```
* Encoding: UTF-8.
* Syntax for Analysis Example Replication ASDA3 C11, Winter 2025.
* Use data sets previously prepared in SAS, refer to SAS Analysis Example Replication for C11 for details.
* Note: No Bayesian Approach in SPSS 29 Complex Samples Module.
************************************************************************************************************
* Single Wave Analyses.

* Complete Case for Single Wave.
GET
  SAS DATA='P:\ASDA3\data sets for analysis examples and stata r code\cc_1wave.sas7bdat'.
DATASET NAME cc_1wave WINDOW=FRONT.
```

**Dataset Name**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:29:34 |
| Comments | | |
| Input | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| Syntax | | DATASET NAME cc_1wave WINDOW=FRONT. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.00 |

**Warnings**

The active dataset will replace the existing dataset named cc_1wave.

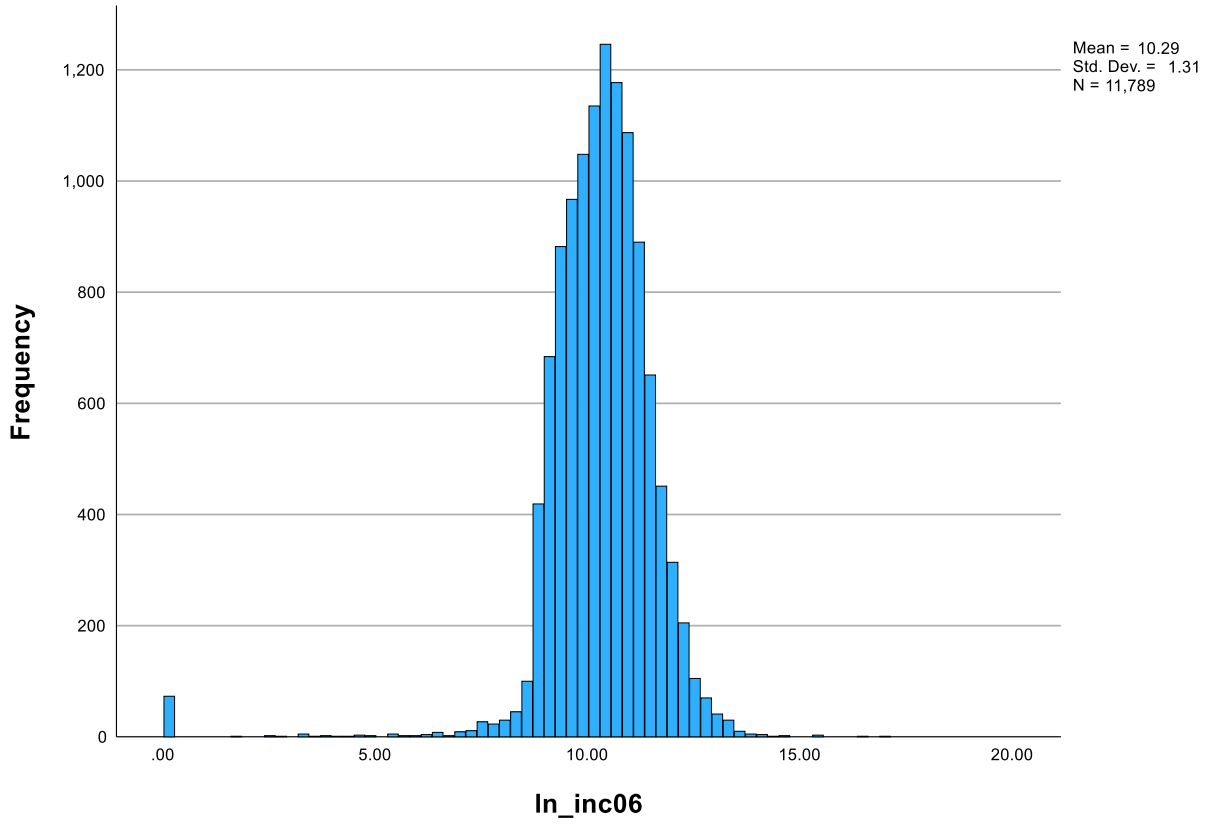
```
* Histograms for log income 2006, 2008, 2010, 2012.
GRAPH
  /HISTOGRAM=ln_inc06.
```

**Graph**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:29:34 |
| Comments | | |
| Input | Active Dataset | cc_1wave |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 11789 |
| Syntax | | GRAPH /HISTOGRAM=ln_inc06. |
| Resources | Processor Time | 00:00:00.19 |
| | Elapsed Time | 00:00:00.36 |

```
[cc_1wave]
```

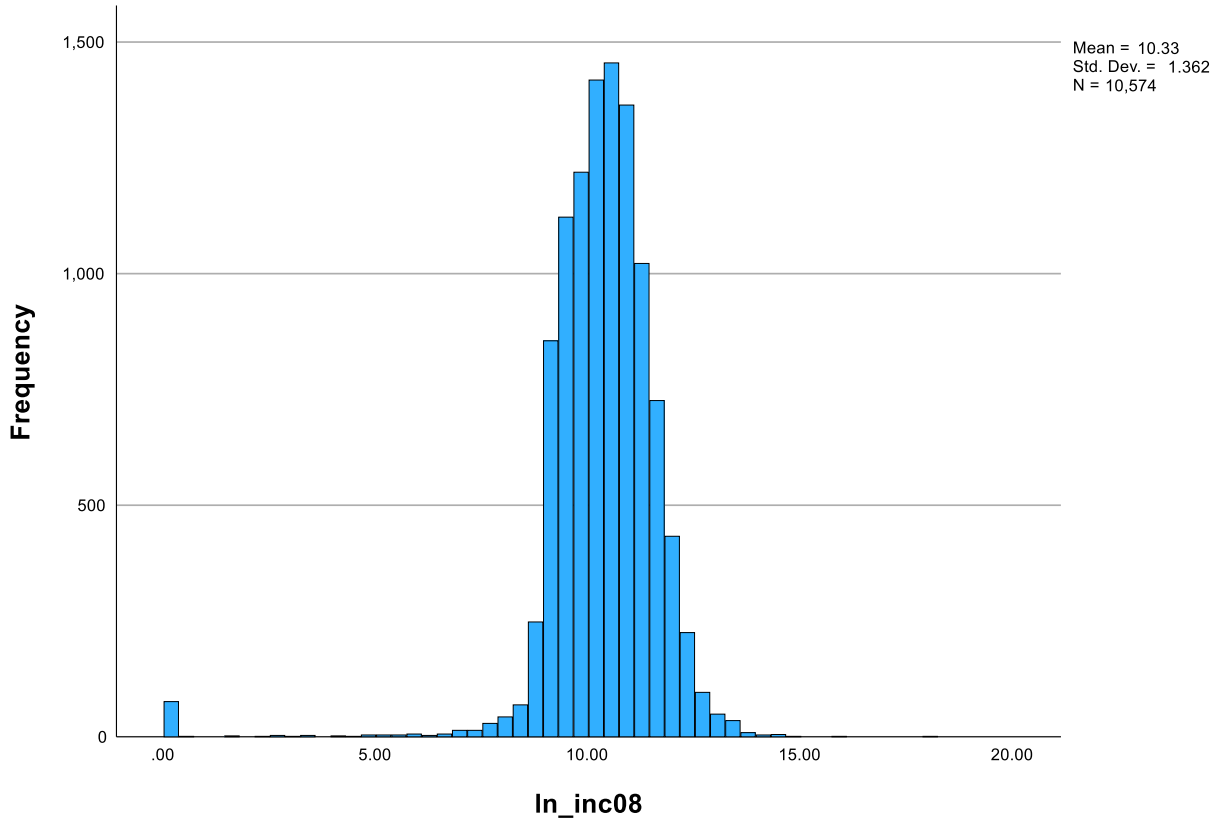



```
GRAPH
    /HISTOGRAM=ln_inc08.
```

**Graph**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:29:35 |
| Comments | | |
| Input | Active Dataset | cc_1wave |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 11789 |
| Syntax | | GRAPH /HISTOGRAM=ln_inc08. |
| Resources | Processor Time | 00:00:00.17 |
| | Elapsed Time | 00:00:00.32 |

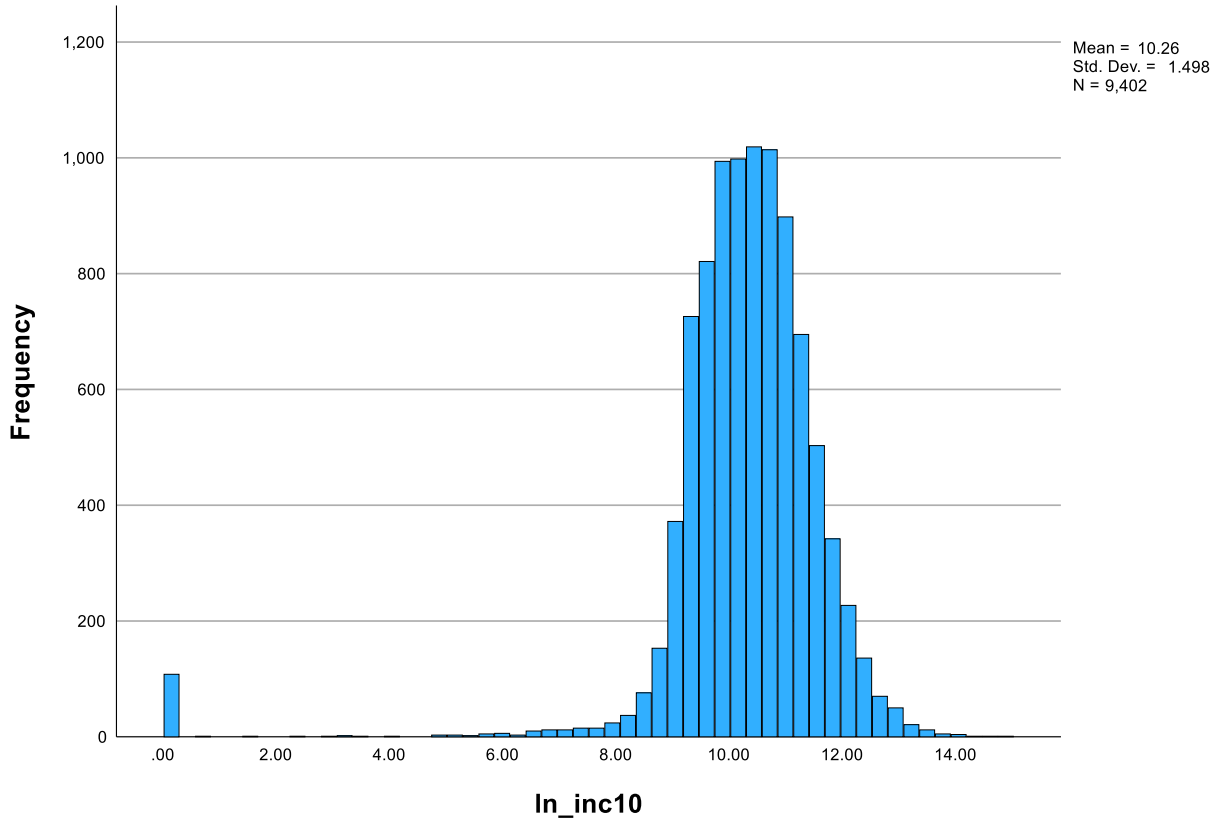



```
GRAPH
  /HISTOGRAM=ln_inc10.
```

**Graph**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:29:35 |
| Comments | | |
| Input | Active Dataset | cc_1wave |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 11789 |
| Syntax | | GRAPH /HISTOGRAM=ln_inc10. |
| Resources | Processor Time | 00:00:00.14 |
| | Elapsed Time | 00:00:00.31 |

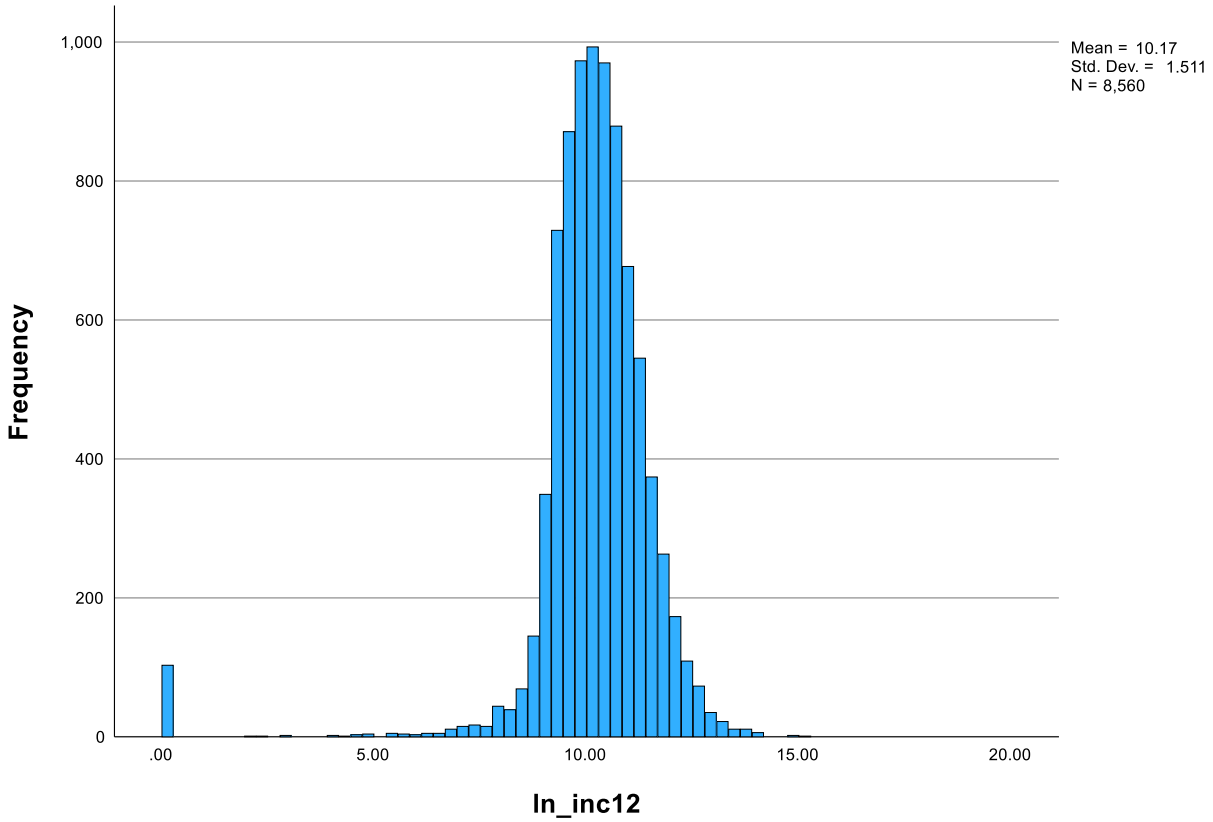



```
GRAPH
    /HISTOGRAM=ln_inc12.
```

**Graph**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:29:35 |
| Comments | | |
| Input | Active Dataset | cc_1wave |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 11789 |
| Syntax | | GRAPH /HISTOGRAM=ln_inc12. |
| Resources | Processor Time | 00:00:00.06 |
| | Elapsed Time | 00:00:00.28 |


Mean = 10.17
Std. Dev. = 1.511
N = 8,560
Frequency
1,000
800
600
400
200
0
.00
5.00
10.00
15.00
20.00
ln_inc12

```
* "11.3.1 Descriptive Estimation at a Single Wave, CC Analysis Table 11.2.
* Analysis Preparation Wizard.
CSPLAN ANALYSIS
  /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_kwgt.csaplan'
  /PLANVARS ANALYSISWEIGHT=KWGTR
  /SRSESTIMATOR TYPE=WOR
  /PRINT PLAN
  /DESIGN STRATA=STRATUM CLUSTER=SECU
  /ESTIMATOR TYPE=WR.
```

**Complex Samples: Plan**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:29:36 |
| Comments | | |
| Input | Active Dataset | cc_1wave |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 11789 |
| Syntax | | CSPLAN ANALYSIS /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_kwgt.csaplan' /PLANVARS ANALYSISWEIGHT=KWGTR /SRSESTIMATOR TYPE=WOR /PRINT PLAN /DESIGN STRATA=STRATUM CLUSTER=SECU /ESTIMATOR TYPE=WR. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.11 |
| Files Saved | Plan File | P:\ASDA3\data sets for analysis examples and stata r code\hrs_kwgt.csaplan |

**Warnings**

This procedure does not check the consistency of the working data file with the plan file. We recommend looking at the output table or the plan file to check consistency before performing selection or analysis.

**Summary**

| | | | Stage 1 |
|---|---|---|---|
| Design Variables | Stratification | 1 | STRATUM ID |
| | Cluster | 1 | SAMPLING ERROR COMPUTATION UNIT |
| Analysis Information | Estimator Assumption | | Sampling with replacement |

Plan File: P:\ASDA3\data sets for analysis examples and stata r code\hrs_kwgt.csaplan
Weight Variable: 2006 WEIGHT: RESPONDENT LEVEL
SRS Estimator: Sampling without replacement

```
* Complex Samples Descriptives.
CSDESCRIPTIVES
  /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_kwgt.csaplan'
  /SUMMARY VARIABLES=ln_inc08
  /SUBPOP TABLE=KFINR DISPLAY=LAYERED
  /MEAN
  /STATISTICS SE CIN COUNT DEFF
  /MISSING SCOPE=LISTWISE.
```

**Complex Samples: Descriptives**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:29:36 |
| Comments | | |
| Input | Active Dataset | cc_1wave |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 11789 |
| | Plan File | P:\ASDA3\data sets for analysis examples and stata r code\hrs_kwgt.csaplan |
| Missing Value Handling | Definition of Missing | User-defined missing values among the strata, cluster, or subpopulation variables are treated as missing. |
| | Cases Used | Only cases with valid data for all analysis variables are used in computing any statistics. |
| Syntax | | CSDESCRIPTIVES<br>/PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_kwgt.csaplan'<br>/SUMMARY VARIABLES=ln_inc08<br>/SUBPOP TABLE=KFINR DISPLAY=LAYERED<br>/MEAN<br>/STATISTICS SE CIN COUNT DEFF<br>/MISSING SCOPE=LISTWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.16 |

**Univariate Statistics**

| | | | | 95% Confidence Interval | | | |
|---|---|---|---|---|---|---|---|
| | | Estimate | Standard Error | Lower | Upper | Design Effect | Unweighted Count |
| Mean | ln_inc08 | 10.4407 | .02630 | 10.3880 | 10.4934 | 3.461 | 10574 |

**Subpopulation Descriptives**

**Univariate Statistics**

| | | | | | 95% Confidence Interval | | |
|---|---|---|---|---|---|---|---|
| 2006 WHETHER FINANCIAL RESPONDENT | | | Estimate | Standard Error | Lower | Upper | Design Effect |
| 1 | Mean | ln_inc08 | 10.4407 | .02630 | 10.3880 | 10.4934 | 3.461 |

**Univariate Statistics**

| | | | |
|---|---|---|---|
| 2006 WHETHER FINANCIAL RESPONDENT | | | Unweighted Count |
| 1 | Mean | ln_inc08 | 10574 |

```
* Use EXP function to back transform log income.
compute mean=exp(10.4407).
compute upci=exp(10.3880).
compute lowci=exp(10.4934).
execute.

DESCRIPTIVES VARIABLES=mean upci lowci
 /STATISTICS=DEFAULT.
```

**Descriptives**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:29:36 |
| Comments | | |
| Input | Active Dataset | cc_1wave |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 11789 |
| Missing Value Handling | Definition of Missing | User defined missing values are treated as missing. |
| | Cases Used | All non-missing data are used. |
| Syntax | | DESCRIPTIVES VARIABLES=mean upci lowci /STATISTICS=DEFAULT. |
| Resources | Processor Time | 00:00:00.03 |
| | Elapsed Time | 00:00:00.02 |

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| mean | 11789 | 34224.60 | 34224.60 | 34224.6013 | .00000 |
| upci | 11789 | 32467.67 | 32467.67 | 32467.6666 | .00000 |
| lowci | 11789 | 36076.61 | 36076.61 | 36076.6096 | .00000 |
| Valid N (listwise) | 11789 | | | | |

```
* Adjusted Weight for Single Wave.
* Use previously created SAS data set.
GET
  SAS DATA='P:\ASDA3\data sets for analysis examples and stata r code\adj_wgt_1wave.sas7bdat'.

Warning # 7251.  Command name: GET SAS
One or more variable names were changed to satisfy the SPSS Statistics rules
for names.
DATASET NAME adj_1wave WINDOW=FRONT.
```

**Dataset Name**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:30:02 |
| Comments | | |
| Input | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| Syntax | | DATASET NAME adj_1wave WINDOW=FRONT. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.00 |

**Warnings**

The active dataset will replace the existing dataset named adj_1wave.

```
* Analysis Preparation Wizard.
CSPLAN ANALYSIS
  /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_adj_kwgt.csaplan'
  /PLANVARS ANALYSISWEIGHT=adj_KWGTR
  /SRSESTIMATOR TYPE=WOR
  /PRINT PLAN
  /DESIGN STRATA=STRATUM CLUSTER=SECU
  /ESTIMATOR TYPE=WR.
```

**Complex Samples: Plan**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:30:02 |
| Comments | | |
| Input | Active Dataset | adj_1wave |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| Syntax | | CSPLAN ANALYSIS<br>/PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_adj_kwgt.csaplan'<br>/PLANVARS ANALYSISWEIGHT=adj_KWGTR<br>/SRSESTIMATOR TYPE=WOR<br>/PRINT PLAN<br>/DESIGN STRATA=STRATUM CLUSTER=SECU<br>/ESTIMATOR TYPE=WR. |

| | | |
|---|---|---|
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.11 |
| Files Saved | Plan File | P:\ASDA3\data sets for analysis examples and stata r code\hrs_adj_kwgt.csaplan |

```
[adj_1wave]
```

**Warnings**

This procedure does not check the consistency of the working data file with the plan file. We recommend looking at the output table or the plan file to check consistency before performing selection or analysis.

**Summary**

| | | | Stage 1 |
|---|---|---|---|
| Design Variables | Stratification | 1 | STRATUM ID |
| | Cluster | 1 | SAMPLING ERROR COMPUTATION UNIT |
| Analysis Information | Estimator Assumption | | Sampling with replacement |
| | | | |

Plan File: P:\ASDA3\data sets for analysis examples and stata r code\hrs_adj_kwgt.csaplan
Weight Variable: adj_kwgtr
SRS Estimator: Sampling without replacement

```
* Complex Samples Descriptives.
CSDESCRIPTIVES
  /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_adj_kwgt.csaplan'
  /SUMMARY VARIABLES=ln_inc08
  /SUBPOP TABLE=KFINR DISPLAY=LAYERED
  /MEAN
  /STATISTICS SE CIN COUNT DEFF
  /MISSING SCOPE=LISTWISE.
```

**Complex Samples: Descriptives**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:30:02 |
| Comments | | |
| Input | Active Dataset | adj_1wave |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 11789 |
| | Plan File | P:\ASDA3\data sets for analysis examples and stata r code\hrs_adj_kwgt.csaplan |
| Missing Value Handling | Definition of Missing | User-defined missing values among the strata, cluster, or subpopulation variables are treated as missing. |
| | Cases Used | Only cases with valid data for all analysis variables are used in computing any statistics. |
| Syntax | | CSDESCRIPTIVES /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_adj_kwgt.csaplan' |

| | | |
|---|---|---|
| | | /SUMMARY VARIABLES=ln_inc08<br>/SUBPOP TABLE=KFINR<br>DISPLAY=LAYERED<br>/MEAN<br>/STATISTICS SE CIN COUNT DEFF<br>/MISSING SCOPE=LISTWISE. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.36 |

**Univariate Statistics**

| | | Estimate | Standard Error | 95% Confidence Interval Lower | 95% Confidence Interval Upper | Design Effect | Unweighted Count |
|---|---|---|---|---|---|---|---|
| Mean | ln_inc08 | 10.4136 | .02661 | 10.3603 | 10.4669 | 3.525 | 10574 |

**Subpopulation Descriptives**

**Univariate Statistics**

| 2006 WHETHER FINANCIAL RESPONDENT | | | Estimate | Standard Error | 95% Confidence Interval Lower | 95% Confidence Interval Upper | Design Effect |
|---|---|---|---|---|---|---|---|
| 1 | Mean | ln_inc08 | 10.4136 | .02661 | 10.3603 | 10.4669 | 3.525 |

**Univariate Statistics**

| 2006 WHETHER FINANCIAL RESPONDENT | | | Unweighted Count |
|---|---|---|---|
| 1 | Mean | ln_inc08 | 10574 |

```
* Back Transform.
compute mean1=exp(10.4136).
compute upci1=exp(10.3603).
compute lowci1=exp(10.4669).
execute.

DESCRIPTIVES VARIABLES=mean1 upci1 lowci1
 /STATISTICS=DEFAULT.
```

**Descriptives**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:30:03 |
| Comments | | |
| Input | Active Dataset | adj_1wave |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 11789 |
| Missing Value Handling | Definition of Missing | User defined missing values are treated as missing. |
| | Cases Used | All non-missing data are used. |
| Syntax | | DESCRIPTIVES VARIABLES=mean1 upci1 lowci1 /STATISTICS=DEFAULT. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.02 |

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| mean1 | 11789 | 33309.57 | 33309.57 | 33309.5693 | .00000 |
| upci1 | 11789 | 31580.65 | 31580.65 | 31580.6541 | .00000 |
| lowci1 | 11789 | 35133.14 | 35133.14 | 35133.1357 | .00000 |
| Valid N (listwise) | 11789 | | | | |

```
* Note: Multiple Imputation using Sequential Regression or Equivalent is Now Available in SPSS 29 but Correct
Pooling/Analysis of
    MI Survey Data Sets is NOT AVAILABLE in CS Commands.  Therefore, this approach is not shown here.  Note that
Analysis of MI
    data sets is possible in SPSS "regular" or non-CS commands, see the documentation for more details.

* Note: MI using Selection Model NOT AVAILABLE in CS Commands.
```

```
************************************************************************************************************************
****************************************
* 2 Waves Analyses.

* Complete Case for Two Waves.
GET
  SAS DATA='P:\ASDA3\data sets for analysis examples and stata r code\cc_2waves.sas7bdat'.
DATASET NAME cc_2waves WINDOW=FRONT.
```

**Dataset Name**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:30:29 |
| Comments | | |
| Input | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| Syntax | | DATASET NAME cc_2waves WINDOW=FRONT. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.00 |

**Warnings**

The active dataset will replace the existing dataset named cc_2waves.

```
* 11.3.2 Change across two waves, CC Analysis.
CSDESCRIPTIVES
  /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_kwgt.csaplan'
  /SUMMARY VARIABLES=incdiff_06_10
  /SUBPOP TABLE=KFINR DISPLAY=LAYERED
  /MEAN
  /STATISTICS SE CIN COUNT DEFF
  /MISSING SCOPE=LISTWISE.
```

**Complex Samples: Descriptives**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:30:29 |
| Comments | | |
| Input | Active Dataset | cc_2waves |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 11789 |
| | Plan File | P:\ASDA3\data sets for analysis examples and stata r code\hrs_kwgt.csaplan |
| Missing Value Handling | Definition of Missing | User-defined missing values among the strata, cluster, or subpopulation variables are treated as missing. |
| | Cases Used | Only cases with valid data for all analysis variables are used in computing any statistics. |

| | | |
|---|---|---|
| Syntax | | CSDESCRIPTIVES<br>/PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_kwgt.csaplan'<br>/SUMMARY<br>VARIABLES=incdiff_06_10<br>/SUBPOP TABLE=KFINR DISPLAY=LAYERED<br>/MEAN<br>/STATISTICS SE CIN COUNT DEFF<br>/MISSING SCOPE=LISTWISE. |
| Resources | Processor Time | 00:00:00.03 |
| | Elapsed Time | 00:00:00.15 |

[cc_2waves]

**Univariate Statistics**

| | | Estimate | Standard Error | 95% Confidence Interval Lower | 95% Confidence Interval Upper | Design Effect | Unweighted Count |
|---|---|---|---|---|---|---|---|
| Mean | incdiff_06_10 | -6551.4016 | 1866.13456 | -10289.7184 | -2813.0849 | 1.081 | 9402 |

**Subpopulation Descriptives Univariate Statistics**

| 2006 WHETHER FINANCIAL RESPONDENT | | | Estimate | Standard Error | 95% Confidence Interval Lower | 95% Confidence Interval Upper | Design Effect |
|---|---|---|---|---|---|---|---|
| 1 | Mean | incdiff_06_10 | -6551.4016 | 1866.13456 | -10289.7184 | -2813.0849 | 1.081 |

**Univariate Statistics**

| 2006 WHETHER FINANCIAL RESPONDENT | | | Unweighted Count |
|---|---|---|---|
| 1 | Mean | incdiff_06_10 | 9402 |

```
* Adjusted Weight Approach  for Two Waves.
GET
  SAS DATA='P:\ASDA3\data sets for analysis examples and stata r code\adj_wgt_2waves.sas7bdat'.

Warning # 7251.  Command name: GET SAS
One or more variable names were changed to satisfy the SPSS Statistics rules
for names.
DATASET NAME adj_wgt_2waves WINDOW=FRONT.
```

**Dataset Name**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:30:46 |
| Comments | | |
| Input | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| Syntax | | DATASET NAME adj_wgt_2waves WINDOW=FRONT. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.00 |

**Warnings**

The active dataset will replace the existing dataset named adj_wgt_2waves.

```
* Analysis Preparation Wizard.
CSPLAN ANALYSIS
  /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_adj_kwgt2.csaplan'
  /PLANVARS ANALYSISWEIGHT=adj_KWGTR
  /SRSESTIMATOR TYPE=WOR
  /PRINT PLAN
  /DESIGN STRATA=STRATUM CLUSTER=SECU
  /ESTIMATOR TYPE=WR.
```

**Complex Samples: Plan**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:30:46 |
| Comments | | |
| Input | Active Dataset | adj_wgt_2waves |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| Syntax | | CSPLAN ANALYSIS /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_adj_kwgt2.csaplan' /PLANVARS ANALYSISWEIGHT=adj_KWGTR /SRSESTIMATOR TYPE=WOR /PRINT PLAN /DESIGN STRATA=STRATUM CLUSTER=SECU /ESTIMATOR TYPE=WR. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.11 |
| Files Saved | Plan File | P:\ASDA3\data sets for analysis examples and stata r code\hrs_adj_kwgt2.csaplan |

[adj_wgt_2waves]

**Warnings**

This procedure does not check the consistency of the working data file with the plan file. We recommend looking at the output table or the plan file to check consistency before performing selection or analysis.

**Summary**

| | | | Stage 1 |
|---|---|---|---|
| Design Variables | Stratification | 1 | STRATUM ID |
| | Cluster | 1 | SAMPLING ERROR COMPUTATION UNIT |
| Analysis Information | Estimator Assumption | | Sampling with replacement |
| | | | |

Plan File: P:\ASDA3\data sets for analysis examples and stata r code\hrs_adj_kwgt2.csaplan
Weight Variable: adj_kwgtr
SRS Estimator: Sampling without replacement

```
* Complex Samples Descriptives.
CSDESCRIPTIVES
  /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_adj_kwgt2.csaplan'
  /SUMMARY VARIABLES=incdiff_06_10
  /SUBPOP TABLE=KFINR DISPLAY=LAYERED
  /MEAN
  /STATISTICS SE CIN COUNT DEFF
  /MISSING SCOPE=LISTWISE.
```

**Complex Samples: Descriptives**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:30:46 |
| Comments | | |
| Input | Active Dataset | adj_wgt_2waves |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 11789 |
| | Plan File | P:\ASDA3\data sets for analysis examples and stata r code\hrs_adj_kwgt2.csaplan |
| Missing Value Handling | Definition of Missing | User-defined missing values among the strata, cluster, or subpopulation variables are treated as missing. |
| | Cases Used | Only cases with valid data for all analysis variables are used in computing any statistics. |
| Syntax | | CSDESCRIPTIVES /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_adj_kwgt2.csaplan' /SUMMARY VARIABLES=incdiff_06_10 /SUBPOP TABLE=KFINR DISPLAY=LAYERED /MEAN /STATISTICS SE CIN COUNT DEFF /MISSING SCOPE=LISTWISE. |
| Resources | Processor Time | 00:00:00.05 |
| | Elapsed Time | 00:00:00.15 |

**Univariate Statistics**

| | | Estimate | Standard Error | 95% Confidence Interval Lower | 95% Confidence Interval Upper | Design Effect | Unweighted Count |
|---|---|---|---|---|---|---|---|
| Mean | incdiff_06_10 | -6119.9698 | 1702.96510 | -9531.4188 | -2708.5208 | .984 | 9402 |

**Subpopulation Descriptives**

**Univariate Statistics**

| 2006 WHETHER FINANCIAL RESPONDENT | | | Estimate | Standard Error | 95% Confidence Interval Lower | 95% Confidence Interval Upper | Design Effect |
|---|---|---|---|---|---|---|---|
| 1 | Mean | incdiff_06_10 | -6119.9698 | 1702.96510 | -9531.4188 | -2708.5208 | .984 |

**Univariate Statistics**

| 2006 WHETHER FINANCIAL RESPONDENT | | | Unweighted Count |
|---|---|---|---|
| 1 | Mean | incdiff_06_10 | 9402 |

```
* Note: Multiple Imputation Method for Two Waves NOT AVAILABLE in SPSS 29.
* Calibration Method for Two Waves.
GET
  SAS DATA='P:\ASDA3\data sets for analysis examples and stata r code\calibration_2waves.sas7bdat'.

Warning # 7251.  Command name: GET SAS
One or more variable names were changed to satisfy the SPSS Statistics rules
for names.
DATASET NAME cal_2waves WINDOW=FRONT.
```

**Dataset Name**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:31:05 |
| Comments | | |
| Input | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| Syntax | | DATASET NAME cal_2waves WINDOW=FRONT. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.00 |

**Warnings**

The active dataset will replace the existing dataset named cal_2waves.

```
* Table 11.3 Numbers.
CSPLAN ANALYSIS
  /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_calibration_2waves.csaplan'
  /PLANVARS ANALYSISWEIGHT=KWGTR_cal
  /SRSESTIMATOR TYPE=WOR
  /PRINT PLAN
  /DESIGN STRATA=STRATUM CLUSTER=SECU
  /ESTIMATOR TYPE=WR.
```

**Complex Samples: Plan**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:31:05 |
| Comments | | |
| Input | Active Dataset | cal_2waves |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| Syntax | | CSPLAN ANALYSIS<br>/PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_calibration_2waves.csaplan'<br>/PLANVARS ANALYSISWEIGHT=KWGTR_cal<br>/SRSESTIMATOR TYPE=WOR<br>/PRINT PLAN<br>/DESIGN STRATA=STRATUM CLUSTER=SECU<br>/ESTIMATOR TYPE=WR. |
| Resources | Processor Time | 00:00:00.00 |

| | | |
|---|---|---|
| | Elapsed Time | 00:00:00.12 |
| Files Saved | Plan File | P:\ASDA3\data sets for analysis examples and stata r code\hrs_calibration_2waves.csaplan |

[cal_2waves]

**Warnings**

This procedure does not check the consistency of the working data file with the plan file. We recommend looking at the output table or the plan file to check consistency before performing selection or analysis.

**Summary**

| | | | Stage 1 |
|---|---|---|---|
| Design Variables | Stratification | 1 | STRATUM ID |
| | Cluster | 1 | SAMPLING ERROR COMPUTATION UNIT |
| Analysis Information | Estimator Assumption | | Sampling with replacement |
| | | | |

Plan File: P:\ASDA3\data sets for analysis examples and stata r code\hrs_calibration_2waves.csaplan
Weight Variable: kwgtr_cal
SRS Estimator: Sampling without replacement

```
CSDESCRIPTIVES
  /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_calibration_2waves.csaplan'
  /SUMMARY VARIABLES=incdiff_06_10
  /SUBPOP TABLE=KFINR DISPLAY=LAYERED
  /MEAN
  /STATISTICS SE CIN COUNT DEFF
  /MISSING SCOPE=LISTWISE.
```

**Complex Samples: Descriptives**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:31:05 |
| Comments | | |
| Input | Active Dataset | cal_2waves |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 11789 |
| | Plan File | P:\ASDA3\data sets for analysis examples and stata r code\hrs_calibration_2waves.csaplan |
| Missing Value Handling | Definition of Missing | User-defined missing values among the strata, cluster, or subpopulation variables are treated as missing. |
| | Cases Used | Only cases with valid data for all analysis variables are used in computing any statistics. |
| Syntax | | CSDESCRIPTIVES /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\hrs_calibration_2waves.csaplan' /SUMMARY |

| | | |
|---|---|---|
| | | VARIABLES=incdiff_06_10<br>/SUBPOP TABLE=KFINR<br>DISPLAY=LAYERED<br>/MEAN<br>/STATISTICS SE CIN COUNT DEFF<br>/MISSING SCOPE=LISTWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.16 |

**Univariate Statistics**

| | | | | 95% Confidence Interval | | | |
|---|---|---|---|---|---|---|---|
| | | Estimate | Standard Error | Lower | Upper | Design Effect | Unweighted Count |
| Mean | incdiff_06_10 | -6341.6570 | 1780.59942 | -9908.6262 | -2774.6877 | 1.036 | 9402 |

**Subpopulation Descriptives**

**Univariate Statistics**

| 2006 WHETHER FINANCIAL RESPONDENT | | | | | 95% Confidence Interval | | |
|---|---|---|---|---|---|---|---|
| | | | Estimate | Standard Error | Lower | Upper | Design Effect |
| 1 | Mean | incdiff_06_10 | -6341.6570 | 1780.59942 | -9908.6262 | -2774.6877 | 1.036 |

**Univariate Statistics**

| 2006 WHETHER FINANCIAL RESPONDENT | | | Unweighted Count |
|---|---|---|---|
| 1 | Mean | incdiff_06_10 | 9402 |

```
* 11.3.2.5 Refreshment Sample Adjustments.
GET
  SAS DATA='P:\ASDA3\data sets for analysis examples and stata r code\hrssub0608.sas7bdat'.
DATASET NAME hrs0608 WINDOW=FRONT.
```

**Dataset Name**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:31:20 |
| Comments | | |
| Input | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| Syntax | | DATASET NAME hrs0608 WINDOW=FRONT. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.00 |

**Warnings**

The active dataset will replace the existing dataset named hrs0608.

```
* Plan File with 2 levels of clustering: Individuals within SECU, Include Probability of .01.
CSPLAN ANALYSIS
  /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\refresh_2waves.csaplan'
  /PLANVARS ANALYSISWEIGHT=weight
  /SRSESTIMATOR TYPE=WOR
  /PRINT PLAN
  /DESIGN STRATA=STRATUM CLUSTER=SECU HHIDPN
  /ESTIMATOR TYPE=WR
   /INCLPROB value=.01.
```

**Complex Samples: Plan**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:31:20 |
| Comments | | |
| Input | Active Dataset | hrs0608 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| Syntax | | CSPLAN ANALYSIS /PLAN FILE='P:\ASDA3\data sets for analysis examples and stata r code\refresh_2waves.csaplan' /PLANVARS ANALYSISWEIGHT=weight /SRSESTIMATOR TYPE=WOR /PRINT PLAN /DESIGN STRATA=STRATUM CLUSTER=SECU HHIDPN /ESTIMATOR TYPE=WR /INCLPROB value=.01. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.11 |
| Files Saved | Plan File | P:\ASDA3\data sets for analysis examples and stata r code\refresh_2waves.csaplan |

[hrs0608]

**Warnings**

| |
|---|
| Plan stage 1. Subcommand POPSIZE/INCLPROB is ignored when TYPE is UNEQUAL_WOR/WR. |
| This procedure does not check the consistency of the working data file with the plan file. We recommend looking at the output table or the plan file to check consistency before performing selection or analysis. |

**Summary**

| | | | Stage 1 |
|---|---|---|---|
| Design Variables | Stratification | 1 | STRATUM ID |
| | Cluster | 1 | SAMPLING ERROR COMPUTATION UNIT |
| | | 2 | hhidpn |
| Analysis Information | Estimator Assumption | | Sampling with replacement |
| | Inclusion Probability | | .01 |
| | | | |

Plan File: P:\ASDA3\data sets for analysis examples and stata r code\refresh_2waves.csaplan
Weight Variable: 2006 WEIGHT: RESPONDENT LEVEL
SRS Estimator: Sampling without replacement

```
* Obtain Difference in Mean Income over Waves.
  CSGLM  income BY wave
  /PLAN FILE='P:\ASDA3\Data Sets for Analysis Examples and Stata R Code\refresh_2waves.csaplan'
  /MODEL wave
  /INTERCEPT INCLUDE=YES SHOW=YES
  /PRINT SUMMARY VARIABLEINFO SAMPLEINFO
  /TEST TYPE=F PADJUST=LSD
  /EMMEANS TABLES=wave COMPARE CONTRAST=SIMPLE(2006)
  /MISSING CLASSMISSING=EXCLUDE
  /CRITERIA CILEVEL=95.
```

**Complex Samples: General Linear Model**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:31:20 |
| Comments | | |
| Input | Active Dataset | hrs0608 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 23578 |
| | Plan File | P:\ASDA3\Data Sets for Analysis Examples and Stata R Code\refresh_2waves.csaplan |
| Missing Value Handling | Definition of Missing | User-defined missing values among the strata, cluster, subpopulation and factor variables are treated as missing. |
| | Cases Used | Only cases with valid data for all analysis variables are used in computing any statistics. |
| Syntax | | CSGLM income BY wave /PLAN FILE='P:\ASDA3\Data Sets for Analysis Examples and Stata R Code\refresh_2waves.csaplan' /MODEL wave /INTERCEPT INCLUDE=YES |

| | | |
|---|---|---|
| | | SHOW=YES<br>/PRINT SUMMARY VARIABLEINFO SAMPLEINFO<br>/TEST TYPE=F PADJUST=LSD<br>/EMMEANS TABLES=wave COMPARE CONTRAST=SIMPLE(2006)<br>/MISSING CLASSMISSING=EXCLUDE<br>/CRITERIA CILEVEL=95. |
| Resources | Processor Time | 00:00:00.05 |
| | Elapsed Time | 00:00:00.24 |

**Sample Design Information**

| | | N |
|---|---|---|
| Unweighted Cases | Valid | 22363 |
| | Invalid | 1215 |
| | Total | 23578 |
| Population Size | | 100083263.000 |
| Stage 1 | Strata | 56 |
| | Units | 11789 |
| Sampling Design Degrees of Freedom | | 11733 |

**Variable Information**

| | | Mean |
|---|---|---|
| Dependent Variable | H8ITOT:W8 Incm: Total HHold / R+Sp only | 70201.5569 |

**Factor Information**

| | | Weighted Count | Weighted Percent |
|---|---|---|---|
| wave | 2006 | 52555987.000 | 52.5% |
| | 2008 | 47527276.000 | 47.5% |
| Population Size | | 100083263.000 | 100.0% |

**Model Summary**[a]

| | |
|---|---|
| R Square | .000 |

a. Model: H8ITOT:W8 Incm: Total HHold / R+Sp only = (Intercept) + wave

**Tests of Model Effects**[a]

| Source | df1 | df2 | Wald F | Sig. |
|---|---|---|---|---|
| (Corrected Model) | 1.000 | 11733.000 | .193 | .660 |
| (Intercept) | 1.000 | 11733.000 | 257.112 | <.001 |
| wave | 1.000 | 11733.000 | .193 | .660 |

a. Model: H8ITOT:W8 Incm: Total HHold / R+Sp only = (Intercept) + wave

**Estimated Marginal Means: wave**

**Estimates**

| | | | 95% Confidence Interval | |
|---|---|---|---|---|
| wave | Mean | Std. Error | Lower | Upper |
| 2006 | 68421.1279 | 5339.22145 | 57955.3665 | 78886.8892 |
| 2008 | 72170.3674 | 6807.19751 | 58827.1290 | 85513.6059 |

**Individual Test Results**

| wave Simple Contrast[a] | Contrast Estimate | Hypothesized Value | Difference (Estimate - Hypothesized) | Std. Error | df1 | df2 |
|---|---|---|---|---|---|---|
| Level 2008 vs. Level 2006 | 3749.240 | .000 | 3749.240 | 8533.083 | 1.000 | 11733.000 |

**Individual Test Results**

| wave Simple Contrast[a] | Wald F | Sig. |
|---|---|---|
| Level 2008 vs. Level 2006 | .193 | .660 |

a. Reference Category = 2006

**Overall Test Results**

| df1 | df2 | Wald F | Sig. |
|---|---|---|---|
| 1.000 | 11733.000 | .193 | .660 |

```
*************************************************************************************************************************
* 3+ Waves Used, 4 Waves of HRS for Example.

* Section 11.3.3 Weighted Multilevel Model.
GET
  SAS DATA='P:\ASDA3\Data Sets for Analysis Examples and Stata R Code\wgt_multilevel_3pwaves.sas7bdat'.
DATASET NAME wtmulti3pwaves WINDOW=FRONT.
```

**Dataset Name**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:31:38 |
| Comments | | |
| Input | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| Syntax | | DATASET NAME wtmulti3pwaves WINDOW=FRONT. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.01 |

**Warnings**

The active dataset will replace the existing dataset named wtmulti3pwaves.

```
* Plot of Mean Log Income by Gender, Figure 11.2.
* Filter data for plot.
USE ALL.
COMPUTE filter_id=(newid_num <= 10200000).
FILTER BY filter_id.
EXECUTE.
show filter_id.
```

**SHOW**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:31:38 |
| Comments | | |
| Input | Active Dataset | wtmulti3pwaves |
| | Filter | filter_id |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 58 |
| Syntax | | show filter_id. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.00 |

```
[wtmulti3pwaves]
```

**System Settings**

| Keyword | Description | Setting |
|---|---|---|
| FILTER | Filter variable | filter_id |

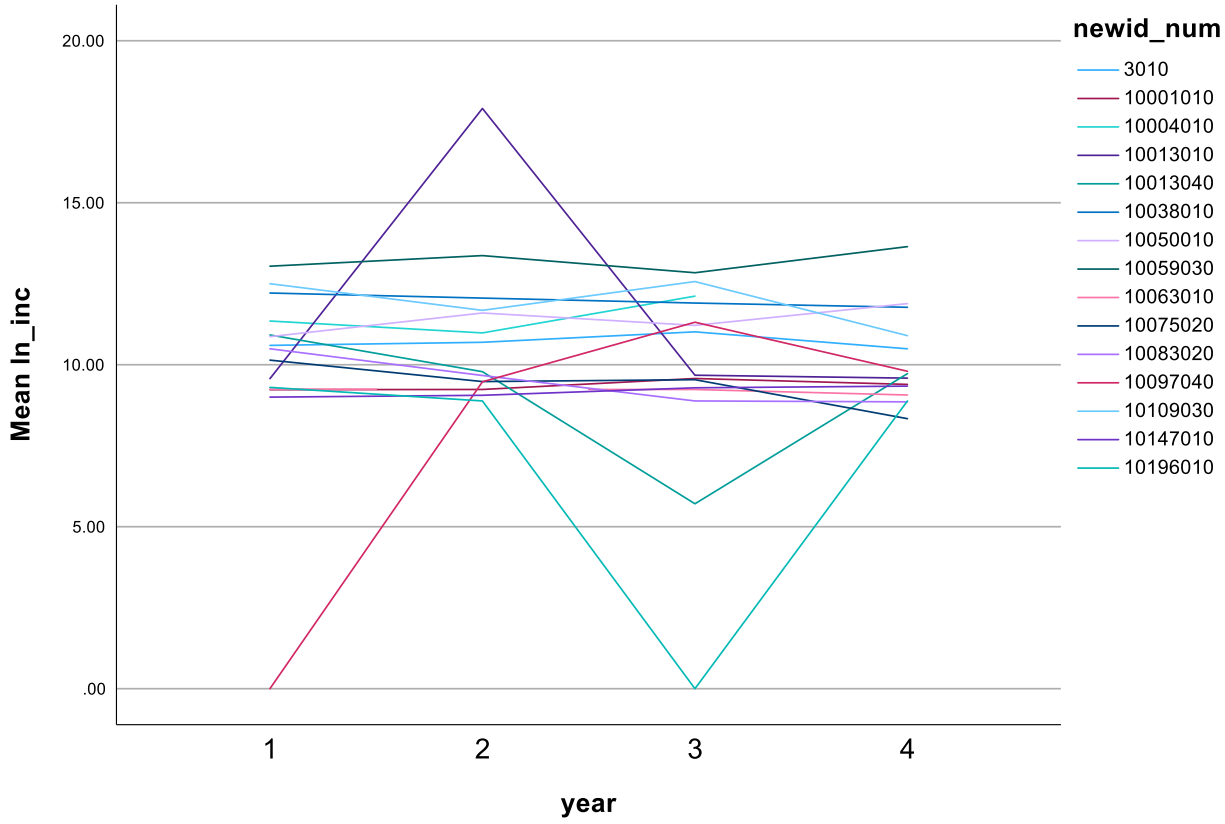
```
* Figure 11.1, Plot for small subsample of subjects.
```

```
GRAPH
  /LINE(simple)=mean (ln_inc  ) BY  year newid_num.
```

**Graph**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:31:38 |
| Comments | | |
| Input | Active Dataset | wtmulti3pwaves |
| | Filter | filter_id |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 58 |
| Syntax | | GRAPH /LINE(simple)=mean (ln_inc ) BY year newid_num. |
| Resources | Processor Time | 00:00:00.08 |
| | Elapsed Time | 00:00:00.19 |



```
* Figure 11.2 Plot mean income by gender for all subjects.
FILTER OFF.
SHOW FILTER.
```

**SHOW**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:31:39 |
| Comments | | |
| Input | Active Dataset | wtmulti3pwaves |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 58 |
| Syntax | | SHOW FILTER. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.00 |

**System Settings**

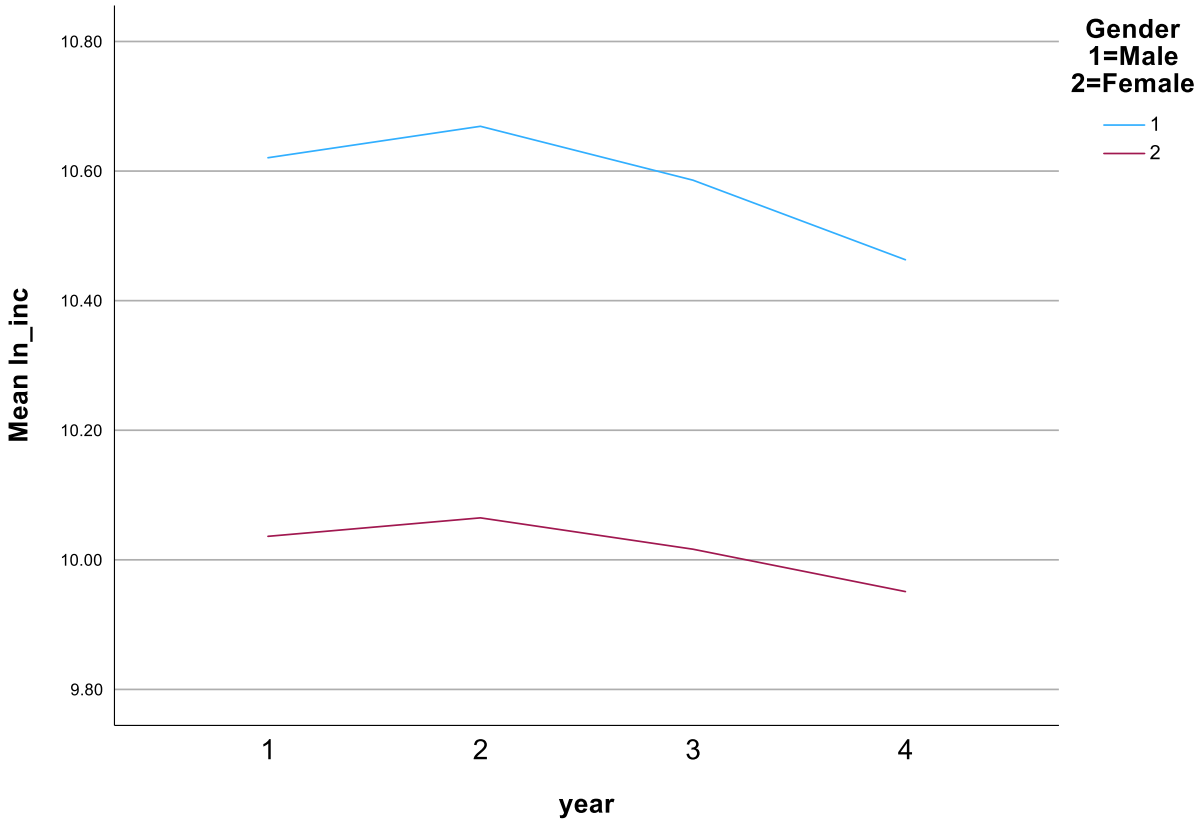
| Keyword | Description | Setting |
|---|---|---|
| FILTER | Filter variable | No case filter is in effect |

```
GRAPH
  /LINE(simple)=mean (ln_inc ) BY year gender.
```

**Graph**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:31:39 |
| Comments | | |
| Input | Active Dataset | wtmulti3pwaves |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 40325 |
| Syntax | | GRAPH /LINE(simple)=mean (ln_inc ) BY year gender. |
| Resources | Processor Time | 00:00:00.05 |
| | Elapsed Time | 00:00:00.20 |


Gender
1=Male
2=Female
1
2
Mean ln_inc
10.80
10.60
10.40
10.20
10.00
9.80
1
2
3
4
year

```
* Prepare needed variables for Mixed model.
compute revgender=3 - gender.
compute revstratum=57- stratum.

* Notes on this model: Approximate weighted multilevel model with mixed linear model with stratum as model
predictor, use of different weights for multiple levels in CS Commands not available.
* Model is modified to include random effects and the level1 weight but no robust SE or level 2 weights. * This
model serves as a demonstration of an approximation and is not strictly correct.

MIXED ln_inc BY REVGENDER REVSTRATUM  WITH yrssince06 yrs06sq
  /CRITERIA=CIN(95) MXITER(100) MXSTEP(10) SCORING(1) SINGULAR(0.000000000001) HCONVERGE(0,
    ABSOLUTE) LCONVERGE(0, ABSOLUTE) PCONVERGE(0.000001, ABSOLUTE)
 /FIXED YRSSINCE06 REVGENDER YRSSINCE06*REVGENDER YRS06SQ YRS06SQ*REVGENDER REVSTRATUM
 /RANDOM YRSSINCE06 YRS06SQ
 /METHOD=REML
 /PRINT=SOLUTION
 /REGWGT=level1wgt.
```

**Mixed Model Analysis**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:31:50 |
| Comments | | |
| Input | Active Dataset | wtmulti3pwaves |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 40325 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data for all variables in the model. |
| Syntax | | MIXED ln_inc BY REVGENDER REVSTRATUM  WITH yrssince06 yrs06sq<br>/CRITERIA=CIN(95) MXITER(100) MXSTEP(10) SCORING(1) SINGULAR(0.000000000001) HCONVERGE(0,<br>ABSOLUTE) LCONVERGE(0, ABSOLUTE)<br>PCONVERGE(0.000001, ABSOLUTE)<br>/FIXED YRSSINCE06 REVGENDER YRSSINCE06*REVGENDER<br>YRS06SQ YRS06SQ*REVGENDER REVSTRATUM<br>/RANDOM YRSSINCE06 YRS06SQ<br>/METHOD=REML<br>/PRINT=SOLUTION<br>/REGWGT=level1wgt. |
| Resources | Processor Time | 00:00:00.27 |
| | Elapsed Time | 00:00:00.40 |

**Warnings**

The final Hessian matrix is not positive definite although all convergence criteria are satisfied. The MIXED procedure continues despite this warning. Validity of subsequent results cannot be ascertained.

**Model Dimension**[a,b]

| | | Number of Levels | Covariance Structure | Number of Parameters |
|---|---|---|---|---|
| Fixed Effects | Intercept | 1 | | 1 |
| | yrssince06 | 1 | | 1 |
| | revgender | 2 | | 1 |
| | revgender * yrssince06 | 2 | | 1 |
| | yrs06sq | 1 | | 1 |
| | revgender * yrs06sq | 2 | | 1 |
| | revstratum | 56 | | 55 |
| Random Effects | yrssince06 + yrs06sq | 2 | Variance Components | 2 |
| Residual | | | | 1 |
| Total | | 67 | | 64 |

a. Dependent Variable: ln_inc.

b. Residual is weighted by level1wgt.

**Information Criteria**[a,b]

| | |
|---|---|
| -2 Restricted Log Likelihood | 135493.368 |
| Akaike's Information Criterion (AIC) | 135499.368 |
| Hurvich and Tsai's Criterion (AICC) | 135499.369 |
| Bozdogan's Criterion (CAIC) | 135528.120 |
| Schwarz's Bayesian Criterion (BIC) | 135525.120 |

The information criteria are displayed in smaller-is-better form.[a,b]

a. Dependent Variable: ln_inc.

b. Residual is weighted by level1wgt.

**Fixed Effects**

**Type III Tests of Fixed Effects**[a,b]

| Source | Numerator df | Denominator df | F | Sig. |
|---|---|---|---|---|
| Intercept | 1 | 39495 | 616652.813 | <.001 |
| yrssince06 | 1 | 39495 | 22.186 | <.001 |
| revgender | 1 | 39495 | 553.444 | <.001 |
| revgender * yrssince06 | 1 | 39495 | .787 | .375 |
| yrs06sq | 1 | 39495 | 38.333 | <.001 |
| revgender * yrs06sq | 1 | 39495 | 1.998 | .157 |
| revstratum | 55 | 39495.000 | 19.217 | <.001 |

a. Dependent Variable: ln_inc.

b. Residual is weighted by level1wgt.

**Estimates of Fixed Effects**[a,b]

| | | | | | | 95% Confidence Interval | |
|---|---|---|---|---|---|---|---|
| Parameter | Estimate | Std. Error | df | t | Sig. | Lower Bound | Upper Bound |
| Intercept | 10.193536 | .054630 | 39495 | 186.594 | <.001 | 10.086460 | 10.300611 |
| yrssince06 | .057366 | .015413 | 39495 | 3.722 | <.001 | .027156 | .087576 |
| [revgender=1.00] | -.570575 | .024254 | 39495 | -23.525 | <.001 | -.618113 | -.523038 |
| [revgender=2.00] | 0[c] | 0 | . | . | . | . | . |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| [revgender=1.00] * yrssince06 | -.018185 | .020496 | 39495 | -.887 | .375 | -.058358 | .021988 |
| [revgender=2.00] * yrssince06 | 0[c] | 0 | . | . | . | . | . |
| yrs06sq | -.012767 | .002526 | 39495 | -5.054 | <.001 | -.017718 | -.007816 |
| [revgender=1.00] * yrs06sq | .004746 | .003357 | 39495 | 1.414 | .157 | -.001835 | .011327 |
| [revgender=2.00] * yrs06sq | 0[c] | 0 | . | . | . | . | . |
| [revstratum=1.00] | .823406 | .121129 | 39495 | 6.798 | <.001 | .585990 | 1.060823 |
| [revstratum=2.00] | .212805 | .111564 | 39495 | 1.907 | .056 | -.005863 | .431472 |
| [revstratum=3.00] | -.248137 | .181099 | 39495 | -1.370 | .171 | -.603096 | .106821 |
| [revstratum=4.00] | .600864 | .136969 | 39495 | 4.387 | <.001 | .332402 | .869326 |
| [revstratum=5.00] | -.642758 | .083198 | 39495 | -7.726 | <.001 | -.805827 | -.479689 |
| [revstratum=6.00] | .413252 | .068634 | 39495 | 6.021 | <.001 | .278727 | .547776 |
| [revstratum=7.00] | .358917 | .064453 | 39495.000 | 5.569 | <.001 | .232588 | .485246 |
| [revstratum=8.00] | .237989 | .068421 | 39495 | 3.478 | <.001 | .103882 | .372097 |
| [revstratum=9.00] | .314640 | .072483 | 39495 | 4.341 | <.001 | .172572 | .456708 |
| [revstratum=10.00] | .220935 | .064141 | 39495 | 3.445 | <.001 | .095217 | .346653 |
| [revstratum=11.00] | .456657 | .061018 | 39495 | 7.484 | <.001 | .337060 | .576255 |
| [revstratum=12.00] | .622352 | .062369 | 39495.000 | 9.979 | <.001 | .500108 | .744596 |
| [revstratum=13.00] | .486190 | .066146 | 39495 | 7.350 | <.001 | .356543 | .615837 |
| [revstratum=14.00] | .470830 | .066287 | 39495 | 7.103 | <.001 | .340906 | .600753 |
| [revstratum=15.00] | .475978 | .065105 | 39495 | 7.311 | <.001 | .348372 | .603585 |
| [revstratum=16.00] | .561794 | .065844 | 39495 | 8.532 | <.001 | .432738 | .690850 |
| [revstratum=17.00] | .723051 | .063516 | 39495 | 11.384 | <.001 | .598558 | .847543 |
| [revstratum=18.00] | .560014 | .069768 | 39495 | 8.027 | <.001 | .423266 | .696762 |
| [revstratum=19.00] | .399625 | .069930 | 39495 | 5.715 | <.001 | .262559 | .536690 |
| [revstratum=20.00] | .251593 | .075962 | 39495 | 3.312 | <.001 | .102706 | .400480 |
| [revstratum=21.00] | .195657 | .073677 | 39495 | 2.656 | .008 | .051248 | .340065 |
| [revstratum=22.00] | .544233 | .083670 | 39495 | 6.505 | <.001 | .380239 | .708228 |
| [revstratum=23.00] | -.014321 | .067300 | 39495 | -.213 | .831 | -.146231 | .117589 |
| [revstratum=24.00] | .264621 | .062751 | 39495 | 4.217 | <.001 | .141626 | .387615 |
| [revstratum=25.00] | .324075 | .068247 | 39495 | 4.749 | <.001 | .190308 | .457841 |
| [revstratum=26.00] | .530216 | .064280 | 39495 | 8.248 | <.001 | .404225 | .656208 |
| [revstratum=27.00] | .613787 | .064293 | 39495 | 9.547 | <.001 | .487772 | .739802 |
| [revstratum=28.00] | .573539 | .063967 | 39495 | 8.966 | <.001 | .448163 | .698915 |
| [revstratum=29.00] | .511901 | .067653 | 39495 | 7.567 | <.001 | .379301 | .644502 |
| [revstratum=30.00] | .648318 | .065427 | 39495 | 9.909 | <.001 | .520080 | .776557 |
| [revstratum=31.00] | .485452 | .068279 | 39495 | 7.110 | <.001 | .351624 | .619280 |
| [revstratum=32.00] | .468919 | .096866 | 39495 | 4.841 | <.001 | .279061 | .658778 |
| [revstratum=33.00] | .555772 | .102353 | 39495 | 5.430 | <.001 | .355158 | .756386 |
| [revstratum=34.00] | .486006 | .093114 | 39495 | 5.219 | <.001 | .303501 | .668511 |
| [revstratum=35.00] | .531222 | .092498 | 39495 | 5.743 | <.001 | .349925 | .712520 |
| [revstratum=36.00] | .503361 | .074307 | 39495 | 6.774 | <.001 | .357718 | .649004 |
| [revstratum=37.00] | -.078161 | .075233 | 39495 | -1.039 | .299 | -.225619 | .069297 |
| [revstratum=38.00] | .357038 | .084517 | 39495 | 4.224 | <.001 | .191382 | .522694 |
| [revstratum=39.00] | .742752 | .084436 | 39495 | 8.797 | <.001 | .577256 | .908248 |
| [revstratum=40.00] | .483201 | .078097 | 39495 | 6.187 | <.001 | .330129 | .636273 |
| [revstratum=41.00] | .321673 | .090246 | 39495 | 3.564 | <.001 | .144789 | .498557 |
| [revstratum=42.00] | .459584 | .086998 | 39495 | 5.283 | <.001 | .289066 | .630103 |
| [revstratum=43.00] | .603072 | .088449 | 39495 | 6.818 | <.001 | .429710 | .776433 |
| [revstratum=44.00] | .611541 | .086753 | 39495 | 7.049 | <.001 | .441503 | .781579 |
| [revstratum=45.00] | .241579 | .081953 | 39495 | 2.948 | .003 | .080950 | .402208 |
| [revstratum=46.00] | .370638 | .080710 | 39495 | 4.592 | <.001 | .212445 | .528831 |
| [revstratum=47.00] | .767664 | .075759 | 39495 | 10.133 | <.001 | .619175 | .916153 |
| [revstratum=48.00] | .553475 | .074679 | 39495 | 7.411 | <.001 | .407102 | .699849 |
| [revstratum=49.00] | .442595 | .068387 | 39495 | 6.472 | <.001 | .308556 | .576635 |
| [revstratum=50.00] | .701016 | .070793 | 39495 | 9.902 | <.001 | .562260 | .839772 |
| [revstratum=51.00] | .281267 | .074866 | 39495 | 3.757 | <.001 | .134527 | .428006 |
| [revstratum=52.00] | .366523 | .076651 | 39495 | 4.782 | <.001 | .216285 | .516762 |
| [revstratum=53.00] | .375566 | .078151 | 39495 | 4.806 | <.001 | .222389 | .528743 |
| [revstratum=54.00] | .275429 | .078811 | 39495 | 3.495 | <.001 | .120957 | .429901 |
| [revstratum=55.00] | .179310 | .074452 | 39495 | 2.408 | .016 | .033383 | .325237 |
| [revstratum=56.00] | 0[c] | 0 | . | . | . | . | . |

a. Dependent Variable: ln_inc.

b. Residual is weighted by level1wgt.

c. This parameter is set to zero because it is redundant.

**Covariance Parameters**

**Estimates of Covariance Parameters**[a,b]

| Parameter | | Estimate | Std. Error |
|---|---|---|---|
| Residual | | 1.775762 | .012637 |
| yrssince06 | Variance | .000000[c] | .000000 |
| yrs06sq | Variance | .000000[c] | .000000 |

a. Dependent Variable: ln_inc.

b. Residual is weighted by level1wgt.

c. This covariance parameter is redundant.

```
* Veiga et al. (2014) not available in SPSS29 CS Commands.
* Error Covariance model is not available in SPSS29 CS program, see Stata program presented in textbook for
details.
```

```
* Section 11.3.4, Weighted GEE Analysis.
GET
  SAS DATA='P:\ASDA3\Data Sets for Analysis Examples and Stata R Code\wgt_gee_3pwaves.sas7bdat'.
DATASET NAME wgt_gee_3pwaves WINDOW=FRONT.
```

**Dataset Name**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:32:14 |
| Comments | | |
| Input | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| Syntax | | DATASET NAME wgt_gee_3pwaves WINDOW=FRONT. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.00 |

**Warnings**

The active dataset will replace the existing dataset named wgt_gee_3pwaves.

```
compute revgender=3 - gender.
compute revstratum=57- stratum.
* Note: Data management and Response Propensity Models were run in SAS and saved for the final model shown
below. For more, see SAS programs for Chapter 11 on ASDA3 website.
* Model results are very close to those from Stata, GENLIN allows Robust SE and STRATUM variable used as model
predictor.
```

```
* Generalized Estimating Equations.
GENLIN ln_inc BY revgender revstratum (ORDER=ASCENDING) WITH yrssince06 yrs06sq
 /MODEL yrssince06 revgender yrs06sq yrssince06*revgender yrs06sq*revgender revstratum INTERCEPT=YES
SCALEWEIGHT=casewt
 DISTRIBUTION=NORMAL LINK=IDENTITY
 /CRITERIA SCALE=MLE PCONVERGE=1E-006(ABSOLUTE) SINGULAR=1E-012 ANALYSISTYPE=3(WALD) CILEVEL=95
    LIKELIHOOD=FULL
 /REPEATED SUBJECT=newid_num SORT=YES CORRTYPE=EXCHANGEABLE ADJUSTCORR=YES COVB=ROBUST
 /MISSING CLASSMISSING=EXCLUDE
 /PRINT CPS DESCRIPTIVES MODELINFO FIT SUMMARY SOLUTION.
```

**Generalized Linear Models**

**Notes**

| | | |
|---|---|---|
| Output Created | | 27-FEB-2025 11:32:24 |
| Comments | | |
| Input | Active Dataset | wgt_gee_3pwaves |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 47156 |
| Missing Value Handling | Definition of Missing | User-defined missing values for factor, subject and within-subject variables are treated as missing. |
| | Cases Used | Statistics are based on cases with valid data for all variables in the model. |
| Weight Handling | | not applicable |
| Syntax | | GENLIN ln_inc BY revgender revstratum (ORDER=ASCENDING) WITH yrssince06 yrs06sq /MODEL yrssince06 revgender yrs06sq yrssince06*revgender yrs06sq*revgender revstratum INTERCEPT=YES SCALEWEIGHT=casewt DISTRIBUTION=NORMAL LINK=IDENTITY /CRITERIA SCALE=MLE PCONVERGE=1E-006(ABSOLUTE) SINGULAR=1E-012 ANALYSISTYPE=3(WALD) CILEVEL=95 LIKELIHOOD=FULL /REPEATED SUBJECT=newid_num SORT=YES CORRTYPE=EXCHANGEABLE ADJUSTCORR=YES COVB=ROBUST /MISSING CLASSMISSING=EXCLUDE /PRINT CPS DESCRIPTIVES MODELINFO FIT SUMMARY SOLUTION. |
| Resources | Processor Time | 00:00:04.62 |
| | Elapsed Time | 00:00:05.43 |

[wgt_gee_3pwaves]

**Model Information**

| | | |
|---|---|---|
| Dependent Variable | | ln_inc |
| Probability Distribution | | Normal |
| Link Function | | Identity |
| Scale Weight Variable | | casewt |
| Subject Effect | 1 | newid_num |
| Working Correlation Matrix Structure | | Exchangeable |

**Case Processing Summary**

| | N | Percent |
|---|---|---|
| Included | 40325 | 85.5% |
| Excluded | 6831 | 14.5% |
| Total | 47156 | 100.0% |

**Correlated Data Summary**

| | | | |
|---|---|---|---|
| Number of Levels | Subject Effect | newid_num | 11789 |
| Number of Subjects | | | 11789 |
| Number of Measurements per Subject | Minimum | | 1 |
| | Maximum | | 4 |
| Correlation Matrix Dimension | | | 4 |

**Categorical Variable Information**

| | | | N | Percent |
|---|---|---|---|---|
| Factor | revgender | 1.00 | 22821 | 56.6% |
| | | 2.00 | 17504 | 43.4% |
| | | Total | 40325 | 100.0% |
| | revstratum | 1.00 | 170 | 0.4% |
| | | 2.00 | 200 | 0.5% |
| | | 3.00 | 62 | 0.2% |
| | | 4.00 | 125 | 0.3% |
| | | 5.00 | 419 | 1.0% |
| | | 6.00 | 921 | 2.3% |
| | | 7.00 | 1238 | 3.1% |
| | | 8.00 | 895 | 2.2% |
| | | 9.00 | 708 | 1.8% |
| | | 10.00 | 1250 | 3.1% |
| | | 11.00 | 1698 | 4.2% |
| | | 12.00 | 1470 | 3.6% |
| | | 13.00 | 1067 | 2.6% |
| | | 14.00 | 1044 | 2.6% |
| | | 15.00 | 1097 | 2.7% |
| | | 16.00 | 1062 | 2.6% |
| | | 17.00 | 1310 | 3.2% |
| | | 18.00 | 808 | 2.0% |
| | | 19.00 | 822 | 2.0% |
| | | 20.00 | 568 | 1.4% |
| | | 21.00 | 707 | 1.8% |
| | | 22.00 | 430 | 1.1% |
| | | 23.00 | 984 | 2.4% |
| | | 24.00 | 1429 | 3.5% |
| | | 25.00 | 893 | 2.2% |
| | | 26.00 | 1207 | 3.0% |
| | | 27.00 | 1193 | 3.0% |
| | | 28.00 | 1227 | 3.0% |
| | | 29.00 | 921 | 2.3% |
| | | 30.00 | 1084 | 2.7% |
| | | 31.00 | 890 | 2.2% |
| | | 32.00 | 252 | 0.6% |

| | | | |
|---|---|---|---|
| | 33.00 | 228 | 0.6% |
| | 34.00 | 292 | 0.7% |
| | 35.00 | 296 | 0.7% |
| | 36.00 | 635 | 1.6% |
| | 37.00 | 606 | 1.5% |
| | 38.00 | 407 | 1.0% |
| | 39.00 | 396 | 1.0% |
| | 40.00 | 533 | 1.3% |
| | 41.00 | 334 | 0.8% |
| | 42.00 | 363 | 0.9% |
| | 43.00 | 341 | 0.8% |
| | 44.00 | 350 | 0.9% |
| | 45.00 | 448 | 1.1% |
| | 46.00 | 471 | 1.2% |
| | 47.00 | 569 | 1.4% |
| | 48.00 | 618 | 1.5% |
| | 49.00 | 910 | 2.3% |
| | 50.00 | 775 | 1.9% |
| | 51.00 | 638 | 1.6% |
| | 52.00 | 577 | 1.4% |
| | 53.00 | 569 | 1.4% |
| | 54.00 | 524 | 1.3% |
| | 55.00 | 631 | 1.6% |
| | 56.00 | 663 | 1.6% |
| | Total | 40325 | 100.0% |

**Continuous Variable Information**

| | | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| Dependent Variable | ln_inc | 40325 | .00 | 17.91 | 10.2688 | 1.41383 |
| Covariate | yrssince06 | 40325 | 0 | 6 | 2.73 | 2.228 |
| | yrs06sq | 40325 | 0 | 36 | 12.42 | 13.591 |
| Scale Weight | casewt | 40325 | 1068 | 8449395 | 27230.1793 | 155257.90017 |

**Goodness of Fit**[a]

| | Value |
|---|---|
| Quasi Likelihood under Independence Model Criterion (QIC)[b] | 2509506411.621 |
| Corrected Quasi Likelihood under Independence Model Criterion (QICC)[b] | 2509502073.623 |

Dependent Variable: ln_inc
Model: (Intercept), yrssince06, revgender, yrs06sq, revgender * yrssince06, revgender * yrs06sq, revstratum
[a]

a. Information criteria are in smaller-is-better form.

b. Computed using the full log quasi-likelihood function.

**Tests of Model Effects**

| | Type III | | |
|---|---|---|---|
| Source | Wald Chi-Square | df | Sig. |
| (Intercept) | 30891.375 | 1 | <.001 |
| yrssince06 | .795 | 1 | .373 |
| revgender | 38.296 | 1 | <.001 |
| yrs06sq | .001 | 1 | .975 |
| revgender * yrssince06 | 1.623 | 1 | .203 |
| revgender * yrs06sq | .771 | 1 | .380 |
| revstratum | 148.647 | 55 | <.001 |

Dependent Variable: ln_inc
Model: (Intercept), yrssince06, revgender, yrs06sq, revgender * yrssince06, revgender * yrs06sq, revstratum

**Parameter Estimates**

| Parameter | B | Std. Error | 95% Wald Confidence Interval | | Hypothesis Test | | |
|---|---|---|---|---|---|---|---|
| | | | Lower | Upper | Wald Chi-Square | df | Sig. |
| (Intercept) | 9.819 | .4376 | 8.961 | 10.676 | 503.508 | 1 | <.001 |
| yrssince06 | -.087 | .0476 | -.180 | .007 | 3.320 | 1 | .068 |
| [revgender=1.00] | -.635 | .1026 | -.836 | -.434 | 38.296 | 1 | <.001 |
| [revgender=2.00] | 0[a] | . | . | . | . | . | . |
| yrs06sq | .006 | .0083 | -.010 | .022 | .489 | 1 | .484 |
| [revgender=1.00] * yrssince06 | .099 | .0779 | -.053 | .252 | 1.623 | 1 | .203 |
| [revgender=2.00] * yrssince06 | 0[a] | . | . | . | . | . | . |
| [revgender=1.00] * yrs06sq | -.011 | .0127 | -.036 | .014 | .771 | 1 | .380 |
| [revgender=2.00] * yrs06sq | 0[a] | . | . | . | . | . | . |
| [revstratum=1.00] | 1.330 | .4733 | .402 | 2.258 | 7.896 | 1 | .005 |
| [revstratum=2.00] | .308 | .5162 | -.704 | 1.319 | .355 | 1 | .551 |
| [revstratum=3.00] | .286 | .6156 | -.921 | 1.492 | .215 | 1 | .643 |
| [revstratum=4.00] | .969 | .4794 | .029 | 1.908 | 4.082 | 1 | .043 |
| [revstratum=5.00] | .067 | .5013 | -.916 | 1.049 | .018 | 1 | .894 |
| [revstratum=6.00] | .963 | .4820 | .018 | 1.908 | 3.990 | 1 | .046 |
| [revstratum=7.00] | .803 | .4552 | -.090 | 1.695 | 3.109 | 1 | .078 |
| [revstratum=8.00] | .354 | .6153 | -.852 | 1.560 | .331 | 1 | .565 |
| [revstratum=9.00] | .933 | .4566 | .038 | 1.828 | 4.176 | 1 | .041 |
| [revstratum=10.00] | .676 | .4517 | -.209 | 1.561 | 2.240 | 1 | .134 |
| [revstratum=11.00] | 1.071 | .4735 | .144 | 1.999 | 5.121 | 1 | .024 |
| [revstratum=12.00] | 1.368 | .4568 | .473 | 2.264 | 8.968 | 1 | .003 |
| [revstratum=13.00] | 1.156 | .4623 | .250 | 2.062 | 6.255 | 1 | .012 |
| [revstratum=14.00] | 1.039 | .4763 | .106 | 1.973 | 4.763 | 1 | .029 |
| [revstratum=15.00] | .666 | .4648 | -.245 | 1.577 | 2.051 | 1 | .152 |
| [revstratum=16.00] | 1.311 | .5071 | .317 | 2.305 | 6.681 | 1 | .010 |
| [revstratum=17.00] | 1.413 | .4549 | .521 | 2.304 | 9.646 | 1 | .002 |
| [revstratum=18.00] | .958 | .4571 | .062 | 1.854 | 4.391 | 1 | .036 |
| [revstratum=19.00] | 1.348 | .5322 | .305 | 2.391 | 6.417 | 1 | .011 |
| [revstratum=20.00] | .720 | .4518 | -.166 | 1.605 | 2.537 | 1 | .111 |
| [revstratum=21.00] | .746 | .6137 | -.456 | 1.949 | 1.480 | 1 | .224 |
| [revstratum=22.00] | 1.123 | .5142 | .116 | 2.131 | 4.774 | 1 | .029 |
| [revstratum=23.00] | .385 | .4540 | -.505 | 1.275 | .720 | 1 | .396 |
| [revstratum=24.00] | .932 | .5666 | -.178 | 2.043 | 2.708 | 1 | .100 |
| [revstratum=25.00] | 1.003 | .6157 | -.203 | 2.210 | 2.656 | 1 | .103 |
| [revstratum=26.00] | 1.136 | .4622 | .230 | 2.042 | 6.039 | 1 | .014 |
| [revstratum=27.00] | .971 | .4739 | .042 | 1.899 | 4.195 | 1 | .041 |
| [revstratum=28.00] | 1.241 | .4700 | .320 | 2.162 | 6.971 | 1 | .008 |
| [revstratum=29.00] | .997 | .4627 | .090 | 1.904 | 4.642 | 1 | .031 |
| [revstratum=30.00] | 1.218 | .4638 | .309 | 2.127 | 6.901 | 1 | .009 |
| [revstratum=31.00] | 1.242 | .5337 | .196 | 2.288 | 5.417 | 1 | .020 |
| [revstratum=32.00] | .916 | .4529 | .028 | 1.803 | 4.089 | 1 | .043 |
| [revstratum=33.00] | .959 | .5252 | -.070 | 1.989 | 3.336 | 1 | .068 |
| [revstratum=34.00] | .556 | .5119 | -.447 | 1.559 | 1.180 | 1 | .277 |
| [revstratum=35.00] | 1.116 | .4895 | .156 | 2.075 | 5.196 | 1 | .023 |
| [revstratum=36.00] | 1.167 | .4514 | .283 | 2.052 | 6.686 | 1 | .010 |
| [revstratum=37.00] | 1.072 | .7330 | -.365 | 2.508 | 2.137 | 1 | .144 |
| [revstratum=38.00] | 1.064 | .6607 | -.231 | 2.359 | 2.595 | 1 | .107 |
| [revstratum=39.00] | 1.393 | .4915 | .430 | 2.356 | 8.031 | 1 | .005 |
| [revstratum=40.00] | 1.277 | .4817 | .333 | 2.221 | 7.024 | 1 | .008 |
| [revstratum=41.00] | .832 | .4533 | -.056 | 1.721 | 3.370 | 1 | .066 |
| [revstratum=42.00] | .801 | .5083 | -.195 | 1.797 | 2.482 | 1 | .115 |
| [revstratum=43.00] | .982 | .4701 | .061 | 1.904 | 4.367 | 1 | .037 |
| [revstratum=44.00] | 1.038 | .5211 | .016 | 2.059 | 3.965 | 1 | .046 |
| [revstratum=45.00] | 1.185 | .5437 | .120 | 2.251 | 4.752 | 1 | .029 |
| [revstratum=46.00] | .236 | .7802 | -1.293 | 1.765 | .091 | 1 | .762 |
| [revstratum=47.00] | 1.476 | .4581 | .578 | 2.374 | 10.385 | 1 | .001 |
| [revstratum=48.00] | .711 | .5196 | -.307 | 1.730 | 1.873 | 1 | .171 |
| [revstratum=49.00] | .922 | .4785 | -.015 | 1.860 | 3.717 | 1 | .054 |
| [revstratum=50.00] | 1.469 | .5121 | .465 | 2.472 | 8.226 | 1 | .004 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| [revstratum=51.00] | .890 | .6169 | -.320 | 2.099 | 2.079 | 1 | .149 |
| [revstratum=52.00] | .700 | 1.6461 | -2.526 | 3.926 | .181 | 1 | .671 |
| [revstratum=53.00] | -.278 | 1.1753 | -2.581 | 2.026 | .056 | 1 | .813 |
| [revstratum=54.00] | .742 | .4870 | -.213 | 1.696 | 2.321 | 1 | .128 |
| [revstratum=55.00] | .243 | .4943 | -.726 | 1.211 | .241 | 1 | .623 |
| [revstratum=56.00] | 0[a] | . | . | . | . | . | . |
| (Scale) | 62326.196 | | | | | | |

Dependent Variable: ln_inc
Model: (Intercept), yrssince06, revgender, yrs06sq, revgender * yrssince06, revgender * yrs06sq, revstratum

a. Set to zero because this parameter is redundant.

```
* Export Output.
OUTPUT EXPORT
  /CONTENTS  EXPORT=ALL  LAYERS=PRINTSETTING  MODELVIEWS=PRINTSETTING
  /DOC  DOCUMENTFILE='P:\ASDA3\Replication SPSS 29\Chapter 11\Analysis Example Replication ASDA3' + 'SPSS C11
Code and Results.docx'
     NOTESCAPTIONS=YES  WIDETABLES=WRAP PAGEBREAKS=YES
     PAGESIZE=INCHES(8.5, 11.0)  TOPMARGIN=INCHES(1.0)  BOTTOMMARGIN=INCHES(1.0)
```