Nominal Regression - Dependent Variable = SameNJobs. Independent Variable = NDaysLeave

Notes

Output Created		**23-MAY-2024 18:16:46**
Comments		
Input	**Data**	**/Users/mendesf1/Desktop/Regression-Paternity/Paternity.sav**
	Active Dataset	**DataSet1**
	Filter	**\<none\>**
	Weight	**\<none\>**
	Split File	**\<none\>**
	N of Rows in Working Data File	**155**
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.**

Notes

Syntax		NOMREG SameNJobs (BASE=LAST ORDER=ASCENDING) BY NDaysLeave
		  /CRITERIA CIN(95) DELTA(0) MXITER(100) MXSTEP(5) CHKSEP(20) LCONVERGE(0) PCONVERGE(0.000001)
		  SINGULAR (0.00000001)
		  /MODEL
		  /STEPWISE=PIN(.05) POUT(0.1) MINEFFECT(0) RULE(SINGLE) ENTRYMETHOD(LR) REMOVALMETHOD(LR)
		  /INTERCEPT=INCLUDE
		  /PRINT=PARAMETER SUMMARY LRT CPS STEP MFI IC.

Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.00

Warnings

Unexpected singularities in the Hessian matrix are encountered. This indicates that either some predictor variables should be excluded or some categories should be merged.
The NOMREG procedure continues despite the above warning(s). Subsequent results shown are based on the last iteration. Validity of the model fit is uncertain.

Case Processing Summary

		N	Marginal Percentage
SameNJobs	Yes	121	78.1%
	No	34	21.9%
NDaysLeave	I did not take paternity leave	16	10.3%
	from 1 to 5 days	55	35.5%
	from 6 to 10 days	26	16.8%
	from 11 to 20 days	36	23.2%
	from 21 to 30 days	12	7.7%
	from 31 to 40 days	2	1.3%
	from 51 to 60 days	2	1.3%
	from 61 to 120 days	1	0.6%
	more than 120 days	5	3.2%
Valid		155	100.0%
Missing		0	
Total		155	
Subpopulation		9[a]	

a. The dependent variable has only one value observed in 5 (55.6%) subpopulations.

Model Fitting Information

	Model Fitting Criteria			Likelihood Ratio Tests		
Model	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	39.923	42.966	37.923			
Final	31.675	59.066	13.675	24.247	8	.002

Pseudo R-Square

Cox and Snell	.145
Nagelkerke	.223
McFadden	.149

Likelihood Ratio Tests

	Model Fitting Criteria			Likelihood Ratio Tests		
Effect	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	31.675	59.066	13.675[a]	.000	0	.
NDaysLeave	39.923	42.966	37.923	24.247	8	.002

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

a. This reduced model is equivalent to the final model because omitting the effect does not increase the degrees of freedom.

Parameter Estimates

SameNJobs[a]		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp (B) Lower Bound	Upper Bound
Yes	Intercept	18.670	4826.686	.000	1	.997			
	[NDaysLeave=1]	-17.571	4826.686	.000	1	.997	2.338E-8	.000	.[b]
	[NDaysLeave=2]	-18.110	4826.686	.000	1	.997	1.364E-8	.000	.[b]
	[NDaysLeave=3]	-17.466	4826.686	.000	1	.997	2.598E-8	.000	.[b]
	[NDaysLeave=4]	-16.272	4826.686	.000	1	.997	8.572E-8	.000	.[b]
	[NDaysLeave=5]	.000	5830.096	.000	1	1.000	1.000	.000	.[b]
	[NDaysLeave=6]	.000	9351.770	.000	1	1.000	1.000	.000	.[b]
	[NDaysLeave=8]	.000	9351.770	.000	1	1.000	1.000	.000	.[b]
	[NDaysLeave=9]	-38.017	.000	.	1	.	3.085E-17	3.085E-17	3.085E-17
	[NDaysLeave=10]	0[c]	.	.	0	.	.	.	.

a. The reference category is: No.

b. Floating point overflow occurred while computing this statistic. Its value is therefore set to system missing.

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

Nominal Regression - Dependent Variable = ChangeJobStatus. Independent Variable = NDaysLeave

Notes

Output Created		**23-MAY-2024 18:17:10**
Comments		
Input	**Data**	**/Users/mendesf1/Desktop/Regression-Paternity/Paternity.sav**
	Active Dataset	**DataSet1**
	Filter	**\<none\>**
	Weight	**\<none\>**
	Split File	**\<none\>**
	N of Rows in Working Data File	**155**
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.**

Notes

Syntax		NOMREG ChangeJobStatus (BASE=LAST ORDER=ASCENDING) BY NDaysLeave /CRITERIA CIN(95) DELTA(0) MXITER(100) MXSTEP(5) CHKSEP(20) LCONVERGE(0) PCONVERGE(0.000001) SINGULAR (0.00000001) /MODEL /STEPWISE=PIN(.05) POUT(0.1) MINEFFECT(0) RULE(SINGLE) ENTRYMETHOD(LR) REMOVALMETHOD(LR) /INTERCEPT=INCLUDE /PRINT=PARAMETER SUMMARY LRT CPS STEP MFI IC.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.00

Warnings

Unexpected singularities in the Hessian matrix are encountered. This indicates that either some predictor variables should be excluded or some categories should be merged.
The NOMREG procedure continues despite the above warning(s). Subsequent results shown are based on the last iteration. Validity of the model fit is uncertain.

Case Processing Summary

		N	Marginal Percentage
ChangeJobStatus	Yes, same role and company	142	91.6%
	No, another role and same company	5	3.2%
	No, same role and another company	2	1.3%
	No, another role and another company	6	3.9%
NDaysLeave	I did not take paternity leave	16	10.3%
	from 1 to 5 days	55	35.5%
	from 6 to 10 days	26	16.8%
	from 11 to 20 days	36	23.2%
	from 21 to 30 days	12	7.7%
	from 31 to 40 days	2	1.3%
	from 51 to 60 days	2	1.3%
	from 61 to 120 days	1	0.6%
	more than 120 days	5	3.2%
Valid		155	100.0%
Missing		0	
Total		155	
Subpopulation		9[a]	

a. The dependent variable has only one value observed in 5 (55.6%) subpopulations.

Model Fitting Information

Model	Model Fitting Criteria			Likelihood Ratio Tests		
	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	43.861	52.991	37.861			
Final	84.164	166.336	30.164	7.697	24	.999

Pseudo R-Square

Cox and Snell	.048
Nagelkerke	.092
McFadden	.067

Likelihood Ratio Tests

Effect	Model Fitting Criteria			Likelihood Ratio Tests		
	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	84.164	166.336	30.164[a]	.000	0	.
NDaysLeave	43.861	52.991	37.861	7.697	24	.999

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

a. This reduced model is equivalent to the final model because omitting the effect does not increase the degrees of freedom.

Parameter Estimates

ChangeJobStatus[a]		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp (B)	
								Lower Bound	Upper Bound
Yes, same role and company	Intercept	4.256	3.839	1.229	1	.268			
	[NDaysLeave=1]	-1.751	4.027	.189	1	.664	.174	6.485E-5	464.668
	[NDaysLeave=2]	-1.528	3.883	.155	1	.694	.217	.000	438.116
	[NDaysLeave=3]	-.042	4.208	.000	1	.992	.959	.000	3660.089
	[NDaysLeave=4]	-1.526	3.904	.153	1	.696	.217	.000	457.123
	[NDaysLeave=5]	.000	4.570	.000	1	1.000	1.000	.000	7755.844
	[NDaysLeave=6]	.000	7.183	.000	1	1.000	1.000	7.696E-7	1299450.633
	[NDaysLeave=8]	.000	7.183	.000	1	1.000	1.000	7.696E-7	1299450.633
	[NDaysLeave=9]	-1.092	.000	.	1	.	.336	.336	.336
	[NDaysLeave=10]	0[b]	.	.	0	.	.	.	.
No, another role and same company	Intercept	-.182	5.655	.001	1	.974			
	[NDaysLeave=1]	-1.615	6.447	.063	1	.802	.199	6.473E-7	61161.751
	[NDaysLeave=2]	.282	5.708	.002	1	.961	1.326	1.836E-5	95693.254
	[NDaysLeave=3]	.000	6.197	.000	1	1.000	1.000	5.309E-6	188369.137
	[NDaysLeave=4]	-.574	5.783	.010	1	.921	.563	6.735E-6	47099.047
	[NDaysLeave=5]	.000	6.730	.000	1	1.000	1.000	1.867E-6	535507.946
	[NDaysLeave=6]	.000	10.579	.000	1	1.000	1.000	9.896E-10	1010495540
	[NDaysLeave=8]	.000	10.579	.000	1	1.000	1.000	9.896E-10	1010495540
	[NDaysLeave=9]	31.000	.000	.	1	.	2.905E+13	2.905E+13	2.905E+13
	[NDaysLeave=10]	0[b]	.	.	0	.	.	.	.
No, same role and another company	Intercept	-1.099	7.625	.021	1	.885			
	[NDaysLeave=1]	3.229	7.724	.175	1	.676	25.259	6.726E-6	94854143.8
	[NDaysLeave=2]	-1.409	7.896	.032	1	.858	.244	4.641E-8	1286668.049
	[NDaysLeave=3]	2.981	7.842	.144	1	.704	19.703	4.160E-6	93307969.7
	[NDaysLeave=4]	-1.435	8.032	.032	1	.858	.238	3.468E-8	1634264.909
	[NDaysLeave=5]	.000	9.075	.000	1	1.000	1.000	1.885E-8	53047679.3

Parameter Estimates

ChangeJobStatus[a]		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp (B)	
								Lower Bound	Upper Bound
	[NDaysLeave=6]	.000	14.264	.000	1	1.000	1.000	7.216E-13	1.386E+12
	[NDaysLeave=8]	.000	14.264	.000	1	1.000	1.000	7.216E-13	1.386E+12
	[NDaysLeave=9]	.000	.000	.	1	.	1.000	1.000	1.000
	[NDaysLeave=10]	0[b]	.	.	0	.	.	.	.

a. The reference category is: No, another role and another company.

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

Test of Parallel Lines

Notes

Output Created		23-MAY-2024 18:27:01
Comments		
Input	Data	/Users/mendesf1/Desktop/Regression-Paternity/Paternity.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	155

Notes

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		PLUM ChangeJobStatus BY NDaysLeave
		  /CRITERIA=CIN(95) DELTA(0) LCONVERGE(0) MXITER(100) MXSTEP(5) PCONVERGE(1.0E-6) SINGULAR(1.0E-8)
		  /LINK=LOGIT
		  /PRINT=TPARALLEL.

Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00

Warnings

Unexpected singularities in the Fisher Information matrix are encountered. There may be a quasi-complete separation in the data. Some parameter estimates will tend to infinity.
The PLUM procedure continues despite the above warning (s). Subsequent results shown are based on the last iteration. Validity of the model fit is uncertain.

Case Processing Summary

		N	Marginal Percentage
ChangeJobStatus	Yes, same role and company	142	91.6%
	No, another role and same company	5	3.2%
	No, same role and another company	2	1.3%
	No, another role and another company	6	3.9%
NDaysLeave	I did not take paternity leave	16	10.3%
	from 1 to 5 days	55	35.5%
	from 6 to 10 days	26	16.8%
	from 11 to 20 days	36	23.2%
	from 21 to 30 days	12	7.7%
	from 31 to 40 days	2	1.3%
	from 51 to 60 days	2	1.3%
	from 61 to 120 days	1	0.6%
	more than 120 days	5	3.2%
Valid		155	100.0%
Missing		0	
Total		155	

Test of Parallel Lines[a]

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Null Hypothesis	29.768			
General	.000[b]	29.768	16	.019

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

a. Link function: Logit.

b. The log-likelihood value is practically zero. There may be a complete separation in the data. The maximum likelihood estimates do not exist.