

SAS Log

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NOTE: SAS (r) Proprietary Software Release 8.2 (TS2M0)
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NOTE: This session is executing on the WIN_PRO platform.

NOTE: SAS initialization used:

real time	0.95 seconds
cpu time	0.68 seconds

1 LIBNAME in v604 "c:\DATA\MYSAS";

NOTE: Libref IN was successfully assigned as follows:

Engine:	V604
Physical Name:	c:\DATA\MYSAS

2 OPTIONS NUMBER;

3 DATA TEMP; SET in.tc80;

4

5 /*CREATING THREE CATEGORY INDUSTRY VARIABLE*/

6 TINDUS=.;

7 IF INDUSTRY=171 THEN TINDUS=1;

8 ELSE IF INDUSTRY=172 THEN TINDUS=2;

9 ELSE TINDUS=3;

10

11 /*RECODING NEGATIVE INCOME VALUES TO 0*/

12

13 ARRAY MONEY {11} INCOME1-INCOME8 EARNINGS HHINCOME FAMINCOM;

14 DO I=1 TO 11;

15 IF MONEY {I} < 0 THEN MONEY {I} = 0;

16 END;

17

18 /*RECODING SEX SO THAT 1=MALE*/

19 DSEX=.;

20 IF SEX=0 THEN DSEX=1;

21 ELSE DSEX=0;

22

23 /*RECODING MARITAL STATUS TO 3 CATS*/

24 MARITAL3=.;

25 IF MARITAL=0 THEN MARITAL3=1;

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26 ELSE IF MARITAL=1 | MARITAL=2 | MARITAL=3 THEN MARITAL3=2;
27 ELSE IF MARITAL=4 THEN MARITAL3=3;
28
29 /*RECODING EDUCATION TO 3 CATS*/
30 EDUC3=.;
31 IF REDUC=0 | REDUC=1 | REDUC=2 THEN EDUC3=1;
32 ELSE IF REDUC=3 THEN EDUC3=2;
33 ELSE IF REDUC=4 | REDUC=5 | REDUC=6 THEN EDUC3=3;
34
35 /*RECODING DIVISION TO 4 CATS*/
36 REGION4=.;
37 IF DIVISION=1 | DIVISION=2 THEN REGION4=1;
38 ELSE IF DIVISION=3 | DIVISION=4 THEN REGION4=2;
39 ELSE IF DIVISION=5 | DIVISION=6 | DIVISION=7 THEN REGION4=3;
40 ELSE IF DIVISION=8 | DIVISION=9 THEN REGION4=4;
41
42 /*RECODING CLASS TO 4 CATS*/
43
44 CLASS4=.;
45 IF CLASS=1 THEN CLASS4=1;
46 ELSE IF CLASS=2 | CLASS=3 | CLASS=4 THEN CLASS4=2;
47 ELSE IF CLASS=5 | CLASS=6 THEN CLASS4=3;
48 ELSE IF CLASS=7 THEN CLASS4=4;
49
50 /*CREATING DUMMY VARS*/
51 IF MARITAL3=1 THEN M1=1;
52
53 ELSE M1=0;
54 IF MARITAL3=2 THEN M2=1;
55 ELSE M2=0;
56 IF MARITAL3=3 THEN M3=1;
57 ELSE M3=0;
58
59 IF TINDUS=1 THEN T1=1;
60 ELSE T1=0;
61 IF TINDUS=2 THEN T2=1;
62 ELSE T2=0;
63 IF TINDUS=3 THEN T3=1;
64 ELSE T3=0;
65
66 IF EDUC3=1 THEN E1=1;
67 ELSE E1=0;
```

```
66 IF EDUC3=2 THEN E2=1;
67 ELSE E2=0;
68 IF EDUC3=3 THEN E3=1;
69 ELSE E3=0;
70
71 IF REGION4=1 THEN R1=1;
72 ELSE R1=0;
73 IF REGION4=2 THEN R2=1;
74 ELSE R2=0;
75 IF REGION4=3 THEN R3=1;
76 ELSE R3=0;
77 IF REGION4=4 THEN R4=1;
78 ELSE R4=0;
79
80 IF CLASS4=1 THEN C1=1;
81 ELSE C1=0;
82 IF CLASS4=2 THEN C2=1;
83 ELSE C2=0;
84 IF CLASS4=3 THEN C3=1;
85 ELSE C3=0;
86 IF CLASS4=4 THEN C4=1;
87 ELSE C4=0;
88
89 /*CREATING INTERACTION TERMS BETWEEN SEX AND INDEPENDENT VARS*/
90
91 DSEXAGE = DSEX * AGE;
92 DSEXM2 = DSEX * M2;
93 DSEXM3 = DSEX * M3;
94 DSEXR2 = DSEX * R2;
95 DSEXR3 = DSEX * R3;
96 DSEXR4 = DSEX * R4;
97 DSEXE1 = DSEX * E1;
98 DSEXE3 = DSEX * E3;
99 DSEXHRS = DSEX * HRSYR;
100 DSEXC2 = DSEX * C2;
101 DSEXC3 = DSEX * C3;
102 DSEXC4 = DSEX * C4;
103 DSEXT2 = DSEX * T2;
104 DSEXT3 = DSEX * T3;
105
106 /*ILLUSTRATIVE REGRESSION*/
107
```

NOTE: There were 3544 observations read from the data set IN.TC80.
NOTE: The data set WORK.TEMP has 3544 observations and 105 variables.
NOTE: DATA statement used:
 real time 0.12 seconds
 cpu time 0.12 seconds

```
108 PROC CORR DATA=TEMP NOMISS;  
109     VAR AGE DSEX EDUC HRSYR EARNINGS;  
110     run;
```

NOTE: PROCEDURE CORR used:
 real time 0.03 seconds
 cpu time 0.03 seconds

```
111  
112 PROC REG DATA=TEMP SIMPLE;  
113     MODEL EARNINGS=AGE DSEX EDUC HRSYR/STB;  
114     run;
```

NOTE: 3544 observations read.
NOTE: 3544 observations used in computations.

SAS Listing

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The CORR Procedure

5 Variables: AGE DSEX EDUC HRSYR EARNINGS

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
AGE	3544	36.96981	13.72894	131021	16.00000	86.00000
DSEX	3544	0.45401	0.49795	1609	0	1.00000
EDUC	3544	12.44582	1.84662	44108	0	20.00000
HRSYR	3544	1755	616.45477	6220801	4.00000	5148
EARNINGS	3544	11544	7713	40912200	0	70005

Pearson Correlation Coefficients, N = 3544
Prob > |r| under H0: Rho=0

	AGE	DSEX	EDUC	HRSYR	EARNINGS
AGE	1.00000	0.34823 <.0001	-0.17647 <.0001	0.11350 <.0001	0.30670 <.0001
DSEX	0.34823 <.0001	1.00000	-0.09587 <.0001	0.18631 <.0001	0.50194 <.0001
EDUC	-0.17647 <.0001	-0.09587 <.0001	1.00000	-0.00940 0.5760	-0.05726 0.0006
HRSYR	0.11350 <.0001	0.18631 <.0001	-0.00940 0.5760	1.00000	0.51965 <.0001
EARNINGS	0.30670 <.0001	0.50194 <.0001	-0.05726 0.0006	0.51965 <.0001	1.00000

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The REG Procedure

Descriptive Statistics

Variable	Sum	Mean	Uncorrected SS	Variance	Standard Deviation
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Intercept	3544.00000	1.00000	3544.00000	0	0
AGE	131021	36.96981	5511619	188.48371	13.72894
DSEX	1609.00000	0.45401	1609.00000	0.24795	0.49795
EDUC	44108	12.44582	561042	3.40999	1.84662
HRSYR	6220801	1755.30502	12265801625	380016	616.45477
EARNINGS	40912200	11544	6.830839E11	59494908	7713.29422

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The REG Procedure
 Model: MODEL1
 Dependent Variable: EARNINGS

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	95701815677	23925453919	735.71	<.0001
Error	3539	1.150886E11	32520102		
Corrected Total	3543	2.107905E11			

Root MSE	5702.63995	R-Square	0.4540
Dependent Mean	11544	Adj R-Sq	0.4534
Coeff Var	49.39885		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Standardized Estimate
Intercept	1	-3579.13354	790.88599	-4.53	<.0001	0
AGE	1	71.30391	7.54474	9.45	<.0001	0.12691
DSEX	1	5843.12920	208.00626	28.09	<.0001	0.37722
EDUC	1	22.49853	52.75320	0.43	0.6698	0.00539
HRSYR	1	5.44309	0.15843	34.36	<.0001	0.43502