

WesVar Analysis Example Replication C11

WesVar 5.1 is primarily a point and click application and though a text file of commands can be used in the WesVar (V5.1) batch processing environment, all examples presented here use the GUI method. For more information on the batch processing approach, see the WesVar documentation addendum for V5.1.

Due to use of GUI method, no syntax is presented prior to results. Typically, WesVar results and setups are stored in WesVar workbooks. The analysis example replication documents include selected parts of the workbook output to highlight key results. For more on additional outputs and program features, see the WesVar documentation.

Output WesVar Analysis Example Replication C11

Example 11.3.1 Single Wave Analyses, HRS data

Note: All data management previously done in SAS, see SAS examples for syntax and details.

Complete Case Analysis

WESVAR VERSION NUMBER : v5.1.18
TIME THE JOB EXECUTED : 10:41:44 07/05/2017
INPUT DATASET NAME : P:\ASDA 2\Data sets\HRS 2012\HRS 2006_2012 Longitudinal File\cc_1wave.var
TIME THE INPUT DATASET CREATED : 10:37:05 07/05/2017
FULL SAMPLE WEIGHT : KWGTR
REPLICATE WEIGHTS : RPL01...RPL56
VARIANCE ESTIMATION METHOD : JK2

OPTION COMPLETE : ON
OPTION FUNCTION LOG : ON
OPTION VARIABLE LABEL : OFF
OPTION VALUE LABEL : OFF
OPTION OUTPUT REPLICATE ESTIMATES : OFF
FINITE POPULATION CORRECTION FACTOR : 1.00000
VALUE OF ALPHA (CONFIDENCE LEVEL %) : 0.05000 (95.00000 %)
DEGREES OF FREEDOM : 56
t VALUE : 2.003

ANALYSIS VARIABLES : ln_inc08
VARIABLES : None Specified.
CORRELATION : None Specified.
BY : None Specified.

FACTOR(S) : 1.00

NUMBER OF REPLICATES : 56
NUMBER OF OBSERVATIONS READ : 11789

WEIGHTED NUMBER OF OBSERVATIONS READ : 52555987.000

Statistics	Unweighted	Weighted	SE Weighted
N	10574	47613567.000	
Missing	N/A		
Minimum	0.000		
Maximum	17.910		
1	5.880	4.097	.
5	8.923	8.931	0.024
10	9.169	9.199	0.023
25	9.685	9.798	0.020
50	10.387	10.563	0.025
75	11.062	11.229	0.025
90	11.660	11.835	0.024
95	12.046	12.163	0.025
99	12.854	13.035	0.062
Mean	10.327	10.441	0.026
GeoMean	.	.	.
Sum	109196.394	4.971e+08	9945115.101
Variance	1.855	2.113	0.143
CV	0.132	0.139	N/A
Skewness	-3.278	-3.269	0.131
Kurtosis	22.627	21.297	0.671

Note, transformation to exponent of log income plus confidence limits not done here, can be done manually.

Weight Adjustment Method

WESVAR VERSION NUMBER : v5.1.18
TIME THE JOB EXECUTED : 10:57:49 07/05/2017
INPUT DATASET NAME : P:\ASDA 2\Data sets\HRS 2012\HRS 2006_2012 Longitudinal File\adj_wgt_1wave.var
TIME THE INPUT DATASET CREATED : 10:55:04 07/05/2017
FULL SAMPLE WEIGHT : adj_kwgtr
REPLICATE WEIGHTS : RPL01...RPL56
VARIANCE ESTIMATION METHOD : JK2

OPTION COMPLETE : ON
OPTION FUNCTION LOG : ON
OPTION VARIABLE LABEL : OFF
OPTION VALUE LABEL : OFF
OPTION OUTPUT REPLICATE ESTIMATES : OFF
FINITE POPULATION CORRECTION FACTOR : 1.00000
VALUE OF ALPHA (CONFIDENCE LEVEL %) : 0.05000 (95.00000 %)
DEGREES OF FREEDOM : 56
t VALUE : 2.003
SUBSET CRITERIA :

ANALYSIS VARIABLES : ln_inc08
VARIABLES : None Specified.
CORRELATION : None Specified.
BY : None Specified.

FACTOR(S) : 1.00

NUMBER OF REPLICATES : 56
NUMBER OF OBSERVATIONS READ : 11789
WEIGHTED NUMBER OF OBSERVATIONS READ : 58317820.572

Statistics	Unweighted	Weighted	SE Weighted
N	10574	52561445.031	
Missing	N/A		
Minimum	0.000		
Maximum	17.910		
1	5.880	4.026	.
5	8.923	8.920	0.025
10	9.169	9.180	0.024
25	9.685	9.768	0.020
50	10.387	10.522	0.025
75	11.062	11.205	0.024
90	11.660	11.810	0.023
95	12.046	12.149	0.024
99	12.854	13.016	0.073
Mean	10.327	10.414	0.027
GeoMean	.	.	.
Sum	109196.394	5.474e+08	11213574.294
Variance	1.855	2.125	0.143
CV	0.132	0.140	N/A
Skewness	-3.278	-3.267	0.130
Kurtosis	22.627	21.249	0.654

Note, transformation to exponent of log income plus confidence limits not done here, can be done manually.

Multiple Imputation Single Wave (SAS Used for Multiple Imputation)

WESVAR VERSION NUMBER : v5.1.18
 TIME THE JOB EXECUTED : 12:05:55 07/05/2017
 INPUT DATASET NAME : P:\ASDA 2\Data sets\HRS 2012\HRS 2006_2012 Longitudinal File\outimp1_wide.var
 TIME THE INPUT DATASET CREATED : 11:56:18 07/05/2017
 FULL SAMPLE WEIGHT : KWGTR
 REPLICATE WEIGHTS : RPL01...RPL56
 VARIANCE ESTIMATION METHOD : JK2

OPTION COMPLETE : ON
 OPTION FUNCTION LOG : ON
 OPTION VARIABLE LABEL : OFF
 OPTION VALUE LABEL : OFF
 OPTION OUTPUT REPLICATE ESTIMATES : OFF
 FINITE POPULATION CORRECTION FACTOR : 1.00000
 VALUE OF ALPHA (CONFIDENCE LEVEL %) : 0.05000 (95.00000 %)
 DEGREES OF FREEDOM : 56
 t VALUE : 2.003
 SUBSET CRITERIA :

ANALYSIS VARIABLES : None Specified.
 COMPUTED STATISTIC : MI_ln_inc08=PV(mean(ln_inc08_1 ln_inc08_2 ln_inc08_3 ln_inc08_4 ln_inc08_5))
 TABLE(S) : None Specified.

FACTOR(S) : 1.00

NUMBER OF REPLICATES : 56
 NUMBER OF OBSERVATIONS READ : 11789
 WEIGHTED NUMBER OF OBSERVATIONS READ : 52555987.000

STATISTIC	EST_TYPE	ESTIMATE	STDERROR	LOWER 95%	UPPER 95%	CELL_n
MI_ln_inc08	VALUE	10.415	0.026	10.363	10.468	11789

NOTE: Selection Method for Multiple Imputation Not Available in WesVar.

Two Waves of Data Used to Analyze Difference Between 2006-2010 For Total HH Income, HRS data

Complete Case Analysis

WESVAR VERSION NUMBER : v5.1.18
 TIME THE JOB EXECUTED : 12:35:04 07/05/2017
 INPUT DATASET NAME : P:\ASDA 2\Data sets\HRS 2012\HRS 2006_2012 Longitudinal File\cc_2waves.var
 TIME THE INPUT DATASET CREATED : 12:24:04 07/05/2017
 FULL SAMPLE WEIGHT : KWGTR
 REPLICATE WEIGHTS : RPL01...RPL56
 VARIANCE ESTIMATION METHOD : JK2

OPTION COMPLETE : ON
 OPTION FUNCTION LOG : ON
 OPTION VARIABLE LABEL : OFF
 OPTION VALUE LABEL : OFF
 OPTION OUTPUT REPLICATE ESTIMATES : OFF
 FINITE POPULATION CORRECTION FACTOR : 1.00000
 VALUE OF ALPHA (CONFIDENCE LEVEL %) : 0.05000 (95.00000 %)
 DEGREES OF FREEDOM : 56
 t VALUE : 2.003
 SUBSET CRITERIA :

ANALYSIS VARIABLES : None Specified.
 COMPUTED STATISTIC : inc_diff_06_10=(h10itot-h8itot)
 M_incdiff_06_10=mean(h10itot-h8itot)
 TABLE(S) : None Specified.

FACTOR(S) : 1.00

NUMBER OF REPLICATES : 56
 NUMBER OF OBSERVATIONS READ : 11789
 WEIGHTED NUMBER OF OBSERVATIONS READ : 52555987.000

STATISTIC	EST_TYPE	ESTIMATE	STDERROR	LOWER 95%	UPPER 95%	CV(%)	CELL_n
M_incdiff_06_10	VALUE	-6551.402	1860.677	-10278.786	-2824.018	28.401	9402

Response Propensity Adjustment

WESVAR VERSION NUMBER : v5.1.18
 TIME THE JOB EXECUTED : 12:50:47 07/05/2017
 INPUT DATASET NAME : P:\ASDA 2\Data sets\HRS 2012\HRS 2006_2012 Longitudinal File\adj_wgt_2waves.var
 TIME THE INPUT DATASET CREATED : 12:46:14 07/05/2017
 FULL SAMPLE WEIGHT : adj_kwgtr
 REPLICATE WEIGHTS : RPL01...RPL56
 VARIANCE ESTIMATION METHOD : JK2

OPTION COMPLETE : ON
 OPTION FUNCTION LOG : ON
 OPTION VARIABLE LABEL : OFF
 OPTION VALUE LABEL : OFF
 OPTION OUTPUT REPLICATE ESTIMATES : OFF
 FINITE POPULATION CORRECTION FACTOR : 1.00000
 VALUE OF ALPHA (CONFIDENCE LEVEL %) : 0.05000 (95.00000 %)
 DEGREES OF FREEDOM : 56
 t VALUE : 2.003
 SUBSET CRITERIA :

ANALYSIS VARIABLES : None Specified.
 COMPUTED STATISTIC : m_incdiff_06_10_Adj=mean(h10itot-h8itot)
 TABLE(S) : None Specified.

FACTOR(S) : 1.00

NUMBER OF REPLICATES : 56
 NUMBER OF OBSERVATIONS READ : 11789
 WEIGHTED NUMBER OF OBSERVATIONS READ : 65949786.730

STATISTIC	EST_TYPE	ESTIMATE	STDERROR	LOWER 95%	UPPER 95%	CV (%)	CELL_n	DEFF
m_incdiff_06_10_Adj	VALUE	-6119.970	1697.752	-9520.976	-2718.963	27.741	9402	N/A

Multiple Imputation Method

WESVAR VERSION NUMBER : v5.1.18
 TIME THE JOB EXECUTED : 13:32:59 07/05/2017
 INPUT DATASET NAME : P:\ASDA 2\Data sets\HRS 2012\HRS 2006_2012 Longitudinal File\outimp2_wide.var
 TIME THE INPUT DATASET CREATED : 13:30:03 07/05/2017
 FULL SAMPLE WEIGHT : KWGTR
 REPLICATE WEIGHTS : RPL01...RPL56
 VARIANCE ESTIMATION METHOD : JK2

OPTION COMPLETE : ON
 OPTION FUNCTION LOG : ON
 OPTION VARIABLE LABEL : OFF
 OPTION VALUE LABEL : OFF
 OPTION OUTPUT REPLICATE ESTIMATES : OFF
 FINITE POPULATION CORRECTION FACTOR : 1.00000
 VALUE OF ALPHA (CONFIDENCE LEVEL %) : 0.05000 (95.00000 %)
 DEGREES OF FREEDOM : 56
 t VALUE : 2.003
 SUBSET CRITERIA :

ANALYSIS VARIABLES : None Specified.
 COMPUTED STATISTIC : m_incdiff0610=pv(mean(new_chg0610_1 new_chg0610_2 new_chg0610_3 new_chg0610_4 new_chg0610_5))
 TABLE(S) : None Specified.

FACTOR(S) : 1.00

NUMBER OF REPLICATES : 56
 NUMBER OF OBSERVATIONS READ : 11789
 WEIGHTED NUMBER OF OBSERVATIONS READ : 52555987.000

STATISTIC	EST_TYPE	ESTIMATE	STDERROR	LOWER 95%	UPPER 95%	CELL_n	DEFF
m_incdiff0610	VALUE	-3752.722	3045.621	-9853.835	2348.392	11789	N/A

Calibration Method

WESVAR VERSION NUMBER : v5.1.18
 TIME THE JOB EXECUTED : 13:09:01 07/05/2017
 INPUT DATASET NAME : P:\ASDA 2\Data sets\HRS 2012\HRS 2006_2012 Longitudinal File\calibration_2waves.var
 TIME THE INPUT DATASET CREATED : 13:03:06 07/05/2017
 FULL SAMPLE WEIGHT : kwgtr_cal
 REPLICATE WEIGHTS : RPL01...RPL56
 VARIANCE ESTIMATION METHOD : JK2

OPTION COMPLETE : ON
 OPTION FUNCTION LOG : ON
 OPTION VARIABLE LABEL : OFF
 OPTION VALUE LABEL : OFF
 OPTION OUTPUT REPLICATE ESTIMATES : OFF
 FINITE POPULATION CORRECTION FACTOR : 1.00000
 VALUE OF ALPHA (CONFIDENCE LEVEL %) : 0.05000 (95.00000 %)
 DEGREES OF FREEDOM : 56
 t VALUE : 2.003
 SUBSET CRITERIA :

ANALYSIS VARIABLES : None Specified.
 COMPUTED STATISTIC : cal_incdiff_06_10=mean(h10itot-h8itot)
 TABLE(S) : None Specified.

FACTOR(S) : 1.00

NUMBER OF REPLICATES : 56
 NUMBER OF OBSERVATIONS READ : 9402
 WEIGHTED NUMBER OF OBSERVATIONS READ : 52555987.000

STATISTIC	EST_TYPE	ESTIMATE	STDERROR	LOWER 95%	UPPER 95%	CELL_n
cal_incdiff_06_10	VALUE	-6341.657	1775.346	-9898.102	-2785.212	9402

Analysis Over 3+ Waves

Weighted Multi-Level Model, Viega et al method, and Weighted GEE Models are Not Available in WesVar.