Program: HLM 7 Hierarchical Linear and Nonlinear Modeling
Authors: Stephen Raudenbush, Tony Bryk, & Richard Congdon
Publisher: Scientific Software International, Inc. (c) 2010
techsupport@ssicentral.com
www.ssicentral.com

Module: HLM2.EXE (7.01.21202.1001)
Date: 28 June 2013, Friday
Time: 11:36:19

Specifications for this Ordinal HLM2 run

Problem Title: no title

The data source for this run = C:\Dokumente und Einstellungen\tcserpes1\Eigene Dateien\Dropbox\politics\data\V20623good.mdm
The command file for this run = C:\DOKUME~1\TCSERP~1\LOKALE~1\Temp\whlmtemp.hlm
Output file name = C:\Dokumente und Einstellungen\tcserpes1\Eigene Dateien\Dropbox\politics\data\hlm2.html
The maximum number of level-1 units = 2606
The maximum number of level-2 units = 2606
The maximum number of micro iterations = 14
Number of categories = 5
Method of estimation: restricted PQL
Maximum number of macro iterations = 100

Distribution at Level-1: Ordinal

The outcome variable is TIEPOLIT

Summary of the model specified

Level-1 Model

$$\text{Prob}[R_{ij} <= 1|\beta_j] = \phi^*_{1ij} = \phi_{1ij}$$
$$\text{Prob}[R_{ij} <= 2|\beta_j] = \phi^*_{2ij} = \phi_{1ij} + \phi_{2ij}$$
$$\text{Prob}[R_{ij} <= 3|\beta_j] = \phi^*_{3ij} = \phi_{1ij} + \phi_{2ij} + \phi_{3ij}$$
$$\text{Prob}[R_{ij} <= 4|\beta_j] = \phi^*_{4ij} = \phi_{1ij} + \phi_{2ij} + \phi_{3ij} + \phi_{4ij}$$
$$\text{Prob}[R_{ij} <= 5|\beta_j] = 1.0$$
$$\phi_{1ij} = \text{Prob}[TIEPOLIT(1) = 1|\beta_j]$$
$$\phi_{2ij} = \text{Prob}[TIEPOLIT(2) = 1|\beta_j]$$
$$\phi_{3ij} = \text{Prob}[TIEPOLIT(3) = 1|\beta_j]$$
$$\phi_{4ij} = \text{Prob}[TIEPOLIT(4) = 1|\beta_j]$$

$$\log[\phi^*_{1ij}/(1 - \phi^*_{1ij})] = \beta_{0j} + \beta_{1j}*(TIEAGE_{ij}) + \beta_{2j}*(TIEKIN_{ij}) + \beta_{3j}*(TIECOWOR_{ij}) + \beta_{4j}*(STRANS\_N_{ij}) + \beta_{5j}*(TIEHOUS_{ij}) + \beta_{6j}*(HETFEMAL_{ij}) + \beta_{7j}*(HETMIGR_{ij}) + \beta_{8j}*(HETRACE_{ij}) + \beta_{9j}*(HETEDUC_{ij})$$

$$\log[\phi^*_{2ij}/(1 - \phi^*_{2ij})] = \beta_{0j} + \beta_{1j}*(TIEAGE_{ij}) + \beta_{2j}*(TIEKIN_{ij}) + \beta_{3j}*(TIECOWOR_{ij}) + \beta_{4j}*(STRANS\_N_{ij}) + \beta_{5j}*(TIEHOUS_{ij}) + \beta_{6j}*(HETFEMAL_{ij}) + \beta_{7j}*(HETMIGR_{ij}) + \beta_{8j}*(HETRACE_{ij}) + \beta_{9j}*(HETEDUC_{ij}) + \delta_2$$

$\log[\ ^{*}_{3ij}/(1 - \ ^{*}_{3ij})] = \beta_{0j} + \beta_{1j}*(TIEAGE_{ij}) + \beta_{2j}*(TIEKIN_{ij}) + \beta_{3j}*(TIECOWOR_{ij}) + \beta_{4j}*(STRANS\_N_{ij}) + \beta_{5j}*(TIEHOUS_{ij}) + \beta_{6j}*(HETFEMAL_{ij}) + \beta_{7j}*(HETMIGR_{ij}) + \beta_{8j}*(HETRACE_{ij}) + \beta_{9j}*(HETEDUC_{ij}) + \delta_3$

$\log[\ ^{*}_{4ij}/(1 - \ ^{*}_{4ij})] = \beta_{0j} + \beta_{1j}*(TIEAGE_{ij}) + \beta_{2j}*(TIEKIN_{ij}) + \beta_{3j}*(TIECOWOR_{ij}) + \beta_{4j}*(STRANS\_N_{ij}) + \beta_{5j}*(TIEHOUS_{ij}) + \beta_{6j}*(HETFEMAL_{ij}) + \beta_{7j}*(HETMIGR_{ij}) + \beta_{8j}*(HETRACE_{ij}) + \beta_{9j}*(HETEDUC_{ij}) + \delta_4$

Level-2 Model

$\beta_{0j} = \gamma_{00} + \gamma_{01}*(MENTION_j) + \gamma_{02}*(NETSIZE_j) + \gamma_{03}*(EFEMALE_j) + \gamma_{04}*(EAGE_j)$
$+ \gamma_{05}*(ERACED_j) + \gamma_{06}*(EEDUCD_j) + \gamma_{07}*(PARTNERE_j) + \gamma_{08}*(NONCITIZ_j)$
$+ \gamma_{09}*(ELIVEDTH_j) + \gamma_{010}*(E1_j) + \gamma_{011}*(E4_j) + \gamma_{012}*(E5_j)$
$+ \gamma_{013}*(E6_j) + \gamma_{014}*(E7_j) + \gamma_{015}*(PROPPOLI_j) + \gamma_{016}*(PROPHOUS_j) + \gamma_{017}*(LCATHETE_j)$

$\beta_{1j} = \gamma_{10}$
$\beta_{2j} = \gamma_{20}$
$\beta_{3j} = \gamma_{30}$
$\beta_{4j} = \gamma_{40} + \gamma_{41}*(DENSITYD_j)$
$\beta_{5j} = \gamma_{50}$
$\beta_{6j} = \gamma_{60}$
$\beta_{7j} = \gamma_{70} + \gamma_{71}*(NONCITIZ_j) + \gamma_{72}*(PROPKIN_j) + \gamma_{73}*(PHETMIGR_j)$
$\beta_{8j} = \gamma_{80}$
$\beta_{9j} = \gamma_{90}$
$\delta_2 \quad \delta_3 \quad \delta_4$

TIEAGE TIEKIN TIECOWOR STRANS_N TIEHOUS HETFEMAL HETMIGR HETRACE HETEDUC have been centered around the grand mean.

Final Results for Ordinal Iteration 8

Final estimation of fixed effects:

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *d.f.*	*p*-value
For INTRCPT1 slope, β_0)					
INTRCPT2, γ_{00}	-6.146569	0.373901	-16.439	2572	<0.001
MENTION, γ_{01}	-0.148414	0.033293	-4.458	2572	<0.001
NETSIZE, γ_{02}	0.093823	0.058549	1.602	2572	0.109
EFEMALE, γ_{03}	0.063452	0.079533	0.798	2572	0.425
EAGE, γ_{04}	-0.002713	0.003108	-0.873	2572	0.383
ERACED, γ_{05}	0.084040	0.094134	0.893	2572	0.372
EEDUCD, γ_{06}	-0.003705	0.095606	-0.039	2572	0.969
PARTNERE, γ_{07}	-0.110048	0.083820	-1.313	2572	0.189
NONCITIZ, γ_{08}	-0.024341	0.193586	-0.126	2572	0.900
ELIVEDTH, γ_{09}	0.000182	0.002428	0.075	2572	0.940
E1, γ_{010}	-0.271186	0.047421	-5.719	2572	<0.001
E4, γ_{011}	-0.123810	0.108244	-1.144	2572	0.253
E5, γ_{012}	0.545318	0.156475	3.485	2572	<0.001
E6, γ_{013}	-0.218204	0.127897	-1.706	2572	0.088
E7, γ_{014}	0.196998	0.191350	1.030	2572	0.303
PROPPOLI, γ_{015}	5.402124	0.154625	34.937	2572	<0.001
PROPHOUS, γ_{016}	-1.227008	0.243030	-5.049	2572	<0.001
LCATHETE, γ_{017}	0.295446	0.140538	2.102	2572	0.036

For TIEAGE slope, β_1					
INTRCPT2, γ_{10}	0.001596	0.003067	0.520	2572	0.603
For TIEKIN slope, β_2					
INTRCPT2, γ_{20}	0.078156	0.116072	0.673	2572	0.501
For TIECOWOR slope, β_3					
INTRCPT2, γ_{30}	0.801696	0.120724	6.641	2572	<0.001
For STRANS_N slope, β_4					
INTRCPT2, γ_{40}	0.188197	0.049864	3.774	2572	<0.001
DENSITYD, γ_{41}	-0.236680	0.075686	-3.127	2572	0.002
For TIEHOUS slope, β_5					
INTRCPT2, γ_{50}	1.757500	0.153607	11.442	2572	<0.001
For HETFEMAL slope, β_6					
INTRCPT2, γ_{60}	0.095613	0.088501	1.080	2572	0.280
For HETMIGR slope, β_7					
INTRCPT2, γ_{70}	0.840176	0.319766	2.627	2572	0.009
NONCITIZ, γ_{71}	0.511631	0.404409	1.265	2572	0.206
PROPKIN, γ_{72}	-0.799921	0.334450	-2.392	2572	0.017
PHETMIGR, γ_{73}	-1.131478	0.435797	-2.596	2572	0.009
For HETRACE slope, β_8					
INTRCPT2, γ_{80}	-0.355612	0.131991	-2.694	2572	0.007
For HETEDUC slope, β_9					
INTRCPT2, γ_{90}	-0.020355	0.089944	-0.226	2572	0.821
For THOLD2,					
δ_2	2.185272	0.076618	28.522	2572	<0.001
For THOLD3,					
δ_3	4.786226	0.110346	43.375	2572	<0.001
For THOLD4,					
δ_4	6.405545	0.137267	46.665	2572	<0.001

Fixed Effect	Coefficient	Odds Ratio	Confidence Interval
For INTRCPT1 slope, β_0)			
INTRCPT2, γ_{00}	-6.146569	0.002141	(0.001,0.004)
MENTION, γ_{01}	-0.148414	0.862074	(0.808,0.920)
NETSIZE, γ_{02}	0.093823	1.098365	(0.979,1.232)
EFEMALE, γ_{03}	0.063452	1.065508	(0.912,1.245)
EAGE, γ_{04}	-0.002713	0.997291	(0.991,1.003)
ERACED, γ_{05}	0.084040	1.087672	(0.904,1.308)
EEDUCD, γ_{06}	-0.003705	0.996302	(0.826,1.202)
PARTNERE, γ_{07}	-0.110048	0.895791	(0.760,1.056)
NONCITIZ, γ_{08}	-0.024341	0.975953	(0.668,1.426)
ELIVEDTH, γ_{09}	0.000182	1.000182	(0.995,1.005)
E1, γ_{010}	-0.271186	0.762475	(0.695,0.837)
E4, γ_{011}	-0.123810	0.883547	(0.715,1.092)
E5, γ_{012}	0.545318	1.725156	(1.270,2.344)
E6, γ_{013}	-0.218204	0.803961	(0.626,1.033)
E7, γ_{014}	0.196998	1.217741	(0.837,1.772)
PROPPOLI, γ_{015}	5.402124	221.877289	(163.868,300.423)
PROPHOUS, γ_{016}	-1.227008	0.293168	(0.182,0.472)
LCATHETE, γ_{017}	0.295446	1.343725	(1.020,1.770)

For TIEAGE slope, β_1			
INTRCPT2, γ_{10}	0.001596	1.001597	(0.996,1.008)
For TIEKIN slope, β_2			
INTRCPT2, γ_{20}	0.078156	1.081291	(0.861,1.358)
For TIECOWOR slope, β_3			
INTRCPT2, γ_{30}	0.801696	2.229319	(1.760,2.824)
For STRANS_N slope, β_4			
INTRCPT2, γ_{40}	0.188197	1.207071	(1.095,1.331)
DENSITYD, γ_{41}	-0.236680	0.789244	(0.680,0.915)
For TIEHOUS slope, β_5			
INTRCPT2, γ_{50}	1.757500	5.797924	(4.291,7.835)
For HETFEMAL slope, β_6			
INTRCPT2, γ_{60}	0.095613	1.100334	(0.925,1.309)
For HETMIGR slope, β_7			
INTRCPT2, γ_{70}	0.840176	2.316774	(1.238,4.336)
NONCITIZ, γ_{71}	0.511631	1.668010	(0.755,3.685)
PROPKIN, γ_{72}	-0.799921	0.449365	(0.233,0.866)
PHETMIGR, γ_{73}	-1.131478	0.322556	(0.137,0.758)
For HETRACE slope, β_8			
INTRCPT2, γ_{80}	-0.355612	0.700744	(0.541,0.908)
For HETEDUC slope, β_9			
INTRCPT2, γ_{90}	-0.020355	0.979850	(0.821,1.169)
For THOLD2,			
δ_2	2.185272	8.893071	(7.653,10.334)
For THOLD3,			
δ_3	4.786226	119.848232	(96.539,148.785)
For THOLD4,			
δ_4	6.405545	605.191644	(462.433,792.022)

Final estimation of fixed effects
(with robust standard errors)

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *d.f.*	*p*-value
For INTRCPT1 slope, β_0)					
INTRCPT2, γ_{00}	-6.146569	0.374064	-16.432	2572	<0.001
MENTION, γ_{01}	-0.148414	0.033948	-4.372	2572	<0.001
NETSIZE, γ_{02}	0.093823	0.060169	1.559	2572	0.119
EFEMALE, γ_{03}	0.063452	0.079731	0.796	2572	0.426
EAGE, γ_{04}	-0.002713	0.003108	-0.873	2572	0.383
ERACED, γ_{05}	0.084040	0.095021	0.884	2572	0.377
EEDUCD, γ_{06}	-0.003705	0.097970	-0.038	2572	0.970
PARTNERE, γ_{07}	-0.110048	0.085063	-1.294	2572	0.196
NONCITIZ, γ_{08}	-0.024341	0.201671	-0.121	2572	0.904
ELIVEDTH, γ_{09}	0.000182	0.002432	0.075	2572	0.940
E1, γ_{010}	-0.271186	0.048166	-5.630	2572	<0.001
E4, γ_{011}	-0.123810	0.106986	-1.157	2572	0.247
E5, γ_{012}	0.545318	0.171063	3.188	2572	0.001
E6, γ_{013}	-0.218204	0.130075	-1.678	2572	0.094

E7, γ_{014}	0.196998	0.205095	0.961	2572	0.337
PROPPOLI, γ_{015}	5.402124	0.137378	39.323	2572	<0.001
PROPHOUS, γ_{016}	-1.227008	0.253809	-4.834	2572	<0.001
LCATHETE, γ_{017}	0.295446	0.139899	2.112	2572	0.035
For TIEAGE slope, β_1					
INTRCPT2, γ_{10}	0.001596	0.003007	0.531	2572	0.596
For TIEKIN slope, β_2					
INTRCPT2, γ_{20}	0.078156	0.117387	0.666	2572	0.506
For TIECOWOR slope, β_3					
INTRCPT2, γ_{30}	0.801696	0.125970	6.364	2572	<0.001
For STRANS_N slope, β_4					
INTRCPT2, γ_{40}	0.188197	0.052886	3.559	2572	<0.001
DENSITYD, γ_{41}	-0.236680	0.079253	-2.986	2572	0.003
For TIEHOUS slope, β_5					
INTRCPT2, γ_{50}	1.757500	0.160370	10.959	2572	<0.001
For HETFEMAL slope, β_6					
INTRCPT2, γ_{60}	0.095613	0.091020	1.050	2572	0.294
For HETMIGR slope, β_7					
INTRCPT2, γ_{70}	0.840176	0.300642	2.795	2572	0.005
NONCITIZ, γ_{71}	0.511631	0.413952	1.236	2572	0.217
PROPKIN, γ_{72}	-0.799921	0.306586	-2.609	2572	0.009
PHETMIGR, γ_{73}	-1.131478	0.409889	-2.760	2572	0.006
For HETRACE slope, β_8					
INTRCPT2, γ_{80}	-0.355612	0.135108	-2.632	2572	0.009
For HETEDUC slope, β_9					
INTRCPT2, γ_{90}	-0.020355	0.090980	-0.224	2572	0.823
For THOLD2, δ_2	2.185272	0.075578	28.914	2572	<0.001
For THOLD3, δ_3	4.786226	0.101983	46.932	2572	<0.001
For THOLD4, δ_4	6.405545	0.141060	45.410	2572	<0.001