

Descriptive Statistics using Proc Means

The MEANS Procedure

Variable	Label	N	N Miss	Minimum	Maximum	Median	Mean	Variance	Std Dev
I	I	100	0	12.930	1486.700	140.100	248.957	71751.897	267.865
F	F	100	0	191.500	6241.700	1682.300	1922.223	2018625.010	1420.783
C	C	100	0	0.800	2226.300	205.350	311.067	138051.130	371.552

Descriptive Statistics using Proc Means

The UNIVARIATE Procedure
Variable: I (I)

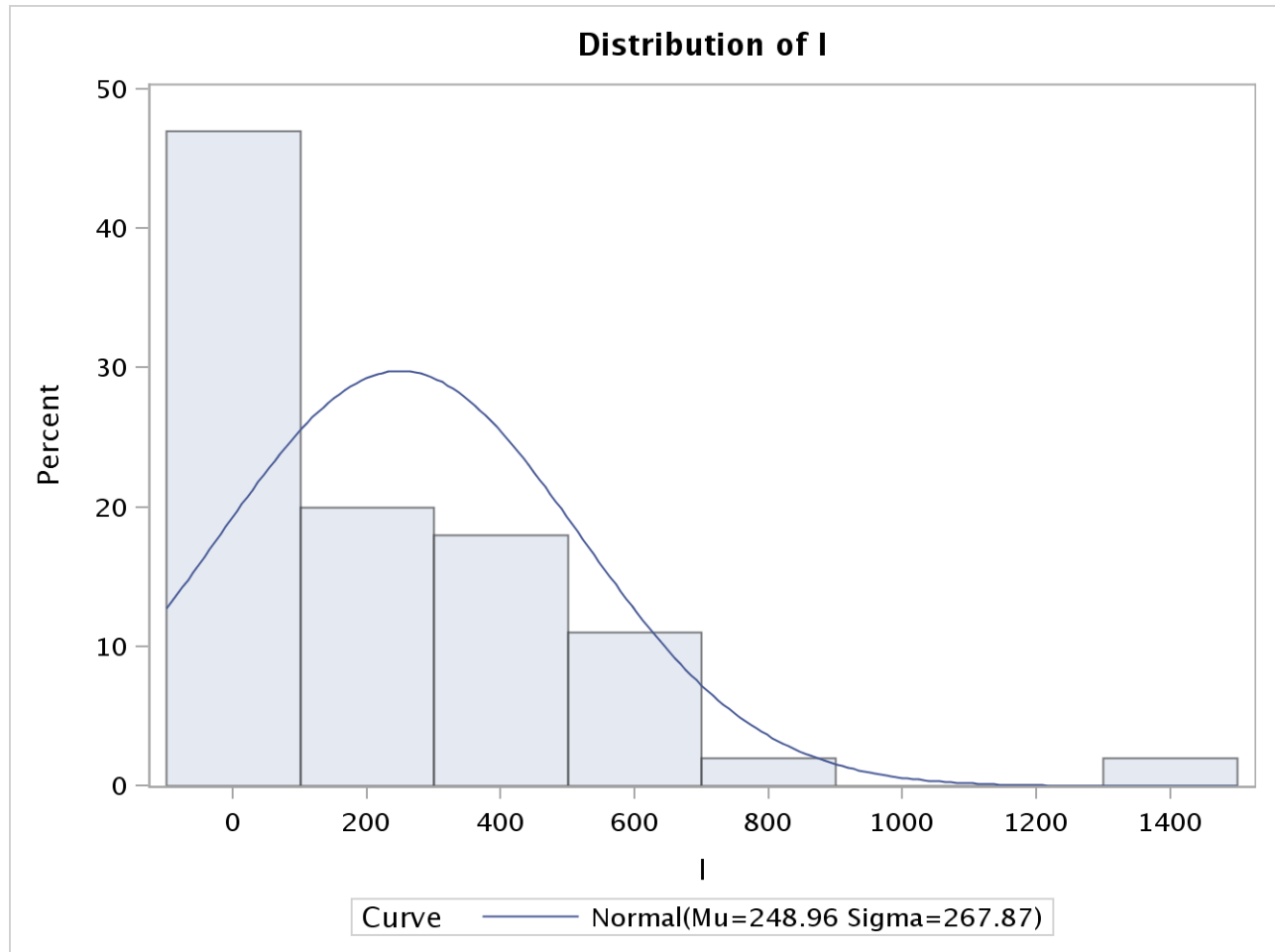
Moments			
N	100	Sum Weights	100
Mean	248.957	Sum Observations	24895.7
Std Deviation	267.865446	Variance	71751.8973
Skewness	1.97694455	Kurtosis	5.43301885
Uncorrected SS	13301396.6	Corrected SS	7103437.83
Coeff Variation	107.595065	Std Error Mean	26.7865446

Basic Statistical Measures			
Location		Variability	
Mean	248.9570	Std Deviation	267.86545
Median	140.1000	Variance	71752
Mode	.	Range	1474
		Interquartile Range	364.58000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	9.294107	Pr > t 	<.0001
Sign	M	50	Pr >= M 	<.0001
Signed Rank	S	2525	Pr >= S 	<.0001

Quantiles (Definition 5)	
Quantile	Estimate
100% Max	1486.700
99%	1395.550
95%	666.650
90%	565.050
75% Q3	419.550
50% Median	140.100
25% Q1	54.970
10%	37.415
5%	30.305
1%	15.885
0% Min	12.930

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
12.93	61	688.1	12
18.84	65	755.9	17
22.89	64	891.2	18
25.90	62	1304.4	19
28.57	66	1486.7	20

Descriptive Statistics using Proc Means**The UNIVARIATE Procedure**

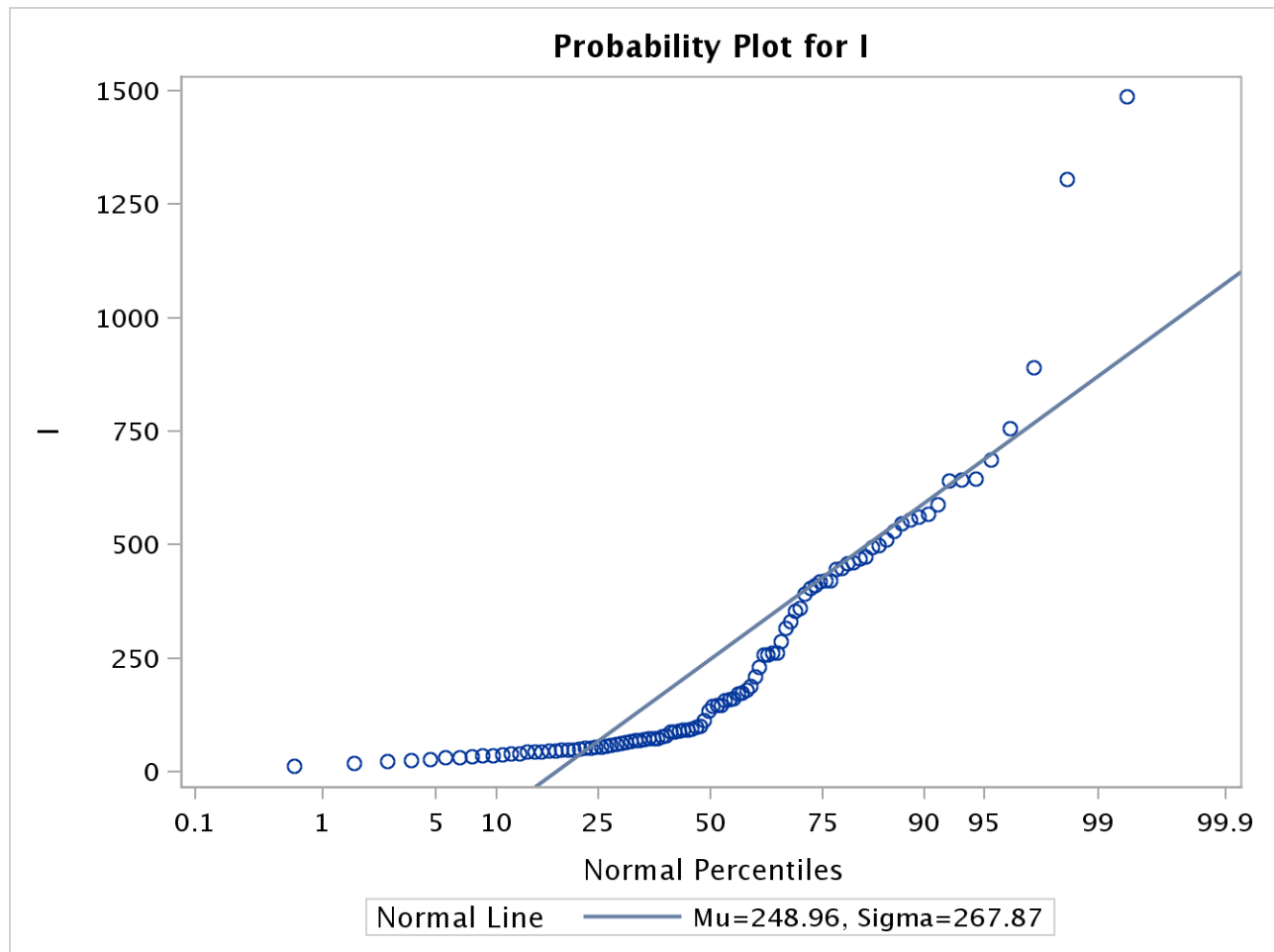
Descriptive Statistics using Proc Means

The UNIVARIATE Procedure Fitted Normal Distribution for I (I)

Parameters for Normal Distribution		
Parameter	Symbol	Estimate
Mean	Mu	248.957
Std Dev	Sigma	267.8654

Goodness-of-Fit Tests for Normal Distribution				
Test	Statistic		p Value	
Kolmogorov-Smirnov	D	0.19229738	Pr > D	<0.010
Cramer-von Mises	W-Sq	1.11803008	Pr > W-Sq	<0.005
Anderson-Darling	A-Sq	6.31933593	Pr > A-Sq	<0.005

Quantiles for Normal Distribution		
Percent	Quantile	
	Observed	Estimated
1.0	15.8850	-374.1912
5.0	30.3050	-191.6425
10.0	37.4150	-94.3264
25.0	54.9700	68.2845
50.0	140.1000	248.9570
75.0	419.5500	429.6295
90.0	565.0500	592.2404
95.0	666.6500	689.5565
99.0	1395.5500	872.1052

Descriptive Statistics using Proc Means**The UNIVARIATE Procedure**

Descriptive Statistics using Proc Means

The UNIVARIATE Procedure
Variable: F (F)

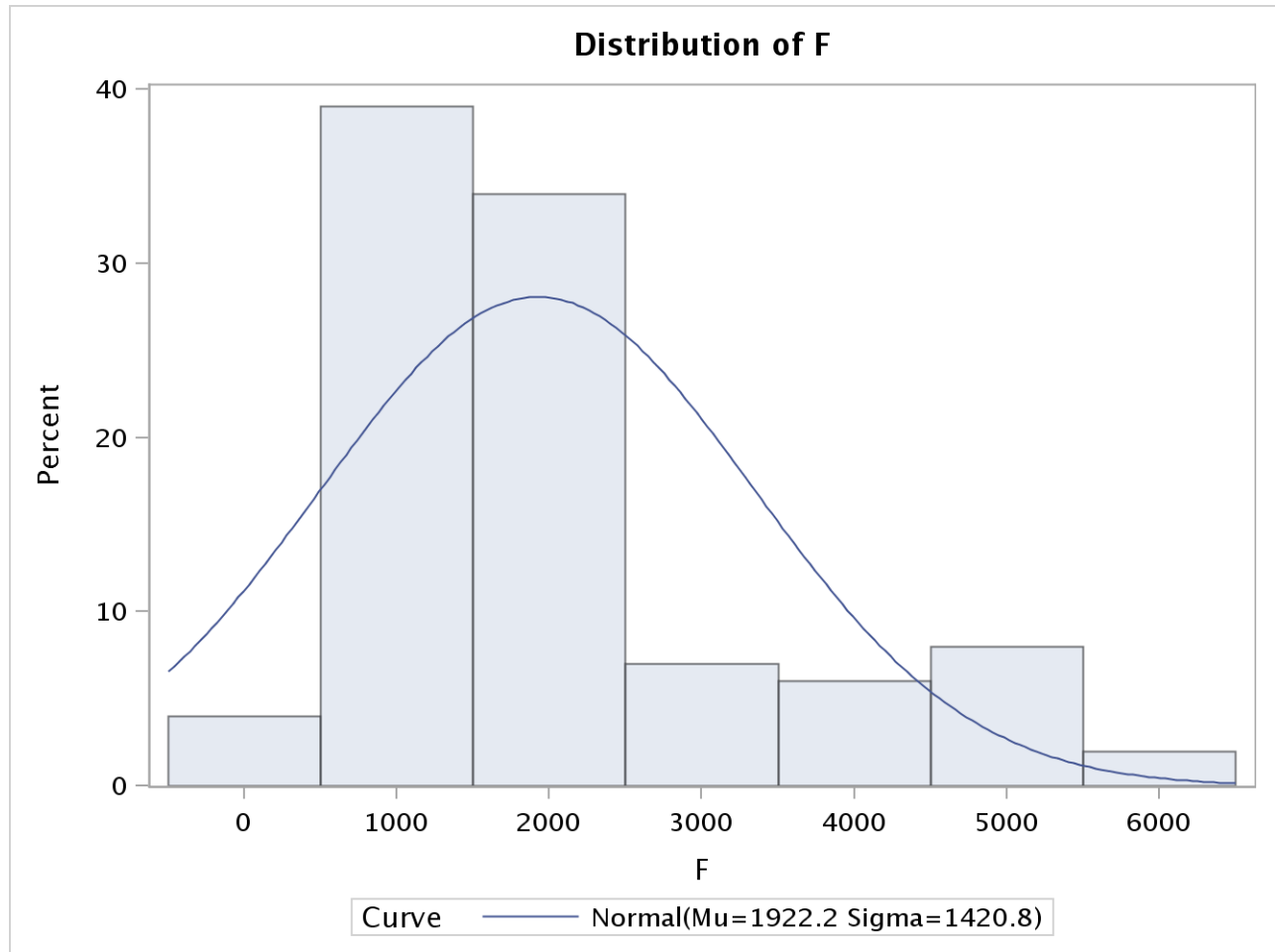
Moments			
N	100	Sum Weights	100
Mean	1922.223	Sum Observations	192222.3
Std Deviation	1420.78324	Variance	2018625.01
Skewness	1.12929283	Kurtosis	0.52303103
Uncorrected SS	569338002	Corrected SS	199843876
Coeff Variation	73.913549	Std Error Mean	142.078324

Basic Statistical Measures			
Location		Variability	
Mean	1922.223	Std Deviation	1421
Median	1682.300	Variance	2018625
Mode	.	Range	6050
		Interquartile Range	1617

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	13.52932	Pr > t 	<.0001
Sign	M	50	Pr >= M 	<.0001
Signed Rank	S	2525	Pr >= S 	<.0001

Quantiles (Definition 5)	
Quantile	Estimate
100% Max	6241.70
99%	5917.65
95%	4870.90
90%	4465.25
75% Q3	2330.55
50% Median	1682.30
25% Q1	713.50
10%	580.20
5%	517.95
1%	301.20
0% Min	191.50

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
191.5	61	4900.9	12
410.9	28	4924.9	18
417.5	21	5387.1	3
437.9	24	5593.6	20
516.0	62	6241.7	19

Descriptive Statistics using Proc Means**The UNIVARIATE Procedure**

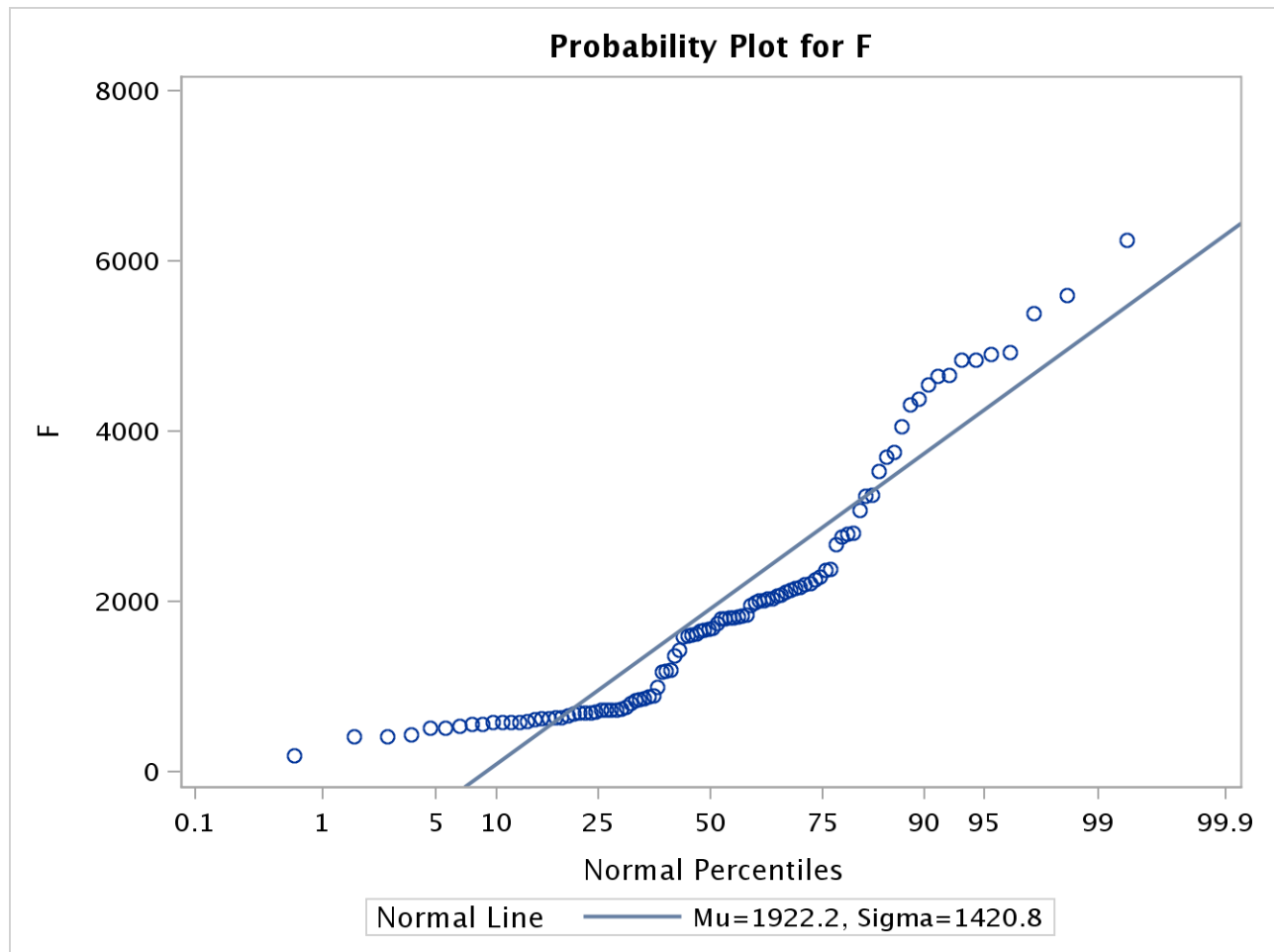
Descriptive Statistics using Proc Means

The UNIVARIATE Procedure Fitted Normal Distribution for F (F)

Parameters for Normal Distribution		
Parameter	Symbol	Estimate
Mean	Mu	1922.223
Std Dev	Sigma	1420.783

Goodness-of-Fit Tests for Normal Distribution				
Test	Statistic		p Value	
Kolmogorov-Smirnov	D	0.15021182	Pr > D	<0.010
Cramer-von Mises	W-Sq	0.68845158	Pr > W-Sq	<0.005
Anderson-Darling	A-Sq	4.40854858	Pr > A-Sq	<0.005

Quantiles for Normal Distribution		
Percent	Quantile	
	Observed	Estimated
1.0	301.200	-1383.013
5.0	517.950	-414.757
10.0	580.200	101.416
25.0	713.500	963.919
50.0	1682.300	1922.223
75.0	2330.550	2880.527
90.0	4465.250	3743.030
95.0	4870.900	4259.203
99.0	5917.650	5227.459

Descriptive Statistics using Proc Means**The UNIVARIATE Procedure**

Descriptive Statistics using Proc Means

The UNIVARIATE Procedure
Variable: C (C)

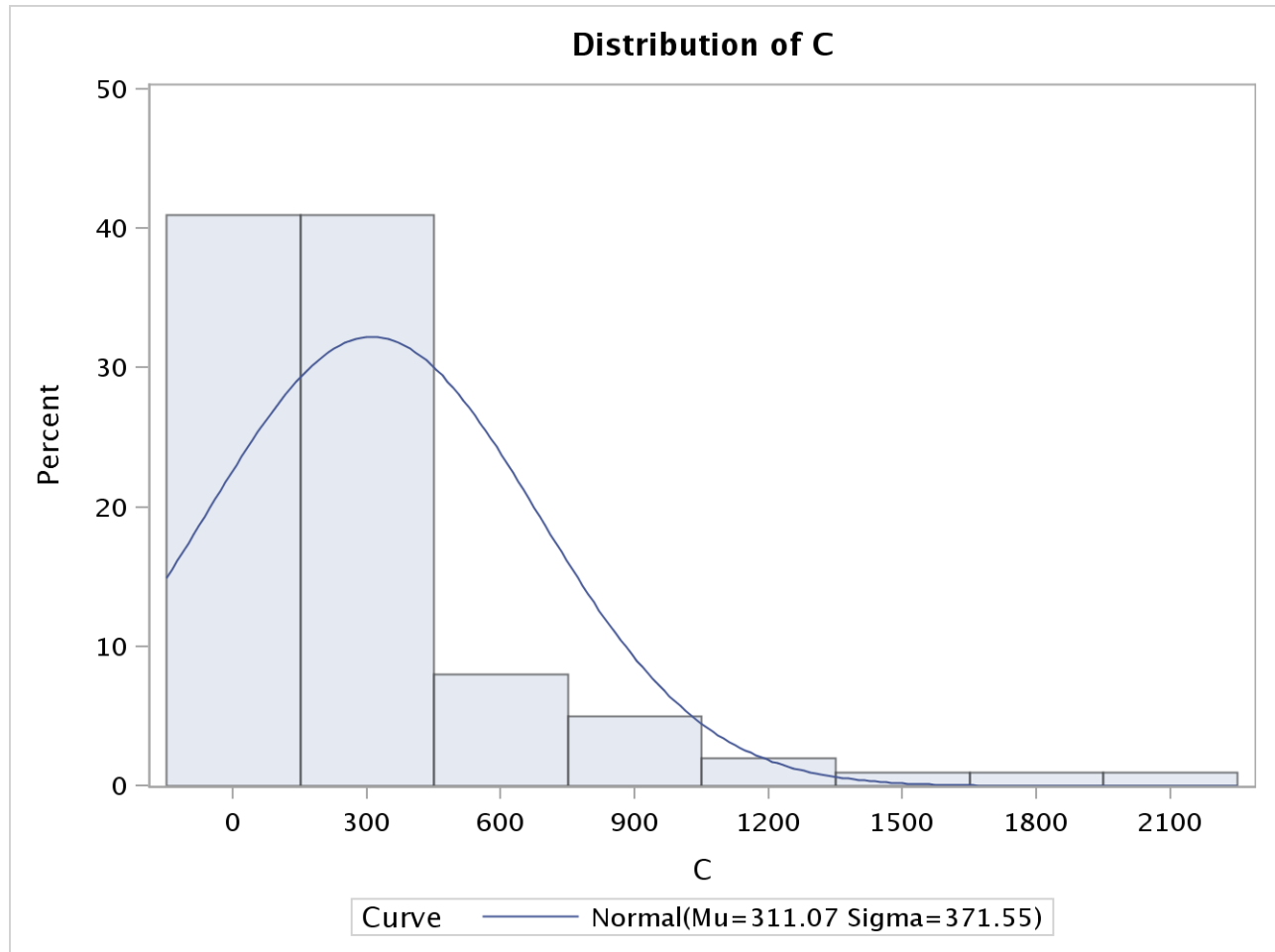
Moments			
N	100	Sum Weights	100
Mean	311.067	Sum Observations	31106.7
Std Deviation	371.552325	Variance	138051.13
Skewness	2.69505465	Kurtosis	9.03943433
Uncorrected SS	23343329.8	Corrected SS	13667061.9
Coeff Variation	119.444469	Std Error Mean	37.1552325

Basic Statistical Measures			
Location		Variability	
Mean	311.0670	Std Deviation	371.55233
Median	205.3500	Variance	138051
Mode	67.1000	Range	2226
		Interquartile Range	258.65000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	8.372091	Pr > t 	<.0001
Sign	M	50	Pr >= M 	<.0001
Signed Rank	S	2525	Pr >= S 	<.0001

Quantiles (Definition 5)	
Quantile	Estimate
100% Max	2226.30
99%	2001.80
95%	1059.55
90%	743.80
75% Q3	344.05
50% Median	205.35
25% Q1	85.40
10%	35.45
5%	10.35
1%	1.30
0% Min	0.80

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0.8	62	1099.0	16
1.8	61	1207.7	17
2.8	1	1430.5	18
7.4	63	1777.3	19
10.2	22	2226.3	20

Descriptive Statistics using Proc Means**The UNIVARIATE Procedure**

Descriptive Statistics using Proc Means

The UNIVARIATE Procedure Fitted Normal Distribution for C (C)

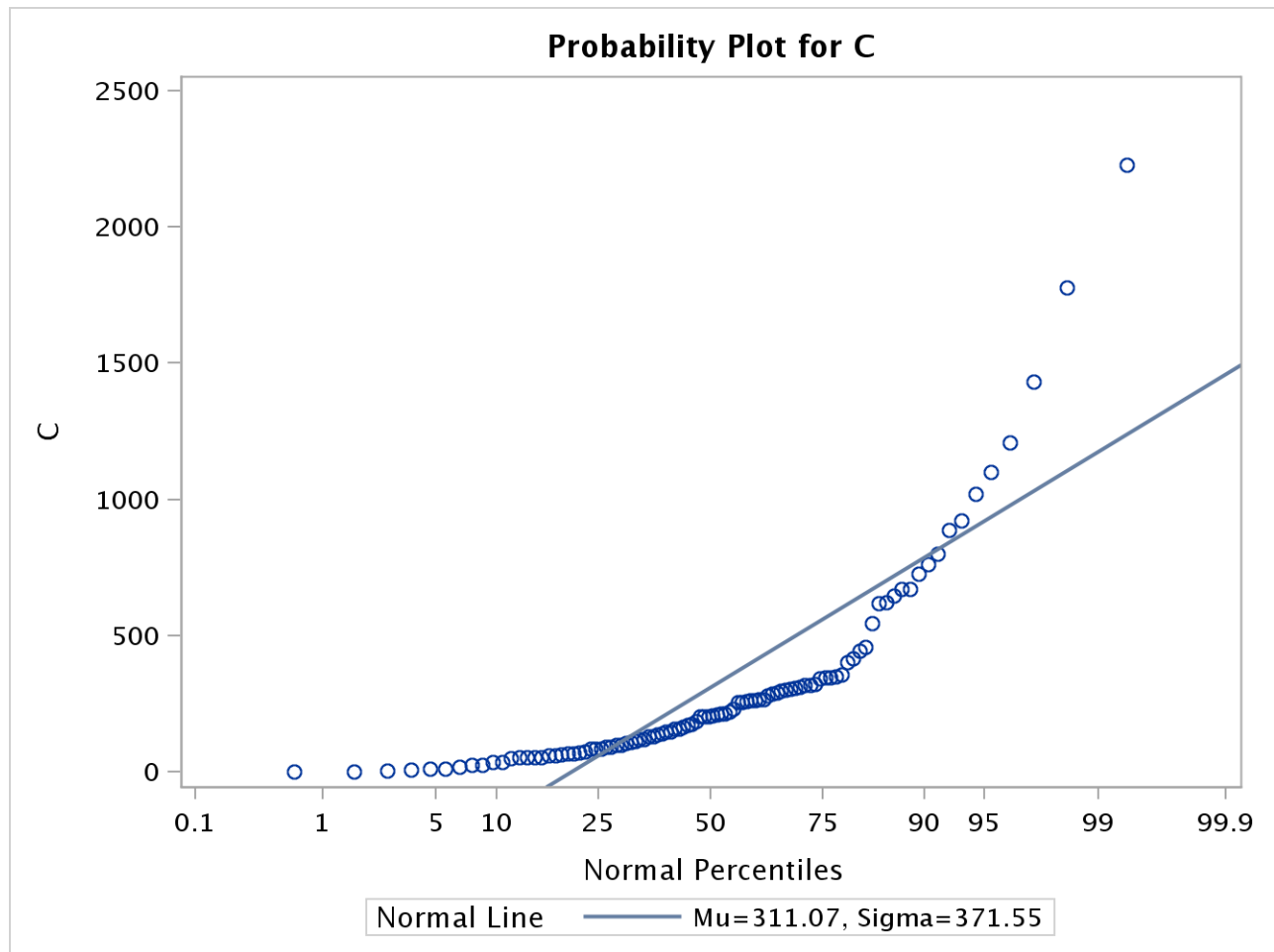
Parameters for Normal Distribution		
Parameter	Symbol	Estimate
Mean	Mu	311.067
Std Dev	Sigma	371.5523

Goodness-of-Fit Tests for Normal Distribution				
Test	Statistic		p Value	
Kolmogorov-Smirnov	D	0.23995394	Pr > D	<0.010
Cramer-von Mises	W-Sq	1.56577652	Pr > W-Sq	<0.005
Anderson-Darling	A-Sq	8.46661696	Pr > A-Sq	<0.005

Quantiles for Normal Distribution		
Percent	Quantile	
	Observed	Estimated
1.0	1.30000	-553.2930
5.0	10.35000	-300.0822
10.0	35.45000	-165.0965
25.0	85.40000	60.4588
50.0	205.35000	311.0670
75.0	344.05000	561.6752
90.0	743.80000	787.2305
95.0	1059.55000	922.2162
99.0	2001.80000	1175.4270

Descriptive Statistics using Proc Means

The UNIVARIATE Procedure



Descriptive Statistics using Proc Means

The REG Procedure
Model: MODEL1
Dependent Variable: i_gm l

Number of Observations Read	20
Number of Observations Used	20

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1677687	838843	99.58	<.0001
Error	17	143206	8423.87514		
Corrected Total	19	1820893			

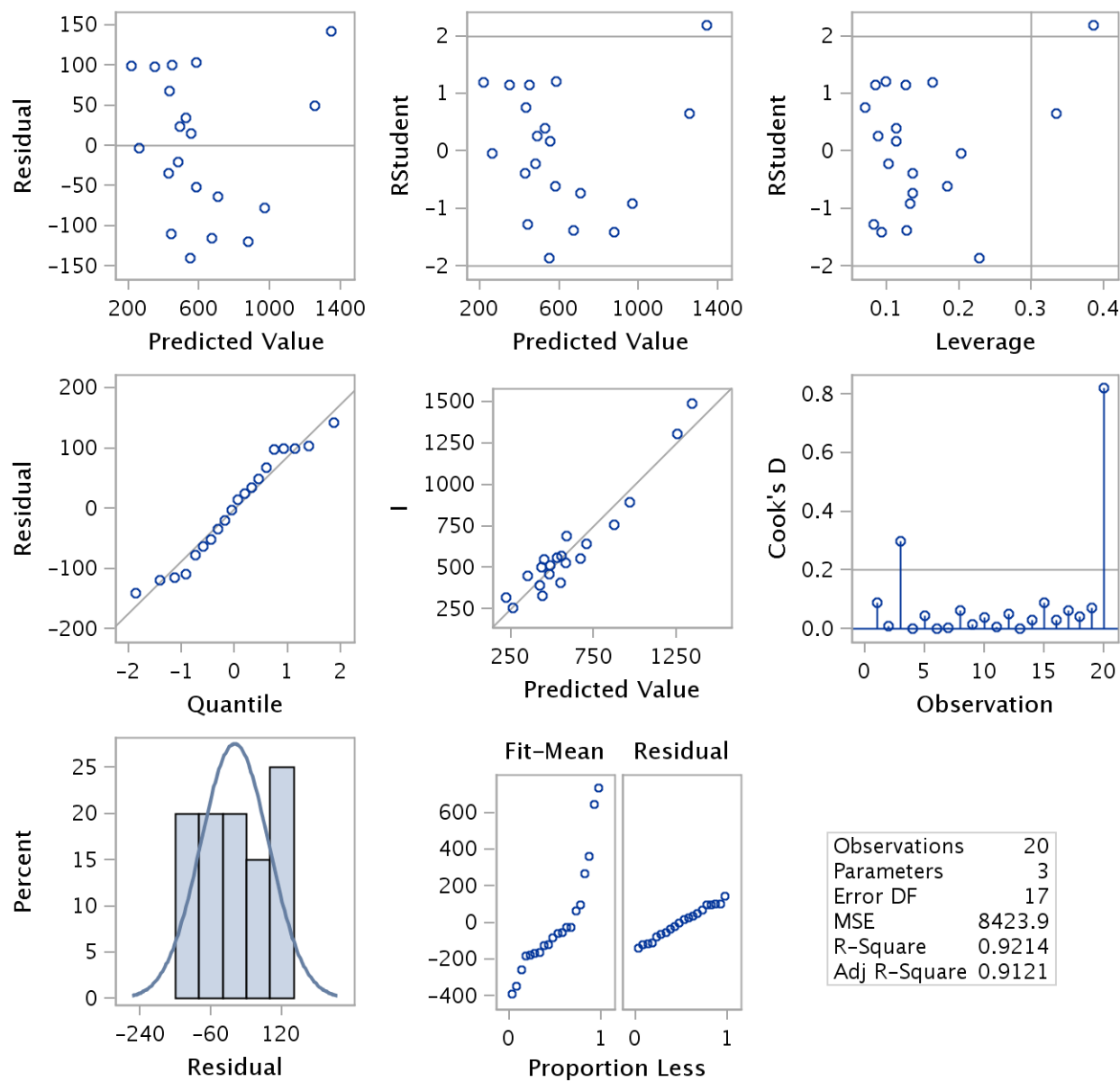
Root MSE	91.78167	R-Square	0.9214
Dependent Mean	608.02000	Adj R-Sq	0.9121
Coeff Var	15.09517		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	-149.78245	105.84212	-1.42	0.1751
f_gm	F	1	0.11928	0.02583	4.62	0.0002
c_gm	C	1	0.37144	0.03707	10.02	<.0001

Descriptive Statistics using Proc Means

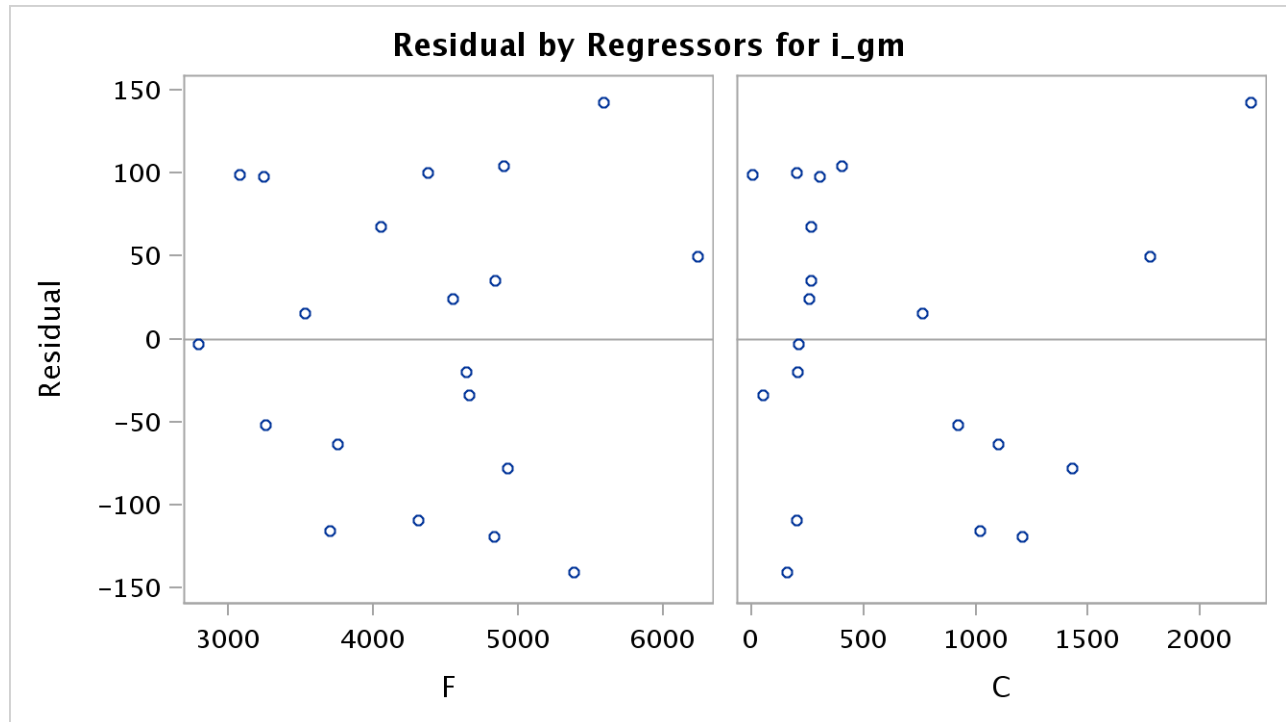
The REG Procedure
 Model: MODEL1
 Dependent Variable: i_gm I

Fit Diagnostics for i_gm



Descriptive Statistics using Proc Means

The REG Procedure
Model: MODEL1
Dependent Variable: i_gm l



Descriptive Statistics using Proc Means

The REG Procedure
Model: MODEL1
Dependent Variable: i_ch I

Number of Observations Read	20
Number of Observations Used	20

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	31687	15843	89.86	<.0001
Error	17	2997.44436	176.32026		
Corrected Total	19	34684			

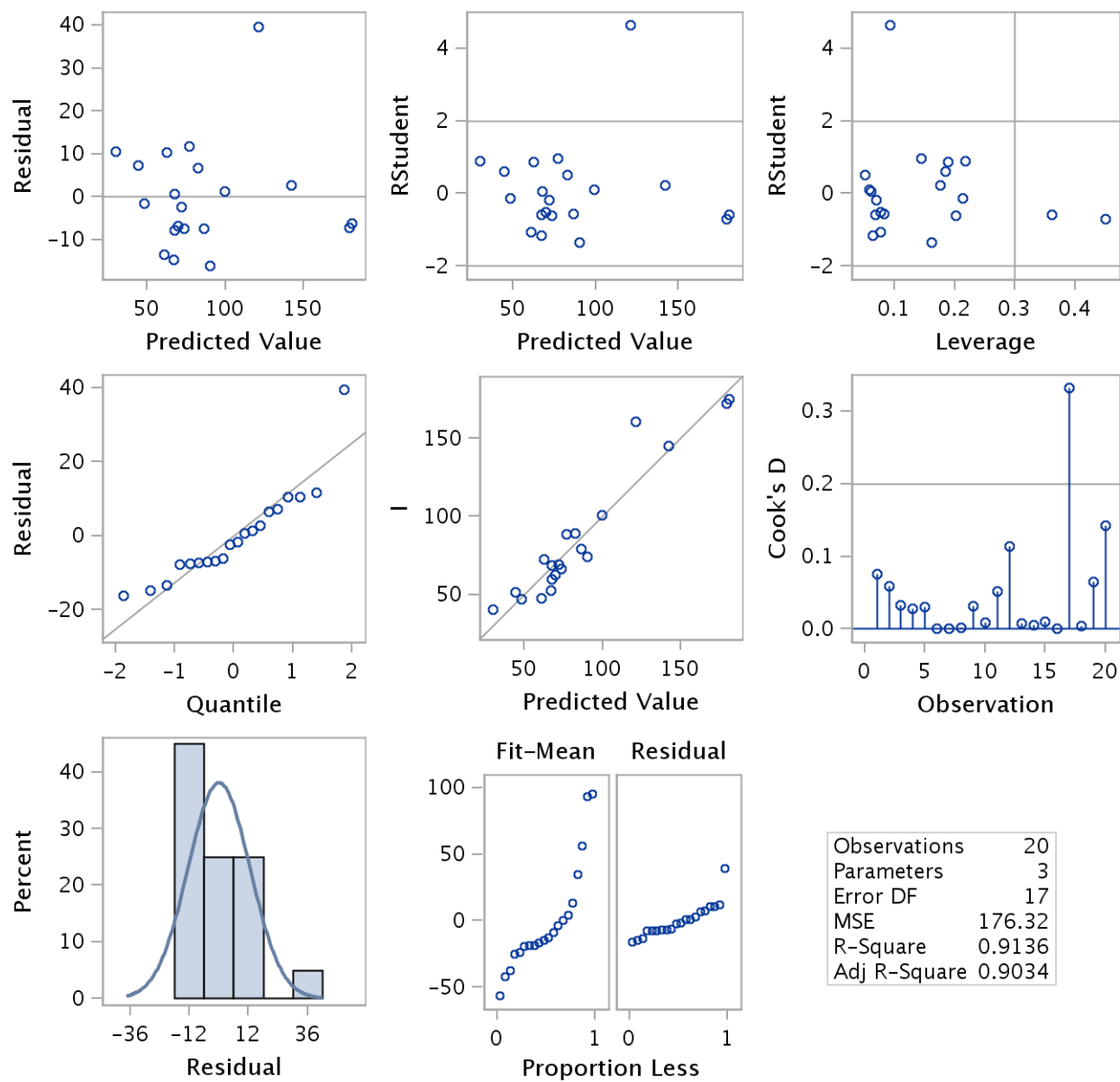
Root MSE	13.27856	R-Square	0.9136
Dependent Mean	86.12350	Adj R-Sq	0.9034
Coeff Var	15.41805		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	-6.18996	13.50648	-0.46	0.6525
f_ch	F	1	0.07795	0.01997	3.90	0.0011
c_ch	C	1	0.31572	0.02881	10.96	<.0001

Descriptive Statistics using Proc Means

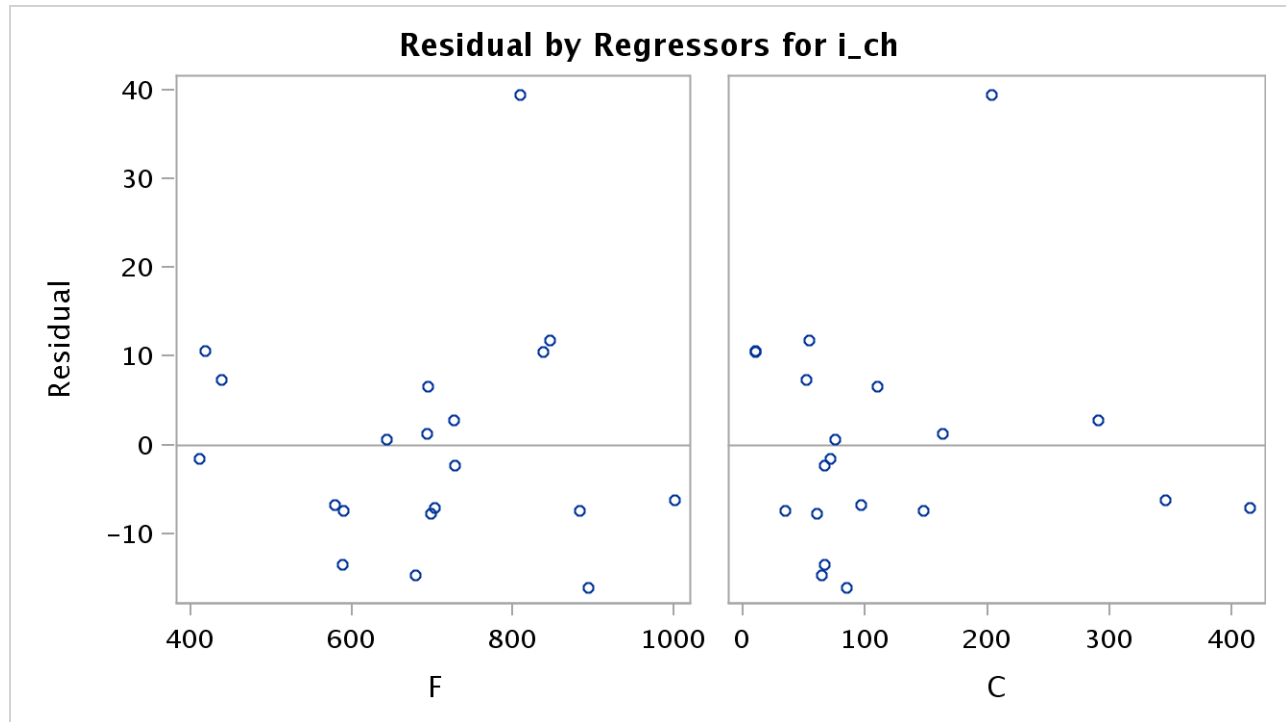
The REG Procedure
 Model: MODEL1
 Dependent Variable: i_ch I

Fit Diagnostics for i_ch



Descriptive Statistics using Proc Means

The REG Procedure
Model: MODEL1
Dependent Variable: i_ch l



Descriptive Statistics using Proc Means

The REG Procedure
Model: MODEL1
Dependent Variable: i_ge I

Number of Observations Read	20
Number of Observations Used	20

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	31632	15816	20.34	<.0001
Error	17	13217	777.44634		
Corrected Total	19	44849			

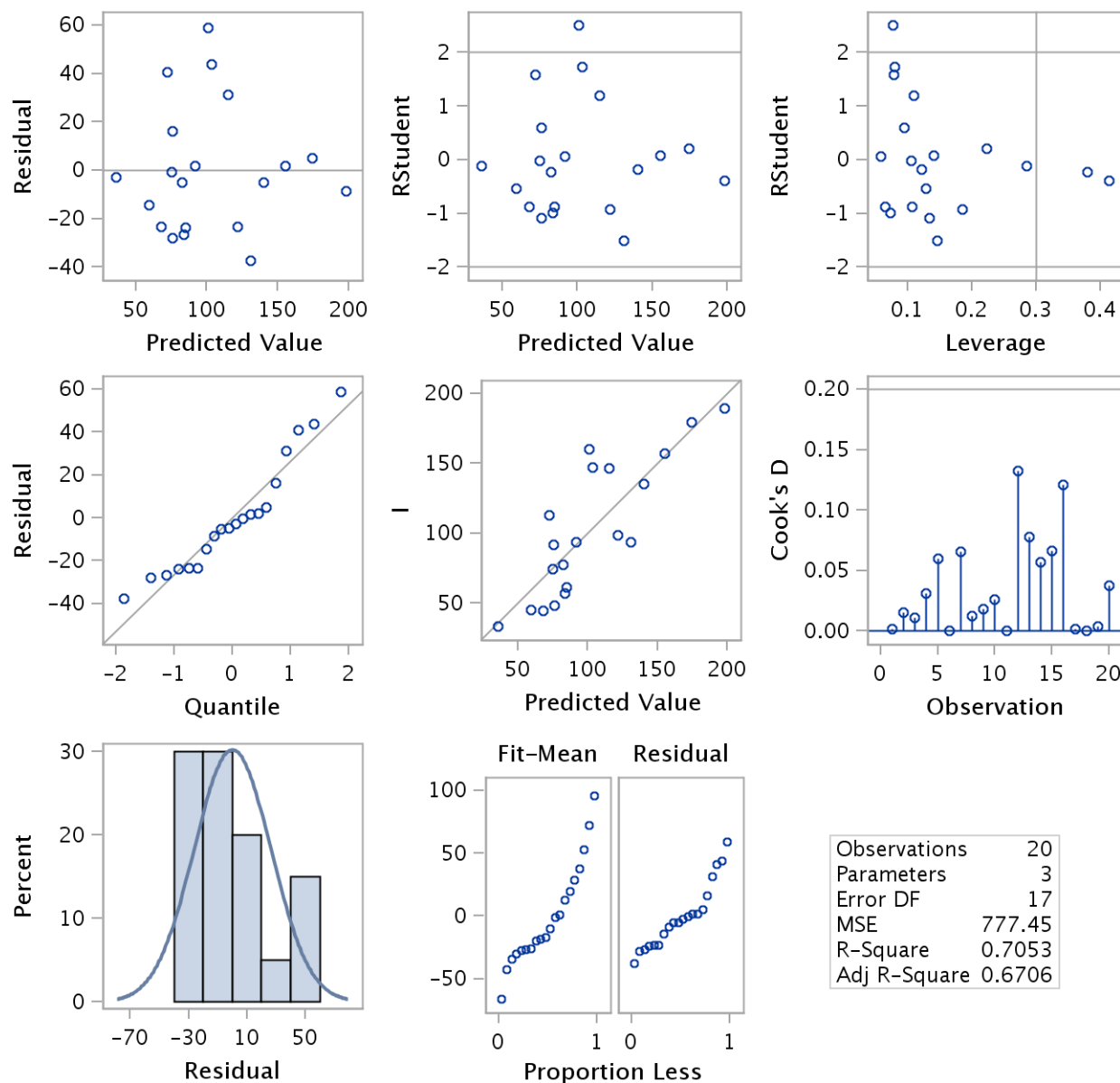
Root MSE	27.88272	R-Square	0.7053
Dependent Mean	102.29000	Adj R-Sq	0.6706
Coeff Var	27.25850		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	-9.95631	31.37425	-0.32	0.7548
f_ge	F	1	0.02655	0.01557	1.71	0.1063
c_ge	C	1	0.15169	0.02570	5.90	<.0001

Descriptive Statistics using Proc Means

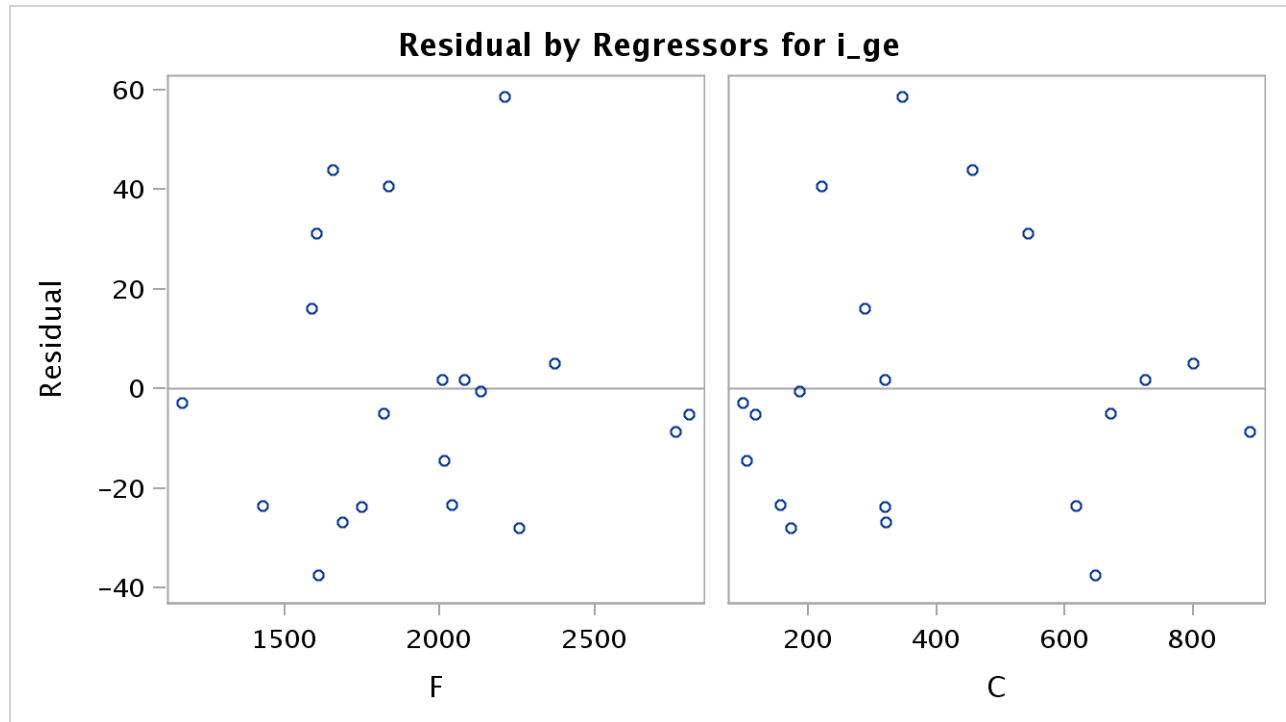
The REG Procedure
 Model: MODEL1
 Dependent Variable: i_ge l

Fit Diagnostics for i_ge



Descriptive Statistics using Proc Means

The REG Procedure
Model: MODEL1
Dependent Variable: i_ge l



Descriptive Statistics using Proc Means

The REG Procedure
Model: MODEL1
Dependent Variable: i_we l

Number of Observations Read	20
Number of Observations Used	20

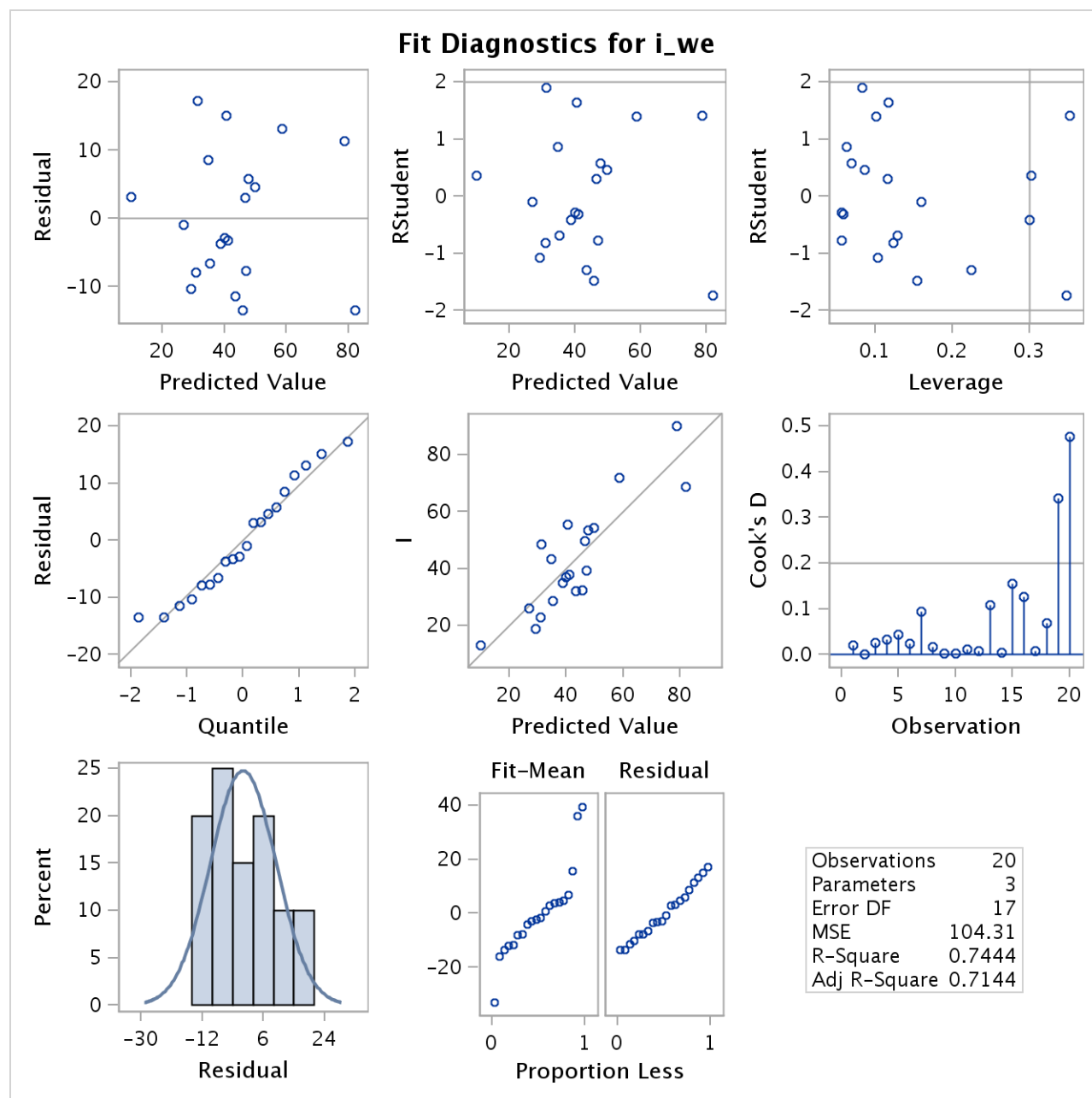
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	5165.55292	2582.77646	24.76	<.0001
Error	17	1773.23393	104.30788		
Corrected Total	19	6938.78685			

Root MSE	10.21312	R-Square	0.7444
Dependent Mean	42.89150	Adj R-Sq	0.7144
Coeff Var	23.81153		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	-0.50939	8.01529	-0.06	0.9501
f_we	F	1	0.05289	0.01571	3.37	0.0037
c_we	C	1	0.09241	0.05610	1.65	0.1179

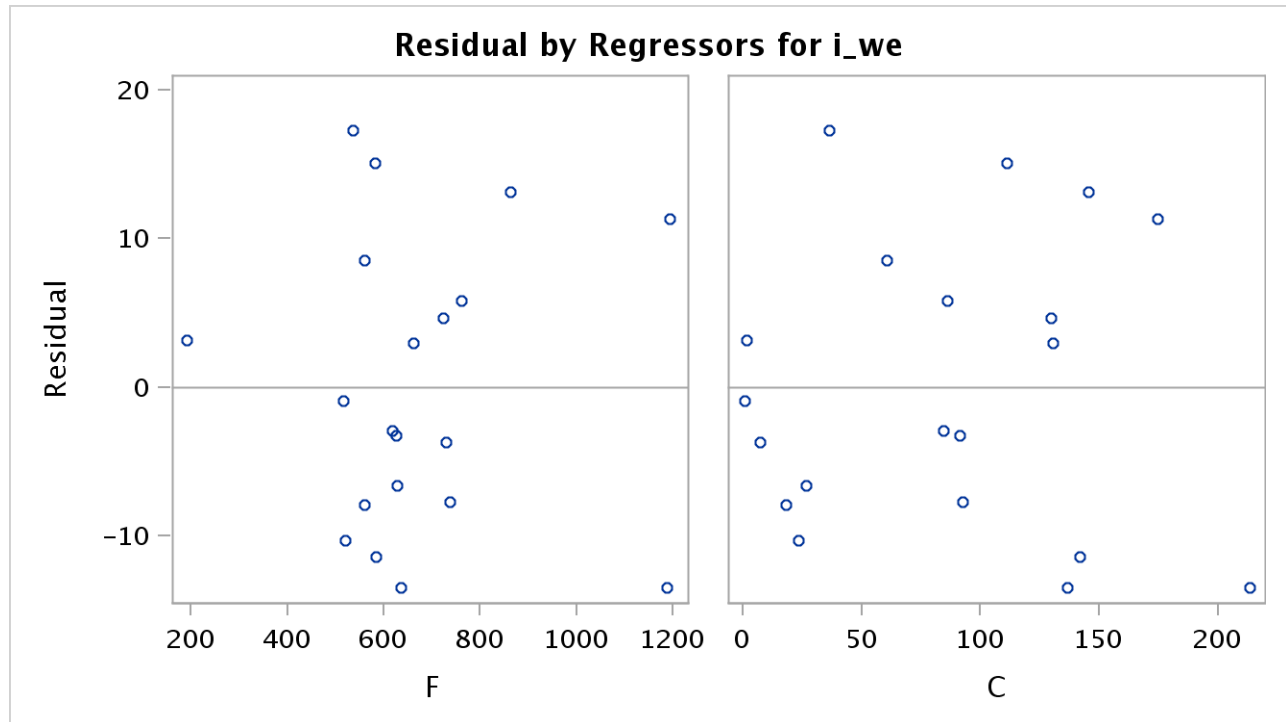
Descriptive Statistics using Proc Means

The REG Procedure
 Model: MODEL1
 Dependent Variable: i_we I



Descriptive Statistics using Proc Means

The REG Procedure
Model: MODEL1
Dependent Variable: i_we l



Descriptive Statistics using Proc Means

The REG Procedure
Model: MODEL1
Dependent Variable: i_us l

Number of Observations Read	20
Number of Observations Used	20

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	139978	69989	6.69	0.0072
Error	17	177928	10466		
Corrected Total	19	317906			

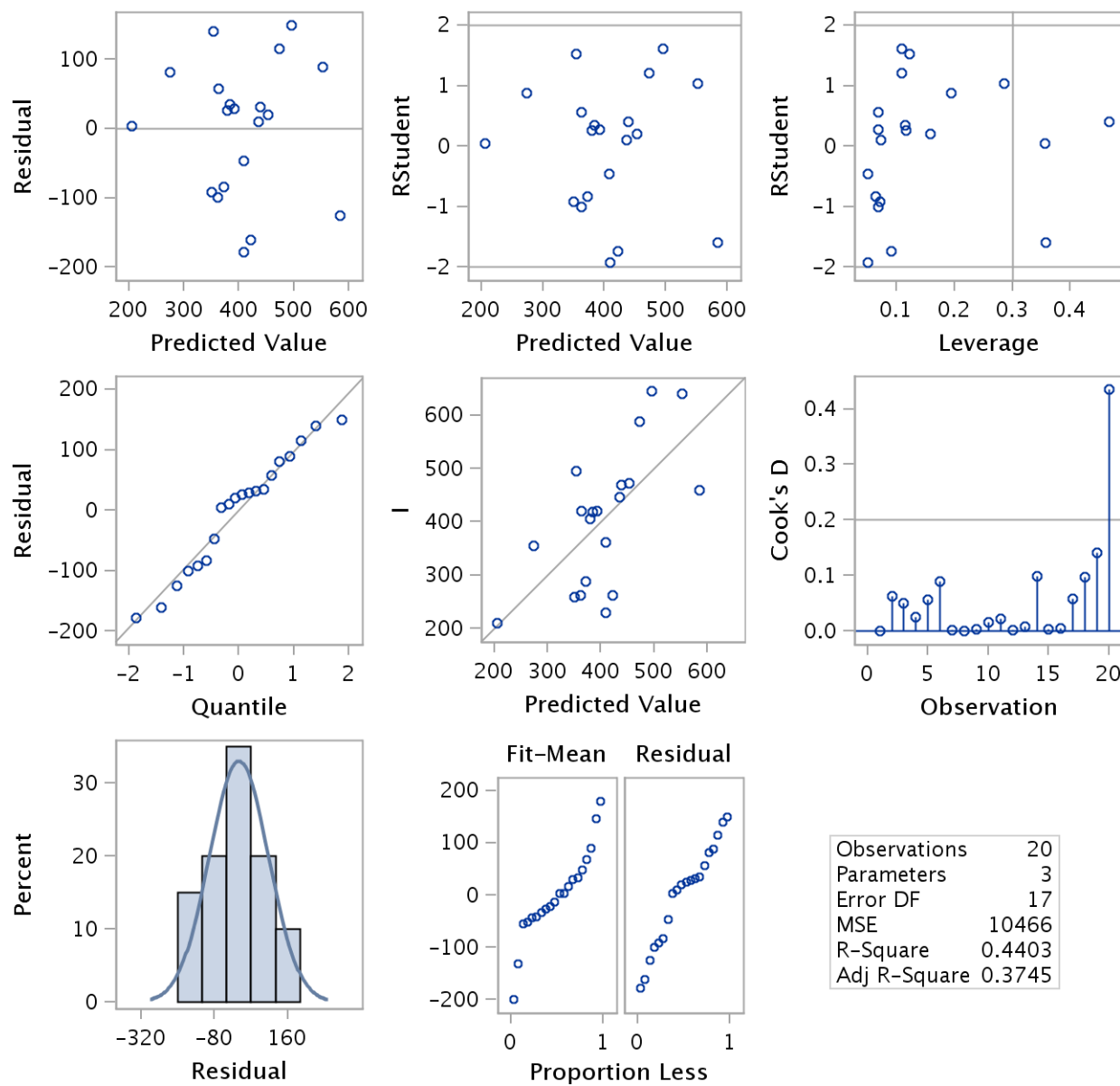
Root MSE	102.30529	R-Square	0.4403
Dependent Mean	405.46000	Adj R-Sq	0.3745
Coeff Var	25.23191		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	-30.36853	157.04769	-0.19	0.8490
f_us	F	1	0.15657	0.07889	1.98	0.0635
c_us	C	1	0.42387	0.15522	2.73	0.0142

Descriptive Statistics using Proc Means

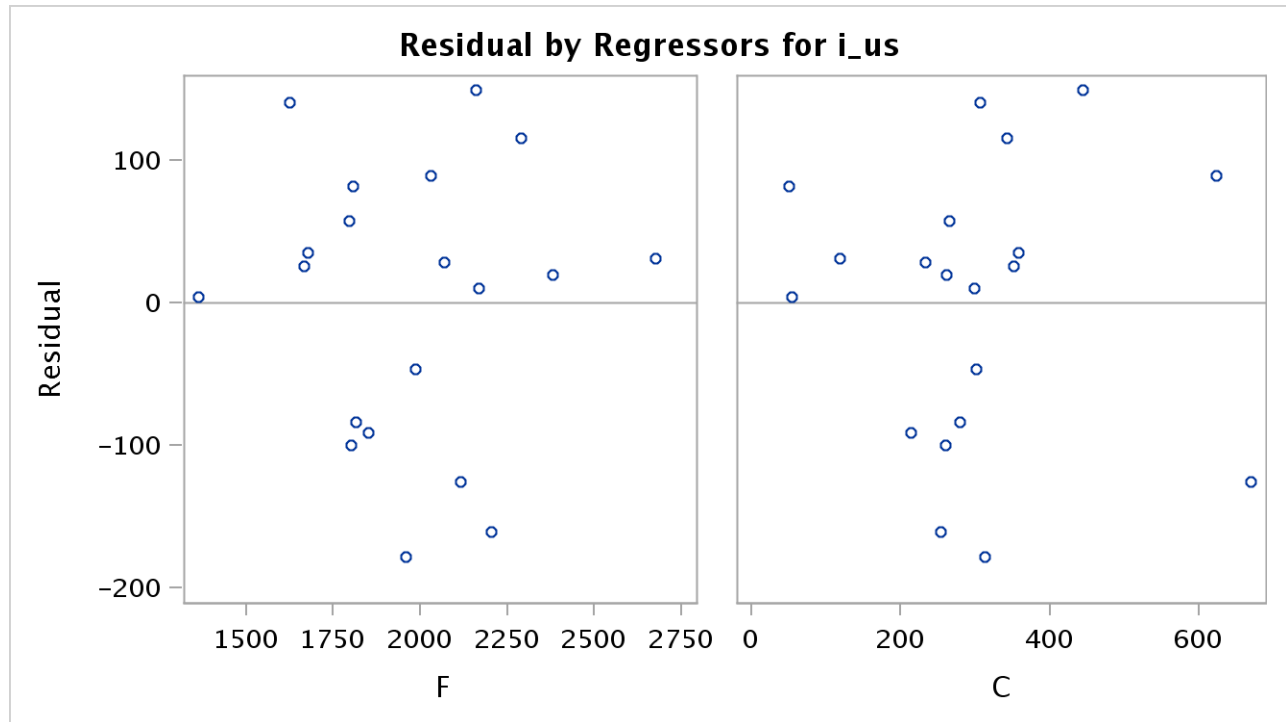
The REG Procedure
 Model: MODEL1
 Dependent Variable: i_us l

Fit Diagnostics for i_us



Descriptive Statistics using Proc Means

The REG Procedure
Model: MODEL1
Dependent Variable: i_us l



Descriptive Statistics using Proc Means

The SYSLIN Procedure Ordinary Least Squares Estimation

Model	GM
Dependent Variable	i_gm
Label	I

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1677687	838843.3	99.58	<.0001
Error	17	143205.9	8423.875		
Corrected Total	19	1820893			

Root MSE	91.78167	R-Square	0.92135
Dependent Mean	608.02000	Adj R-Sq	0.91210
Coeff Var	15.09517		

Parameter Estimates						
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Variable Label
Intercept	1	-149.782	105.8421	-1.42	0.1751	Intercept
f_gm	1	0.119281	0.025834	4.62	0.0002	F
c_gm	1	0.371445	0.037073	10.02	<.0001	C

Descriptive Statistics using Proc Means

The SYSLIN Procedure Ordinary Least Squares Estimation

Model	CH
Dependent Variable	i_ch
Label	I

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	31686.54	15843.27	89.86	<.0001
Error	17	2997.444	176.3203		
Corrected Total	19	34683.99			

Root MSE	13.27856	R-Square	0.91358
Dependent Mean	86.12350	Adj R-Sq	0.90341
Coeff Var	15.41805		

Parameter Estimates						
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Variable Label
Intercept	1	-6.18996	13.50648	-0.46	0.6525	Intercept
f_ch	1	0.077948	0.019973	3.90	0.0011	F
c_ch	1	0.315718	0.028813	10.96	<.0001	C

Descriptive Statistics using Proc Means

The SYSLIN Procedure Ordinary Least Squares Estimation

Model	GE
Dependent Variable	i_ge
Label	I

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	31632.03	15816.02	20.34	<.0001
Error	17	13216.59	777.4463		
Corrected Total	19	44848.62			

Root MSE	27.88272	R-Square	0.70531
Dependent Mean	102.29000	Adj R-Sq	0.67064
Coeff Var	27.25850		

Parameter Estimates						
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Variable Label
Intercept	1	-9.95631	31.37425	-0.32	0.7548	Intercept
f_ge	1	0.026551	0.015566	1.71	0.1063	F
c_ge	1	0.151694	0.025704	5.90	<.0001	C

Descriptive Statistics using Proc Means

The SYSLIN Procedure Ordinary Least Squares Estimation

Model	WE
Dependent Variable	i_we
Label	I

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	5165.553	2582.776	24.76	<.0001
Error	17	1773.234	104.3079		
Corrected Total	19	6938.787			

Root MSE	10.21312	R-Square	0.74445
Dependent Mean	42.89150	Adj R-Sq	0.71438
Coeff Var	23.81153		

Parameter Estimates						
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Variable Label
Intercept	1	-0.50939	8.015289	-0.06	0.9501	Intercept
f_we	1	0.052894	0.015707	3.37	0.0037	F
c_we	1	0.092406	0.056099	1.65	0.1179	C

Descriptive Statistics using Proc Means

The SYSLIN Procedure Ordinary Least Squares Estimation

Model	US
Dependent Variable	i_us
Label	I

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	139978.1	69989.04	6.69	0.0072
Error	17	177928.3	10466.37		
Corrected Total	19	317906.4			

Root MSE	102.30529	R-Square	0.44031
Dependent Mean	405.46000	Adj R-Sq	0.37447
Coeff Var	25.23191		

Parameter Estimates						
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Variable Label
Intercept	1	-30.3685	157.0477	-0.19	0.8490	Intercept
f_us	1	0.156571	0.078886	1.98	0.0635	F
c_us	1	0.423866	0.155216	2.73	0.0142	C

Descriptive Statistics using Proc Means

The SYSLIN Procedure Seemingly Unrelated Regression Estimation

Cross Model Covariance					
	GM	CH	GE	WE	US
GM	8423.88	-332.655	714.74	148.443	-2614.2
CH	-332.65	176.320	-25.15	15.655	491.9
GE	714.74	-25.148	777.45	207.587	1064.6
WE	148.44	15.655	207.59	104.308	642.6
US	-2614.19	491.857	1064.65	642.571	10466.4

Cross Model Correlation					
	GM	CH	GE	WE	US
GM	1.00000	-0.27295	0.27929	0.15836	-0.27841
CH	-0.27295	1.00000	-0.06792	0.11544	0.36207
GE	0.27929	-0.06792	1.00000	0.72896	0.37323
WE	0.15836	0.11544	0.72896	1.00000	0.61499
US	-0.27841	0.36207	0.37323	0.61499	1.00000

Cross Model Inverse Correlation					
	GM	CH	GE	WE	US
GM	1.41160	0.14649	-0.32667	-0.46056	0.74512
CH	0.14649	1.23373	0.27615	-0.08670	-0.45566
GE	-0.32667	0.27615	2.33055	-1.65117	-0.04531
WE	-0.46056	-0.08670	-1.65117	3.16367	-1.42618
US	0.74512	-0.45566	-0.04531	-1.42618	2.26642

Cross Model Inverse Covariance					
	GM	CH	GE	WE	US
GM	0.000168	0.000120	-0.000128	-0.000491	0.000079
CH	0.000120	0.006997	0.000746	-0.000639	-0.000335
GE	-0.000128	0.000746	0.002998	-0.005798	-0.000016
WE	-0.000491	-0.000639	-0.005798	0.030330	-0.001365
US	0.000079	-0.000335	-0.000016	-0.001365	0.000217

System Weighted MSE	0.9401
Degrees of freedom	85
System Weighted R-Square	0.8707

Model	GM
Dependent Variable	i_gm
Label	I

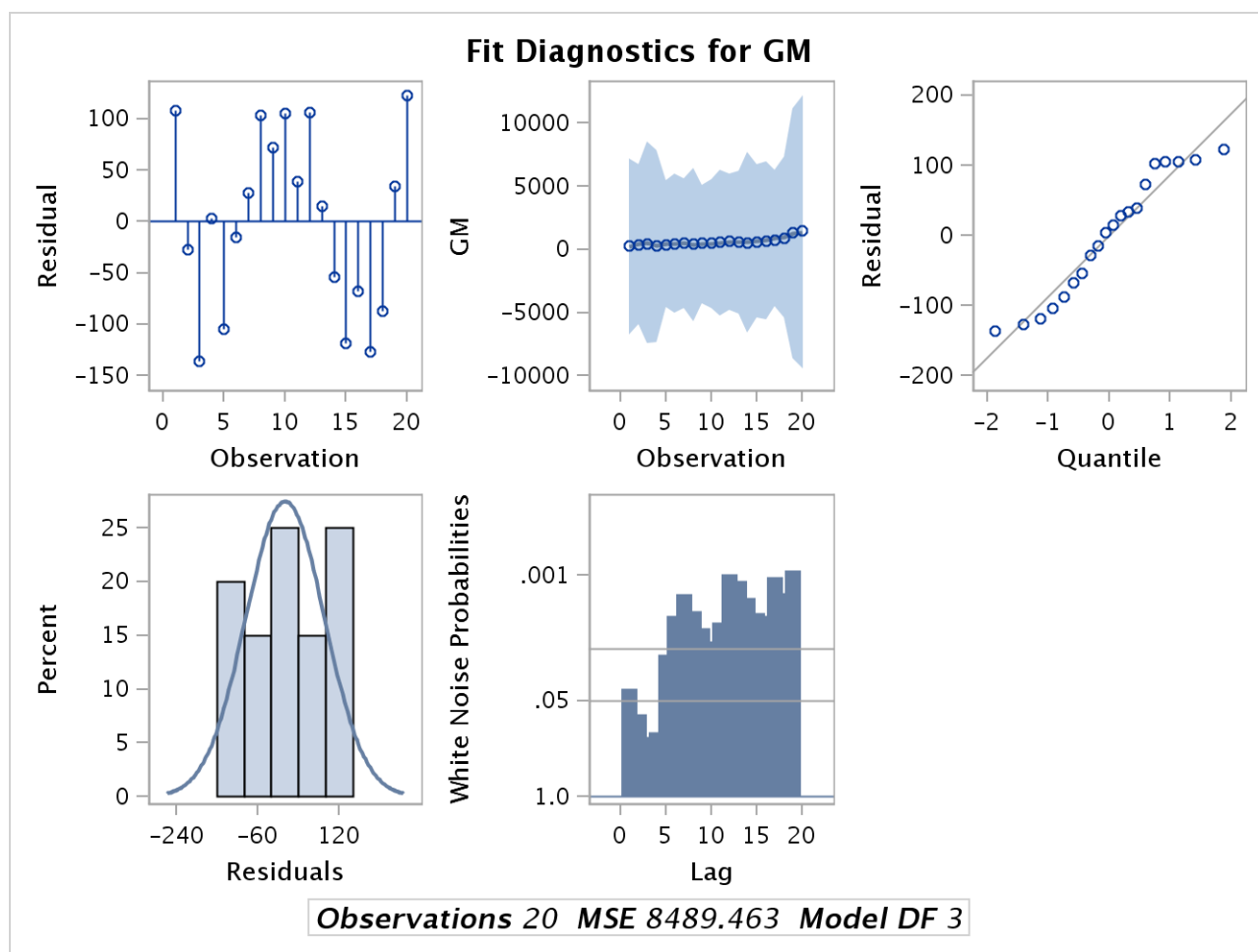
Descriptive Statistics using Proc Means

The SYSLIN Procedure Seemingly Unrelated Regression Estimation

Parameter Estimates						
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Variable Label
Intercept	1	-162.364	97.03216	-1.67	0.1126	Intercept
f_gm	1	0.120493	0.023460	5.14	<.0001	F
c_gm	1	0.382746	0.035542	10.77	<.0001	C

Descriptive Statistics using Proc Means

The SYSLIN Procedure
Seemingly Unrelated Regression Estimation

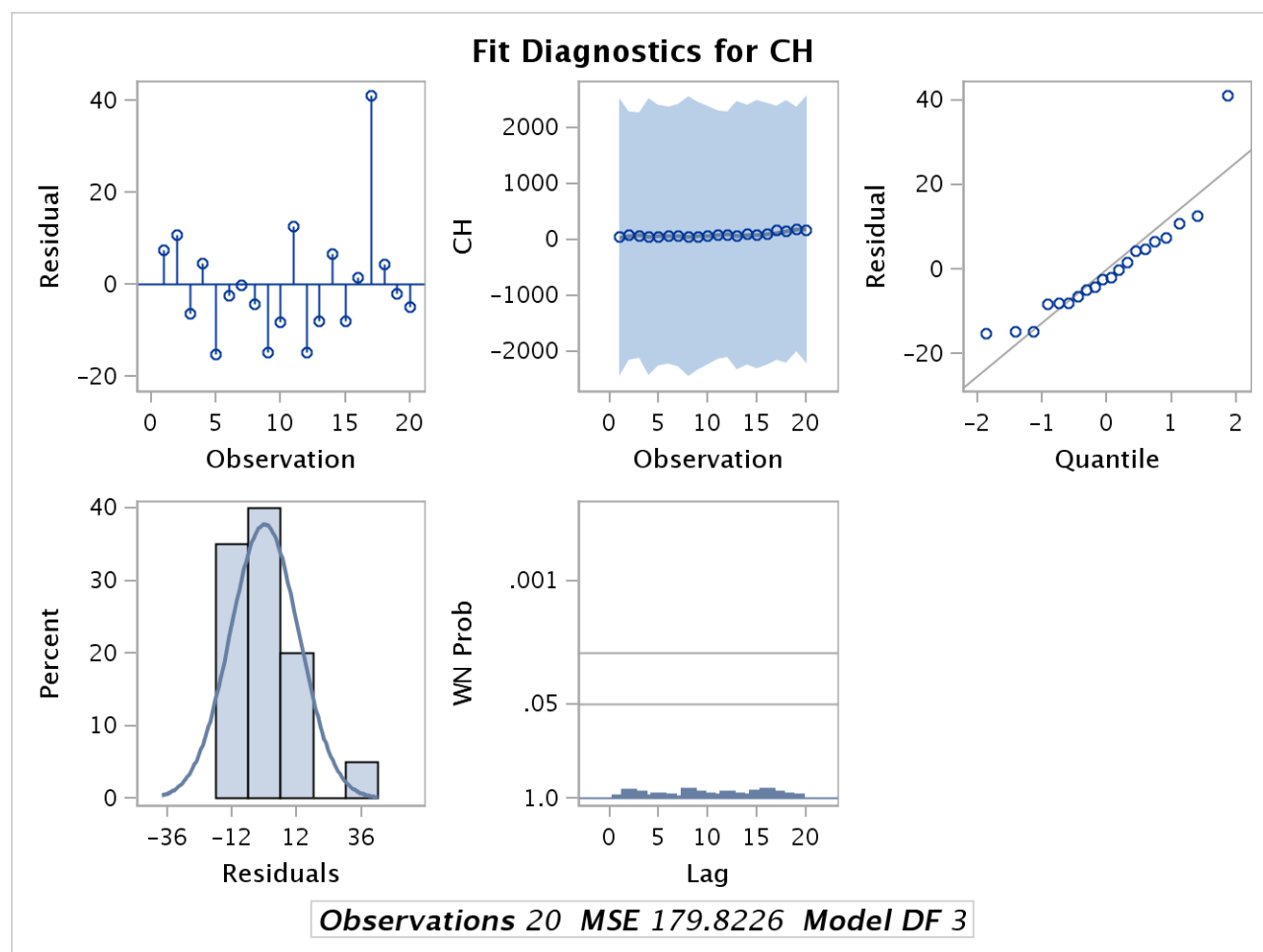


Model	CH
Dependent Variable	i_ch
Label	I

Parameter Estimates						
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Variable Label
Intercept	1	0.504304	12.48742	0.04	0.9683	Intercept
f_ch	1	0.069546	0.018328	3.79	0.0014	F
c_ch	1	0.308545	0.028053	11.00	<.0001	C

Descriptive Statistics using Proc Means

The SYSLIN Procedure
Seemingly Unrelated Regression Estimation

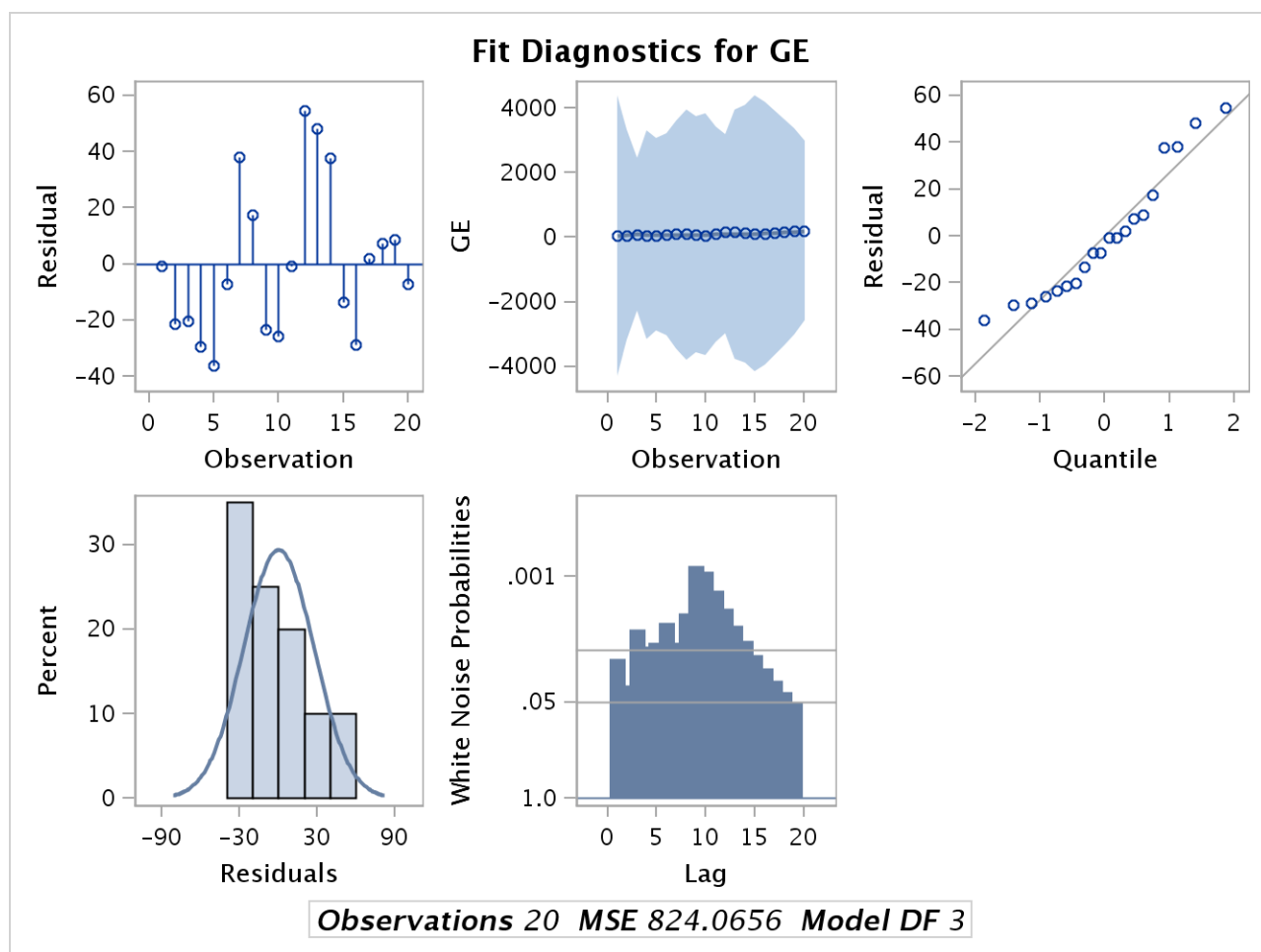


Model	GE
Dependent Variable	i_ge
Label	I

Parameter Estimates						
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Variable Label
Intercept	1	-22.4389	27.67879	-0.81	0.4287	Intercept
f_ge	1	0.037291	0.013301	2.80	0.0122	F
c_ge	1	0.130783	0.023916	5.47	<.0001	C

Descriptive Statistics using Proc Means

The SYSLIN Procedure
Seemingly Unrelated Regression Estimation

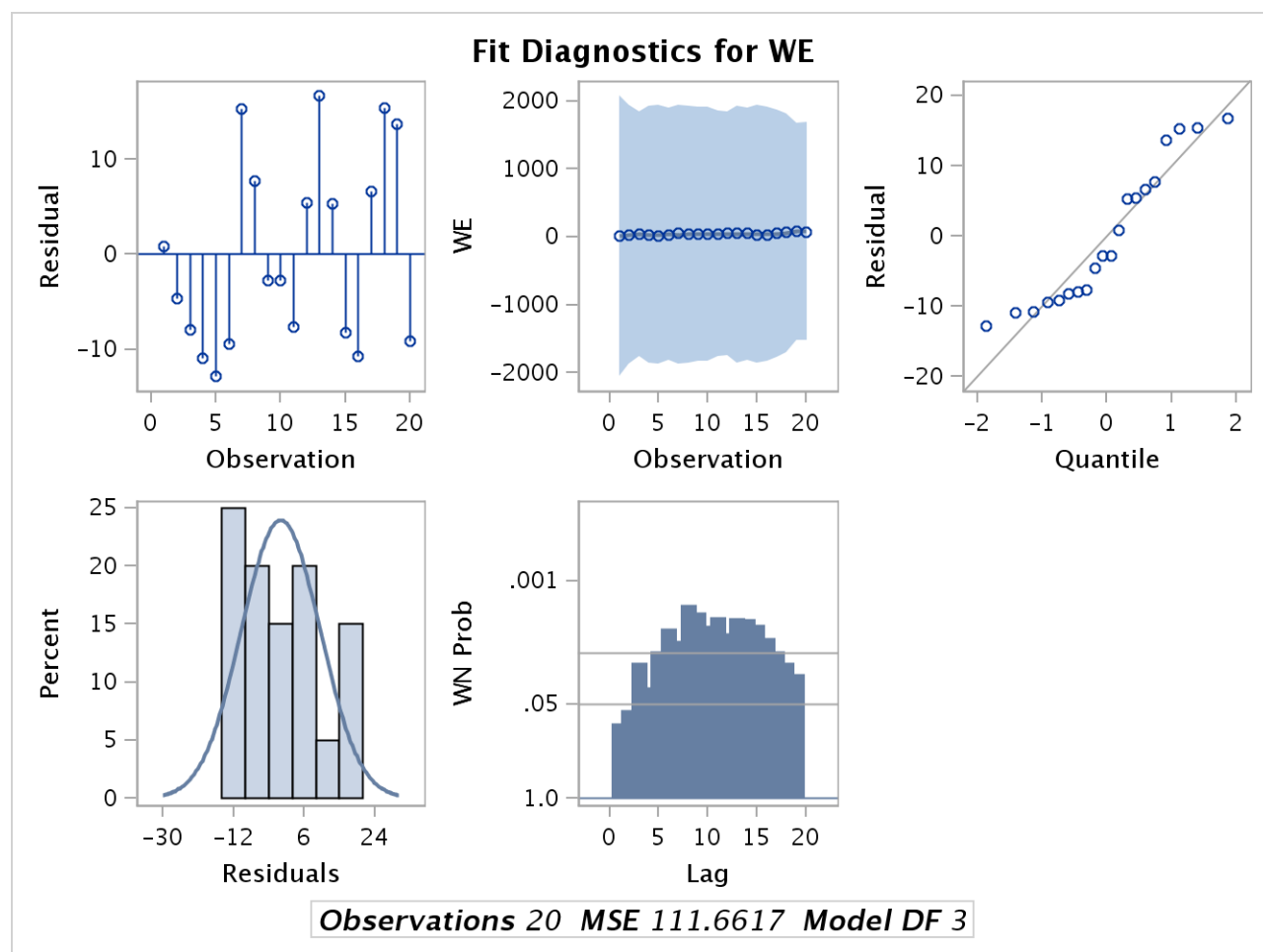


Model	WE
Dependent Variable	i_we
Label	I

Parameter Estimates						
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Variable Label
Intercept	1	1.088877	6.788627	0.16	0.8745	Intercept
f_we	1	0.057009	0.012324	4.63	0.0002	F
c_we	1	0.041506	0.044689	0.93	0.3660	C

Descriptive Statistics using Proc Means

The SYSLIN Procedure
Seemingly Unrelated Regression Estimation



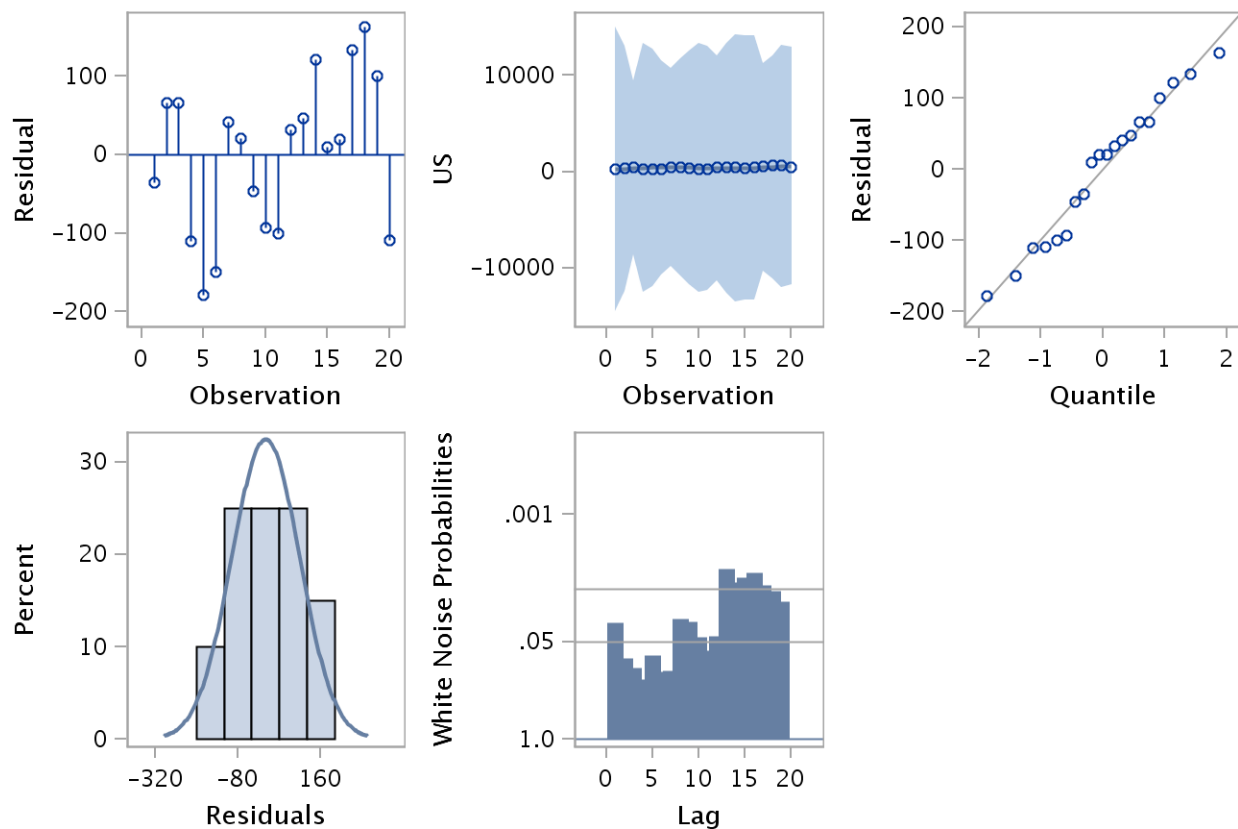
Model	US
Dependent Variable	i_us
Label	I

Parameter Estimates						
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Variable Label
Intercept	1	85.42325	121.3481	0.70	0.4910	Intercept
f_us	1	0.101478	0.059421	1.71	0.1059	F
c_us	1	0.399991	0.138613	2.89	0.0103	C

Descriptive Statistics using Proc Means

The SYSLIN Procedure
Seemingly Unrelated Regression Estimation

Fit Diagnostics for US



Observations 20 MSE 10809.59 Model DF 3

Descriptive Statistics using Proc Means

The REG Procedure
Model: MODEL1
Dependent Variable: I I

Number of Observations Read	100
Number of Observations Used	100

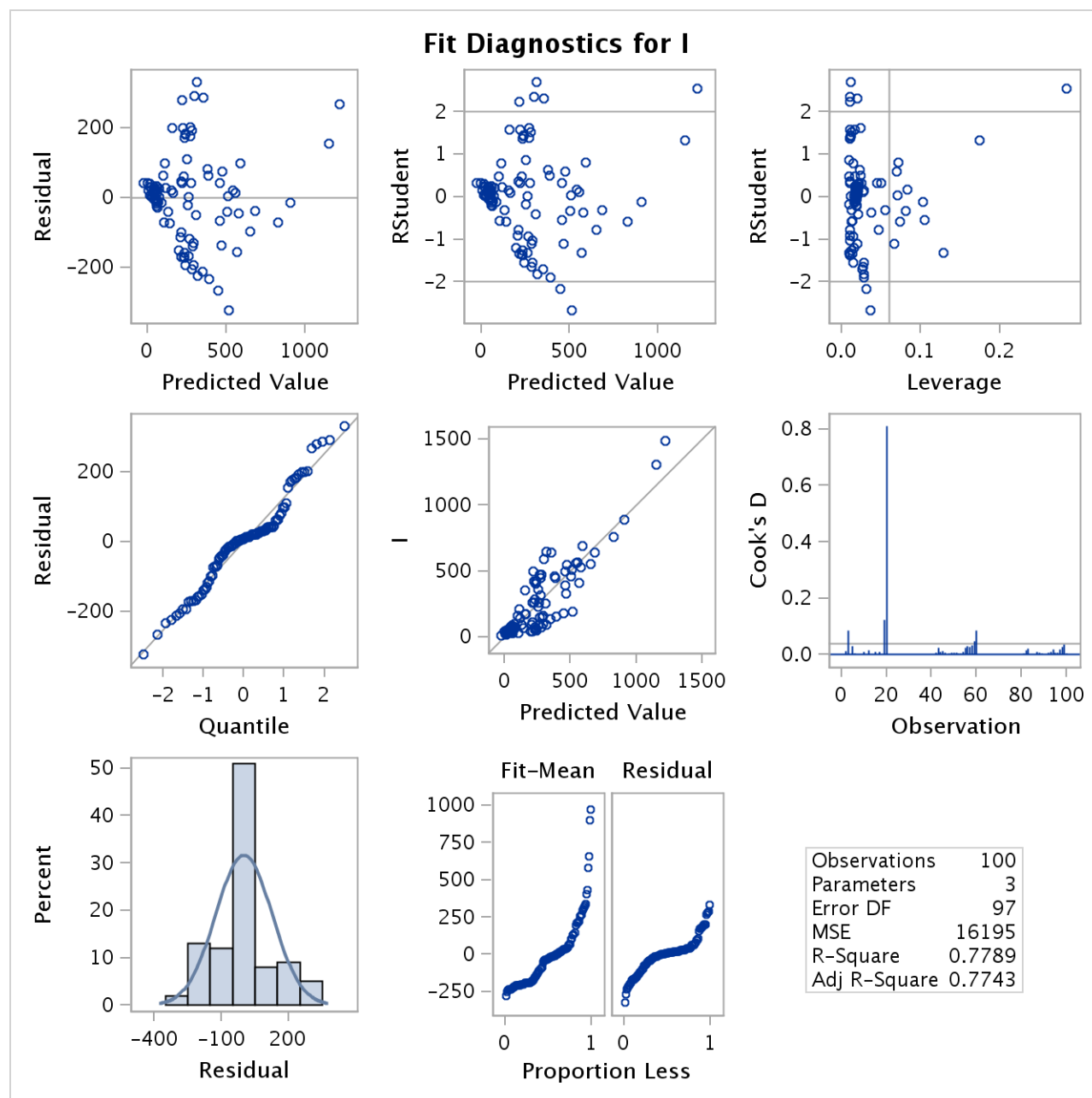
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	5532554	2766277	170.81	<.0001
Error	97	1570884	16195		
Corrected Total	99	7103438			

Root MSE	127.25831	R-Square	0.7789
Dependent Mean	248.95700	Adj R-Sq	0.7743
Coeff Var	51.11658		

Parameter Estimates							
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Variance Inflation
Intercept	Intercept	1	-48.02974	21.48017	-2.24	0.0276	0
F	F	1	0.10509	0.01138	9.24	<.0001	1.59749
C	C	1	0.30537	0.04351	7.02	<.0001	1.59749

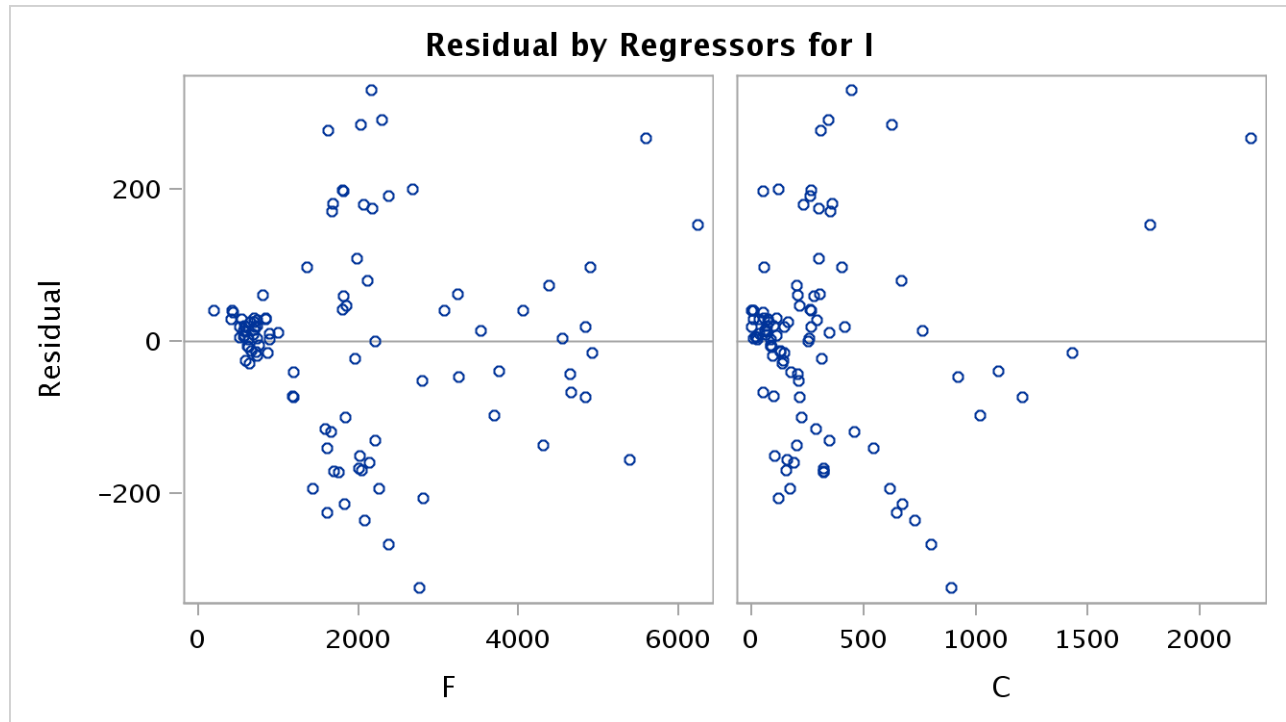
Descriptive Statistics using Proc Means

The REG Procedure
Model: MODEL1
Dependent Variable: II



Descriptive Statistics using Proc Means

The REG Procedure
Model: MODEL1
Dependent Variable: II



Descriptive Statistics using Proc Means

The MEANS Procedure

Variable	Label	N	N Miss	Minimum	Maximum	Median	Mean	Variance	Std Dev
I	I	100	0	12.930	1486.700	140.100	248.957	71751.897	267.865
F	F	100	0	191.500	6241.700	1682.300	1922.223	2018625.010	1420.783
C	C	100	0	0.800	2226.300	205.350	311.067	138051.130	371.552