The birthrate data

March 8, 2011

The data:

24.7	5.7	30.8	Albania	12.5	11.9	14.4	Bulgaria
13.4	11.7	11.3	Czechoslovakia	12	12.4	7.6	Former_E._Germany
11.6	13.4	14.8	Hungary	14.3	10.2	16	Poland
13.6	10.7	26.9	Romania	14	9	20.2	Yugoslavia
17.7	10	23	USSR	15.2	9.5	13.1	Byelorussia_SSR
13.4	11.6	13	Ukrainian_SSR	20.7	8.4	25.7	Argentina
46.6	18	111	Bolivia	28.6	7.9	63	Brazil
23.4	5.8	17.1	Chile	27.4	6.1	40	Columbia
32.9	7.4	63	Ecuador	28.3	7.3	56	Guyana
34.8	6.6	42	Paraguay	32.9	8.3	109.9	Peru
18	9.6	21.9	Uruguay	27.5	4.4	23.3	Venezuela
29	23.2	43	Mexico	12	10.6	7.9	Belgium
13.2	10.1	5.8	Finland	12.4	11.9	7.5	Denmark
13.6	9.4	7.4	France	11.4	11.2	7.4	Germany
10.1	9.2	11	Greece	15.1	9.1	7.5	Ireland
9.7	9.1	8.8	Italy	13.2	8.6	7.1	Netherlands
14.3	10.7	7.8	Norway	11.9	9.5	13.1	Portugal
10.7	8.2	8.1	Spain	14.5	11.1	5.6	Sweden
12.5	9.5	7.1	Switzerland	13.6	11.5	8.4	U.K.
14.9	7.4	8	Austria	9.9	6.7	4.5	Japan
14.5	7.3	7.2	Canada	16.7	8.1	9.1	U.S.A.
40.4	18.7	181.6	Afghanistan	28.4	3.8	16	Bahrain
42.5	11.5	108.1	Iran	42.6	7.8	69	Iraq
22.3	6.3	9.7	Israel	38.9	6.4	44	Jordan
26.8	2.2	15.6	Kuwait	31.7	8.7	48	Lebanon
45.6	7.8	40	Oman	42.1	7.6	71	Saudi_Arabia
29.2	8.4	76	Turkey	22.8	3.8	26	United_Arab_Emirates
42.2	15.5	119	Bangladesh	41.4	16.6	130	Cambodia
21.2	6.7	32	China	11.7	4.9	6.1	Hong_Kong
30.5	10.2	91	India	28.6	9.4	75	Indonesia
23.5	18.1	25	Korea	31.6	5.6	24	Malaysia
36.1	8.8	68	Mongolia	39.6	14.8	128	Nepal
30.3	8.1	107.7	Pakistan	33.2	7.7	45	Philippines

```
17.8   5.2    7.5 Singapore            21.3   6.2   19.4 Sri_Lanka
22.3   7.7     28 Thailand             31.8   9.5     64 Vietnam
35.5   8.3     74 Algeria              47.2  20.2    137 Angola
48.5  11.6     67 Botswana             46.1  14.6     73 Congo
38.8   9.5   49.4 Egypt                48.6  20.7    137 Ethiopia
39.4  16.8    103 Gabon                47.4  21.4    143 Gambia
44.4  13.1     90 Ghana                  47  11.3     72 Kenya
  44   9.4     82 Libya                48.3    25    130 Malawi
35.5   9.8     82 Morocco                45  18.5    141 Mozambique
  44  12.1    135 Namibia              48.5  15.6    105 Nigeria
48.2  23.4    154 Sierra_Leone         50.1  20.2    132 Somalia
32.1   9.9     72 South_Africa         44.6  15.8    108 Sudan
46.8  12.5    118 Swaziland            31.1   7.3     52 Tunisia
52.2  15.6    103 Uganda               50.5    14    106 Tanzania
45.6  14.2     83 Zaire                51.1  13.7     80 Zambia
41.7  10.3     66 Zimbabwe
```

The SAS code and output:

```
data birthrate;
  infile "birthrate.dat";
  input birth death infant country $ @@;

proc cluster method=average ccc standard;
  id country;

proc standard mean=0 std=1;

proc fastclus maxclusters=6 out=clust;
    id country;

proc sort data=clust;
    by cluster;

proc print data=clust;
    by cluster;


run;
```

```
The CLUSTER Procedure
Average Linkage Cluster Analysis
          Eigenvalues of the Correlation Matrix
       Eigenvalue      Difference      Proportion      Cumulative
   1   2.34463201      1.80325940        0.7815          0.7815
   2   0.54137260      0.42737721        0.1805          0.9620
   3   0.11399539                        0.0380          1.0000
```

2

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation   1
Root-Mean-Square Distance Between Observations   2.44949

Cluster History

NCL	--Clusters Joined---		FREQ	SPRSQ	RSQ	ERSQ	CCC	Norm RMS Dist	Tie
96	Austria	Canada	2	0.0000	1.00	.	.	0.0165	
95	Czechosl	Ukrainia	2	0.0000	1.00	.	.	0.0175	
94	Greece	Italy	2	0.0000	1.00	.	.	0.0246	
93	Iraq	Saudi_Ar	2	0.0000	1.00	.	.	0.0292	
92	France	Switzerl	2	0.0000	1.00	.	.	0.0344	
91	CL95	U.K.	3	0.0000	1.00	.	.	0.0373	
90	USSR	Uruguay	2	0.0000	1.00	.	.	0.0376	
89	Norway	Sweden	2	0.0000	1.00	.	.	0.0406	
88	Former_E	Denmark	2	0.0000	1.00	.	.	0.0456	
87	Bulgaria	CL91	4	0.0000	1.00	.	.	0.0534	
86	Belgium	Germany	2	0.0000	1.00	.	.	0.0559	
85	Angola	Ethiopia	2	0.0000	1.00	.	.	0.0609	
84	Byelorus	Ireland	2	0.0000	1.00	.	.	0.0609	
83	Finland	CL92	3	0.0000	1.00	.	.	0.0612	
82	Botswana	Kenya	2	0.0000	1.00	.	.	0.0686	
81	Mongolia	Algeria	2	0.0001	1.00	.	.	0.0714	
80	CL87	CL88	6	0.0001	.999	.	.	0.0731	
79	CL94	Portugal	3	0.0001	.999	.	.	0.0744	
78	Chile	Sri_Lank	2	0.0001	.999	.	.	0.0752	
77	Vietnam	South_Af	2	0.0001	.999	.	.	0.0797	
76	Argentin	Thailand	2	0.0001	.999	.	.	0.0808	
75	Brazil	Guyana	2	0.0001	.999	.	.	0.082	
74	Peru	Pakistan	2	0.0001	.999	.	.	0.0826	
73	Netherla	Spain	2	0.0001	.999	.	.	0.0836	
72	Venezuel	Bahrain	2	0.0001	.999	.	.	0.0878	
71	CL84	CL83	5	0.0001	.999	.	.	0.0879	
70	CL85	Somalia	3	0.0001	.999	.	.	0.0882	
69	CL78	Israel	3	0.0001	.999	.	.	0.0887	
68	CL86	CL89	4	0.0001	.998	.	.	0.0888	
67	Turkey	Indonesi	2	0.0001	.998	.	.	0.0901	
66	CL96	U.S.A.	3	0.0001	.998	.	.	0.0907	
65	Philippi	Tunisia	2	0.0001	.998	.	.	0.0954	
64	Congo	Zaire	2	0.0001	.998	.	.	0.0966	
63	Poland	CL71	6	0.0001	.998	.	.	0.1042	
62	CL80	CL68	10	0.0004	.998	.	.	0.1067	
61	CL79	CL73	5	0.0002	.997	.	.	0.1071	

3

```
The CLUSTER Procedure
Average Linkage Cluster Analysis
                        Cluster History
                                                       Norm     T
                                                       RMS      i
    NCL    --Clusters Joined---   FREQ   SPRSQ   RSQ   ERSQ  CCC  Dist     e
    60    Nigeria    Uganda        2    0.0001  .997    .    .   0.1129
    59    Lebanon    CL65          3    0.0002  .997    .    .   0.1166
    58    Albania    Columbia      2    0.0002  .997    .    .   0.1205
    57    CL63       Yugoslav      7    0.0002  .997    .    .   0.1236
    56    Banglade   Sudan         2    0.0002  .997    .    .   0.1243
    55    Paraguay   Jordan        2    0.0002  .996    .    .   0.1261
    54    CL70       Gambia        4    0.0002  .996    .    .   0.128
    53    CL76       China         3    0.0002  .996    .    .   0.1337
    52    CL57       CL61         12    0.0006  .995    .    .   0.1352
    51    CL75       Ecuador       3    0.0003  .995    .    .   0.1447
    50    CL67       CL77          4    0.0004  .995    .    .   0.1464
    49    CL81       Morocco       3    0.0003  .994    .    .   0.1515
    48    CL60       Tanzania      3    0.0003  .994    .    .   0.1526
    47    Romania    CL90          3    0.0003  .994    .    .   0.1567
    46    CL51       CL59          6    0.0005  .993    .    .   0.1623
    45    Japan      Hong_Kon      2    0.0003  .993    .    .   0.1678
    44    Cambodia   Nepal         2    0.0003  .993    .    .   0.1681
    43    CL64       Ghana         3    0.0004  .992    .    .   0.1692
    42    CL72       United_A      3    0.0004  .992    .    .   0.1729
    41    Namibia    Swazilan      2    0.0003  .991    .    .   0.1764
    40    Libya      Zimbabwe      2    0.0003  .991    .    .   0.1767
    39    CL69       Singapor      4    0.0005  .991    .    .   0.1795
    38    CL42       Kuwait        4    0.0004  .990    .    .   0.1892
    37    CL52       CL66         15    0.0014  .989    .    .   0.1914
    36    CL62       Hungary      11    0.0006  .988    .    .   0.1922
    35    CL56       Gabon         3    0.0005  .988    .    .   0.1931
    34    CL43       Zambia        4    0.0005  .987    .    .   0.1952
    33    CL50       CL49          7    0.0010  .986    .    .   0.1968
    32    CL58       Malaysia      3    0.0005  .986    .    .   0.2063
    31    CL93       CL40          4    0.0008  .985    .    .   0.2125
    30    Iran       CL41          3    0.0005  .984    .    .   0.2169
    29    CL35       CL44          5    0.0008  .984    .    .   0.2205
    28    CL37       CL47         18    0.0018  .982    .    .   0.2241
    27    CL54       Mozambiq      5    0.0008  .981    .    .   0.2242
    26    CL33       India         8    0.0007  .980    .    .   0.2255
    25    CL53       CL39          7    0.0015  .979    .    .   0.2305
    24    Malawi     Sierra_L      2    0.0007  .978    .    .   0.2552
    23    CL46       CL55          8    0.0017  .977    .    .   0.2573
    22    CL36       CL28         29    0.0071  .970    .    .   0.2642
    21    CL31       Egypt         5    0.0010  .969    .    .   0.2659
```

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```
   20    CL82        CL34            6    0.0016    .967      .        .       0.2664
   19    CL32        CL38            7    0.0018    .965    .952     4.10     0.2709
   18    Bolivia     CL29            6    0.0011    .964    .949     4.53     0.2794
   17    CL21        Oman            6    0.0014    .963    .945     4.87     0.3191
   16    CL23        CL26           16    0.0059    .957    .942     3.84     0.3225
   15    CL19        CL25           14    0.0048    .952    .938     3.37     0.3255
   14    CL18        CL48            9    0.0034    .948    .933     3.43     0.332
   13    CL27        CL24            7    0.0037    .945    .928     3.51     0.39
   12    CL16        CL17           22    0.0084    .936    .922     2.68     0.3935
   11    CL14        CL30           12    0.0055    .931    .915     2.69     0.4085
   10    CL22        CL45           31    0.0059    .925    .908     2.80     0.4251
    9    CL11        CL20           18    0.0115    .913    .899     1.78     0.4592
```

The CLUSTER Procedure
Average Linkage Cluster Analysis

Cluster History

```
                                                                 Norm    T
                                                                 RMS     i
   NCL    --Clusters Joined---    FREQ    SPRSQ     RSQ    ERSQ    CCC    Dist    e
    8    CL12        CL74           24    0.0067    .907    .887    2.16    0.4773
    7    Mexico      Korea           2    0.0026    .904    .873    3.27    0.5037
    6    Afghanis    CL13            8    0.0045    .900    .854    4.47    0.5328
    5    CL15        CL10           45    0.0517    .848    .827    1.57    0.5697
    4    CL9         CL8            42    0.1001    .748    .788   -2.3     0.7742
    3    CL5         CL4            87    0.3980    .350    .723   -12      1.0708
    2    CL3         CL7            89    0.0385    .311    .593   -6.8     1.1662
    1    CL2         CL6            97    0.3114    .000    .000    0.00    1.5693
```

The FASTCLUS Procedure
Replace=FULL   Radius=0   Maxclusters=6 Maxiter=1

Initial Seeds

Cluster	_NCL_	_FREQ_	_HEIGHT_	_RMSSTD_	_SPRSQ_	
1	-1.72534162	0.15941566	0.82927258	0.98789355	-0.09010923	-0.132
2	-2.23773390	6.56925385	4.86392496	5.09607210	10.57544551	-6.211
3	-2.17368487	3.20408880	2.33623356	2.26332995	1.25197653	-1.290
4	-2.14166035	0.23953864	2.15051882	1.90509577	-0.01874520	-0.780
5	-2.20570938	2.96371987	3.36770524	3.49895155	2.55451672	-2.279
6	-2.26975842	6.72949980	5.34491074	5.20968367	0.89677969	-6.591

Initial Seeds

Cluster	_PSF_	_PST2_	_ERSQ_	_RATIO_	_LOGR_	
1	-0.44033521	-0.27035129	0.55112996	0.72236918	0.62134323	0.610
2	-0.59196410	6.02138806	-0.48666002	-2.67283667	-3.05447144	-3.184
3	-0.42698985	2.84010160	-0.01321720	-0.14421243	0.01381143	0.026
4	-0.37114439	-0.30991961	0.10638924	1.00232096	0.79485489	0.696

```
     5      -0.48514931      2.71332040     -0.19136040     -1.19487568     -0.92724080     -0.85
     6      -0.56365055     -0.29326147     -1.07663676     -2.08325736     -2.02796310     -1.908
```
                                   Initial Seeds
```
  Cluster         birth           death            infant           _DIST_          _AVLIM
  --------------------------------------------------------------------------------------------
     1      -0.15598640     -1.40435939     -0.65291697       0.74415712       0.829272
     2      -0.10757157     -0.24604039     -0.15882604       4.79659575       4.863924
     3      -0.93411268     -0.51221259     -0.89037050       2.34281977       2.336233
     4       1.33561691      2.29886040      2.02179681       2.27937914       2.150518
     5       0.77800820      0.03914411      0.62497160       3.34682063       3.367705
     6      -0.10997284     -0.19068009     -0.16544707       4.99251670       5.344910
```

Criterion Based on Final Seeds =   0.6188

                                 Cluster Summary
                               Maximum Distance
```
                         RMS Std          from Seed      Radius     Nearest     Distance F
  Cluster   Frequency   Deviation    to Observation    Exceeded    Cluster     Cluster Cen
  --------------------------------------------------------------------------------------------
     1          152       0.5355           6.5342                      4
     2            2          .             4.9068                      6
     3            2       0.6573           3.8327                      5
     4           35       0.6080           4.5274                      1
     5            1          .                  0                      3
     6            1          .                  0                      5
```

                          Statistics for Variables
```
  Variable     Total STD    Within STD    R-Square    RSQ/(1-RSQ)
  ---------------------------------------------------------------
  _NCL_         1.00000       0.79643     0.382218       0.618694
  _FREQ_        1.00000       0.33262     0.892247       8.280458
```

The FASTCLUS Procedure
Replace=FULL   Radius=0   Maxclusters=6 Maxiter=1
                          Statistics for Variables
```
  Variable     Total STD    Within STD    R-Square    RSQ/(1-RSQ)
  ---------------------------------------------------------------
  _HEIGHT_      1.00000       0.50062     0.755908       3.096816
  _RMSSTD_      1.00000       0.54782     0.707710       2.421260
  _SPRSQ_       1.00000       0.14115     0.980596      50.534593
  _RSQ_         1.00000       0.23355     0.946873      17.822929
  _PSF_         1.00000       0.98599     0.079526       0.086397
  _PST2_        1.00000       0.58495     0.685432       2.178961
  _ERSQ_        1.00000       0.65813     0.687179       2.196718
  _RATIO_       1.00000       0.51831     0.805978       4.154054
  _LOGR_        1.00000       0.56787     0.767098       3.293657
```

```
_CCC_            1.00000      0.59768    0.742005     2.876050
birth            1.00000      0.84410    0.306047     0.441020
death            1.00000      0.79432    0.385483     0.627294
infant           1.00000      0.78705    0.396687     0.657516
_DIST_           1.00000      0.50737    0.749280     2.988510
_AVLINK_         1.00000      0.50062    0.755908     3.096816
OVER-ALL         1.00000      0.61116    0.640057     1.778215


Pseudo F Statistic =     66.51


Approximate Expected Over-All R-Squared =    0.19194


Cubic Clustering Criterion =   127.942
WARNING: The two values above are invalid for correlated variables.


                                        Cluster Means
Cluster          _NCL_            _FREQ_        _HEIGHT_         _RMSSTD_          _SPRSQ_
------------------------------------------------------------------------------------------
   1        0.301683923    -0.199556359    -0.286926752    -0.298956307    -0.133931975      0.1868
   2       -2.269758418     6.969868734     6.120784934     5.623795978     9.410645041     -7.9401
   3       -2.093623572     2.643227960     1.971774582     1.686323428     0.635442138     -0.9103
   4       -0.932963560     0.040375813     0.534718037     0.631785275    -0.091023157     -0.0523
   5       -2.205709383     2.963719870     3.367705240     3.498951550     2.554516718     -2.2793
   6       -2.269758418     6.729499802     5.344910736     5.209683671     0.896779685     -6.5917
                                        Cluster Means
Cluster          _PSF_            _PST2_          _ERSQ_          _RATIO_           _LOGR_
------------------------------------------------------------------------------------------
   1        0.203191787    -0.191951319     0.518803341     0.575010171     0.524501846      0.5262
   2       -0.591964095     3.739996942    -2.123665444    -1.650063821    -1.719321305     -1.7593
   3       -0.434312765     1.434053779     0.168784904     0.023718538     0.138625708      0.1682
   4       -0.360303618    -0.278948234     0.376377414     0.489163933     0.460690128      0.4450
   5       -0.485149307     2.713320400    -0.191360398    -1.194875681    -0.927240804     -0.8570
   6       -0.563650551    -0.293261468    -1.076636758    -2.083257358    -2.027963100     -1.9083

The FASTCLUS Procedure
Replace=FULL   Radius=0   Maxclusters=6 Maxiter=1
                                        Cluster Means
Cluster          birth            death           infant           _DIST_           _AVLIN
------------------------------------------------------------------------------------------
   1       -0.253995921    -0.295260055    -0.293572632    -0.288263428    -0.2869267
   2       -0.049160257    -0.115698772    -0.071940931     6.191124181     6.1207849
   3       -1.061148925    -0.363979264    -0.930867950     2.004736587     1.9717745
   4        1.147427513     1.314012010     1.319118093     0.545285205     0.5347180
   5        0.778008195     0.039144115     0.624971598     3.346820631     3.3677052
   6       -0.109972840    -0.190680085    -0.165447071     4.992516702     5.3449107


                              7
```

```
                            Cluster Standard Deviations
Cluster         _NCL_           _FREQ_          _HEIGHT_          _RMSSTD_          _SPRSQ_
-----------------------------------------------------------------------------------------
    1        0.733452981     0.281655045     0.377948549     0.434404102     0.020214715     0.0660
    2        0.045289507     0.566555006     1.777468428     0.746314270     1.647276625     2.4448
    3        0.113223767     0.793177008     0.515422833     0.816010455     0.871911304     0.5379
    4        1.048365136     0.477732273     0.802037885     0.881210260     0.074793701     0.3103
    5           .               .               .               .               .               .
    6           .               .               .               .               .               .
                            Cluster Standard Deviations
Cluster         _PSF_           _PST2_           _ERSQ_           _RATIO_           _LOGR_
-----------------------------------------------------------------------------------------
    1        1.185719789     0.358682362     0.045716743     0.208397112     0.136954402     0.1188
    2           .            3.226374259     2.315075269     1.446419240     1.888187434     2.0150
    3        0.010356169     1.988451895     0.257389850     0.237490246     0.176514051     0.2001
    4        0.168062635     0.178457518     0.142429478     0.360615675     0.240221828     0.2300
    5           .               .               .               .               .               .
    6           .               .               .               .               .               .
                            Cluster Standard Deviations
Cluster         birth           death            infant           _DIST_            _AVLIN
-----------------------------------------------------------------------------------------
    1        0.919450899     0.725233903     0.805007986     0.381534561     0.3779485
    2        0.082606072     0.184330878     0.122874098     1.972161020     1.7774684
    3        0.179656375     0.209633575     0.057272044     0.478121821     0.5154228
    4        0.403876612     1.063965357     0.726877276     0.805119499     0.8020378
    5           .               .               .               .               .
    6           .               .               .               .               .

Cluster=1
Obs _NAME_  _PARENT_ _NCL_   _FREQ_   _HEIGHT_ _RMSSTD_ _SPRSQ_  _RSQ_    _PSF_    _PST2_
  1 Austria   CL96   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180    .        .
  2 Canada    CL96   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180    .        .
  3 Czechosl  CL95   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180    .        .
  4 Ukrainia  CL95   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180    .        .
  5 Greece    CL94   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180    .        .
  6 Italy     CL94   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180    .        .
  7 Iraq      CL93   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180    .        .
  8 Saudi_Ar  CL93   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180    .        .
  9 France    CL92   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180    .        .
 10 Switzerl  CL92   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180    .        .
 11 CL95      CL91   0.70852 -0.24120 -0.44874 -0.47618 -0.13942 0.21174 5.03253    .
 12 U.K.      CL91   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180    .        .
 13 USSR      CL90   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180    .        .
 14 Uruguay   CL90   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180    .        .
 15 Norway    CL89   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180    .        .
 16 Sweden    CL89   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180    .        .
```

Obs	_NAME_	_PARENT_	_NCL_	_FREQ_	_HEIGHT_	_RMSSTD_	_SPRSQ_	_RSQ_	_PSF_	_PST2_
17	Former_E	CL88	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
18	Denmark	CL88	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
19	Bulgaria	CL87	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
20	CL91	CL87	0.58042	-0.16108	-0.34848	-0.37736	-0.13901	0.21129	1.42972	-0.26854
21	Belgium	CL86	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
22	Germany	CL86	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
23	Byelorus	CL84	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
24	Ireland	CL84	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
25	Finland	CL83	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
26	CL92	CL83	0.61245	-0.24120	-0.36332	-0.36193	-0.13918	0.21147	1.99598	.

Obs	_RATIO_	_LOGR_	_CCC_	birth	death	infant	_DIST_	_AVLINK_	country	DIST
1	.	.	.	-1.06639	-0.75663	-1.03614	-0.54757	-0.53680	Austria	2.1
2	.	.	.	-1.09641	-0.77907	-1.05407	-0.54757	-0.53680	Canada	2.2
3	.	.	.	-1.17898	0.20856	-0.96218	-0.54757	-0.53680	Czechosl	2.1
4	.	.	.	-1.17898	0.18611	-0.92409	-0.54757	-0.53680	Ukrainia	2.1
5	.	.	.	-1.42669	-0.35260	-0.96891	-0.54757	-0.53680	Greece	2.3
6	.	.	.	-1.45672	-0.37504	-1.01821	-0.54757	-0.53680	Italy	2.3
7	.	.	.	1.01285	-0.66684	0.33091	-0.54757	-0.53680	Iraq	2.0
8	.	.	.	0.97532	-0.71173	0.37573	-0.54757	-0.53680	Saudi_Ar	2.0
9	.	.	.	-1.16397	-0.30770	-1.04959	-0.54757	-0.53680	France	2.1
10	.	.	.	-1.24654	-0.28526	-1.05631	-0.54757	-0.53680	Switzerl	2.1
11	.	.	.	-1.17898	0.19734	-0.94314	-0.44806	-0.44874		6.2
12	.	.	.	-1.16397	0.16367	-1.02718	-0.54757	-0.53680	U.K.	2.1
13	.	.	.	-0.85621	-0.17303	-0.69998	-0.54757	-0.53680	USSR	1.6
14	.	.	.	-0.83370	-0.26281	-0.72463	-0.54757	-0.53680	Uruguay	1.6
15	.	.	.	-1.11143	-0.01590	-1.04062	-0.54757	-0.53680	Norway	2.0
16	.	.	.	-1.09641	0.07388	-1.08993	-0.54757	-0.53680	Sweden	2.1
17	.	.	.	-1.28407	0.36568	-1.04510	-0.54757	-0.53680	Former_E	2.3
18	.	.	.	-1.25405	0.25345	-1.04734	-0.54757	-0.53680	Denmark	2.2
19	.	.	.	-1.24654	0.25345	-0.89271	-0.54757	-0.53680	Bulgaria	2.1
20	.	.	.	-1.17398	0.18611	-0.97115	-0.34067	-0.34848		2.3
21	.	.	.	-1.28407	-0.03835	-1.03838	-0.54757	-0.53680	Belgium	2.2
22	.	.	.	-1.32911	0.09633	-1.04959	-0.54757	-0.53680	Germany	2.2
23	.	.	.	-1.04387	-0.28526	-0.92185	-0.54757	-0.53680	Byelorus	1.9
24	.	.	.	-1.05138	-0.37504	-1.04734	-0.54757	-0.53680	Ireland	2.0
25	.	.	.	-1.19400	-0.15058	-1.08544	-0.54757	-0.53680	Finland	2.1
26	.	.	.	-1.20526	-0.29648	-1.05295	-0.35154	-0.36332		2.9

Cluster=1
(continued)

Obs	_NAME_	_PARENT_	_NCL_	_FREQ_	_HEIGHT_	_RMSSTD_	_SPRSQ_	_RSQ_	_PSF_	_PST2_
27	Botswana	CL82	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
28	Kenya	CL82	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
29	Mongolia	CL81	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
30	Algeria	CL81	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
31	CL87	CL80	0.45233	-0.08095	-0.26746	-0.29673	-0.13845	0.21037	0.65657	-0.3667

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32 CL88      CL80   0.48435 -0.24120 -0.30705 -0.28667 -0.13893 0.21076  0.94110   .
33 CL94      CL79   0.67650 -0.24120 -0.41287 -0.42820 -0.13934 0.21168  3.56724   .
34 Portugal  CL79   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
35 Chile     CL78   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
36 Sri_Lank  CL78   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
37 Vietnam   CL77   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
38 South_Af  CL77   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
39 Argentin  CL76   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
40 Thailand  CL76   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
41 Brazil    CL75   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
42 Guyana    CL75   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
43 Peru      CL74   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
44 Pakistan  CL74   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
45 Netherla  CL73   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
46 Spain     CL73   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
47 Venezuel  CL72   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
48 Bahrain   CL72   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
49 CL84      CL71   0.35625 -0.24120 -0.22941 -0.18284 -0.13847 0.20929  0.35381   .
50 CL83      CL71   0.32423 -0.16108 -0.22828 -0.23138 -0.13822 0.20881  0.27234 -0.35583
51 CL78      CL69   0.16410 -0.24120 -0.15748 -0.08663 -0.13792 0.20536 -0.02644   .
52 Israel    CL69   0.77257 -0.32132 -0.53680 -0.59395 -0.13951 0.21180   .        .
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Obs _RATIO_ _LOGR_ _CCC_    birth     death    infant    _DIST_   _AVLINK_  country   DIST
27    .       .      .     1.45572   0.18611   0.28609  -0.54757  -0.53680  Botswana  2.3
28    .       .      .     1.34312   0.11877   0.39814  -0.54757  -0.53680  Kenya     2.2
29    .       .      .     0.52494  -0.44238   0.30850  -0.54757  -0.53680  Mongolia  1.5
30    .       .      .     0.47990  -0.55461   0.44296  -0.54757  -0.53680  Algeria   1.6
31    .       .      .    -1.19212   0.20295  -0.95154  -0.26214  -0.26746            1.8
32    .       .      .    -1.26906   0.30957  -1.04622  -0.28795  -0.30705            2.1
33    .       .      .    -1.44170  -0.36382  -0.99356  -0.40753  -0.41287            4.6
34    .       .      .    -1.29158  -0.28526  -0.92185  -0.54757  -0.53680  Portugal  2.1
35    .       .      .    -0.42836  -1.11577  -0.83220  -0.54757  -0.53680  Chile     1.9
36    .       .      .    -0.58599  -1.02598  -0.78066  -0.54757  -0.53680  Sri_Lank  1.9
37    .       .      .     0.20217  -0.28526   0.21886  -0.54757  -0.53680  Vietnam   1.3
38    .       .      .     0.22469  -0.19547   0.39814  -0.54757  -0.53680  South_Af  1.4
39    .       .      .    -0.63103  -0.53216  -0.63947  -0.54757  -0.53680  Argentin  1.5
40    .       .      .    -0.51093  -0.68929  -0.58793  -0.54757  -0.53680  Thailand  1.5
41    .       .      .    -0.03803  -0.64440   0.19645  -0.54757  -0.53680  Brazil    1.3
42    .       .      .    -0.06055  -0.77907   0.03957  -0.54757  -0.53680  Guyana    1.4
43    .       .      .     0.28474  -0.55461   1.24751  -0.54757  -0.53680  Peru      2.1
44    .       .      .     0.08958  -0.59950   1.19820  -0.54757  -0.53680  Pakistan  2.1
45    .       .      .    -1.19400  -0.48727  -1.05631  -0.54757  -0.53680  Netherla  2.1
46    .       .      .    -1.38165  -0.57706  -1.03390  -0.54757  -0.53680  Spain     2.3
47    .       .      .    -0.12060  -1.43001  -0.69326  -0.54757  -0.53680  Venezuel  2.1
48    .       .      .    -0.05304  -1.56469  -0.85685  -0.54757  -0.53680  Bahrain   2.3
49    .       .      .    -1.04762  -0.33015  -0.98459  -0.20022  -0.22941            1.5
50    .       .      .    -1.20150  -0.24785  -1.06378  -0.21300  -0.22828            1.6
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51     .        .        .     -0.50717  -1.07087  -0.80643  -0.11893  -0.15748               1.4
52     .        .        .     -0.51093  -1.00353  -0.99804  -0.54757  -0.53680  Israel       1.9
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Cluster=1
(continued)

Obs	_NAME_	_PARENT_	_NCL_	_FREQ_	_HEIGHT_	_RMSSTD_	_SPRSQ_	_RSQ_	_PSF_	_PST2_
53	CL86	CL68	0.42030	-0.24120	-0.25488	-0.21690	-0.13863	0.21005	0.53842	.
54	CL89	CL68	0.51637	-0.24120	-0.33179	-0.31976	-0.13904	0.21097	1.10747	.
55	Turkey	CL67	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
56	Indonesi	CL67	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
57	CL96	CL66	0.74055	-0.24120	-0.45348	-0.48252	-0.13943	0.21177	5.30121	.
58	U.S.A.	CL66	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
59	Philippi	CL65	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
60	Tunisia	CL65	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
61	Congo	CL64	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
62	Zaire	CL64	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
63	Poland	CL63	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
64	CL71	CL63	-0.06007	-0.00083	-0.09339	-0.07689	-0.13558	0.19968	-0.14779	-0.33057
65	CL80	CL62	0.22815	0.07929	-0.16795	-0.17992	-0.13644	0.20668	0.03248	-0.27902
66	CL68	CL62	-0.15614	-0.08095	-0.08892	-0.06913	-0.13575	0.19648	-0.18589	-0.27598
67	CL79	CL61	0.19613	-0.16108	-0.16155	-0.17314	-0.13749	0.20594	-0.00935	0.01589
68	CL73	CL61	0.00398	-0.24120	-0.11515	-0.03000	-0.13755	0.20192	-0.09896	.
69	Nigeria	CL60	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
70	Uganda	CL60	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
71	Lebanon	CL59	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
72	CL65	CL59	-0.25221	-0.24120	-0.05567	0.04954	-0.13696	0.19359	-0.19862	.
73	Albania	CL58	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
74	Columbia	CL58	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
75	CL63	CL57	-0.31626	0.07929	-0.01103	-0.00823	-0.13553	0.19117	-0.21260	-0.42397
76	Yugoslav	CL57	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
77	Banglade	CL56	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
78	Sudan	CL56	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.

Obs	_RATIO_	_LOGR_	_CCC_	birth	death	infant	_DIST_	_AVLINK_	country	DIST
53	.	.	.	-1.30659	0.02899	-1.04398	-0.22900	-0.25488		1.9
54	.	.	.	-1.10392	0.02899	-1.06527	-0.31591	-0.33179		2.1
55	.	.	.	0.00701	-0.53216	0.48779	-0.54757	-0.53680	Turkey	1.4
56	.	.	.	-0.03803	-0.30770	0.46538	-0.54757	-0.53680	Indonesi	1.4
57	.	.	.	-1.08140	-0.76785	-1.04510	-0.45342	-0.45348		6.5
58	.	.	.	-0.93128	-0.59950	-1.01149	-0.54757	-0.53680	U.S.A.	2.0
59	.	.	.	0.30726	-0.68929	-0.20694	-0.54757	-0.53680	Philippi	1.4
60	.	.	.	0.14963	-0.77907	-0.05007	-0.54757	-0.53680	Tunisia	1.4
61	.	.	.	1.27557	0.85950	0.42055	-0.54757	-0.53680	Congo	2.5
62	.	.	.	1.23804	0.76971	0.64466	-0.54757	-0.53680	Zaire	2.5
63	.	.	.	-1.11143	-0.12813	-0.85685	-0.54757	-0.53680	Poland	1.9
64	.	.	.	-1.13995	-0.28077	-1.03211	-0.11212	-0.09339		1.6
65	.	.	.	-1.21777	0.23849	-0.98310	-0.18257	-0.16795		1.7

11

Obs			birth	death	infant	_DIST_	_AVLINK_	country	DIST
66	.	.	.	-1.20526	0.02899	-1.05463	-0.08136	-0.08892		1.7
67	.	.	.	-1.39166	-0.33763	-0.96965	-0.12936	-0.16155		1.8
68	.	.	.	-1.28782	-0.53216	-1.04510	-0.07110	-0.11515		1.8
69	.	.	.	1.45572	1.08396	1.13770	-0.54757	-0.53680	Nigeria	3.1
70	.	.	.	1.73345	1.08396	1.09287	-0.54757	-0.53680	Uganda	3.3
71	.	.	.	0.19466	-0.46483	-0.13971	-0.54757	-0.53680	Lebanon	1.3
72	.	.	.	0.22844	-0.73418	-0.12851	-0.00389	-0.05567		1.0
73	.	.	.	-0.33078	-1.13821	-0.52518	-0.54757	-0.53680	Albania	1.7
74	.	.	.	-0.12811	-1.04843	-0.31900	-0.54757	-0.53680	Columbia	1.6
75	.	.	.	-1.13520	-0.25533	-1.00290	-0.02160	-0.01103		1.7
76	.	.	.	-1.13395	-0.39749	-0.76273	-0.54757	-0.53680	Yugoslav	1.9
77	.	.	.	0.98282	1.06151	1.45145	-0.54757	-0.53680	Banglade	3.0
78	.	.	.	1.16297	1.12885	1.20493	-0.54757	-0.53680	Sudan	3.0

Cluster=1
(continued)

Obs	_NAME_	_PARENT_	_NCL_	_FREQ_	_HEIGHT_	_RMSSTD_	_SPRSQ_	_RSQ_	_PSF_	_PST2_
79	Paraguay	CL55	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
80	Jordan	CL55	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
81	CL76	CL53	0.10006	-0.24120	-0.12947	-0.04916	-0.13768	0.20403	-0.06224	.
82	China	CL53	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
83	CL57	CL52	-0.50841	0.15942	0.08675	0.07221	-0.13367	0.17885	-0.29040	-0.40794
84	CL61	CL52	-0.38031	-0.00083	0.00338	0.03701	-0.13384	0.18535	-0.27424	-0.34546
85	CL75	CL51	0.06803	-0.24120	-0.12335	-0.04098	-0.13762	0.20334	-0.07656	.
86	Ecuador	CL51	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
87	CL67	CL50	-0.18816	-0.24120	-0.08227	0.01397	-0.13723	0.19564	-0.18779	.
88	CL77	CL50	0.13208	-0.24120	-0.13462	-0.05605	-0.13772	0.20470	-0.04580	.
89	CL81	CL49	0.26018	-0.24120	-0.17689	-0.11259	-0.13808	0.20781	0.15978	.
90	Morocco	CL49	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
91	Tanzania	CL48	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
92	Romania	CL47	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
93	CL90	CL47	0.54840	-0.24120	-0.34730	-0.34051	-0.13911	0.21114	1.26248	.
94	CL51	CL46	-0.70056	-0.16108	0.19300	0.26458	-0.13231	0.16219	-0.34038	-0.35874
95	CL59	CL46	-0.44436	-0.16108	0.05115	0.14785	-0.13528	0.18249	-0.27964	-0.45916
96	Japan	CL45	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
97	Hong_Kon	CL45	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
98	Cambodia	CL44	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
99	Nepal	CL44	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
100	CL64	CL43	-0.28424	-0.24120	-0.04936	0.05798	-0.13689	0.19263	-0.20079	.
101	Ghana	CL43	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
102	CL72	CL42	-0.02804	-0.24120	-0.09389	-0.00157	-0.13734	0.20112	-0.11085	.
103	United_A	CL42	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
104	Namibia	CL41	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.

Obs	_RATIO_	_LOGR_	_CCC_	birth	death	infant	_DIST_	_AVLINK_	country	DIST
79	.	.	.	0.42736	-0.93620	-0.27418	-0.54757	-0.53680	Paraguay	1.6
80	.	.	.	0.73512	-0.98109	-0.22936	-0.54757	-0.53680	Jordan	1.8

81	.	.	.	-0.57098	-0.61073	-0.61370	-0.08728	-0.12947		1.(
82	.	.	.	-0.59349	-0.91375	-0.49828	-0.54757	-0.53680	China	1.7
83	.	.	.	-1.13502	-0.27564	-0.96859	0.08048	0.08675		1.9
84	.	.	.	-1.35013	-0.41544	-0.99983	-0.02440	0.00338		1.9
85	.	.	.	-0.04929	-0.71173	0.11801	-0.08037	-0.12335		0.8
86	.	.	.	0.28474	-0.75663	0.19645	-0.54757	-0.53680	Ecuador	1.5
87	.	.	.	-0.01551	-0.41993	0.47658	-0.03395	-0.08227		1.(
88	.	.	.	0.21343	-0.24036	0.30850	-0.09310	-0.13462		0.7
89	.	.	.	0.50242	-0.49850	0.37573	-0.14087	-0.17689		1.(
90	.	.	.	0.47990	-0.21792	0.62225	-0.54757	-0.53680	Morocco	1.6
91	.	.	.	1.60584	0.72482	1.16011	-0.54757	-0.53680	Tanzania	3.:
92	.	.	.	-1.16397	-0.01590	-0.61258	-0.54757	-0.53680	Romania	1.8
93	.	.	.	-0.84495	-0.21792	-0.71231	-0.33344	-0.34730		1.9
94	.	.	.	0.06205	-0.72670	0.14416	0.24333	0.19300		1.6
95	.	.	.	0.21718	-0.64440	-0.13224	0.05867	0.05115		1.2
96	.	.	.	-1.44170	-0.91375	-1.11458	-0.54757	-0.53680	Japan	2.5
97	.	.	.	-1.30659	-1.31778	-1.07872	-0.54757	-0.53680	Hong_Kon	2.6
98	.	.	.	0.92277	1.30842	1.69796	-0.54757	-0.53680	Cambodia	3.:
99	.	.	.	0.78766	0.90439	1.65314	-0.54757	-0.53680	Nepal	3.(
100	.	.	.	1.25680	0.81461	0.53261	0.00324	-0.04936		2.2
101	.	.	.	1.14796	0.52281	0.80154	-0.54757	-0.53680	Ghana	2.4
102	.	.	.	-0.08682	-1.49735	-0.77506	-0.04707	-0.09389		1.8
103	.	.	.	-0.47339	-1.56469	-0.63275	-0.54757	-0.53680	United_A	2.2
104	.	.	.	1.11794	0.29834	1.81002	-0.54757	-0.53680	Namibia	3.:

Cluster=1
(continued)

Obs	_NAME_	_PARENT_	_NCL_	_FREQ_	_HEIGHT_	_RMSSTD_	_SPRSQ_	_RSQ_	_PSF_	_PST2_
105	Swazilan	CL41	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
106	Libya	CL40	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
107	Zimbabwe	CL40	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
108	CL69	CL39	-0.12412	-0.16108	-0.08936	-0.02427	-0.13709	0.19786	-0.16559	-0.4654
109	Singapor	CL39	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
110	CL42	CL38	-0.98878	-0.16108	0.33511	0.41777	-0.12905	0.13100	-0.37180	-0.3117
111	Kuwait	CL38	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
112	CL52	CL37	-0.66853	0.56003	0.14518	0.20775	-0.12216	0.16483	-0.33649	-0.2290
113	CL66	CL37	-0.22019	-0.16108	-0.07957	-0.09052	-0.13646	0.19452	-0.19616	1.3125
114	CL62	CL36	-0.34829	0.39978	0.00145	0.01454	-0.12934	0.18744	-0.26056	-0.1723
115	Hungary	CL36	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
116	Gabon	CL35	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
117	Zambia	CL34	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
118	CL50	CL33	-0.73258	-0.08095	0.20167	0.27792	-0.12951	0.15852	-0.34901	-0.3076
119	CL49	CL33	-0.76461	-0.16108	0.22717	0.28540	-0.13140	0.15554	-0.35265	-0.2727
120	CL58	CL32	-0.47639	-0.24120	0.07102	0.21899	-0.13543	0.18099	-0.28194	.
121	Malaysia	CL32	0.77257	-0.32132	-0.53680	-0.59395	-0.13951	0.21180	.	.
122	CL93	CL31	0.64447	-0.24120	-0.38968	-0.39719	-0.13927	0.21159	2.65828	.

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123 CL40       CL31    -1.05283 -0.24120  0.35441  0.59801 -0.13075  0.12458 -0.36954    .
124 Iran       CL30     0.77257 -0.32132 -0.53680 -0.59395 -0.13951  0.21180    .        .
125 CL37       CL28    -1.14890  0.80040  0.42868  0.39748 -0.10139  0.10162 -0.39568 -0.0435
126 CL47       CL28    -0.82866 -0.16108  0.25372  0.28164 -0.13045  0.14946 -0.35816  0.5256
127 Mozambiq   CL27     0.77257 -0.32132 -0.53680 -0.59395 -0.13951  0.21180    .        .
128 CL33       CL26    -1.27700  0.15942  0.45573  0.56131 -0.11374  0.07660 -0.40148 -0.2825
129 India      CL26     0.77257 -0.32132 -0.53680 -0.59395 -0.13951  0.21180    .        .
130 CL53       CL25    -0.63651 -0.16108  0.13731  0.20658 -0.13344  0.17120 -0.30390 -0.3820
Obs _ERSQ_ _RATIO_ _LOGR_ _CCC_    birth    death   infant   _DIST_  _AVLINK_ country  DI
105   .      .      .      .     1.32811  0.38813  1.42903 -0.54757 -0.53680 Swazilan  2
106   .      .      .      .     1.11794 -0.30770  0.62225 -0.54757 -0.53680 Libya     2
107   .      .      .      .     0.94529 -0.10569  0.26368 -0.54757 -0.53680 Zimbabwe  1
108   .      .      .      .    -0.50842 -1.04843 -0.87030 -0.08963 -0.08936           1
109   .      .      .      .    -0.84871 -1.25044 -1.04734 -0.54757 -0.53680 Singapor  2
110   .      .      .      .    -0.21568 -1.51980 -0.72762  0.40539  0.33511           2
111   .      .      .      .    -0.17314 -1.92383 -0.86582 -0.54757 -0.53680 Kuwait    2
112   .      .      .      .    -1.22465 -0.33389 -0.98161  0.03934  0.14518           2
113   .      .      .      .    -1.03136 -0.71173 -1.03390 -0.03305 -0.07957           2
114   .      .      .      .    -1.21276  0.15469 -1.01171 -0.05238  0.00145           2
115   .      .      .      .    -1.31410  0.59014 -0.88375 -0.54757 -0.53680 Hungary   2
116   .      .      .      .     0.77265  1.35331  1.09287 -0.54757 -0.53680 Gabon     2
117   .      .      .      .     1.65088  0.65748  0.57743 -0.54757 -0.53680 Zambia    2
118   .      .      .      .     0.09896 -0.33015  0.39254  0.21320  0.20167           1
119   .      .      .      .     0.49491 -0.40497  0.45791  0.29143  0.22717           1
120   .      .      .      .    -0.22944 -1.09332 -0.42209  0.13927  0.07102           2
121   .      .      .      .     0.18716 -1.16066 -0.67757 -0.54757 -0.53680 Malaysia  1
122   .      .      .      .     0.99408 -0.68929  0.35332 -0.38133 -0.38968           3
123   .      .      .      .     1.03161 -0.20670  0.44296  0.45951  0.35441
124   .      .      .      .     1.00534  0.16367  1.20717 -0.54757 -0.53680 Iran      2
125   .      .      .      .    -1.18599 -0.40946 -0.99207  0.41145  0.42868           2
126   .      .      .      .    -0.95129 -0.15058 -0.67906  0.33929  0.25372           2
127   .      .      .      .     1.19300  1.73490  1.94448 -0.54757 -0.53680 Mozambiq  4
128   .      .      .      .     0.26865 -0.36222  0.42055  0.38541  0.45573           2
129   .      .      .      .     0.10459 -0.12813  0.82395 -0.54757 -0.53680 India     2
130   .      .      .      .    -0.57848 -0.71173 -0.57523  0.17859  0.13731           1

Cluster=1
(continued)
Obs _NAME_ _PARENT_ _NCL_ _FREQ_ _HEIGHT_ _RMSSTD_ _SPRSQ_   _RSQ_    _PSF_   _PST2_
131 CL39    CL25    -1.08485 -0.08095  0.36835  0.35212 -0.12696  0.11997 -0.37178 -0.2448
132 CL46    CL23    -0.86068  0.07929  0.28161  0.39416 -0.12529  0.14425 -0.36869 -0.3697
133 CL55    CL23    -0.57246 -0.24120  0.09897  0.25637 -0.13505  0.17563 -0.29333    .
134 CL36    CL22    -1.18092  0.47991  0.43237  0.18607 -0.12254  0.09539 -0.39824 -0.1910
135 CL28    CL22    -1.43712  1.04077  0.59331  0.57290 -0.09111  0.03268 -0.41070 -0.1548
136 CL31    CL21    -1.34105 -0.08095  0.53516  0.67633 -0.11867  0.06362 -0.40096 -0.3210
137 Egypt   CL21     0.77257 -0.32132 -0.53680 -0.59395 -0.13951  0.21180    .        .
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138 CL82       CL20      0.29220 -0.24120 -0.19075 -0.13113 -0.13819  0.20833  0.21190    .
139 CL32       CL19     -1.30902 -0.16108  0.50342  0.63516 -0.12496  0.07127 -0.39963 -0.3703
140 CL38       CL19     -1.11688 -0.08095  0.41729  0.55756 -0.12761  0.11560 -0.37260 -0.4485
141 Bolivia    CL18      0.77257 -0.32132 -0.53680 -0.59395 -0.13951  0.21180    .         .
142 Oman       CL17      0.77257 -0.32132 -0.53680 -0.59395 -0.13951  0.21180    .         .
143 CL23       CL16     -1.59724  0.23954  0.76076  0.76239 -0.09468 -0.01943 -0.40757 -0.1746
144 CL26       CL16     -1.50117  0.23954  0.60026  0.66270 -0.12073  0.01822 -0.40477 -0.4301
145 CL19       CL15     -1.72534  0.15942  0.82927  0.98789 -0.09011 -0.13278 -0.44034 -0.2703
146 CL25       CL15     -1.53319  0.15942  0.62574  0.72088 -0.10002  0.00373 -0.40903 -0.1612
147 CL22       CL10     -1.62927  1.92212  0.79581  0.87054  0.05048 -0.08915 -0.45033  0.7855
148 CL45       CL10     -0.89270 -0.24120  0.30931  0.53770 -0.13161  0.14135 -0.36879    .
149 CL74       CL8       0.03601 -0.24120 -0.12001 -0.03651 -0.13759  0.20264 -0.08856    .
150 Mexico     CL7       0.77257 -0.32132 -0.53680 -0.59395 -0.13951  0.21180    .         .
151 Korea      CL7       0.77257 -0.32132 -0.53680 -0.59395 -0.13951  0.21180    .         .
152 CL15       CL5      -1.85344  0.72028  1.10485  1.29610 -0.00973 -0.26360 -0.44682 -0.0741
Obs _ERSQ_ _RATIO_ _LOGR_  _CCC_    birth    death    infant    _DIST_  _AVLINK_ country  DI
131   .       .       .       .     -0.59349 -1.09893 -0.91456  0.43679  0.36835          2
132   .       .       .       .      0.13962 -0.68555  0.00596  0.19335  0.28161          1
133   .       .       .       .      0.58124 -0.95864 -0.25177  0.17086  0.09897          1
134   .       .       .       .     -1.22197  0.19428 -1.00008  0.49189  0.43237          3
135   .       .       .       .     -1.14687 -0.36631 -0.93990  0.51119  0.59331          3
136   .       .       .       .      1.01285 -0.44799  0.39814  0.55100  0.53516          2
137   .       .       .       .      0.72761 -0.28526 -0.10834 -0.54757 -0.53680 Egypt    1
138   .       .       .       .      1.39942  0.15244  0.34212 -0.15654 -0.19075          2
139   .       .       .       .     -0.09057 -1.11577 -0.50725  0.57661  0.50342          2
140   .       .       .       .     -0.20505 -1.62080 -0.76217  0.41099  0.41729          2
141   .       .       .       .      1.31310  1.62267  1.27216 -0.54757 -0.53680 Bolivia  3
142   .       .       .       .      1.23804 -0.66684 -0.31900 -0.54757 -0.53680 Oman     2
143   .       .       .       .      0.25002 -0.75382 -0.05847  0.76792  0.76076          3
144   .       .       .       .      0.24815 -0.33295  0.47098  0.56718  0.60026          2
145 0.55113 0.72237 0.62134 0.61029 -0.15599 -1.40436 -0.65292  0.74416  0.82927          3
146   .       .       .       .     -0.58706 -0.93299 -0.76913  0.60729  0.62574          3
147   .       .       .       .     -1.17536 -0.15368 -0.96273  0.72179  0.79581          4
148   .       .       .       .     -1.37415 -1.11577 -1.09665  0.40855  0.30931          2
149   .       .       .       .      0.18716 -0.57706  1.22286 -0.07659 -0.12001          1
150   .       .       .       .     -0.00801  2.78987 -0.25177 -0.54757 -0.53680 Mexico   3
151   .       .       .       .     -0.42085  1.64512 -0.65516 -0.54757 -0.53680 Korea    2
152 0.48648 0.42765 0.42766 0.44224 -0.37152 -1.16867 -0.71102  0.91769  1.10485          3

Cluster=2
Obs _NAME_ _PARENT_  _NCL_   _FREQ_  _HEIGHT_ _RMSSTD_  _SPRSQ_   _RSQ_    _PSF_    _PST2_   _
153  CL3    CL2     -2.23773 6.56925  4.86392  5.09607 10.5754  -6.21143 -0.59196 6.02139 -0.
154  CL1           -2.30178 7.37048  7.37764  6.15152  8.2458  -9.66890    .      1.45861 -3.
Obs _RATIO_ _LOGR_   _CCC_    birth    death    infant    _DIST_  _AVLINK_ country DISTANCE
153 -2.67284 -3.05447 -3.18419 -0.10757 -0.24604 -0.15883 4.79660  4.86392          4.76033
154 -0.62729 -0.38417 -0.33453  0.00925  0.01464  0.01494 7.58565  7.37764          4.90683
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Cluster=3
Obs _NAME_ _PARENT_   _NCL_    _FREQ_  _HEIGHT_ _RMSSTD_  _SPRSQ_   _RSQ_      _PSF_     _PST2_    _F
155 CL10     CL5     -2.01356 2.08237  1.60732  1.10932  0.01891 -0.52990 -0.44164  0.02801  0.
156 CL5      CL3     -2.17368 3.20409  2.33623  2.26333  1.25198 -1.29072 -0.42699  2.84010 -0.
Obs  _RATIO_   _LOGR_    _CCC_     birth     death    infant   _DIST_   _AVLINK_  country  DI
155  0.19165   0.26344  0.30970  -1.18819  -0.21575  -0.97137  1.66665   1.60732            3
156 -0.14421   0.01381  0.02672  -0.93411  -0.51221  -0.89037  2.34282   2.33623            0

Cluster=4
Obs _NAME_   _PARENT_   _NCL_    _FREQ_  _HEIGHT_ _RMSSTD_  _SPRSQ_   _RSQ_      _PSF_     _PST2_
157 Angola    CL85     0.77257 -0.32132 -0.53680 -0.59395 -0.13951  0.21180     .         .
158 Ethiopia  CL85     0.77257 -0.32132 -0.53680 -0.59395 -0.13951  0.21180     .         .
159 CL85      CL70     0.38828 -0.24120 -0.22964 -0.18314 -0.13847  0.20967   0.42851     .
160 Somalia   CL70     0.77257 -0.32132 -0.53680 -0.59395 -0.13951  0.21180     .         .
161 CL70      CL54    -0.09209 -0.16108 -0.09209 -0.05349 -0.13695  0.19874  -0.15864  -0.42185
162 Gambia    CL54     0.77257 -0.32132 -0.53680 -0.59395 -0.13951  0.21180     .         .
163 CL60      CL48    -0.41234 -0.24120  0.03265  0.16767 -0.13593  0.18404  -0.27580     .
164 CL56      CL35    -0.54043 -0.24120  0.09028  0.24475 -0.13517  0.17726  -0.29198     .
165 CL43      CL34    -0.95675 -0.16108  0.31659  0.41112 -0.12967  0.13483  -0.37008  -0.36187
166 CL41      CL30    -1.02080 -0.24120  0.35298  0.59611 -0.13078  0.12779  -0.37089     .
167 CL35      CL29    -1.21295 -0.16108  0.43709  0.57462 -0.12701  0.09080  -0.39680  -0.40230
168 CL44      CL29    -0.92473 -0.24120  0.31102  0.53998 -0.13158  0.13844  -0.36845     .
169 CL54      CL27    -0.60448 -0.08095  0.10892  0.12645 -0.13351  0.17342  -0.29906  -0.38153
Obs  _ERSQ_ _RATIO_ _LOGR_ _CCC_    birth    death    infant   _DIST_   _AVLINK_ country  DISTANCE
157    .       .      .      .    1.35814  2.11649  1.85484 -0.54757 -0.53680 Angola   4.21435
158    .       .      .      .    1.46322  2.22872  1.85484 -0.54757 -0.53680 Ethiopia 4.22659
159    .       .      .      .    1.41068  2.17260  1.85484 -0.20048 -0.22964          3.24096
160    .       .      .      .    1.57582  2.11649  1.74278 -0.54757 -0.53680 Somalia  4.22403
161    .       .      .      .    1.46573  2.15390  1.81749 -0.07596 -0.09209          2.46072
162    .       .      .      .    1.37315  2.38584  1.98930 -0.54757 -0.53680 Gambia   4.25260
163    .       .      .      .    1.59458  1.08396  1.11529  0.09592  0.03265          2.42155
164    .       .      .      .    1.07290  1.09518  1.32819  0.16104  0.09028          2.17134
165    .       .      .      .    1.22052  0.71734  0.62225  0.37661  0.31659          2.19842
166    .       .      .      .    1.22302  0.34324  1.61953  0.45790  0.35298          2.28364
167    .       .      .      .    0.97281  1.18123  1.24975  0.49435  0.43709          1.40536
168    .       .      .      .    0.85522  1.10641  1.67555  0.41048  0.31102          1.67844
169    .       .      .      .    1.44258  2.21188  1.86044  0.13281  0.10892          1.81925

Cluster=4
(continued)
Obs _NAME_    _PARENT_   _NCL_    _FREQ_  _HEIGHT_ _RMSSTD_  _SPRSQ_   _RSQ_      _PSF_     _PST2_
170 Malawi    CL24     0.77257 -0.32132 -0.53680 -0.59395 -0.13951  0.21180     .         .
171 Sierra_L  CL24     0.77257 -0.32132 -0.53680 -0.59395 -0.13951  0.21180     .         .
172 CL34      CL20    -1.24497 -0.08095  0.44787  0.57750 -0.12658  0.08606  -0.39517  -0.4397
173 CL29      CL18    -1.40510 -0.00083  0.57503  0.77171 -0.11828  0.05044  -0.39809  -0.4167
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174 CL21        CL17    -1.66129 -0.00083   0.80434   0.90777 -0.11374 -0.09860 -0.44476 -0.4158
175 CL18        CL14    -1.75737  0.07929   0.87210   0.96392 -0.11069 -0.14336 -0.43278 -0.4197
176 CL48        CL14    -0.79663 -0.16108   0.23266   0.35443 -0.13200  0.15279 -0.35445 -0.4385
177 CL27        CL13    -1.46915 -0.00083   0.59399   0.51344 -0.11887  0.02511 -0.40849 -0.2366
178 CL24        CL13    -1.56522 -0.24120   0.75047   1.12774 -0.12124 -0.00298 -0.40361    .
179 CL16        CL12    -1.82142  0.88052   1.08948   1.22840  0.02003 -0.21597 -0.44129  0.1667
180 CL17        CL12    -1.78939  0.07929   1.07270   1.15193 -0.10117 -0.15743 -0.42610 -0.4080
181 CL14        CL11    -1.88546  0.31966   1.13773   1.30188 -0.04816 -0.29712 -0.44410 -0.1904
182 CL30        CL11    -1.37307 -0.16108   0.55698   0.78401 -0.12483  0.05823 -0.39801 -0.4580
183 CL11        CL9     -1.98154  0.56003   1.52328   1.67596  0.00921 -0.47176 -0.44708 -0.1920
184 CL20        CL9     -1.69332  0.07929   0.80678   0.91781 -0.09577 -0.11466 -0.44244 -0.2318
185 CL12        CL8     -1.94951  1.36126   1.44790   1.60865  0.08748 -0.41719 -0.45037 -0.0105
186 Afghanis    CL6      0.77257 -0.32132  -0.53680  -0.59395 -0.13951  0.21180    .         .
187 CL13        CL6     -1.91749  0.15942   1.43017   1.41125 -0.03931 -0.33389 -0.44061 -0.0566
188 CL9         CL4     -2.04559  1.04077   1.77901   2.04447  0.17015 -0.64353 -0.44651  0.0117
189 CL8         CL4     -2.07761  1.52151   1.87040   1.79646  0.04068 -0.70966 -0.43441 -0.2439
190 CL7         CL2     -2.10964 -0.24120   2.00352   2.80367 -0.06835 -0.73577 -0.40590    .
191 CL6         CL1     -2.14166  0.23954   2.15052   1.90510 -0.01875 -0.78009 -0.37114 -0.3099
Obs _ERSQ_  _RATIO_  _LOGR_  _CCC_    birth     death     infant    _DIST_   _AVLINK_ country  I
170 .        .        .       .        1.44070   3.19390   1.69796  -0.54757 -0.53680 Malawi
171 .        .        .       .        1.43320   2.83476   2.23582  -0.54757 -0.53680 Sierra_L
172 .        .        .       .        1.32811   0.70238   0.61104   0.45129  0.44787
173 .        .        .       .        0.92577   1.15130   1.42007   0.46441  0.57503
174 .        .        .       .        0.95580  -0.41544   0.29685   0.81802  0.80434
175 0.53718  0.88149 0.72114 0.70810   0.99033   1.22986   1.39542   0.86742  0.87210
176 .        .        .       .        1.59834   0.96425   1.13023   0.26021  0.23266
177 .        .        .       .        1.39266   2.11649   1.87725   0.67467  0.59399
178 .        .        .       .        1.43695   3.01433   1.96689   0.90708  0.75047
179 0.50509  0.60356 0.54470 0.54957   0.24908  -0.54339   0.20625   0.97214  1.08948
180 0.52191  1.00993 0.79944 0.78674   1.00284  -0.45734   0.19421   1.08460  1.07270
181 0.46573  0.44042 0.43630 0.45513   1.19300   1.14132   1.30702   1.07870  1.13773
182 .        .        .       .        1.15046   0.28338   1.48207   0.58155  0.55698
183 0.38581  0.16602 0.24507 0.28510   1.18236   0.92684   1.35078   1.40875  1.52328
184 .        .        .       .        1.35188   0.51906   0.52140   0.83068  0.80678
185 0.41603  0.17052 0.24831 0.28289   0.45465  -0.51992   0.20297   1.18797  1.44790
186 .        .        .       .        0.84771   1.77979   2.85435  -0.54757 -0.53680 Afghanis
187 0.44243  0.46034 0.44975 0.47340   1.40532   2.37301   1.90286   1.46770  1.43017
188 0.30918 -0.01257 0.11404 0.07510   1.23887   0.79091   1.07432   1.56967  1.77901
189 0.25784  0.12089 0.21247 0.16356   0.43236  -0.52468   0.28796   1.83803  1.87040
190 0.19256  0.53789 0.50152 0.41951  -0.21443   2.21749  -0.45346   2.32305  2.00352
191 0.10639  1.00232 0.79485 0.69611   1.33562   2.29886   2.02180   2.27938  2.15052


Cluster=5
Obs _NAME_ _PARENT_   _NCL_   _FREQ_  _HEIGHT_ _RMSSTD_ _SPRSQ_   _RSQ_     _PSF_    _PST2_  _F
192 CL4     CL3      -2.20571 2.96372  3.36771  3.49895  2.55452 -2.27935 -0.48515 2.71332 -0.
Obs  _RATIO_   _LOGR_     _CCC_     birth    death     infant   _DIST_   _AVLINK_   country  DI
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192 -1.19488  -0.92724  -0.85710  0.77801  0.039144  0.62497  3.34682   3.36771


Cluster=6
Obs _NAME_ _PARENT_   _NCL_    _FREQ_ _HEIGHT_ _RMSSTD_ _SPRSQ_   _RSQ_      _PSF_    _PST2_   _
193 CL2      CL1     -2.26976 6.72950  5.34491  5.20968 0.89678 -6.59172 -0.56365 -0.29326 -1
Obs  _RATIO_  _LOGR_    _CCC_    birth    death    infant   _DIST_ _AVLINK_ country DISTANCE
193 -2.08326 -2.02796 -1.90836 -0.10997 -0.19068 -0.16545 4.99252  5.34491             0
```