VARIABLE LABELS
QHCLUST  "Cluster number"
/QHNUMBER  "Household number"
/QHWEIGHT  "Household weight (6 decimals)"
/QHTYPE  "Type of place of residence"
/HHMEMB  "Total persons in household"
/HHUSUAL  "Number of usual residents"
/HHSLEPT  "Number who slept in HH last night"
/QH26  "Any members of HH who lived here in the past 10 years but who have since moved away"
/QH33A  "Total number of migrants"
/QH101  "Frequency of smoking inside house"
/QH102  "Source of drinking water"
/QH103  "Location of source for water"
/QH104  "Time to water and back (mins)"
/QH105  "Do anything to water to make safe to drink"
/QH106  "What do you usually do to make water safe to drink"
/QH107  "Type of toilet facility"
/QH108  "Share facilities with other households"
/QH109  "Number of households sharing toilet"
/QH110A  "Electricity"
Radio
Television
Telephone (non-mobile)
Refrigerator
Almirah/Cabinet
Chair
Room cooler
Airconditioner
Washing machine
Water pump
Bed
Clock
Sofa
Camera
Sewing machine
Computer
Internet connection
Type of cooking fuel
Food cooked in the house / in separate building / outdoors
Household has separate room used as kitchen
Main material of floor
Main roof material
Main wall material
Number of rooms used for sleeping
Watch
Mobile telephone
Bicycle
Motorcycle or Scooter
Animal-drawn cart
Car or Truck
A Tractor
Boat with a motor
Boat without a motor
Own land usable for agriculture
Area for agricultural land: Unit
Area for agricultural land: Number
Livestock, herds or farm animals
Cows / bulls
Horses / donkeys / mules
Goats
Sheep
Chickens
Buffalo
Camels
Bank account
Interior walls sprayed against insecticide in past 12 months
Dwelling sprayed by government, private company or NGO
Mosquito nets used while sleeping
Number of mosquito nets
"Number of mosquito nets are insecticide treated"
"Usually soak the mosquito nets in a liquid"
"Number of months mosquito net are soaked or dipped"
"Use of insecticide treated nets reduce the incidence of malaria"
"Household avoid mosquitos"
"Ways to avoid mosquitos from the HH"
"Place for handwashing observed"
"Presence of water observed"
"Presence of soap, detergent or other cleansing agent observed"
"Domestic servant in household"
"Owns a dwelling"
"Owns agricultural land"

MISSING VALUE
QH26   (9)
/QH33A  (99)
/QH101  (9)
/QH102  (99)
/QH103  (9)
/QH104  (999)
/QH105  (9)
/QH107  (99)
/QH108  (9)
/QH109  (99)
/QH110A (9)
/QH110B (9)
/QH110C (9)
/QH110D (9)
/QH110E (9)
/QH110F (9)
/QH110G (9)
/QH110H (9)
/QH110I (9)
/QH110J (9)
/QH110K (9)
/QH110L (9)
/QH110M (9)
/QH110N (9)
/QH110O (9)
/QH110P (9)
/QH110Q (9)
/QH110R (9)
/QH111  (99)
/QH112  (9)
/QH113  (9)
/QH114  (99)
/QH115  (99)
/QH116  (99)
/QH117  (99)
/QH118A (9)
VALUE LABELS

QHTYPE
  1 "Urban"
  2 "Rural"

/QH26
  1 "Yes"
  2 "No"
  8 "Don't know"

/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"
  22 "Hand pump"
  31 "Dug well - protected"
  32 "Dug well - unprotected"
41 "Spring - protected"
42 "Spring - unprotected"
51 "Rainwater"
61 "Tanker truck"
62 "Filtration plant"
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
996 "On premises"
998 "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"

/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"
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"

/QH110A
1 "Yes"
2 "No"
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>QH110B</td>
<td>Yes</td>
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<tr>
<td>QH110C</td>
<td>Yes</td>
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<tr>
<td>QH110D</td>
<td>Yes</td>
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<tr>
<td>QH110E</td>
<td>Yes</td>
</tr>
<tr>
<td>QH110F</td>
<td>Yes</td>
</tr>
<tr>
<td>QH110G</td>
<td>Yes</td>
</tr>
<tr>
<td>QH110H</td>
<td>Yes</td>
</tr>
<tr>
<td>QH110I</td>
<td>Yes</td>
</tr>
<tr>
<td>QH110J</td>
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<td>QH110K</td>
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<tr>
<td>QH110Q</td>
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</tr>
<tr>
<td>QH110R</td>
<td>Yes</td>
</tr>
<tr>
<td>QH111</td>
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</tbody>
</table>
1 "Electricity"
2 "LPG"
3 "Natural gas"
4 "Biogas"
5 "Kerosene"
6 "Coal, lignite"
7 "Charcoal"
8 "Wood"
9 "Straw / shrubs / grass"
10 "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"
36 "Chips/Terrazzo"
37 "Bricks"
38 "Mats"
39 "Marble"
96 "Other"

/QH115
11 "No roof"
12 "Thatch / palm leaf"
13 "Sod/grass"
21 "Rustic mat"
22 "Palm / bamboo"
23 "Wood planks"
24 "Cardboard"
31 "Iron sheets/asbestos"
32 "Reinforced brick cement/RCC"
33 "Metal"
34 "Wood/ T Iron/Mud"
35 "Calamine / cement fiber"
36 "Ceramic tiles"
37 "Cement/RCC"
38 "Roofing shingles"
96 "Other"
<table>
<thead>
<tr>
<th>Material Type</th>
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</thead>
<tbody>
<tr>
<td>No walls</td>
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<td></td>
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<tr>
<td>Cane / palm / trunks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dirt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mud/stones</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bamboo/Sticks/mud</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unbaked bricks/mud</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carton/plastic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bamboo with mud</td>
<td></td>
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<tr>
<td>Stone with mud</td>
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<td></td>
</tr>
<tr>
<td>Uncovered adobe</td>
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<tr>
<td>Plywood</td>
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<td></td>
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<tr>
<td>Cardboard</td>
<td></td>
<td></td>
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<tr>
<td>Reused wood</td>
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<tr>
<td>Baked bricks</td>
<td></td>
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<tr>
<td>Tent</td>
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</tr>
<tr>
<td>Cement</td>
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<td></td>
</tr>
<tr>
<td>Stone with lime / cement</td>
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</tr>
<tr>
<td>Bricks</td>
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<tr>
<td>Cement blocks</td>
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<td></td>
</tr>
<tr>
<td>Covered adobe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood planks / shingles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
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</tr>
</tbody>
</table>

/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"

/QH118H
1 "Yes"
2 "No"

/QH118I
1 "Yes"
2 "No"
/QH126
  1 "Yes"
  2 "No"
/QH127
  7 "7+"
/QH128
  0 "None"
  8 "Don't know"
/QH129
  1 "Yes"
  2 "No"
  8 "Don't know"
/QH130
  0 "Less than a month"
  95 "25 or more"
  98 "Don't know"
/QH131
  1 "Yes"
  2 "No"
  8 "Not sure"
/QH132
  1 "Yes"
  2 "No"
  8 "Don't know"
/QH133
' A ' "Coil"
'B ' "Mats"
'C ' "Spray"
'D ' "Electric spray repellant"
'E ' "Insect repellant"
'F ' "Infrared electric device"
'G ' "Smoke"
'H ' "Membrance"
'X ' "Others"
'? ' "Missing"
/QH134
  1 "Observed"
  2 "Not observed, not in dwelling / yard / plot"
  3 "Not observed, no permission to see"
  4 "Not observed, other reason"
/QH135
  1 "Water is available"
  2 "Water is not available"
/QH136
' A ' "Soap or detergent (bar, liquid, powder, paste)"
'B ' "Ash, mud, sand"
'C ' "None"
'? ' "Missing"

EXECUTE.

*{Construct Variables}.
*{Members per sleeping room}.
if (HHUSUAL=0) HHUSUAL=HHSLEPT.
if (QH117>0) memsleep=trunc(HHUSUAL/QH117).
if (QH117=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 (QH102=11) h2oires=1.
variable labels h2oires "Public Piped into dwelling".
compute h2oyrd=0.
if (QH102=12) h2oyrd=1.
variable labels h2oyrd "Public Piped into yard/plot".
compute h2ospipe=0.
if (QH102=13) h2ospipe=1.
variable labels h2ospipe "Public tap/standpipe".
compute h2owell=0.
if (QH102=21) h2owell=1.
variable labels h2owell "Tube well/borehole".
compute h2opump=0.
if (QH102=22) h2opump=1.
variable labels h2opump "Hand pump".
compute h2opwell=0.
if (QH102=31) h2opwell=1.
variable labels h2opwell "Protected well".
compute h2ouwell=0.
if (QH102=32) h2ouwell=1.
variable labels h2ouwell "Unprotected well".
compute h2opspg=0.
if (QH102=41) h2opspg=1.
variable labels h2opspg "Protected spring".
compute h2ouspg=0.
if (QH102=42) h2ouspg=1.
variable labels h2ouspg "Protected spring".
compute h2orain=0.
if (QH102=51) h2orain=1.
variable labels h2orain "Water from rain".
compute h2otruck=0.
if (QH102=61) h2otruck=1.
variable labels h2otruck "Water from tanker truck".
compute h2ofilt=0.
if (QH102=62) h2ofilt=1.
variable labels h2ofilt "Filtration plant".
compute h2ocart=0.
if (QH102=71) h2ocart=1.
variable labels h2ocart "Cart with small tank".
compute h2osurf=0.
if (QH102=81) h2osurf=1.
variable labels h2osurf "Surface water-river, lake, dam, etc.".
compute h2obot=0.
if (QH102=91) h2obot=1.
variable labels h2obot "Water from bottle".
compute h2ooth=0.
if (QH102=96) h2ooth=1.
variable labels h2ooth "Other water source".
formats h2oires h2oyrd h2ospipe h2owell h2opump h2opwell h2ouwell
h2opspg h2ouspg h2orain h2otruck h2ofilt h2ocart h2osurf h2obot
h2ooth (f1.0).

*{Toilet facility}.
compute flushs=0.
if (QH107=11) flushs=1.
variable labels flushs "Flush toilet to sewer".
compute flusht=0.
if (QH107=12) flusht=1.
variable labels flusht "Flush toilet to septic tank".
compute flushp=0.
if (QH107=13) flushp=1.
variable labels flushp "Flush to pit latrine".
compute flushe=0.
if (QH107=14) flushe=1.
variable labels flushe "Flush somewhere else".
compute flushd=0.
if (QH107=15) flushd=1.
variable labels flushd "Flush don't know where".
compute latvip=0.
if (QH107=21) latvip=1.
variable labels latvip "Ventilated improved pit latrine".
compute latslab=0.
if (QH107=22) latslab=1.
variable labels latslab "Pit latrine with slab".
compute latpit=0.
if (QH107=23) latpit=1.
variable labels latpit "Pit latrine open pit".
compute latbuck=0.
if (QH107=41) latbuck=1.
variable labels latbuck "Bucket toilet".
compute lathang=0.
if (QH107=51) lathang=1.
variable labels lathang "Hanging toilet/latrine".
compute latbush=0.
if (QH107=61) latbush=1.
variable labels latbush "No facility/bush/field".
compute latoth=0.
if (QH107=96) latoth=1.
variable labels latoth "Other type of latrine/toilet".
formats flushs flusht flushp flushe flushd latvip latslab latpit
latbuck lathang latbush latoth (f1.0).

compute latshare=0.
if (QH108=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 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 (QH107=11) sflushs=1.
   if (QH107=12) sflusht=1.
   if (QH107=13) sflushp=1.
   if (QH107=14) sflushe=1.
   if (QH107=15) sflushd=1.
   if (QH107=21) slatvip=1.
   if (QH107=22) slatslab=1.
   if (QH107=23) slatpit=1.
   if (QH107=41) slatbuck=1.
   if (QH107=51) slathang=1.
   if (QH107=96) slatoth=1.
end if.
formats sflushs sflusht sflushp sflushe sflushd slatvip slatslab slatpit slatbuck slathang slatoth (f1.0).

*{Flooring}.
compute dirtfloo=0.
if (QH114=11) dirtfloo=1.
variable labels dirtfloo "Earth, sand, floor".
compute dungfloo=0.
if (QH114=12) dungfloo=1.
variable labels dungfloo "dung floor".
compute woodfloo=0.
if (QH114=21) woodfloo=1.
variable labels woodfloo "wood plank floor".
compute palmfloo=0.
if (QH114=22) palmfloo=1.
variable labels palmfloo "Palm/bamboo floor".
compute prqfloo=0.
if (QH114=31) prqfloo=1.
variable labels prqfloo "Polished wood floor".
compute vinyfloo=0.
if (QH114=32) vinyfloo=1.
variable labels vinyfloo "Vinyl/asphalt floor".
compute tilefloo=0.
if (QH114=33) tilefloo=1.
variable labels tilefloo "Ceramic tile floor".
compute cemtfloo=0.
if (QH114=34) cemtfloo=1.
variable labels cemtfloo "Cement floor".
compute carpfloo=0.
if (QH114=35) carpfloo=1.
variable labels carpfloo "Carpet floor".
compute terrfloo=0.
if (QH114=36) terrfloo=1.
variable labels terrfloo "Chips/terrazo floor".
compute brikfloo=0.
if (QH114=37) brikfloo=1.
variable labels brikfloo "Bricks floor".
compute matsfloo=0.
if (QH114=38) matsfloo=1.
variable labels matsfloo "Mats floor".
compute marbfloo=0.
if (QH114=39) marbfloo=1.
variable labels marbfloo "Marble floor".
compute othfloo=0.
if (QH114=96) othfloo=1.
variable labels othfloo "Other type of flooring".
formats dirtfloo dungfloo woodfloo palmfloo prqfloo vinyfloo
tilefloo cemtfloo carpfloo terrfloo brikfloo matsfloo marbfloo
othfloo (f1.0).

*{Roofing}.
compute noroof=0.
if (QH115=11) noroof=1.
variable labels noroof "No roof".
compute natroof=0.
if (QH115=12) natroof=1.
variable labels natroof "Thatch, palm, sod roof".
compute sodroof=0.
if (QH115=13) sodroof=1.
variable labels sodroof "Sod/grass roof".
compute rustroof=0.
if (QH115=21) rustroof=1.
variable labels rustroof "Rustic mat roof".
compute palmroof=0.
if (QH115=22) palmroof=1.
variable labels palmroof "Palm/bamboo roof".
compute wproof=0.
if (QH115=23) wproof=1.
variable labels wproof "Wood planks roof".
compute cardroof=0.
if (QH115=24) cardroof=1.
variable labels cardroof "Cardboard roof".
compute ironroof=0.
if (QH115=31) ironroof=1.
variable labels ironroof "Iron sheet/asbestos roof".
compute brikroof=0.
if (QH115=32) brikroof=1.
variable labels brikroof "Reinforced brick/cement roof".
compute metroof=0.
if (QH115=33) metroof=1.
variable labels metroof "Metal fiber roof".
compute woodroof=0.
if (QH115=34) woodroof=1.
variable labels woodroof "Wood/T iron/mud roof".
compute calaroof=0.
if (QH115=35) calaroof=1.
variable labels calaroof "Calamine/cement fiber roof".
compute ceraroof=0.
if (QH115=36) ceraroof=1.
variable labels ceraroof "Ceramic tiles roof".
compute cemtroof=0.
if (QH115=37) cemtroof=1.
variable labels cemtroof "Cement/RCC roof".
compute shinroof=0.
if (QH115=38) shinroof=1.
variable labels shinroof "Shingles roof".
compute othroof=0.
if (QH115=96) othroof=1.
variable labels othroof "Other type of roof".
formats noroof natroof sodroof rustroof palmroof wproof cardroof ironroof brikroof metroof woodroof calaroof ceraroof cemtroof shinroof othroof (f1.0).

*(Walls).
compute nowall=0.
if (QH116=11) nowall=1.
variable labels nowall "No walls".
compute natwall=0.
if (QH116=12) natwall=1.
variable labels natwall "Cane/palm/trunks walls".
compute dirtwall=0.
if (QH116=13) dirtwall=1.
variable labels dirtwall "Dirt walls".
compute mudwall=0.
if (QH116=14) mudwall=1.
variable labels mudwall "Mud/stones walls".
compute bambwall=0.
if (QH116=15) bambwall=1.
variable labels bambwall "Bamboo walls".
compute unbkmwall=0.
if (QH116=21) unbkmwall=1.
variable labels unbkmwall "Unbaked bricks/mud walls".
compute cartwall=0.
if (QH116=22) cartwall=1.
variable labels cartwall "Carton/plastic walls".
compute bmudwall=0.
if (QH116=23) bmudwall=1.
variable labels bmudwall "Bamboo with mud walls".
compute stonwall=0.
if (QH116=24) stonwall=1.
variable labels stonwall "Stone walls with lime/cement".
compute adobwall=0.
if (QH116=25) adobwall=1.
variable labels adobwall "Uncovered adobe walls".
compute plywwall=0.
if (QH116=26) plywwall=1.
variable labels plywwall "Plywood wall".
compute cardwall=0.
if (QH116=27) cardwall=1.
variable labels cardwall "Cardboard walls".
compute reuwwall=0.
if (QH116=28) reuwwall=1.
variable labels reuwwall "Reused wood walls".
compute brikwall=0.
if (QH116=31) brikwall=1.
variable labels brikwall "Baked brick walls".
compute tentwall=0.
if (QH116=32) tentwall=1.
variable labels tentwall "Tent walls".
compute cemtwall=0.
if (QH116=33) cemtwall=1.
variable labels cemtwall "Cement walls".
compute stlimwall=0.
if (QH116=34) stlimwall=1.
variable labels stlimwall "Stone with lime/cement walls".
compute brik2wall=0.
if (QH116=35) brik2wall=1.
variable labels brik2wall "Briks walls".
compute cemt2wall=0.
if (QH116=36) cemt2wall=1.
variable labels cemt2wall "Cement blocks walls".
compute adob2wall=0.
if (QH116=37) adob2wall=1.
variable labels adob2wall "Covered adobe walls".
compute shinwall=0.
if (QH116=38) shinwall=1.
variable labels shinwall "Wood planks/shingle walls".
compute othwall=0.
if (QH116=96) othwall=1.
variable labels othwall "Other type of walls".
formats nowall natwall dirtwall mudwall bambwall unbkmwall
cartwall bmudwall stonwall adobwall plywwall cardwall reuwwall
brikwall tentwall cemtwall stlimwall brik2wall cemt2wall
adob2wall shinwall othwall (f1.0).

*{Cooking Fuel}.
compute cookelec=0.
if (QH111=1) cookelec=1.
variable labels cookelec "Electricity for cooking".
compute cooklpg=0.
if (QH111=2) cooklpg=1.
variable labels cooklpg "LPG for cooking".
compute cookngas=0.
if (QH111=3) cookngas=1.
variable labels cookngas "Natural gas for cooking".
compute cookbgas=0.
if (QH111=4) cookbgas=1.
variable labels cookbgas "Biogas for cooking".
compute cookkero=0.
if (QH111=5) cookkero=1.
variable labels cookkero "Kerosene for cooking".
compute cookcoal=0.
if (QH111=6) cookcoal=1.
variable labels cookcoal "Coal ignite for cooking".
compute cookchar=0.
if (QH111=7) cookchar=1.
variable labels cookchar "Charcoal for cooking".
compute cookwood=0.
if (QH111=8) cookwood=1.
variable labels cookwood "Wood for cooking".
compute cookstraw=0.
if (QH111=9) cookstraw=1.
variable labels cookstraw "Straw/shrubs/grass for cooking".
compute cookdung=0.
if (QH111=10) cookdung=1.
variable labels cookdung "Dung for cooking".
compute cooknone=0.
if (QH111=6) cooknone=1.
variable labels cooknone 'Does not cook'.
compute cookoth=0.
if (QH111=96) cookoth=1.
variable labels cookoth "Other fuel for cooking".
formats cookelec cooklpg cookngas cookbgas cookkero cookcoal
cookchar cookwood cookstraw cookdung cooknone cookoth (f1.0).

*{Reset missing values to "does not have", change 2 code to 0}.
if (missing(QH110A) | QH110A<>1) QH110A=0.
if (missing(QH110B) | QH110B<>1) QH110B=0.
if (missing(QH110C) | QH110C<>1) QH110C=0.
if (missing(QH110D) | QH110D<>1) QH110D=0.
if (missing(QH110E) | QH110E<>1) QH110E=0.
if (missing(QH110F) | QH110F<>1) QH110F=0.
if (missing(QH110G) | QH110G<>1) QH110G=0.
if (missing(QH110H) | QH110H<>1) QH110H=0.
if (missing(QH110I) | QH110I<>1) QH110I=0.
if (missing(QH110J) | QH110J<>1) QH110J=0.
if (missing(QH110K) | QH110K<>1) QH110K=0.
if (missing(QH110L) | QH110L<>1) QH110L=0.
if (missing(QH110M) | QH110M<>1) QH110M=0.
if (missing(QH110N) | QH110N<>1) QH110N=0.
if (missing(QH110O) | QH110O<>1) QH110O=0.
if (missing(QH110P) | QH110P<>1) QH110P=0.
if (missing(QH110Q) | QH110Q<>1) QH110Q=0.
if (missing(QH110R) | QH110R<>1) QH110R=0.

if (missing(QH118A) | QH118A<>1) QH118A=0.
if (missing(QH118B) | QH118B<>1) QH118B=0.
if (missing(QH118C) | QH118C<>1) QH118C=0.
if (missing(QH118D) | QH118D<>1) QH118D=0.
if (missing(QH118E) | QH118E<>1) QH118E=0.
if (missing(QH118F) | QH118F<>1) QH118F=0.
if (missing(QH118G) | QH118G<>1) QH118G=0.
if (missing(QH118H) | QH118H<>1) QH118H=0.
if (missing(QH118I) | QH118I<>1) QH118I=0.

* Land.
* Acres.
if (QH120U=1) landarea=QH120N*0.404686.
* Kanal.
if (QH120U=2) landarea=QH120N*0.404686/8.

if (QH120U=9 | QH120N=99.8 | QH120N=99.9) landarea=$sysmis.
if (QH120N=99.5) landarea=95.
if (missing(QH119) | QH119<>1) landarea=0.
frequencies landarea.

*Animals.
if (missing(QH121) | QH121 <>1) QH121=0.
if (missing(QH122A) | QH121 <>1) QH122A=0.
if (missing(QH122B) | QH121 <>1) QH122B=0.
if (missing(QH122C) | QH121 <>1) QH122C=0.
if (missing(QH122D) | QH121 <>1) QH122D=0.
if (missing(QH122E) | QH121 <>1) QH122E=0.
if (missing(QH122F) | QH121 <>1) QH122F=0.
if (missing(QH122G) | QH121 <>1) QH122G=0.

missing values QH122A to QH122G (98,99).
* Bank account.
if (missing(QH123) | QH123<>1) QH123=0.

* Compute urban and rural variables coded (1/0) for filters later.
COMPUTE urban=(QHTYPE = 1).
COMPUTE rural=(QHTYPE = 2).
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=memsleep h2oires h2oyrd h2ospipe h2owell h2opump h2opwell h2ouwell h2opspg h2ouspg h2orain h2otruck h2ofilt h2ocart h2osurf h2obot h2ooth flushs flusht flushp flushe flushd latvip latslab latpit latbuck latlathang latlathot latlathare sflushs sflusht sflushp sflushe sflushd slatvip slatslab slatpit slatbuck slathang slatlathot cookelec cooklpg cookngas cookbgas coo kero cookcoal cookchar cookwood cookstraw cookdung cooknone cookoth dirtfloo dungfloo woodfloo palmfloo prqfloo vinyfloo tilefloo cemtfloo carpfloo terrfloo brikfloo matsfloo marbfloo othfloo noroof natroof sodroof rustroof palmroof wproof cardroof ironroof brikroof metroof woodroof calaroof ceraroof cemtroof shinroof othroof nowall natwall dirtwall mudwall bambwall unbkmwall cartwall bmudwall stonwall adobwall plynwall cardwall reuwwall brikwall tentwall cementwall stlimwall brik2wall cement2wall adob2wall shinwall othwall landarea urban rural /ORDER=ANALYSIS.

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

20
save outfile="c:\pk61\WealthIndex\pk12assets.sav".

************************************************

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

FACTOR
/VARIABLES QH110A QH110B QH110C QH110D QH110E QH110F QH110G QH110H QH110I QH110J QH110K QH110L QH110M QH110N QH110O QH110P QH110Q QH110R QH118A QH118B QH118C QH118D QH118E QH118F QH118G QH118H QH118I QH121 QH122A QH122B QH122C QH122D QH122E QH122F QH122G QH123 DOMESTIC HOUSE LAND h2oires h2oyrd h2ospipe h2owell h2opump h2opwell h2ouwell h2opspg h2ouspg h2orain h2otruck h2ofilt h2ocart h2osurf h2obot h2oother
flushs flusht flushp flushe flushd latvip latslab latpit latbuck latladder latlatto latlath share sflushs sflusht sflushp sflushe sflushd slatvip slatvips slatvips slatslab slatpit slatbuck slatlatto cookelec cooklpg cookngas cookkero cookcoal cookchar cookwood cookstraw cookdung cookkero cookcoal dirtfloo dungfloo woodfloo palmfloo prqfloo vinyfloo tilefloo cemtfloo carpfloo terrfloo brpkfl oo matsfloo marbfloo othfloo noroof natroof sodroof rustroof palmroof wproof cardroof ironroof brikroof metroof woodroof calaroofer ceraroom cemtroof shinroof othroof nowall natwall dirtwall mudwall bambwall unbkmwall cartwall bmudwall stonwall adobwall plywwall cardwall reuwwall brikwall tentwall cemtwall stlimwall brik2wall cemt2wall adob2wall shinwall othwall landarea /MISSING MEANSUB /ANALYSIS QH110A QH110B QH110C QH110D QH110E QH110F QH110G QH110H QH110I QH110J QH110K QH110L QH110M QH110N QH110O QH110P QH110Q QH110R QH118A QH118B QH118C QH118D QH118E QH118F QH118G QH118H QH118I QH121 QH122A QH122B QH122C QH122D QH122E QH122F QH122G QH123 DOMESTIC HOUSE LAND h2oires h2oyrd h2ospipe h2owell h2opump h2opwell h2ouwell h2opspg h2ouspg h2orain h2otruck h2ofilt h2ocart h2osurf h2obot h2oother flushs flusht flushp flushe flushd latvip latslab latpit latbuck latladder latlatto latlath share sflushs sflusht sflushp sflushe sflushd slatvip slatvips slatvips slatslab slatpit slatbuck slatlatto cookelec cooklpg cookngas cookkero cookcoal cookchar cookwood cookstraw cookdung cookkero cookcoal dirtfloo dungfloo woodfloo palmfloo prqfloo vinyfloo tilefloo cemtfloo carpfloo terrfloo brpkfl oo matsfloo marbfloo othfloo noroof natroof sodroof rustroof palmroof wproof cardroof
**Common Factor Analysis.**

FILTER OFF.
USE ALL.
EXECUTE.

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

FACTOR
/VARIABLES QH110A QH110B QH110C QH110D QH110E QH110F QH110G QH110H QH110I QH110J QH110K QH110L QH110M QH110N QH110O QH110P QH110Q QH110R QH110S QH110T QH110U QH110V QH118A QH118B QH118C QH118D QH118E QH118F QH118G QH118H QH118I QH118J QH118K QH118L QH118M QH118N QH118O QH118P QH118Q QH118R QH118S QH118T QH118U QH118V QH118W QH118X QH118Y QH118Z DOMESTIC HOUSE h2oires h2oyrd h2ospipe h2owell h2opump h2opwell h2ouwell h2opspg h2ouspg h2orain h2otruck h2ofilt h2ocart h2osurf h2obot h2ooth flushs flusht flushp flushe flushd latvip latslab latpit latbuck latbush latoth latshare sfloops sfloops sfloops sfloops sfloops slatvip slatslab slatpits slatpits slatoth cookelec cooklpq cookngas cookkero cookcoa cookchar cookwood cookstraw cookdung cooknorr cookoth dirtfloof duguflloof woodflloof palmfloof prqfloof vinylfloof tilefloof cemtfloof carpfloof terrflooo brikflooo matsflooo marbflooo othflooo norof natroof sodroof rustroof palmroof wprcroof cardroof ironroof brikroof metroof woodroof calaroof ceraroof cemtrooof shinroof othroof nowall natwall dirtwall mudwall bambwall unbkmwall cartwall bmudwall stonwall adobwall plywwall cardwall reuwall brikwall tentwall cemtwall stlimwall brik2wall cemt2wall adob2wall shinwall othwall
/MISSING MEANSUB
/ANALYSIS QH110A QH110B QH110C QH110D QH110E QH110F QH110G QH110H QH110I QH110J QH110K QH110L
** Urban Area.**

USE ALL.
FILTER BY urban.
EXECUTE.

FACTOR
h2oires h2oyrd h2ospipe h2owell h2opump h2opwell h2ouwell h2opspg h2ouspg h2orain h2otruck h2ofilt h2ocart h2osurf h2obot h2ooth
flushs flusht flushp flushe flushd latvip latslab latpit latbuck latbath latbush latoth latshare sfflushs sfflusht sfflushp sfflushe sfflushd slatvip slatslab slatpit slatbuck slathang slatoth cookelec cooklpg cookngas cookelec cookngas cookkero cookcoal cookchar cookwood cookstraw cookdung cooknurse cookoth dirtfloo dungfloo woodfloo prqfloo vinyfloo tilefloo cemtfloo carpfloo terrfloo brikfloo matsfloo marbfloo othfloo noroof natroof sodroof rustroof palmroof wproof cardroof ironroof brikroof metroof woodroof calaroof ceraroof cemtroof shinroof othroof nowall natwall dirtwall mudwall bambwall unbkmwall cartwall bmudwall stonwall adobwall plywwall cardwall reuwwall brikwall tentwall cementwall cemtwall stlimwall brik2wall cemt2wall adob2wall shinwall othwall
/PRINT UNIVARIATE INITIAL EXTRACTION
/Criteria FACTORS(1) ITERATE(25)
/EXTRACTION PC
/ROTATION NOROTATE
/SAVE REG(ALL COM)
/METHOD=CORRELATION.
**Rural Area.**

USE ALL.
FILTER BY rural.
EXECUTE.
FACTOR
/VARIABLES QH110A QH110B QH110C QH110D QH110E QH110F QH110G QH110H QH110I QH110J QH110K QH110L QH110M QH110N QH110O QH110P QH110Q QH110R QH118A QH118B QH118C QH118D QH118E QH118F QH118G QH118H QH118I QH121 QH122A QH122B QH122C QH122D QH122E QH122F QH122G QH123 DOMESTIC HOUSE LAND h2oires h2oyrd h2ospipe h2owell h2opump h2opwell h2ouwell h2opspg h2ouspg h2orain h2otruck h2ofilt h2ocart h2osurf h2obot h2ooth flushs flusht flushp flushe flushd latvip latslab latpit latbucket latbush latnood latshare slflushs slflushp slflushd slvatip slatslab slatpit slatbucket slatnood slatoth cookelec cooklpq cookngas cookbgas coookkero coookcoal cookchar cookwood cookstraw cookdung cooknood cookoth dirtflool dungflool woodflool palmflool pirqflool vinyflool tileflool cemtfloo carpflool terrflool brikflool matsflool marbfloo othflool noroof natroof sodroof rustroof palroof wproof cardroof ironroof brikroof metroof woodroof carloorf cerroof cemtroof shinroof othroof nowall natwall dirtwall mudwall bambwall unbkmwall cartwall bmudwall stonwall adobwall plywwall cardwall reuwwall brikwall tentwall cemtwall stlimwall brik2wall cemt2wall adob2wall shinwall othwall landarea /MISSING MEANMISS 
/ANALYSIS QH110A QH110B QH110C QH110D QH110E QH110F QH110G QH110H QH110I QH110J QH110K QH110L QH110M QH110N QH110O QH110P QH110Q QH110R QH118A QH118B QH118C QH118D QH118E QH118F QH118G QH118H QH118I QH121 QH122A QH122B QH122C QH122D QH122E QH122F QH122G QH123 DOMESTIC HOUSE LAND h2oires h2oyrd h2ospipe h2owell h2opump h2opwell h2ouwell h2opspg h2ouspg h2orain h2otruck h2ofilt h2ocart h2osurf h2obot h2ooth flushs flusht flushp flushe flushd latvip latslab latpit latbucket latbush latnood latshare slflushs slflushp slflushd slvatip slatslab slatpit slatbucket slatnood slatoth cookelec cooklpq cookngas cookbgas coookkero coookcoal cookchar cookwood cookstraw cookdung cooknood cookoth dirtflool dungflool woodflool palmflool pirqflool vinyflool tileflool cemtfloo carpflool terrflool brikflool matsflool marbfloo othflool noroof natroof sodroof rustroof palroof wproof cardroof ironroof brikroof metroof woodroof carloorf cerroof cemtroof shinroof othroof nowall natwall dirtwall mudwall bambwall unbkmwall cartwall bmudwall stonwall adobwall plywwall cardwall reuwwall brikwall tentwall cemtwall stlimwall brik2wall cemt2wall adob2wall shinwall othwall landarea
brik2wall cemt2wall adob2wall shinwall othwall
landarea
/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 urbcov.
  regression
    /missing listwise
    /statistics coeff outs r anova
    /criteria=pin(.05) pout(.10)
    /noorigin
    /dependent com1
    /method=enter urb1
    /outfile=corv(urbcov).

* Activate file of output from regression.
  dataset activate urbcov.
* 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-activate the main household data.
  dataset activate assets.
* Rename the urban score.
rename variables urbl=urbscore.
* merge the coefficients.
match files
   /file = *
   /table = urbcov
   /by ROWTYPE_.
execute.

** Rural area.

use all.
filter by rural.

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

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

use all.
dataset close urbcov.
dataset close rurcerv.
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.

frequncies variables=ncombsco.

weight by hhwt.

MEANS TABLES=
  QH110A QH110B QH110C QH110D QH110E QH110F QH110G QH110H QH110I QH110J QH110K QH110L QH110M QH110N QH110O QH110P QH110Q QH110R QH118A QH118B QH118C QH118D QH118E QH118F QH118G QH118H QH118I QH1121 QH1122A QH1122B QH1122C QH1122D QH1122E QH1122F QH1122G QH1123 DOMESTIC HOUSE LAND h2oires h2oyrd h2ospipe h2owell h2opump h2opwell h2ouwell h2opspg h2ouspg h2orain h2otruck h2ofilt h2ocart h2osurf h2obot
h2ooth
    flushs flusht flushp flushe flushd latvip latslab
latpit latbuck lathang latbush latoth latshare
    sflushs sflusht sflushp sflushe sflushd slatvip slatslab
slatpit slatbuck slathang slatoth
    cookelec cooklpg cookngas cookbgas cookkero cookcoal
cookchar cookwood cookstraw cookdung cooknone cookoth
dirtfloo dungfloo woodfloo palmfloo prqfloo vinyfloo tilefloo
cemtfloo carpfloo terrfloo brikfloo matsfloo marbfloo othfloo
    noroof natroof sodroof rustroof palmroof wproof cardroof
ironroof brikroof metroof woodroof calaroof ceraroof cemtroof
shinroof othroof
    nowall natwall dirtwall mudwall unbkmwall cartwall
bmudwall stonwall adobwall plywwall cardwall
    reuwwall brikwall tentwall cemtwall stlimwall
brik2wall cemt2wall adob2wall shinwall othwall
landarea
    by Ncombsco
/CELLS MEAN COUNT STDDEV.

WEIGHT OFF.

save outfile="c:\PK61\WealthIndex\PK12assets.sav".

*** Write out scores file.
WRITE OUTFILE="c:\PK61\WealthIndex\PK12scores.dat"
    TABLE
        /QHCLUST QNUMBER combscor ncombsco urbscore nurbscor rurscore
nrurscor.
EXECUTE.