

Backward Elimination Using p-values

The GLMSELECT Procedure

Data Set	MYDATA.CARS4
Dependent Variable	LogPrice
Selection Method	Backward
Select Criterion	Significance Level
Stop Criterion	Significance Level
Stay Significance Level (SLS)	0.1
Effect Hierarchy Enforced	Single

Number of Observations Read	81
Number of Observations Used	81

Dimensions	
Number of Effects	13
Number of Parameters	13

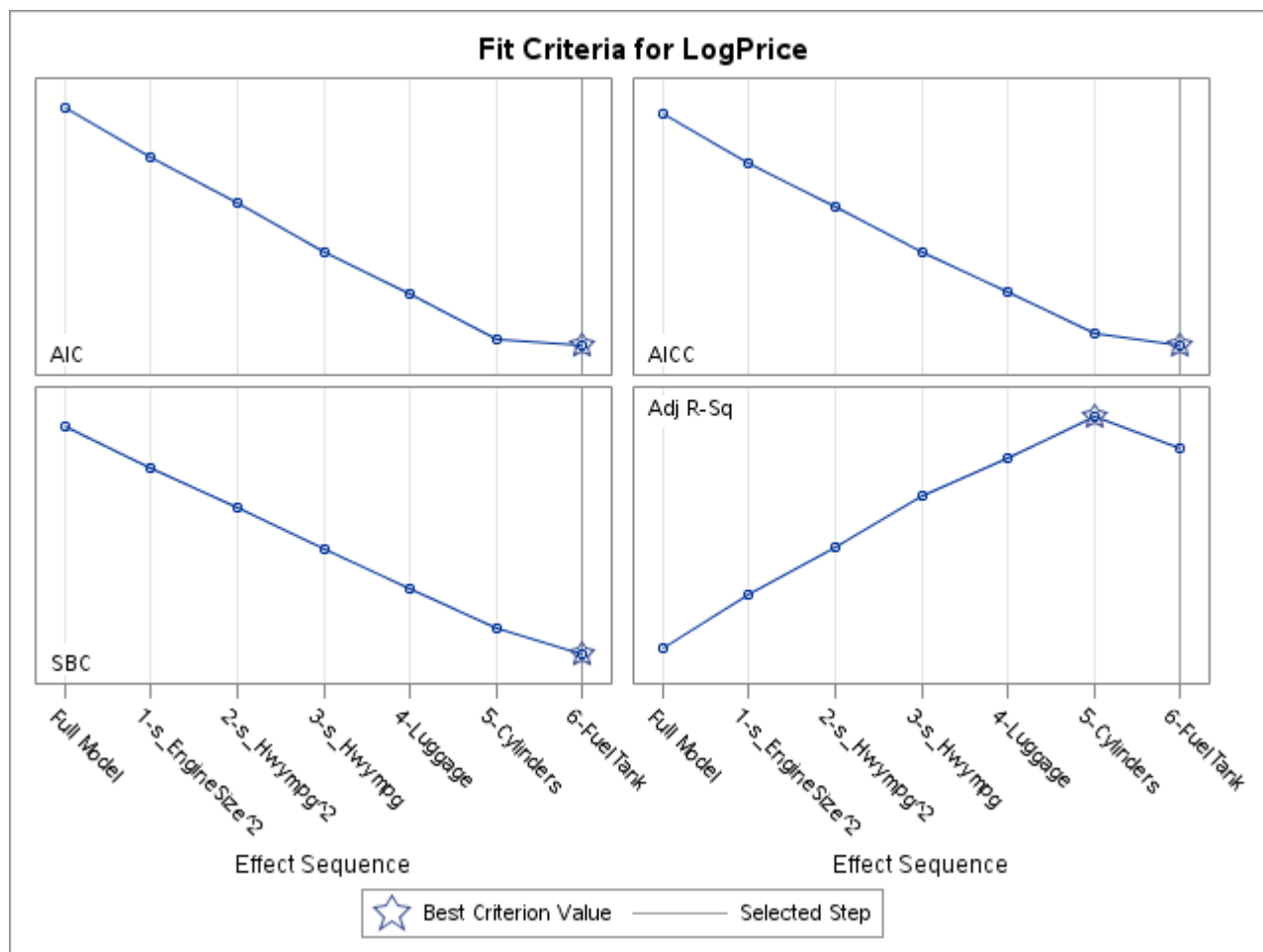
Backward Elimination Using p-values

The GLMSELECT Procedure

Backward Selection Summary				
Step	Effect Removed	Number Effects In	F Value	Pr > F
0		13		
1	s_EngineSize^2	12	0.05	0.8297
2	s_Hwypmg^2	11	0.14	0.7079
3	s_Hwypmg	10	0.03	0.8710
4	Luggage	9	0.29	0.5929
5	Cylinders	8	0.19	0.6671
6	FuelTank	7	1.62	0.2066

Selection stopped because the next candidate for removal has SLS < 0.1.

Stop Details					
Candidate For	Effect	Candidate Significance		Compare Significance	
Removal	s_Horsepower^2	0.0522	<	0.1000	(SLS)



Backward Elimination Using p-values

The GLMSELECT Procedure Selected Model

The selected model is the model at the last step (Step 6).

Effects:	Intercept s_Citympg s_Citympg ² s_EngineSize s_Horsepower s_Horsepower ² Weight
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Analysis of Variance				
Source	DF	Sum of Squares	Mean Square	F Value
Model	6	13.13371	2.18895	53.14
Error	74	3.04807	0.04119	
Corrected Total	80	16.18179		

Root MSE	0.20295
Dependent Mean	2.82388
R-Square	0.8116
Adj R-Sq	0.7964
AIC	-168.67506
AICC	-166.67506

SBC	-234.91391
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Parameter Estimates				
Parameter	DF	Estimate	Standard Error	t Value
Intercept	1	1.581640	0.458723	3.45
s_Citympg	1	-0.038770	0.012692	-3.05
s_Citympg^2	1	0.001968	0.000587	3.35
s_EngineSize	1	-0.170680	0.060525	-2.82
s_Horsepower	1	0.004417	0.001233	3.58
s_Horsepower^2	1	-0.000014810	0.000007506	-1.97
Weight	1	0.000409	0.000152	2.69

Stepwise Selection Using AICC

The GLMSELECT Procedure

Data Set	MYDATA.CARS4
Dependent Variable	LogPrice
Selection Method	Stepwise
Select Criterion	AICC
Stop Criterion	AICC
Effect Hierarchy Enforced	Single

Number of Observations Read	81
Number of Observations Used	81

Dimensions	
Number of Effects	13
Number of Parameters	13

Stepwise Selection Using AICC

The GLMSELECT Procedure

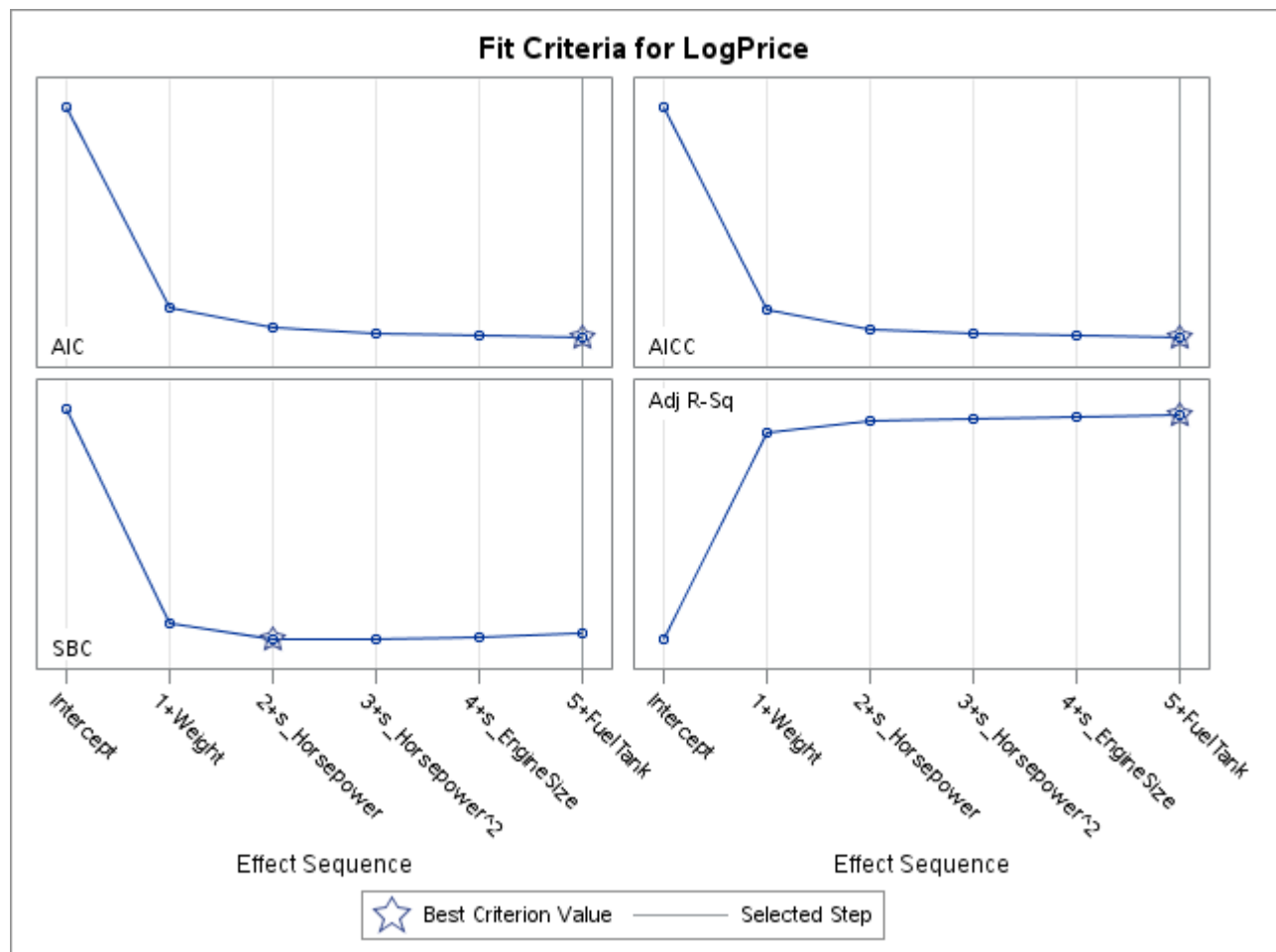
Stepwise Selection Summary				
Step	Effect Entered	Effect Removed	Number Effects In	AICC
0	Intercept		1	-45.3017
1	Weight		2	-146.7906
2	s_Horsepower		3	-156.8064

* Optimal Value of Criterion

Stepwise Selection Summary				
Step	Effect Entered	Effect Removed	Number Effects In	AICC
3	s_Horsepower^2		4	-158.9003
4	s_EngineSize		5	-159.7257
5	FuelTank		6	-160.4949*
* Optimal Value of Criterion				

Selection stopped at a local minimum of the AICC criterion.

Stop Details				
Candidate For	Effect	Candidate AICC		Compare AICC
Entry	Cylinders	-159.1391	>	-160.4949
Removal	s_Horsepower^2	-159.7459	>	-160.4949



Stepwise Selection Using AICC

The GLMSELECT Procedure Selected Model

The selected model is the model at the last step (Step 5).

Effects:	Intercept s_EngineSize s_Horsepower s_Horsepower^2 FuelTank Weight
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Analysis of Variance				
Source	DF	Sum of Squares	Mean Square	F Value
Model	5	12.79036	2.55807	56.57
Error	75	3.39143	0.04522	
Corrected Total	80	16.18179		

Root MSE	0.21265
Dependent Mean	2.82388
R-Square	0.7904
Adj R-Sq	0.7764
AIC	-162.02910
AICC	-160.49486
SBC	-230.66241

Parameter Estimates				
Parameter	DF	Estimate	Standard Error	t Value
Intercept	1	1.276910	0.450509	2.83
s_EngineSize	1	-0.104482	0.059656	-1.75
s_Horsepower	1	0.004659	0.001283	3.63
s_Horsepower^2	1	-0.000013128	0.000007615	-1.72
FuelTank	1	0.031462	0.018190	1.73
Weight	1	0.000360	0.000165	2.19

Forward Selection Using Adjusted R-Squared

The GLMSELECT Procedure

Data Set	MYDATA.CARS4
Dependent Variable	LogPrice
Selection Method	Forward
Select Criterion	Adj R-Sq
Stop Criterion	Adj R-Sq
Effect Hierarchy Enforced	Single

Number of Observations Read	81
Number of Observations Used	81

Dimensions

Dimensions	
Number of Effects	13
Number of Parameters	13

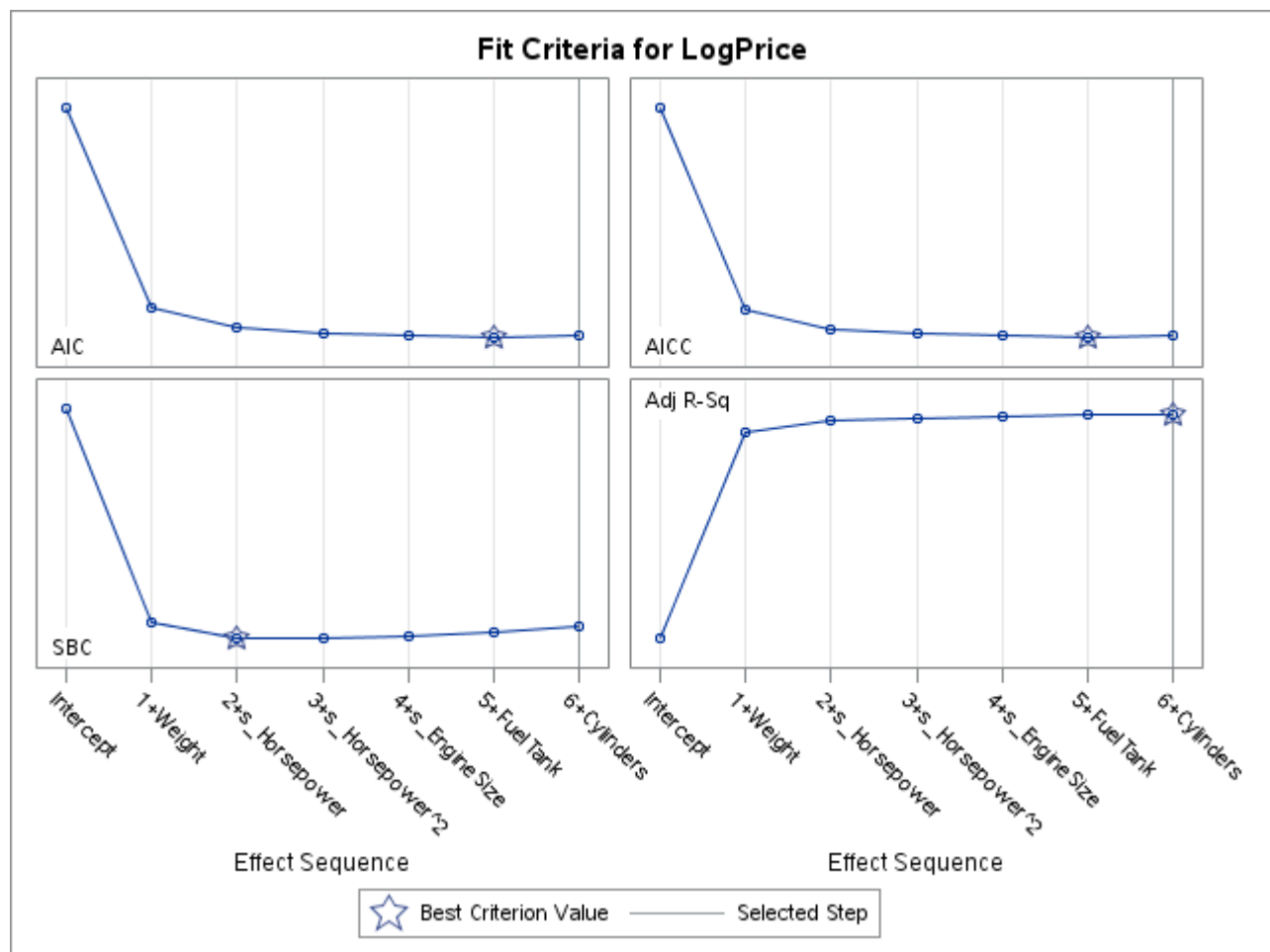
Forward Selection Using Adjusted R-Squared

The GLMSELECT Procedure

Forward Selection Summary			
Step	Effect Entered	Number Effects In	Adjusted R-Square
0	Intercept	1	0.0000
1	Weight	2	0.7183
2	s_Horsepower	3	0.7547
3	s_Horsepower^2	4	0.7646
4	s_EngineSize	5	0.7706
5	FuelTank	6	0.7764
6	Cylinders	7	0.7765*
* Optimal Value of Criterion			

Selection stopped at a local maximum of the AdjRSq criterion.

Stop Details				
Candidate For	Effect	Candidate Adj-RSq		Compare Adj-RSq
Entry	Luggage	0.7758	<	0.7765



Forward Selection Using Adjusted R-Squared

The GLMSELECT Procedure Selected Model

The selected model is the model at the last step (Step 6).

Effects:	Intercept Cylinders s_EngineSize s_Horsepower s_Horsepower^2 FuelTank Weight
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Analysis of Variance				
Source	DF	Sum of Squares	Mean Square	F Value
Model	6	12.83652	2.13942	47.33
Error	74	3.34527	0.04521	
Corrected Total	80	16.18179		

Root MSE	0.21262
Dependent Mean	2.82388
R-Square	0.7933
Adj R-Sq	0.7765
AIC	-161.13915
AICC	-159.13915

SBC	-227.37800
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Parameter Estimates				
Parameter	DF	Estimate	Standard Error	t Value
Intercept	1	1.018811	0.517822	1.97
Cylinders	1	0.044192	0.043733	1.01
s_EngineSize	1	-0.150302	0.074926	-2.01
s_Horsepower	1	0.004375	0.001313	3.33
s_Horsepower^2	1	-0.000014030	0.000007666	-1.83
FuelTank	1	0.034125	0.018377	1.86
Weight	1	0.000362	0.000165	2.20