```
*{Construct Variables}.


*{Members per sleeping room}.
if (HHUSUAL=0) HHUSUAL=HHSLEPT.
if (QH112>0 and qh112<98) memsleep=trunc(HHUSUAL/QH112).
if (QH112=0) memsleep=HHUSUAL.
if (memsleep>=98) memsleep=98.
variable labels memsleep "Number of members per sleeping room".
value labels memsleep 0 'Less than 1 per room'.

*{Drinking water supply}.
compute h2oires=0.
if (qh101=11) h2oires=1.
variable labels h2oires "Public Piped into dwelling".
compute h2oyrd=0.
if (qh101=12) h2oyrd=1.
variable labels h2oyrd "Public Piped into yard/plot".
compute h2ospipe=0.
if (qh101=13) h2ospipe=1.
variable labels h2ospipe "Public tap/standpipe".
compute h2otwell=0.
if (qh101=21) h2otwell=1.
variable labels h2otwell "Tube well/borehole".
compute h2opwell=0.
if (qh101=31) h2opwell=1.
variable labels h2opwell "Protected well".
compute h2ouwell=0.
if (qh101=32) h2ouwell=1.
variable labels h2ouwell "Unprotected well".
compute h2opspg=0.
if (qh101=41) h2opspg=1.
variable labels h2opspg "Protected spring".
compute h2ouspg=0.
if (qh101=42) h2ouspg=1.
variable labels h2ouspg "Unprotected spring".
compute h2orain=0.
if (qh101=51) h2orain=1.
variable labels h2orain "Water from rain".
compute h2otruck=0.
if (qh101=61) h2otruck=1.
variable labels h2otruck "Water from tanker truck".
compute h2ocart=0.
if (qh101=71) h2ocart=1.
variable labels h2ocart "Cart with small tank".
compute h2osurf=0.
if (qh101=81) h2osurf=1.
variable labels h2osurf "Surface water-river, lake, dam, etc.".
compute h2obot=0.
if (qh101=91) h2obot=1.
variable labels h2obot "Water from bottle".
compute h2osach=0.
```

```
if (qh101=92) h2osach=1.
variable labels h2osach "Water from sachet".
compute h2ooth=0.
if (qh101=96) h2ooth=1.
variable labels h2ooth "Other water source".
formats h2oires h2oyrd h2ospipe h2otwell h2opwell h2ouwell
h2opspg h2ouspg h2orain h2otruck h2ocart h2osurf h2obot h2osach
h2ooth (f1.0).

*{Toilet facility}.
compute flushs=0.
if (qh104=11) flushs=1.
variable labels flushs "Flush toilet to sewer".
compute flusht=0.
if (qh104=12) flusht=1.
variable labels flusht "Flush toilet to septic tank".
compute flushp=0.
if (qh104=13) flushp=1.
variable labels flushp "Flush to pit latrine".
compute flushe=0.
if (qh104=14) flushe=1.
variable labels flushe "Flush somewhere else".
compute flushd=0.
if (qh104=15) flushd=1.
variable labels flushd "Flush don't know where".
compute latvip=0.
if (qh104=21) latvip=1.
variable labels latvip "Ventilated improved pit latrine".
compute latslab=0.
if (qh104=22) latslab=1.
variable labels latslab "Pit latrine with slab".
compute latpit=0.
if (qh104=23) latpit=1.
variable labels latpit "Pit latrine open pit".
compute latcomp=0.
if (qh104=31) latcomp=1.
variable labels latcomp "Composting latrine".
compute latbuck=0.
if (qh104=41) latbuck=1.
variable labels latbuck "Bucket toilet".
compute lathang=0.
if (qh104=51) lathang=1.
variable labels lathang "Hanging toilet/latrine".
compute latbush=0.
if (qh104=61) latbush=1.
variable labels latbush "No facility/bush/field".
compute latoth=0.
if (qh104=96) latoth=1.
variable labels latoth "Other type of latrine/toilet".
formats flushs flusht flushp flushe flushd latvip latslab latpit
latcomp latbuck lathang latbush latoth (f1.0).
```

```
compute latshare=0.
if (QH105=1) latshare=1.
variable labels latshare "Shares latrine/toilet with other
households".
formats latshare (f1.0).


compute sflushs=0.
variable labels sflushs "Shared Flush toilet to sewer".
compute sflusht=0.
variable labels sflusht "Shared Flush toilet to septic tank".
compute sflushp=0.
variable labels sflushp "Shared Flush to pit latrine".
compute sflushe=0.
variable labels sflushe "Shared Flush somewhere else".
compute sflushd=0.
variable labels sflushd "Shared Flush don't know where".
compute slatvip=0.
variable labels slatvip "Shared Ventilated improved pit latrine".
compute slatslab=0.
variable labels slatslab "Shared Pit latrine with slab".
compute slatpit=0.
variable labels slatpit "Shared Pit latrine open pit".
compute slatcomp=0.
variable labels slatcomp "Shared composting latrine".
compute slatbuck=0.
variable labels slatbuck "Shared Bucket toilet".
compute slathang=0.
variable labels slathang "Shared Hanging toilet/latrine".
compute slatoth=0.
variable labels slatoth "Shared Other type of latrine/toilet".

do if (latshare=1).
  if (qh104=11) sflushs=1.
  if (qh104=12) sflusht=1.
  if (qh104=13) sflushp=1.
  if (qh104=14) sflushe=1.
  if (qh104=15) sflushd=1.
  if (qh104=21) slatvip=1.
  if (qh104=22) slatslab=1.
  if (qh104=23) slatpit=1.
  if (qh104=31) slatcomp=1.
  if (qh104=41) slatbuck=1.
  if (qh104=51) slathang=1.
  if (qh104=96) slatoth=1.
end if.
formats sflushs sflusht sflushp sflushe sflushd slatvip slatslab
slatpit slatcomp slatbuck slathang slatoth (f1.0).


*{Flooring}.
compute dirtfloo=0.
if (qh109=11) dirtfloo=1.
```

```
variable labels dirtfloo "Earth, sand, floor".
compute dungfloo=0.
if (qh109=12) dungfloo=1.
variable labels dungfloo "dung floor".
compute woodfloo=0.
if (qh109=21) woodfloo=1.
variable labels woodfloo "wood plank floor".
compute palmfloo=0.
if (qh109=22) palmfloo=1.
variable labels palmfloo "Palm/bamboo floor".
compute prqfloo=0.
if (qh109=31) prqfloo=1.
variable labels prqfloo "Polished wood floor".
compute vinyfloo=0.
if (qh109=32) vinyfloo=1.
variable labels vinyfloo "Vinyl/asphalt floor".
compute tilefloo=0.
if (qh109=33) tilefloo=1.
variable labels tilefloo "Ceramic tile floor".
compute cemtfloo=0.
if (qh109=34) cemtfloo=1.
variable labels cemtfloo "Cement floor".
compute carpfloo=0.
if (qh109=35) carpfloo=1.
variable labels carpfloo "Carpet floor".
compute othfloo=0.
if (qh109=96) othfloo=1.
variable labels othfloo "Other type of flooring".
formats dirtfloo dungfloo woodfloo palmfloo prqfloo vinyfloo
tilefloo cemtfloo carpfloo othfloo (f1.0).

*{Roofing}.
compute noroof=0.
if (qh110=11) noroof=1.
variable labels noroof "No roof".
compute natroof=0.
if (qh110=12) natroof=1.
variable labels natroof "Thatch, palm, sod roof".
compute sodroof=0.
if (qh110=13) sodroof=1.
variable labels sodroof "Sod/grass roof".
compute rustroof=0.
if (qh110=21) rustroof=1.
variable labels rustroof "Rustic mat roof".
compute palmroof=0.
if (qh110=22) palmroof=1.
variable labels palmroof "Palm/bamboo roof".
compute wproof=0.
if (qh110=23) wproof=1.
variable labels wproof "Wood planks roof".
compute cardroof=0.
if (qh110=24) cardroof=1.
```

```
variable labels cardroof "Cardboard roof".
compute ironroof=0.
if (qh110=31) ironroof=1.
variable labels ironroof "Iron sheet/asbestos roof".
compute woodroof=0.
if (qh110=32) woodroof=1.
variable labels woodroof "Wood/T iron/mud roof".
compute calaroof=0.
if (qh110=33) calaroof=1.
variable labels calaroof "Calamine/cement fiber roof".
compute ceraroof=0.
if (qh110=34) ceraroof=1.
variable labels ceraroof "Ceramic tiles roof".
compute cemtroof=0.
if (qh110=35) cemtroof=1.
variable labels cemtroof "Cement/RCC roof".
compute shinroof=0.
if (qh110=36) shinroof=1.
variable labels shinroof "Shingles roof".
compute othroof=0.
if (qh110=96) othroof=1.
variable labels othroof "Other type of roof".
formats noroof natroof sodroof rustroof palmroof wproof cardroof
ironroof woodroof calaroof ceraroof cemtroof shinroof othroof
(f1.0).

*{Walls}.
compute nowall=0.
if (qh111=11) nowall=1.
variable labels nowall "No walls".
compute natwall=0.
if (qh111=12) natwall=1.
variable labels natwall "Cane/palm/trunks walls".
compute dirtwall=0.
if (qh111=13) dirtwall=1.
variable labels dirtwall "Dirt walls".
compute bambwall=0.
if (qh111=21) bambwall=1.
variable labels bambwall "Bamboo with mud walls".
compute mudwall=0.
if (qh111=22) mudwall=1.
variable labels mudwall "Mud/stones walls".
compute adobwall=0.
if (qh111=23) adobwall=1.
variable labels adobwall "Uncovered adobe walls".
compute plywwall=0.
if (qh111=24) plywwall=1.
variable labels plywwall "Plywood wall".
compute cardwall=0.
if (qh111=25) cardwall=1.
variable labels cardwall "Cardboard walls".
compute reuwwall=0.
```

```
if (qh111=26) reuwwall=1.
variable labels reuwwall "Reused wood walls".
compute cemtwall=0.
if (qh111=31) cemtwall=1.
variable labels cemtwall "Cement walls".
compute stlimwall=0.
if (qh111=32) stlimwall=1.
variable labels stlimwall "Stone with lime/cement walls".
compute brikwall=0.
if (qh111=33) brikwall=1.
variable labels brikwall "Baked brick walls".
compute cemt2wall=0.
if (qh111=34) cemt2wall=1.
variable labels cemt2wall "Cement blocks walls".
compute adob2wall=0.
if (qh111=35) adob2wall=1.
variable labels adob2wall "Covered adobe walls".
compute shinwall=0.
if (qh111=36) shinwall=1.
variable labels shinwall "Wood planks/shingle walls".
compute othwall=0.
if (qh111=96) othwall=1.
variable labels othwall "Other type of walls".
formats nowall natwall dirtwall mudwall bambwall adobwall
plywwall cardwall reuwwall brikwall cemtwall stlimwall cemt2wall
adob2wall shinwall othwall (f1.0).


*{Cooking Fuel}.
compute cookelec=0.
if (qh108=1) cookelec=1.
variable labels cookelec "Electricity for cooking".
compute cooklpg=0.
if (qh108=2) cooklpg=1.
variable labels cooklpg "LPG for cooking".
compute cookngas=0.
if (qh108=3) cookngas=1.
variable labels cookngas "Natural gas for cooking".
compute cookbgas=0.
if (qh108=4) cookbgas=1.
variable labels cookbgas "Biogas for cooking".
compute cookkero=0.
if (qh108=5) cookkero=1.
variable labels cookkero "Kerosene for cooking".
compute cookcoal=0.
if (qh108=6) cookcoal=1.
variable labels cookcoal "Coal lgnite for cooking".
compute cookchar=0.
if (qh108=7) cookchar=1.
variable labels cookchar "Charcoal for cooking".
compute cookwood=0.
if (qh108=8) cookwood=1.
```

```
variable labels cookwood "Wood for cooking".
compute cookstraw=0.
if (qh108=9) cookstraw=1.
variable labels cookstraw "Straw/shrubs/grass for cooking".
compute cookagric=0.
if (qh108=10) cookagric=1.
variable labels cookagric "Agricultural residue for cooking
fuel".
compute cookdung=0.
if (qh108=11) cookdung=1.
variable labels cookdung "Dung for cooking".
compute cooknone=0.
if (qh108=95) cooknone=1.
variable labels cooknone 'Does not cook'.
compute cookoth=0.
if (qh108=96) cookoth=1.
variable labels cookoth "Other fuel for cooking".
formats cookelec cooklpg cookngas cookbgas cookkero cookcoal
cookchar cookwood cookstraw cookagric cookdung cooknone cookoth
(f1.0).

*{Reset missing values to "does not have", change 2 code to 0}.
if (missing(qh107A) | qh107A<>1) qh107A=0.
if (missing(qh107B) | qh107B<>1) qh107B=0.
if (missing(qh107C) | qh107C<>1) qh107C=0.
if (missing(qh107D) | qh107D<>1) qh107D=0.
if (missing(qh107E) | qh107E<>1) qh107E=0.
if (missing(qh107F) | qh107F<>1) qh107F=0.


if (missing(qh113A) | qh113A<>1) qh113A=0.
if (missing(qh113B) | qh113B<>1) qh113B=0.
if (missing(qh113C) | qh113C<>1) qh113C=0.
if (missing(qh113D) | qh113D<>1) qh113D=0.
if (missing(qh113E) | qh113E<>1) qh113E=0.
if (missing(qh113F) | qh113F<>1) qh113F=0.
if (missing(qh113G) | qh113g<>1) qh113g=0.

execute.

* Land.
* Hectares.
compute landarea=qh115.
if (QH115>95) landarea=$sysmis.
if (missing(QH114) | QH114<>1) landarea=0.
frequencies landarea.

*Animals.
if (missing(QH116)  | qh116 <>1) qh116=0.
if (missing(qh117A) | qh116 <>1) qh117A=0.
if (missing(qh117B) | qh116 <>1) qh117B=0.
if (missing(qh117C) | qh116 <>1) qh117C=0.
if (missing(qh117D) | qh116 <>1) qh117D=0.
```

```
if (missing(qh117E) | qh116 <>1) qh117E=0.

missing values qh117A to qh117E (98,99).

* Bank account.
if (missing(qh118) | qh118<>1) qh118=0.

* Compute urban and rural variables coded (1/0) for filters
later.
*** !!! Note that Sierra Leone appears to have 1=rural and 2
=urban for qhtype !!! .
COMPUTE urban=(QHTYPE = 2).
COMPUTE rural=(QHTYPE = 1).
VARIABLE LABELS urban 'Urban' / rural 'Rural'.
VALUE LABELS urban 1 'Urban' / rural 1 'Rural'.
FORMATS urban rural (f1.0).

execute.


* Check on indicator variable creation.

FREQUENCIES VARIABLES=QHTYPE HHMEMB HHUSUAL HHSLEPT qh101 qh104
qh107A qh107B qh107C qh107D qh107E
    qh107F QH108  qh109
    qh110  QH111 qh113A qh113B qh113C qh113D qh113E qh113F
    qh116 qh117A qh117B qh117C qh117D qh117E qh118
  /ORDER=ANALYSIS.

FREQUENCIES VARIABLES=memsleep h2oires h2oyrd h2ospipe h2otwell
h2opwell h2ouwell h2opspg h2ouspg
    h2orain h2osurf h2obot h2osach h2ooth flushs flusht flushp
flushe flushd latvip
    latslab latpit latcomp latbuck lathang latbush latoth
latshare sflushs sflusht sflushp sflushe
    sflushd slatvip slatslab slatpit slatcomp slatbuck slathang
slatoth dirtfloo dungfloo woodfloo
    palmfloo prqfloo tilefloo cemtfloo carpfloo othfloo noroof
natroof sodroof rustroof
    palmroof wproof cardroof ironroof woodroof calaroof cemtroof
shinroof othroof nowall
    natwall dirtwall bambwall mudwall adobwall plywwall cardwall
reuwwall cemtwall stlimwall brikwall
    cemt2wall adob2wall shinwall othwall cookelec cookngas
cookbgas cookkero cookchar
    cookwood cookstraw cooknone cookoth landarea urban rural
  /ORDER=ANALYSIS.


* Turn off weights before all factor analysis.
WEIGHT OFF.
```

```
save outfile="c:\hnp2a\Sierra Leone\sl13misassets.sav".

*********************************.
*** Factor Analysis to Test Distribution of created variables.

FACTOR
  /VARIABLES qh107A qh107B qh107C qh107D qh107E
     qh107F qh113A qh113B qh113C qh113D qh113E qh113F qh117A
qh117B qh117C qh117D qh117E qh118
     memsleep h2oires h2oyrd h2ospipe h2otwell h2opwell h2ouwell
h2opspg h2ouspg
     h2orain h2osurf h2obot h2osach h2ooth flushs flusht flushp
flushe flushd latvip
     latslab latpit latcomp latbuck lathang latbush latoth
latshare sflushs sflusht sflushp sflushe
     sflushd slatvip slatslab slatpit slatcomp slatbuck slathang
slatoth dirtfloo dungfloo woodfloo
     palmfloo prqfloo tilefloo cemtfloo carpfloo othfloo noroof
natroof sodroof rustroof
     palmroof wproof cardroof ironroof woodroof calaroof cemtroof
shinroof othroof nowall
     natwall dirtwall bambwall mudwall adobwall plywwall cardwall
reuwwall cemtwall stlimwall brikwall
     cemt2wall adob2wall shinwall othwall cookelec cookngas
cookbgas cookkero cookchar
     cookwood cookstraw cooknone cookoth landarea
  /MISSING MEANSUB
  /ANALYSIS qh107A qh107B qh107C qh107D qh107E
     qh107F qh113A qh113B qh113C qh113D qh113E qh113F qh117A
qh117B qh117C qh117D qh117E qh118
     memsleep h2oires h2oyrd h2ospipe h2otwell h2opwell h2ouwell
h2opspg h2ouspg
     h2orain h2osurf h2obot h2osach h2ooth flushs flusht flushp
flushe flushd latvip
     latslab latpit latcomp latbuck lathang latbush latoth
latshare sflushs sflusht sflushp sflushe
     sflushd slatvip slatslab slatpit slatcomp slatbuck slathang
slatoth dirtfloo dungfloo woodfloo
     palmfloo prqfloo tilefloo cemtfloo carpfloo othfloo noroof
natroof sodroof rustroof
     palmroof wproof cardroof ironroof woodroof calaroof cemtroof
shinroof othroof nowall
     natwall dirtwall bambwall mudwall adobwall plywwall cardwall
reuwwall cemtwall stlimwall brikwall
     cemt2wall adob2wall shinwall othwall cookelec cookngas
cookbgas cookkero cookchar
     cookwood cookstraw cooknone cookoth landarea
  /PRINT UNIVARIATE INITIAL EXTRACTION
  /CRITERIA FACTORS(1) ITERATE(25)
  /EXTRACTION PC
  /ROTATION NOROTATE
  /METHOD=CORRELATION.
```

```
*********************************.
*** Common Factor Analysis.

FILTER OFF.
USE ALL.
EXECUTE.

**** Redo removing area-specific variables ****.
** Agricultural land size and animal variables excluded.
** Any others ?.


FACTOR
  /VARIABLES qh107A qh107B qh107C qh107D qh107E
    qh107F qh113A qh113B qh113C qh113D qh113E qh113F qh118
    memsleep h2oires h2oyrd h2ospipe h2otwell h2opwell h2ouwell
h2opspg h2ouspg
    h2orain h2osurf h2obot h2osach h2ooth flushs flusht flushp
flushe flushd latvip
    latslab latpit latcomp latbuck lathang latbush latoth
latshare sflushs sflusht sflushp sflushe
    sflushd slatvip slatslab slatpit slatcomp slatbuck slathang
slatoth dirtfloo dungfloo woodfloo
    palmfloo prqfloo tilefloo cemtfloo carpfloo othfloo noroof
natroof sodroof rustroof
    palmroof wproof cardroof ironroof woodroof calaroof cemtroof
shinroof othroof nowall
    natwall dirtwall bambwall mudwall adobwall plywwall cardwall
reuwwall cemtwall stlimwall brikwall
    cemt2wall adob2wall shinwall othwall cookelec cookngas
cookbgas cookkero cookchar
    cookwood cookstraw cooknone cookoth
  /MISSING MEANSUB
  /ANALYSIS qh107A qh107B qh107C qh107D qh107E
    qh107F qh113A qh113B qh113C qh113D qh113E qh113F qh118
    memsleep h2oires h2oyrd h2ospipe h2otwell h2opwell h2ouwell
h2opspg h2ouspg
    h2orain h2osurf h2obot h2osach h2ooth flushs flusht flushp
flushe flushd latvip
    latslab latpit latcomp latbuck lathang latbush latoth
latshare sflushs sflusht sflushp sflushe
    sflushd slatvip slatslab slatpit slatcomp slatbuck slathang
slatoth dirtfloo dungfloo woodfloo
    palmfloo prqfloo tilefloo cemtfloo carpfloo othfloo noroof
natroof sodroof rustroof
    palmroof wproof cardroof ironroof woodroof calaroof cemtroof
shinroof othroof nowall
    natwall dirtwall bambwall mudwall adobwall plywwall cardwall
reuwwall cemtwall stlimwall brikwall
    cemt2wall adob2wall shinwall othwall cookelec cookngas
cookbgas cookkero cookchar
    cookwood cookstraw cooknone cookoth
```

```
  /PRINT UNIVARIATE INITIAL EXTRACTION
  /CRITERIA FACTORS(1) ITERATE(25)
  /EXTRACTION PC
  /ROTATION NOROTATE
  /SAVE REG(ALL COM)
  /METHOD=CORRELATION.

** Now do the optimal binning.

compute dairy=qh117a.
compute pigs=qh117b.
compute goats=qh117c.
compute sheep=qh117d.
compute chicks=qh117e.
execute.

FREQUENCIES VARIABLES=dairy to chicks.
** Classify large animals (cattle, dairy, traction, hogs, goats,
sheep, etc.) into the following categories
0, 1-4, 5-9, 10+.

** Classifiy small animals (chicks, ducks, guinea pigs, etc.)
into the following categories:
0, 1-9, 10-29, 30+.
use all.
filter off.
execute.
numeric dairy1 to dairy4 pigs1 to pigs4, goats1 to goats4, sheep1
to sheep4 chicks1 to chicks4.
do repeat  lgan=dairy to sheep
                /lg1=dairy1 pigs1 goats1 sheep1
                /lg2=dairy2 pigs2 goats2 sheep2
                /lg3=dairy3 pigs3 goats3 sheep3
                /lg4=dairy4 pigs4 goats4 sheep4.
compute lg1=(lgan = 0).
compute lg2=(lgan ge 1 and lgan le 4).
compute lg3=(lgan ge 5 and lgan le 9).
compute lg4=(lgan ge 10 and lgan le 97).
end repeat.
execute.
value labels dairy1 pigs1 goats1 sheep1 1 'Zero'.
value labels dairy2 pigs2 goats2 sheep2 1 '1 to 4'.
value labels dairy3 pigs3 goats3 sheep3 1 '5 to 9'.
value labels dairy4 pigs4 goats4 sheep4 1 '10 or more'.


do repeat sman=chicks
                /sm1=chicks1
                /sm2=chicks2
                /sm3=chicks3
                /sm4=chicks4 .
compute sm1=(sman = 0).
```

```
compute sm2=(sman ge 1 and sman le 9).
compute sm3=(sman ge 10 and sman le 29).
compute sm4=(sman ge 30 and sman le 97).
end repeat.
execute.
value labels chicks1  1 'Zero'.
value labels chicks2  1 '1 to 9'.
value labels chicks3  1 '10 to 29'.
value labels chicks4 4 1 '30 or more'.
frequencies dairy1 to chicks4.


RANK VARIABLES=com1 (A) /RANK /NTILES (5) /PRINT=YES /TIES=MEAN.


*OPTIMAL BINNING
  /variables guide=ncom1 bin=landarea save=yes (into=landgrpr)
 /CRITERIA preprocess=EQUALFREQ
                  method=MDLP
                  LOWEREND =OBSERVED

                       UPPEREND =OBSERVED
 /MISSING SCOPE = PAIRWISE.


** No SPSS License to run  so will drop optimal binning for land
area.


**  Urban Area.


USE ALL.
FILTER BY urban.
EXECUTE.


FACTOR
/VARIABLES qh107A qh107B qh107C qh107D qh107E
    qh107F qh113A qh113B qh113C qh113D qh113E qh113F qh118
    memsleep h2oires h2oyrd h2ospipe h2otwell h2opwell h2ouwell
h2opspg h2ouspg
    h2orain h2osurf h2obot h2osach h2ooth flushs flusht flushp
flushe flushd latvip
    latslab latpit latcomp latbuck lathang latbush latoth
latshare sflushs sflusht sflushp sflushe
    sflushd slatvip slatslab slatpit slatcomp slatbuck slathang
slatoth dirtfloo dungfloo woodfloo
    palmfloo prqfloo tilefloo cemtfloo carpfloo othfloo noroof
natroof rustroof
    palmroof wproof cardroof ironroof woodroof calaroof cemtroof
shinroof othroof
    natwall dirtwall bambwall mudwall plywwall cardwall reuwwall
cemtwall stlimwall brikwall
    cemt2wall shinwall othwall cookelec cookngas cookbgas
cookkero cookchar
    cookwood cookstraw cooknone cookoth landarea dairy1 to dairy4
pigs1 to pigs3
```

```
    goats1 to goats4 sheep1 to sheep4 chicks1 to chicks4
    /MISSING MEANSUB
    /ANALYSIS qh107A qh107B qh107C qh107D qh107E
    qh107F qh113A qh113B qh113C qh113D qh113E qh113F qh118
    memsleep h2oires h2oyrd h2ospipe h2otwell h2opwell h2ouwell
h2opspg h2ouspg
    h2orain h2osurf h2obot h2osach h2ooth flushs flusht flushp
flushe flushd latvip
    latslab latpit latcomp latbuck lathang latbush latoth
latshare sflushs sflusht sflushp sflushe
    sflushd slatvip slatslab slatpit slatcomp slatbuck slathang
slatoth dirtfloo dungfloo woodfloo
    palmfloo prqfloo tilefloo cemtfloo carpfloo othfloo noroof
natroof rustroof
    palmroof wproof cardroof ironroof woodroof calaroof cemtroof
shinroof othroof
    natwall dirtwall bambwall mudwall plywwall cardwall reuwwall
cemtwall stlimwall brikwall
    cemt2wall shinwall othwall cookelec cookngas cookbgas
cookkero cookchar
    cookwood cookstraw cooknone cookoth landarea dairy1 to dairy4
pigs1 to pigs3
    goats1 to goats4 sheep1 to sheep4 chicks1 to chicks4
    /PRINT UNIVARIATE INITIAL EXTRACTION
  /CRITERIA FACTORS(1) ITERATE(25)
  /EXTRACTION PC
  /ROTATION NOROTATE
  /SAVE REG(ALL URB)
  /METHOD=CORRELATION.


** Rural Area.

USE ALL.
FILTER BY rural.
EXECUTE.

FACTOR
  /VARIABLES qh107A qh107B qh107C qh107D qh107E
    qh107F qh113A qh113B qh113C qh113D qh113E qh113F qh118
    memsleep h2oires h2oyrd h2ospipe h2otwell h2opwell h2ouwell
h2opspg h2ouspg
    h2orain h2osurf h2obot h2osach h2ooth flushs flusht flushp
flushe flushd latvip
    latslab latpit latcomp latbuck lathang latbush latoth
latshare sflushs sflushp
    slatvip slatslab slatpit slatcomp slatbuck slathang slatoth
dirtfloo dungfloo woodfloo
    palmfloo tilefloo cemtfloo carpfloo othfloo noroof natroof
sodroof rustroof
    palmroof wproof ironroof woodroof calaroof cemtroof shinroof
othroof nowall
```

```
    natwall dirtwall bambwall mudwall adobwall cardwall cemtwall
stlimwall brikwall
    cemt2wall adob2wall shinwall othwall cookelec cookkero
cookchar
    cookwood cookstraw cooknone cookoth landarea dairy1 to dairy4
pigs1 to pigs3
    goats1 to goats4 sheep1 to sheep4 chicks1 to chicks4
  /MISSING MEANSUB
  /ANALYSIS  qh107A qh107B qh107C qh107D qh107E
    qh107F qh113A qh113B qh113C qh113D qh113E qh113F qh118
    memsleep h2oires h2oyrd h2ospipe h2otwell h2opwell h2ouwell
h2opspg h2ouspg
    h2orain h2osurf h2obot h2osach h2ooth flushs flusht flushp
flushe flushd latvip
    latslab latpit latcomp latbuck lathang latbush latoth
latshare sflushs sflushp
    slatvip slatslab slatpit slatcomp slatbuck slathang slatoth
dirtfloo dungfloo woodfloo
    palmfloo tilefloo cemtfloo carpfloo othfloo noroof natroof
sodroof rustroof
    palmroof wproof ironroof woodroof calaroof cemtroof shinroof
othroof nowall
    natwall dirtwall bambwall mudwall adobwall cardwall cemtwall
stlimwall brikwall
    cemt2wall adob2wall shinwall othwall cookelec cookkero
cookchar
    cookwood cookstraw cooknone cookoth landarea dairy1 to dairy4
pigs1 to pigs3
    goats1 to goats4 sheep1 to sheep4 chicks1 to chicks4
  /PRINT UNIVARIATE INITIAL EXTRACTION
  /CRITERIA FACTORS(1) ITERATE(25)
  /EXTRACTION PC
  /ROTATION NOROTATE
  /SAVE REG(ALL RUR)
  /METHOD=CORRELATION.

* Name the dataset window for the hh data for use later.
dataset name assets.

* label the created score variables.
variable labels
  com1 "Common wealth score"
 /urb1 "Urban wealth score"
 /rur1 "Rural wealth score".

* Add a variable used for linking later.
use all.
string ROWTYPE_ (A8).
compute ROWTYPE_ = 'EST'.

* Calculate regressions with total score.
** Urban area.
```

```
use all.
filter by urban.
execute.

* Declare a dataset to be written to in the regression.
dataset declare urbcorv.
regression
   /missing listwise
   /statistics coeff outs r anova
   /criteria=pin(.05) pout(.10)
   /noorigin
   /dependent com1
   /method=enter urb1
   /outfile=corv(urbcorv).
* Activate file of output from regression.
dataset activate urbcorv.
* Drop all rows of output except the coefficients.
select if (ROWTYPE_ = 'EST').
execute.
* Delete unnecessary variables before merging.
delete variables DEPVAR_ VARNAME_.
* Rename variables containing the constant and the coefficient.
rename variables CONST_=urbconst urb1=urbcoeff.

* Re-activitate the main household data.
dataset activate assets.
* Rename the urban score.
rename variables urb1=urbscore.
* merge the coefficients.
match files
   /file = *
   /table = urbcorv
   /by ROWTYPE_.
execute.

** Rural area.

use all.
filter by rural.

* Declare a dataset to be written to in the regression.
dataset declare rurcorv.
regression
   /missing listwise
   /statistics coeff outs r anova
   /criteria=pin(.05) pout(.10)
   /noorigin
   /dependent com1
   /method=enter rur1
   /outfile=corv(rurcorv).
* Activate file of output from regression.
```

```
dataset activate rurcorv.
* Drop all rows of output except the coefficients.
select if (ROWTYPE_ = 'EST').
execute.
* Delete unnecessary variables before merging.
delete variables DEPVAR_ VARNAME_.
* Rename variables containing the constant and the coefficient.
rename variables CONST_=rurconst rur1=rurcoeff.

* Re-activitate the main household data.
dataset activate assets.
* Rename the rural score.
rename variables rur1=rurscore.
* merge the coefficients.
match files
  /file = *
  /table = rurcorv
  /by ROWTYPE_.
execute.

use all.

dataset close urbcorv.
dataset close rurcorv.
dataset activate assets.

*** Calculate combined wealth score from Urban and Rural Scores.
* Use coefficients from urban and rural regressions above!.
compute combscor=0.
variable labels combscor "Combined wealth score".
formats combscor (f11.5).
** Urban - replace values with those from the regressions above!.
if (urban = 1) combscor=urbconst+urbcoeff*urbscore.
** Rural - replace values with those from the regressions above!.
if (rural = 1) combscor=rurconst+rurcoeff*rurscore.
execute.

*Tabulation for histograms.
compute hhwt = QHWEIGHT/1000000.
VARIABLE LABELS hhwt 'HH weights' .
weight by hhwt.
filter off.
use all.

FREQUENCIES
  VARIABLES=combscor COM1 /FORMAT=NOTABLE
  /NTILES= 5
  /STATISTICS=STDDEV MEAN
  /HISTOGRAM  NORMAL
  /ORDER=ANALYSIS.

USE ALL.
```

```
FILTER BY urban.
EXECUTE.

FREQUENCIES
  VARIABLES=combscor URBscore /FORMAT=NOTABLE
  /NTILES= 5
  /STATISTICS=STDDEV MEAN
  /HISTOGRAM  NORMAL
  /ORDER=ANALYSIS.

USE ALL.
FILTER BY rural.
EXECUTE.

FREQUENCIES
  VARIABLES=combscor RURscore /FORMAT=NOTABLE
  /NTILES= 5
  /STATISTICS=STDDEV MEAN
  /HISTOGRAM  NORMAL
  /ORDER=ANALYSIS.

FILTER OFF.
USE ALL.
EXECUTE.


*Calculate quintiles and scores for data file.
compute hhmemwt=QHWEIGHT*HHUSUAL/1000000.
weight by hhmemwt.
VARIABLE LABELS hhmemwt 'HH members weighting for index'.

** Urban Area.
USE ALL.
FILTER BY urban.
EXECUTE.

RANK VARIABLES=urbscore (A) /RANK /NTILES (5) /PRINT=YES
/TIES=MEAN.

** Rural Area.
USE ALL.
FILTER BY rural.
EXECUTE.

RANK VARIABLES=rurscore (A) /RANK /NTILES (5) /PRINT=YES
/TIES=MEAN.

** National combined score.
FILTER OFF.
USE ALL.
EXECUTE.
```

```
RANK VARIABLES=combscor (A) /RANK /NTILES (5) /PRINT=YES
/TIES=MEAN.

FREQUENCIES
   VARIABLES=combscor
       /FORMAT=NOTABLE
   /NTILES=5
   /STATISTICS=STDDEV MINIMUM MAXIMUM MEAN MEDIAN MODE SKEWNESS
SESKEW KURTOSIS SEKURT
   /ORDER=ANALYSIS.

*** Check on quintiles.

frequencies variables=ncombsco.

weight by hhwt.

MEANS TABLES=
     qh107A qh107B qh107C qh107D qh107E
     qh107F qh113A qh113B qh113C qh113D qh113E qh113F qh117A
qh117B qh117C qh117D qh117E qh118
     memsleep h2oires h2oyrd h2ospipe h2otwell h2opwell h2ouwell
h2opspg h2ouspg
     h2orain h2osurf h2obot h2osach h2ooth flushs flusht flushp
flushe flushd latvip
     latslab latpit latcomp latbuck lathang latbush latoth
latshare sflushs sflusht sflushp sflushe
     sflushd slatvip slatslab slatpit slatcomp slatbuck slathang
slatoth dirtfloo dungfloo woodfloo
     palmfloo prqfloo tilefloo cemtfloo carpfloo othfloo noroof
natroof sodroof rustroof
     palmroof wproof cardroof ironroof woodroof calaroof cemtroof
shinroof othroof nowall
     natwall dirtwall bambwall mudwall adobwall plywwall cardwall
reuwwall cemtwall stlimwall brikwall
     cemt2wall adob2wall shinwall othwall cookelec cookngas
cookbgas cookkero cookchar
     cookwood cookstraw cooknone cookoth landarea dairy1 to dairy4
pigs1 to pigs3
     goats1 to goats4 sheep1 to sheep4 chicks1 to chicks4
     by Ncombsco, nurbscor, nrurscor
   /CELLS MEAN COUNT STDDEV.

WEIGHT OFF.

save outfile="c:\hnp2a\Sierra Leone\sl13misassets.sav".

*** Write out scores file.
WRITE OUTFILE="c:\hnp2a\Sierra Leone\sl13misscores.dat"
   TABLE
   /QHCLUST QHNUMBER combscor ncombsco urbscore nurbscor rurscore
nrurscor.
```

EXECUTE.