Obs	membership	season	duration	X1	X2	X3	X4	X1X2	X1X3	X1X4	trany
1	casual	winter	1414	1	1	0	0	1	0	0	7.25418
2	casual	winter	2207	1	1	0	0	1	0	0	7.69939
3	casual	winter	1046	1	1	0	0	1	0	0	6.95273
4	casual	winter	1398	1	1	0	0	1	0	0	7.24280
5	casual	winter	1077	1	1	0	0	1	0	0	6.98193
6	casual	winter	832	1	1	0	0	1	0	0	6.72383
7	casual	winter	234	1	1	0	0	1	0	0	5.45532
8	casual	winter	2012	1	1	0	0	1	0	0	7.60688
9	casual	winter	1375	1	1	0	0	1	0	0	7.22621
10	casual	winter	1010	1	1	0	0	1	0	0	6.91771
11	casual	spring	852	1	0	1	0	0	1	0	6.74759
12	casual	spring	531	1	0	1	0	0	1	0	6.27476
13	casual	spring	1754	1	0	1	0	0	1	0	7.46965
14	casual	spring	670	1	0	1	0	0	1	0	6.50728
15	casual	spring	2441	1	0	1	0	0	1	0	7.80016
16	casual	spring	1343	1	0	1	0	0	1	0	7.20266
17	casual	spring	2082	1	0	1	0	0	1	0	7.64108
18	casual	spring	1501	1	0	1	0	0	1	0	7.31389
19	casual	spring	2513	1	0	1	0	0	1	0	7.82923
20	casual	spring	1576	1	0	1	0	0	1	0	7.36265
21	casual	summer	1761	1	0	0	1	0	0	1	7.47364
22	casual	summer	1811	1	0	0	1	0	0	1	7.50163
23	casual	summer	1793	1	0	0	1	0	0	1	7.49165
24	casual	summer	5078	1	0	0	1	0	0	1	8.53267
25	casual	summer	1338	1	0	0	1	0	0	1	7.19893
26	casual	summer	2961	1	0	0	1	0	0	1	7.99328
27	casual	summer	1574	1	0	0	1	0	0	1	7.36138
28	casual	summer	1173	1	0	0	1	0	0	1	7.06732
29	casual	summer	763	1	0	0	1	0	0	1	6.63726
30	casual	summer	4096	1	0	0	1	0	0	1	8.31777
31	casual	autumn	5025	1	-1	-1	-1	-1	-1	-1	8.52218
32	casual	autumn	4270	1	-1	-1	-1	-1	-1	-1	8.35937
33	casual	autumn	834	1	-1	-1	-1	-1	-1	-1	6.72623
34	casual	autumn	7788	1	-1	-1	-1	-1	-1	-1	8.96034
35	casual	autumn	1987	1	-1	-1	-1	-1	-1	-1	7.59438
36	casual	autumn	1246	1	-1	-1	-1	-1	-1	-1	7.12769
37	casual	autumn	956	1	-1	-1	-1	-1	-1	-1	6.86276
38	casual	autumn	6929	1	-1	-1	-1	-1	-1	-1	8.84347

Obs	membership	season	duration	X1	X2	X3	X4	X1X2	X1X3	X1X4	trany
39	casual	autumn	1172	1	-1	-1	-1	-1	-1	-1	7.06647
40	casual	autumn	1126	1	-1	-1	-1	-1	-1	-1	7.02643
41	member	winter	515	-1	1	0	0	-1	0	0	6.24417
42	member	winter	1202	-1	1	0	0	-1	0	0	7.09174
43	member	winter	499	-1	1	0	0	-1	0	0	6.21261
44	member	winter	974	-1	1	0	0	-1	0	0	6.88141
45	member	winter	175	-1	1	0	0	-1	0	0	5.16479
46	member	winter	1450	-1	1	0	0	-1	0	0	7.27932
47	member	winter	428	-1	1	0	0	-1	0	0	6.05912
48	member	winter	83	-1	1	0	0	-1	0	0	4.41884
49	member	winter	294	-1	1	0	0	-1	0	0	5.68358
50	member	winter	1508	-1	1	0	0	-1	0	0	7.31854
51	member	spring	429	-1	0	1	0	0	-1	0	6.06146
52	member	spring	1893	-1	0	1	0	0	-1	0	7.54592
53	member	spring	202	-1	0	1	0	0	-1	0	5.30827
54	member	spring	319	-1	0	1	0	0	-1	0	5.76519
55	member	spring	304	-1	0	1	0	0	-1	0	5.71703
56	member	spring	533	-1	0	1	0	0	-1	0	6.27852
57	member	spring	1061	-1	0	1	0	0	-1	0	6.96697
58	member	spring	338	-1	0	1	0	0	-1	0	5.82305
59	member	spring	418	-1	0	1	0	0	-1	0	6.03548
60	member	spring	835	-1	0	1	0	0	-1	0	6.72743
61	member	summer	364	-1	0	0	1	0	0	-1	5.89715
62	member	summer	764	-1	0	0	1	0	0	-1	6.63857
63	member	summer	630	-1	0	0	1	0	0	-1	6.44572
64	member	summer	565	-1	0	0	1	0	0	-1	6.33683
65	member	summer	337	-1	0	0	1	0	0	-1	5.82008
66	member	summer	663	-1	0	0	1	0	0	-1	6.49677
67	member	summer	732	-1	0	0	1	0	0	-1	6.59578
68	member	summer	780	-1	0	0	1	0	0	-1	6.65929
69	member	summer	1111	-1	0	0	1	0	0	-1	7.01302
70	member	summer	216	-1	0	0	1	0	0	-1	5.37528
71	member	autumn	450	-1	-1	-1	-1	1	1	1	6.10925
72	member	autumn	601	-1	-1	-1	-1	1	1	1	6.39859
73	member	autumn	533	-1	-1	-1	-1	1	1	1	6.27852
74	member	autumn	685	-1	-1	-1	-1	1	1	1	6.52942
75	member	autumn	1371	-1	-1	-1	-1	1	1	1	7.22330
76	member	autumn	500	-1	-1	-1	-1	1	1	1	6.21461

Obs	membership	season	duration	X1	X2	X3	X4	X1X2	X1X3	X1X4	trany
77	member	autumn	271	-1	-1	-1	-1	1	1	1	5.60212
78	member	autumn	1007	-1	-1	-1	-1	1	1	1	6.91473
79	member	autumn	846	-1	-1	-1	-1	1	1	1	6.74052
80	member	autumn	248	-1	-1	-1	-1	1	1	1	5.51343

The MEANS Procedure

Analysis Variable : trany							
membership	season	N Obs	N	Mean	Std Dev	Minimum	Maximum
casual	autumn	10	10	7.7089320	0.8723456	6.7262334	8.9603394
	spring	10	10	7.2148954	0.5376097	6.2747620	7.8292325
	summer	10	10	7.5575523	0.5761483	6.6372580	8.5326728
	winter	10	10	7.0060981	0.6239164	5.4553211	7.6993894
member	autumn	10	10	6.3524484	0.5384282	5.5134287	7.2232957
	spring	10	10	6.2229309	0.6736871	5.3082677	7.5459182
	summer	10	10	6.3278494	0.4877235	5.3752784	7.0130158
	winter	10	10	6.2354114	0.9542821	4.4188406	7.3185395

Obs	membership	season	_TYPE_	_FREQ_	average
1			0	80	6.82826
2		autumn	1	20	7.03069
3		spring	1	20	6.71891
4		summer	1	20	6.94270
5		winter	1	20	6.62075
6	casual		2	40	7.37187
7	member		2	40	6.28466
8	casual	autumn	3	10	7.70893
9	casual	spring	3	10	7.21490
10	casual	summer	3	10	7.55755
11	casual	winter	3	10	7.00610
12	member	autumn	3	10	6.35245
13	member	spring	3	10	6.22293
14	member	summer	3	10	6.32785
15	member	winter	3	10	6.23541

The ANOVA Procedure

Class Level Information		
Class	**Levels**	**Values**
membership	2	casual member
season	4	autumn spring summer winter

Number of Observations Read	80
Number of Observations Used	80

The ANOVA Procedure

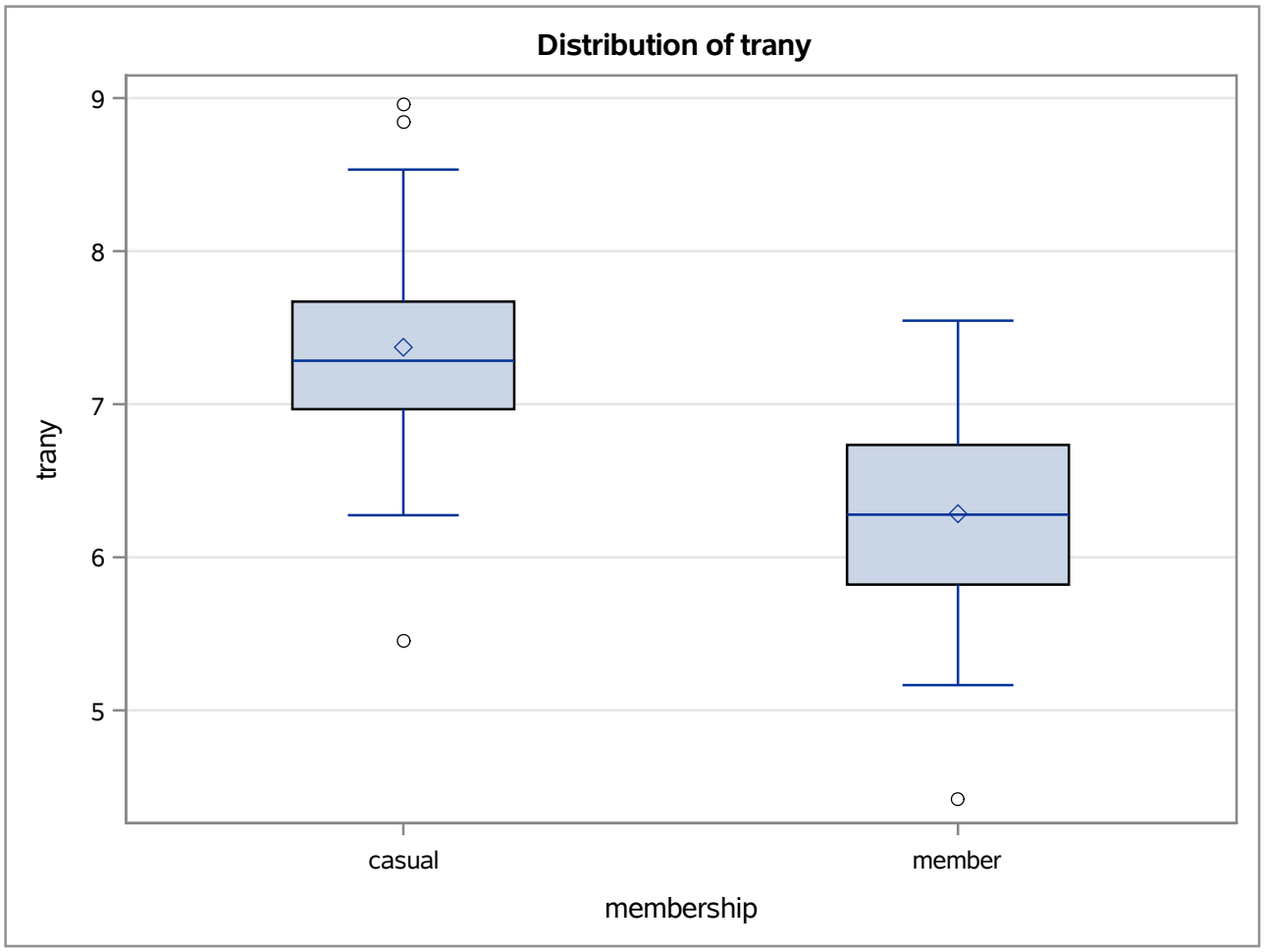
Dependent Variable: trany

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	26.83263864	3.83323409	8.37	<.0001
Error	72	32.97165499	0.45793965		
Corrected Total	79	59.80429363			

R-Square	Coeff Var	Root MSE	trany Mean
0.448674	9.910459	0.676712	6.828265

Source	DF	Anova SS	Mean Square	F Value	Pr > F
membership	1	23.64048559	23.64048559	51.62	<.0001
season	3	2.18179702	0.72726567	1.59	0.1997
membership*season	3	1.01035603	0.33678534	0.74	0.5343

The ANOVA Procedure

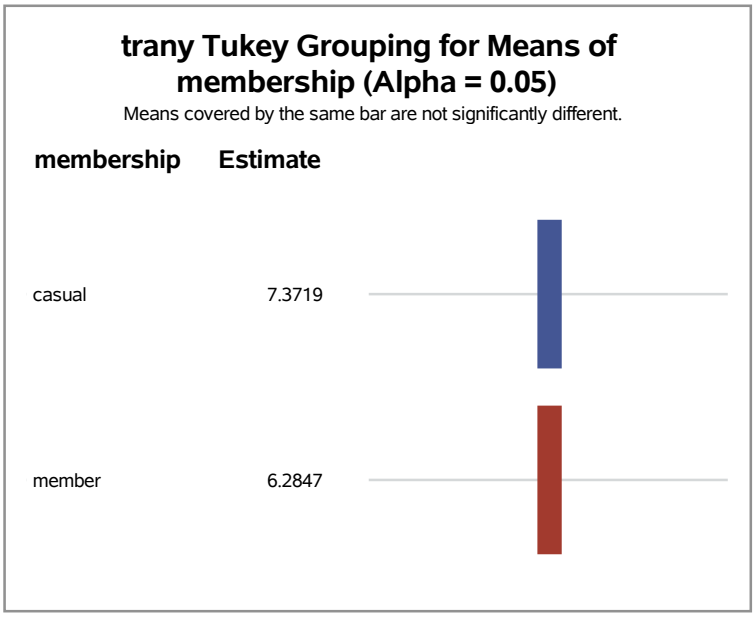


The ANOVA Procedure

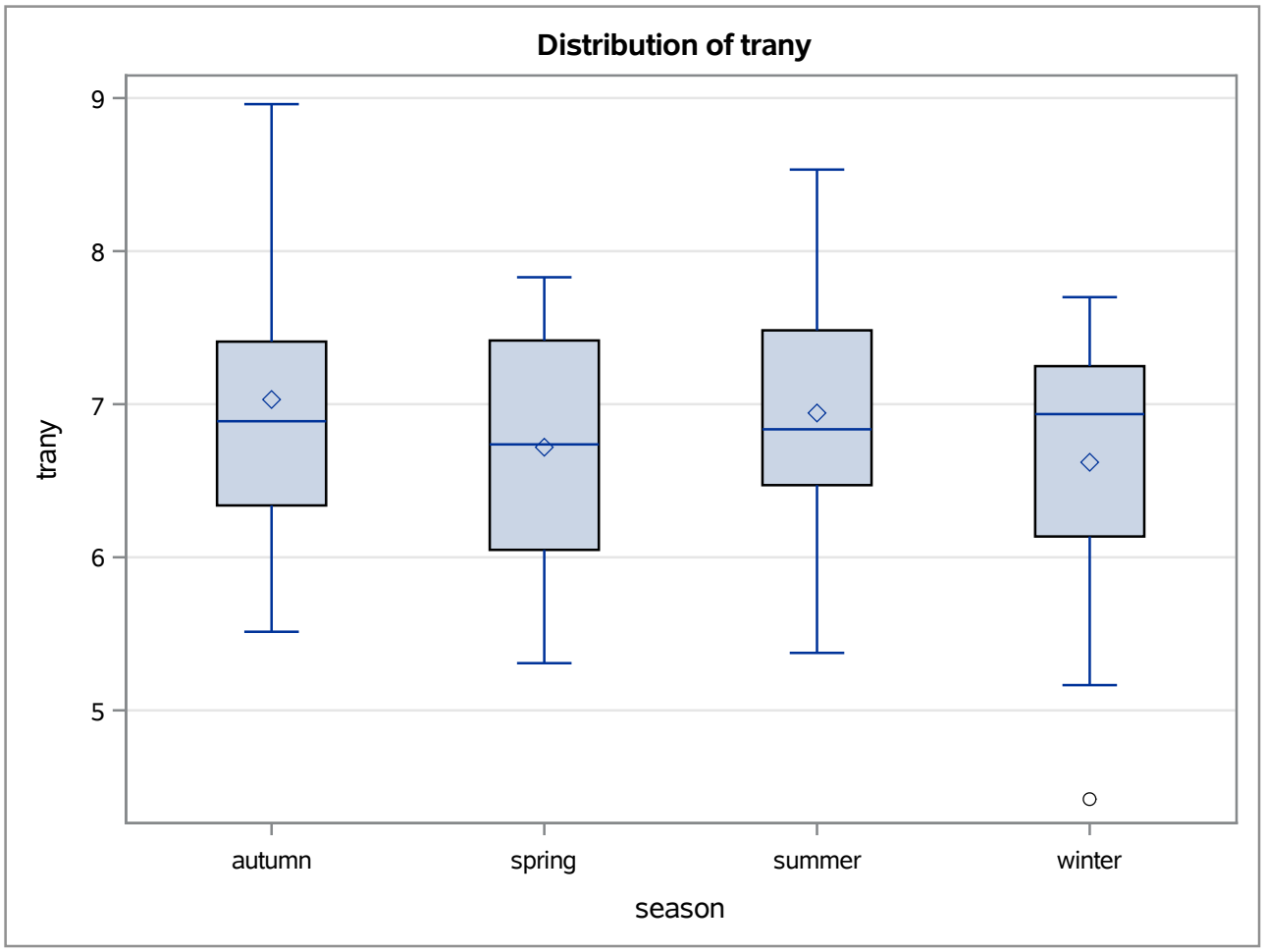
Tukey's Studentized Range (HSD) Test for trany

Note: This test controls the Type I experimentwise error rate, but it generally has a higher Type II error rate than REGWQ.

Alpha	0.05
Error Degrees of Freedom	72
Error Mean Square	0.45794
Critical Value of Studentized Range	2.81918
Minimum Significant Difference	0.3016



The ANOVA Procedure

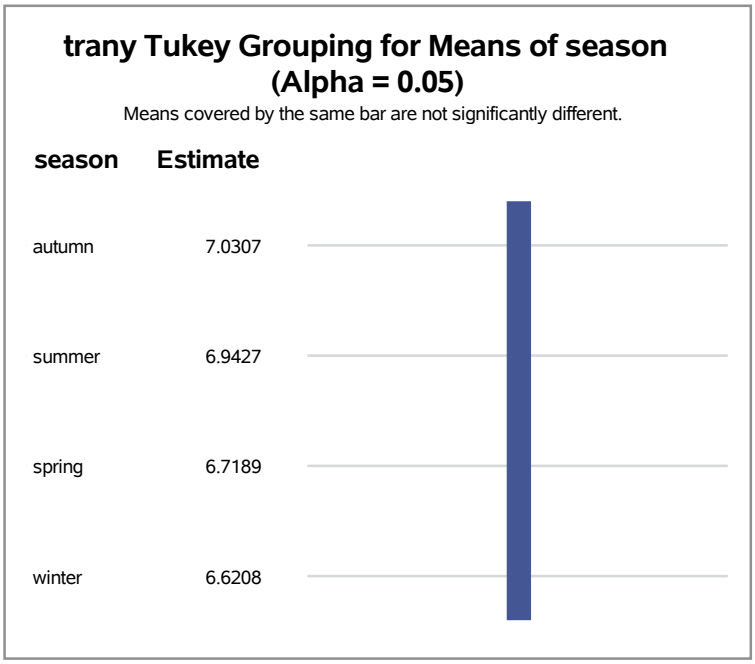


The ANOVA Procedure

Tukey's Studentized Range (HSD) Test for trany

Note: This test controls the Type I experimentwise error rate, but it generally has a higher Type II error rate than REGWQ.

Alpha	0.05
Error Degrees of Freedom	72
Error Mean Square	0.45794
Critical Value of Studentized Range	3.71947
Minimum Significant Difference	0.5628



The GLM Procedure

Class Level Information		
Class	**Levels**	**Values**
membership	2	casual member
season	4	autumn spring summer winter

Number of Observations Read	80
Number of Observations Used	80

The GLM Procedure

Dependent Variable: trany

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	26.83263864	3.83323409	8.37	<.0001
Error	72	32.97165499	0.45793965		
Corrected Total	79	59.80429363			

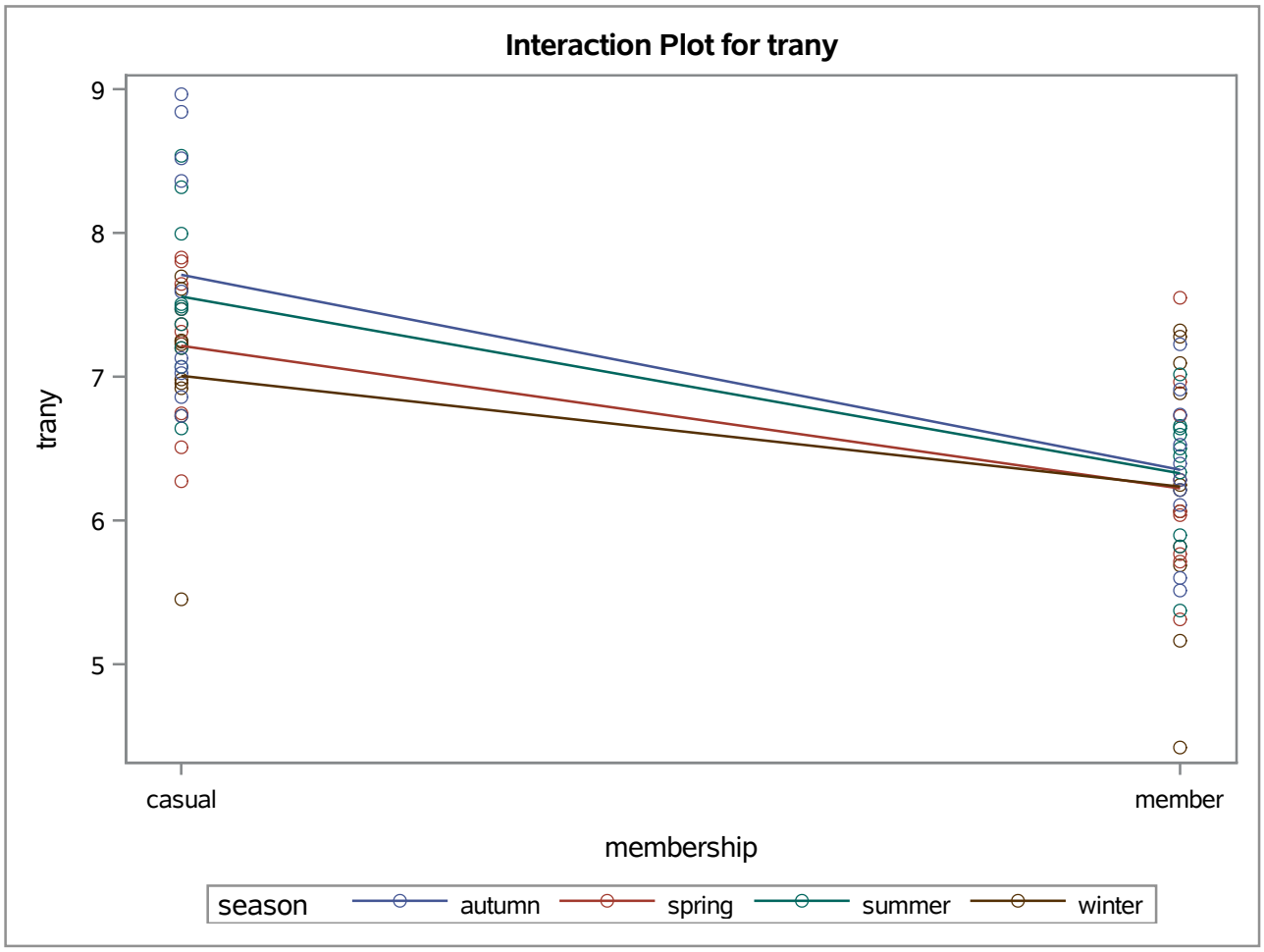
R-Square	Coeff Var	Root MSE	trany Mean
0.448674	9.910459	0.676712	6.828265

Source	DF	Type I SS	Mean Square	F Value	Pr > F
membership	1	23.64048559	23.64048559	51.62	<.0001
season	3	2.18179702	0.72726567	1.59	0.1997
membership*season	3	1.01035603	0.33678534	0.74	0.5343

Source	DF	Type III SS	Mean Square	F Value	Pr > F
membership	1	23.64048559	23.64048559	51.62	<.0001
season	3	2.18179702	0.72726567	1.59	0.1997
membership*season	3	1.01035603	0.33678534	0.74	0.5343

The GLM Procedure

Dependent Variable: trany



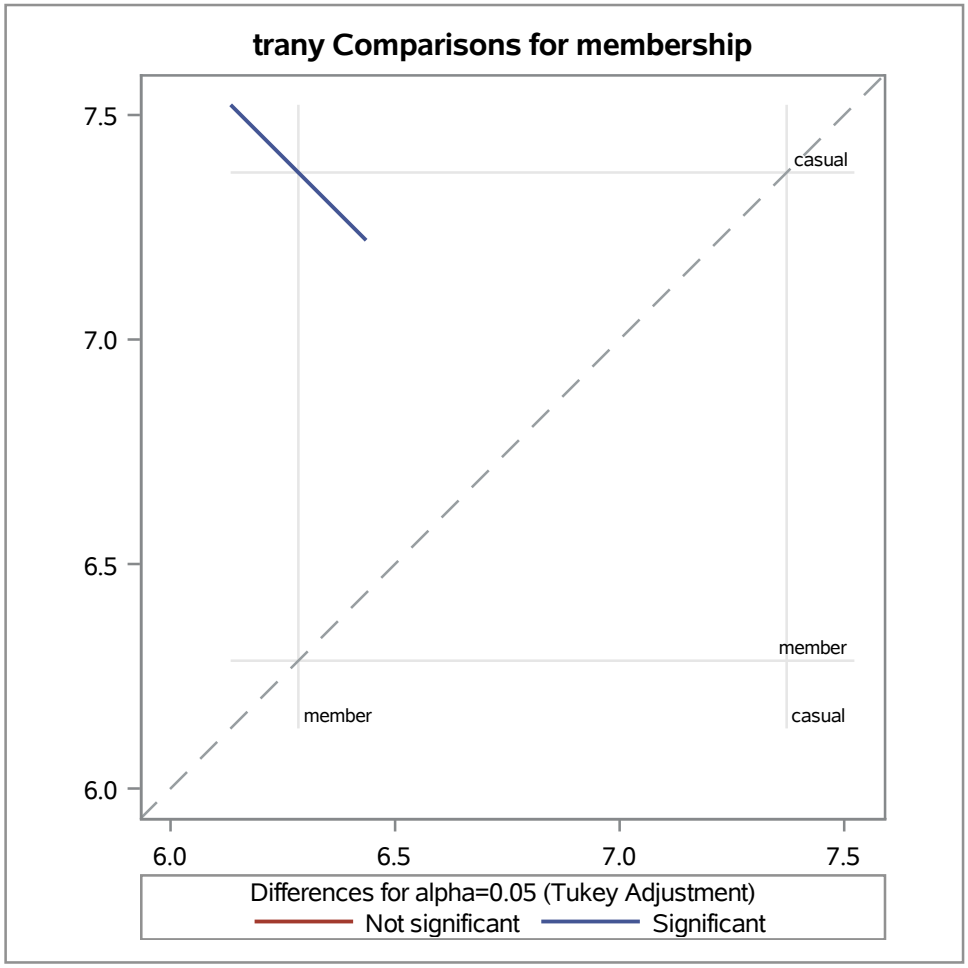
The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey

membership	trany LSMEAN	H0:LSMean1=LSMean2	
		t Value	Pr > |t|
casual	7.37186944	7.18	<.0001
member	6.28466004		

membership	trany LSMEAN	95% Confidence Limits	
casual	7.371869	7.158574	7.585165
member	6.284660	6.071364	6.497956

Least Squares Means for Effect membership				
i	j	Difference Between Means	Simultaneous 95% Confidence Limits for LSMean(i)-LSMean(j)	
1	2	1.087209	0.785563	1.388855

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey

season	trany LSMEAN	LSMEAN Number
autumn	7.03069022	1
spring	6.71891314	2
summer	6.94270083	3
winter	6.62075478	4

Least Squares Means for Effect season
t for H0: LSMean(i)=LSMean(j) / Pr > |t|

Dependent Variable: trany

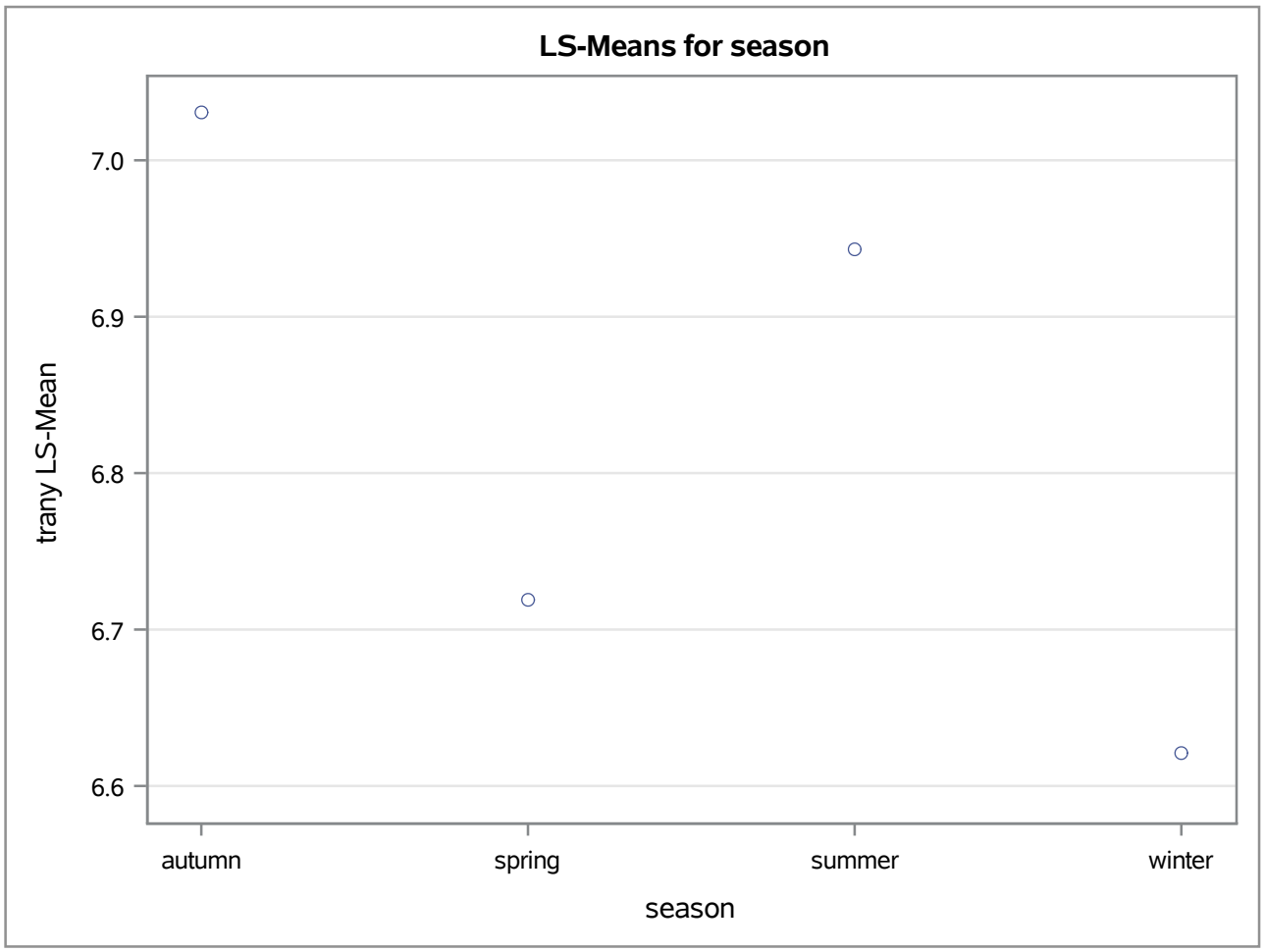
i/j	1	2	3	4
1		1.456935 0.4687	0.411175 0.9764	1.915629 0.2307
2	-1.45693 0.4687		-1.04576 0.7232	0.458694 0.9677
3	-0.41117 0.9764	1.04576 0.7232		1.504454 0.4402
4	-1.91563 0.2307	-0.45869 0.9677	-1.50445 0.4402	

season	trany LSMEAN	95% Confidence Limits	
autumn	7.030690	6.729044	7.332336
spring	6.718913	6.417267	7.020559
summer	6.942701	6.641055	7.244347
winter	6.620755	6.319109	6.922401

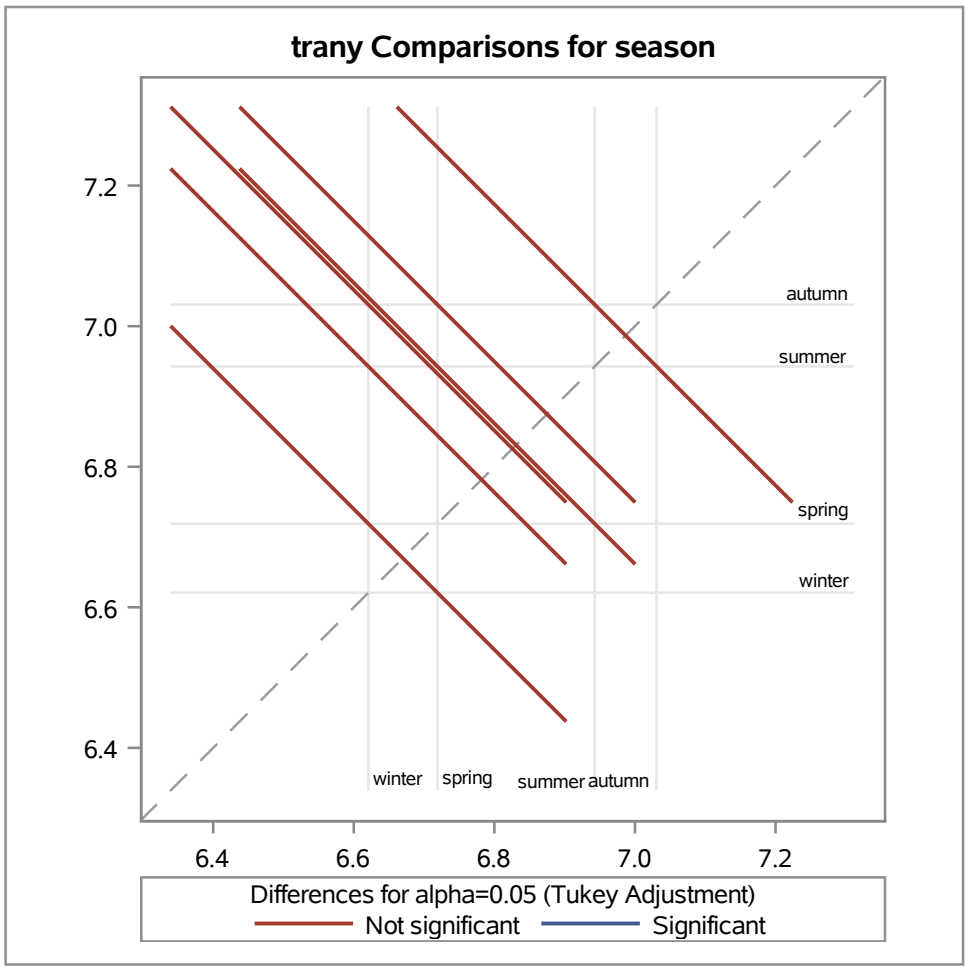
Least Squares Means for Effect season

i	j	Difference Between Means	Simultaneous 95% Confidence Limits for LSMean(i)-LSMean(j)	
1	2	0.311777	-0.251044	0.874598
1	3	0.087989	-0.474831	0.650810
1	4	0.409935	-0.152885	0.972756
2	3	-0.223788	-0.786608	0.339033
2	4	0.098158	-0.464662	0.660979
3	4	0.321946	-0.240875	0.884767

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey



The REG Procedure
Model: MODEL1
Dependent Variable: trany

Number of Observations Read	80
Number of Observations Used	80

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	26.83264	3.83323	8.37	<.0001
Error	72	32.97165	0.45794		
Corrected Total	79	59.80429			

Root MSE	0.67671	**R-Square**	0.4487
Dependent Mean	6.82826	**Adj R-Sq**	0.3951
Coeff Var	9.91046		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	6.82826	0.07566	90.25	<.0001
X1	1	0.54360	0.07566	7.18	<.0001
X2	1	-0.20751	0.13104	-1.58	0.1177
X3	1	-0.10935	0.13104	-0.83	0.4068
X4	1	0.11444	0.13104	0.87	0.3854
X1X2	1	-0.15826	0.13104	-1.21	0.2311
X1X3	1	-0.04762	0.13104	-0.36	0.7174
X1X4	1	0.07125	0.13104	0.54	0.5883

Covariance of Estimates

Variable	Intercept	X1	X2	X3	X4	X1X2	X1X3	X1X4
Intercept	0.0057242457	0	0	0	0	0	0	0
X1	0	0.0057242457	0	0	0	0	0	0
X2	0	0	0.017172737	-0.005724246	-0.005724246	0	0	0
X3	0	0	-0.005724246	0.017172737	-0.005724246	0	0	0
X4	0	0	-0.005724246	-0.005724246	0.017172737	0	0	0
X1X2	0	0	0	0	0	0.017172737	-0.005724246	-0.005724246
X1X3	0	0	0	0	0	-0.005724246	0.017172737	-0.005724246
X1X4	0	0	0	0	0	-0.005724246	-0.005724246	0.017172737

The REG Procedure
Model: MODEL1
Dependent Variable: trany

Output Statistics						
Obs	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual
1	7.25	7.0061	0.2140	6.5795	7.4327	0.2481
2	7.70	7.0061	0.2140	6.5795	7.4327	0.6933
3	6.95	7.0061	0.2140	6.5795	7.4327	-0.0534
4	7.24	7.0061	0.2140	6.5795	7.4327	0.2367
5	6.98	7.0061	0.2140	6.5795	7.4327	-0.0242
6	6.72	7.0061	0.2140	6.5795	7.4327	-0.2823
7	5.46	7.0061	0.2140	6.5795	7.4327	-1.5508
8	7.61	7.0061	0.2140	6.5795	7.4327	0.6008
9	7.23	7.0061	0.2140	6.5795	7.4327	0.2201
10	6.92	7.0061	0.2140	6.5795	7.4327	-0.0884
11	6.75	7.2149	0.2140	6.7883	7.6415	-0.4673
12	6.27	7.2149	0.2140	6.7883	7.6415	-0.9401
13	7.47	7.2149	0.2140	6.7883	7.6415	0.2548
14	6.51	7.2149	0.2140	6.7883	7.6415	-0.7076
15	7.80	7.2149	0.2140	6.7883	7.6415	0.5853
16	7.20	7.2149	0.2140	6.7883	7.6415	-0.0122
17	7.64	7.2149	0.2140	6.7883	7.6415	0.4262
18	7.31	7.2149	0.2140	6.7883	7.6415	0.0990
19	7.83	7.2149	0.2140	6.7883	7.6415	0.6143
20	7.36	7.2149	0.2140	6.7883	7.6415	0.1477
21	7.47	7.5576	0.2140	7.1310	7.9841	-0.0839
22	7.50	7.5576	0.2140	7.1310	7.9841	-0.0559
23	7.49	7.5576	0.2140	7.1310	7.9841	-0.0659
24	8.53	7.5576	0.2140	7.1310	7.9841	0.9751
25	7.20	7.5576	0.2140	7.1310	7.9841	-0.3586
26	7.99	7.5576	0.2140	7.1310	7.9841	0.4357
27	7.36	7.5576	0.2140	7.1310	7.9841	-0.1962
28	7.07	7.5576	0.2140	7.1310	7.9841	-0.4902
29	6.64	7.5576	0.2140	7.1310	7.9841	-0.9203
30	8.32	7.5576	0.2140	7.1310	7.9841	0.7602
31	8.52	7.7089	0.2140	7.2823	8.1355	0.8132
32	8.36	7.7089	0.2140	7.2823	8.1355	0.6504
33	6.73	7.7089	0.2140	7.2823	8.1355	-0.9827

The REG Procedure
Model: MODEL1
Dependent Variable: trany

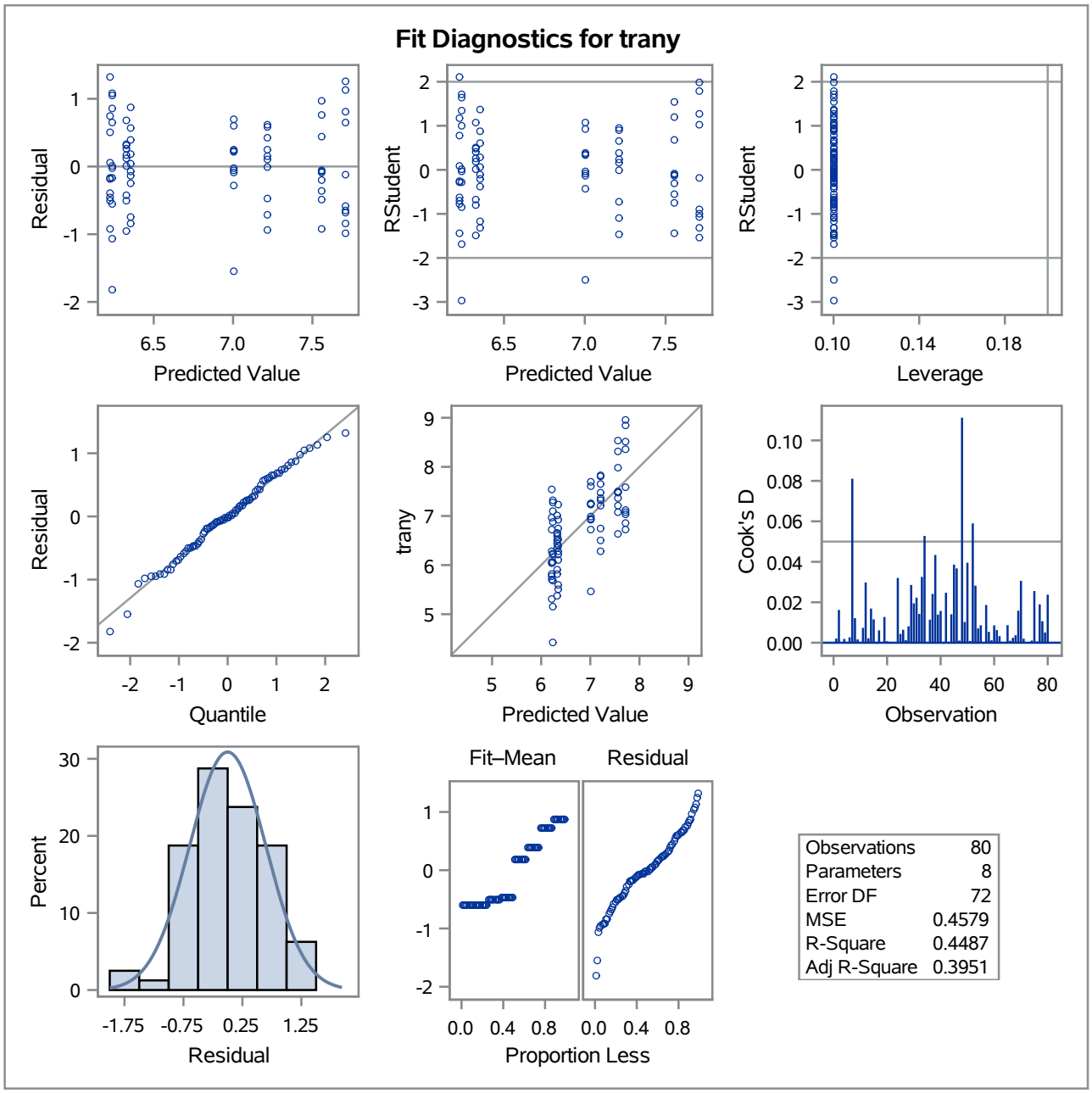
Output Statistics						
Obs	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual
34	8.96	7.7089	0.2140	7.2823	8.1355	1.2514
35	7.59	7.7089	0.2140	7.2823	8.1355	-0.1146
36	7.13	7.7089	0.2140	7.2823	8.1355	-0.5812
37	6.86	7.7089	0.2140	7.2823	8.1355	-0.8462
38	8.84	7.7089	0.2140	7.2823	8.1355	1.1345
39	7.07	7.7089	0.2140	7.2823	8.1355	-0.6425
40	7.03	7.7089	0.2140	7.2823	8.1355	-0.6825
41	6.24	6.2354	0.2140	5.8088	6.6620	0.008755
42	7.09	6.2354	0.2140	5.8088	6.6620	0.8563
43	6.21	6.2354	0.2140	5.8088	6.6620	-0.0228
44	6.88	6.2354	0.2140	5.8088	6.6620	0.6460
45	5.16	6.2354	0.2140	5.8088	6.6620	-1.0706
46	7.28	6.2354	0.2140	5.8088	6.6620	1.0439
47	6.06	6.2354	0.2140	5.8088	6.6620	-0.1763
48	4.42	6.2354	0.2140	5.8088	6.6620	-1.8166
49	5.68	6.2354	0.2140	5.8088	6.6620	-0.5518
50	7.32	6.2354	0.2140	5.8088	6.6620	1.0831
51	6.06	6.2229	0.2140	5.7963	6.6495	-0.1615
52	7.55	6.2229	0.2140	5.7963	6.6495	1.3230
53	5.31	6.2229	0.2140	5.7963	6.6495	-0.9147
54	5.77	6.2229	0.2140	5.7963	6.6495	-0.4577
55	5.72	6.2229	0.2140	5.7963	6.6495	-0.5059
56	6.28	6.2229	0.2140	5.7963	6.6495	0.0556
57	6.97	6.2229	0.2140	5.7963	6.6495	0.7440
58	5.82	6.2229	0.2140	5.7963	6.6495	-0.3999
59	6.04	6.2229	0.2140	5.7963	6.6495	-0.1874
60	6.73	6.2229	0.2140	5.7963	6.6495	0.5045
61	5.90	6.3278	0.2140	5.9013	6.7544	-0.4307
62	6.64	6.3278	0.2140	5.9013	6.7544	0.3107
63	6.45	6.3278	0.2140	5.9013	6.7544	0.1179
64	6.34	6.3278	0.2140	5.9013	6.7544	0.008976
65	5.82	6.3278	0.2140	5.9013	6.7544	-0.5078
66	6.50	6.3278	0.2140	5.9013	6.7544	0.1689

The REG Procedure
Model: MODEL1
Dependent Variable: trany

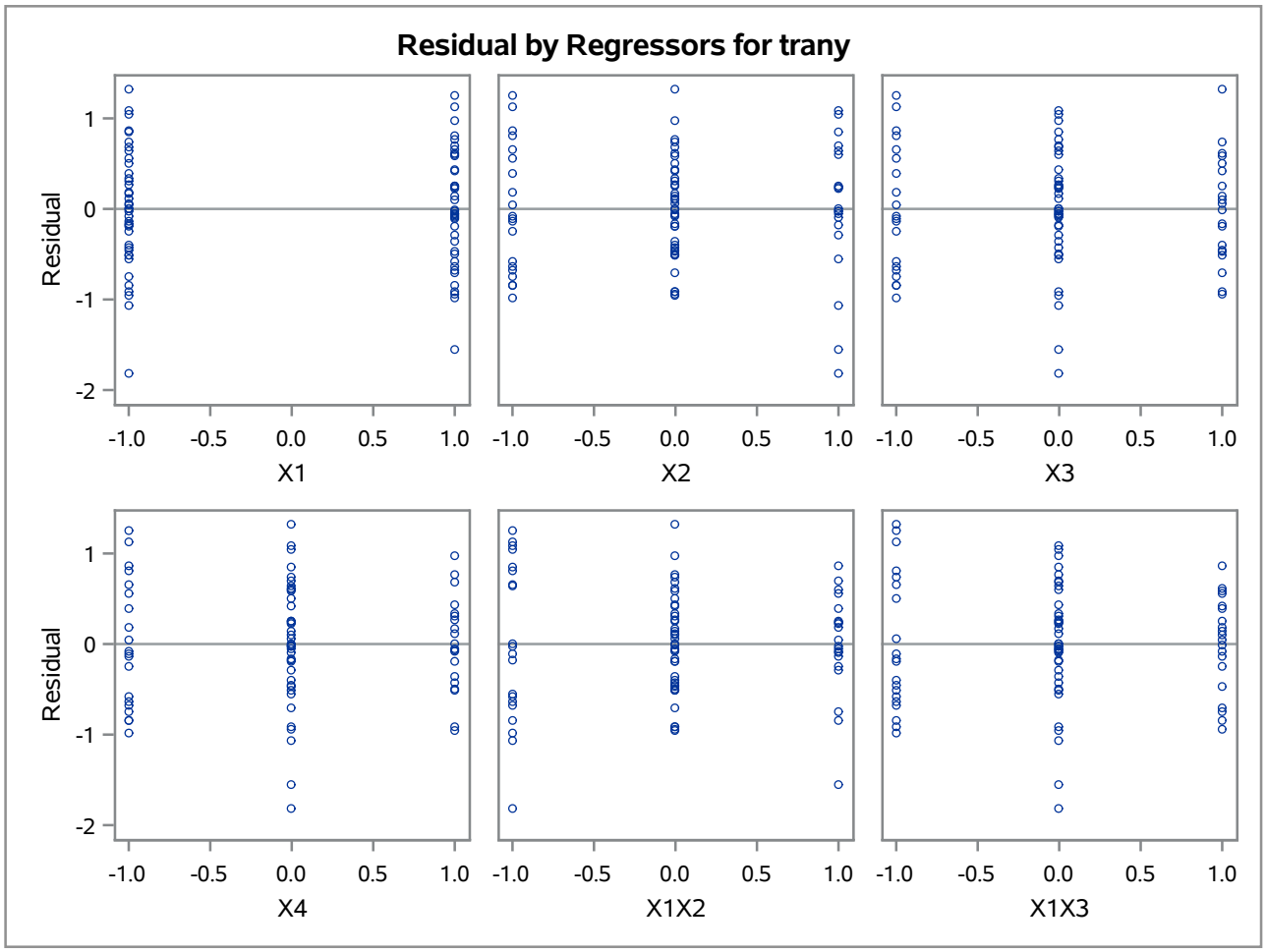
Output Statistics						
Obs	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual
67	6.60	6.3278	0.2140	5.9013	6.7544	0.2679
68	6.66	6.3278	0.2140	5.9013	6.7544	0.3314
69	7.01	6.3278	0.2140	5.9013	6.7544	0.6852
70	5.38	6.3278	0.2140	5.9013	6.7544	-0.9526
71	6.11	6.3524	0.2140	5.9259	6.7790	-0.2432
72	6.40	6.3524	0.2140	5.9259	6.7790	0.0461
73	6.28	6.3524	0.2140	5.9259	6.7790	-0.0739
74	6.53	6.3524	0.2140	5.9259	6.7790	0.1770
75	7.22	6.3524	0.2140	5.9259	6.7790	0.8708
76	6.21	6.3524	0.2140	5.9259	6.7790	-0.1378
77	5.60	6.3524	0.2140	5.9259	6.7790	-0.7503
78	6.91	6.3524	0.2140	5.9259	6.7790	0.5623
79	6.74	6.3524	0.2140	5.9259	6.7790	0.3881
80	5.51	6.3524	0.2140	5.9259	6.7790	-0.8390

Sum of Residuals	0
Sum of Squared Residuals	32.97165
Predicted Residual SS (PRESS)	40.70575

The REG Procedure
Model: MODEL1



The REG Procedure
Model: MODEL1



The REG Procedure
Model: MODEL1