HM Measure: 5.179157

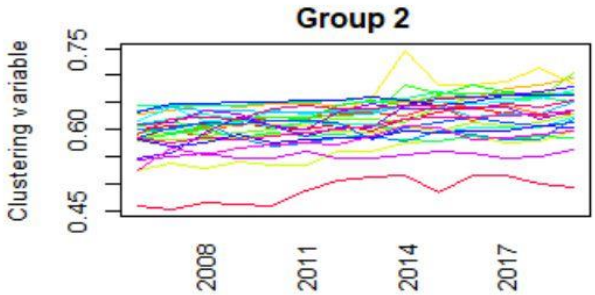
$mstar

[1] 2

$lpml

[1] 2098.621





B3-1 : Trend T, deg = 2, level = T, Nstable, c = 0.001

Number of groups of the chosen cluster configuration: 5

Time series in group 1 : Albania Bangladesh Botswana Brazil Chile China Cyprus Czech.Republic Dominican.Republic El.Salvador Georgia Ghana Greece Honduras Hungary Indonesia Italy Kenya Kyrgyz.Republic Madagascar Malawi Malta Mexico Paraguay Peru Romania Russian.Federation Singapore Slovak.Republic Thailand Ukraine Uruguay Venezuela

Time series in group 2 : Algeria Bahrain Burkina.Faso Cambodia Cameroon Ethiopia Guatemala India Japan Korea..Rep. Kuwait Malaysia Mauritius Nepal Nigeria United.Arab.Emirates

Time series in group 3 : Argentina Australia Austria Bolivia Bulgaria Canada Colombia Costa.Rica Croatia Ecuador Estonia France Israel Jamaica Kazakhstan Lesotho Lithuania Luxembourg Moldova Mongolia Namibia Panama Poland Portugal Slovenia Sri.Lanka Tanzania Uganda United.States

Time series in group 4 : Belgium Denmark Finland Germany Iceland Ireland Latvia Netherlands New.Zealand Nicaragua Norway Philippines South.Africa Spain Sweden Switzerland United.Kingdom

Time series in group 5 : Chad Egypt Iran..Islamic.Rep. Jordan Mali Mauritania Morocco Pakistan Saudi.Arabia Turkey Yemen

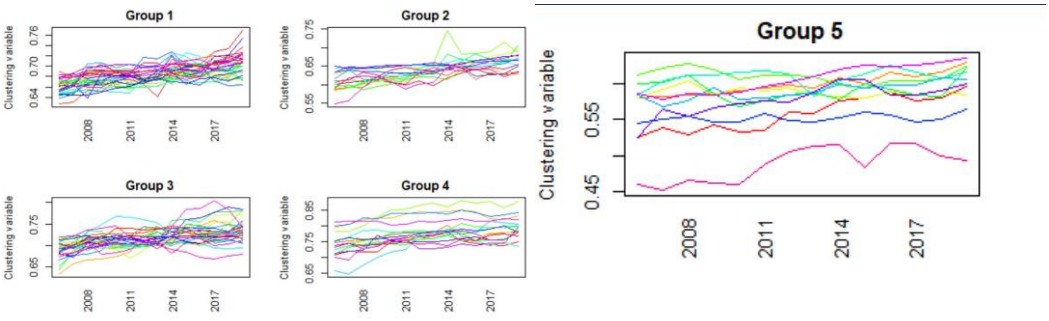
HM Measure: 1.890273

$mstar

[1] 5

$lpml

[1] 3141.789



B3-2: trend T, deg = 2, level = T, NSTAN, c = 0.01

Number of groups of the chosen cluster configuration: 2

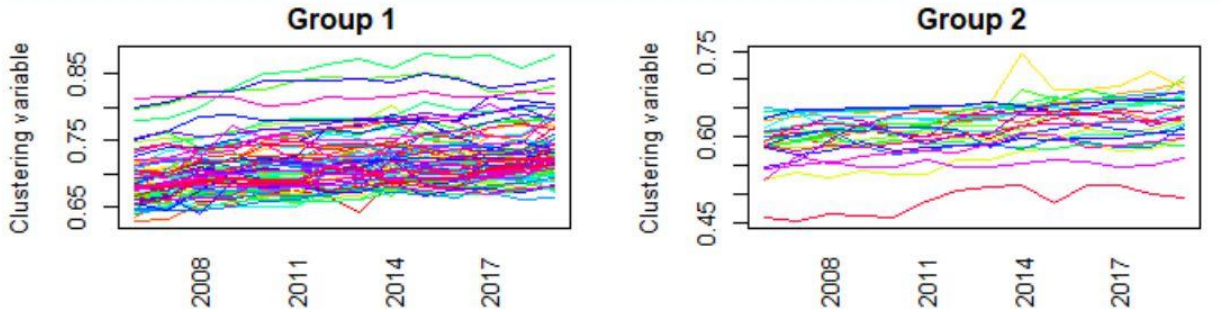
Time series in group 1 : Albania Argentina Australia Austria Bangladesh Belgium Bolivia Botswana Brazil Bulgaria Canada Chile China Colombia Costa.Rica Croatia Cyprus Czech.Republic Denmark Dominican.Republic Ecuador El.Salvador Estonia Finland France Georgia Germany Ghana Greece Honduras Hungary Iceland Indonesia Ireland Israel Italy Jamaica Kazakhstan Kenya Kyrgyz.Republic Latvia Lesotho Lithuania Luxembourg Madagascar Malawi Malta Mexico Moldova Mongolia Namibia Netherlands New.Zealand Nicaragua Norway Panama Paraguay Peru Philippines Poland Portugal Romania Russian.Federation Singapore Slovak.Republic Slovenia South.Africa Spain Sri.Lanka Sweden Switzerland Tanzania Thailand Uganda Ukraine United.Kingdom United.States Uruguay Venezuela

Time series in group 2 : Algeria Bahrain Burkina.Faso Cambodia Cameroon Chad Egypt Ethiopia Guatemala India Iran..Islamic.Rep. Japan Jordan Korea..Rep. Kuwait Malaysia Mali Mauritania Mauritius Morocco Nepal Nigeria Pakistan Saudi.Arabia Turkey United.Arab.Emirates Yemen

HM Measure: 5.134756

$mstar

[1] 2



C1-1: trend T, deg = 1, level = F,Dirichlet, c = 0.001

Number of groups of the chosen cluster configuration: 11

Time series in group 1 : Albania Bangladesh Bolivia Cameroon Ethiopia France Guatemala India Kenya Mexico Namibia Nepal Nicaragua Slovenia Turkey

Time series in group 2 : Algeria Argentina Bahrain Belgium Botswana Brazil Bulgaria Burkina.Faso Canada Chad Chile Colombia Costa.Rica Croatia Cyprus Czech.Republic Denmark Ecuador Egypt El.Salvador Estonia Georgia Germany Greece Honduras Indonesia Israel Italy Korea..Rep. Latvia Lithuania Madagascar Malaysia Malta Mauritius Moldova Mongolia Nigeria Norway Panama Paraguay Peru Philippines Poland Portugal Romania Singapore South.Africa Spain Thailand Uganda Ukraine United.Kingdom Uruguay Venezuela Yemen

Time series in group 3 : Australia Austria China Finland Ireland Japan Kazakhstan Kuwait Kyrgyz.Republic Luxembourg Malawi Netherlands Russian.Federation Sweden Switzerland United.Arab.Emirates United.States

Time series in group 4 : Cambodia Dominican.Republic Jamaica

Time series in group 5 : Ghana

Time series in group 6 : Hungary Iran..Islamic.Rep. Mali Morocco Slovak.Republic

Time series in group 7 : Iceland Saudi.Arabia

Time series in group 8 : Jordan Lesotho Sri.Lanka

Time series in group 9 : Mauritania Tanzania

Time series in group 10 : New.Zealand

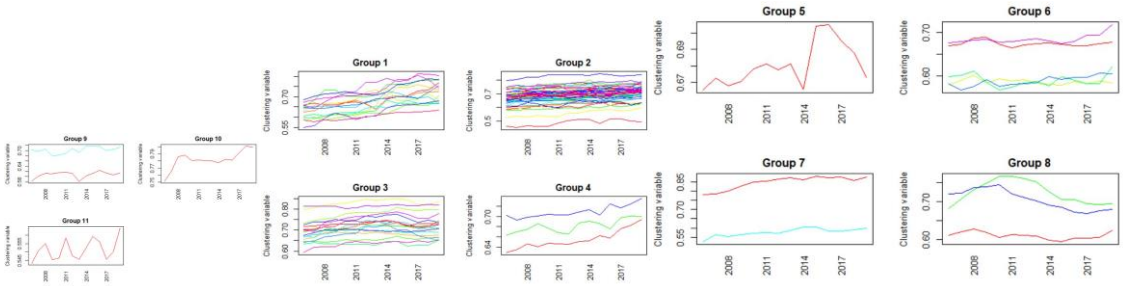
Time series in group 11 : Pakistan

HM Measure: 10.36886

$mstar 11

[1] $lpml

[1] 3591.2711



C2 -1: trend T, deg = 1, level = F, Poisson Dirichlet, c = 0.001

Number of groups of the chosen cluster configuration: 6

Time series in group 1 : Albania Bangladesh Bolivia Cameroon Chad Ethiopia France Iceland India Ireland Madagascar Mexico Namibia Nepal Nicaragua Singapore Slovenia

Time series in group 2 : Algeria Argentina Australia Austria Bahrain Belgium Botswana Brazil Bulgaria Burkina.Faso Cambodia Canada Chile Colombia Costa.Rica Cyprus Czech.Republic Denmark Dominican.Republic Ecuador Egypt El.Salvador Estonia Georgia Germany Ghana Greece Guatemala Indonesia Israel Italy Jamaica Japan Kazakhstan Kenya Korea..Rep. Kuwait Latvia Lithuania Luxembourg Malaysia Mali Malta Mauritania Mauritius Moldova Mongolia Morocco New.Zealand Nigeria Norway Pakistan Panama Paraguay Peru Philippines Poland Portugal Romania Russian.Federation Saudi.Arabia South.Africa Spain Switzerland Tanzania Thailand Turkey Uganda Ukraine United.Arab.Emirates United.Kingdom United.States Uruguay Venezuela Yemen

Time series in group 3 : China Iran..Islamic.Rep. Lesotho Netherlands Slovak.Republic

Time series in group 4 : Croatia

Time series in group 5 : Finland Honduras Kyrgyz.Republic Malawi Sweden

Time series in group 6 : Hungary Jordan Sri.Lanka

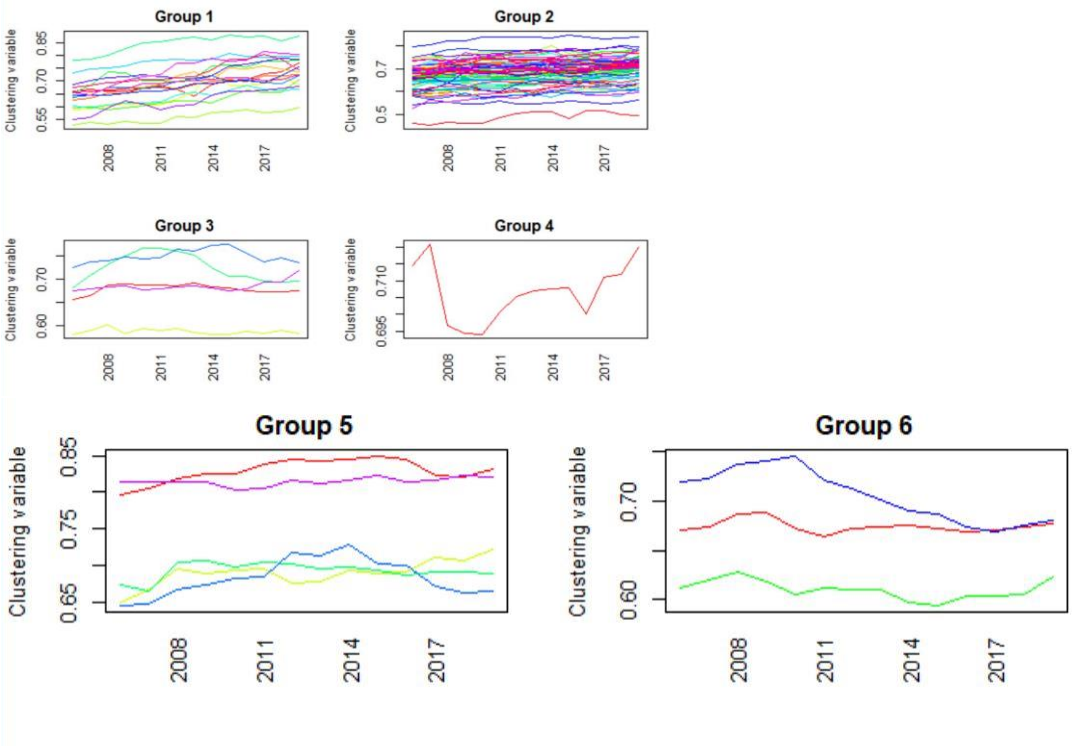
HM Measure: 10.83423

$mstar

[1] 6

$lpml

[1] 3591.276



C3-1: trend T, deg = 2, level = F, Nstable, c = 0.001

Number of groups of the chosen cluster configuration: 4

Time series in group 1 : Albania Bangladesh Bolivia Cameroon Chad Ethiopia France Guatemala Iceland India Mexico Nepal Nicaragua Slovenia

Time series in group 2 : Algeria Argentina Australia Austria Bahrain Belgium Botswana Brazil Bulgaria Burkina.Faso Cambodia Canada Chile Colombia Costa.Rica Croatia Cyprus Czech.Republic Denmark Dominican.Republic Ecuador Egypt El.Salvador Estonia Finland Georgia Germany Ghana Greece Honduras Indonesia Ireland Israel Italy Jamaica Japan Kazakhstan Kenya Korea..Rep. Latvia Lithuania Luxembourg Madagascar Malaysia Malta Mauritania Mauritius Moldova Morocco Namibia Netherlands New.Zealand Nigeria Norway Pakistan Panama Paraguay Peru Philippines Poland Portugal Romania Saudi.Arabia Singapore Slovak.Republic South.Africa Spain Sweden Switzerland Thailand Turkey Uganda Ukraine United.Arab.Emirates United.Kingdom United.States Uruguay Venezuela Yemen

Time series in group 3 : China Hungary Iran..Islamic.Rep. Jordan Kuwait Sri.Lanka

Time series in group 4 : Kyrgyz.Republic Lesotho Malawi Mali Mongolia Russian.Federation Tanzania

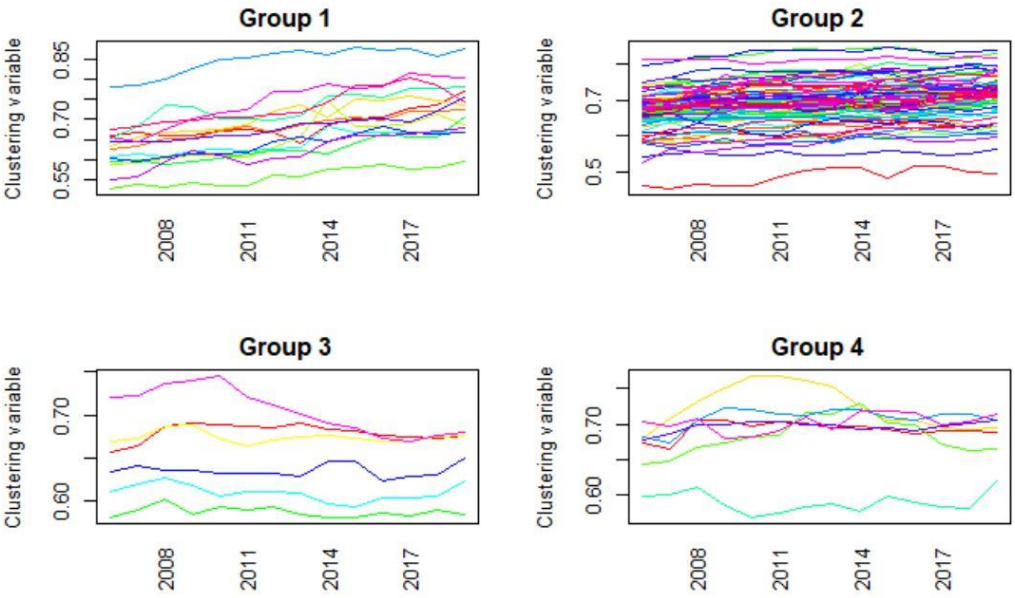
HM Measure: 10.74551

$mstar

[1] 4

$lpml

[1] 3591.248



D1-1: trend T, deg = 2, level = F, Dirichlet, c = 0.001

Number of groups of the chosen cluster configuration: 3

Time series in group 1 : Albania Bangladesh Bolivia Ethiopia France Mexico Namibia Nepal Nicaragua Slovenia

Time series in group 2 : Algeria Argentina Australia Austria Bahrain Belgium Botswana Brazil Bulgaria Burkina.Faso Cambodia Cameroon Canada Chad Chile China Colombia Costa.Rica Croatia Cyprus Czech.Republic Denmark Dominican.Republic Ecuador Egypt El.Salvador Estonia Finland Georgia Germany Ghana Greece Guatemala Honduras Hungary Iceland India Indonesia Iran..Islamic.Rep. Ireland Israel Italy Jamaica Japan Jordan Kazakhstan Kenya Korea..Rep. Kuwait Kyrgyz.Republic Latvia Lesotho Lithuania Luxembourg Madagascar Malawi Malaysia Mali Malta Mauritania Mauritius Moldova Mongolia Morocco Netherlands New.Zealand Nigeria Norway Pakistan Panama Paraguay Peru Philippines Poland Portugal Romania Russian.Federation Saudi.Arabia Singapore Slovak.Republic South.Africa Spain Sweden Switzerland Tanzania Thailand Turkey Uganda Ukraine United.Arab.Emirates United.Kingdom United.States Uruguay Venezuela Yemen

Time series in group 3 : Sri.Lanka

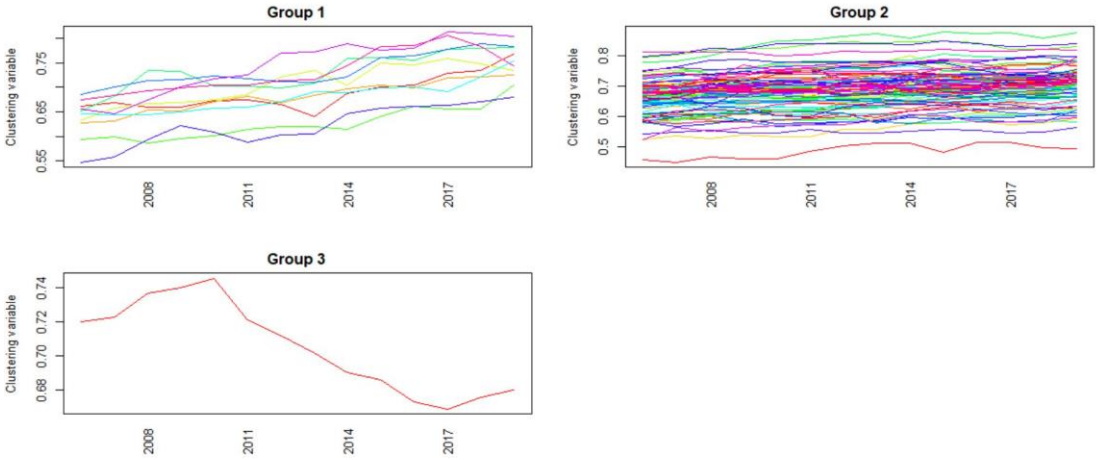
HM Measure: 10.96927

$mstar

[1] 3

$lpml

[1] 3705.739



D2-1: trend T, deg = 2, level = F,Poisson Dirichlet, c = 0.001

Number of groups of the chosen cluster configuration: 4

Time series in group 1 : Albania Algeria Argentina Australia Austria Bahrain Bangladesh Belgium Bolivia Botswana Brazil Bulgaria Burkina.Faso Cambodia Cameroon Canada Chad Chile China Colombia Costa.Rica Croatia Cyprus Czech.Republic Denmark Dominican.Republic Ecuador Egypt El.Salvador Estonia Ethiopia Finland France Georgia Germany Ghana Greece Guatemala Honduras Iceland India Indonesia Ireland Israel Italy Jamaica Japan Kazakhstan Kenya Korea..Rep. Kuwait Kyrgyz.Republic Latvia Lesotho Lithuania Luxembourg Madagascar Malawi Malaysia Mali Malta Mauritania Mauritius Mexico Moldova Mongolia Morocco Namibia Nepal Netherlands New.Zealand Nicaragua Nigeria Norway Pakistan Panama Paraguay Peru Philippines Poland Portugal Romania Russian.Federation Saudi.Arabia Singapore Slovak.Republic Slovenia South.Africa Spain Sweden Switzerland Tanzania Thailand Turkey Uganda Ukraine United.Arab.Emirates United.Kingdom United.States Uruguay Venezuela Yemen

Time series in group 2 : Hungary

Time series in group 3 : Iran..Islamic.Rep.

Time series in group 4 : Jordan Sri.Lanka

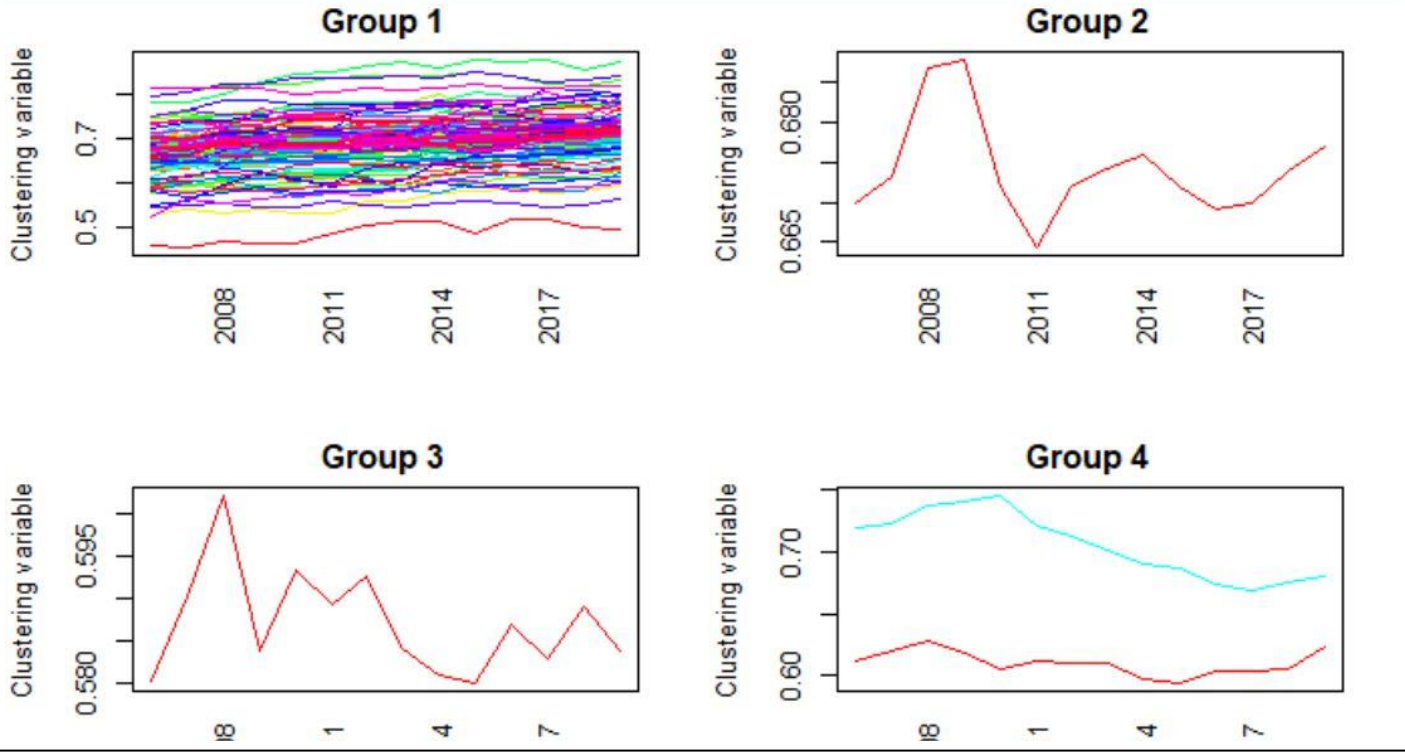
HM Measure: 10.81035

$mstar

[1] 4

$lpml

[1] 3718.373



D3-1: trend T, deg = 2, level = F, Nstable , c = 0.001

Number of groups of the chosen cluster configuration: 4

Time series in group 1 : Albania Algeria Argentina Australia Austria Bahrain Bangladesh Belgium Bolivia Botswana Brazil Bulgaria Burkina.Faso Cambodia Cameroon Canada Chad Chile China Colombia Costa.Rica Croatia Cyprus Czech.Republic Denmark Dominican.Republic Ecuador Egypt El.Salvador Estonia Ethiopia Finland France Georgia Germany Ghana Greece Guatemala Honduras Iceland India Indonesia Ireland Israel Italy Jamaica Japan Kazakhstan Kenya Korea..Rep. Kuwait Kyrgyz.Republic Latvia Lesotho Lithuania Luxembourg Madagascar Malawi Malaysia Mali Malta Mauritania Mauritius Mexico Moldova Mongolia Morocco Namibia Nepal Netherlands New.Zealand Nicaragua Nigeria Norway Pakistan Panama Paraguay Peru Philippines Poland Portugal Romania Russian.Federation Saudi.Arabia Singapore Slovak.Republic Slovenia South.Africa Spain Sweden Switzerland Tanzania Thailand Turkey Uganda Ukraine United.Arab.Emirates United.Kingdom United.States Uruguay Venezuela Yemen

Time series in group 2 : Hungary

Time series in group 3 : Iran..Islamic.Rep. Sri.Lanka

Time series in group 4 : Jordan

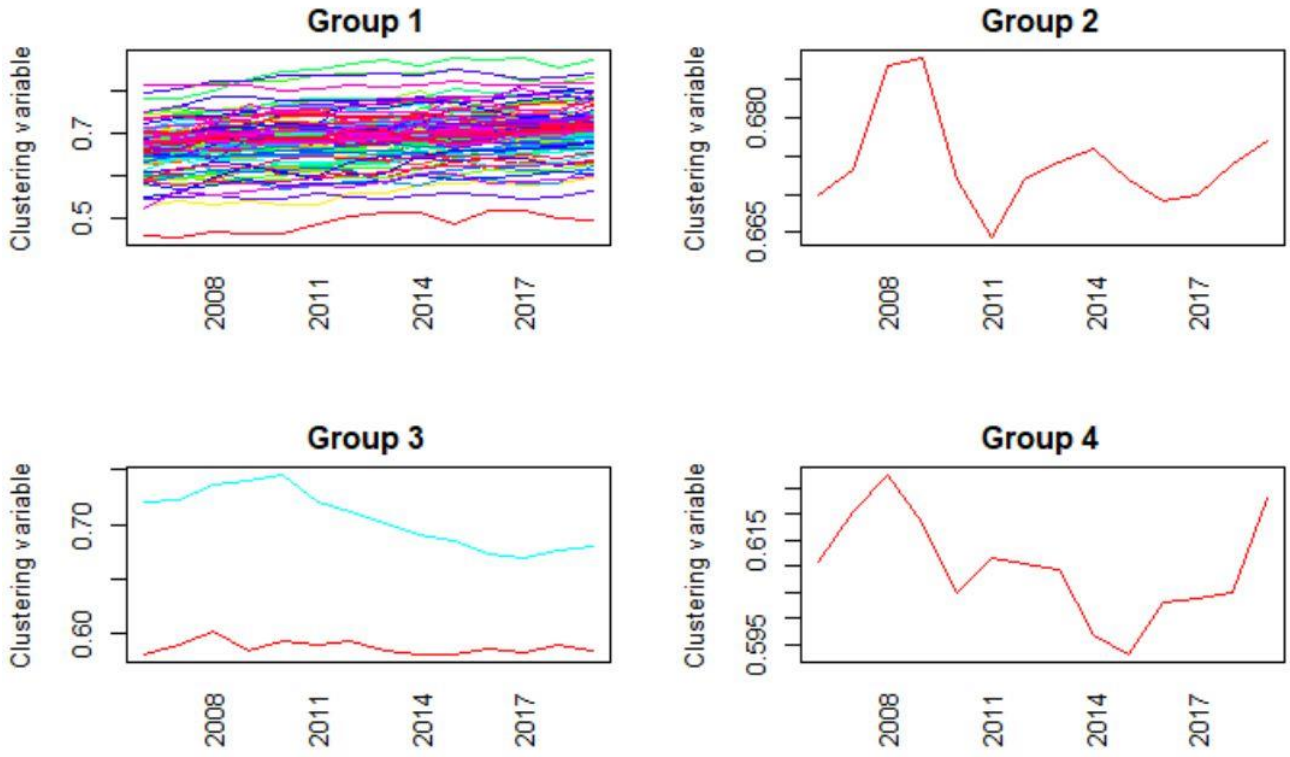
HM Measure: 10.94693

$mstar

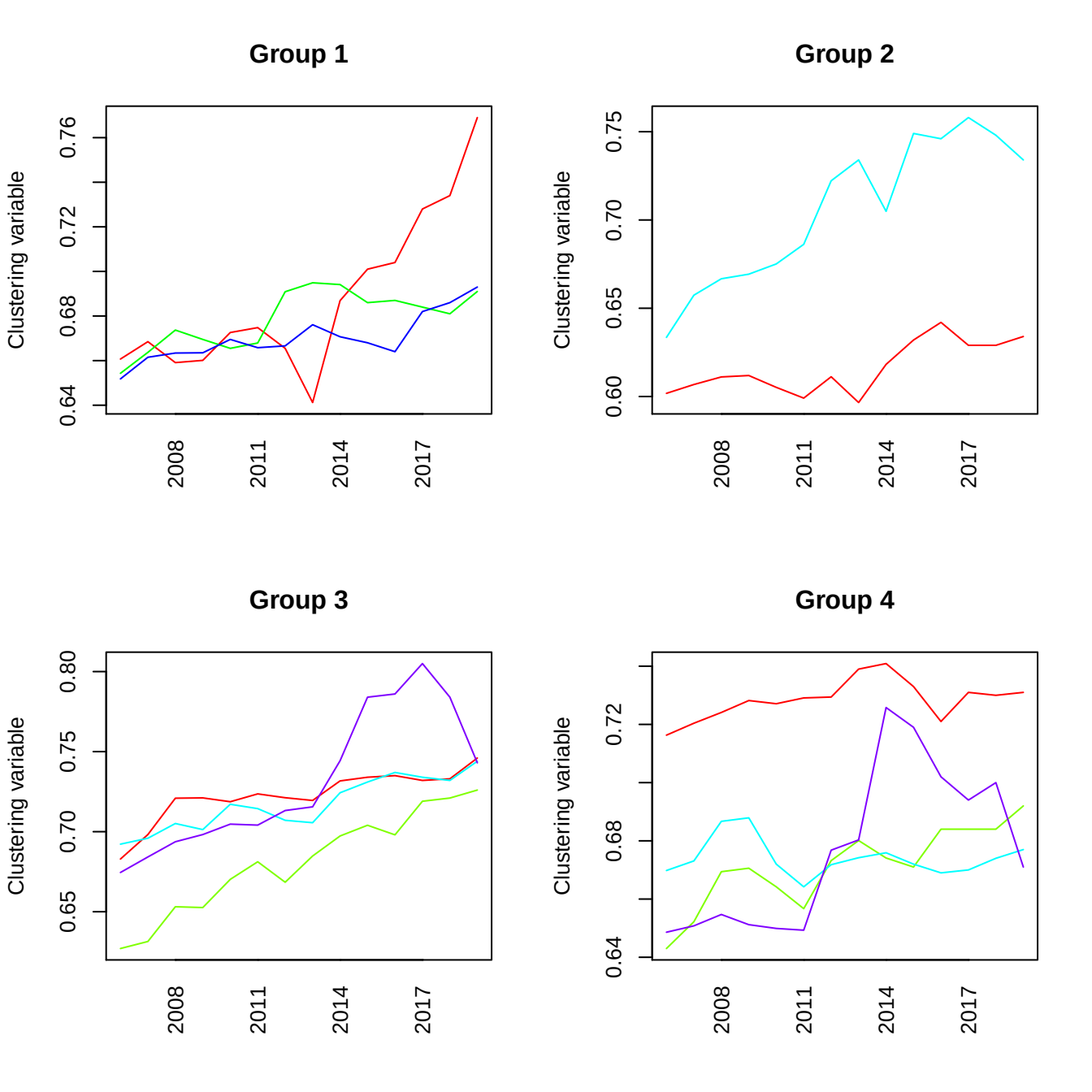
[1] 4

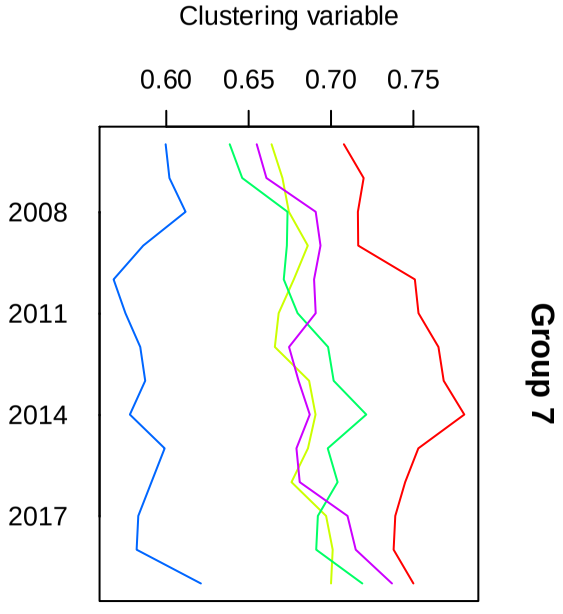
$lpml

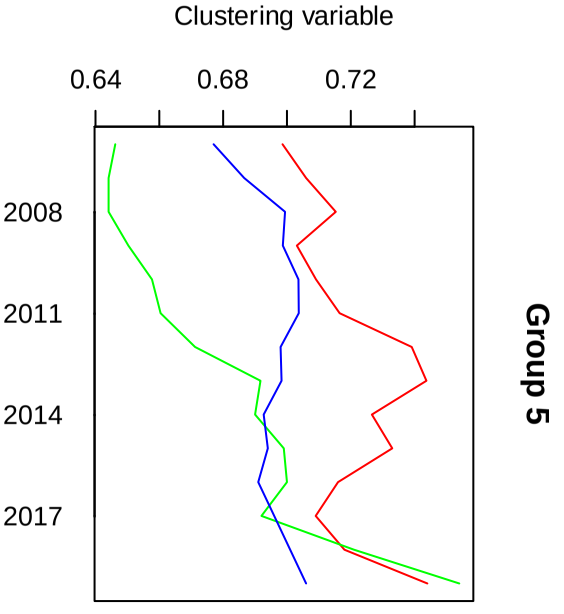
[1] 3736.161

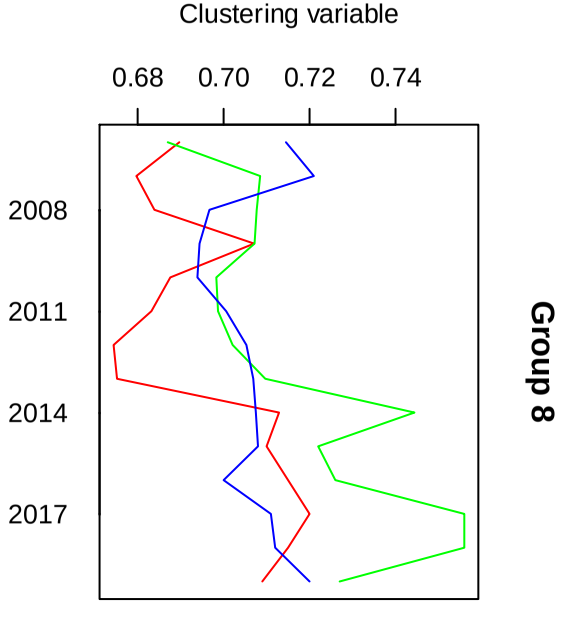


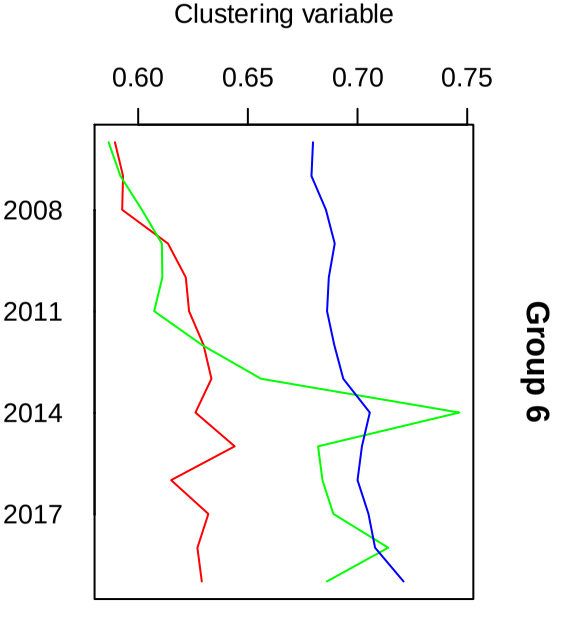
E1-1: trend F, level = F, Dirichlet, c = 0.001:

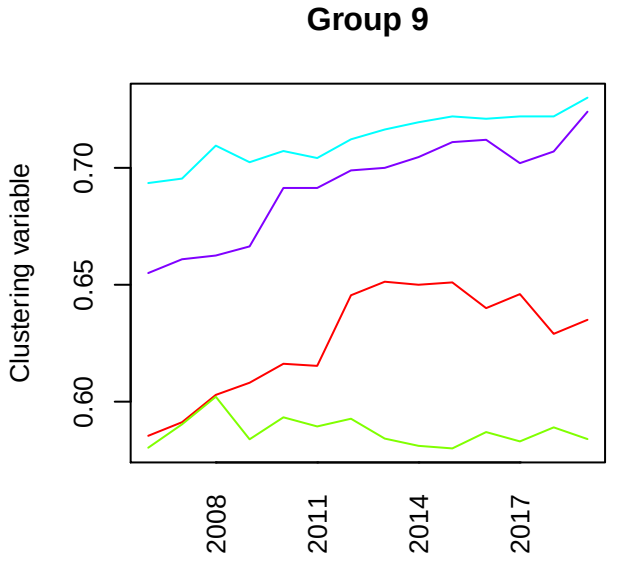

Group 1
Clustering variable
0.64
0.68
0.72
0.76
2008
2011
2014
2017
Group 2
Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017
Group 3
Clustering variable
0.65
0.70
0.75
0.80
2008
2011
2014
2017
Group 4
Clustering variable
0.64
0.68
0.72
2008
2011
2014
2017

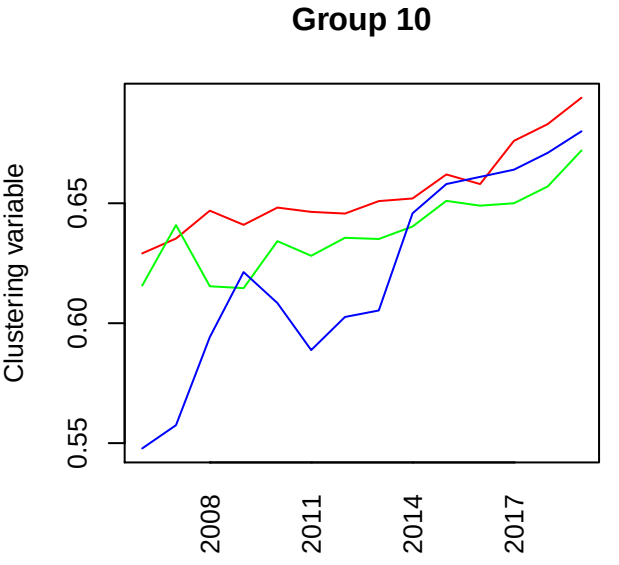

Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017
Group 7

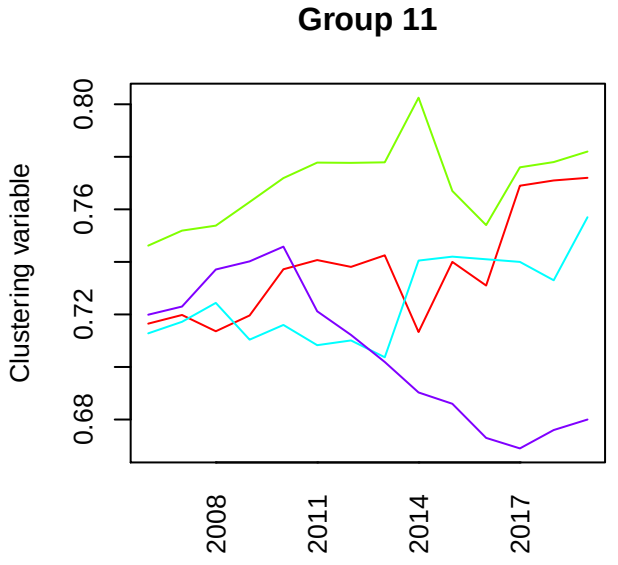

Clustering variable
0.64
0.68
0.72
2008
2011
2014
2017
Group 5

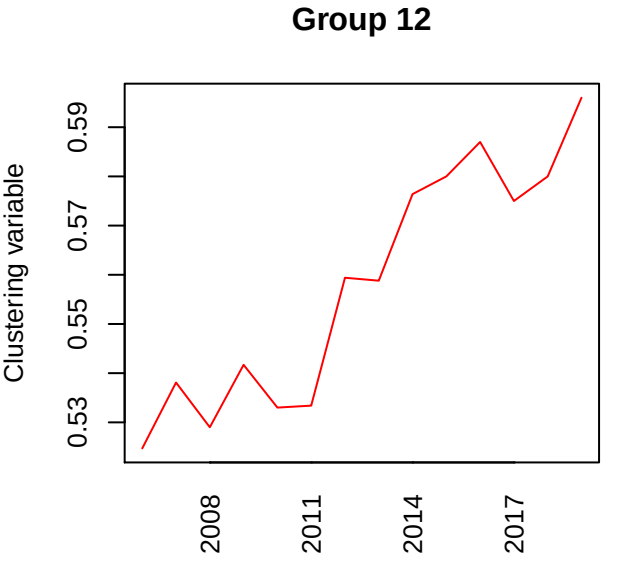

Clustering variable
0.68
0.70
0.72
0.74
2008
2011
2014
2017
Group 8

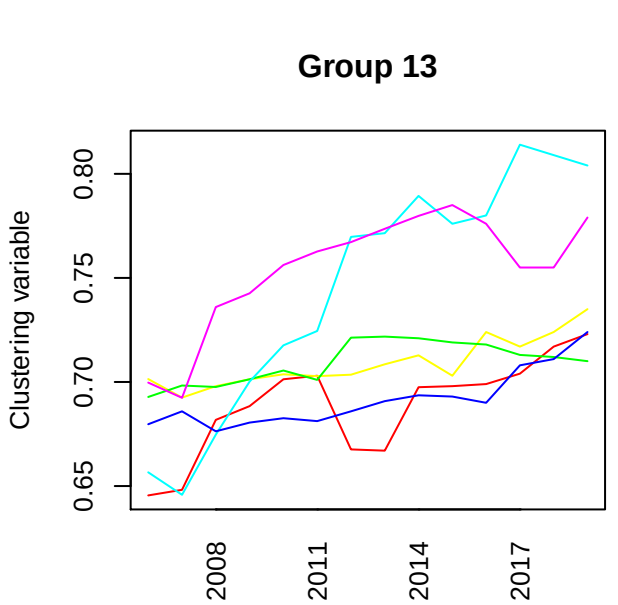

Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017
Group 6

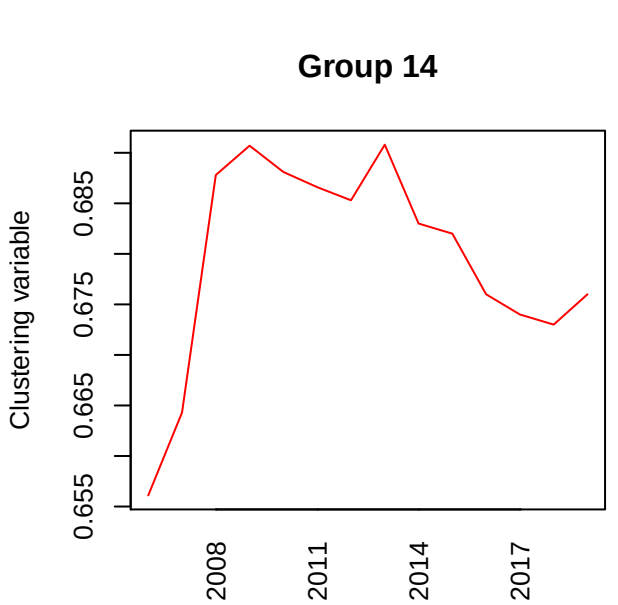

Group 9
Clustering variable
0.60
0.65
0.70
2008
2011
2014
2017

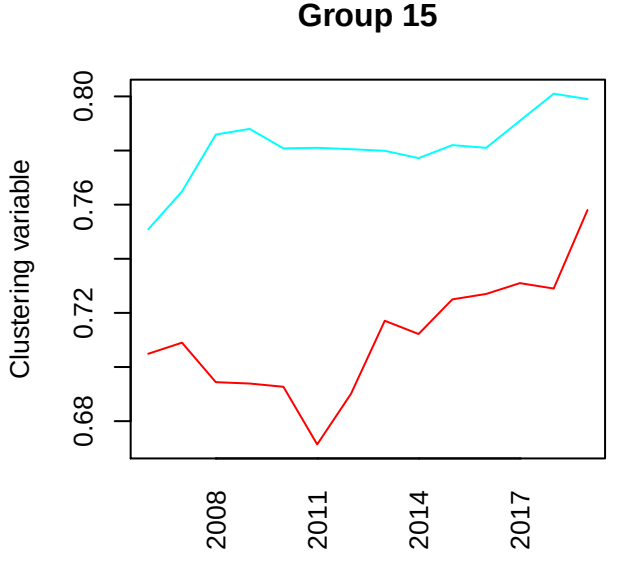

Group 10
Clustering variable
0.55
0.60
0.65
2008
2011
2014
2017

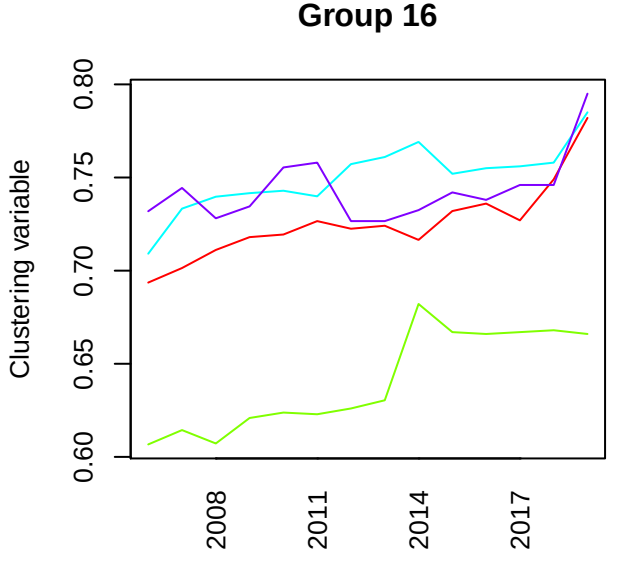

Group 11
Clustering variable
0.68
0.72
0.76
0.80
2008
2011
2014
2017

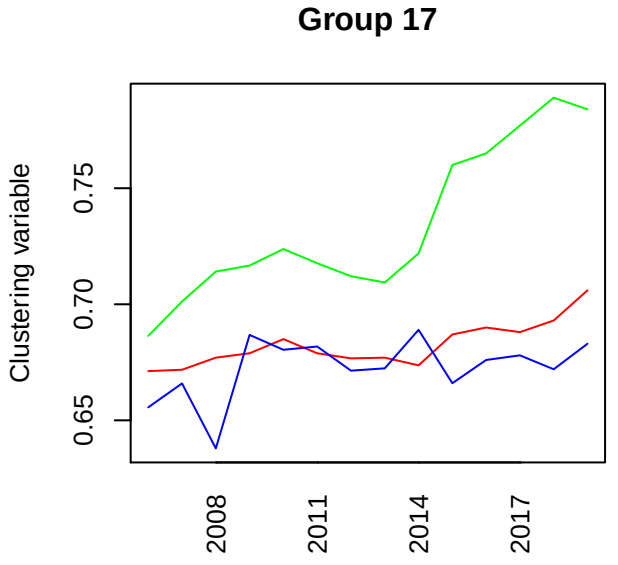

Group 12
Clustering variable
0.53
0.55
0.57
0.59
2008
2011
2014
2017

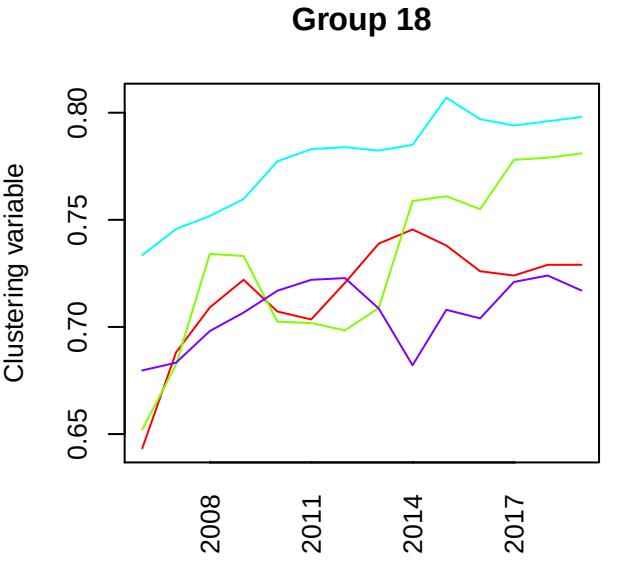

Group 13
Clustering variable
0.65
0.70
0.75
0.80
2008
2011
2014
2017

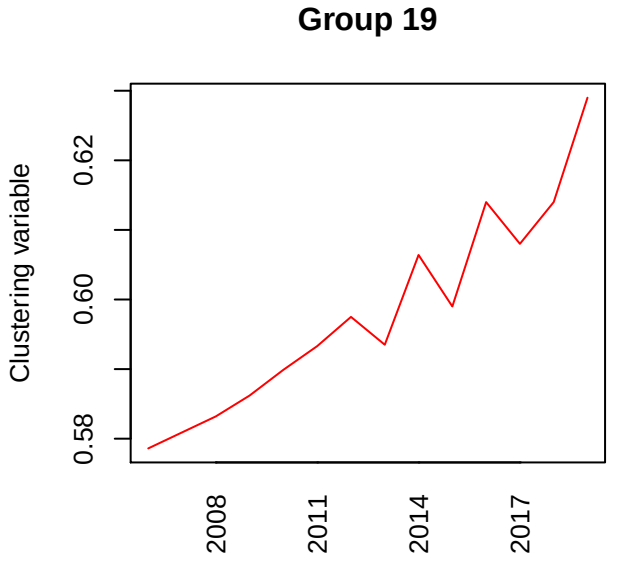

Group 14
Clustering variable
0.655
0.665
0.675
0.685
2008
2011
2014
2017

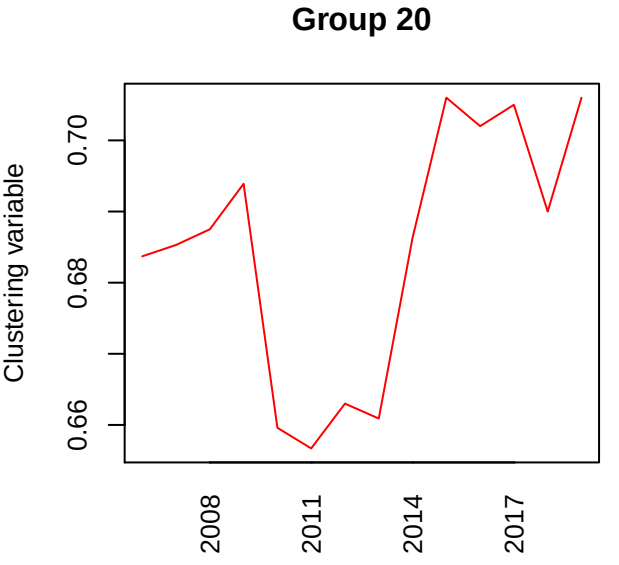

Group 15
Clustering variable
0.68
0.72
0.76
0.80
2008
2011
2014
2017

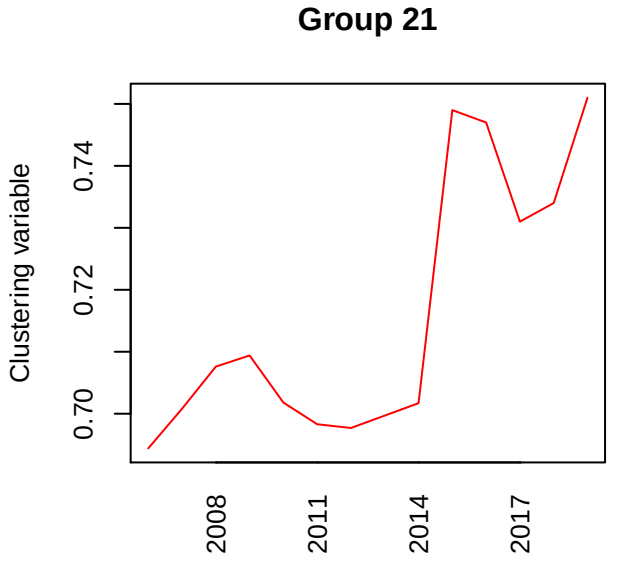

Group 16
Clustering variable
0.60
0.65
0.70
0.75
0.80
2008
2011
2014
2017

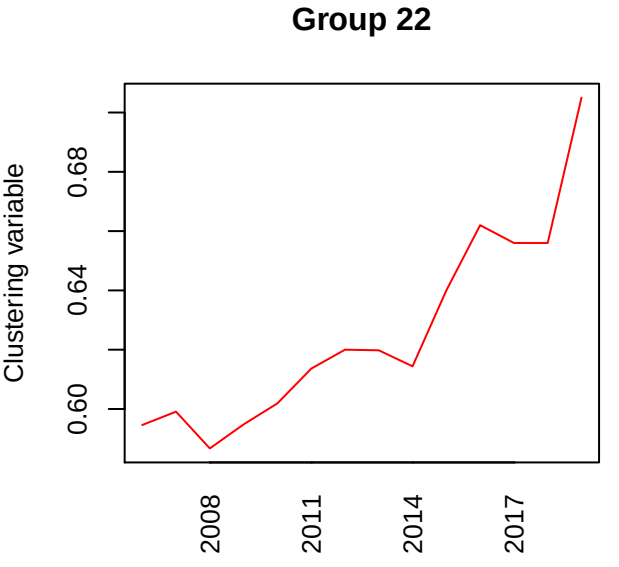

Group 17
Clustering variable
0.65
0.70
0.75
2008
2011
2014
2017

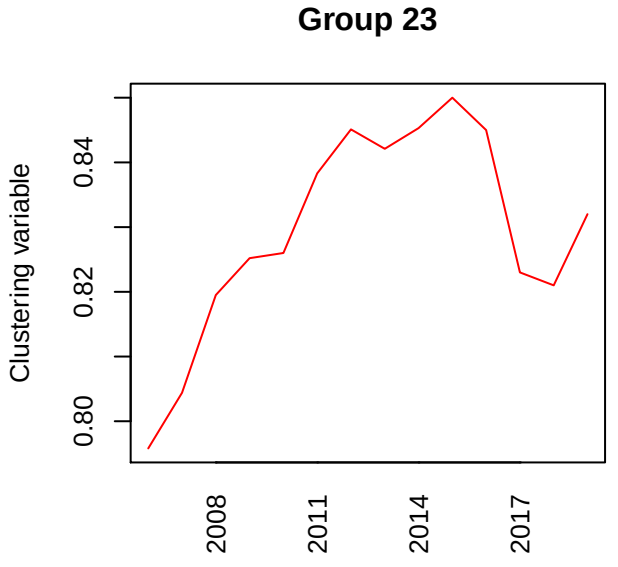

Group 18
Clustering variable
0.65
0.70
0.75
0.80
2008
2011
2014
2017

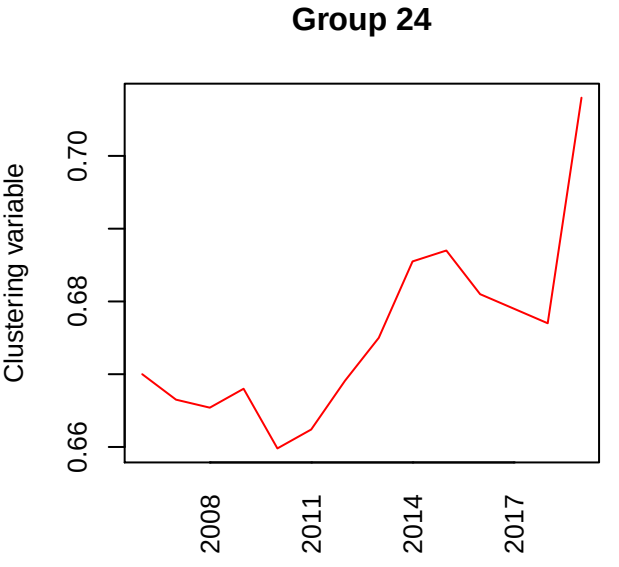

Group 19
Clustering variable
0.58
0.60
0.62
2008
2011
2014
2017

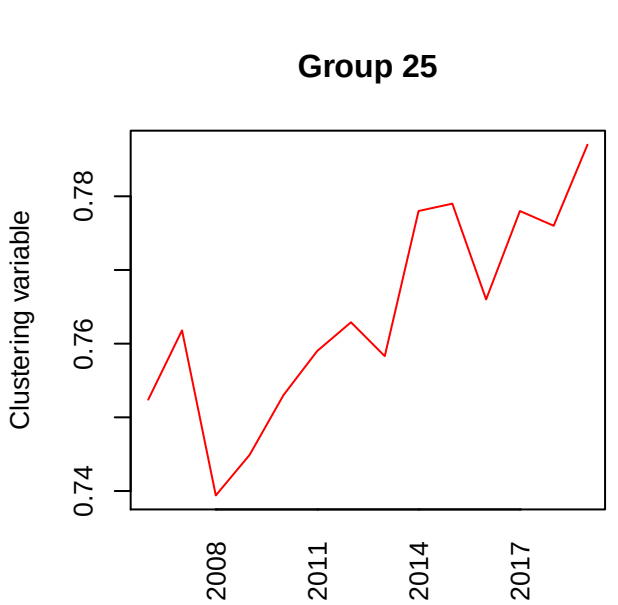

Group 20
Clustering variable
0.66
0.68
0.70
2008
2011
2014
2017

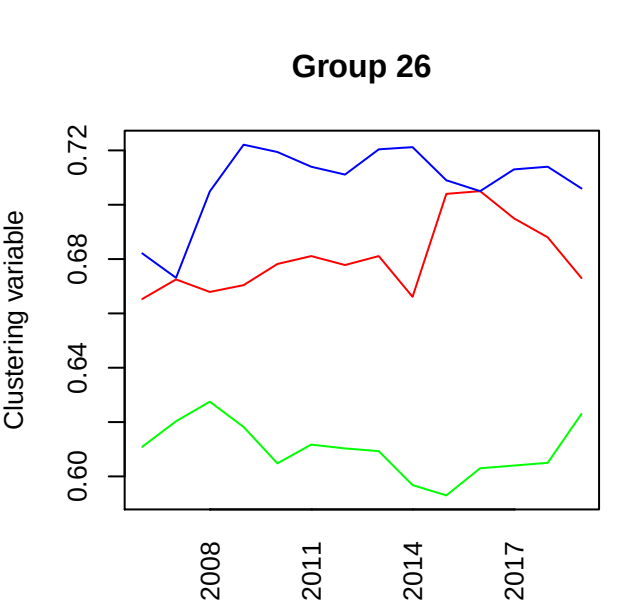

Group 21
Clustering variable
0.70
0.72
0.74
2008
2011
2014
2017

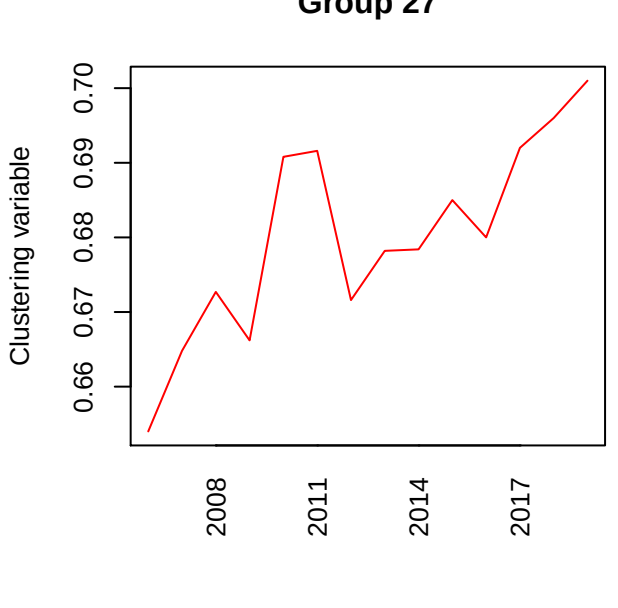

Group 22
Clustering variable
0.60
0.64
0.68
2008
2011
2014
2017

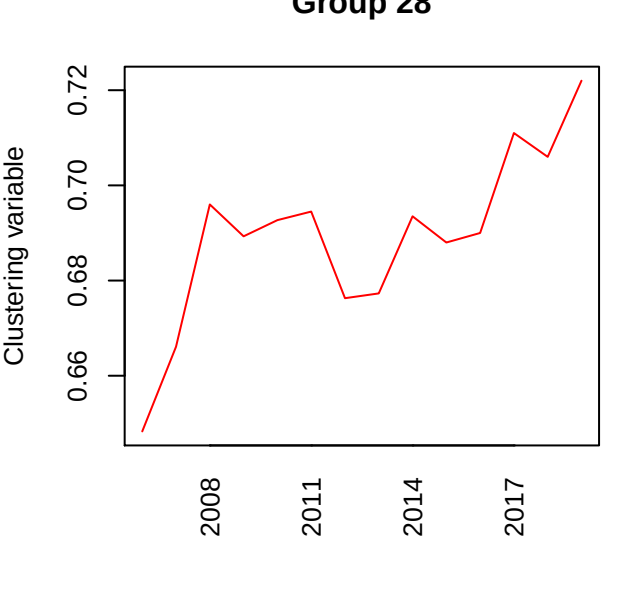

Group 23
Clustering variable
0.80
0.82
0.84
2008
2011
2014
2017

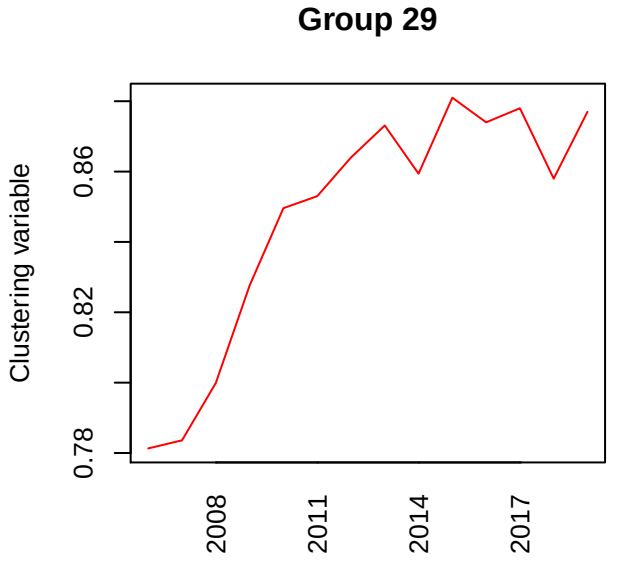

Group 24
Clustering variable
0.66
0.68
0.70
2008
2011
2014
2017

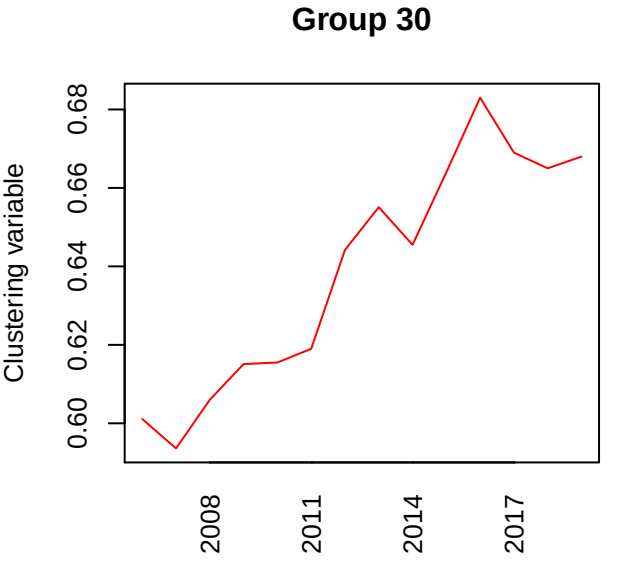

Group 25
Clustering variable
0.74
0.76
0.78
2008
2011
2014
2017

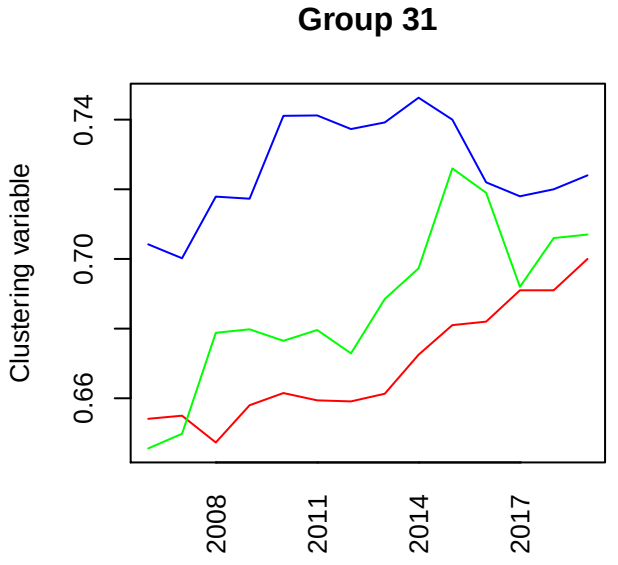

Group 26
Clustering variable
0.60
0.64
0.68
0.72
2008
2011
2014
2017

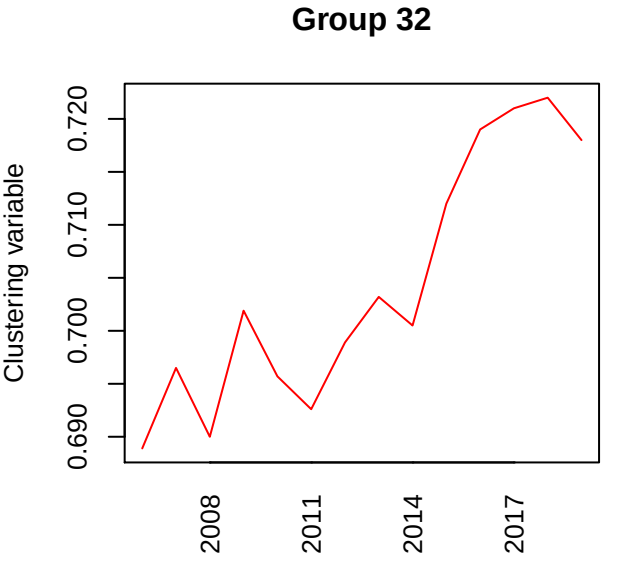

Group 27
Clustering variable
0.66
0.67
0.68
0.69
0.70
2008
2011
2014
2017

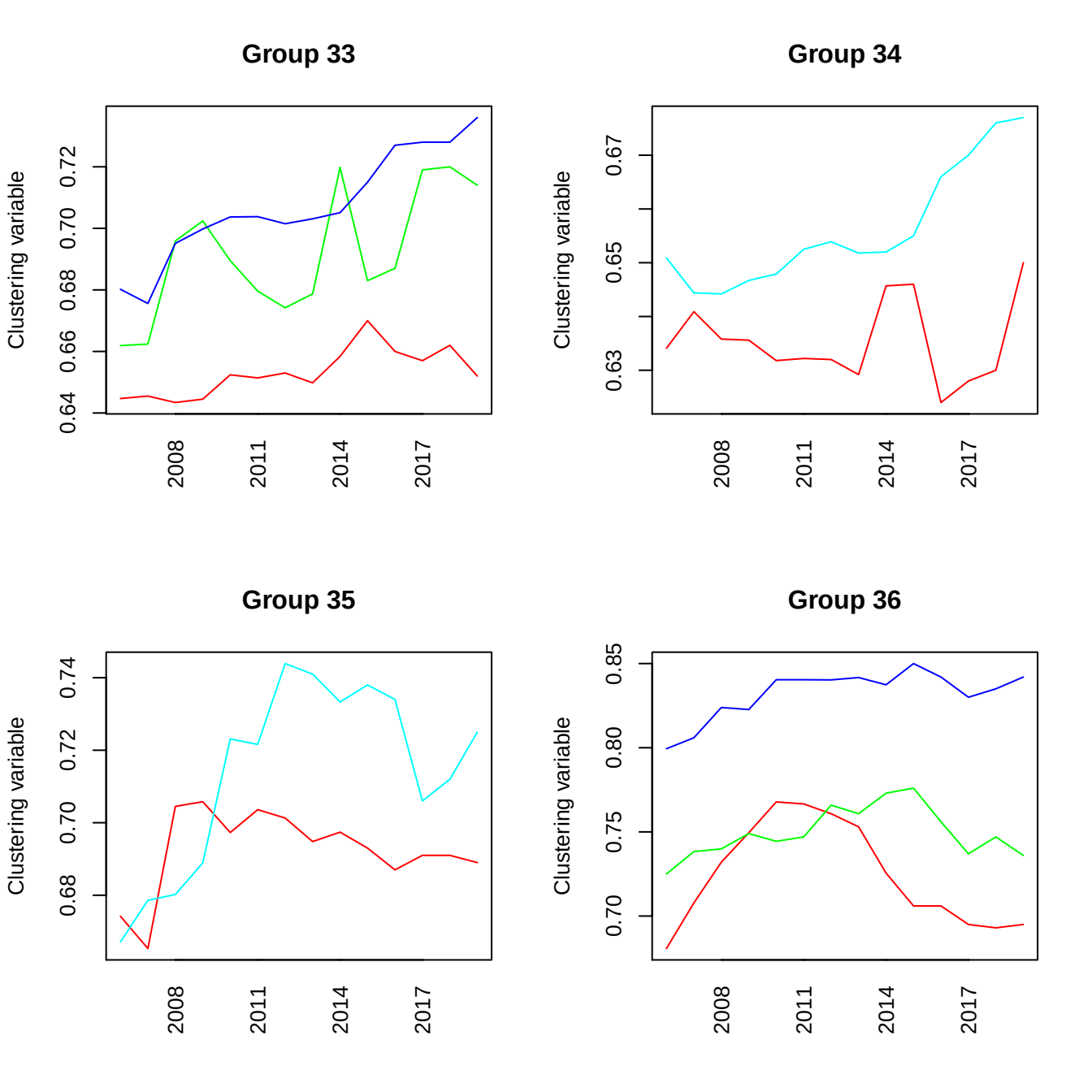

Group 28
Clustering variable
0.66
0.68
0.70
0.72
2008
2011
2014
2017

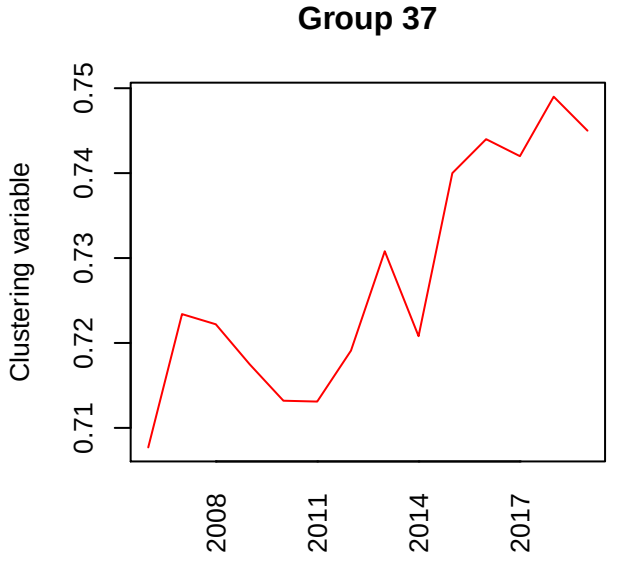

Group 29
Clustering variable
0.78
0.82
0.86
2008
2011
2014
2017

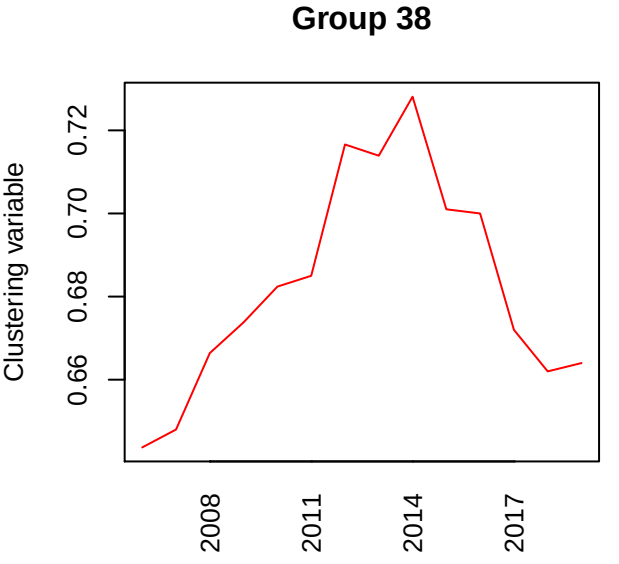

Group 30
Clustering variable
0.60
0.62
0.64
0.66
0.68
2008
2011
2014
2017

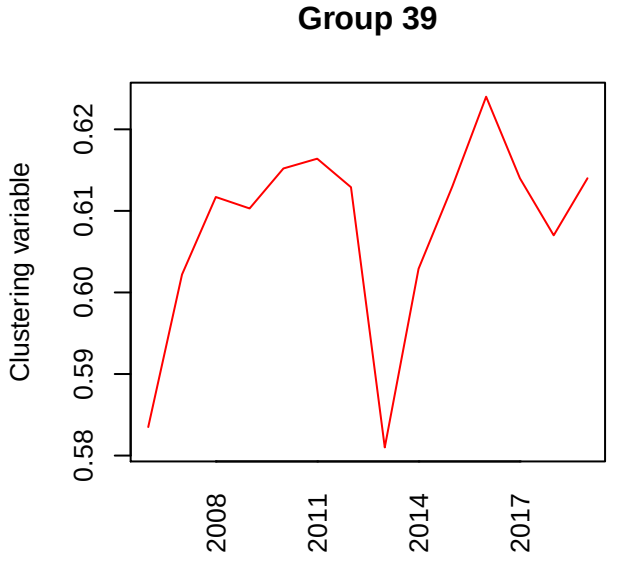

Group 31
Clustering variable
0.66
0.70
0.74
2008
2011
2014
2017

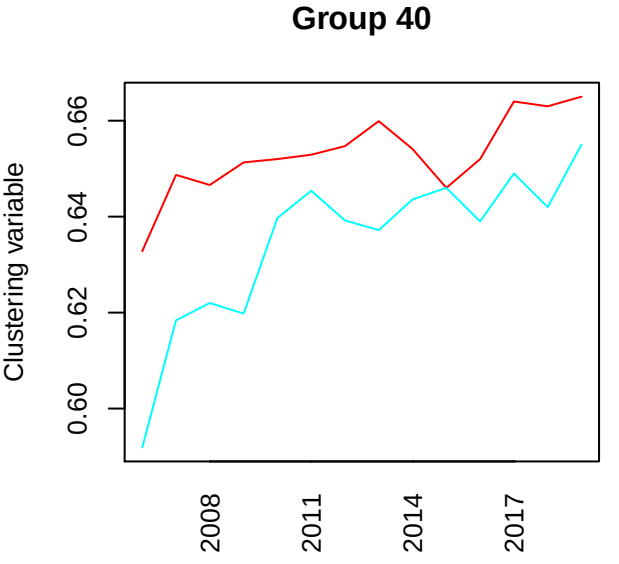

Group 32
Clustering variable
0.690
0.700
0.710
0.720
2008
2011
2014
2017

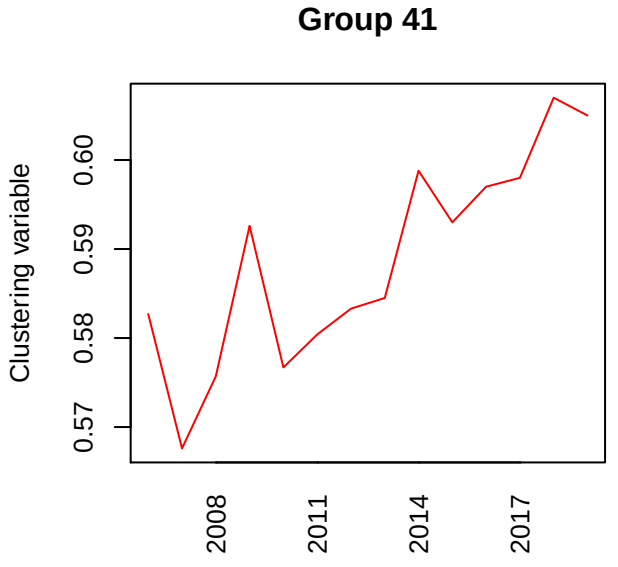

Group 33
Clustering variable
0.64
0.66
0.68
0.70
0.72
2008
2011
2014
2017
Group 34
Clustering variable
0.63
0.65
0.67
2008
2011
2014
2017
Group 35
Clustering variable
0.68
0.70
0.72
0.74
2008
2011
2014
2017
Group 36
Clustering variable
0.70
0.75
0.80
0.85
2008
2011
2014
2017

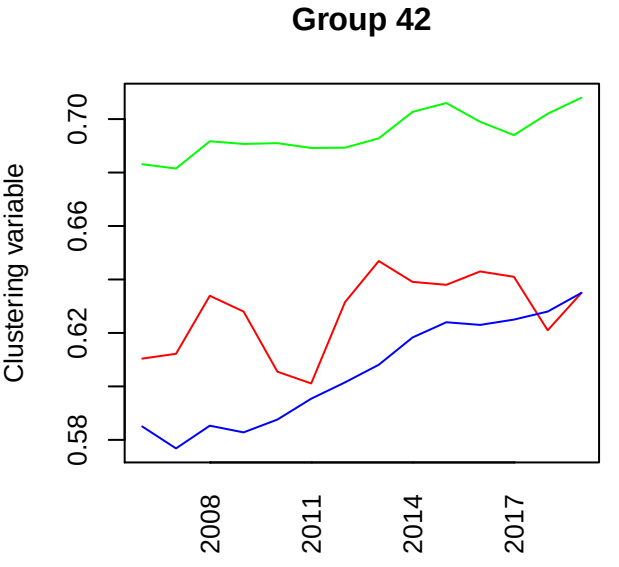

Group 37
Clustering variable
0.71
0.72
0.73
0.74
0.75
2008
2011
2014
2017

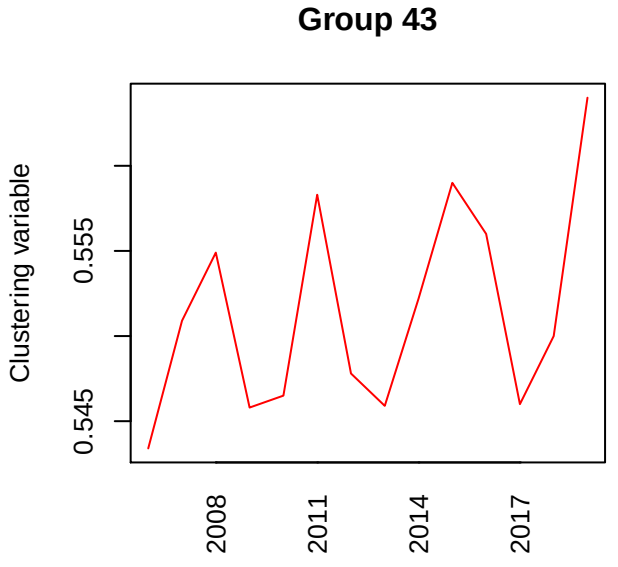

Group 38
Clustering variable
0.66
0.68
0.70
0.72
2008
2011
2014
2017

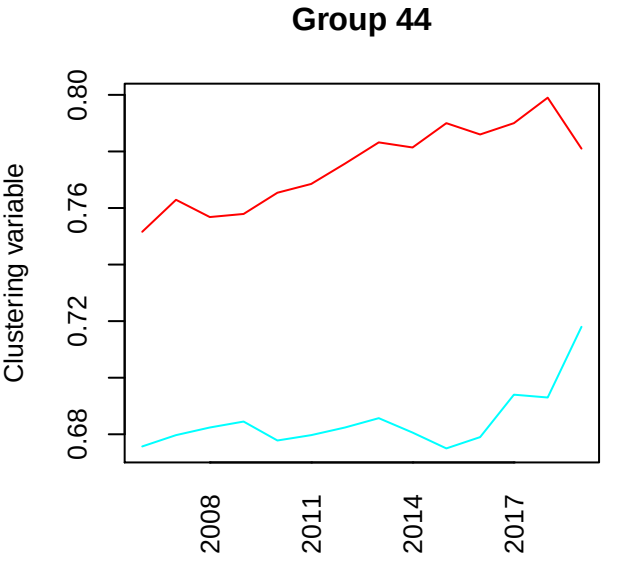

Group 39
Clustering variable
0.58
0.59
0.60
0.61
0.62
2008
2011
2014
2017

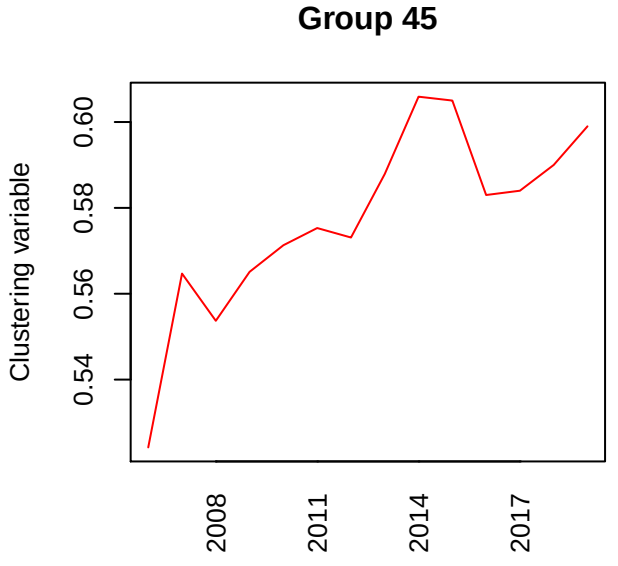

Group 40
Clustering variable
0.60
0.62
0.64
0.66
2008
2011
2014
2017

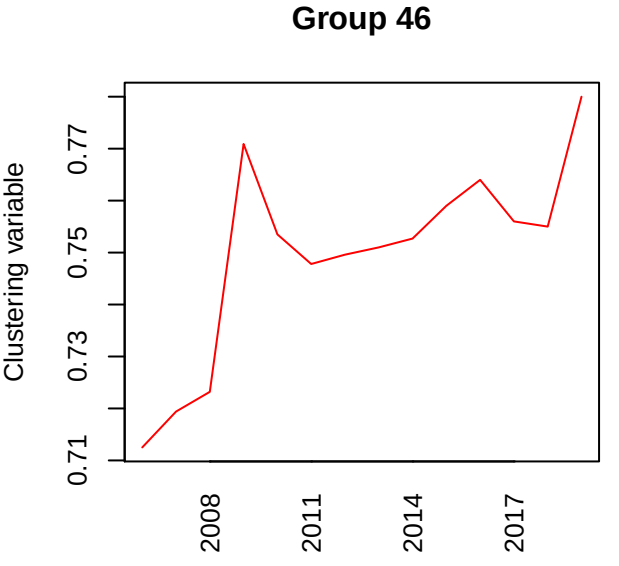

Group 41
Clustering variable
0.57
0.58
0.59
0.60
2008
2011
2014
2017

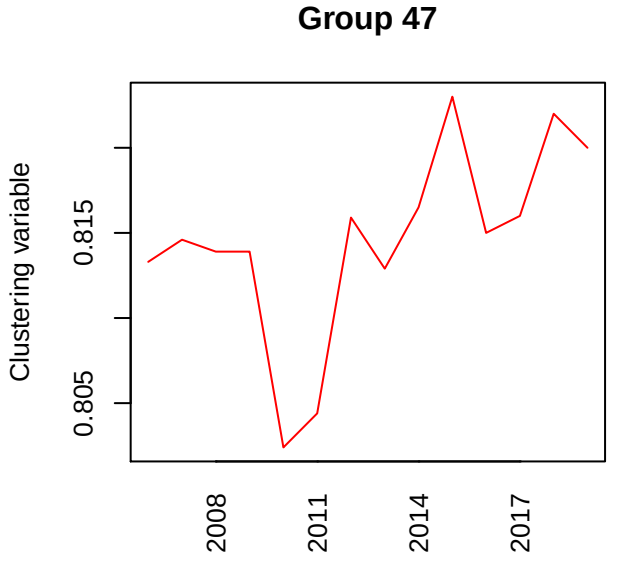

Group 42
Clustering variable
0.58
0.62
0.66
0.70
2008
2011
2014
2017

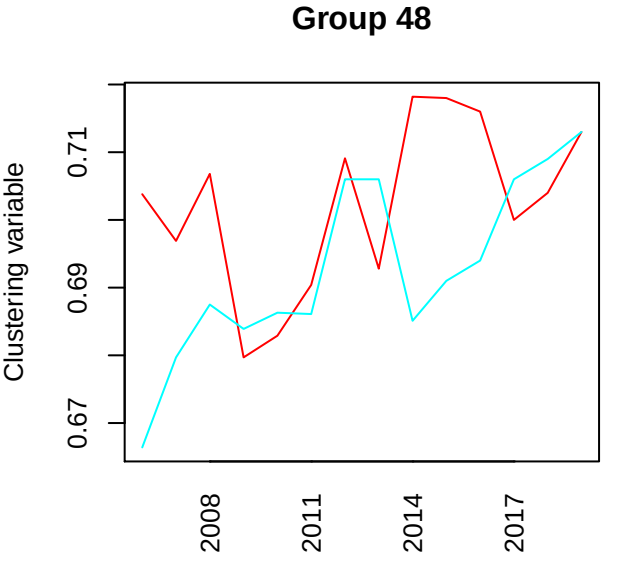

Group 43
Clustering variable
0.545
0.555
2008
2011
2014
2017


Group 44
Clustering variable
0.68
0.72
0.76
0.80
2008
2011
2014
2017


Group 45
Clustering variable
0.54
0.56
0.58
0.60
2008
2011
2014
2017


Group 46
Clustering variable
0.71
0.73
0.75
0.77
2008
2011
2014
2017

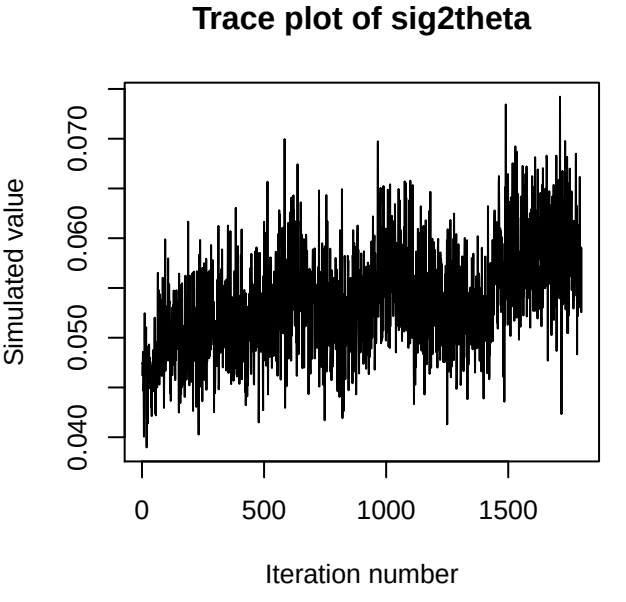

Group 47
Clustering variable
0.805
0.815
2008
2011
2014
2017

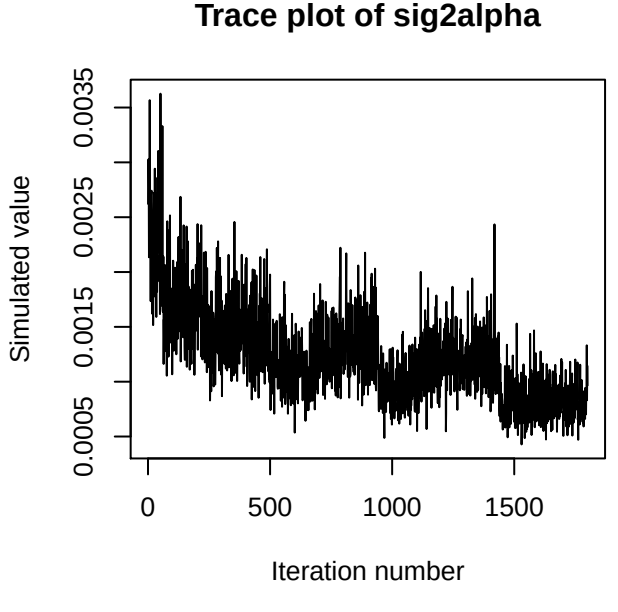

Group 48
Clustering variable
0.67
0.69
0.71
2008
2011
2014
2017

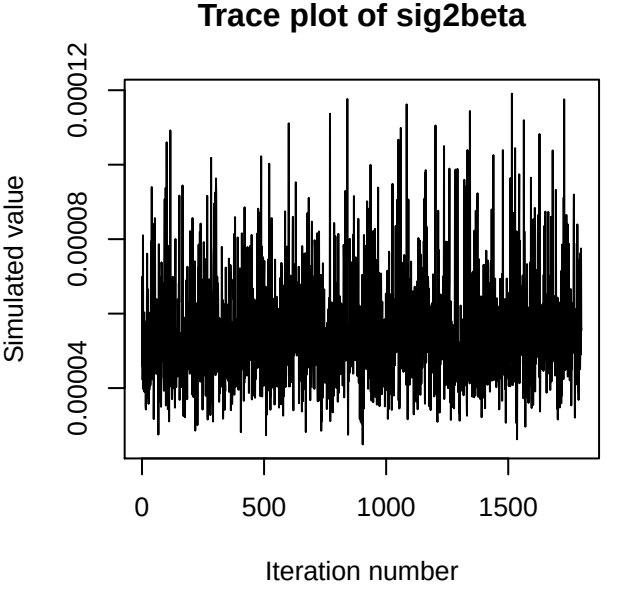
Group 49
Clustering variable
0.74
0.75
0.76
0.77
2008
2011
2014
2017

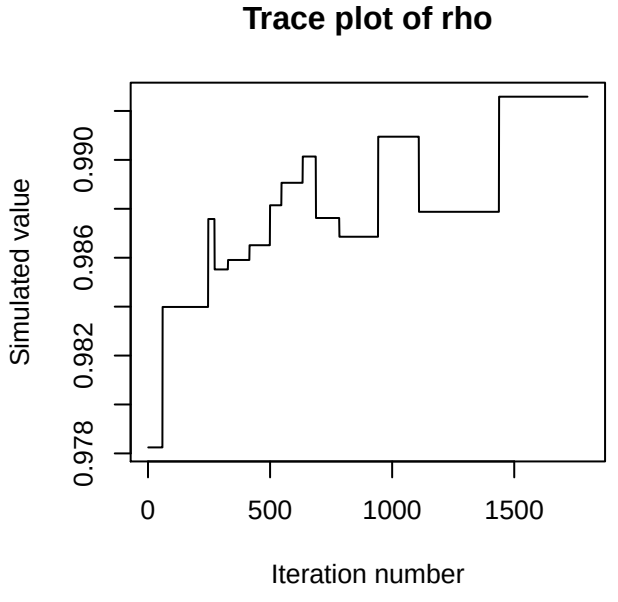
Group 50
Clustering variable
0.45
0.47
0.49
0.51
2008
2011
2014
2017

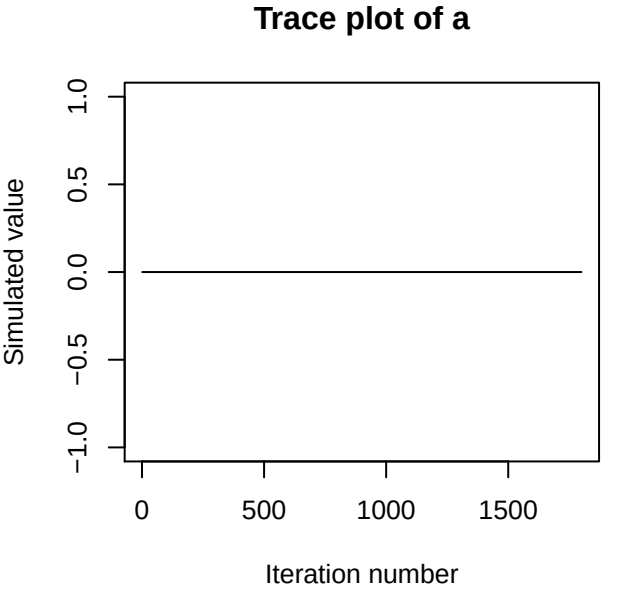
Trace plot of sig2eps
Simulated value
0.000
0.004
0.008
0
500
1000
1500
Iteration number

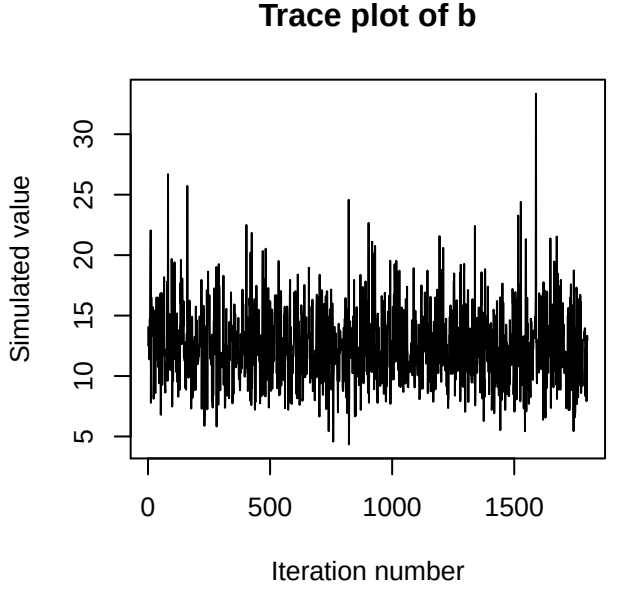

Trace plot of sig2theta
Simulated value
0.040
0.050
0.060
0.070
0
500
1000
1500
Iteration number

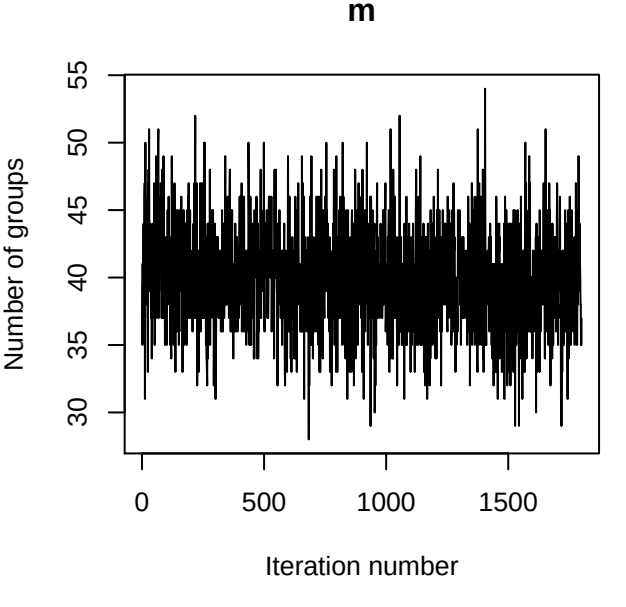

Trace plot of sig2alpha
Simulated value
0.0005
0.0015
0.0025
0.0035
0
500
1000
1500
Iteration number

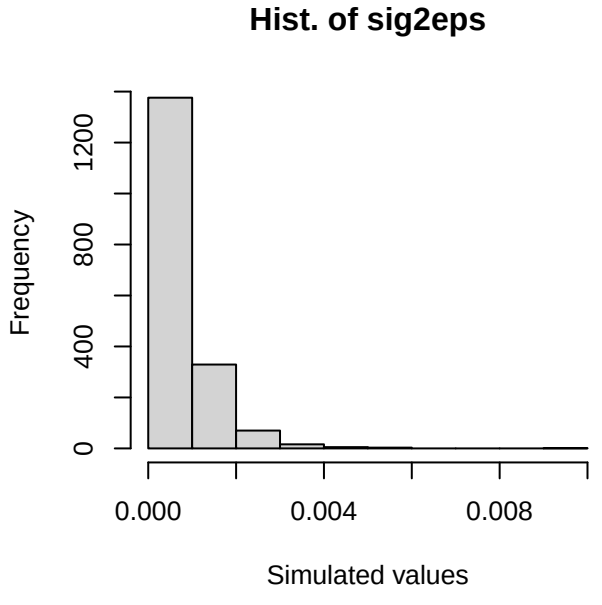

Trace plot of sig2beta
Simulated value
0.00004
0.00008
0.00012
0
500
1000
1500
Iteration number


Trace plot of rho
Simulated value
0.978
0.982
0.986
0.990
0
500
1000
1500
Iteration number

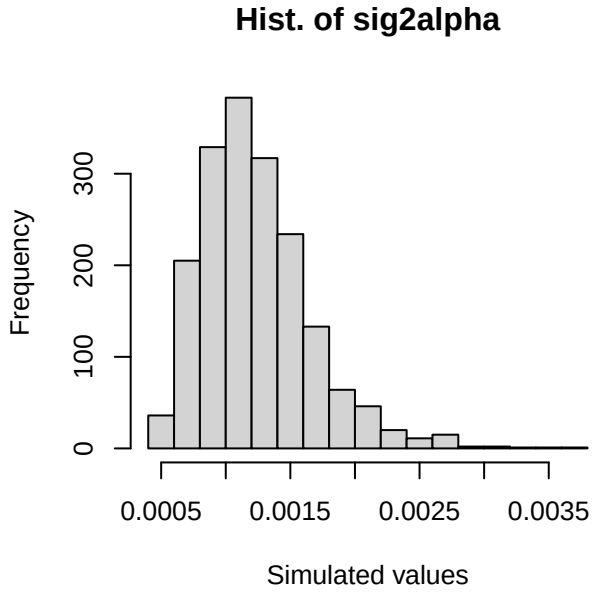

Trace plot of a
Simulated value
−1.0
−0.5
0.0
0.5
1.0
0
500
1000
1500
Iteration number

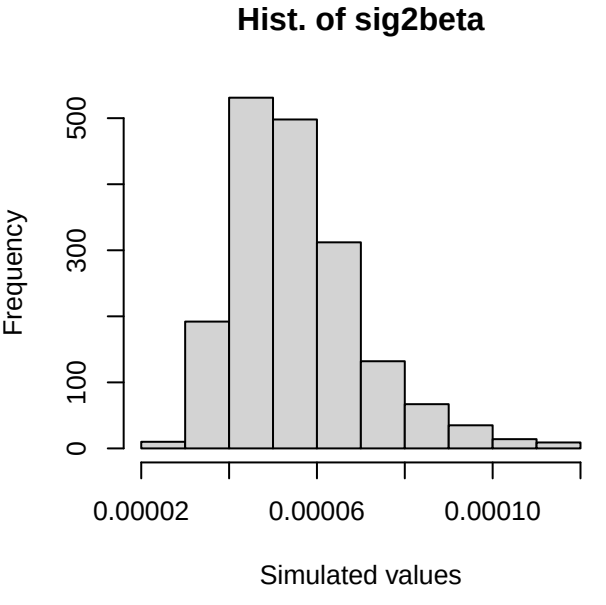

Trace plot of b
Simulated value
5
10
15
20
25
30
0
500
1000
1500
Iteration number

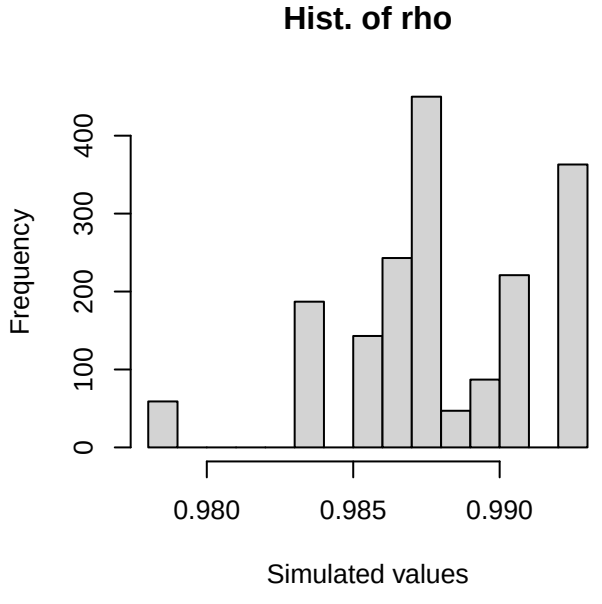

m
Number of groups
30
35
40
45
50
55
0
500
1000
1500
Iteration number

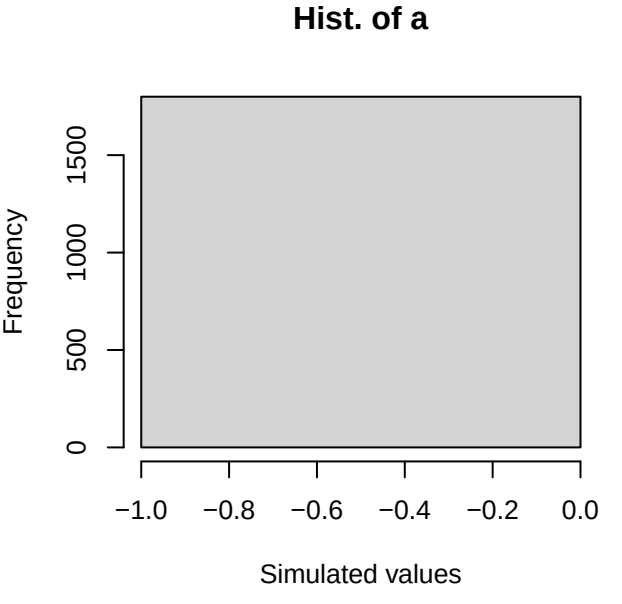

Hist. of sig2eps
Frequency
0
400
800
1200
0.000
0.004
0.008
Simulated values

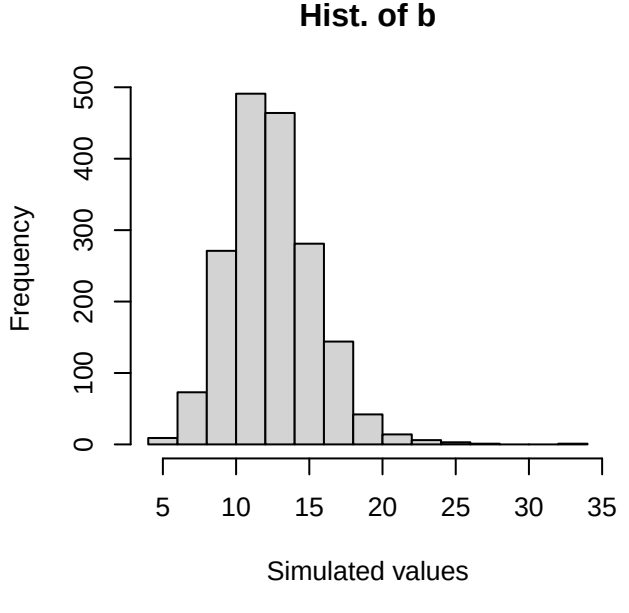
Hist. of sig2the
Frequency
0
100
300
500
0.04
0.05
0.06
0.07
Simulated values

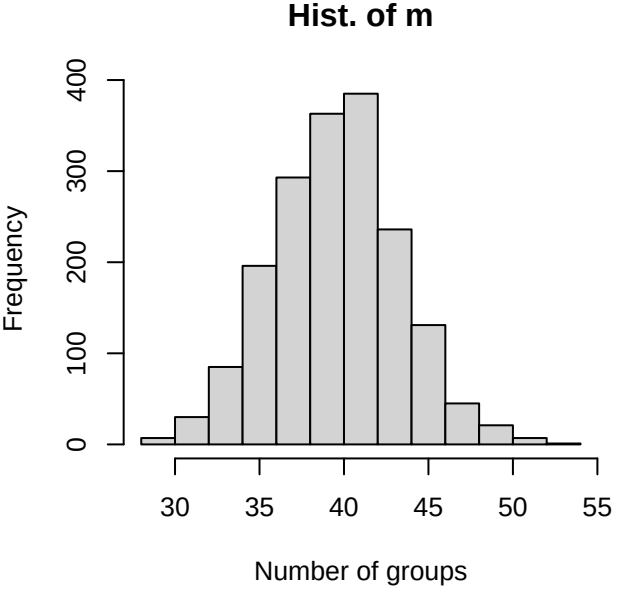

Hist. of sig2alpha
Frequency
0
100
200
300
0.0005
0.0015
0.0025
0.0035
Simulated values

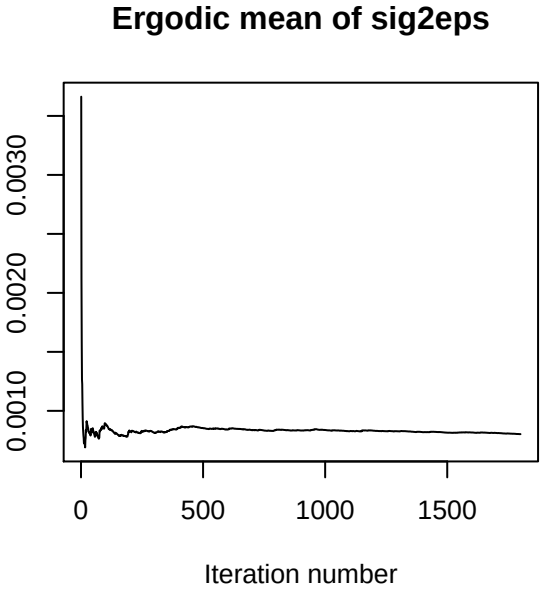

Hist. of sig2beta
Frequency
0
100
300
500
0.00002
0.00006
0.00010
Simulated values

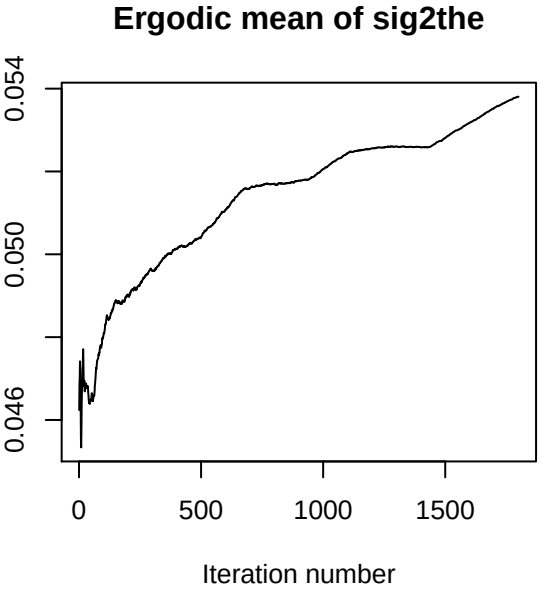

Hist. of rho
Frequency
0
100
200
300
400
0.980
0.985
0.990
Simulated values

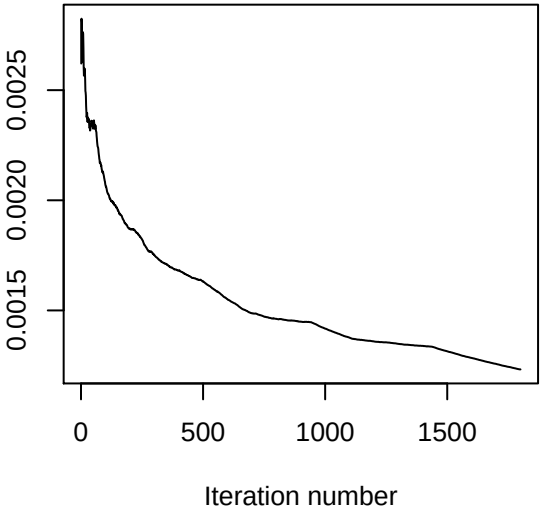

Hist. of a
Frequency
0
500
1000
1500
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
Simulated values

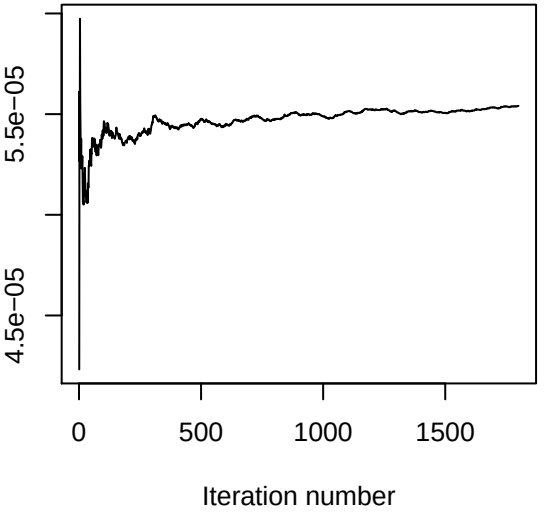

Hist. of b
Frequency
0
100
200
300
400
500
5
10
15
20
25
30
35
Simulated values

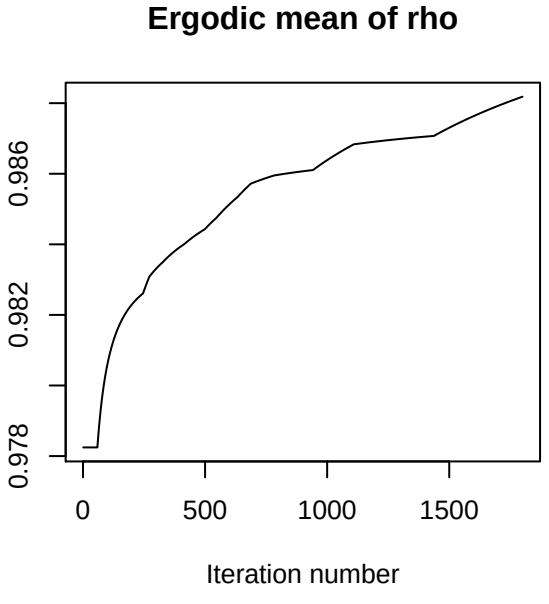

Hist. of m
Frequency
0
100
200
300
400
30
35
40
45
50
55
Number of groups

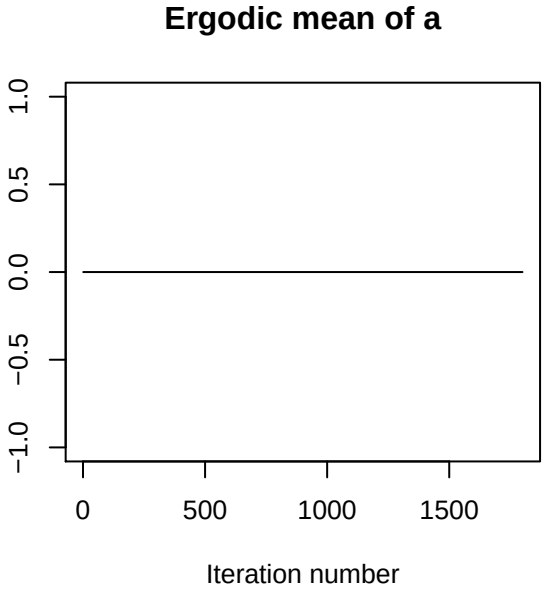

Ergodic mean of sig2eps
0.0010
0.0020
0.0030
0
500
1000
1500
Iteration number

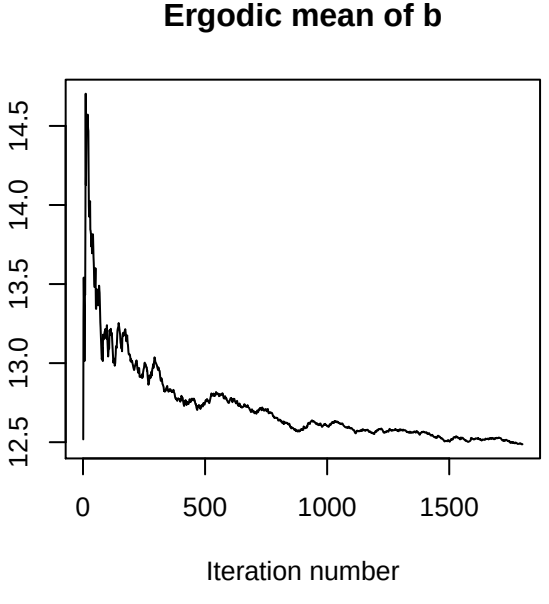

Ergodic mean of sig2the
0.046
0.050
0.054
0
500
1000
1500
Iteration number

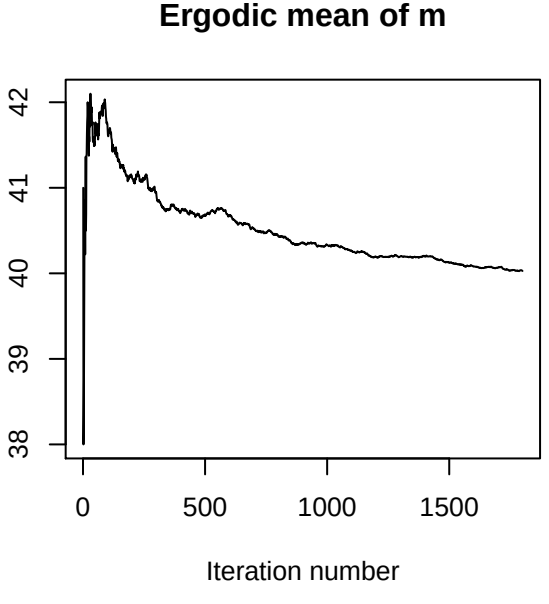

Ergodic mean of sig2alpha
0.0015
0.0020
0.0025
0
500
1000
1500
Iteration number


Ergodic mean of sig2beta
4.5e−05
5.5e−05
0
500
1000
1500
Iteration number

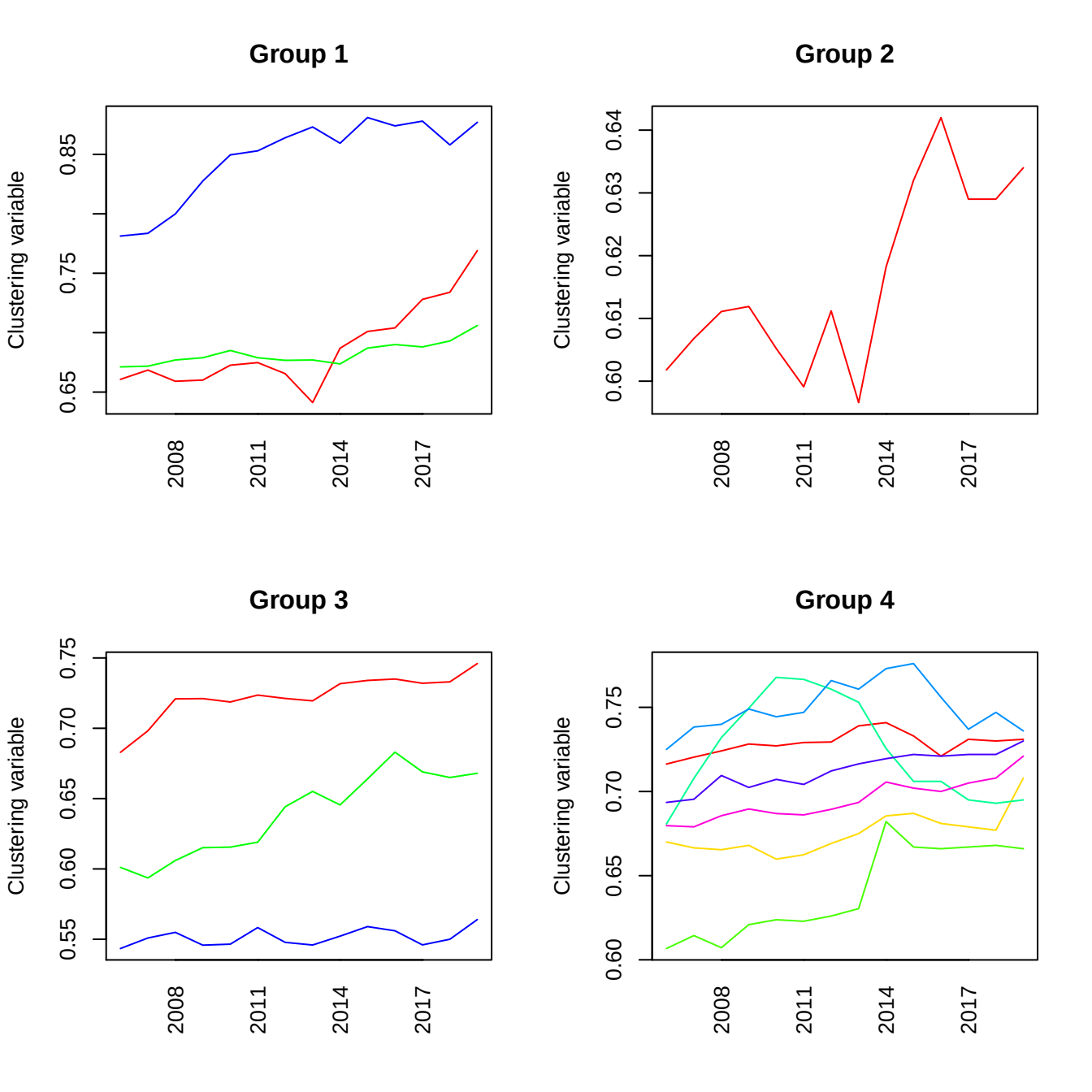

Ergodic mean of rho
0.978
0.982
0.986
0
500
1000
1500
Iteration number

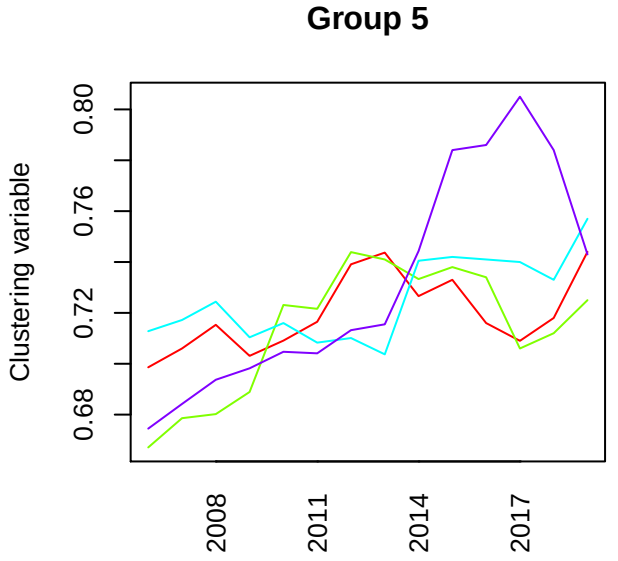

Ergodic mean of a
−1.0
−0.5
0.0
0.5
1.0
0
500
1000
1500
Iteration number

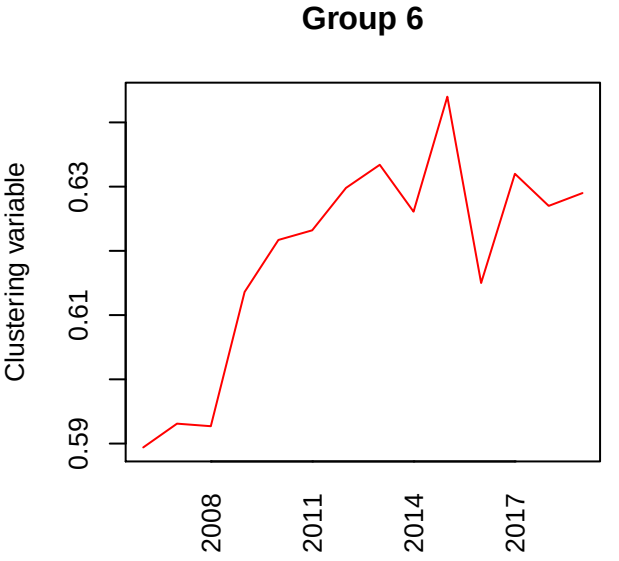

Ergodic mean of b
12.5
13.0
13.5
14.0
14.5
0
500
1000
1500
Iteration number

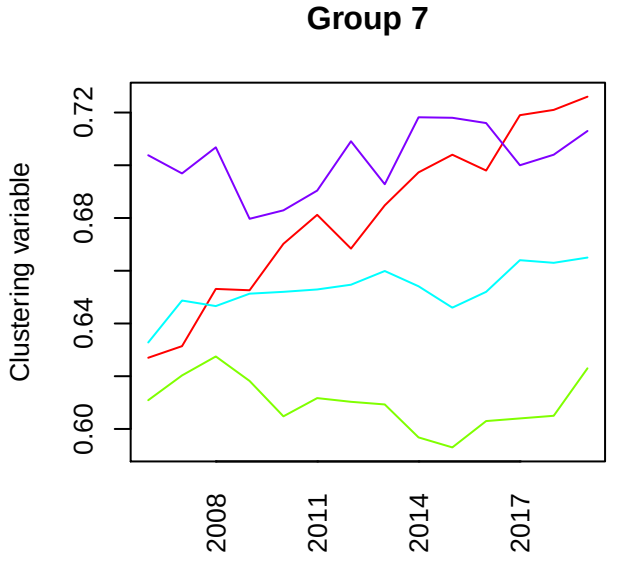

Ergodic mean of m
38
39
40
41
42
0
500
1000
1500
Iteration number

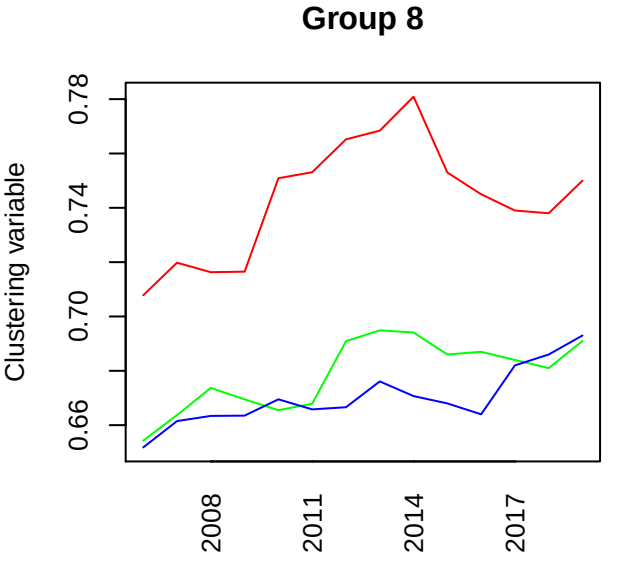
E2-1: trend = F, level = T, Poisson - Dirichlet, c = 0.001

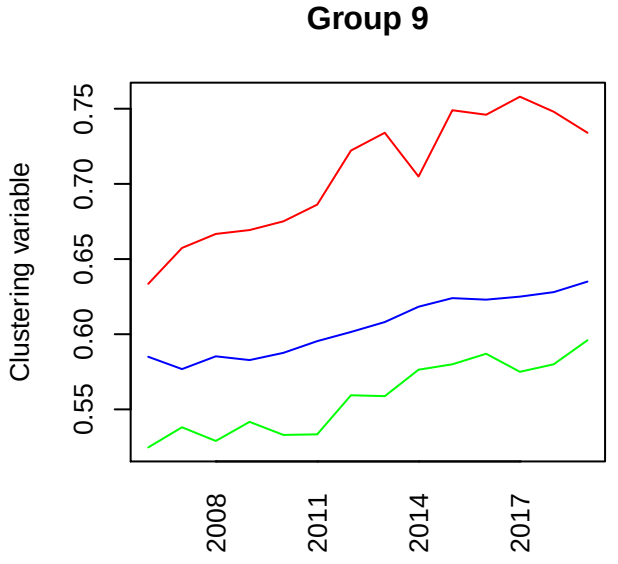

Group 1
Clustering variable
0.65
0.75
0.85
2008
2011
2014
2017
Group 2
Clustering variable
0.60
0.61
0.62
0.63
0.64
2008
2011
2014
2017
Group 3
Clustering variable
0.55
0.60
0.65
0.70
0.75
2008
2011
2014
2017
Group 4
Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017

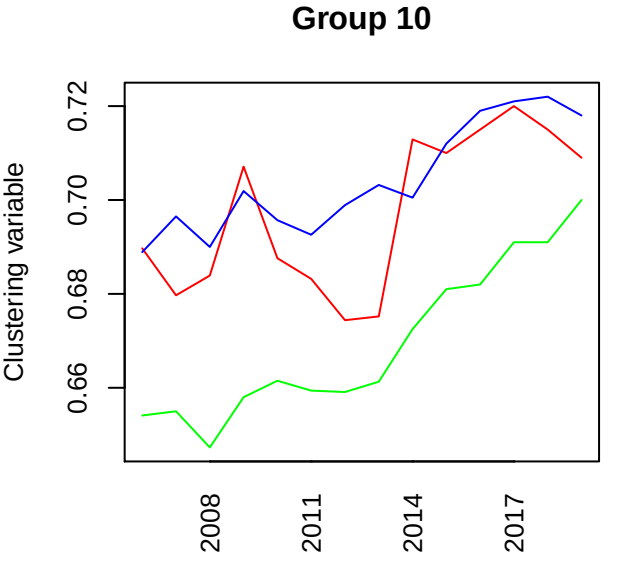

Group 5
Clustering variable
0.68
0.72
0.76
0.80
2008
2011
2014
2017

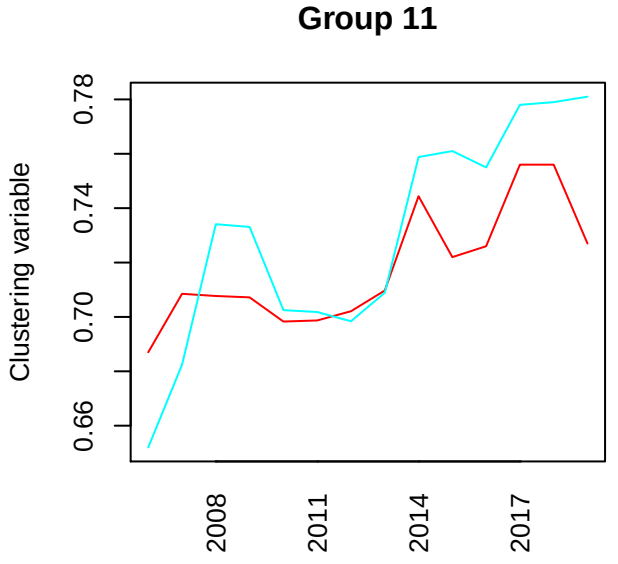

Group 6
Clustering variable
0.59
0.61
0.63
2008
2011
2014
2017

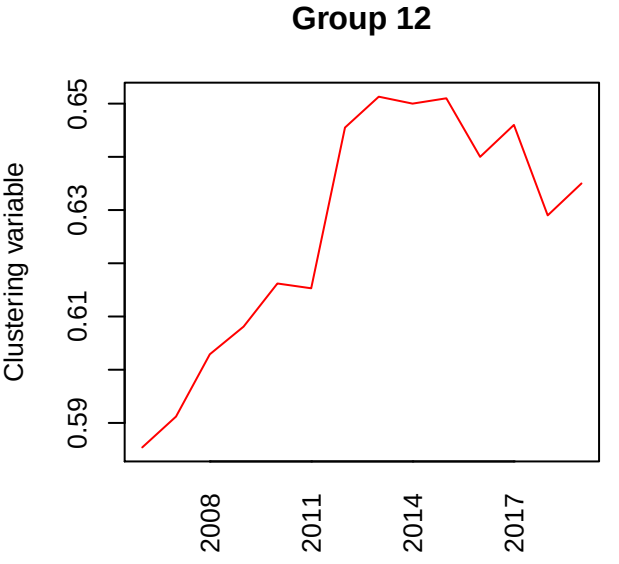

Group 7
Clustering variable
0.60
0.64
0.68
0.72
2008
2011
2014
2017

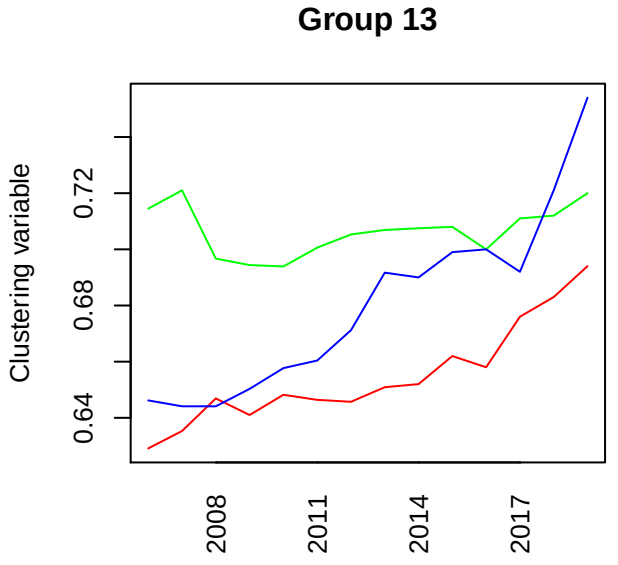

Group 8
Clustering variable
0.66
0.70
0.74
0.78
2008
2011
2014
2017

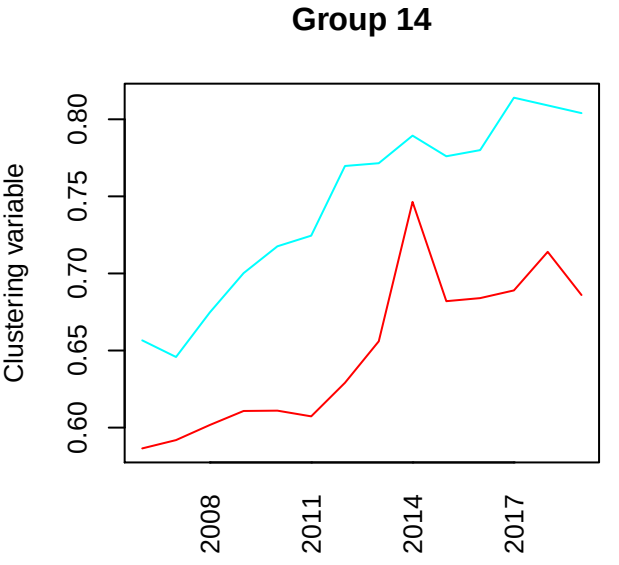

Group 9
Clustering variable
0.55
0.60
0.65
0.70
0.75
2008
2011
2014
2017

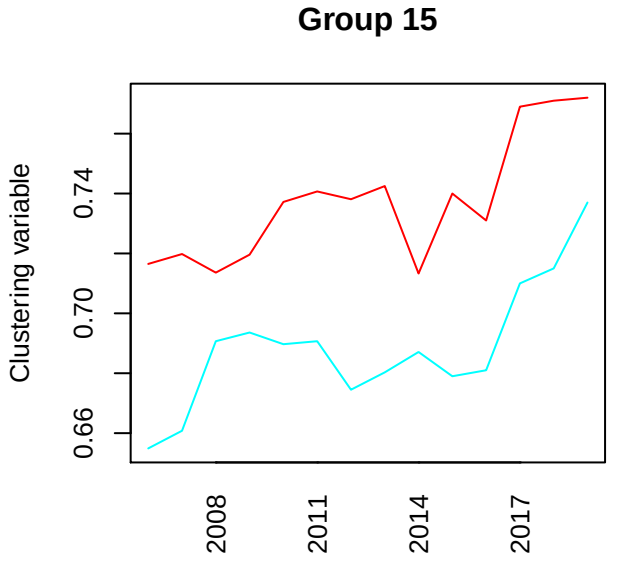

Group 10
Clustering variable
0.66
0.68
0.70
0.72
2008
2011
2014
2017

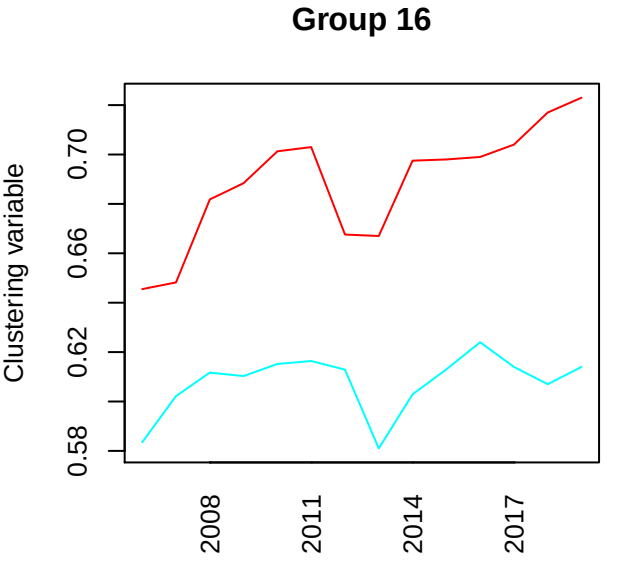

Group 11
Clustering variable
0.66
0.70
0.74
0.78
2008
2011
2014
2017

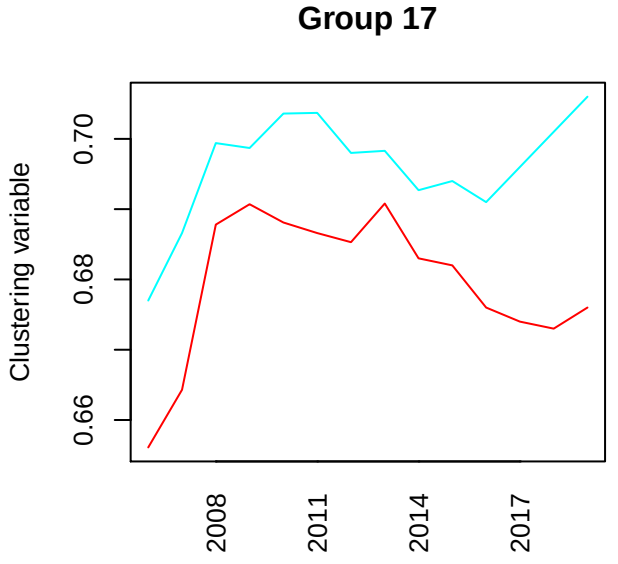

Group 12
Clustering variable
0.59
0.61
0.63
0.65
2008
2011
2014
2017

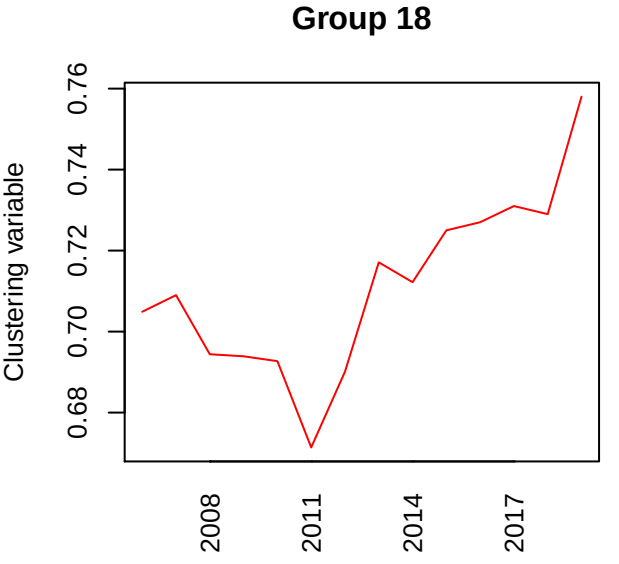

Group 13
Clustering variable
0.64
0.68
0.72
2008
2011
2014
2017

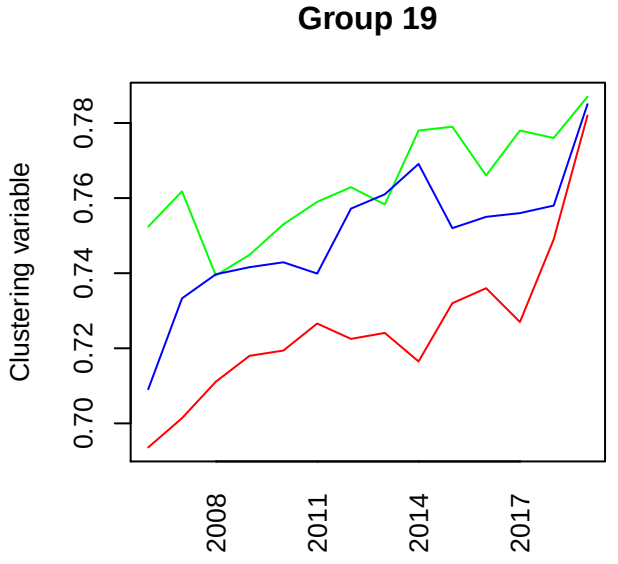

Group 14
Clustering variable
0.60
0.65
0.70
0.75
0.80
2008
2011
2014
2017

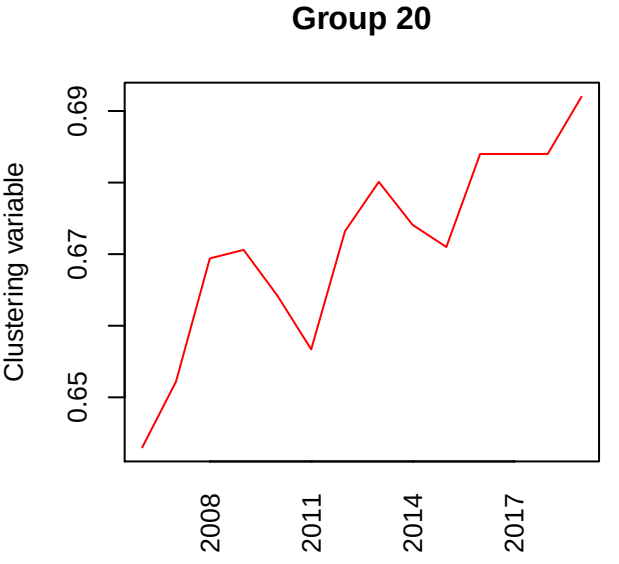

Group 15
Clustering variable
0.66
0.70
0.74
2008
2011
2014
2017

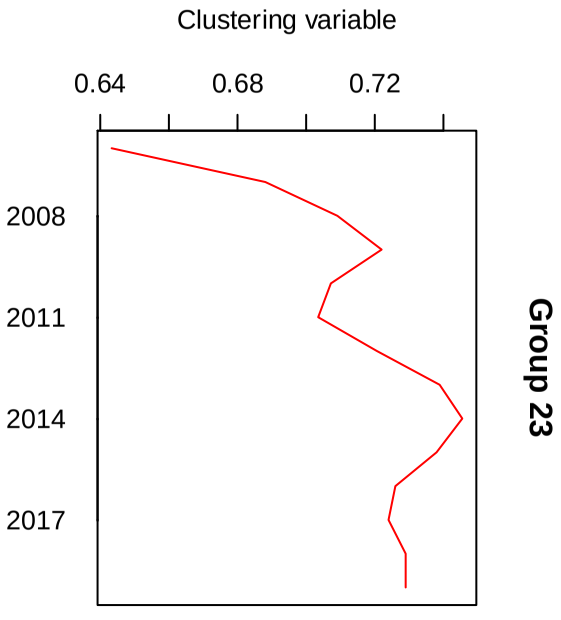

Group 16
Clustering variable
0.58
0.62
0.66
0.70
2008
2011
2014
2017

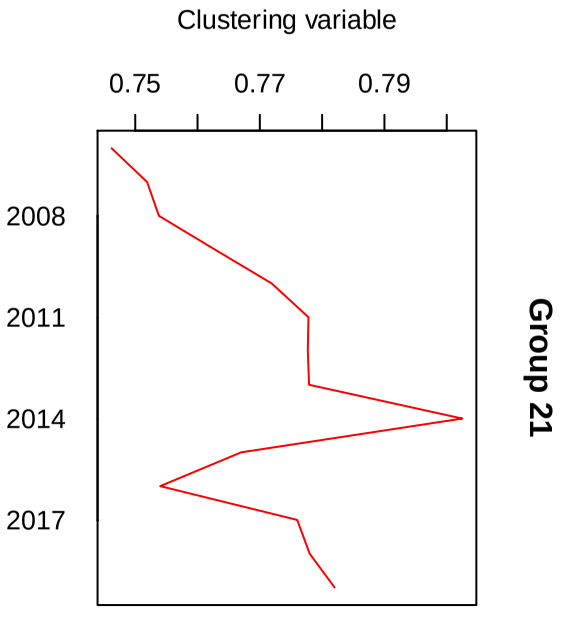

Group 17
Clustering variable
0.66
0.68
0.70
2008
2011
2014
2017

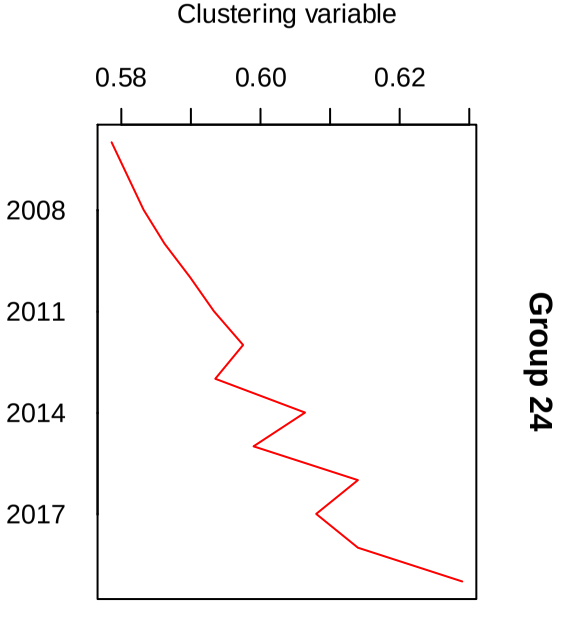

Group 18
Clustering variable
0.68
0.70
0.72
0.74
0.76
2008
2011
2014
2017

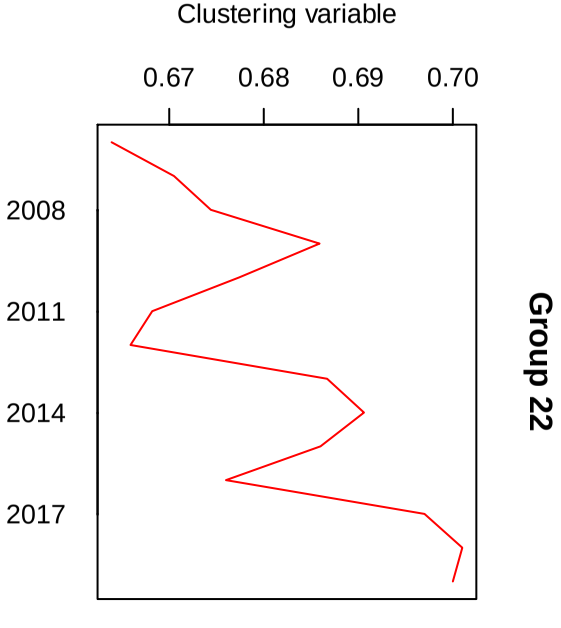

Group 19
Clustering variable
0.70
0.72
0.74
0.76
0.78
2008
2011
2014
2017

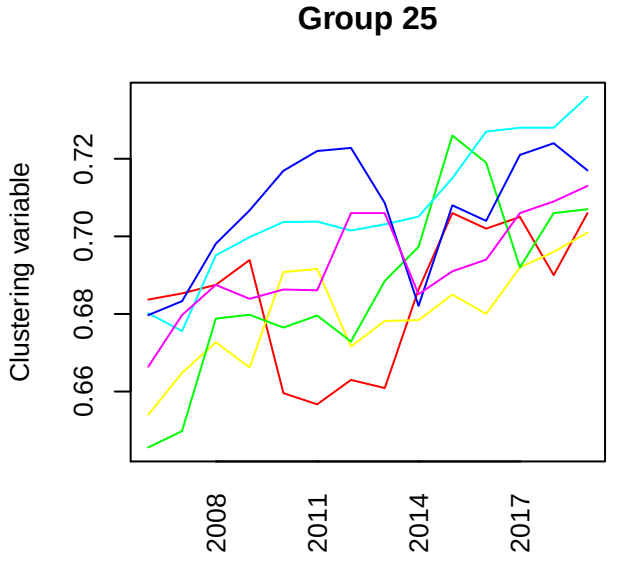

Group 20
Clustering variable
0.65
0.67
0.69
2008
2011
2014
2017

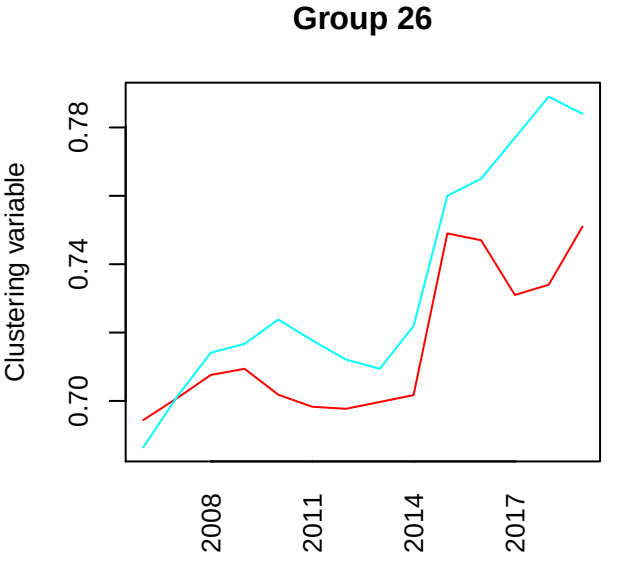

Clustering variable
0.64
0.68
0.72
2008
2011
2014
2017
Group 23

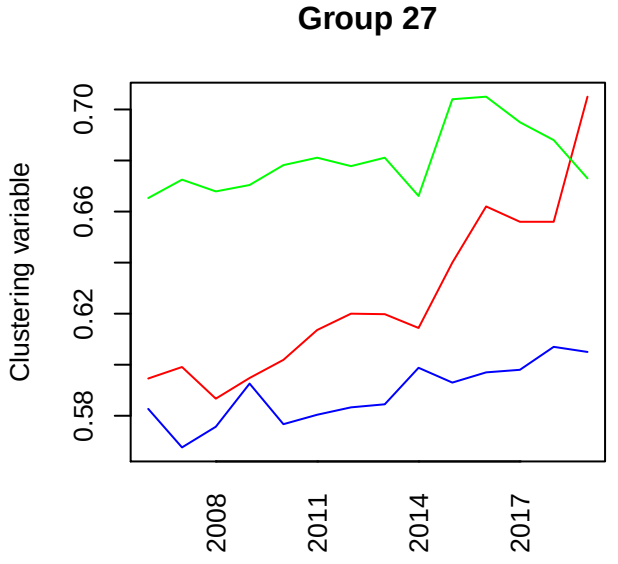

Clustering variable
0.75
0.77
0.79
2008
2011
2014
2017
Group 21

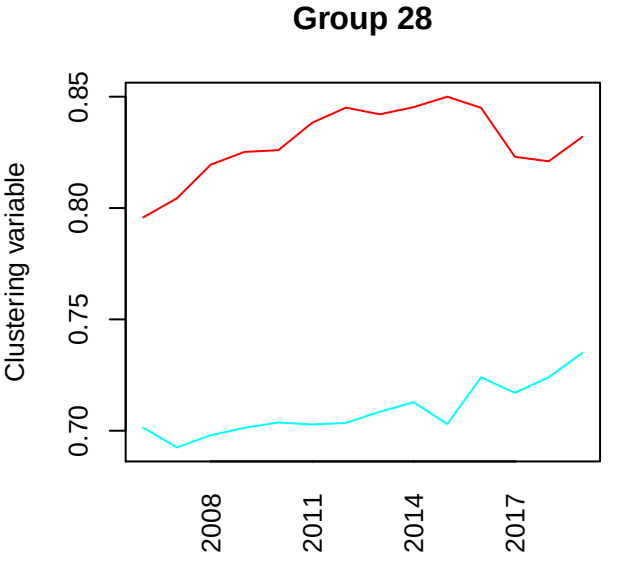

Clustering variable
0.58
0.60
0.62
2008
2011
2014
2017
Group 24

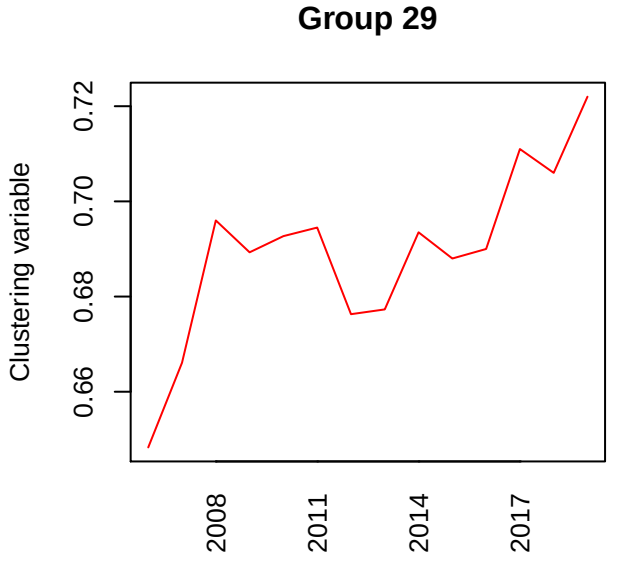

Clustering variable
0.67
0.68
0.69
0.70
2008
2011
2014
2017
Group 22

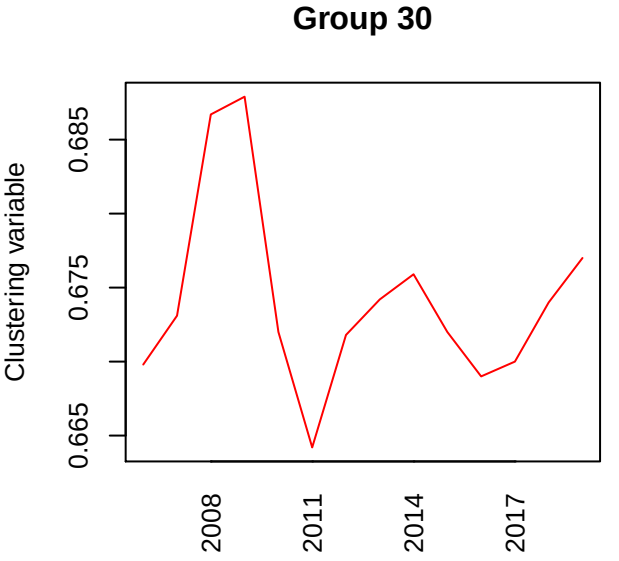

Group 25
Clustering variable
0.66
0.68
0.70
0.72
2008
2011
2014
2017

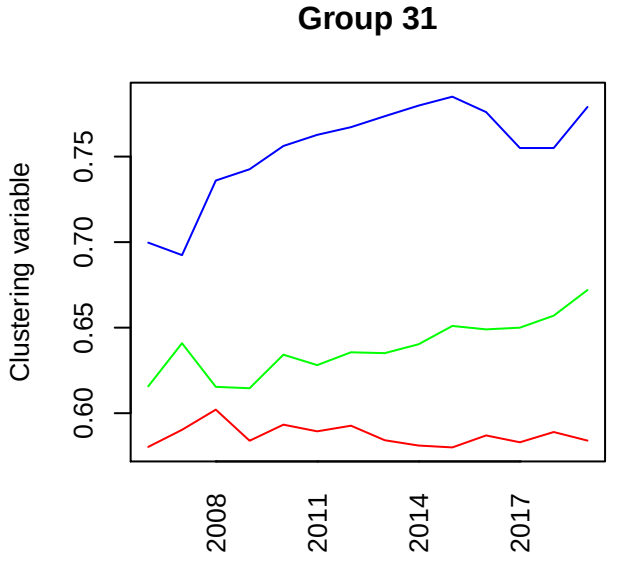

Group 26
Clustering variable
0.70
0.74
0.78
2008
2011
2014
2017

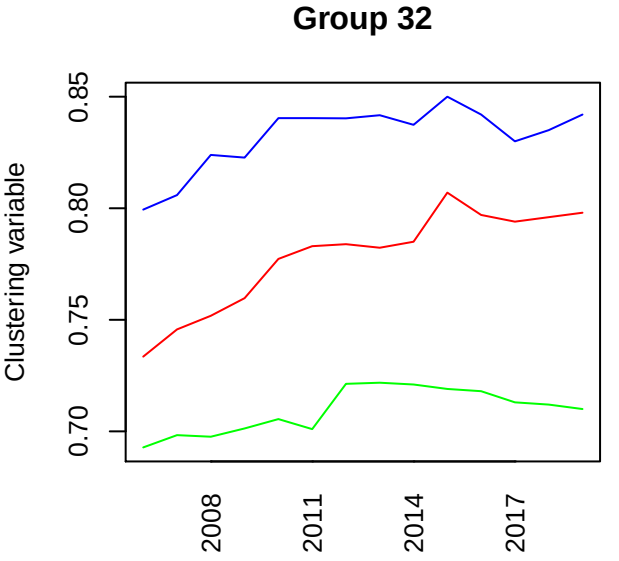

Group 27
Clustering variable
0.58
0.62
0.66
0.70
2008
2011
2014
2017

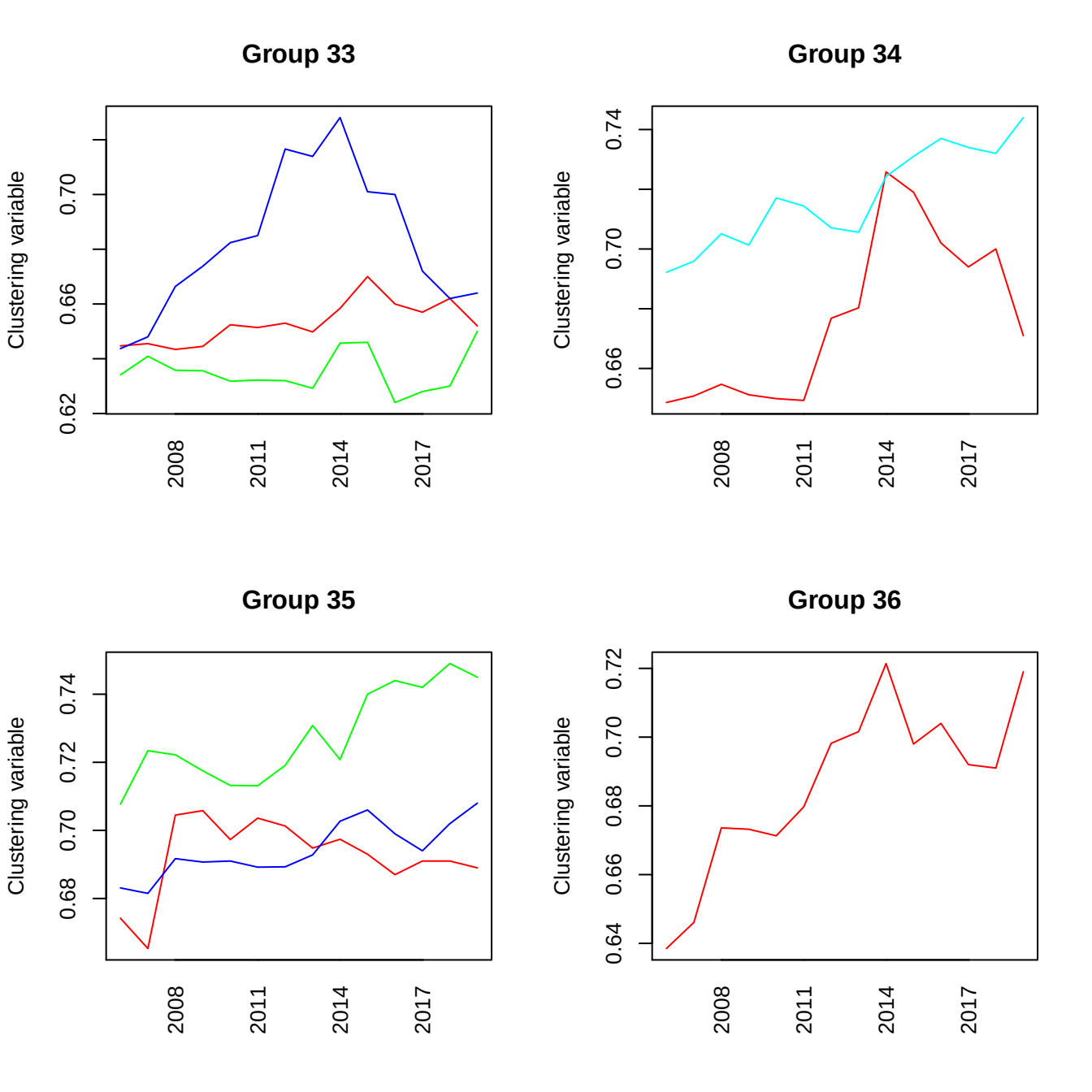

Group 28
Clustering variable
0.70
0.75
0.80
0.85
2008
2011
2014
2017

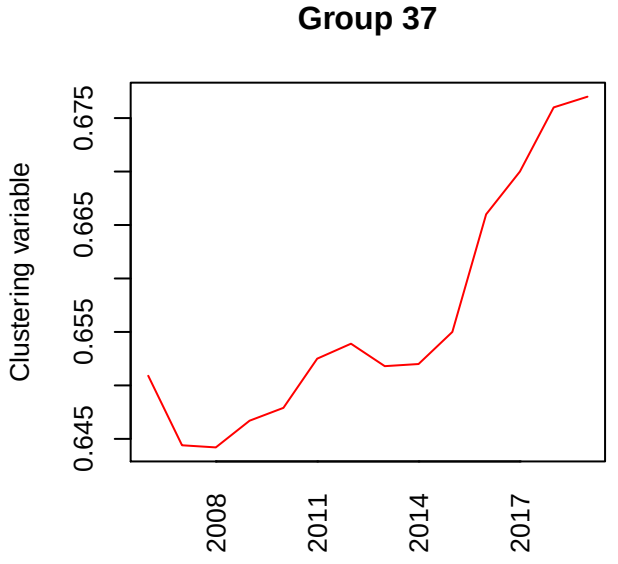

Group 29
Clustering variable
0.66
0.68
0.70
0.72
2008
2011
2014
2017

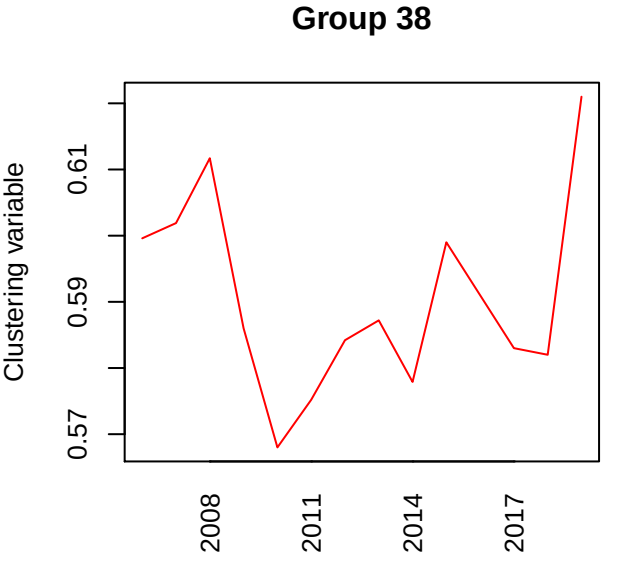

Group 30
Clustering variable
0.665
0.675
0.685
2008
2011
2014
2017

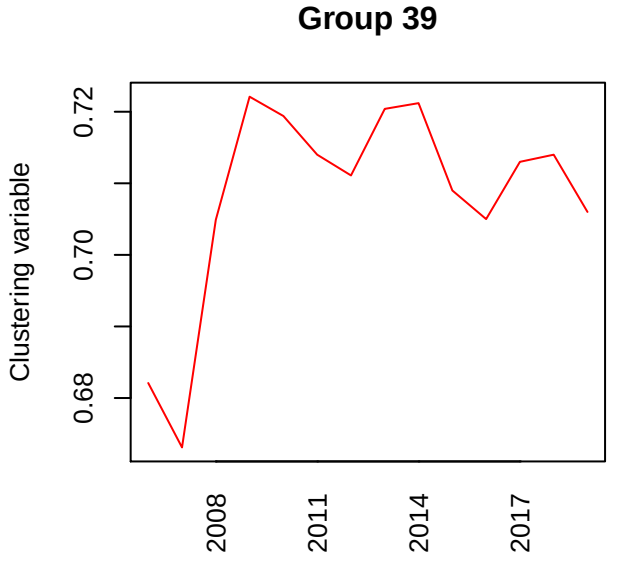

Group 31
Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017

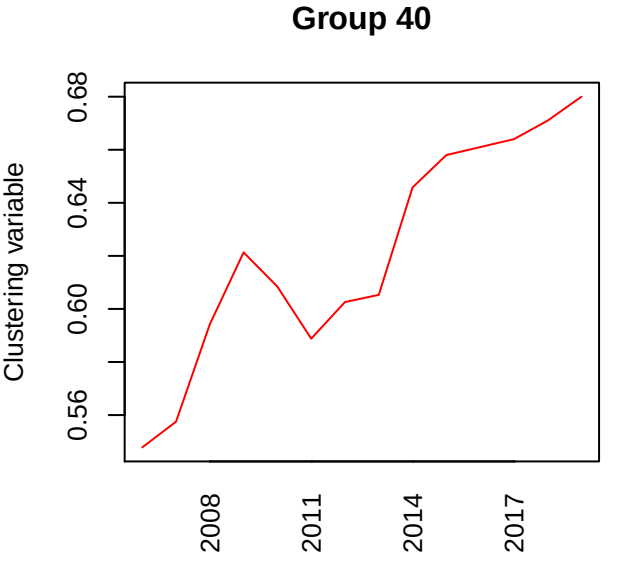

Group 32
Clustering variable
0.70
0.75
0.80
0.85
2008
2011
2014
2017

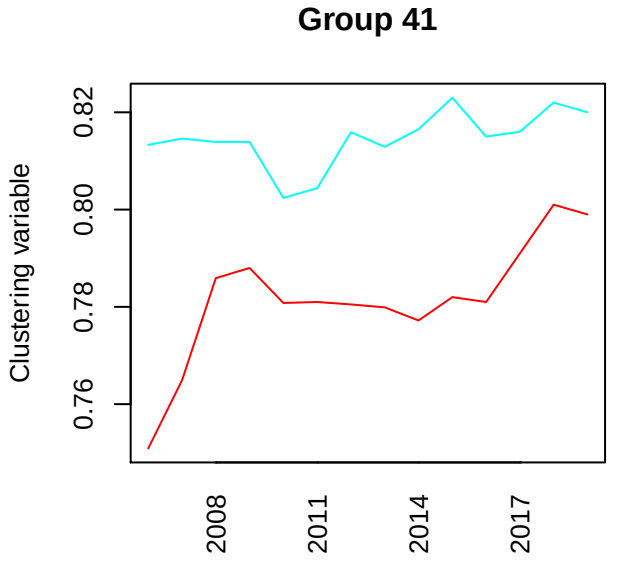

Group 33
Clustering variable
0.62
0.66
0.70
2008
2011
2014
2017
Group 34
Clustering variable
0.66
0.70
0.74
2008
2011
2014
2017
Group 35
Clustering variable
0.68
0.70
0.72
0.74
2008
2011
2014
2017
Group 36
Clustering variable
0.64
0.66
0.68
0.70
0.72
2008
2011
2014
2017

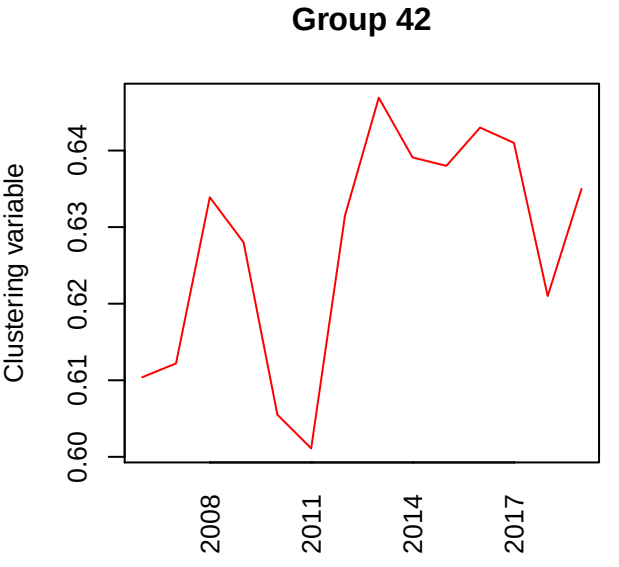

Group 37
Clustering variable
0.645
0.655
0.665
0.675
2008
2011
2014
2017

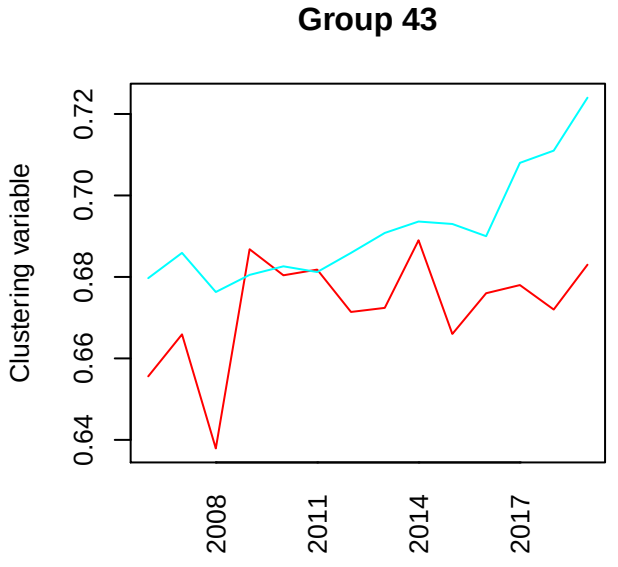

Group 38
Clustering variable
0.57
0.59
0.61
2008
2011
2014
2017

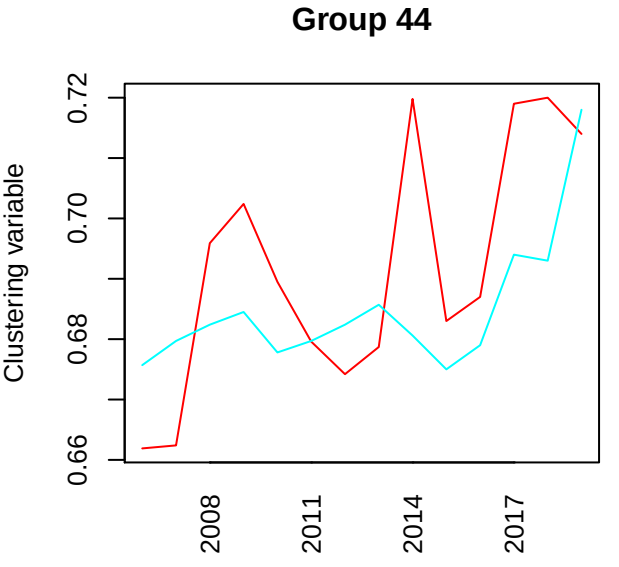

Group 39
Clustering variable
0.68
0.70
0.72
2008
2011
2014
2017

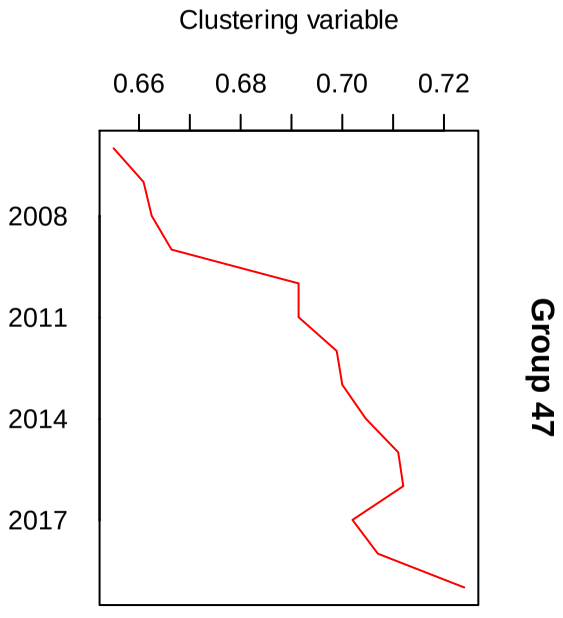

Group 40
Clustering variable
0.56
0.60
0.64
0.68
2008
2011
2014
2017

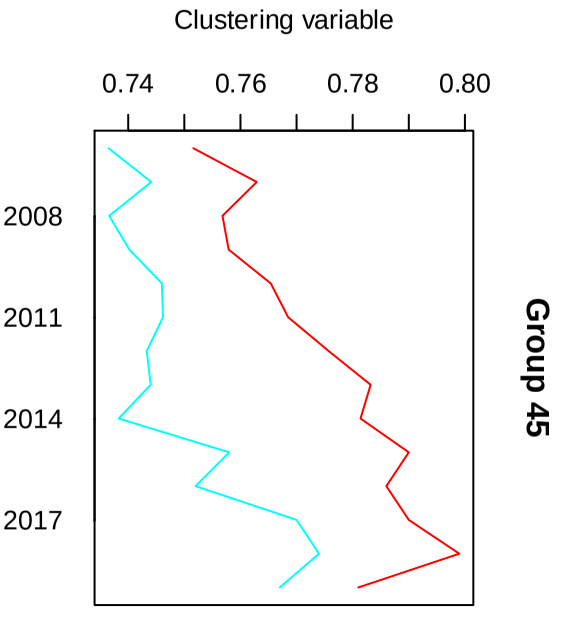

Group 41
Clustering variable
0.76
0.78
0.80
0.82
2008
2011
2014
2017

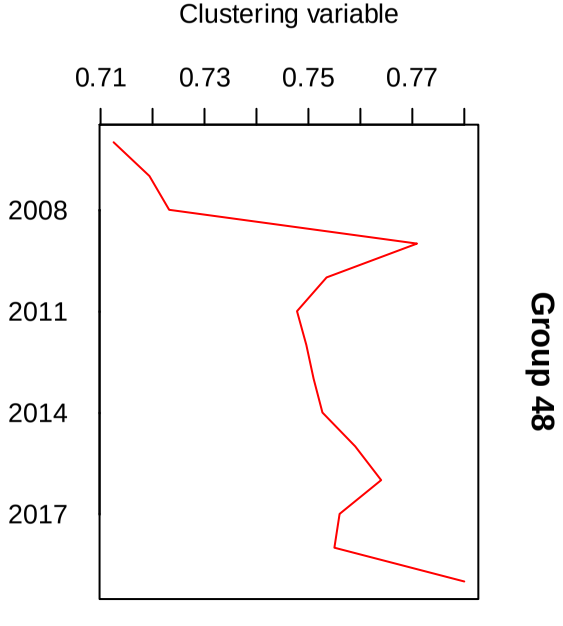

Group 42
Clustering variable
0.60
0.61
0.62
0.63
0.64
2008
2011
2014
2017

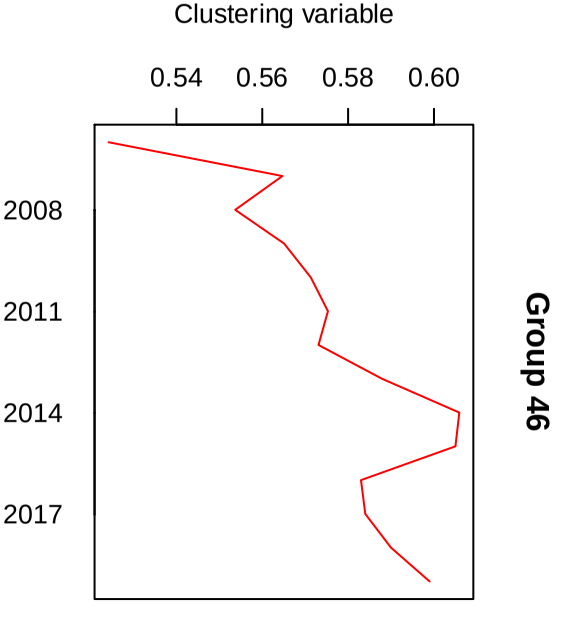

Group 43
Clustering variable
0.64
0.66
0.68
0.70
0.72
2008
2011
2014
2017

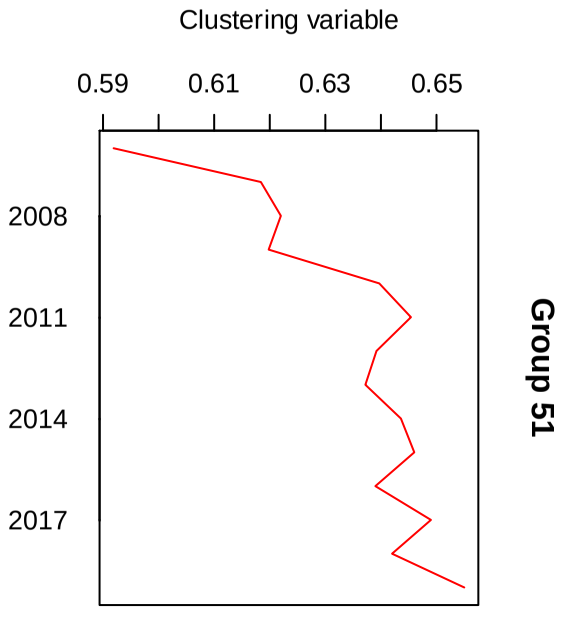

Group 44
Clustering variable
0.66
0.68
0.70
0.72
2008
2011
2014
2017

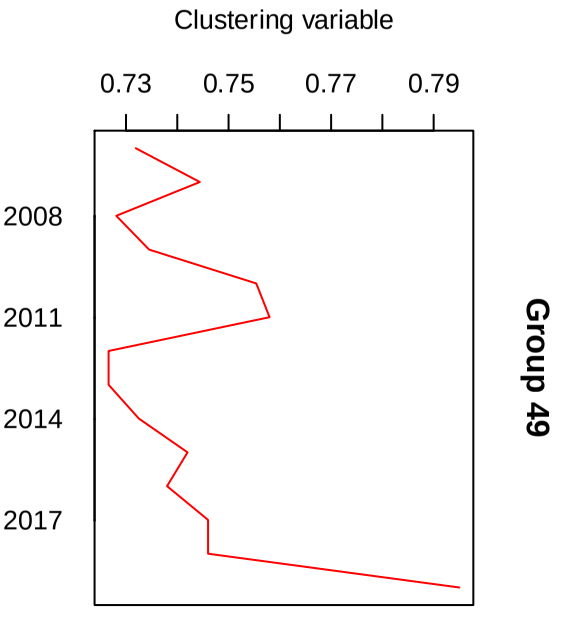

Clustering variable
0.66
0.68
0.70
0.72
2008
2011
2014
2017
Group 47

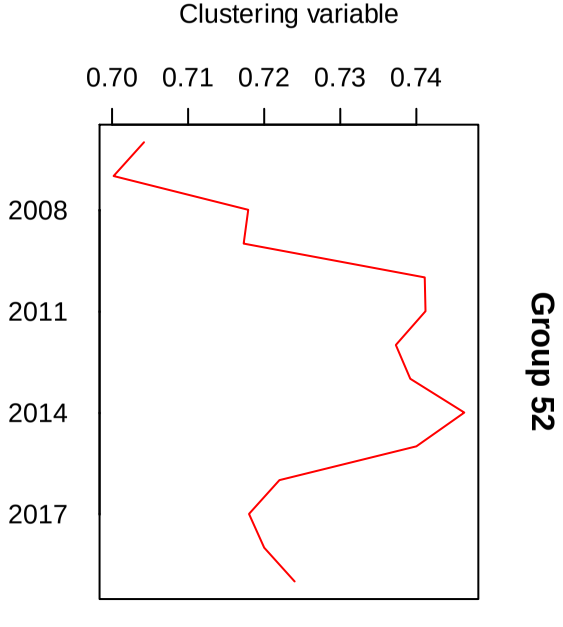

Clustering variable
0.74
0.76
0.78
0.80
2008
2011
2014
2017
Group 45

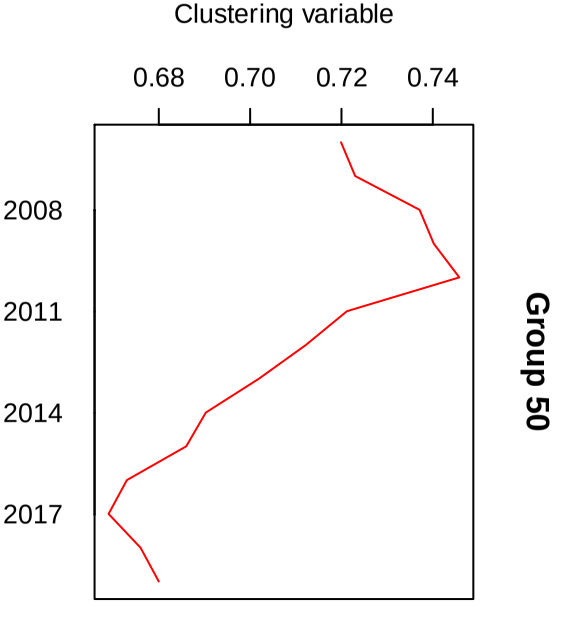

Clustering variable
0.71
0.73
0.75
0.77
2008
2011
2014
2017
Group 48

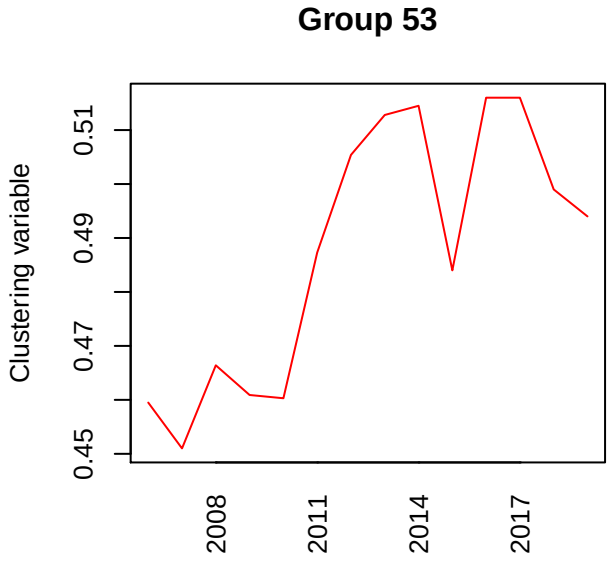

Clustering variable
0.54
0.56
0.58
0.60
2008
2011
2014
2017
Group 46

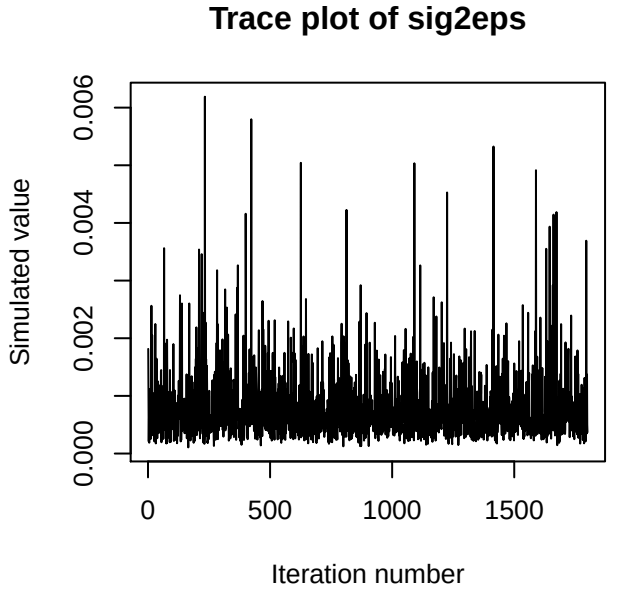

Clustering variable
0.59
0.61
0.63
0.65
2008
2011
2014
2017
Group 51

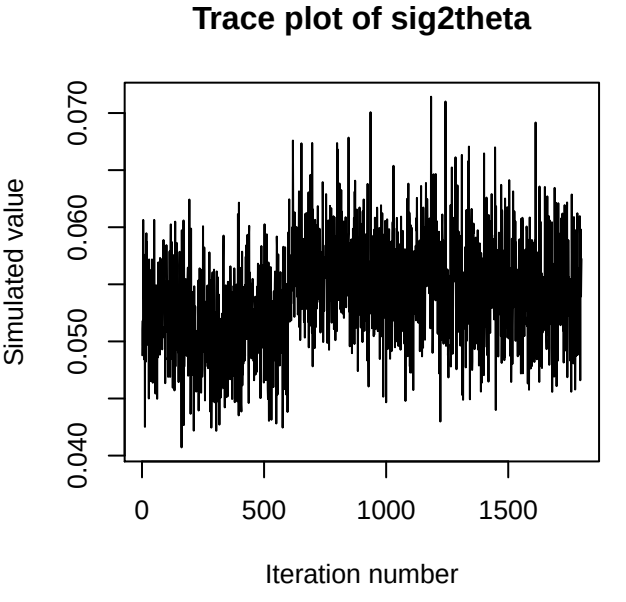

Clustering variable
0.73
0.75
0.77
0.79
2008
2011
2014
2017
Group 49

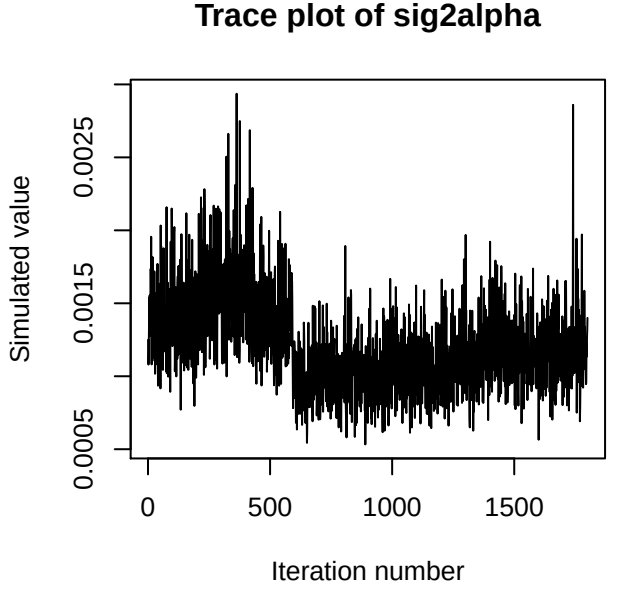

Clustering variable
0.70
0.71
0.72
0.73
0.74
2008
2011
2014
2017
Group 52

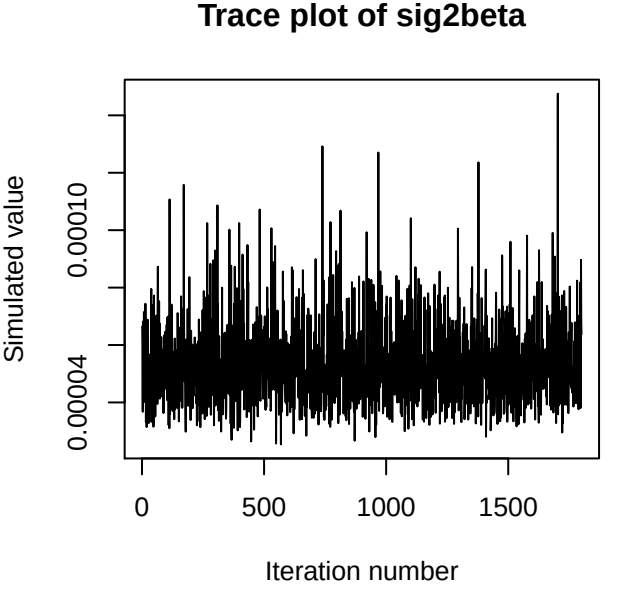

Clustering variable
0.68
0.70
0.72
0.74
2008
2011
2014
2017
Group 50

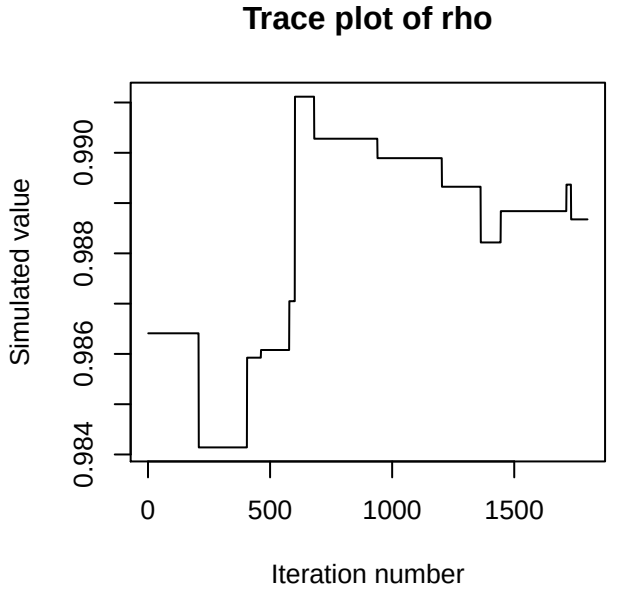

Group 53
Clustering variable
0.45
0.47
0.49
0.51
2008
2011
2014
2017

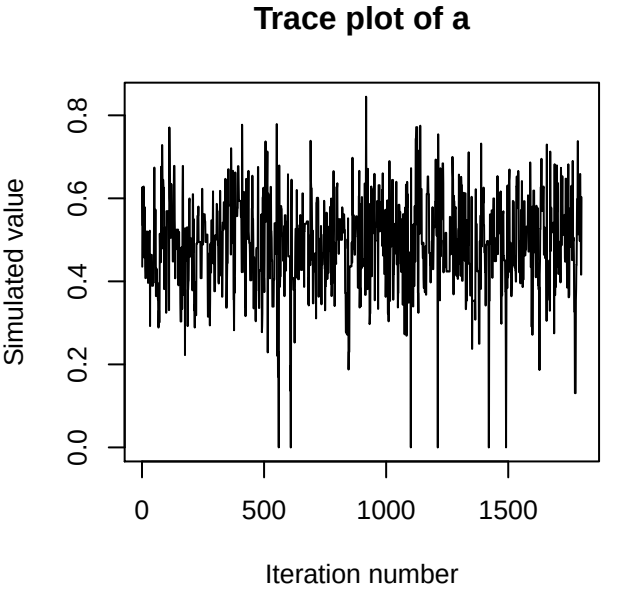

Trace plot of sig2eps
Simulated value
0.000
0.002
0.004
0.006
0
500
1000
1500
Iteration number

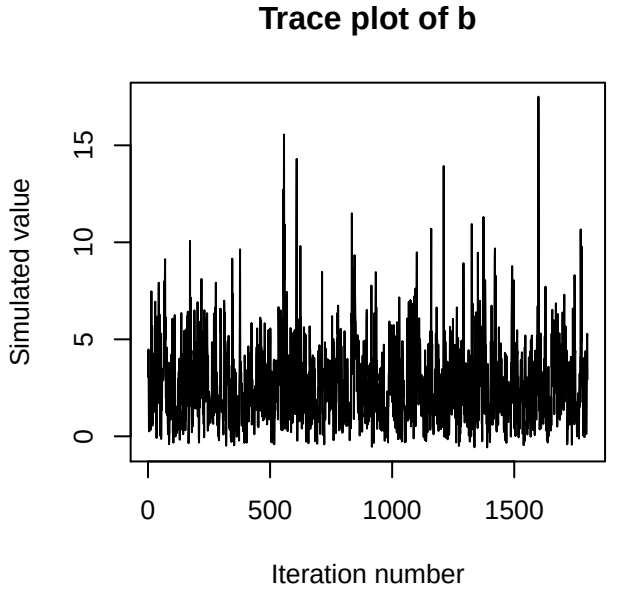

Trace plot of sig2theta
Simulated value
0.040
0.050
0.060
0.070
0
500
1000
1500
Iteration number

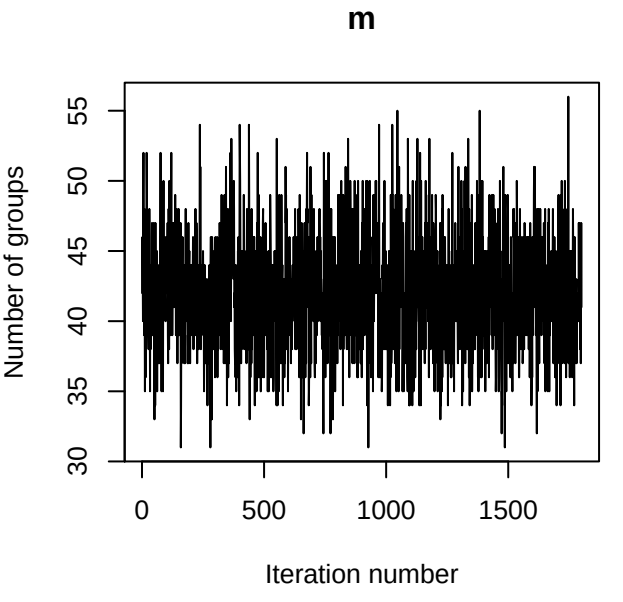

Trace plot of sig2alpha
Simulated value
0.0005
0.0015
0.0025
0
500
1000
1500
Iteration number

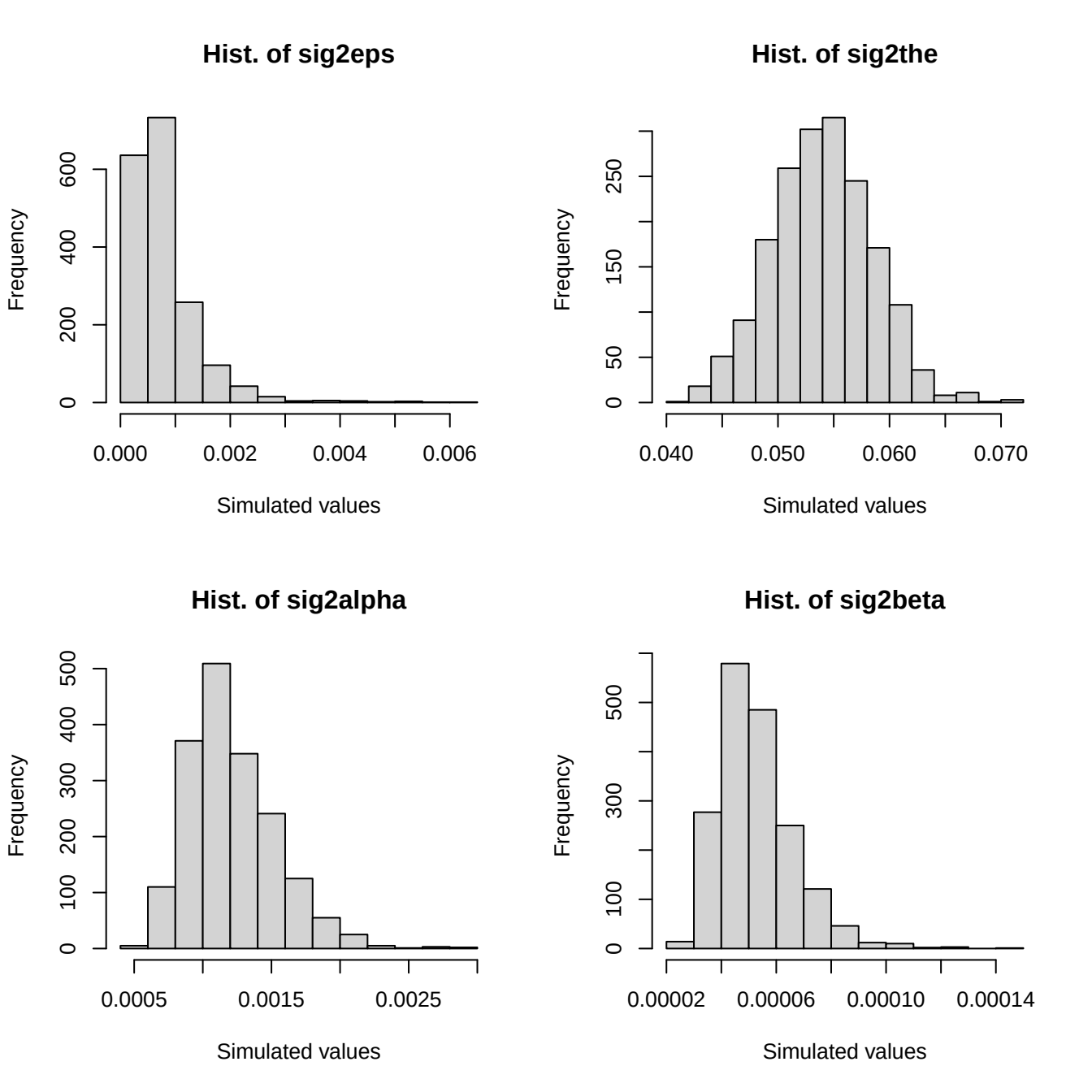

Trace plot of sig2beta
Simulated value
0.00004
0.00010
0
500
1000
1500
Iteration number

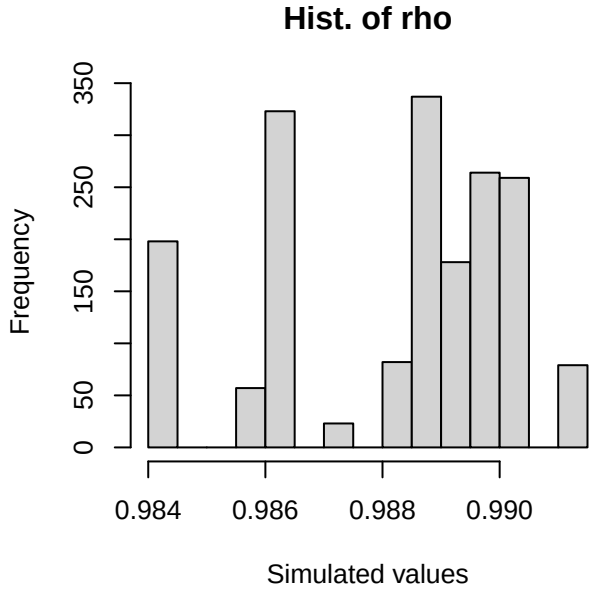

Trace plot of rho
Simulated value
0.984
0.986
0.988
0.990
0
500
1000
1500
Iteration number

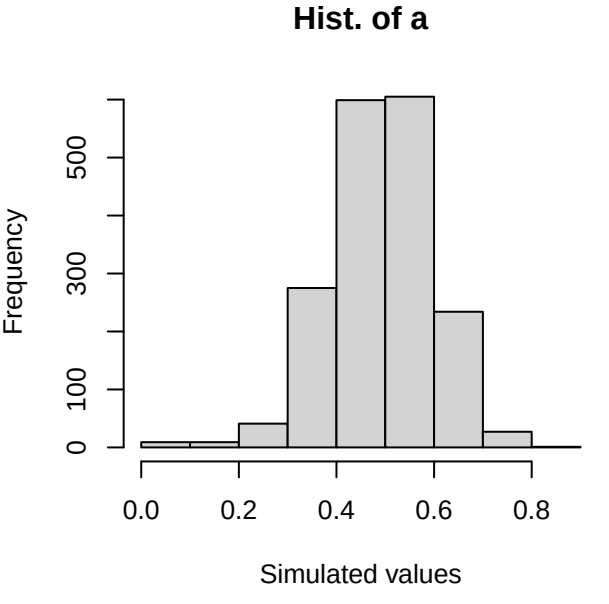

Trace plot of a
Simulated value
0.0
0.2
0.4
0.6
0.8
0
500
1000
1500
Iteration number

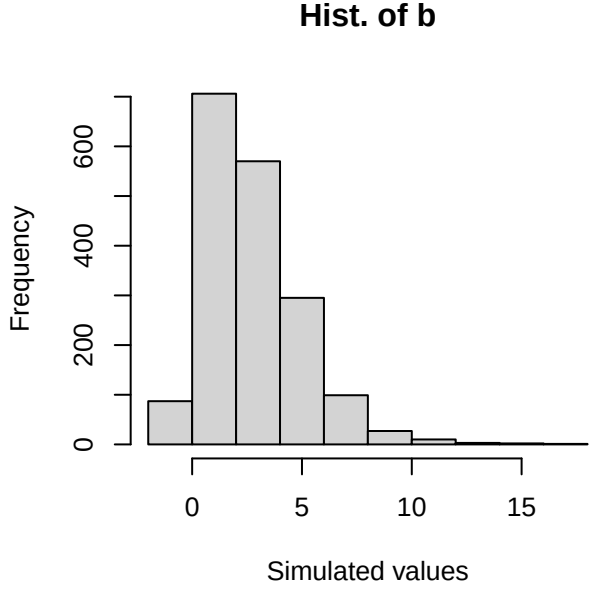

Trace plot of b
Simulated value
0
5
10
15
0
500
1000
1500
Iteration number

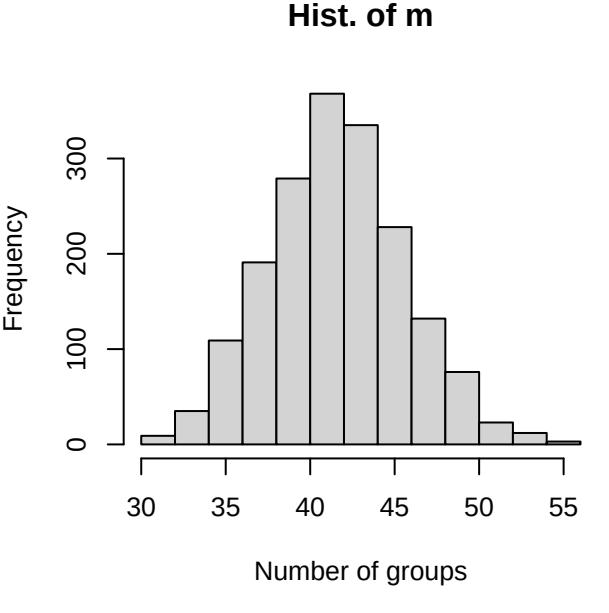

m
Number of groups
30
35
40
45
50
55
0
500
1000
1500
Iteration number

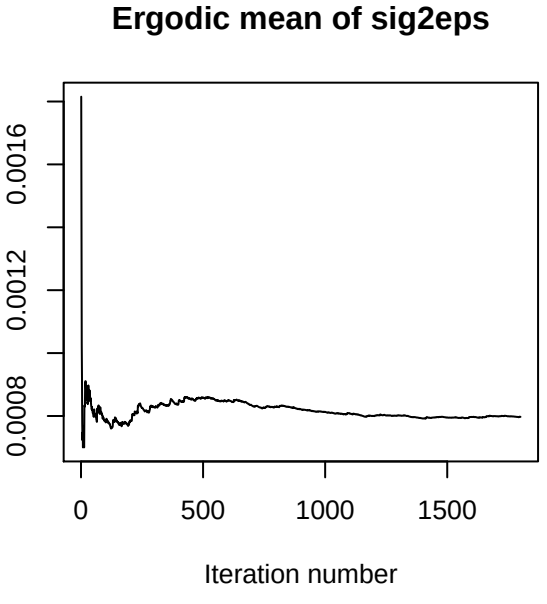

Hist. of sig2eps
Frequency
0
200
400
600
0.000
0.002
0.004
0.006
Simulated values
Hist. of sig2the
Frequency
0
50
150
250
0.040
0.050
0.060
0.070
Simulated values
Hist. of sig2alpha
Frequency
0
100
200
300
400
500
0.0005
0.0015
0.0025
Simulated values
Hist. of sig2beta
Frequency
0
100
300
500
0.00002
0.00006
0.00010
0.00014
Simulated values

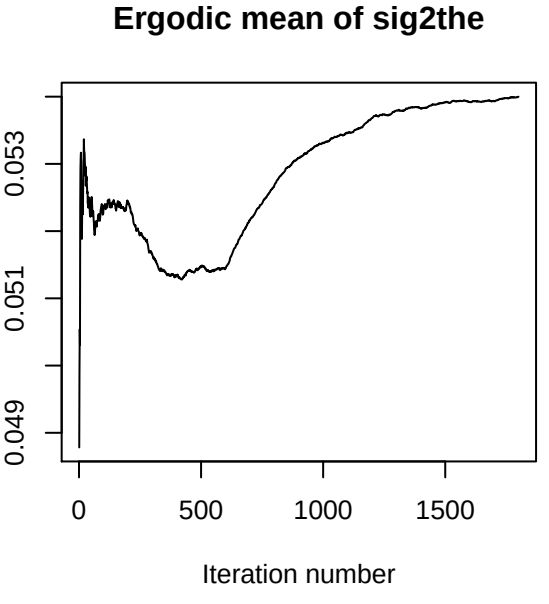

Hist. of rho
Frequency
0
50
150
250
350
0.984
0.986
0.988
0.990
Simulated values

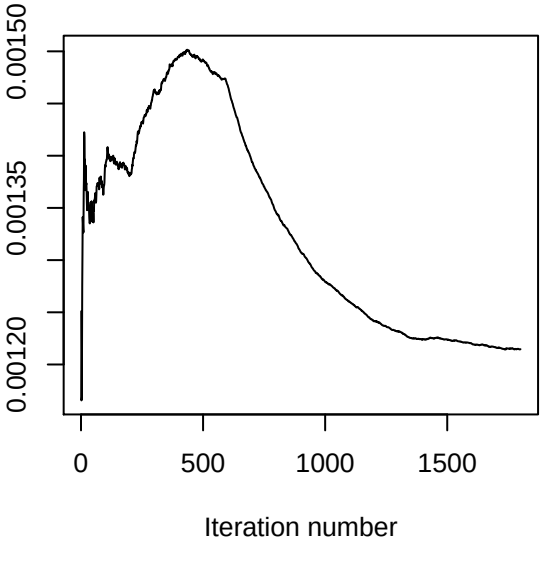

Hist. of a
Frequency
0
100
300
500
0.0
0.2
0.4
0.6
0.8
Simulated values

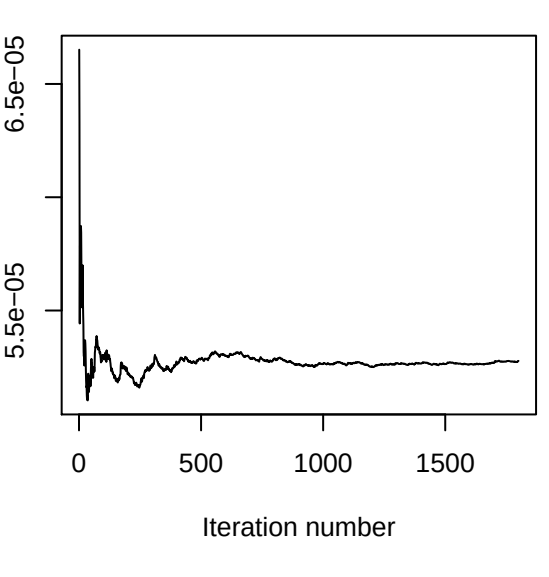

Hist. of b
Frequency
0
200
400
600
0
5
10
15
Simulated values

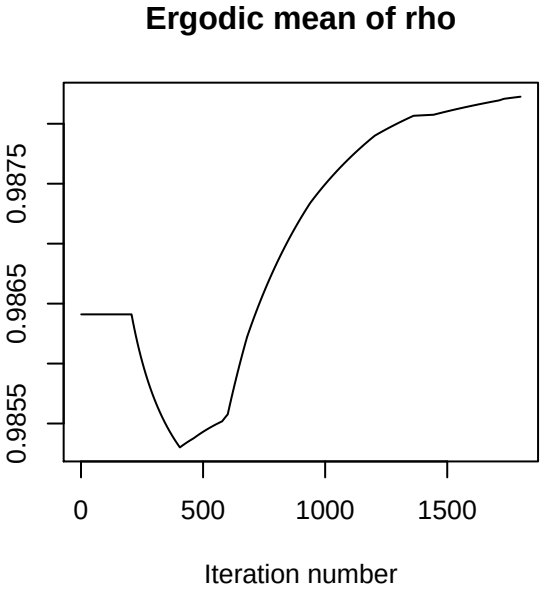

Hist. of m
Frequency
0
100
200
300
30
35
40
45
50
55
Number of groups

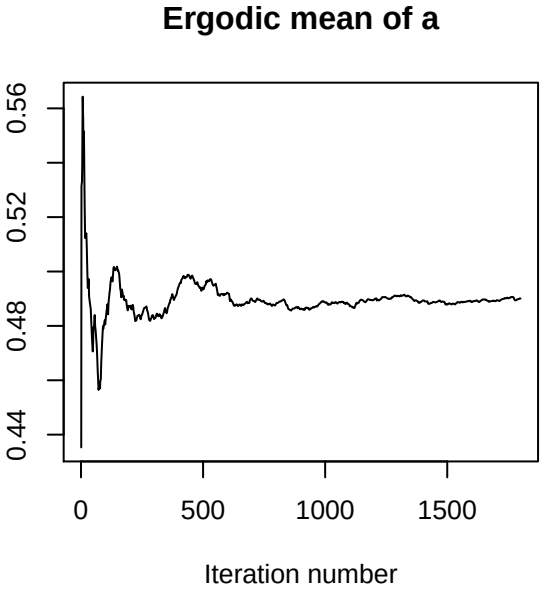

Ergodic mean of sig2eps
0.0008
0.0012
0.0016
0
500
1000
1500
Iteration number

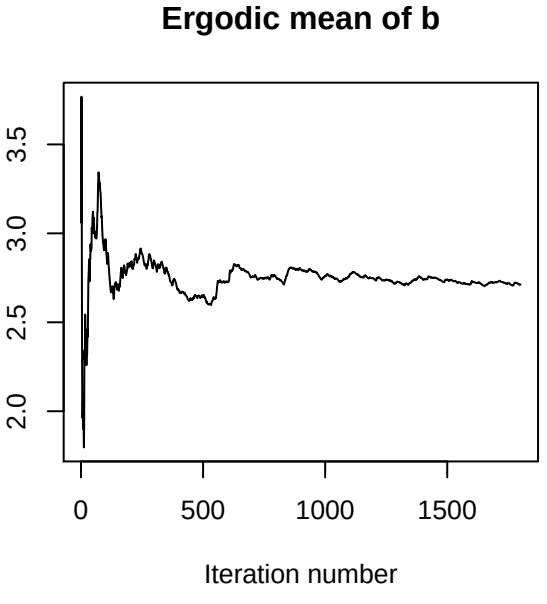

Ergodic mean of sig2the
0.049
0.051
0.053
0
500
1000
1500
Iteration number

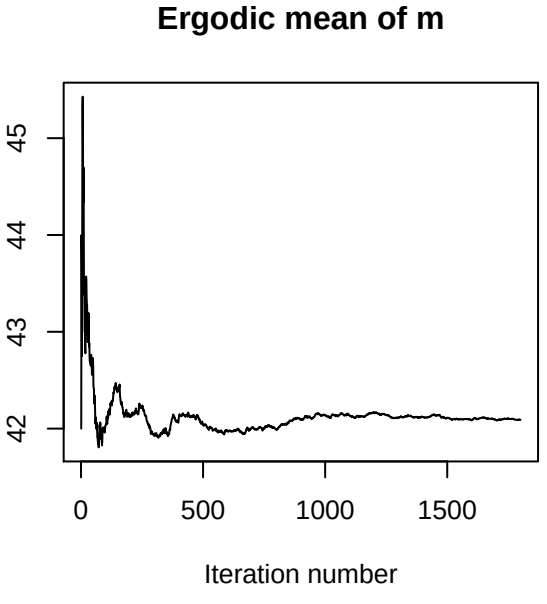

Ergodic mean of sig2alpha
0.00120
0.00135
0.00150
0
500
1000
1500
Iteration number


Ergodic mean of sig2beta
5.5e−05
6.5e−05
0
500
1000
1500
Iteration number

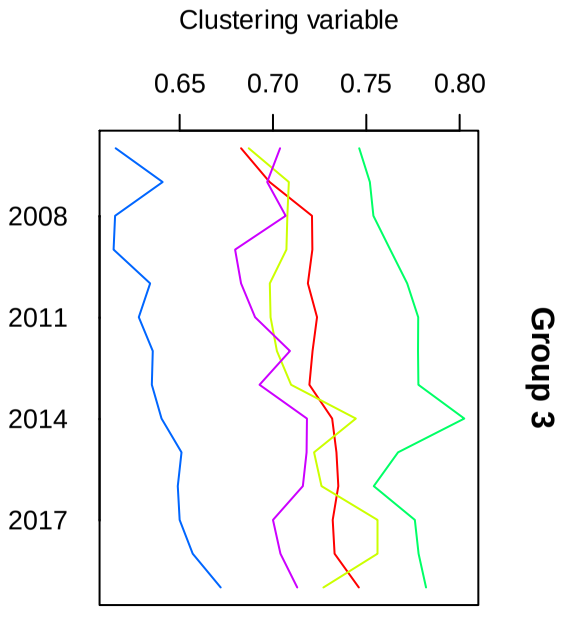

Ergodic mean of rho
0.9855
0.9865
0.9875
0
500
1000
1500
Iteration number

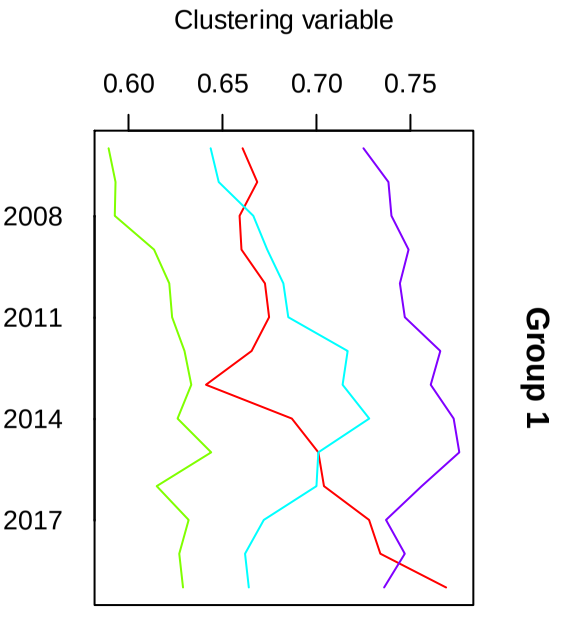

Ergodic mean of a
0.44
0.48
0.52
0.56
0
500
1000
1500
Iteration number

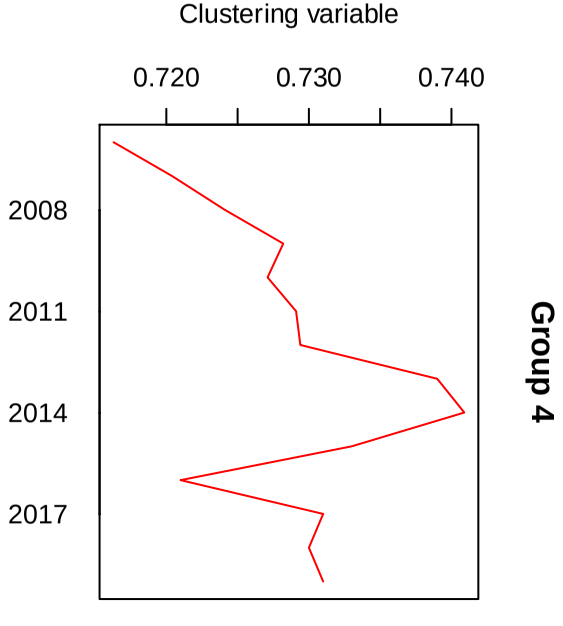

Ergodic mean of b
2.0
2.5
3.0
3.5
0
500
1000
1500
Iteration number

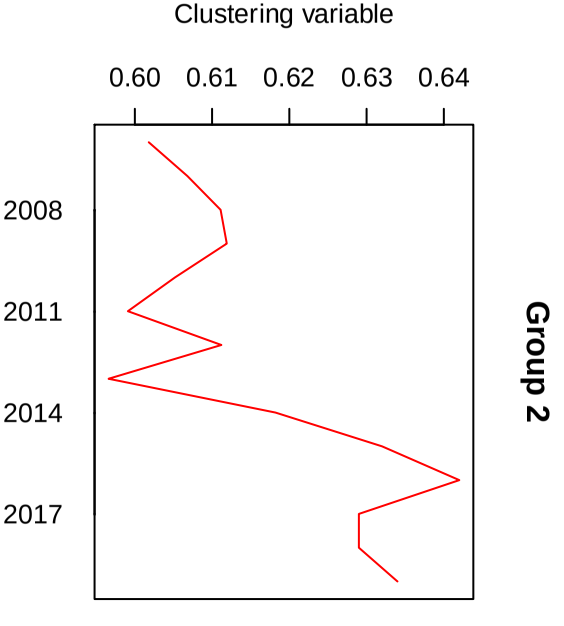

Ergodic mean of m
42
43
44
45
0
500
1000
1500
Iteration number

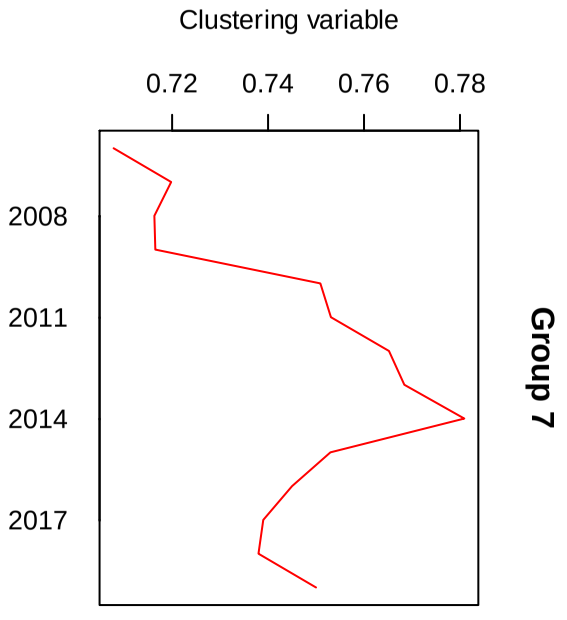
E3-1: trend = F, level = T, Nstable, c = 0.001

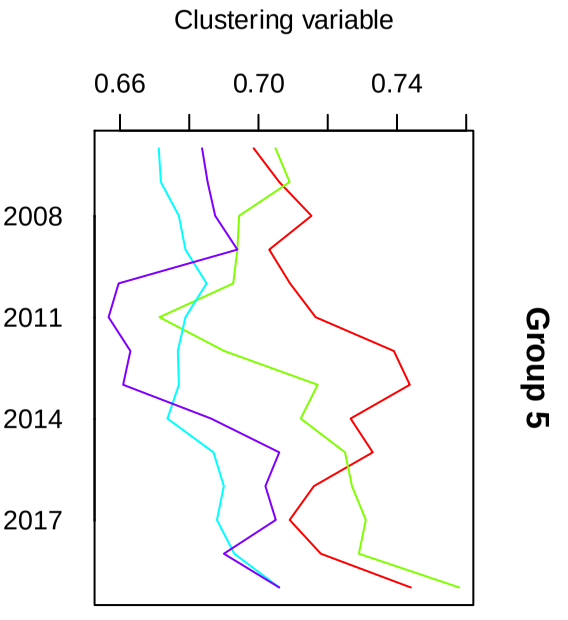

Clustering variable
0.65
0.70
0.75
0.80
2008
2011
2014
2017
Group 3

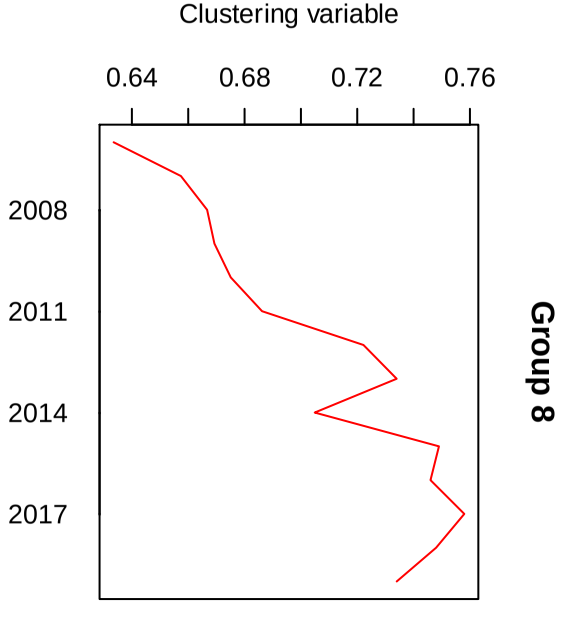

Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017
Group 1

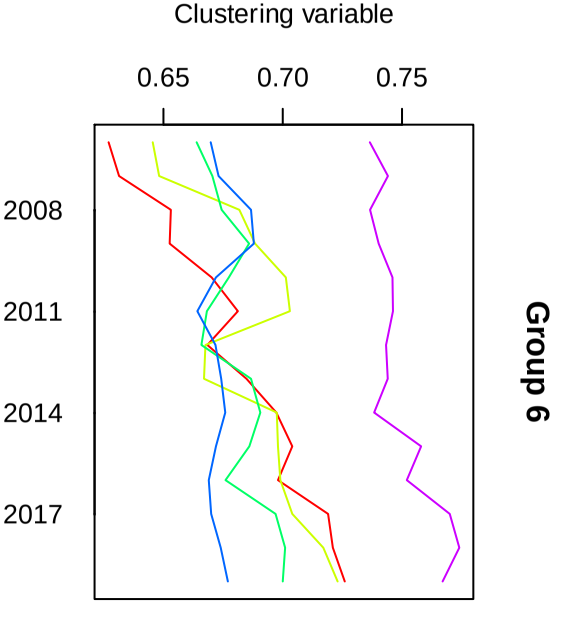

Clustering variable
0.720
0.730
0.740
2008
2011
2014
2017
Group 4

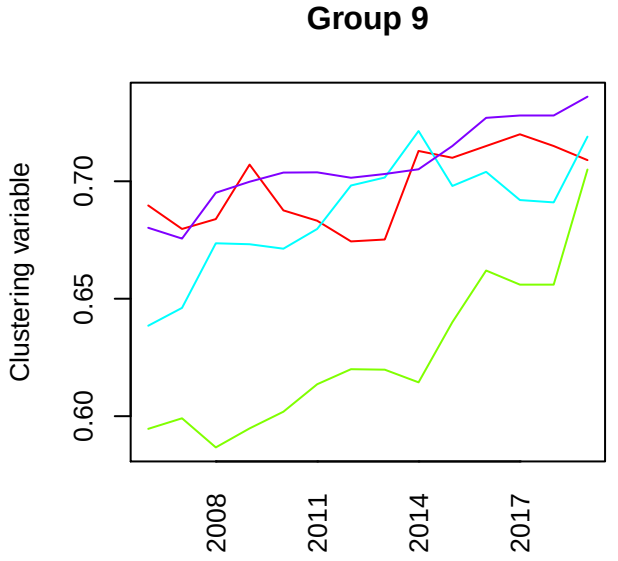

Clustering variable
0.60
0.61
0.62
0.63
0.64
2008
2011
2014
2017
Group 2

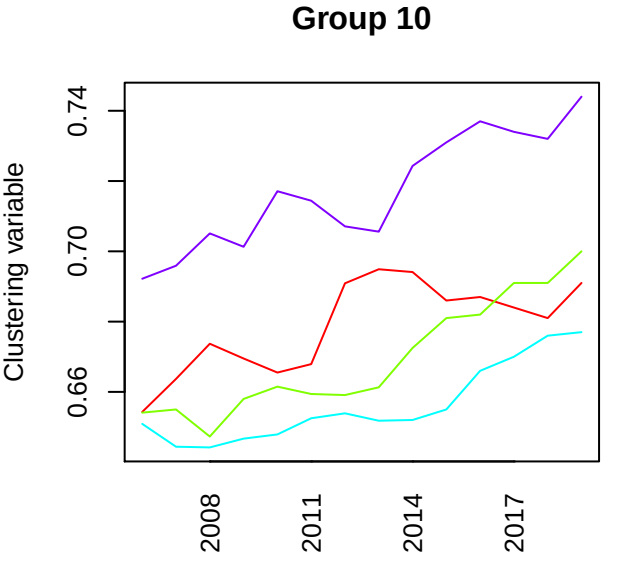

Clustering variable
0.72
0.74
0.76
0.78
2008
2011
2014
2017
Group 7

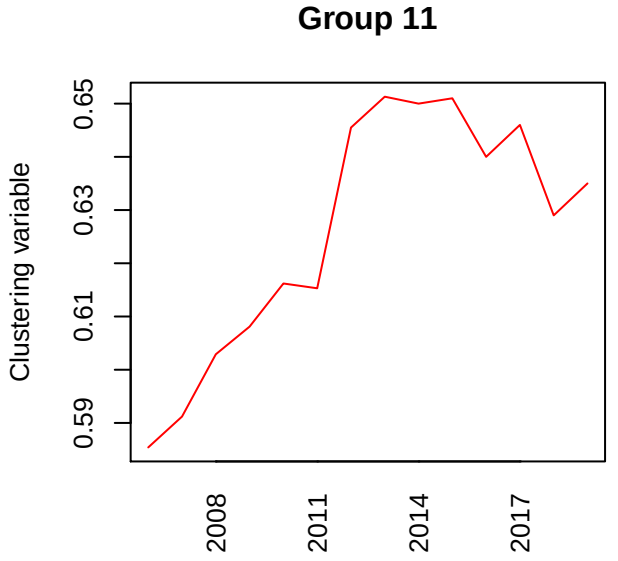

Clustering variable
0.66
0.70
0.74
2008
2011
2014
2017
Group 5

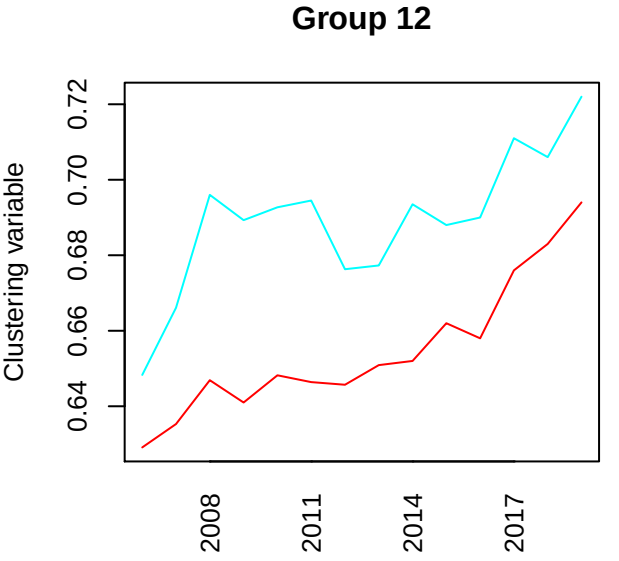

Clustering variable
0.64
0.68
0.72
0.76
2008
2011
2014
2017
Group 8

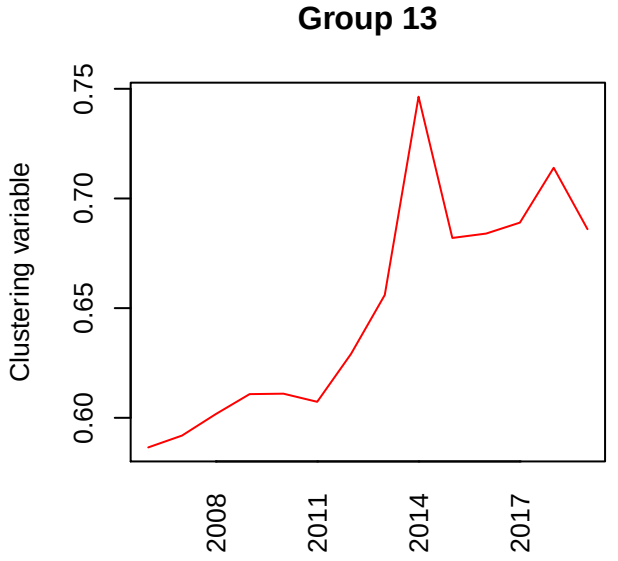

Clustering variable
0.65
0.70
0.75
2008
2011
2014
2017
Group 6

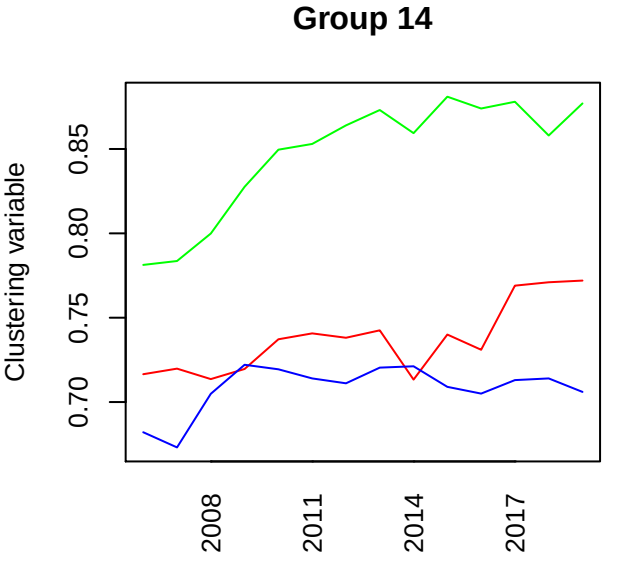

Group 9
Clustering variable
0.60
0.65
0.70
2008
2011
2014
2017

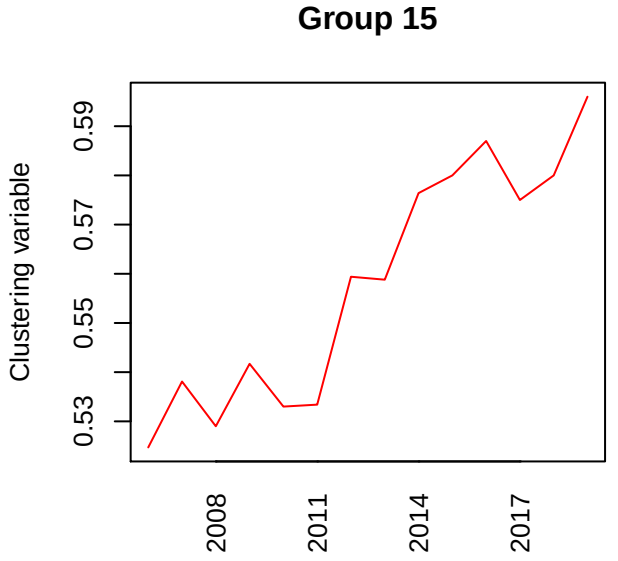

Group 10
Clustering variable
0.66
0.70
0.74
2008
2011
2014
2017

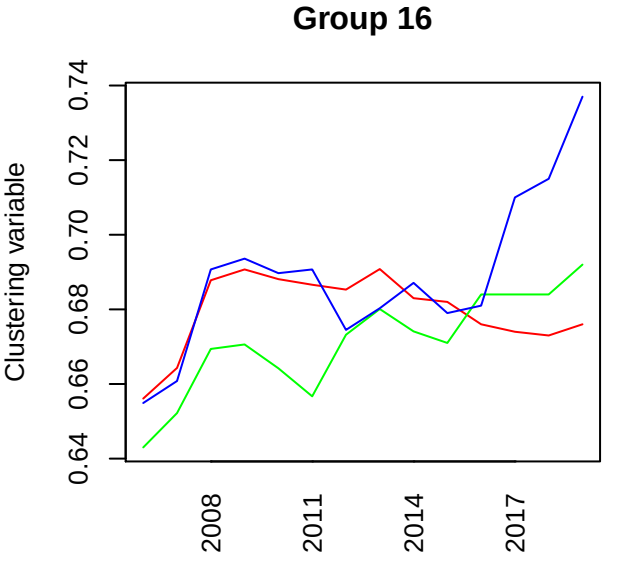

Group 11
Clustering variable
0.59
0.61
0.63
0.65
2008
2011
2014
2017

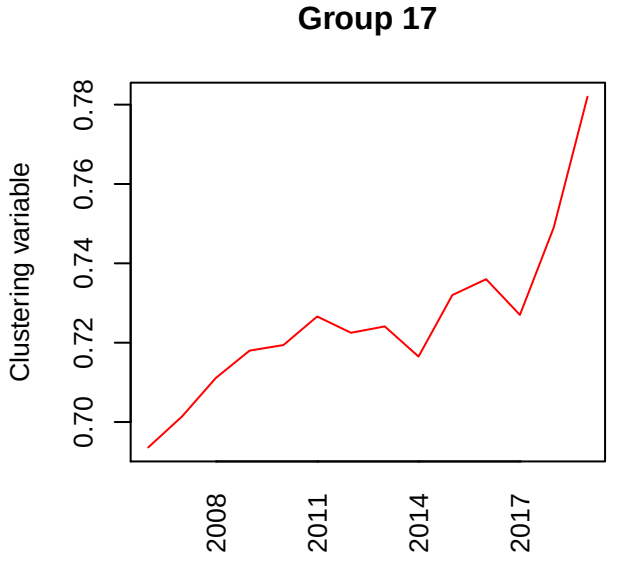

Group 12
Clustering variable
0.64
0.66
0.68
0.70
0.72
2008
2011
2014
2017

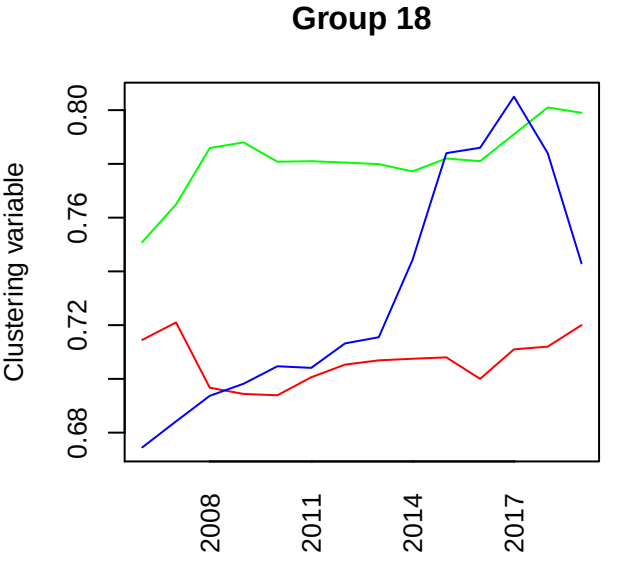

Group 13
Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017

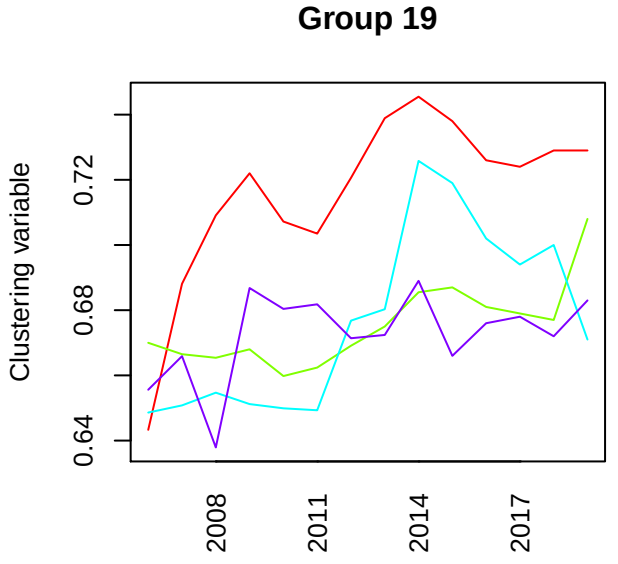

Group 14
Clustering variable
0.70
0.75
0.80
0.85
2008
2011
2014
2017

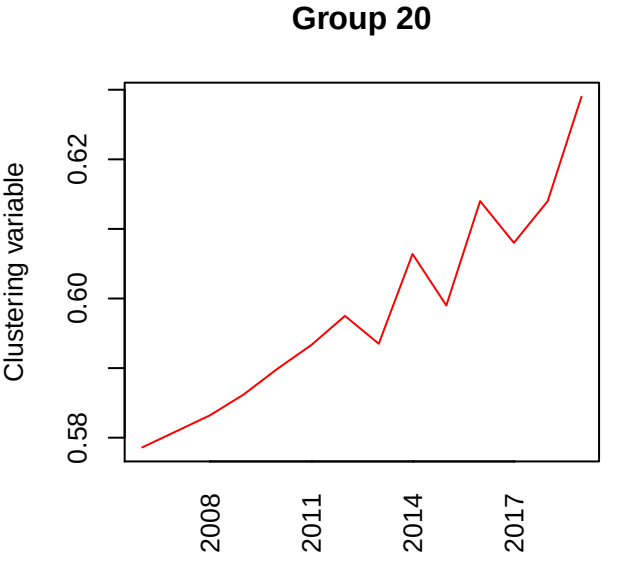

Group 15
Clustering variable
0.53
0.55
0.57
0.59
2008
2011
2014
2017

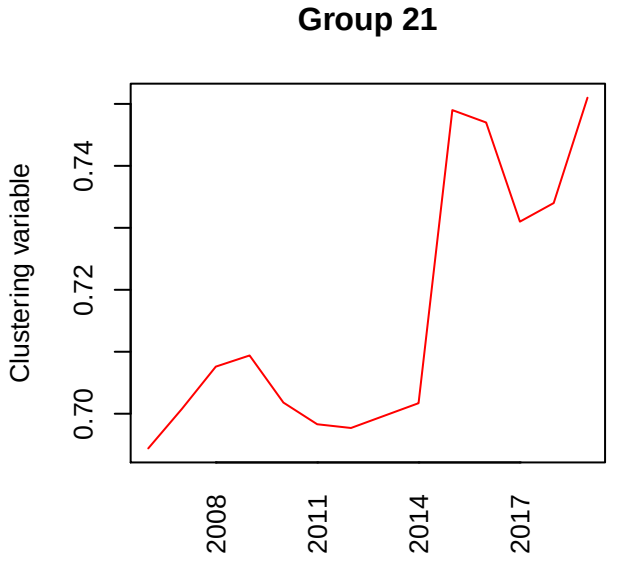

Group 16
Clustering variable
0.64
0.66
0.68
0.70
0.72
0.74
2008
2011
2014
2017

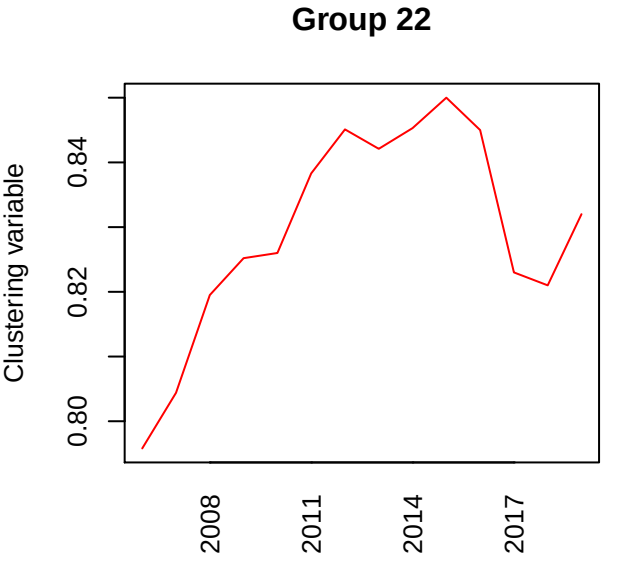

Group 17
Clustering variable
0.70
0.72
0.74
0.76
0.78
2008
2011
2014
2017

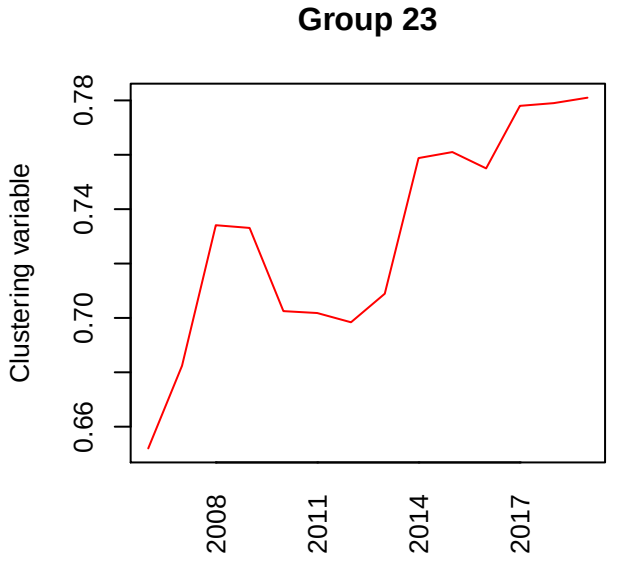

Group 18
Clustering variable
0.68
0.72
0.76
0.80
2008
2011
2014
2017

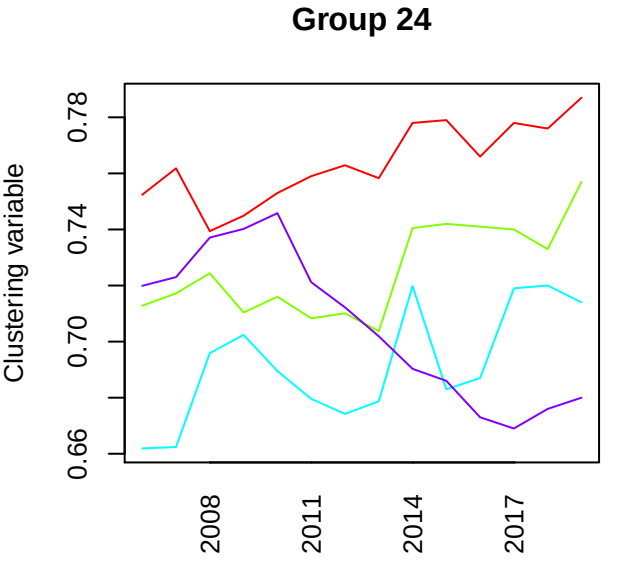

Group 19
Clustering variable
0.64
0.68
0.72
2008
2011
2014
2017

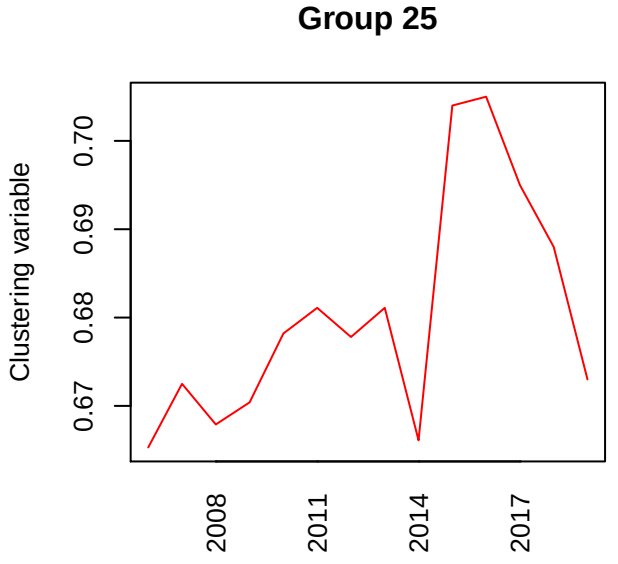

Group 20
Clustering variable
0.58
0.60
0.62
2008
2011
2014
2017

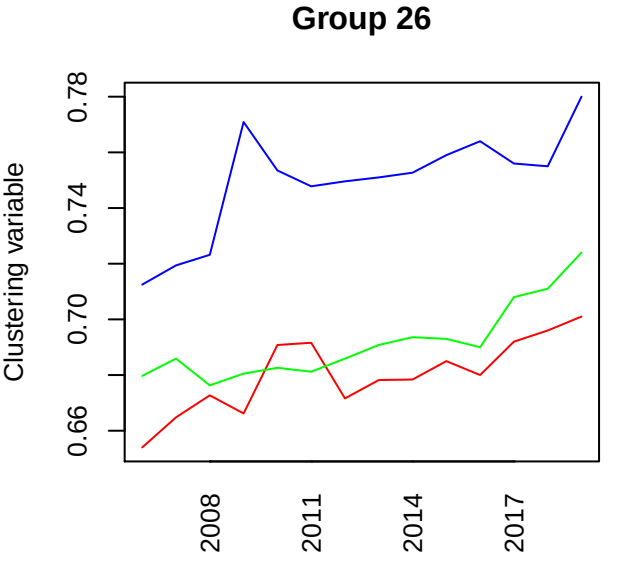

Group 21
Clustering variable
0.70
0.72
0.74
2008
2011
2014
2017

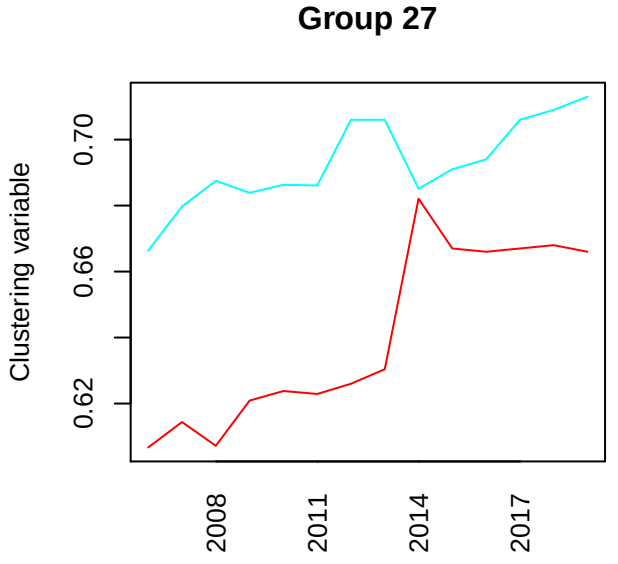

Group 22
Clustering variable
0.80
0.82
0.84
2008
2011
2014
2017

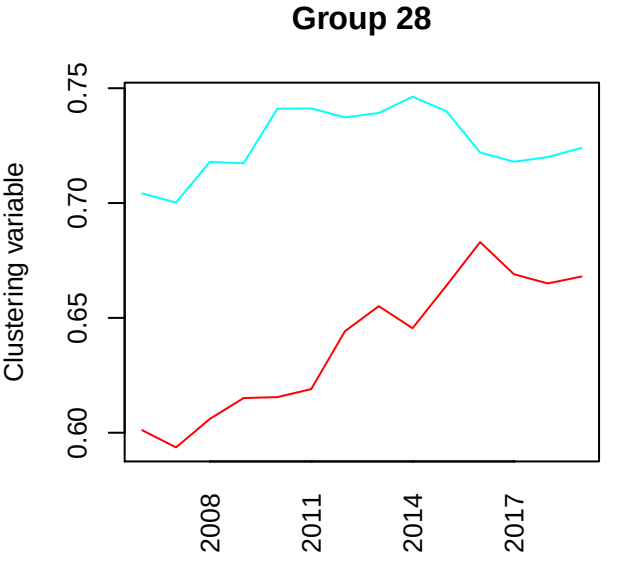

Group 23
Clustering variable
0.66
0.70
0.74
0.78
2008
2011
2014
2017

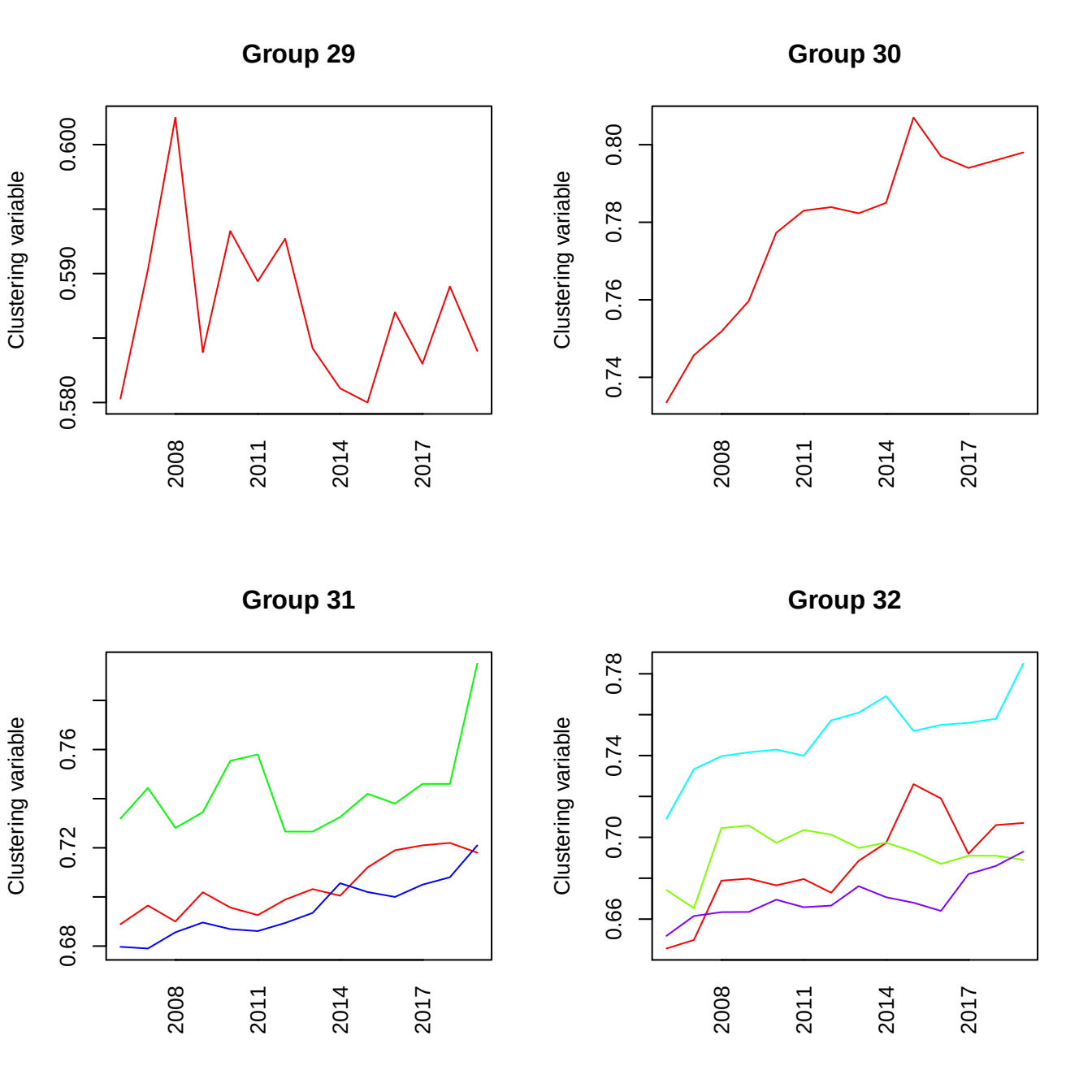

Group 24
Clustering variable
0.66
0.70
0.74
0.78
2008
2011
2014
2017

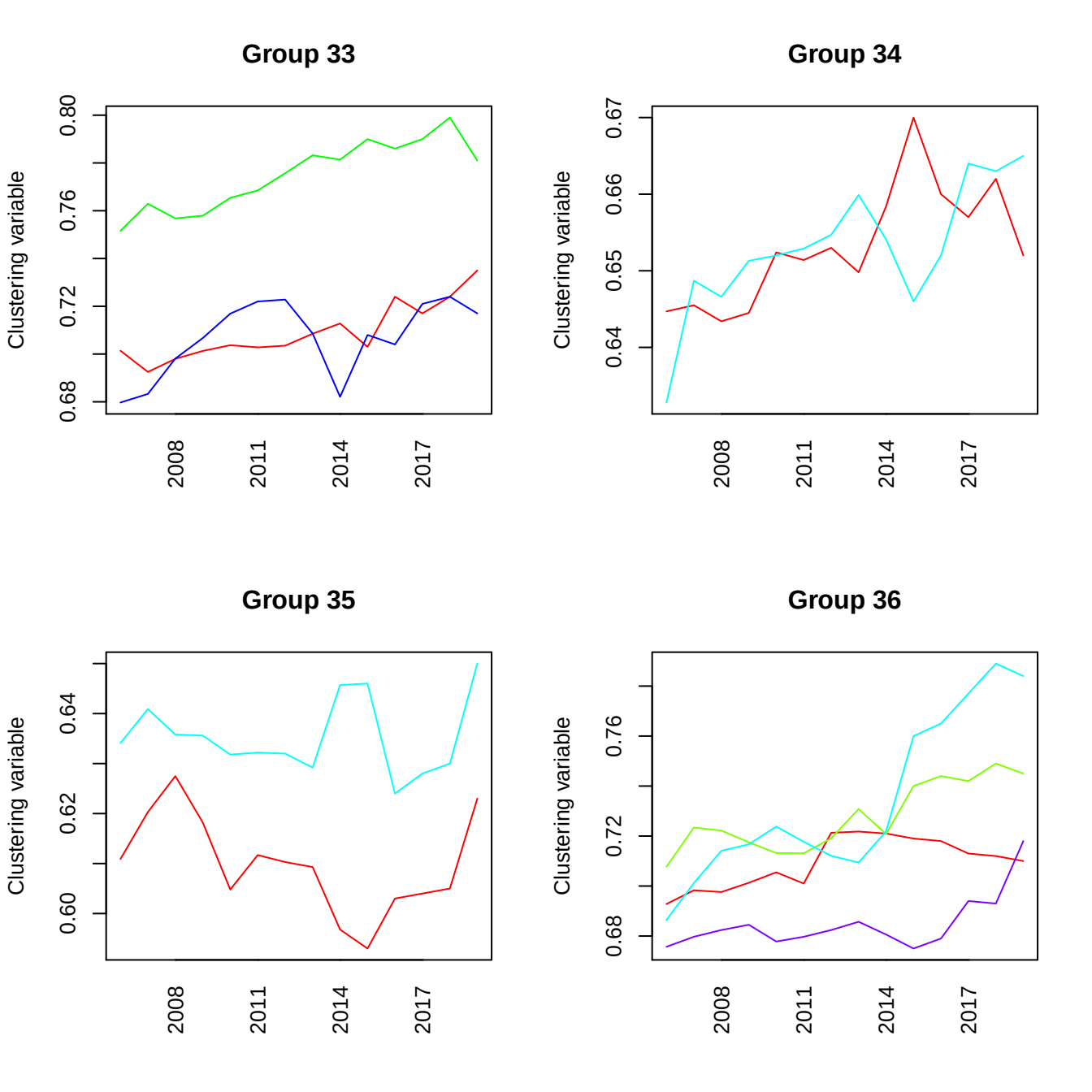

Group 25
Clustering variable
0.67
0.68
0.69
0.70
2008
2011
2014
2017

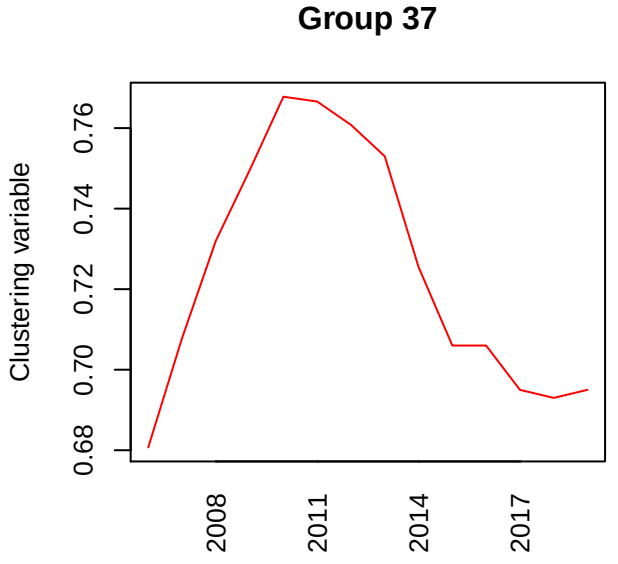

Group 26
Clustering variable
0.66
0.70
0.74
0.78
2008
2011
2014
2017

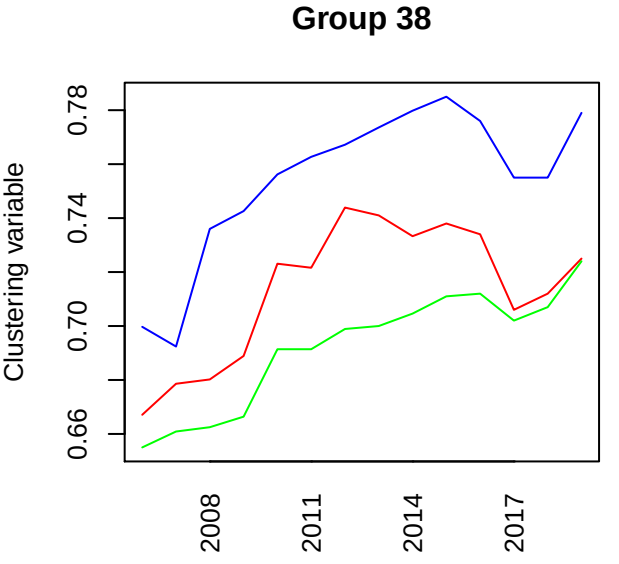

Group 27
Clustering variable
0.62
0.66
0.70
2008
2011
2014
2017

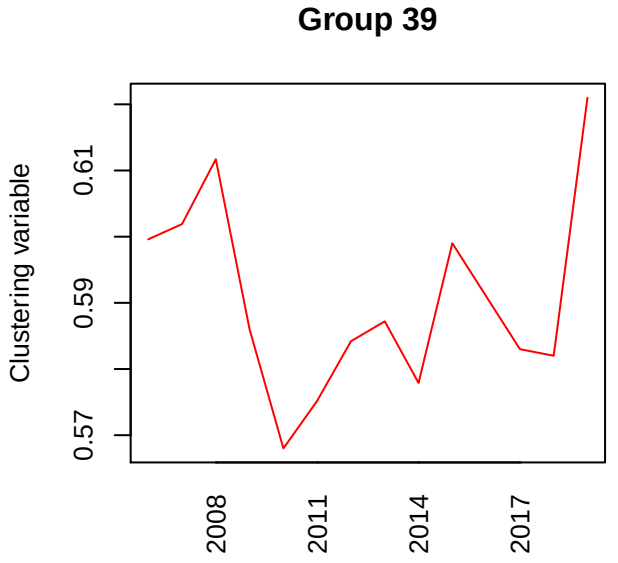

Group 28
Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017

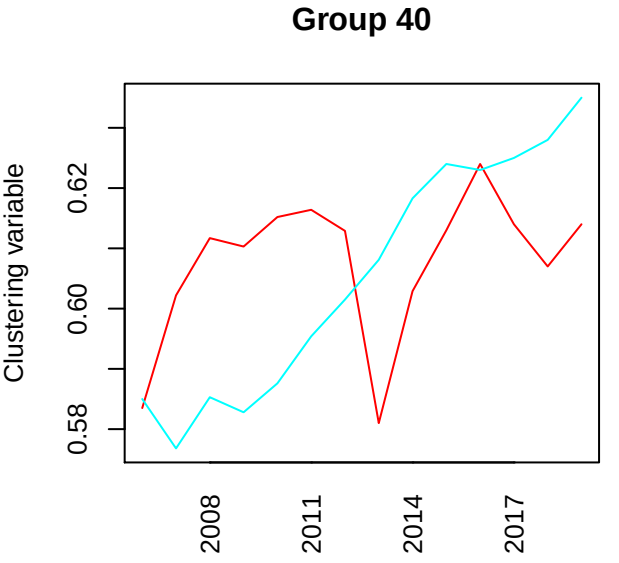

Group 29
Clustering variable
0.580
0.590
0.600
2008
2011
2014
2017
Group 30
Clustering variable
0.74
0.76
0.78
0.80
2008
2011
2014
2017
Group 31
Clustering variable
0.68
0.72
0.76
2008
2011
2014
2017
Group 32
Clustering variable
0.66
0.70
0.74
0.78
2008
2011
2014
2017

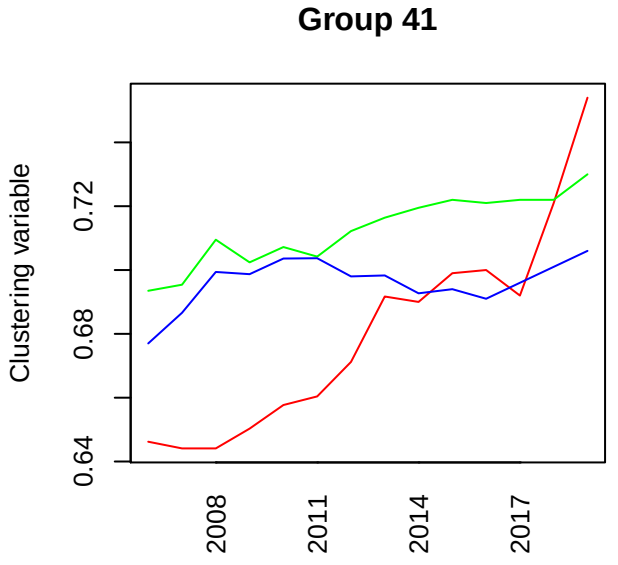

Group 33
Clustering variable
0.68
0.72
0.76
0.80
2008
2011
2014
2017
Group 34
Clustering variable
0.64
0.65
0.66
0.67
2008
2011
2014
2017
Group 35
Clustering variable
0.60
0.62
0.64
2008
2011
2014
2017
Group 36
Clustering variable
0.68
0.72
0.76
2008
2011
2014
2017

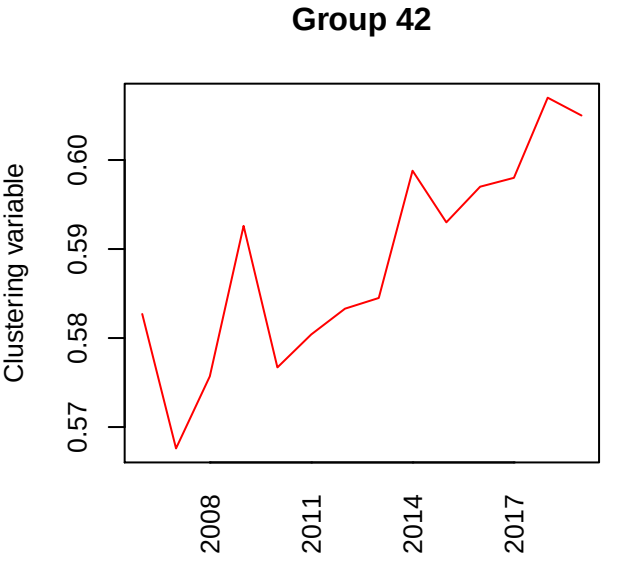

Group 37
Clustering variable
0.68
0.70
0.72
0.74
0.76
2008
2011
2014
2017

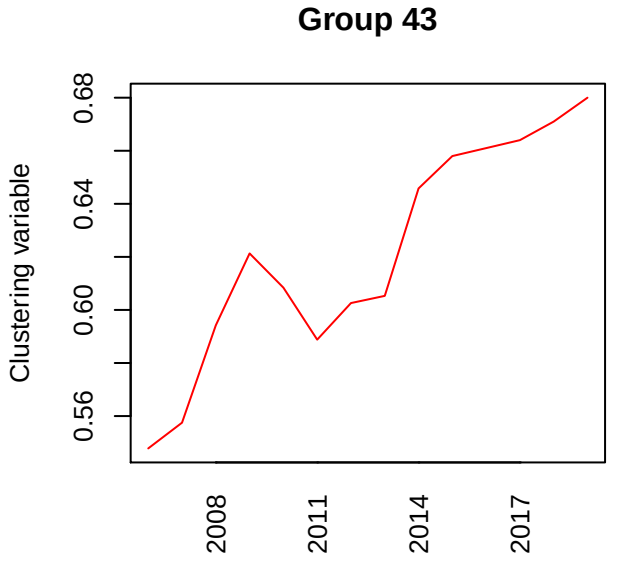

Group 38
Clustering variable
0.66
0.70
0.74
0.78
2008
2011
2014
2017

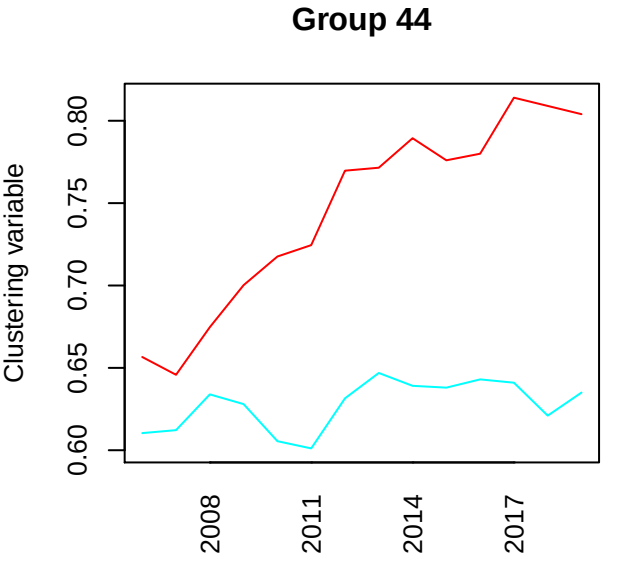

Group 39
Clustering variable
0.57
0.59
0.61
2008
2011
2014
2017

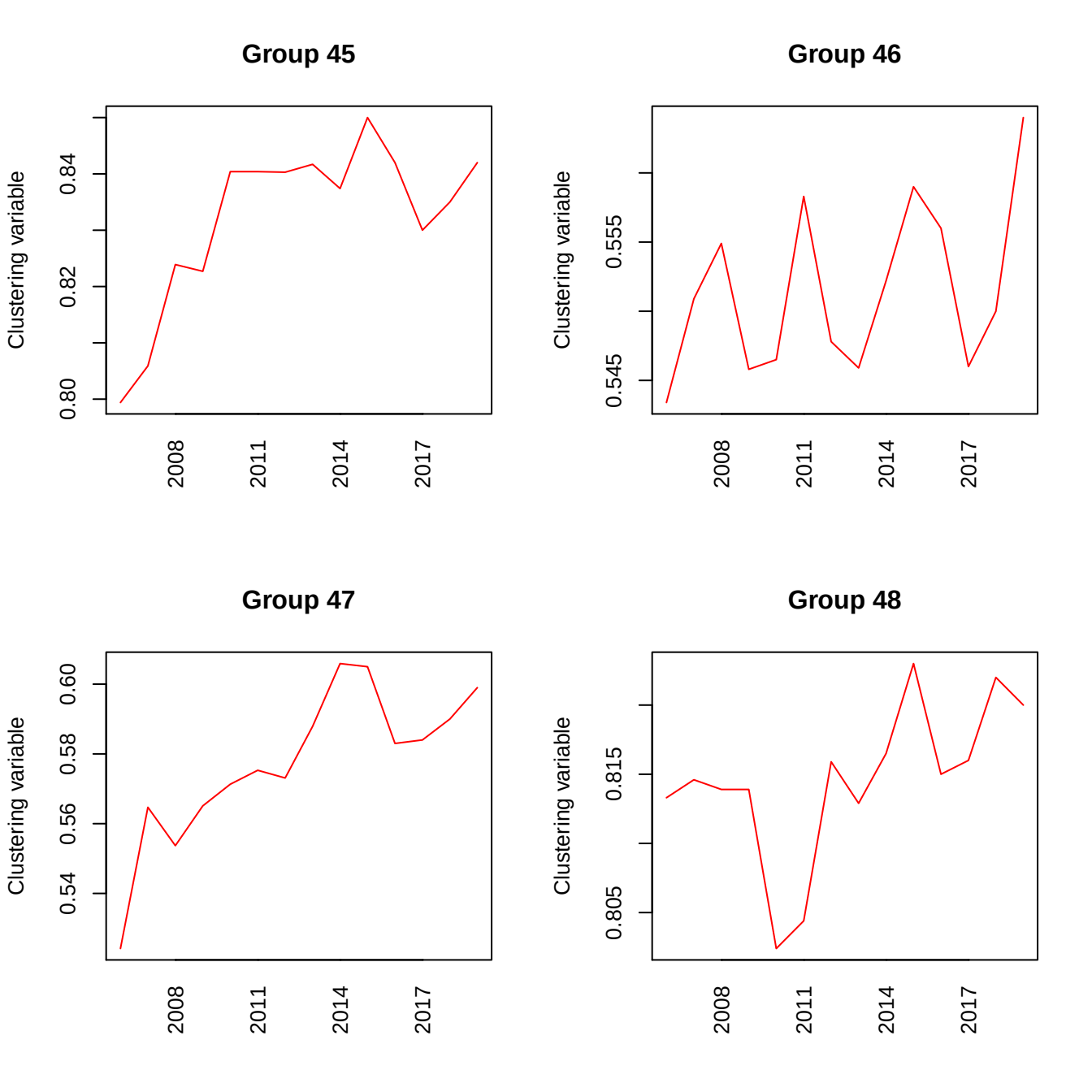

Group 40
Clustering variable
0.58
0.60
0.62
2008
2011
2014
2017

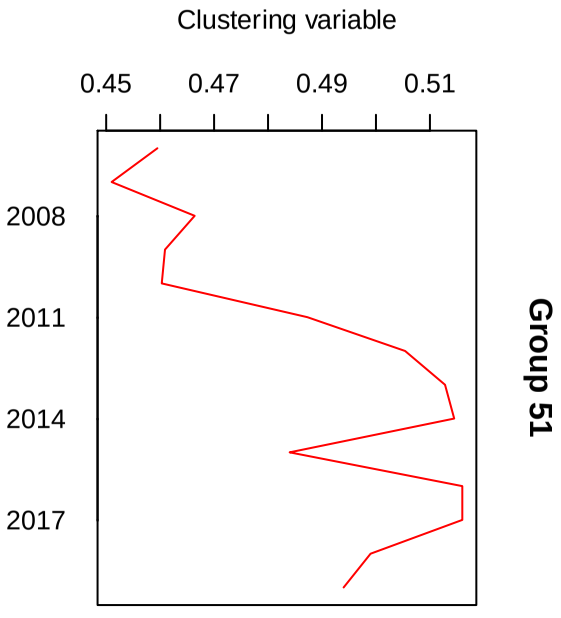

Group 41
Clustering variable
0.64
0.68
0.72
2008
2011
2014
2017

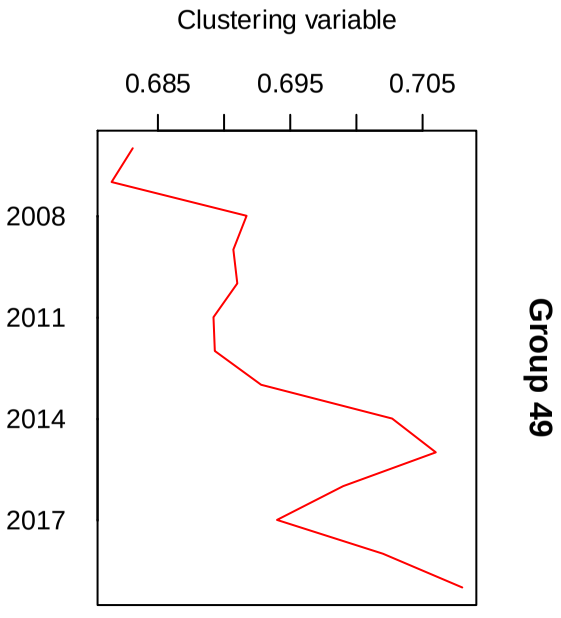

Group 42
Clustering variable
0.57
0.58
0.59
0.60
2008
2011
2014
2017

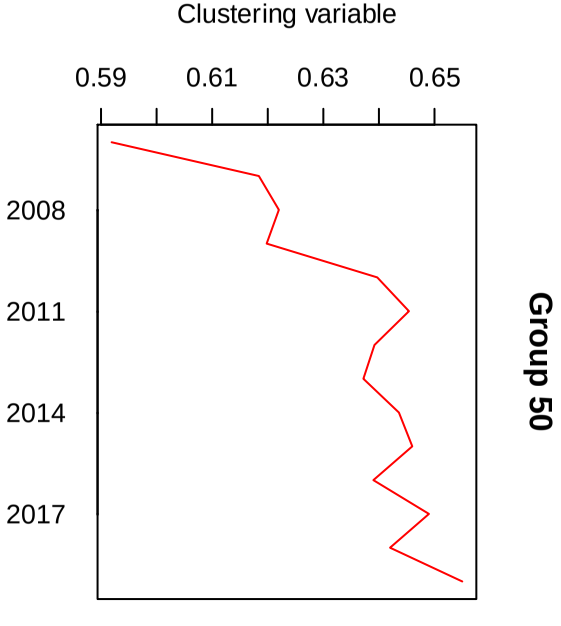

Group 43
Clustering variable
0.56
0.60
0.64
0.68
2008
2011
2014
2017

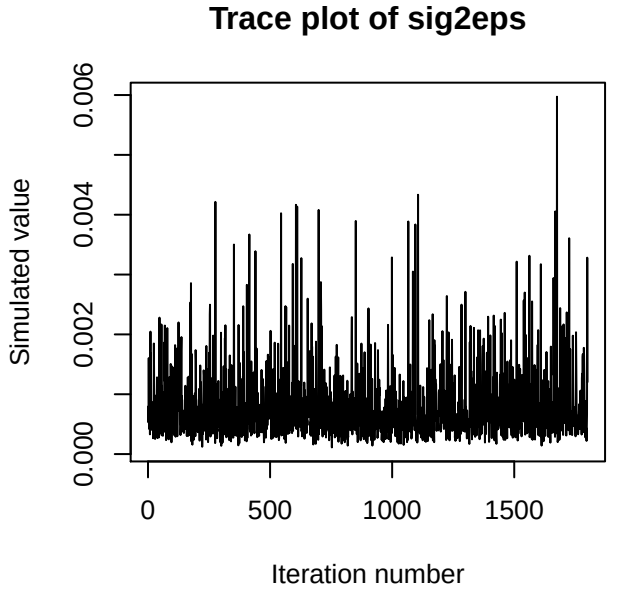

Group 44
Clustering variable
0.60
0.65
0.70
0.75
0.80
2008
2011
2014
2017


Group 45
Clustering variable
0.80
0.82
0.84
2008
2011
2014
2017
Group 46
Clustering variable
0.545
0.555
2008
2011
2014
2017
Group 47
Clustering variable
0.54
0.56
0.58
0.60
2008
2011
2014
2017
Group 48
Clustering variable
0.805
0.815
2008
2011
2014
2017

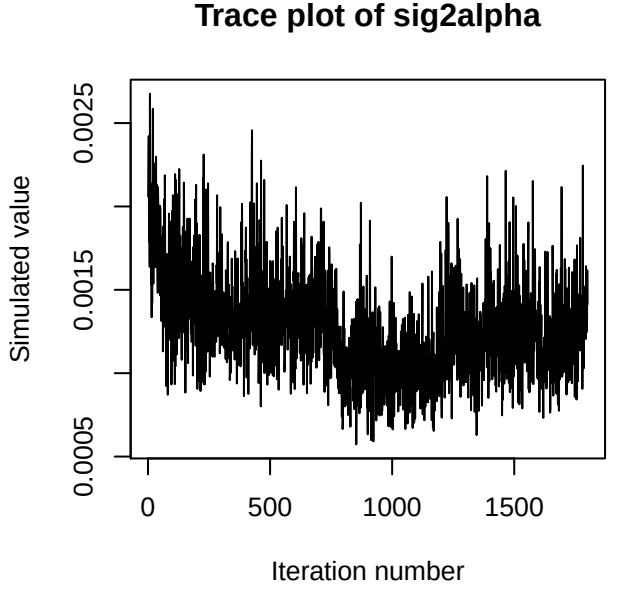

Clustering variable
0.45
0.47
0.49
0.51
2008
2011
2014
2017
Group 51

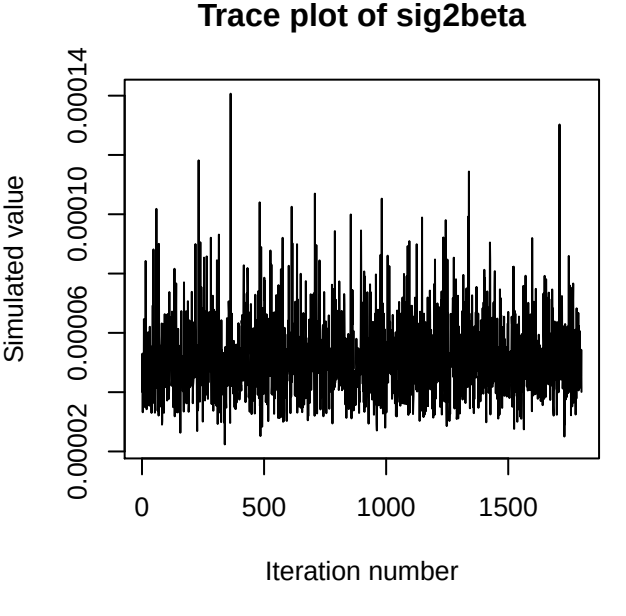

Clustering variable
0.685
0.695
0.705
2008
2011
2014
2017
Group 49

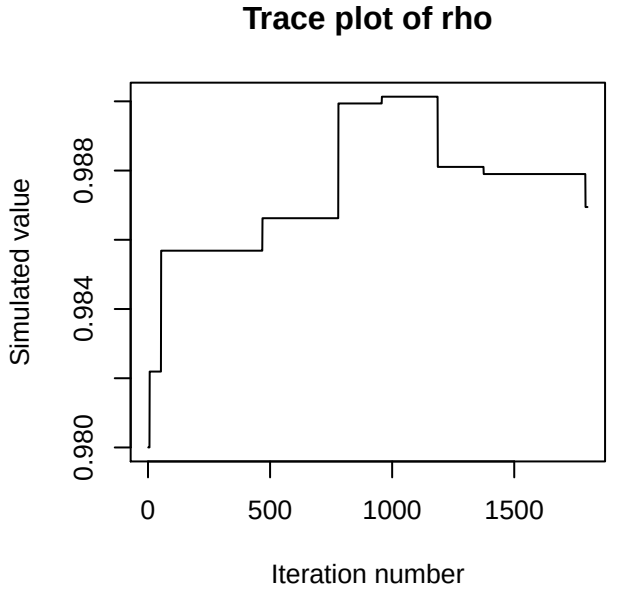

Clustering variable
0.59
0.61
0.63
0.65
2008
2011
2014
2017
Group 50

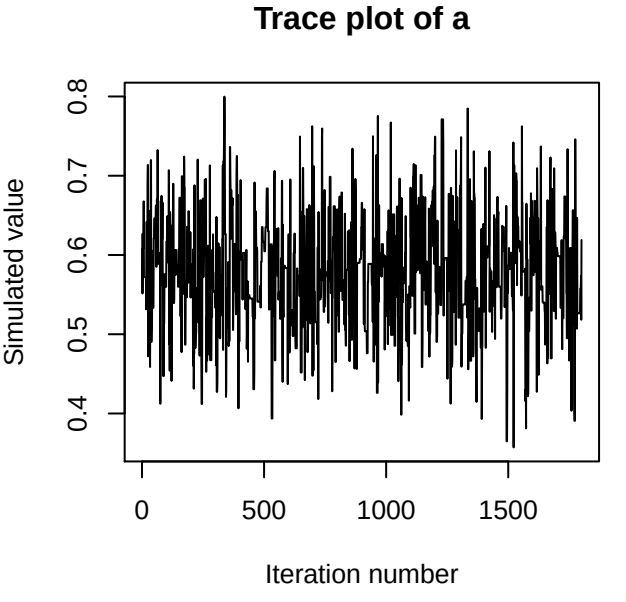

Trace plot of sig2eps
Simulated value
0.000
0.002
0.004
0.006
0
500
1000
1500
Iteration number

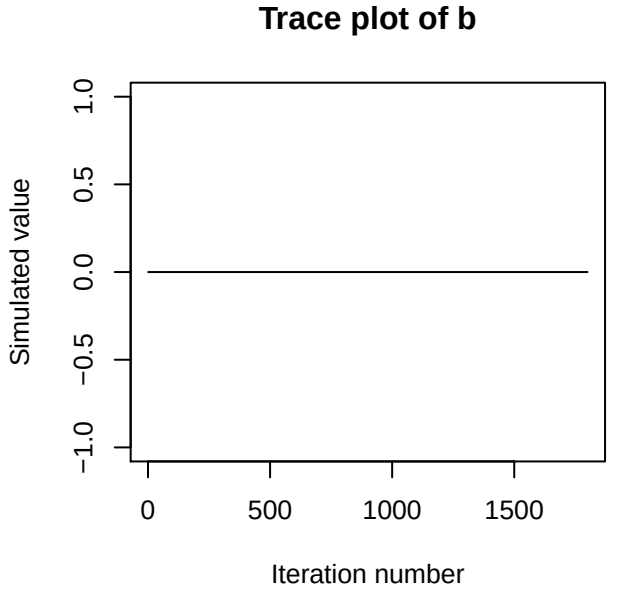
Trace plot of sig2theta
Simulated value
0.040
0.050
0.060
0.070
0
500
1000
1500
Iteration number

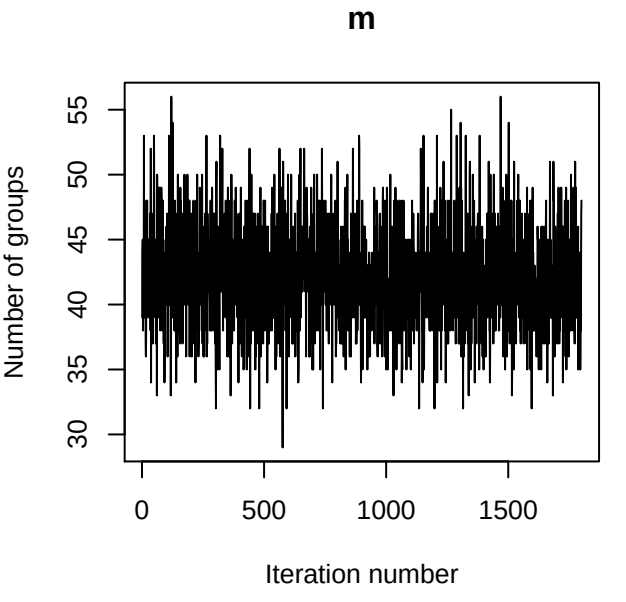

Trace plot of sig2alpha
Simulated value
0.0005
0.0015
0.0025
0
500
1000
1500
Iteration number

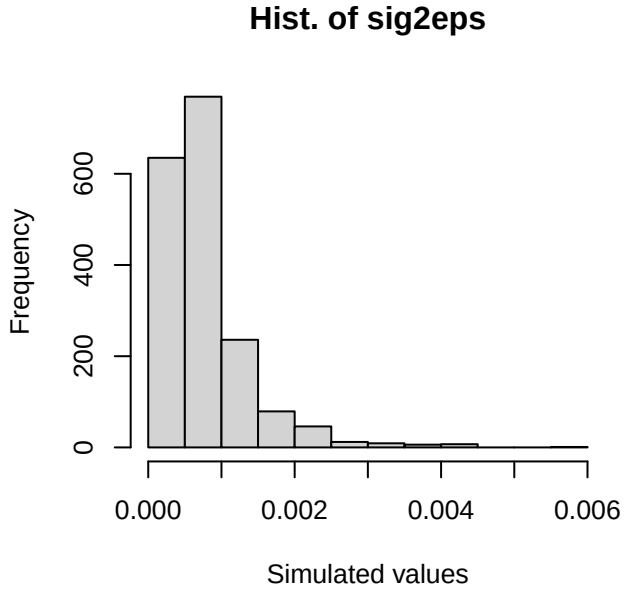

Trace plot of sig2beta
Simulated value
0.00002
0.00006
0.00010
0.00014
0
500
1000
1500
Iteration number

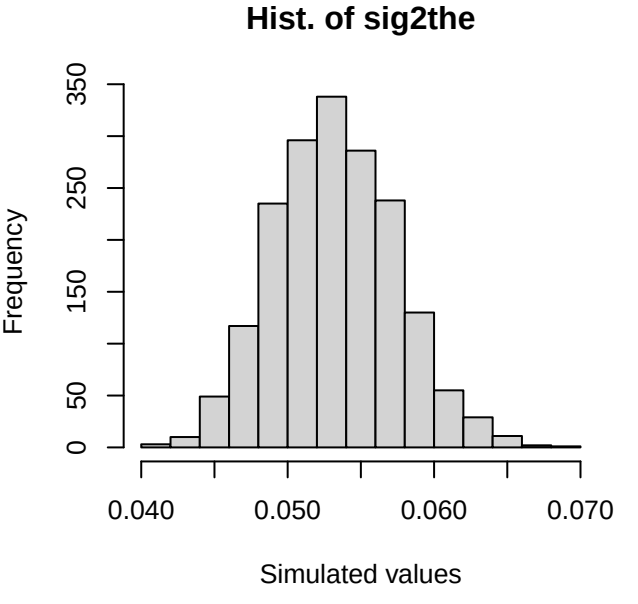

Trace plot of rho
Simulated value
0.980
0.984
0.988
0
500
1000
1500
Iteration number

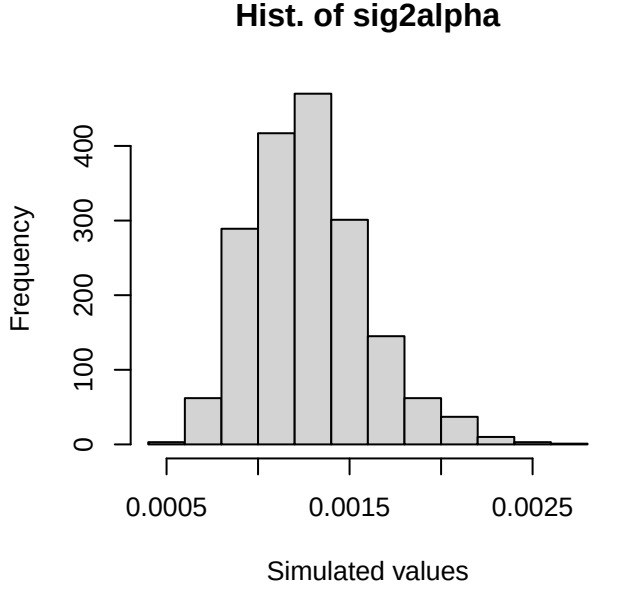

Trace plot of a
Simulated value
0.4
0.5
0.6
0.7
0.8
0
500
1000
1500
Iteration number

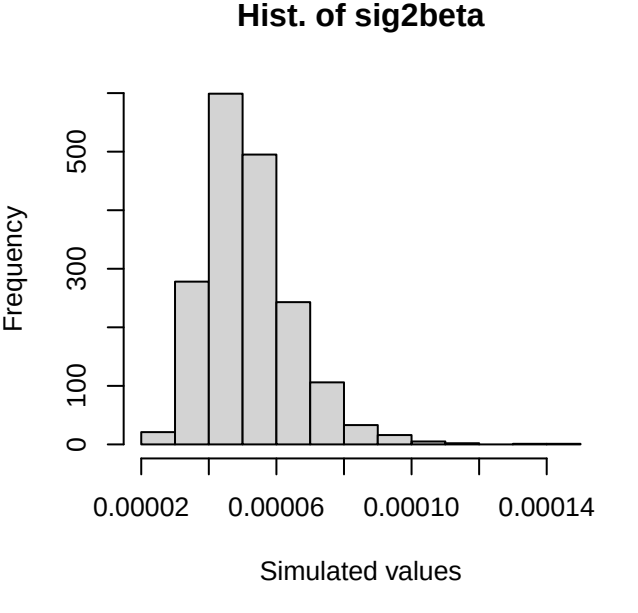

Trace plot of b
Simulated value
−1.0
−0.5
0.0
0.5
1.0
0
500
1000
1500
Iteration number

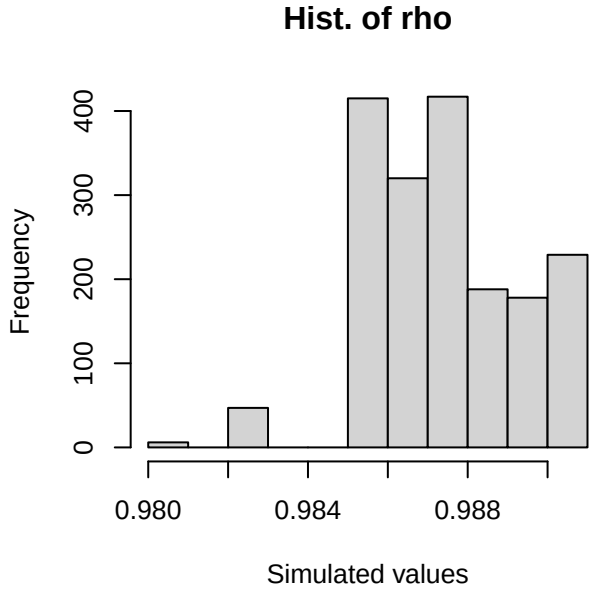

m
Number of groups
30
35
40
45
50
55
0
500
1000
1500
Iteration number

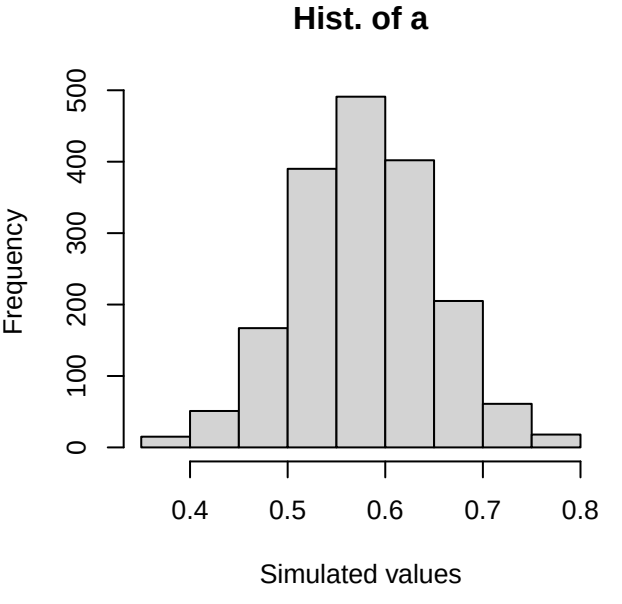

Hist. of sig2eps
Frequency
0
200
400
600
0.000
0.002
0.004
0.006
Simulated values

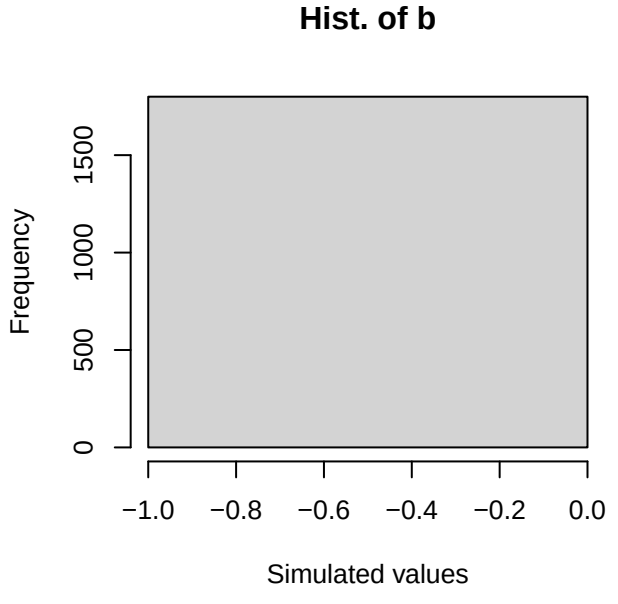

Hist. of sig2the
Frequency
0
50
150
250
350
0.040
0.050
0.060
0.070
Simulated values

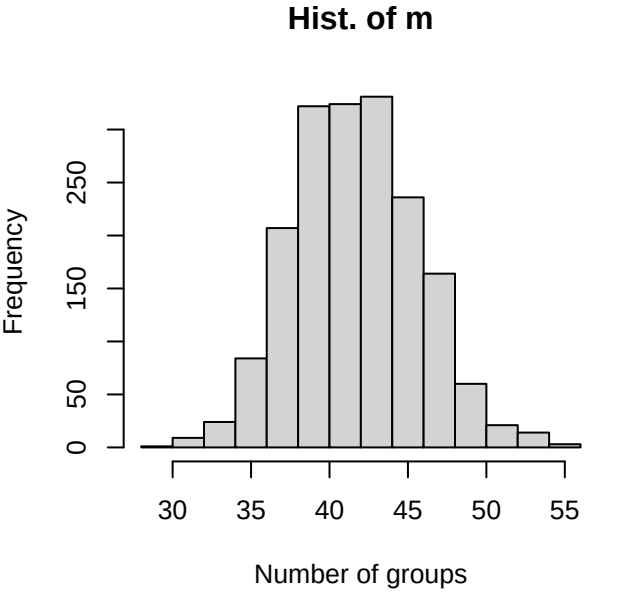

Hist. of sig2alpha
Frequency
0
100
200
300
400
0.0005
0.0015
0.0025
Simulated values

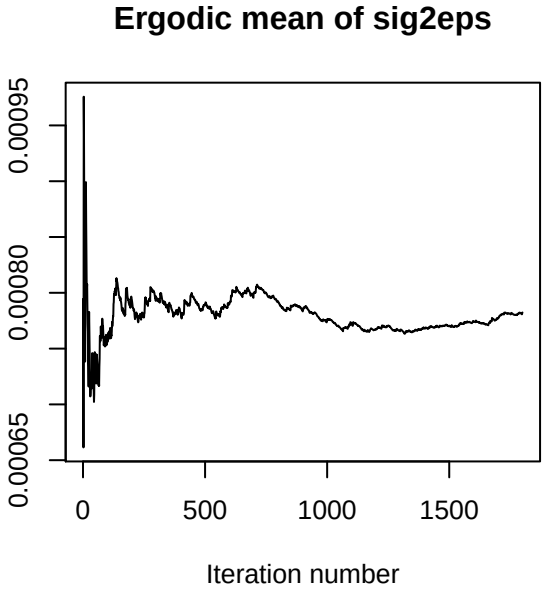

Hist. of sig2beta
Frequency
0
100
300
500
0.00002
0.00006
0.00010
0.00014
Simulated values

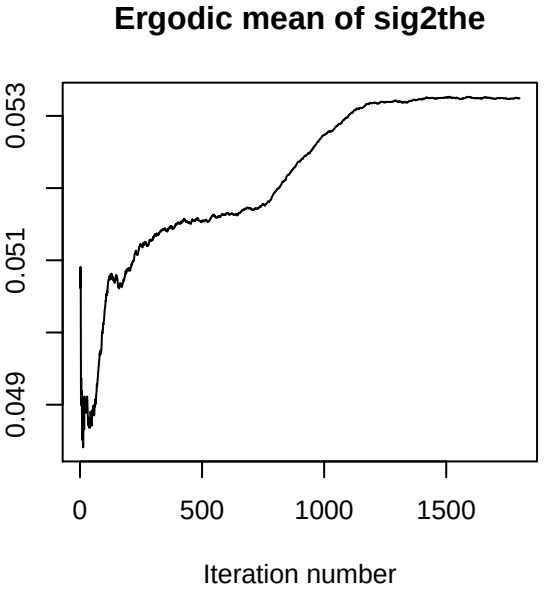

Hist. of rho
Frequency
0
100
200
300
400
0.980
0.984
0.988
Simulated values

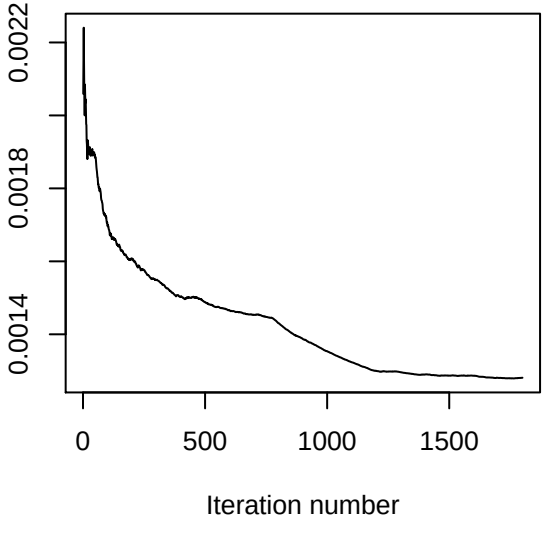

Hist. of a
Frequency
0
100
200
300
400
500
0.4
0.5
0.6
0.7
0.8
Simulated values

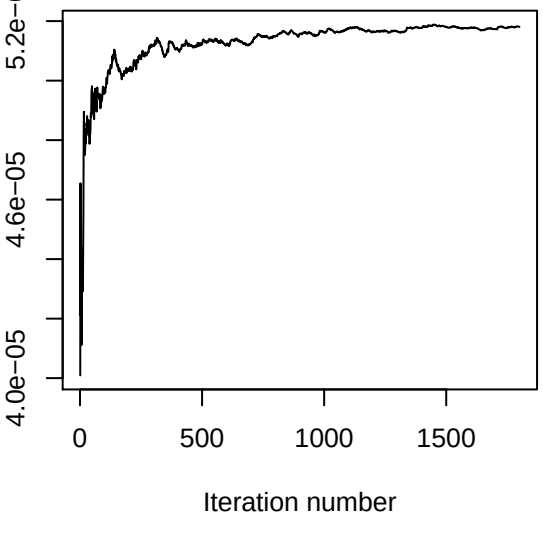

Hist. of b
Frequency
0
500
1000
1500
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
Simulated values

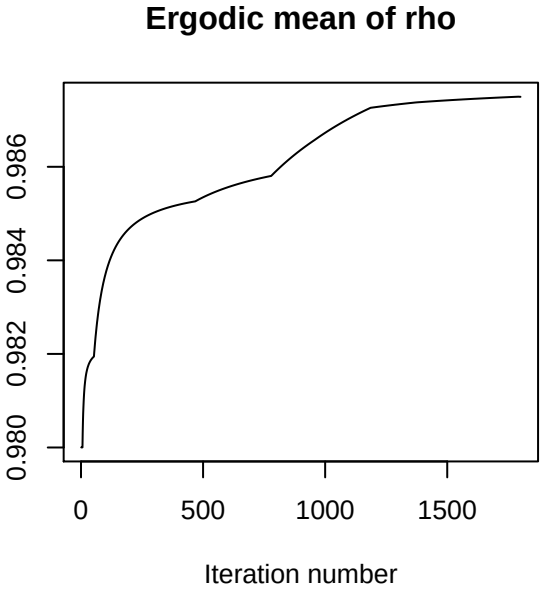

Hist. of m
Frequency
0
50
150
250
30
35
40
45
50
55
Number of groups

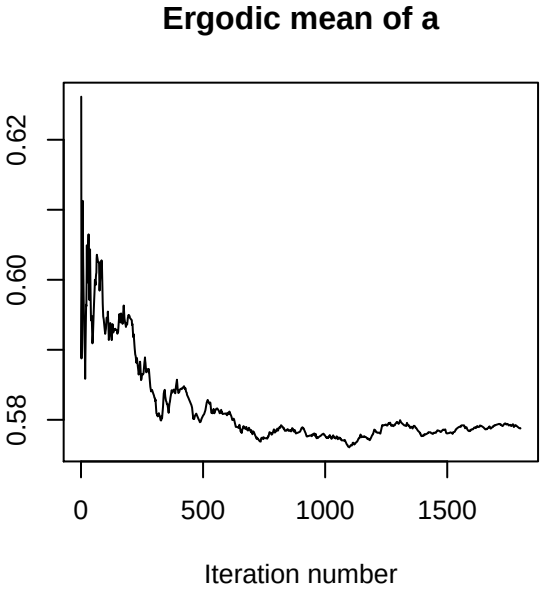

Ergodic mean of sig2eps
0.00095
0.00080
0.00065
0
500
1000
1500
Iteration number

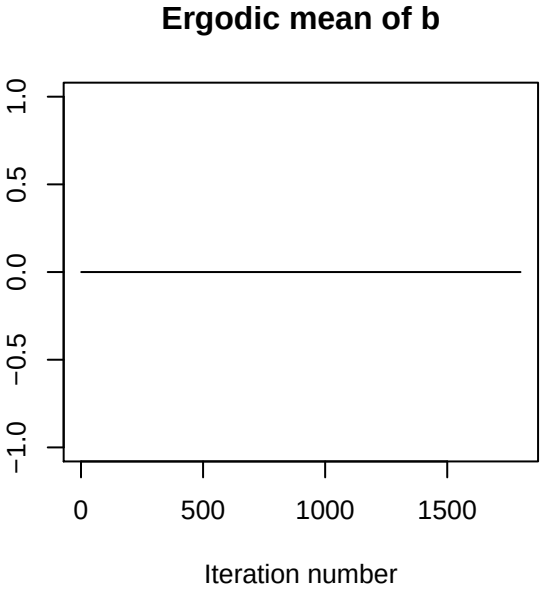

Ergodic mean of sig2the
0.053
0.051
0.049
0
500
1000
1500
Iteration number

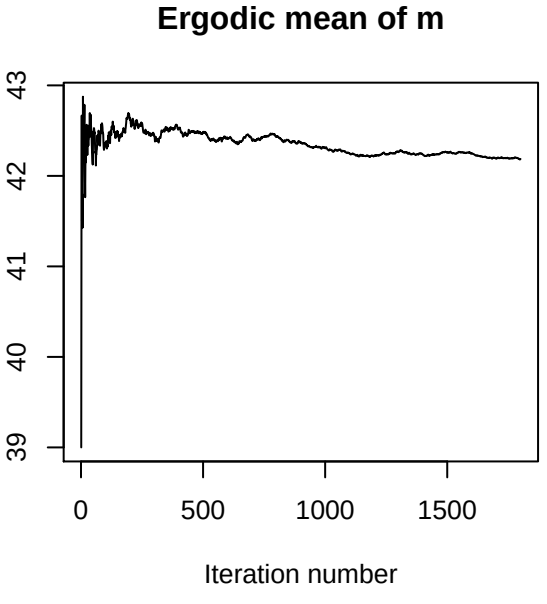

Ergodic mean of sig2alpha
0.0022
0.0018
0.0014
0
500
1000
1500
Iteration number


Ergodic mean of sig2beta
5.2e−05
4.6e−05
4.0e−05
0
500
1000
1500
Iteration number

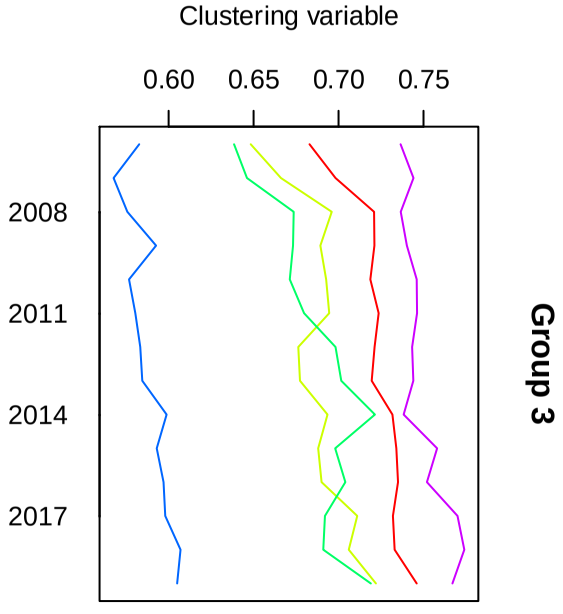

Ergodic mean of rho
0.980
0.982
0.984
0.986
0
500
1000
1500
Iteration number

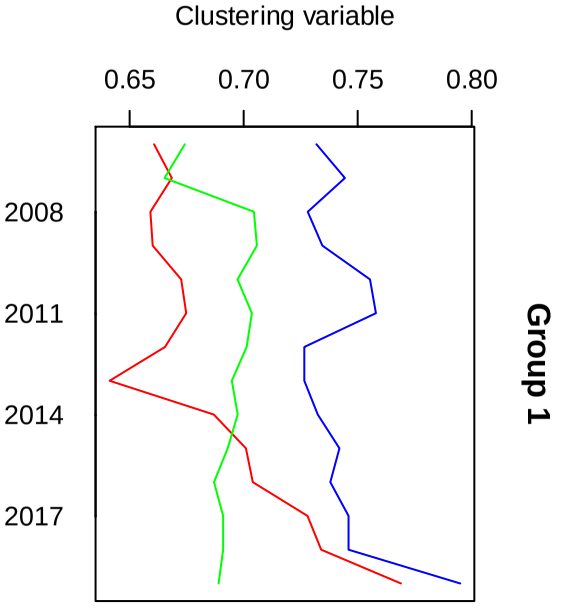

Ergodic mean of a
0.58
0.60
0.62
0
500
1000
1500
Iteration number

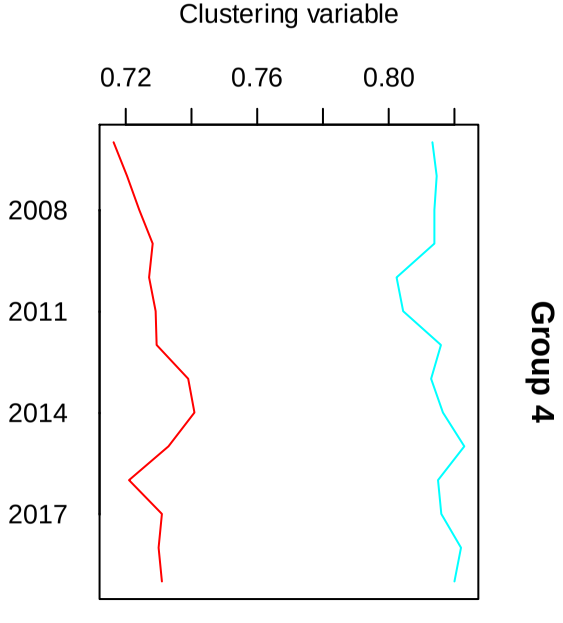

Ergodic mean of b
−1.0
−0.5
0.0
0.5
1.0
0
500
1000
1500
Iteration number

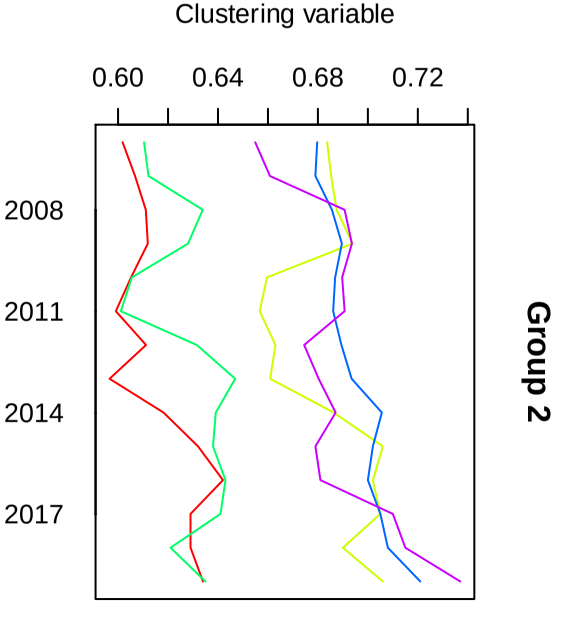

Ergodic mean of m
39
40
41
42
43
0
500
1000
1500
Iteration number

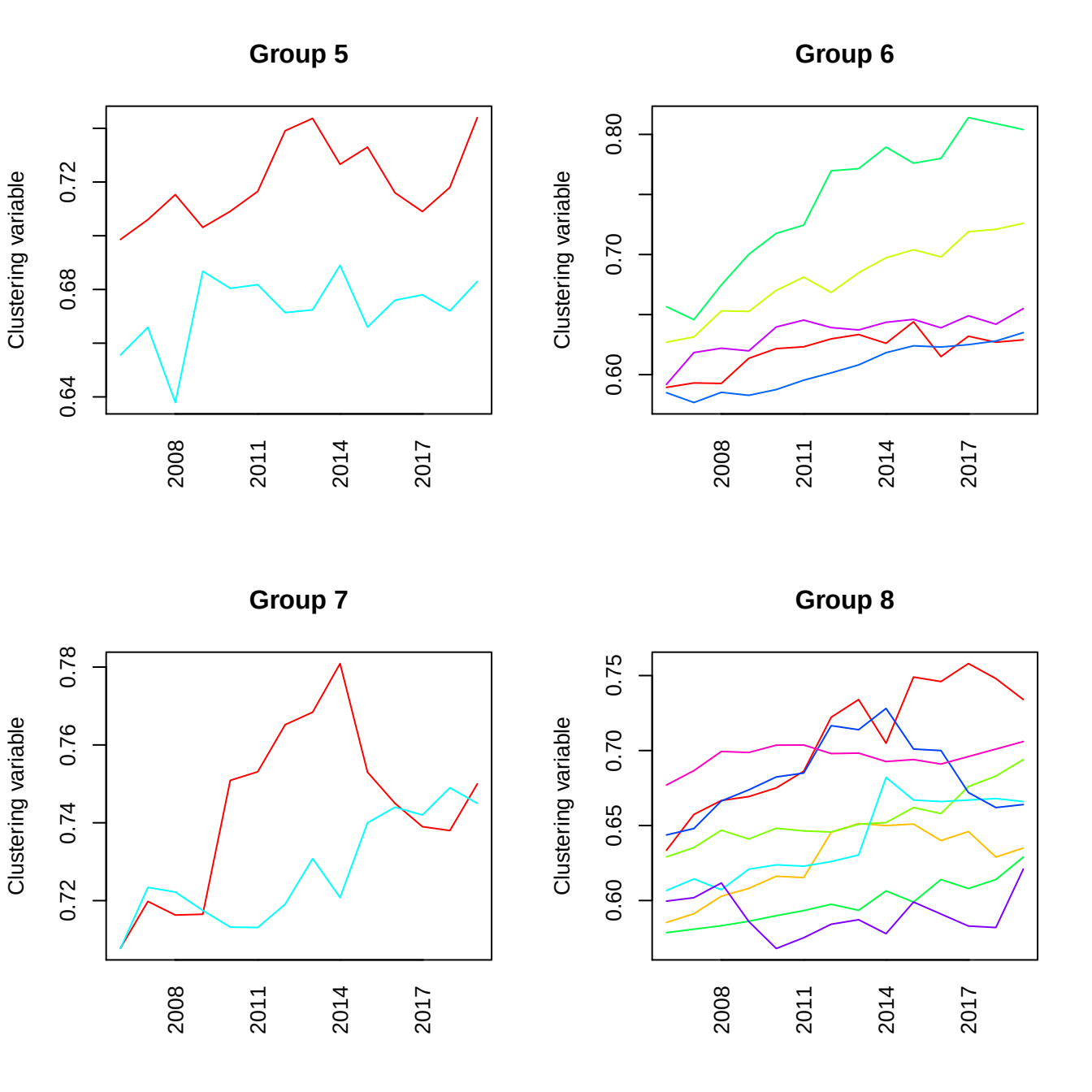
E1-2: trend = F, level = T, Dirichlet, c = 0.01

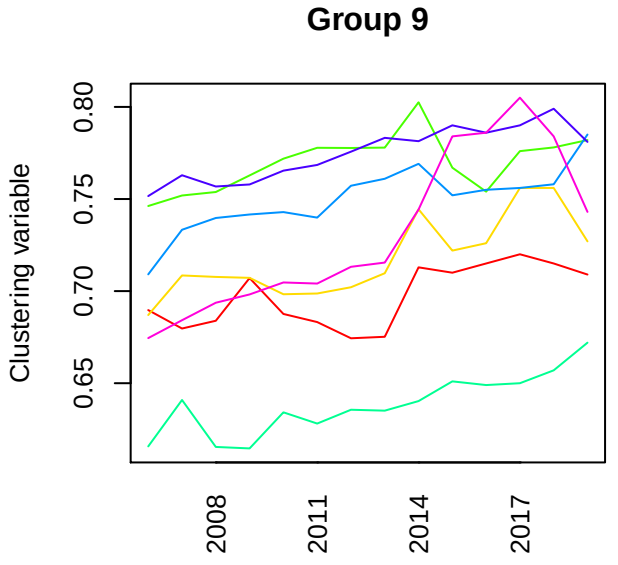

Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017
Group 3

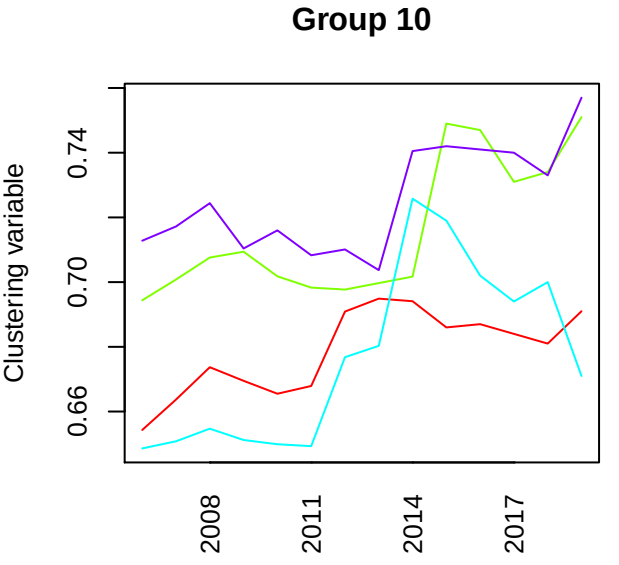

Clustering variable
0.65
0.70
0.75
0.80
2008
2011
2014
2017
Group 1

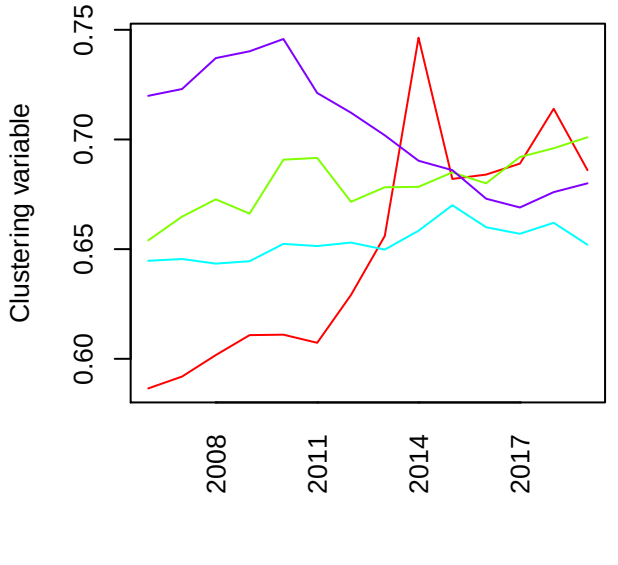

Clustering variable
0.72
0.76
0.80
2008
2011
2014
2017
Group 4


Clustering variable
0.60
0.64
0.68
0.72
2008
2011
2014
2017
Group 2

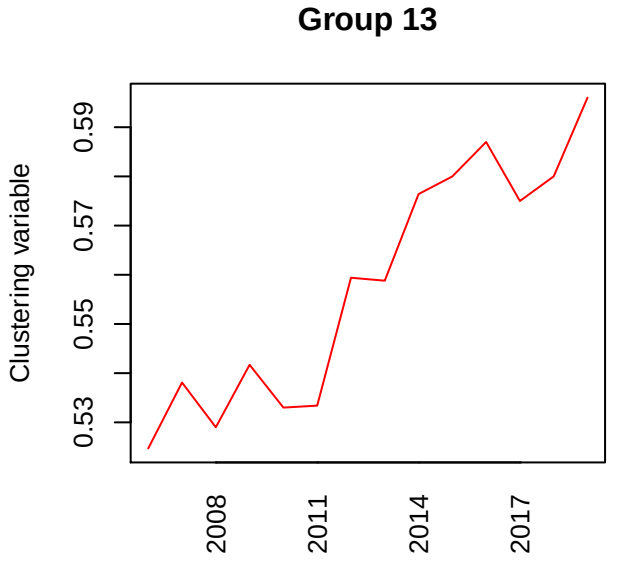

Group 5
Clustering variable
0.64
0.68
0.72
2008
2011
2014
2017
Group 6
Clustering variable
0.60
0.70
0.80
2008
2011
2014
2017
Group 7
Clustering variable
0.72
0.74
0.76
0.78
2008
2011
2014
2017
Group 8
Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017

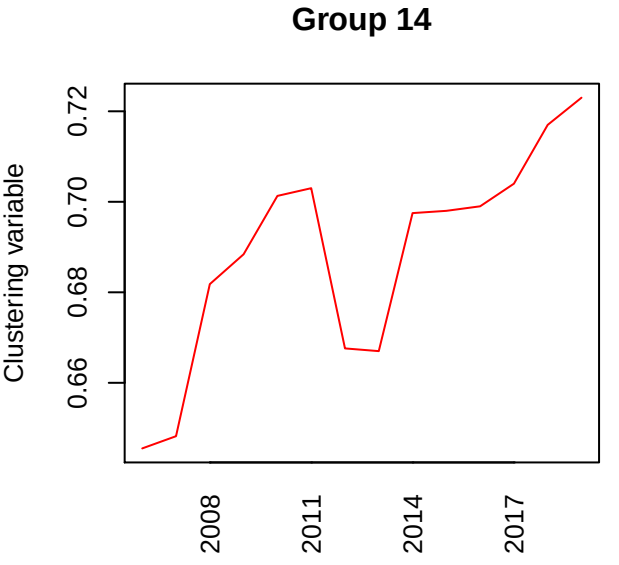

Group 9
Clustering variable
0.65
0.70
0.75
0.80
2008
2011
2014
2017

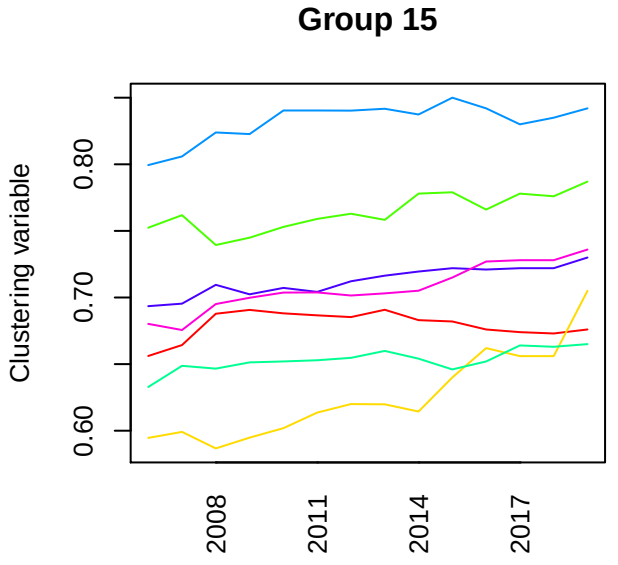

Group 10
Clustering variable
0.66
0.70
0.74
2008
2011
2014
2017

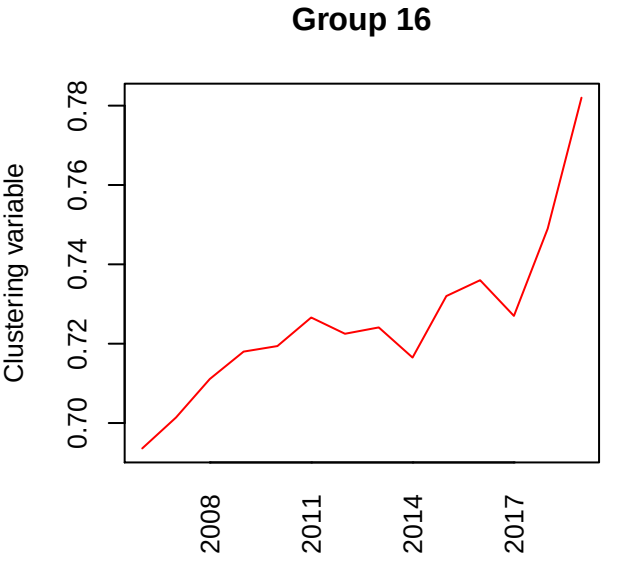

Group 11
Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017

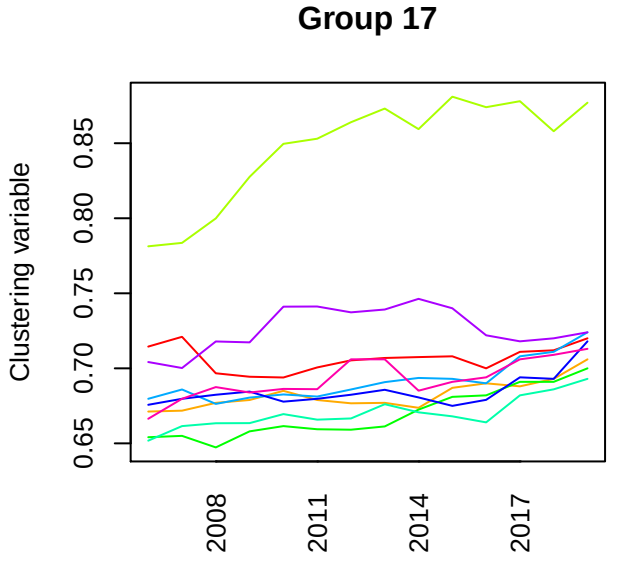
Group 12
Clustering variable
0.55
0.65
0.75
2008
2011
2014
2017

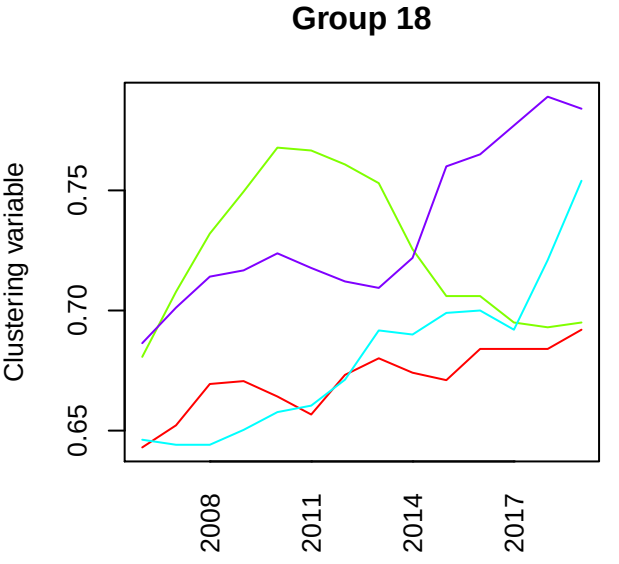

Group 13
Clustering variable
0.53
0.55
0.57
0.59
2008
2011
2014
2017

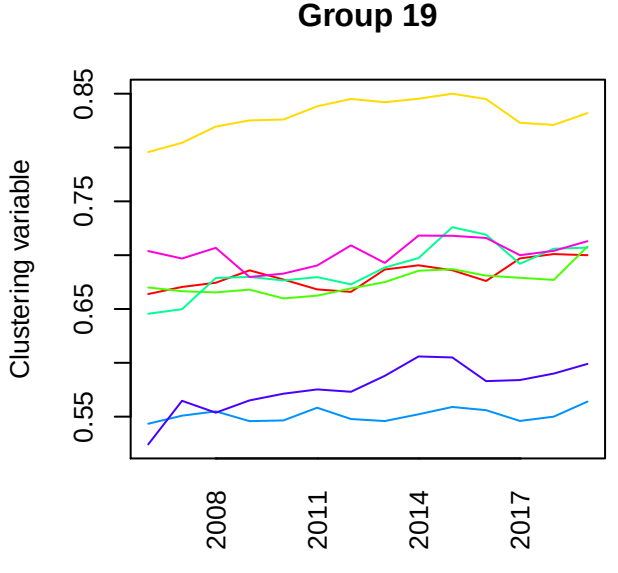

Group 14
Clustering variable
0.66
0.68
0.70
0.72
2008
2011
2014
2017

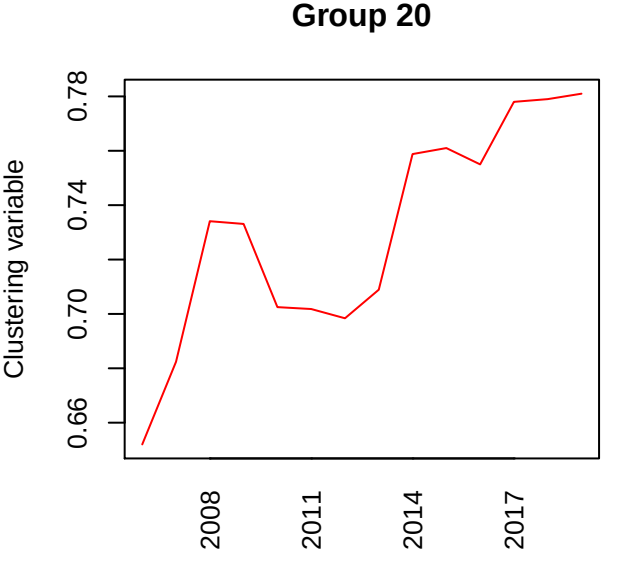

Group 15
Clustering variable
0.60
0.70
0.80
2008
2011
2014
2017

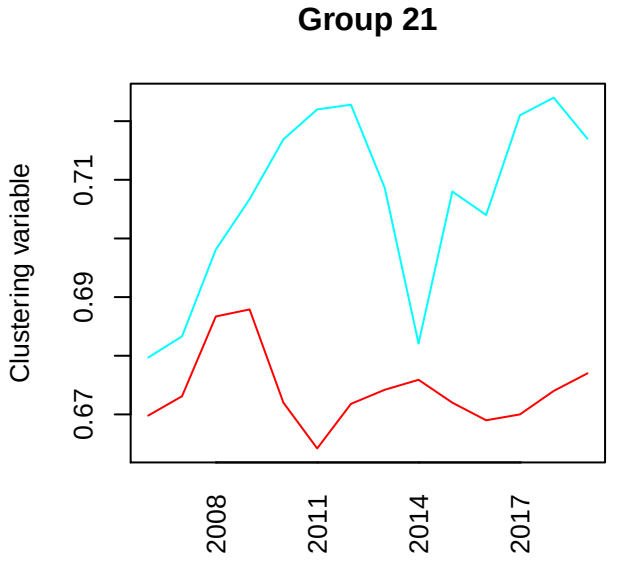

Group 16
Clustering variable
0.70
0.72
0.74
0.76
0.78
2008
2011
2014
2017

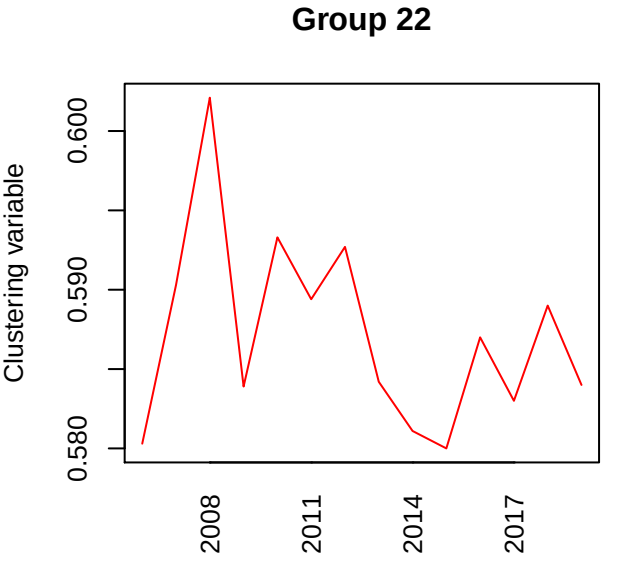

Group 17
Clustering variable
0.65
0.70
0.75
0.80
0.85
2008
2011
2014
2017

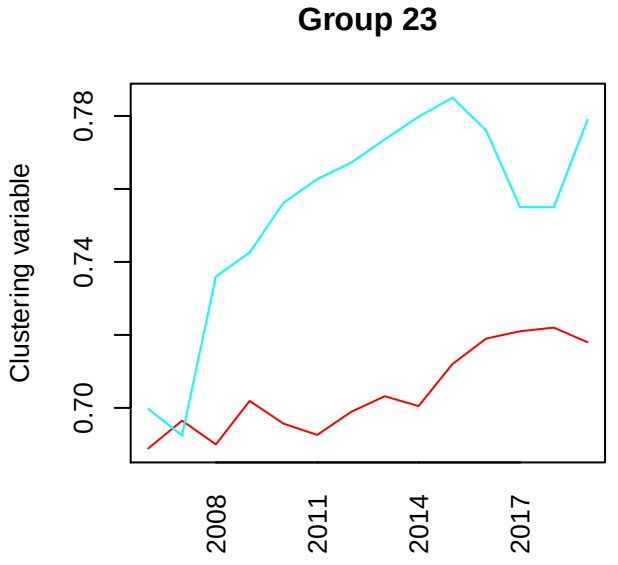

Group 18
Clustering variable
0.65
0.70
0.75
2008
2011
2014
2017

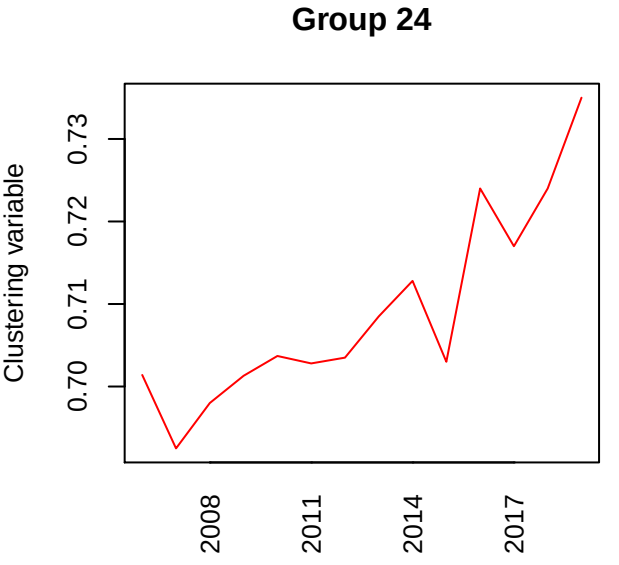

Group 19
Clustering variable
0.55
0.65
0.75
0.85
2008
2011
2014
2017

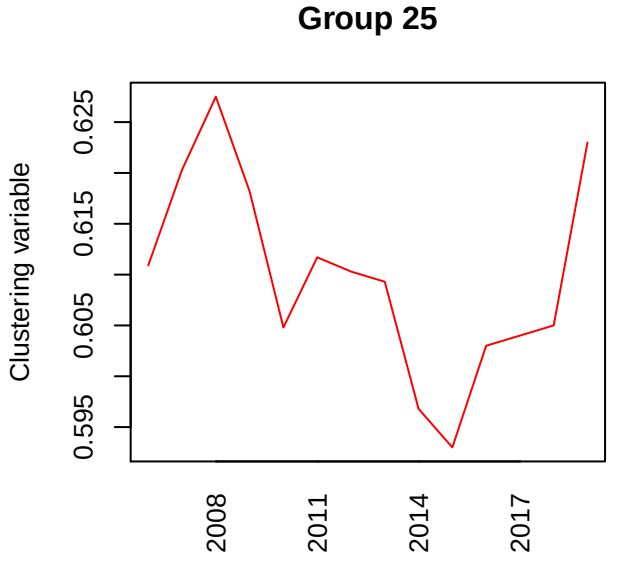

Group 20
Clustering variable
0.66
0.70
0.74
0.78
2008
2011
2014
2017

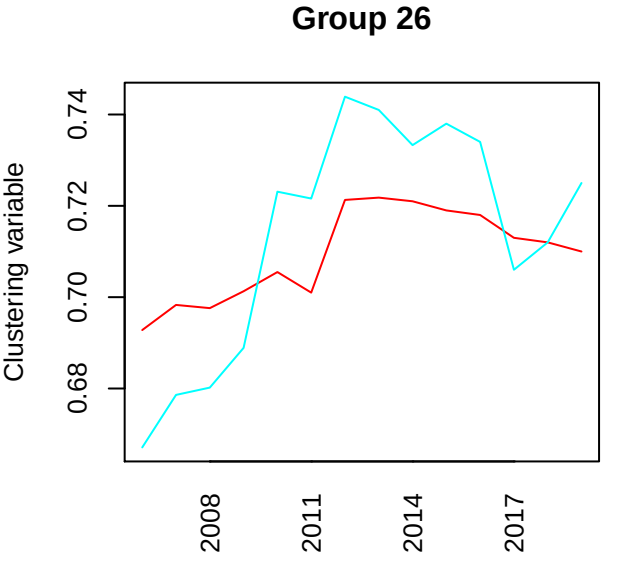

Group 21
Clustering variable
0.67
0.69
0.71
2008
2011
2014
2017

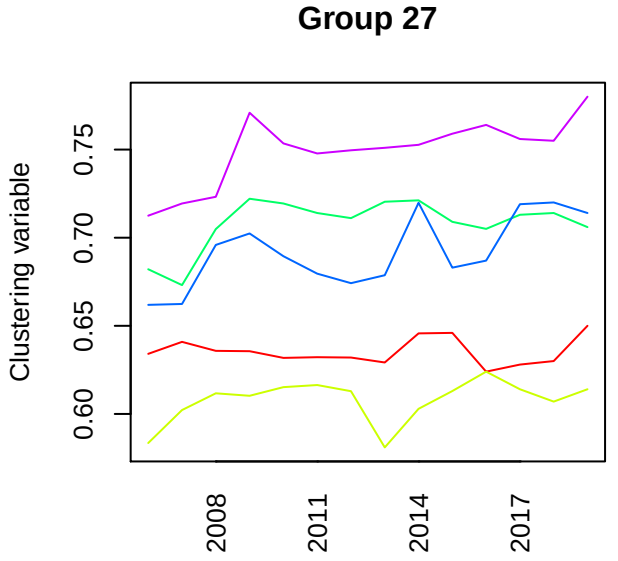

Group 22
Clustering variable
0.580
0.590
0.600
2008
2011
2014
2017

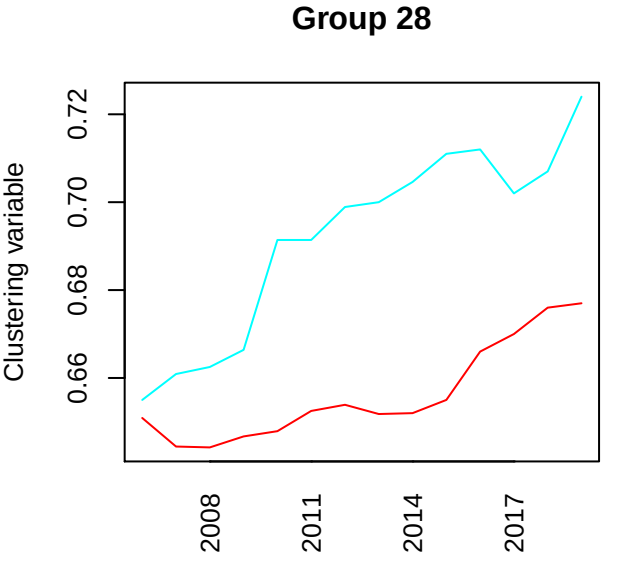

Group 23
Clustering variable
0.70
0.74
0.78
2008
2011
2014
2017

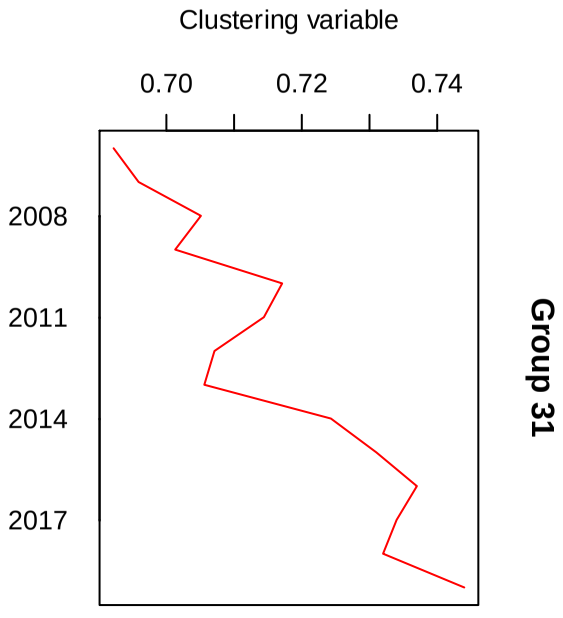

Group 24
Clustering variable
0.70
0.71
0.72
0.73
2008
2011
2014
2017

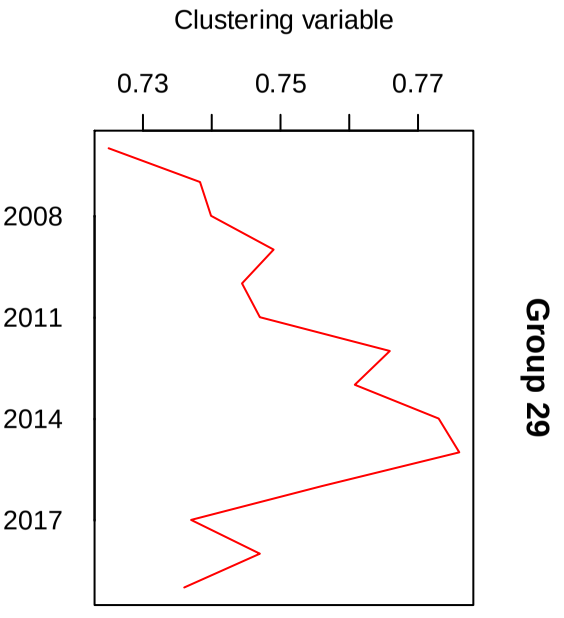

Group 25
Clustering variable
0.595
0.605
0.615
0.625
2008
2011
2014
2017

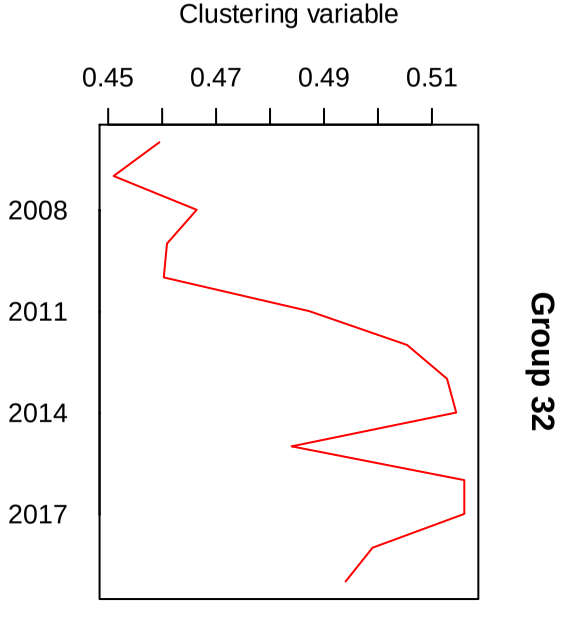

Group 26
Clustering variable
0.68
0.70
0.72
0.74
2008
2011
2014
2017

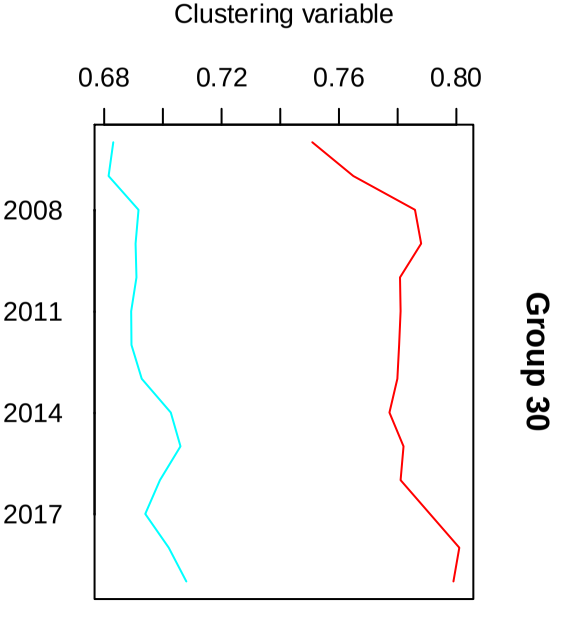

Group 27
Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017

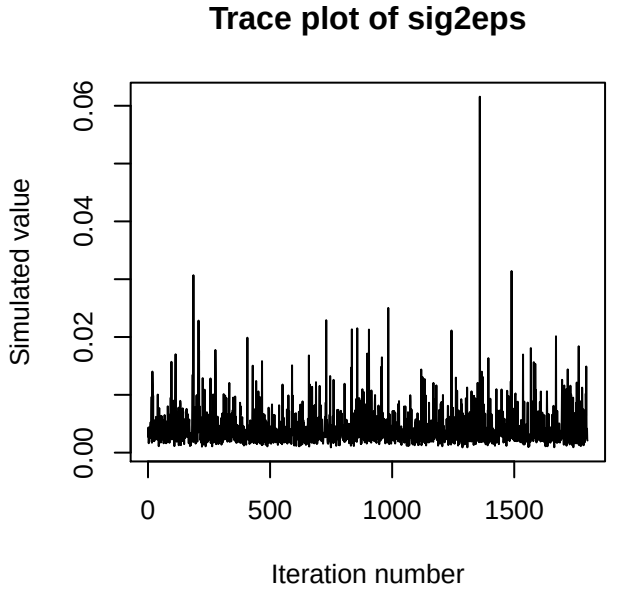

Group 28
Clustering variable
0.66
0.68
0.70
0.72
2008
2011
2014
2017

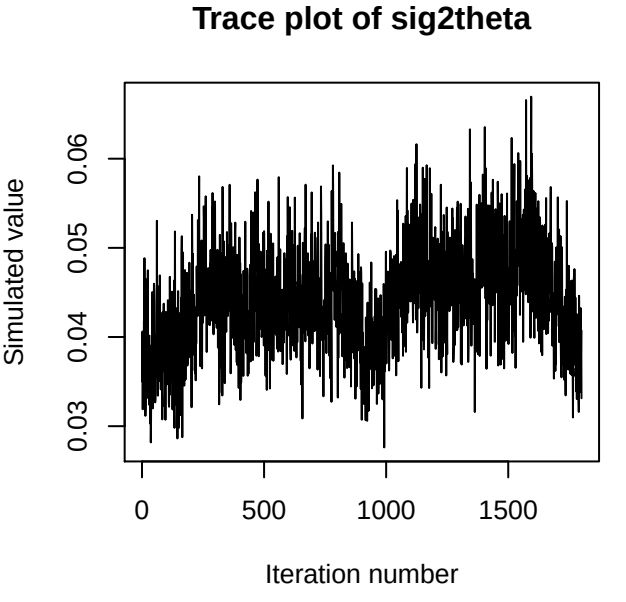

Clustering variable
0.70
0.72
0.74
2008
2011
2014
2017
Group 31

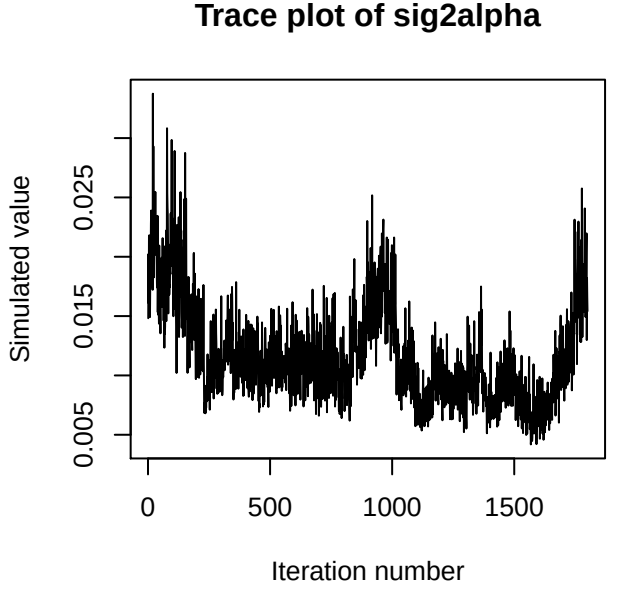

Clustering variable
0.73
0.75
0.77
2008
2011
2014
2017
Group 29

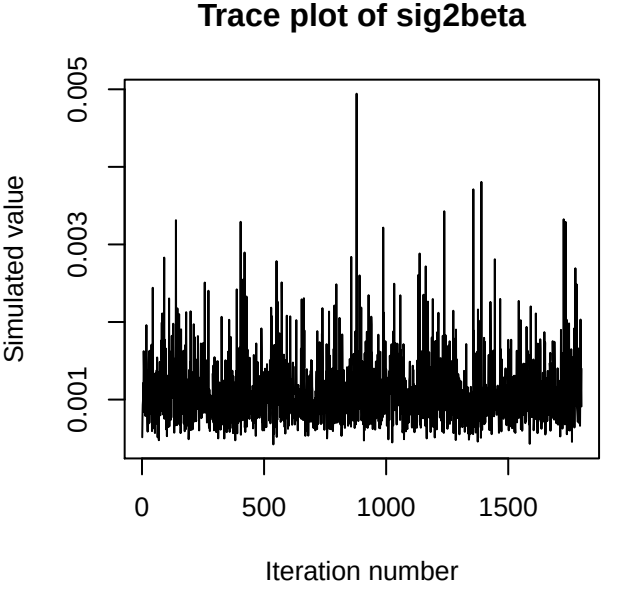

Clustering variable
0.45
0.47
0.49
0.51
2008
2011
2014
2017
Group 32

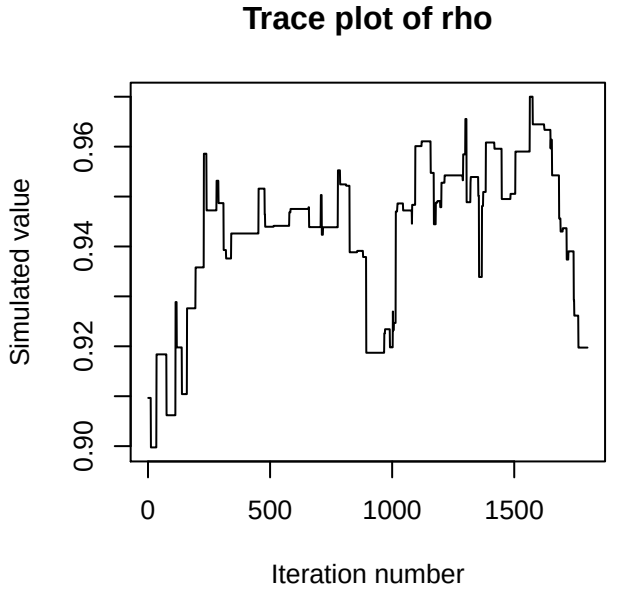

Clustering variable
0.68
0.72
0.76
0.80
2008
2011
2014
2017
Group 30

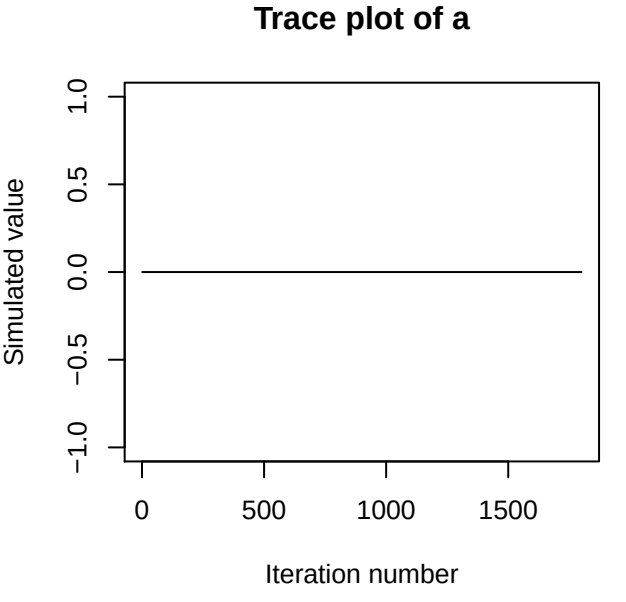

Trace plot of sig2eps
Simulated value
0.00
0.02
0.04
0.06
0
500
1000
1500
Iteration number

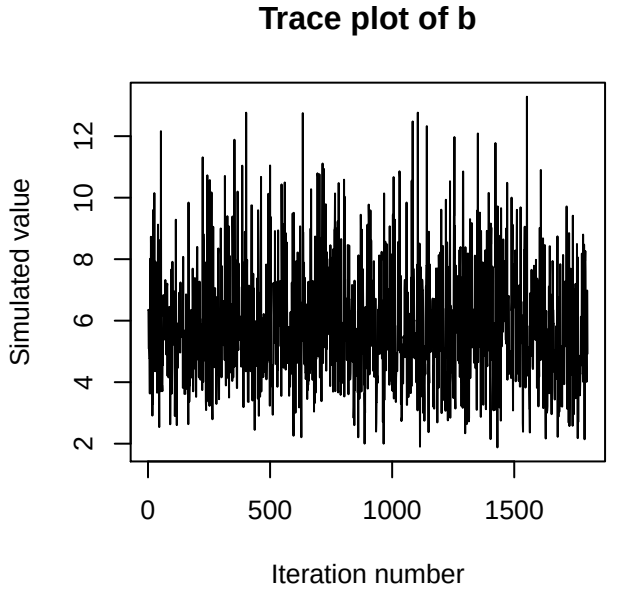

Trace plot of sig2theta
Simulated value
0.03
0.04
0.05
0.06
0
500
1000
1500
Iteration number

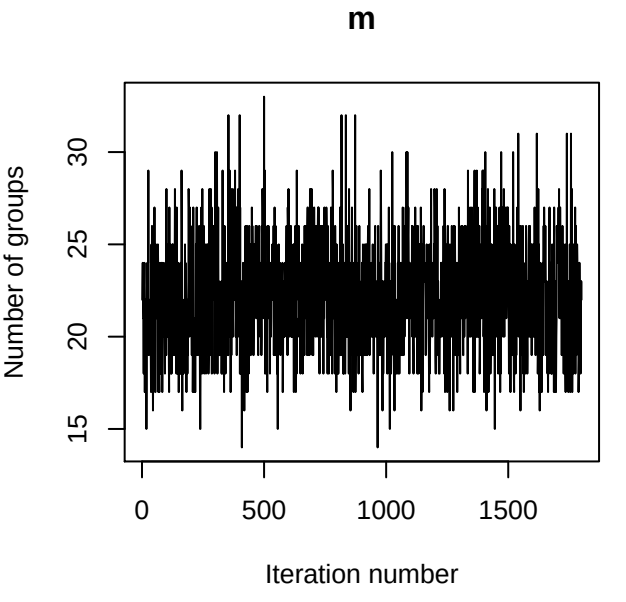

Trace plot of sig2alpha
Simulated value
0.005
0.015
0.025
0
500
1000
1500
Iteration number


Trace plot of sig2beta
Simulated value
0.001
0.003
0.005
0
500
1000
1500
Iteration number

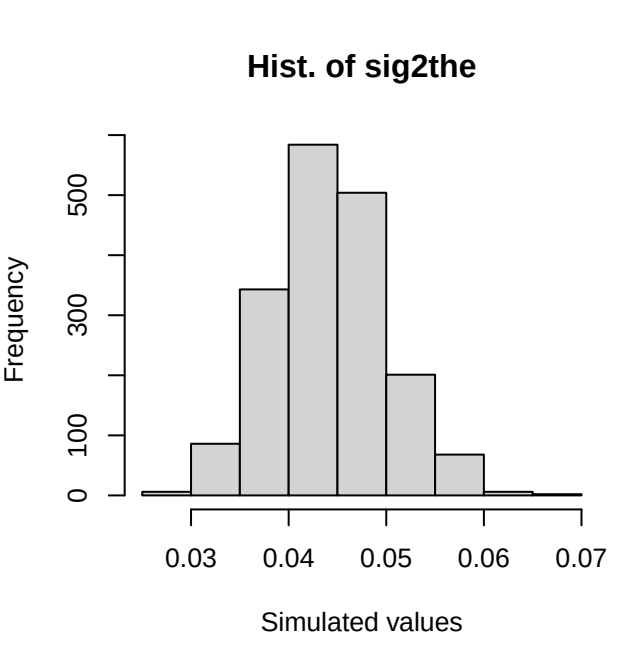

Trace plot of rho
Simulated value
0.90
0.92
0.94
0.96
0
500
1000
1500
Iteration number

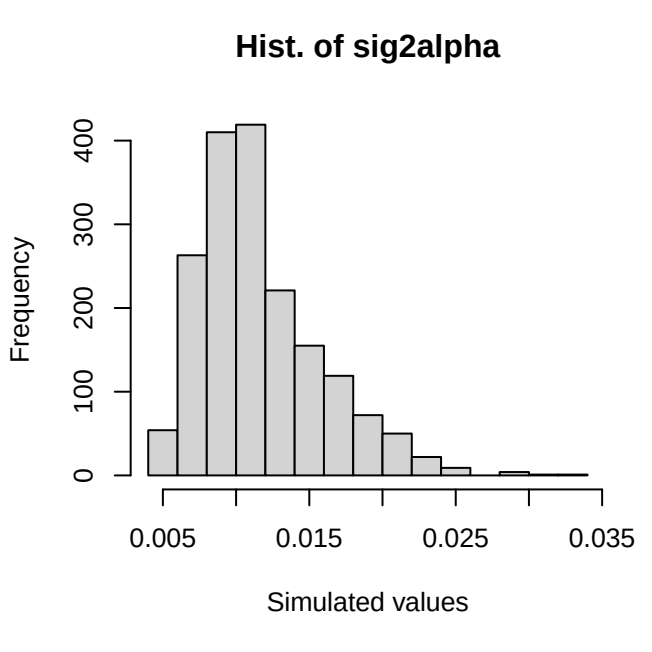

Trace plot of a
Simulated value
−1.0
−0.5
0.0
0.5
1.0
0
500
1000
1500
Iteration number

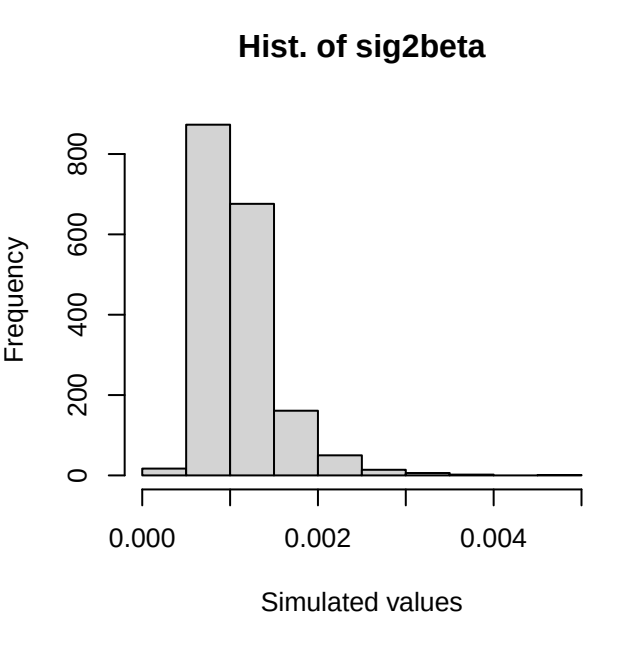

Trace plot of b
Simulated value
2
4
6
8
10
12
0
500
1000
1500
Iteration number

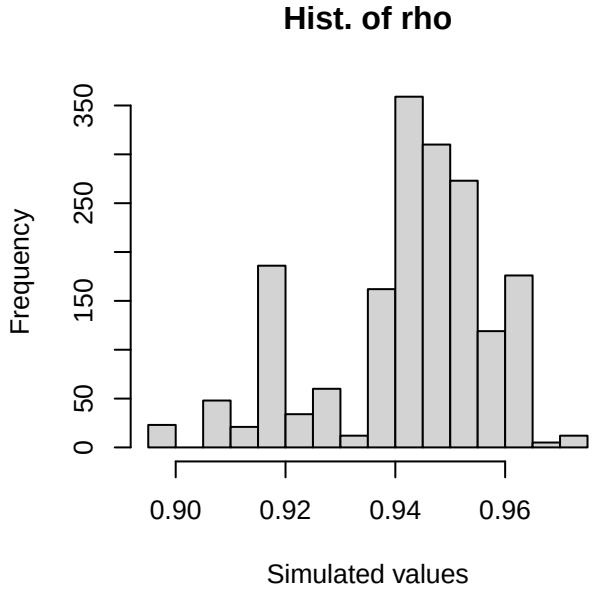

m
Number of groups
15
20
25
30
0
500
1000
1500
Iteration number

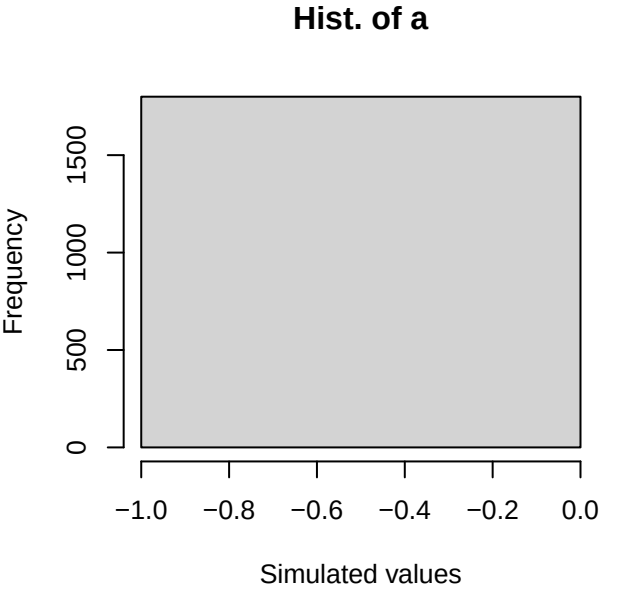
Hist. of sig2eps
Frequency
0
200
600
1000
0.00
0.02
0.04
0.06
Simulated values

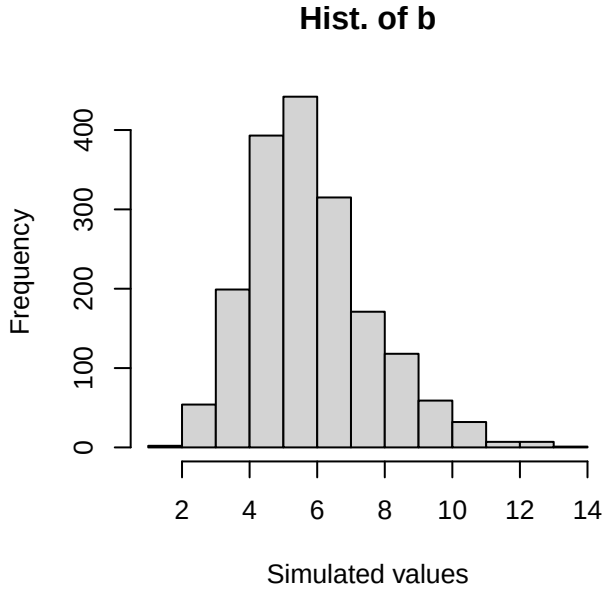

Hist. of sig2the
Frequency
0
100
300
500
0.03
0.04
0.05
0.06
0.07
Simulated values

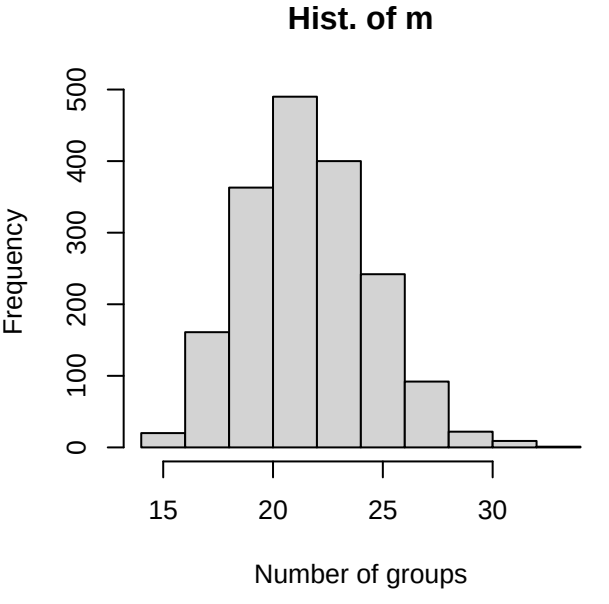

Hist. of sig2alpha
Frequency
0
100
200
300
400
0.005
0.015
0.025
0.035
Simulated values

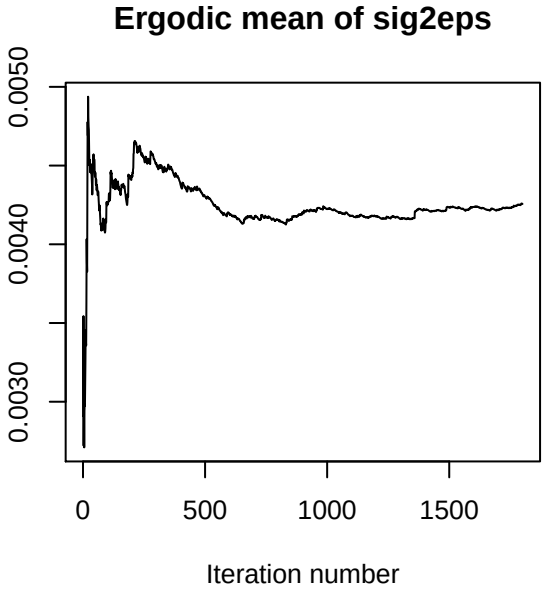

Hist. of sig2beta
Frequency
0
200
400
600
800
0.000
0.002
0.004
Simulated values

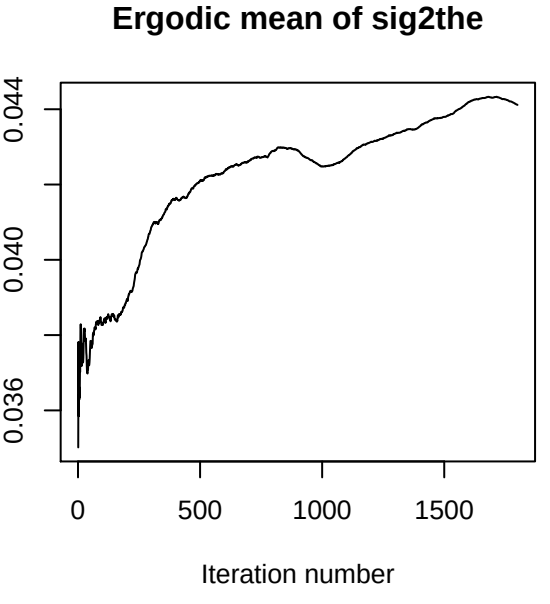

Hist. of rho
Frequency
0
50
150
250
350
0.90
0.92
0.94
0.96
Simulated values

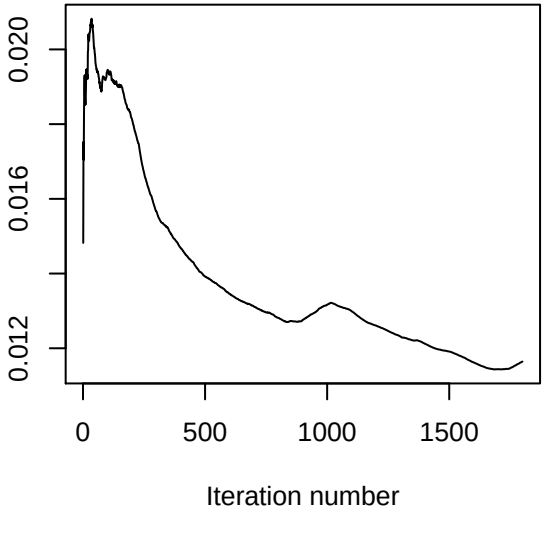

Hist. of a
Frequency
0
500
1000
1500
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
Simulated values

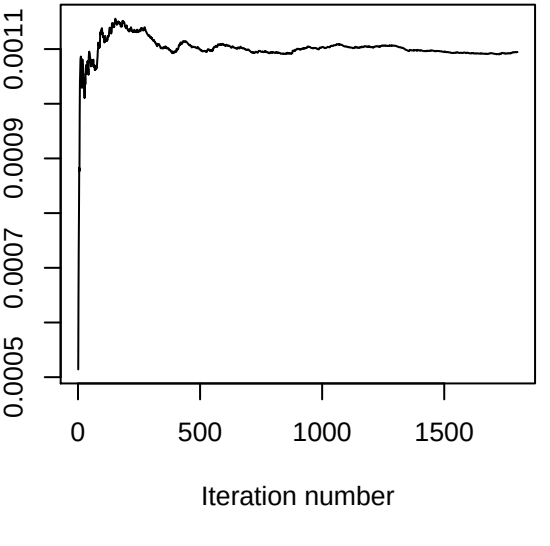

Hist. of b
Frequency
0
100
200
300
400
2
4
6
8
10
12
14
Simulated values

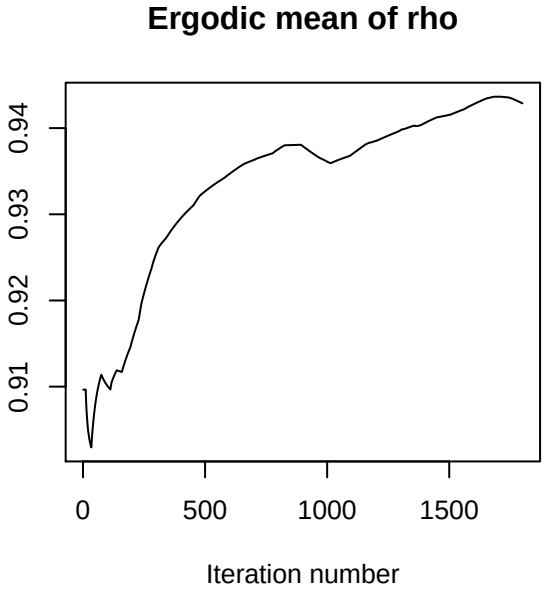

Hist. of m
Frequency
0
100
200
300
400
500
15
20
25
30
Number of groups

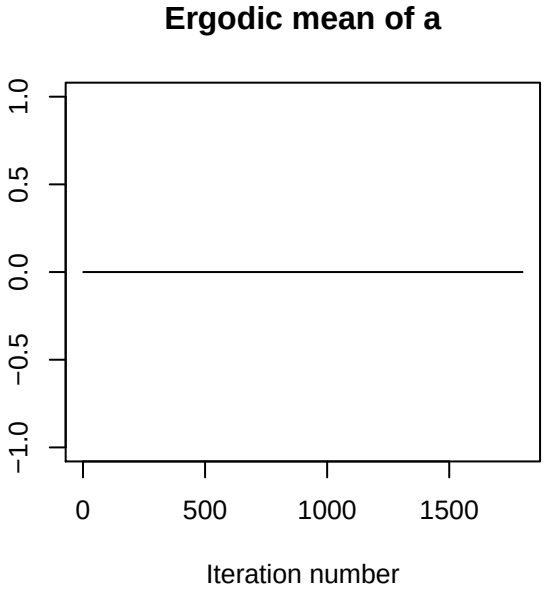

Ergodic mean of sig2eps
0.0050
0.0040
0.0030
0
500
1000
1500
Iteration number

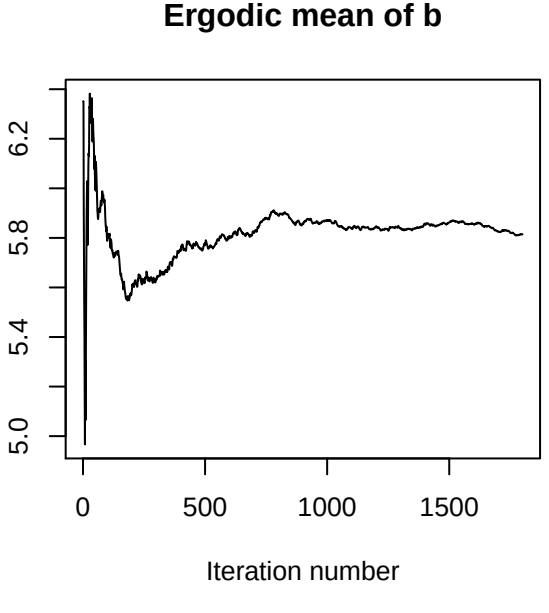

Ergodic mean of sig2the
0.044
0.040
0.036
0
500
1000
1500
Iteration number

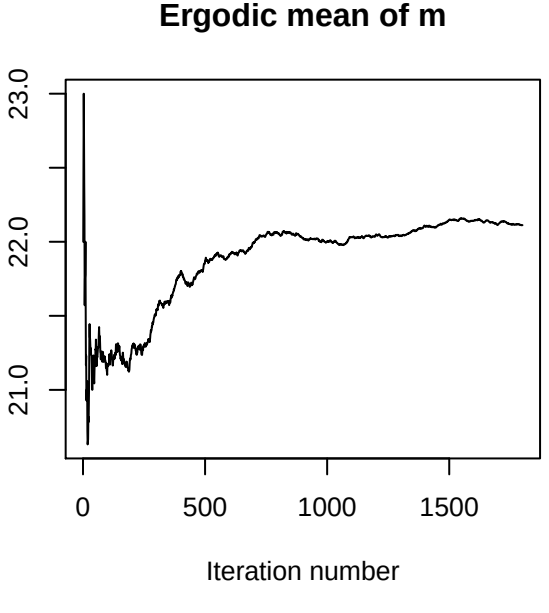

Ergodic mean of sig2alpha
0.020
0.016
0.012
0
500
1000
1500
Iteration number


Ergodic mean of sig2beta
0.0011
0.0009
0.0007
0.0005
0
500
1000
1500
Iteration number

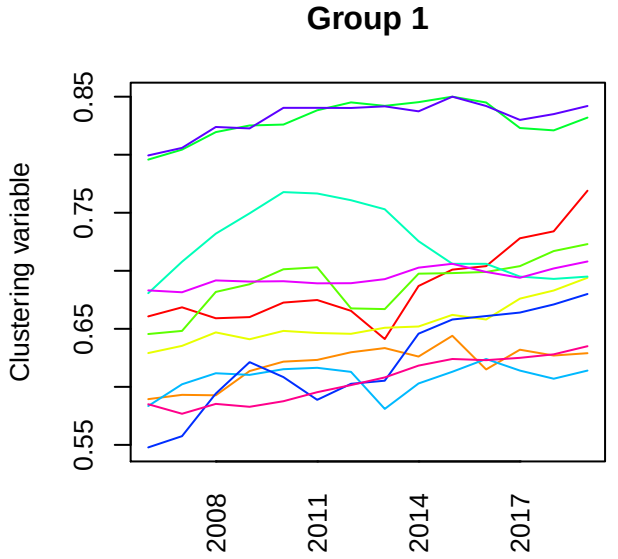

Ergodic mean of rho
0.91
0.92
0.93
0.94
0
500
1000
1500
Iteration number

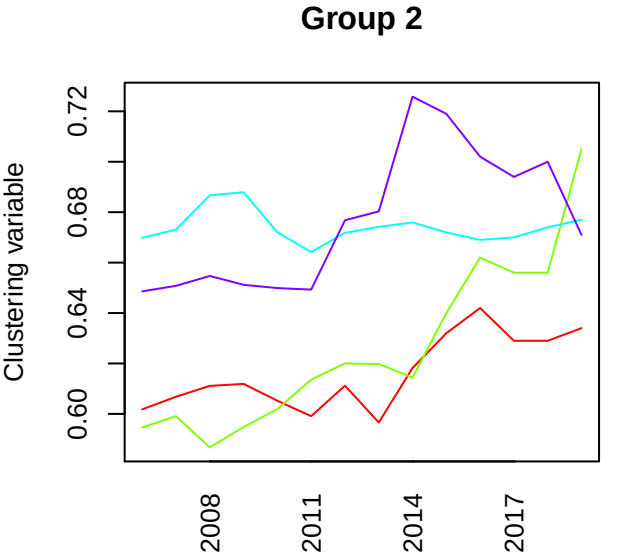

Ergodic mean of a
−1.0
−0.5
0.0
0.5
1.0
0
500
1000
1500
Iteration number

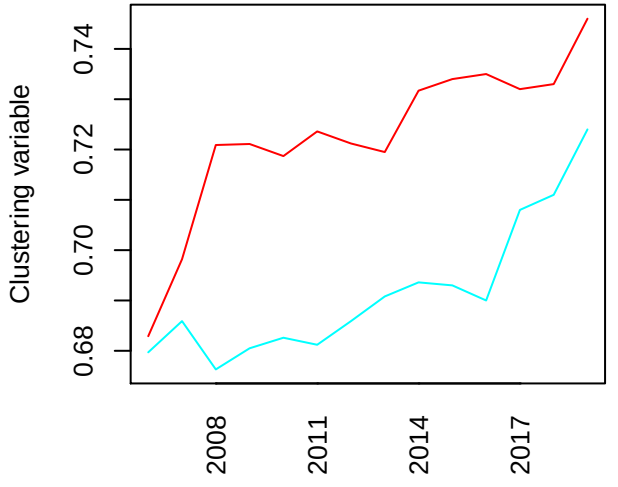

Ergodic mean of b
5.0
5.4
5.8
6.2
0
500
1000
1500
Iteration number

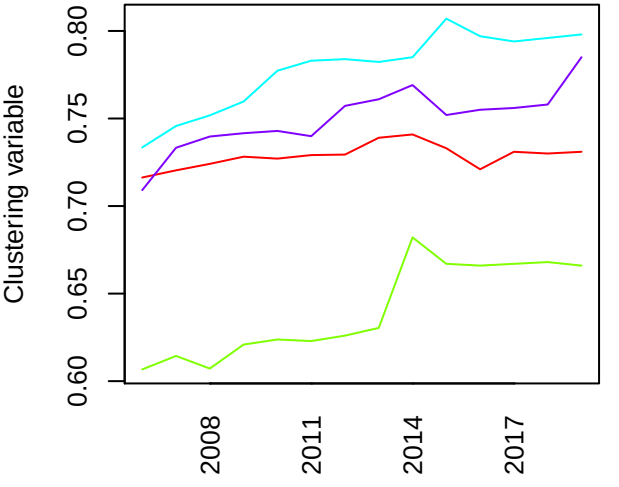

Ergodic mean of m
21.0
22.0
23.0
0
500
1000
1500
Iteration number

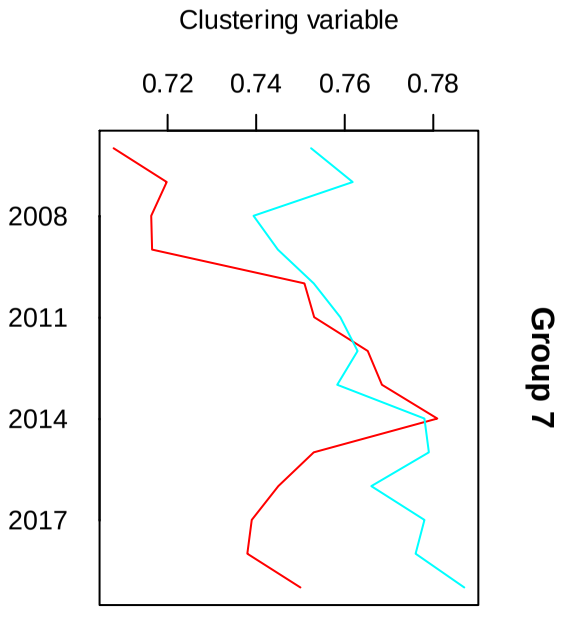
E2-2: trend = F, level = T, Poisson-Dirichlet, c = 0.01

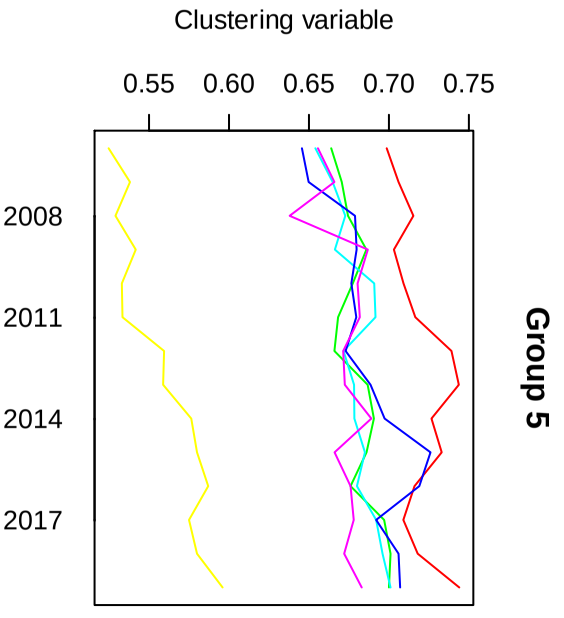

Group 1
Clustering variable
0.55
0.65
0.75
0.85
2008
2011
2014
2017

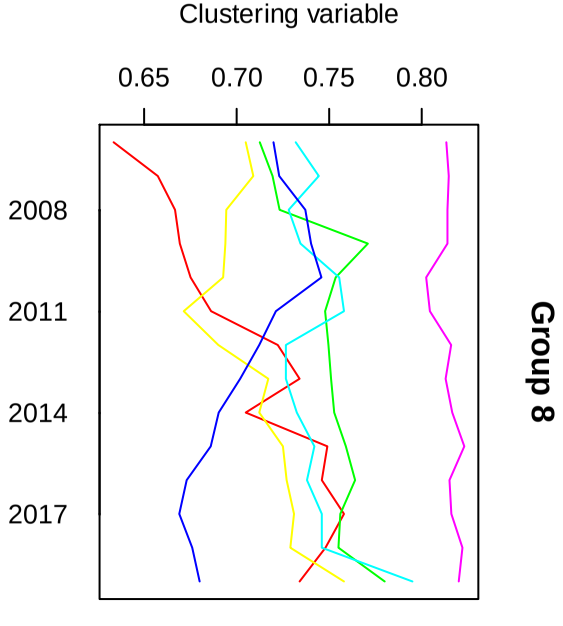

Group 2
Clustering variable
0.60
0.64
0.68
0.72
2008
2011
2014
2017

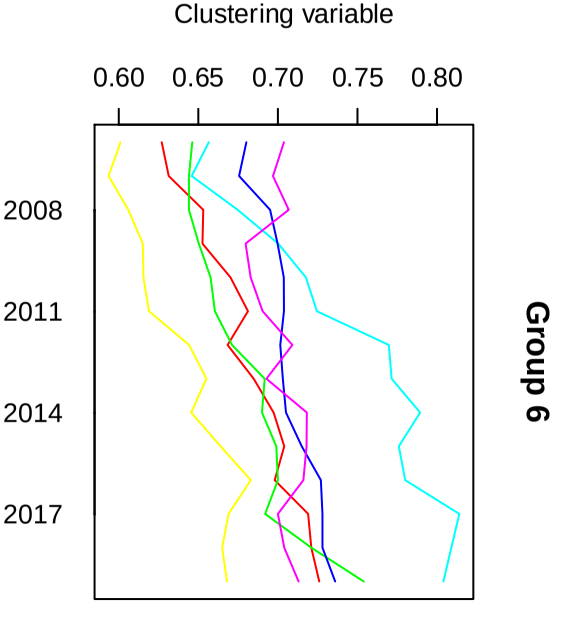

Group 3
Clustering variable
0.68
0.70
0.72
0.74
2008
2011
2014
2017

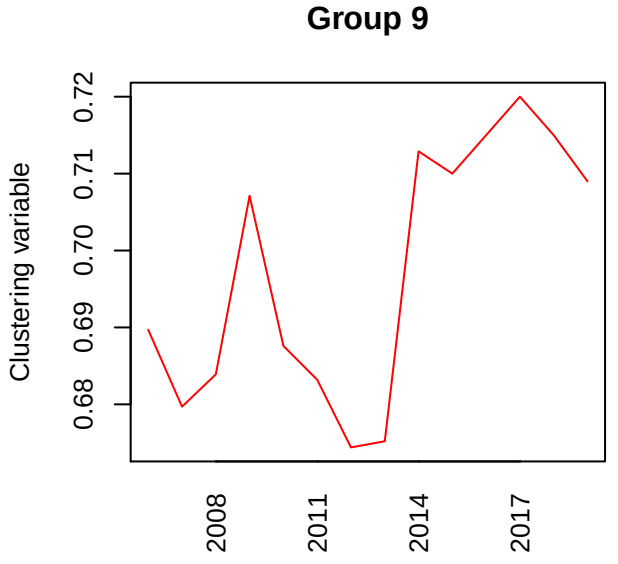

Group 4
Clustering variable
0.60
0.65
0.70
0.75
0.80
2008
2011
2014
2017

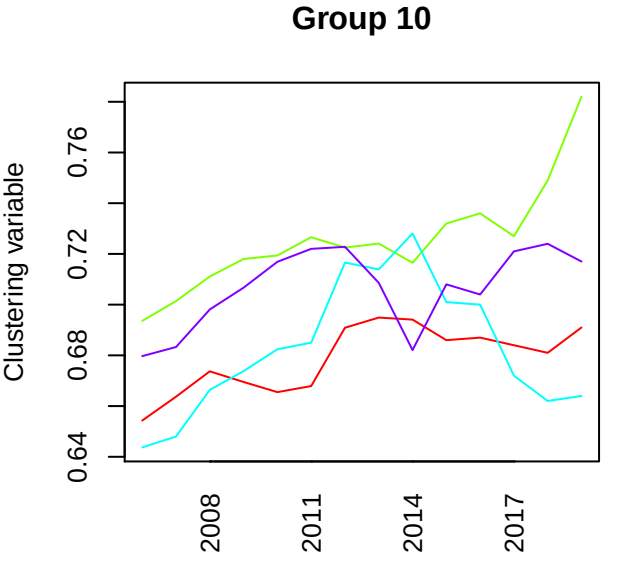

Clustering variable
0.72
0.74
0.76
0.78
2008
2011
2014
2017
Group 7

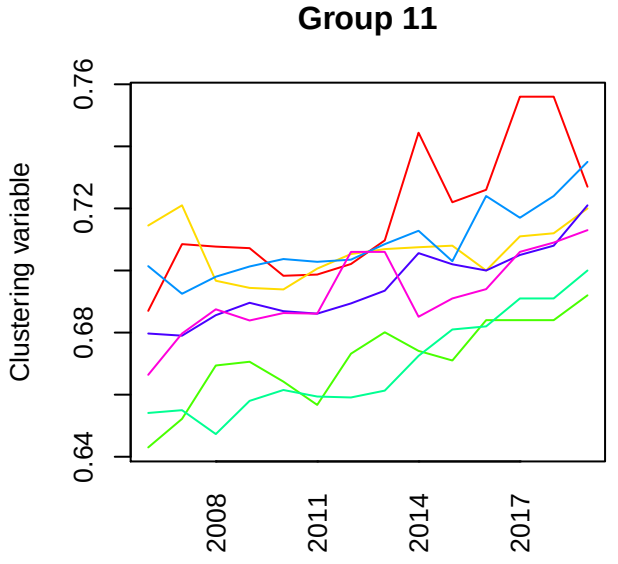

Clustering variable
0.55
0.60
0.65
0.70
0.75
2008
2011
2014
2017
Group 5

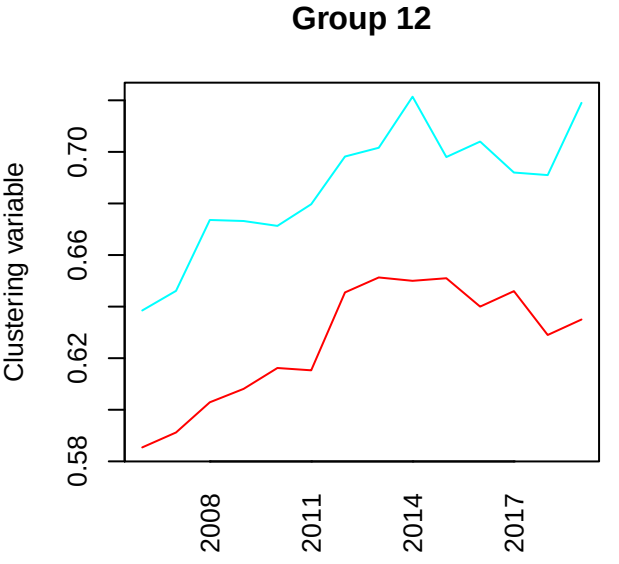

Clustering variable
0.65
0.70
0.75
0.80
2008
2011
2014
2017
Group 8

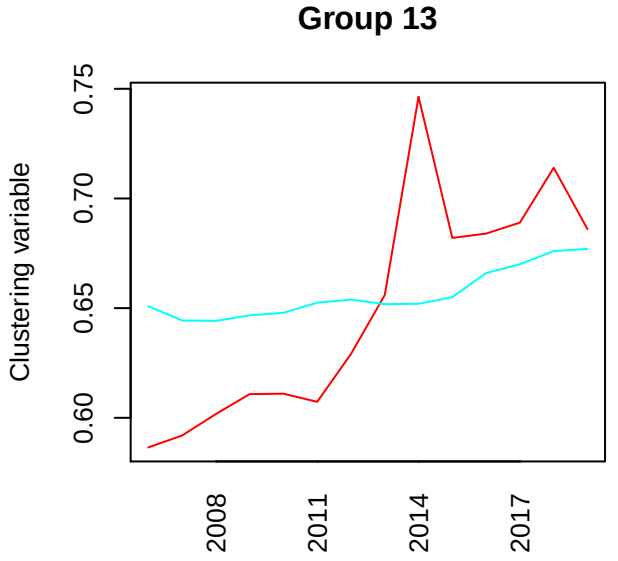

Clustering variable
0.60
0.65
0.70
0.75
0.80
2008
2011
2014
2017
Group 6

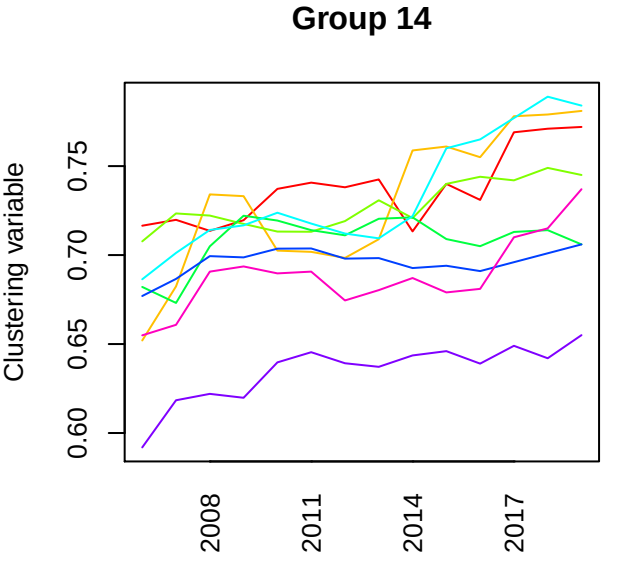

Group 9
Clustering variable
0.68
0.69
0.70
0.71
0.72
2008
2011
2014
2017

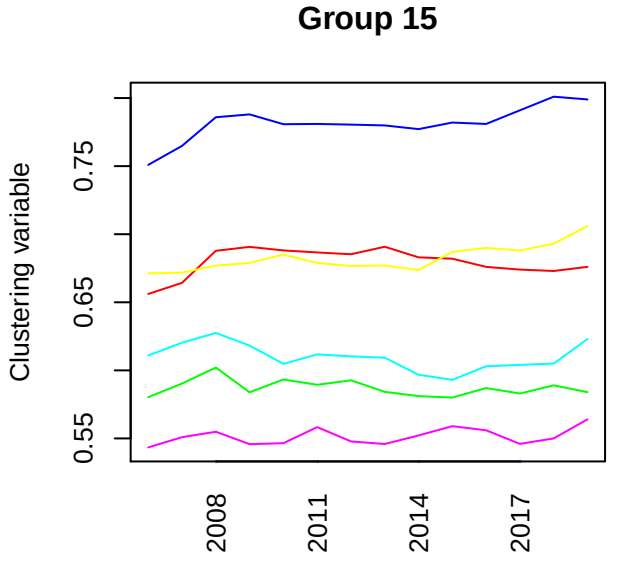

Group 10
Clustering variable
0.64
0.68
0.72
0.76
2008
2011
2014
2017

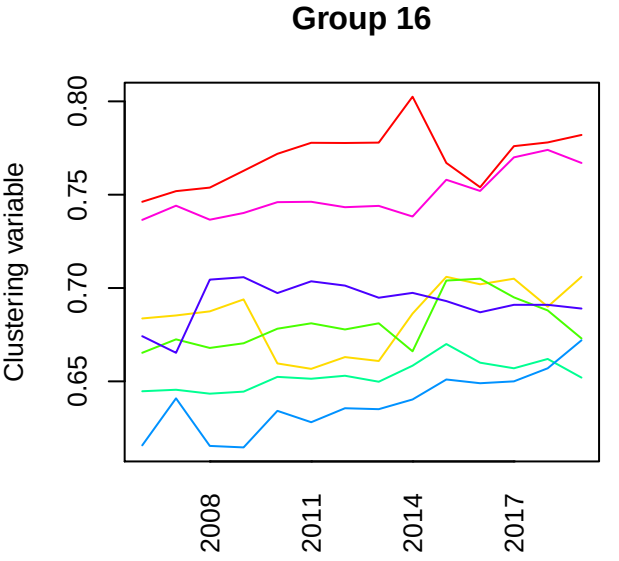

Group 11
Clustering variable
0.64
0.68
0.72
0.76
2008
2011
2014
2017

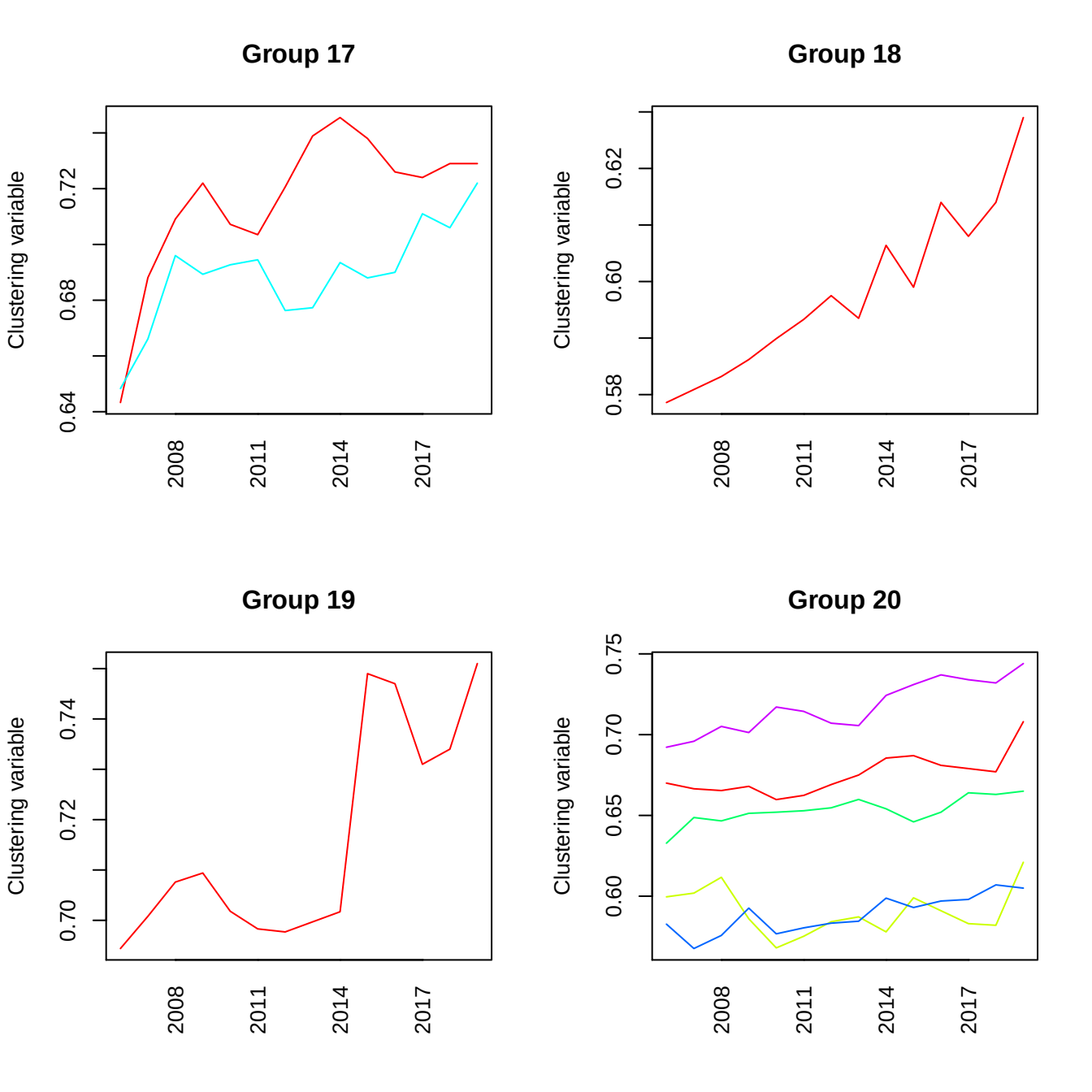

Group 12
Clustering variable
0.58
0.62
0.66
0.70
2008
2011
2014
2017

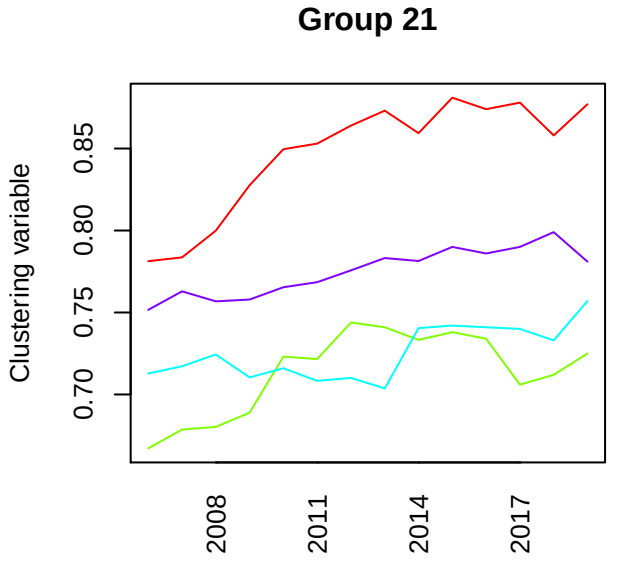

Group 13
Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017

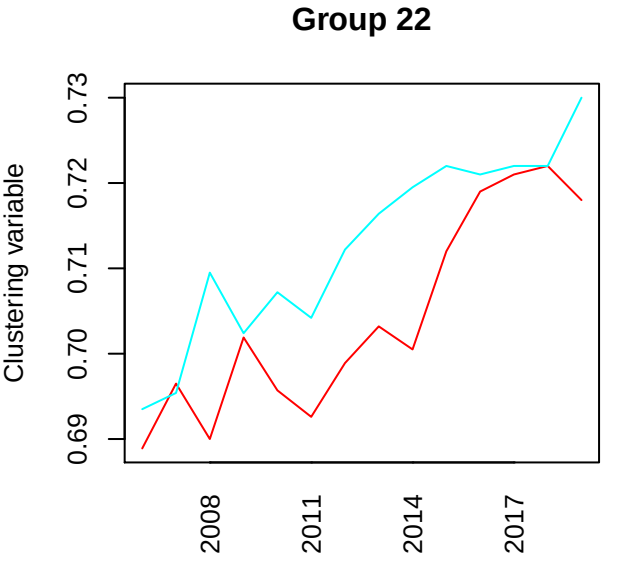

Group 14
Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017

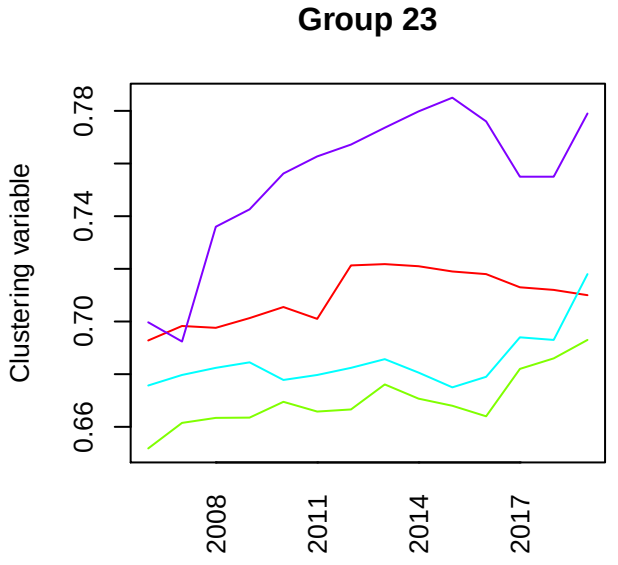

Group 15
Clustering variable
0.55
0.65
0.75
2008
2011
2014
2017

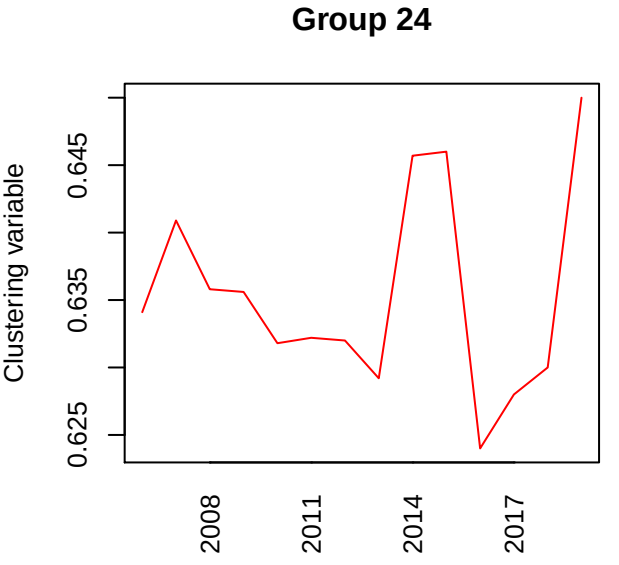

Group 16
Clustering variable
0.65
0.70
0.75
0.80
2008
2011
2014
2017

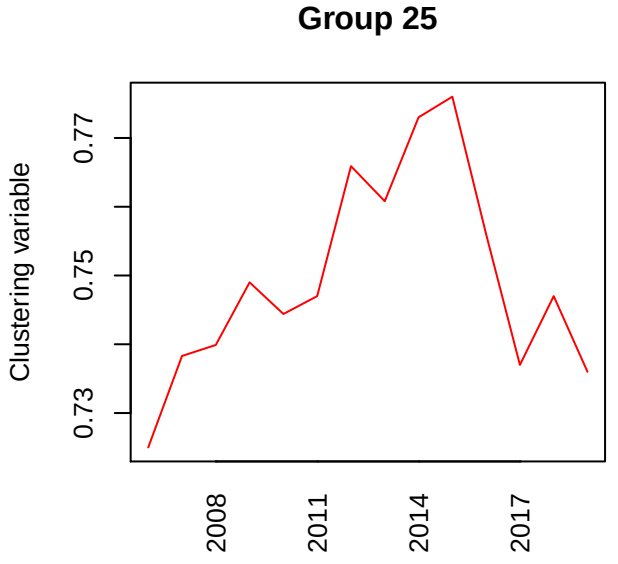

Group 17
Clustering variable
0.64
0.68
0.72
2008
2011
2014
2017
Group 18
Clustering variable
0.58
0.60
0.62
2008
2011
2014
2017
Group 19
Clustering variable
0.70
0.72
0.74
2008
2011
2014
2017
Group 20
Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017

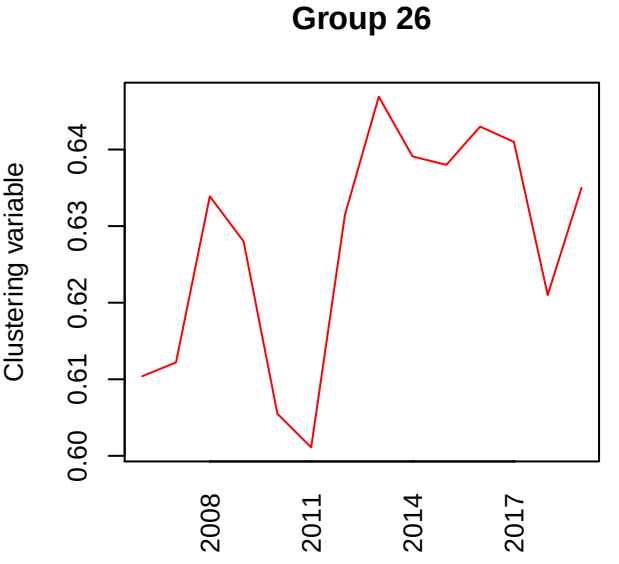

Group 21
Clustering variable
0.70
0.75
0.80
0.85
2008
2011
2014
2017

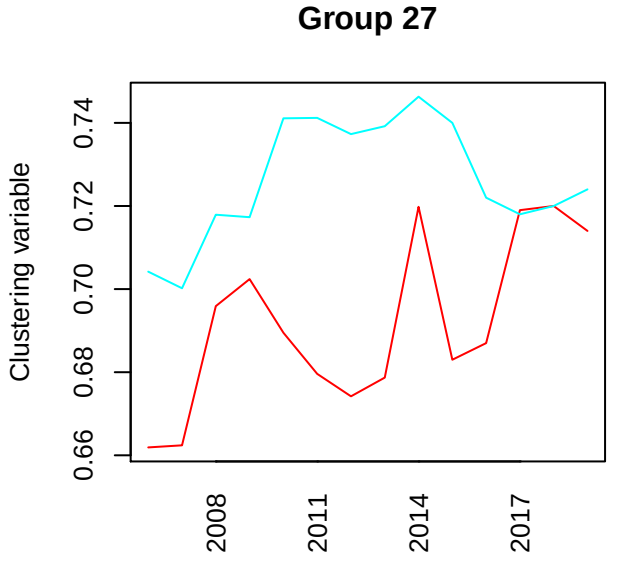

Group 22
Clustering variable
0.69
0.70
0.71
0.72
0.73
2008
2011
2014
2017

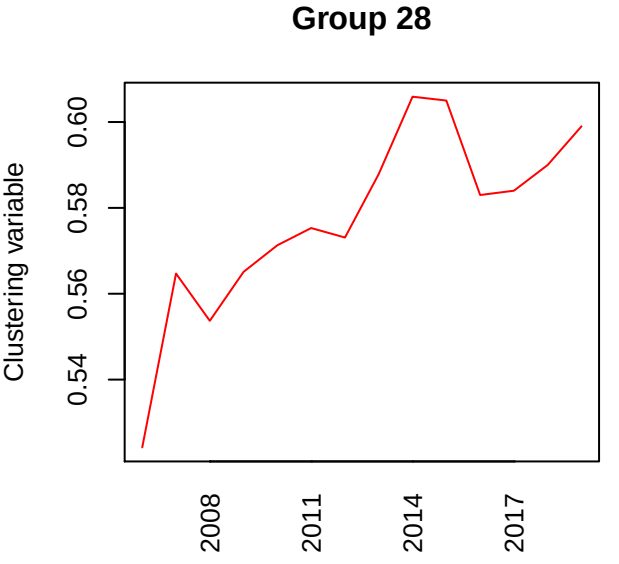

Group 23
Clustering variable
0.66
0.70
0.74
0.78
2008
2011
2014
2017

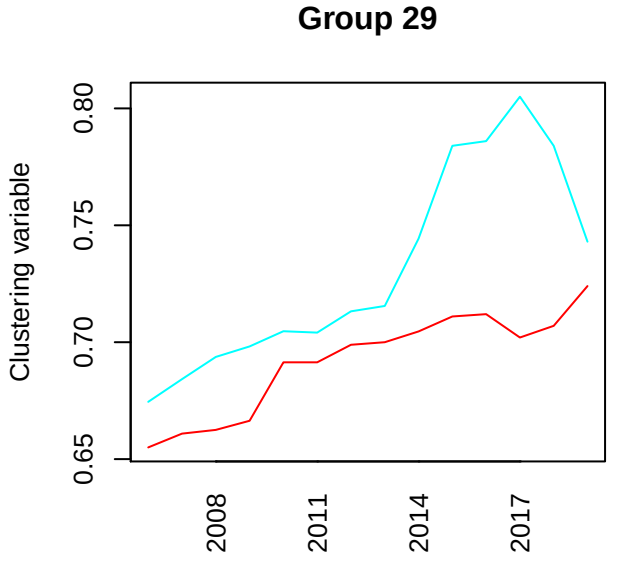

Group 24
Clustering variable
0.625
0.635
0.645
2008
2011
2014
2017

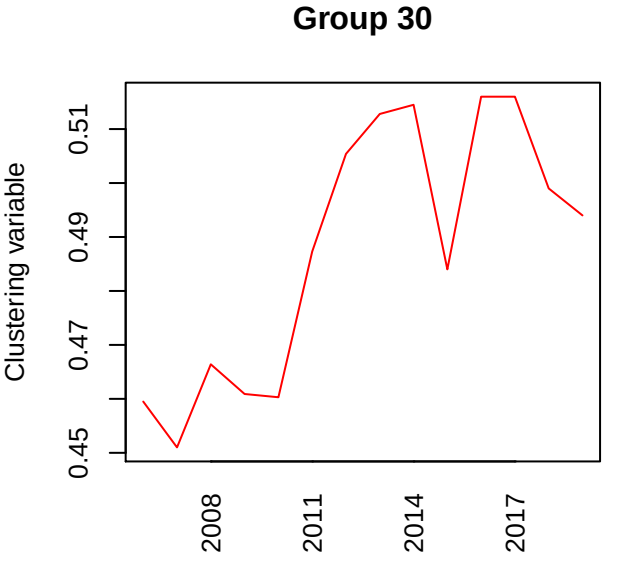

Group 25
Clustering variable
0.73
0.75
0.77
2008
2011
2014
2017

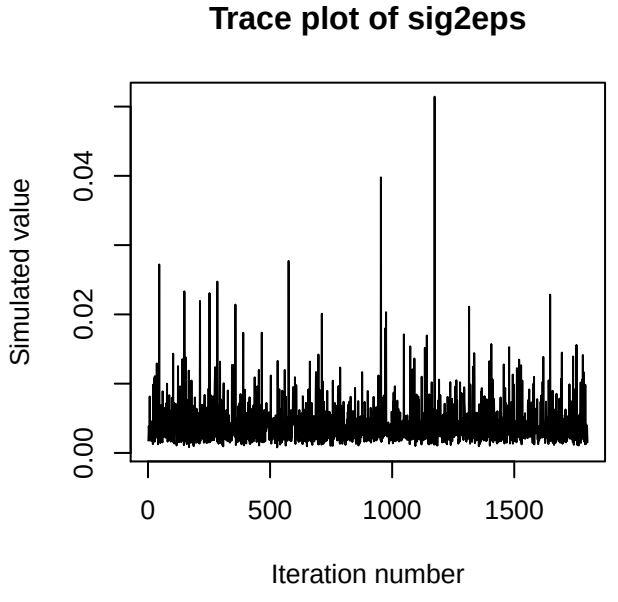

Group 26
Clustering variable
0.60
0.61
0.62
0.63
0.64
2008
2011
2014
2017

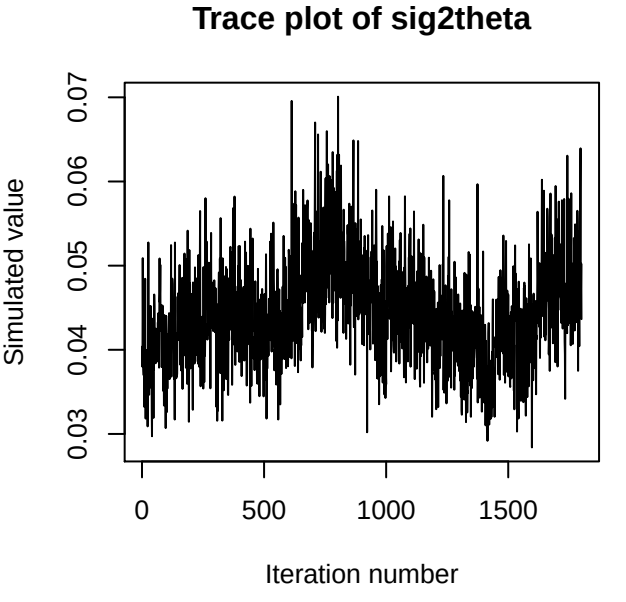

Group 27
Clustering variable
0.66
0.68
0.70
0.72
0.74
2008
2011
2014
2017

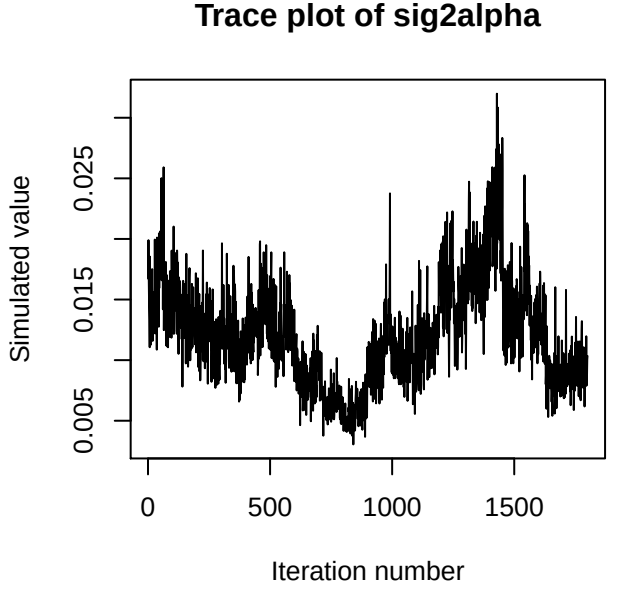

Group 28
Clustering variable
0.54
0.56
0.58
0.60
2008
2011
2014
2017

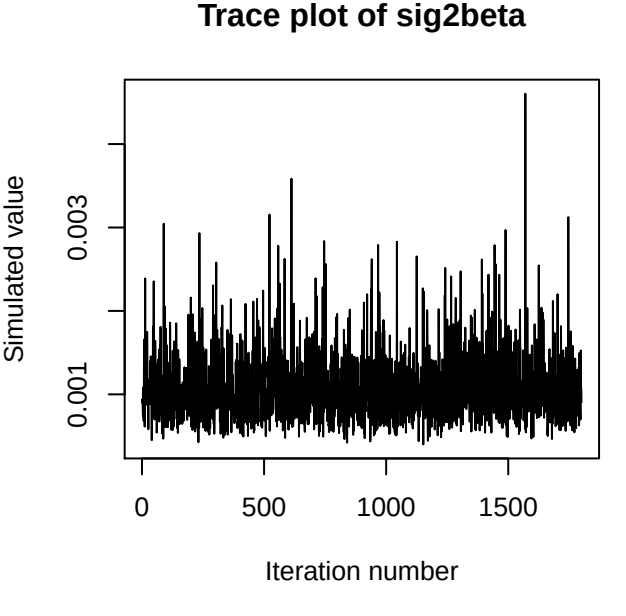

Group 29
Clustering variable
0.65
0.70
0.75
0.80
2008
2011
2014
2017

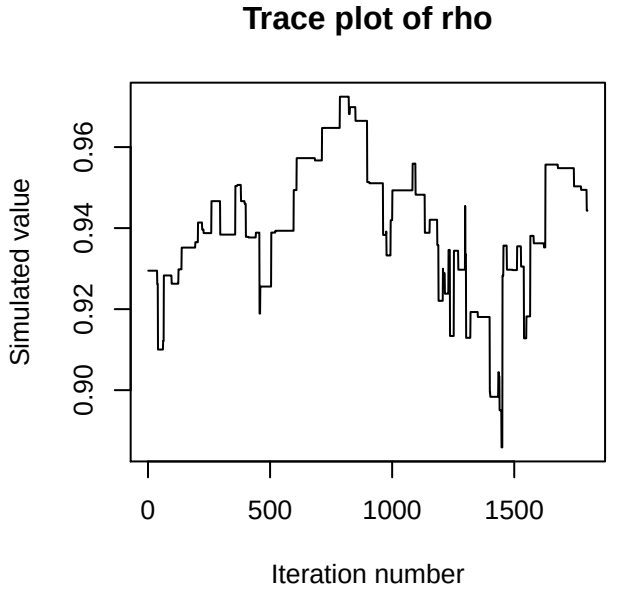

Group 30
Clustering variable
0.45
0.47
0.49
0.51
2008
2011
2014
2017

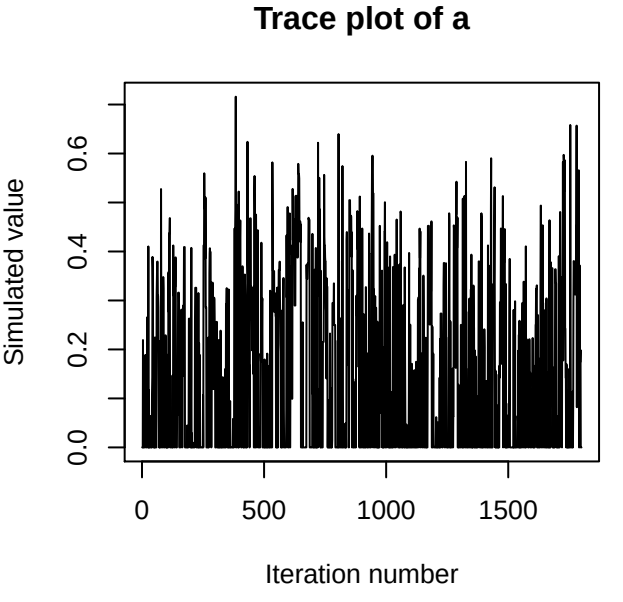

Trace plot of sig2eps
Simulated value
0.00
0.02
0.04
0
500
1000
1500
Iteration number

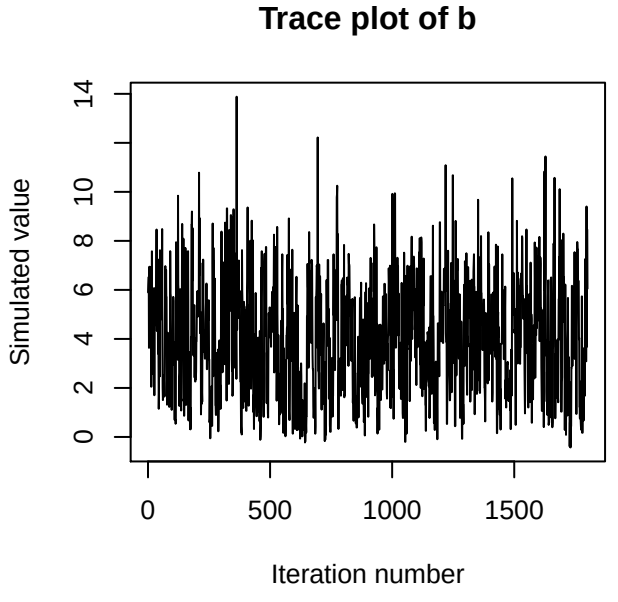

Trace plot of sig2theta
Simulated value
0.03
0.04
0.05
0.06
0.07
0
500
1000
1500
Iteration number

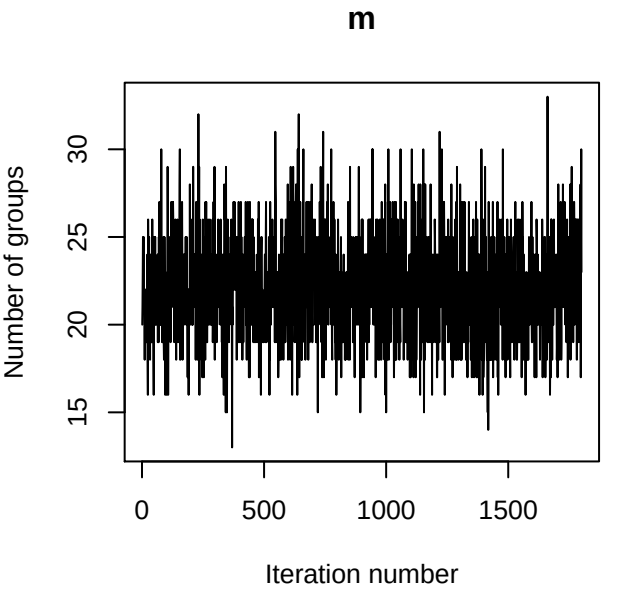

Trace plot of sig2alpha
Simulated value
0.005
0.015
0.025
0
500
1000
1500
Iteration number

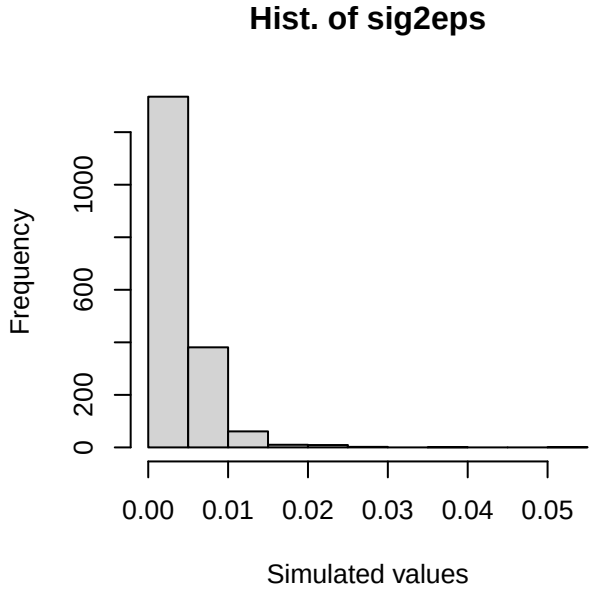

Trace plot of sig2beta
Simulated value
0.001
0.003
0
500
1000
1500
Iteration number

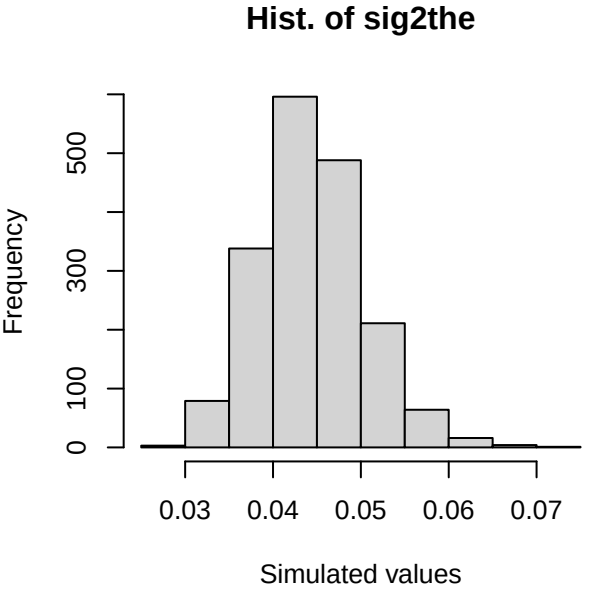

Trace plot of rho
Simulated value
0.90
0.92
0.94
0.96
0
500
1000
1500
Iteration number

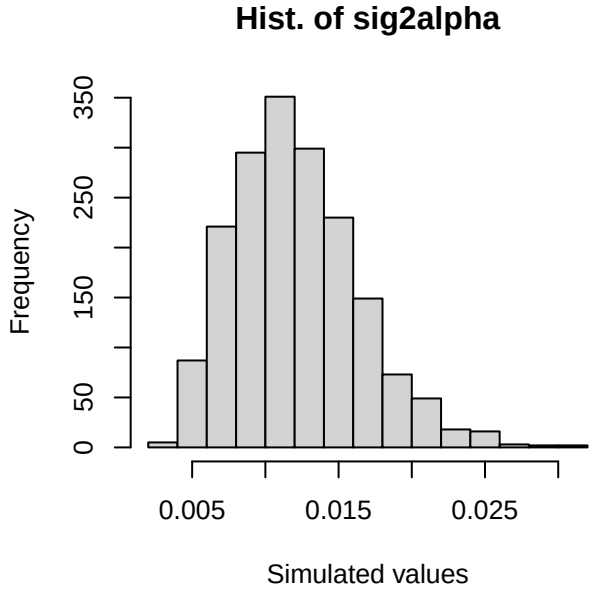

Trace plot of a
Simulated value
0.0
0.2
0.4
0.6
0
500
1000
1500
Iteration number


Trace plot of b
Simulated value
0
2
4
6
8
10
14
0
500
1000
1500
Iteration number

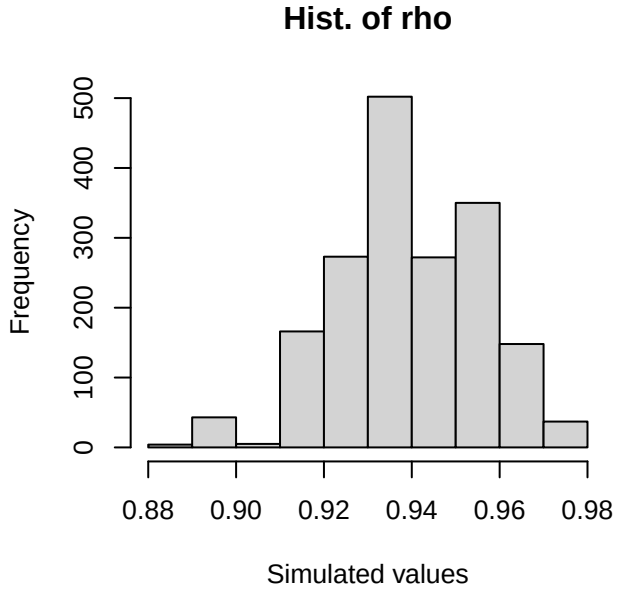

m
Number of groups
15
20
25
30
0
500
1000
1500
Iteration number

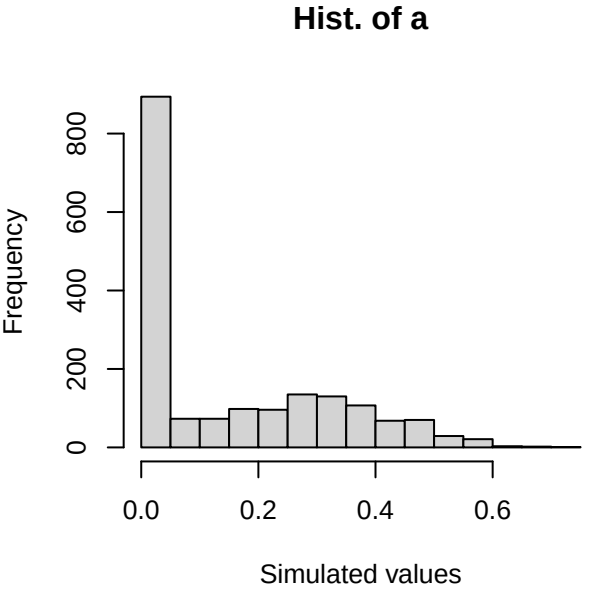

Hist. of sig2eps
Frequency
0
200
600
1000
0.00
0.01
0.02
0.03
0.04
0.05
Simulated values

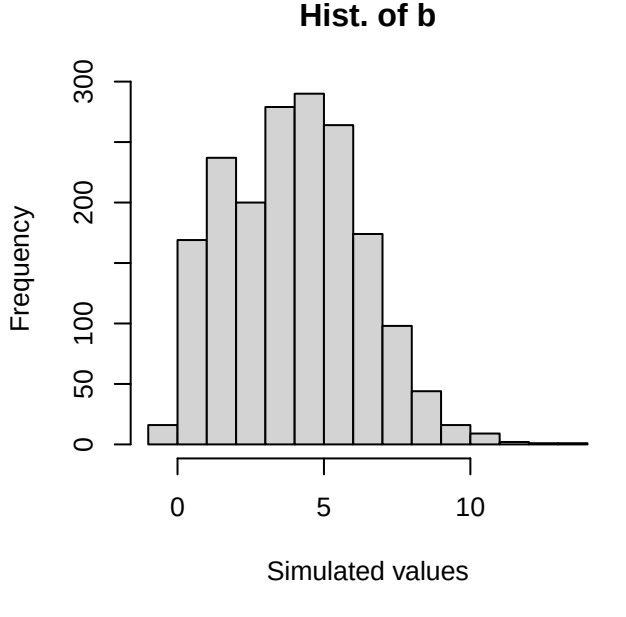

Hist. of sig2the
Frequency
0
100
300
500
0.03
0.04
0.05
0.06
0.07
Simulated values

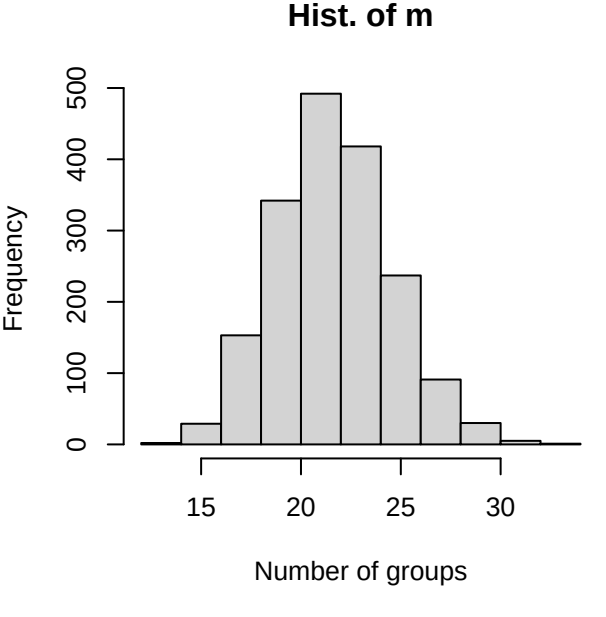

Hist. of sig2alpha
Frequency
0
50
150
250
350
0.005
0.015
0.025
Simulated values

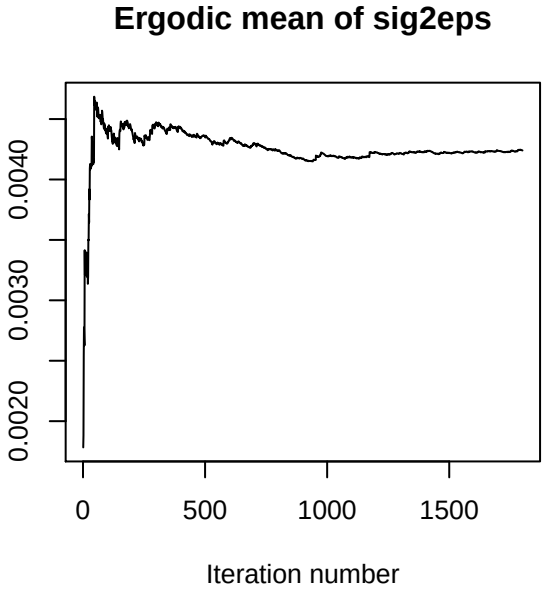
Hist. of sig2beta
Frequency
0
200
400
600
800
0.000
0.002
0.004
Simulated values

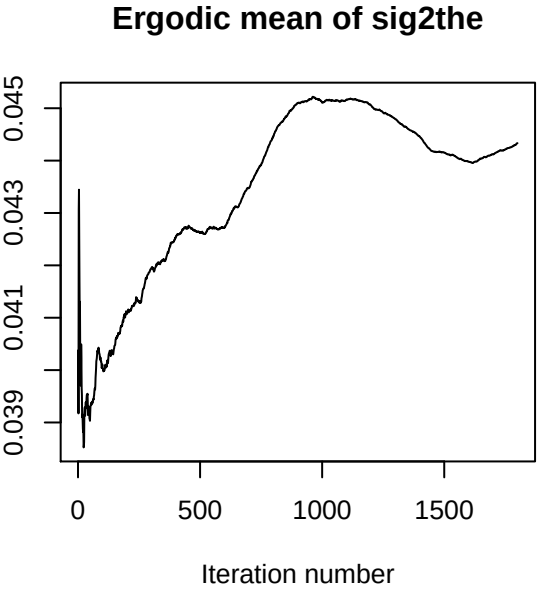

Hist. of rho
Frequency
0
100
200
300
400
500
0.88
0.90
0.92
0.94
0.96
0.98
Simulated values

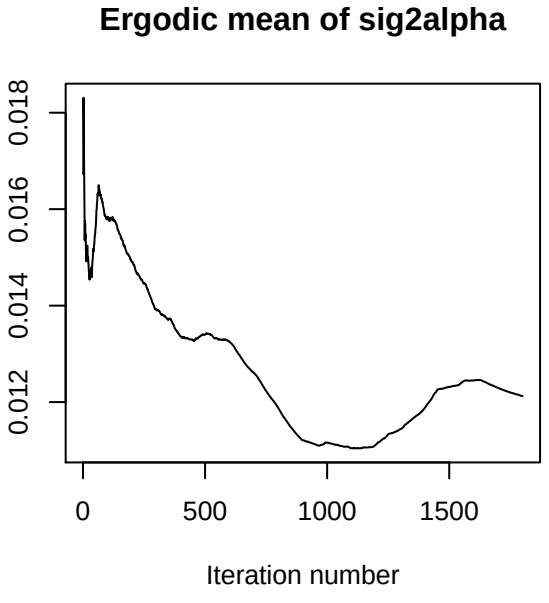

Hist. of a
Frequency
0
200
400
600
800
0.0
0.2
0.4
0.6
Simulated values

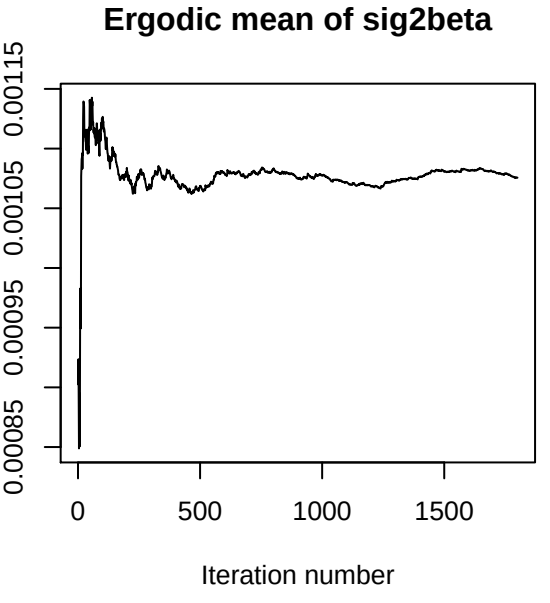

Hist. of b
Frequency
0
50
100
200
300
0
5
10
Simulated values

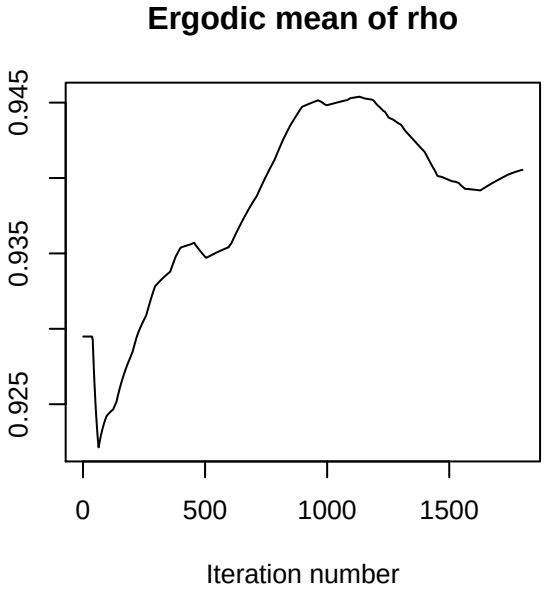

Hist. of m
Frequency
0
100
200
300
400
500
15
20
25
30
Number of groups

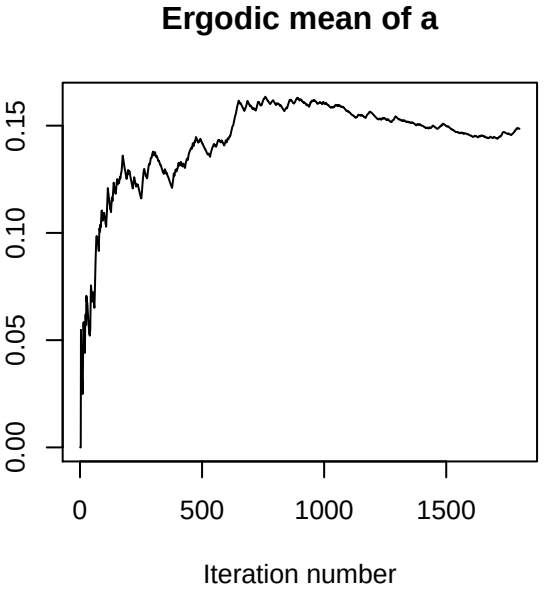

Ergodic mean of sig2eps
0.0020
0.0030
0.0040
0
500
1000
1500
Iteration number

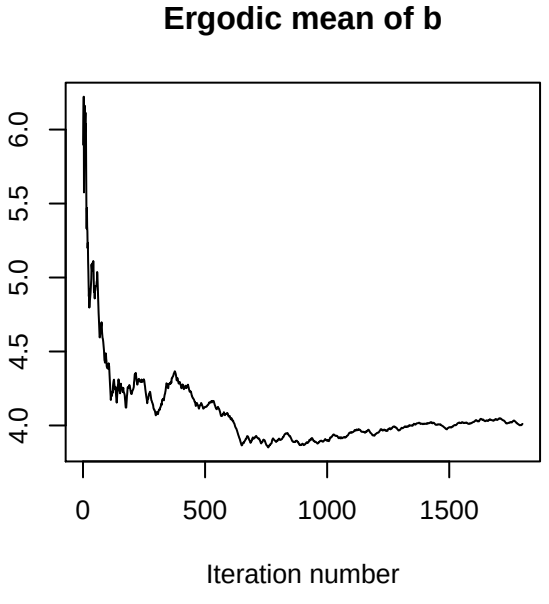

Ergodic mean of sig2the
0.039
0.041
0.043
0.045
0
500
1000
1500
Iteration number

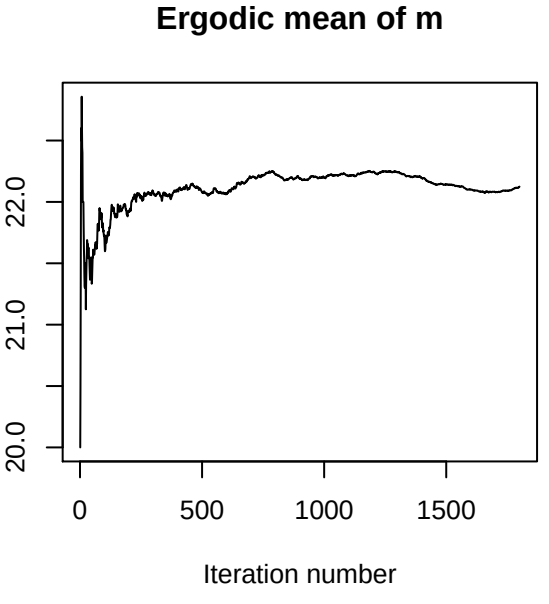

Ergodic mean of sig2alpha
0.012
0.014
0.016
0.018
0
500
1000
1500
Iteration number


Ergodic mean of sig2beta
0.00085
0.00095
0.00105
0.00115
0
500
1000
1500
Iteration number


Ergodic mean of rho
0.925
0.935
0.945
0
500
1000
1500
Iteration number

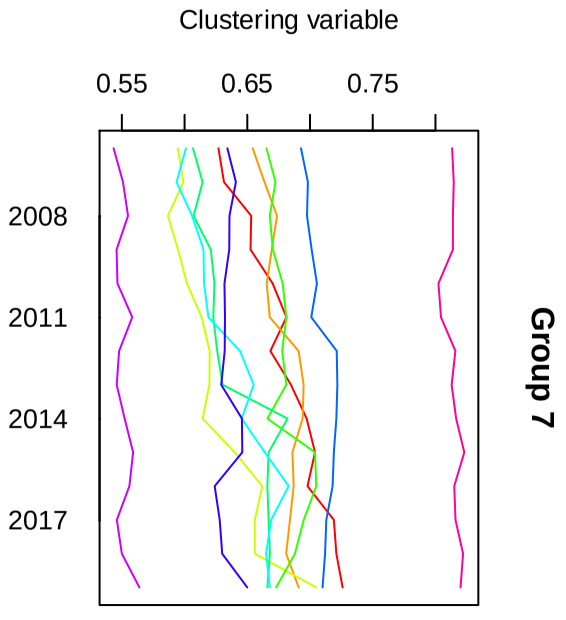

Ergodic mean of a
0.00
0.05
0.10
0.15
0
500
1000
1500
Iteration number

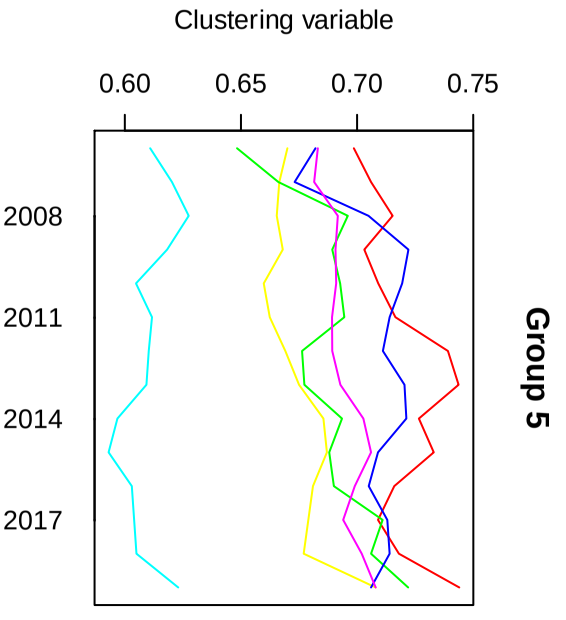

Ergodic mean of b
4.0
4.5
5.0
5.5
6.0
0
500
1000
1500
Iteration number

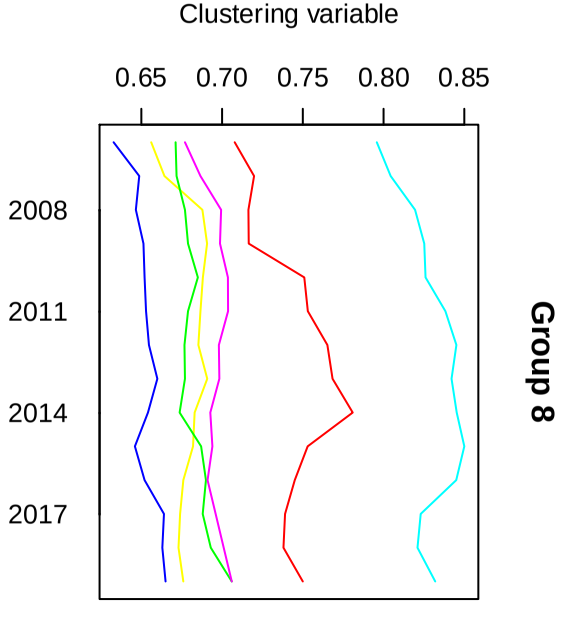

Ergodic mean of m
20.0
21.0
22.0
0
500
1000
1500
Iteration number

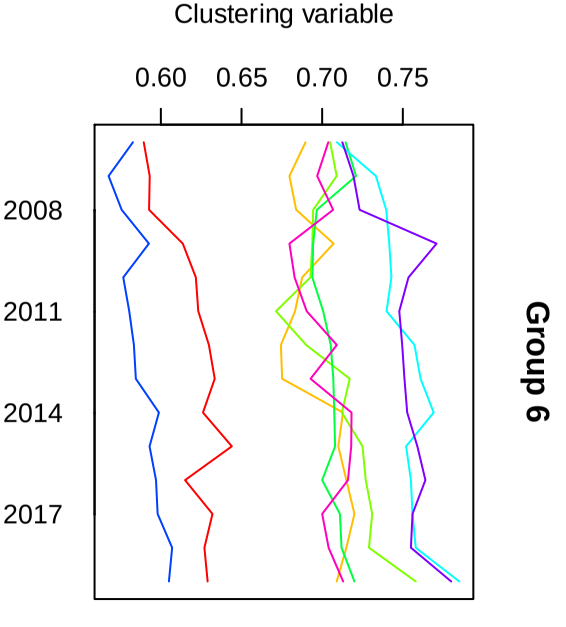
E3-2: trend = F, level = T, Nstable, c = 0.01

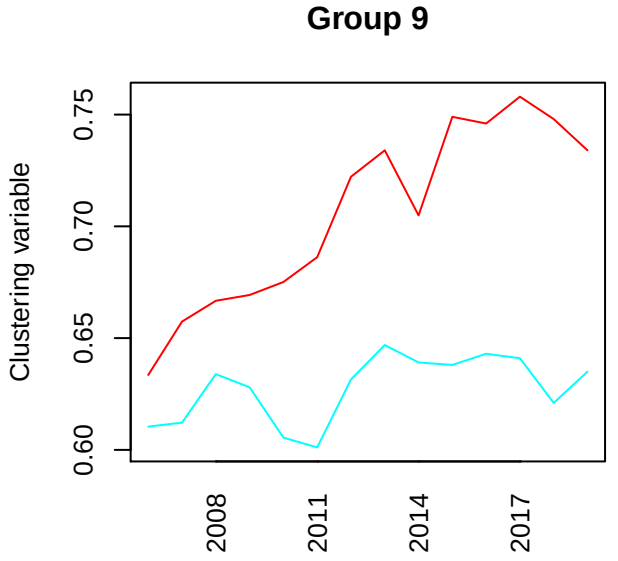
Group 1
Clustering variable
0.60
0.65
0.70
0.75
0.80
2008
2011
2014
2017
Group 2
Clustering variable
0.59
0.61
0.63
0.65
2008
2011
2014
2017
Group 3
Clustering variable
0.65
0.70
0.75
0.80
2008
2011
2014
2017
Group 4
Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017

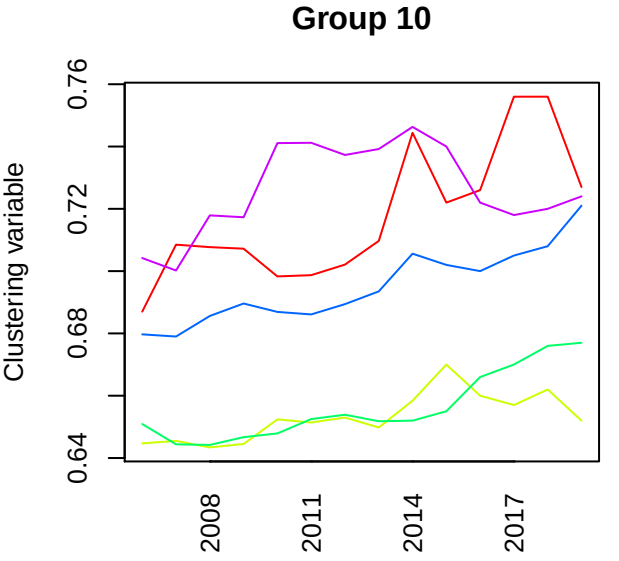

Clustering variable
0.55
0.65
0.75
2008
2011
2014
2017
Group 7

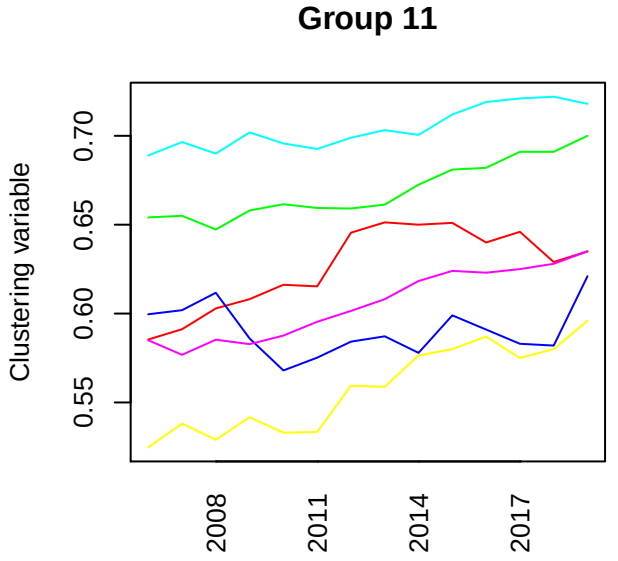

Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017
Group 5

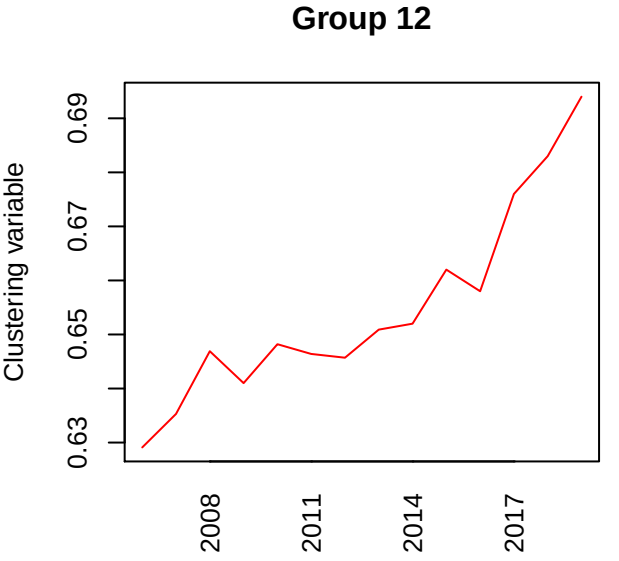

Clustering variable
0.65
0.70
0.75
0.80
0.85
2008
2011
2014
2017
Group 8

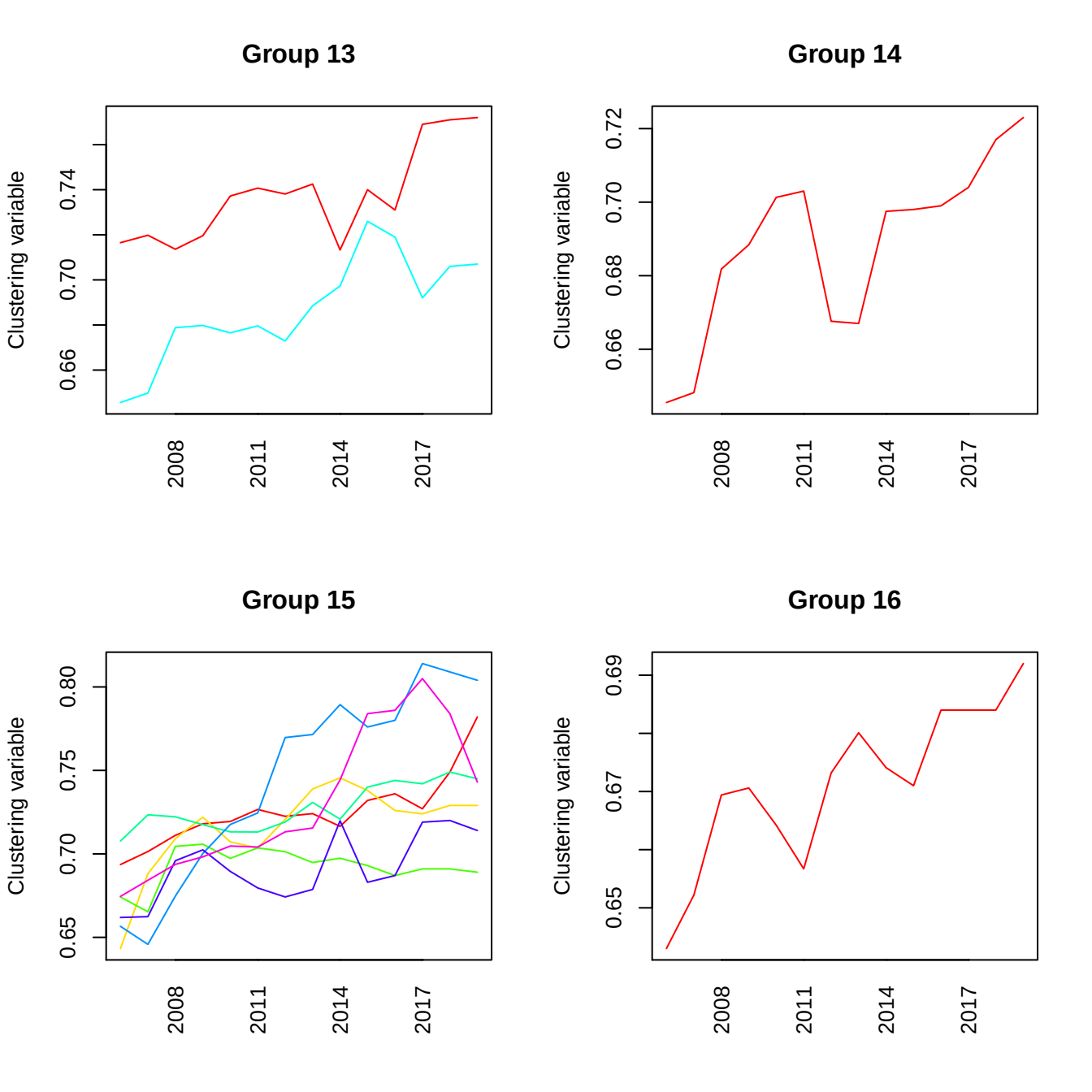

Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017
Group 6

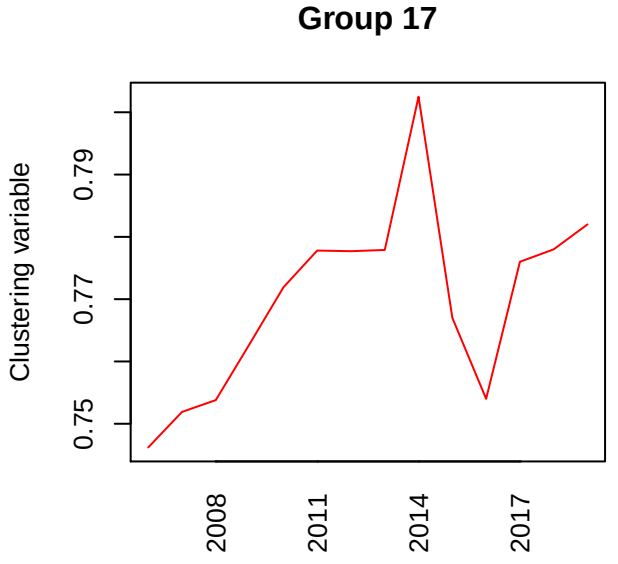

Group 9
Clustering variable
0.60
0.65
0.70
0.75
2008
2011
2014
2017

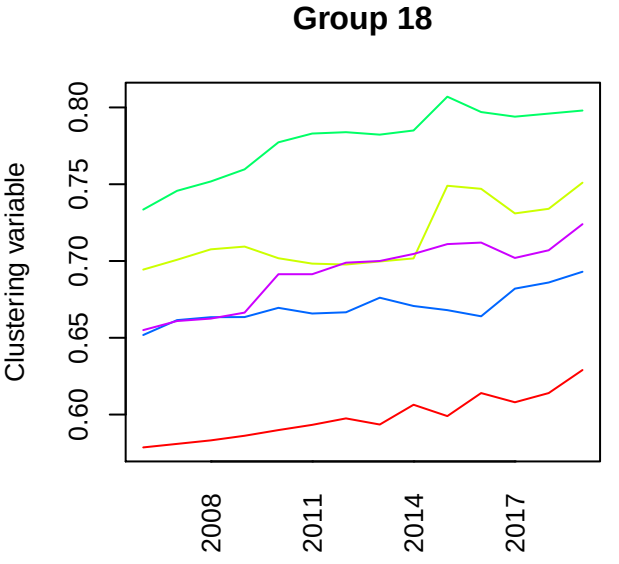

Group 10
Clustering variable
0.64
0.68
0.72
0.76
2008
2011
2014
2017

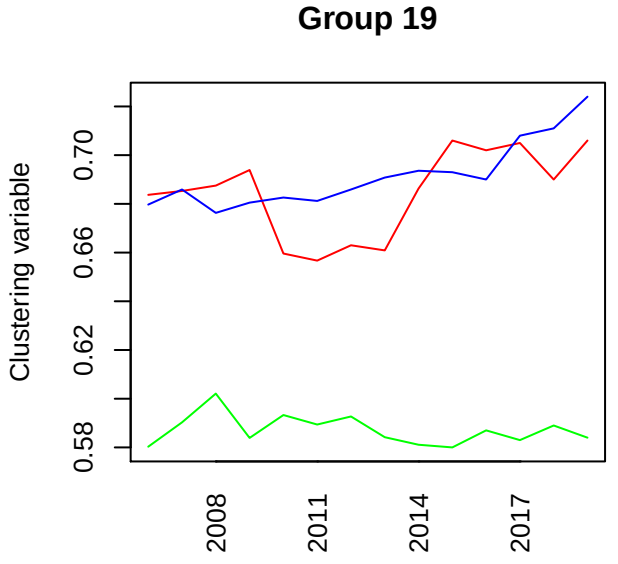

Group 11
Clustering variable
0.55
0.60
0.65
0.70
2008
2011
2014
2017

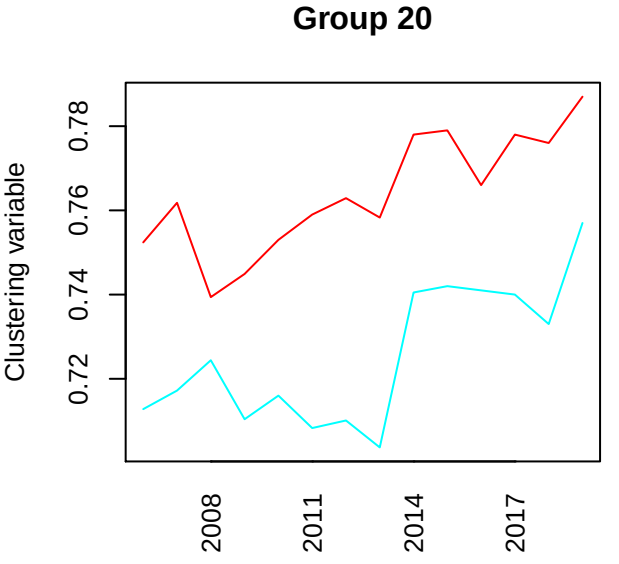

Group 12
Clustering variable
0.63
0.65
0.67
0.69
2008
2011
2014
2017

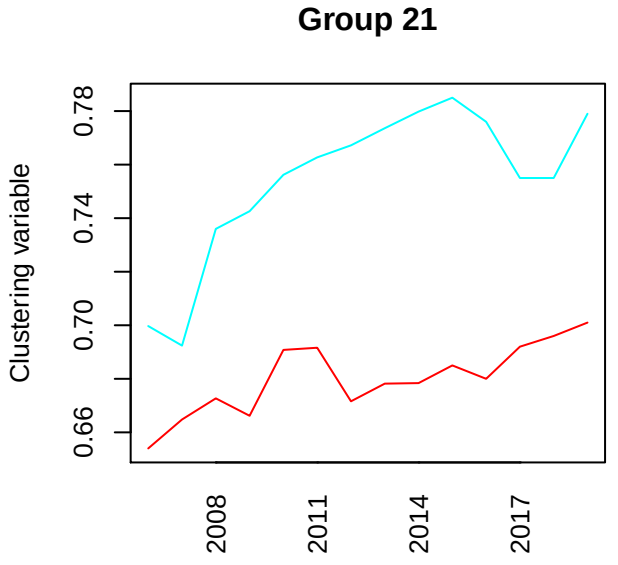

Group 13
Clustering variable
0.66
0.70
0.74
2008
2011
2014
2017
Group 14
Clustering variable
0.66
0.68
0.70
0.72
2008
2011
2014
2017
Group 15
Clustering variable
0.65
0.70
0.75
0.80
2008
2011
2014
2017
Group 16
Clustering variable
0.65
0.67
0.69
2008
2011
2014
2017

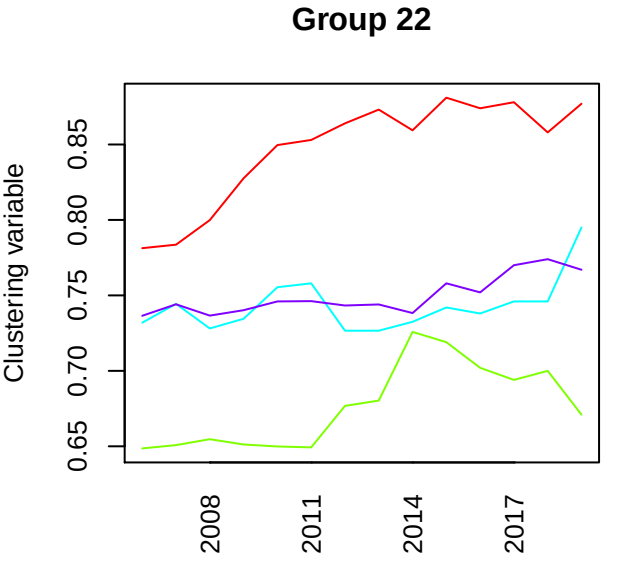

Group 17
Clustering variable
0.75
0.77
0.79
2008
2011
2014
2017

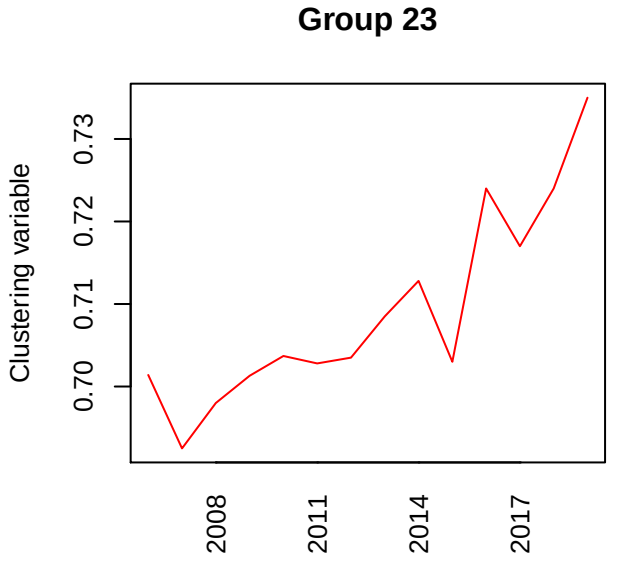

Group 18
Clustering variable
0.60
0.65
0.70
0.75
0.80
2008
2011
2014
2017

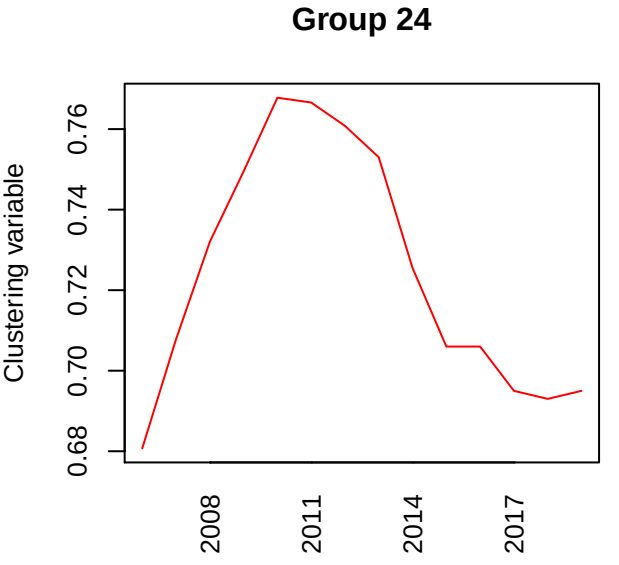

Group 19
Clustering variable
0.58
0.62
0.66
0.70
2008
2011
2014
2017

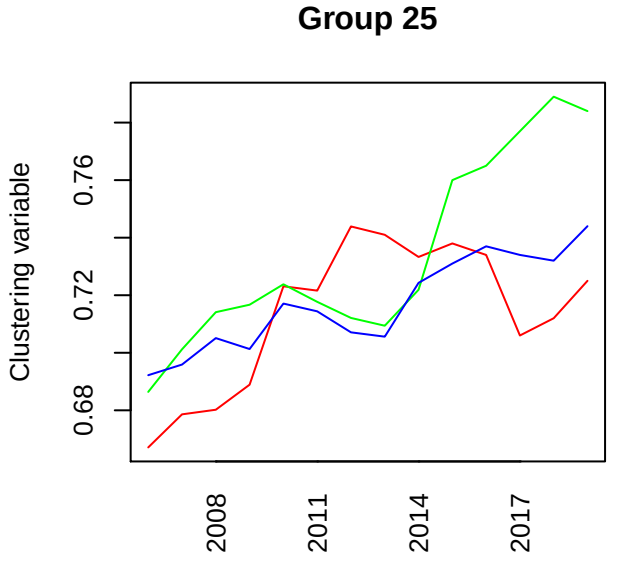

Group 20
Clustering variable
0.72
0.74
0.76
0.78
2008
2011
2014
2017

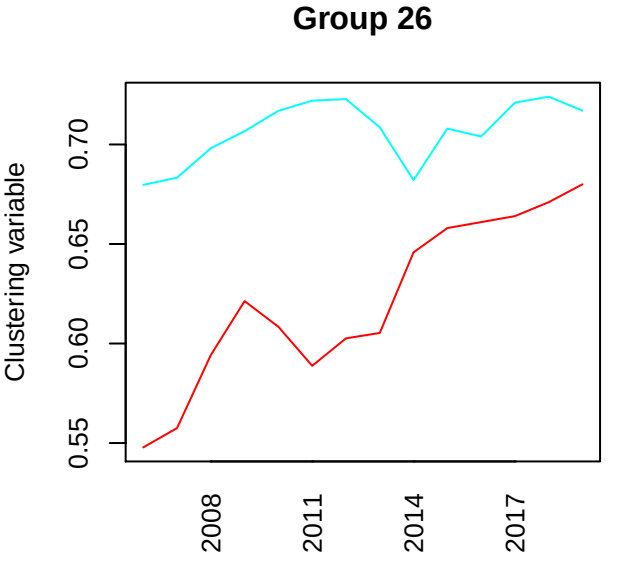

Group 21
Clustering variable
0.66
0.70
0.74
0.78
2008
2011
2014
2017

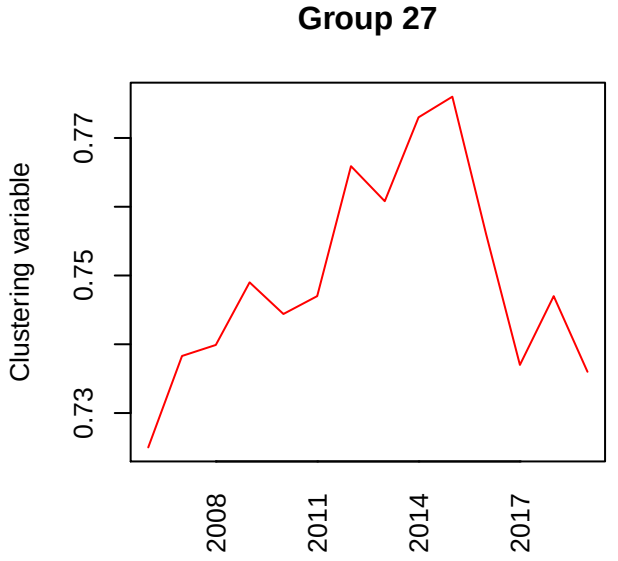

Group 22
Clustering variable
0.65
0.70
0.75
0.80
0.85
2008
2011
2014
2017

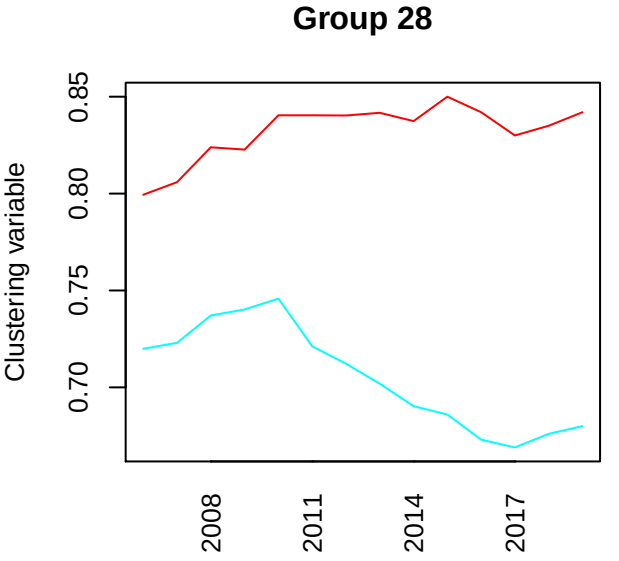

Group 23
Clustering variable
0.70
0.71
0.72
0.73
2008
2011
2014
2017

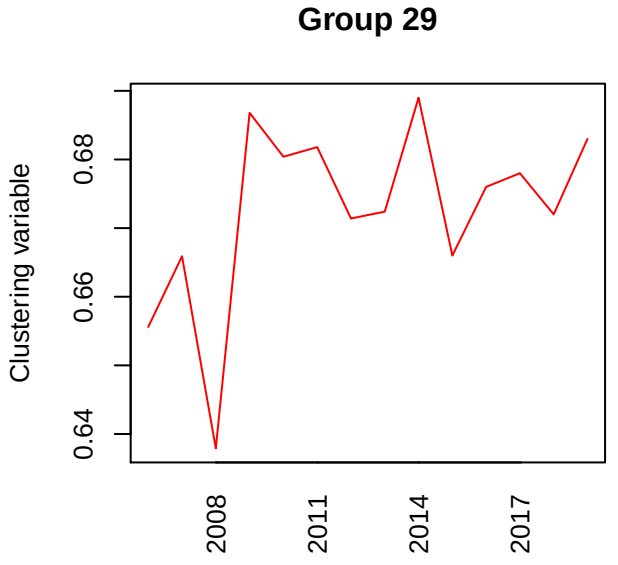

Group 24
Clustering variable
0.68
0.70
0.72
0.74
0.76
2008
2011
2014
2017

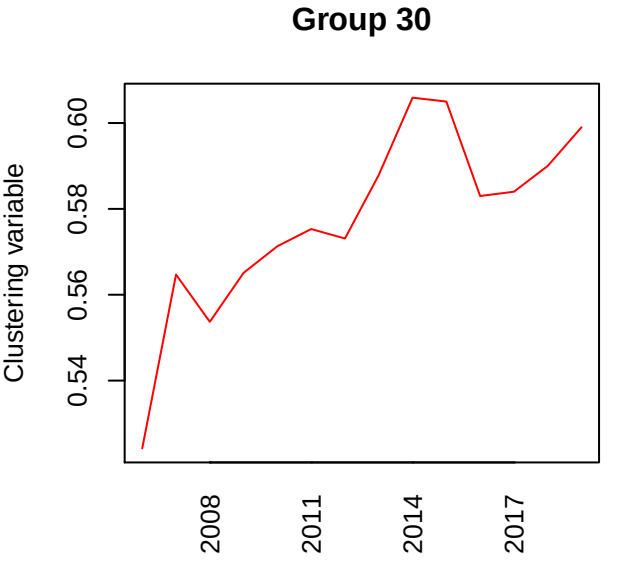

Group 25
Clustering variable
0.68
0.72
0.76
2008
2011
2014
2017

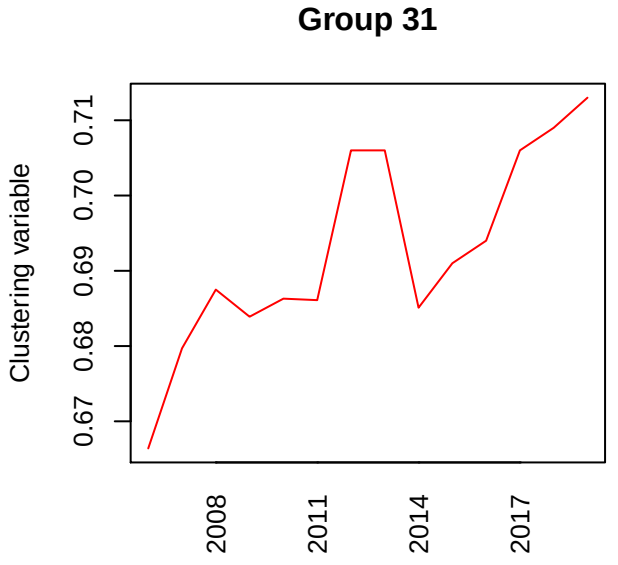

Group 26
Clustering variable
0.55
0.60
0.65
0.70
2008
2011
2014
2017

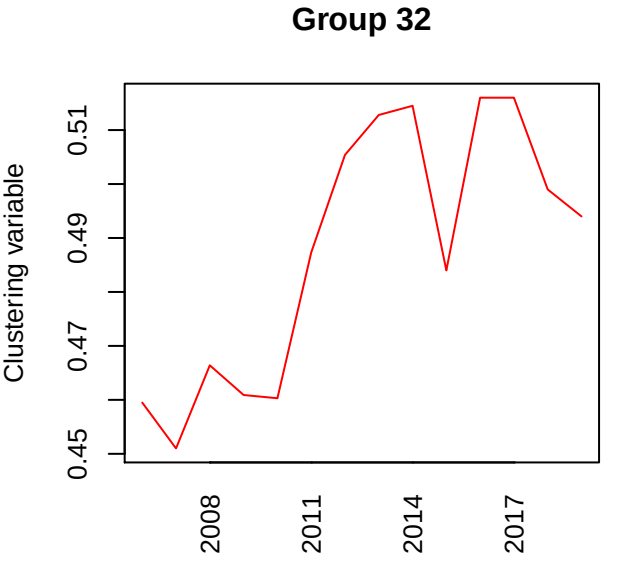

Group 27
Clustering variable
0.73
0.75
0.77
2008
2011
2014
2017


Group 28
Clustering variable
0.70
0.75
0.80
0.85
2008
2011
2014
2017


Group 29
Clustering variable
0.64
0.66
0.68
2008
2011
2014
2017


Group 30
Clustering variable
0.54
0.56
0.58
0.60
2008
2011
2014
2017


Group 31
Clustering variable
0.67
0.68
0.69
0.70
0.71
2008
2011
2014
2017


Group 32
Clustering variable
0.45
0.47
0.49
0.51
2008
2011
2014
2017