

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

Obs	X9	X10	X14
1	32	4.2	1
2	43	4.3	1
3	48	5.2	2
4	32	3.9	1
5	58	6.8	3
6	45	4.4	2
7	46	5.8	1
8	44	4.3	2
9	63	5.4	3
10	54	5.4	2
11	32	4.3	1
12	47	5.0	2
13	39	4.4	1
14	38	5.0	1
15	54	5.9	3
16	49	4.7	3
17	38	4.4	2
18	40	5.6	2
19	54	5.9	3
20	55	6.0	3
21	41	4.5	2
22	35	3.3	1
23	55	5.2	3
24	36	3.7	1
25	49	4.9	2
26	49	5.9	3
27	36	3.7	1
28	54	5.8	3
29	49	5.4	3
30	46	5.1	2
31	43	3.3	1
32	53	5.0	3
33	60	6.1	3
34	47	3.8	1
35	35	4.1	1
36	39	3.6	1
37	44	4.8	2

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

Obs	X9	X10	X14
38	46	5.1	3
39	29	3.9	1
40	28	3.3	1
41	40	3.7	1
42	58	6.7	3
43	53	5.9	3
44	48	4.8	2
45	38	3.2	1
46	54	6.0	3
47	55	4.9	3
48	43	4.7	2
49	57	4.9	3
50	53	3.8	3
51	41	5.0	2
52	53	5.2	2
53	50	5.5	2
54	32	3.7	1
55	39	3.7	1
56	47	4.2	2
57	62	6.2	2
58	65	6.0	3
59	46	5.6	3
60	50	5.0	2
61	54	4.8	3
62	60	6.1	3
63	47	5.3	3
64	36	4.2	2
65	40	3.4	1
66	45	4.9	2
67	59	6.0	3
68	46	4.5	2
69	58	4.3	3
70	49	4.8	2
71	50	5.4	2
72	55	3.9	3
73	51	4.9	3
74	60	5.1	3

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

Obs	X9	X10	X14
75	41	4.1	1
76	49	5.2	2
77	42	5.1	2
78	47	5.1	3
79	39	3.3	1
80	56	5.1	3
81	59	4.5	3
82	47	5.6	2
83	41	4.1	1
84	37	4.4	1
85	53	5.6	2
86	43	3.7	1
87	51	5.5	2
88	36	4.3	1
89	34	4.0	1
90	60	6.1	3
91	49	4.4	2
92	39	5.5	2
93	43	5.2	2
94	36	3.6	1
95	31	4.0	1
96	25	3.4	1
97	60	5.2	3
98	38	3.7	1
99	42	4.3	1
100	33	4.4	1

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The MEANS Procedure**

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
X9	X9 - Usage Level	100	46.1000000	8.9887696	25.0000000	65.0000000
X10	X10 - Satisfaction Level	100	4.7710000	0.8555576	3.2000000	6.8000000

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The MEANS Procedure

X14 - Type of buying situation=1

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
X9	X9 - Usage Level	34	36.9117647	5.0594505	25.0000000	47.0000000
X10	X10 - Satisfaction Level	34	3.9294118	0.5311676	3.2000000	5.8000000

X14 - Type of buying situation=2

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
X9	X9 - Usage Level	32	46.5312500	5.3035860	36.0000000	62.0000000
X10	X10 - Satisfaction Level	32	5.0031250	0.4869155	4.2000000	6.2000000

X14 - Type of buying situation=3

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
X9	X9 - Usage Level	34	54.8823529	4.8727113	46.0000000	65.0000000
X10	X10 - Satisfaction Level	34	5.3941176	0.7134811	3.8000000	6.8000000

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X9 (X9 - Usage Level)

Moments			
N	100	Sum Weights	100
Mean	46.1	Sum Observations	4610
Std Deviation	8.98876965	Variance	80.7979798
Skewness	-0.0626115	Kurtosis	-0.72533
Uncorrected SS	220520	Corrected SS	7999
Coeff Variation	19.4984157	Std Error Mean	0.89887696

Basic Statistical Measures			
Location		Variability	
Mean	46.10000	Std Deviation	8.98877
Median	46.50000	Variance	80.79798
Mode	49.00000	Range	40.00000
		Interquartile Range	14.50000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	51.28622	Pr > t 	<.0001
Sign	M	50	Pr >= M 	<.0001
Signed Rank	S	2525	Pr >= S 	<.0001

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.985048	Pr < W	0.3201
Kolmogorov-Smirnov	D	0.078645	Pr > D	0.1303
Cramer-von Mises	W-Sq	0.064259	Pr > W-Sq	>0.2500
Anderson-Darling	A-Sq	0.421888	Pr > A-Sq	>0.2500

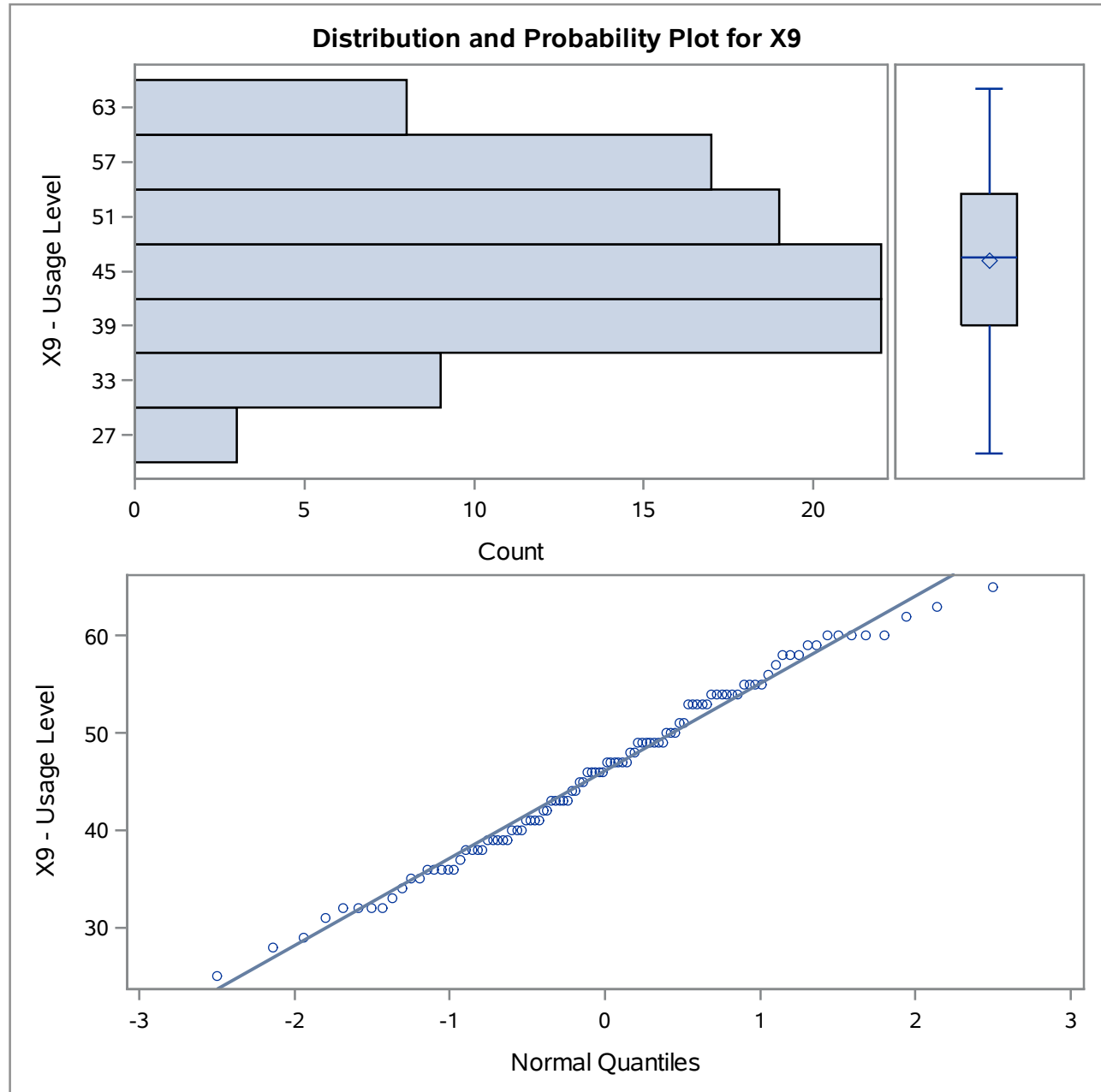
Quantiles (Definition 5)	
Level	Quantile
100% Max	65.0
99%	64.0
95%	60.0
90%	58.5
75% Q3	53.5
50% Median	46.5

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X9 (X9 - Usage Level)

Quantiles (Definition 5)	
Level	Quantile
25% Q1	39.0
10%	34.5
5%	32.0
1%	26.5
0% Min	25.0

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
25	31	60	99
28	16	60	100
29	15	62	52
31	30	63	68
32	19	65	86

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The UNIVARIATE Procedure**

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X10 (X10 - Satisfaction Level)

Moments			
N	100	Sum Weights	100
Mean	4.771	Sum Observations	477.1
Std Deviation	0.85555759	Variance	0.73197879
Skewness	0.08940227	Kurtosis	-0.7627554
Uncorrected SS	2348.71	Corrected SS	72.4659
Coeff Variation	17.9324584	Std Error Mean	0.08555576

Basic Statistical Measures			
Location		Variability	
Mean	4.771000	Std Deviation	0.85556
Median	4.850000	Variance	0.73198
Mode	3.700000	Range	3.60000
		Interquartile Range	1.30000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	55.7648	Pr > t	<.0001
Sign	M	50	Pr >= M	<.0001
Signed Rank	S	2525	Pr >= S	<.0001

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.97675	Pr < W	0.0740
Kolmogorov-Smirnov	D	0.077723	Pr > D	0.1408
Cramer-von Mises	W-Sq	0.090496	Pr > W-Sq	0.1503
Anderson-Darling	A-Sq	0.608237	Pr > A-Sq	0.1129

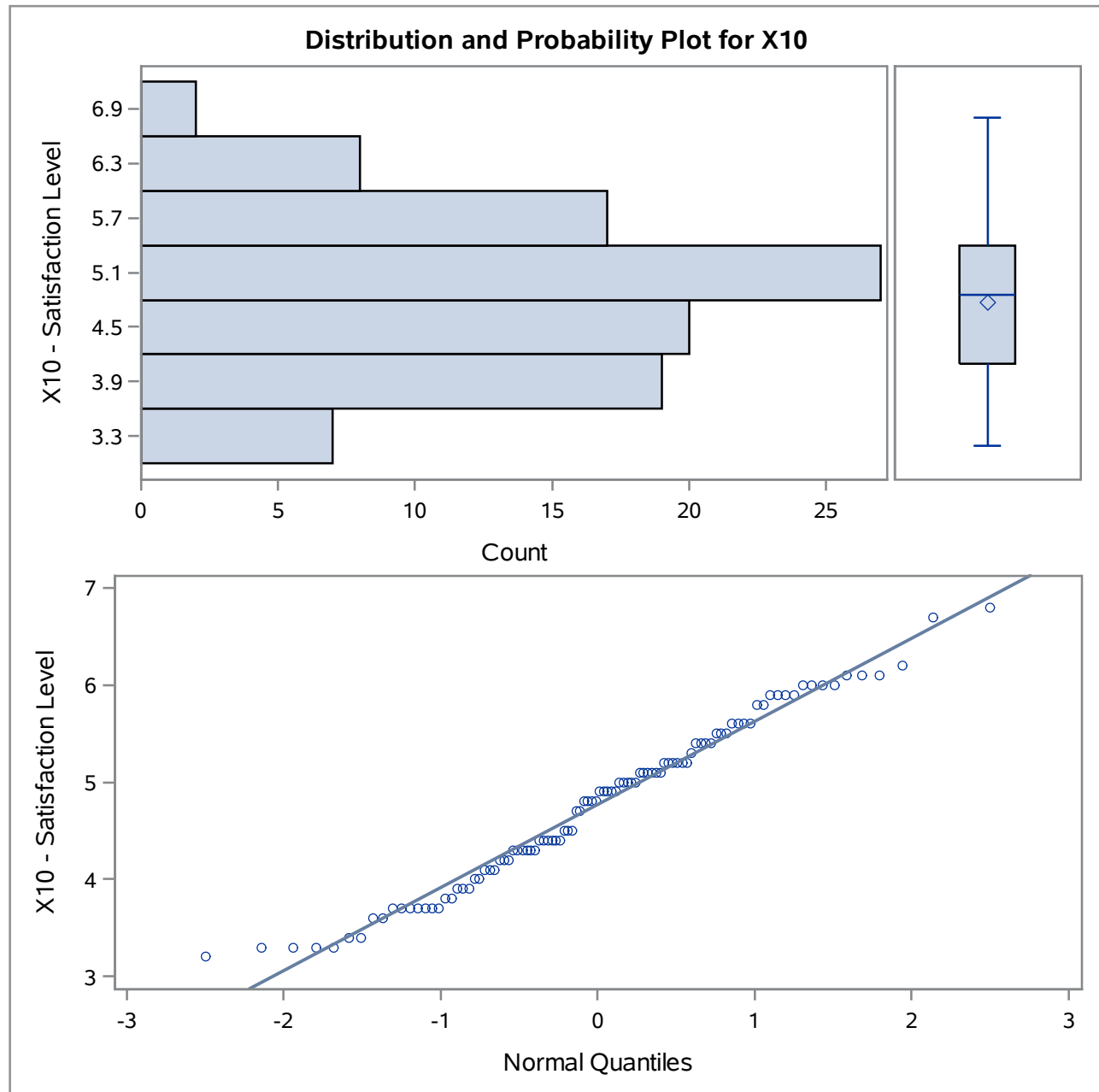
Quantiles (Definition 5)	
Level	Quantile
100% Max	6.80
99%	6.75
95%	6.10
90%	5.95
75% Q3	5.40
50% Median	4.85

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X10 (X10 - Satisfaction Level)

Quantiles (Definition 5)	
Level	Quantile
25% Q1	4.10
10%	3.70
5%	3.35
1%	3.25
0% Min	3.20

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
3.2	18	6.1	89
3.3	23	6.1	99
3.3	16	6.2	52
3.3	11	6.7	80
3.3	8	6.8	67

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The UNIVARIATE Procedure**

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X9 (X9 - Usage Level)

X14 - Type of buying situation=1

Moments			
N	34	Sum Weights	34
Mean	36.9117647	Sum Observations	1255
Std Deviation	5.05945049	Variance	25.5980392
Skewness	-0.2121497	Kurtosis	-0.1291778
Uncorrected SS	47169	Corrected SS	844.735294
Coeff Variation	13.7068778	Std Error Mean	0.8676886

Basic Statistical Measures			
Location		Variability	
Mean	36.91176	Std Deviation	5.05945
Median	37.50000	Variance	25.59804
Mode	32.00000	Range	22.00000
		Interquartile Range	7.00000

Note: The mode displayed is the smallest of 3 modes with a count of 4.

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	42.54034	Pr > t 	<.0001
Sign	M	17	Pr >= M 	<.0001
Signed Rank	S	297.5	Pr >= S 	<.0001

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.987046	Pr < W	0.9509
Kolmogorov-Smirnov	D	0.085151	Pr > D	>0.1500
Cramer-von Mises	W-Sq	0.031849	Pr > W-Sq	>0.2500
Anderson-Darling	A-Sq	0.194545	Pr > A-Sq	>0.2500

Quantiles (Definition 5)	
Level	Quantile
100% Max	47.0
99%	47.0
95%	46.0
90%	43.0
75% Q3	40.0

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X9 (X9 - Usage Level)

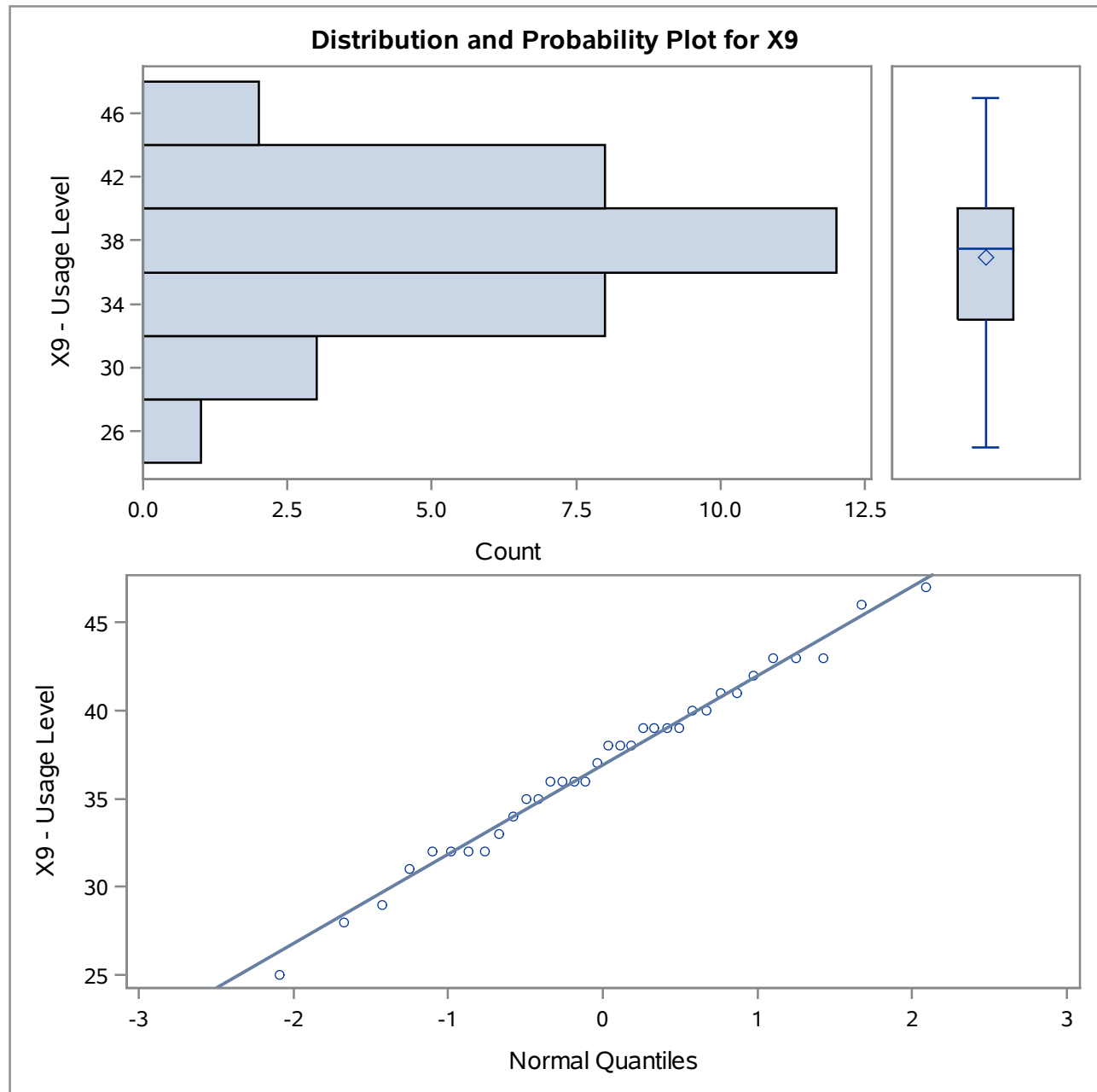
X14 - Type of buying situation=1

Quantiles (Definition 5)	
Level	Quantile
50% Median	37.5
25% Q1	33.0
10%	31.0
5%	28.0
1%	25.0
0% Min	25.0

Extreme Observations					
Lowest			Highest		
Value	X14	Obs	Value	X14	Obs
25	1	31	43	1	2
28	1	16	43	1	11
29	1	15	43	1	26
31	1	30	46	1	4
32	1	19	47	1	12

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The UNIVARIATE Procedure**

X14 - Type of buying situation=1



HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X10 (X10 - Satisfaction Level)

X14 - Type of buying situation=1

Moments			
N	34	Sum Weights	34
Mean	3.92941176	Sum Observations	133.6
Std Deviation	0.53116762	Variance	0.28213904
Skewness	1.39295561	Kurtosis	3.51049493
Uncorrected SS	534.28	Corrected SS	9.31058824
Coeff Variation	13.5177388	Std Error Mean	0.09109449

Basic Statistical Measures			
Location		Variability	
Mean	3.929412	Std Deviation	0.53117
Median	3.850000	Variance	0.28214
Mode	3.700000	Range	2.60000
		Interquartile Range	0.70000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	43.13556	Pr > t 	<.0001
Sign	M	17	Pr >= M 	<.0001
Signed Rank	S	297.5	Pr >= S 	<.0001

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.88984	Pr < W	0.0025
Kolmogorov-Smirnov	D	0.137682	Pr > D	0.0984
Cramer-von Mises	W-Sq	0.106794	Pr > W-Sq	0.0901
Anderson-Darling	A-Sq	0.820855	Pr > A-Sq	0.0317

Quantiles (Definition 5)	
Level	Quantile
100% Max	5.80
99%	5.80
95%	5.00
90%	4.40
75% Q3	4.30

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X10 (X10 - Satisfaction Level)

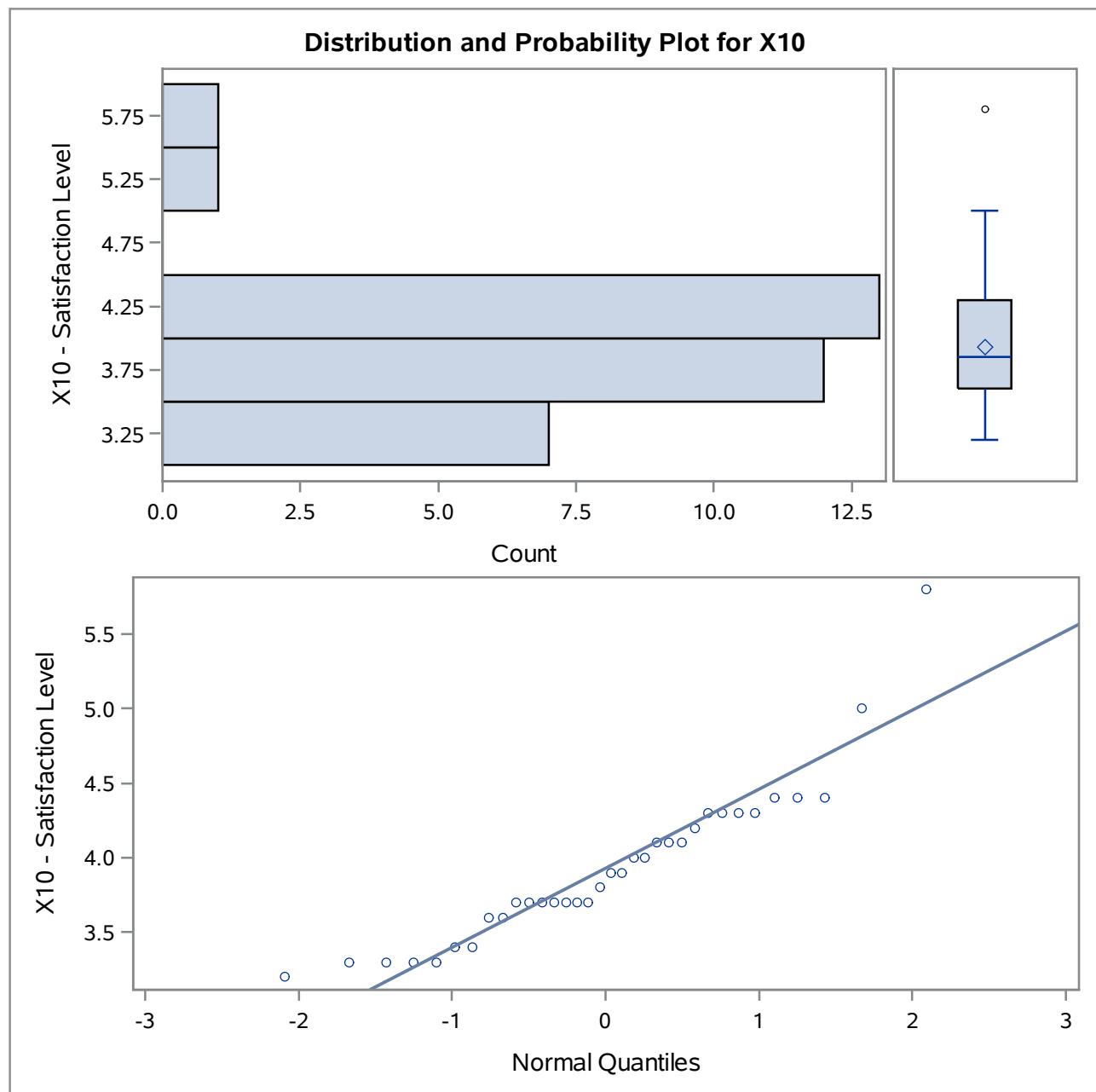
X14 - Type of buying situation=1

Quantiles (Definition 5)	
Level	Quantile
50% Median	3.85
25% Q1	3.60
10%	3.30
5%	3.30
1%	3.20
0% Min	3.20

Extreme Observations					
Lowest			Highest		
Value	X14	Obs	Value	X14	Obs
3.2	1	18	4.4	1	6
3.3	1	23	4.4	1	25
3.3	1	16	4.4	1	34
3.3	1	11	5.0	1	7
3.3	1	8	5.8	1	4

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The UNIVARIATE Procedure**

X14 - Type of buying situation=1



HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X9 (X9 - Usage Level)

X14 - Type of buying situation=2

Moments			
N	32	Sum Weights	32
Mean	46.53125	Sum Observations	1489
Std Deviation	5.30358597	Variance	28.1280242
Skewness	0.43512641	Kurtosis	1.14972938
Uncorrected SS	70157	Corrected SS	871.96875
Coeff Variation	11.3979014	Std Error Mean	0.9375504

Basic Statistical Measures			
Location		Variability	
Mean	46.53125	Std Deviation	5.30359
Median	47.00000	Variance	28.12802
Mode	49.00000	Range	26.00000
		Interquartile Range	6.50000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	49.63067	Pr > t	<.0001
Sign	M	16	Pr >= M	<.0001
Signed Rank	S	264	Pr >= S	<.0001

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.973071	Pr < W	0.5881
Kolmogorov-Smirnov	D	0.100293	Pr > D	>0.1500
Cramer-von Mises	W-Sq	0.032242	Pr > W-Sq	>0.2500
Anderson-Darling	A-Sq	0.246757	Pr > A-Sq	>0.2500

Quantiles (Definition 5)	
Level	Quantile
100% Max	62.0
99%	62.0
95%	54.0
90%	53.0
75% Q3	49.5

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X9 (X9 - Usage Level)

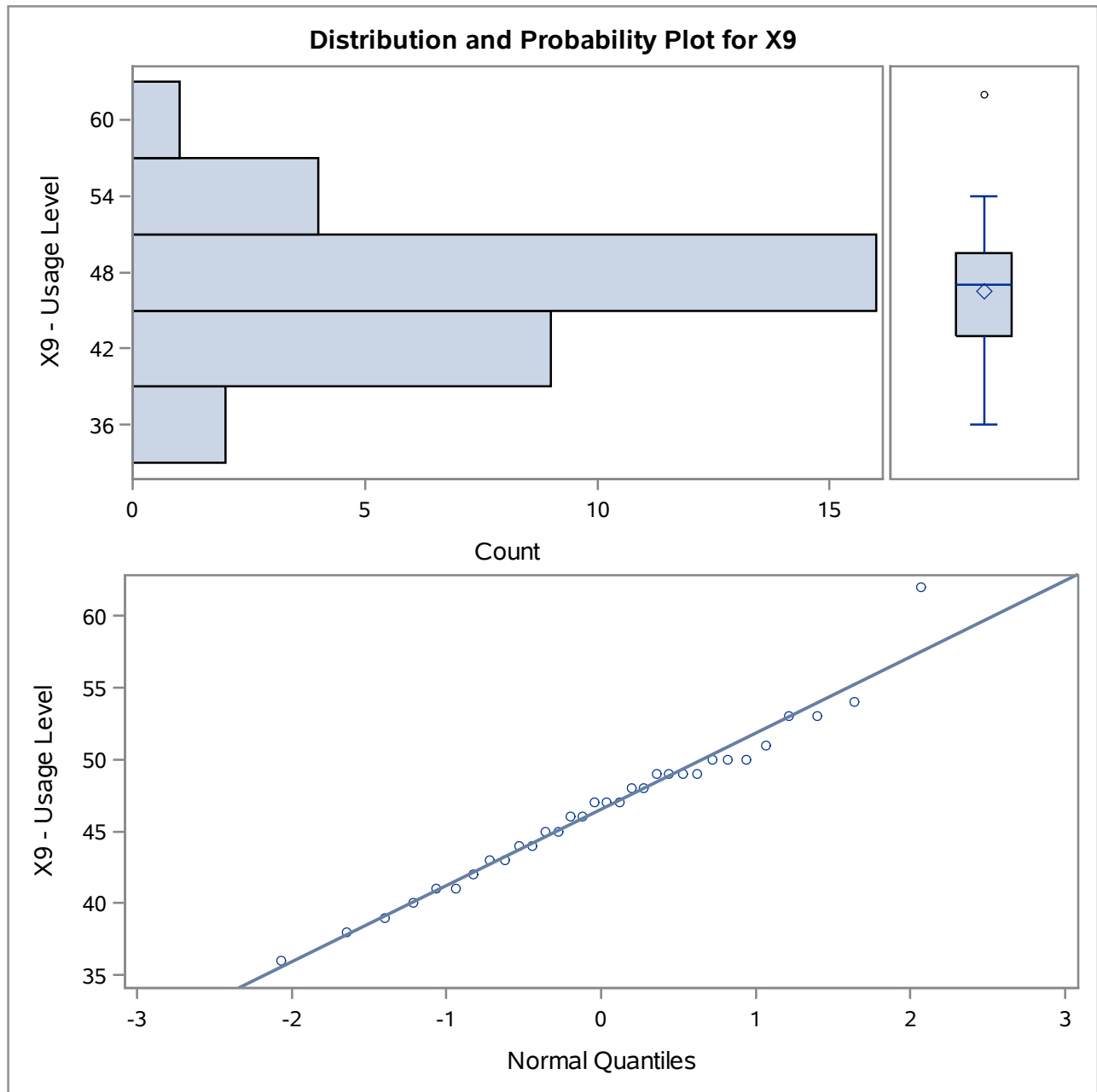
X14 - Type of buying situation=2

Quantiles (Definition 5)	
Level	Quantile
50% Median	47.0
25% Q1	43.0
10%	40.0
5%	38.0
1%	36.0
0% Min	36.0

Extreme Observations					
Lowest			Highest		
Value	X14	Obs	Value	X14	Obs
36	2	54	51	2	63
38	2	40	53	2	49
39	2	65	53	2	62
40	2	41	54	2	38
41	2	48	62	2	52

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The UNIVARIATE Procedure**

X14 - Type of buying situation=2



HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X10 (X10 - Satisfaction Level)

X14 - Type of buying situation=2

Moments			
N	32	Sum Weights	32
Mean	5.003125	Sum Observations	160.1
Std Deviation	0.48691549	Variance	0.23708669
Skewness	0.15680901	Kurtosis	-0.3276455
Uncorrected SS	808.35	Corrected SS	7.3496875
Coeff Variation	9.73222714	Std Error Mean	0.08607531

Basic Statistical Measures			
Location		Variability	
Mean	5.003125	Std Deviation	0.48692
Median	5.000000	Variance	0.23709
Mode	5.200000	Range	2.00000
		Interquartile Range	0.80000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	58.12497	Pr > t	<.0001
Sign	M	16	Pr >= M	<.0001
Signed Rank	S	264	Pr >= S	<.0001

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.965145	Pr < W	0.3772
Kolmogorov-Smirnov	D	0.099266	Pr > D	>0.1500
Cramer-von Mises	W-Sq	0.042172	Pr > W-Sq	>0.2500
Anderson-Darling	A-Sq	0.342386	Pr > A-Sq	>0.2500

Quantiles (Definition 5)	
Level	Quantile
100% Max	6.2
99%	6.2
95%	5.6
90%	5.6
75% Q3	5.4

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X10 (X10 - Satisfaction Level)

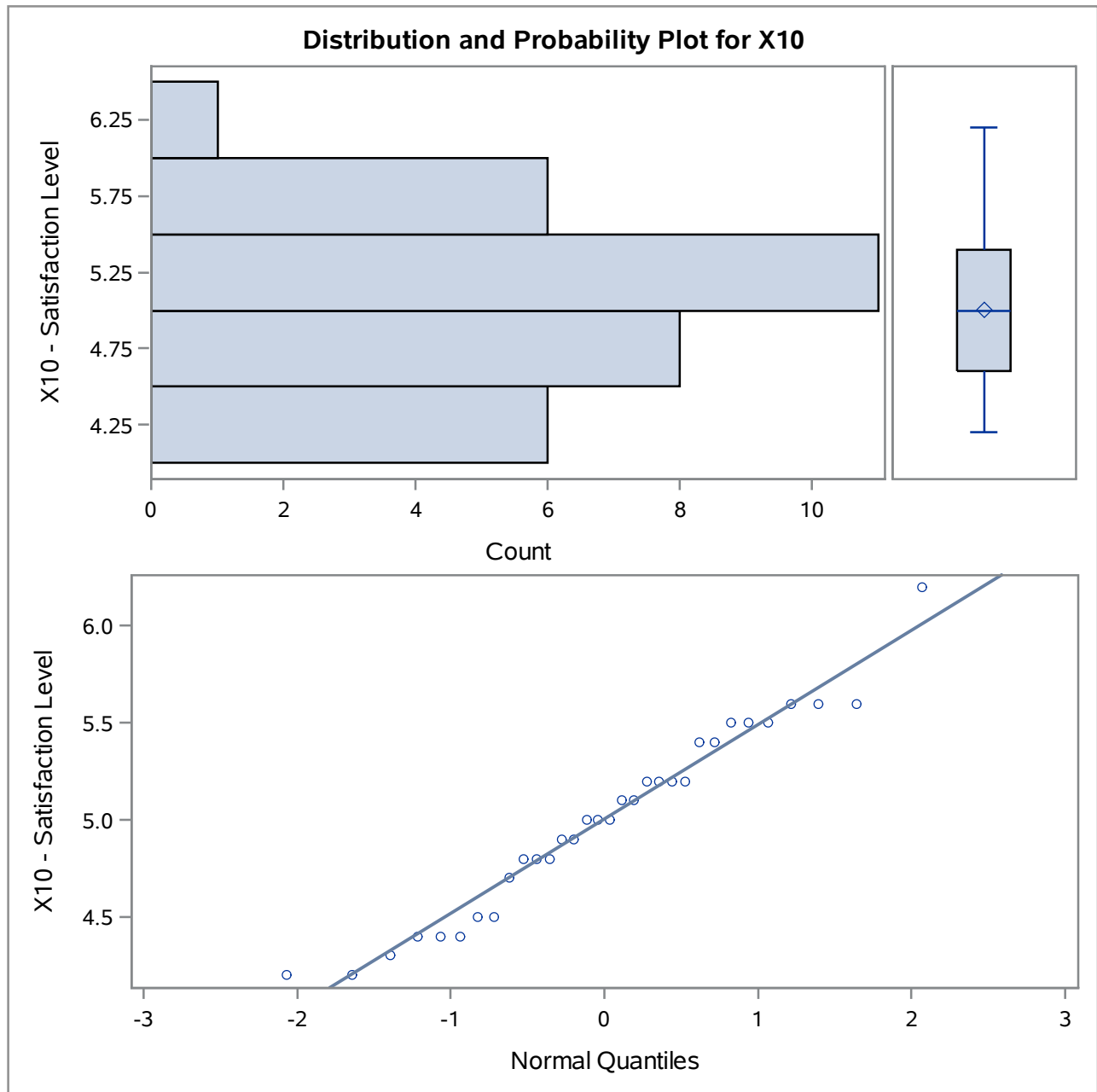
X14 - Type of buying situation=2

Quantiles (Definition 5)	
Level	Quantile
50% Median	5.0
25% Q1	4.6
10%	4.4
5%	4.2
1%	4.2
0% Min	4.2

Extreme Observations					
Lowest			Highest		
Value	X14	Obs	Value	X14	Obs
4.2	2	54	5.5	2	65
4.2	2	51	5.6	2	41
4.3	2	37	5.6	2	61
4.4	2	64	5.6	2	62
4.4	2	40	6.2	2	52

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The UNIVARIATE Procedure**

X14 - Type of buying situation=2



HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X9 (X9 - Usage Level)

X14 - Type of buying situation=3

Moments			
N	34	Sum Weights	34
Mean	54.8823529	Sum Observations	1866
Std Deviation	4.87271131	Variance	23.7433155
Skewness	-0.1645841	Kurtosis	-0.5102631
Uncorrected SS	103194	Corrected SS	783.529412
Coeff Variation	8.87846648	Std Error Mean	0.8356631

Basic Statistical Measures			
Location		Variability	
Mean	54.88235	Std Deviation	4.87271
Median	55.00000	Variance	23.74332
Mode	54.00000	Range	19.00000
		Interquartile Range	6.00000

Note: The mode displayed is the smallest of 2 modes with a count of 5.

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	65.67521	Pr > t	<.0001
Sign	M	17	Pr >= M	<.0001
Signed Rank	S	297.5	Pr >= S	<.0001

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.962129	Pr < W	0.2802
Kolmogorov-Smirnov	D	0.114341	Pr > D	>0.1500
Cramer-von Mises	W-Sq	0.073251	Pr > W-Sq	0.2481
Anderson-Darling	A-Sq	0.477929	Pr > A-Sq	0.2287

Quantiles (Definition 5)	
Level	Quantile
100% Max	65
99%	65
95%	63
90%	60
75% Q3	59

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X9 (X9 - Usage Level)

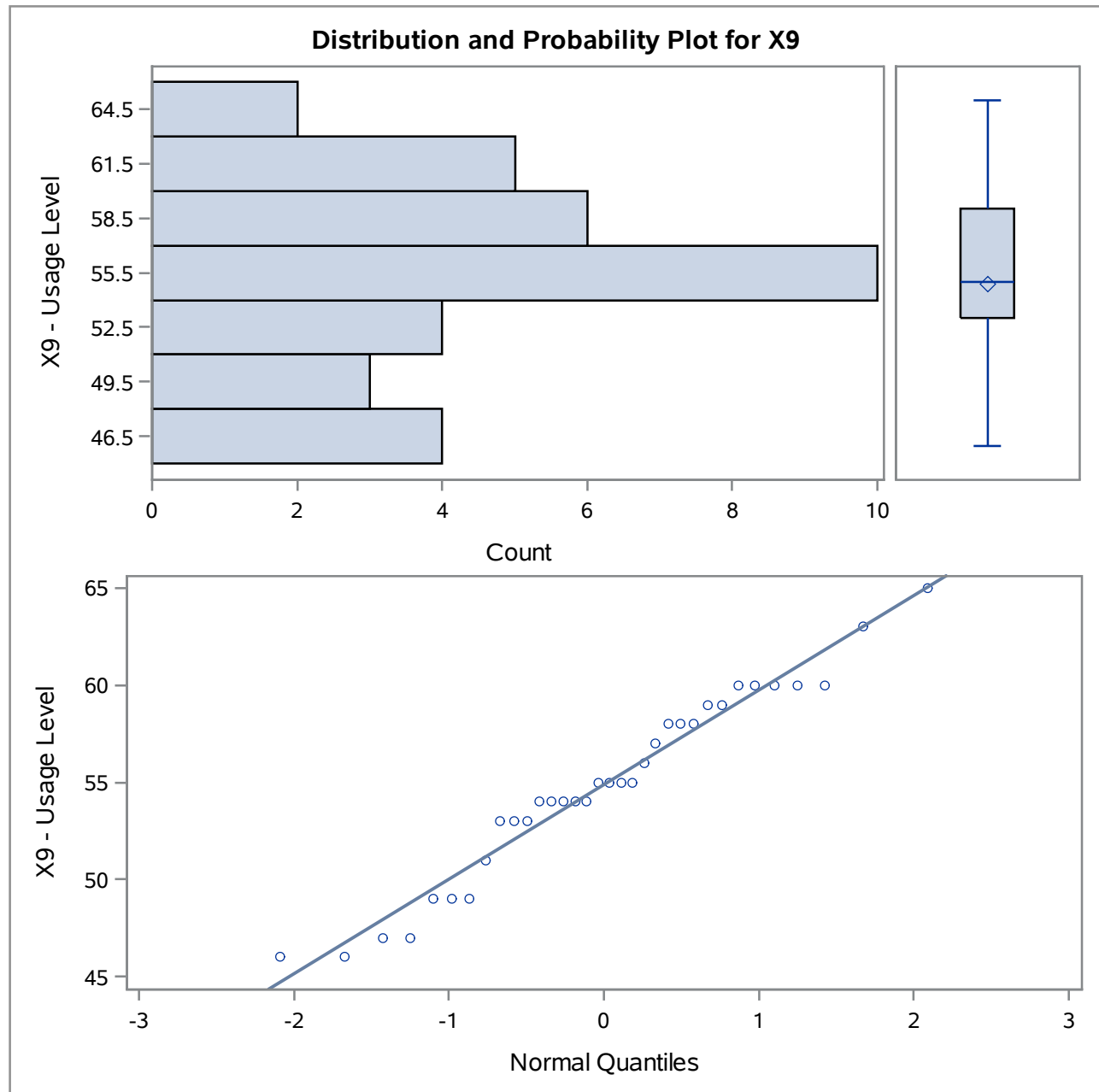
X14 - Type of buying situation=3

Quantiles (Definition 5)	
Level	Quantile
50% Median	55
25% Q1	53
10%	47
5%	46
1%	46
0% Min	46

Extreme Observations					
Lowest			Highest		
Value	X14	Obs	Value	X14	Obs
46	3	87	60	3	95
46	3	79	60	3	99
47	3	96	60	3	100
47	3	90	63	3	68
49	3	76	65	3	86

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The UNIVARIATE Procedure**

X14 - Type of buying situation=3



HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X10 (X10 - Satisfaction Level)

X14 - Type of buying situation=3

Moments			
N	34	Sum Weights	34
Mean	5.39411765	Sum Observations	183.4
Std Deviation	0.71348108	Variance	0.50905526
Skewness	-0.2616476	Kurtosis	-0.137714
Uncorrected SS	1006.08	Corrected SS	16.7988235
Coeff Variation	13.2270212	Std Error Mean	0.122361

Basic Statistical Measures			
Location		Variability	
Mean	5.394118	Std Deviation	0.71348
Median	5.350000	Variance	0.50906
Mode	5.100000	Range	3.00000
		Interquartile Range	1.10000

Note: The mode displayed is the smallest of 3 modes with a count of 4.

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	44.08364	Pr > t	<.0001
Sign	M	17	Pr >= M	<.0001
Signed Rank	S	297.5	Pr >= S	<.0001

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.964113	Pr < W	0.3192
Kolmogorov-Smirnov	D	0.143201	Pr > D	0.0767
Cramer-von Mises	W-Sq	0.086602	Pr > W-Sq	0.1684
Anderson-Darling	A-Sq	0.523186	Pr > A-Sq	0.1778

Quantiles (Definition 5)	
Level	Quantile
100% Max	6.80
99%	6.80
95%	6.70
90%	6.10
75% Q3	6.00

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The UNIVARIATE Procedure Variable: X10 (X10 - Satisfaction Level)

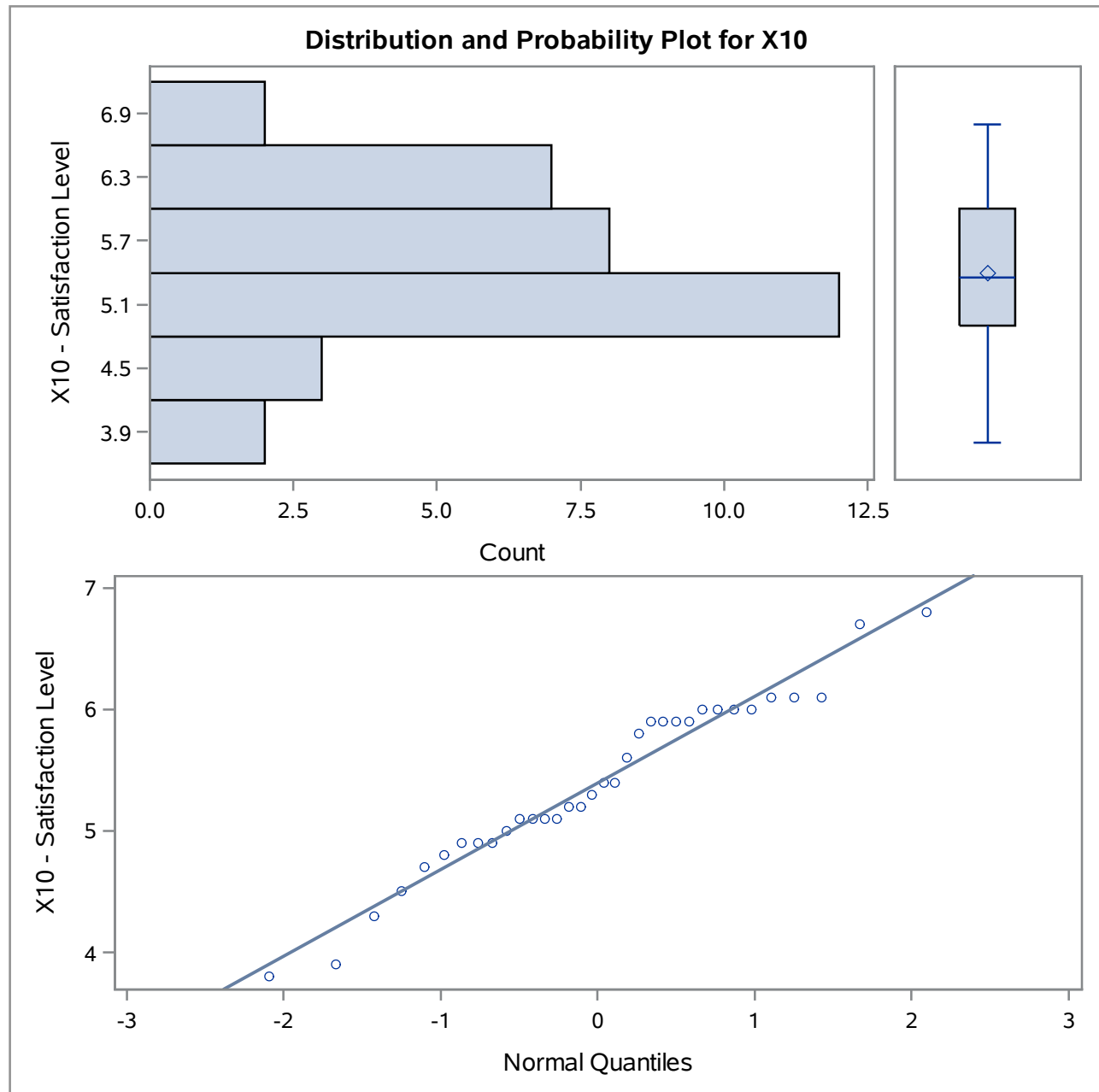
X14 - Type of buying situation=3

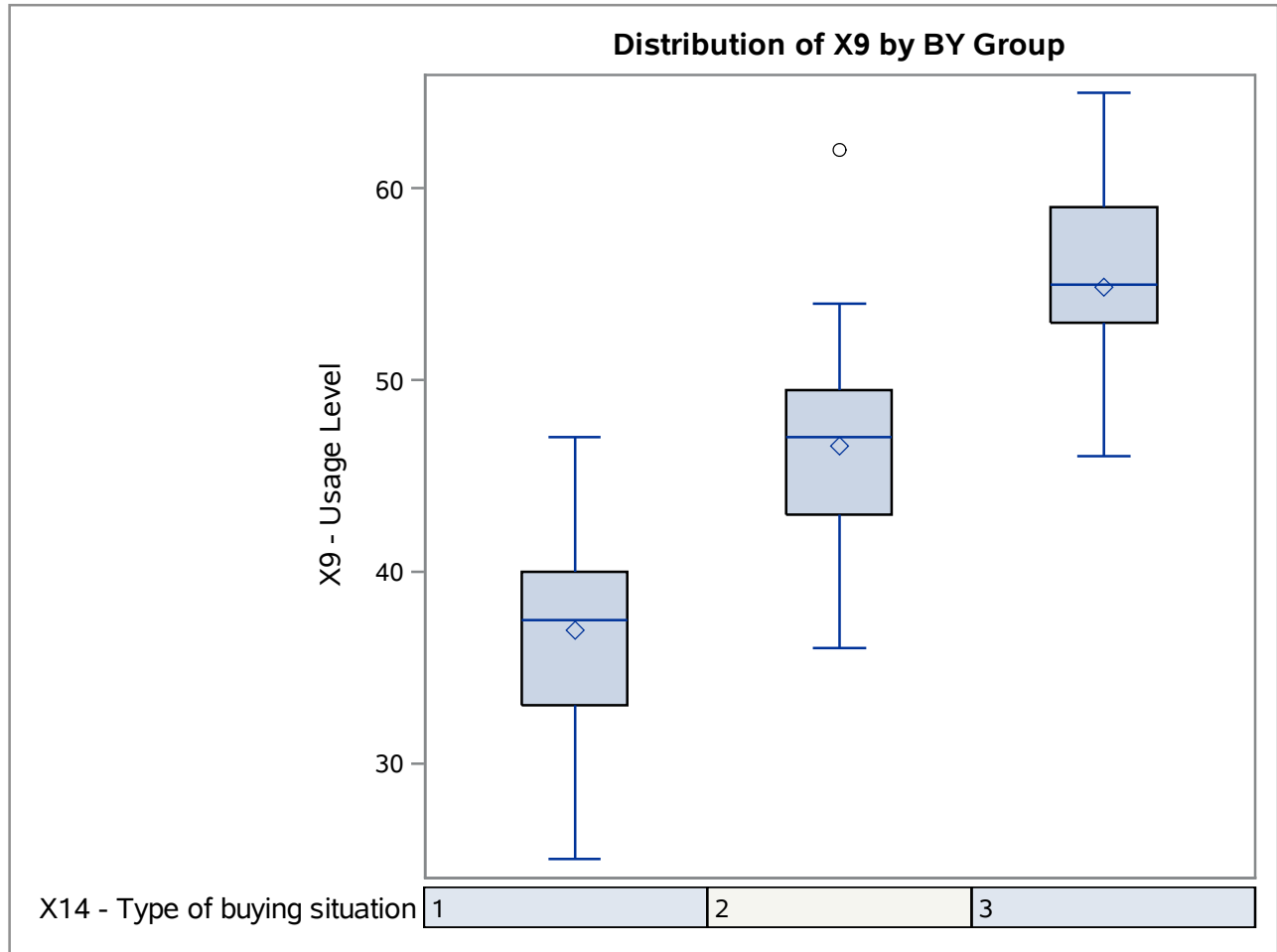
Quantiles (Definition 5)	
Level	Quantile
50% Median	5.35
25% Q1	4.90
10%	4.50
5%	3.90
1%	3.80
0% Min	3.80

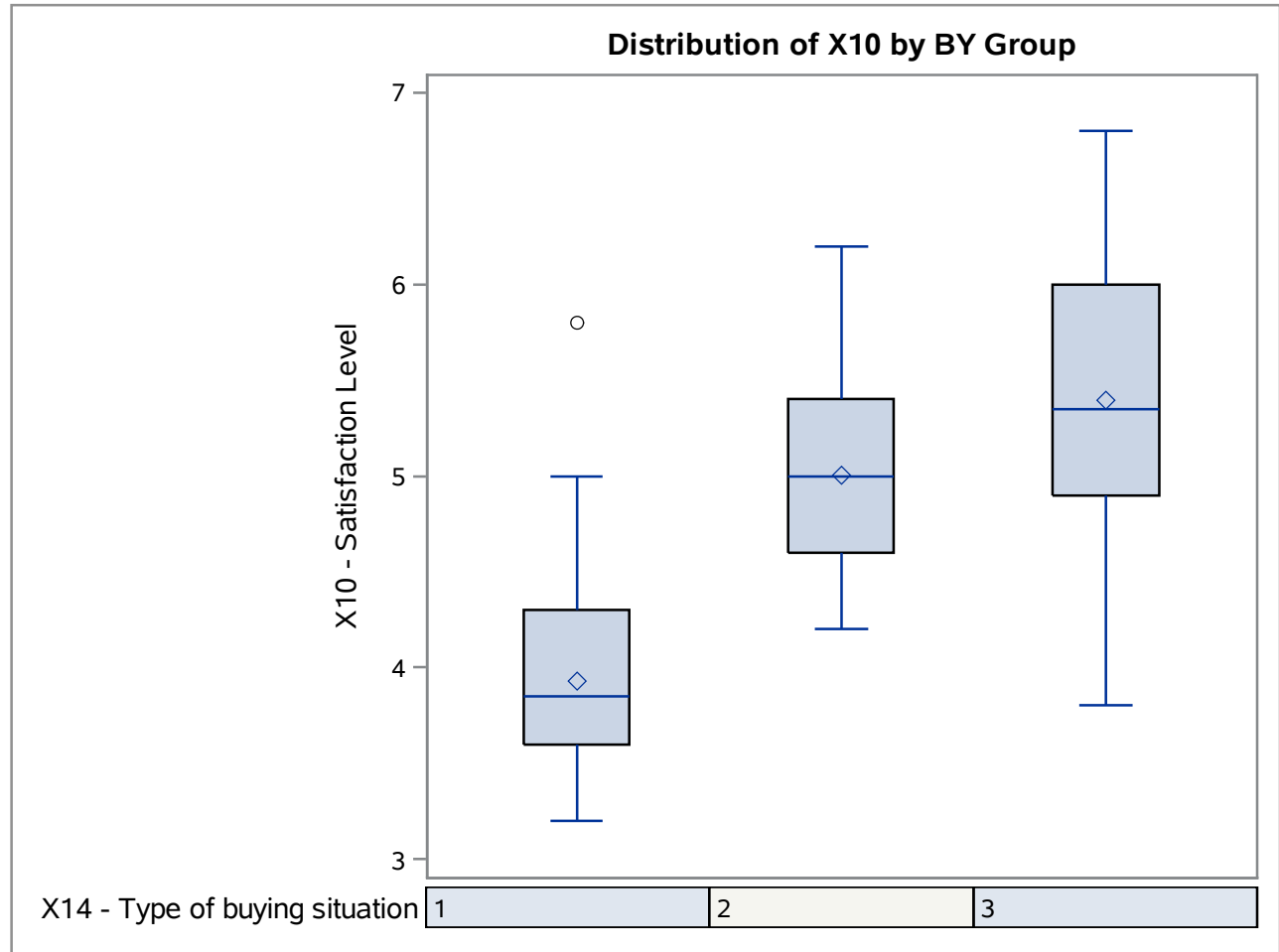
Extreme Observations					
Lowest			Highest		
Value	X14	Obs	Value	X14	Obs
3.8	3	85	6.1	3	78
3.9	3	93	6.1	3	89
4.3	3	92	6.1	3	99
4.5	3	98	6.7	3	80
4.7	3	70	6.8	3	67

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The UNIVARIATE Procedure**

X14 - Type of buying situation=3



HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The UNIVARIATE Procedure**

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The UNIVARIATE Procedure**

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The GLM Procedure**

Class Level Information		
Class	Levels	Values
X14	3	1 2 3

Number of Observations Read	100
Number of Observations Used	100

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The GLM Procedure

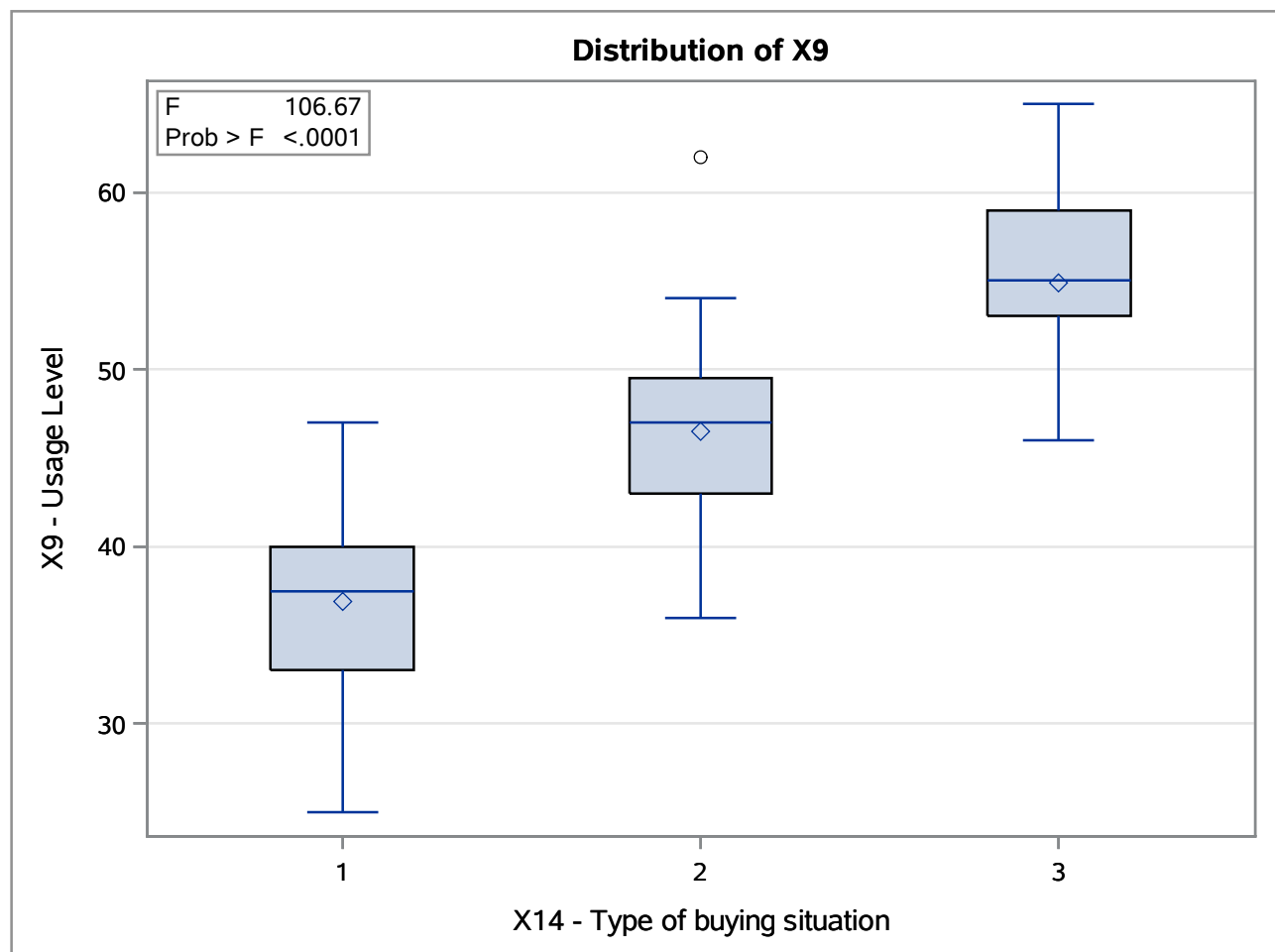
Dependent Variable: X9 X9 - Usage Level

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	5498.766544	2749.383272	106.67	<.0001
Error	97	2500.233456	25.775603		
Corrected Total	99	7999.000000			

R-Square	Coeff Var	Root MSE	X9 Mean
0.687432	11.01295	5.076968	46.10000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
X14	2	5498.766544	2749.383272	106.67	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
X14	2	5498.766544	2749.383272	106.67	<.0001



HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The GLM Procedure

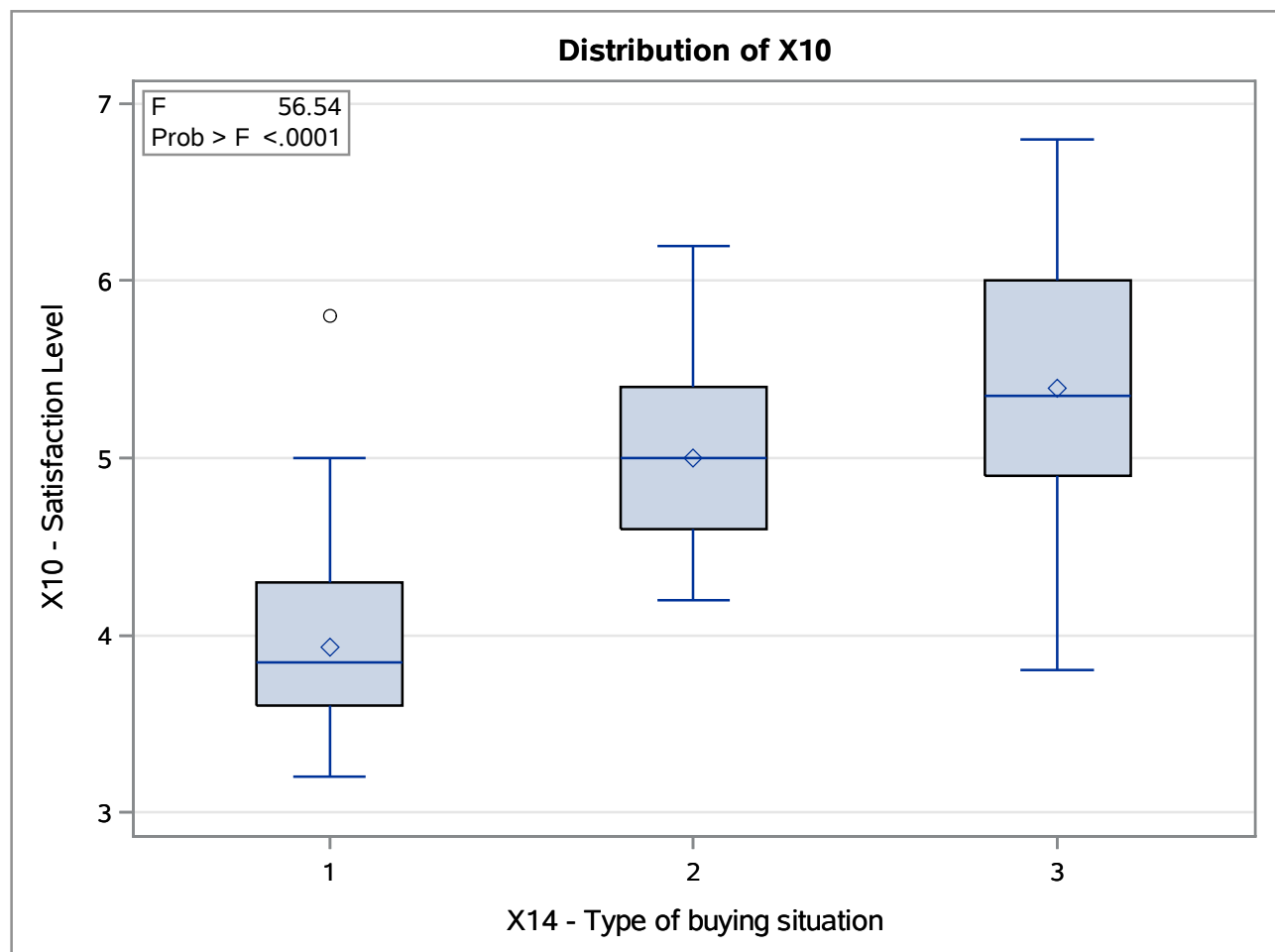
Dependent Variable: X10 X10 - Satisfaction Level

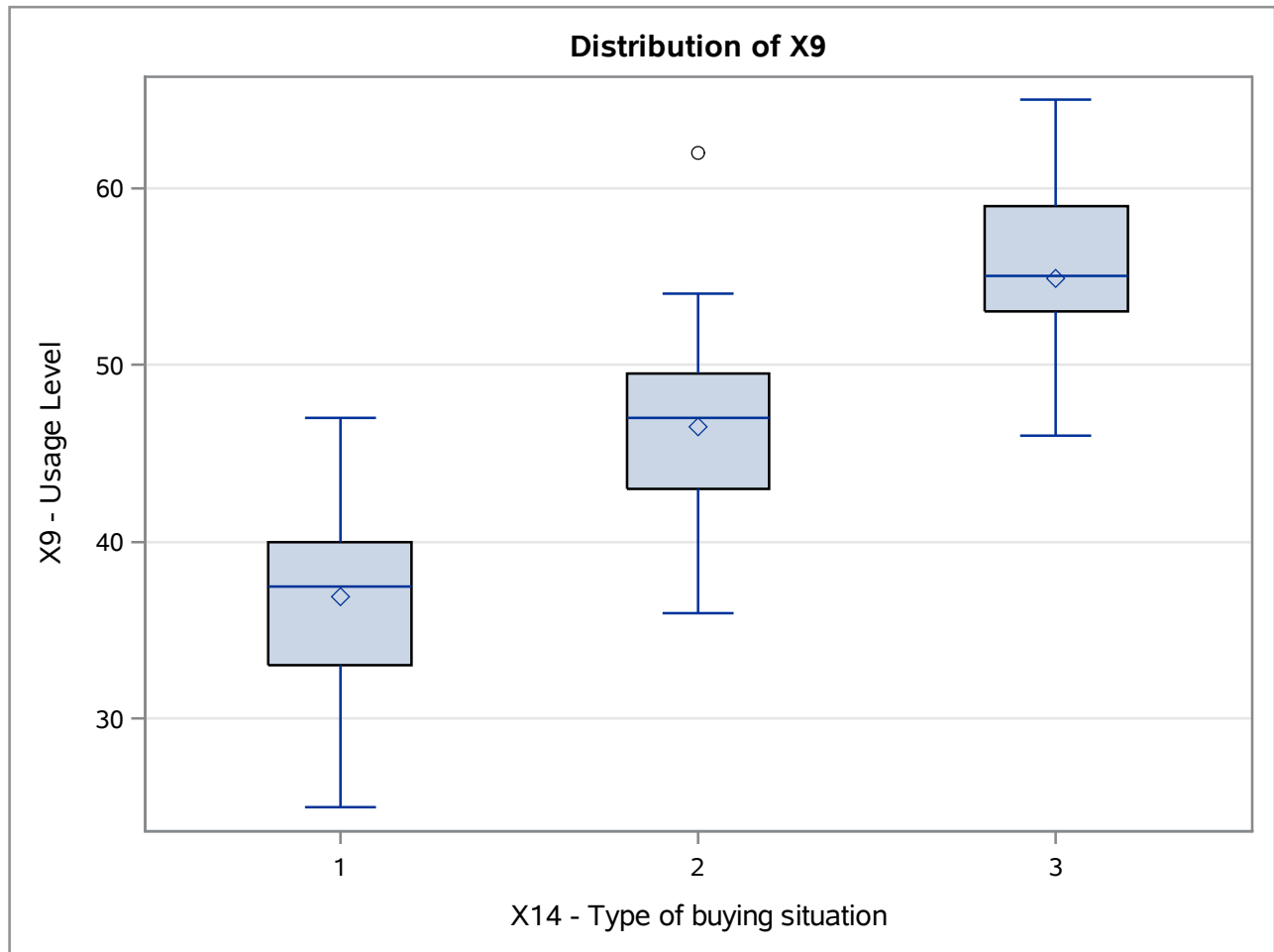
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	39.00680074	19.50340037	56.54	<.0001
Error	97	33.45909926	0.34493917		
Corrected Total	99	72.46590000			

R-Square	Coeff Var	Root MSE	X10 Mean
0.538278	12.31011	0.587315	4.771000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
X14	2	39.00680074	19.50340037	56.54	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
X14	2	39.00680074	19.50340037	56.54	<.0001



HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The GLM Procedure**

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The GLM Procedure

t Tests (LSD) for X9

Note: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	97
Error Mean Square	25.7756
Critical Value of t	1.98472
Least Significant Difference	2.4692
Harmonic Mean of Cell Sizes	33.30612

Note: Cell sizes are not equal.

Means with the same letter are not significantly different.			
t Grouping	Mean	N	X14
A	54.882	34	3
B	46.531	32	2
C	36.912	34	1

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The GLM Procedure

Duncan's Multiple Range Test for X9

Note: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	97
Error Mean Square	25.7756
Harmonic Mean of Cell Sizes	33.30612

Note: Cell sizes are not equal.

Number of Means	2	3
Critical Range	2.469	2.598

Means with the same letter are not significantly different.			
Duncan Grouping	Mean	N	X14
A	54.882	34	3
B	46.531	32	2
C	36.912	34	1

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The GLM Procedure

Student-Newman-Keuls Test for X9

Note: This test controls the Type I experimentwise error rate under the complete null hypothesis but not under partial null hypotheses.

Alpha	0.05
Error Degrees of Freedom	97
Error Mean Square	25.7756
Harmonic Mean of Cell Sizes	33.30612

Note: Cell sizes are not equal.

Number of Means	2	3
Critical Range	2.4692062	2.9612475

Means with the same letter are not significantly different.			
SNK Grouping	Mean	N	X14
A	54.882	34	3
B	46.531	32	2
C	36.912	34	1

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The GLM Procedure

Tukey's Studentized Range (HSD) Test for X9

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	97
Error Mean Square	25.7756
Critical Value of Studentized Range	3.36614
Minimum Significant Difference	2.9612
Harmonic Mean of Cell Sizes	33.30612

Note: Cell sizes are not equal.

Means with the same letter are not significantly different.			
Tukey Grouping	Mean	N	X14
A	54.882	34	3
B	46.531	32	2
C	36.912	34	1

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The GLM Procedure

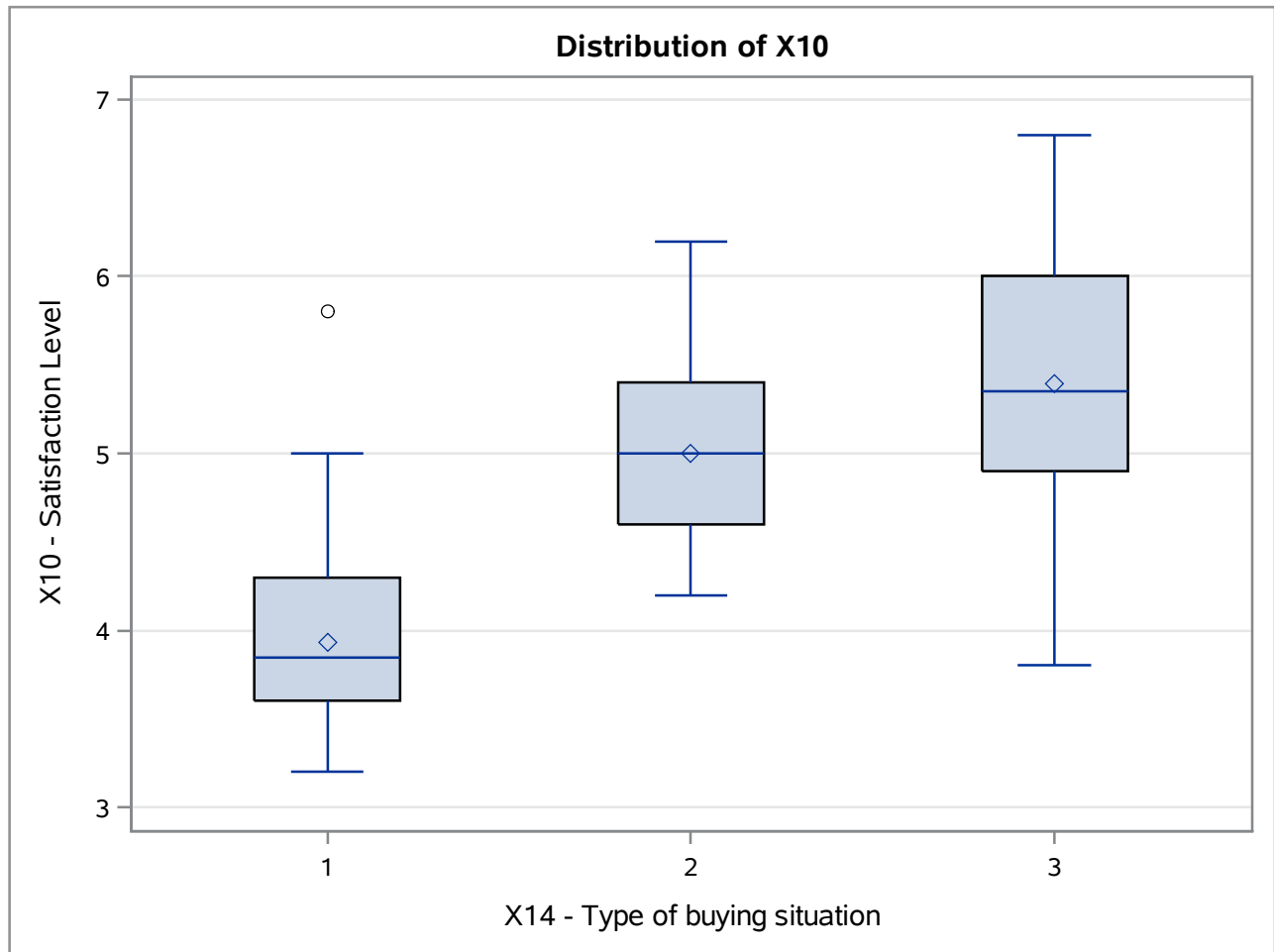
Scheffe's Test for X9

Note: This test controls the Type I experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	97
Error Mean Square	25.7756
Critical Value of F	3.09019
Minimum Significant Difference	3.0929
Harmonic Mean of Cell Sizes	33.30612

Note: Cell sizes are not equal.

Means with the same letter are not significantly different.			
Scheffe Grouping	Mean	N	X14
A	54.882	34	3
B	46.531	32	2
C	36.912	34	1

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The GLM Procedure**

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The GLM Procedure

t Tests (LSD) for X10

Note: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	97
Error Mean Square	0.344939
Critical Value of t	1.98472
Least Significant Difference	0.2856
Harmonic Mean of Cell Sizes	33.30612

Note: Cell sizes are not equal.

Means with the same letter are not significantly different.			
t Grouping	Mean	N	X14
A	5.3941	34	3
B	5.0031	32	2
C	3.9294	34	1

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The GLM Procedure

Duncan's Multiple Range Test for X10

Note: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	97
Error Mean Square	0.344939
Harmonic Mean of Cell Sizes	33.30612

Note: Cell sizes are not equal.

Number of Means	2	3
Critical Range	.2856	.3006

Means with the same letter are not significantly different.			
Duncan Grouping	Mean	N	X14
A	5.3941	34	3
B	5.0031	32	2
C	3.9294	34	1

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The GLM Procedure

Student-Newman-Keuls Test for X10

Note: This test controls the Type I experimentwise error rate under the complete null hypothesis but not under partial null hypotheses.

Alpha	0.05
Error Degrees of Freedom	97
Error Mean Square	0.344939
Harmonic Mean of Cell Sizes	33.30612

Note: Cell sizes are not equal.

Number of Means	2	3
Critical Range	0.2856434	0.3425639

Means with the same letter are not significantly different.			
SNK Grouping	Mean	N	X14
A	5.3941	34	3
B	5.0031	32	2
C	3.9294	34	1

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The GLM Procedure

Tukey's Studentized Range (HSD) Test for X10

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	97
Error Mean Square	0.344939
Critical Value of Studentized Range	3.36614
Minimum Significant Difference	0.3426
Harmonic Mean of Cell Sizes	33.30612

Note: Cell sizes are not equal.

Means with the same letter are not significantly different.			
Tukey Grouping	Mean	N	X14
A	5.3941	34	3
B	5.0031	32	2
C	3.9294	34	1

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The GLM Procedure

Scheffe's Test for X10

Note: This test controls the Type I experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	97
Error Mean Square	0.344939
Critical Value of F	3.09019
Minimum Significant Difference	0.3578
Harmonic Mean of Cell Sizes	33.30612

Note: Cell sizes are not equal.

Means with the same letter are not significantly different.			
Scheffe Grouping	Mean	N	X14
A	5.3941	34	3
B	5.0031	32	2
C	3.9294	34	1

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The GLM Procedure**

Levene's Test for Homogeneity of X9 Variance ANOVA of Squared Deviations from Group Means					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
X14	2	292.6	146.3	0.11	0.8948
Error	97	127586	1315.3		

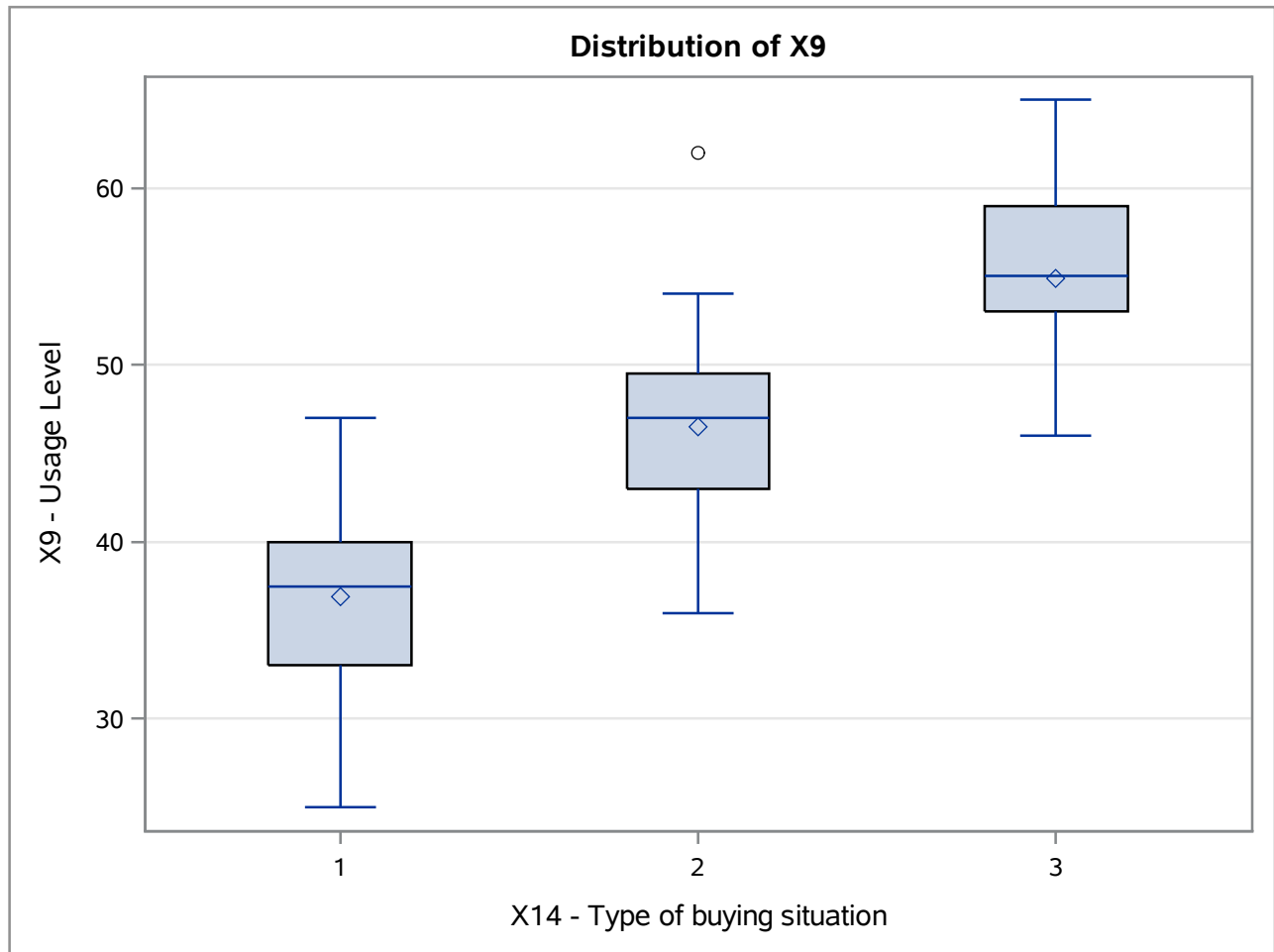
Brown and Forsythe's Test for Homogeneity of X9 Variance ANOVA of Absolute Deviations from Group Medians					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
X14	2	0.9595	0.4797	0.05	0.9522
Error	97	950.4	9.7977		

Bartlett's Test for Homogeneity of X9 Variance			
Source	DF	Chi-Square	Pr > ChiSq
X14	2	0.2277	0.8924

Levene's Test for Homogeneity of X10 Variance ANOVA of Squared Deviations from Group Means					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
X14	2	1.3426	0.6713	2.23	0.1126
Error	97	29.1437	0.3005		

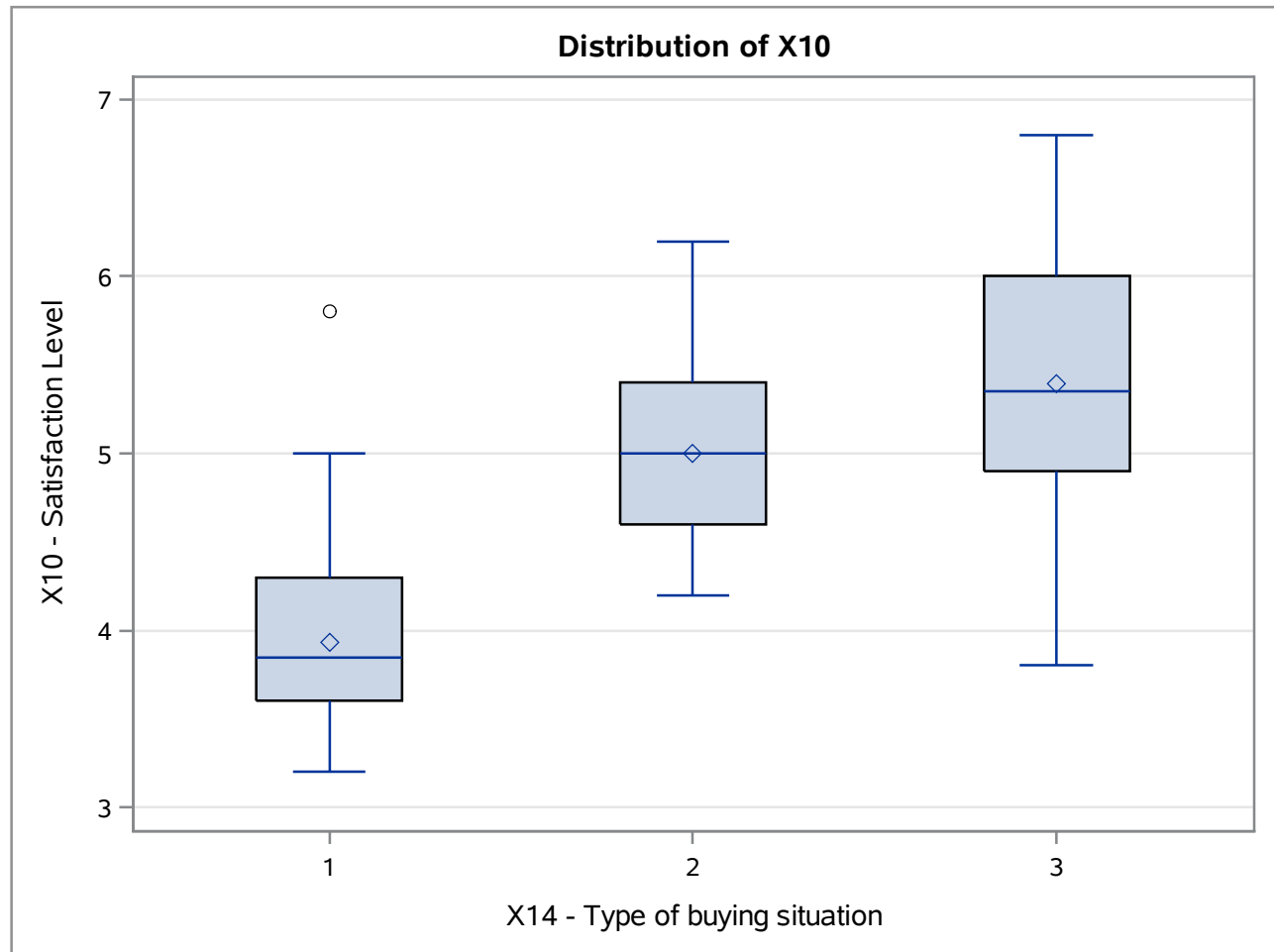
Brown and Forsythe's Test for Homogeneity of X10 Variance ANOVA of Absolute Deviations from Group Medians					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
X14	2	0.8097	0.4048	3.26	0.0426
Error	97	12.0454	0.1242		

Bartlett's Test for Homogeneity of X10 Variance			
Source	DF	Chi-Square	Pr > ChiSq
X14	2	5.3385	0.0693

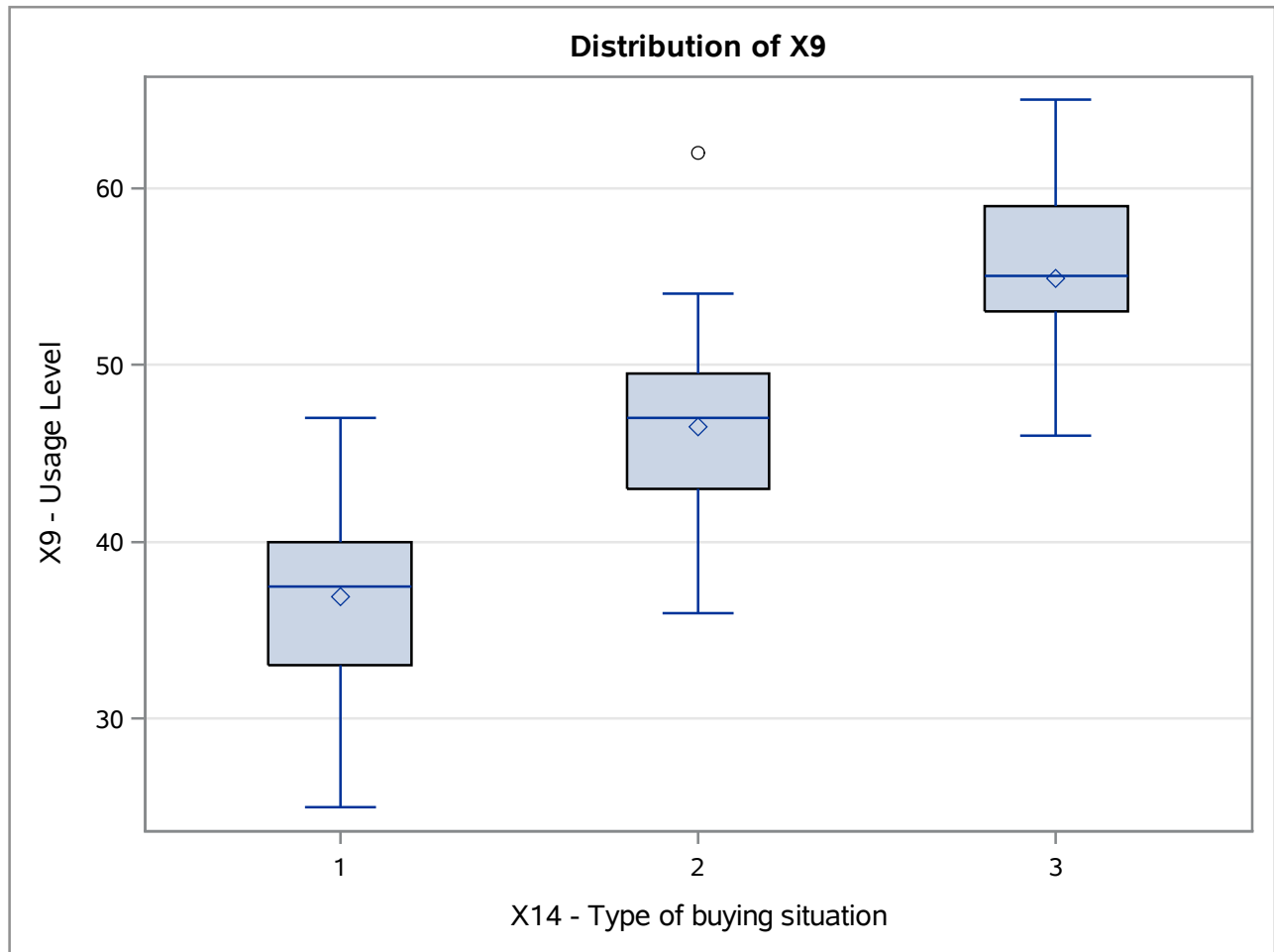
HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The GLM Procedure**

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The GLM Procedure

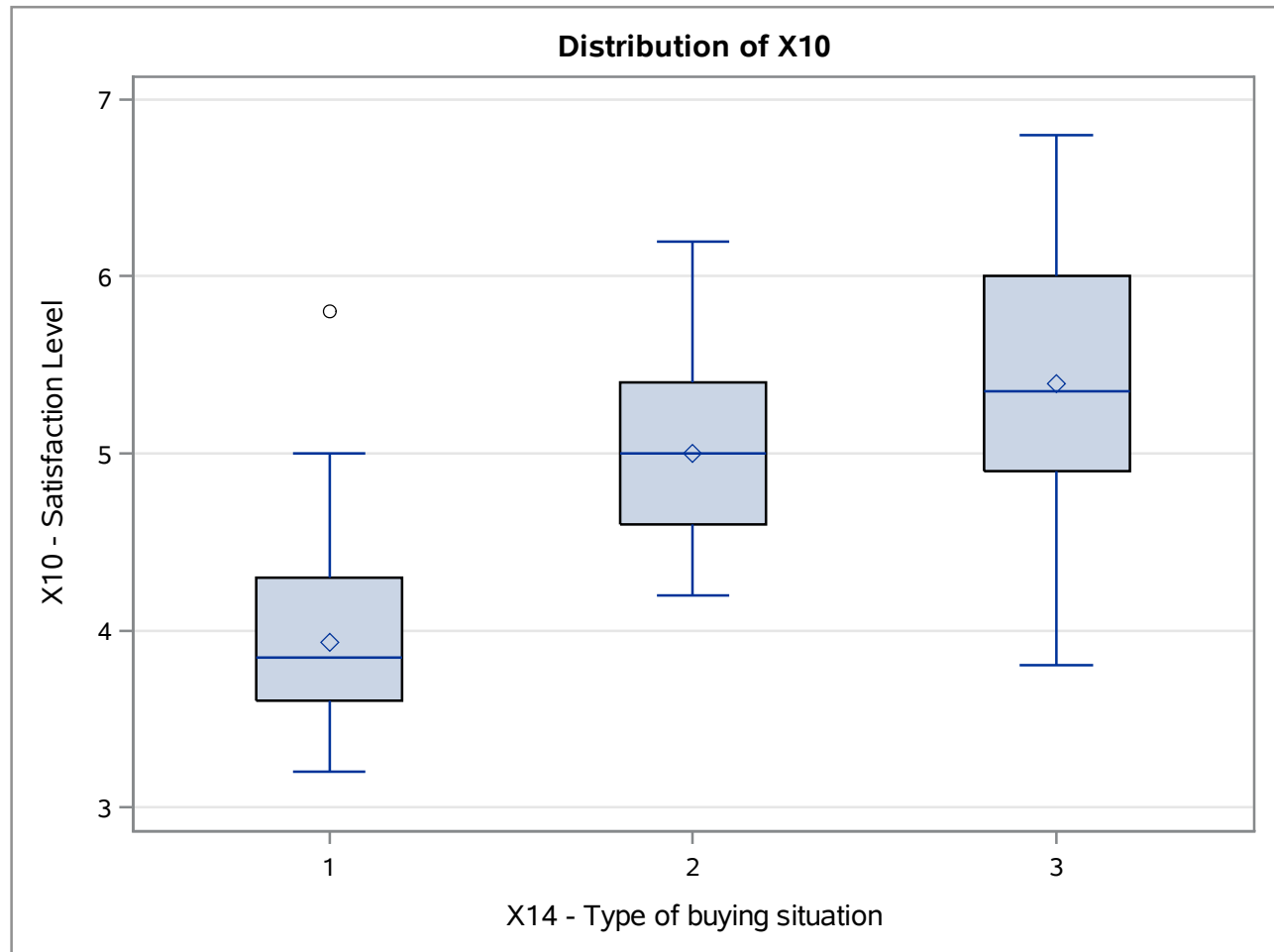


Level of X14	N	X9		X10	
		Mean	Std Dev	Mean	Std Dev
1	34	36.9117647	5.05945049	3.92941176	0.53116762
2	32	46.5312500	5.30358597	5.00312500	0.48691549
3	34	54.8823529	4.87271131	5.39411765	0.71348108

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations**The GLM Procedure**

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The GLM Procedure



Level of X14	N	X9		X10	
		Mean	Std Dev	Mean	Std Dev
1	34	36.9117647	5.05945049	3.92941176	0.53116762
2	32	46.5312500	5.30358597	5.00312500	0.48691549
3	34	54.8823529	4.87271131	5.39411765	0.71348108

HATCO MANOVA Analysis of Usage and Satisfaction Levels across Buying Situations

The GLM Procedure
Multivariate Analysis of Variance

Characteristic Roots and Vectors of: E Inverse * H, where H = Type III SSCP Matrix for X14 E = Error SSCP Matrix			
Characteristic Root	Percent	Characteristic Vector V'EV=1	
		X9	X10
2.60398495	98.09	0.01577364	0.07232965
0.05081792	1.91	-0.01388866	0.16665736

MANOVA Tests for the Hypothesis of No Overall X14 Effect H = Type III SSCP Matrix for X14 E = Error SSCP Matrix S=2 M=-0.5 N=47		
Statistic	Value	P-Value
Wilks' Lambda	0.26405206	<.0001
Pillai's Trace	0.77088971	<.0001
Hotelling-Lawley Trace	2.65480287	<.0001
Roy's Greatest Root	2.60398495	<.0001