The NLMIXED Procedure

Specifications	
Data Set	WORK.GUATEMALA
Dependent Variable	ll
Distribution for Dependent Variable	General
Optimization Technique	Dual Quasi-Newton
Integration Method	None

Dimensions	
Observations Used	13594
Observations Not Used	0
Total Observations	13594
Parameters	17

Initial Parameters														
b0	**b15**	**b611**	**b1223**	**b24up**	**bmage**	**bmage2**	**bborde**	**bpdead**	**bp0014**	**bp1523**	**bp2435**	**bp36up**	**bi0111223**	**bi01124p**
-0.76	2.25	3.48	3.74	7.98	0	0	0	0	0	0.3362	0.34	0.39	-0.96	-1.587

Initial Parameters		
bi122324p	**log_gamma**	**Negative Log Likelihood**
-0.0657	-10	9363.00218

Iteration History					
Iteration	**Calls**	**Negative Log Likelihood**	**Difference**	**Maximum Gradient**	**Slope**
1	12	3390.4114	5972.591	194526	-3.09E11
2	19	2584.6089	805.8026	74664.0	-86.3917
3	25	2563.7831	20.82573	1922.57	-250.364
4	27	2561.0833	2.6998	4233.01	-5.71979
5	31	2546.1639	14.91948	46683.4	-6.84112
6	34	2538.7265	7.437338	23554.7	-11.6932
7	38	2519.1696	19.55694	43102.8	-5.34343
8	40	2498.7151	20.45451	824.619	-19.3697
9	43	2497.5950	1.120043	3244.62	-1.71623
10	47	2493.8358	3.759215	24112.9	-0.71282
11	51	2456.7915	37.04433	18635.7	-6.37194
12	54	2455.7060	1.085492	2167.03	-2.52899
13	57	2455.0330	0.673027	1972.43	-0.61859

The NLMIXED Procedure

Iteration History					
Iteration	Calls	Negative Log Likelihood	Difference	Maximum Gradient	Slope
14	61	2444.2242	10.80882	7938.54	-0.79652
15	64	2441.4807	2.743408	8030.26	-5.73031
16	67	2440.9416	0.539142	157.328	-1.03642
17	70	2440.9001	0.041516	320.129	-0.03879
18	74	2440.4229	0.477176	1797.86	-0.04518
19	76	2440.2050	0.21795	283.323	-0.46051
20	78	2440.1232	0.081779	211.917	-0.32091
21	80	2440.0458	0.077356	22.9093	-0.15562
22	83	2440.0345	0.011307	4.08068	-0.01545
23	89	2439.5732	0.461354	2581.50	-0.00746
24	92	2439.4615	0.111614	416.315	-0.17906
25	95	2439.4383	0.023277	1134.35	-0.01019
26	99	2439.0318	0.40645	811.114	-0.03415
27	102	2438.9225	0.109331	74.6951	-0.20767
28	105	2438.9213	0.001219	56.3834	-0.00177
29	109	2438.9053	0.015982	1446.77	-0.00061
30	111	2438.8902	0.015078	258.653	-0.01495
31	114	2438.8889	0.001278	14.3496	-0.00230
32	118	2438.8741	0.014797	173.836	-0.00023
33	120	2438.8616	0.012574	44.3884	-0.01669
34	123	2438.8589	0.002671	5.33905	-0.00477
35	125	2438.8572	0.00166	51.8842	-0.00031
36	131	2438.8147	0.042497	109.325	-0.00262
37	134	2438.8043	0.010429	0.49625	-0.01660
38	138	2438.8013	0.002958	55.8415	-0.00015
39	144	2438.7334	0.067973	94.5932	-0.00546
40	147	2438.7301	0.003248	5.77472	-0.00514
41	151	2438.6877	0.042396	989.639	-0.00121
42	155	2438.5674	0.120315	358.364	-0.06401
43	158	2438.5665	0.000873	14.9435	-0.00166
44	162	2438.5659	0.000689	169.647	-0.00004
45	168	2438.4813	0.084524	557.583	-0.00132
46	171	2438.4694	0.011915	37.4041	-0.02061

The NLMIXED Procedure

Iteration History					
Iteration	Calls	Negative Log Likelihood	Difference	Maximum Gradient	Slope
47	174	2438.4694	0.000024	0.52105	-0.00005
48	176	2438.4694	6.926E-6	3.67643	-1.07E-6

NOTE: GCONV convergence criterion satisfied.

Note: Moore-Penrose inverse is used in covariance matrix.

Fit Statistics	
-2 Log Likelihood	4876.9
AIC (smaller is better)	4910.9
AICC (smaller is better)	4911.0
BIC (smaller is better)	5038.7

Parameter Estimates								
Parameter	Estimate	Standard Error	DF	t Value	Pr > |t|	95% Confidence Limits		Gradient
b0	1.1337	0.7531	14E3	1.51	0.1323	-0.3426	2.6099	0.000222
b15	3.9417	0.7615	14E3	5.18	<.0001	2.4492	5.4343	0.002400
b611	4.2518	0.7585	14E3	5.61	<.0001	2.7651	5.7385	0.000370
b1223	4.7694	0.7585	14E3	6.29	<.0001	3.2826	6.2562	0.001239
b24up	6.3694	0.7788	14E3	8.18	<.0001	4.8429	7.8959	-0.00164
bmage	0.1455	0.05849	14E3	2.49	0.0129	0.03081	0.2601	-0.27893
bmage2	-0.00251	0.001040	14E3	-2.41	0.0160	-0.00455	-0.00047	-3.67643
bborde	-0.06169	0.03343	14E3	-1.85	0.0650	-0.1272	0.003838	-0.01285
bpdead	-0.1021	0.1495	14E3	-0.68	0.4947	-0.3951	0.1910	-0.00064
bp0014	-0.5347	0.2125	14E3	-2.52	0.0119	-0.9512	-0.1182	-0.00378
bp1523	0.1280	0.1864	14E3	0.69	0.4921	-0.2373	0.4934	-0.00121
bp2435	0.2606	0.1846	14E3	1.41	0.1579	-0.1011	0.6224	-0.00152
bp36up	0.3943	0.2087	14E3	1.89	0.0589	-0.01488	0.8034	-0.00239
bi0111223	-0.8294	0.7115	14E3	-1.17	0.2437	-2.2241	0.5652	-0.02843
bi01124p	-1.6193	0.7392	14E3	-2.19	0.0285	-3.0683	-0.1702	0.016184
bi122324p	-0.06563	0.3769	14E3	-0.17	0.8618	-0.8044	0.6732	0.001238
log_gamma	-9.7907	.	14E3	.	.	.	.	-0.06467

The NLMIXED Procedure

Additional Estimates								
Label	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
gamma	0.000056	.	14E3	.	.	0.05	.	.

LIFEREG: mod. Esponenziale a tratti senza frailty

The LIFEREG Procedure

Model Information		
Data Set	WORK.GUATEMALA	
Dependent Variable	Log(time)	time
Censoring Variable	death	death
Censoring Value(s)	0	
Number of Observations	13594	
Noncensored Values	403	
Right Censored Values	13191	
Left Censored Values	0	
Interval Censored Values	0	
Number of Parameters	16	
Name of Distribution	Exponential	
Log Likelihood	-1990.315153	

Number of Observations Read	13594
Number of Observations Used	13594

Fit Statistics	
-2 Log Likelihood	3980.630
AIC (smaller is better)	4012.630
AICC (smaller is better)	4012.670
BIC (smaller is better)	4132.908

Fit Statistics (Unlogged Response)	
-2 Log Likelihood	4877.067
Exponential AIC (smaller is better)	4909.067
Exponential AICC (smaller is better)	4909.107
Exponential BIC (smaller is better)	5029.346

Algorithm converged.

LIFEREG: mod. Esponenziale a tratti senza frailty

The LIFEREG Procedure

Type III Analysis of Effects			
Effect	DF	Wald Chi-Square	Pr > ChiSq
Intercept	0	.	.
a0	1	2.2448	0.1341
a1to5	1	26.8872	<.0001
a6to11	1	31.5430	<.0001
a12to23	1	39.6967	<.0001
a24up	1	67.2130	<.0001
mage	1	6.3262	0.0119
mage2	1	5.9703	0.0145
borde	1	3.4061	0.0650
pdead	1	0.4654	0.4951
p0014	1	6.3495	0.0117
p1523	1	0.4666	0.4945
p2435	1	1.9825	0.1591
p36up	1	3.5536	0.0594
i011a1223	1	1.2943	0.2553
i011a24p	1	4.8881	0.0270
i1223a24p	1	0.0312	0.8598

Analysis of Maximum Likelihood Parameter Estimates							
Parameter	DF	Estimate	Standard Error	95% Confidence Limits		Chi-Square	Pr > ChiSq
Intercept	0	0.0000	0.0000	0.0000	0.0000	.	.
a0	1	1.1234	0.7498	-0.3462	2.5930	2.24	0.1341
a1to5	1	3.9313	0.7582	2.4453	5.4172	26.89	<.0001
a6to11	1	4.2412	0.7552	2.7611	5.7213	31.54	<.0001
a12to23	1	4.7581	0.7552	3.2780	6.2383	39.70	<.0001
a24up	1	6.3584	0.7756	4.8383	7.8785	67.21	<.0001
mage	1	0.1463	0.0581	0.0323	0.2602	6.33	0.0119
mage2	1	-0.0025	0.0010	-0.0045	-0.0005	5.97	0.0145
borde	1	-0.0617	0.0334	-0.1272	0.0038	3.41	0.0650
pdead	1	-0.1020	0.1495	-0.3950	0.1910	0.47	0.4951
p0014	1	-0.5354	0.2125	-0.9518	-0.1189	6.35	0.0117
p1523	1	0.1273	0.1864	-0.2379	0.4925	0.47	0.4945
p2435	1	0.2598	0.1845	-0.1018	0.6215	1.98	0.1591

LIFEREG: mod. Esponenziale a tratti senza frailty

The LIFEREG Procedure

Analysis of Maximum Likelihood Parameter Estimates							
Parameter	DF	Estimate	Standard Error	95% Confidence Limits		Chi-Square	Pr > ChiSq
p36up	1	0.3934	0.2087	-0.0156	0.8025	3.55	0.0594
i011a1223	1	-0.8150	0.7164	-2.2192	0.5891	1.29	0.2553
i011a24p	1	-1.6283	0.7365	-3.0719	-0.1848	4.89	0.0270
i1223a24p	1	-0.0666	0.3769	-0.8053	0.6722	0.03	0.8598
Scale	0	1.0000	0.0000	1.0000	1.0000		
Weibull Shape	0	1.0000	0.0000	1.0000	1.0000		

Lagrange Multiplier Statistics		
Parameter	Chi-Square	Pr > ChiSq
Intercept	.	.
Scale	443.4169	<.0001

The PHREG Procedure

Model Information		
Data Set	WORK.GUATEMALA	
Dependent Variable	time	time
Censoring Variable	death	death
Censoring Value(s)	0	
Ties Handling	BRESLOW	
Frailty	GAMMA	

Number of Observations Read	13594
Number of Observations Used	13594

Summary of the Number of Event and Censored Values			
Total	**Event**	**Censored**	**Percent Censored**
13594	403	13191	97.04

Convergence Status
Convergence criterion (PCONV=0.0001) satisfied.

Marginal Loglikelihood	-3979.8

Testing Global Null Hypothesis			
Test	**Chi-Square**	**Adjusted DF**	**Pr > ChiSq**
Likelihood Ratio	333.9558	145.17	<.0001
Wald	227.3227	145.17	<.0001

Covariance Parameter Estimates	
Cov Parm	**Estimate**
momid	0.4171

The PHREG Procedure

Type 3 Tests					
Effect	Wald Chi-Square	DF	Pr > ChiSq	Adjusted DF	Adjusted Pr > ChiSq
mage	7.6590	1	0.0056	0.9014	0.0047
mage2	7.2594	1	0.0071	0.9016	0.0059
borde	1.6492	1	0.1991	0.8193	0.1575
pdead	2.3015	1	0.1293	0.9528	0.1215
p0014	7.7050	1	0.0055	0.9419	0.0050
p1523	0.0952	1	0.7577	0.9571	0.7410
p2435	1.3204	1	0.2505	0.9555	0.2382
p36up	2.8352	1	0.0922	0.9563	0.0868
i011a1223	0.3014	1	0.5830	0.9824	0.5756
i011a24p	0.0357	1	0.8501	0.9808	0.8441
i1223a24p	20.3921	1	<.0001	0.9947	<.0001
momid	156.0037	.	.	134.17	0.0956

Analysis of Maximum Likelihood Estimates							
Parameter	DF	Parameter Estimate	Standard Error	Chi-Square	Pr > ChiSq	Hazard Ratio	Label
mage	1	-0.17091	0.06176	7.6590	0.0056	0.843	mage
mage2	1	0.00295	0.00110	7.2594	0.0071	1.003	mage2
borde	1	0.04775	0.03718	1.6492	0.1991	1.049	borde
pdead	1	-0.23390	0.15418	2.3015	0.1293	0.791	pdead
p0014	1	0.61521	0.22163	7.7050	0.0055	1.850	p0014
p1523	1	-0.05908	0.19149	0.0952	0.7577	0.943	p1523
p2435	1	-0.21814	0.18984	1.3204	0.2505	0.804	p2435
p36up	1	-0.36224	0.21513	2.8352	0.0922	0.696	p36up
i011a1223	1	0.39412	0.71787	0.3014	0.5830	1.483	i011a1223
i011a24p	1	0.13599	0.71965	0.0357	0.8501	1.146	i011a24p
i1223a24p	1	-1.46627	0.32470	20.3921	<.0001	0.231	i1223a24p

PHREG: mod. Cox con frailty Gamma (Newton–Raphson)

The PHREG Procedure

Model Information		
Data Set	WORK.GUATEMALA	
Dependent Variable	time	time
Censoring Variable	death	death
Censoring Value(s)	0	
Ties Handling	BRESLOW	
Frailty	GAMMA	

Number of Observations Read	13594
Number of Observations Used	13594

Summary of the Number of Event and Censored Values			
Total	**Event**	**Censored**	**Percent Censored**
13594	403	13191	97.04

Convergence Status
Convergence criterion (PCONV=0.0001) satisfied.

Marginal Loglikelihood	-3979.8

Testing Global Null Hypothesis			
Test	**Chi-Square**	**Adjusted DF**	**Pr > ChiSq**
Likelihood Ratio	334.0900	145.18	<.0001
Wald	227.5043	145.18	<.0001

Covariance Parameter Estimates	
Cov Parm	**Estimate**
momid	0.4171

PHREG: mod. Cox con frailty Gamma (Newton–Raphson)

The PHREG Procedure

Type 3 Tests					
Effect	Wald Chi-Square	DF	Pr > ChiSq	Adjusted DF	Adjusted Pr > ChiSq
mage	7.6597	1	0.0056	0.9014	0.0047
mage2	7.2601	1	0.0071	0.9016	0.0059
borde	1.6485	1	0.1992	0.8193	0.1576
pdead	2.3049	1	0.1290	0.9528	0.1212
p0014	7.7059	1	0.0055	0.9419	0.0050
p1523	0.0952	1	0.7577	0.9571	0.7411
p2435	1.3198	1	0.2506	0.9555	0.2383
p36up	2.8344	1	0.0923	0.9563	0.0868
i011a1223	0.3014	1	0.5830	0.9824	0.5757
i011a24p	0.0357	1	0.8501	0.9808	0.8442
i1223a24p	20.3923	1	<.0001	0.9947	<.0001
momid	156.1871	.	.	134.18	0.0940

Analysis of Maximum Likelihood Estimates							
Parameter	DF	Parameter Estimate	Standard Error	Chi-Square	Pr > ChiSq	Hazard Ratio	Label
mage	1	-0.17092	0.06176	7.6597	0.0056	0.843	mage
mage2	1	0.00295	0.00110	7.2601	0.0071	1.003	mage2
borde	1	0.04774	0.03718	1.6485	0.1992	1.049	borde
pdead	1	-0.23407	0.15418	2.3049	0.1290	0.791	pdead
p0014	1	0.61525	0.22164	7.7059	0.0055	1.850	p0014
p1523	1	-0.05907	0.19149	0.0952	0.7577	0.943	p1523
p2435	1	-0.21809	0.18984	1.3198	0.2506	0.804	p2435
p36up	1	-0.36219	0.21513	2.8344	0.0923	0.696	p36up
i011a1223	1	0.39410	0.71787	0.3014	0.5830	1.483	i011a1223
i011a24p	1	0.13598	0.71965	0.0357	0.8501	1.146	i011a24p
i1223a24p	1	-1.46627	0.32470	20.3923	<.0001	0.231	i1223a24p

NLMIXED: mod. Esponenziale a tratti con frailty log-normale

The NLMIXED Procedure

Specifications	
Data Set	WORK.GUATEMALA
Dependent Variable	time
Distribution for Dependent Variable	General
Random Effects	e
Distribution for Random Effects	Normal
Subject Variable	momid
Optimization Technique	Dual Quasi-Newton
Integration Method	Adaptive Gaussian Quadrature

Dimensions	
Observations Used	13594
Observations Not Used	0
Total Observations	13594
Subjects	851
Max Obs per Subject	40
Parameters	17
Quadrature Points	3

Initial Parameters														
b0	**b15**	**b611**	**b1223**	**b24up**	**bmage**	**bmage2**	**bborde**	**bpdead**	**bp0014**	**bp1523**	**bp2435**	**bp36up**	**bi0111223**	**bi01124p**
-1.12	-3.93	-4.24	-4.76	-6.35	-0.14	0.0025	0.062	0.1	0.54	-0.13	-0.26	-0.39	0.82	1.63

Initial Parameters		
bi122324p	**s2**	**Negative Log Likelihood**
0.07	0.21	2451.30152

Iteration History					
Iteration	**Calls**	**Negative Log Likelihood**	**Difference**	**Maximum Gradient**	**Slope**
1	10	2439.8066	11.4949	13796.2	-6.796E7
2	12	2439.0814	0.725191	1868.43	-1.05102
3	16	2438.6083	0.473132	11342.2	-0.55617
4	20	2438.2239	0.38438	1468.33	-0.32945
5	22	2438.1881	0.035777	213.786	-0.06196
6	25	2438.1827	0.005439	361.949	-0.00436
7	31	2437.7818	0.400951	934.302	-0.00653

NLMIXED: mod. Esponenziale a tratti con frailty log-normale

The NLMIXED Procedure

Iteration History					
Iteration	Calls	Negative Log Likelihood	Difference	Maximum Gradient	Slope
8	34	2437.7726	0.00912	237.717	-0.01403
9	40	2437.4452	0.32744	4778.18	-0.00411
10	43	2437.3913	0.053913	97.6910	-0.09611
11	46	2437.3912	0.000115	97.2792	-0.00011
12	54	2437.3493	0.041861	2207.80	-0.00012
13	56	2437.3213	0.02805	978.349	-0.03849
14	59	2437.3137	0.007586	13.2222	-0.01494
15	61	2437.3135	0.00012	127.767	-0.00002

NOTE: GCONV convergence criterion satisfied.

Fit Statistics	
-2 Log Likelihood	4874.6
AIC (smaller is better)	4908.6
AICC (smaller is better)	4908.7
BIC (smaller is better)	4989.3

Parameter Estimates								
Parameter	Estimate	Standard Error	DF	t Value	Pr > |t|	95% Confidence Limits		Gradient
b0	-1.1245	0.7653	850	-1.47	0.1421	-2.6266	0.3777	0.81508
b15	-3.9338	0.7737	850	-5.08	<.0001	-5.4524	-2.4151	-0.09870
b611	-4.2421	0.7709	850	-5.50	<.0001	-5.7553	-2.7290	-0.21808
b1223	-4.7529	0.7711	850	-6.16	<.0001	-6.2665	-3.2394	-0.16940
b24up	-6.3489	0.7915	850	-8.02	<.0001	-7.9024	-4.7954	-0.12034
bmage	-0.1502	0.05949	850	-2.52	0.0118	-0.2670	-0.03345	4.40575
bmage2	0.002588	0.001053	850	2.46	0.0142	0.000520	0.004655	127.767
bborde	0.05988	0.03508	850	1.71	0.0882	-0.00898	0.1287	0.71826
bpdead	-0.02431	0.1756	850	-0.14	0.8899	-0.3689	0.3203	0.28867
bp0014	0.5342	0.2168	850	2.46	0.0140	0.1086	0.9598	-0.42879
bp1523	-0.1174	0.1885	850	-0.62	0.5335	-0.4875	0.2526	0.54417
bp2435	-0.2580	0.1874	850	-1.38	0.1690	-0.6259	0.1099	-0.73288
bp36up	-0.3911	0.2112	850	-1.85	0.0644	-0.8057	0.02345	0.12315
bi0111223	0.8194	0.7149	850	1.15	0.2521	-0.5838	2.2226	0.029583

NLMIXED: mod. Esponenziale a tratti con frailty log-normale

The NLMIXED Procedure

Parameter Estimates								
Parameter	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**	**95% Confidence Limits**		**Gradient**
bi01124p	1.6307	0.7422	850	2.20	0.0283	0.1740	3.0874	-0.01091
bi122324p	0.06930	0.3778	850	0.18	0.8545	-0.6723	0.8109	-0.00759
s2	0.1520	0.1068	850	1.42	0.1551	-0.05763	0.3616	-0.26382

NLMIXED: mod. Gompertz con frailty log-normale

The NLMIXED Procedure

Specifications	
Data Set	WORK.GUATEMALA
Dependent Variable	ll
Distribution for Dependent Variable	General
Random Effects	e
Distribution for Random Effects	Normal
Subject Variable	momid
Optimization Technique	Dual Quasi-Newton
Integration Method	Adaptive Gaussian Quadrature

Dimensions	
Observations Used	13594
Observations Not Used	0
Total Observations	13594
Subjects	851
Max Obs per Subject	40
Parameters	18
Quadrature Points	5

Initial Parameters														
b0	**b15**	**b611**	**b1223**	**b24up**	**bmage**	**bmage2**	**bborde**	**bpdead**	**bp0014**	**bp1523**	**bp2435**	**bp36up**	**bi0111223**	**bi01124p**
-0.76	2.25	3.48	3.74	7.98	0	0	0	0	0	0.3362	0.34	0.39	-0.96	-1.587

Initial Parameters			
bi122324p	**log_gamma**	**s2**	**Negative Log Likelihood**
-0.0657	-10	0.21	6414.17671

Iteration History					
Iteration	**Calls**	**Negative Log Likelihood**	**Difference**	**Maximum Gradient**	**Slope**
1	12	4020.3611	2393.816	258803	-4.86E10
2	21	2870.0000	1150.361	17778.7	-294.872
3	26	2722.6066	147.3933	126390	-808.969
4	28	2568.5846	154.0221	52985.8	-445.564
5	31	2561.8736	6.710976	8780.66	-33.4928
6	34	2558.7557	3.117901	19079.8	-1.31551
7	38	2536.7694	21.98627	6250.69	-3.35013

NLMIXED: mod. Gompertz con frailty log-normale

The NLMIXED Procedure

Iteration History					
Iteration	**Calls**	**Negative Log Likelihood**	**Difference**	**Maximum Gradient**	**Slope**
8	41	2532.7876	3.981857	12279.4	-5.01652
9	43	2527.0984	5.689205	24081.6	-2.24432
10	47	2505.9044	21.19395	51235.9	-8.26473
11	50	2497.8635	8.040884	6924.25	-13.0854
12	53	2497.3466	0.516947	372.600	-0.80226
13	55	2496.5258	0.820833	4580.50	-0.24317
14	59	2487.8561	8.669666	25276.1	-1.71274
15	63	2455.1610	32.69505	9630.36	-14.1269
16	66	2454.2206	0.940456	2092.08	-2.03920
17	69	2454.0271	0.193524	1146.22	-0.22206
18	75	2447.0048	7.022227	4825.40	-0.22339
19	77	2440.3509	6.653898	2105.86	-6.68972
20	80	2439.9712	0.379701	1402.54	-0.78497
21	83	2439.9476	0.023621	133.925	-0.04506
22	87	2439.8855	0.062136	4187.37	-0.01723
23	91	2439.0465	0.838963	2733.05	-0.09928
24	94	2438.8899	0.156626	450.700	-0.26290
25	97	2438.8846	0.005329	230.280	-0.00589
26	103	2438.6775	0.207044	3089.73	-0.00478
27	105	2438.4488	0.228771	41.2799	-0.22515
28	108	2438.4426	0.006159	16.8740	-0.00948
29	114	2438.1720	0.270611	2552.95	-0.00277
30	116	2437.7182	0.453789	361.056	-0.35013
31	119	2437.6479	0.070248	3.50187	-0.13325
32	122	2437.6465	0.00143	20.5466	-0.00203
33	128	2437.5912	0.055357	254.403	-0.00078
34	131	2437.5668	0.024359	43.2703	-0.03527
35	134	2437.5665	0.000253	33.4280	-0.00025
36	140	2437.5571	0.009413	375.731	-0.00023
37	142	2437.5463	0.010859	27.1890	-0.00981
38	145	2437.5461	0.000148	7.82315	-0.00021
39	151	2437.5225	0.023581	230.918	-0.00008
40	153	2437.5157	0.006898	120.941	-0.02252
41	155	2437.5055	0.010146	23.6827	-0.02079

NLMIXED: mod. Gompertz con frailty log-normale

The NLMIXED Procedure

Iteration History					
Iteration	Calls	Negative Log Likelihood	Difference	Maximum Gradient	Slope
42	158	2437.5051	0.000415	7.08198	-0.00074
43	164	2437.4902	0.014914	244.644	-0.00009
44	166	2437.4777	0.012435	127.322	-0.01321
45	169	2437.4761	0.001687	5.00350	-0.00329
46	175	2437.4544	0.021696	829.238	-0.00009
47	177	2437.4382	0.016138	301.090	-0.02028
48	180	2437.4350	0.003207	4.05762	-0.00627
49	184	2437.4315	0.003549	375.120	-0.00009
50	190	2437.2550	0.176486	40.2618	-0.00692
51	193	2437.2543	0.000707	4.99801	-0.00137
52	197	2437.2541	0.000134	83.9868	-0.00001

NOTE: GCONV convergence criterion satisfied.

Note: Moore-Penrose inverse is used in covariance matrix.

Fit Statistics	
-2 Log Likelihood	4874.5
AIC (smaller is better)	4910.5
AICC (smaller is better)	4910.6
BIC (smaller is better)	4995.9

Parameter Estimates								
Parameter	Estimate	Standard Error	DF	t Value	Pr > |t|	95% Confidence Limits		Gradient
b0	0.9307	0.7678	850	1.21	0.2258	-0.5763	2.4377	-0.01781
b15	3.7315	0.7760	850	4.81	<.0001	2.2085	5.2545	-0.03745
b611	4.0387	0.7731	850	5.22	<.0001	2.5213	5.5560	-0.03087
b1223	4.5453	0.7731	850	5.88	<.0001	3.0280	6.0627	-0.06350
b24up	6.1272	0.7928	850	7.73	<.0001	4.5712	7.6832	-0.04471
bmage	0.1670	0.05967	850	2.80	0.0052	0.04990	0.2842	3.25276
bmage2	-0.00288	0.001061	850	-2.71	0.0068	-0.00496	-0.00079	83.9868
bborde	-0.05748	0.03534	850	-1.63	0.1042	-0.1268	0.01187	0.60241
bpdead	0.05698	0.1792	850	0.32	0.7505	-0.2947	0.4086	0.024410
bp0014	-0.5798	0.2167	850	-2.68	0.0076	-1.0051	-0.1546	0.001683
bp1523	0.08738	0.1888	850	0.46	0.6436	-0.2832	0.4580	0.015243

NLMIXED: mod. Gompertz con frailty log-normale

The NLMIXED Procedure

Parameter Estimates								
Parameter	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**	**95% Confidence Limits**		**Gradient**
bp2435	0.2139	0.1875	850	1.14	0.2543	-0.1541	0.5819	-0.01211
bp36up	0.3562	0.2118	850	1.68	0.0931	-0.05962	0.7720	-0.02841
bi0111223	-0.6526	0.7721	850	-0.85	0.3982	-2.1680	0.8629	0.26669
bi01124p	-1.4340	0.8052	850	-1.78	0.0753	-3.0143	0.1464	0.33396
bi122324p	-0.04870	0.3769	850	-0.13	0.8972	-0.7885	0.6911	0.018046
log_gamma	-9.8702	.	850	.	.	.	.	-0.05982
s2	0.1766	0.1172	850	1.51	0.1322	-0.05340	0.4065	0.014657

NLMIXED: mod. Gompertz senza frailty

The NLMIXED Procedure

Specifications	
Data Set	WORK.GUATEMALA
Dependent Variable	ll
Distribution for Dependent Variable	General
Optimization Technique	Dual Quasi-Newton
Integration Method	None

Dimensions	
Observations Used	13594
Observations Not Used	0
Total Observations	13594
Parameters	17

Initial Parameters														
b0	**b15**	**b611**	**b1223**	**b24up**	**bmage**	**bmage2**	**bborde**	**bpdead**	**bp0014**	**bp1523**	**bp2435**	**bp36up**	**bi0111223**	**bi01124p**
-0.76	2.25	3.48	3.74	7.98	0	0	0	0	0	0.3362	0.34	0.39	-0.96	-1.587

Initial Parameters		
bi122324p	**log_gamma**	**Negative Log Likelihood**
-0.0657	-10	9363.00218

Iteration History					
Iteration	**Calls**	**Negative Log Likelihood**	**Difference**	**Maximum Gradient**	**Slope**
1	12	3390.4114	5972.591	194526	-3.09E11
2	19	2584.6089	805.8026	74664.0	-86.3917
3	25	2563.7831	20.82573	1922.57	-250.364
4	27	2561.0833	2.6998	4233.01	-5.71979
5	31	2546.1639	14.91948	46683.4	-6.84112
6	34	2538.7265	7.437338	23554.7	-11.6932
7	38	2519.1696	19.55694	43102.8	-5.34343
8	40	2498.7151	20.45451	824.619	-19.3697
9	43	2497.5950	1.120043	3244.62	-1.71623
10	47	2493.8358	3.759215	24112.9	-0.71282
11	51	2456.7915	37.04433	18635.7	-6.37194
12	54	2455.7060	1.085492	2167.03	-2.52899
13	57	2455.0330	0.673027	1972.43	-0.61859

NLMIXED: mod. Gompertz senza frailty

The NLMIXED Procedure

Iteration History					
Iteration	Calls	Negative Log Likelihood	Difference	Maximum Gradient	Slope
14	61	2444.2242	10.80882	7938.54	-0.79652
15	64	2441.4807	2.743408	8030.26	-5.73031
16	67	2440.9416	0.539142	157.328	-1.03642
17	70	2440.9001	0.041516	320.129	-0.03879
18	74	2440.4229	0.477176	1797.86	-0.04518
19	76	2440.2050	0.21795	283.323	-0.46051
20	78	2440.1232	0.081779	211.917	-0.32091
21	80	2440.0458	0.077356	22.9093	-0.15562
22	83	2440.0345	0.011307	4.08068	-0.01545
23	89	2439.5732	0.461354	2581.50	-0.00746
24	92	2439.4615	0.111614	416.315	-0.17906
25	95	2439.4383	0.023277	1134.35	-0.01019
26	99	2439.0318	0.40645	811.114	-0.03415
27	102	2438.9225	0.109331	74.6951	-0.20767
28	105	2438.9213	0.001219	56.3834	-0.00177
29	109	2438.9053	0.015982	1446.77	-0.00061
30	111	2438.8902	0.015078	258.653	-0.01495
31	114	2438.8889	0.001278	14.3496	-0.00230
32	118	2438.8741	0.014797	173.836	-0.00023
33	120	2438.8616	0.012574	44.3884	-0.01669
34	123	2438.8589	0.002671	5.33905	-0.00477
35	125	2438.8572	0.00166	51.8842	-0.00031
36	131	2438.8147	0.042497	109.325	-0.00262
37	134	2438.8043	0.010429	0.49625	-0.01660
38	138	2438.8013	0.002958	55.8415	-0.00015
39	144	2438.7334	0.067973	94.5932	-0.00546
40	147	2438.7301	0.003248	5.77472	-0.00514
41	151	2438.6877	0.042396	989.639	-0.00121
42	155	2438.5674	0.120315	358.364	-0.06401
43	158	2438.5665	0.000873	14.9435	-0.00166
44	162	2438.5659	0.000689	169.647	-0.00004
45	168	2438.4813	0.084524	557.583	-0.00132
46	171	2438.4694	0.011915	37.4041	-0.02061

NLMIXED: mod. Gompertz senza frailty

The NLMIXED Procedure

Iteration History					
Iteration	Calls	Negative Log Likelihood	Difference	Maximum Gradient	Slope
47	174	2438.4694	0.000024	0.52105	-0.00005
48	176	2438.4694	6.926E-6	3.67643	-1.07E-6

NOTE: GCONV convergence criterion satisfied.

Note: Moore-Penrose inverse is used in covariance matrix.

Fit Statistics	
-2 Log Likelihood	4876.9
AIC (smaller is better)	4910.9
AICC (smaller is better)	4911.0
BIC (smaller is better)	5038.7

Parameter Estimates								
Parameter	Estimate	Standard Error	DF	t Value	Pr > |t|	95% Confidence Limits		Gradient
b0	1.1337	0.7531	14E3	1.51	0.1323	-0.3426	2.6099	0.000222
b15	3.9417	0.7615	14E3	5.18	<.0001	2.4492	5.4343	0.002400
b611	4.2518	0.7585	14E3	5.61	<.0001	2.7651	5.7385	0.000370
b1223	4.7694	0.7585	14E3	6.29	<.0001	3.2826	6.2562	0.001239
b24up	6.3694	0.7788	14E3	8.18	<.0001	4.8429	7.8959	-0.00164
bmage	0.1455	0.05849	14E3	2.49	0.0129	0.03081	0.2601	-0.27893
bmage2	-0.00251	0.001040	14E3	-2.41	0.0160	-0.00455	-0.00047	-3.67643
bborde	-0.06169	0.03343	14E3	-1.85	0.0650	-0.1272	0.003838	-0.01285
bpdead	-0.1021	0.1495	14E3	-0.68	0.4947	-0.3951	0.1910	-0.00064
bp0014	-0.5347	0.2125	14E3	-2.52	0.0119	-0.9512	-0.1182	-0.00378
bp1523	0.1280	0.1864	14E3	0.69	0.4921	-0.2373	0.4934	-0.00121
bp2435	0.2606	0.1846	14E3	1.41	0.1579	-0.1011	0.6224	-0.00152
bp36up	0.3943	0.2087	14E3	1.89	0.0589	-0.01488	0.8034	-0.00239
bi0111223	-0.8294	0.7115	14E3	-1.17	0.2437	-2.2241	0.5652	-0.02843
bi01124p	-1.6193	0.7392	14E3	-2.19	0.0285	-3.0683	-0.1702	0.016184
bi122324p	-0.06563	0.3769	14E3	-0.17	0.8618	-0.8044	0.6732	0.001238
log_gamma	-9.7907	.	14E3	.	.	.	.	-0.06467

NLMIXED: mod. Gompertz senza frailty

The NLMIXED Procedure

Additional Estimates								
Label	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**	**Alpha**	**Lower**	**Upper**
gamma	0.000056	.	14E3	.	.	0.05	.	.