

# HBAT - Two-Sample T-Test

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Obs	ID	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20	X21	X22	X23
1	1	2	0	1	1	1	8.5	3.9	2.5	5.9	4.8	4.9	6.0	6.8	4.7	4.3	5.0	5.1	3.7	8.2	8.0	8.4	65.1	1
2	2	3	1	0	0	0	8.2	2.7	5.1	7.2	3.4	7.9	3.1	5.3	5.5	4.0	3.9	4.3	4.9	5.7	6.5	7.5	67.1	0
3	3	3	0	1	1	1	9.2	3.4	5.6	5.6	5.4	7.4	5.8	4.5	6.2	4.6	5.4	4.0	4.5	8.9	8.4	9.0	72.1	1
4	4	1	1	1	1	0	6.4	3.3	7.0	3.7	4.7	4.7	4.5	8.8	7.0	3.6	4.3	4.1	3.0	4.8	6.0	7.2	40.1	0
5	5	2	0	1	0	1	9.0	3.4	5.2	4.6	2.2	6.0	4.5	6.8	6.1	4.5	4.5	3.5	3.5	7.1	6.6	9.0	57.1	0
6	6	1	1	0	1	0	6.5	2.8	3.1	4.1	4.0	4.3	3.7	8.5	5.1	9.5	3.6	4.7	3.3	4.7	6.3	6.1	50.1	0
7	7	1	1	1	1	0	6.9	3.7	5.0	2.6	2.1	2.3	5.4	8.9	4.8	2.5	2.1	4.2	2.0	5.7	7.8	7.2	41.1	0
8	8	2	0	1	1	0	6.2	3.3	3.9	4.8	4.6	3.6	5.1	6.9	5.4	4.8	4.3	6.3	3.7	6.3	5.8	7.7	56.1	0
9	9	2	1	1	1	0	5.8	3.6	5.1	6.7	3.7	5.9	5.8	9.3	5.9	4.4	4.4	6.1	4.6	7.0	7.5	8.2	56.1	1
10	10	1	0	1	1	0	6.4	4.5	5.1	6.1	4.7	5.7	5.7	8.4	5.4	5.3	4.1	5.8	4.4	5.5	5.9	6.7	59.1	0
11	11	3	0	1	0	1	8.7	3.2	4.6	4.8	2.7	6.8	4.6	6.8	5.8	7.5	3.8	3.7	4.0	7.4	7.0	8.4	68.1	0
12	12	1	0	1	1	0	6.1	4.9	6.3	3.9	4.4	3.9	6.4	8.2	5.8	5.9	3.0	4.9	3.2	6.0	6.3	6.6	53.1	0
13	13	1	1	0	0	1	9.5	5.6	4.6	6.9	5.0	6.9	6.6	7.6	6.5	5.3	5.1	4.5	4.4	8.4	8.4	7.9	58.1	1
14	14	3	1	0	0	1	9.2	3.9	5.7	5.5	2.4	8.4	4.8	7.1	6.7	3.0	4.5	2.6	4.2	7.6	6.9	8.2	72.1	1
15	15	2	0	1	1	1	6.3	4.5	4.7	6.9	4.5	6.8	5.9	8.8	6.0	5.4	4.8	6.2	5.2	8.0	7.0	7.6	62.1	1
16	16	3	0	0	0	0	8.7	3.2	4.0	6.8	3.2	7.8	3.8	4.9	6.1	5.0	4.3	3.9	4.5	6.6	6.4	7.1	71.1	0
17	17	2	1	0	1	1	5.7	4.0	6.7	6.0	3.3	5.5	5.1	6.2	6.7	5.4	4.2	6.2	4.5	6.4	7.5	7.2	50.1	1
18	18	2	0	1	1	0	5.9	4.1	5.5	7.2	3.5	6.4	5.5	8.4	6.2	6.3	5.7	5.8	4.8	7.4	6.9	8.2	58.1	1
19	19	2	1	1	1	0	5.6	3.4	5.1	6.4	3.7	5.7	5.6	9.1	5.4	6.1	5.0	6.0	4.5	6.8	7.5	7.9	55.1	0
20	20	3	0	1	1	0	9.1	4.5	3.6	6.4	5.3	5.3	7.1	8.4	5.8	6.7	4.5	6.1	4.4	7.6	8.5	8.8	67.1	1
21	21	1	0	0	1	0	5.2	3.8	7.1	5.2	3.9	4.3	5.0	8.4	7.1	4.6	3.3	4.9	3.3	5.4	5.5	7.0	50.1	0
22	22	3	1	1	1	1	9.6	5.7	6.8	5.9	5.4	8.3	7.8	4.5	6.4	6.5	4.3	3.0	4.3	9.9	9.6	9.9	70.1	1
23	23	2	0	0	0	1	8.6	3.6	7.4	5.1	3.5	7.3	4.7	3.7	6.7	6.0	4.8	3.4	4.0	7.0	7.1	8.1	60.1	0
24	24	3	0	1	1	1	9.3	2.4	2.6	7.2	2.2	7.2	4.5	6.2	6.4	4.2	6.7	4.4	4.5	8.6	8.1	8.0	65.1	1
25	25	1	0	0	1	0	6.0	4.1	5.3	4.7	3.5	5.3	5.3	8.0	6.5	3.9	4.7	5.3	4.0	4.8	4.9	5.5	55.1	0
26	26	2	0	1	1	0	6.4	3.6	6.6	6.1	4.0	3.9	5.3	7.1	6.1	3.7	5.6	6.6	3.9	6.6	6.8	7.0	58.1	0
27	27	3	0	0	0	0	8.5	3.0	7.2	5.8	4.1	7.6	3.7	4.8	6.9	6.7	5.3	3.8	4.4	6.3	7.1	7.0	70.1	0
28	28	1	1	0	1	0	7.0	3.3	5.4	5.5	2.6	4.8	4.2	9.0	6.5	5.9	4.3	5.2	3.7	5.4	5.5	5.6	55.1	0
29	29	3	0	0	0	0	8.5	3.0	5.7	6.0	2.3	7.6	3.7	4.8	5.8	6.0	5.7	3.8	4.4	6.3	6.9	7.2	70.1	0
30	30	1	1	1	1	0	7.6	3.6	3.0	4.0	5.1	4.2	4.6	7.7	4.9	7.2	4.7	5.5	3.5	5.4	5.5	6.2	52.1	0
31	31	1	1	0	0	1	6.9	3.4	8.5	4.3	4.5	6.4	4.7	5.2	7.7	3.3	3.7	2.7	3.3	6.1	6.8	7.1	44.1	0
32	32	1	0	1	1	0	8.1	2.5	7.2	4.5	2.3	5.1	3.8	6.6	6.8	6.1	3.0	3.5	3.0	6.4	5.8	6.2	51.1	0
33	33	1	1	1	1	0	6.7	3.7	6.5	5.3	5.3	5.1	4.9	9.2	5.7	4.2	3.5	4.5	3.4	5.4	6.5	7.6	44.1	0
34	34	2	1	1	1	0	8.0	3.3	6.1	5.7	5.5	4.6	4.7	8.7	5.9	3.8	4.7	6.6	4.2	7.3	7.5	9.0	62.1	1
35	35	1	0	1	1	0	6.7	4.0	5.2	3.9	3.0	5.4	6.8	8.4	6.2	6.0	2.5	4.3	3.5	6.3	6.6	6.7	54.1	0
36	36	1	0	0	0	0	8.7	3.2	6.1	4.3	3.5	6.1	2.9	5.6	6.1	6.5	3.1	2.9	2.5	5.4	4.6	7.1	51.1	0
37	37	2	0	0	0	1	9.0	3.4	5.9	4.6	3.9	6.0	4.5	6.8	6.4	4.3	3.9	3.5	3.5	7.1	8.0	7.2	57.1	0
38	38	3	0	1	1	1	9.6	4.1	6.2	7.3	2.9	7.7	5.5	7.7	6.1	4.4	5.2	4.6	4.9	8.7	9.9	9.9	77.1	1

## HBAT - Two-Sample T-Test

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Obs	ID	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20	X21	X22	X23
39	39	2	1	1	1	0	8.2	3.6	3.9	6.2	5.8	4.9	5.0	9.0	5.2	7.1	4.7	6.9	4.5	7.6	6.9	7.6	65.1	1
40	40	1	0	0	1	0	6.1	4.9	3.0	4.8	5.1	3.9	6.4	8.2	5.1	6.8	4.5	4.9	3.2	6.0	5.5	5.8	53.1	0
41	41	2	1	1	1	0	8.3	3.4	3.3	5.5	3.1	4.6	5.2	9.1	4.1	1.7	4.6	5.8	3.9	7.0	7.5	8.4	61.1	1
42	42	2	1	0	0	1	9.4	3.8	4.7	5.4	3.8	6.5	4.9	8.5	4.9	6.2	4.1	4.5	4.1	7.6	8.0	7.9	61.1	1
43	43	3	0	1	0	1	9.3	5.1	4.6	6.8	5.8	6.6	6.3	7.4	5.1	4.1	4.6	4.6	4.3	8.9	7.8	7.6	72.1	1
44	44	2	1	1	1	1	5.1	5.1	6.6	6.9	4.4	5.4	7.8	5.9	7.2	5.2	4.9	6.3	4.5	7.6	7.9	8.4	55.1	1
45	45	3	1	0	0	0	8.0	2.5	4.7	7.1	3.6	7.7	3.0	5.2	5.1	3.9	4.3	4.2	4.7	5.5	5.6	6.5	65.1	0
46	46	2	0	1	1	0	5.9	4.1	5.7	5.9	5.8	6.4	5.5	8.4	6.4	5.1	5.2	5.8	4.8	7.4	8.6	7.7	58.1	1
47	47	3	1	0	0	1	10.0	4.3	7.1	6.3	2.9	5.4	4.5	3.8	6.7	3.7	5.0	4.0	3.5	7.1	8.8	8.0	67.1	1
48	48	2	1	1	1	0	5.7	3.8	6.8	7.5	5.7	5.7	6.0	8.2	6.6	4.8	6.5	7.3	5.2	7.6	7.6	7.1	60.1	0
49	49	3	0	0	1	1	9.9	3.7	3.7	6.1	4.2	7.0	6.7	6.8	5.9	7.2	4.5	3.4	3.9	8.7	8.1	8.5	67.1	1
50	50	3	1	1	0	1	7.9	3.9	4.3	5.8	4.4	6.9	5.8	4.7	5.2	3.6	4.1	4.2	4.3	8.6	7.8	7.6	61.1	1
51	51	1	0	1	1	0	6.7	3.6	5.9	4.2	3.4	4.7	4.8	7.2	5.7	5.3	4.0	3.6	2.8	5.4	7.5	7.2	48.1	0
52	52	3	1	0	0	0	8.2	2.7	3.7	7.4	2.7	7.9	3.1	5.3	5.3	5.0	4.5	4.3	4.9	5.7	7.1	8.2	67.1	1
53	53	3	0	1	1	1	9.4	2.5	4.8	6.1	3.2	7.3	4.6	6.3	6.3	9.2	4.7	4.6	4.6	8.7	9.0	9.0	66.1	1
54	54	1	1	0	0	1	6.9	3.4	5.7	4.4	3.3	6.4	4.7	5.2	6.4	4.4	3.2	2.7	3.3	6.1	7.0	7.2	44.1	0
55	55	2	1	1	1	0	8.0	3.3	3.8	5.8	3.2	4.6	4.7	8.7	5.3	4.2	4.9	6.6	4.2	7.3	8.1	8.1	62.1	1
56	56	3	1	0	0	0	9.3	3.8	7.3	5.7	3.7	6.4	5.5	7.4	6.6	5.9	4.1	3.2	3.4	7.7	7.6	8.9	59.1	1
57	57	2	0	1	1	1	7.4	5.1	4.8	7.7	4.5	7.2	6.9	9.6	6.4	7.4	5.7	6.5	5.5	9.0	7.9	8.8	74.1	1
58	58	3	1	0	0	0	7.6	3.6	5.2	5.8	5.6	6.6	5.4	4.4	6.7	6.4	4.6	3.9	4.0	8.2	7.5	7.5	58.1	1
59	59	3	1	0	0	0	10.0	4.3	5.3	3.7	4.2	5.4	4.5	3.8	6.7	4.5	3.7	4.0	3.5	7.1	6.5	7.0	67.1	0
60	60	3	1	1	1	0	9.9	2.8	7.2	6.9	2.6	5.8	3.5	5.4	6.2	7.0	5.6	4.9	4.0	7.9	8.5	8.5	61.1	1
61	61	3	0	0	0	0	8.7	3.2	8.4	6.1	2.8	7.8	3.8	4.9	7.2	4.5	5.4	3.9	4.5	6.6	6.9	7.2	71.1	1
62	62	2	0	1	1	1	8.4	3.8	6.7	5.0	4.5	4.7	5.9	6.7	5.1	4.2	2.7	5.0	3.6	8.0	7.6	8.8	63.1	1
63	63	1	0	0	0	1	8.8	3.9	3.8	5.1	4.3	4.7	4.8	5.8	5.0	7.2	4.4	3.7	2.9	6.3	5.5	8.0	44.1	0
64	64	1	0	1	1	0	7.7	2.2	6.3	4.5	2.4	4.7	3.4	6.2	6.0	4.7	3.3	3.1	2.6	6.0	6.0	8.1	47.1	0
65	65	1	0	1	1	0	6.6	3.6	5.8	4.1	4.9	4.7	4.8	7.2	6.5	3.9	3.5	3.6	2.8	5.4	6.9	7.1	48.1	0
66	66	2	1	1	1	0	5.7	3.8	3.5	6.7	5.4	5.7	6.0	8.2	5.4	5.0	4.7	7.3	5.2	7.6	6.9	9.0	60.1	1
67	67	2	1	0	1	0	5.7	4.0	7.9	6.4	2.7	5.5	5.1	6.2	7.5	6.4	5.0	6.2	4.5	6.4	5.6	6.2	50.1	0
68	68	2	1	0	1	1	5.5	3.7	4.7	5.4	4.3	5.3	4.9	6.0	5.6	2.5	4.5	5.9	4.3	6.1	6.3	8.2	48.1	0
69	69	1	1	1	1	0	7.5	3.5	3.8	3.5	2.9	4.1	4.5	7.6	5.1	5.2	4.0	5.4	3.4	5.2	5.8	5.8	51.1	0
70	70	2	0	1	1	0	6.4	3.6	2.7	5.3	3.9	3.9	5.3	7.1	5.2	5.5	4.7	6.6	3.9	6.6	6.6	8.0	58.1	1
71	71	3	0	0	1	0	9.1	4.5	6.1	5.9	6.3	5.3	7.1	8.4	7.1	5.7	5.4	6.1	4.4	7.6	7.5	7.7	67.1	0
72	72	1	1	0	0	1	6.7	3.2	3.0	3.7	4.8	6.3	4.5	5.0	5.2	2.5	2.9	2.6	3.1	5.8	6.0	7.0	43.1	0
73	73	2	0	1	1	0	6.5	4.3	2.7	6.6	6.5	6.3	6.0	8.7	4.7	6.3	4.6	5.6	4.6	7.9	6.6	7.9	66.1	0
74	74	3	0	1	1	1	9.9	3.7	7.5	4.7	5.6	7.0	6.7	6.8	7.2	4.6	4.1	3.4	3.9	8.6	8.8	9.8	66.1	1
75	75	2	0	1	1	1	8.5	3.9	5.3	5.5	5.0	4.9	6.0	6.8	5.7	3.6	4.4	5.1	3.7	8.2	7.0	8.4	65.1	1
76	76	3	0	0	0	0	9.9	3.0	6.8	5.0	5.4	5.9	4.8	4.9	7.3	7.6	3.1	4.3	3.8	7.1	6.6	8.9	63.1	1

# HBAT - Two-Sample T-Test

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Obs	ID	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20	X21	X22	X23
77	77	1	0	0	1	1	7.6	3.6	7.6	4.6	4.7	4.6	5.0	7.4	8.1	6.6	4.5	5.8	3.9	6.4	6.9	7.5	49.1	0
78	78	2	1	0	0	1	9.4	3.8	7.0	6.2	4.7	6.5	4.9	8.5	7.3	2.4	4.3	4.5	4.1	7.6	7.3	8.0	61.1	1
79	79	3	0	0	0	1	9.3	3.5	6.3	7.6	5.5	7.5	5.9	4.6	6.6	3.1	5.2	4.1	4.6	8.9	7.3	8.1	72.1	1
80	80	1	1	1	1	0	7.1	3.4	4.9	4.1	4.0	5.0	5.9	7.8	6.1	3.5	2.6	3.1	2.7	5.7	5.8	7.6	44.1	0
81	81	3	0	1	0	0	9.9	3.0	7.4	4.8	4.0	5.9	4.8	4.9	5.9	6.9	3.2	4.3	3.8	7.1	7.9	8.8	63.1	0
82	82	3	0	0	0	0	8.7	3.2	6.4	4.9	2.4	6.8	4.6	6.8	6.3	5.1	4.3	3.7	4.0	7.4	7.3	8.0	68.1	1
83	83	2	0	0	0	1	8.6	2.9	5.8	3.9	2.9	5.6	4.0	6.3	6.1	4.0	2.7	3.0	3.0	6.6	6.1	8.5	53.1	0
84	84	1	1	0	1	0	6.4	3.2	6.7	3.6	2.2	2.9	5.0	8.4	7.3	6.5	2.0	3.7	1.6	5.0	5.1	6.5	37.1	0
85	85	2	0	0	0	1	7.7	2.6	6.7	6.6	1.9	7.2	4.3	5.9	6.5	4.1	4.7	3.9	4.3	8.2	7.5	7.7	52.1	1
86	86	1	1	1	1	0	7.5	3.5	4.1	4.5	3.5	4.1	4.5	7.6	4.9	2.8	3.4	5.4	3.4	5.2	6.0	7.2	51.1	0
87	87	1	0	0	1	0	5.0	3.6	1.3	3.0	3.5	4.2	4.9	8.2	4.3	7.6	2.4	4.8	3.1	5.2	5.5	6.0	48.1	0
88	88	2	0	0	0	1	7.7	2.6	8.0	6.7	3.5	7.2	4.3	5.9	6.9	7.7	5.1	3.9	4.3	8.2	7.6	8.2	52.1	0
89	89	2	1	0	0	1	9.1	3.6	5.5	5.4	4.2	6.2	4.6	8.3	6.5	4.1	4.6	4.3	3.9	7.3	6.5	7.4	59.1	0
90	90	2	1	0	1	1	5.5	5.5	7.7	7.0	5.6	5.7	8.2	6.3	7.4	4.9	5.5	6.7	4.9	8.2	7.6	9.3	59.1	1
91	91	3	1	0	0	0	9.1	3.7	7.0	4.1	4.4	6.3	5.4	7.3	7.5	4.6	4.4	3.0	3.3	7.4	7.9	7.9	58.1	1
92	92	1	1	0	1	0	7.1	4.2	4.1	2.6	2.1	3.3	4.5	9.9	5.5	3.5	2.0	4.0	2.4	4.8	5.0	6.5	51.1	0
93	93	3	1	1	0	1	9.2	3.9	4.6	5.3	4.2	8.4	4.8	7.1	6.2	6.6	4.4	2.6	4.2	7.6	7.5	8.6	72.1	0
94	94	3	0	1	1	1	9.3	3.5	5.4	7.8	4.6	7.5	5.9	4.6	6.4	4.9	4.8	4.1	4.6	8.9	7.6	8.9	72.1	1
95	95	3	1	1	0	0	9.3	3.8	4.0	4.6	4.7	6.4	5.5	7.4	5.3	4.8	3.6	3.2	3.4	7.7	7.3	8.4	59.1	1
96	96	1	1	0	0	1	8.6	4.8	5.6	5.3	2.3	6.0	5.7	6.7	5.8	3.6	4.9	3.6	3.6	7.3	8.1	8.1	50.1	1
97	97	1	0	0	1	1	7.4	3.4	2.6	5.0	4.1	4.4	4.8	7.2	4.5	6.4	4.2	5.6	3.7	6.3	5.5	7.2	48.1	0
98	98	1	0	0	0	1	8.7	3.2	3.3	3.2	3.1	6.1	2.9	5.6	5.0	4.3	3.1	2.9	2.5	5.4	7.0	7.7	51.1	0
99	99	2	1	0	1	1	7.8	4.9	5.8	5.3	5.2	5.3	7.1	7.9	6.0	5.7	4.3	4.9	3.9	6.4	7.1	7.4	61.1	0
100	100	2	1	1	1	0	7.9	3.0	4.4	5.1	5.9	4.2	4.8	9.7	5.7	5.8	3.4	5.4	3.5	6.4	7.3	7.0	57.1	0

**The UNIVARIATE Procedure**  
**Variable: X19 (X19 - Satisfaction)**

Moments			
<b>N</b>	100	<b>Sum Weights</b>	100
<b>Mean</b>	6.918	<b>Sum Observations</b>	691.8
<b>Std Deviation</b>	1.19183925	<b>Variance</b>	1.42048081
<b>Skewness</b>	0.0781812	<b>Kurtosis</b>	-0.7913045
<b>Uncorrected SS</b>	4926.5	<b>Corrected SS</b>	140.6276
<b>Coeff Variation</b>	17.2280898	<b>Std Error Mean</b>	0.11918393

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	6.918000	<b>Std Deviation</b>	1.19184
<b>Median</b>	7.050000	<b>Variance</b>	1.42048
<b>Mode</b>	7.600000	<b>Range</b>	5.20000
		<b>Interquartile Range</b>	1.65000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	58.04474	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	50	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	2525	<b>Pr &gt;=  S </b>	<.0001

Tests for Normality				
Test	Statistic		p Value	
<b>Shapiro-Wilk</b>	<b>W</b>	0.975162	<b>Pr &lt; W</b>	0.0556
<b>Kolmogorov-Smirnov</b>	<b>D</b>	0.078082	<b>Pr &gt; D</b>	0.1367
<b>Cramer-von Mises</b>	<b>W-Sq</b>	0.109171	<b>Pr &gt; W-Sq</b>	0.0870
<b>Anderson-Darling</b>	<b>A-Sq</b>	0.714966	<b>Pr &gt; A-Sq</b>	0.0630

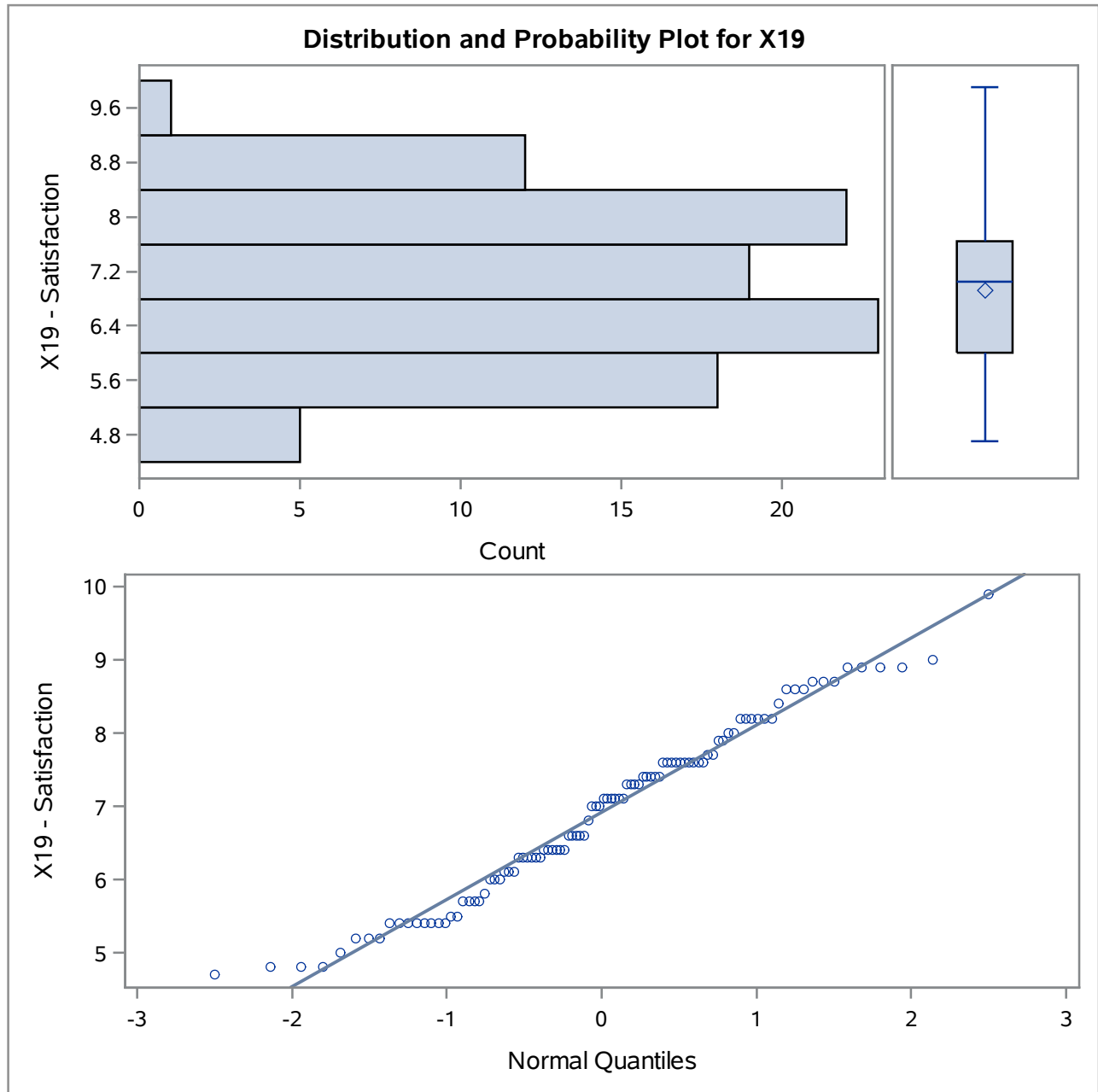
Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	9.90
<b>99%</b>	9.45
<b>95%</b>	8.90
<b>90%</b>	8.60
<b>75% Q3</b>	7.65
<b>50% Median</b>	7.05
<b>25% Q1</b>	6.00

The UNIVARIATE Procedure  
Variable: X19 (X19 - Satisfaction)

Quantiles (Definition 5)	
Level	Quantile
10%	5.40
5%	5.10
1%	4.75
0% Min	4.70

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
4.7	6	8.9	43
4.8	92	8.9	79
4.8	25	8.9	94
4.8	4	9.0	57
5.0	84	9.9	22

## The UNIVARIATE Procedure



**The UNIVARIATE Procedure**  
**Variable: X20 (X20 - Likelihood of Recommendation)**

Moments			
<b>N</b>	100	<b>Sum Weights</b>	100
<b>Mean</b>	7.02	<b>Sum Observations</b>	702
<b>Std Deviation</b>	1.04330477	<b>Variance</b>	1.08848485
<b>Skewness</b>	0.04392529	<b>Kurtosis</b>	-0.0883467
<b>Uncorrected SS</b>	5035.8	<b>Corrected SS</b>	107.76
<b>Coeff Variation</b>	14.8618913	<b>Std Error Mean</b>	0.10433048

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	7.020000	<b>Std Deviation</b>	1.04330
<b>Median</b>	7.000000	<b>Variance</b>	1.08848
<b>Mode</b>	7.500000	<b>Range</b>	5.30000
		<b>Interquartile Range</b>	1.30000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	67.28619	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	50	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	2525	<b>Pr &gt;=  S </b>	<.0001

Tests for Normality				
Test	Statistic		p Value	
<b>Shapiro-Wilk</b>	<b>W</b>	0.988054	<b>Pr &lt; W</b>	0.5122
<b>Kolmogorov-Smirnov</b>	<b>D</b>	0.077269	<b>Pr &gt; D</b>	0.1460
<b>Cramer-von Mises</b>	<b>W-Sq</b>	0.073672	<b>Pr &gt; W-Sq</b>	0.2498
<b>Anderson-Darling</b>	<b>A-Sq</b>	0.452245	<b>Pr &gt; A-Sq</b>	>0.2500

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	9.90
<b>99%</b>	9.75
<b>95%</b>	8.70
<b>90%</b>	8.25
<b>75% Q3</b>	7.60
<b>50% Median</b>	7.00
<b>25% Q1</b>	6.30

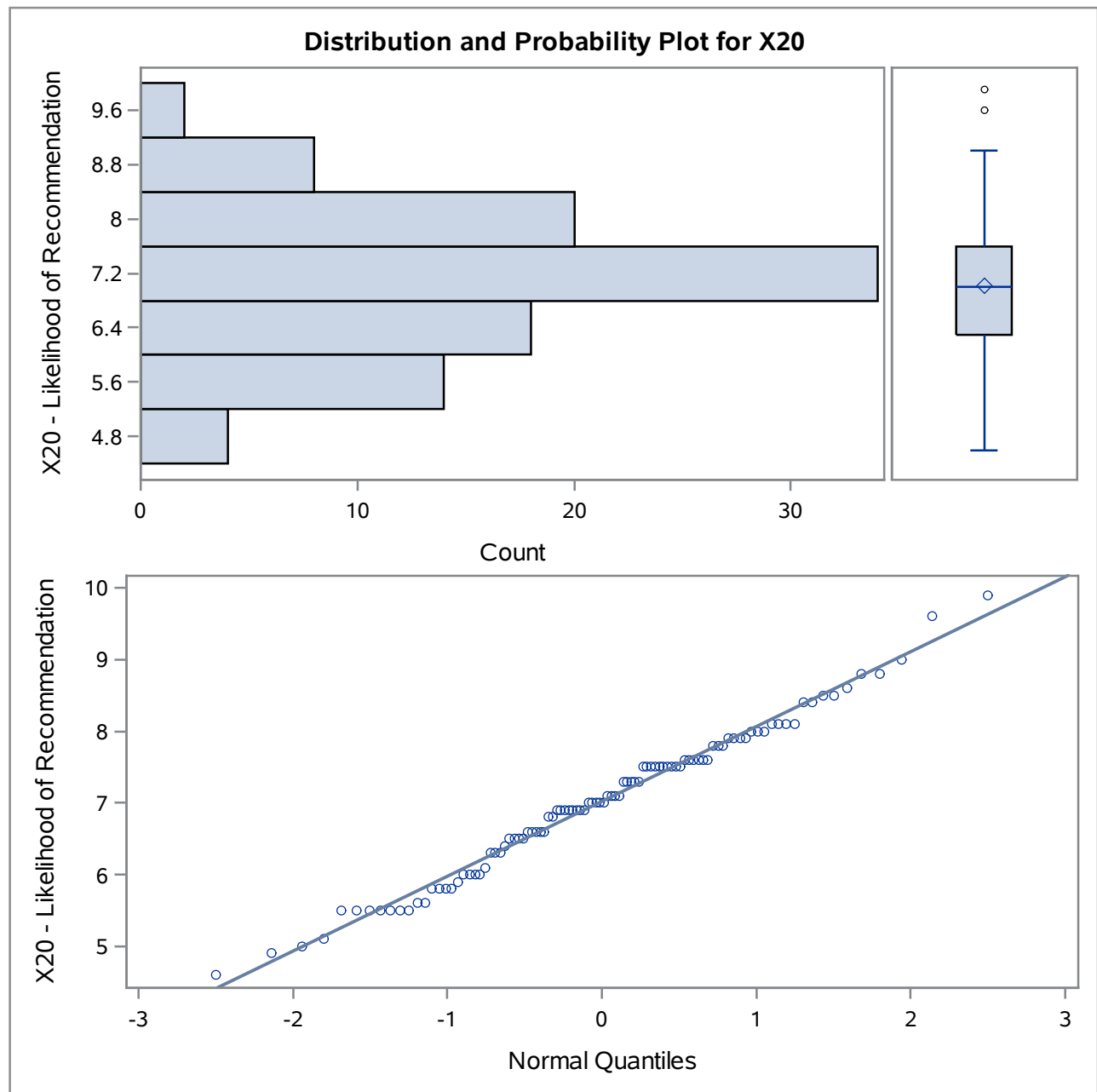
**The UNIVARIATE Procedure**  
**Variable: X20 (X20 - Likelihood of Recommendation)**

Quantiles (Definition 5)	
Level	Quantile
10%	5.50
5%	5.50
1%	4.75
0% Min	4.60

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
4.6	36	8.8	47
4.9	25	8.8	74
5.0	92	9.0	53
5.1	84	9.6	22
5.5	97	9.9	38



## The UNIVARIATE Procedure



**The UNIVARIATE Procedure**  
**Variable: X19 (X19 - Satisfaction)**

X5 - Distribution System=0

Moments			
<b>N</b>	57	<b>Sum Weights</b>	57
<b>Mean</b>	6.38245614	<b>Sum Observations</b>	363.8
<b>Std Deviation</b>	0.98545182	<b>Variance</b>	0.97111529
<b>Skewness</b>	0.00654683	<b>Kurtosis</b>	-1.2628095
<b>Uncorrected SS</b>	2376.32	<b>Corrected SS</b>	54.3824561
<b>Coeff Variation</b>	15.4400093	<b>Std Error Mean</b>	0.13052628

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	6.382456	<b>Std Deviation</b>	0.98545
<b>Median</b>	6.400000	<b>Variance</b>	0.97112
<b>Mode</b>	5.400000	<b>Range</b>	3.50000
		<b>Interquartile Range</b>	1.90000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	48.89786	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	28.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	826.5	<b>Pr &gt;=  S </b>	<.0001

Tests for Normality				
Test	Statistic		p Value	
<b>Shapiro-Wilk</b>	<b>W</b>	0.944705	<b>Pr &lt; W</b>	0.0114
<b>Kolmogorov-Smirnov</b>	<b>D</b>	0.124119	<b>Pr &gt; D</b>	0.0272
<b>Cramer-von Mises</b>	<b>W-Sq</b>	0.16214	<b>Pr &gt; W-Sq</b>	0.0172
<b>Anderson-Darling</b>	<b>A-Sq</b>	1.054157	<b>Pr &gt; A-Sq</b>	0.0086

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	8.2
<b>99%</b>	8.2
<b>95%</b>	7.9
<b>90%</b>	7.6
<b>75% Q3</b>	7.3
<b>50% Median</b>	6.4

The UNIVARIATE Procedure  
Variable: X19 (X19 - Satisfaction)

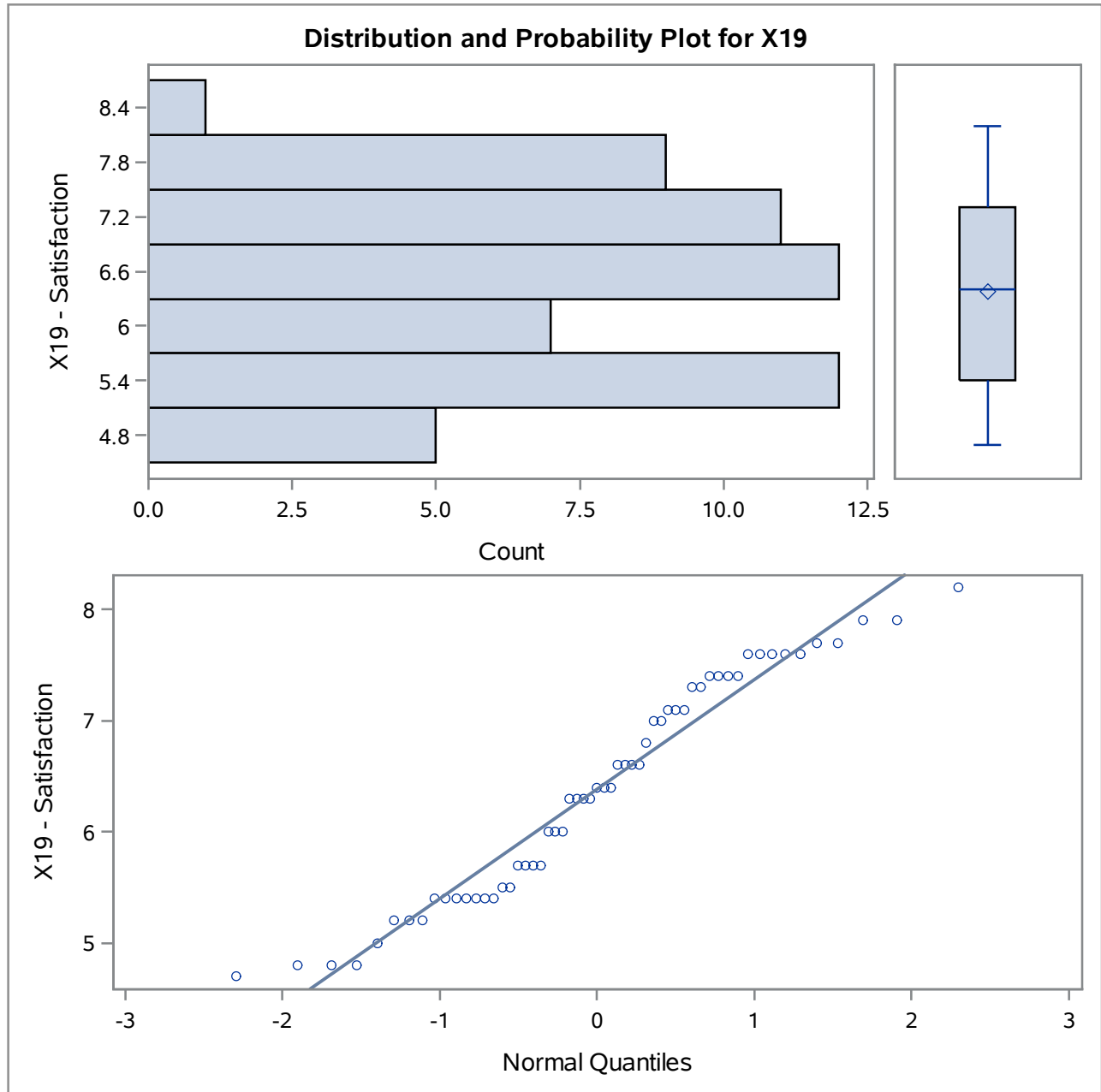
X5 - Distribution System=0

Quantiles (Definition 5)	
Level	Quantile
25% Q1	5.4
10%	5.2
5%	4.8
1%	4.7
0% Min	4.7

Extreme Observations					
Lowest			Highest		
Value	X5	Obs	Value	X5	Obs
4.7	0	3	7.7	0	34
4.8	0	55	7.7	0	56
4.8	0	14	7.9	0	37
4.8	0	2	7.9	0	46
5.0	0	51	8.2	0	35

## The UNIVARIATE Procedure

X5 - Distribution System=0



The UNIVARIATE Procedure  
Variable: X19 (X19 - Satisfaction)

X5 - Distribution System=1

Moments			
N	43	Sum Weights	43
Mean	7.62790698	Sum Observations	328
Std Deviation	1.07156441	Variance	1.14825028
Skewness	-0.1920377	Kurtosis	-0.8318361
Uncorrected SS	2550.18	Corrected SS	48.2265116
Coeff Variation	14.047948	Std Error Mean	0.16341204

Basic Statistical Measures			
Location		Variability	
Mean	7.627907	Std Deviation	1.07156
Median	7.600000	Variance	1.14825
Mode	7.600000	Range	4.50000
		Interquartile Range	2.00000

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	46.67898	Pr >  t	<.0001
Sign	M	21.5	Pr >=  M	<.0001
Signed Rank	S	473	Pr >=  S	<.0001

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.961101	Pr < W	0.1521
Kolmogorov-Smirnov	D	0.121894	Pr > D	0.1058
Cramer-von Mises	W-Sq	0.100658	Pr > W-Sq	0.1084
Anderson-Darling	A-Sq	0.662014	Pr > A-Sq	0.0821

Quantiles (Definition 5)	
Level	Quantile
100% Max	9.9
99%	9.9
95%	8.9
90%	8.9
75% Q3	8.6

**The UNIVARIATE Procedure**  
**Variable: X19 (X19 - Satisfaction)**

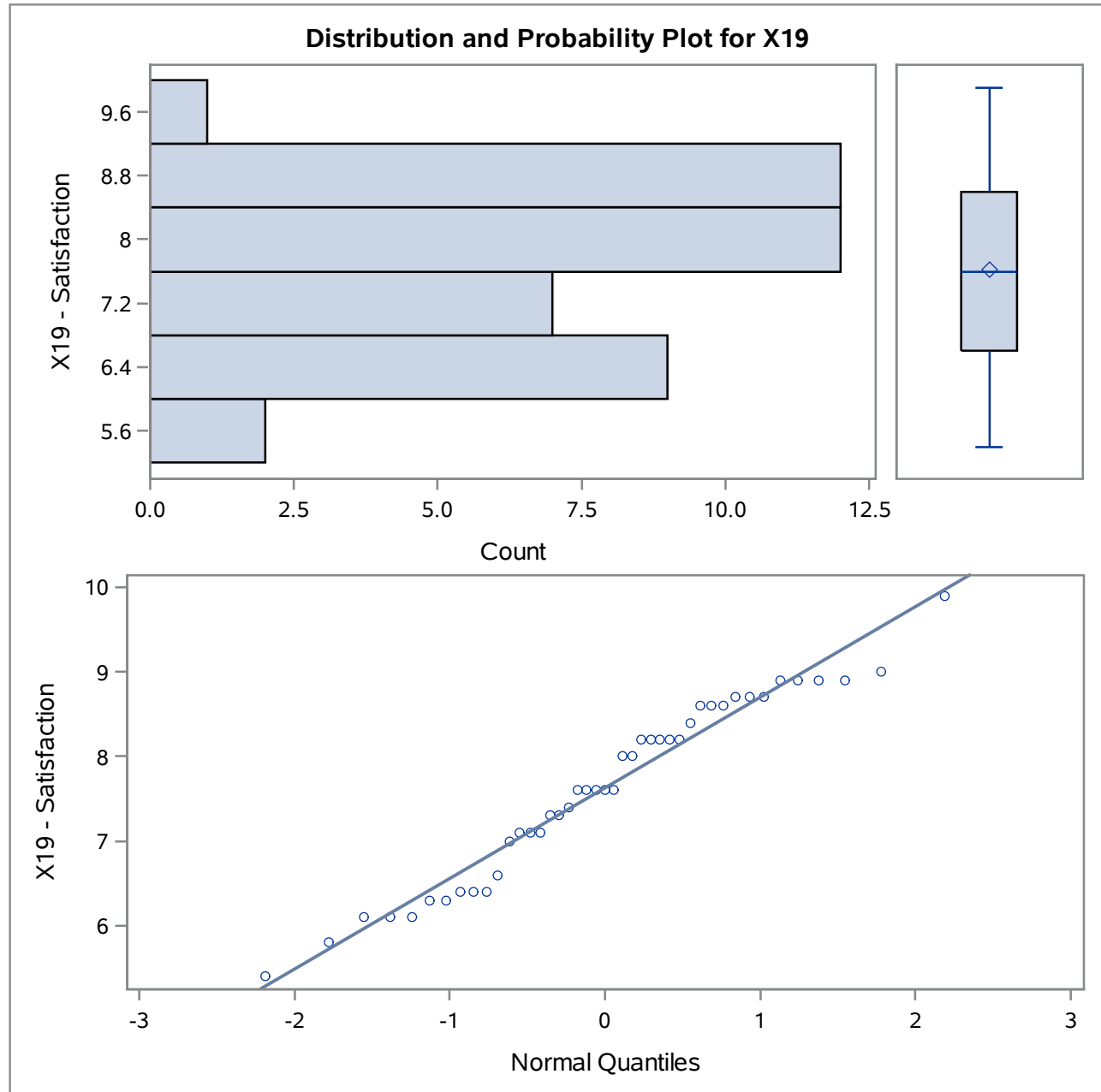
X5 - Distribution System=1

Quantiles (Definition 5)	
Level	Quantile
50% Median	7.6
25% Q1	6.6
10%	6.1
5%	6.1
1%	5.4
0% Min	5.4

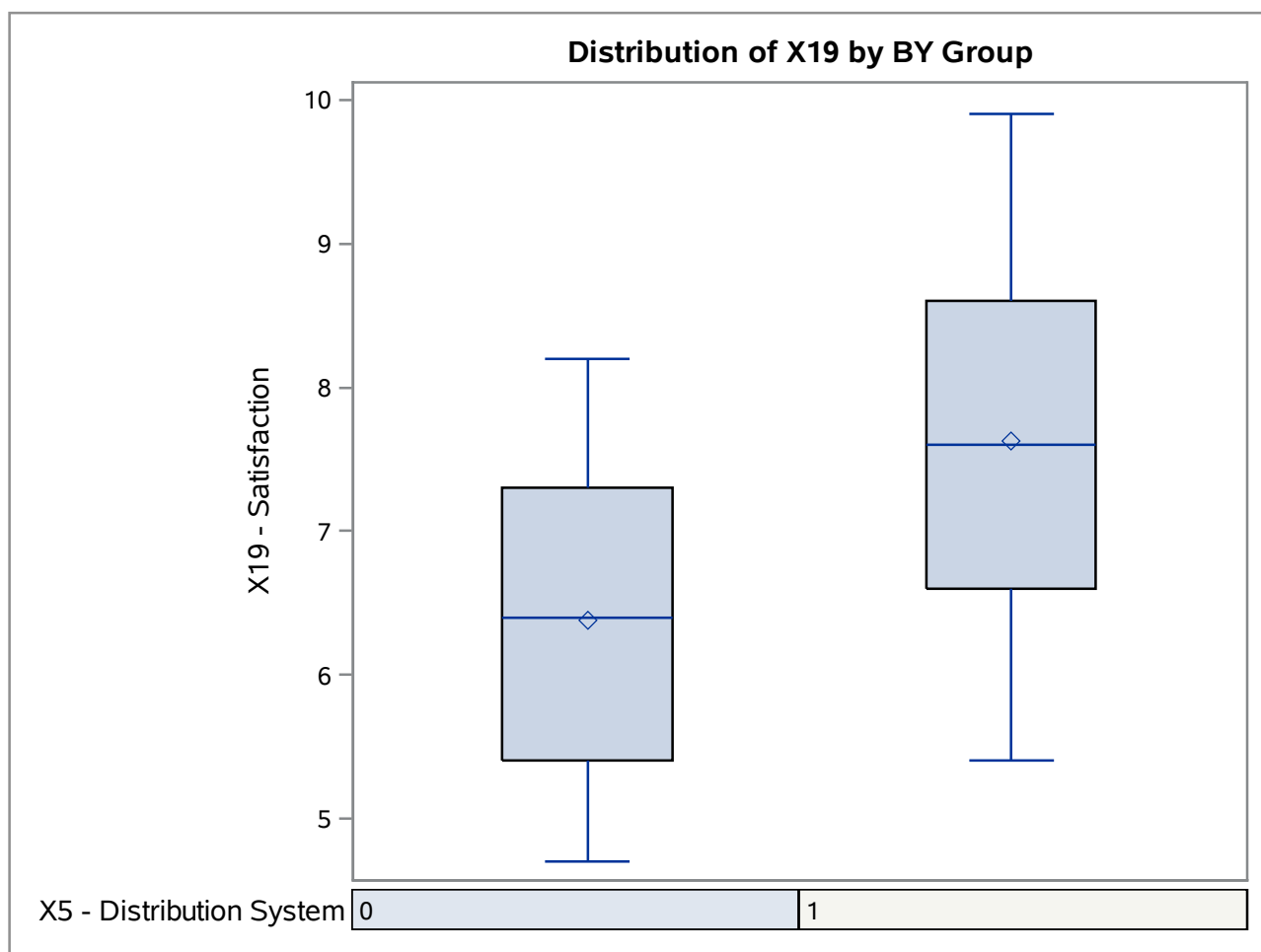
Extreme Observations					
Lowest			Highest		
Value	X5	Obs	Value	X5	Obs
5.4	1	99	8.9	1	73
5.8	1	84	8.9	1	89
6.1	1	83	8.9	1	96
6.1	1	79	9.0	1	80
6.1	1	69	9.9	1	66

## The UNIVARIATE Procedure

X5 - Distribution System=1



## The UNIVARIATE Procedure





**The UNIVARIATE Procedure**  
**Variable: X20 (X20 - Likelihood of Recommendation)**

X5 - Distribution System=0

Moments			
<b>N</b>	57	<b>Sum Weights</b>	57
<b>Mean</b>	6.65964912	<b>Sum Observations</b>	379.6
<b>Std Deviation</b>	0.9676665	<b>Variance</b>	0.93637845
<b>Skewness</b>	-0.0361836	<b>Kurtosis</b>	-0.6903364
<b>Uncorrected SS</b>	2580.44	<b>Corrected SS</b>	52.437193
<b>Coeff Variation</b>	14.5302925	<b>Std Error Mean</b>	0.12817056

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	6.659649	<b>Std Deviation</b>	0.96767
<b>Median</b>	6.600000	<b>Variance</b>	0.93638
<b>Mode</b>	7.500000	<b>Range</b>	4.00000
		<b>Interquartile Range</b>	1.70000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	51.95927	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	28.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	826.5	<b>Pr &gt;=  S </b>	<.0001

Tests for Normality				
Test	Statistic		p Value	
<b>Shapiro-Wilk</b>	<b>W</b>	0.97818	<b>Pr &lt; W</b>	0.3903
<b>Kolmogorov-Smirnov</b>	<b>D</b>	0.088122	<b>Pr &gt; D</b>	>0.1500
<b>Cramer-von Mises</b>	<b>W-Sq</b>	0.070271	<b>Pr &gt; W-Sq</b>	>0.2500
<b>Anderson-Darling</b>	<b>A-Sq</b>	0.431285	<b>Pr &gt; A-Sq</b>	>0.2500

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	8.6
<b>99%</b>	8.6
<b>95%</b>	8.5
<b>90%</b>	7.9
<b>75% Q3</b>	7.5
<b>50% Median</b>	6.6

**The UNIVARIATE Procedure**  
**Variable: X20 (X20 - Likelihood of Recommendation)**

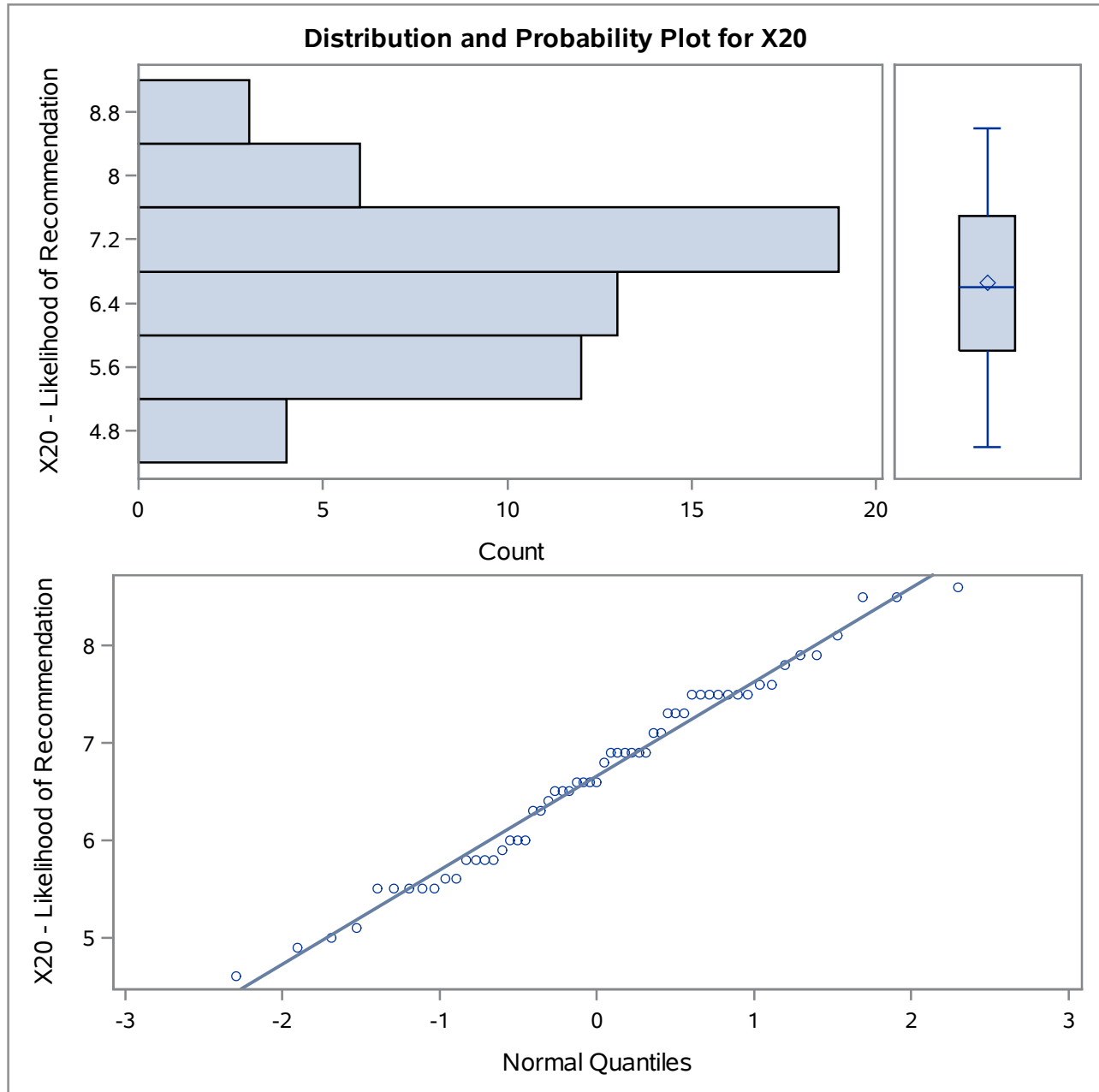
X5 - Distribution System=0

Quantiles (Definition 5)	
Level	Quantile
25% Q1	5.8
10%	5.5
5%	5.0
1%	4.6
0% Min	4.6

Extreme Observations					
Lowest			Highest		
Value	X5	Obs	Value	X5	Obs
4.6	0	24	7.9	0	54
4.9	0	14	8.1	0	33
5.0	0	55	8.5	0	12
5.1	0	51	8.5	0	37
5.5	0	53	8.6	0	29

## The UNIVARIATE Procedure

X5 - Distribution System=0



**The UNIVARIATE Procedure**  
**Variable: X20 (X20 - Likelihood of Recommendation)**

X5 - Distribution System=1

Moments			
<b>N</b>	43	<b>Sum Weights</b>	43
<b>Mean</b>	7.49767442	<b>Sum Observations</b>	322.4
<b>Std Deviation</b>	0.95256255	<b>Variance</b>	0.90737542
<b>Skewness</b>	0.19260946	<b>Kurtosis</b>	0.47361591
<b>Uncorrected SS</b>	2455.36	<b>Corrected SS</b>	38.1097674
<b>Coeff Variation</b>	12.7047735	<b>Std Error Mean</b>	0.14526443

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	7.497674	<b>Std Deviation</b>	0.95256
<b>Median</b>	7.500000	<b>Variance</b>	0.90738
<b>Mode</b>	7.000000	<b>Range</b>	4.40000
		<b>Interquartile Range</b>	1.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	51.61397	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	21.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	473	<b>Pr &gt;=  S </b>	<.0001

Tests for Normality				
Test	Statistic		p Value	
<b>Shapiro-Wilk</b>	<b>W</b>	0.980277	<b>Pr &lt; W</b>	0.6584
<b>Kolmogorov-Smirnov</b>	<b>D</b>	0.100798	<b>Pr &gt; D</b>	>0.1500
<b>Cramer-von Mises</b>	<b>W-Sq</b>	0.050482	<b>Pr &gt; W-Sq</b>	>0.2500
<b>Anderson-Darling</b>	<b>A-Sq</b>	0.321261	<b>Pr &gt; A-Sq</b>	>0.2500

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	9.9
<b>99%</b>	9.9
<b>95%</b>	9.0
<b>90%</b>	8.8
<b>75% Q3</b>	8.0
<b>50% Median</b>	7.5

**The UNIVARIATE Procedure**  
**Variable: X20 (X20 - Likelihood of Recommendation)**

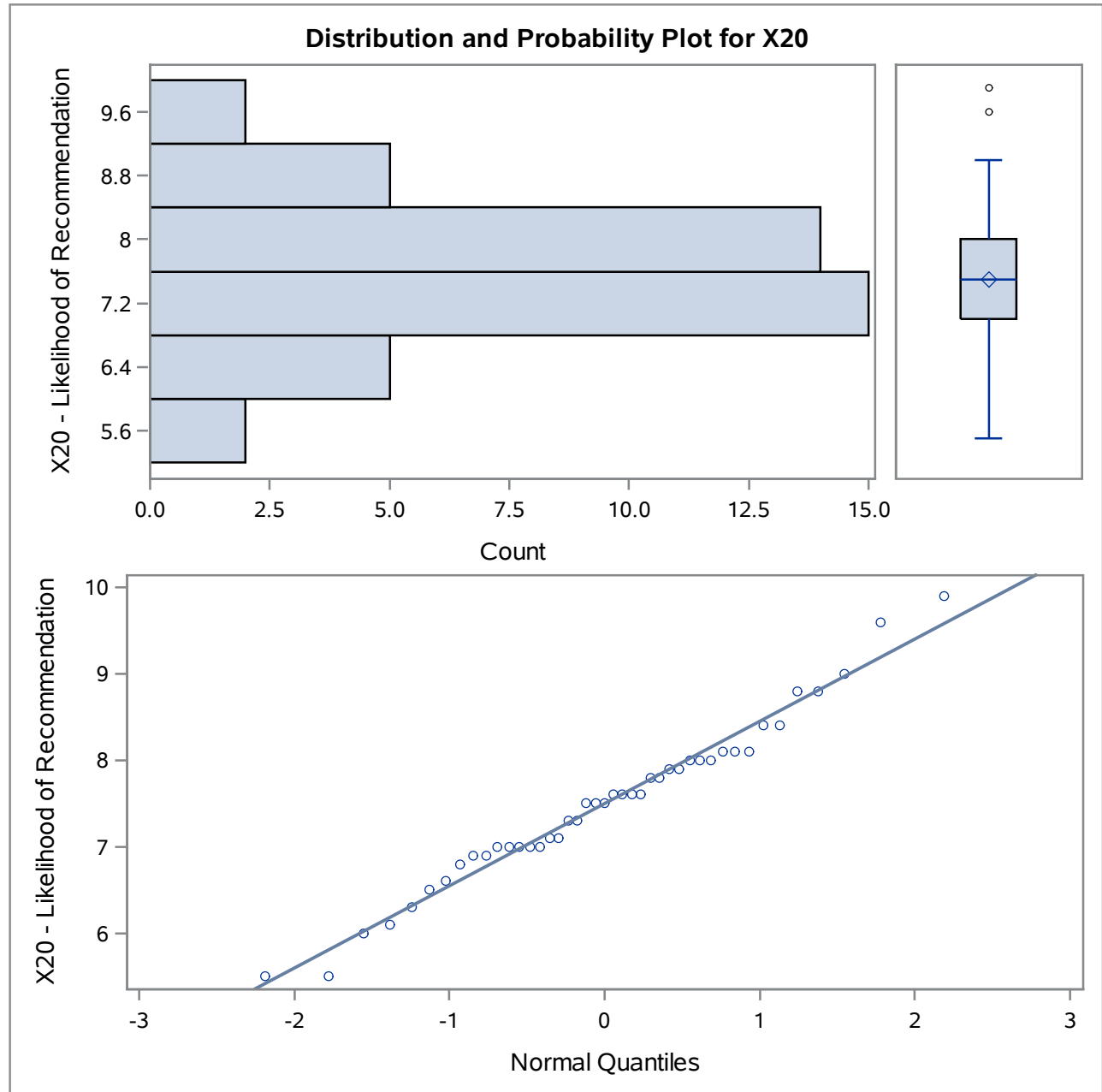
X5 - Distribution System=1

Quantiles (Definition 5)	
Level	Quantile
25% Q1	7.0
10%	6.3
5%	6.0
1%	5.5
0% Min	5.5

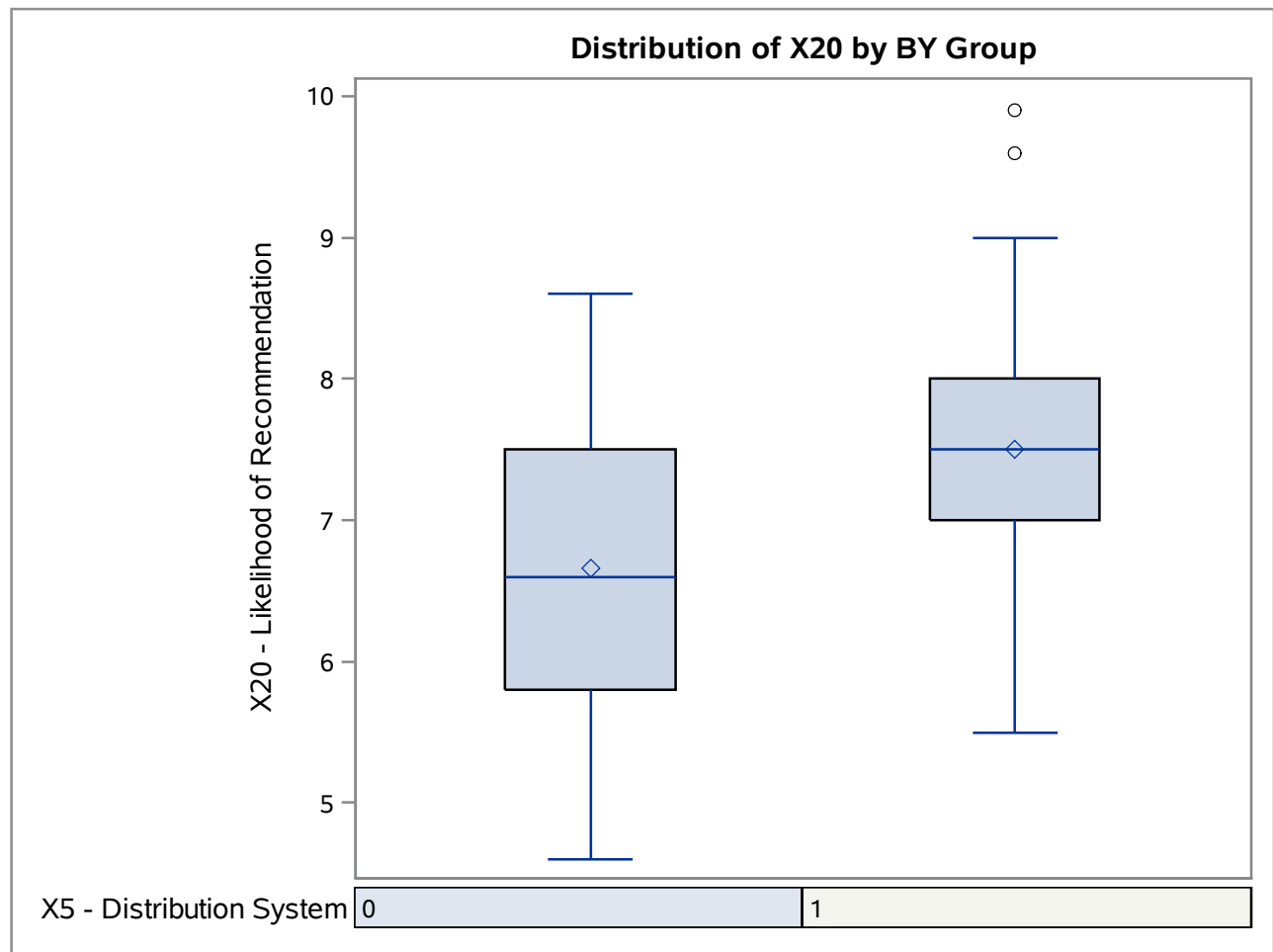
Extreme Observations					
Lowest			Highest		
Value	X5	Obs	Value	X5	Obs
5.5	1	98	8.8	1	75
5.5	1	82	8.8	1	85
6.0	1	84	9.0	1	78
6.1	1	90	9.6	1	66
6.3	1	83	9.9	1	71

## The UNIVARIATE Procedure

X5 - Distribution System=1



## The UNIVARIATE Procedure



## The TTEST Procedure

Variable: X19 (X19 - Satisfaction)

X5	N	Mean	Std Dev	Std Err	Minimum	Maximum
0	57	6.3825	0.9855	0.1305	4.7000	8.2000
1	43	7.6279	1.0716	0.1634	5.4000	9.9000
Diff (1-2)		-1.2455	1.0232	0.2067		

X5	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
0		6.3825	6.1210	6.6439	0.9855	0.8320	1.2089
1		7.6279	7.2981	7.9577	1.0716	0.8835	1.3620
Diff (1-2)	Pooled	-1.2455	-1.6556	-0.8353	1.0232	0.8979	1.1897
Diff (1-2)	Satterthwaite	-1.2455	-1.6612	-0.8297			

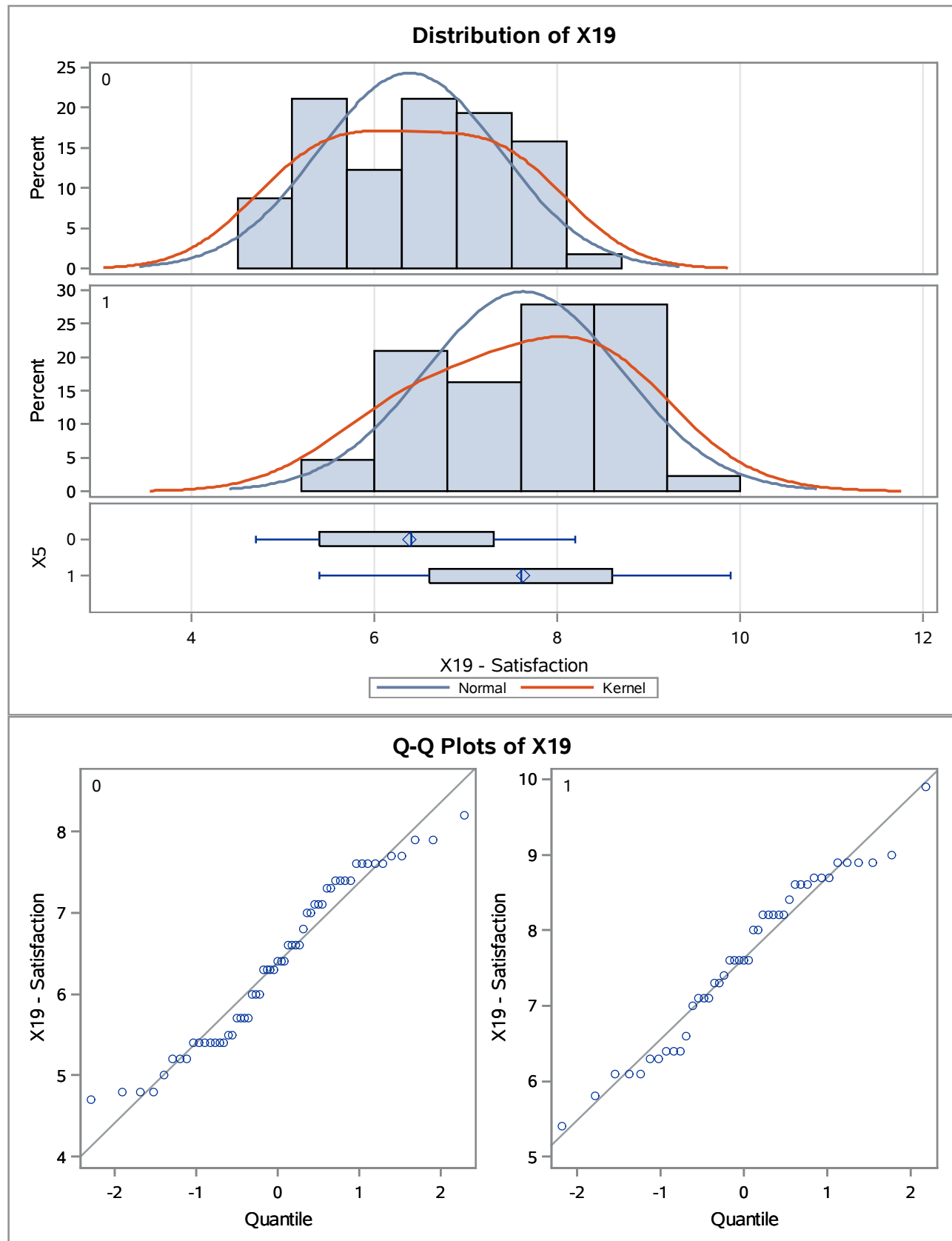
Method	Variances	DF	t Value	Pr >  t
Pooled	Equal	98	-6.03	<.0001
Satterthwaite	Unequal	86.333	-5.96	<.0001

Equality of Variances				
Method	Num DF	Den DF	F Value	Pr > F
Folded F	42	56	1.18	0.5531



## The TTEST Procedure

Variable: X19 (X19 - Satisfaction)



## The TTEST Procedure

Variable: X20 (X20 - Likelihood of Recommendation)

Variable: X20 (X20 - Likelihood of Recommendation)

X5	N	Mean	Std Dev	Std Err	Minimum	Maximum
0	57	6.6596	0.9677	0.1282	4.6000	8.6000
1	43	7.4977	0.9526	0.1453	5.5000	9.9000
Diff (1-2)		-0.8380	0.9612	0.1942		

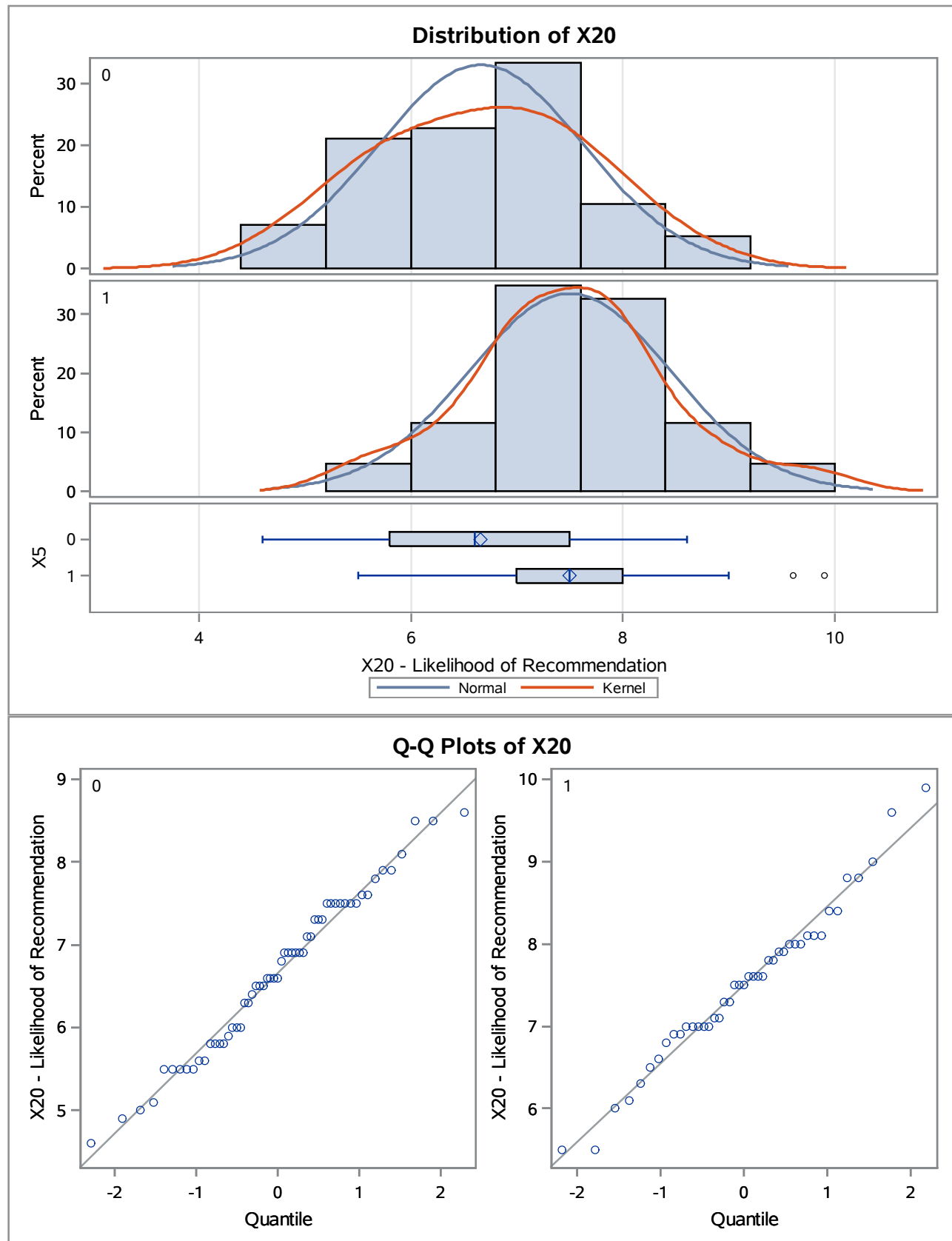
X5	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
0		6.6596	6.4029	6.9164	0.9677	0.8170	1.1871
1		7.4977	7.2045	7.7908	0.9526	0.7854	1.2107
Diff (1-2)	Pooled	-0.8380	-1.2233	-0.4527	0.9612	0.8434	1.1175
Diff (1-2)	Satterthwaite	-0.8380	-1.2228	-0.4532			

Method	Variances	DF	t Value	Pr >  t
Pooled	Equal	98	-4.32	<.0001
Satterthwaite	Unequal	91.333	-4.33	<.0001

Equality of Variances				
Method	Num DF	Den DF	F Value	Pr > F
Folded F	56	42	1.03	0.9247

## The TTEST Procedure

Variable: X20 (X20 - Likelihood of Recommendation)



The ANOVA Procedure

Class Level Information		
Class	Levels	Values
X5	2	0 1

Number of Observations Read	100
Number of Observations Used	100

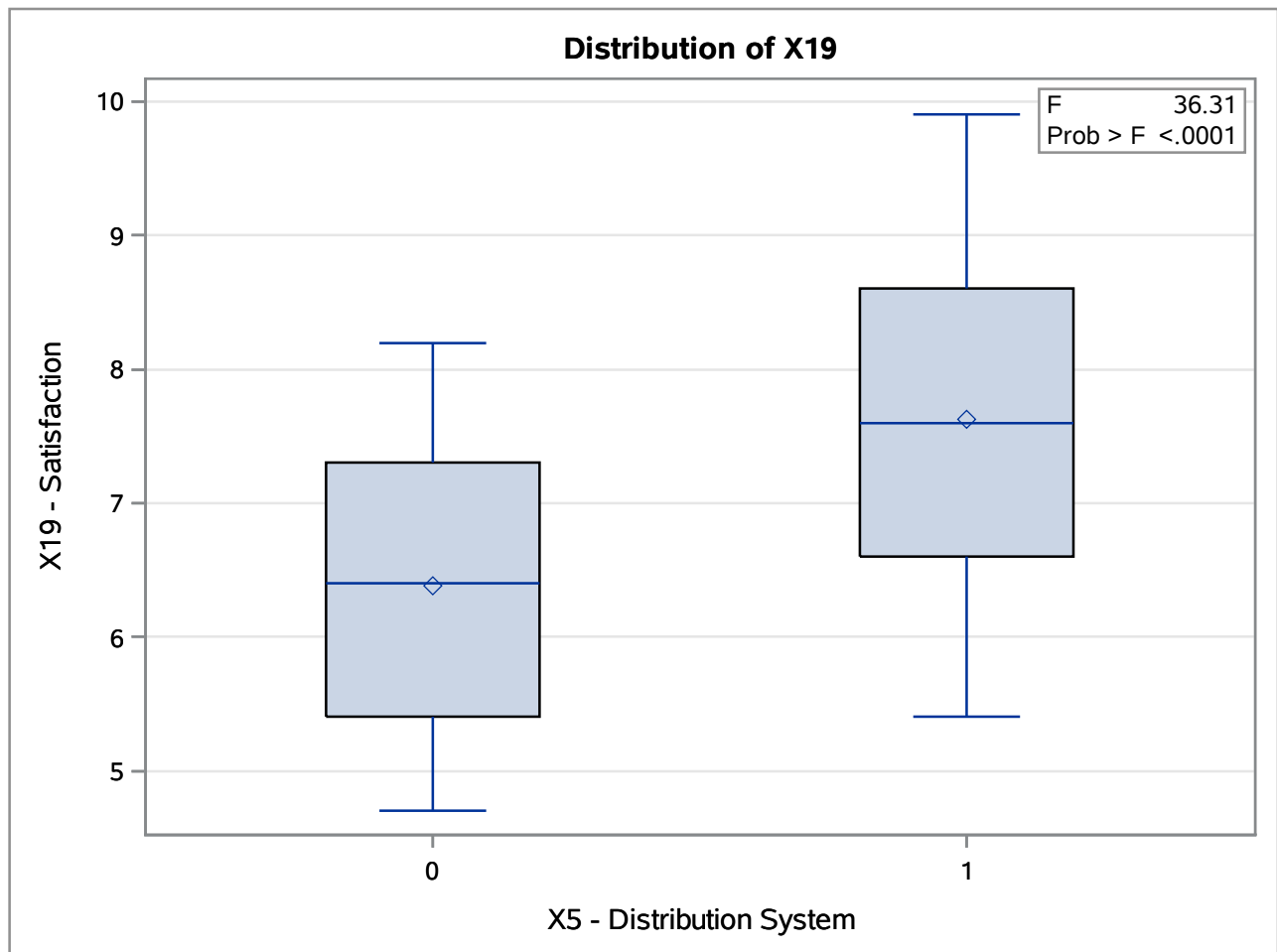
## The ANOVA Procedure

Dependent Variable: X19 X19 - Satisfaction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	38.0186322	38.0186322	36.31	<.0001
Error	98	102.6089678	1.0470303		
Corrected Total	99	140.6276000			

R-Square	Coeff Var	Root MSE	X19 Mean
0.270350	14.79105	1.023245	6.918000

Source	DF	Anova SS	Mean Square	F Value	Pr > F
X5	1	38.01863223	38.01863223	36.31	<.0001



**The ANOVA Procedure**

Class Level Information		
Class	Levels	Values
X5	2	0 1

Number of Observations Read	100
Number of Observations Used	100

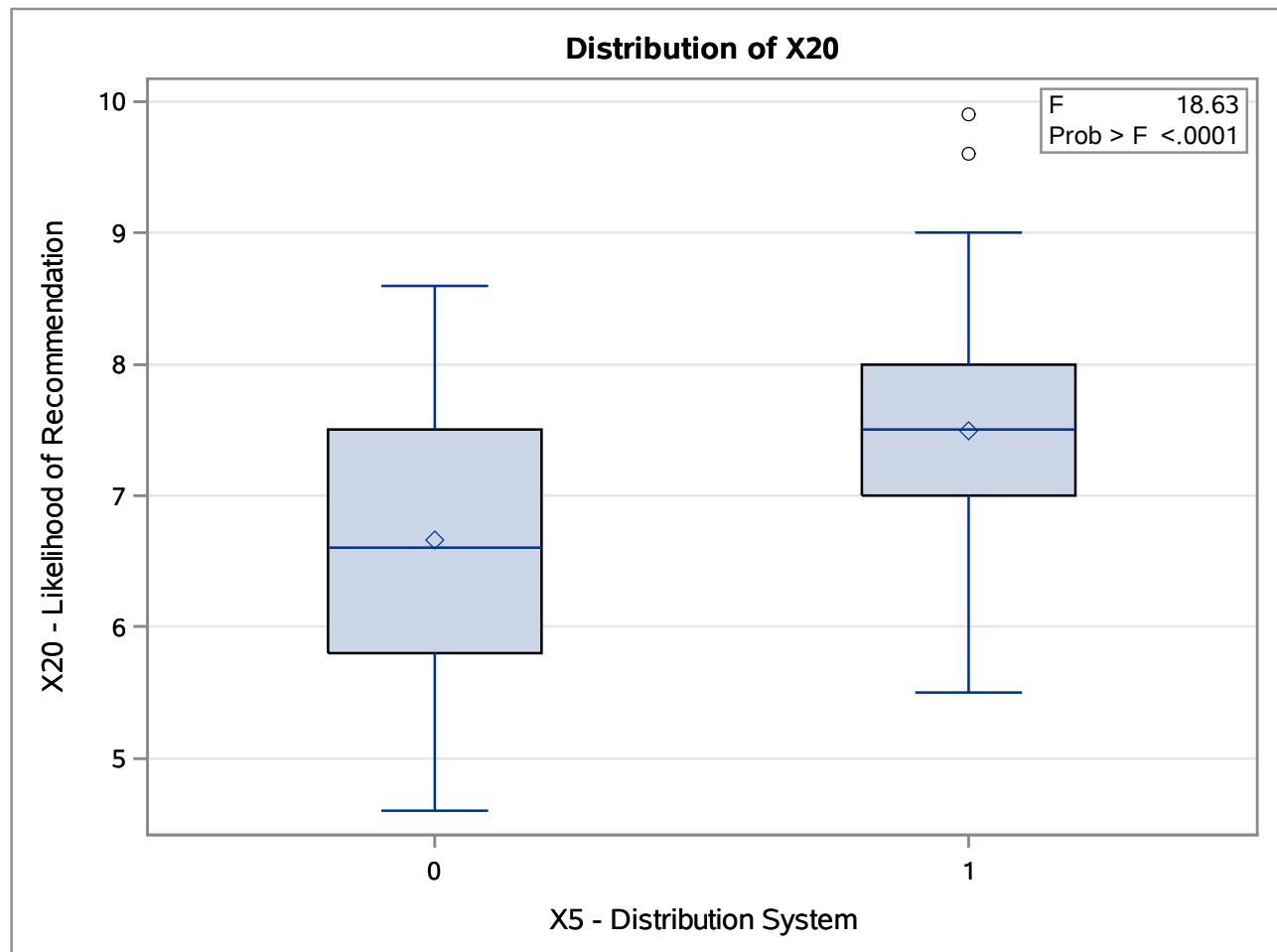
## The ANOVA Procedure

Dependent Variable: X20 X20 - Likelihood of Recommendation

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	17.2130396	17.2130396	18.63	<.0001
Error	98	90.5469604	0.9239486		
Corrected Total	99	107.7600000			

R-Square	Coeff Var	Root MSE	X20 Mean
0.159735	13.69263	0.961222	7.020000

Source	DF	Anova SS	Mean Square	F Value	Pr > F
X5	1	17.21303958	17.21303958	18.63	<.0001



**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: X19 X19 - Satisfaction**

Number of Observations Read	100
Number of Observations Used	100

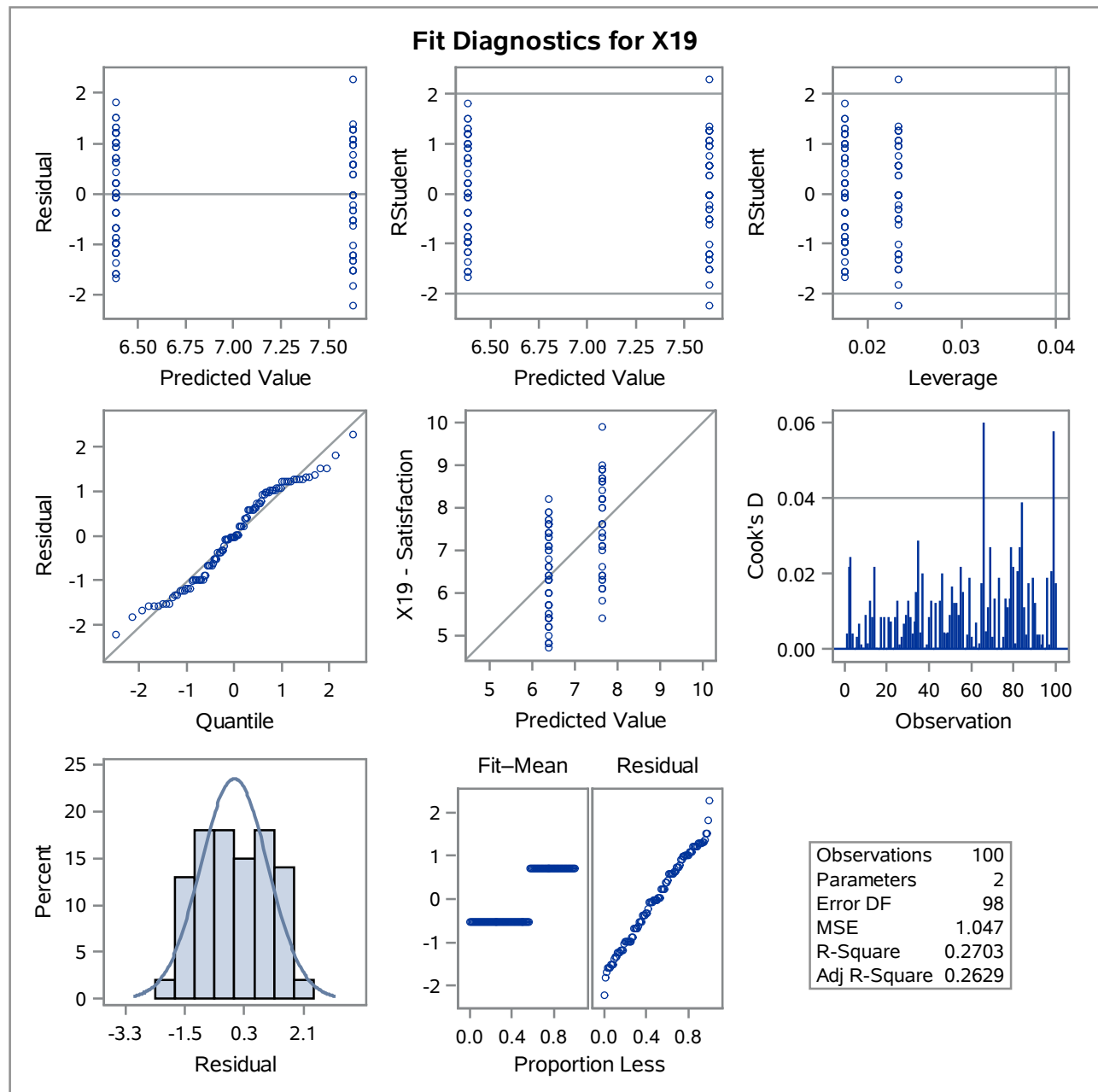
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	38.01863	38.01863	36.31	<.0001
Error	98	102.60897	1.04703		
Corrected Total	99	140.62760			

Root MSE	1.02324	R-Square	0.2703
Dependent Mean	6.91800	Adj R-Sq	0.2629
Coeff Var	14.79105		

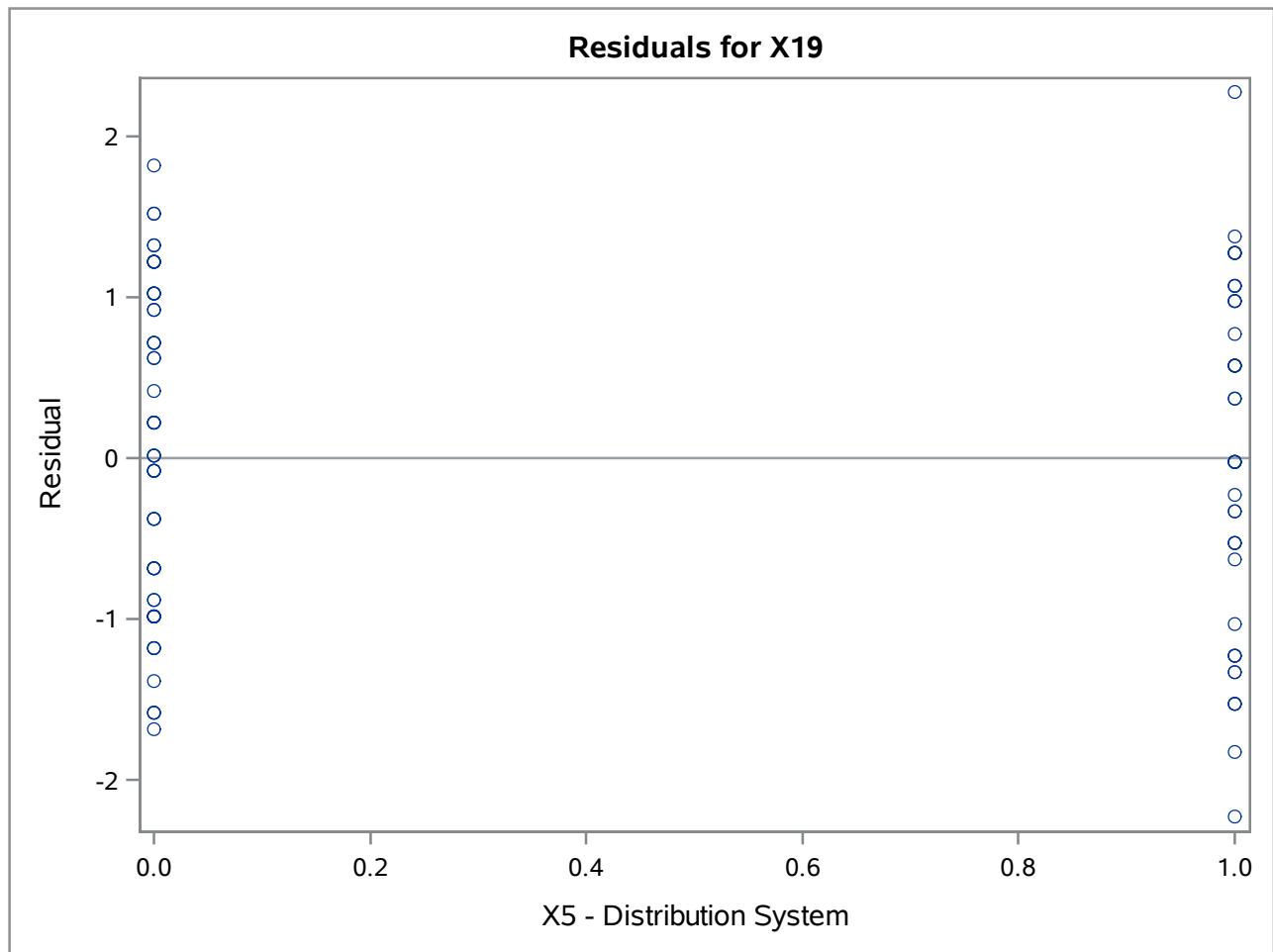
Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr >  t
Intercept	Intercept	1	6.38246	0.13553	47.09	<.0001
X5	X5 - Distribution System	1	1.24545	0.20668	6.03	<.0001



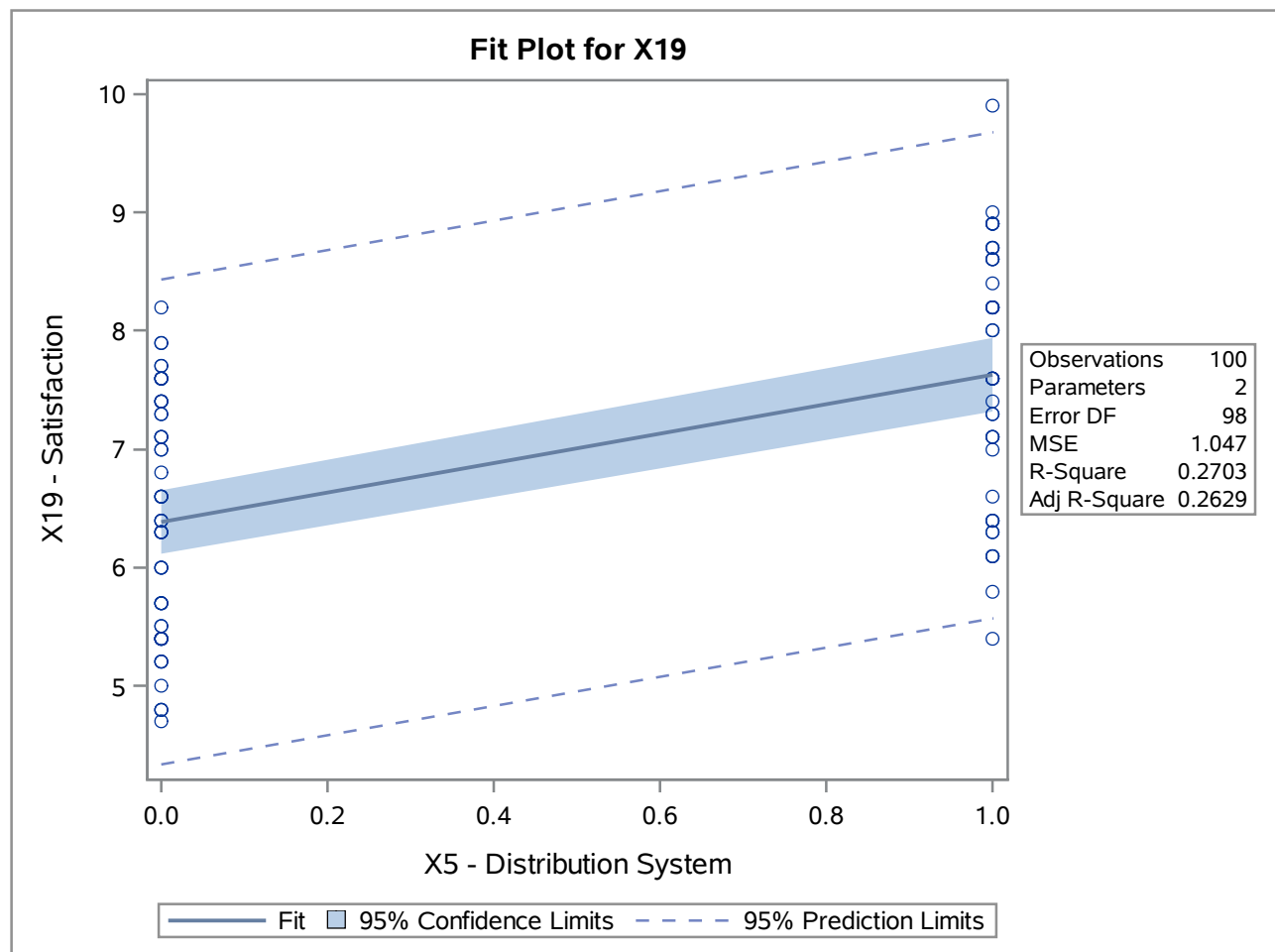
**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: X19 X19 - Satisfaction**



The REG Procedure  
Model: MODEL1  
Dependent Variable: X19 X19 - Satisfaction



The REG Procedure  
Model: MODEL1  
Dependent Variable: X19 X19 - Satisfaction



## The REG Procedure

Model: MODEL1

Dependent Variable: X20 X20 - Likelihood of Recommendation

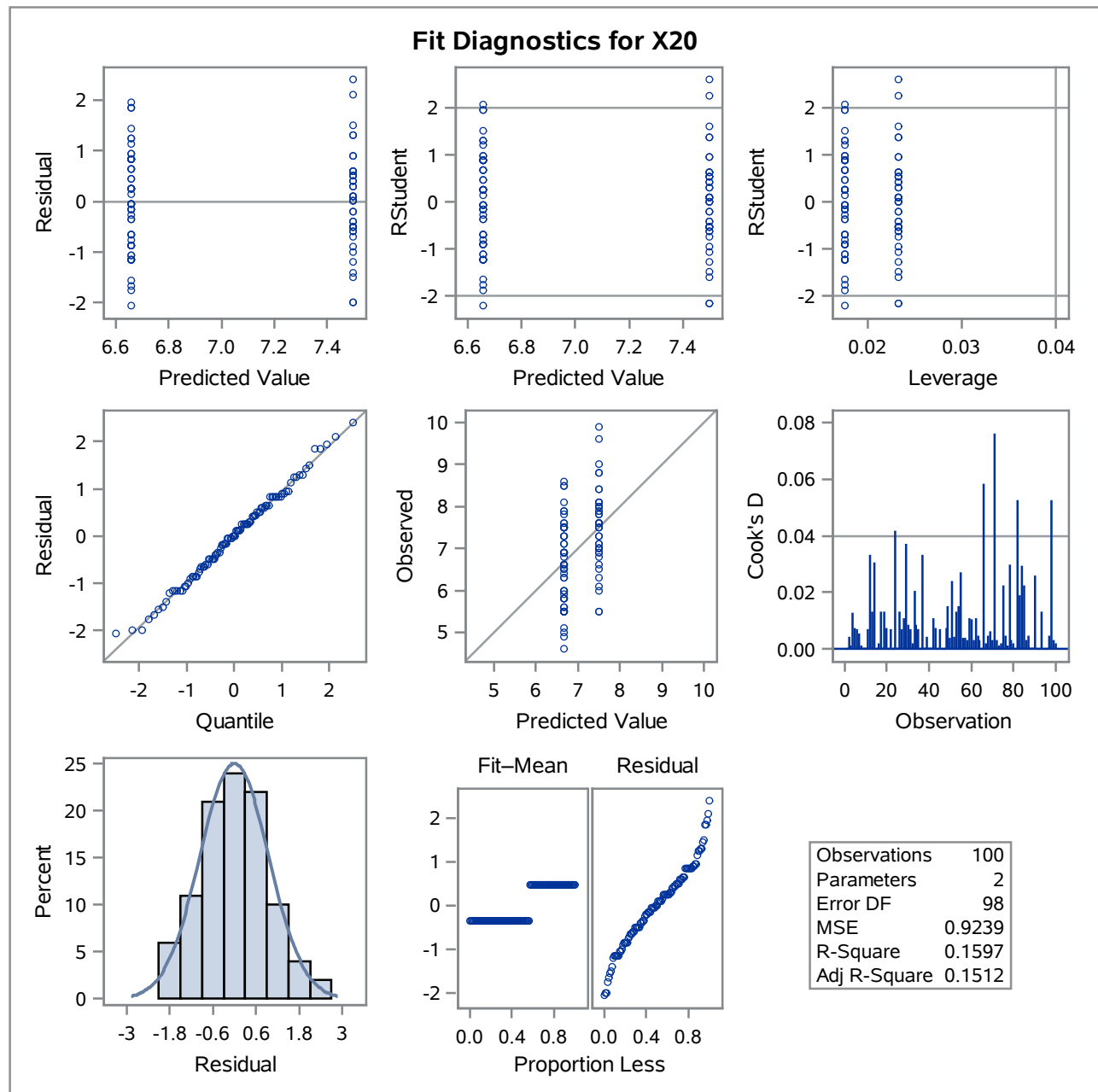
Number of Observations Read	100
Number of Observations Used	100

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	17.21304	17.21304	18.63	<.0001
Error	98	90.54696	0.92395		
Corrected Total	99	107.76000			

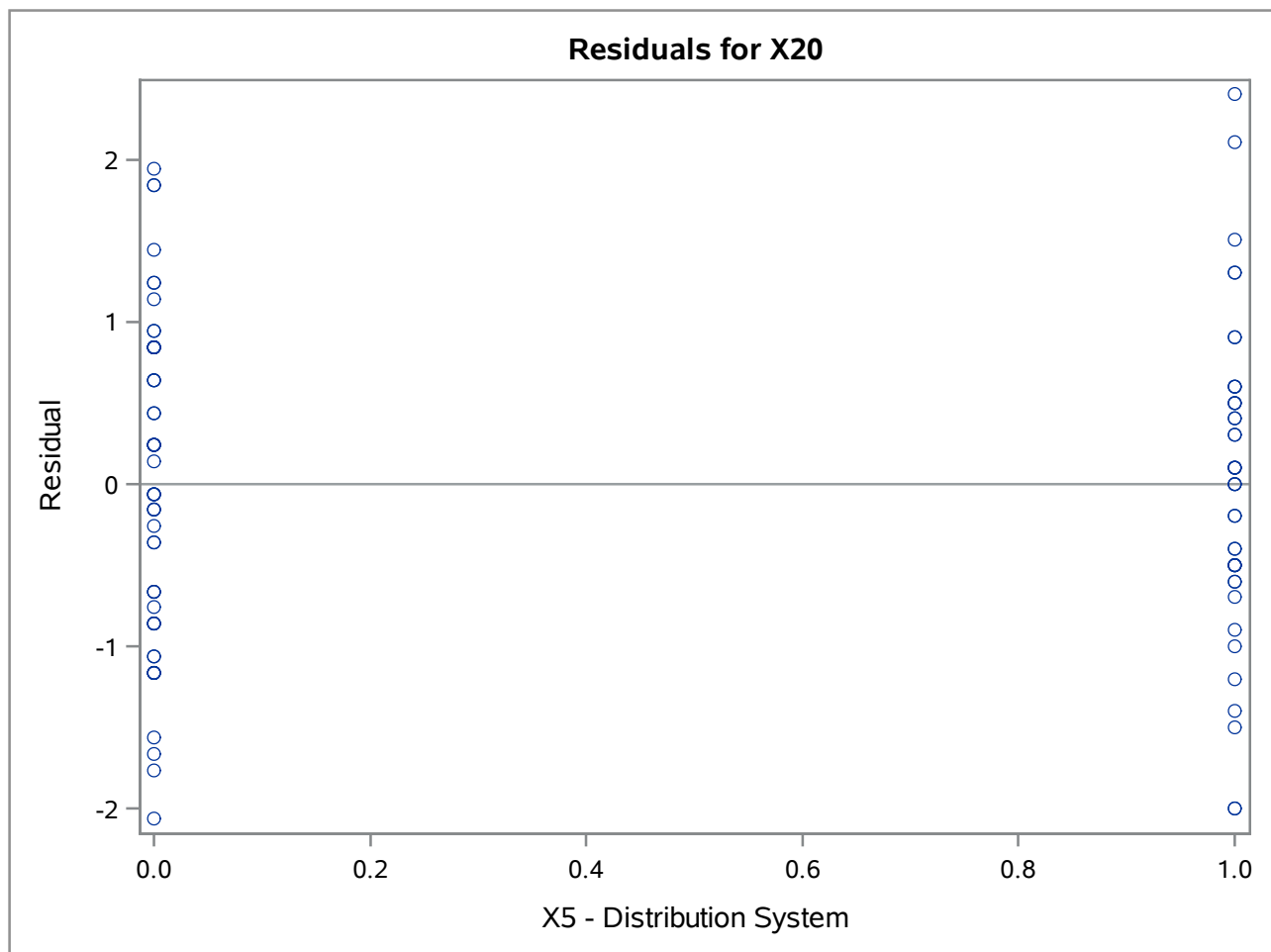
Root MSE	0.96122	R-Square	0.1597
Dependent Mean	7.02000	Adj R-Sq	0.1512
Coeff Var	13.69263		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr >  t
Intercept	Intercept	1	6.65965	0.12732	52.31	<.0001
X5	X5 - Distribution System	1	0.83803	0.19416	4.32	<.0001

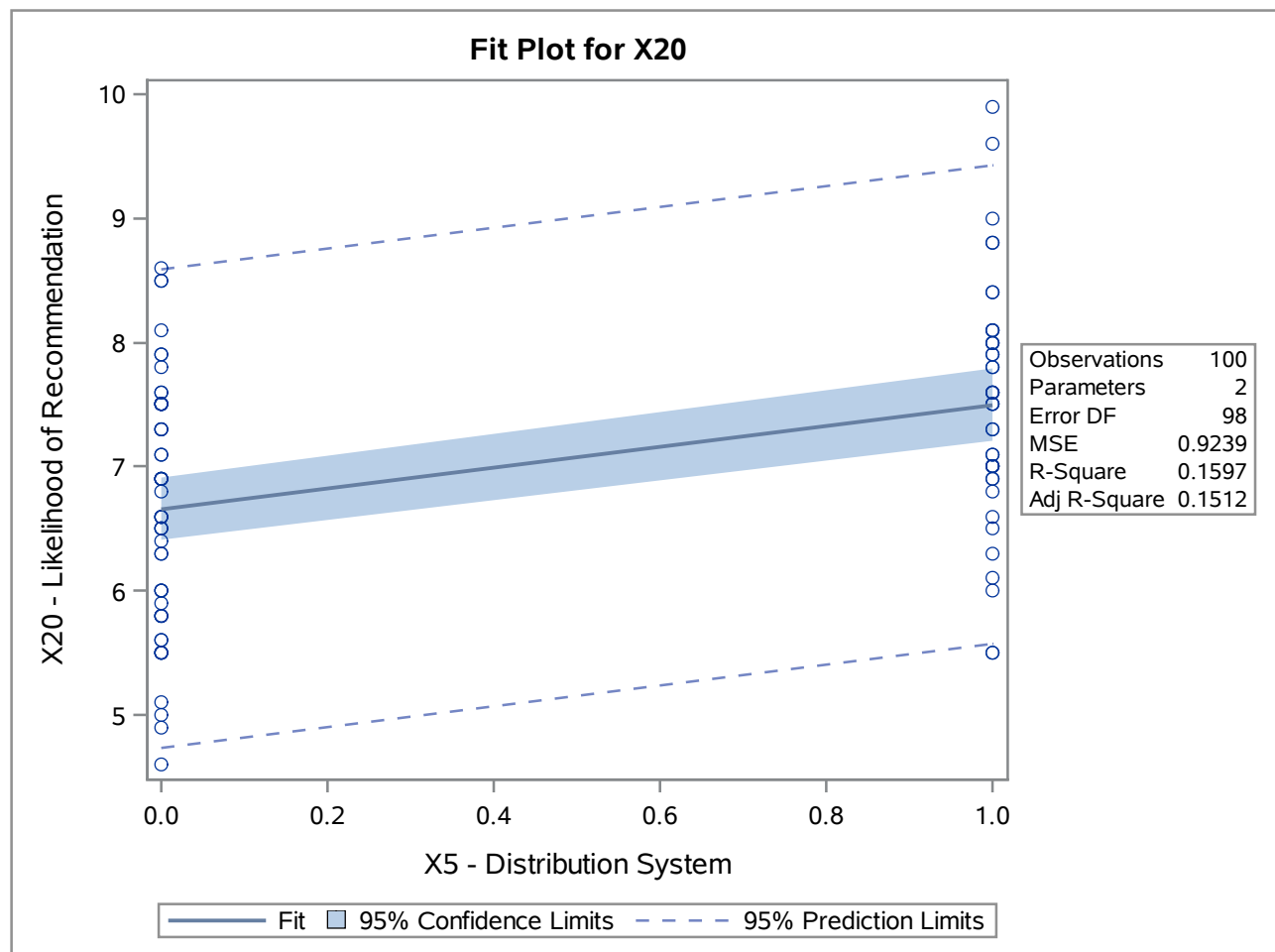
**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: X20 X20 - Likelihood of Recommendation**



The REG Procedure  
Model: MODEL1  
Dependent Variable: X20 X20 - Likelihood of Recommendation



The REG Procedure  
Model: MODEL1  
Dependent Variable: X20 X20 - Likelihood of Recommendation



**The GLM Procedure**

Class Level Information		
Class	Levels	Values
X5	2	0 1

Number of Observations Read	100
Number of Observations Used	100



## The GLM Procedure

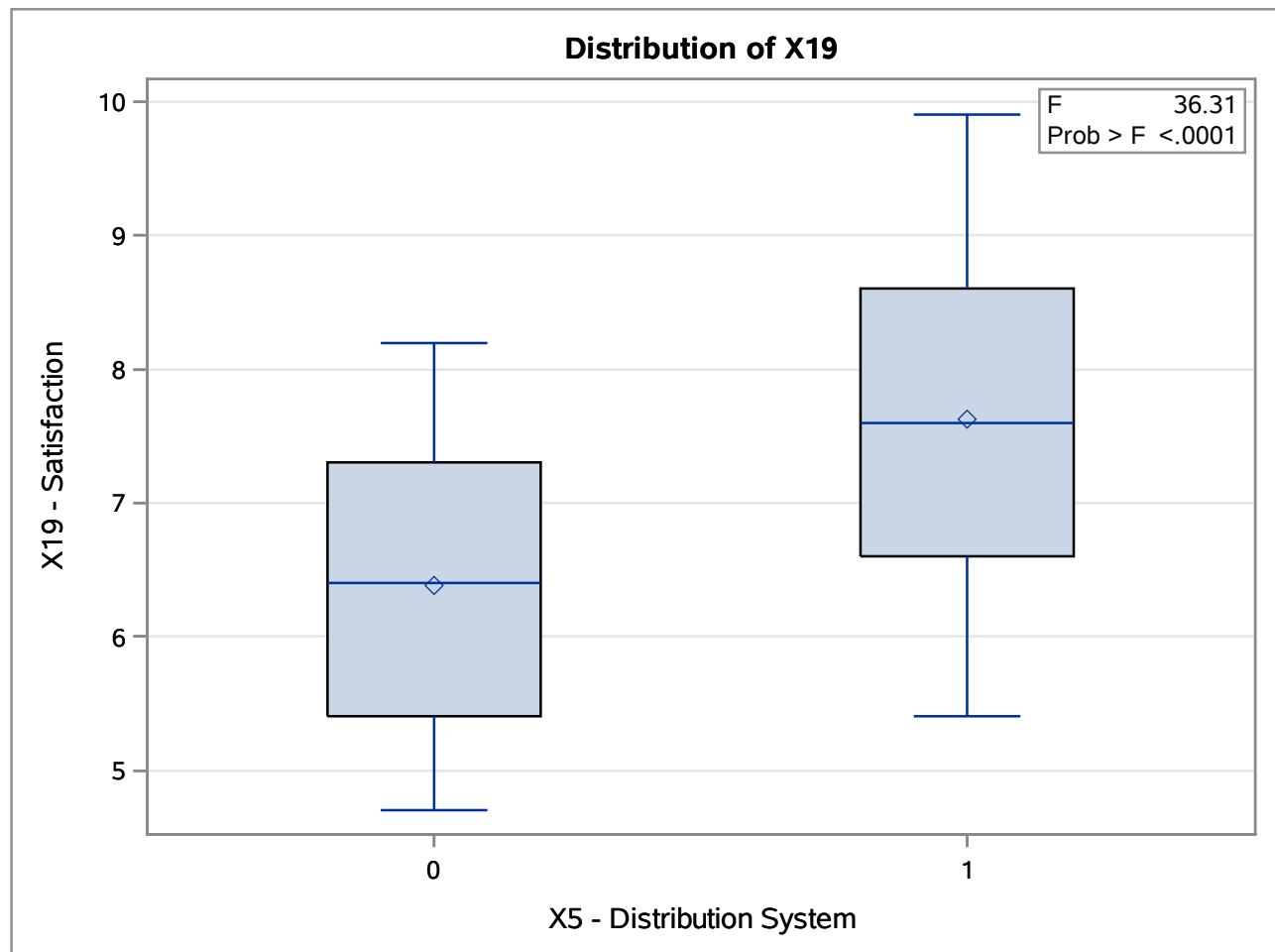
Dependent Variable: X19 X19 - Satisfaction

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	38.0186322	38.0186322	36.31	<.0001
Error	98	102.6089678	1.0470303		
Corrected Total	99	140.6276000			

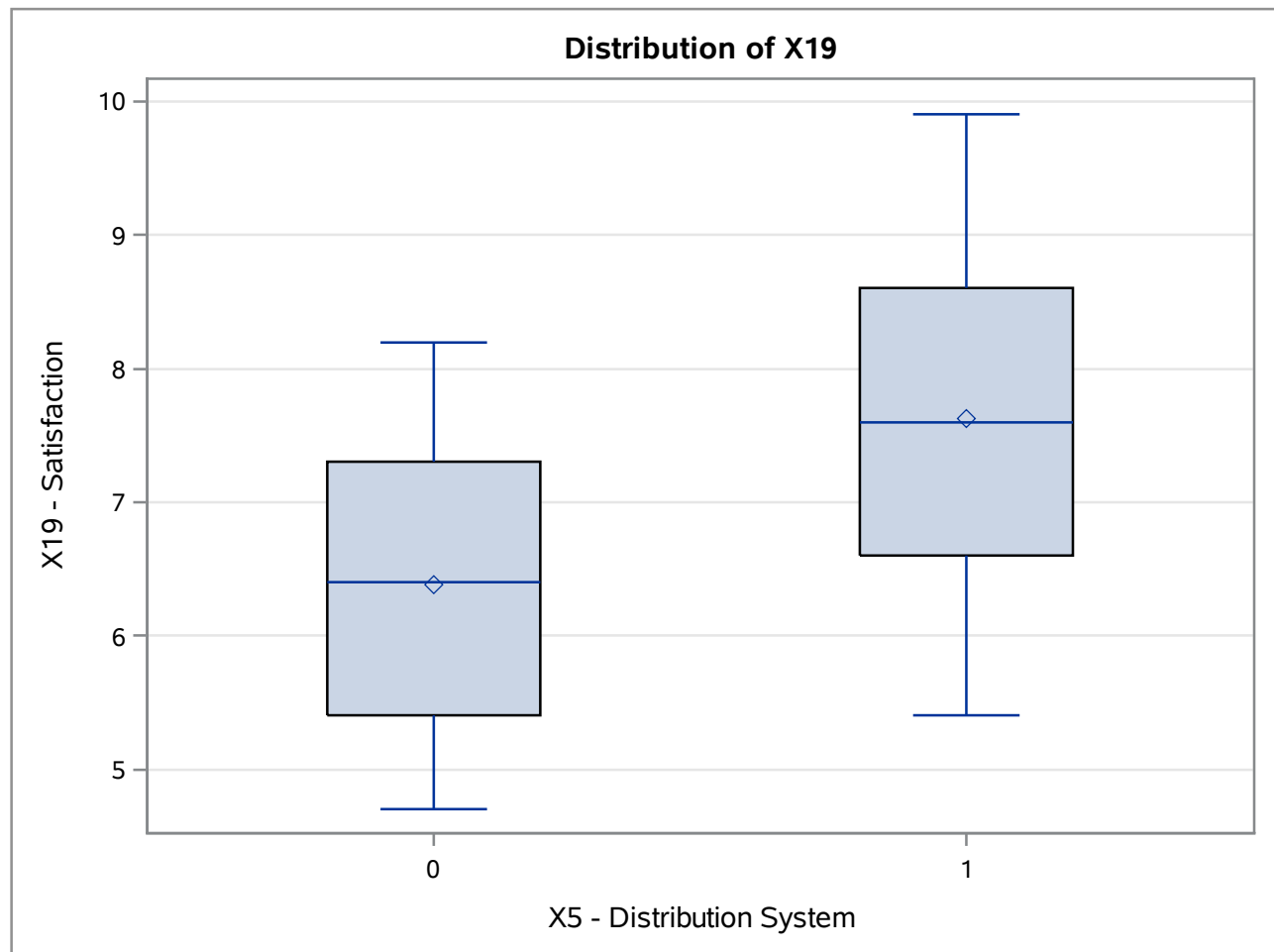
R-Square	Coeff Var	Root MSE	X19 Mean
0.270350	14.79105	1.023245	6.918000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
X5	1	38.01863223	38.01863223	36.31	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
X5	1	38.01863223	38.01863223	36.31	<.0001



## The GLM Procedure



Level of X5	N	X19	
		Mean	Std Dev
0	57	6.38245614	0.98545182
1	43	7.62790698	1.07156441

**The GLM Procedure**

Class Level Information		
Class	Levels	Values
X5	2	0 1

Number of Observations Read	100
Number of Observations Used	100

## The GLM Procedure

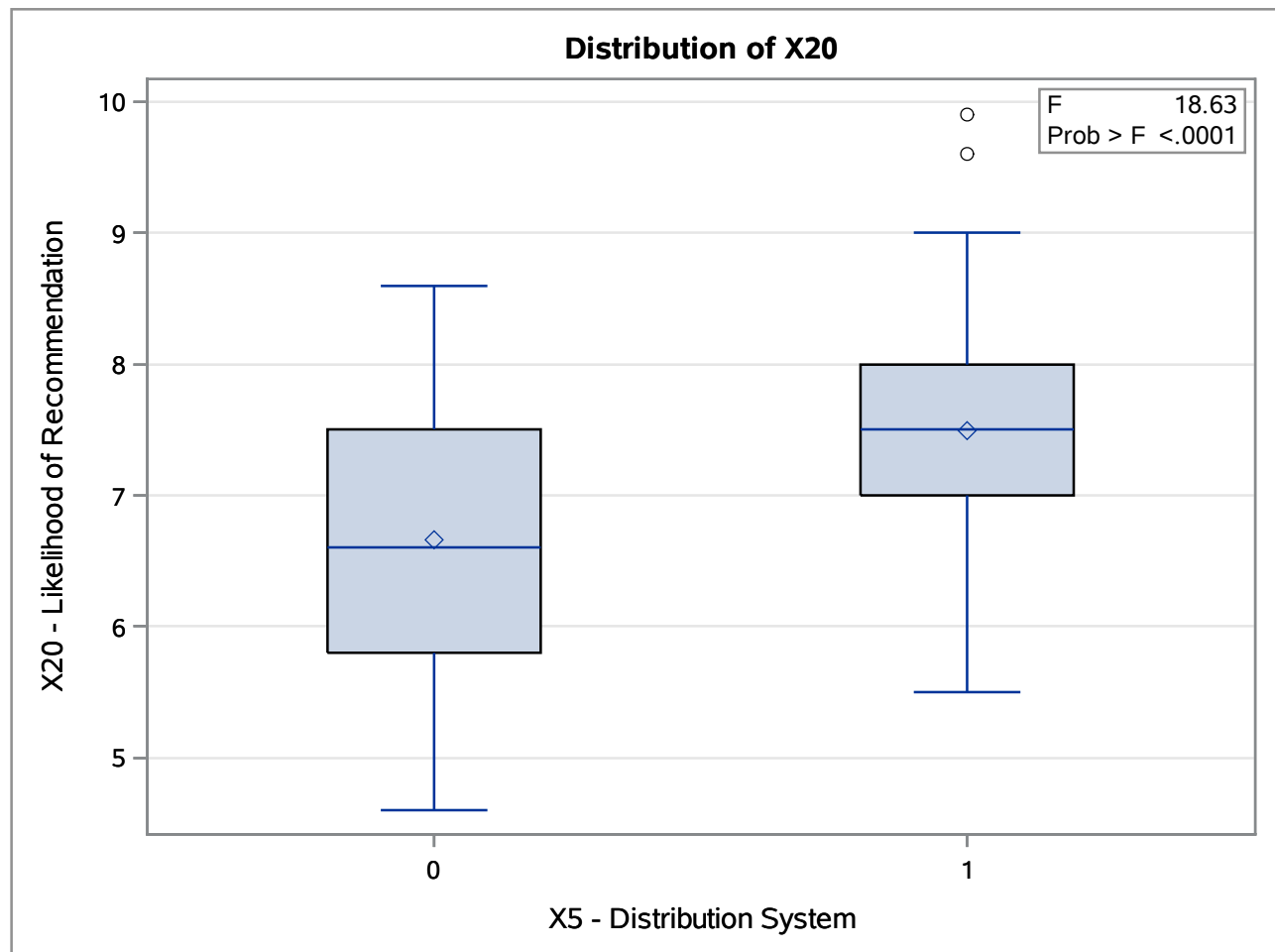
Dependent Variable: X20 X20 - Likelihood of Recommendation

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	17.2130396	17.2130396	18.63	<.0001
Error	98	90.5469604	0.9239486		
Corrected Total	99	107.7600000			

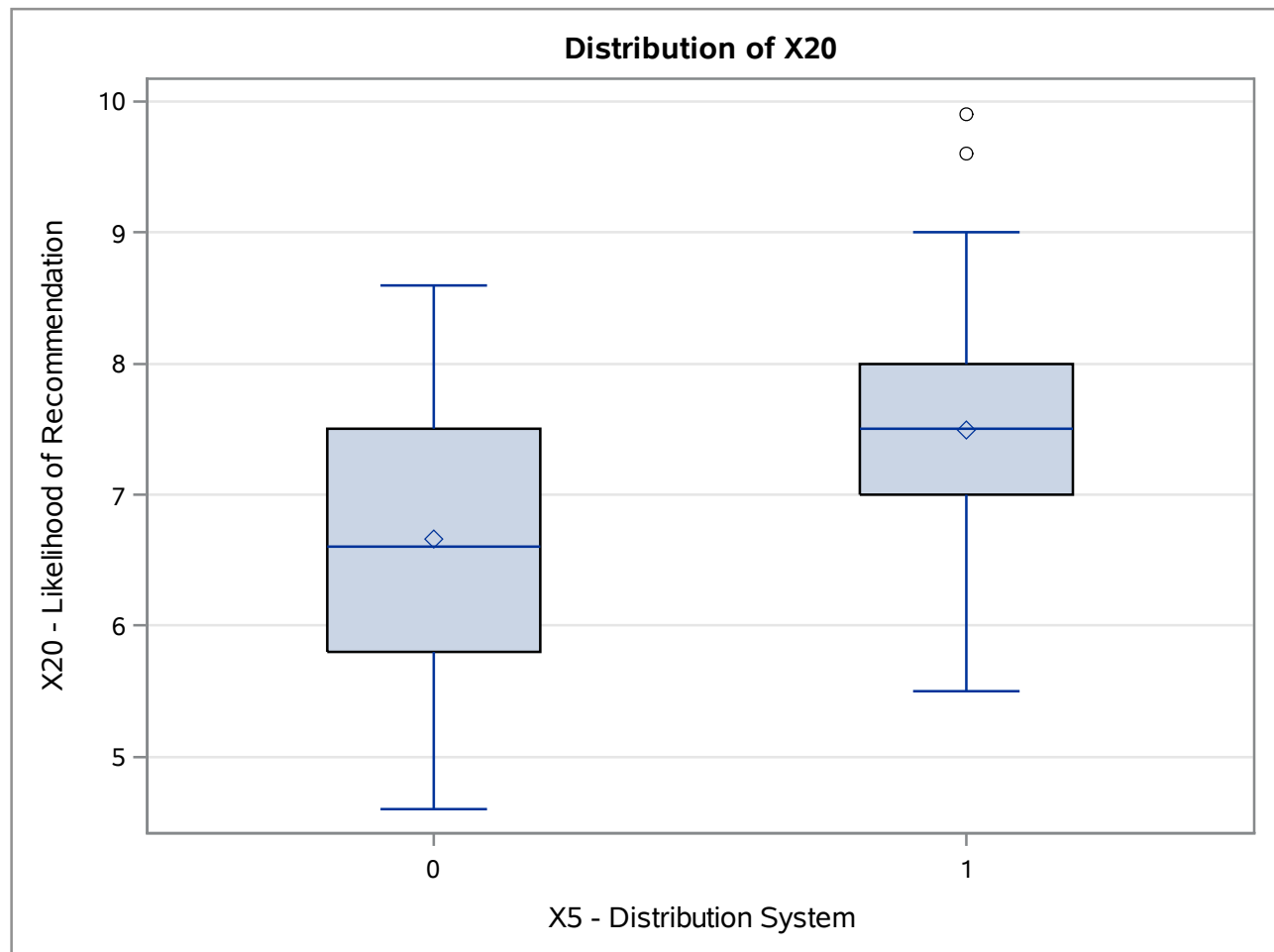
R-Square	Coeff Var	Root MSE	X20 Mean
0.159735	13.69263	0.961222	7.020000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
X5	1	17.21303958	17.21303958	18.63	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
X5	1	17.21303958	17.21303958	18.63	<.0001



## The GLM Procedure



Level of X5	N	X20	
		Mean	Std Dev
0	57	6.65964912	0.96766650
1	43	7.49767442	0.95256255