The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: inf

Number of Observations Read	49
Number of Observations Used	49

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	25.63696	25.63696	2.62	0.1125
Error	47	460.61978	9.80042		
Corrected Total	48	486.25673			

Root MSE	3.13056	**R-Square**	0.0527
Dependent Mean	4.10816	**Adj R-Sq**	0.0326
Coeff Var	76.20346		

Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	1.42361	1.71902	0.83	0.4118
unem	1	0.46763	0.28913	1.62	0.1125

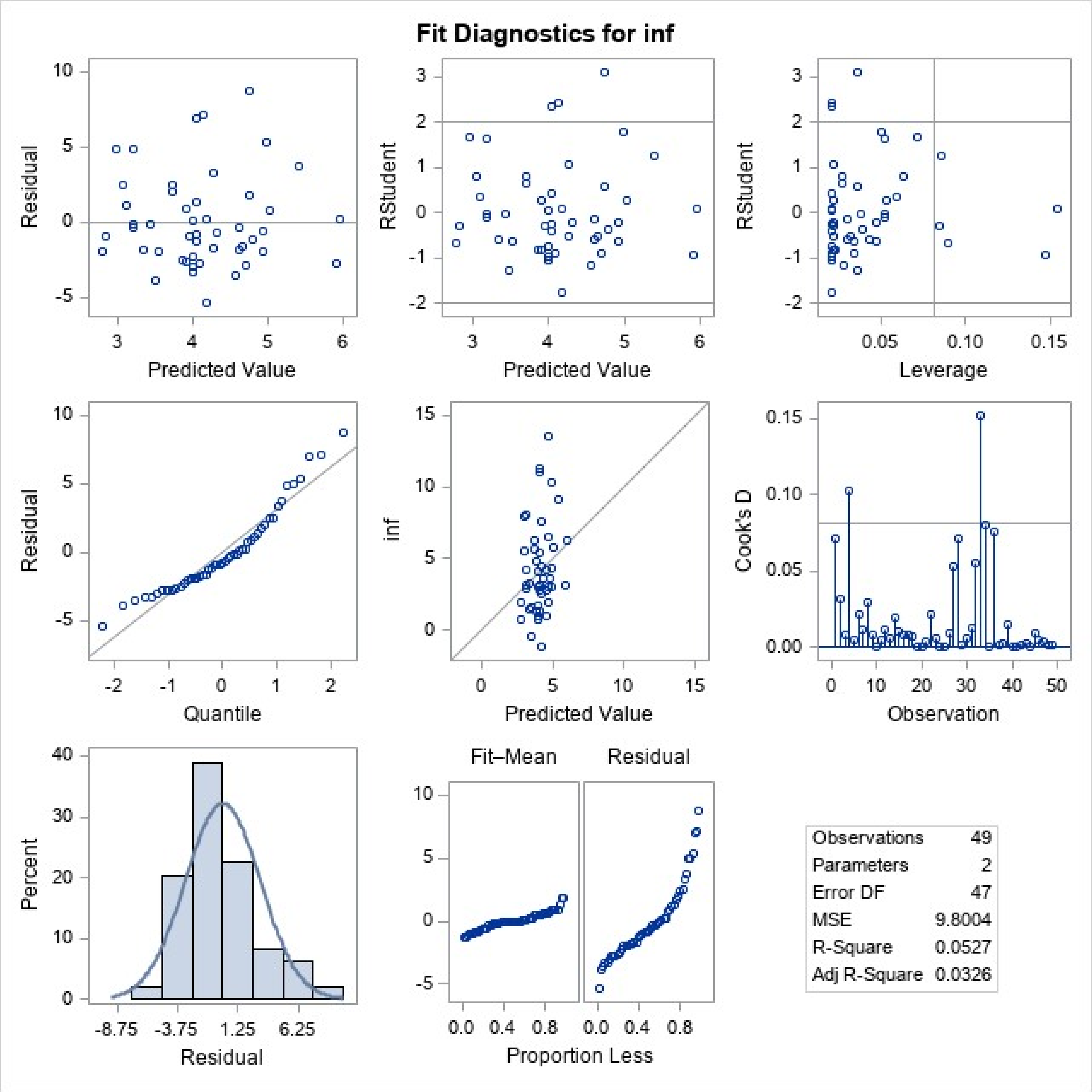
The SAS System

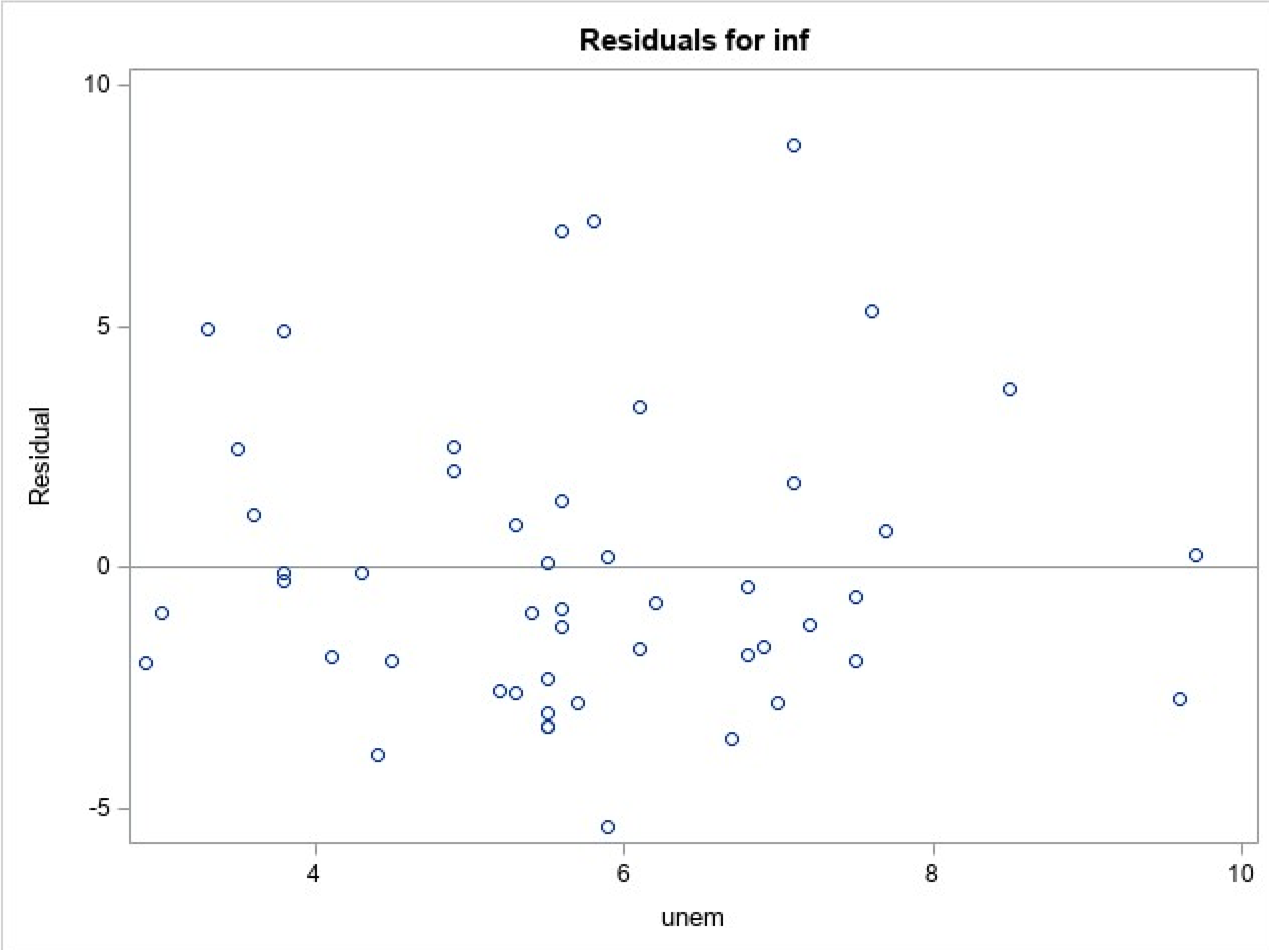
The REG Procedure
Model: MODEL1
Dependent Variable: inf

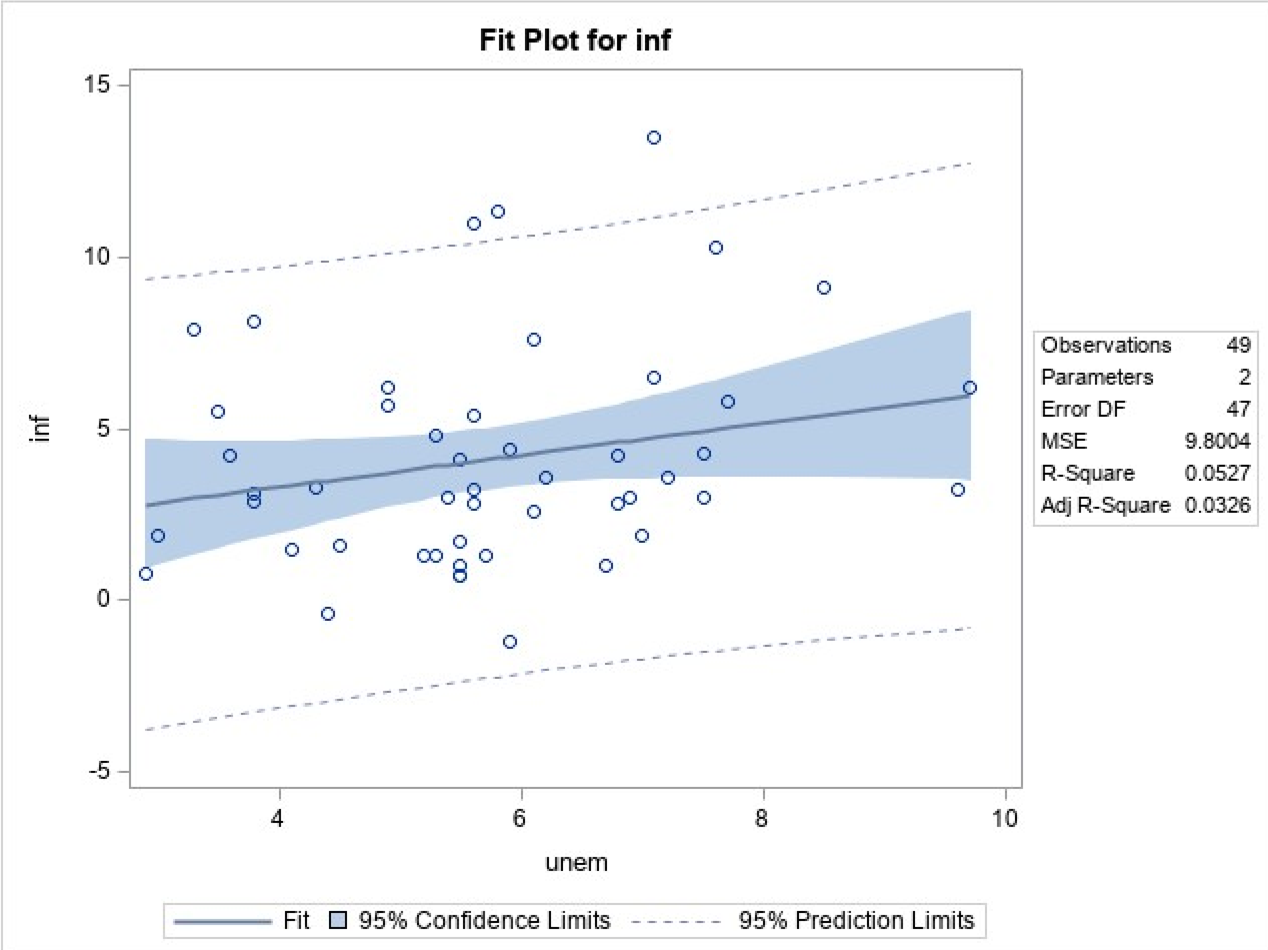
Durbin-Watson D	0.803
Number of Observations	49
1st Order Autocorrelation	0.572

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: inf




Residuals for inf
Residual
unem
10
5
0
-5
4
6
8
10



Fit Plot for inf
15
10
5
0
-5
inf
4
6
8
10
unem
Observations 49
Parameters 2
Error DF 47
MSE 9.8004
R-Square 0.0527
Adj R-Square 0.0326
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The AUTOREG Procedure

Dependent Variable	inf

The SAS System

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	460.619776	DFE	47
MSE	9.80042	Root MSE	3.13056
SBC	256.636495	AIC	252.852855
MAE	2.38412834	AICC	253.113724
MAPE	115.723949	HQC	254.288363
Durbin-Watson	0.8027	Total R-Square	0.0527

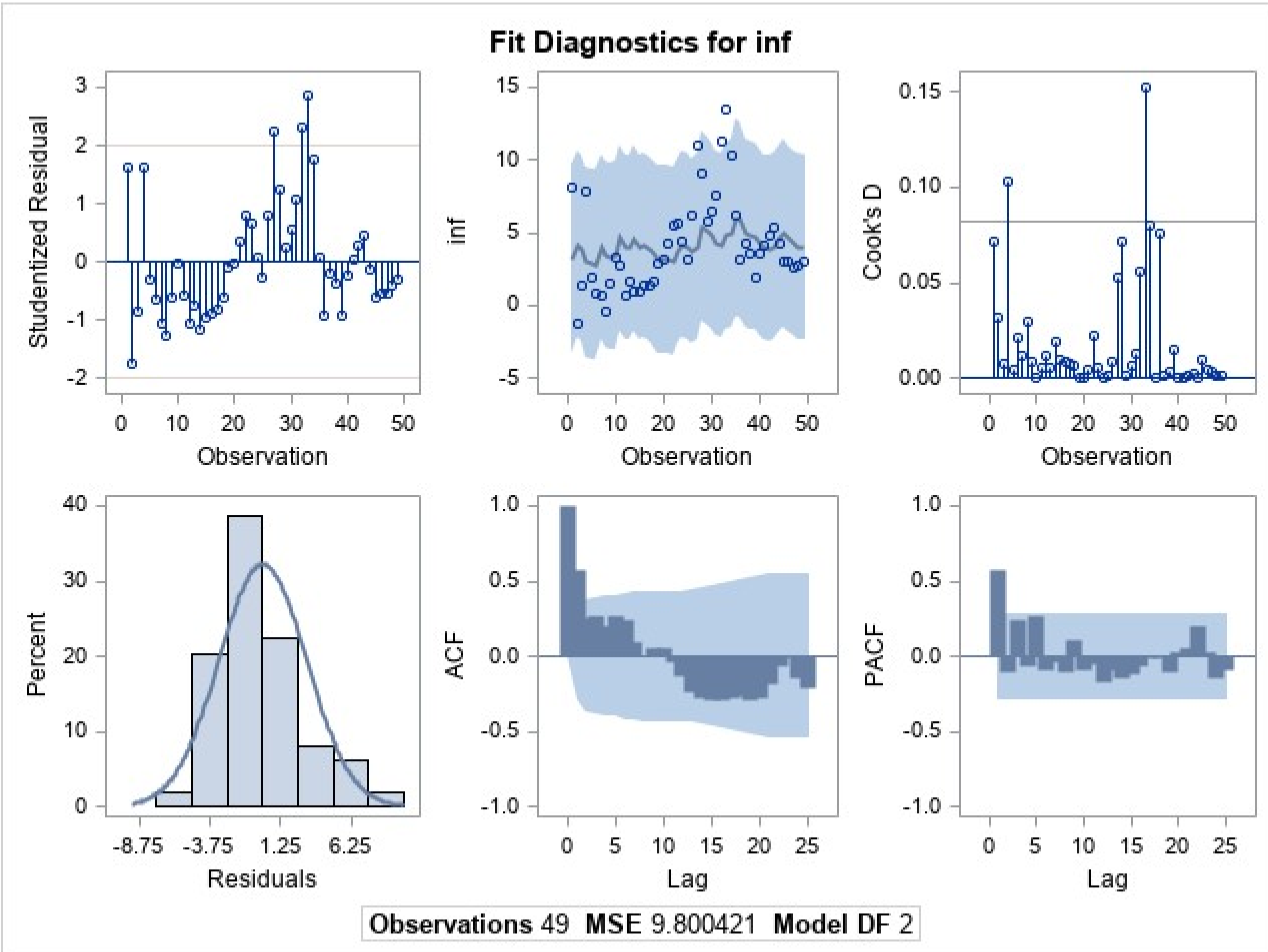
Durbin-Watson Statistics			
Order	DW	Pr < DW	Pr > DW
1	0.8027	<.0001	1.0000

NOTE: Pr<DW is the p-value for testing positive autocorrelation, and Pr>DW is the p-value for testing negative autocorrelation.

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	1.4236	1.7190	0.83	0.4118
unem	1	0.4676	0.2891	1.62	0.1125

The SAS System

The AUTOREG Procedure



The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: inf

Number of Observations Read	49
Number of Observations Used	49

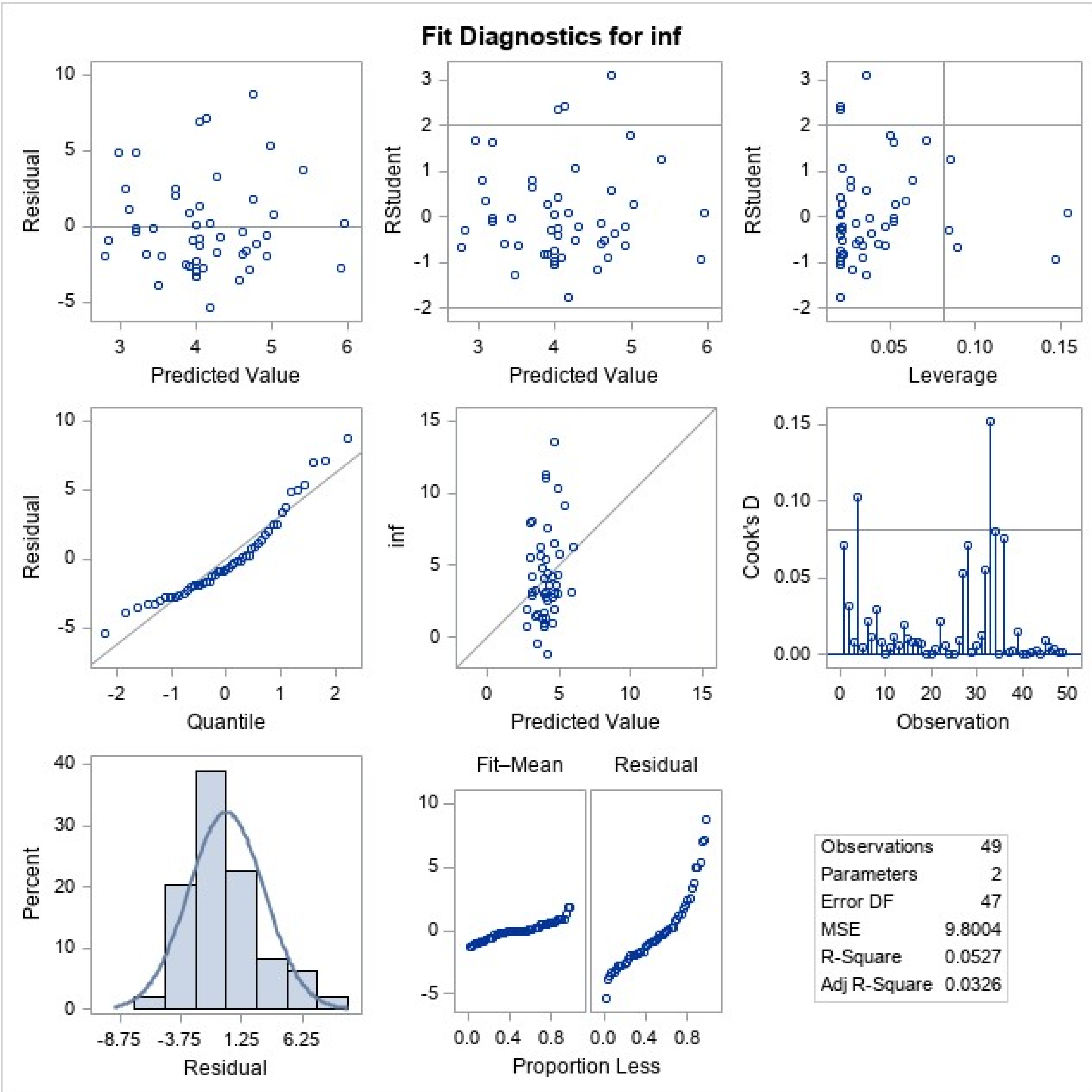
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	25.63696	25.63696	2.62	0.1125
Error	47	460.61978	9.80042		
Corrected Total	48	486.25673			

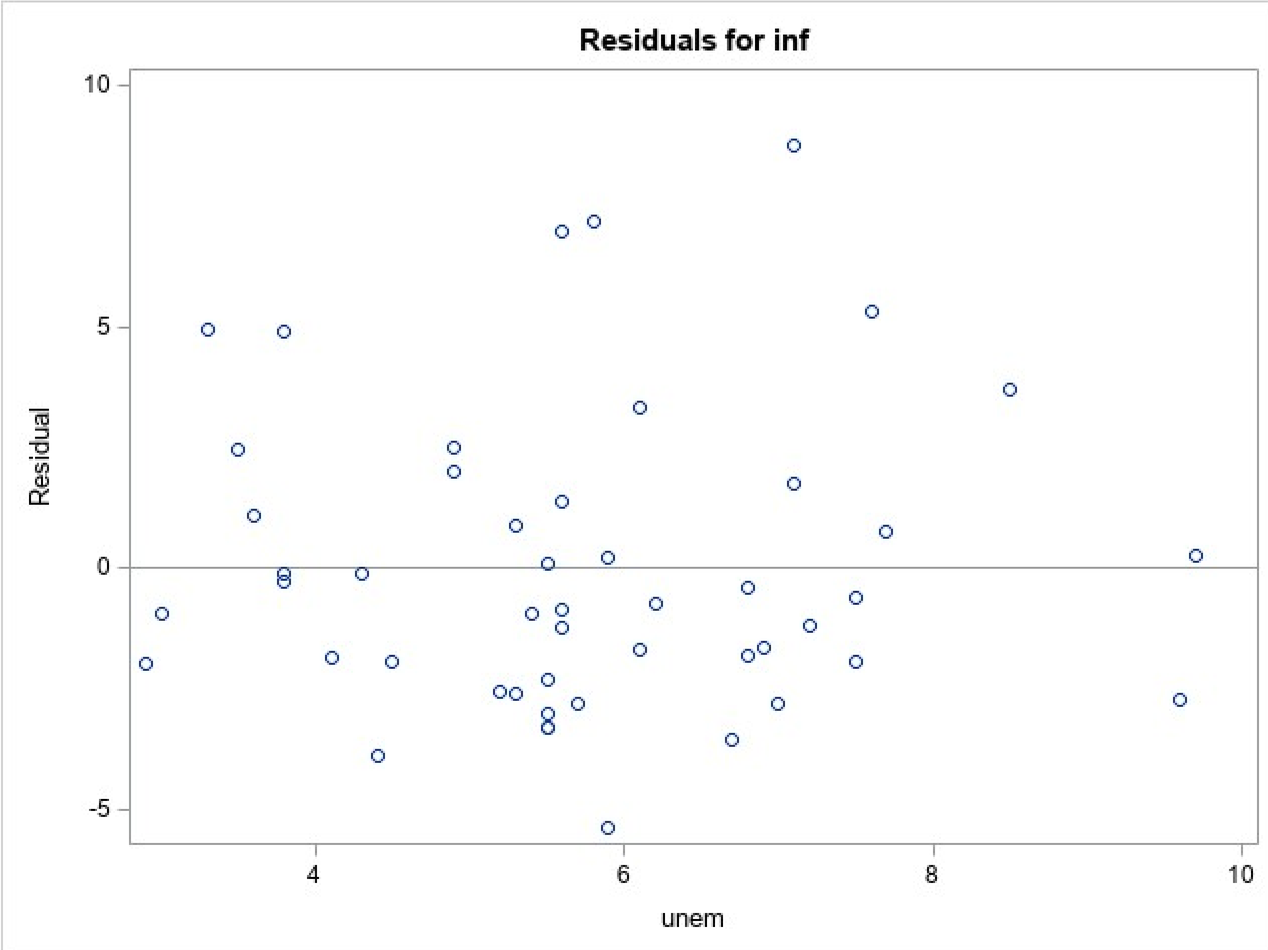
Root MSE	3.13056	R-Square	0.0527
Dependent Mean	4.10816	Adj R-Sq	0.0326
Coeff Var	76.20346		

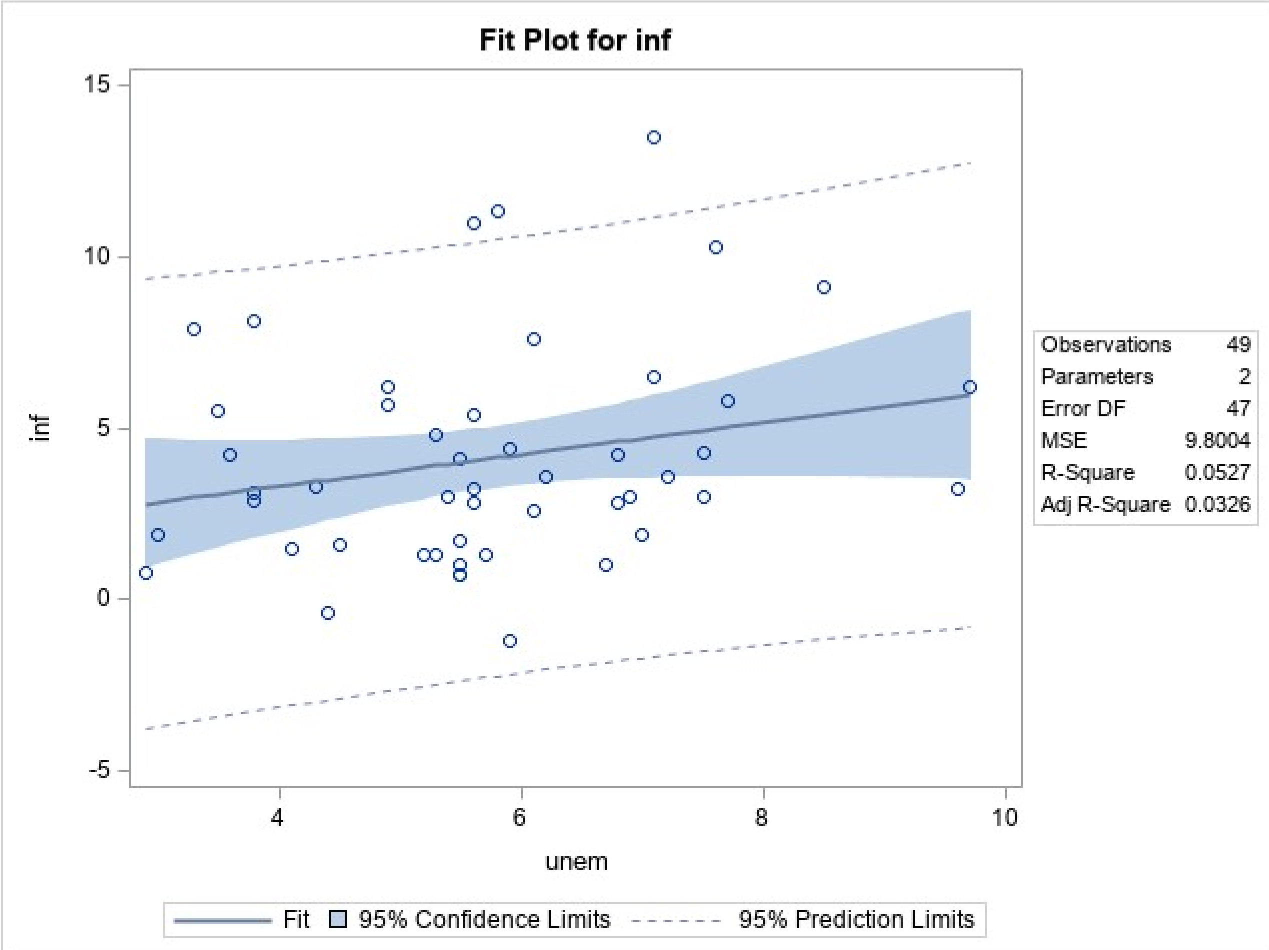
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	1.42361	1.71902	0.83	0.4118
unem	1	0.46763	0.28913	1.62	0.1125

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: inf




Residuals for inf
Residual
unem
10
5
0
-5
4
6
8
10


Fit Plot for inf
15
10
5
0
-5
inf
4
6
8
10
unem
Observations 49
Parameters 2
Error DF 47
MSE 9.8004
R-Square 0.0527
Adj R-Square 0.0326
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: e Residual

Number of Observations Read	49
Number of Observations Used	48
Number of Observations with Missing Values	1

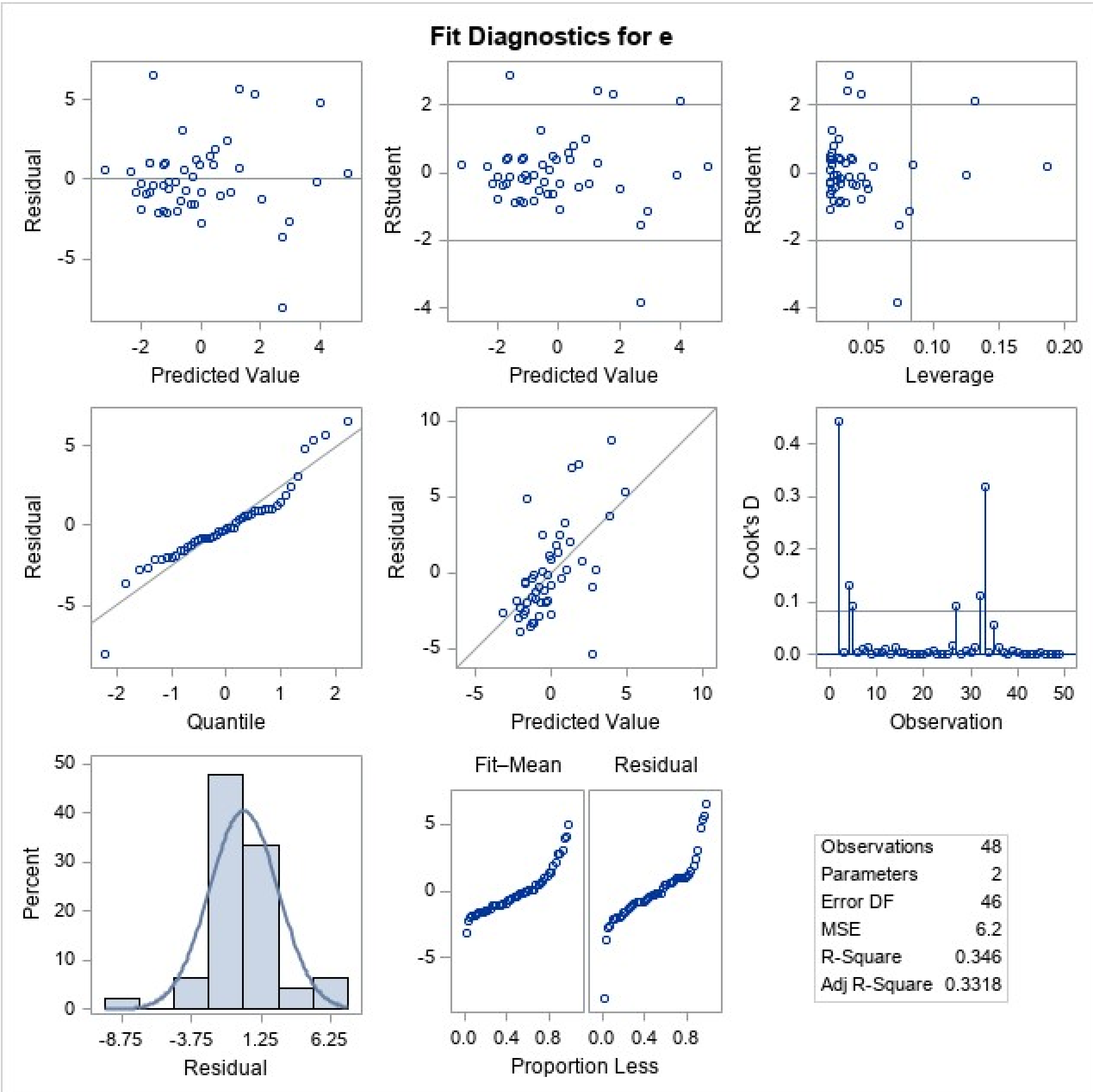
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	150.91704	150.91704	24.34	<.0001
Error	46	285.19841	6.19997		
Corrected Total	47	436.11545			

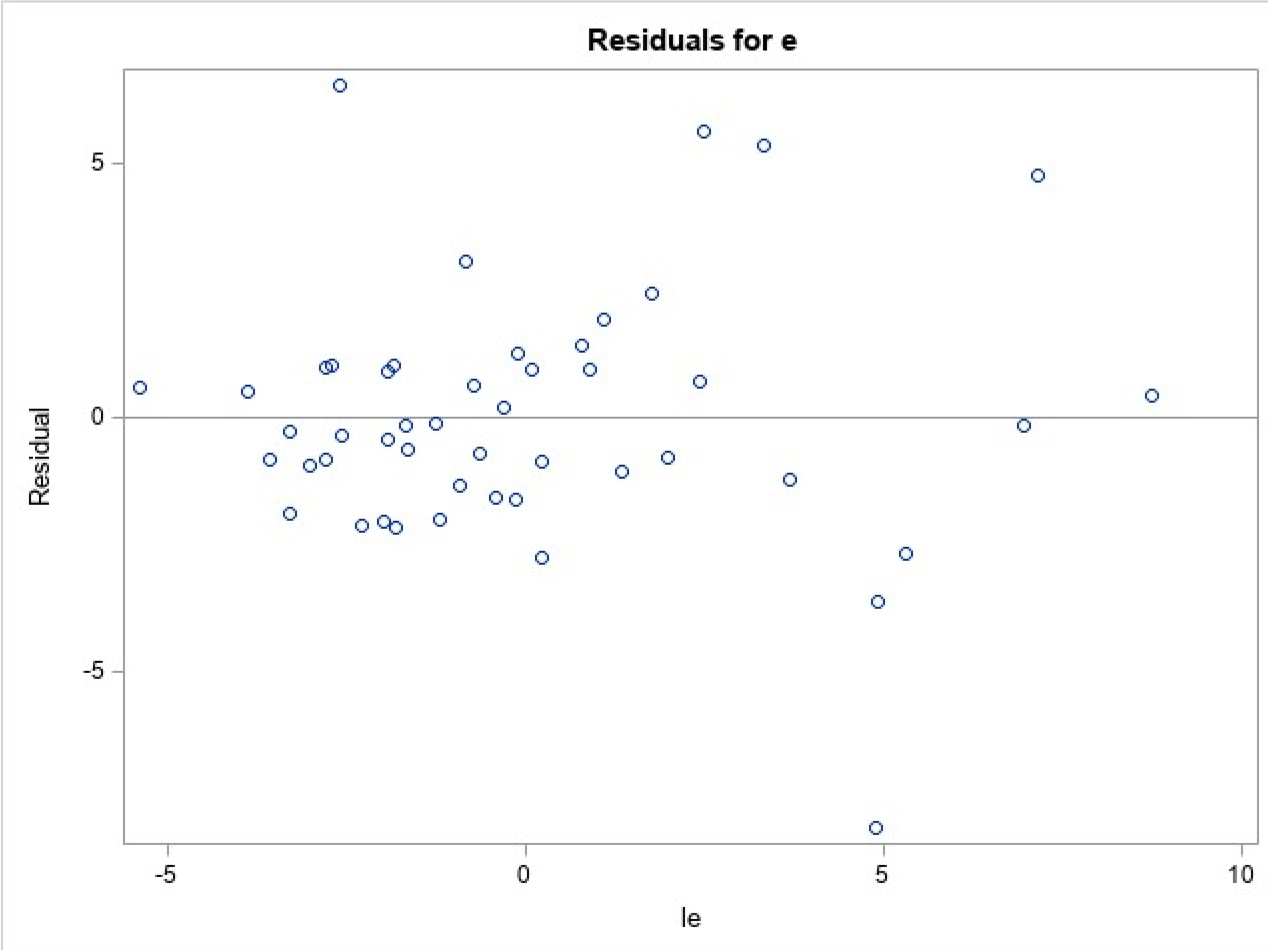
Root MSE	2.48997	R-Square	0.3460
Dependent Mean	-0.10207	Adj R-Sq	0.3318
Coeff Var	-2439.44976		

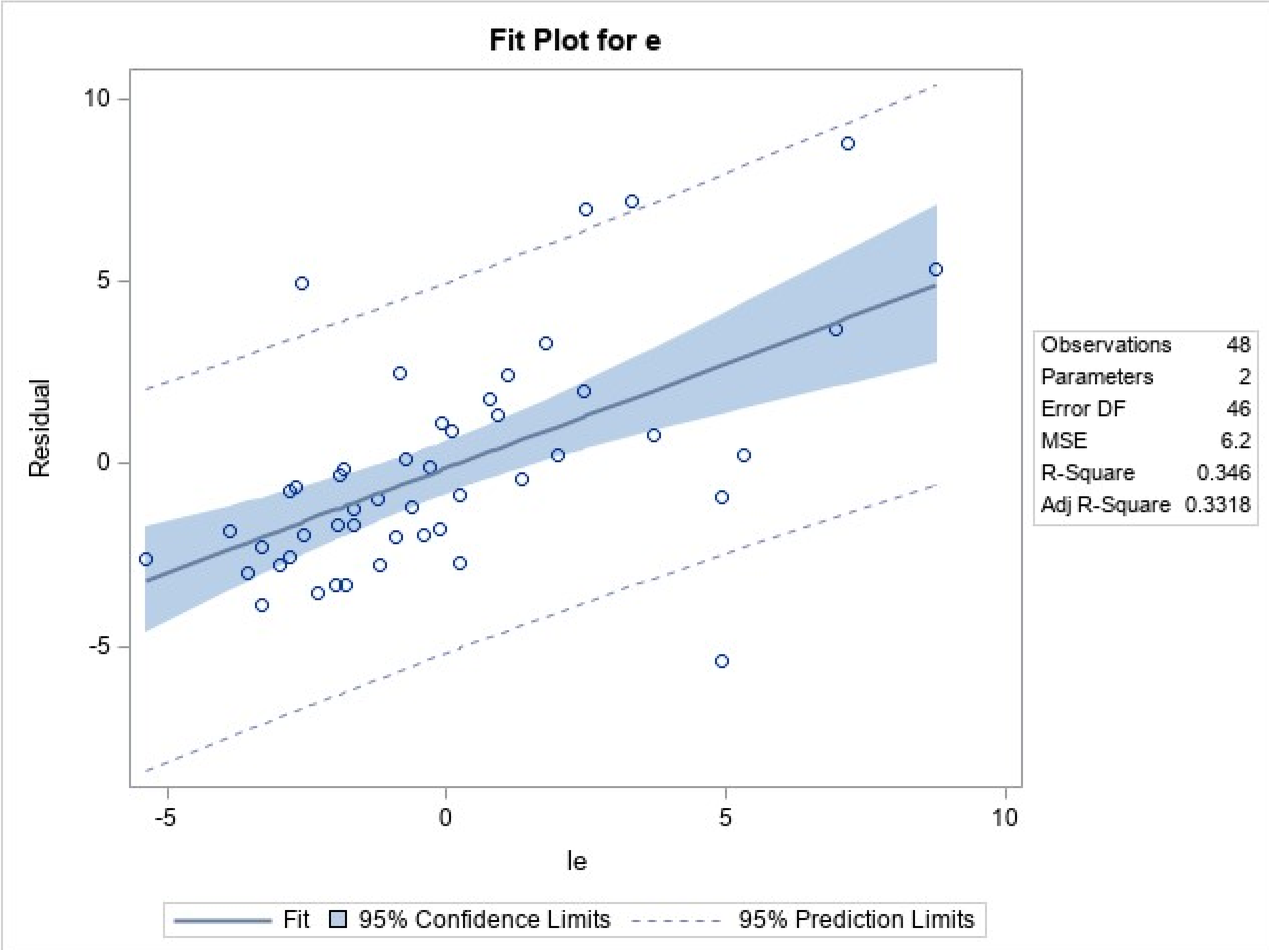
Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	Intercept	1	-0.11340	0.35940	-0.32	0.7538
le		1	0.57297	0.11613	4.93	<.0001

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: e Residual




Residuals for e
Residual
5
0
-5
-5
0
5
10
le


Fit Plot for e
10
5
0
-5
Residual
-5
0
5
10
le
Observations 48
Parameters 2
Error DF 46
MSE 6.2
R-Square 0.346
Adj R-Square 0.3318
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

Cochrane-Orcutt method: round 1

The REG Procedure
Model: MODEL1
Dependent Variable: dinf

Number of Observations Read	49
Number of Observations Used	48
Number of Observations with Missing Values	1

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	4.19292	4.19292	0.76	0.3892
Error	46	255.28064	5.54958		
Corrected Total	47	259.47356			

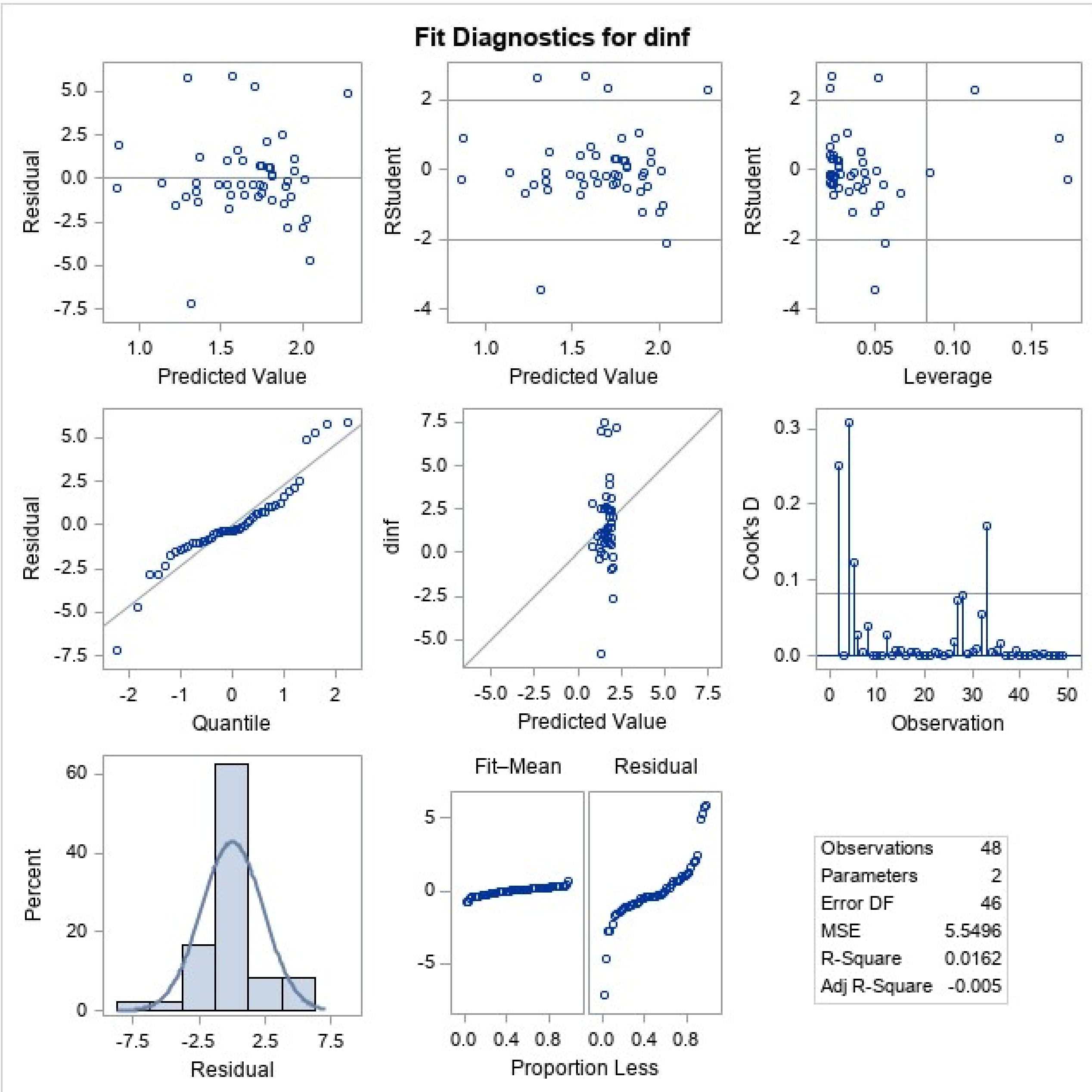
Root MSE	2.35575	R-Square	0.0162
Dependent Mean	1.65792	Adj R-Sq	-0.0052
Coeff Var	142.09098		

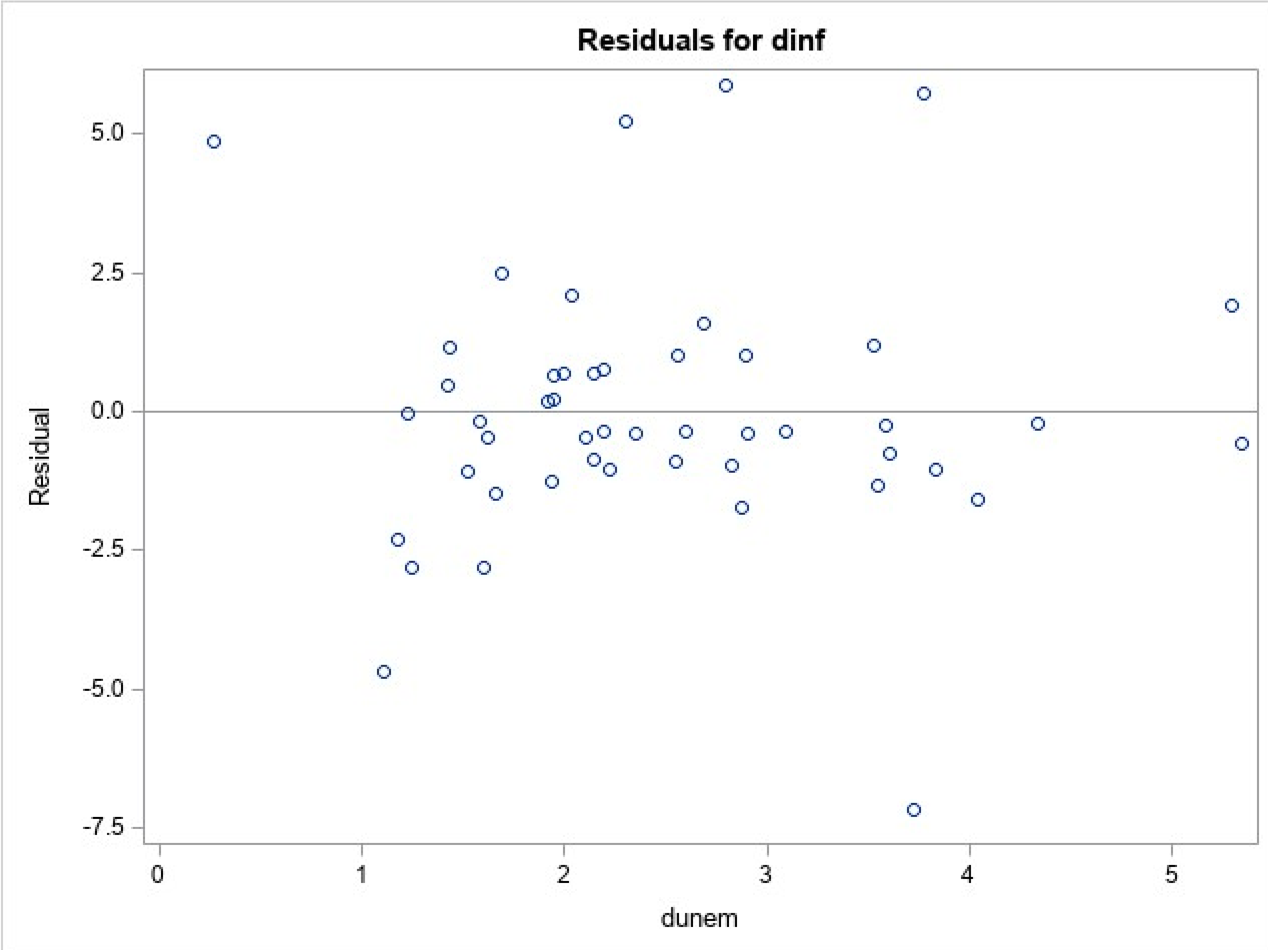
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	2.35406	0.87008	2.71	0.0095
dunem	1	-0.27981	0.32192	-0.87	0.3892

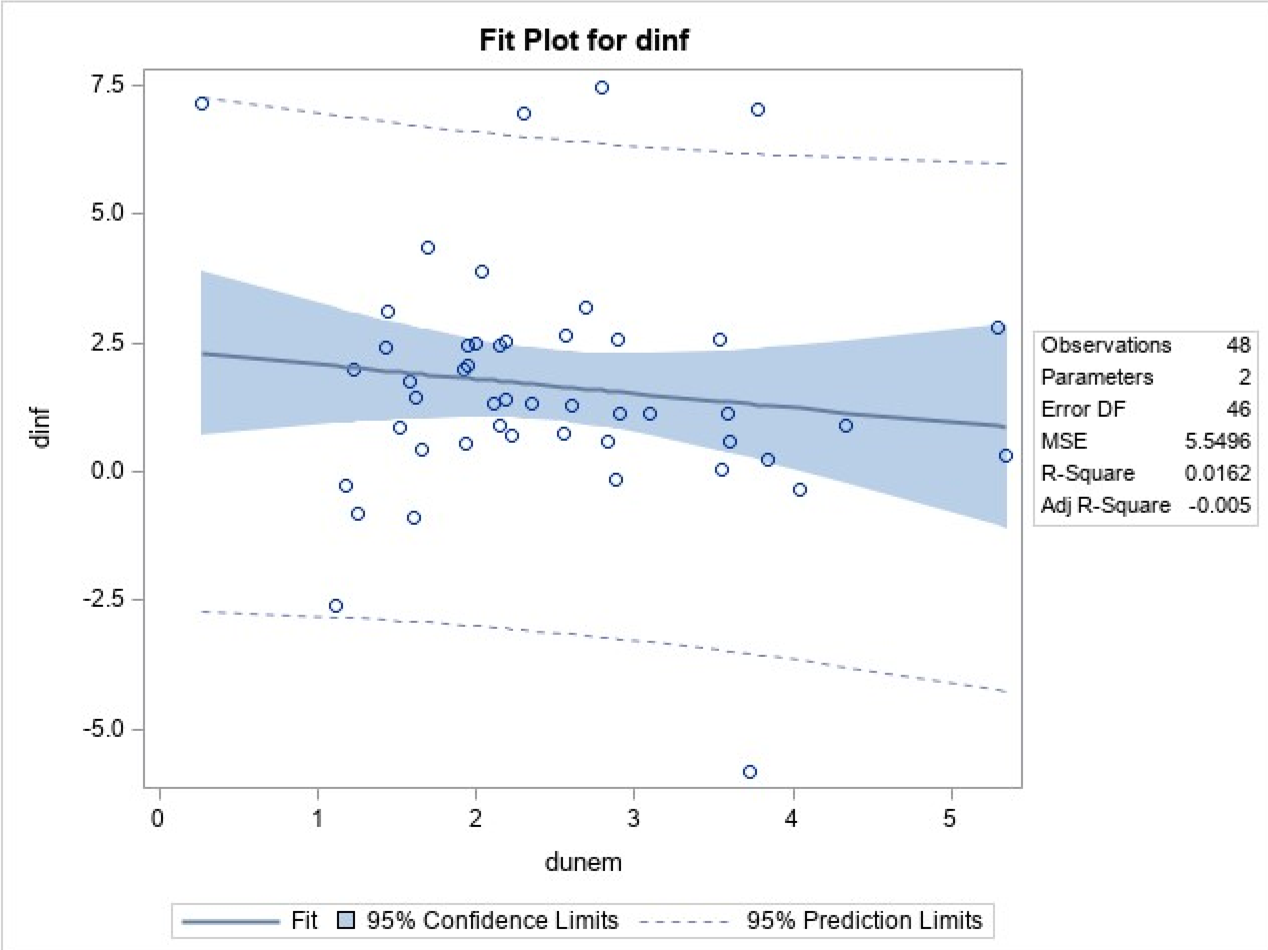
The SAS System

Cochrane-Orcutt method: round 1

The REG Procedure
Model: MODEL1
Dependent Variable: dinf




Residuals for dinf
Residual
5.0
2.5
0.0
-2.5
-5.0
-7.5
0
1
2
3
4
5
dunem


Fit Plot for dinf
7.5
5.0
2.5
0.0
-2.5
-5.0
dinf
0
1
2
3
4
5
dunem
Observations 48
Parameters 2
Error DF 46
MSE 5.5496
R-Square 0.0162
Adj R-Square -0.005
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

MLE of AR(1)

The AUTOREG Procedure

Dependent Variable	inf

The SAS System

MLE of AR(1)

The AUTOREG Procedure

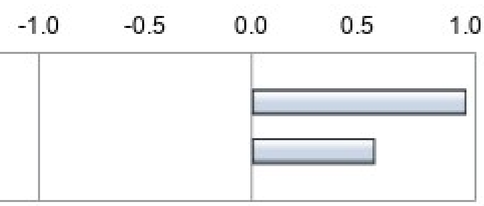
Ordinary Least Squares Estimates			
SSE	460.619776	DFE	47
MSE	9.80042	Root MSE	3.13056
SBC	256.636495	AIC	252.852855
MAE	2.38412834	AICC	253.113724
MAPE	115.723949	HQC	254.288363
Durbin-Watson	0.8027	Total R-Square	0.0527

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	1.4236	1.7190	0.83	0.4118
unem	1	0.4676	0.2891	1.62	0.1125

Estimates of Autocorrelations

Lag	Covariance	Correlation
0	9.4004	1.0000
1	5.3734	0.5716



Preliminary MSE	6.3289

Estimates of Autoregressive Parameters

Lag	Coefficient	Standard Error	t Value
1	-0.571616	0.120979	-4.72

Algorithm converged.

The SAS System

MLE of AR(1)

The AUTOREG Procedure

Maximum Likelihood Estimates			
SSE	241.740564	**DFE**	46
MSE	5.25523	**Root MSE**	2.29243
SBC	229.844245	**AIC**	224.168785
MAE	1.50069103	**AICC**	224.702118
MAPE	74.8230375	**HQC**	226.322046
Log Likelihood	-109.08439	**Transformed Regression R-Square**	0.0970
Durbin-Watson	1.9364	**Total R-Square**	0.5029
		Observations	49

Parameter Estimates					
Variable	**DF**	**Estimate**	**Standard Error**	**t Value**	**Approx Pr > |t|**
Intercept	1	8.2318	2.3553	3.50	0.0011
unem	1	-0.7048	0.3485	-2.02	0.0490
AR1	1	-0.7721	0.1005	-7.68	<.0001

Autoregressive parameters assumed given					
Variable	**DF**	**Estimate**	**Standard Error**	**t Value**	**Approx Pr > |t|**
Intercept	1	8.2318	2.2290	3.69	0.0006
unem	1	-0.7048	0.3170	-2.22	0.0312

The SAS System

MLE of AR(1)

The AUTOREG Procedure