The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: lsalary

Number of Observations Read	209
Number of Observations Used	209

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	19.79020	6.59673	28.81	<.0001
Error	205	46.93196	0.22894		
Corrected Total	208	66.72217			

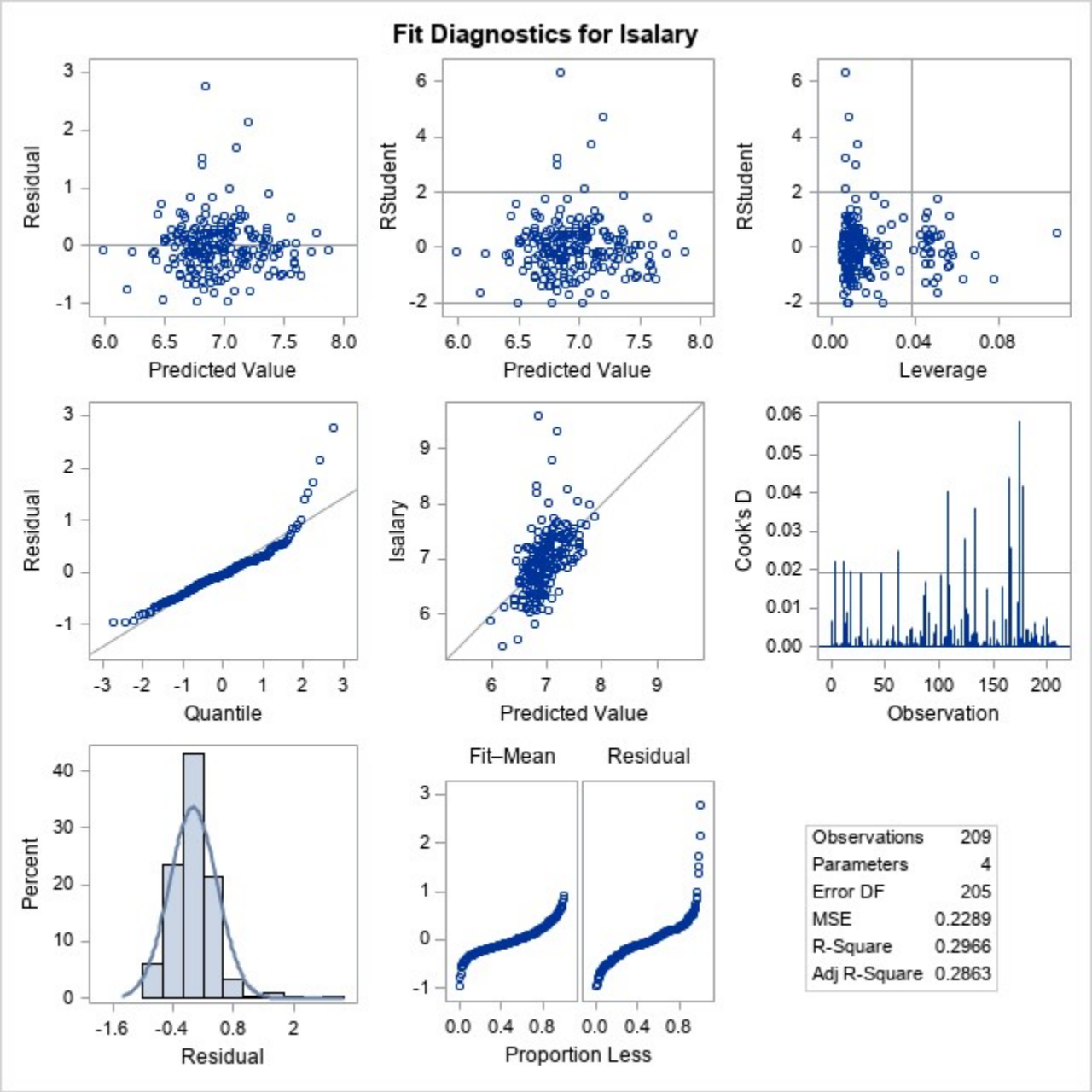
Root MSE	0.47847	R-Square	0.2966
Dependent Mean	6.95039	Adj R-Sq	0.2863
Coeff Var	6.88412		

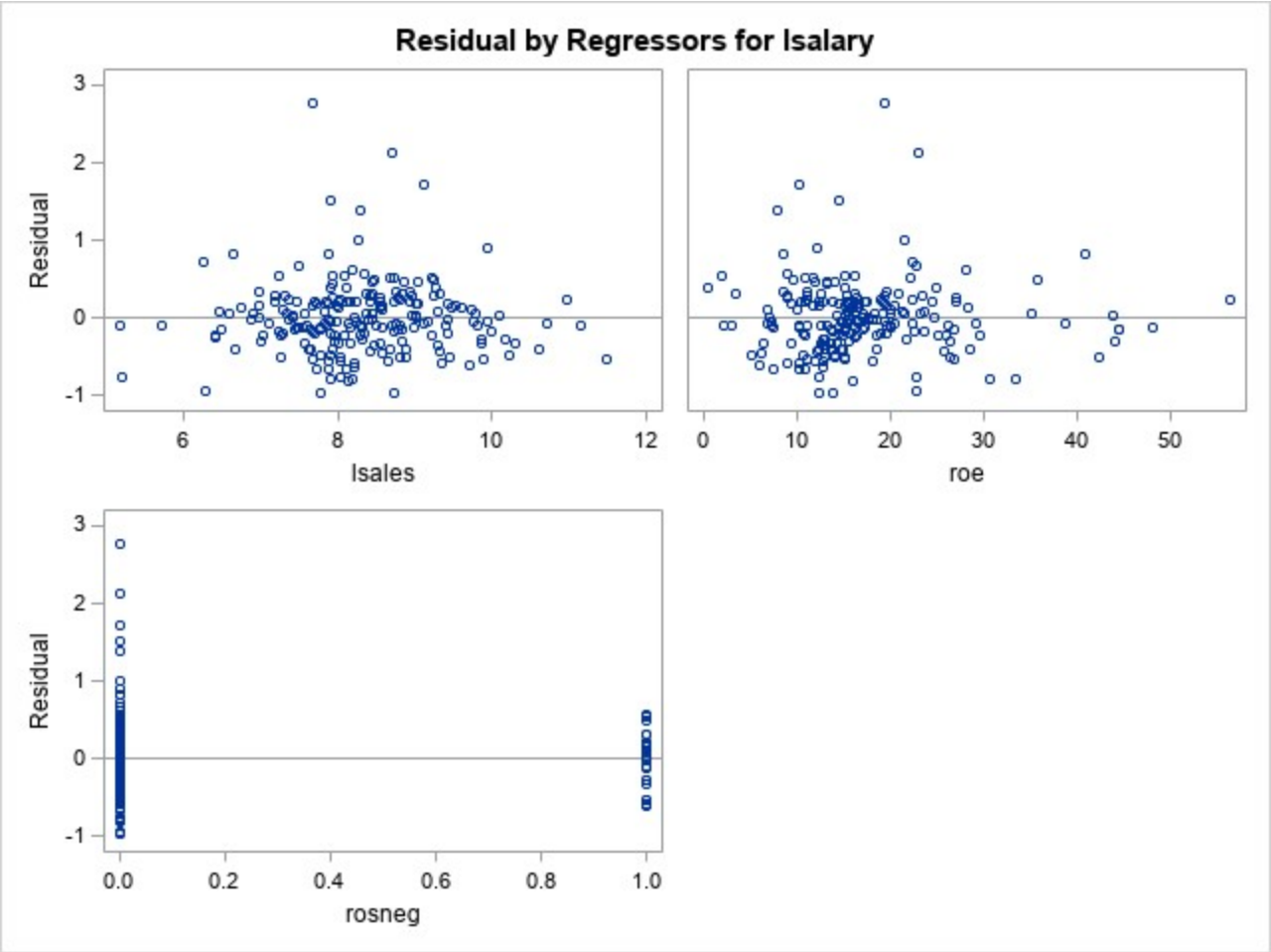
Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	4.29760	0.29325	14.65	<.0001
lsales	1	0.28839	0.03362	8.58	<.0001
roe	1	0.01666	0.00397	4.20	<.0001
rosneg	1	-0.22568	0.10934	-2.06	0.0403

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: lsalary




Residual by Regressors for lsalary
Residual
lsales
roe
Residual
rosneg

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: lsalary

Number of Observations Read	209
Number of Observations Used	209

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	20.39881	4.07976	17.88	<.0001
Error	203	46.32335	0.22819		
Corrected Total	208	66.72217			

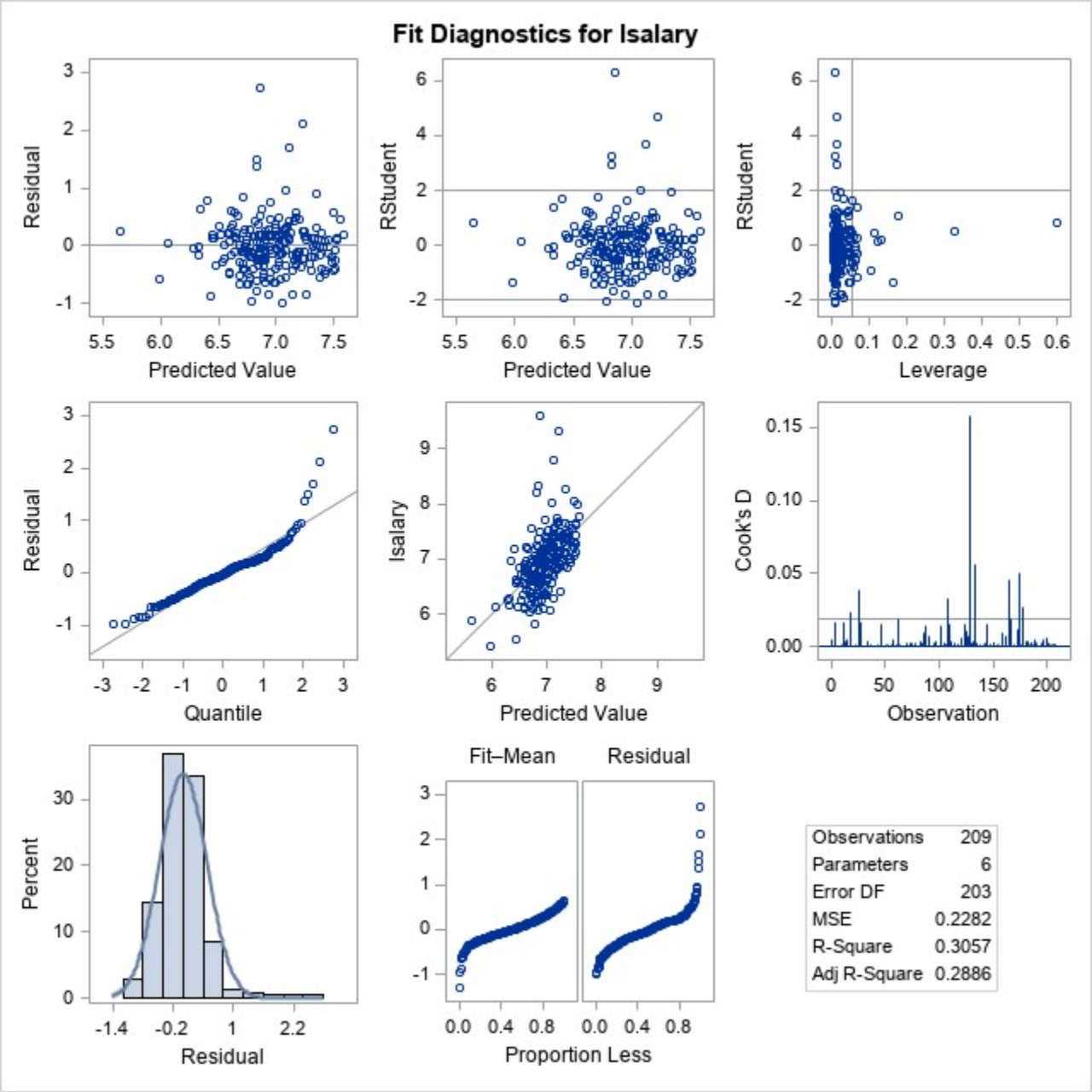
Root MSE	0.47770	R-Square	0.3057
Dependent Mean	6.95039	Adj R-Sq	0.2886
Coeff Var	6.87295		

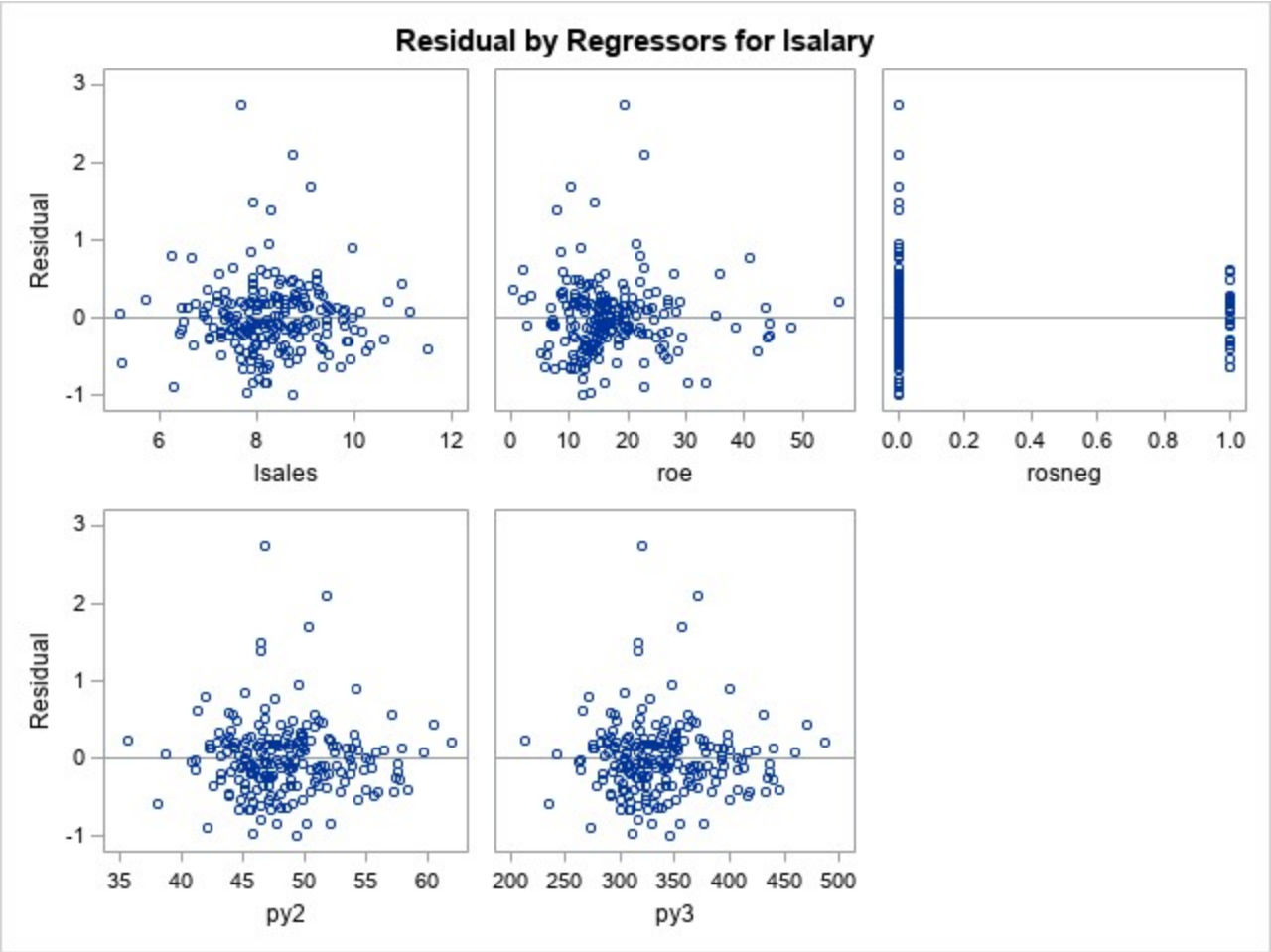
Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-12.46260	122.58246	-0.10	0.9191
lsales	1	-1.21552	17.77710	-0.07	0.9456
roe	1	-0.06889	1.02688	-0.07	0.9466
rosneg	1	0.96119	13.91841	0.07	0.9450
py2	1	1.14336	8.87894	0.13	0.8977
py3	1	-0.07334	0.42567	-0.17	0.8634

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: lsalary




Residual by Regressors for lsalary
Residual
lsales
roe
rosneg
py2
py3

The SAS System

The AUTOREG Procedure

Dependent Variable	lsalary

The SAS System

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	46.9319637	DFE	205
MSE	0.22894	Root MSE	0.47847
SBC	302.31587	AIC	288.946533
MAE	0.32896329	AICC	289.142612
MAPE	4.6859539	HQC	294.351835
Durbin-Watson	1.9582	Total R-Square	0.2966

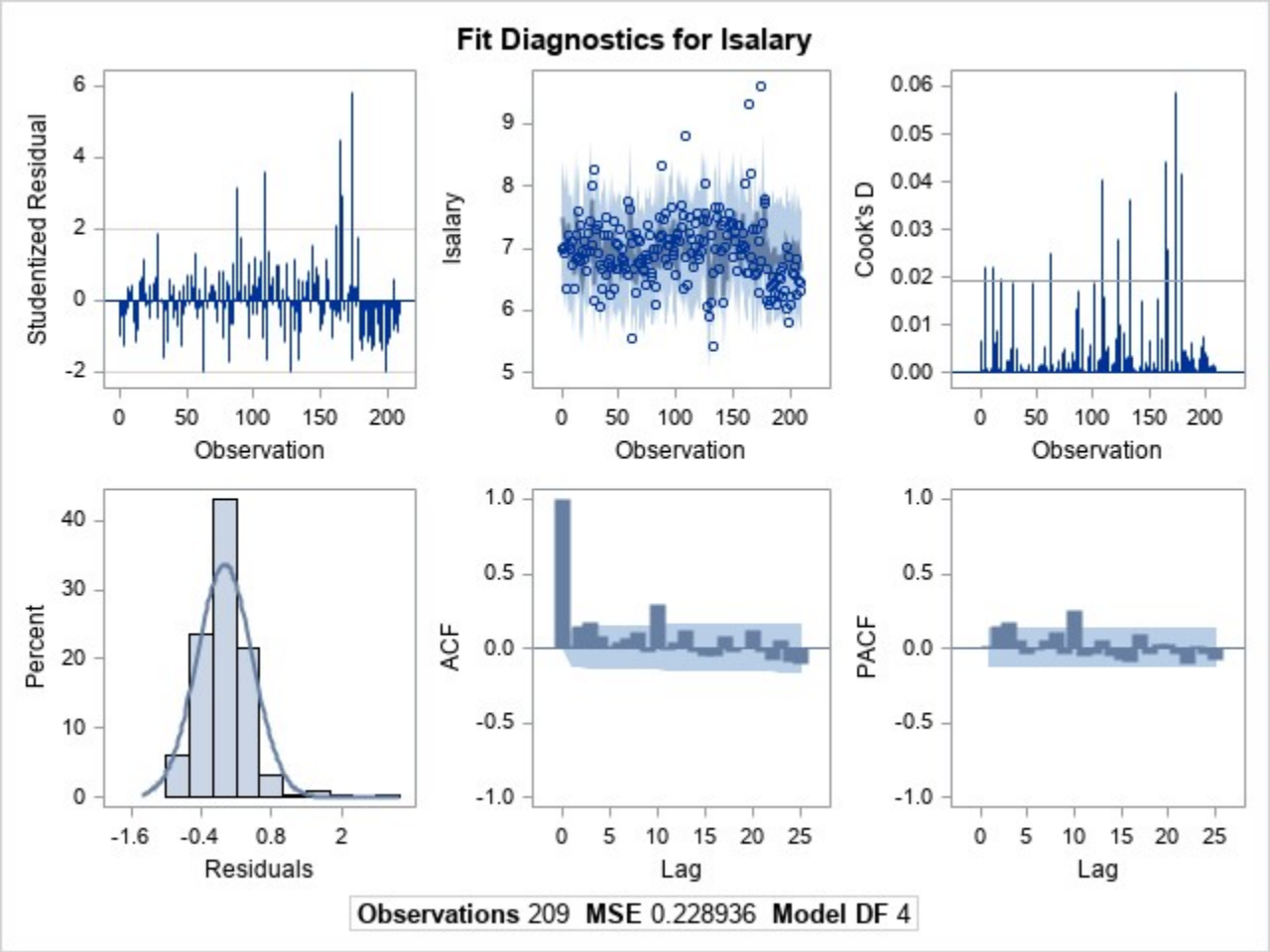
Miscellaneous Statistics			
Statistic	Value	Prob	Label
Normal Test	566.3407	<.0001	Pr > ChiSq

Ramsey's RESET Test		
Power	RESET	Pr > F
2	2.6500	0.1051
3	1.3335	0.2658
4	1.0735	0.3614

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	4.2976	0.2933	14.65	<.0001
lsales	1	0.2884	0.0336	8.58	<.0001
roe	1	0.0167	0.003968	4.20	<.0001
rosneg	1	-0.2257	0.1093	-2.06	0.0403

The SAS System

The AUTOREG Procedure



The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: lprice

Number of Observations Read	142
Number of Observations Used	142

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.86427	3.86427	30.79	<.0001
Error	140	17.57309	0.12552		
Corrected Total	141	21.43736			

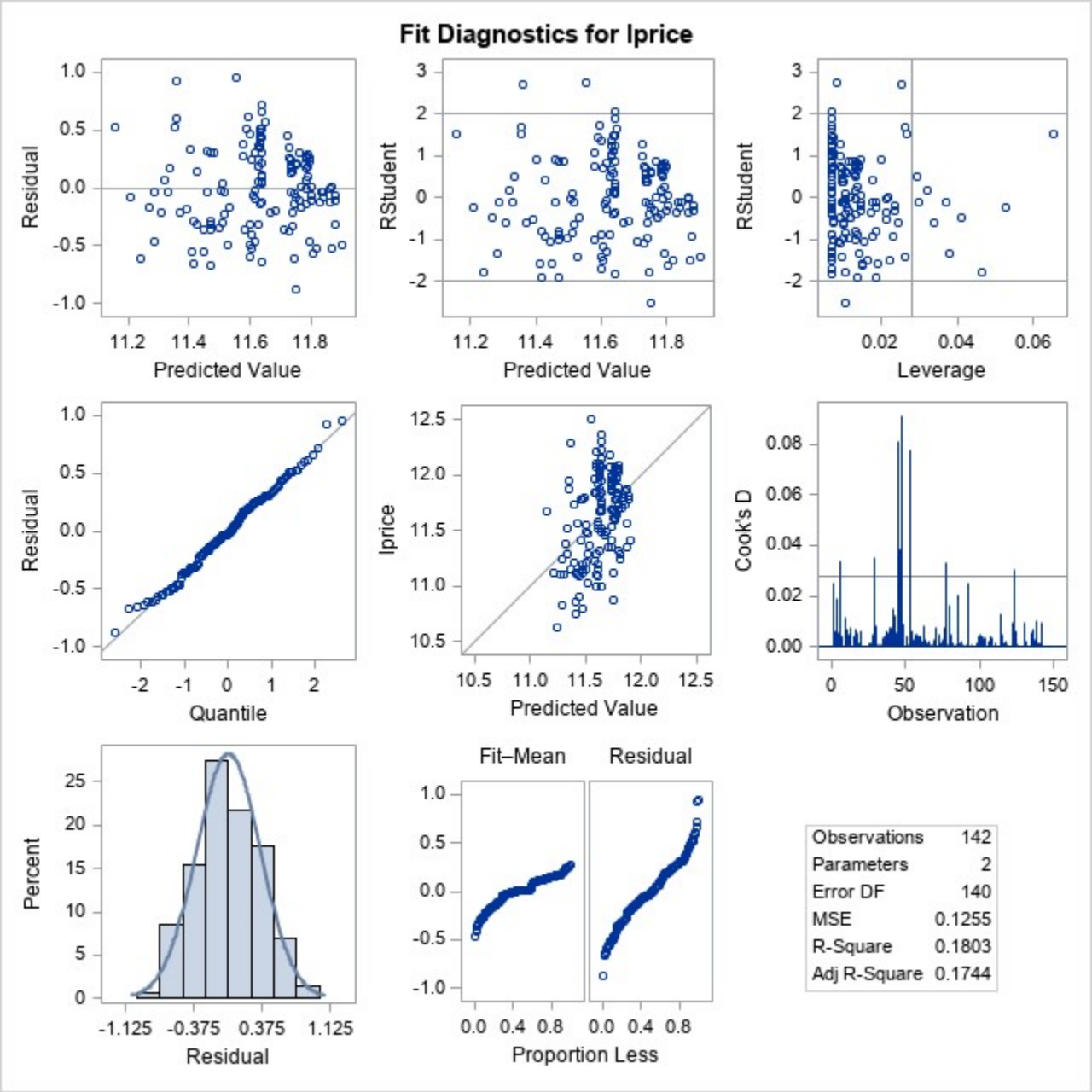
Root MSE	0.35429	R-Square	0.1803
Dependent Mean	11.62902	Adj R-Sq	0.1744
Coeff Var	3.04661		

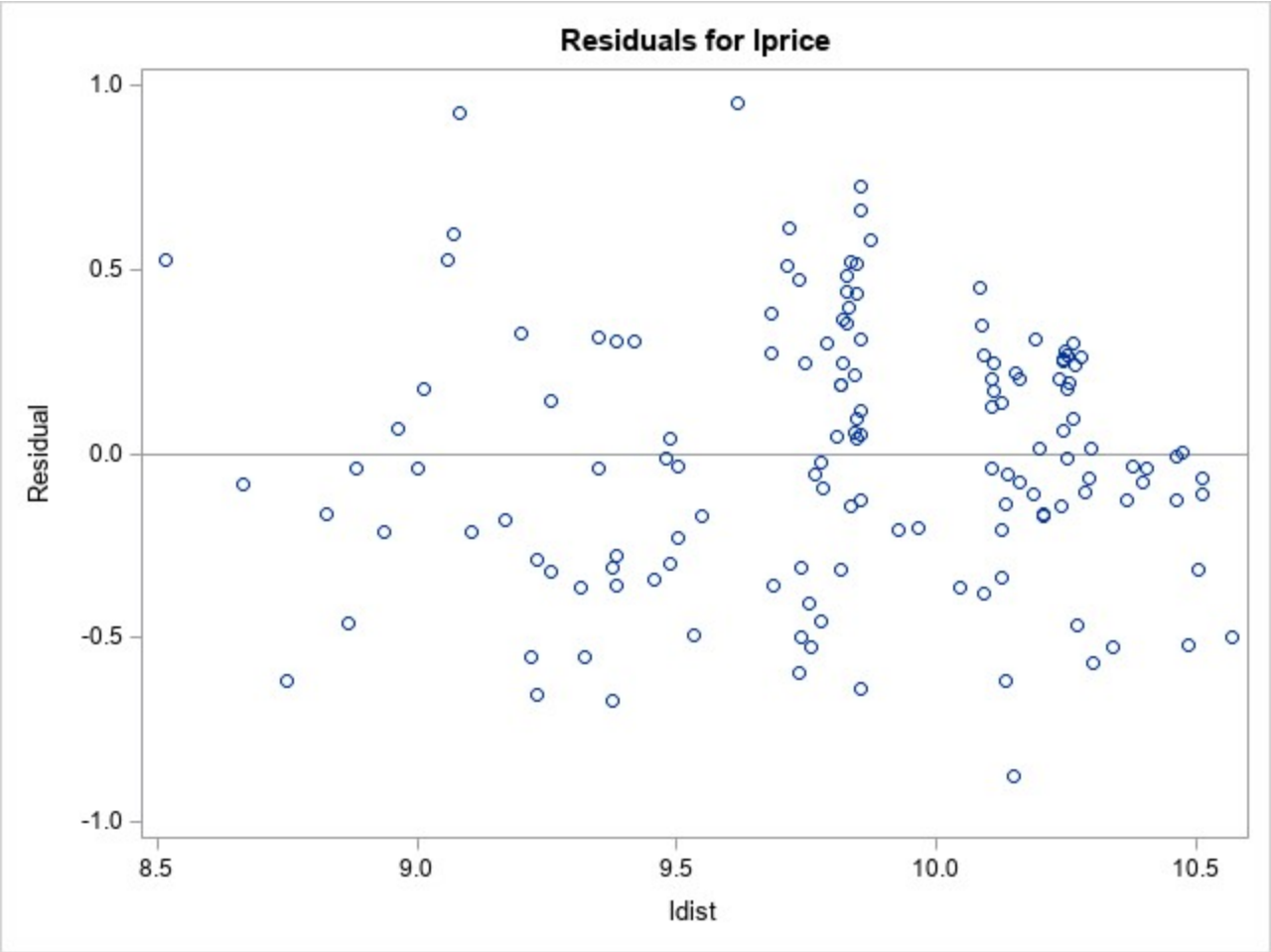
Parameter Estimates

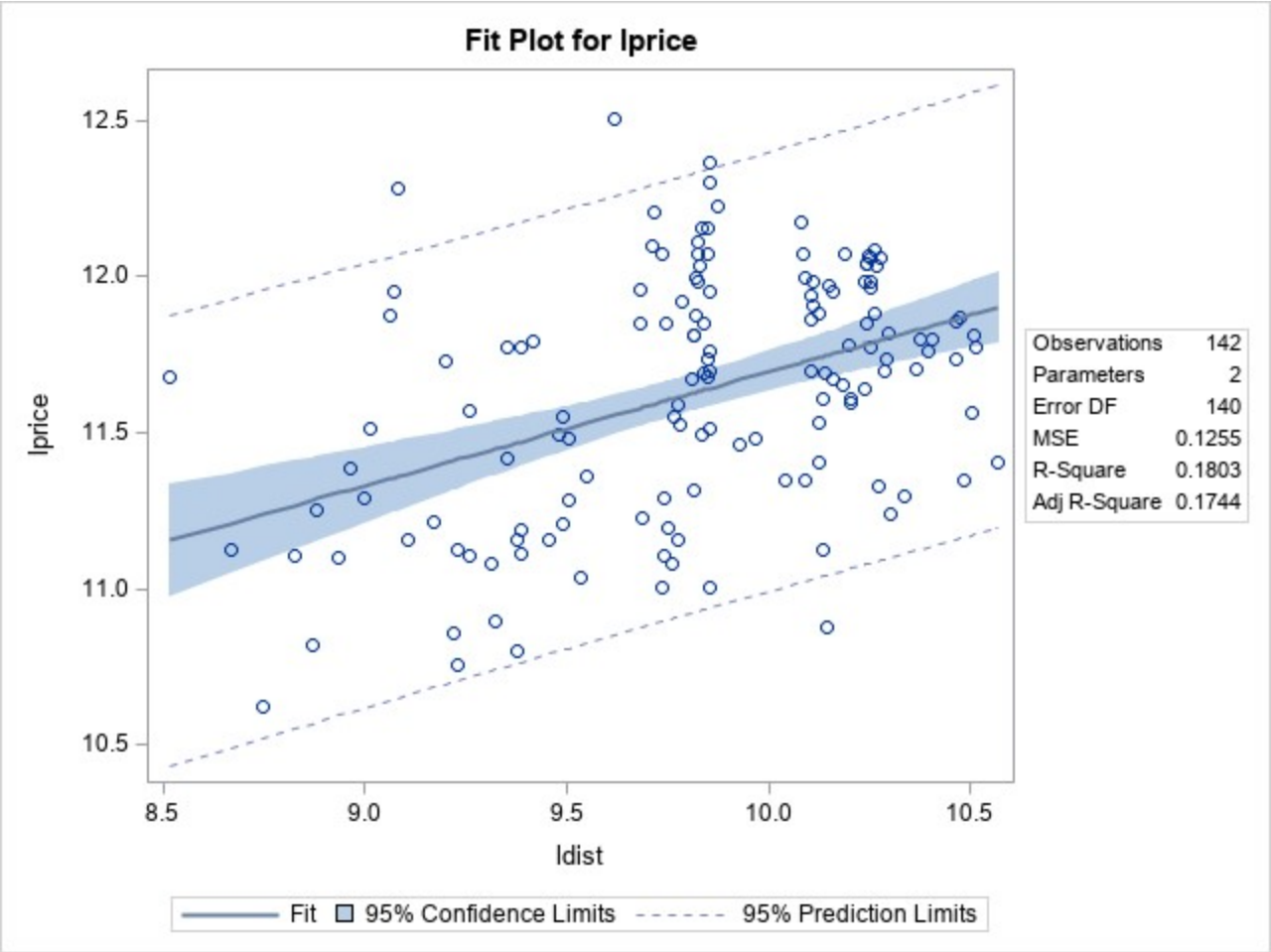
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	8.04716	0.64624	12.45	<.0001
ldist	1	0.36488	0.06576	5.55	<.0001

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: lprice




Residuals for lprice
Residual
1.0
0.5
0.0
-0.5
-1.0
8.5
9.0
9.5
10.0
10.5
ldist


Fit Plot for lprice
lprice
12.5
12.0
11.5
11.0
10.5
8.5
9.0
9.5
10.0
10.5
ldist
Observations 142
Parameters 2
Error DF 140
MSE 0.1255
R-Square 0.1803
Adj R-Square 0.1744
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: lprice

Number of Observations Read	142
Number of Observations Used	142

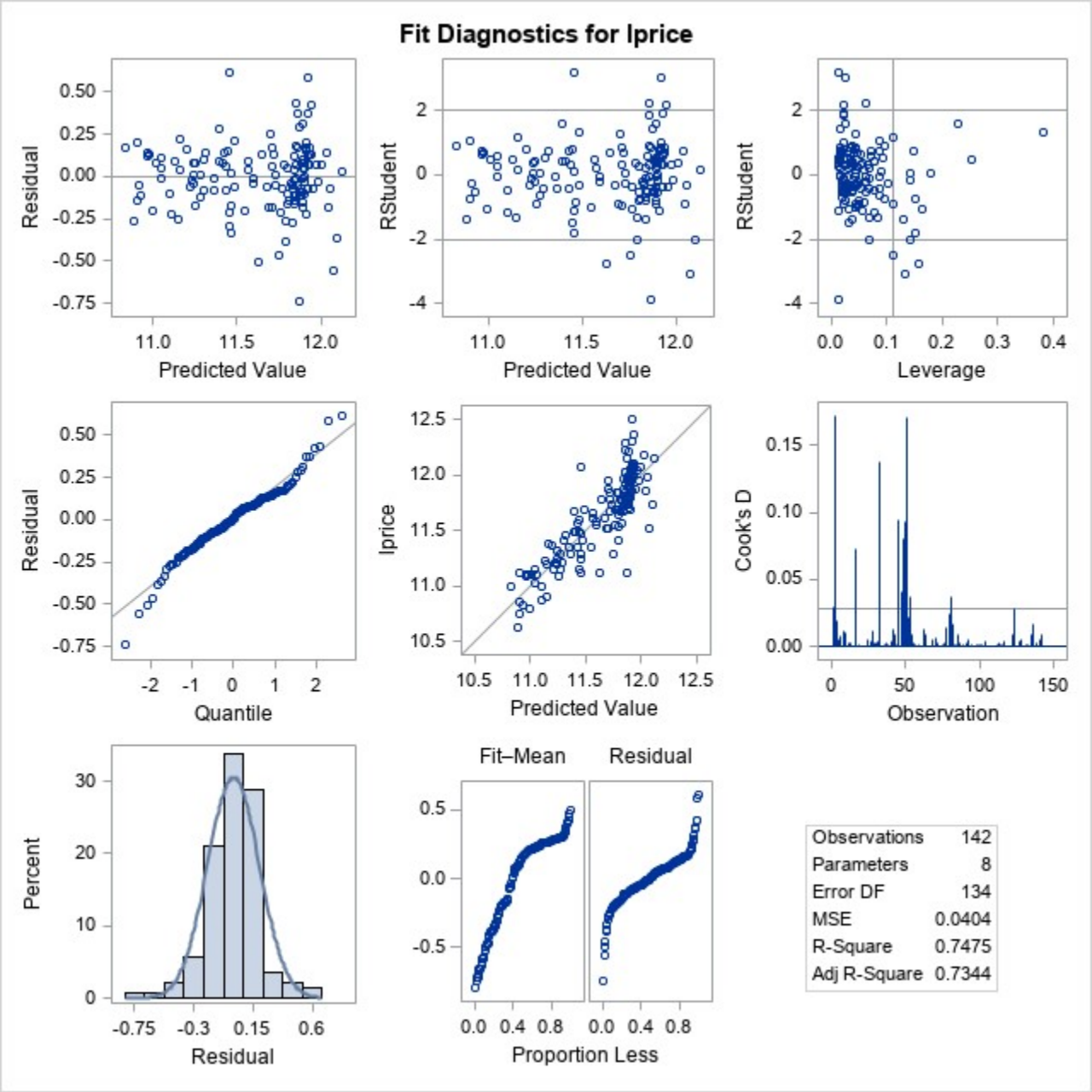
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	16.02533	2.28933	56.68	<.0001
Error	134	5.41203	0.04039		
Corrected Total	141	21.43736			

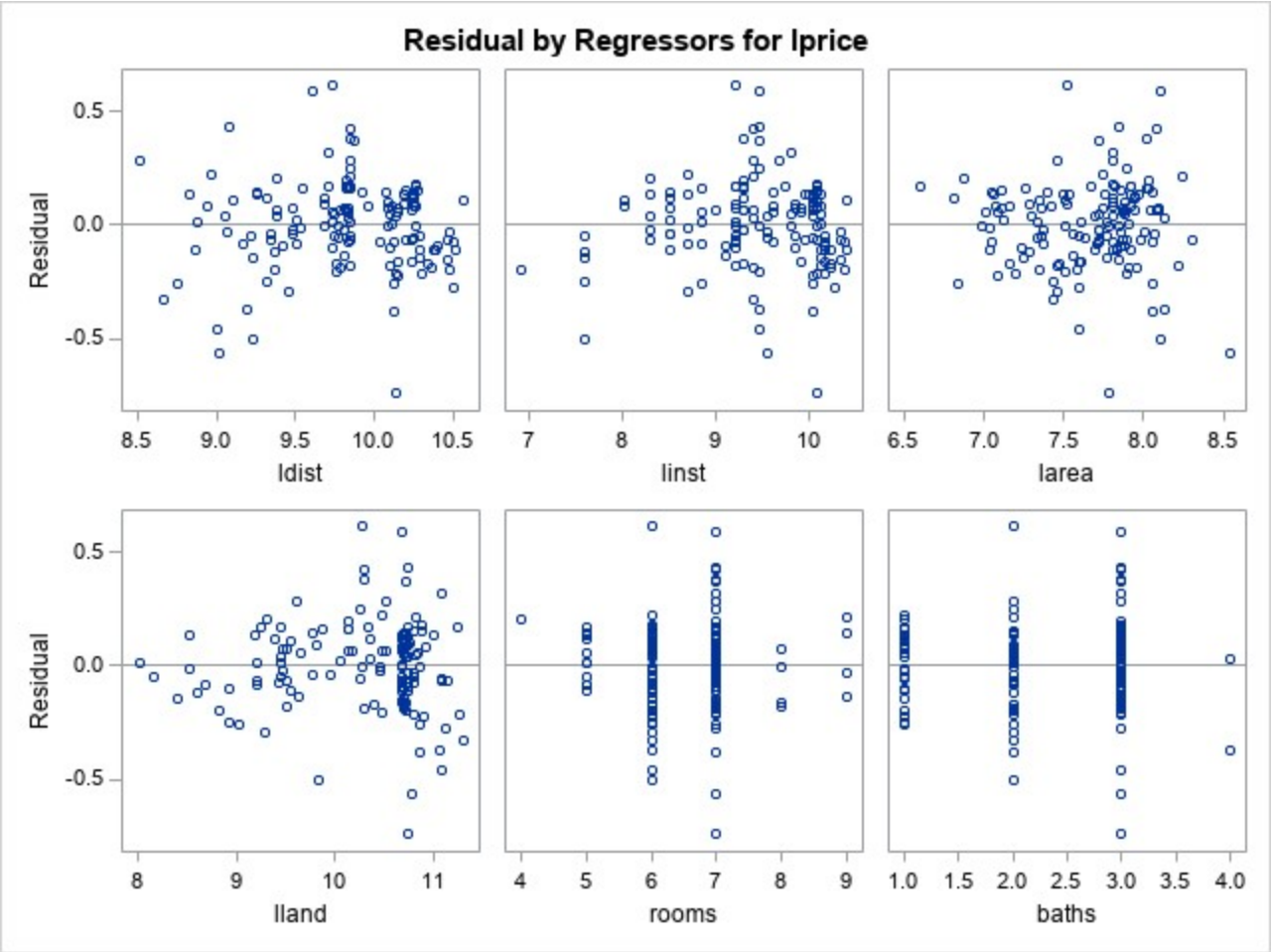
Root MSE	0.20097	R-Square	0.7475
Dependent Mean	11.62902	Adj R-Sq	0.7344
Coeff Var	1.72816		

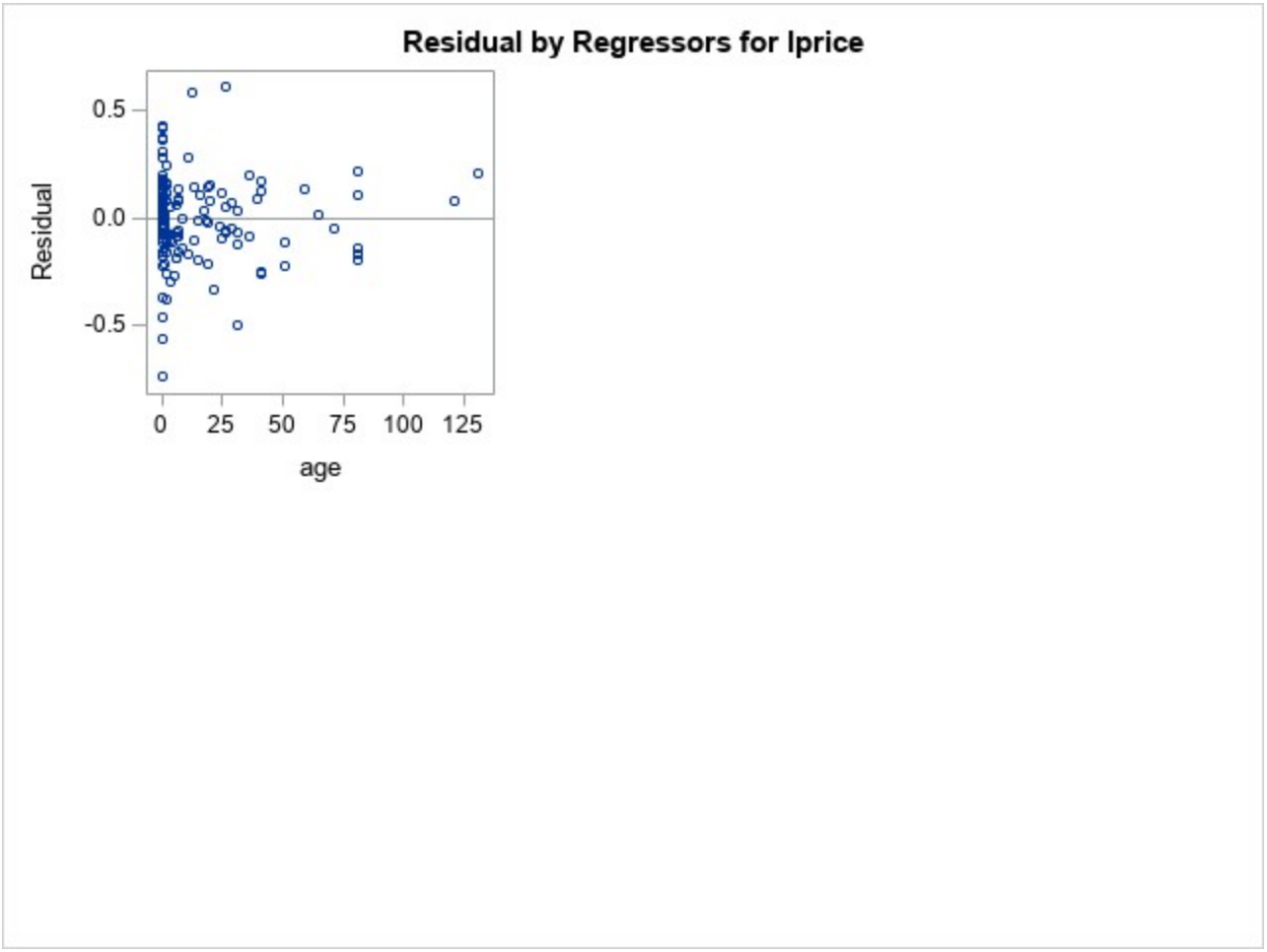
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	7.59233	0.64171	11.83	<.0001
ldist	1	0.05539	0.05762	0.96	0.3382
linst	1	-0.03903	0.05166	-0.76	0.4513
larea	1	0.31929	0.07642	4.18	<.0001
lland	1	0.07682	0.03950	1.94	0.0539
rooms	1	0.04253	0.02825	1.51	0.1346
baths	1	0.16692	0.04194	3.98	0.0001
age	1	-0.00357	0.00106	-3.37	0.0010

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: lprice




Residual by Regressors for lprice
Residual
0.5
0.0
-0.5
8.5
9.0
9.5
10.0
10.5
ldist
7
8
9
10
linst
6.5
7.0
7.5
8.0
8.5
larea
8
9
10
11
lland
4
5
6
7
8
9
rooms
1.0
1.5
2.0
2.5
3.0
3.5
4.0
baths


Residual by Regressors for lprice
Residual
0.5
0.0
-0.5
0
25
50
75
100
125
age

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: lprice

Number of Observations Read	142
Number of Observations Used	142

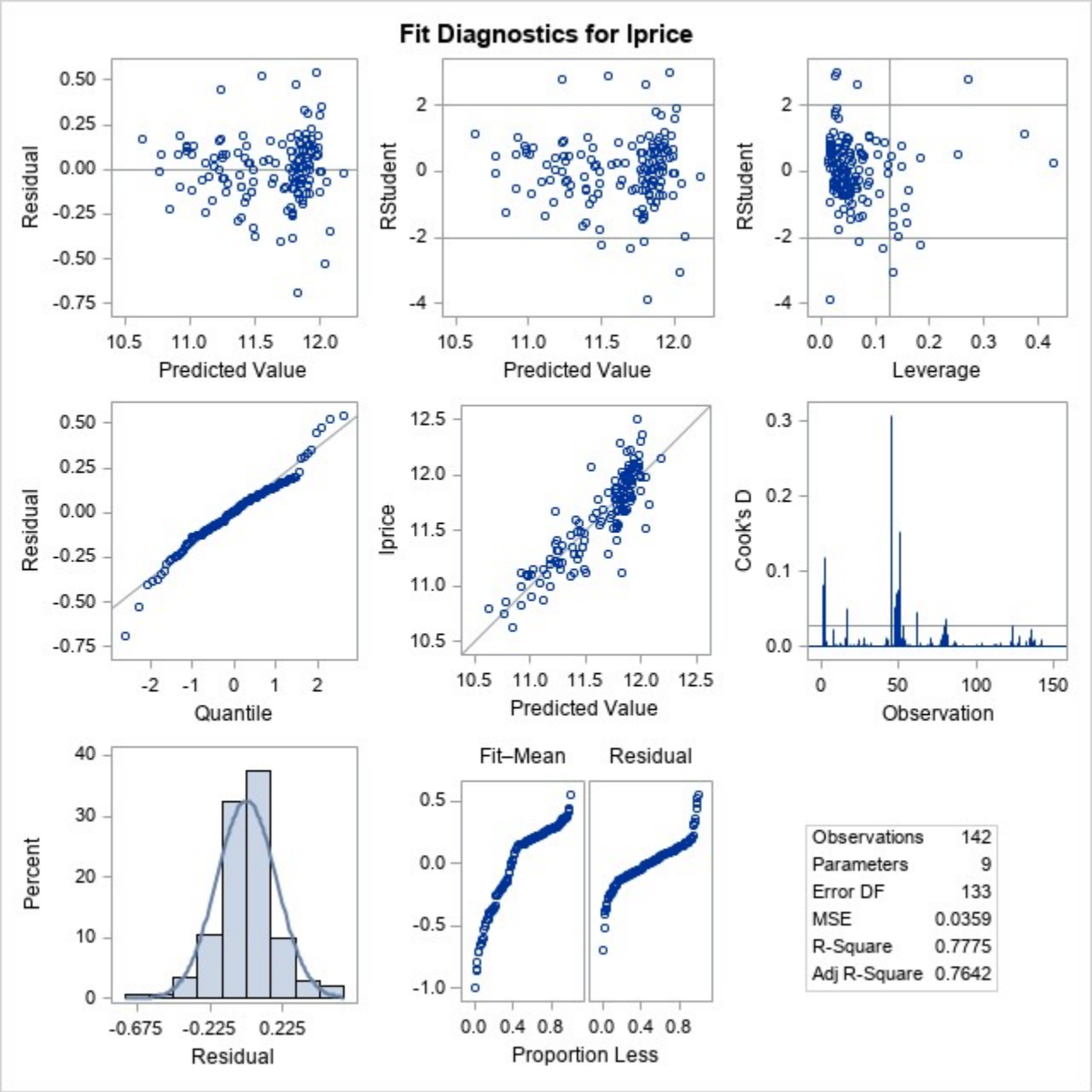
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	16.66861	2.08358	58.11	<.0001
Error	133	4.76875	0.03586		
Corrected Total	141	21.43736			

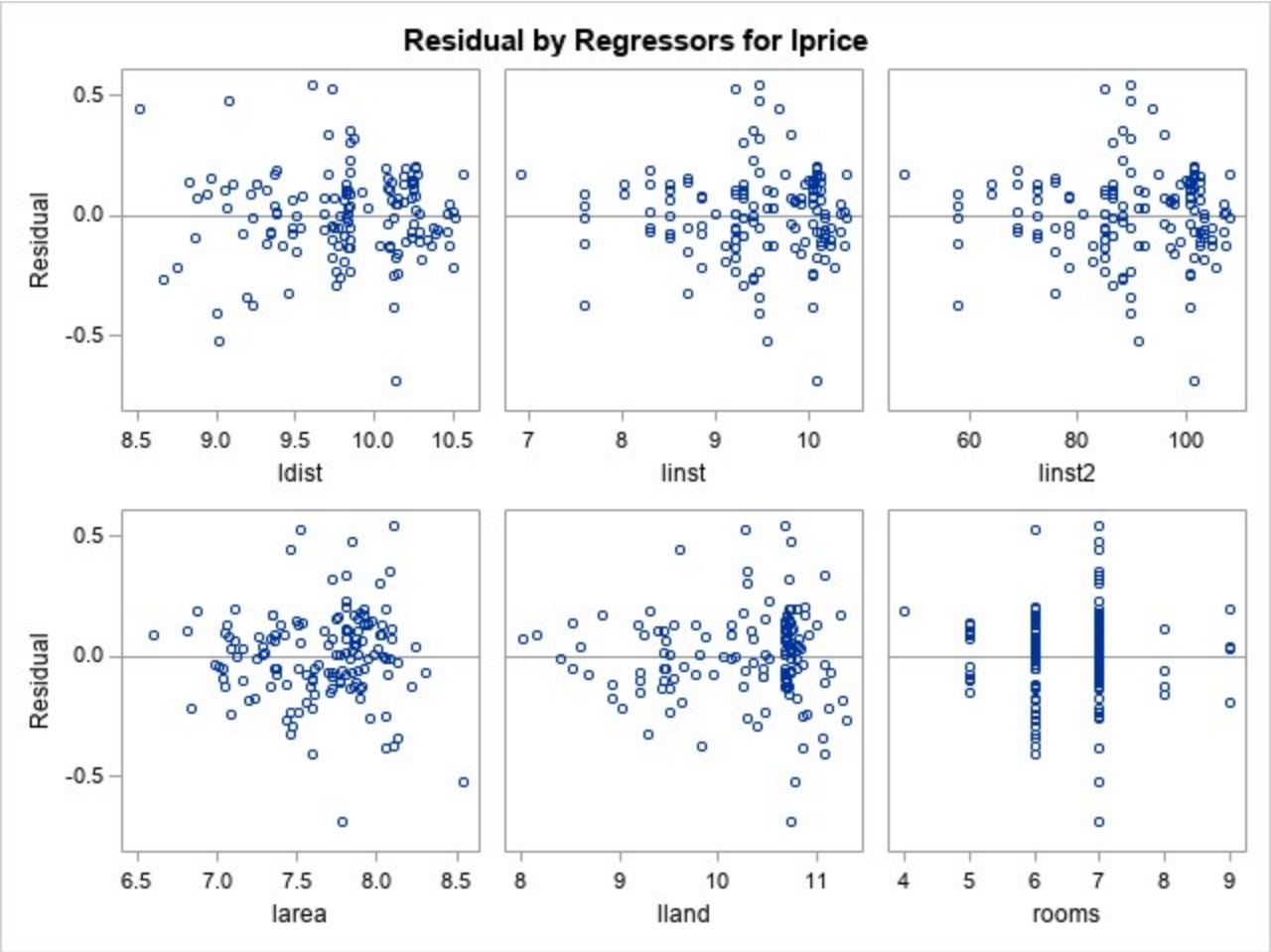
Root MSE	0.18935	R-Square	0.7775
Dependent Mean	11.62902	Adj R-Sq	0.7642
Coeff Var	1.62830		

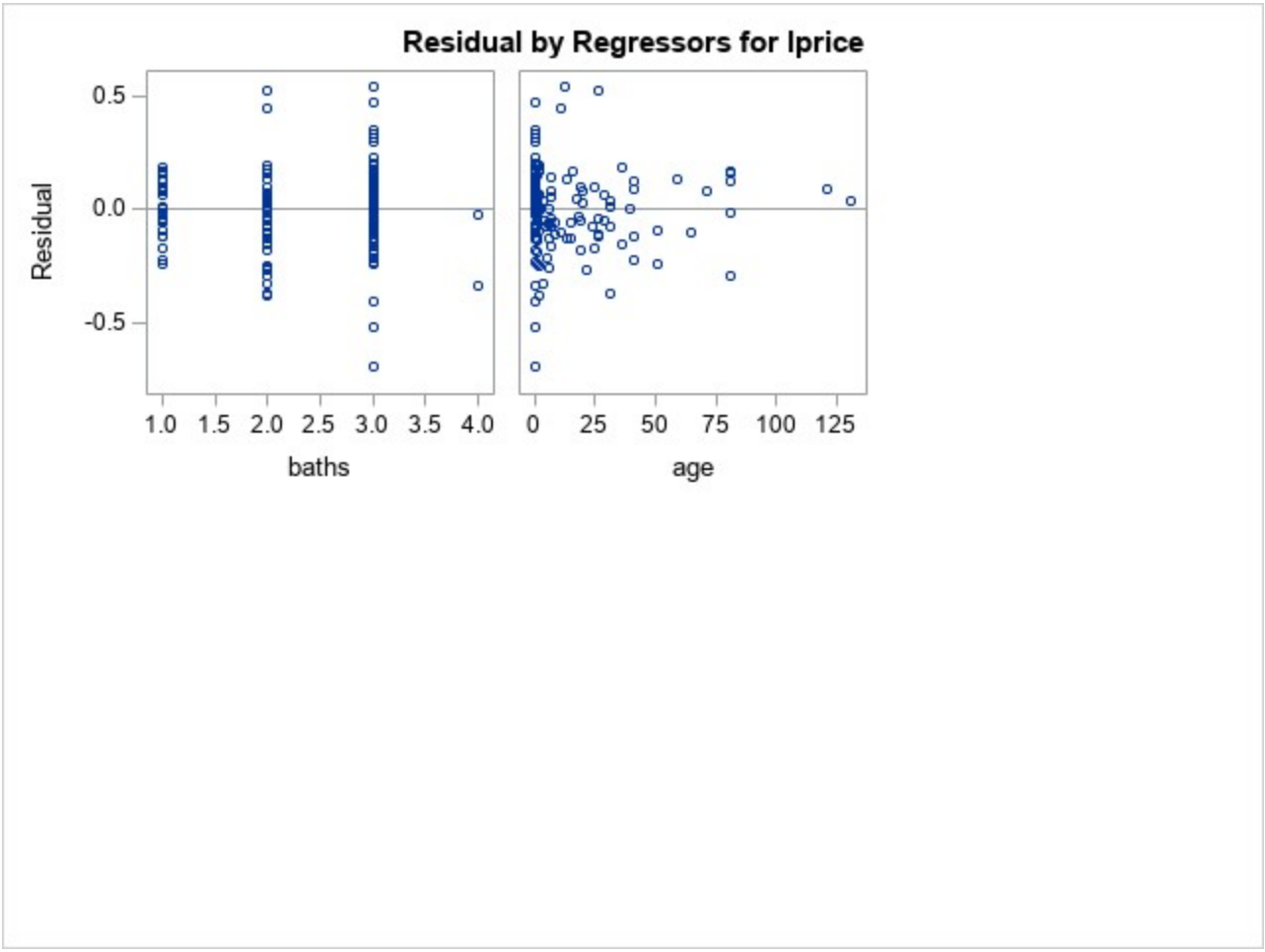
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-3.31802	2.64584	-1.25	0.2120
ldist	1	0.18526	0.06235	2.97	0.0035
linst	1	2.07296	0.50099	4.14	<.0001
linst2	1	-0.11933	0.02817	-4.24	<.0001
larea	1	0.35935	0.07262	4.95	<.0001
lland	1	0.09139	0.03738	2.44	0.0158
rooms	1	0.03811	0.02664	1.43	0.1549
baths	1	0.14953	0.03973	3.76	0.0003
age	1	-0.00293	0.00101	-2.90	0.0044

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: lprice




Residual by Regressors for lprice
Residual
0.5
0.0
-0.5
8.5
9.0
9.5
10.0
10.5
ldist
7
8
9
10
linst
60
80
100
linst2
6.5
7.0
7.5
8.0
8.5
larea
8
9
10
11
lland
4
5
6
7
8
9
rooms


Residual by Regressors for lprice
Residual
0.5
0.0
-0.5
1.0 1.5 2.0 2.5 3.0 3.5 4.0
baths
0 25 50 75 100 125
age

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: lprice

Number of Observations Read	142
Number of Observations Used	142

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	16.67255	1.85251	51.32	<.0001
Error	132	4.76481	0.03610		
Corrected Total	141	21.43736			

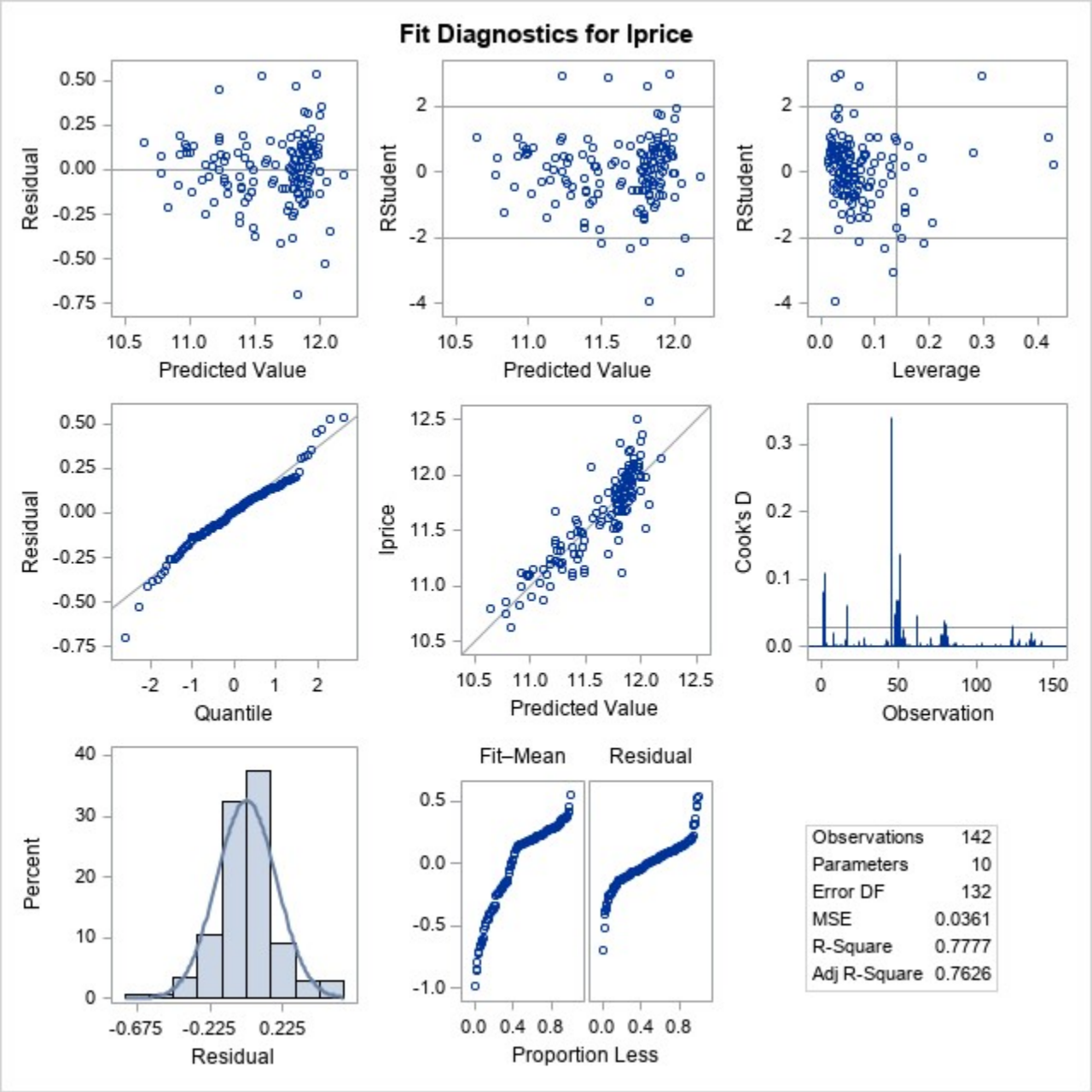
Root MSE	0.18999	R-Square	0.7777
Dependent Mean	11.62902	Adj R-Sq	0.7626
Coeff Var	1.63378		

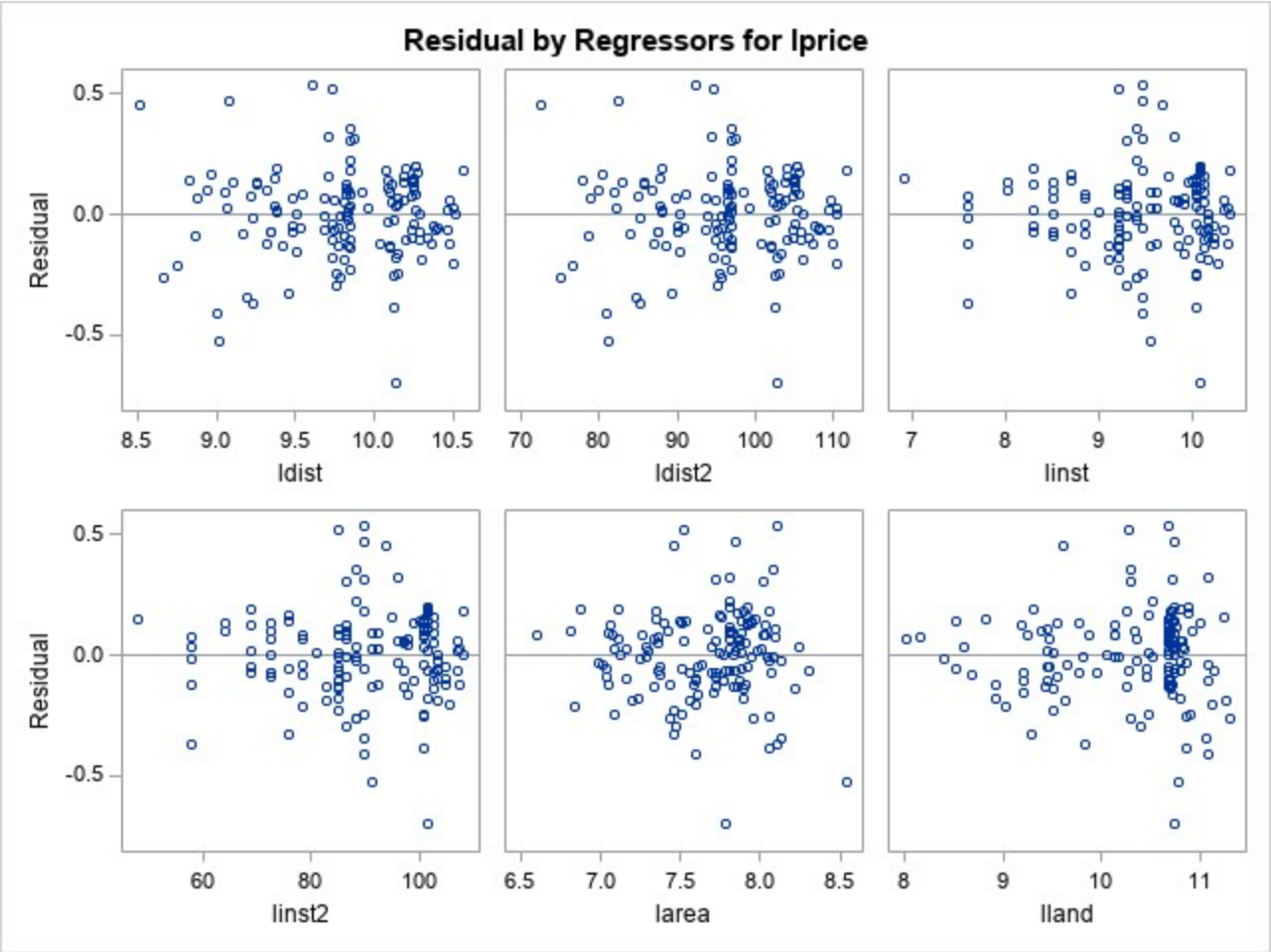
Parameter Estimates

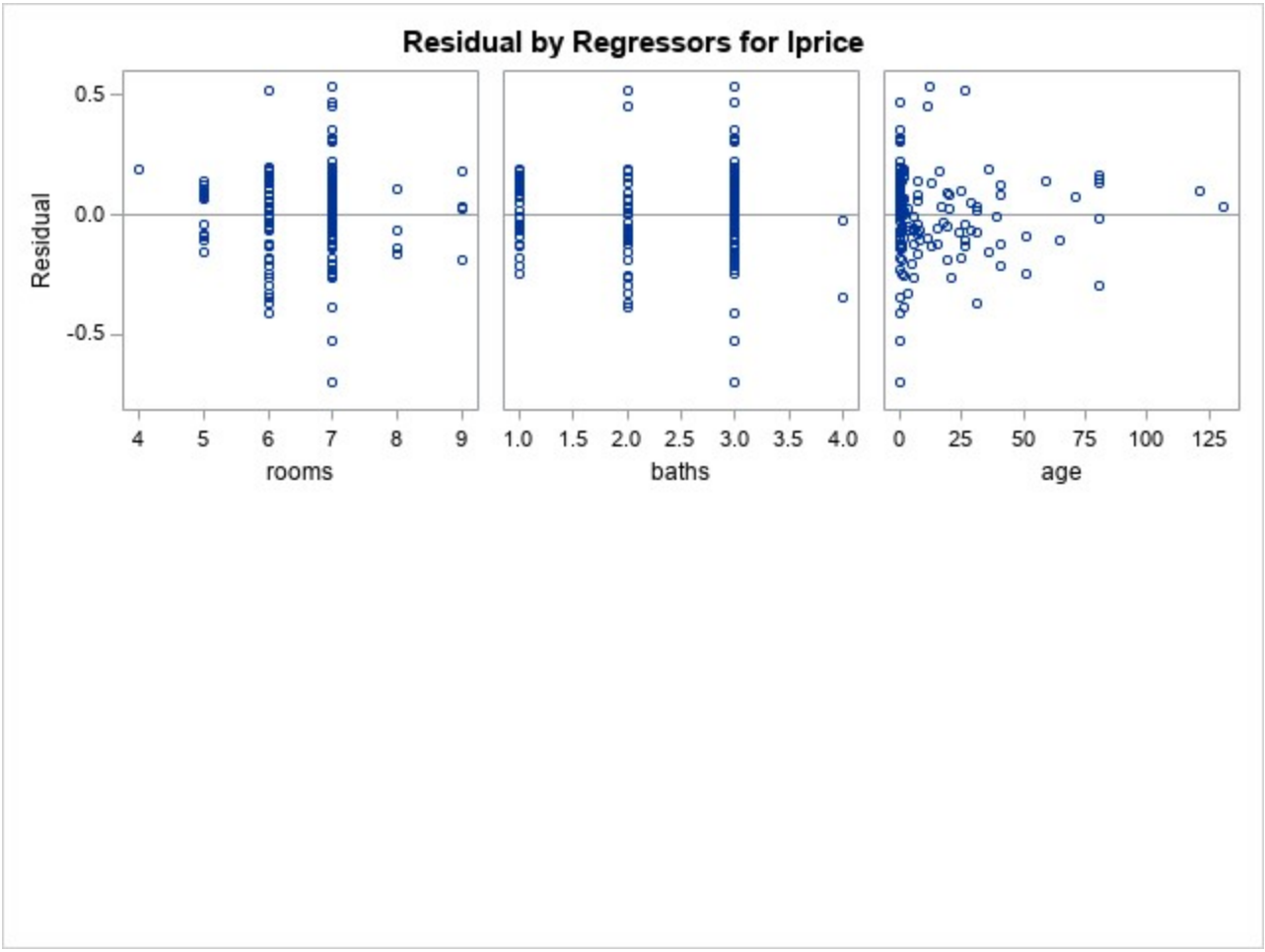
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-5.91613	8.29580	-0.71	0.4770
ldist	1	0.86956	2.07104	0.42	0.6753
ldist2	1	-0.03642	0.11017	-0.33	0.7415
linst	1	1.93444	0.65442	2.96	0.0037
linst2	1	-0.11076	0.03836	-2.89	0.0045
larea	1	0.35534	0.07387	4.81	<.0001
lland	1	0.08787	0.03898	2.25	0.0258
rooms	1	0.03806	0.02673	1.42	0.1569
baths	1	0.15069	0.04002	3.77	0.0002
age	1	-0.00287	0.00103	-2.79	0.0060

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: lprice




Residual by Regressors for lprice
Residual
0.5
0.0
-0.5
8.5
9.0
9.5
10.0
10.5
ldist
70
80
90
100
110
ldist2
7
8
9
10
linst
60
80
100
linst2
6.5
7.0
7.5
8.0
8.5
larea
8
9
10
11
lland


Residual by Regressors for lprice
Residual
0.5
0.0
-0.5
4
5
6
7
8
9
rooms
1.0
1.5
2.0
2.5
3.0
3.5
4.0
baths
0
25
50
75
100
125
age