Forward Model Selection for Mzda - SL 0.01

The GLMSELECT Procedure

Data Set	SAD.CV4_3
Dependent Variable	mzda
Selection Method	Forward
Select Criterion	Significance Level
Stop Criterion	Significance Level
Entry Significance Level (SLE)	0.01
Effect Hierarchy Enforced	None

Number of Observations Read	300
Number of Observations Used	300

Dimensions	
Number of Effects	9
Number of Parameters	9

Forward Model Selection for Mzda - SL 0.01

The GLMSELECT Procedure
Forward Selection: Step 0

Effect Entered: Intercept

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	0	0	.	.	.
Error	299	34560	115.58513		
Corrected Total	299	34560			

Root MSE	10.75105
Dependent Mean	104.58253
R-Square	0.0000
Adj R-Sq	0.0000
AIC	1728.00052
AICC	1728.04092
SBC	1429.70430

Parameter Estimates					
Parameter	**DF**	**Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	104.582533	0.620712	168.49	<.0001

Forward Model Selection for Mzda - SL 0.01

The GLMSELECT Procedure
Forward Selection: Step 1

Effect Entered: vzdelani

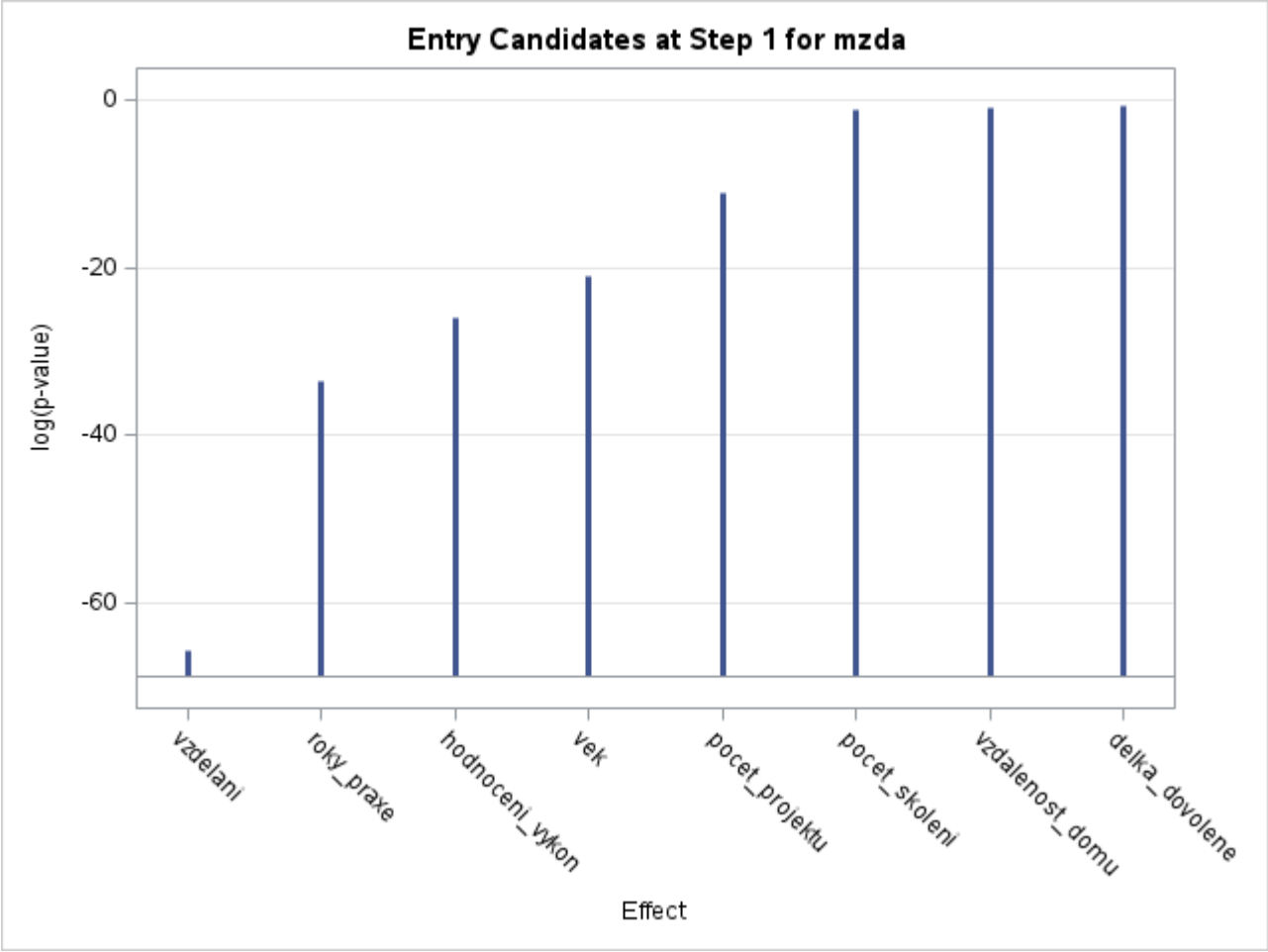
Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	11915	11915	156.79	<.0001
Error	298	22645	75.99103		

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Corrected Total	299	34560			

Root MSE	8.71728
Dependent Mean	104.58253
R-Square	0.3448
Adj R-Sq	0.3426
AIC	1603.17790
AICC	1603.25898
SBC	1308.58546

Parameter Estimates					
Parameter	DF	Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	63.579247	3.313061	19.19	<.0001
vzdelani	1	2.519094	0.201180	12.52	<.0001

Entry Candidates			
Rank	Effect	Log pValue	Pr > F
1	vzdelani	-65.5375	<.0001
2	roky_praxe	-33.6283	<.0001
3	hodnoceni_vykon	-26.0780	<.0001
4	vek	-21.0835	<.0001
5	pocet_projektu	-11.1885	<.0001
6	pocet_skoleni	-1.2215	0.2948
7	vzdalenost_domu	-1.0334	0.3558
8	delka_dovolene	-0.7726	0.4618



Forward Model Selection for Mzda - SL 0.01

The GLMSELECT Procedure
Forward Selection: Step 2

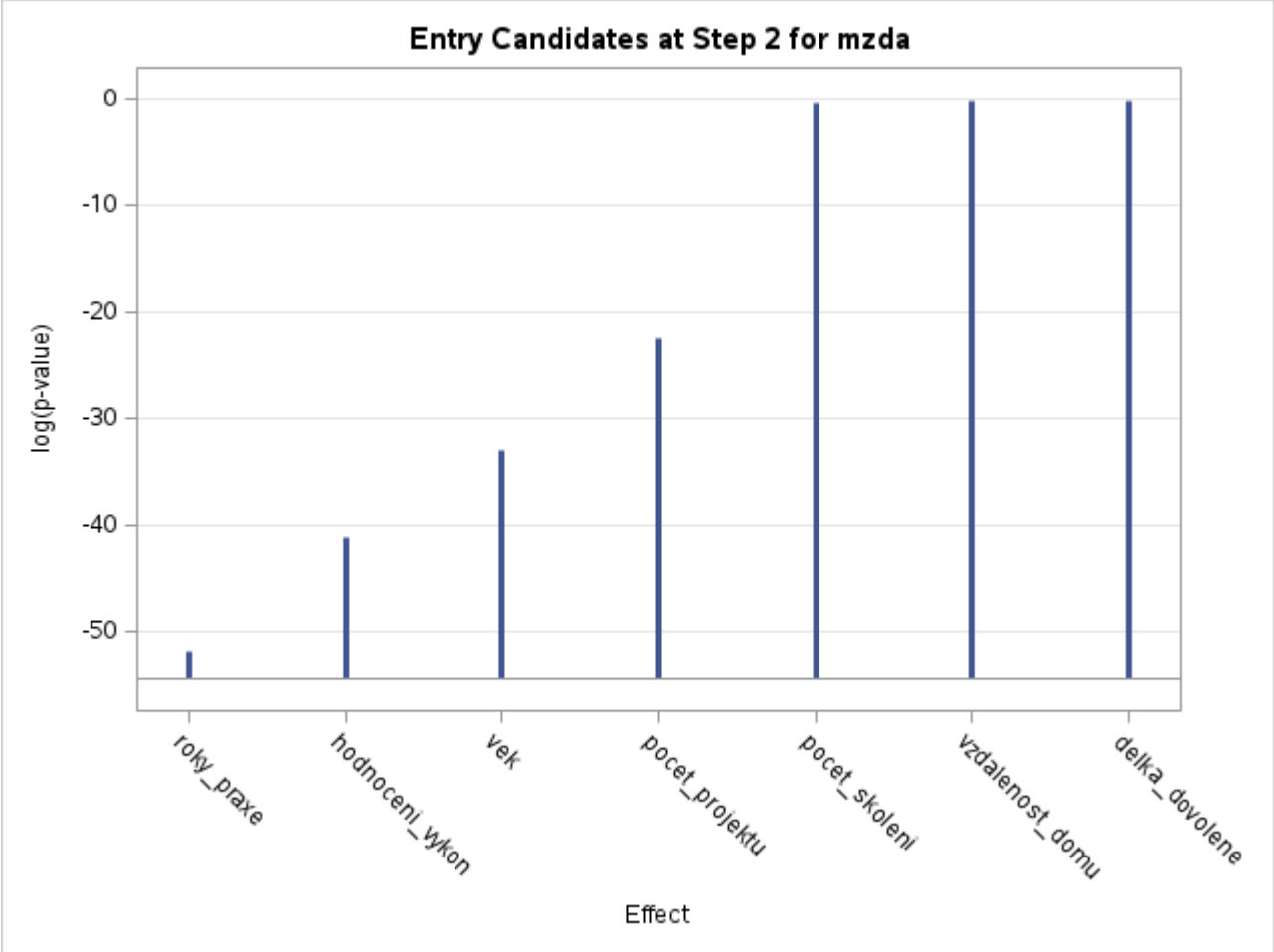
Effect Entered: roky_praxe

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	2	18326	9163.06458	167.64	<.0001
Error	297	16234	54.65934		
Corrected Total	299	34560			

Root MSE	7.39320
Dependent Mean	104.58253
R-Square	0.5303
Adj R-Sq	0.5271
AIC	1505.32093
AICC	1505.45653
SBC	1214.43228

Parameter Estimates					
Parameter	**DF**	**Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	55.458256	2.908161	19.07	<.0001
roky_praxe	1	0.934350	0.086270	10.83	<.0001
vzdelani	1	2.503303	0.170629	14.67	<.0001

Entry Candidates			
Rank	Effect	Log pValue	Pr > F
1	roky_praxe	-51.8801	<.0001
2	hodnoceni_vykon	-41.1428	<.0001
3	vek	-32.8802	<.0001
4	pocet_projektu	-22.3933	<.0001
5	pocet_skoleni	-0.3923	0.6755
6	vzdalenost_domu	-0.2507	0.7782
7	delka_dovolene	-0.1968	0.8213



Forward Model Selection for Mzda - SL 0.01

The GLMSELECT Procedure
Forward Selection: Step 3

Effect Entered: hodnoceni_vykon

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	22890	7629.97600	193.53	<.0001
Error	296	11670	39.42576		
Corrected Total	299	34560			

Root MSE	6.27899
Dependent Mean	104.58253
R-Square	0.6623
Adj R-Sq	0.6589
AIC	1408.29892

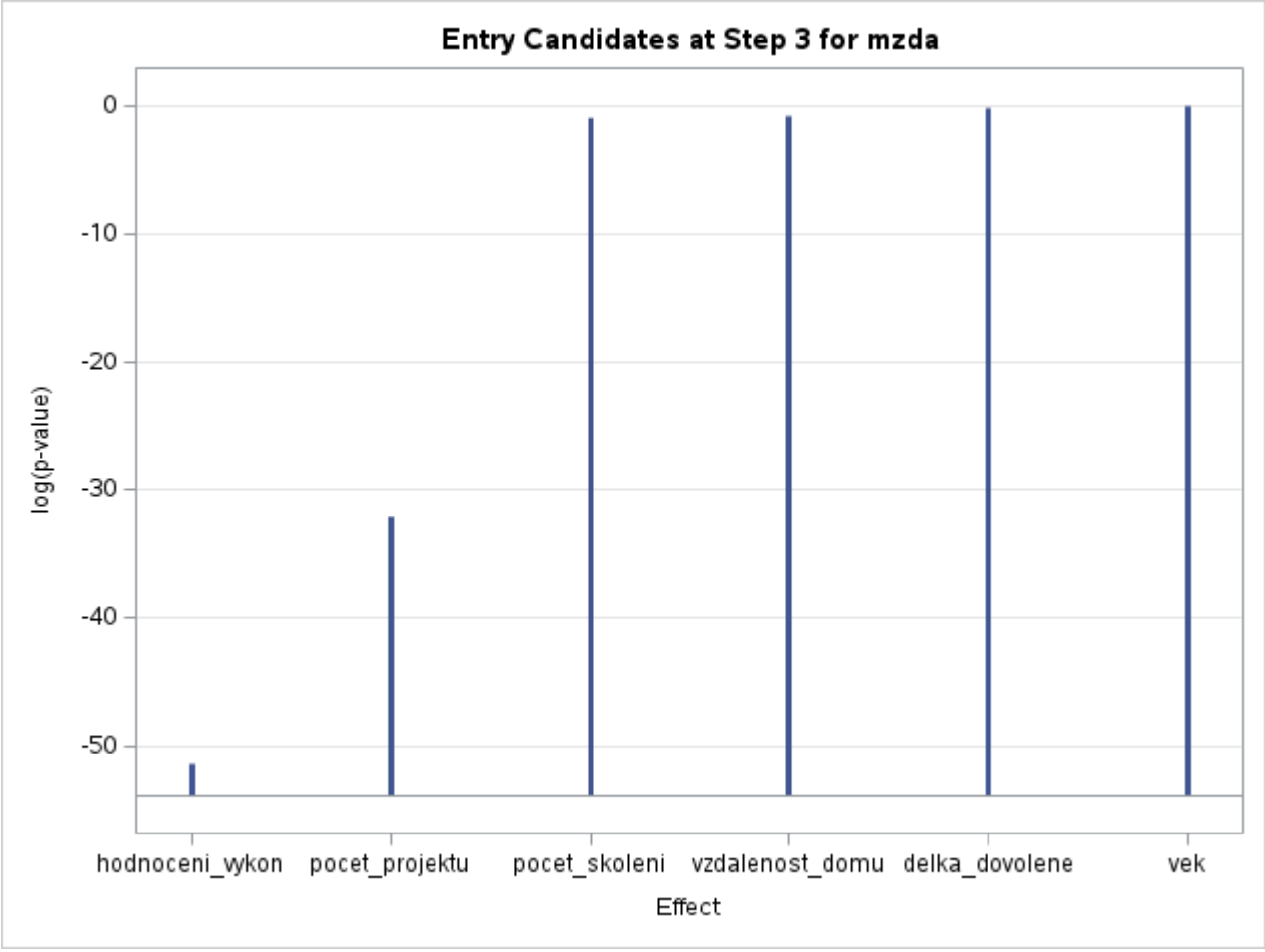
AICC	1408.50301
SBC	1121.11405

Parameter Estimates

Parameter	DF	Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	35.901182	3.066673	11.71	<.0001
roky_praxe	1	0.887849	0.073396	12.10	<.0001
vzdelani	1	2.511723	0.144916	17.33	<.0001
hodnoceni_vykon	1	2.663993	0.247605	10.76	<.0001

Entry Candidates

Rank	Effect	Log pValue	Pr > F
1	hodnoceni_vykon	-51.2966	<.0001
2	pocet_projektu	-32.0279	<.0001
3	pocet_skoleni	-0.9441	0.3890
4	vzdalenost_domu	-0.7197	0.4869
5	delka_dovolene	-0.0953	0.9091
6	vek	-0.0716	0.9309



Forward Model Selection for Mzda - SL 0.01

The GLMSELECT Procedure
Forward Selection: Step 4

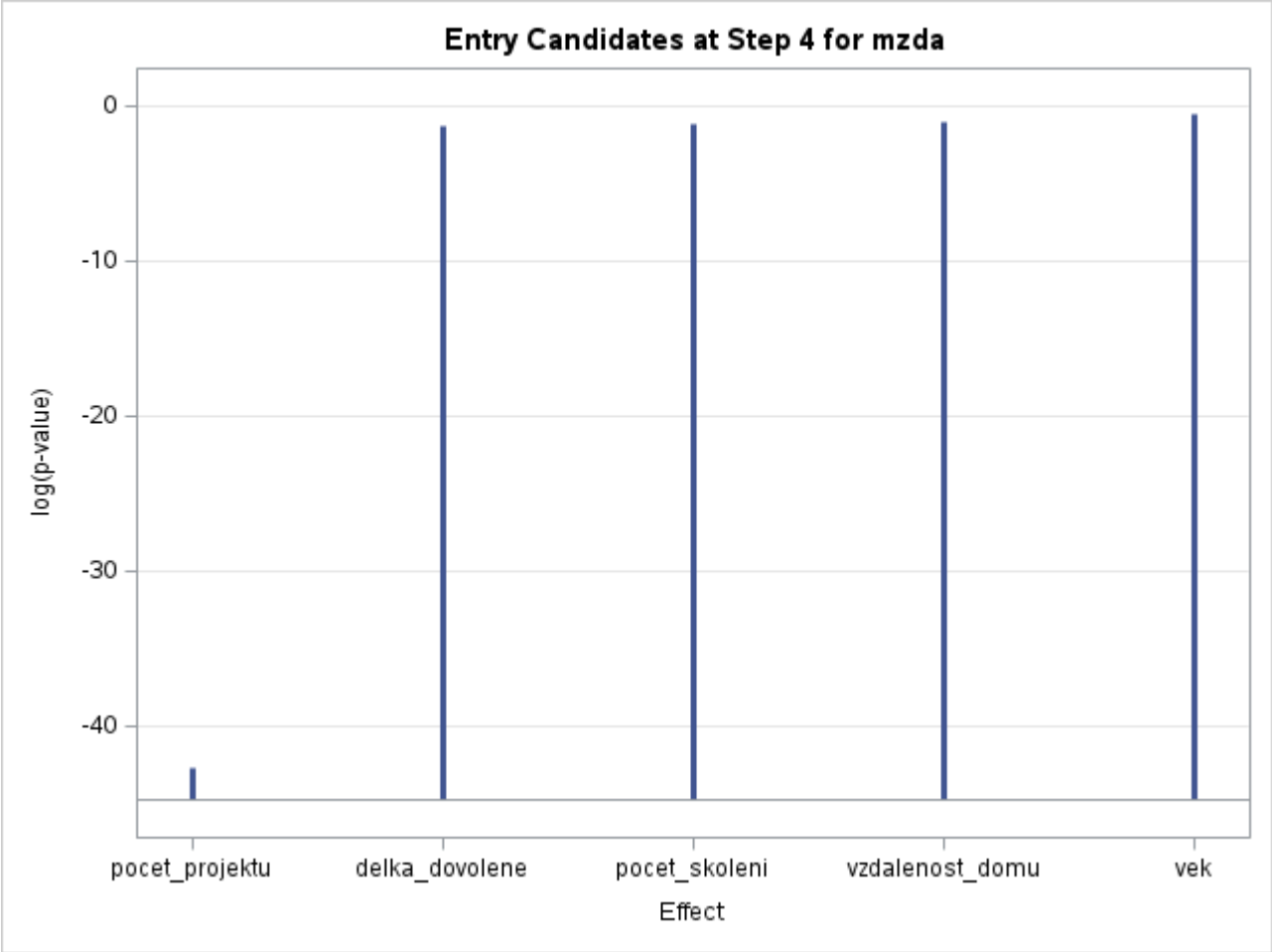
Effect Entered: pocet_projektu

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	25677	6419.35403	213.19	<.0001
Error	295	8882.53716	30.11030		
Corrected Total	299	34560			

Root MSE	5.48728
Dependent Mean	104.58253
R-Square	0.7430
Adj R-Sq	0.7395
AIC	1328.41801
AICC	1328.70470
SBC	1044.93692

Parameter Estimates					
Parameter	DF	Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	28.251079	2.795457	10.11	<.0001
roky_praxe	1	0.893200	0.064144	13.92	<.0001
vzdelani	1	2.596331	0.126949	20.45	<.0001
pocet_projektu	1	1.323976	0.137604	9.62	<.0001
hodnoceni_vykon	1	2.613922	0.216448	12.08	<.0001

Entry Candidates			
Rank	Effect	Log pValue	Pr > F
1	pocet_projektu	-42.6228	<.0001
2	delka_dovolene	-1.3517	0.2588
3	pocet_skoleni	-1.1265	0.3242
4	vzdalenost_domu	-0.9979	0.3687
5	vek	-0.4848	0.6158



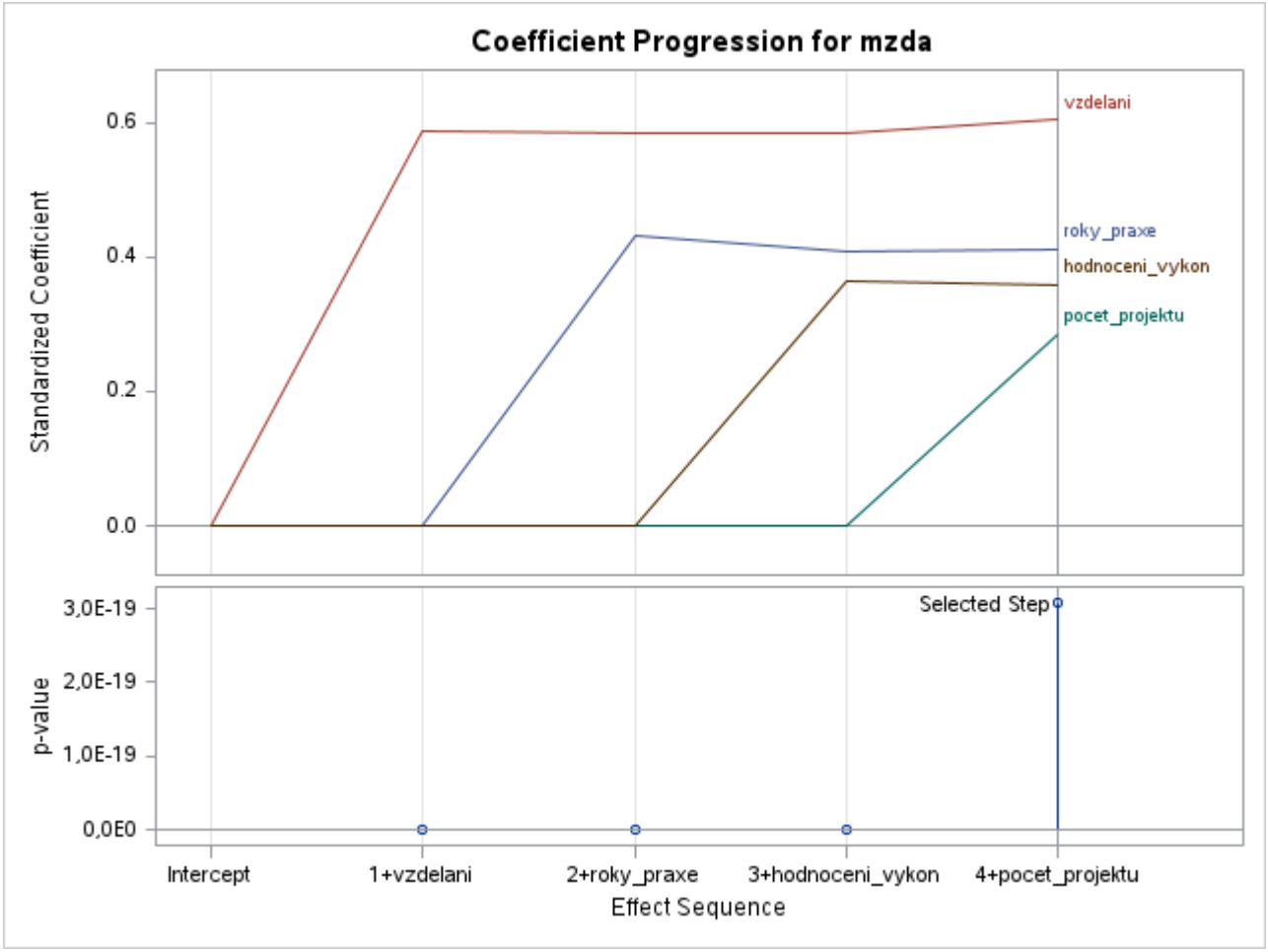
Forward Model Selection for Mzda - SL 0.01

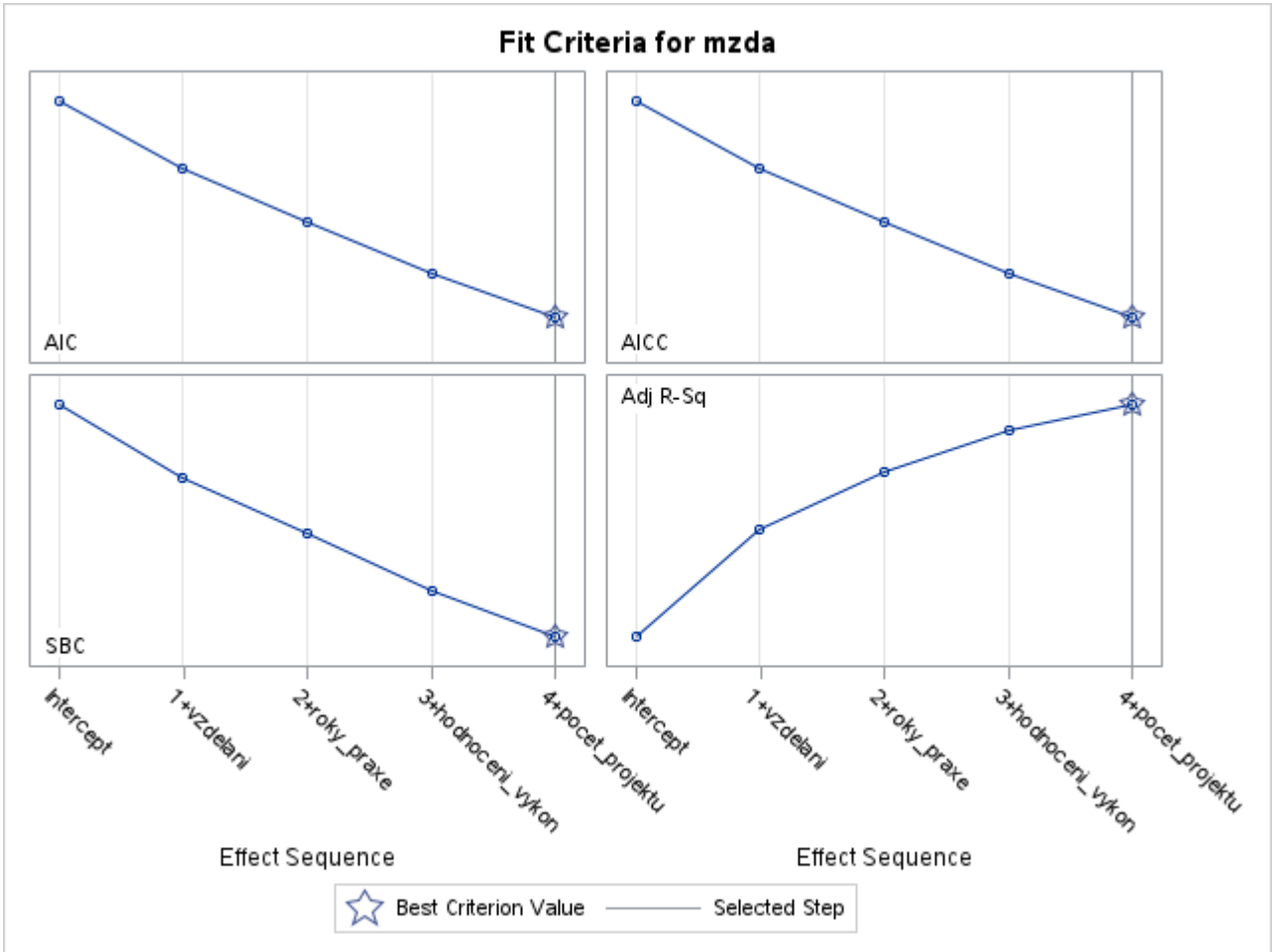
The GLMSELECT Procedure

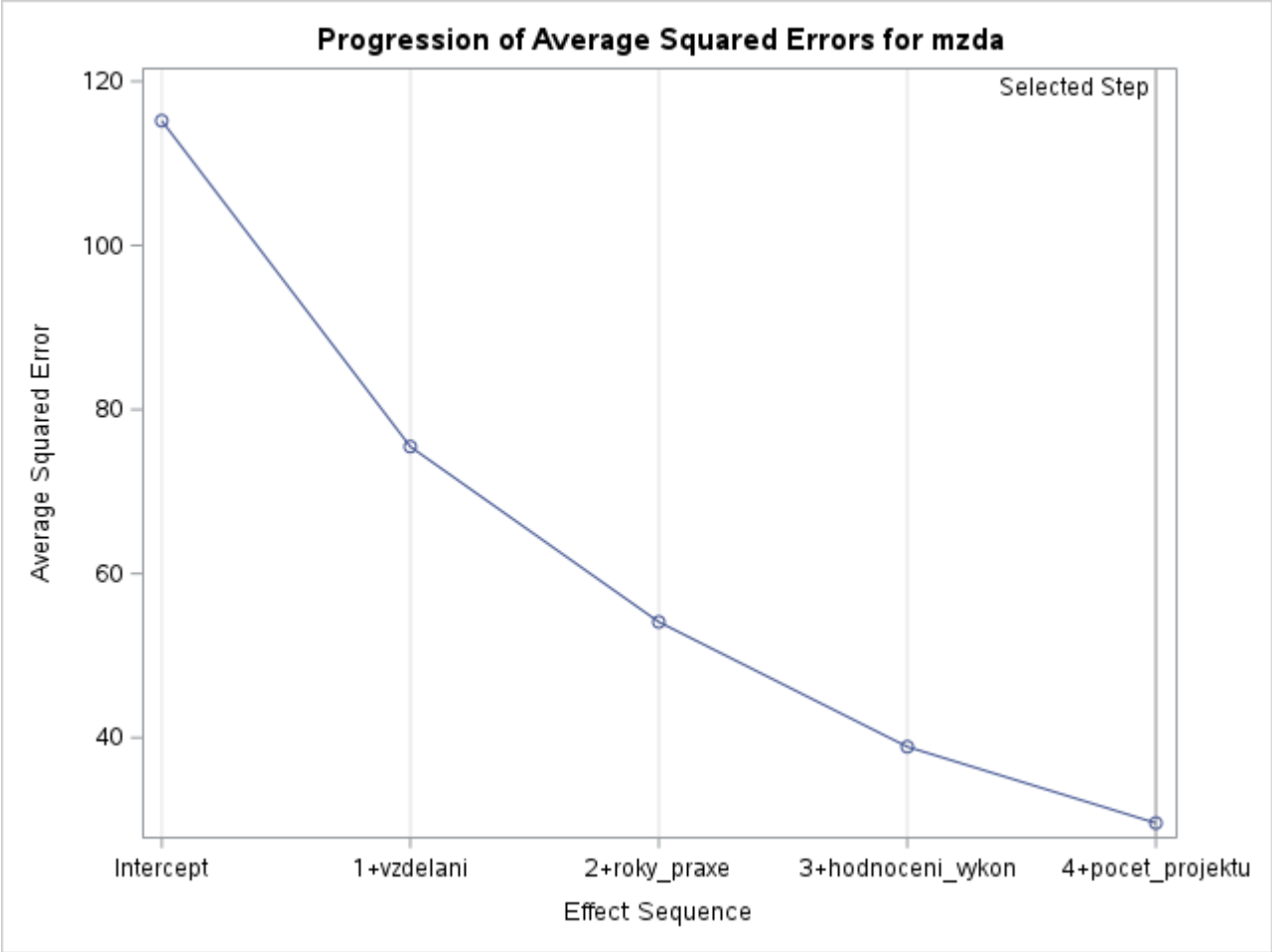
Forward Selection Summary				
Step	Effect Entered	Number Effects In	F Value	Pr > F
0	Intercept	1	0.00	1.0000
1	vzdelani	2	156.79	<.0001
2	roky_praxe	3	117.30	<.0001
3	hodnoceni_vykon	4	115.76	<.0001
4	pocet_projektu	5	92.58	<.0001

Selection stopped as the candidate for entry has SLE > 0.01.

Stop Details					
Candidate For	Effect	Candidate Significance		Compare Significance	
Entry	delka_dovolene	0.0486	>	0.0100	(SLE)


Coefficient Progression for mzda
Standardized Coefficient
0.6
0.4
0.2
0.0
vzdelani
roky_praxe
hodnoceni_vykon
pocet_projektu
p-value
3,0E-19
2,0E-19
1,0E-19
0,0E0
Selected Step
Intercept
1+vzdelani
2+roky_praxe
3+hodnoceni_vykon
4+pocet_projektu
Effect Sequence


Fit Criteria for mzda
AIC
AICC
SBC
Adj R-Sq
Intercept
1+vzdelani
2+roky_praxe
3+hodnoceni_vykon
4+pocet_projektu
Effect Sequence
Effect Sequence
Best Criterion Value
Selected Step



Forward Model Selection for Mzda - SL 0.01

The GLMSELECT Procedure
Selected Model

The selected model is the model at the last step (Step 4).

Effects:	Intercept roky_praxe vzdelani pocet_projektu hodnoceni_vykon

Note: The p-values for parameters and effects are not adjusted for the fact that the terms in the model have been selected and so are generally liberal.

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	4	25677	6419.35403	213.19	<.0001
Error	295	8882.53716	30.11030		
Corrected Total	299	34560			

Root MSE	5.48728
Dependent Mean	104.58253
R-Square	0.7430
Adj R-Sq	0.7395
AIC	1328.41801
AICC	1328.70470
SBC	1044.93692

Parameter Estimates					
Parameter	**DF**	**Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	28.251079	2.795457	10.11	<.0001
roky_praxe	1	0.893200	0.064144	13.92	<.0001

Parameter Estimates					
Parameter	DF	Estimate	Standard Error	t Value	Pr > |t|
vzdelani	1	2.596331	0.126949	20.45	<.0001
pocet_projektu	1	1.323976	0.137604	9.62	<.0001
hodnoceni_vykon	1	2.613922	0.216448	12.08	<.0001

Mzda Model - Plots of Diagnostic Statistics

The REG Procedure
Model: MODEL1
Dependent Variable: mzda

Number of Observations Read	300
Number of Observations Used	300

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	25677	6419.35403	213.19	<.0001
Error	295	8882.53716	30.11030		
Corrected Total	299	34560			

Root MSE	5.48728	R-Square	0.7430
Dependent Mean	104.58253	Adj R-Sq	0.7395
Coeff Var	5.24685		

Parameter Estimates								
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate	95% Confidence Limits	
Intercept	1	28.25108	2.79546	10.11	<.0001	0	22.74951	33.75264
roky_praxe	1	0.89320	0.06414	13.92	<.0001	0.41176	0.76696	1.01944
vzdelani	1	2.59633	0.12695	20.45	<.0001	0.60516	2.34649	2.84617
pocet_projektu	1	1.32398	0.13760	9.62	<.0001	0.28478	1.05317	1.59479
hodnoceni_vykon	1	2.61392	0.21645	12.08	<.0001	0.35719	2.18794	3.03990

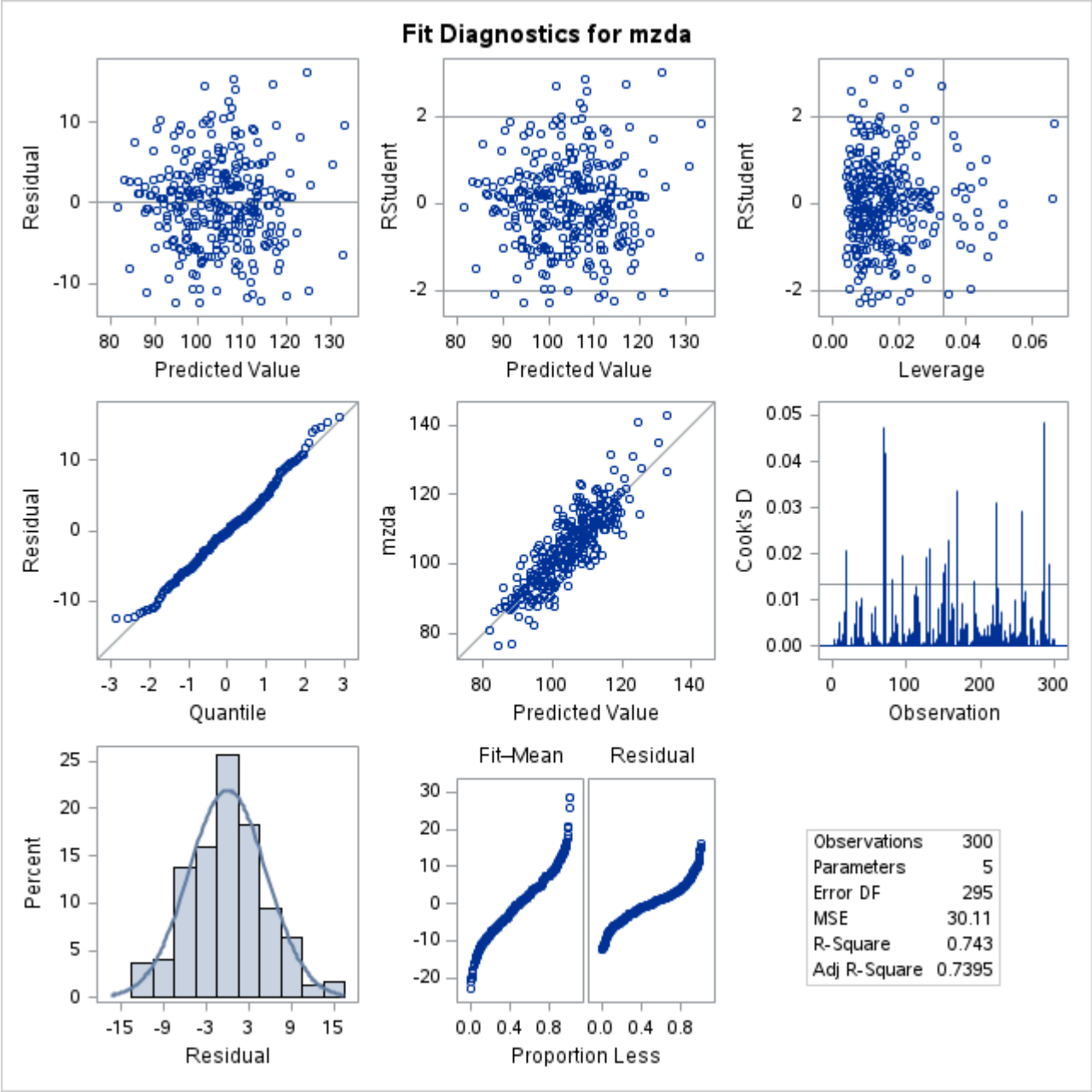
Mzda Model - Plots of Diagnostic Statistics

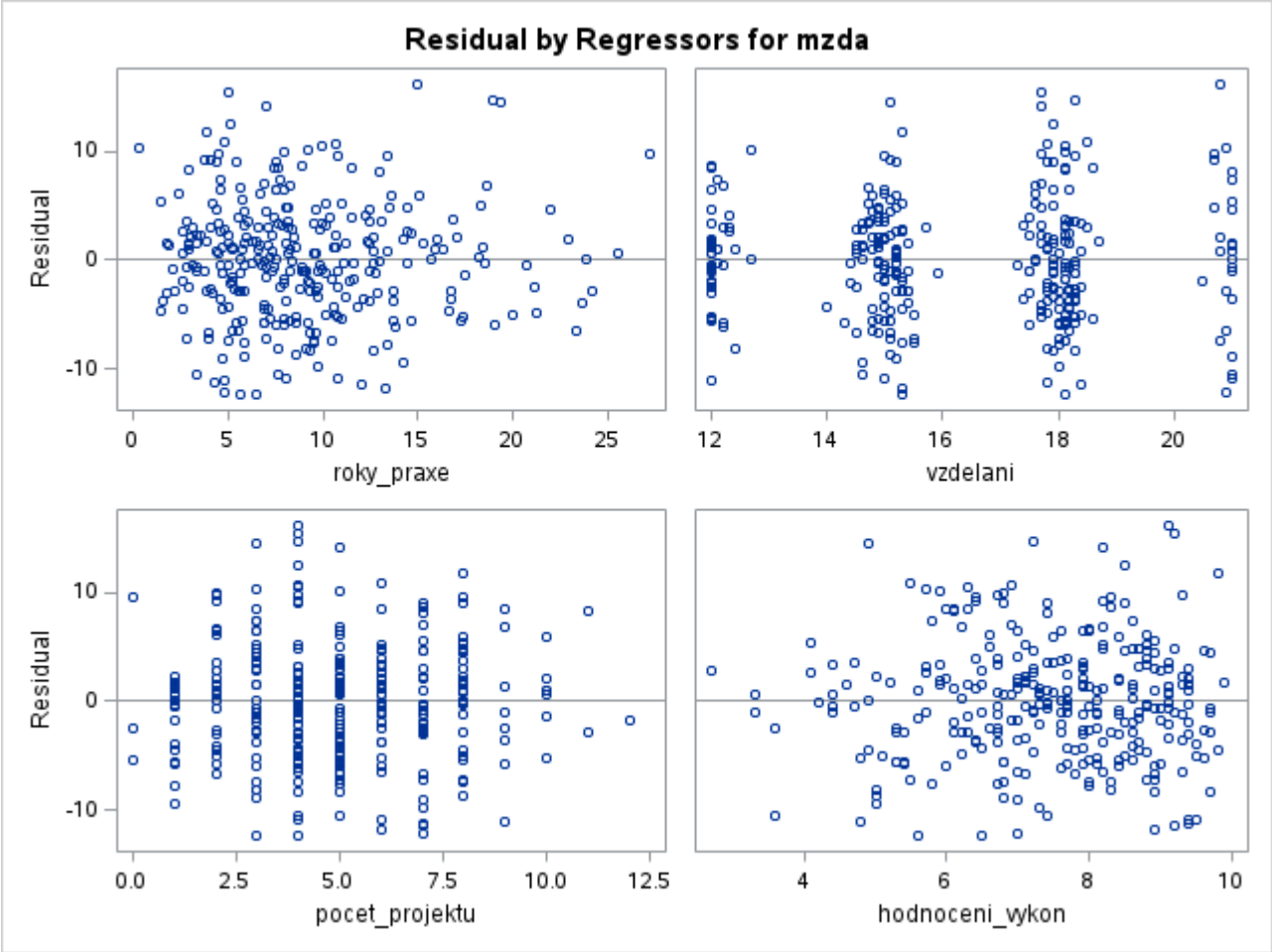
The REG Procedure
Model: MODEL1
Dependent Variable: mzda

Test of First and Second Moment Specification		
DF	Chi-Square	Pr > ChiSq
14	19.39	0.1507

Mzda Model - Plots of Diagnostic Statistics

The REG Procedure
Model: MODEL1
Dependent Variable: mzda


Fit Diagnostics for mzda
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
mzda
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 300
Parameters 5
Error DF 295
MSE 30.11
R-Square 0.743
Adj R-Square 0.7395



Diagnostika reziduí mzdy

The REG Procedure
Model: MODEL1
Dependent Variable: mzda

Number of Observations Read	300
Number of Observations Used	300

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	25677	6419.35403	213.19	<.0001
Error	295	8882.53716	30.11030		
Corrected Total	299	34560			

Root MSE	5.48728	R-Square	0.7430
Dependent Mean	104.58253	Adj R-Sq	0.7395
Coeff Var	5.24685		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate	95% Confidence Limits	
Intercept	1	28.25108	2.79546	10.11	<.0001	0	22.74951	33.75264
roky_praxe	1	0.89320	0.06414	13.92	<.0001	0.41176	0.76696	1.01944
vzdelani	1	2.59633	0.12695	20.45	<.0001	0.60516	2.34649	2.84617
pocet_projektu	1	1.32398	0.13760	9.62	<.0001	0.28478	1.05317	1.59479

Parameter Estimates								
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate	95% Confidence Limits	
hodnoceni_vykon	1	2.61392	0.21645	12.08	<.0001	0.35719	2.18794	3.03990

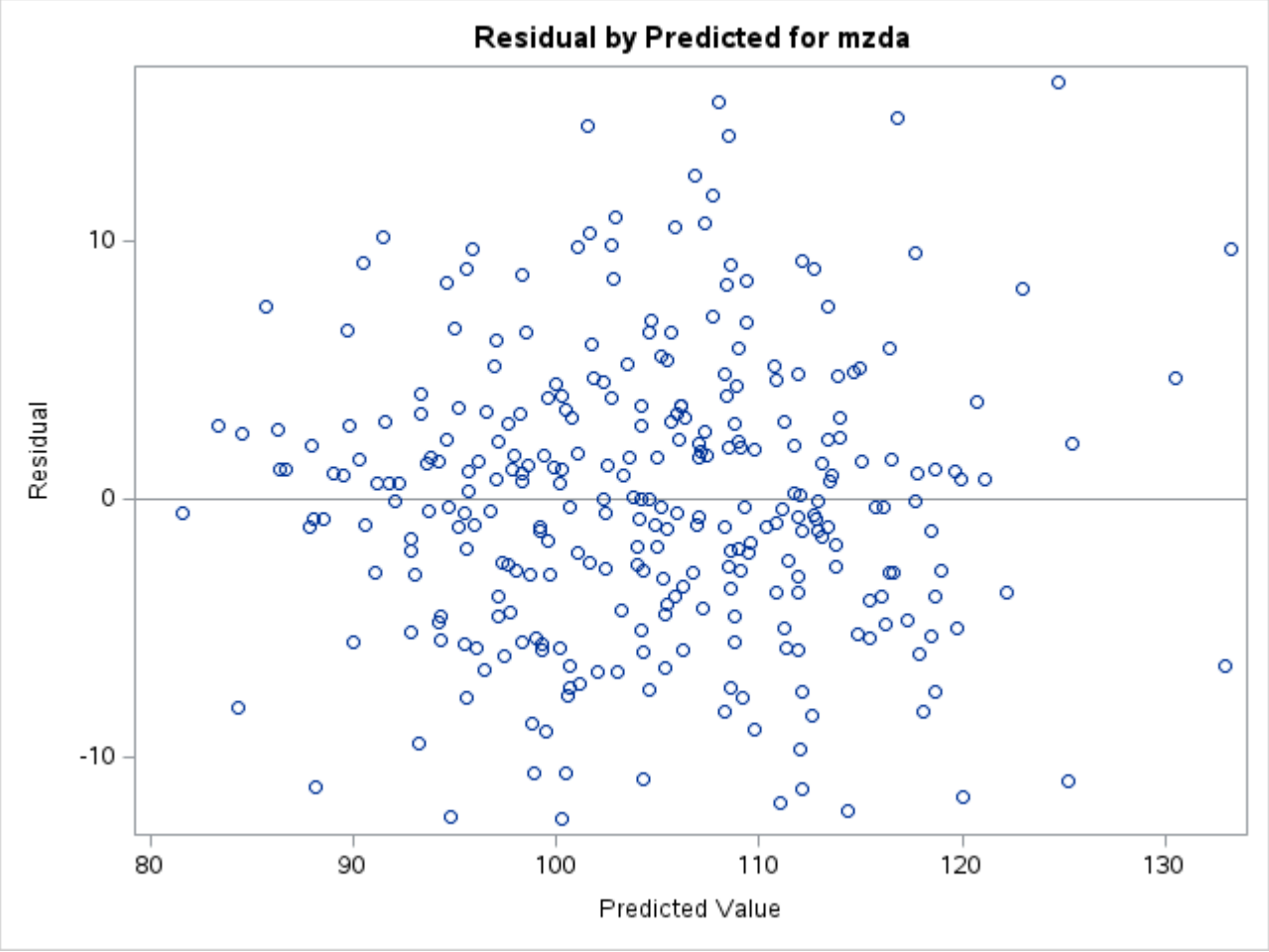
Diagnostika reziduí mzdy

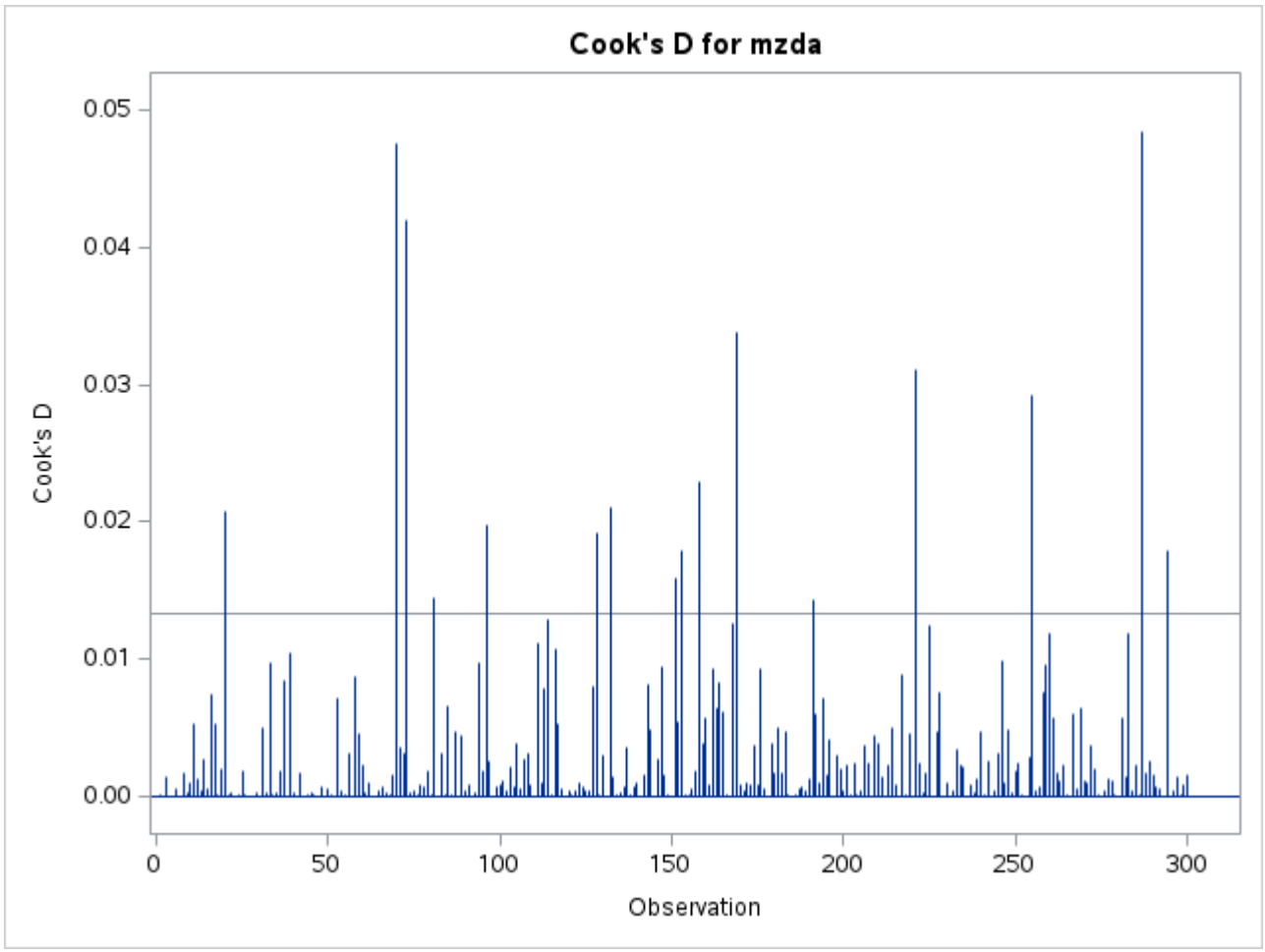
The REG Procedure
Model: MODEL1
Dependent Variable: mzda

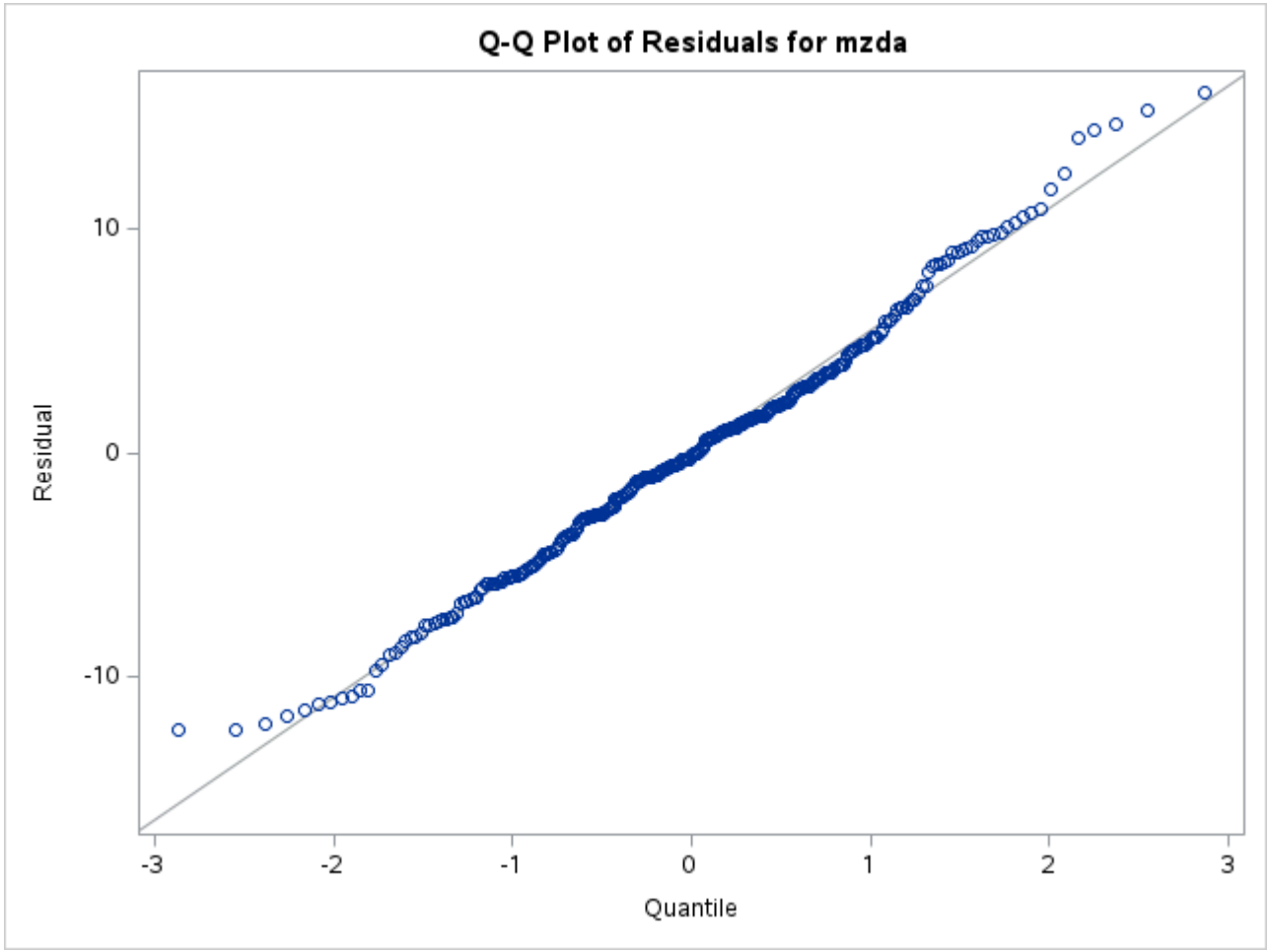
Test of First and Second Moment Specification		
DF	Chi-Square	Pr > ChiSq
14	19.39	0.1507

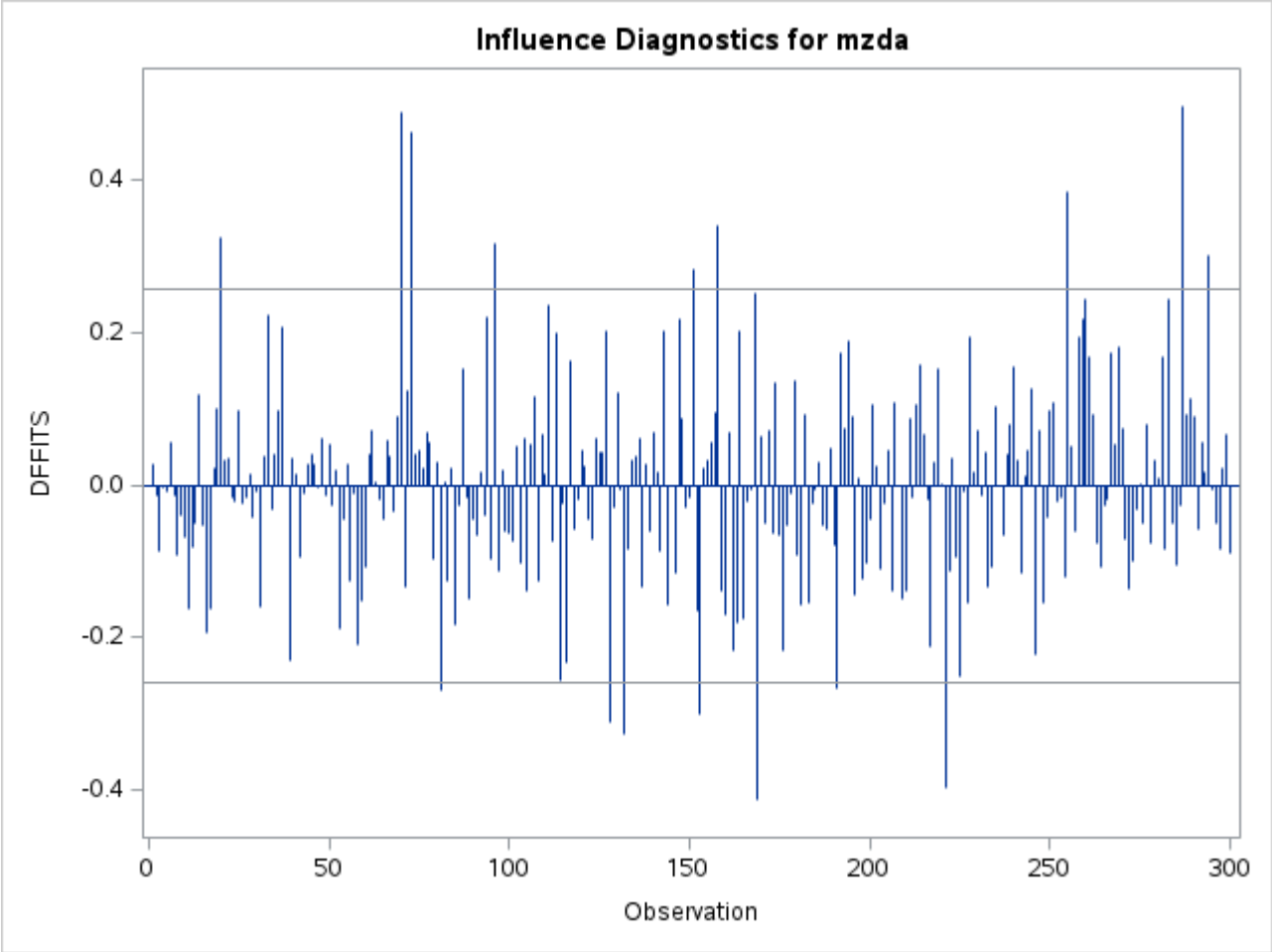
Diagnostika reziduí mzdy

The REG Procedure
Model: MODEL1
Dependent Variable: mzda




Cook's D for mzda
Cook's D
0.05
0.04
0.03
0.02
0.01
0.00
0
50
100
150
200
250
300
Observation


Q-Q Plot of Residuals for mzda
Residual
10
0
-10
-3
-2
-1
0
1
2
3
Quantile



Collinearity diagnostics

The REG Procedure
Model: MODEL1
Dependent Variable: mzda

Number of Observations Read	300
Number of Observations Used	300

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	25677	6419.35403	213.19	<.0001
Error	295	8882.53716	30.11030		
Corrected Total	299	34560			

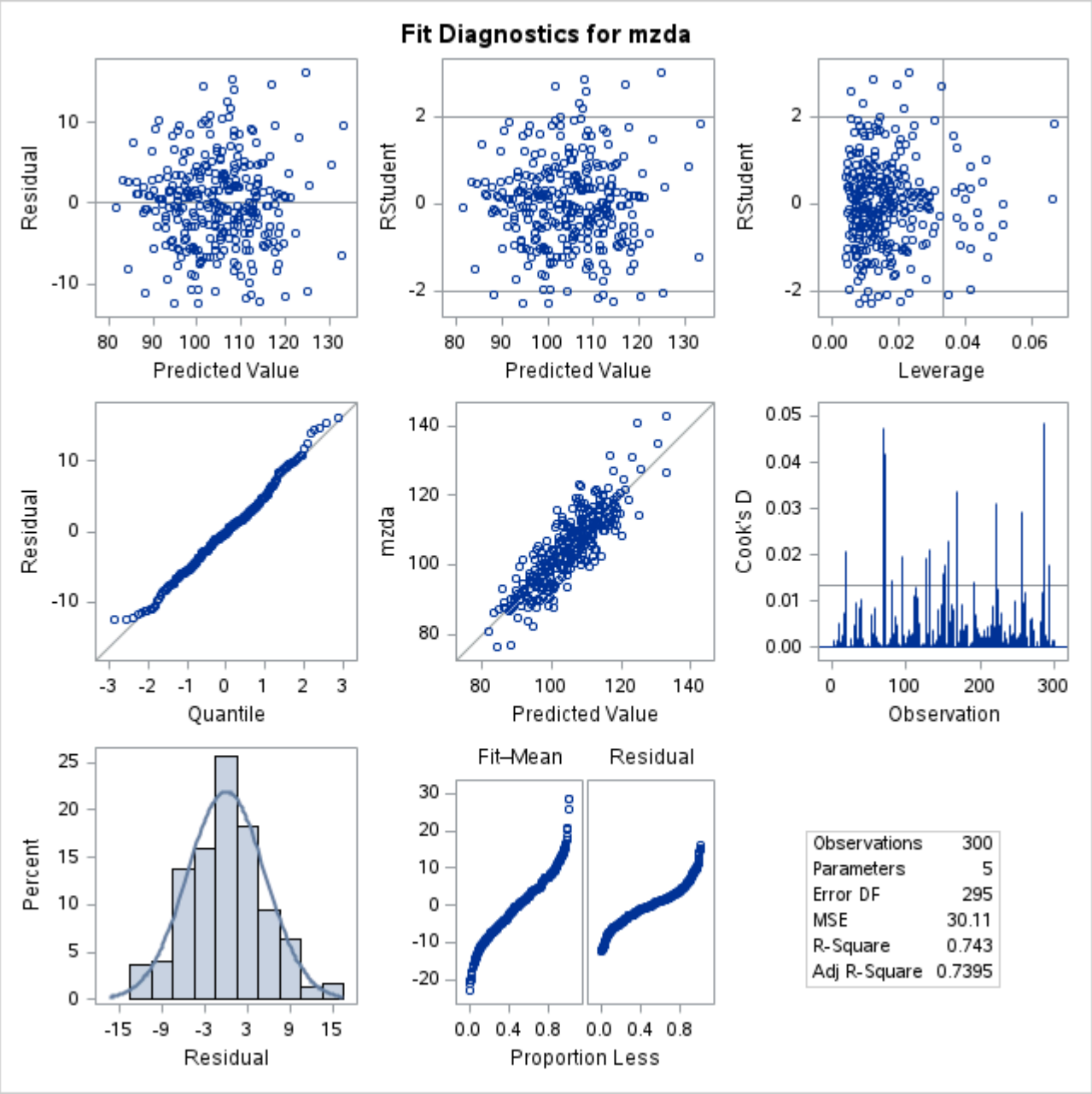
Root MSE	5.48728	R-Square	0.7430
Dependent Mean	104.58253	Adj R-Sq	0.7395
Coeff Var	5.24685		

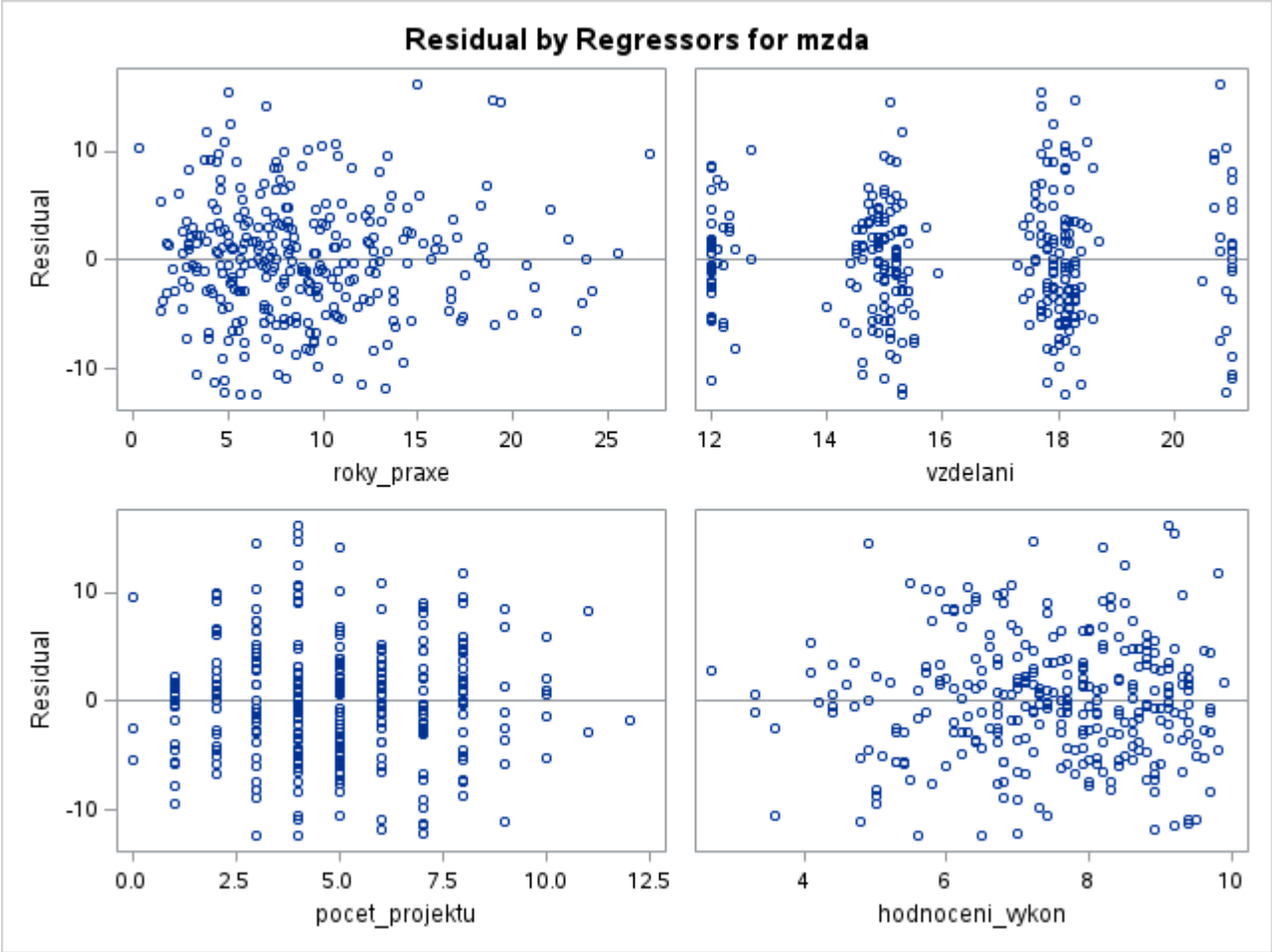
Parameter Estimates										
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate	Tolerance	Variance Inflation	95% Confidence Limits	
Intercept	1	28.25108	2.79546	10.11	<.0001	0	.	0	22.74951	33.75264
roky_praxe	1	0.89320	0.06414	13.92	<.0001	0.41176	0.99638	1.00363	0.76696	1.01944
vzdelani	1	2.59633	0.12695	20.45	<.0001	0.60516	0.99510	1.00492	2.34649	2.84617
pocet_projektu	1	1.32398	0.13760	9.62	<.0001	0.28478	0.99455	1.00548	1.05317	1.59479

Parameter Estimates										
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate	Tolerance	Variance Inflation	95% Confidence Limits	
hodnoceni_vykon	1	2.61392	0.21645	12.08	<.0001	0.35719	0.99593	1.00408	2.18794	3.03990

Collinearity diagnostics

The REG Procedure
Model: MODEL1
Dependent Variable: mzda





Mzda Model - Plots of Diagnostic Statistics

The REG Procedure
Model: MODEL1
Dependent Variable: mzda

Number of Observations Read	300
Number of Observations Used	300

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	25677	6419.35403	213.19	<.0001
Error	295	8882.53716	30.11030		
Corrected Total	299	34560			

Root MSE	5.48728	R-Square	0.7430
Dependent Mean	104.58253	Adj R-Sq	0.7395
Coeff Var	5.24685		

Parameter Estimates								
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate	95% Confidence Limits	
Intercept	1	28.25108	2.79546	10.11	<.0001	0	22.74951	33.75264
roky_praxe	1	0.89320	0.06414	13.92	<.0001	0.41176	0.76696	1.01944
vzdelani	1	2.59633	0.12695	20.45	<.0001	0.60516	2.34649	2.84617
pocet_projektu	1	1.32398	0.13760	9.62	<.0001	0.28478	1.05317	1.59479

Parameter Estimates								
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate	95% Confidence Limits	
hodnoceni_vykon	1	2.61392	0.21645	12.08	<.0001	0.35719	2.18794	3.03990

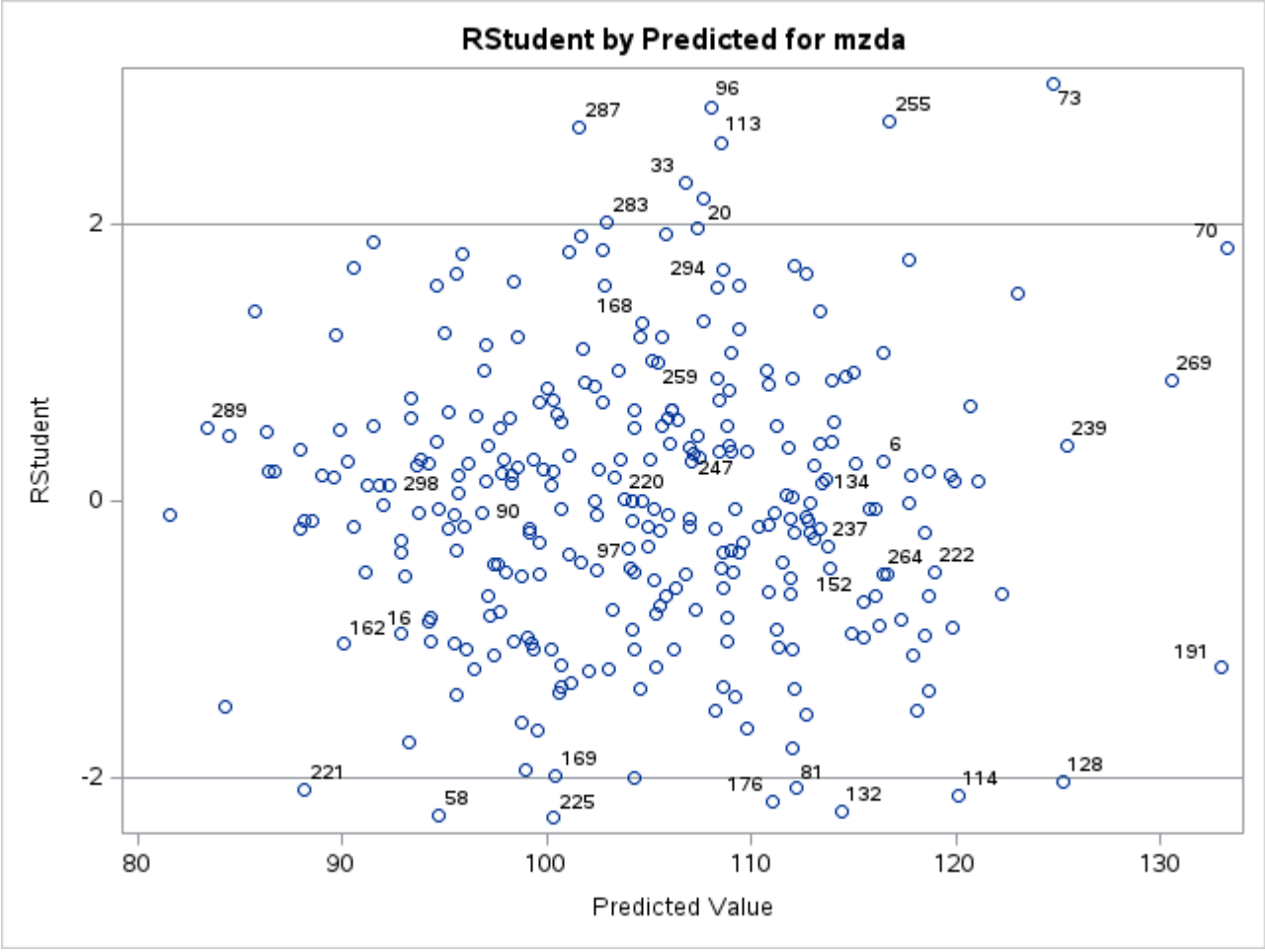
Mzda Model - Plots of Diagnostic Statistics

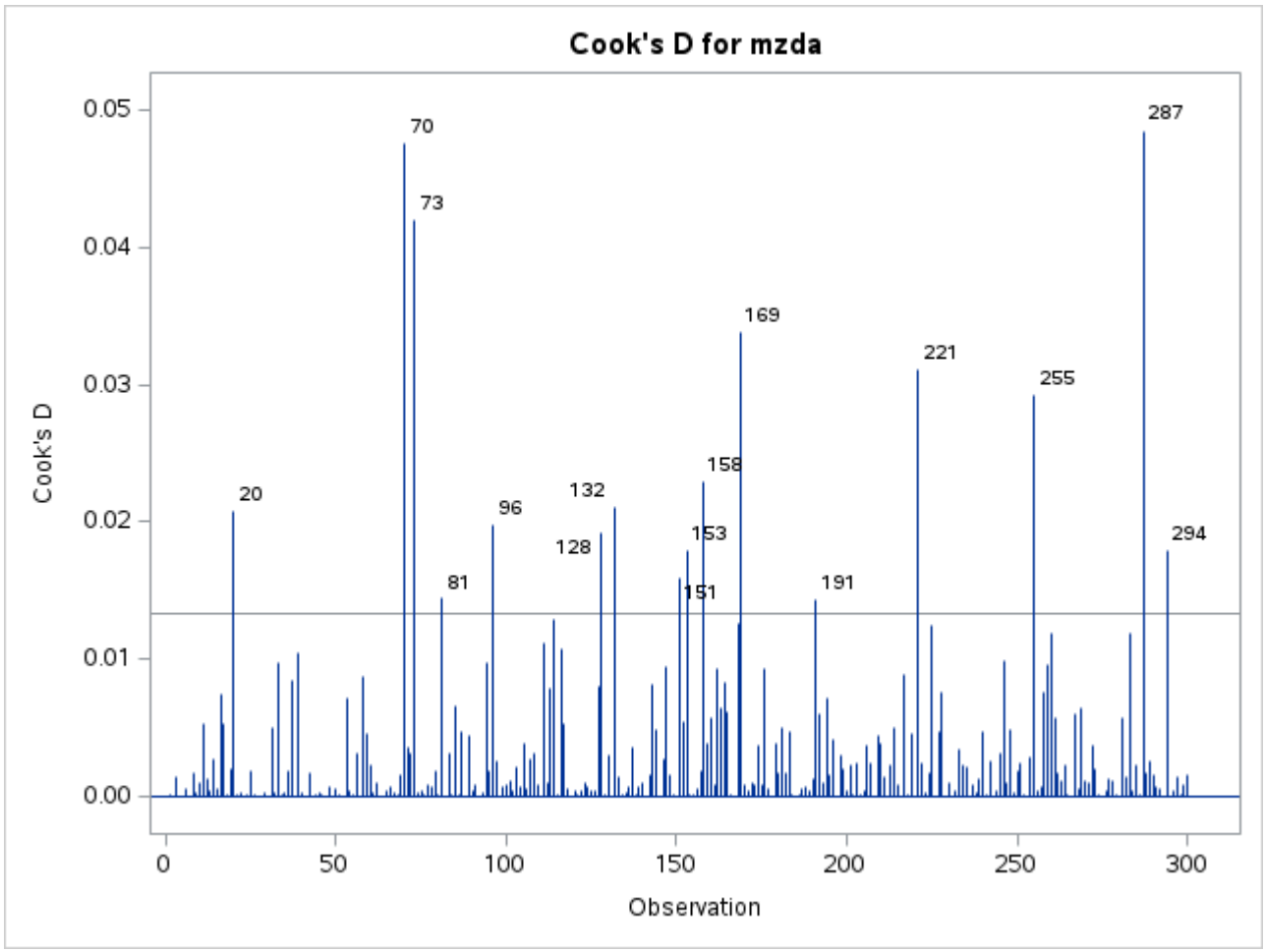
The REG Procedure
Model: MODEL1
Dependent Variable: mzda

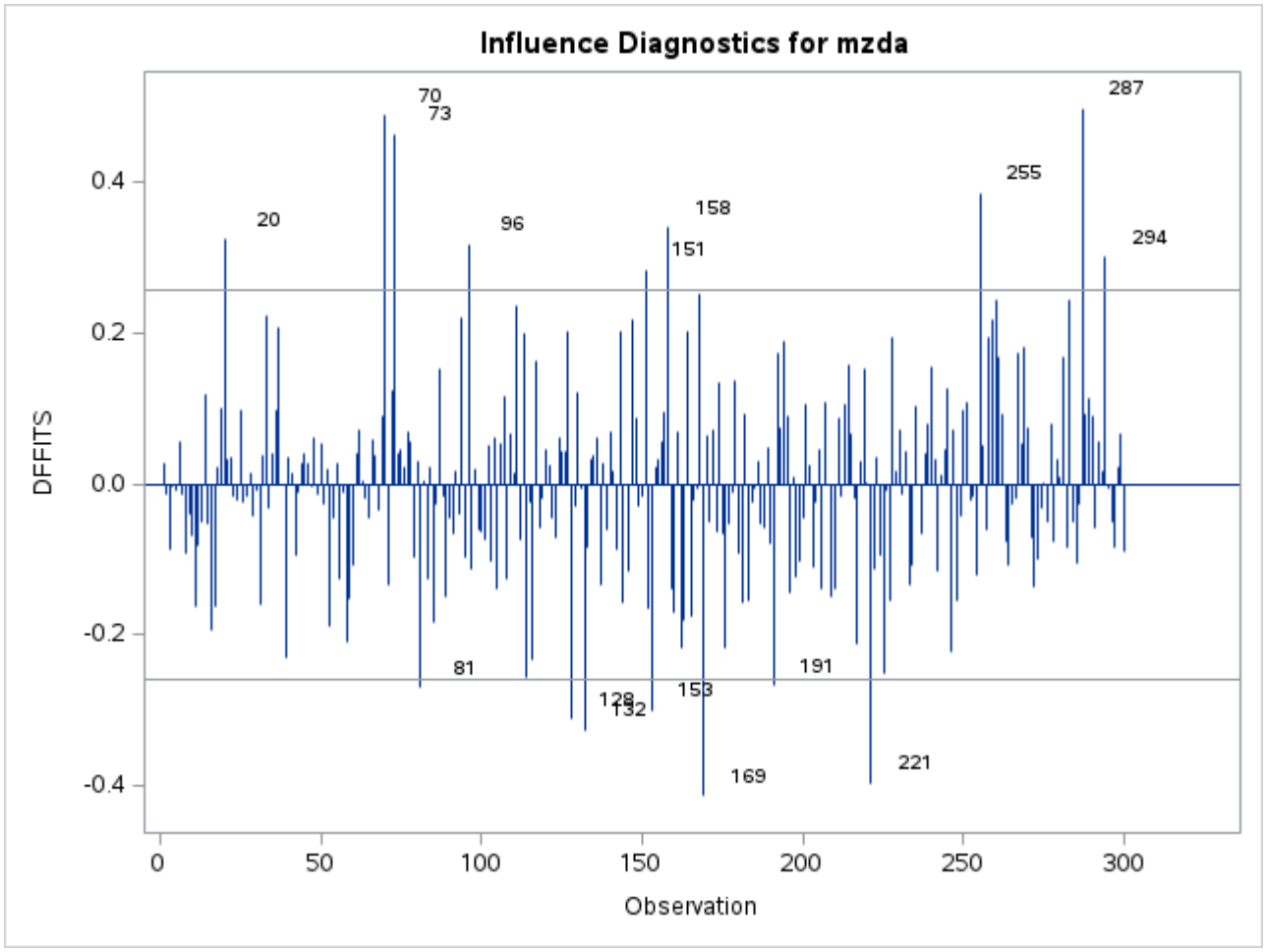
Test of First and Second Moment Specification		
DF	Chi-Square	Pr > ChiSq
14	19.39	0.1507

Mzda Model - Plots of Diagnostic Statistics

The REG Procedure
Model: MODEL1
Dependent Variable: mzda




Cook's D for mzda
Cook's D
Observation
0.05
0.04
0.03
0.02
0.01
0.00
0
50
100
150
200
250
300
70
73
287
169
221
255
158
132
20
96
153
294
128
81
151
191


Influence Diagnostics for mzda
DFFITS
Observation
0.4
0.2
0.0
-0.2
-0.4
0
50
100
150
200
250
300
70
73
287
255
20
158
96
294
151
81
191
153
128
132
169
221

Mzda Model - Plots of Diagnostic Statistics

The MEANS Procedure

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
CooksD	Cook's D Influence Statistic	300	0.003	0.007	0.000	0.048
DFFits	Standard Influence on Predicted Value	300	0.001	0.132	-0.413	0.497