```
 GET
  FILE='\\home.iowa.uiowa.edu\cdonne\Documents\Masters research\CompiledDonneL
arkindataAGE.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
GET
  FILE='\\home.iowa.uiowa.edu\cdonne\Documents\Masters research\CompiledDonneL
arkindataGROWTH.sav'.
DATASET NAME DataSet2 WINDOW=FRONT.
GET
  FILE='\\home.iowa.uiowa.edu\cdonne\Documents\Masters research\CompiledDonneL
arkindataLENGTH.sav'.
DATASET NAME DataSet3 WINDOW=FRONT.
DATASET ACTIVATE DataSet2.
GLM Growthrate3mmboxcox BY Family Population Status
/random Family Population
/design Family(Population(Status)) Population(Status) Status.
```

General Linear Model

Notes

Output Created		04-FEB-2021 16:03:28
Comments		
Input	Data	\\home.iowa.uiowa.edu\cdonne\Documents\Masters research\CompiledDonneLarkindataGROWTH.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	707
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		GLM Growthrate3mmboxcox BY Family Population Status /random Family Population /design Family(Population (Status)) Population (Status) Status.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.06

[DataSet2] \\home.iowa.uiowa.edu\cdonne\Documents\Masters research\CompiledDonneLarkindataGROWTH.sav

Between-Subjects Factors

		N
Family	AI1	4
	AI10	2
	AI12	5
	AI18	3
	AI19	6
	AI3	2
	AI4	3
	AI6	4
	AS21	5
	AS26	5
	AS27	5
	AS32	4
	AS35	5
	AS36	4
	AS39	6
	CW1-146	7
	CW1-147	8
	Gb4	5
	Gb5	5
	GN3-184	6
	GN9-155	4
	GR41	7

Between-Subjects Factors

		N
	GR44	5
	GR45	3
	GR48	5
	GR49	8
	GR50	6
	GR51	5
	GR54	5
	GR55	4
	GR57	5
	GR59	6
	GR60	8
	HP125	5
	HP126	5
	HP129	6
	HR61	11
	HR62	7
	HR64	6
	HR65	4
	HR66	5
	HR67	4
	HR68	7
	HR70	5
	HR72	9
	HR73	6
	HR74	3
	HR75	5
	HR76	3
	HR77	2
	HR78	9
	HR79	2
	HR80	4
	KN141	8
	KN181	7
	Md1	2
	Md2	4

Between-Subjects Factors

		N
	Md3	2
	Mr1	2
	Mr2	4
	Mr3	5
	Mr4	4
	Mr5	4
	OK1-160	4
	OK2-161	4
	OK5-162	5
	OK8-163	9
	PA1	3
	PA2	5
	PA3	4
	PA5	4
	Pc2	3
	Pc3	3
	Pc5	2
	Pc6	3
	PO2-167	7
	PO3-168	5
	PO92-188	6
	PO95-189	6
	RI3-164	3
	RS83	4
	RS88	3
	RS97	7
	RS98	8
	S103	7
	S109	7
	S113	4
	S115	8
	S116	3
	Sn1	5
	Sn2	3
	Sn4	2

Between-Subjects Factors

		N
	Sn5	4
	TP4-150	6
	Ty4-149	4
	WK1-148	5
Population	AlexIsoe	29
	AlexShal	34
	Clearwat	15
	Gb	10
	Grasmere	67
	Gunn 03	6
	Gunn09	4
	Haupiri	16
	Heron	92
	Kaniere0	15
	Md	8
	Mr	19
	Okareka0	22
	PA	16
	Pc	11
	Poerua02	7
	Poerua03	5
	Poerua92	5
	Poerua95	7
	Rotoiti0	3
	RotoroaS	22
	Selfe	29
	Sn	14
	Taupo04	6
	Taylor04	4
	Waikarem	5
Status	Invasive	78
	Native	393

Tests of Between-Subjects Effects

Dependent Variable: growthrate3mmboxcox

Source		Type III Sum of Squares	df	Mean Square	F
Intercept	Hypothesis	78.810	1	78.810	279.106
	Error	8.880	31.449	.282[a]	
Family(Population(Status))	Hypothesis	9.552	71	.135	1.055
	Error	47.700	374	.128[b]	
Population(Status)	Hypothesis	8.193	24	.341	2.541
	Error	9.994	74.373	.134[c]	
Status	Hypothesis	1.713	1	1.713	6.059
	Error	8.861	31.339	.283[d]	

Tests of Between-Subjects Effects

Dependent Variable: growthrate3mmboxcox

Source		Sig.
Intercept	Hypothesis	.000
	Error	
Family(Population(Status))	Hypothesis	.369
	Error	
Population(Status)	Hypothesis	.001
	Error	
Status	Hypothesis	.020
	Error	

a. .058 MS(Family(Population(Status))) + .722 MS(Population(Status)) + .220 MS(Error)

b. MS(Error)

c. .976 MS(Family(Population(Status))) + .024 MS(Error)

d. .043 MS(Family(Population(Status))) + .724 MS(Population(Status)) + .232 MS(Error)

Expected Mean Squares[a,b]

Source	Variance Component: Var(Family (Population (Status)))	Var(Population (Status))	Var(Error)	Quadratic Term
Intercept	3.618	11.259	1.000	Intercept, Status
Family(Population(Status))	4.745	.000	1.000	
Population(Status)	4.630	15.590	1.000	
Status	3.560	11.294	1.000	Status
Error	.000	.000	1.000	

a. For each source, the expected mean square equals the sum of the coefficients in the cells times the variance components, plus a quadratic term involving effects in the Quadratic Term cell.

b. Expected Mean Squares are based on the Type III Sums of Squares.

```
DATASET ACTIVATE DataSet1.
GLM ResidualAgeatmaturity BY Family Population Status
/random Family Population
/design Family(Population(Status)) Population(Status) Status.
```

General Linear Model

Notes

Output Created		04-FEB-2021 16:04:11
Comments		
Input	Data	\\home.iowa.uiowa.edu\cdonne\Documents\Masters research\CompiledDonneLarkindataAGE.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	697
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		GLM ResidualAgeatmaturity BY Family Population Status /random Family Population /design Family(Population (Status)) Population (Status) Status.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.05

```
[DataSet1] \\home.iowa.uiowa.edu\cdonne\Documents\Masters research\CompiledDonneLarkindataAGE.sav
```

Between-Subjects Factors

		N
Family	AI1	4
	AI18	3
	AI19	4
	AI4	3
	AI6	3
	AS21	5
	AS26	4
	AS27	3
	AS32	4
	AS36	2
	AS39	6
	CW1-146	4
	CW1-147	7
	Gb4	5
	Gb5	4
	GN3-184	5
	GN9-155	4
	GR41	5
	GR44	5
	GR48	3
	GR49	4
	GR50	2
	GR51	4
	GR54	5
	GR55	4
	GR57	4
	GR59	5
	GR60	5
	HP126	3
	HP129	3
	HR61	7
	HR62	6
	HR64	6
	HR65	3
	HR66	2

Between-Subjects Factors

		N
	HR67	3
	HR68	2
	HR70	2
	HR72	5
	HR73	5
	HR75	3
	HR79	2
	HR80	4
	KN141	7
	KN181	7
	Md1	2
	Md2	3
	Md3	2
	Mr1	2
	Mr2	3
	Mr3	4
	Mr4	4
	Mr5	4
	OK1-160	4
	OK2-161	2
	OK5-162	2
	OK8-163	3
	PA1	3
	PA2	5
	PA3	4
	PA5	4
	Pc2	3
	Pc3	3
	Pc5	2
	Pc6	3
	PO2-167	3
	PO92-188	6
	PO95-189	6
	RI3-164	3
	RS83	3

Between-Subjects Factors

		N
	RS88	2
	RS97	4
	RS98	2
	S103	6
	S109	7
	S115	5
	Sn1	5
	Sn2	3
	Sn4	2
	Sn5	3
	Ty4-149	3
	WK1-148	4
Population	AlexIsoe	17
	AlexShal	24

Between-Subjects Factors

		N
	Clearwat	11
	Gb	9
	Grasmere	46
	Gunn 03	5
	Gunn09	4
	Haupiri	6
	Heron	50
	Kaniere0	14
	Md	7
	Mr	17
	Okareka0	11
	PA	16
	Pc	11
	Poerua02	3
	Poerua92	5
	Poerua95	7
	Rotoiti0	3
	RotoroaS	11
	Selfe	18
	Sn	13
	Taylor04	3
	Waikarem	4
Status	Invasive	73
	Native	242

Tests of Between-Subjects Effects

Dependent Variable: Standardized Residual

Source		Type III Sum of Squares	df	Mean Square	F
Intercept	Hypothesis	25.377	1	25.377	20.626
	Error	31.346	25.478	1.230[a]	
Family(Population(Status))	Hypothesis	56.123	59	.951	1.620
	Error	136.184	232	.587[b]	
Population(Status)	Hypothesis	29.204	22	1.327	1.396
	Error	56.147	59.037	.951[c]	
Status	Hypothesis	58.562	1	58.562	47.499
	Error	30.703	24.903	1.233[d]	

Tests of Between-Subjects Effects

Dependent Variable: Standardized Residual

Source		Sig.
Intercept	Hypothesis	.000
	Error	
Family(Population(Status))	Hypothesis	.006
	Error	
Population(Status)	Hypothesis	.155
	Error	
Status	Hypothesis	.000
	Error	

a. .016 MS(Family(Population(Status))) + .861 MS(Population(Status)) + .123 MS(Error)

b. MS(Error)

c. .999 MS(Family(Population(Status))) + .001 MS(Error)

d. - .001 MS(Family(Population(Status))) + .873 MS(Population(Status)) + .128 MS(Error)

Expected Mean Squares[a,b]

Source	Variance Component: Var(Family (Population (Status)))	Var(Population (Status))	Var(Error)	Quadratic Term
Intercept	3.219	9.909	1.000	Intercept, Status
Family(Population(Status))	3.673	.000	1.000	
Population(Status)	3.671	11.507	1.000	
Status	3.200	10.043	1.000	Status
Error	.000	.000	1.000	

a. For each source, the expected mean square equals the sum of the coefficients in the cells times the variance components, plus a quadratic term involving effects in the Quadratic Term cell.

b. Expected Mean Squares are based on the Type III Sums of Squares.

```
 DATASET ACTIVATE DataSet3.
GLM ResidualFinallength BY Family Population Status
/random Family Population
/design Family(Population(Status)) Population(Status) Status.
```

General Linear Model

Notes

Output Created		04-FEB-2021 16:04:42
Comments		
Input	Data	\\home.iowa.uiowa.edu\cdonne\Documents\Masters research\CompiledDonneLarkindataLENGTH.sav
	Active Dataset	DataSet3
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	697
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		GLM ResidualFinallength BY Family Population Status /random Family Population /design Family(Population (Status)) Population (Status) Status.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.03

```
[DataSet3] \\home.iowa.uiowa.edu\cdonne\Documents\Masters research\CompiledDonneLarkindataLENGTH.sav
```

Between-Subjects Factors

		N
Family	AI1	3
	AI18	3
	AI19	4
	AI4	3
	AI6	3
	AS21	5
	AS26	2
	AS27	3
	AS32	3
	AS36	2
	AS39	5
	CW1-146	3
	CW1-147	6
	Gb4	5
	Gb5	4
	GN3-184	5
	GN9-155	4
	GR41	5
	GR44	4
	GR48	2
	GR49	3
	GR50	2
	GR51	4
	GR54	5
	GR55	4
	GR57	4
	GR59	5
	GR60	5
	HP126	3
	HP129	3
	HR61	7
	HR62	5
	HR64	6
	HR65	3
	HR67	3

Between-Subjects Factors

		N
	HR68	2
	HR72	5
	HR73	5
	HR75	2
	HR79	2
	HR80	4
	KN141	7
	KN181	7
	Md1	2
	Md2	3
	Md3	2
	Mr1	2
	Mr2	3
	Mr3	4
	Mr4	4
	Mr5	4
	OK1-160	4
	OK2-161	2
	OK5-162	2
	PA1	3
	PA2	5
	PA3	4
	PA5	4
	Pc2	3
	Pc3	3
	Pc5	2
	Pc6	2
	PO2-167	3
	PO92-188	5
	PO95-189	6
	RI3-164	3
	RS83	3
	RS88	2
	RS97	4
	RS98	2

Between-Subjects Factors

		N
	S103	6
	S109	6
	S115	4
	Sn1	5
	Sn2	3
	Sn5	2
	Ty4-149	3
	WK1-148	2
Population	AlexIsoe	16
	AlexShal	20
	Clearwat	9
	Gb	9
	Grasmere	43
	Gunn 03	5
	Gunn09	4
	Haupiri	6
	Heron	44
	Kaniere0	14
	Md	7
	Mr	17
	Okareka0	8
	PA	16
	Pc	10
	Poerua02	3
	Poerua92	4
	Poerua95	7
	Rotoiti0	3
	RotoroaS	11
	Selfe	16
	Sn	10
	Taylor04	3
	Waikarem	2
Status	Invasive	69
	Native	218

Tests of Between-Subjects Effects

Dependent Variable: Standardized Residual

Source		Type III Sum of Squares	df	Mean Square	F
Intercept	Hypothesis	9.590	1	9.590	2.793
	Error	79.612	23.187	3.433[a]	
Family(Population(Status))	Hypothesis	68.132	55	1.239	2.217
	Error	116.205	208	.559[b]	
Population(Status)	Hypothesis	84.340	22	3.834	3.160
	Error	69.089	56.945	1.213[c]	
Status	Hypothesis	2.610	1	2.610	.752
	Error	79.546	22.922	3.470[d]	

Tests of Between-Subjects Effects

Dependent Variable: Standardized Residual

Source		Sig.
Intercept	Hypothesis	.108
	Error	
Family(Population(Status))	Hypothesis	.000
	Error	
Population(Status)	Hypothesis	.000
	Error	
Status	Hypothesis	.395
	Error	

a. .026 MS(Family(Population(Status))) + .872 MS(Population(Status)) + .101 MS(Error)

b. MS(Error)

c. .962 MS(Family(Population(Status))) + .038 MS(Error)

d. .011 MS(Family(Population(Status))) + .887 MS(Population(Status)) + .102 MS(Error)

Expected Mean Squares[a,b]

Source	Variance Component: Var(Family (Population (Status)))	Var(Population (Status))	Var(Error)	Quadratic Term
Intercept	3.057	9.059	1.000	Intercept, Status
Family(Population(Status))	3.530	.000	1.000	
Population(Status)	3.398	10.384	1.000	
Status	3.052	9.209	1.000	Status
Error	.000	.000	1.000	

a. For each source, the expected mean square equals the sum of the coefficients in the cells times the variance components, plus a quadratic term involving effects in the Quadratic Term cell.

b. Expected Mean Squares are based on the Type III Sums of Squares.