```
DATA LIST FILE='C:\HNP2A\RWANDA 2010\EXPORTEDRW10' RECORDS=1
 /
 QHCLUST     1-3
 QHNUMBER    4-5
 QHWEIGHT    6-13
 QHTYPE     14-14
 HV009      15-17
 HV012      18-20
 HV013      21-23
 QH101      24-24
 QH102      25-26
 QH103      27-27
 QH104      28-30
 QH104A     31-31
 QH105      32-32
 QH106      33-39   (A)
 QH106A     40-40
 QH106B     41-41
 QH106C     42-42
 QH107      43-44
 QH108      45-45
 QH109      46-47
 QH109A     48-50   (A)
 QH110A     51-51
 QH110B     52-52
 QH110C     53-53
 QH110D     54-54
 QH110E     55-55
 QH110F     56-56
 QH110G     57-57
 QH111      58-59
 QH112      60-60
 QH113      61-61
 QH114      62-63
 QH115      64-65
 QH116      66-67
 QH117      68-69
 QH118A     70-70
 QH118B     71-71
 QH118C     72-72
 QH118D     73-73
 QH118E     74-74
 QH118F     75-75
 QH118G     76-76
 QH119      77-77
 QH120      78-81   (1)
 QH121      82-82
 QH122A     83-84
 QH122B     85-86
 QH122C     87-88
 QH122D     89-90
 QH122E     91-92
```

```
 QH122F     93-94
 QH122G     95-96
 QH122H     97-98
 QH122I     99-100
 QH123     101-101
 QH123C    102-102
 QH123D    103-103
 QH123E    104-104
 QH126     105-105
 QH127     106-106
 QH137     107-107
 QH138     108-108
 QH139     109-111  (A)
 QH140     112-112
 QHNUMDV   113-114
 QH142H    115-116
 QH142M    117-118
 QH178     119-124
 QH178AH   125-126
 QH178AM   127-128
 QH120AU   129-129
 QH120AN   130-137
 DOMESTIC  138-138
 HOUSE     139-139
 LAND      140-140
.
VARIABLE LABELS
  QHCLUST  "Cluster number"
 /QHNUMBER "Household number"
 /QHWEIGHT "Household weight (6 decimals)"
 /QHTYPE   "Type of place of residence"
 /HV009    "Total persons in household"
 /HV012    "Number of usual residents"
 /HV013    "Number who slept in HH last night"
 /QH101    "Frequency of smoking inside house"
 /QH102    "Source of drinking water"
 /QH103    "Location of source for water"
 /QH104    "Time to water and back (mins)"
 /QH104A   "Distance from the house"
 /QH105    "Do anything to water to make safe to drink"
 /QH106    "What do you usually do to make water safe to drink"
 /QH106A   "Water is stored"
 /QH106B   "How is water stored"
 /QH106C   "Frequency of wahing water containers"
 /QH107    "Type of toilet facility"
 /QH108    "Share facilities with other households"
 /QH109    "Number of households sharing toilet"
 /QH109A   "How clean is toilet facility"
 /QH110A   "Electricity"
 /QH110B   "Radio"
 /QH110C   "Television"
 /QH110D   "Mobile telephone"
```

```
 /QH110E   "Telephone (non-mobile)"
 /QH110F   "Refrigerator"
 /QH110G   "Computer"
 /QH111    "Type of cooking fuel"
 /QH112    "Food cooked in the house / in separate building /
outdoors"
 /QH113    "Household has separate room used as kitchen"
 /QH114    "Main material of floor"
 /QH115    "Main roof material"
 /QH116    "Main wall material"
 /QH117    "Number of rooms used for sleeping"
 /QH118A   "Watch"
 /QH118B   "Bicycle"
 /QH118C   "Motorcycle or Scooter"
 /QH118D   "Animal-drawn cart"
 /QH118E   "Car or Truck"
 /QH118F   "Boat without a motor"
 /QH118G   "Boat with a motor"
 /QH119    "Own land usable for agriculture"
 /QH120    "Hectares for agricultural land"
 /QH121    "Livestock, herds or farm animals"
 /QH122A   "Cows"
 /QH122B   "Milk cows"
 /QH122C   "Bulls"
 /QH122D   "Goats"
 /QH122E   "Sheep"
 /QH122F   "Chickens"
 /QH122G   "Pigs"
 /QH122H   "Rabbits"
 /QH122I   "Horses / donkeys / mules"
 /QH123    "Bank account"
 /QH123C   "Card(s) seen"
 /QH123D   "For all household members"
 /QH123E   "Plan to get insurance"
 /QH126    "Mosquito nets used while sleeping"
 /QH127    "Number of mosquito nets"
 /QH137    "Place for handwashing observed"
 /QH138    "Presence of water observed"
 /QH139    "Presence of soap, detergent or other cleansing agent
observed"
 /QH140    "Test salt for Iodine"
 /QHNUMDV  "Line number of woman eligible for domestic violence"
 /QH142H   "Begin time - hour"
 /QH142M   "Begin time - minutes"
 /QH178    "Total amount of money spent on health in last 4
weeks"
 /QH178AH  "End time - hour"
 /QH178AM  "End time - minutes"
 /QH120AU  "Area of agricultural land"
 /QH120AN  "Area of agricultural land"
 /DOMESTIC "Domestic servant in household"
 /HOUSE    "Owns a dwelling"
```

```
 /LAND     "Owns agricultural land"
.
MISSING VALUE
  QH101    (9)
 /QH102    (99)
 /QH103    (9)
 /QH104    (999)
 /QH104A   (9)
 /QH105    (9)
 /QH106B   (9)
 /QH106C   (9)
 /QH107    (99)
 /QH108    (9)
 /QH109    (99)
 /QH110A   (9)
 /QH110B   (9)
 /QH110C   (9)
 /QH110D   (9)
 /QH110E   (9)
 /QH110F   (9)
 /QH110G   (9)
 /QH111    (99)
 /QH112    (9)
 /QH113    (9)
 /QH114    (99)
 /QH115    (99)
 /QH116    (99)
 /QH117    (99)
 /QH118A   (9)
 /QH118B   (9)
 /QH118C   (9)
 /QH118D   (9)
 /QH118E   (9)
 /QH118F   (9)
 /QH118G   (9)
 /QH119    (9)
 /QH120    (100)
 /QH121    (9)
 /QH122A   (99)
 /QH122D   (99)
 /QH122E   (99)
 /QH122F   (99)
 /QH122I   (99)
 /QH123    (9)
 /QH123C   (9)
 /QH123D   (9)
 /QH123E   (9)
 /QH126    (9)
 /QH127    (9)
 /QH137    (9)
 /QH138    (9)
 /QH140    (9)
```

```
 /QH142H   (99)
 /QH142M   (99)
 /QH178    (999999)
 /QH178AH  (99)
 /QH178AM  (99)
 /QH120AN  (99999999)
.
VALUE LABELS
  QHTYPE
     1 "Urban"
     2 "Rural"
 /QH101
     1 "Daily"
     2 "Weekly"
     3 "Monthly"
     4 "Less than monthly"
     5 "Never"
 /QH102
    11 "Piped - into dwelling"
    12 "Piped - into yard/plot"
    13 "Piped - public tap / standpipe"
    21 "Tube well or borehole"
    31 "Dug well - protected"
    32 "Dug well - unprotected"
    41 "Spring - protected"
    42 "Spring - unprotected"
    51 "Rainwater"
    61 "Tanker truck"
    71 "Cart with small tank"
    81 "Surface water
(river/dam/lake/pond/stream/canal/irrigation channel"
    91 "Bottled water"
    96 "Other"
 /QH103
     1 "In own dwelling"
     2 "In own yard/plot"
     3 "Elsewhere"
 /QH104
   998 "Don't know"
 /QH104A
     1 "Less than 200 meters"
     2 "200-500 meters"
     3 "More than 500 meters"
     8 "Don't know"
 /QH105
     1 "Yes"
     2 "No"
     8 "Don't know"
 /QH106
'A      ' "Boil"
'B      ' "Add bleach/chlorine"
'C      ' "Strain through a cloth"
```

```
'D      ' "Use water filter (ceramic/sand/composite/etc.)"
'E      ' "Solar disinfection"
'F      ' "Let it stand and settle"
'X      ' "Other"
'Z      ' "Don't know"
 /QH106A
     1 "Yes"
     2 "No"
     8 "Don't know"
     9 "Missing"
 /QH106B
     1 "Jerry can"
     2 "Pot"
     3 "Bottle"
     4 "Cooking pot"
     6 "Other"
     8 "Not observed"
 /QH106C
     0 "Less than once"
     7 "7+ times"
     8 "Don't know"
 /QH107
    11 "Flush - to piped sewer system"
    12 "Flush - to septic tank"
    13 "Flush - to pit latrine"
    14 "Flush - to somewhere else"
    15 "Flush - don't know where"
    21 "Pit latrine - ventilated improved pit (VIP)"
    22 "Pit latrine - with slab"
    23 "Pit latrine - without slab / open pit"
    31 "Composting toilet"
    41 "Bucket toilet"
    51 "Hanging toilet / hanging latrine"
    61 "No facility/bush/field"
    96 "Other"
 /QH108
     1 "Yes"
     2 "No"
 /QH109
    95 "10 or more households"
    98 "Don't know"
 /QH109A
'A  ' "Dry and clean"
'B  ' "With urine or excreta"
'C  ' "With flies"
'?  ' "Missing"
 /QH110A
     1 "Yes"
     2 "No"
 /QH110B
     1 "Yes"
     2 "No"
```

```
/QH110C
    1 "Yes"
    2 "No"
/QH110D
    1 "Yes"
    2 "No"
/QH110E
    1 "Yes"
    2 "No"
/QH110F
    1 "Yes"
    2 "No"
/QH110G
    1 "Yes"
    2 "No"
/QH111
    1 "Electricity"
    2 "LPG"
    3 "Natural gas"
    4 "Biogas"
    5 "Kerosene"
    7 "Charcoal"
    8 "Wood"
    9 "Straw / shrubs / grass"
   10 "Agricultural crop"
   11 "Animal dung"
   95 "No food cooked in HH"
   96 "Other"
/QH112
    1 "In the house"
    2 "In a separate building"
    3 "Outdoors"
    6 "Other"
/QH113
    1 "Yes"
    2 "No"
/QH114
   11 "Earth, sand"
   12 "Dung"
   21 "Wood planks"
   22 "Palm, bamboo"
   31 "Parquet, polished wood"
   32 "Vinyl, asphalt strips"
   33 "Ceramic tiles"
   34 "Cement"
   35 "Carpet"
   96 "Other"
/QH115
   11 "No roof"
   12 "Thatch / palm leaf"
   13 "Sod"
   21 "Rustic mat/plastic"
```

```
   22 "Palm / bamboo"
   23 "Wood planks"
   24 "Cardboard"
   31 "Metal"
   32 "Wood"
   33 "Calamine / cement fiber"
   34 "Ceramic tiles"
   35 "Cement"
   36 "Roofing shingles"
   96 "Other"
/QH116
   11 "No walls"
   12 "Cane / palm / trunks"
   13 "Dirt"
   21 "Bamboo with mud"
   22 "Stone with mud"
   23 "Uncovered adobe"
   24 "Plywood"
   25 "Cardboard"
   26 "Reused wood"
   27 "Trunks with mud"
   31 "Cement"
   32 "Stone with lime / cement"
   33 "Bricks"
   34 "Cement blocks"
   35 "Covered adobe"
   36 "Wood planks / shingles"
   96 "Other"
/QH118A
    1 "Yes"
    2 "No"
/QH118B
    1 "Yes"
    2 "No"
/QH118C
    1 "Yes"
    2 "No"
/QH118D
    1 "Yes"
    2 "No"
/QH118E
    1 "Yes"
    2 "No"
/QH118F
    1 "Yes"
    2 "No"
/QH118G
    1 "Yes"
    2 "No"
/QH119
    1 "Yes"
    2 "No"
```

```
/QH120
 95.0 "More than 95"
 99.8 "Unknown"
/QH121
    1 "Yes"
    2 "No"
/QH122A
    0 "None"
   95 "95 or more"
   98 "Unknown"
/QH122B
    0 "None"
   95 "95 or more"
   98 "Unknown"
   99 "Missing"
/QH122C
    0 "None"
   95 "95 or more"
   98 "Unknown"
   99 "Missing"
/QH122D
    0 "None"
   95 "95 or more"
   98 "Unknown"
/QH122E
    0 "None"
   95 "95 or more"
   98 "Unknown"
/QH122F
    0 "None"
   95 "95 or more"
   98 "Unknown"
/QH122G
    0 "None"
   95 "95 or more"
   98 "Unknown"
   99 "Missing"
/QH122H
    0 "None"
   95 "95 or more"
   98 "Unknown"
   99 "Missing"
/QH122I
    0 "None"
   95 "95 or more"
   98 "Unknown"
/QH123
    1 "Yes"
    2 "No"
/QH123C
    1 "Yes, seen"
    2 "Not seen"
```

```
 /QH123D
     1 "All household members"
     2 "Some household members"
 /QH123E
     1 "Yes"
     2 "No"
 /QH126
     1 "Yes"
     2 "No"
 /QH127
     7 "7+"
 /QH137
     1 "Observed"
     2 "Not observed, not in dwelling / yard / plot"
     3 "Not observed, no permission to see"
     4 "Not observed, other reason"
 /QH138
     1 "Water is available"
     2 "Water is not available"
 /QH139
'A  ' "Soap or detergent (bar, liquid, powder, paste)"
'B  ' "Ash, mud, sand"
'C  ' "None"
 /QH140
     1 "Iodine present"
     2 "No iodine"
     3 "No salt in household"
     6 "Salt not tested"
 /QH178
999998 "Don't know"
 /QH120AU
     1 "Square metres"
     2 "Hectares"
 /QH120AN
99999995 "More than 95"
99999998 "Unknown"
.
EXECUTE.



*{Construct Variables}.

*{Members per sleeping room}.
if (hv012=0) hv012=hv013.
if (qh117>0) memsleep=trunc(hv012/qh117).
if (qh117=0) memsleep=hv012.
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 (qh102=11) h2oires=1.
var labels h2oires "Piped into dwelling".
compute h2oyrd=0.
if (qh102=12) h2oyrd=1.
var labels h2oyrd "Piped into yard/plot".
compute h2opub=0.
if (qh102=13) h2opub=1.
var labels h2opub "Public tap / standpipe".
compute h2obwell=0.
if (qh102=21) h2obwell=1.
var labels h2obwell "Tube well or borehole".
compute h2ipwell=0.
if (qh102=31) h2ipwell=1.
var labels h2ipwell "Protected dug well".
compute h2iowell=0.
if (qh102=32) h2iowell=1.
var labels h2iowell "Unprotected dug well".
compute h2opspg=0.
if (qh102=41) h2opspg=1.
var labels h2opspg "Protected Spring".
compute h2ouspg=0.
if (qh102=42) h2ouspg=1.
var labels h2ouspg "Unprotected Spring".
compute h2orain=0.
if (qh102=51) h2orain=1.
var labels h2orain "Water from rain".
compute h2otruck=0.
if (qh102=61) h2otruck=1.
var labels h2otruck "Water from tanker truck".
compute h2osurf=0.
if (qh102=81) h2osurf=1.
var labels h2osurf "Surface water-river, lake, dam, etc.".
compute h2obot=0.
if (qh102=91) h2obot=1.
var labels h2obot "Water from bottle".
compute h2ooth=0.
if (qh102=71 or qh102=96) h2ooth=1.
var labels h2ooth "Other water source".

*{Toilet facility}.
compute flushs=0.
if (qh107=11) flushs=1.
var labels flushs "Flush toilet to sewer".
compute flusht=0.
if (qh107=12) flusht=1.
var labels flusht "Flush toilet to septic tank".
compute flushp=0.
if (qh107=13) flushp=1.
```

```
var labels flushp "Flush toilet to pit latrine".
compute flushe=0.
if (qh107=14) flushe=1.
var labels flushe "Flush toilet to elsewhere".
compute latpit=0.
if (qh107=23) latpit=1.
var labels latpit "Traditional pit latrine".
compute latpits=0.
if (qh107=22) latpits=1.
var labels latpits "Pit latrine with slab".
compute latvip=0.
if (qh107=21) latvip=1.
var labels latvip "VIP latrine".
compute latcomp=0.
if (qh107=31) latcomp=1.
var labels latcomp 'Composting toilet/ecosan'.
compute latbush=0.
if (qh107=61) latbush=1.
var labels latbush "No facility/bush/field".
compute latoth=0.
if (qh107=41 or qh107=96) latoth=1.
var labels latoth 'Other type of latrine/toilet'.

compute latshare=0.
if (qh108=1) latshare=1.
var labels latshare 'Shares latrine/toilet with other
households'.


*{Flooring}.
compute dirtfloo=0.
if (qh114=11 or qh114=12) dirtfloo=1.
var labels dirtfloo "Earth, sand, dung floor".
compute woodfloo=0.
if (qh114=21 or qh114=22) woodfloo=1.
var labels woodfloo "Rudimentary wood plank, palm, bamboo floor".
compute cemtfloo=0.
if (qh114=34) cemtfloo=1.
var labels cemtfloo "Cement floor".
compute vinlfloo=0.
if (qh114=32) vinlfloo=1.
var labels vinlfloo "Vinyl, asphalt strip floor".
compute tilefloo=0.
if (qh114=33) tilefloo=1.
var labels tilefloo "Ceramic tile floor".
compute rugfloo=0.
if (qh114=35) rugfloo=1.
var labels rugfloo "Carpeted floor".
compute prqfloo=0.
if (qh114=31) prqfloo=1.
var labels prqfloo "Polished wood floor".
compute othfloo=0.
```

```
if (qh114=96) othfloo=1.
var labels othfloo "Other type of flooring".

*{Walls}.
compute nowall=0.
if (qh116=11) nowall=1.
var labels nowall "No walls".
compute natwall=0.
if (qh116=12 or qh116=13) natwall=1.
var labels natwall "Cane/palm/trunks/dirt walls".
compute mudwall=0.
if (qh116=21) mudwall=1.
var labels mudwall "Bamboo with mud walls".
compute stonwall=0.
if (qh116=22) stonwall=1.
var labels stonwall "Stone with mud walls".
compute adobwall=0.
if (qh116=23) adobwall=1.
var labels adobwall "Uncovered adobe walls".
compute plywall=0.
if (qh116=24) plywall=1.
var labels plywall "Plywood walls".
compute cardwall=0.
if (qh116=25) cardwall=1.
var labels cardwall "Cardboard walls".
compute rwoodwall=0.
if (qh116=26) rwoodwall=1.
var labels rwoodwall "Reused wood walls".
compute trnkwall=0.
if (qh116=27) trnkwall=1.
var labels trnkwall "Trunks with mud walls".
compute cmtwall=0.
if (qh116=31) cmtwall=1.
var labels cmtwall "Cement walls".
compute stonwall=0.
if (qh116=32) stonwall=1.
var labels stonwall "Stone walls".
compute brkwall=0.
if (qh116=33) brkwall=1.
var labels brkwall "Baked brick walls".
compute cmtbwall=0.
if (qh116=34) cmtbwall=1.
var labels cmtbwall "Cement block walls".
compute cadobwall=0.
if (qh116=35) cadobwall=1.
var labels cadobwall "Covered adobe walls".
compute woodwall=0.
if (qh116=36) woodwall=1.
var labels woodwall "Wood planks, shingles walls".
compute othwall=0.
if (qh116=96) othwall=1.
var labels othwall "Other type of walls".
```

```
*{Roofing}.
compute noroof=0.
if (qh115=11) noroof=1.
var labels noroof "No roof".
compute natroof=0.
if (qh115=12) natroof=1.
var labels natroof "Thatch/palm/sod roof".
compute matroof=0.
if (qh115=21) matroof=1.
var labels matroof "Rustic mat / plastic roof".
compute bambroof=0.
if (qh115=22) bambroof=1.
var labels bambroof "Palm / bamboo roof".
compute wproof=0.
if (qh115=23) wproof=1.
var labels wproof "Wood planks roof".
compute cardroof=0.
if (qh115=24) cardroof=1.
var labels cardroof "Cardboard roof".
compute metroof=0.
if (qh115=31) metroof=1.
var labels metroof "Iron sheet roof".
compute woodroof=0.
if (qh115=32) woodroof=1.
var labels woodroof "Wood roof".
compute asbroof=0.
if (qh115=33) asbroof=1.
var labels asbroof "Calamine / cement fiber roof".
compute tileroof=0.
if (qh115=34) tileroof=1.
var labels tileroof "Ceramic tile roof".
compute cmtroof=0.
if (qh115=35) cmtroof=1.
var labels cmtroof "Concrete roof".
compute shngroof=0.
if (qh115=36) shngroof=1.
var labels shngroof "Roofing shingles roof".
compute othroof=0.
if (qh115=96) othroof=1.
var labels othroof "Other type of roof".

*{Cooking Fuel}.
compute cookelec=0.
if (qh111>=1 and qh111<=4) cookelec=1.
var labels cookelec "Electricity or gas for cooking".
compute cookkero=0.
if (qh111=5) cookkero=1.
var labels cookkero "Kerosene for cooking".
compute cookchar=0.
if (qh111=7) cookchar=1.
var labels cookchar "Charcoal for cooking".
```

```
compute cookwood=0.
if (qh111=8 ) cookwood=1.
var labels cookwood "Wood for cooking".
compute cookstraw=0.
if (qh111=9) cookstraw=1.
var labels cookstraw "Straw for cooking".
compute cookcrop=0.
if (qh111=10) cookcrop=1.
var labels cookcrop "Agricultural crop for cooking".
compute cookdung=0.
if (qh111=11) cookdung=1.
var labels cookdung "Dung for cooking".
compute cooknone=0.
if (qh111=95) cooknone=1.
var labels cooknone 'Does not cook'.
compute cookoth=0.
if (qh111=96) cookoth=1.
var labels cookoth "Other fuel for cooking".

*{Reset missing values to "does not have", change 2 code to 0}.

if (qh108<>1) qh108=0.
if (qh110a<>1) qh110a=0.
if (qh110b<>1) qh110b=0.
if (qh110c<>1) qh110c=0.
if (qh110d<>1) qh110d=0.
if (qh110e<>1) qh110e=0.
if (qh110f<>1)  qh110f=0.
if (qh110g<>1) qh110g=0.

if (qh118a<>1) qh118a=0.
if (qh118b<>1) qh118b=0.
if (qh118c<>1) qh118c=0.
if (qh118d<>1) qh118d=0.
if (qh118e<>1) qh118e=0.
if (qh118f<>1)  qh118f=0.
if (qh118g<>1) qh118g=0.

if (qh119<>1) qh119=0.
if (qh119<>1) qh120=0.

compute landarea=0.

if (missing(qh120) and qh120au=1) landarea=qh120an/10000.
if (missing(qh120) and qh120au=2) landarea=qh120an.
if (not(missing(qh120))) landarea=qh120.
if (qh119<>1) landarea=0.
FREQUENCIES landarea.

if (qh121<>1) qh121=0.
if (qh121<>1) qh122a=0.
if (qh121<>1) qh122b=0.
```

```
if (qh121<>1) qh122c=0.
if (qh121<>1) qh122d=0.
if (qh121<>1) qh122e=0.
if (qh121<>1) qh122f=0.
if (qh121<>1) qh122g=0.
if (qh121<>1) qh122h=0.
if (qh121<>1) qh122i=0.
missing values qh122a to qh122i (98,99).

if (qh123<>1) qh123=0.

*{Lighting fuel}.
*compute eleclgt=0.
*if (qh106=1) eleclgt=1.
*var labels eleclgt "Electricity for lighting".
*compute sunlgt=0.
*if (qh106=2) sunlgt=1.
*var labels sunlgt "Solar electricity for lighting".
*compute gaslgt=0.
*if (qh106=3) gaslgt=1.
*var labels gaslgt "Gas for lighting".
*compute hurrlgt=0.
*if (qh106=4) hurrlgt=1.
*var labels hurrlgt "Pariffin-hurricane lamp".
*compute preslgt=0.
*if (qh106=5) preslgt=1.
*var labels preslgt "Pariffin-pressure lamp".
*compute wicklgt=0.
*if (qh106=6) wicklgt=1.
*var labels wicklgt "Wick lamp for lighting".
*compute candlgt=0.
*if (qh106=8) candlgt=1.
*var labels candlgt "Candles for lighting".
*compute woodlgt=0.
*if (qh106=7) woodlgt=1.
*var labels woodlgt "Firewood for lighting".
*compute othlgt=0.
*if (qh106=96) othlgt=1.
*var labels othlgt "Other type of lighting".


*{Solid waste/garbage collection}.

execute.

DATASET ACTIVATE DataSet1.
FREQUENCIES VARIABLES=QHTYPE HV009 HV012 HV013 QH102 QH107 QH108
QH110A QH110B QH110C QH110D QH110E
    QH110F QH110G QH114 QH115 QH116 QH117 QH118A QH118B QH118C
QH118D QH118E QH118F QH118G QH119 QH120
    QH121 QH122A QH122B QH122C QH122D QH122E QH122F QH122G QH122H
QH122I QH123 QH120AU QH120AN DOMESTIC
```

```
    HOUSE LAND
  /ORDER=ANALYSIS.
FREQUENCIES VARIABLES=memsleep h2oires h2oyrd h2opub h2obwell
h2ipwell h2iowell h2opspg h2ouspg
    h2orain h2otruck h2osurf h2obot h2ooth flushs flusht flushp
flushe latpit latpits latvip
    latcomp latbush latoth latshare dirtfloo woodfloo cemtfloo
vinlfloo tilefloo
    rugfloo prqfloo othfloo nowall natwall mudwall stonwall
adobwall plywall cardwall rwoodwall
    trnkwall cmtwall brkwall cmtbwall cadobwall woodwall othwall
noroof natroof matroof bambroof wproof
    cardroof metroof woodroof asbroof tileroof cmtroof shngroof
othroof cookelec
    cookkero cookchar cookwood cookcrop cookdung cooknone cookoth
landarea
  /ORDER=ANALYSIS.

save outfile="c:\hnp2a\Rwanda 2010\rwassets.sav".

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

FACTOR
  /VARIABLES QH110A QH110B QH110C QH110D QH110E QH110F QH110G
QH118A QH118B QH118C QH118D
    QH118E QH118F QH118G QH119 QH120 QH121 QH122A QH122B QH122C
QH122D QH122E QH122F QH122G QH122H qh122i
   QH123 DOMESTIC HOUSE LAND memsleep h2oires h2oyrd h2opub
h2obwell h2ipwell h2iowell h2opspg
    h2ouspg h2orain h2osurf h2obot h2ooth flushs flusht flushp
flushe latpit latpits
    latvip latcomp latbush latoth latshare dirtfloo woodfloo
cemtfloo tilefloo
    othfloo nowall natwall mudwall stonwall adobwall plywall
rwoodwall
    trnkwall cmtwall brkwall cmtbwall cadobwall woodwall othwall
noroof natroof matroof bambroof
    metroof woodroof tileroof cmtroof shngroof othroof cookelec
cookkero cookchar cookwood cookcrop cooknone cookoth landarea
  /MISSING MEANSUB
  /ANALYSIS QH110A QH110B QH110C QH110D QH110E QH110F QH110G
QH118A QH118B QH118C QH118D
    QH118E QH118F QH118G QH119 QH120 QH121 QH122A QH122B QH122C
QH122D QH122E QH122F QH122G QH122H qh122i
   QH123 DOMESTIC HOUSE LAND memsleep h2oires h2oyrd h2opub
h2obwell h2ipwell h2iowell h2opspg
    h2ouspg h2orain h2osurf h2obot h2ooth flushs flusht flushp
flushe latpit latpits
    latvip latcomp latbush latoth latshare dirtfloo woodfloo
cemtfloo tilefloo
    othfloo nowall natwall mudwall stonwall adobwall plywall
```

```
rwoodwall
    trnkwall cmtwall brkwall cmtbwall cadobwall woodwall othwall
noroof natroof matroof bambroof
    metroof woodroof tileroof cmtroof shngroof othroof cookelec
cookkero cookchar cookwood cookcrop cooknone cookoth
        /PRINT UNIVARIATE INITIAL CORRELATION 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 ****.

FACTOR
 /VARIABLES QH110A QH110B QH110C QH110D QH110E QH110F QH110G
QH118A QH118B QH118C QH118D
    QH118E QH118F QH118G
   QH123 DOMESTIC HOUSE memsleep h2oires h2oyrd h2opub h2obwell
h2ipwell h2iowell h2opspg
    h2ouspg h2orain h2osurf h2obot h2ooth flushs flusht flushp
flushe latpit latpits
    latvip latcomp latbush latoth latshare dirtfloo woodfloo
cemtfloo tilefloo
    othfloo nowall natwall mudwall stonwall adobwall plywall
rwoodwall
    trnkwall cmtwall brkwall cmtbwall cadobwall woodwall othwall
noroof natroof matroof bambroof
    metroof woodroof tileroof cmtroof shngroof othroof cookelec
cookkero cookchar cookwood cookcrop cooknone cookoth landarea
  /MISSING MEANSUB
  /ANALYSIS QH110A QH110B QH110C QH110D QH110E QH110F QH110G
QH118A QH118B QH118C QH118D
    QH118E QH118F QH118G
   QH123 DOMESTIC HOUSE memsleep h2oires h2oyrd h2opub h2obwell
h2ipwell h2iowell h2opspg
    h2ouspg h2orain h2osurf h2obot h2ooth flushs flusht flushp
flushe latpit latpits
    latvip latcomp latbush latoth latshare dirtfloo woodfloo
cemtfloo tilefloo
    othfloo nowall natwall mudwall stonwall adobwall plywall
rwoodwall
    trnkwall cmtwall brkwall cmtbwall cadobwall woodwall othwall
noroof natroof matroof bambroof
    metroof woodroof tileroof cmtroof shngroof othroof cookelec
cookkero cookchar cookwood cookcrop cooknone cookoth
```

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


** For Scale-up survey only.
*FACTOR
 /VARIABLES QH110A QH110B QH110C QH110D QH110E QH110F QH110G
QH118A QH118B QH118C QH118D
    QH118E QH118F QH118G
   QH123 DOMESTIC HOUSE memsleep h2oires h2oyrd h2opub h2obwell
h2ipwell h2iowell h2opspg
    h2ouspg h2orain h2osurf h2obot h2ooth flushs flusht flushp
flushe latpit latpits
    latvip latcomp latbush latoth latshare dirtfloo woodfloo
cemtfloo tilefloo
    othfloo nowall natwall mudwall stonwall adobwall plywall
rwoodwall
    trnkwall cmtwall brkwall cmtbwall cadobwall woodwall othwall
noroof natroof matroof bambroof
    metroof woodroof tileroof cmtroof shngroof othroof cookelec
cookkero cookchar cookwood cookcrop cooknone cookoth landarea
  /MISSING MEANSUB
  /ANALYSIS QH110A QH110B QH110C QH110D QH110E QH110F QH110G
QH118A QH118B QH118C QH118D
    QH118E QH118F QH118G
   QH123 DOMESTIC HOUSE memsleep h2oires h2oyrd h2opub h2obwell
h2ipwell h2iowell h2opspg
    h2ouspg h2orain h2osurf h2obot h2ooth flushs flusht flushp
flushe latpit latpits
    latvip latcomp latbush latoth latshare dirtfloo woodfloo
cemtfloo tilefloo
    othfloo nowall natwall mudwall stonwall adobwall plywall
rwoodwall
    trnkwall cmtwall brkwall cmtbwall cadobwall woodwall othwall
noroof natroof matroof bambroof
    metroof woodroof tileroof cmtroof shngroof othroof
  /PRINT UNIVARIATE INITIAL EXTRACTION FSCORE
  /CRITERIA FACTORS(1) ITERATE(25)
  /EXTRACTION PC
  /ROTATION NOROTATE
  /SAVE REG(ALL SU)
  /METHOD=CORRELATION.

weight by hhmemwt.

*FREQUENCIES
  VARIABLES=su1  /FORMAT=NOTABLE
  /NTILES= 5
```

```
  /STATISTICS=STDDEV MINIMUM MAXIMUM MEAN MEDIAN MODE SKEWNESS
SESKEW
  KURTOSIS SEKURT
  /ORDER=  ANALYSIS .

weight off.

** Standard wealth index for DHS by urban and rural areas.


**  Urban Areas.

USE ALL.
COMPUTE filter_$=(qhtype = 1).
VARIABLE LABEL filter_$ 'qhtype = 1 (FILTER)'.
VALUE LABELS filter_$  0 'Not Selected' 1 'Selected'.
FORMAT filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE .

WEIGHT
  OFF.


FACTOR
   /VARIABLES QH110A QH110B QH110C QH110D QH110E QH110F QH110G
QH118A QH118B QH118C QH118D
    QH118E QH119 QH121 QH122A QH122B QH122C QH122D QH122E QH122F
QH122G QH122H
   QH123 DOMESTIC HOUSE land memsleep h2oires h2oyrd h2opub
h2obwell h2ipwell h2iowell h2opspg
    h2ouspg h2orain h2osurf h2obot h2ooth flushs flusht flushp
flushe latpit latpits
    latvip latcomp latbush latoth latshare dirtfloo woodfloo
cemtfloo tilefloo
    othfloo natwall mudwall stonwall adobwall rwoodwall
    trnkwall cmtwall brkwall cmtbwall cadobwall woodwall othwall
natroof matroof bambroof
    metroof woodroof tileroof cmtroof shngroof cookelec cookkero
cookchar cookwood cooknone cookoth landarea
  /MISSING MEANSUB
  /ANALYSIS QH110A QH110B QH110C QH110D QH110E QH110F QH110G
QH118A QH118B QH118C QH118D
    QH118E QH119 QH121 QH122A QH122B QH122C QH122D QH122E QH122F
QH122G QH122H
   QH123 DOMESTIC HOUSE land memsleep h2oires h2oyrd h2opub
h2obwell h2ipwell h2iowell h2opspg
    h2ouspg h2orain h2osurf h2obot h2ooth flushs flusht flushp
flushe latpit latpits
    latvip latcomp latbush latoth latshare dirtfloo woodfloo
cemtfloo tilefloo
    othfloo natwall mudwall stonwall adobwall rwoodwall
```

```
    trnkwall cmtwall brkwall cmtbwall cadobwall woodwall othwall
natroof matroof bambroof
    metroof woodroof tileroof cmtroof shngroof cookelec cookkero
cookchar cookwood cooknone cookoth landarea
  /PRINT UNIVARIATE INITIAL EXTRACTION FSCORE
  /CRITERIA FACTORS(1) ITERATE(25)
  /EXTRACTION PC
  /ROTATION NOROTATE
  /SAVE REG(ALL URB)
  /METHOD=CORRELATION.


** Rural Area.

USE ALL.
COMPUTE filter_$=(qhtype = 2).
VARIABLE LABEL filter_$ 'qhtype = 2 (FILTER)'.
VALUE LABELS filter_$  0 'Not Selected' 1 'Selected'.
FORMAT filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE .


FACTOR
  /VARIABLES QH110A QH110B QH110C QH110D QH110E QH110F QH110G
QH118A QH118B QH118C QH118D
    QH118E QH118F QH118G QH119 QH120 QH121 QH122A QH122B QH122C
QH122D QH122E QH122F QH122G QH122H qh122i
   QH123 DOMESTIC HOUSE LAND memsleep h2oires h2oyrd h2opub
h2obwell h2ipwell h2iowell h2opspg
    h2ouspg h2orain h2osurf h2obot h2ooth flushs flusht flushp
flushe latpit latpits
    latvip latcomp latbush latoth latshare dirtfloo woodfloo
cemtfloo tilefloo
    othfloo nowall natwall mudwall stonwall adobwall plywall
rwoodwall
    trnkwall cmtwall brkwall cmtbwall cadobwall woodwall othwall
noroof natroof matroof bambroof
    metroof woodroof tileroof cmtroof shngroof othroof cookelec
cookkero cookchar cookwood cookcrop cooknone cookoth landarea
  /MISSING MEANSUB
  /ANALYSIS QH110A QH110B QH110C QH110D QH110E QH110F QH110G
QH118A QH118B QH118C QH118D
    QH118E QH118F QH118G QH119 QH120 QH121 QH122A QH122B QH122C
QH122D QH122E QH122F QH122G QH122H qh122i
   QH123 DOMESTIC HOUSE LAND memsleep h2oires h2oyrd h2opub
h2obwell h2ipwell h2iowell h2opspg
    h2ouspg h2orain h2osurf h2obot h2ooth flushs flusht flushp
flushe latpit latpits
    latvip latcomp latbush latoth latshare dirtfloo woodfloo
cemtfloo tilefloo
    othfloo nowall natwall mudwall stonwall adobwall plywall
```

```
rwoodwall
    trnkwall cmtwall brkwall cmtbwall cadobwall woodwall othwall
noroof natroof matroof bambroof
    metroof woodroof tileroof cmtroof shngroof othroof cookelec
cookkero cookchar cookwood cookcrop cooknone cookoth landarea
  /PRINT UNIVARIATE INITIAL EXTRACTION FSCORE
  /CRITERIA FACTORS(1) ITERATE(25)
  /EXTRACTION PC
  /ROTATION NOROTATE
  /SAVE REG(ALL RUR)
  /METHOD=CORRELATION.



* Calculate regressions with total score.
** Urban Area.

USE ALL.
COMPUTE filter_$=(qhtype = 1).
VARIABLE LABEL filter_$ 'qhtype = 1 (FILTER)'.
VALUE LABELS filter_$  0 'Not Selected' 1 'Selected'.
FORMAT filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE .


REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT FAC1_1
  /METHOD=ENTER URB1  .

** Rural Area.

USE ALL.
COMPUTE filter_$=(qhtype = 2).
VARIABLE LABEL filter_$ 'qhtype = 2 (FILTER)'.
VALUE LABELS filter_$  0 'Not Selected' 1 'Selected'.
FORMAT filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE .


REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT FAC1_1
  /METHOD=ENTER RUR1  .
```

```
FILTER OFF.
USE ALL.
EXECUTE .


*** Calculate combined wealth score from Urban and Rural Scores.
compute combscor=0.
print formats combscor (F11.5).
** Urban.
if (qhtype = 1) combscor=1.292+1.530* URB1.
** Rural.
if (qhtype = 2) combscor=(-0.247)+0.566* RUR1.
execute.


*Tabulation for histograms
weight by hhwt.
filter off.
use all.
FREQUENCIES
  VARIABLES=combscor  /FORMAT=NOTABLE
  /NTILES= 5
  /STATISTICS=STDDEV MEAN
  /HISTOGRAM  NORMAL
  /ORDER=  ANALYSIS
.

* Calculate histogram intervals.

compute histnac=trunc(fac1_1/((2.5-(-2.0))/50)).
if (fac1_1 ge 0 ) histnac=histnac+1.
freq var=histnac.


*Calculate quintiles and scores for data file.
compute hhmemwt=qhweight*hv012/1000000.
weight by hhmemwt.
VARIABLE LABELS hhmemwt 'HH members weighting for Index' .

** Urban Area.
USE ALL.
COMPUTE filter_$=(qhtype = 1).
VARIABLE LABEL filter_$ 'qhtype = 1 (FILTER)'.
VALUE LABELS filter_$  0 'Not Selected' 1 'Selected'.
FORMAT filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE .

RANK
  VARIABLES=urb1  (A) /RANK /NTILES (5) /PRINT=YES
  /TIES=MEAN .
```

```
** Rural Area.

USE ALL.
COMPUTE filter_$=(qhtype = 2).
VARIABLE LABEL filter_$ 'qhtype = 2 (FILTER)'.
VALUE LABELS filter_$  0 'Not Selected' 1 'Selected'.
FORMAT filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE .

RANK
  VARIABLES=rur1  (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 .

frequencies variables=ncombsco.

compute hhwt=qhweight/1000000.
weight by hhwt.
VARIABLE LABELS hhwt 'HH weights' .

MEANS TABLES=QH110A QH110B QH110C QH110D QH110E QH110F QH110G
QH118A QH118B QH118C QH118D
    QH118E QH118F QH118G QH119 QH120 QH121 QH122A QH122B QH122C
QH122D QH122E QH122F QH122G QH122H qh122i
   QH123 DOMESTIC HOUSE LAND memsleep h2oires h2oyrd h2opub
h2obwell h2ipwell h2iowell h2opspg
    h2ouspg h2orain h2osurf h2obot h2ooth flushs flusht flushp
flushe latpit latpits
    latvip latcomp latbush latoth latshare dirtfloo woodfloo
cemtfloo tilefloo
    othfloo nowall natwall mudwall stonwall adobwall plywall
rwoodwall
    trnkwall cmtwall brkwall cmtbwall cadobwall woodwall othwall
```

```
noroof natroof matroof bambroof
    metroof woodroof tileroof cmtroof shngroof othroof cookelec
cookkero cookchar cookwood cookcrop cooknone cookoth landarea
    by Ncombsco
  /CELLS MEAN COUNT STDDEV.


compute hv271=combscor.
compute hv270=ncombsco.

save outfile="c:\hnp2a\Rwanda 2010\rw10assets.sav".

WEIGHT
  OFF.
FREQUENCIES
  VARIABLES=hv271
  /ORDER=  ANALYSIS .

compute hhwt=qhweight/1000000.
weight by hhwt.

GRAPH
  /HISTOGRAM(NORMAL)=combscor
  /TITLE= 'Distribution of Households by Wealth Scores Rwanda
2010'.
FREQUENCIES
  VARIABLES=combscor  /FORMAT=NOTABLE
  /NTILES= 5
  /STATISTICS=STDDEV MINIMUM MAXIMUM SEMEAN MEAN MEDIAN MODE
SKEWNESS SESKEW
  KURTOSIS SEKURT
  /ORDER=  ANALYSIS .

write formats combscor urb1 rur1 (f11.5).

WRITE OUTFILE='c:\hnp2a\Rwanda 2010\rw10scores.dat'
  TABLE
  /qhclust qhnumber combscor ncombsco urb1 nurb1 rur1 nrur1.
EXECUTE.

save outfile="c:\hnp2a\Rwanda 2010\rw10assets.sav".
```