```
DATA:
   File is "../US_Other_All.csv";

VARIABLE:
   Names are
      Group
      AP1-AP3
      BP1-BP3
      CP1-CP3
      DP1-DP3
      EP1-EP3
      FP1-FP3
      GP1-GP3;
      Grouping is group (11=U5-6 12=U7-8 13=U9-10
                  14=U11-12 15=U13-14 16=U15-16
                  21=O5-6 22=O7-8 23=O9-10
                  24=O11-12 25=O13-14 26=O15-16);

   USEVARIABLES ARE
      Group
      AP1-AP3
      BP1-BP3
      CP1-CP3
      DP1-DP3
      EP1-EP3
      FP1-FP3
      GP1-GP3;

   USEOBSERVATIONS ARE Group < 27;

      Missing are all (-999);

  ANALYSIS:
    estimator = ML;
    Iterations = 10000;

MODEL:

   A BY AP1*(L1)
       AP2 (L2)
       AP3 (L3);
   B BY BP1*(L4)
       BP2 (L5)
       BP3 (L6);
```

```
  C BY CP1*(L7)
     CP2 (L8)
     CP3 (L9);
  D BY DP1*(L10)
     DP2 (L11)
     DP3 (L12);
  E BY EP1*(L13)
     EP2 (L14)
     EP3 (L15);
  F BY FP1*(L16)
     FP2 (L17)
     FP3 (L18);
  G BY GP1*(L19)
     GP2 (L20)
     GP3 (L21);

 MODEL CONSTRAINT:
  L1 = 3 - L2 - L3;
  L4 = 3 - L5 - L6;
  L7 = 3 - L8 - L9;
  L10 = 3 - L11 - L12;
  L13 = 3 - L14 - L15;
  L16 = 3 - L17 - L18;
  L19 = 3 - L20 - L21;

MODEL U5-6:
  [AP1] (T1);
  [AP2] (T2);
  [AP3] (T3);
  [BP1] (T4);
  [BP2] (T5);
  [BP3] (T6);
  [CP1] (T7);
  [CP2] (T8);
  [CP3] (T9);
  [DP1] (T10);
  [DP2] (T11);
  [DP3] (T12);
  [EP1] (T13);
  [EP2] (T14);
  [EP3] (T15);
  [FP1] (T16);
  [FP2] (T17);
  [FP3] (T18);
```

[GP1] (T19);
[GP2] (T20);
[GP3] (T21);

[A*];
[B*];
[C*];
[D*];
[E*];
[F*];
[G*];

A*;
B*;
C*;
D*;
E*;
F*;
G*;

MODEL U7-8:

[AP1] (T1);
[AP2] (T2);
[AP3] (T3);
[BP1] (T4);
[BP2] (T5);
[BP3] (T6);
[CP1] (T7);
[CP2] (T8);
[CP3] (T9);
[DP1] (T10);
[DP2] (T11);
[DP3] (T12);
[EP1] (T13);
[EP2] (T14);
[EP3] (T15);
[FP1] (T16);
[FP2] (T17);
[FP3] (T18);
[GP1] (T19);
[GP2] (T20);
[GP3] (T21);

[A*];
[B*];
[C*];
[D*];
[E*];
[F*];
[G*];

A*;
B*;
C*;
D*;
E*;
F*;
G*;

MODEL U9-10:

[AP1] (T1);
[AP2] (T2);
[AP3] (T3);
[BP1] (T4);
[BP2] (T5);
[BP3] (T6);
[CP1] (T7);
[CP2] (T8);
[CP3] (T9);
[DP1] (T10);
[DP2] (T11);
[DP3] (T12);
[EP1] (T13);
[EP2] (T14);
[EP3] (T15);
[FP1] (T16);
[FP2] (T17);
[FP3] (T18);
[GP1] (T19);
[GP2] (T20);
[GP3] (T21);

[A*];
[B*];
[C*];

[D*];
[E*];
[F*];
[G*];

A*;
B*;
C*;
D*;
E*;
F*;
G*;

MODEL U11-12:

[AP1] (T1);
[AP2] (T2);
[AP3] (T3);
[BP1] (T4);
[BP2] (T5);
[BP3] (T6);
[CP1] (T7);
[CP2] (T8);
[CP3] (T9);
[DP1] (T10);
[DP2] (T11);
[DP3] (T12);
[EP1] (T13);
[EP2] (T14);
[EP3] (T15);
[FP1] (T16);
[FP2] (T17);
[FP3] (T18);
[GP1] (T19);
[GP2] (T20);
[GP3] (T21);

[A*];
[B*];
[C*];
[D*];
[E*];
[F*];
[G*];

A*;
B*;
C*;
D*;
E*;
F*;
G*;

MODEL U13-14:

[AP1] (T1);
[AP2] (T2);
[AP3] (T3);
[BP1] (T4);
[BP2] (T5);
[BP3] (T6);
[CP1] (T7);
[CP2] (T8);
[CP3] (T9);
[DP1] (T10);
[DP2] (T11);
[DP3] (T12);
[EP1] (T13);
[EP2] (T14);
[EP3] (T15);
[FP1] (T16);
[FP2] (T17);
[FP3] (T18);
[GP1] (T19);
[GP2] (T20);
[GP3] (T21);

[A*];
[B*];
[C*];
[D*];
[E*];
[F*];
[G*];

A*;
B*;
C*;

D*;
E*;
F*;
G*;

MODEL U15-16:

[AP1] (T1);
[AP2] (T2);
[AP3] (T3);
[BP1] (T4);
[BP2] (T5);
[BP3] (T6);
[CP1] (T7);
[CP2] (T8);
[CP3] (T9);
[DP1] (T10);
[DP2] (T11);
[DP3] (T12);
[EP1] (T13);
[EP2] (T14);
[EP3] (T15);
[FP1] (T16);
[FP2] (T17);
[FP3] (T18);
[GP1] (T19);
[GP2] (T20);
[GP3] (T21);

[A*];
[B*];
[C*];
[D*];
[E*];
[F*];
[G*];

A*;
B*;
C*;
D*;
E*;
F*;
G*;

```
MODEL O5-6:
   A BY AP1*(L1)
      AP2 (L2)
      AP3 (L3);
   B BY BP1*(L4)
      BP2 (L5)
      BP3 (L6);
   C BY CP1*(L7)
      CP2 (L8)
      CP3 (L9);
   D BY DP1*(L10)
      DP2 (L11)
      DP3 (L12);
   E BY EP1*(L13)
      EP2 (L14)
      EP3 (L15);
   F BY FP1*(L16)
      FP2 (L17)
      FP3 (L18);
   G BY GP1*(L19)
      GP2 (L20)
      GP3 (L21);

   [AP1] (T1);
   [AP2] (T2);
   [AP3] (T3);
   [BP1] (T4);
   [BP2] (T5);
   [BP3] (T6);
   [CP1] (T7);
   [CP2] (T8);
   [CP3] (T9);
   [DP1] (T10);
   [DP2] (T11);
   [DP3] (T12);
   [EP1] (T13);
   [EP2] (T14);
   [EP3] (T15);
   [FP1] (T16);
   [FP2] (T17);
   [FP3] (T18);
   [GP1] (T19);
   [GP2] (T20);
   [GP3] (T21);
```

```
  [A*];
  [B*];
  [C*](LMC0);
  [D*];
  [E*];
  [F*];
  [G*];


  A*;
  B*;
  C(LVC);
  D*;
  E*;
  F*;
  G*;

MODEL O7-8:
  A BY AP1*(L1)
      AP2 (L2)
      AP3 (L3);
  B BY BP1*(L4)
      BP2 (L5)
      BP3 (L6);
  C BY CP1*(L7)
      CP2 (L8)
      CP3 (L9);
  D BY DP1*(L10)
      DP2 (L11)
      DP3 (L12);
  E BY EP1*(L13)
      EP2 (L14)
      EP3 (L15);
  F BY FP1*(L16)
      FP2 (L17)
      FP3 (L18);
  G BY GP1*(L19)
      GP2 (L20)
      GP3 (L21);

  [AP1] (T1);
  [AP2] (T2);
  [AP3] (T3);
```

```
  [BP1] (T4);
  [BP2] (T5);
  [BP3] (T6);
  [CP1] (T7);
  [CP2] (T8);
  [CP3] (T9);
  [DP1] (T10);
  [DP2] (T11);
  [DP3] (T12);
  [EP1] (T13);
  [EP2] (T14);
  [EP3] (T15);
  [FP1] (T16);
  [FP2] (T17);
  [FP3] (T18);
  [GP1] (T19);
  [GP2] (T20);
  [GP3] (T21);

  [A*];
  [B*];
  [C*](LMC0);
  [D*];
  [E*];
  [F*];
  [G*];


  A*;
  B*;
  C(LVC);
  D*;
  E*;
  F*;
  G*;

MODEL O9-10:
  A BY AP1*(L1)
      AP2 (L2)
      AP3 (L3);
  B BY BP1*(L4)
      BP2 (L5)
      BP3 (L6);
  C BY CP1*(L7)
```

```
    CP2 (L8)
    CP3 (L9);
D BY DP1*(L10)
    DP2 (L11)
    DP3 (L12);
E BY EP1*(L13)
    EP2 (L14)
    EP3 (L15);
F BY FP1*(L16)
    FP2 (L17)
    FP3 (L18);
G BY GP1*(L19)
    GP2 (L20)
    GP3 (L21);

[AP1] (T1);
[AP2] (T2);
[AP3] (T3);
[BP1] (T4);
[BP2] (T5);
[BP3] (T6);
[CP1] (T7);
[CP2] (T8);
[CP3] (T9);
[DP1] (T10);
[DP2] (T11);
[DP3] (T12);
[EP1] (T13);
[EP2] (T14);
[EP3] (T15);
[FP1] (T16);
[FP2] (T17);
[FP3] (T18);
[GP1] (T19);
[GP2] (T20);
[GP3] (T21);

[A*];
[B*];
[C*](LMC0);
[D*];
[E*];
[F*];
[G*];
```

```
  A*;
  B*;
  C(LVC);
  D*;
  E*;
  F*;
  G*;


MODEL O11-12:
  A BY AP1*(L1)
     AP2 (L2)
     AP3 (L3);
  B BY BP1*(L4)
     BP2 (L5)
     BP3 (L6);
  C BY CP1*(L7)
     CP2 (L8)
     CP3 (L9);
  D BY DP1*(L10)
     DP2 (L11)
     DP3 (L12);
  E BY EP1*(L13)
     EP2 (L14)
     EP3 (L15);
  F BY FP1*(L16)
     FP2 (L17)
     FP3 (L18);
  G BY GP1*(L19)
     GP2 (L20)
     GP3 (L21);

  [AP1] (T1);
  [AP2] (T2);
  [AP3] (T3);
  [BP1] (T4);
  [BP2] (T5);
  [BP3] (T6);
  [CP1] (T7);
  [CP2] (T8);
  [CP3] (T9);
  [DP1] (T10);
  [DP2] (T11);
```

```
  [DP3] (T12);
  [EP1] (T13);
  [EP2] (T14);
  [EP3] (T15);
  [FP1] (T16);
  [FP2] (T17);
  [FP3] (T18);
  [GP1] (T19);
  [GP2] (T20);
  [GP3] (T21);

  [A*];
  [B*];
  [C*](LMC1);
  [D*];
  [E*];
  [F*];
  [G*];

  A*;
  B*;
  C(LVC);
  D*;
  E*;
  F*;
  G*;


MODEL O13-14:
  A BY AP1*(L1)
     AP2 (L2)
     AP3 (L3);
  B BY BP1*(L4)
     BP2 (L5)
     BP3 (L6);
  C BY CP1*(L7)
     CP2 (L8)
     CP3 (L9);
  D BY DP1*(L10)
     DP2 (L11)
     DP3 (L12);
  E BY EP1*(L13)
     EP2 (L14)
     EP3 (L15);
```

```
F BY FP1*(L16)
    FP2 (L17)
    FP3 (L18);
G BY GP1*(L19)
    GP2 (L20)
    GP3 (L21);

[AP1] (T1);
[AP2] (T2);
[AP3] (T3);
[BP1] (T4);
[BP2] (T5);
[BP3] (T6);
[CP1] (T7);
[CP2] (T8);
[CP3] (T9);
[DP1] (T10);
[DP2] (T11);
[DP3] (T12);
[EP1] (T13);
[EP2] (T14);
[EP3] (T15);
[FP1] (T16);
[FP2] (T17);
[FP3] (T18);
[GP1] (T19);
[GP2] (T20);
[GP3] (T21);

[A*];
[B*];
[C*](LMC1);
[D*];
[E*];
[F*];
[G*];

A*;
B*;
C(LVC);
D*;
E*;
F*;
G*;
```

```
MODEL O15-16:
 A BY AP1*(L1)
    AP2 (L2)
    AP3 (L3);
 B BY BP1*(L4)
    BP2 (L5)
    BP3 (L6);
 C BY CP1*(L7)
    CP2 (L8)
    CP3 (L9);
 D BY DP1*(L10)
    DP2 (L11)
    DP3 (L12);
 E BY EP1*(L13)
    EP2 (L14)
    EP3 (L15);
 F BY FP1*(L16)
    FP2 (L17)
    FP3 (L18);
 G BY GP1*(L19)
    GP2 (L20)
    GP3 (L21);

 [AP1] (T1);
 [AP2] (T2);
 [AP3] (T3);
 [BP1] (T4);
 [BP2] (T5);
 [BP3] (T6);
 [CP1] (T7);
 [CP2] (T8);
 [CP3] (T9);
 [DP1] (T10);
 [DP2] (T11);
 [DP3] (T12);
 [EP1] (T13);
 [EP2] (T14);
 [EP3] (T15);
 [FP1] (T16);
 [FP2] (T17);
 [FP3] (T18);
 [GP1] (T19);
 [GP2] (T20);
 [GP3] (T21);
```

```
  [A*];
  [B*];
  [C*](LMC1);
  [D*];
  [E*];
  [F*];
  [G*];

  A*;
  B*;
  C(LVC);
  D*;
  E*;
  F*;
  G*;


   MODEL CONSTRAINT:

    T1 = 0 - T2 - T3;
    T4 = 0 - T5 - T6;
    T7 = 0 - T8 - T9;
    T10 = 0 - T11 - T12;
    T13 = 0 - T14 - T15;
    T16 = 0 - T17 - T18;
    T19 = 0 - T20 - T21;



OUTPUT:
  STDYX;
  SAMPSTAT;
```