

## IVEware Analysis Example Replication C5

\* IVEware (SAS-Callable) Analysis Examples Replication for ASDA 2nd Edition, SAS v9.4 TS1M3 ;  
\* Berglund April 2017  
\* Chapter 5 ;

```
libname d "P:\ASDA 2\Data sets\nhanes 2011_2012\" ;
```

```
ods listing ;  
options nodate nonumber ;
```

\* Note: run this code in the SAS REGULAR PROGRAM EDITOR, NOT THE ENHANCED EDITOR! ;  
\* Note: IVEware can also be run using the XML editor method, see the [iveware.org](http://iveware.org) site for details ;

```
data c5_nhanes ;  
  set d.nhanes1112_sub_8aug2016 ;  
  int_wtmec2yr = int(wtmec2yr) ;  
  female=0 ;  
  if riagendr=2 then female = 1 ;  
  if age > 45 then age45=1 ; else age45=0 ;  
run ;
```

```
ods rtf style=normalprinter bodytitle ;
```

```
title "Example 5.1 : generate weighted histogram of cholesterol, Plots Not Available in IVEware" ;  
title "Example 5.2:generate weighted boxplot of cholesterol by gender, Plots Not Available in IVEware" ;
```

```
title "Example 5.3 : Population totals using NCSR data " ;  
libname ncsr "P:\ASDA 2\Data sets\ncsr\" ;
```

```
data c5_ncsr ;  
  set ncsr.ncsr_sub_13nov2015 ;  
  * create variables needed for NCSR examples ;  
  ncsrwtsh_pop = ncsrwtsh * (209128094 / 9282) ;  
run ;
```

```
* set options and location to call IVEware from SAS session ;  
options set=srclib "C:\iveware_30jan2017\sas" sasautos=(!srclib sasautos) maautosource ;
```

\* NOTE: Totals are not available in IVEware ;

```
title "Example 5.4 : Total HH Wealth using HRS 2012 data " ;  
libname hrs "P:\ASDA 2\Data sets\HRS 2012\" ;
```

```
data c5_hrs ;  
  set hrs.hrs_sub_28sep2016 ;  
  if nfinr=1 then finr=1 ; else if nfinr=0 then finr=0 ; else finr=. ;  
  if gender=2 then female=1 ; else female=0 ;  
  if nage >=70 then age70=1 ; else age70=0 ;  
run ;
```

```
****5.4??? ;
```

```
title "Example 5.5: Estimating the Mean Value of Household Income using the 2012 HRS Data." ;  
%describe (setup=new, name="Example 5.5 Mean HH Income Using HRS Data", dir=P:\ASDA 2\Analysis Example  
Replication\IVEware\IVEware files) ;
```

```
title "Example 5.5, Mean HH Income using HRS Data" ;  
datain c5_hrs ;  
stratum stratum ;  
cluster secu ;  
weight nwgthh ;  
by finr ;  
mean hllitot ;  
run;
```

```
*title "Example 5.6: Estimating Mean Systolic Blood Pressure using the NHANES Data." ;  
%describe (setup=new, name="Example 5.6 Mean Systolic BP Using NHANES Data", dir=P:\ASDA 2\Analysis Example  
Replication\IVEware\IVEware files) ;
```

```
title "Example 5.6, Mean Systolic BP using NHANES Data" ;  
datain c5_nhanes ;  
stratum sdmvstra ;  
cluster sdmvpsu ;  
weight wtmec2yr ;  
by age18p ;  
mean bpxs1 ;  
run;
```

```

title "Example 5.7: Estimating the Mean Value of Total Household Wealth using the HRS Data." ;
%describe (setup=new, name="Example 5.7 Mean HH Wealth Using HRS Data", dir=P:\ASDA 2\Analysis Example
Replication\IVEware\IVEware files) ;
  title "Example 5.7, Mean Total HH Wealth using HRS Data" ;
  datain c5_hrs ;
  stratum stratum ;
  cluster secu ;
  weight nwgthh ;
  by finr ;
  mean hllatota ;
run;

title "NOTE: Not Available in IVEware: Example 5.8: Estimation of the Population Standard Deviations of NHANES 2011-2012
Measures of High-density and Total Cholesterol Level.";
* NOTE: standard deviations are not available in IVEware ;

ods text="Example 5.8: Standard Deviations not Available in IVEware" ;

ods text="Example 5.9: Population Quantiles not Available in IVEware" ;

ods text="Example 5.10: Estimating the Lorenz Curve and Gini Coefficient for the 2012 HRS Population Distribution of Total
Household Wealth. Not available in IVEware" ;

title "Example 5.11: Estimation of the Correlation of Adults' Total and High-Density Cholesterol Measures in the 2011-2012
NHANES.";
proc means data=c5_nhanes mean ;
  where age18p=1 ;
  var lbdhdd lbxtc ;
  weight wtmec2yr ;
run ;
proc corr data=c5_nhanes ;
  where age18p=1 ;
  var lbdhdd lbxtc ;
  weight wtmec2yr ;
run ;

data c5_nhanes_1 ;
  set c5_nhanes ;
  stdlbxtc=(lbxtc - 194.4355)/41.05184 ;
  stdlbdhdd = (lbdhdd - 52.83826) / 14.93157 ;
run ;

%regress (setup=new, name="Example 5.11 Correlation of Adult Total and HDL Cholesterol Using NHANES Data", dir=P:\ASDA
2\Analysis Example Replication\IVEware\IVEware files) ;
  title "Example 5.11 Correlation of Adult Total and HDL Cholesterol Using NHANES Data" ;
  datain c5_nhanes_1 ;
  stratum sdmvstra ;
  cluster sdmvpsu ;
  weight wtmec2yr ;
  by age18p ;
  dependent stdlbdhdd ;
  predictor stdlbxtc ;
run;

ods text="Example 5.12: Estimating the Population Ratio of High Density to Total Cholesterol for U.S. Adults. Not available
in IVEware (Ratios) " ;

title "Example 5.13: Estimating the Proportions of Males and Females Age >= 70 with Diabetes Using the HRS Data." ;
%describe (setup=new, name="Example 5.13 Proportions of Males and Females Age 70 Plus with Diabetes", dir=P:\ASDA 2\Analysis
Example Replication\IVEware\IVEware files) ;
  title "Example 5.13 Proportions of Males and Females Age >= 70 with Diabetes, Using HRS Data" ;
  datain c5_hrs ;
  stratum stratum ;
  cluster secu ;
  weight nwgtr ;
  by age70 gender ;
  mean diabetes ;
run;
* NOTE IVEware will halt if any stratum have only 1 cluster:
  Read data
    Only one cluster for stratum 53
    Only one cluster for stratum 55
    Only one cluster for stratum 53
;

title "Example 5.14: Estimating Mean Systolic Blood Pressure for Males and Females Age > 45 using the 2011-2012 NHANES data." ;

```

```
%describe (setup=new,name="Example 5.14 Mean Systolic BP by Gender Age 45 Plus using the NHANES data", dir=P:\ASDA 2\Analysis
Example Replication\IVEware\IVEware files) ;
title "Example 5.14 Estimating Mean Systolic Blood Pressure for Males and Females Age 45 Plus using the 2011-2012 NHANES
data.";
datain c5_nhanes ;
stratum sdmvstra ;
cluster sdmvpsu ;
weight wtmecl2yr ;
by age45 riagendr ;
mean bpxs1 ;
run;
```

```
title "Example 5.15: Estimating Differences in Mean Total Household Wealth Between HRS Subpopulations Defined by Educational
Attainment Level." ;
%describe (setup=new, name="Example 5.15", dir=P:\ASDA 2\Analysis Example Replication\IVEware\IVEware files) ;
title "Example 5.15 Estimating Differences in Mean Total Household Wealth Between HRS Subpopulations Defined by Educational
Attainment Level" ;
datain c5_hrs ;
stratum stratum ;
cluster secu ;
weight nwgthh ;
by finr edcat ;
mean hllatota ;
contrast edcat ;
run;
```

\*NOTE: program will not run due to "Only one cluster for stratum 24" or issue with BY statement in above code ;

```
title "Example 5.16: Estimating Differences in Mean Total Household Wealth from 2010 to 2012 using Data from the HRS study.
" ;
```

```
libname hrs10_12 "P:\ASDA 2\Data sets\HRS 2012\hrs 2010" ;
```

```
data hrs_2010_2012_c5 ;
set hrs10_12.hrs_2010_2012_both ;
* prepare data for analysis ;
hhweight = mwgthh ; if year=2012 then hhweight = nwgthh ;
totwealth=h10atota ; if year=2012 then totwealth=h11atota ;
finr2010 = 0 ; if (year = 2010 & mfinr = 1) then finr2010=1 ;
finr2012 = 0 ; if (year = 2012 & nfinr = 1) then finr2012=1 ;
finr2010_2012 = 0 ; if finr2010 = 1 | finr2012 = 1 then finr2010_2012=1 ;
run ;
```

```
%describe (setup=new, name="Example 5.16", dir=P:\ASDA 2\Analysis Example Replication\IVEware\IVEware files) ;
title "Example 5.16: Estimating Differences in Mean Total Household Wealth from 2010 to 2012 using Data from the HRS study.
" ;
datain hrs_2010_2012_c5 ;
stratum stratum ;
cluster secu ;
weight hhweight ;
by finr2010_2012 ;
mean totwealth ;
contrast year ;
run;
```

```
ods rtf close ;
```

```
title "Example 5.1 : generate weighted histogram of cholesterol, Plots Not Available in IVEware" ;  
title "Example 5.2:generate weighted boxplot of cholesterol by gender, Plots Not Available in IVEware" ;  
title "Example 5.3 : Population totals using NCSR data Not Available in IVEware" ;
```

**Example 5.5: Estimating the Mean Value of Household Income using the 2012 HRS Data.**

```

IVEware Setup Checker, Mon May 08 15:12:45 2017 1
Setup listing:
title "Example 5.5, Mean HH Income using HRS Data" ;
datain c5_hrs ;
stratum stratum ;
cluster secu ;
weight nwgthh ;
by finr ;
mean hllitot ;
run;
    
```

**Example 5.5: Estimating the Mean Value of Household Income using the 2012 HRS Data.**

```

IVEware Design-Based Descriptive Statistics Procedure, Mon May 08 15:12:46 2017 1
"Example 5.5, Mean HH Income using HRS Data"
By variables:          finr
Stratum variable:     STRATUM  STRATUM ID
Cluster variable:     SECU  SAMPLING ERROR COMPUTATION UNIT
Weight variable:      NWGTHH  2012 WEIGHT: HOUSEHOLD LEVEL

Analysis description:

      5  Variables
     56  Strata
    112  Secus

Strata Model
     56  Multiple PSU
      0  Paired Selection
      0  Successive Differences

13657  Cases Read
    
```

**Example 5.5: Estimating the Mean Value of Household Income using the 2012 HRS Data.**

```

IVEware Design-Based Descriptive Statistics Procedure, Mon May 08 15:12:46 2017 2
"Example 5.5, Mean HH Income using HRS Data"
By Condition
      finr
        1

      Problem 1

Degrees of freedom
              56

      Factor  Covariance of denominator
      None    0.02918

      Mean    Number of      Sum of      Weighted      Standard
      HLLITOT Cases      Weights      Mean          Error
              13657  5.896986e+007  71382.4      1937.229

              Lower      Upper      T Test      Prob > |T|
              Bound      Bound
              67501.66  75263.15  36.84768      0.00000

      Unweighted      Bias      Design
      Mean            Effect
      55151.22      -22.73835  3.43529
    
```

"Example 5.6, Mean Systolic BP using NHANES Data"

IVEware Setup Checker, Mon May 08 15:12:47 2017

1

Setup listing:

```
title "Example 5.6, Mean Systolic BP using NHANES Data" ;
datain c5_nhanes ;
stratum sdmvstra ;
cluster sdmvpsu ;
weight wtmecc2yr ;
by agel8p ;
mean bpxs1 ;
run;
```

IVEware Design-Based Descriptive Statistics Procedure, Mon May 08 15:12:47 2017

1

"Example 5.6, Mean Systolic BP using NHANES Data"

```
By variables:          agel8p  Age >=18: 1=Yes 0=No
Stratum variable:     SDMVSTRA  Masked variance pseudo-stratum
Cluster variable:     SDMVPSU   Masked variance pseudo-PSU
Weight variable:      WTMECC2YR  Full sample 2 year MEC exam weight
```

Analysis description:

```
      5  Variables
     14  Strata
     31  Secus

Strata  Model
     14  Multiple PSU
        0  Paired Selection
        0  Successive Differences

9338  Cases Read
```

"Example 5.6, Mean Systolic BP using NHANES Data"

By Condition

age18p  
0

Problem 1

Degrees of freedom

17

Factor Covariance of denominator  
None 0.07479

Mean	Number of	Sum of	Weighted	Standard
BPXSY1	Cases	Weights	Mean	Error
	1624	3.897599e+007	105.8484	0.2854116
	Lower Bound	Upper Bound	T Test	Prob >  T
	105.2463	106.4506	370.86243	0.00000
	Unweighted Mean	Bias	Design Effect	
	105.3978	-0.42574	1.30886	

By Condition

age18p  
1

Problem 2

Degrees of freedom

17

Factor Covariance of denominator  
None 0.06226

Mean	Number of	Sum of	Weighted	Standard
BPXSY1	Cases	Weights	Mean	Error
	5132	2.134132e+008	122.0292	0.6163389
	Lower Bound	Upper Bound	T Test	Prob >  T
	120.7289	123.3296	197.99050	0.00000
	Unweighted	Bias	Design	

\*Note, double check if this is 5.4?

Mean	Effect
123.5281	6.46071

Example 5.7: Estimating the Mean Value of Total Household Wealth using the HRS Data.

IVEware Setup Checker, Mon May 08 15:12:48 2017

1

Setup listing:

```

title "Example 5.7, Mean Total HH Wealth using HRS Data" ;
datain c5_hrs ;
stratum stratum ;
cluster secu ;
weight nwgthh ;
by finr ;
mean hllatota ;
run;

```

Example 5.7: Estimating the Mean Value of Total Household Wealth using the HRS Data.

IVEware Design-Based Descriptive Statistics Procedure, Mon May 08 15:12:48 2017

1

"Example 5.7, Mean Total HH Wealth using HRS Data"

```

By variables:          finr
Stratum variable:     STRATUM  STRATUM ID
Cluster variable:     SECU  SAMPLING ERROR COMPUTATION UNIT
Weight variable:      NWGTHH  2012 WEIGHT: HOUSEHOLD LEVEL

```

Analysis description:

```

      5  Variables
     56  Strata
    112  Secus

Strata Model
     56  Multiple PSU
      0  Paired Selection
      0  Successive Differences

13657  Cases Read

```

Example 5.7: Estimating the Mean Value of Total Household Wealth using the HRS Data.

IVEware Design-Based Descriptive Statistics Procedure, Mon May 08 15:12:48 2017

2

"Example 5.7, Mean Total HH Wealth using HRS Data"

By Condition

```

      finr
      1

```

Problem 1

Degrees of freedom

56

```

Factor  Covariance of denominator
None    0.02918

```

Mean	Number of	Sum of	Weighted	Standard
HLLATOTA	Cases	Weights	Mean	Error
	13657	5.896986e+007	428470.8	17353.77

Lower	Upper	T Test	Prob >  T
Bound	Bound		
393706.9	463234.6	24.69035	0.00000

Unweighted	Bias	Design
Mean		Effect
341639.1	-20.26548	3.31574



Example 5.8 Standard Deviations not Available in IVEware

Example 5.9: Population Quantiles not Available in IVEware

Example 5.10: Estimating the Lorenz Curve and Gini Coefficient for the 2012 HRS Population Distribution of Total Household Wealth. Not available in IVEware

**Example 5.11: Estimation of the Correlation of Adults' Total and High-Density Cholesterol Measures in the 2011-2012 NHANES.**

**The MEANS Procedure**

Variable	Label	Mean
LBDHDD	Direct HDL-Cholesterol (mg/dL)	52.8382631
LBXTC	Total Cholesterol( mg/dL)	194.4354654

**Example 5.11: Estimation of the Correlation of Adults' Total and High-Density Cholesterol Measures in the 2011-2012 NHANES.**

**The CORR Procedure**

<b>2</b>	LBDHDD LBXTC
<b>Variables:</b>	
<b>Weight Variable:</b>	WTMEC2YR

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
LBDHDD	5187	52.83826	3066	1.15527E10	14.00000	175.00000	Direct HDL-Cholesterol (mg/dL)
LBXTC	5187	194.43547	8428	4.25118E10	59.00000	523.00000	Total Cholesterol( mg/dL)

Pearson Correlation Coefficients, N = 5187 Prob >  r  under H0: Rho=0		
	LBDHDD	LBXTC
<b>LBDHDD</b> Direct HDL-Cholesterol (mg/dL)	1.00000	0.24144 <.0001
<b>LBXTC</b> Total Cholesterol( mg/dL)	0.24144 <.0001	1.00000

**Example 5.11: Estimation of the Correlation of Adults' Total and High-Density Cholesterol Measures in the 2011-2012 NHANES.**

IVEware Setup Checker, Mon May 08 15:12:49 2017

1

Setup listing:

```

title "Example 5.11 Correlation of Adult Total and HDL Cholesterol Using NHANES
Data" ;
datain c5_nhanes_1 ;
stratum sdmvstra ;
cluster sdmvpsu ;
weight wtmec2yr ;
by age18p ;
dependent stdlbdhdd ;
predictor stdlbxtc ;
run;

```

Example 5.11: Estimation of the Correlation of Adults' Total and High-Density Cholesterol Measures in the 2011-2012 NHANES.

IVEware Jackknife Regression Procedure, Mon May 08 15:12:49 2017		1		
"Example 5.11 Correlation of Adult Total and HDL Cholesterol Using NHANES Data"				
Regression type:	Linear			
Dependent variable:	stdlbdhdd			
Predictors:	stdlbxtc			
By variables:	age18p Age >=18: 1=Yes 0=No			
Stratum variable:	SDMVSTRA Masked variance pseudo-stratum			
Cluster variable:	SDMVPSU Masked variance pseudo-PSU			
Weight variable:	WTMEC2YR Full sample 2 year MEC exam weight			
By variable	Code			
age18p	0			
Valid cases	1801			
Sum weights	42172649.23			
Replicates	17			
Degr freedom	17			
Sum of squares:				
Model	1410279.07			
Error	23204743.56			
Total	24615022.63			
R-square	0.05729			
F-value	0.51659			
P-value	0.60562			
Variable	Estimate	Std Error	T Test	Prob >  T
Intercept	0.2149614	0.0692603	3.10367	0.00645
stdlbxtc	0.2724514	0.0559067	4.87332	0.00014
Variable	Estimate	95% Confidence Interval		
		Lower	Upper	
Intercept	0.2149614	0.0688348	0.3610879	
stdlbxtc	0.2724514	0.1544986	0.3904043	
Variable	Design	SRS	% Diff	
	Effect	Estimate	SRS v Est	
Intercept	6.07765	0.2931265	36.36240	
stdlbxtc	4.83614	0.3025651	11.05286	

Example 5.11: Estimation of the Correlation of Adults' Total and High-Density Cholesterol Measures in the 2011-2012 NHANES.

IVEware Jackknife Regression Procedure, Mon May 08 15:12:50 2017		2		
"Example 5.11 Correlation of Adult Total and HDL Cholesterol Using NHANES Data"				
By variable	Code			
age18p	1			
Valid cases	5187			
Sum weights	218642035.7			
Replicates	17			
Degr freedom	17			
Sum of squares:				
Model	12743275.27			
Error	205856703.7			
Total	218599979			
R-square	0.05829			
F-value	0.52618			
P-value	0.60017			
Variable	Estimate	Std Error	T Test	Prob >  T
Intercept	0.0000004	0.0348597	0.00001	0.99999
stdlbxtc	0.2414436	0.0122344	19.73482	0.00000
Variable	Estimate	95% Confidence Interval		
		Lower	Upper	
Intercept	0.0000004	-0.0735471	0.0735479	
stdlbxtc	0.2414436	0.2156312	0.2672559	
Variable	Design	SRS	% Diff	
	Effect	Estimate	SRS v Est	
Intercept	6.84574	-0.0158677	-3872012.53563	
stdlbxtc	0.88388	0.2090949	-13.39803	

Example 5.12: Estimating the Population Ratio of High Density to Total Cholesterol for U.S. Adults. Not available in IVEware (Ratios)

Example 5.13: Will Not Run in IVEware due to singleton SECU.

Example 5.14: Estimating Mean Systolic Blood Pressure for Males and Females Age > 45 using the 2011-2012 NHANES data.

IVEware Setup Checker, Mon May 08 15:12:51 2017

1

Setup listing:

```
title "Example 5.14 Estimating Mean Systolic Blood Pressure for Males and
Females Age 45 Plus using the 2011-2012 NHANES data.";
datain c5_nhanes ;
stratum sdmvstra ;
cluster sdmvpsu ;
weight wtmecl2yr ;
by age45 riagendr ;
mean bpxs1 ;
run;
```

Example 5.14: Estimating Mean Systolic Blood Pressure for Males and Females Age > 45 using the 2011-2012 NHANES data.

IVEware Design-Based Descriptive Statistics Procedure, Mon May 08 15:12:52 2017

1

"Example 5.14 Estimating Mean Systolic Blood Pressure for Males and Females Age 45 P

```
By variables:          age45
By variables:          RIAGENDR  Gender
Stratum variable:     SDMVSTRA  Masked variance pseudo-stratum
Cluster variable:     SDMVPSU   Masked variance pseudo-PSU
Weight variable:      WTMEC2YR  Full sample 2 year MEC exam weight
```

Analysis description:

```
    6  Variables
   14  Strata
   31  Secus

Strata  Model
   14  Multiple PSU
    0  Paired Selection
    0  Successive Differences

9338  Cases Read
```

Example 5.14: Estimating Mean Systolic Blood Pressure for Males and Females Age > 45 using the 2011-2012 NHANES data.

IVEware Design-Based Descriptive Statistics Procedure, Mon May 08 15:12:52 2017						2
"Example 5.14 Estimating Mean Systolic Blood Pressure for Males and Females Age 45 Plus using the 2011-2012 NHANES data."						
By Condition						
age45	RIAGENDR					
0	1					
Problem 1						
Degrees of freedom						
		17				
Factor	Covariance of denominator					
None	0.04890					
Mean	Number of	Sum of	Weighted	Standard		
BPXSY1	Cases	Weights	Mean	Error		
	2078	7.197895e+007	115.9131	0.4550489		
	Lower	Upper	T Test	Prob >  T		
	Bound	Bound				
	114.953	116.8731	254.72664	0.00000		
	Unweighted	Bias	Design			
	Mean		Effect			
	114.4841	-1.23278	2.86778			
By Condition						
age45	RIAGENDR					
0	2					
Problem 2						
Degrees of freedom						
		17				
Factor	Covariance of denominator					
None	0.06125					
Mean	Number of	Sum of	Weighted	Standard		
BPXSY1	Cases	Weights	Mean	Error		
	2006	7.104621e+007	109.7915	0.4919168		
	Lower	Upper	T Test	Prob >  T		
	Bound	Bound				
	108.7536	110.8293	223.19119	0.00000		
	Unweighted	Bias	Design			
	Mean		Effect			
	108.4197	-1.24941	3.32053			
By Condition						
age45	RIAGENDR					
1	1					

Example 5.14: Estimating Mean Systolic Blood Pressure for Males and Females Age > 45 using the 2011-2012 NHANES data.

IVEware Design-Based Descriptive Statistics Procedure, Mon May 08 15:12:52 2017 3

"Example 5.14 Estimating Mean Systolic Blood Pressure for Males and Females Age 45 Plus using the 2011-2012 NHANES data."

Problem 3

Degrees of freedom 17

Factor	Covariance of denominator		Weighted Mean	Standard Error
None	0.09910			
Mean BPXSY1	Number of Cases	Sum of Weights	Weighted Mean	Standard Error
	1329	5.16879e+007	128.3005	0.8687054
	Lower Bound	Upper Bound	T Test	Prob >  T
	126.4677	130.1334	147.69167	0.00000
	Unweighted Mean	Bias	Design Effect	
	131.0233	2.12219	2.89363	

By Condition

age45	RIAGENDR
1	2

Problem 4

Degrees of freedom 17

Factor	Covariance of denominator		Weighted Mean	Standard Error
None	0.09866			
Mean BPXSY1	Number of Cases	Sum of Weights	Weighted Mean	Standard Error
	1343	5.767615e+007	128.182	0.9460163
	Lower Bound	Upper Bound	T Test	Prob >  T
	126.1861	130.1779	135.49658	0.00000
	Unweighted Mean	Bias	Design Effect	
	130.7476	2.00153	3.16297	

Example 5.15: Not available in IVEware

Example 5.16: Estimating Differences in Mean Total Household Wealth from 2010 to 2012 using Data from the HRS study.

IVEware Setup Checker, Mon May 08 15:12:54 2017

1

Setup listing:

```
title "Example 5.16: Estimating Differences in Mean Total Household Wealth from
2010 to 2012 using Data from the HRS study. " ;
datain hrs_2010_2012_c5 ;
stratum stratum ;
cluster secu ;
weight hhweight;
by finr2010_2012 ;
mean totwealth ;
contrast year ;
run;
```

Example 5.16: Estimating Differences in Mean Total Household Wealth from 2010 to 2012 using Data from the HRS study.

IVEware Design-Based Descriptive Statistics Procedure, Mon May 08 15:12:55 2017 1

"Example 5.16: Estimating Differences in Mean Total Household Wealth from 2010 to 20

```
By variables:          finr2010_2012
Stratum variable:     STRATUM  STRATUM ID
Cluster variable:    SECU  SAMPLING ERROR COMPUTATION UNIT
Weight variable:     hhweight
```

Analysis description:

```
      6  Variables
     56  Strata
    112  Secus

Strata Model
     56  Multiple PSU
      0  Paired Selection
      0  Successive Differences

37291  Cases Read
```



Example 5.16: Estimating Differences in Mean Total Household Wealth from 2010 to 2012 using Data from the HRS study.

SPSSware Design-Based Descriptive Statistics Procedure, Mon May 08 15:12:55 2017 2

"Example 5.16: Estimating Differences in Mean Total Household Wealth from 2010 to 2012 using Data from the HRS study. "

By Condition  
finr2010\_2012  
0

Problem 1

Degrees of freedom 56

Factor	Covariance of denominator			
year 2010	0.03893			
Mean totwealth	Number of Cases	Sum of Weights	Weighted Mean	Standard Error
	6189	2.857366e+007	553669	24171.51
	Lower Bound	Upper Bound	T Test	Prob >  T
	505247.5	602090.5	22.90585	0.00000
	Unweighted Mean	Bias	Design Effect	
	472303.3	-14.69573	3.03972	
Factor	Covariance of denominator			
year 2012	0.04023			
Mean totwealth	Number of Cases	Sum of Weights	Weighted Mean	Standard Error
	5920	2.844828e+007	569090.1	25820.99
	Lower Bound	Upper Bound	T Test	Prob >  T
	517364.3	620815.9	22.03983	0.00000
	Unweighted Mean	Bias	Design Effect	
	471522.1	-17.14457	2.72217	
Contrast				
year 2010 versus 2012				

Example 5.16: Estimating Differences in Mean Total Household Wealth from 2010 to 2012 using Data from the HRS study.

Mean totwealth	Number of Cases	Sum of Weights	Weighted Mean	Standard Error
	12109	5.702193e+007	-15421.08	13599.34

Example 5.16: Estimating Differences in Mean Total Household Wealth from 2010 to 2012 using Data from the HRS study.

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"Example 5.16: Estimating Differences in Mean Total Household Wealth from 2010 to 2012 using Data from the HRS study. "

Lower Bound	Upper Bound	T Test	Prob >  T
-42663.92	11821.75	-1.13396	0.26164
Unweighted Mean	Bias	Design Effect	
781.2626	-105.06620	0.42308	

By Condition  
finr2010\_2012  
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Problem 2

Degrees of freedom

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Factor year 2010	Covariance of denominator			
	0.02839			
Mean totwealth	Number of Cases	Sum of Weights	Weighted Mean	Standard Error
	12676	5.316295e+007	432829.6	16010.53
Lower Bound	Upper Bound	T Test	Prob >  T	
400756.5	464902.6	27.03405	0.00000	
Unweighted Mean	Bias	Design Effect		
353736.5	-18.27348	2.74525		
Factor year 2012	Covariance of denominator			
	0.02857			
Mean totwealth	Number of Cases	Sum of Weights	Weighted Mean	Standard Error
	12506	5.411467e+007	437807.6	17016.29
Lower Bound	Upper Bound	T Test	Prob >  T	
403719.8	471895.5	25.72873	0.00000	
Unweighted Mean	Bias	Design Effect		
349801.7	-20.10151	2.83033		

Example 5.16: Estimating Differences in Mean Total Household Wealth from 2010 to 2012 using Data from the HRS study.

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"Example 5.16: Estimating Differences in Mean Total Household Wealth from 2010 to 2012 using Data from the HRS study. "

Contrast				
year				
2010 versus				
2012				
Mean	Number of	Sum of	Weighted	Standard
totwealth	Cases	Weights	Mean	Error
	25182	1.072776e+008	-4978.066	7936.797
	Lower	Upper	T Test	Prob >  T
	Bound	Bound		
	-20877.43	10921.29	-0.62721	0.53307
	Unweighted	Bias	Design	
	Mean		Effect	
	3934.83	-179.04333	0.32192	