Anthony Damico

From:	mahdi.s.sundukchi@census.gov
Sent:	Wednesday, January 30, 2013 2:56 PM
To:	Anthony Damico
Subject:	RE: standard error with public use file

Hi Anthony,

Sorry I did not recognized your name when I talked to you on the phone yesterday. Hope you are doing well.

Below you will find the SAS code and the output of estimating Percent and total of poverty and their standard errors using public use data. All standard error estimates are found based on the Fay Method (Modified replicate weight method). Hope this is going to be helpful.. even I know you have a great knowledge of SIPP.

Please don't hesitate to ask or discuss SIPP estimate issues. Have great day.

Mahdi

```
libname temp '/sippbranch/temp/mahdi';

libname pu_core '/sipp/sipp2008/pubuse/wave1';
libname pu_repwt '/sippbranch/sippb/cswgting/sasdata/pub_08repwgt';

proc sort data=pu_core.l08puw1(keep=ssuid EPPPNUM srefmon rhcalmn rhcalyr THTOTINC TFTOTINC
      RHPOV RFPOV WPFINWGT ERRP EFREFPER EHREFPER
      rename=(EPPPNUM=pnum srefmon=rfmon) where=(rhcalmn=8))
      out=l08puw1;
      by ssuid pnum rfmon;
run;

proc sort data=pu_repwt.Repwgt120_p08w1_scramid(rename=(scramid=ssuid))
      out=repwgt120_p08w1;
      by ssuid pnum rfmon;
run;

****     Merge Core Data and Replicate Weights;

data temp.ppw1;
      merge l08puw1(in=a) repwgt120_p08w1(in=b);
      by ssuid pnum rfmon;  if a and b;
      pov=(THTOTINC<RHPOV);
      povf=(TFTOTINC<RFPOV);
      WPFINWGT=WPFINWGT/10000;
run;


****     Calculate standard errors of proportion and total number of people in poverty;

Title "Person Poverty Estimation";

proc surveymeans mean sum cv data=temp.ppw1 varmethod=BRR (FAY=.5) ;
  repweights repwt1-repwt120;
```

```
   weight WPFINWGT;
   var pov;
run;

Title "Household Poverty Estimation";

proc surveymeans mean sum cv data=temp.ppw1(where=(EHREFPER=pnum)) varmethod=BRR (FAY=.5)
;
   repweights repwt1-repwt120;
   weight WPFINWGT;
   var pov;
run;

Title "Family Poverty Estimation";

proc surveymeans mean sum cv data=temp.ppw1(where=(EFREFPER=pnum)) varmethod=BRR (FAY=.5)
;
   repweights repwt1-repwt120;
   weight WPFINWGT;
   var povf;
run;
```

The SURVEYMEANS Procedure

        Data Summary

Number of Observations   105474
Sum of Weights   299425276

        Variance Estimation

Method   BRR
Replicate Weights   PPW1
Number of Replicates   120
Fay Coefficient   0.5

                    Statistics

| | | Std Error | | | Coeff of | | |
Variable	Mean	of Mean	t Value	Pr > |t|	Variation	Sum	Std Dev
pov	0.146016	0.001929	75.70	<.0001	0.013210	43720944	577541

The SURVEYMEANS Procedure

        Data Summary

Number of Observations   42029
Sum of Weights   117625360

      Variance Estimation

Method   BRR
Replicate Weights   PPW1
Number of Replicates   120
Fay Coefficient   0.5

                              Statistics

Variable	Mean	Std Error of Mean	t Value	Pr > |t|	Coeff of Variation	Sum	Std Dev
pov	0.147249	0.001896	77.66	<.0001	0.012876	17320237	223023

Family Poverty Estimation

The SURVEYMEANS Procedure

      Data Summary

Number of Observations   46542
Sum of Weights   131586872

      Variance Estimation

Method   BRR
Replicate Weights   PPW1
Number of Replicates   120
Fay Coefficient   0.5

                              Statistics

Variable	Mean	Std Error of Mean	t Value	Pr > |t|	Coeff of Variation	Sum	Std Dev
pov	0.146449	0.001990	73.59	<.0001	0.013589	19270778	265908