BASIC DESCRIPTIVE STATISTICS AND GRAPHICS -- X6

Explore

C:\HBAT.SAV

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
X6 - Product Quality	100	100.0%	0	0.0%	100	100.0%

Descriptives

			Statistic	Std. Error
X6 - Product Quality	Mean		7.810	.1396
	95% Confidence Interval for Mean	Lower Bound	7.533	
		Upper Bound	8.087	
	5% Trimmed Mean		7.833	
	Median		8.000	
	Variance		1.950	
	Std. Deviation		1.3963	
	Minimum		5.0	
	Maximum		10.0	
	Range		5.0	
	Interquartile Range		2.6	
	Skewness		-.245	.241
	Kurtosis		-1.132	.478

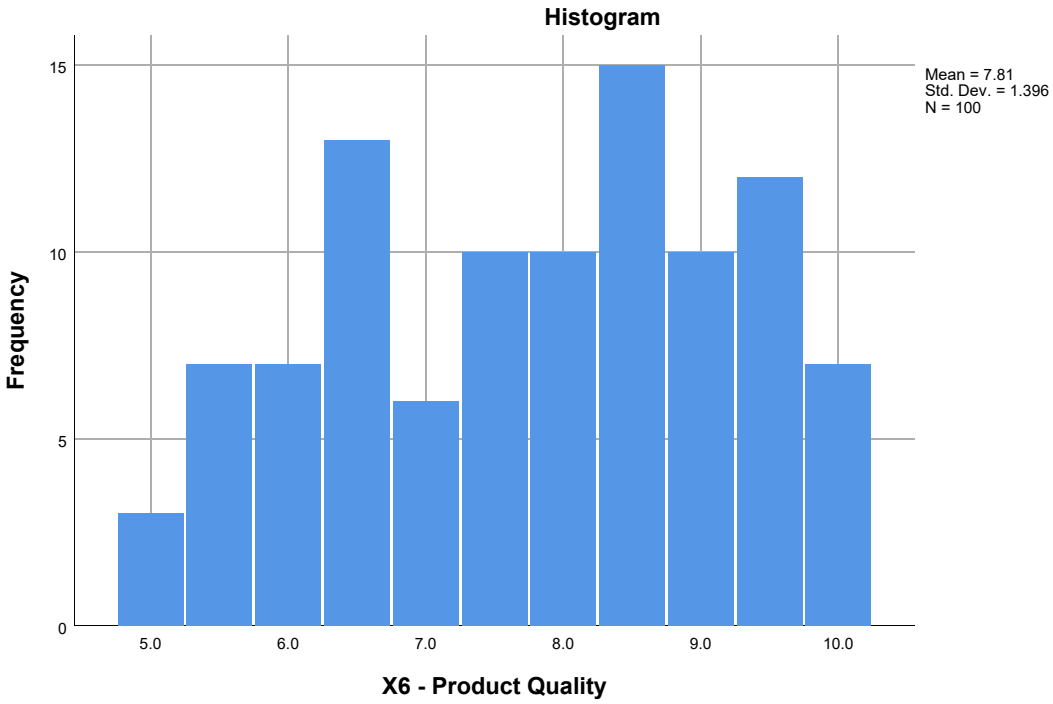
Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
X6 - Product Quality	.109	100	.005	.950	100	.001

a. Lilliefors Significance Correction

X6 - Product Quality

BASIC DESCRIPTIVE STATISTICS AND GRAPHICS -- X6

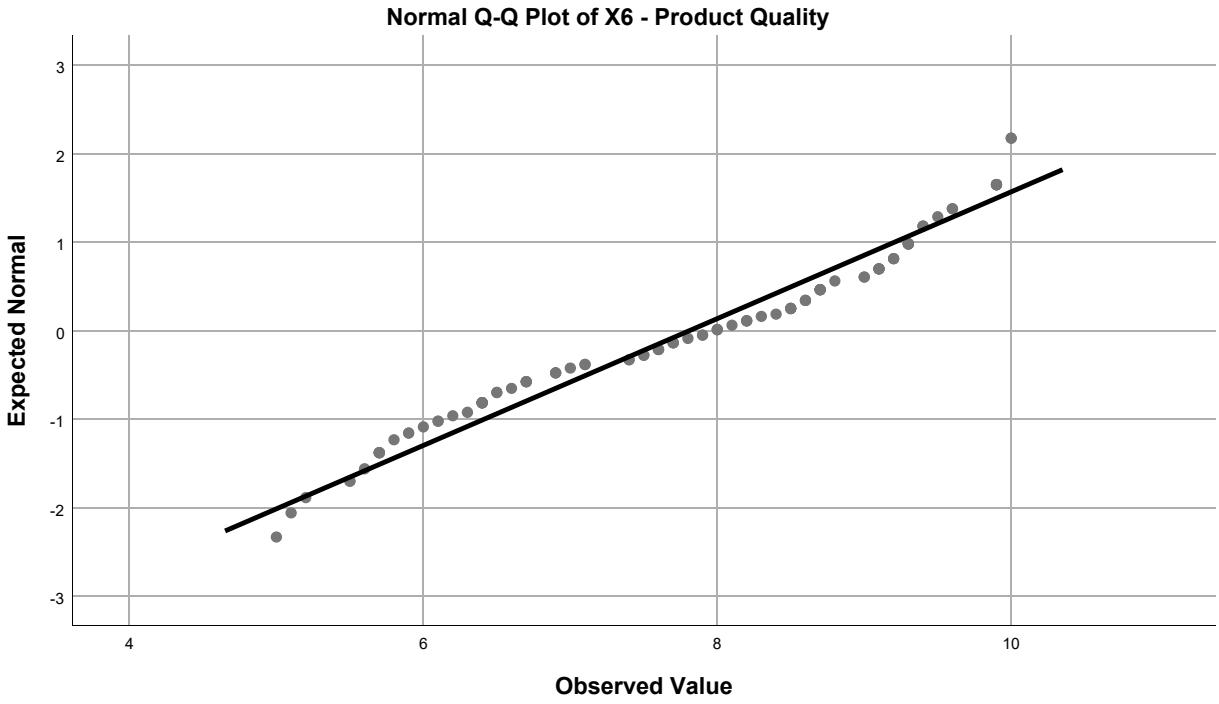


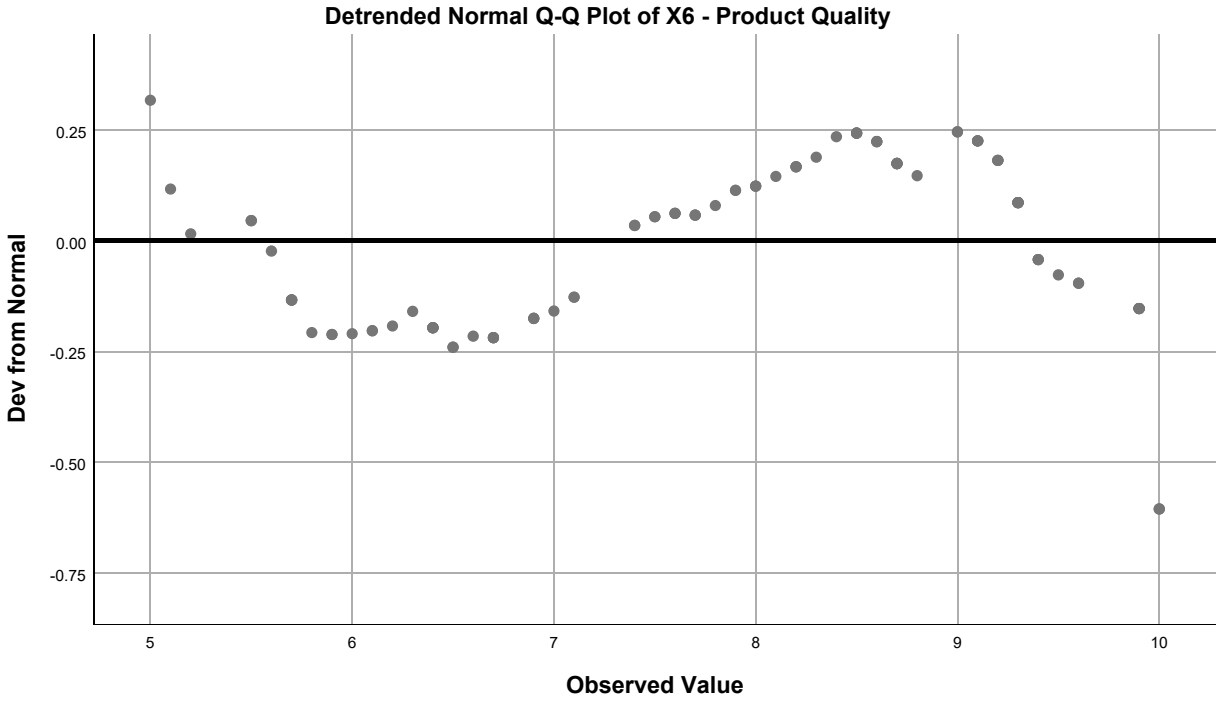
X6 - Product Quality Stem-and-Leaf Plot

Frequency	Stem &	Leaf
3.00	5 .	012
10.00	5 .	5567777899
10.00	6 .	0112344444
10.00	6 .	5567777999
5.00	7 .	01144
11.00	7 .	55666777899
9.00	8 .	000122234
14.00	8 .	55556667777778
18.00	9 .	001111222333333444
8.00	9 .	56699999
2.00	10 .	00

Stem width: 1.0
Each leaf: 1 case(s)

BASIC DESCRIPTIVE STATISTICS AND GRAPHICS -- X6





BASIC DESCRIPTIVE STATISTICS AND GRAPHICS -- X6 BY X1

Explore

X1 - Customer Type

Case Processing Summary

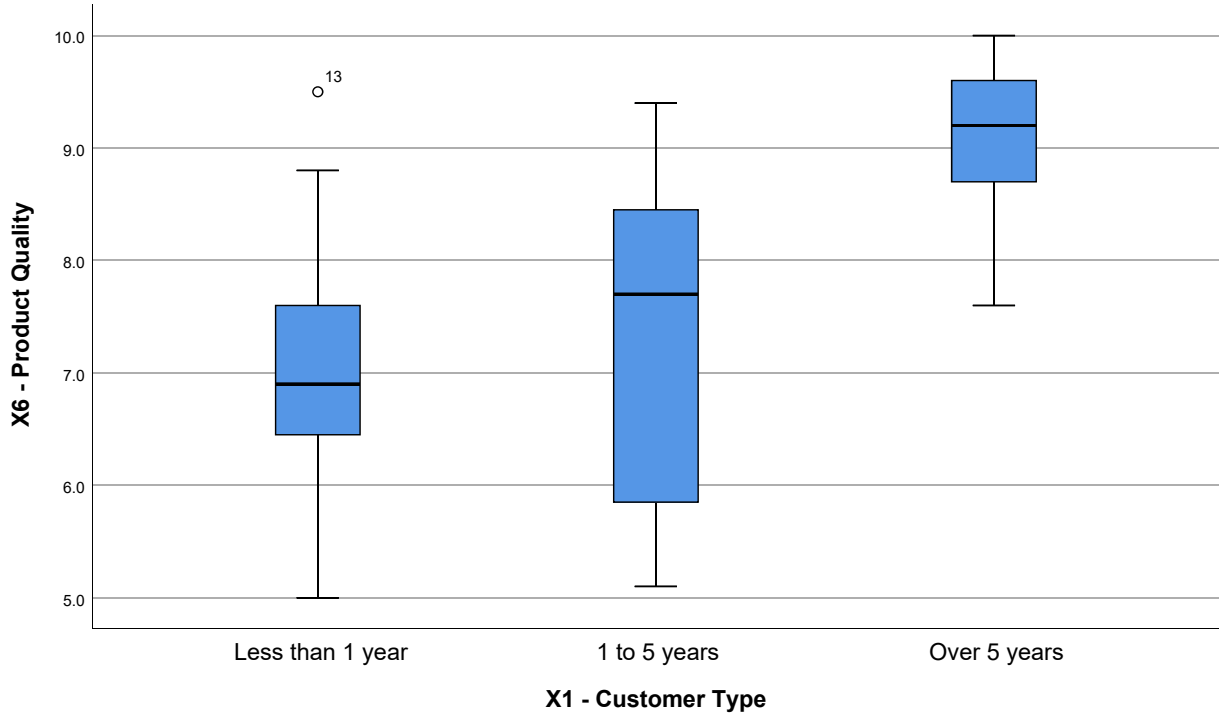
		Cases				
		Valid		Missing		Total
	X1 - Customer Type	N	Percent	N	Percent	N
X6 - Product Quality	Less than 1 year	32	100.0%	0	0.0%	32
	1 to 5 years	35	100.0%	0	0.0%	35
	Over 5 years	33	100.0%	0	0.0%	33

Case Processing Summary

		Cases
		Total
	X1 - Customer Type	Percent
X6 - Product Quality	Less than 1 year	100.0%
	1 to 5 years	100.0%
	Over 5 years	100.0%

X6 - Product Quality

BASIC DESCRIPTIVE STATISTICS AND GRAPHICS -- X6 BY X1



Explore

X1 - Customer Type

Case Processing Summary

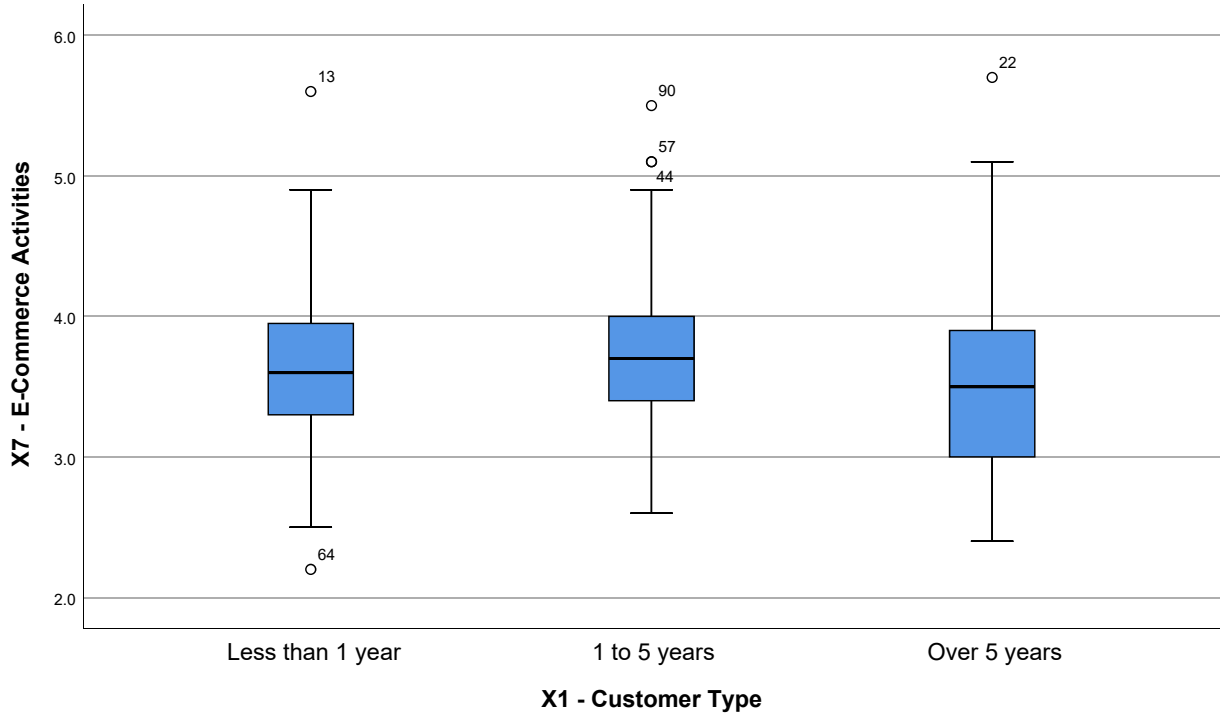
		Cases			
		Valid		Missing	
	X1 - Customer Type	N	Percent	N	Percent
X7 - E-Commerce Activities	Less than 1 year	32	100.0%	0	0.0%
	1 to 5 years	35	100.0%	0	0.0%
	Over 5 years	33	100.0%	0	0.0%

Case Processing Summary

		Cases	
		Total	
	X1 - Customer Type	N	Percent
X7 - E-Commerce Activities	Less than 1 year	32	100.0%
	1 to 5 years	35	100.0%
	Over 5 years	33	100.0%

BASIC DESCRIPTIVE STATISTICS AND GRAPHICS -- X6 BY X1

X7 - E-Commerce Activities



Oneway

ANOVA

		Sum of Squares	df	Mean Square	F
X6 - Product Quality	Between Groups	83.078	2	41.539	36.652
	Within Groups	109.932	97	1.133	
	Total	193.010	99		
X7 - E-Commerce Activities	Between Groups	.864	2	.432	.878
	Within Groups	47.718	97	.492	
	Total	48.582	99		

BASIC DESCRIPTIVE STATISTICS AND GRAPHICS -- X6 BY X1

ANOVA

		Sig.
X6 - Product Quality	Between Groups	.000
	Within Groups	
	Total	
X7 - E-Commerce Activities	Between Groups	.419
	Within Groups	
	Total	

Post Hoc Tests

Multiple Comparisons

Scheffe

Dependent Variable	(I) X1 - Customer Type	(J) X1 - Customer Type	Mean Difference (I-J)	Std. Error
X6 - Product Quality	Less than 1 year	1 to 5 years	-.1431	.2604
		Over 5 years	-2.0092*	.2641
	1 to 5 years	Less than 1 year	.1431	.2604
		Over 5 years	-1.8661*	.2583
	Over 5 years	Less than 1 year	2.0092*	.2641
		1 to 5 years	1.8661*	.2583
X7 - E-Commerce Activities	Less than 1 year	1 to 5 years	-.1050	.1715
		Over 5 years	.1205	.1740
	1 to 5 years	Less than 1 year	.1050	.1715
		Over 5 years	.2255	.1702
	Over 5 years	Less than 1 year	-.1205	.1740
		1 to 5 years	-.2255	.1702

BASIC DESCRIPTIVE STATISTICS AND GRAPHICS -- X6 BY X1

Multiple Comparisons

Scheffe

Dependent Variable	(I) X1 - Customer Type	(J) X1 - Customer Type	Sig.	95% ... Lower Bound
X6 - Product Quality	Less than 1 year	1 to 5 years	.860	-.790
		Over 5 years	.000	-2.666
	1 to 5 years	Less than 1 year	.860	-.504
		Over 5 years	.000	-2.508
	Over 5 years	Less than 1 year	.000	1.353
		1 to 5 years	.000	1.224
X7 - E-Commerce Activities	Less than 1 year	1 to 5 years	.829	-.531
		Over 5 years	.787	-.312
	1 to 5 years	Less than 1 year	.829	-.321
		Over 5 years	.419	-.198
	Over 5 years	Less than 1 year	.787	-.553
		1 to 5 years	.419	-.649

Multiple Comparisons

Scheffe

Dependent Variable	(I) X1 - Customer Type	(J) X1 - Customer Type	95% Confidence . Upper Bound
X6 - Product Quality	Less than 1 year	1 to 5 years	.504
		Over 5 years	-1.353
	1 to 5 years	Less than 1 year	.790
		Over 5 years	-1.224
	Over 5 years	Less than 1 year	2.666
		1 to 5 years	2.508
X7 - E-Commerce Activities	Less than 1 year	1 to 5 years	.321
		Over 5 years	.553
	1 to 5 years	Less than 1 year	.531
		Over 5 years	.649
	Over 5 years	Less than 1 year	.312
		1 to 5 years	.198

*. The mean difference is significant at the .05 level.

BASIC DESCRIPTIVE STATISTICS AND GRAPHICS -- X6 BY X1

Homogeneous Subsets

X6 - Product Quality

Scheffe[a,b]

X1 - Customer Type	N	Subset for alpha = .05	
		1	2
Less than 1 year	32	7.097	
1 to 5 years	35	7.240	
Over 5 years	33		9.106
Sig.		.861	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 33.287.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

X7 - E-Commerce Activities

Scheffe[a,b]

X1 - Customer Type	N	Subset for alpha = .05
		1
Over 5 years	33	3.555
Less than 1 year	32	3.675
1 to 5 years	35	3.780
Sig.		.426

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 33.287.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Frequencies

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Statistics

NMISS

N	Valid	70
	Missing	0

NMISS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	26	37.1	37.1	37.1
	1.00	15	21.4	21.4	58.6
	2.00	19	27.1	27.1	85.7
	3.00	4	5.7	5.7	91.4
	7.00	6	8.6	8.6	100.0
	Total	70	100.0	100.0	

MVA

Warnings

Since more than half of the cases are missing, error terms are chosen randomly from a Normal distribution instead of from the observed residuals of complete cases.

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Univariate Statistics

	N	Mean	Std. Deviation	Missing Count	Missing Percent	No. of Extremes[a] Low	No. of Extremes[a] High
v1	49	4.008	.9318	21	30.0	0	0
v2	57	1.944	.8751	13	18.6	0	0
v3	53	8.062	1.4072	17	24.3	0	0
v4	63	5.168	1.1714	7	10.0	0	0
v5	61	2.856	.7760	9	12.9	0	0
v6	64	2.611	.7174	6	8.6	0	0
v7	61	6.823	1.6809	9	12.9	1	0
v8	61	46.033	9.3559	9	12.9	0	0
v9	63	4.759	.8319	7	10.0	0	0
v10	68			2	2.9		
v11	68			2	2.9		
v12	68			2	2.9		
v13	69			1	1.4		
v14	68			2	2.9		

a. Number of cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

Summary of Estimated Means

	v1	v2	v3	v4	v5	v6	v7
Listwise	4.019	1.950	8.354	5.269	2.981	2.600	6.754
All Values	4.008	1.944	8.062	5.168	2.856	2.611	6.823
EM	3.686	2.104	8.019	5.178	2.848	2.630	6.932
Regression	3.939	2.028	8.024	5.130	2.853	2.579	6.867

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Summary of Estimated Means

	v8	v9
Listwise	48.308	4.896
All Values	46.033	4.759
EM	45.791	4.737
Regression	45.806	4.768

Summary of Estimated Standard Deviations

	v1	v2	v3	v4	v5	v6	v7
Listwise	.9583	.8860	1.1697	1.1030	.4875	.7440	1.3848
All Values	.9318	.8751	1.4072	1.1714	.7760	.7174	1.6809
EM	1.1288	1.0490	1.3593	1.1459	.7757	.7129	1.6968
Regression	.9055	.8508	1.2705	1.1337	.7621	.7428	1.6686

Summary of Estimated Standard Deviations

	v8	v9
Listwise	8.0487	.8022
All Values	9.3559	.8319
EM	9.3689	.8185
Regression	9.4909	.8190

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Separate Variance t Tests[a]

		v1	v2	v3	v4	v5	v6	v7
v1	t	.	-.3	1.6	2.4	2.9	1.7	-1.0
	df	.	38.2	17.5	45.0	24.1	41.1	25.9
	P(2-tail)	.	.757	.126	.019	.008	.101	.316
	# Present	49	39	40	44	43	44	43
	# Missing	0	18	13	19	18	20	18
	Mean(Present)	4.008	1.921	8.255	5.373	3.056	2.707	6.665
	Mean(Missing)	.	1.994	7.469	4.695	2.378	2.400	7.200
v2	t	-.4	.	-.1	-2.7	-4.5	-2.3	-1.5
	df	11.9	.	12.0	16.4	18.1	11.9	12.9
	P(2-tail)	.700	.	.950	.015	.000	.038	.155
	# Present	39	57	44	51	50	54	51
	# Missing	10	0	9	12	11	10	10
	Mean(Present)	3.977	1.944	8.057	4.982	2.694	2.519	6.682
	Mean(Missing)	4.130	.	8.089	5.958	3.591	3.110	7.540
v3	t	.3	1.6	.	.8	1.2	.0	-.2
	df	16.1	21.4	.	22.7	15.3	25.9	18.3
	P(2-tail)	.748	.132	.	.434	.250	.978	.841
	# Present	40	44	53	48	48	49	47
	# Missing	9	13	0	15	13	15	14
	Mean(Present)	4.025	2.036	8.062	5.235	2.931	2.612	6.796
	Mean(Missing)	3.933	1.631	.	4.953	2.577	2.607	6.914
v4	t	.1	.0	.7	.	.7	1.4	1.5
	df	9.3	5.8	4.4	.	5.8	3.8	5.7
	P(2-tail)	.902	.988	.542	.	.484	.239	.177
	# Present	44	51	48	63	56	60	57
	# Missing	5	6	5	0	5	4	4
	Mean(Present)	4.011	1.943	8.121	5.168	2.871	2.635	6.867
	Mean(Missing)	3.980	1.950	7.500	.	2.680	2.250	6.200
	t	-.2	-1.0	.7	.2	.	-1.2	-.8
	df	7.4	8.3	4.3	12.6	.	6.5	5.9
	P(2-tail)	.810	.344	.518	.838	.	.260	.447

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Separate Variance t Tests[a]

		v8	v9
v1	t	2.6	2.6
	df	24.4	27.2
	P(2-tail)	.016	.015
	# Present	43	44
	# Missing	18	19
	Mean(Present)	48.209	4.948
	Mean(Missing)	40.833	4.321
v2	t	-1.2	-1.5
	df	11.4	23.1
	P(2-tail)	.255	.147
	# Present	52	52
	# Missing	9	11
	Mean(Present)	45.462	4.706
	Mean(Missing)	49.333	5.009
v3	t	1.7	1.1
	df	31.9	19.3
	P(2-tail)	.100	.269
	# Present	46	50
	# Missing	15	13
	Mean(Present)	47.022	4.818
	Mean(Missing)	43.000	4.531
v4	t	.3	-.8
	df	4.1	6.2
	P(2-tail)	.814	.465
	# Present	57	57
	# Missing	4	6
	Mean(Present)	46.088	4.733
	Mean(Missing)	45.250	5.000
	t	.3	.9
	df	5.8	7.1
	P(2-tail)	.763	.378

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Separate Variance t Tests[a]

		v1	v2	v3	v4	v5	v6	v7
v5	# Present	43	50	48	56	61	58	55
	# Missing	6	7	5	7	0	6	6
	Mean(Present)	3.998	1.904	8.129	5.175	2.856	2.579	6.758
	Mean(Missing)	4.083	2.229	7.420	5.114	.	2.917	7.417
v6	t	.4	-.6	.6	.2	.1	.	-.2
	df	11.5	2.1	3.2	2.1	2.0	.	1.0
	P(2-tail)	.672	.629	.568	.883	.926	.	.848
	# Present	44	54	49	60	58	64	59
	# Missing	5	3	4	3	3	0	2
	Mean(Present)	4.018	1.919	8.118	5.177	2.860	2.611	6.810
	Mean(Missing)	3.920	2.400	7.375	5.000	2.767	.	7.200
v7	t	2.5	-.5	.8	-1.9	.1	-2.1	.
	df	14.9	5.9	5.6	6.5	5.7	7.5	.
	P(2-tail)	.024	.613	.437	.097	.921	.076	.
	# Present	43	51	47	57	55	59	61
	# Missing	6	6	6	6	6	5	0
	Mean(Present)	4.077	1.920	8.138	5.088	2.860	2.581	6.823
	Mean(Missing)	3.517	2.150	7.467	5.933	2.817	2.960	.
v8	t	2.9	-2.6	2.1	-1.2	-1.0	-2.3	1.8
	df	14.4	4.8	6.9	7.5	6.0	6.3	9.0
	P(2-tail)	.011	.049	.073	.271	.371	.056	.107
	# Present	43	52	46	57	55	59	58
	# Missing	6	5	7	6	6	5	3
	Mean(Present)	4.088	1.854	8.261	5.126	2.822	2.573	6.850
	Mean(Missing)	3.433	2.880	6.757	5.567	3.167	3.060	6.300
	t	.7	-.2	.0	1.0	.6	1.3	.0
	df	8.9	4.4	2.1	5.8	4.3	2.3	5.1

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Separate Variance t Tests[a]

		v8	v9
v5	# Present	55	56
	# Missing	6	7
	Mean(Present)	46.182	4.798
	Mean(Missing)	44.667	4.443
v6	t	.3	.8
	df	1.1	1.1
	P(2-tail)	.822	.566
	# Present	59	61
	# Missing	2	2
	Mean(Present)	46.085	4.775
	Mean(Missing)	44.500	4.250
v7	t	.5	1.5
	df	2.1	8.4
	P(2-tail)	.652	.179
	# Present	58	56
	# Missing	3	7
	Mean(Present)	46.207	4.805
	Mean(Missing)	42.667	4.386
v8	t	.	2.2
	df	.	9.2
	P(2-tail)	.	.052
	# Present	61	56
	# Missing	0	7
	Mean(Present)	46.033	4.821
	Mean(Missing)	.	4.257
	t	1.5	.
	df	5.7	.

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Separate Variance t Tests[a]

		v1	v2	v3	v4	v5	v6	v7
v9	P(2-tail)	.531	.880	.975	.351	.582	.294	.972
	# Present	44	52	50	57	56	61	56
	# Missing	5	5	3	6	5	3	5
	Mean(Present)	4.025	1.937	8.060	5.223	2.882	2.633	6.825
	Mean(Missing)	3.860	2.020	8.100	4.650	2.560	2.167	6.800

Separate Variance t Tests[a]

		v8	v9
v9	P(2-tail)	.182	.
	# Present	56	63
	# Missing	5	0
	Mean(Present)	46.429	4.759
	Mean(Missing)	41.600	.

For each quantitative variable, pairs of groups are formed by indicator variables (present, missing).

a. Indicator variables with less than 5% missing are not displayed.

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Data Patterns (all cases)

Case	# Missing	% Missing	Missing and Extreme Value Patterns					
			v1	v2	v3	v4	v5	v6
201	0	.0						
202	2	14.3	S		S			
203	2	14.3		S				
204	3	21.4	S		S			
205	1	7.1			S			
206	0	.0						
207	3	21.4	S		S			
208	0	.0						
209	0	.0						
210	7	50.0				S	S	S
211	0	.0						
212	0	.0						
213	2	14.3		S	S			
214	7	50.0	S			S		S
215	0	.0						
216	2	14.3	S				S	
217	0	.0						
218	2	14.3	S				S	
219	2	14.3						
220	1	7.1		S				
221	3	21.4	S		S			
222	2	14.3			S		S	
223	0	.0						
224	3	21.4	S	S				
225	2	14.3			S	S		
226	0	.0						
227	2	14.3		S				
228	2	14.3	S			S		

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Data Patterns (all cases)

Missing and Extreme Value Patterns

Case	v7	v8	v9	v10	v11	v12	v13	v14
201								
202								
203	S							
204			S					
205								
206								
207			S					
208								
209								
210	S	S	S	S				
211								
212								
213								
214	S	S			S		S	
215								
216								
217								
218								
219	S	S						
220								
221	S							
222								
223								
224		S						
225								
226								
227		S						
228								

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Data Patterns (all cases)

	Variable Values							
Case	v1	v2	v3	v4	v5	v6	v7	v8
201	3.3	.9	8.6	4.0	2.1	1.8	6.3	41.0
202	.	.4	.	2.5	1.2	1.7	5.2	35.0
203	3.0	.	9.1	7.1	3.5	3.4	.	55.0
204	.	1.5	.	4.8	1.9	2.5	7.2	36.0
205	5.1	1.4	.	4.8	3.3	2.6	3.8	49.0
206	4.6	2.1	7.9	5.8	3.4	2.8	4.7	49.0
207	.	1.5	.	4.8	1.9	2.5	7.2	36.0
208	5.2	1.3	9.7	6.1	3.2	3.9	6.7	54.0
209	3.5	2.8	9.9	3.5	3.1	1.7	5.4	49.0
210	4.1	3.7	5.9	.	.	.	.	.
211	3.0	2.8	7.8	7.1	3.0	3.8	7.9	49.0
212	4.8	1.7	7.6	4.2	3.3	1.4	5.8	39.0
213	3.1	.	.	7.8	3.6	4.0	5.9	43.0
214	.	2.7	5.0	.	2.2	.	.	.
215	4.0	.5	6.7	4.5	2.2	2.1	5.0	31.0
216	.	1.6	6.4	5.0	.	2.1	8.4	25.0
217	6.1	.5	9.2	4.8	3.3	2.8	7.1	60.0
218	.	2.8	5.2	5.0	.	2.7	8.4	38.0
219	3.1	2.2	6.7	6.8	2.6	2.9	.	.
220	6.5	.	9.0	7.0	3.2	3.7	8.0	33.0
221	.	1.6	.	4.8	2.0	2.8	.	32.0
222	3.9	2.2	.	4.6	.	2.5	8.3	47.0
223	2.8	1.4	8.1	3.8	2.1	1.4	6.6	39.0
224	.	.	8.6	5.7	2.7	3.7	6.7	.
225	4.7	1.3	.	.	3.0	2.6	6.8	54.0
226	3.4	2.0	9.7	4.7	2.7	1.7	4.8	49.0
227	3.2	.	5.7	5.1	3.6	2.9	6.2	.
228	.	1.8	7.7	.	3.4	1.5	5.9	40.0

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Data Patterns (all cases)

Case	Variable Values v9
201	4.5
202	3.3
203	5.2
204	.
205	4.9
206	5.9
207	.
208	5.8
209	5.4
210	.
211	4.4
212	5.5
213	5.2
214	3.6
215	4.0
216	3.4
217	5.2
218	3.7
219	4.3
220	5.4
221	4.3
222	5.0
223	4.4
224	5.0
225	5.9
226	4.7
227	4.4
228	5.6

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Data Patterns (all cases)

Case	# Missing	% Missing	Missing and Extreme Value Patterns					
			v1	v2	v3	v4	v5	v6
229	1	7.1					S	
230	0	.0						
231	1	7.1						
232	2	14.3	S	S				
233	7	50.0		S	S		S	S
234	0	.0						
235	2	14.3						S
236	0	.0						
237	1	7.1		S				
238	1	7.1	S					
239	0	.0						
240	1	7.1	S					
241	2	14.3			S		S	
242	0	.0						
243	0	.0						
244	1	7.1						
245	7	50.0	S		S		S	
246	1	7.1				S		
247	0	.0						
248	2	14.3	S	S				
249	1	7.1		S				
250	2	14.3	S		S			
251	0	.0						
252	0	.0						
253	1	7.1	S					
254	0	.0						
255	2	14.3	S		S			
256	1	7.1	S					

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Data Patterns (all cases)

Missing and Extreme Value Patterns

Case	v7	v8	v9	v10	v11	v12	v13	v14
229								
230								
231	S							
232								
233			S			S		S
234								
235			S					
236								
237								
238								
239								
240	-							
241								
242								
243								
244		S						
245	S	S				S		S
246								
247								
248								
249								
250								
251								
252								
253								
254								
255								
256								

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Data Patterns (all cases)

	Variable Values							
Case	v1	v2	v3	v4	v5	v6	v7	v8
229	5.3	1.4	9.7	6.1	.	3.9	6.8	54.0
230	4.7	1.3	9.9	6.7	3.0	2.6	6.8	55.0
231	3.7	.7	8.2	6.0	2.1	2.5	.	41.0
232	.	.	8.2	5.0	3.6	2.5	9.0	53.0
233	4.5	.	.	5.9	.	.	8.8	50.0
234	2.8	2.4	6.7	4.9	2.5	2.6	9.2	32.0
235	3.8	.8	8.7	2.9	1.6	.	5.6	39.0
236	2.9	2.6	7.7	7.0	2.8	3.6	7.7	47.0
237	4.9	.	7.4	6.9	4.6	4.0	9.6	62.0
238	.	2.5	9.6	5.5	4.0	3.0	7.7	65.0
239	4.3	1.8	7.6	5.4	3.1	2.5	4.4	46.0
240	.	1.5	9.9	2.7	1.3	1.2	1.7	50.0
241	3.1	1.9	.	4.5	.	3.1	3.8	54.0
242	5.1	1.9	9.2	5.8	3.6	2.3	4.5	60.0
243	4.1	1.1	9.3	5.5	2.5	2.7	7.4	47.0
244	3.0	3.8	5.5	4.9	3.4	2.6	6.0	.
245	.	2.0	.	4.7	.	3.2	.	.
246	3.7	1.4	9.0	.	2.6	2.3	6.8	45.0
247	4.2	2.5	9.2	6.2	3.3	3.9	7.3	59.0
248	.	.	6.4	5.3	3.0	2.5	7.1	46.0
249	5.3	.	8.5	3.7	3.5	1.9	4.8	58.0
250	.	3.7	.	5.2	3.0	2.3	9.1	49.0
251	3.0	3.2	6.0	5.3	3.1	3.0	8.0	43.0
252	2.8	3.8	8.9	6.9	3.3	3.2	8.2	53.0
253	.	2.0	9.3	5.9	3.7	2.4	4.6	60.0
254	3.4	3.7	6.4	5.7	3.5	3.4	8.4	47.0
255	.	1.0	.	3.4	1.7	1.1	6.2	35.0
256	.	3.3	7.5	4.5	2.5	2.4	7.6	39.0

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Data Patterns (all cases)

Case	Variable Values v9
229	5.9
230	6.0
231	5.0
232	5.2
233	.
234	3.7
235	.
236	4.2
237	6.2
238	6.0
239	5.6
240	5.0
241	4.8
242	6.1
243	5.3
244	4.2
245	3.4
246	4.9
247	6.0
248	4.5
249	4.3
250	4.8
251	3.3
252	5.0
253	6.1
254	3.8
255	4.1
256	3.6

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Data Patterns (all cases)

Case	# Missing	% Missing	Missing and Extreme Value Patterns					
			v1	v2	v3	v4	v5	v6
257	2	14.3		S	S			
258	0	.0						
259	1	7.1	S					
260	1	7.1	S					
261	7	50.0		S	S			S
262	0	.0						
263	7	50.0		S		S	S	S
264	0	.0						
265	0	.0						
266	0	.0						
267	2	14.3			S	S		
268	1	7.1						
269	2	14.3	S		S			
270	0	.0						

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Data Patterns (all cases)

Missing and Extreme Value Patterns

Case	v7	v8	v9	v10	v11	v12	v13	v14
257								
258								
259								
260								
261	S	S	S		S			
262								
263	S	S		S				
264								
265								
266								
267								
268			S					
269								
270								

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Data Patterns (all cases)

	Variable Values							
Case	v1	v2	v3	v4	v5	v6	v7	v8
257	3.6	.	.	5.8	3.7	2.5	9.3	44.0
258	4.0	.9	9.1	5.4	2.4	2.6	7.3	46.0
259	.	2.1	6.9	5.4	1.1	2.6	8.9	29.0
260	.	2.0	6.4	4.5	2.1	2.2	8.8	28.0
261	3.6	.	.	6.2	4.5	.	.	.
262	5.6	2.2	8.2	3.1	4.0	1.6	5.3	55.0
263	3.6	.	9.9	.	.	.	.	.
264	5.2	1.3	9.1	4.5	3.3	2.7	7.3	60.0
265	3.0	2.0	6.6	6.6	2.4	2.7	8.2	41.0
266	4.2	2.4	9.4	4.9	3.2	2.7	8.5	49.0
267	3.8	.8	.	.	2.2	2.6	5.3	42.0
268	3.3	2.6	9.7	3.3	2.9	1.5	5.2	47.0
269	.	1.9	.	4.5	1.5	3.1	9.9	39.0
270	4.5	1.6	8.7	4.6	3.1	2.1	6.8	56.0

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Data Patterns (all cases)

Case	Variable Values v9
257	4.8
258	5.1
259	3.9
260	3.3
261	.
262	3.9
263	4.9
264	5.1
265	4.1
266	5.2
267	5.1
268	.
269	3.3
270	5.1

- indicates an extreme low value, while + indicates an extreme high value. The range used is (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Missing Patterns (cases with missing values)

Case	# Missing	% Missing	Missing and Extreme Value Patterns[a]					
			v1	v2	v3	v4	v5	v6
205	1	7.1			S			
202	2	14.3	S		S			
250	2	14.3	S		S			
255	2	14.3	S		S			
269	2	14.3	S		S			
238	1	7.1	S					
240	1	7.1	S					
253	1	7.1	S					
256	1	7.1	S					
259	1	7.1	S					
260	1	7.1	S					
228	2	14.3	S			S		
246	1	7.1				S		
225	2	14.3			S	S		
267	2	14.3			S	S		
222	2	14.3			S		S	
241	2	14.3			S		S	
229	1	7.1					S	
216	2	14.3	S				S	
218	2	14.3	S				S	
232	2	14.3	S	S				
248	2	14.3	S	S				
237	1	7.1		S				
249	1	7.1		S				
220	1	7.1		S				
213	2	14.3		S	S			
257	2	14.3		S	S			
203	2	14.3		S				

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Missing Patterns (cases with missing values)

Missing and Extreme Value Patterns[a]

Case	v7	v8	v9	v10	v11	v12	v13	v14
205								
202								
250								
255								
269								
238								
240	-							
253								
256								
259								
260								
228								
246								
225								
267								
222								
241								
229								
216								
218								
232								
248								
237								
249								
220								
213								
257								
203	S							

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Missing Patterns (cases with missing values)

	Variable Values							
Case	v1	v2	v3	v4	v5	v6	v7	v8
205	5.1	1.4	.	4.8	3.3	2.6	3.8	49.0
202	.	.4	.	2.5	1.2	1.7	5.2	35.0
250	.	3.7	.	5.2	3.0	2.3	9.1	49.0
255	.	1.0	.	3.4	1.7	1.1	6.2	35.0
269	.	1.9	.	4.5	1.5	3.1	9.9	39.0
238	.	2.5	9.6	5.5	4.0	3.0	7.7	65.0
240	.	1.5	9.9	2.7	1.3	1.2	1.7	50.0
253	.	2.0	9.3	5.9	3.7	2.4	4.6	60.0
256	.	3.3	7.5	4.5	2.5	2.4	7.6	39.0
259	.	2.1	6.9	5.4	1.1	2.6	8.9	29.0
260	.	2.0	6.4	4.5	2.1	2.2	8.8	28.0
228	.	1.8	7.7	.	3.4	1.5	5.9	40.0
246	3.7	1.4	9.0	.	2.6	2.3	6.8	45.0
225	4.7	1.3	.	.	3.0	2.6	6.8	54.0
267	3.8	.8	.	.	2.2	2.6	5.3	42.0
222	3.9	2.2	.	4.6	.	2.5	8.3	47.0
241	3.1	1.9	.	4.5	.	3.1	3.8	54.0
229	5.3	1.4	9.7	6.1	.	3.9	6.8	54.0
216	.	1.6	6.4	5.0	.	2.1	8.4	25.0
218	.	2.8	5.2	5.0	.	2.7	8.4	38.0
232	.	.	8.2	5.0	3.6	2.5	9.0	53.0
248	.	.	6.4	5.3	3.0	2.5	7.1	46.0
237	4.9	.	7.4	6.9	4.6	4.0	9.6	62.0
249	5.3	.	8.5	3.7	3.5	1.9	4.8	58.0
220	6.5	.	9.0	7.0	3.2	3.7	8.0	33.0
213	3.1	.	.	7.8	3.6	4.0	5.9	43.0
257	3.6	.	.	5.8	3.7	2.5	9.3	44.0
203	3.0	.	9.1	7.1	3.5	3.4	.	55.0

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Missing Patterns (cases with missing values)

Case	Variable Values v9
205	4.9
202	3.3
250	4.8
255	4.1
269	3.3
238	6.0
240	5.0
253	6.1
256	3.6
259	3.9
260	3.3
228	5.6
246	4.9
225	5.9
267	5.1
222	5.0
241	4.8
229	5.9
216	3.4
218	3.7
232	5.2
248	4.5
237	6.2
249	4.3
220	5.4
213	5.2
257	4.8
203	5.2

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Missing Patterns (cases with missing values)

Case	# Missing	% Missing	Missing and Extreme Value Patterns[a]					
			v1	v2	v3	v4	v5	v6
231	1	7.1						
219	2	14.3						
244	1	7.1						
227	2	14.3		S				
224	3	21.4	S	S				
268	1	7.1						
235	2	14.3						S
204	3	21.4	S		S			
207	3	21.4	S		S			
221	3	21.4	S		S			
245	7	50.0	S		S		S	
233	7	50.0		S	S		S	S
261	7	50.0		S	S			S
210	7	50.0				S	S	S
263	7	50.0		S		S	S	S
214	7	50.0	S			S		S

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Missing Patterns (cases with missing values)

Missing and Extreme Value Patterns[a]

Case	v7	v8	v9	v10	v11	v12	v13	v14
231	S							
219	S	S						
244		S						
227		S						
224		S						
268			S					
235			S					
204			S					
207			S					
221	S							
245	S	S				S		S
233			S			S		S
261	S	S	S		S			
210	S	S	S	S				
263	S	S		S				
214	S	S			S		S	

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Missing Patterns (cases with missing values)

	Variable Values							
Case	v1	v2	v3	v4	v5	v6	v7	v8
231	3.7	.7	8.2	6.0	2.1	2.5	.	41.0
219	3.1	2.2	6.7	6.8	2.6	2.9	.	.
244	3.0	3.8	5.5	4.9	3.4	2.6	6.0	.
227	3.2	.	5.7	5.1	3.6	2.9	6.2	.
224	.	.	8.6	5.7	2.7	3.7	6.7	.
268	3.3	2.6	9.7	3.3	2.9	1.5	5.2	47.0
235	3.8	.8	8.7	2.9	1.6	.	5.6	39.0
204	.	1.5	.	4.8	1.9	2.5	7.2	36.0
207	.	1.5	.	4.8	1.9	2.5	7.2	36.0
221	.	1.6	.	4.8	2.0	2.8	.	32.0
245	.	2.0	.	4.7	.	3.2	.	.
233	4.5	.	.	5.9	.	.	8.8	50.0
261	3.6	.	.	6.2	4.5	.	.	.
210	4.1	3.7	5.9	.	.	.	.	.
263	3.6	.	9.9	.	.	.	.	.
214	.	2.7	5.0	.	2.2	.	.	.

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Missing Patterns (cases with missing values)

Case	Variable Values v9
231	5.0
219	4.3
244	4.2
227	4.4
224	5.0
268	.
235	.
204	.
207	.
221	4.3
245	3.4
233	.
261	.
210	.
263	4.9
214	3.6

- indicates an extreme low value, while + indicates an extreme high value. The range used is (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

a. Cases are sorted on missing patterns, variables are not sorted.

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Tabulated Patterns

	Missing Patterns[a]						
Number of Cases	v1	v2	v3	v4	v5	v6	v7
26							
1			X				
4	X		X				
6	X						
1	X			X			
1				X			
2			X	X			
2			X		X		
1					X		
2	X				X		
2	X	X					
3		X					
2		X	X				
1		X					X
1							X
1							X
1							
1		X					
1	X	X					
1							
1						X	
2	X		X				
1	X		X				X
1	X		X		X		X
1		X	X		X	X	
1		X	X			X	X
1				X	X	X	X
1		X		X	X	X	X
1	X			X		X	X

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Tabulated Patterns

Number of Cases	Missing Patterns[a] v8	v9	v10	v11	v12	v13	v14
26							
1							
4							
6							
1							
1							
2							
2							
1							
2							
2							
3							
2							
1							
1							
1	X						
1	X						
1	X						
1	X						
1		X					
1		X					
2		X					
1							
1	X				X		X
1		X			X		X
1	X	X		X			
1	X	X	X				
1	X		X				
1	X			X		X	

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Tabulated Patterns

Number of Cases	Complete if ...[b]	v1[c]	v2[c]	v3[c]	v4[c]	v5[c]	v6[c]
26	26	4.019	1.950	8.354	5.269	2.981	2.600
1	27	5.100	1.400	.	4.800	3.300	2.600
4	37	.	1.750	.	3.900	1.850	2.050
6	32	.	2.233	8.267	4.750	2.450	2.300
1	34	.	1.800	7.700	.	3.400	1.500
1	27	3.700	1.400	9.000	.	2.600	2.300
2	30	4.250	1.050	.	.	2.600	2.600
2	30	3.500	2.050	.	4.550	.	2.800
1	27	5.300	1.400	9.700	6.100	.	3.900
2	35	.	2.200	5.800	5.000	.	2.400
2	37	.	.	7.300	5.150	3.300	2.500
3	29	5.567	.	8.300	5.867	3.767	3.200
2	32	3.350	.	.	6.800	3.650	3.250
1	31	3.000	.	9.100	7.100	3.500	3.400
1	27	3.700	.700	8.200	6.000	2.100	2.500
1	29	3.100	2.200	6.700	6.800	2.600	2.900
1	27	3.000	3.800	5.500	4.900	3.400	2.600
1	31	3.200	.	5.700	5.100	3.600	2.900
1	40	.	.	8.600	5.700	2.700	3.700
1	27	3.300	2.600	9.700	3.300	2.900	1.500
1	28	3.800	.800	8.700	2.900	1.600	.
2	40	.	1.500	.	4.800	1.900	2.500
1	39	.	1.600	.	4.800	2.000	2.800
1	47	.	2.000	.	4.700	.	3.200
1	38	4.500	.	.	5.900	.	.
1	40	3.600	.	.	6.200	4.500	.
1	34	4.100	3.700	5.900	.	.	.
1	37	3.600	.	9.900	.	.	.
1	38	.	2.700	5.000	.	2.200	.

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Tabulated Patterns

Number of Cases	v7[c]	v8[c]	v9[c]
26	6.754	48.308	4.896
1	3.800	49.000	4.900
4	7.600	39.500	3.875
6	6.550	45.167	4.650
1	5.900	40.000	5.600
1	6.800	45.000	4.900
2	6.050	48.000	5.500
2	6.050	50.500	4.900
1	6.800	54.000	5.900
2	8.400	31.500	3.550
2	8.050	49.500	4.850
3	7.467	51.000	5.300
2	7.600	43.500	5.000
1	.	55.000	5.200
1	.	41.000	5.000
1	.	.	4.300
1	6.000	.	4.200
1	6.200	.	4.400
1	6.700	.	5.000
1	5.200	47.000	.
1	5.600	39.000	.
2	7.200	36.000	.
1	.	32.000	4.300
1	.	.	3.400
1	8.800	50.000	.
1	.	.	.
1	.	.	.
1	.	.	4.900
1	.	.	3.600

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

a. Variables are not sorted.

b. Number of complete cases if variables missing in that pattern (marked with X) are not used.

c. Means at each unique pattern

Listwise Statistics

Listwise Means

Number of cases	v1	v2	v3	v4	v5	v6	v7	v8
26	4.019	1.950	8.354	5.269	2.981	2.600	6.754	48.308

Listwise Means

v9
4.896

Listwise Covariances

	v1	v2	v3	v4	v5	v6	v7	v8
v1	.9184							
v2	-.4266	.7850						
v3	.4813	-.3052	1.3682					
v4	-.2594	.3132	-.0787	1.2166				
v5	.2644	.1818	.0895	.0246	.2376			
v6	-.0668	.2344	-.0572	.6596	.0772	.5536		
v7	-.5519	.4344	-.3730	.5837	-.1009	.5452	1.9178	
v8	4.6218	.3440	6.0988	1.6938	2.6782	1.8040	-1.1012	64.7815
v9	.4221	-.1978	.6802	.1507	.1187	.0384	-.4498	3.6572

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Listwise Covariances

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	.6436

Listwise Correlations

	v1	v2	v3	v4	v5	v6	v7	v8
v1	1							
v2	-.502	1						
v3	.429	-.294	1					
v4	-.245	.320	-.061	1				
v5	.566	.421	.157	.046	1			
v6	-.094	.356	-.066	.804	.213	1		
v7	-.416	.354	-.230	.382	-.150	.529	1	
v8	.599	.048	.648	.191	.683	.301	-.099	1
v9	.549	-.278	.725	.170	.304	.064	-.405	.566

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Listwise Correlations

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	1

Pairwise Statistics

Pairwise Frequencies

	v1	v2	v3	v4	v5	v6	v7	v8
v1	49							
v2	39	57						
v3	40	44	53					
v4	44	51	48	63				
v5	43	50	48	56	61			
v6	44	54	49	60	58	64		
v7	43	51	47	57	55	59	61	
v8	43	52	46	57	55	59	58	61
v9	44	52	50	57	56	61	56	56
v10	47	56	51	63	61	64	61	61
v11	48	56	52	62	59	64	61	61
v12	48	56	53	61	61	63	60	60
v13	49	56	52	63	60	64	61	61
v14	48	56	53	61	61	63	60	60

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Pairwise Frequencies

	v9	v10	v11	v12	v13	v14
v1						
v2						
v3						
v4						
v5						
v6						
v7						
v8						
v9	63					
v10	62	68				
v11	62	66	68			
v12	62	66	66	68		
v13	62	67	68	67	69	
v14	62	66	66	68	67	68

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Pairwise Means

	v1	v2	v3	v4	v5	v6	v7	v8
v1	4.008	1.921	8.255	5.373	3.056	2.707	6.665	48.209
v2	3.977	1.944	8.057	4.982	2.694	2.519	6.682	45.462
v3	4.025	2.036	8.062	5.235	2.931	2.612	6.796	47.022
v4	4.011	1.943	8.121	5.168	2.871	2.635	6.867	46.088
v5	3.998	1.904	8.129	5.175	2.856	2.579	6.758	46.182
v6	4.018	1.919	8.118	5.177	2.860	2.611	6.810	46.085
v7	4.077	1.920	8.138	5.088	2.860	2.581	6.823	46.207
v8	4.088	1.854	8.261	5.126	2.822	2.573	6.850	46.033
v9	4.025	1.937	8.060	5.223	2.882	2.633	6.825	46.429
v10	4.015	1.913	8.069	5.168	2.856	2.611	6.823	46.033
v11	4.017	1.930	8.121	5.152	2.839	2.611	6.823	46.033
v12	3.998	1.943	8.062	5.164	2.856	2.602	6.790	45.967
v13	4.008	1.930	8.121	5.168	2.867	2.611	6.823	46.033
v14	3.998	1.943	8.062	5.164	2.856	2.602	6.790	45.967

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Pairwise Means

	v9
v1	4.948
v2	4.706
v3	4.818
v4	4.733
v5	4.798
v6	4.775
v7	4.805
v8	4.821
v9	4.759
v10	4.756
v11	4.777
v12	4.781
v13	4.777
v14	4.781

Mean of quantitative variable when other variable is present.

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Pairwise Standard Deviations

	v1	v2	v3	v4	v5	v6	v7	v8
v1	.9318	.9200	1.3032	1.2185	.6242	.7321	1.5357	7.7477
v2	.8845	.8751	1.4334	1.1119	.7243	.6796	1.6686	9.4027
v3	.9834	.8832	1.4072	1.1643	.6956	.7412	1.6007	9.8036
v4	.9751	.8624	1.3397	1.1714	.7963	.7255	1.7230	9.5754
v5	.9605	.8864	1.3133	1.2257	.7760	.7235	1.6616	9.2298
v6	.9770	.8454	1.3305	1.1522	.7424	.7174	1.6821	9.4564
v7	.9661	.8656	1.3377	1.1665	.7603	.7343	1.6809	9.3166
v8	.9582	.8318	1.2421	1.2002	.7697	.7268	1.7189	9.3559
v9	.9729	.8593	1.3939	1.1526	.7383	.7204	1.7120	9.5114
v10	.9498	.8500	1.3778	1.1714	.7760	.7174	1.6809	9.3559
v11	.9397	.8770	1.3533	1.1734	.7541	.7174	1.6809	9.3559
v12	.9389	.8829	1.4072	1.1855	.7760	.7192	1.6751	9.4204
v13	.9318	.8770	1.3533	1.1714	.7778	.7174	1.6809	9.3559
v14	.9389	.8829	1.4072	1.1855	.7760	.7192	1.6751	9.4204

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Pairwise Standard Deviations

	v9
v1	.7096
v2	.8768
v3	.8366
v4	.8384
v5	.8161
v6	.8320
v7	.8411
v8	.8396
v9	.8319
v10	.8385
v11	.8253
v12	.8202
v13	.8253
v14	.8202

Standard deviation of quantitative variable when other variable is present.

Pairwise Covariances

	v1	v2	v3	v4	v5	v6	v7	v8
v1	.8683							
v2	-.3632	.7657						
v3	.4750	-.5293	1.9801					
v4	-.1181	.2860	-.1020	1.3722				
v5	.1901	.2704	.0897	.4329	.6022			
v6	.0222	.1491	-.0346	.6679	.1848	.5146		
v7	-.1775	.5022	-.7668	.8155	.0839	.4964	2.8255	
v8	2.8001	1.1668	7.3231	2.5994	5.0552	1.8403	-3.0579	87.5322
v9	.3548	-.1512	.8244	.3692	.3272	.1227	-.3681	5.3434

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Pairwise Covariances

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	.6921

Pairwise Correlations

	v1	v2	v3	v4	v5	v6	v7	v8
v1	1							
v2	-.446	1						
v3	.371	-.418	1					
v4	-.099	.298	-.065	1				
v5	.317	.421	.098	.444	1			
v6	.031	.259	-.035	.799	.344	1		
v7	-.120	.348	-.358	.406	.066	.402	1	
v8	.377	.149	.601	.226	.712	.268	-.191	1
v9	.514	-.201	.707	.382	.543	.205	-.256	.669

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Pairwise Correlations

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	1

EM Estimated Statistics

EM Means[a]

v1	v2	v3	v4	v5	v6	v7	v8	v9
3.686	2.104	8.019	5.178	2.848	2.630	6.932	45.791	4.737

a. Little's MCAR test: Chi-Square = 198.533, DF = 180, Sig. = .164

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

EM Covariances[a]

	v1	v2	v3	v4	v5	v6	v7	v8
v1	1.2742							
v2	-.3497	1.1004						
v3	.6250	-.6199	1.8478					
v4	.1757	.4227	-.2257	1.3131				
v5	.5455	.4456	-.0107	.3876	.6018			
v6	.1162	.2248	-.1061	.6164	.1827	.5083		
v7	-.3890	.6222	-.7573	.8066	.1338	.5086	2.8793	
v8	6.0091	2.2127	6.5284	2.1174	4.8685	1.6082	-2.8461	87.7757
v9	.5911	-.0343	.6489	.3331	.3431	.1061	-.3276	5.1655

EM Covariances[a]

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	.6700

a. Little's MCAR test: Chi-Square = 198.533, DF = 180, Sig. = .164

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

EM Correlations[a]

	v1	v2	v3	v4	v5	v6	v7	v8
v1	1							
v2	-.295	1						
v3	.407	-.435	1					
v4	.136	.352	-.145	1				
v5	.623	.548	-.010	.436	1			
v6	.144	.301	-.110	.755	.330	1		
v7	-.203	.350	-.328	.415	.102	.420	1	
v8	.568	.225	.513	.197	.670	.241	-.179	1
v9	.640	-.040	.583	.355	.540	.182	-.236	.674

EM Correlations[a]

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	1

a. Little's MCAR test: Chi-Square = 198.533, DF = 180, Sig. = .164

Regression Estimated Statistics

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

Regression Means[a]

v1	v2	v3	v4	v5	v6	v7	v8	v9
3.939	2.028	8.024	5.130	2.853	2.579	6.867	45.806	4.768

a. Random normal variate is added to each estimate.

Regression Covariances[a]

	v1	v2	v3	v4	v5	v6	v7	v8
v1	.8200							
v2	-.2837	.7239						
v3	.3878	-.3252	1.6142					
v4	.0405	.3269	-.0468	1.2852				
v5	.2560	.2810	.1435	.3627	.5808			
v6	.0672	.1618	.0170	.6691	.2282	.5518		
v7	-.1619	.4572	-.7547	.7567	.1143	.4692	2.7841	
v8	3.4869	.7605	6.7094	2.7070	5.0052	2.1176	-2.0214	90.0763
v9	.3660	-.0815	.6603	.2928	.3288	.1230	-.3376	5.3730

Regression Covariances[a]

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	.6707

EXAMINATION AND REMEDY OF MISSING DATA -- INITIAL ANALYSIS

a. Random normal variate is added to each estimate.

Regression Correlations[a]

	v1	v2	v3	v4	v5	v6	v7	v8
v1	1							
v2	-.368	1						
v3	.337	-.301	1					
v4	.039	.339	-.032	1				
v5	.371	.433	.148	.420	1			
v6	.100	.256	.018	.795	.403	1		
v7	-.107	.322	-.356	.400	.090	.379	1	
v8	.406	.094	.556	.252	.692	.300	-.128	1
v9	.493	-.117	.635	.315	.527	.202	-.247	.691

Regression Correlations[a]

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	1

a. Random normal variate is added to each estimate.

MISSING DATA -- DELETE CASES WITH GT 50 PERCENT MISSING

Frequencies

Statistics

NMISS

N	Valid	64
	Missing	0

NMISS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	26	40.6	40.6	40.6
	1.00	15	23.4	23.4	64.1
	2.00	19	29.7	29.7	93.8
	3.00	4	6.3	6.3	100.0
	Total	64	100.0	100.0	

MVA OF 64 CASES WITH V1

MVA

Warnings

Since more than half of the cases are missing, error terms are chosen randomly from a Normal distribution instead of from the observed residuals of complete cases.

Univariate Statistics

	N	Mean	Std. Deviation	Missing Count	Missing Percent	No. of Extremes[a] Low	No. of Extremes[a] High
v1	45	4.013	.9664	19	29.7	0	0
v2	54	1.896	.8589	10	15.6	0	0
v3	50	8.130	1.3194	14	21.9	0	0
v4	60	5.147	1.1877	4	6.3	0	0
v5	59	2.839	.7541	5	7.8	0	0
v6	63	2.602	.7192	1	1.6	0	0
v7	60	6.790	1.6751	4	6.3	0	0
v8	60	45.967	9.4204	4	6.3	0	0
v9	60	4.798	.8194	4	6.3	0	0
v10	64			0	.0		
v11	64			0	.0		
v12	64			0	.0		
v13	64			0	.0		
v14	64			0	.0		

a. Number of cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

Summary of Estimated Means

	v1	v2	v3	v4	v5	v6	v7
Listwise	4.019	1.950	8.354	5.269	2.981	2.600	6.754
All Values	4.013	1.896	8.130	5.147	2.839	2.602	6.790
EM	3.711	2.034	8.110	5.149	2.823	2.602	6.844
Regression	3.872	1.968	8.099	5.147	2.847	2.600	6.802

MVA OF 64 CASES WITH V1

Summary of Estimated Means

	v8	v9
Listwise	48.308	4.896
All Values	45.967	4.798
EM	45.848	4.767
Regression	46.000	4.773

Summary of Estimated Standard Deviations

	v1	v2	v3	v4	v5	v6	v7
Listwise	.9583	.8860	1.1697	1.1030	.4875	.7440	1.3848
All Values	.9664	.8589	1.3194	1.1877	.7541	.7192	1.6751
EM	1.1463	1.0011	1.2724	1.1585	.7458	.7148	1.6804
Regression	1.0204	.8469	1.2175	1.1624	.7632	.7136	1.6524

Summary of Estimated Standard Deviations

	v8	v9
Listwise	8.0487	.8022
All Values	9.4204	.8194
EM	9.2896	.8156
Regression	9.1875	.8098

MVA OF 64 CASES WITH V1

Separate Variance t Tests[a]

		v1	v2	v3	v4	v5	v6	v7
v1	t	.	-.3	1.3	2.2	2.6	1.9	-1.1
	df	.	30.3	16.3	41.9	21.4	38.8	25.9
	P(2-tail)	.	.763	.223	.033	.017	.065	.273
	# Present	45	38	38	42	42	44	42
	# Missing	0	16	12	18	17	19	18
	Mean(Present)	4.013	1.874	8.274	5.340	3.021	2.707	6.614
	Mean(Missing)	.	1.950	7.675	4.694	2.388	2.358	7.200
v2	t	-.5	.	.7	-2.2	-4.2	-2.4	-1.2
	df	7.0	.	10.3	12.1	17.8	12.0	11.0
	P(2-tail)	.646	.	.528	.044	.001	.034	.260
	# Present	38	54	42	50	49	53	51
	# Missing	7	0	8	10	10	10	9
	Mean(Present)	3.974	1.896	8.181	4.988	2.704	2.506	6.682
	Mean(Missing)	4.229	.	7.863	5.940	3.500	3.110	7.400
v3	t	.4	1.4	.	1.1	2.0	.2	.0
	df	10.3	18.3	.	16.0	14.9	23.2	16.5
	P(2-tail)	.693	.180	.	.286	.066	.818	.965
	# Present	38	42	50	48	47	49	47
	# Missing	7	12	0	12	12	14	13
	Mean(Present)	4.034	1.981	8.130	5.235	2.947	2.612	6.796
	Mean(Missing)	3.900	1.600	.	4.792	2.417	2.564	6.769
v4	t	-.2	2.6	-.3	.	.2	1.4	1.5
	df	3.0	5.5	1.2	.	4.0	3.8	5.8
	P(2-tail)	.882	.046	.785	.	.888	.249	.197
	# Present	42	50	48	60	55	59	56
	# Missing	3	4	2	0	4	4	4
	Mean(Present)	4.010	1.942	8.121	5.147	2.842	2.625	6.832
	Mean(Missing)	4.067	1.325	8.350	.	2.800	2.250	6.200
	t	-.1	-.3	.8	.4	.	-.9	-.4
	df	2.2	6.4	2.1	7.1	.	4.8	4.5
	P(2-tail)	.900	.749	.502	.734	.	.423	.696

MVA OF 64 CASES WITH V1

Separate Variance t Tests[a]

		v8	v9
v1	t	2.6	2.1
	df	24.8	23.5
	P(2-tail)	.017	.049
	# Present	42	43
	# Missing	18	17
	Mean(Present)	48.167	4.949
	Mean(Missing)	40.833	4.418
v2	t	-1.1	-1.2
	df	9.3	18.6
	P(2-tail)	.318	.233
	# Present	52	50
	# Missing	8	10
	Mean(Present)	45.462	4.754
	Mean(Missing)	49.250	5.020
v3	t	1.9	.9
	df	28.7	18.2
	P(2-tail)	.073	.399
	# Present	46	48
	# Missing	14	12
	Mean(Present)	47.022	4.842
	Mean(Missing)	42.500	4.625
v4	t	.2	-2.4
	df	4.1	4.5
	P(2-tail)	.830	.064
	# Present	56	56
	# Missing	4	4
	Mean(Present)	46.018	4.757
	Mean(Missing)	45.250	5.375
	t	.5	.6
	df	4.4	4.5
	P(2-tail)	.669	.605

MVA OF 64 CASES WITH V1

Separate Variance t Tests[a]

		v1	v2	v3	v4	v5	v6	v7
v5	# Present	42	49	47	55	59	58	55
	# Missing	3	5	3	5	0	5	5
	Mean(Present)	4.007	1.888	8.196	5.156	2.839	2.579	6.758
	Mean(Missing)	4.100	1.980	7.100	5.040	.	2.860	7.140
v7	t	3.0	.9	.2	-2.1	.9	-1.5	.
	df	4.3	2.3	2.3	3.6	3.6	4.8	.
	P(2-tail)	.036	.440	.864	.118	.441	.193	.
	# Present	42	51	47	56	55	59	60
	# Missing	3	3	3	4	4	4	0
	Mean(Present)	4.067	1.920	8.138	5.073	2.860	2.581	6.790
	Mean(Missing)	3.267	1.500	8.000	6.175	2.550	2.900	.
v8	t	6.1	-1.4	2.2	-1.1	-.9	-1.8	1.7
	df	37.2	1.0	3.4	3.9	4.1	4.0	9.1
	P(2-tail)	.000	.384	.101	.326	.401	.149	.128
	# Present	42	52	46	56	55	59	57
	# Missing	3	2	4	4	4	4	3
	Mean(Present)	4.079	1.854	8.261	5.113	2.822	2.573	6.816
	Mean(Missing)	3.100	3.000	6.625	5.625	3.075	3.025	6.300
v9	t	1.7	.8	-2.1	2.5	2.7	1.3	.9
	df	1.8	3.7	1.3	3.6	3.8	2.3	4.2
	P(2-tail)	.249	.463	.235	.076	.056	.302	.409
	# Present	43	50	48	56	55	60	56
	# Missing	2	4	2	4	4	3	4
	Mean(Present)	4.035	1.920	8.085	5.232	2.895	2.623	6.825
	Mean(Missing)	3.550	1.600	9.200	3.950	2.075	2.167	6.300

MVA OF 64 CASES WITH V1

Separate Variance t Tests[a]

		v8	v9
v5	# Present	55	55
	# Missing	5	5
	Mean(Present)	46.182	4.820
	Mean(Missing)	43.600	4.560
v7	t	.5	.4
	df	2.1	4.5
	P(2-tail)	.658	.704
	# Present	57	56
	# Missing	3	4
	Mean(Present)	46.140	4.805
	Mean(Missing)	42.667	4.700
v8	t	.	1.6
	df	.	5.7
	P(2-tail)	.	.155
	# Present	60	56
	# Missing	0	4
	Mean(Present)	45.967	4.821
	Mean(Missing)	.	4.475
v9	t	2.4	.
	df	4.6	.
	P(2-tail)	.066	.
	# Present	56	60
	# Missing	4	0
	Mean(Present)	46.429	4.798
	Mean(Missing)	39.500	.

For each quantitative variable, pairs of groups are formed by indicator variables (present, missing).

a. Indicator variables with less than 5% missing are not displayed.

MVA OF 64 CASES WITH V1

Data Patterns (all cases)

Case	# Missing	% Missing	Missing and Extreme Value Patterns					
			v1	v2	v3	v4	v5	v6
201	0	.0						
202	2	14.3	S		S			
203	2	14.3		S				
204	3	21.4	S		S			
205	1	7.1			S			
206	0	.0						
207	3	21.4	S		S			
208	0	.0						
209	0	.0						
211	0	.0						
212	0	.0						
213	2	14.3		S	S			
215	0	.0						
216	2	14.3	S				S	
217	0	.0						
218	2	14.3	S				S	
219	2	14.3						
220	1	7.1		S				
221	3	21.4	S		S			
222	2	14.3			S		S	
223	0	.0						
224	3	21.4	S	S				
225	2	14.3			S	S		
226	0	.0						
227	2	14.3		S				
228	2	14.3	S			S		
229	1	7.1					S	
230	0	.0						

MVA OF 64 CASES WITH V1

Data Patterns (all cases)

Missing and Extreme Value Patterns

Case	v7	v8	v9	v10	v11	v12	v13	v14
201								
202								
203	S							
204			S					
205								
206								
207			S					
208								
209								
211								
212								
213								
215								
216								
217								
218								
219	S	S						
220								
221	S							
222								
223								
224		S						
225								
226								
227		S						
228								
229								
230								

MVA OF 64 CASES WITH V1

Data Patterns (all cases)

Case	Variable Values							
	v1	v2	v3	v4	v5	v6	v7	v8
201	3.3	.9	8.6	4.0	2.1	1.8	6.3	41.0
202	.	.4	.	2.5	1.2	1.7	5.2	35.0
203	3.0	.	9.1	7.1	3.5	3.4	.	55.0
204	.	1.5	.	4.8	1.9	2.5	7.2	36.0
205	5.1	1.4	.	4.8	3.3	2.6	3.8	49.0
206	4.6	2.1	7.9	5.8	3.4	2.8	4.7	49.0
207	.	1.5	.	4.8	1.9	2.5	7.2	36.0
208	5.2	1.3	9.7	6.1	3.2	3.9	6.7	54.0
209	3.5	2.8	9.9	3.5	3.1	1.7	5.4	49.0
211	3.0	2.8	7.8	7.1	3.0	3.8	7.9	49.0
212	4.8	1.7	7.6	4.2	3.3	1.4	5.8	39.0
213	3.1	.	.	7.8	3.6	4.0	5.9	43.0
215	4.0	.5	6.7	4.5	2.2	2.1	5.0	31.0
216	.	1.6	6.4	5.0	.	2.1	8.4	25.0
217	6.1	.5	9.2	4.8	3.3	2.8	7.1	60.0
218	.	2.8	5.2	5.0	.	2.7	8.4	38.0
219	3.1	2.2	6.7	6.8	2.6	2.9	.	.
220	6.5	.	9.0	7.0	3.2	3.7	8.0	33.0
221	.	1.6	.	4.8	2.0	2.8	.	32.0
222	3.9	2.2	.	4.6	.	2.5	8.3	47.0
223	2.8	1.4	8.1	3.8	2.1	1.4	6.6	39.0
224	.	.	8.6	5.7	2.7	3.7	6.7	.
225	4.7	1.3	.	.	3.0	2.6	6.8	54.0
226	3.4	2.0	9.7	4.7	2.7	1.7	4.8	49.0
227	3.2	.	5.7	5.1	3.6	2.9	6.2	.
228	.	1.8	7.7	.	3.4	1.5	5.9	40.0
229	5.3	1.4	9.7	6.1	.	3.9	6.8	54.0
230	4.7	1.3	9.9	6.7	3.0	2.6	6.8	55.0

MVA OF 64 CASES WITH V1

Data Patterns (all cases)

Case	Variable Values v9
201	4.5
202	3.3
203	5.2
204	.
205	4.9
206	5.9
207	.
208	5.8
209	5.4
211	4.4
212	5.5
213	5.2
215	4.0
216	3.4
217	5.2
218	3.7
219	4.3
220	5.4
221	4.3
222	5.0
223	4.4
224	5.0
225	5.9
226	4.7
227	4.4
228	5.6
229	5.9
230	6.0

MVA OF 64 CASES WITH V1

Data Patterns (all cases)

Case	# Missing	% Missing	Missing and Extreme Value Patterns					
			v1	v2	v3	v4	v5	v6
231	1	7.1						
232	2	14.3	S	S				
234	0	.0						
235	2	14.3						S
236	0	.0						
237	1	7.1		S				
238	1	7.1	S					
239	0	.0						
240	1	7.1	S					
241	2	14.3			S		S	
242	0	.0						
243	0	.0						
244	1	7.1						
246	1	7.1				S		
247	0	.0						
248	2	14.3	S	S				
249	1	7.1		S				
250	2	14.3	S		S			
251	0	.0						
252	0	.0						
253	1	7.1	S					
254	0	.0						
255	2	14.3	S		S			
256	1	7.1	S					
257	2	14.3		S	S			
258	0	.0						
259	1	7.1	S					
260	1	7.1	S					

MVA OF 64 CASES WITH V1

Data Patterns (all cases)

Missing and Extreme Value Patterns

Case	v7	v8	v9	v10	v11	v12	v13	v14
231	S							
232								
234								
235			S					
236								
237								
238								
239								
240								
241								
242								
243								
244		S						
246								
247								
248								
249								
250								
251								
252								
253								
254								
255								
256								
257								
258								
259								
260								

MVA OF 64 CASES WITH V1

Data Patterns (all cases)

Case	Variable Values							
	v1	v2	v3	v4	v5	v6	v7	v8
231	3.7	.7	8.2	6.0	2.1	2.5	.	41.0
232	.	.	8.2	5.0	3.6	2.5	9.0	53.0
234	2.8	2.4	6.7	4.9	2.5	2.6	9.2	32.0
235	3.8	.8	8.7	2.9	1.6	.	5.6	39.0
236	2.9	2.6	7.7	7.0	2.8	3.6	7.7	47.0
237	4.9	.	7.4	6.9	4.6	4.0	9.6	62.0
238	.	2.5	9.6	5.5	4.0	3.0	7.7	65.0
239	4.3	1.8	7.6	5.4	3.1	2.5	4.4	46.0
240	.	1.5	9.9	2.7	1.3	1.2	1.7	50.0
241	3.1	1.9	.	4.5	.	3.1	3.8	54.0
242	5.1	1.9	9.2	5.8	3.6	2.3	4.5	60.0
243	4.1	1.1	9.3	5.5	2.5	2.7	7.4	47.0
244	3.0	3.8	5.5	4.9	3.4	2.6	6.0	.
246	3.7	1.4	9.0	.	2.6	2.3	6.8	45.0
247	4.2	2.5	9.2	6.2	3.3	3.9	7.3	59.0
248	.	.	6.4	5.3	3.0	2.5	7.1	46.0
249	5.3	.	8.5	3.7	3.5	1.9	4.8	58.0
250	.	3.7	.	5.2	3.0	2.3	9.1	49.0
251	3.0	3.2	6.0	5.3	3.1	3.0	8.0	43.0
252	2.8	3.8	8.9	6.9	3.3	3.2	8.2	53.0
253	.	2.0	9.3	5.9	3.7	2.4	4.6	60.0
254	3.4	3.7	6.4	5.7	3.5	3.4	8.4	47.0
255	.	1.0	.	3.4	1.7	1.1	6.2	35.0
256	.	3.3	7.5	4.5	2.5	2.4	7.6	39.0
257	3.6	.	.	5.8	3.7	2.5	9.3	44.0
258	4.0	.9	9.1	5.4	2.4	2.6	7.3	46.0
259	.	2.1	6.9	5.4	1.1	2.6	8.9	29.0
260	.	2.0	6.4	4.5	2.1	2.2	8.8	28.0

MVA OF 64 CASES WITH V1

Data Patterns (all cases)

Case	Variable Values v9
231	5.0
232	5.2
234	3.7
235	.
236	4.2
237	6.2
238	6.0
239	5.6
240	5.0
241	4.8
242	6.1
243	5.3
244	4.2
246	4.9
247	6.0
248	4.5
249	4.3
250	4.8
251	3.3
252	5.0
253	6.1
254	3.8
255	4.1
256	3.6
257	4.8
258	5.1
259	3.9
260	3.3

MVA OF 64 CASES WITH V1

Data Patterns (all cases)

Case	# Missing	% Missing	Missing and Extreme Value Patterns					
			v1	v2	v3	v4	v5	v6
262	0	.0						
264	0	.0						
265	0	.0						
266	0	.0						
267	2	14.3			S	S		
268	1	7.1						
269	2	14.3	S		S			
270	0	.0						

Data Patterns (all cases)

Case	Missing and Extreme Value Patterns							
	v7	v8	v9	v10	v11	v12	v13	v14
262								
264								
265								
266								
267								
268			S					
269								
270								

MVA OF 64 CASES WITH V1

Data Patterns (all cases)

Case	Variable Values							
	v1	v2	v3	v4	v5	v6	v7	v8
262	5.6	2.2	8.2	3.1	4.0	1.6	5.3	55.0
264	5.2	1.3	9.1	4.5	3.3	2.7	7.3	60.0
265	3.0	2.0	6.6	6.6	2.4	2.7	8.2	41.0
266	4.2	2.4	9.4	4.9	3.2	2.7	8.5	49.0
267	3.8	.8	.	.	2.2	2.6	5.3	42.0
268	3.3	2.6	9.7	3.3	2.9	1.5	5.2	47.0
269	.	1.9	.	4.5	1.5	3.1	9.9	39.0
270	4.5	1.6	8.7	4.6	3.1	2.1	6.8	56.0

Data Patterns (all cases)

Case	Variable Values
	v9
262	3.9
264	5.1
265	4.1
266	5.2
267	5.1
268	.
269	3.3
270	5.1

- indicates an extreme low value, while + indicates an extreme high value. The range used is (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

MVA OF 64 CASES WITH V1

Missing Patterns (cases with missing values)

Case	# Missing	% Missing	Missing and Extreme Value Patterns[a]					
			v1	v2	v3	v4	v5	v6
205	1	7.1			S			
202	2	14.3	S		S			
250	2	14.3	S		S			
255	2	14.3	S		S			
269	2	14.3	S		S			
238	1	7.1	S					
240	1	7.1	S					
253	1	7.1	S					
256	1	7.1	S					
259	1	7.1	S					
260	1	7.1	S					
228	2	14.3	S			S		
246	1	7.1				S		
225	2	14.3			S	S		
267	2	14.3			S	S		
222	2	14.3			S		S	
241	2	14.3			S		S	
229	1	7.1					S	
216	2	14.3	S				S	
218	2	14.3	S				S	
232	2	14.3	S	S				
248	2	14.3	S	S				
237	1	7.1		S				
249	1	7.1		S				
220	1	7.1		S				
213	2	14.3		S	S			
257	2	14.3		S	S			
203	2	14.3		S				

MVA OF 64 CASES WITH V1

Missing Patterns (cases with missing values)

Missing and Extreme Value Patterns[a]

Case	v7	v8	v9	v10	v11	v12	v13	v14
205								
202								
250								
255								
269								
238								
240								
253								
256								
259								
260								
228								
246								
225								
267								
222								
241								
229								
216								
218								
232								
248								
237								
249								
220								
213								
257								
203	S							

MVA OF 64 CASES WITH V1

Missing Patterns (cases with missing values)

Case	Variable Values							
	v1	v2	v3	v4	v5	v6	v7	v8
205	5.1	1.4	.	4.8	3.3	2.6	3.8	49.0
202	.	.4	.	2.5	1.2	1.7	5.2	35.0
250	.	3.7	.	5.2	3.0	2.3	9.1	49.0
255	.	1.0	.	3.4	1.7	1.1	6.2	35.0
269	.	1.9	.	4.5	1.5	3.1	9.9	39.0
238	.	2.5	9.6	5.5	4.0	3.0	7.7	65.0
240	.	1.5	9.9	2.7	1.3	1.2	1.7	50.0
253	.	2.0	9.3	5.9	3.7	2.4	4.6	60.0
256	.	3.3	7.5	4.5	2.5	2.4	7.6	39.0
259	.	2.1	6.9	5.4	1.1	2.6	8.9	29.0
260	.	2.0	6.4	4.5	2.1	2.2	8.8	28.0
228	.	1.8	7.7	.	3.4	1.5	5.9	40.0
246	3.7	1.4	9.0	.	2.6	2.3	6.8	45.0
225	4.7	1.3	.	.	3.0	2.6	6.8	54.0
267	3.8	.8	.	.	2.2	2.6	5.3	42.0
222	3.9	2.2	.	4.6	.	2.5	8.3	47.0
241	3.1	1.9	.	4.5	.	3.1	3.8	54.0
229	5.3	1.4	9.7	6.1	.	3.9	6.8	54.0
216	.	1.6	6.4	5.0	.	2.1	8.4	25.0
218	.	2.8	5.2	5.0	.	2.7	8.4	38.0
232	.	.	8.2	5.0	3.6	2.5	9.0	53.0
248	.	.	6.4	5.3	3.0	2.5	7.1	46.0
237	4.9	.	7.4	6.9	4.6	4.0	9.6	62.0
249	5.3	.	8.5	3.7	3.5	1.9	4.8	58.0
220	6.5	.	9.0	7.0	3.2	3.7	8.0	33.0
213	3.1	.	.	7.8	3.6	4.0	5.9	43.0
257	3.6	.	.	5.8	3.7	2.5	9.3	44.0
203	3.0	.	9.1	7.1	3.5	3.4	.	55.0

MVA OF 64 CASES WITH V1

Missing Patterns (cases with missing values)

Case	Variable Values v9
205	4.9
202	3.3
250	4.8
255	4.1
269	3.3
238	6.0
240	5.0
253	6.1
256	3.6
259	3.9
260	3.3
228	5.6
246	4.9
225	5.9
267	5.1
222	5.0
241	4.8
229	5.9
216	3.4
218	3.7
232	5.2
248	4.5
237	6.2
249	4.3
220	5.4
213	5.2
257	4.8
203	5.2

MVA OF 64 CASES WITH V1

Missing Patterns (cases with missing values)

Case	# Missing	% Missing	Missing and Extreme Value Patterns[a]					
			v1	v2	v3	v4	v5	v6
231	1	7.1						
219	2	14.3						
244	1	7.1						
227	2	14.3		S				
224	3	21.4	S	S				
268	1	7.1						
235	2	14.3						S
204	3	21.4	S		S			
207	3	21.4	S		S			
221	3	21.4	S		S			

Missing Patterns (cases with missing values)

Case	Missing and Extreme Value Patterns[a]							
	v7	v8	v9	v10	v11	v12	v13	v14
231	S							
219	S	S						
244		S						
227		S						
224		S						
268			S					
235			S					
204			S					
207			S					
221	S							

MVA OF 64 CASES WITH V1

Missing Patterns (cases with missing values)

Case	Variable Values							
	v1	v2	v3	v4	v5	v6	v7	v8
231	3.7	.7	8.2	6.0	2.1	2.5	.	41.0
219	3.1	2.2	6.7	6.8	2.6	2.9	.	.
244	3.0	3.8	5.5	4.9	3.4	2.6	6.0	.
227	3.2	.	5.7	5.1	3.6	2.9	6.2	.
224	.	.	8.6	5.7	2.7	3.7	6.7	.
268	3.3	2.6	9.7	3.3	2.9	1.5	5.2	47.0
235	3.8	.8	8.7	2.9	1.6	.	5.6	39.0
204	.	1.5	.	4.8	1.9	2.5	7.2	36.0
207	.	1.5	.	4.8	1.9	2.5	7.2	36.0
221	.	1.6	.	4.8	2.0	2.8	.	32.0

Missing Patterns (cases with missing values)

Case	Variable Values	
	v9	
231	5.0	
219	4.3	
244	4.2	
227	4.4	
224	5.0	
268	.	
235	.	
204	.	
207	.	
221	4.3	

- indicates an extreme low value, while + indicates an extreme high value. The range used is (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

a. Cases are sorted on missing patterns, variables are not sorted.

MVA OF 64 CASES WITH V1

Tabulated Patterns

	Missing Patterns[a]						
Number of Cases	v1	v2	v3	v4	v5	v6	v7
26							
1			X				
4	X		X				
6	X						
1	X			X			
1				X			
2			X	X			
2			X		X		
1					X		
2	X				X		
2	X	X					
3		X					
2		X	X				
1		X					X
1							X
1							X
1							
1		X					
1	X	X					
1							
1						X	
2	X		X				
1	X		X				X

MVA OF 64 CASES WITH V1

Tabulated Patterns

Number of Cases	Missing Patterns[a]						
	v8	v9	v10	v11	v12	v13	v14
26							
1							
4							
6							
1							
1							
2							
2							
1							
2							
2							
3							
2							
1							
1							
1	X						
1	X						
1	X						
1	X						
1		X					
1		X					
2		X					
1							

MVA OF 64 CASES WITH V1

Tabulated Patterns

Number of Cases	Complete if ...[b]	v1[c]	v2[c]	v3[c]	v4[c]	v5[c]	v6[c]
26	26	4.019	1.950	8.354	5.269	2.981	2.600
1	27	5.100	1.400	.	4.800	3.300	2.600
4	37	.	1.750	.	3.900	1.850	2.050
6	32	.	2.233	8.267	4.750	2.450	2.300
1	34	.	1.800	7.700	.	3.400	1.500
1	27	3.700	1.400	9.000	.	2.600	2.300
2	30	4.250	1.050	.	.	2.600	2.600
2	30	3.500	2.050	.	4.550	.	2.800
1	27	5.300	1.400	9.700	6.100	.	3.900
2	35	.	2.200	5.800	5.000	.	2.400
2	37	.	.	7.300	5.150	3.300	2.500
3	29	5.567	.	8.300	5.867	3.767	3.200
2	32	3.350	.	.	6.800	3.650	3.250
1	31	3.000	.	9.100	7.100	3.500	3.400
1	27	3.700	.700	8.200	6.000	2.100	2.500
1	29	3.100	2.200	6.700	6.800	2.600	2.900
1	27	3.000	3.800	5.500	4.900	3.400	2.600
1	31	3.200	.	5.700	5.100	3.600	2.900
1	40	.	.	8.600	5.700	2.700	3.700
1	27	3.300	2.600	9.700	3.300	2.900	1.500
1	28	3.800	.800	8.700	2.900	1.600	.
2	40	.	1.500	.	4.800	1.900	2.500
1	39	.	1.600	.	4.800	2.000	2.800

MVA OF 64 CASES WITH V1

Tabulated Patterns

Number of Cases	v7[c]	v8[c]	v9[c]
26	6.754	48.308	4.896
1	3.800	49.000	4.900
4	7.600	39.500	3.875
6	6.550	45.167	4.650
1	5.900	40.000	5.600
1	6.800	45.000	4.900
2	6.050	48.000	5.500
2	6.050	50.500	4.900
1	6.800	54.000	5.900
2	8.400	31.500	3.550
2	8.050	49.500	4.850
3	7.467	51.000	5.300
2	7.600	43.500	5.000
1	.	55.000	5.200
1	.	41.000	5.000
1	.	.	4.300
1	6.000	.	4.200
1	6.200	.	4.400
1	6.700	.	5.000
1	5.200	47.000	.
1	5.600	39.000	.
2	7.200	36.000	.
1	.	32.000	4.300

a. Variables are not sorted.

b. Number of complete cases if variables missing in that pattern (marked with X) are not used.

c. Means at each unique pattern

Listwise Statistics

MVA OF 64 CASES WITH V1

Listwise Means

Number of cases	v1	v2	v3	v4	v5	v6	v7	v8
26	4.019	1.950	8.354	5.269	2.981	2.600	6.754	48.308

Listwise Means

v9
4.896

Listwise Covariances

	v1	v2	v3	v4	v5	v6	v7	v8
v1	.9184							
v2	-.4266	.7850						
v3	.4813	-.3052	1.3682					
v4	-.2594	.3132	-.0787	1.2166				
v5	.2644	.1818	.0895	.0246	.2376			
v6	-.0668	.2344	-.0572	.6596	.0772	.5536		
v7	-.5519	.4344	-.3730	.5837	-.1009	.5452	1.9178	
v8	4.6218	.3440	6.0988	1.6938	2.6782	1.8040	-1.1012	64.7815
v9	.4221	-.1978	.6802	.1507	.1187	.0384	-.4498	3.6572

MVA OF 64 CASES WITH V1

Listwise Covariances

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	.6436

Listwise Correlations

	v1	v2	v3	v4	v5	v6	v7	v8
v1	1							
v2	-.502	1						
v3	.429	-.294	1					
v4	-.245	.320	-.061	1				
v5	.566	.421	.157	.046	1			
v6	-.094	.356	-.066	.804	.213	1		
v7	-.416	.354	-.230	.382	-.150	.529	1	
v8	.599	.048	.648	.191	.683	.301	-.099	1
v9	.549	-.278	.725	.170	.304	.064	-.405	.566

MVA OF 64 CASES WITH V1

Listwise Correlations

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	1

Pairwise Statistics

Pairwise Frequencies

	v1	v2	v3	v4	v5	v6	v7	v8
v1	45							
v2	38	54						
v3	38	42	50					
v4	42	50	48	60				
v5	42	49	47	55	59			
v6	44	53	49	59	58	63		
v7	42	51	47	56	55	59	60	
v8	42	52	46	56	55	59	57	60
v9	43	50	48	56	55	60	56	56
v10	45	54	50	60	59	63	60	60
v11	45	54	50	60	59	63	60	60
v12	45	54	50	60	59	63	60	60
v13	45	54	50	60	59	63	60	60
v14	45	54	50	60	59	63	60	60

MVA OF 64 CASES WITH V1

Pairwise Frequencies

	v9	v10	v11	v12	v13	v14
v1						
v2						
v3						
v4						
v5						
v6						
v7						
v8						
v9	60					
v10	60	64				
v11	60	64	64			
v12	60	64	64	64		
v13	60	64	64	64	64	
v14	60	64	64	64	64	64

MVA OF 64 CASES WITH V1

Pairwise Means

	v1	v2	v3	v4	v5	v6	v7	v8
v1	4.013	1.874	8.274	5.340	3.021	2.707	6.614	48.167
v2	3.974	1.896	8.181	4.988	2.704	2.506	6.682	45.462
v3	4.034	1.981	8.130	5.235	2.947	2.612	6.796	47.022
v4	4.010	1.942	8.121	5.147	2.842	2.625	6.832	46.018
v5	4.007	1.888	8.196	5.156	2.839	2.579	6.758	46.182
v6	4.018	1.917	8.118	5.185	2.860	2.602	6.810	46.085
v7	4.067	1.920	8.138	5.073	2.860	2.581	6.790	46.140
v8	4.079	1.854	8.261	5.113	2.822	2.573	6.816	45.967
v9	4.035	1.920	8.085	5.232	2.895	2.623	6.825	46.429
v10	4.013	1.896	8.130	5.147	2.839	2.602	6.790	45.967
v11	4.013	1.896	8.130	5.147	2.839	2.602	6.790	45.967
v12	4.013	1.896	8.130	5.147	2.839	2.602	6.790	45.967
v13	4.013	1.896	8.130	5.147	2.839	2.602	6.790	45.967
v14	4.013	1.896	8.130	5.147	2.839	2.602	6.790	45.967

MVA OF 64 CASES WITH V1

Pairwise Means

	v9
v1	4.949
v2	4.754
v3	4.842
v4	4.757
v5	4.820
v6	4.798
v7	4.805
v8	4.821
v9	4.798
v10	4.798
v11	4.798
v12	4.798
v13	4.798
v14	4.798

Mean of quantitative variable when other variable is present.

MVA OF 64 CASES WITH V1

Pairwise Standard Deviations

	v1	v2	v3	v4	v5	v6	v7	v8
v1	.9664	.8840	1.2517	1.2380	.5891	.7321	1.5173	7.8365
v2	.8961	.8589	1.3408	1.1224	.7283	.6795	1.6686	9.4027
v3	1.0071	.8583	1.3194	1.1643	.6947	.7412	1.6007	9.8036
v4	.9936	.8711	1.3397	1.1877	.7719	.7279	1.7186	9.6474
v5	.9701	.8880	1.2429	1.2289	.7541	.7235	1.6616	9.2298
v6	.9770	.8534	1.3305	1.1604	.7424	.7192	1.6821	9.4564
v7	.9755	.8656	1.3377	1.1719	.7603	.7343	1.6751	9.3855
v8	.9677	.8318	1.2421	1.2065	.7697	.7268	1.7141	9.4204
v9	.9822	.8697	1.3242	1.1609	.7392	.7226	1.7120	9.5114
v10	.9664	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204
v11	.9664	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204
v12	.9664	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204
v13	.9664	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204
v14	.9664	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204

MVA OF 64 CASES WITH V1

Pairwise Standard Deviations

	v9
v1	.7179
v2	.8591
v3	.8351
v4	.8264
v5	.8070
v6	.8194
v7	.8411
v8	.8396
v9	.8194
v10	.8194
v11	.8194
v12	.8194
v13	.8194
v14	.8194

Standard deviation of quantitative variable when other variable is present.

Pairwise Covariances

	v1	v2	v3	v4	v5	v6	v7	v8
v1	.9339							
v2	-.3791	.7377						
v3	.5242	-.4111	1.7409					
v4	-.1219	.2921	-.1020	1.4107				
v5	.2091	.2844	.0409	.4095	.5686			
v6	.0222	.1509	-.0346	.6842	.1848	.5173		
v7	-.2044	.5022	-.7668	.8012	.0839	.4964	2.8060	
v8	2.8500	1.1668	7.3231	2.5907	5.0552	1.8403	-3.2469	88.7446
v9	.3628	-.1376	.7764	.3630	.3179	.1382	-.3681	5.3434

MVA OF 64 CASES WITH V1

Pairwise Covariances

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	.6714

Pairwise Correlations

	v1	v2	v3	v4	v5	v6	v7	v8
v1	1							
v2	-.479	1						
v3	.416	-.357	1					
v4	-.099	.299	-.065	1				
v5	.366	.440	.047	.432	1			
v6	.031	.260	-.035	.810	.344	1		
v7	-.138	.348	-.358	.398	.066	.402	1	
v8	.376	.149	.601	.223	.712	.268	-.202	1
v9	.514	-.184	.702	.378	.533	.233	-.256	.669

MVA OF 64 CASES WITH V1

Pairwise Correlations

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	1

EM Estimated Statistics

EM Means[a]

v1	v2	v3	v4	v5	v6	v7	v8	v9
3.711	2.034	8.110	5.149	2.823	2.602	6.844	45.848	4.767

a. Little's MCAR test: Chi-Square = 174.464, DF = 159, Sig. = .190

MVA OF 64 CASES WITH V1

EM Covariances[a]

	v1	v2	v3	v4	v5	v6	v7	v8
v1	1.3141							
v2	-.3774	1.0022						
v3	.5990	-.4938	1.6189					
v4	.1769	.3760	-.1574	1.3421				
v5	.5516	.3674	.0489	.3606	.5562			
v6	.1254	.2068	-.0627	.6365	.1796	.5109		
v7	-.4129	.5630	-.6680	.7846	.0856	.4876	2.8238	
v8	5.9698	1.9970	6.3336	2.0967	4.6892	1.7108	-2.9728	86.2970
v9	.5954	-.0386	.6216	.3461	.3400	.1289	-.3239	5.0838

EM Covariances[a]

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	.6653

a. Little's MCAR test: Chi-Square = 174.464, DF = 159, Sig. = .190

MVA OF 64 CASES WITH V1

EM Correlations[a]

	v1	v2	v3	v4	v5	v6	v7	v8
v1	1							
v2	-.329	1						
v3	.411	-.388	1					
v4	.133	.324	-.107	1				
v5	.645	.492	.052	.417	1			
v6	.153	.289	-.069	.769	.337	1		
v7	-.214	.335	-.312	.403	.068	.406	1	
v8	.561	.215	.536	.195	.677	.258	-.190	1
v9	.637	-.047	.599	.366	.559	.221	-.236	.671

EM Correlations[a]

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	1

a. Little's MCAR test: Chi-Square = 174.464, DF = 159, Sig. = .190

Regression Estimated Statistics

MVA OF 64 CASES WITH V1

Regression Means[a]

v1	v2	v3	v4	v5	v6	v7	v8	v9
3.872	1.968	8.099	5.147	2.847	2.600	6.802	46.000	4.773

a. Random normal variate is added to each estimate.

Regression Covariances[a]

	v1	v2	v3	v4	v5	v6	v7	v8
v1	1.0412							
v2	-.4360	.7172						
v3	.5910	-.3331	1.4823					
v4	-.0785	.3019	-.0627	1.3512				
v5	.2290	.2734	.0852	.3323	.5824			
v6	-.0139	.1811	-.0339	.6514	.1937	.5092		
v7	-.5490	.3937	-.7030	.7152	.0287	.4605	2.7306	
v8	3.7579	1.1604	6.1788	2.3161	4.9017	1.8118	-3.1124	84.4107
v9	.4312	-.0797	.6393	.3168	.3386	.1265	-.3609	5.0390

Regression Covariances[a]

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	.6557

MVA OF 64 CASES WITH V1

a. Random normal variate is added to each estimate.

Regression Correlations[a]

	v1	v2	v3	v4	v5	v6	v7	v8
v1	1							
v2	-.505	1						
v3	.476	-.323	1					
v4	-.066	.307	-.044	1				
v5	.294	.423	.092	.375	1			
v6	-.019	.300	-.039	.785	.356	1		
v7	-.326	.281	-.349	.372	.023	.391	1	
v8	.401	.149	.552	.217	.699	.276	-.205	1
v9	.522	-.116	.648	.337	.548	.219	-.270	.677

Regression Correlations[a]

	v9
v1	
v2	
v3	
v4	
v5	
v6	
v7	
v8	
v9	1

a. Random normal variate is added to each estimate.

DELETE CASES GT 50 PERCENT MISSING AND DELETE V1

Frequencies

Statistics

NMISS

N	Valid	70
	Missing	0

NMISS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	32	45.7	45.7	45.7
	1.00	18	25.7	25.7	71.4
	2.00	14	20.0	20.0	91.4
	6.00	2	2.9	2.9	94.3
	7.00	4	5.7	5.7	100.0
	Total	70	100.0	100.0	

Frequencies

Statistics

NMISS

N	Valid	64
	Missing	0

NMISS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	32	50.0	50.0	50.0
	1.00	18	28.1	28.1	78.1
	2.00	14	21.9	21.9	100.0
	Total	64	100.0	100.0	

MVA OF 64 CASES AND V1 DELETED

MVA

Warnings

Since more than half of the cases are missing, error terms are chosen randomly from a Normal distribution instead of from the observed residuals of complete cases.

Univariate Statistics

	N	Mean	Std. Deviation	Missing Count	Missing Percent	No. of Extremes[a] Low	No. of Extremes[a] High
v2	54	1.896	.8589	10	15.6	0	0
v3	50	8.130	1.3194	14	21.9	0	0
v4	60	5.147	1.1877	4	6.3	0	0
v5	59	2.839	.7541	5	7.8	0	0
v6	63	2.602	.7192	1	1.6	0	0
v7	60	6.790	1.6751	4	6.3	0	0
v8	60	45.967	9.4204	4	6.3	0	0
v9	60	4.798	.8194	4	6.3	0	0
v10	64			0	.0		
v11	64			0	.0		
v12	64			0	.0		
v13	64			0	.0		
v14	64			0	.0		

a. Number of cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

Summary of Estimated Means

	v2	v3	v4	v5	v6	v7	v8
Listwise	2.003	8.337	5.172	2.881	2.544	6.716	47.719
All Values	1.896	8.130	5.147	2.839	2.602	6.790	45.967
EM	1.993	8.108	5.136	2.832	2.583	6.836	45.810
Regression	1.950	8.108	5.138	2.851	2.583	6.811	45.523

MVA OF 64 CASES AND V1 DELETED

Summary of Estimated Means

	v9
Listwise	4.850
All Values	4.798
EM	4.768
Regression	4.755

Summary of Estimated Standard Deviations

	v2	v3	v4	v5	v6	v7	v8
Listwise	.8403	1.2141	1.1125	.6851	.7206	1.6895	9.6695
All Values	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204
EM	.8733	1.2604	1.1620	.7487	.7302	1.6730	9.2838
Regression	.8307	1.2646	1.1530	.7587	.7295	1.6829	9.3461

Summary of Estimated Standard Deviations

	v9
Listwise	.8784
All Values	.8194
EM	.8145
Regression	.8245

MVA OF 64 CASES AND V1 DELETED

Separate Variance t Tests[a]

		v2	v3	v4	v5	v6	v7	v8
v2	t	.	.7	-2.2	-4.2	-2.4	-1.2	-1.1
	df	.	10.3	12.1	17.8	12.0	11.0	9.3
	P(2-tail)	.	.528	.044	.001	.034	.260	.318
	# Present	54	42	50	49	53	51	52
	# Missing	0	8	10	10	10	9	8
	Mean(Present)	1.896	8.181	4.988	2.704	2.506	6.682	45.462
	Mean(Missing)	.	7.863	5.940	3.500	3.110	7.400	49.250
v3	t	1.4	.	1.1	2.0	.2	.0	1.9
	df	18.3	.	16.0	14.9	23.2	16.5	28.7
	P(2-tail)	.180	.	.286	.066	.818	.965	.073
	# Present	42	50	48	47	49	47	46
	# Missing	12	0	12	12	14	13	14
	Mean(Present)	1.981	8.130	5.235	2.947	2.612	6.796	47.022
	Mean(Missing)	1.600	.	4.792	2.417	2.564	6.769	42.500
v4	t	2.6	-.3	.	.2	1.4	1.5	.2
	df	5.5	1.2	.	4.0	3.8	5.8	4.1
	P(2-tail)	.046	.785	.	.888	.249	.197	.830
	# Present	50	48	60	55	59	56	56
	# Missing	4	2	0	4	4	4	4
	Mean(Present)	1.942	8.121	5.147	2.842	2.625	6.832	46.018
	Mean(Missing)	1.325	8.350	.	2.800	2.250	6.200	45.250
v5	t	-.3	.8	.4	.	-.9	-.4	.5
	df	6.4	2.1	7.1	.	4.8	4.5	4.4
	P(2-tail)	.749	.502	.734	.	.423	.696	.669
	# Present	49	47	55	59	58	55	55
	# Missing	5	3	5	0	5	5	5
	Mean(Present)	1.888	8.196	5.156	2.839	2.579	6.758	46.182
	Mean(Missing)	1.980	7.100	5.040	.	2.860	7.140	43.600
	t	.9	.2	-2.1	.9	-1.5	.	.5
	df	2.3	2.3	3.6	3.6	4.8	.	2.1
	P(2-tail)	.440	.864	.118	.441	.193	.	.658

MVA OF 64 CASES AND V1 DELETED

Separate Variance t Tests[a]

		v9
v2	t	-1.2
	df	18.6
	P(2-tail)	.233
	# Present	50
	# Missing	10
	Mean(Present)	4.754
	Mean(Missing)	5.020
v3	t	.9
	df	18.2
	P(2-tail)	.399
	# Present	48
	# Missing	12
	Mean(Present)	4.842
	Mean(Missing)	4.625
v4	t	-2.4
	df	4.5
	P(2-tail)	.064
	# Present	56
	# Missing	4
	Mean(Present)	4.757
	Mean(Missing)	5.375
v5	t	.6
	df	4.5
	P(2-tail)	.605
	# Present	55
	# Missing	5
	Mean(Present)	4.820
	Mean(Missing)	4.560
	t	.4
	df	4.5
	P(2-tail)	.704

MVA OF 64 CASES AND V1 DELETED

Separate Variance t Tests[a]

		v2	v3	v4	v5	v6	v7	v8
v7	# Present	51	47	56	55	59	60	57
	# Missing	3	3	4	4	4	0	3
	Mean(Present)	1.920	8.138	5.073	2.860	2.581	6.790	46.140
	Mean(Missing)	1.500	8.000	6.175	2.550	2.900	.	42.667
v8	t	-1.4	2.2	-1.1	-.9	-1.8	1.7	.
	df	1.0	3.4	3.9	4.1	4.0	9.1	.
	P(2-tail)	.384	.101	.326	.401	.149	.128	.
	# Present	52	46	56	55	59	57	60
	# Missing	2	4	4	4	4	3	0
	Mean(Present)	1.854	8.261	5.113	2.822	2.573	6.816	45.967
	Mean(Missing)	3.000	6.625	5.625	3.075	3.025	6.300	.
v9	t	.8	-2.1	2.5	2.7	1.3	.9	2.4
	df	3.7	1.3	3.6	3.8	2.3	4.2	4.6
	P(2-tail)	.463	.235	.076	.056	.302	.409	.066
	# Present	50	48	56	55	60	56	56
	# Missing	4	2	4	4	3	4	4
	Mean(Present)	1.920	8.085	5.232	2.895	2.623	6.825	46.429
	Mean(Missing)	1.600	9.200	3.950	2.075	2.167	6.300	39.500

MVA OF 64 CASES AND V1 DELETED

Separate Variance t Tests[a]

		v9
v7	# Present	56
	# Missing	4
	Mean(Present)	4.805
	Mean(Missing)	4.700
v8	t	1.6
	df	5.7
	P(2-tail)	.155
	# Present	56
	# Missing	4
	Mean(Present)	4.821
	Mean(Missing)	4.475
v9	t	.
	df	.
	P(2-tail)	.
	# Present	60
	# Missing	0
	Mean(Present)	4.798
	Mean(Missing)	.

For each quantitative variable, pairs of groups are formed by indicator variables (present, missing).

a. Indicator variables with less than 5% missing are not displayed.

MVA OF 64 CASES AND V1 DELETED

Percent Mismatch of Indicator Variables.[a]

	v2	v3	v4	v5	v7	v8	v9
v2	15.63						
v3	31.25	21.88					
v4	21.88	21.88	6.25				
v5	23.44	23.44	14.06	7.81			
v7	18.75	25.00	12.50	14.06	6.25		
v8	15.63	28.13	12.50	14.06	9.38	6.25	
v9	21.88	21.88	12.50	14.06	12.50	12.50	6.25

The diagonal elements are the percentages missing, and the off-diagonal elements are the mismatch percentages of indicator variables.

a. Indicator variables with less than 5% missing values are not displayed.

Missing Patterns (cases with missing values)

Case	# Missing	% Missing	Missing and Extreme Value Patterns[a]					
			v2	v3	v4	v5	v6	v7
202	1	7.7		S				
205	1	7.7		S				
250	1	7.7		S				
255	1	7.7		S				
269	1	7.7		S				
213	2	15.4	S	S				
257	2	15.4	S	S				
220	1	7.7	S					
232	1	7.7	S					
237	1	7.7	S					
248	1	7.7	S					
249	1	7.7	S					
224	2	15.4	S					

MVA OF 64 CASES AND V1 DELETED

Missing Patterns (cases with missing values)

	Missing and Extreme Value Patterns[a]							Variable Values
Case	v8	v9	v10	v11	v12	v13	v14	v2
202								.4
205								1.4
250								3.7
255								1.0
269								1.9
213								.
257								.
220								.
232								.
237								.
248								.
249								.
224	S							.

MVA OF 64 CASES AND V1 DELETED

Missing Patterns (cases with missing values)

	Variable Values						
Case	v3	v4	v5	v6	v7	v8	v9
202	.	2.5	1.2	1.7	5.2	35.0	3.3
205	.	4.8	3.3	2.6	3.8	49.0	4.9
250	.	5.2	3.0	2.3	9.1	49.0	4.8
255	.	3.4	1.7	1.1	6.2	35.0	4.1
269	.	4.5	1.5	3.1	9.9	39.0	3.3
213	.	7.8	3.6	4.0	5.9	43.0	5.2
257	.	5.8	3.7	2.5	9.3	44.0	4.8
220	9.0	7.0	3.2	3.7	8.0	33.0	5.4
232	8.2	5.0	3.6	2.5	9.0	53.0	5.2
237	7.4	6.9	4.6	4.0	9.6	62.0	6.2
248	6.4	5.3	3.0	2.5	7.1	46.0	4.5
249	8.5	3.7	3.5	1.9	4.8	58.0	4.3
224	8.6	5.7	2.7	3.7	6.7	.	5.0

MVA OF 64 CASES AND V1 DELETED

Missing Patterns (cases with missing values)

Case	# Missing	% Missing	Missing and Extreme Value Patterns[a]					
			v2	v3	v4	v5	v6	v7
227	2	15.4	S					
244	1	7.7						
219	2	15.4						S
231	1	7.7						S
221	2	15.4		S				S
241	2	15.4		S		S		
222	2	15.4		S		S		
218	1	7.7				S		
229	1	7.7				S		
216	1	7.7				S		
246	1	7.7			S			
228	1	7.7			S			
225	2	15.4		S	S			
267	2	15.4		S	S			
204	2	15.4		S				
207	2	15.4		S				
268	1	7.7						
235	2	15.4					S	
203	2	15.4	S					S

MVA OF 64 CASES AND V1 DELETED

Missing Patterns (cases with missing values)

Case	Missing and Extreme Value Patterns[a]							Variable Values
	v8	v9	v10	v11	v12	v13	v14	v2
227	S							.
244	S							3.8
219	S							2.2
231								.7
221								1.6
241								1.9
222								2.2
218								2.8
229								1.4
216								1.6
246								1.4
228								1.8
225								1.3
267								.8
204		S						1.5
207		S						1.5
268		S						2.6
235		S						.8
203								.

MVA OF 64 CASES AND V1 DELETED

Missing Patterns (cases with missing values)

	Variable Values						
Case	v3	v4	v5	v6	v7	v8	v9
227	5.7	5.1	3.6	2.9	6.2	.	4.4
244	5.5	4.9	3.4	2.6	6.0	.	4.2
219	6.7	6.8	2.6	2.9	.	.	4.3
231	8.2	6.0	2.1	2.5	.	41.0	5.0
221	.	4.8	2.0	2.8	.	32.0	4.3
241	.	4.5	.	3.1	3.8	54.0	4.8
222	.	4.6	.	2.5	8.3	47.0	5.0
218	5.2	5.0	.	2.7	8.4	38.0	3.7
229	9.7	6.1	.	3.9	6.8	54.0	5.9
216	6.4	5.0	.	2.1	8.4	25.0	3.4
246	9.0	.	2.6	2.3	6.8	45.0	4.9
228	7.7	.	3.4	1.5	5.9	40.0	5.6
225	.	.	3.0	2.6	6.8	54.0	5.9
267	.	.	2.2	2.6	5.3	42.0	5.1
204	.	4.8	1.9	2.5	7.2	36.0	.
207	.	4.8	1.9	2.5	7.2	36.0	.
268	9.7	3.3	2.9	1.5	5.2	47.0	.
235	8.7	2.9	1.6	.	5.6	39.0	.
203	9.1	7.1	3.5	3.4	.	55.0	5.2

- indicates an extreme low value, while + indicates an extreme high value. The range used is (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

a. Cases are sorted on missing patterns, variables are not sorted.

MVA OF 64 CASES AND V1 DELETED

Tabulated Patterns

	Missing Patterns[a]						
Number of Cases	v2	v3	v4	v5	v6	v7	v8
32							
5		X					
2	X	X					
5	X						
2	X						X
1							X
1						X	X
1						X	
1		X				X	
2		X		X			
3				X			
2			X				
2		X	X				
2		X					
1							
1					X		
1	X					X	

MVA OF 64 CASES AND V1 DELETED

Tabulated Patterns

Number of Cases	Missing Patterns[a]						Complete if ...[b]
	v9	v10	v11	v12	v13	v14	
32							32
5							37
2							44
5							37
2							40
1							33
1							35
1							33
1							39
2							42
3							35
2							34
2							41
2	X						40
1	X						33
1	X						34
1							39

MVA OF 64 CASES AND V1 DELETED

Tabulated Patterns

Number of Cases	v2[c]	v3[c]	v4[c]	v5[c]	v6[c]	v7[c]	v8[c]
32	2.003	8.337	5.172	2.881	2.544	6.716	47.719
5	1.680	.	4.080	2.140	2.160	6.840	41.400
2	.	.	6.800	3.650	3.250	7.600	43.500
5	.	7.900	5.580	3.580	2.920	7.700	50.400
2	.	7.150	5.400	3.150	3.300	6.450	.
1	3.800	5.500	4.900	3.400	2.600	6.000	.
1	2.200	6.700	6.800	2.600	2.900	.	.
1	.700	8.200	6.000	2.100	2.500	.	41.000
1	1.600	.	4.800	2.000	2.800	.	32.000
2	2.050	.	4.550	.	2.800	6.050	50.500
3	1.933	7.100	5.367	.	2.900	7.867	39.000
2	1.600	8.350	.	3.000	1.900	6.350	42.500
2	1.050	.	.	2.600	2.600	6.050	48.000
2	1.500	.	4.800	1.900	2.500	7.200	36.000
1	2.600	9.700	3.300	2.900	1.500	5.200	47.000
1	.800	8.700	2.900	1.600	.	5.600	39.000
1	.	9.100	7.100	3.500	3.400	.	55.000

MVA OF 64 CASES AND V1 DELETED

Tabulated Patterns

Number of Cases	v9[c]
32	4.850
5	4.080
2	5.000
5	5.120
2	4.700
1	4.200
1	4.300
1	5.000
1	4.300
2	4.900
3	4.333
2	5.250
2	5.500
2	.
1	.
1	.
1	5.200

a. Variables are not sorted.

b. Number of complete cases if variables missing in that pattern (marked with X) are not used.

c. Means at each unique pattern

Listwise Statistics

MVA OF 64 CASES AND V1 DELETED

Listwise Means

Number of cases	v2	v3	v4	v5	v6	v7	v8	v9
32	2.003	8.337	5.172	2.881	2.544	6.716	47.719	4.850

Listwise Covariances

	v2	v3	v4	v5	v6	v7	v8	v9
v2	.7061							
v3	-.2914	1.4740						
v4	.2662	-.1012	1.2376					
v5	.1643	.2065	.1972	.4693				
v6	.2099	-.0762	.6561	.1554	.5193			
v7	.4896	-.8342	.7863	-.0316	.6599	2.8543		
v8	.0686	8.4625	2.1822	4.7204	1.8062	-4.4213	93.4990	
v9	-.2008	.8171	.2085	.2755	.0590	-.6411	6.0306	.7716

Listwise Correlations

	v2	v3	v4	v5	v6	v7	v8	v9
v2	1							
v3	-.286	1						
v4	.285	-.075	1					
v5	.285	.248	.259	1				
v6	.347	-.087	.818	.315	1			
v7	.345	-.407	.418	-.027	.542	1		
v8	.008	.721	.203	.713	.259	-.271	1	
v9	-.272	.766	.213	.458	.093	-.432	.710	1

Pairwise Statistics

MVA OF 64 CASES AND V1 DELETED

Pairwise Frequencies

	v2	v3	v4	v5	v6	v7	v8	v9
v2	54							
v3	42	50						
v4	50	48	60					
v5	49	47	55	59				
v6	53	49	59	58	63			
v7	51	47	56	55	59	60		
v8	52	46	56	55	59	57	60	
v9	50	48	56	55	60	56	56	60
v10	54	50	60	59	63	60	60	60
v11	54	50	60	59	63	60	60	60
v12	54	50	60	59	63	60	60	60
v13	54	50	60	59	63	60	60	60
v14	54	50	60	59	63	60	60	60

Pairwise Frequencies

	v10	v11	v12	v13	v14
v2					
v3					
v4					
v5					
v6					
v7					
v8					
v9					
v10	64				
v11	64	64			
v12	64	64	64		
v13	64	64	64	64	
v14	64	64	64	64	64

MVA OF 64 CASES AND V1 DELETED

Pairwise Means

	v2	v3	v4	v5	v6	v7	v8	v9
v2	1.896	8.181	4.988	2.704	2.506	6.682	45.462	4.754
v3	1.981	8.130	5.235	2.947	2.612	6.796	47.022	4.842
v4	1.942	8.121	5.147	2.842	2.625	6.832	46.018	4.757
v5	1.888	8.196	5.156	2.839	2.579	6.758	46.182	4.820
v6	1.917	8.118	5.185	2.860	2.602	6.810	46.085	4.798
v7	1.920	8.138	5.073	2.860	2.581	6.790	46.140	4.805
v8	1.854	8.261	5.113	2.822	2.573	6.816	45.967	4.821
v9	1.920	8.085	5.232	2.895	2.623	6.825	46.429	4.798
v10	1.896	8.130	5.147	2.839	2.602	6.790	45.967	4.798
v11	1.896	8.130	5.147	2.839	2.602	6.790	45.967	4.798
v12	1.896	8.130	5.147	2.839	2.602	6.790	45.967	4.798
v13	1.896	8.130	5.147	2.839	2.602	6.790	45.967	4.798
v14	1.896	8.130	5.147	2.839	2.602	6.790	45.967	4.798

Mean of quantitative variable when other variable is present.

MVA OF 64 CASES AND V1 DELETED

Pairwise Standard Deviations

	v2	v3	v4	v5	v6	v7	v8	v9
v2	.8589	1.3408	1.1224	.7283	.6795	1.6686	9.4027	.8591
v3	.8583	1.3194	1.1643	.6947	.7412	1.6007	9.8036	.8351
v4	.8711	1.3397	1.1877	.7719	.7279	1.7186	9.6474	.8264
v5	.8880	1.2429	1.2289	.7541	.7235	1.6616	9.2298	.8070
v6	.8534	1.3305	1.1604	.7424	.7192	1.6821	9.4564	.8194
v7	.8656	1.3377	1.1719	.7603	.7343	1.6751	9.3855	.8411
v8	.8318	1.2421	1.2065	.7697	.7268	1.7141	9.4204	.8396
v9	.8697	1.3242	1.1609	.7392	.7226	1.7120	9.5114	.8194
v10	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204	.8194
v11	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204	.8194
v12	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204	.8194
v13	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204	.8194
v14	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204	.8194

Standard deviation of quantitative variable when other variable is present.

Pairwise Covariances

	v2	v3	v4	v5	v6	v7	v8	v9
v2	.7377							
v3	-.4111	1.7409						
v4	.2921	-.1020	1.4107					
v5	.2844	.0409	.4095	.5686				
v6	.1509	-.0346	.6842	.1848	.5173			
v7	.5022	-.7668	.8012	.0839	.4964	2.8060		
v8	1.1668	7.3231	2.5907	5.0552	1.8403	-3.2469	88.7446	
v9	-.1376	.7764	.3630	.3179	.1382	-.3681	5.3434	.6714

MVA OF 64 CASES AND V1 DELETED

Pairwise Correlations

	v2	v3	v4	v5	v6	v7	v8	v9
v2	1							
v3	-.357	1						
v4	.299	-.065	1					
v5	.440	.047	.432	1				
v6	.260	-.035	.810	.344	1			
v7	.348	-.358	.398	.066	.402	1		
v8	.149	.601	.223	.712	.268	-.202	1	
v9	-.184	.702	.378	.533	.233	-.256	.669	1

EM Estimated Statistics

EM Means[a]

v2	v3	v4	v5	v6	v7	v8	v9
1.993	8.108	5.136	2.832	2.583	6.836	45.810	4.768

a. Little's MCAR test: Chi-Square = 99.367, DF = 103, Sig. = .583

MVA OF 64 CASES AND V1 DELETED

EM Covariances[a]

	v2	v3	v4	v5	v6	v7	v8	v9
v2	.7626							
v3	-.3468	1.5887						
v4	.3049	-.1301	1.3504					
v5	.3156	.0640	.3526	.5605				
v6	.1884	-.0655	.6829	.2066	.5332			
v7	.5115	-.6294	.7739	.0403	.5039	2.7989		
v8	1.3501	6.3727	2.1476	4.7539	1.8283	-2.9874	86.1895	
v9	-.0535	.6300	.3396	.3368	.1414	-.3275	5.0875	.6634

a. Little's MCAR test: Chi-Square = 99.367, DF = 103, Sig. = .583

EM Correlations[a]

	v2	v3	v4	v5	v6	v7	v8	v9
v2	1							
v3	-.315	1						
v4	.300	-.089	1					
v5	.483	.068	.405	1				
v6	.295	-.071	.805	.378	1			
v7	.350	-.298	.398	.032	.412	1		
v8	.167	.545	.199	.684	.270	-.192	1	
v9	-.075	.614	.359	.552	.238	-.240	.673	1

a. Little's MCAR test: Chi-Square = 99.367, DF = 103, Sig. = .583

Regression Estimated Statistics

MVA OF 64 CASES AND V1 DELETED

Regression Means[a]

v2	v3	v4	v5	v6	v7	v8	v9
1.950	8.108	5.138	2.851	2.583	6.811	45.523	4.755

a. Random normal variate is added to each estimate.

Regression Covariances[a]

	v2	v3	v4	v5	v6	v7	v8	v9
v2	.6901							
v3	-.4035	1.5992						
v4	.2757	-.2062	1.3294					
v5	.2836	.0426	.3634	.5756				
v6	.1650	-.1006	.6730	.2233	.5322			
v7	.4429	-.5843	.8289	.0561	.5059	2.8321		
v8	1.0707	6.8539	1.9602	4.8528	1.6898	-2.4431	87.3494	
v9	-.0752	.6277	.3438	.3530	.1406	-.3179	5.2930	.6798

a. Random normal variate is added to each estimate.

MVA OF 64 CASES AND V1 DELETED

Regression Correlations[a]

	v2	v3	v4	v5	v6	v7	v8	v9
v2	1							
v3	-.384	1						
v4	.288	-.141	1					
v5	.450	.044	.415	1				
v6	.272	-.109	.800	.403	1			
v7	.317	-.275	.427	.044	.412	1		
v8	.138	.580	.182	.684	.248	-.155	1	
v9	-.110	.602	.362	.564	.234	-.229	.687	1

a. Random normal variate is added to each estimate.

IMPUTE MEAN SUBSTITUTION

Replace Missing Values

Result Variables

	Result Variable	N of Replaced Missing Values	Case Number of Non-Missing Values		N of Valid Cases
			First	Last	
1	v2_MEANSUB	10	1	64	64
2	v3_MEANSUB	14	1	64	64
3	V4_MEANSUB	4	1	64	64
4	V5_MEANSUB	5	1	64	64
5	V6_MEANSUB	1	1	64	64
6	V7_MEANSUB	4	1	64	64
7	V8_MEANSUB	4	1	64	64
8	V9_MEANSUB	4	1	64	64

Result Variables

	Creating Function
1	SMEAN(v2)
2	SMEAN(v3)
3	SMEAN(v4)
4	SMEAN(v5)
5	SMEAN(v6)
6	SMEAN(v7)
7	SMEAN(v8)
8	SMEAN(v9)

IMPUTATION OF LISTWISE, PAIRWISE and EM with MVA

MVA

Univariate Statistics

	N	Mean	Std. Deviation	Missing		No. of Extremes[a]	
				Count	Percent	Low	High
v2	54	1.896	.8589	10	15.6	0	0
v3	50	8.130	1.3194	14	21.9	0	0
v4	60	5.147	1.1877	4	6.3	0	0
v5	59	2.839	.7541	5	7.8	0	0
v6	63	2.602	.7192	1	1.6	0	0
v7	60	6.790	1.6751	4	6.3	0	0
v8	60	45.967	9.4204	4	6.3	0	0
v9	60	4.798	.8194	4	6.3	0	0

a. Number of cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

Summary of Estimated Means

	v2	v3	v4	v5	v6	v7	v8	v9
Listwise	2.003	8.337	5.172	2.881	2.544	6.716	47.719	4.850
All Values	1.896	8.130	5.147	2.839	2.602	6.790	45.967	4.798
EM	1.993	8.108	5.136	2.832	2.583	6.836	45.810	4.768

Summary of Estimated Standard Deviations

	v2	v3	v4	v5	v6	v7	v8	v9
Listwise	.8403	1.2141	1.1125	.6851	.7206	1.6895	9.6695	.8784
All Values	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204	.8194
EM	.8733	1.2604	1.1620	.7487	.7302	1.6730	9.2838	.8145

Listwise Statistics

IMPUTATION OF LISTWISE, PAIRWISE and EM with MVA

Listwise Means

Number of cases	v2	v3	v4	v5	v6	v7	v8	v9
32	2.003	8.337	5.172	2.881	2.544	6.716	47.719	4.850

Listwise Covariances

	v2	v3	v4	v5	v6	v7	v8	v9
v2	.7061							
v3	-.2914	1.4740						
v4	.2662	-.1012	1.2376					
v5	.1643	.2065	.1972	.4693				
v6	.2099	-.0762	.6561	.1554	.5193			
v7	.4896	-.8342	.7863	-.0316	.6599	2.8543		
v8	.0686	8.4625	2.1822	4.7204	1.8062	-4.4213	93.4990	
v9	-.2008	.8171	.2085	.2755	.0590	-.6411	6.0306	.7716

Listwise Correlations

	v2	v3	v4	v5	v6	v7	v8	v9
v2	1							
v3	-.286	1						
v4	.285	-.075	1					
v5	.285	.248	.259	1				
v6	.347	-.087	.818	.315	1			
v7	.345	-.407	.418	-.027	.542	1		
v8	.008	.721	.203	.713	.259	-.271	1	
v9	-.272	.766	.213	.458	.093	-.432	.710	1

Pairwise Statistics

IMPUTATION OF LISTWISE, PAIRWISE and EM with MVA

Pairwise Frequencies

	v2	v3	v4	v5	v6	v7	v8	v9
v2	54							
v3	42	50						
v4	50	48	60					
v5	49	47	55	59				
v6	53	49	59	58	63			
v7	51	47	56	55	59	60		
v8	52	46	56	55	59	57	60	
v9	50	48	56	55	60	56	56	60

Pairwise Means

	v2	v3	v4	v5	v6	v7	v8	v9
v2	1.896	8.181	4.988	2.704	2.506	6.682	45.462	4.754
v3	1.981	8.130	5.235	2.947	2.612	6.796	47.022	4.842
v4	1.942	8.121	5.147	2.842	2.625	6.832	46.018	4.757
v5	1.888	8.196	5.156	2.839	2.579	6.758	46.182	4.820
v6	1.917	8.118	5.185	2.860	2.602	6.810	46.085	4.798
v7	1.920	8.138	5.073	2.860	2.581	6.790	46.140	4.805
v8	1.854	8.261	5.113	2.822	2.573	6.816	45.967	4.821
v9	1.920	8.085	5.232	2.895	2.623	6.825	46.429	4.798

Mean of quantitative variable when other variable is present.

IMPUTATION OF LISTWISE, PAIRWISE and EM with MVA

Pairwise Standard Deviations

	v2	v3	v4	v5	v6	v7	v8	v9
v2	.8589	1.3408	1.1224	.7283	.6795	1.6686	9.4027	.8591
v3	.8583	1.3194	1.1643	.6947	.7412	1.6007	9.8036	.8351
v4	.8711	1.3397	1.1877	.7719	.7279	1.7186	9.6474	.8264
v5	.8880	1.2429	1.2289	.7541	.7235	1.6616	9.2298	.8070
v6	.8534	1.3305	1.1604	.7424	.7192	1.6821	9.4564	.8194
v7	.8656	1.3377	1.1719	.7603	.7343	1.6751	9.3855	.8411
v8	.8318	1.2421	1.2065	.7697	.7268	1.7141	9.4204	.8396
v9	.8697	1.3242	1.1609	.7392	.7226	1.7120	9.5114	.8194

Standard deviation of quantitative variable when other variable is present.

Pairwise Covariances

	v2	v3	v4	v5	v6	v7	v8	v9
v2	.7377							
v3	-.4111	1.7409						
v4	.2921	-.1020	1.4107					
v5	.2844	.0409	.4095	.5686				
v6	.1509	-.0346	.6842	.1848	.5173			
v7	.5022	-.7668	.8012	.0839	.4964	2.8060		
v8	1.1668	7.3231	2.5907	5.0552	1.8403	-3.2469	88.7446	
v9	-.1376	.7764	.3630	.3179	.1382	-.3681	5.3434	.6714

IMPUTATION OF LISTWISE, PAIRWISE and EM with MVA

Pairwise Correlations

	v2	v3	v4	v5	v6	v7	v8	v9
v2	1							
v3	-.357	1						
v4	.299	-.065	1					
v5	.440	.047	.432	1				
v6	.260	-.035	.810	.344	1			
v7	.348	-.358	.398	.066	.402	1		
v8	.149	.601	.223	.712	.268	-.202	1	
v9	-.184	.702	.378	.533	.233	-.256	.669	1

EM Estimated Statistics

EM Means[a]

v2	v3	v4	v5	v6	v7	v8	v9
1.993	8.108	5.136	2.832	2.583	6.836	45.810	4.768

a. Little's MCAR test: Chi-Square = 99.367, DF = 103, Sig. = .583

IMPUTATION OF LISTWISE, PAIRWISE and EM with MVA

EM Covariances[a]

	v2	v3	v4	v5	v6	v7	v8	v9
v2	.7626							
v3	-.3468	1.5887						
v4	.3049	-.1301	1.3504					
v5	.3156	.0640	.3526	.5605				
v6	.1884	-.0655	.6829	.2066	.5332			
v7	.5115	-.6294	.7739	.0403	.5039	2.7989		
v8	1.3501	6.3727	2.1476	4.7539	1.8283	-2.9874	86.1895	
v9	-.0535	.6300	.3396	.3368	.1414	-.3275	5.0875	.6634

a. Little's MCAR test: Chi-Square = 99.367, DF = 103, Sig. = .583

EM Correlations[a]

	v2	v3	v4	v5	v6	v7	v8	v9
v2	1							
v3	-.315	1						
v4	.300	-.089	1					
v5	.483	.068	.405	1				
v6	.295	-.071	.805	.378	1			
v7	.350	-.298	.398	.032	.412	1		
v8	.167	.545	.199	.684	.270	-.192	1	
v9	-.075	.614	.359	.552	.238	-.240	.673	1

a. Little's MCAR test: Chi-Square = 99.367, DF = 103, Sig. = .583

IMPUTATION WITH REGRESSION MODEL WITHOUT RESIDUALS

MVA

Univariate Statistics

	N	Mean	Std. Deviation	Missing Count	Missing Percent	No. of Extremes[a] Low	No. of Extremes[a] High
v2	54	1.896	.8589	10	15.6	0	0
v3	50	8.130	1.3194	14	21.9	0	0
v4	60	5.147	1.1877	4	6.3	0	0
v5	59	2.839	.7541	5	7.8	0	0
v6	63	2.602	.7192	1	1.6	0	0
v7	60	6.790	1.6751	4	6.3	0	0
v8	60	45.967	9.4204	4	6.3	0	0
v9	60	4.798	.8194	4	6.3	0	0

a. Number of cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

Summary of Estimated Means

	v2	v3	v4	v5	v6	v7	v8
All Values	1.896	8.130	5.147	2.839	2.602	6.790	45.967
Regression	1.971	8.107	5.139	2.835	2.585	6.844	45.679

Summary of Estimated Means

	v9
All Values	4.798
Regression	4.776

IMPUTATION WITH REGRESSION MODEL WITHOUT RESIDUALS

Summary of Estimated Standard Deviations

	v2	v3	v4	v5	v6	v7	v8
All Values	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204
Regression	.8151	1.2211	1.1511	.7442	.7264	1.6407	9.2243

Summary of Estimated Standard Deviations

	v9
All Values	.8194
Regression	.8039

Regression Estimated Statistics

Regression Means

v2	v3	v4	v5	v6	v7	v8	v9
1.971	8.107	5.139	2.835	2.585	6.844	45.679	4.776

Regression Covariances

	v2	v3	v4	v5	v6	v7	v8	v9
v2	.6643							
v3	-.3303	1.4910						
v4	.2878	-.1327	1.3251					
v5	.2919	.0583	.3538	.5538				
v6	.1768	-.0663	.6761	.2075	.5276			
v7	.4419	-.6086	.7819	.0319	.5011	2.6920		
v8	1.0008	6.6160	2.1186	4.7155	1.7559	-2.9058	85.0886	
v9	-.0697	.6309	.3304	.3308	.1355	-.3317	5.0753	.6462

IMPUTATION WITH REGRESSION MODEL WITHOUT RESIDUALS

Regression Correlations

	v2	v3	v4	v5	v6	v7	v8	v9
v2	1							
v3	-.332	1						
v4	.307	-.094	1					
v5	.481	.064	.413	1				
v6	.299	-.075	.809	.384	1			
v7	.330	-.304	.414	.026	.420	1		
v8	.133	.587	.200	.687	.262	-.192	1	
v9	-.106	.643	.357	.553	.232	-.251	.684	1

IMPUTATION WITH REGRESSION MODEL -- OPTION 1

IMPUTATION WITH REGRESSION MODEL -- OPTION 1
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

MVA

Warnings

Since more than half of the cases are missing, error terms are chosen randomly from a Normal distribution instead of from the observed residuals of complete cases.

Univariate Statistics

	N	Mean	Std. Deviation	Missing Count	Missing Percent	No. of Extremes[a] Low	No. of Extremes[a] High
v2	54	1.896	.8589	10	15.6	0	0
v3	50	8.130	1.3194	14	21.9	0	0
v4	60	5.147	1.1877	4	6.3	0	0
v5	59	2.839	.7541	5	7.8	0	0
v6	63	2.602	.7192	1	1.6	0	0
v7	60	6.790	1.6751	4	6.3	0	0
v8	60	45.967	9.4204	4	6.3	0	0
v9	60	4.798	.8194	4	6.3	0	0

a. Number of cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

Summary of Estimated Means

	v2	v3	v4	v5	v6	v7	v8
All Values	1.896	8.130	5.147	2.839	2.602	6.790	45.967
Regression	1.983	8.094	5.131	2.836	2.581	6.911	45.823

Summary of Estimated Means

	v9
All Values	4.798
Regression	4.808

IMPUTATION WITH REGRESSION MODEL -- OPTION 1
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

Summary of Estimated Standard Deviations

	v2	v3	v4	v5	v6	v7	v8
All Values	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204
Regression	.8349	1.2368	1.1534	.7534	.7323	1.7091	9.2172

Summary of Estimated Standard Deviations

	v9
All Values	.8194
Regression	.8025

Regression Estimated Statistics

Regression Means[a]

v2	v3	v4	v5	v6	v7	v8	v9
1.983	8.094	5.131	2.836	2.581	6.911	45.823	4.808

a. Random normal variate is added to each estimate.

IMPUTATION WITH REGRESSION MODEL -- OPTION 1
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

Regression Covariances[a]

	v2	v3	v4	v5	v6	v7	v8	v9
v2	.6971							
v3	-.3122	1.5297						
v4	.2763	-.1304	1.3303					
v5	.3056	.0293	.3484	.5676				
v6	.1610	-.0551	.6827	.2082	.5363			
v7	.3954	-.6662	.8369	-.0210	.5059	2.9210		
v8	1.0589	6.3658	2.0935	4.7019	1.8671	-3.4126	84.9570	
v9	-.0944	.6340	.2795	.2896	.1122	-.3571	4.8575	.6441

a. Random normal variate is added to each estimate.

Regression Correlations[a]

	v2	v3	v4	v5	v6	v7	v8	v9
v2	1							
v3	-.302	1						
v4	.287	-.091	1					
v5	.486	.031	.401	1				
v6	.263	-.061	.808	.377	1			
v7	.277	-.315	.425	-.016	.404	1		
v8	.138	.558	.197	.677	.277	-.217	1	
v9	-.141	.639	.302	.479	.191	-.260	.657	1

a. Random normal variate is added to each estimate.

IMPUTATION WITH REGRESSION MODEL -- OPTION 2

IMPUTATION WITH REGRESSION MODEL -- OPTION 2
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

MVA

Univariate Statistics

	N	Mean	Std. Deviation	Missing Count	Missing Percent	No. of Extremes[a] Low	No. of Extremes[a] High
v2	54	1.896	.8589	10	15.6	0	0
v3	50	8.130	1.3194	14	21.9	0	0
v4	60	5.147	1.1877	4	6.3	0	0
v5	59	2.839	.7541	5	7.8	0	0
v6	63	2.602	.7192	1	1.6	0	0
v7	60	6.790	1.6751	4	6.3	0	0
v8	60	45.967	9.4204	4	6.3	0	0
v9	60	4.798	.8194	4	6.3	0	0

a. Number of cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

Summary of Estimated Means

	v2	v3	v4	v5	v6	v7	v8
All Values	1.896	8.130	5.147	2.839	2.602	6.790	45.967
Regression	2.000	8.126	5.133	2.842	2.586	6.846	45.631

Summary of Estimated Means

	v9
All Values	4.798
Regression	4.785

IMPUTATION WITH REGRESSION MODEL -- OPTION 2
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

Summary of Estimated Standard Deviations

	v2	v3	v4	v5	v6	v7	v8
All Values	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204
Regression	.8682	1.2723	1.1651	.7510	.7238	1.6547	9.3607

Summary of Estimated Standard Deviations

	v9
All Values	.8194
Regression	.7994

Regression Estimated Statistics

Regression Means[a]

v2	v3	v4	v5	v6	v7	v8	v9
2.000	8.126	5.133	2.842	2.586	6.846	45.631	4.785

a. Random normal variate is added to each estimate.

IMPUTATION WITH REGRESSION MODEL -- OPTION 2
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

Regression Covariances[a]

	v2	v3	v4	v5	v6	v7	v8	v9
v2	.7537							
v3	-.3752	1.6188						
v4	.2525	-.0809	1.3574					
v5	.3061	.0705	.3402	.5640				
v6	.1509	-.0709	.6877	.2152	.5239			
v7	.4635	-.5399	.8091	.0105	.5107	2.7380		
v8	1.0280	6.5574	2.0455	4.8814	1.7661	-2.9712	87.6223	
v9	-.0856	.6514	.3102	.3336	.1330	-.3300	5.0454	.6391

a. Random normal variate is added to each estimate.

Regression Correlations[a]

	v2	v3	v4	v5	v6	v7	v8	v9
v2	1							
v3	-.340	1						
v4	.250	-.055	1					
v5	.470	.074	.389	1				
v6	.240	-.077	.816	.396	1			
v7	.323	-.256	.420	.008	.426	1		
v8	.127	.551	.188	.694	.261	-.192	1	
v9	-.123	.640	.333	.556	.230	-.249	.674	1

a. Random normal variate is added to each estimate.

IMPUTATION WITH REGRESSION MODEL -- OPTION 3

IMPUTATION WITH REGRESSION MODEL -- OPTION 3
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

MVA

Univariate Statistics

	N	Mean	Std. Deviation	Missing Count	Missing Percent	No. of Extremes[a] Low	No. of Extremes[a] High
v2	54	1.896	.8589	10	15.6	0	0
v3	50	8.130	1.3194	14	21.9	0	0
v4	60	5.147	1.1877	4	6.3	0	0
v5	59	2.839	.7541	5	7.8	0	0
v6	63	2.602	.7192	1	1.6	0	0
v7	60	6.790	1.6751	4	6.3	0	0
v8	60	45.967	9.4204	4	6.3	0	0
v9	60	4.798	.8194	4	6.3	0	0

a. Number of cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

Summary of Estimated Means

	v2	v3	v4	v5	v6	v7	v8
All Values	1.896	8.130	5.147	2.839	2.602	6.790	45.967
Regression	1.925	8.123	5.155	2.820	2.575	6.877	45.406

Summary of Estimated Means

	v9
All Values	4.798
Regression	4.782

IMPUTATION WITH REGRESSION MODEL -- OPTION 3
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

Summary of Estimated Standard Deviations

	v2	v3	v4	v5	v6	v7	v8
All Values	.8589	1.3194	1.1877	.7541	.7192	1.6751	9.4204
Regression	.8370	1.3018	1.1644	.7556	.7456	1.6769	9.5424

Summary of Estimated Standard Deviations

	v9
All Values	.8194
Regression	.8054

Regression Estimated Statistics

Regression Means[a]

v2	v3	v4	v5	v6	v7	v8	v9
1.925	8.123	5.155	2.820	2.575	6.877	45.406	4.782

a. Random t(5) variate is added to each estimate.

IMPUTATION WITH REGRESSION MODEL -- OPTION 3
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

Regression Covariances[a]

	v2	v3	v4	v5	v6	v7	v8	v9
v2	.7006							
v3	-.1776	1.6947						
v4	.2630	-.1315	1.3559					
v5	.2354	.0589	.3608	.5709				
v6	.1709	-.0914	.7070	.2273	.5559			
v7	.3861	-.5772	.8481	-.0123	.5201	2.8120		
v8	1.0313	7.0561	1.8948	4.8095	1.6519	-3.5786	91.0582	
v9	-.0692	.6445	.3275	.3339	.1354	-.3395	5.1249	.6487

a. Random t(5) variate is added to each estimate.

Regression Correlations[a]

	v2	v3	v4	v5	v6	v7	v8	v9
v2	1							
v3	-.163	1						
v4	.270	-.087	1					
v5	.372	.060	.410	1				
v6	.274	-.094	.814	.403	1			
v7	.275	-.264	.434	-.010	.416	1		
v8	.129	.568	.171	.667	.232	-.224	1	
v9	-.103	.615	.349	.549	.225	-.251	.667	1

a. Random t(5) variate is added to each estimate.

MULTIPLE IMPUTATION WITH AUXILLIARY VARIABLES

MULTIPLE IMPUTATION WITH AUXILLIARY VARIABLES
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

Multiple Imputation

Imputation Specifications

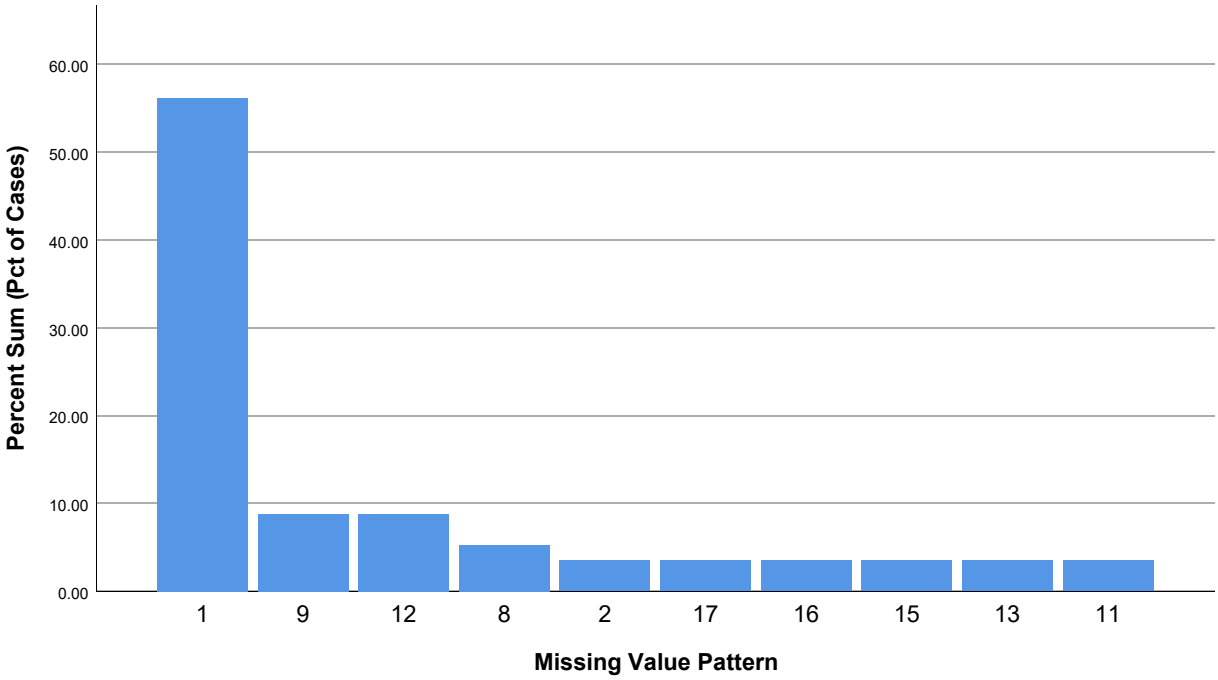
Imputation Method	Fully Conditional Specification
Number of Imputations	5
Model for Scale Variables	Linear Regression
Interactions Included in Models	(none)
Maximum Percentage of Missing Values	100.0%
Maximum Number of Parameters in Imputation Model	100

Imputation Constraints

	Role in Imputation		Imputed Values	
	Dependent	Predictor	Minimum	Maximum
V2	Yes	Yes	0	10
V3	Yes	Yes	0	10
V4	Yes	Yes	0	10
V5	Yes	Yes	0	10
V6	Yes	Yes	0	10
V7	Yes	Yes	0	10
V8	Yes	Yes	0	100
V9	Yes	Yes	0	10
V10	Yes	Yes		
V11	Yes	Yes		
V12	Yes	Yes		
V13	Yes	Yes		
V14	Yes	Yes		

Missing Values

MULTIPLE IMPUTATION WITH AUXILLIARY VARIABLES
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS



The 10 most frequently occurring patterns are shown in the chart.

Imputed Values

Imputation Results

Imputation Method		Fully Conditional Specification
Fully Conditional Specification Method Iterations		20
Dependent Variables	Imputed	v2,v3,v4,v5,v6,v7,v8,v9
	Not Imputed(Too Many Missing Values)	
	Not Imputed(No Missing Values)	v10,v11,v12,v13,v14
Imputation Sequence		v2,v3,v4,v5,v6,v7,v8,v9,v10,v11, v12,v13,v14

MULTIPLE IMPUTATION WITH AUXILLIARY VARIABLES
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

Imputation Models

	Model			
	Type	Effects	Missing Values	Imputed Values
V2	Linear Regression	v10,v11,v12, v13,v14,v3, v4,v5,v6,v7,...	10	50
V3	Linear Regression	v10,v11,v12, v13,v14,v2, v4,v5,v6,v7,...	14	70
V4	Linear Regression	v10,v11,v12, v13,v14,v2, v3,v5,v6,v7,...	4	20
V5	Linear Regression	v10,v11,v12, v13,v14,v2, v3,v4,v6,v7,...	5	25
V6	Linear Regression	v10,v11,v12, v13,v14,v2, v3,v4,v5,v7,...	1	5
V7	Linear Regression	v10,v11,v12, v13,v14,v2, v3,v4,v5,v6,...	4	20
V8	Linear Regression	v10,v11,v12, v13,v14,v2, v3,v4,v5,v6,...	4	20
V9	Linear Regression	v10,v11,v12, v13,v14,v2, v3,v4,v5,v6,...	4	20

Descriptive Statistics

MULTIPLE IMPUTATION WITH AUXILLIARY VARIABLES
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

v2

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		54	1.896	.8589	.400	3.800
Imputed Values	1	10	3.059	1.2447	1.415	4.660
	2	10	2.958	.7038	2.068	3.951
	3	10	3.029	1.3809	.758	4.876
	4	10	3.041	1.1740	1.123	4.988
	5	10	3.467	1.0519	1.594	5.402
Complete Data After Imputation	1	64	2.078	1.0114	.400	4.660
	2	64	2.062	.9178	.400	3.951
	3	64	2.073	1.0319	.400	4.876
	4	64	2.075	.9965	.400	4.988
	5	64	2.142	1.0532	.400	5.402

v3

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		50	8.130	1.3194	5.200	9.900
Imputed Values	1	14	7.871	1.0929	5.642	9.695
	2	14	7.912	1.2202	5.244	9.996
	3	14	7.767	.8712	6.450	9.524
	4	14	7.879	1.2813	5.995	9.879
	5	14	7.317	1.0772	5.865	9.525
Complete Data After Imputation	1	64	8.073	1.2697	5.200	9.900
	2	64	8.082	1.2921	5.200	9.996
	3	64	8.051	1.2383	5.200	9.900
	4	64	8.075	1.3053	5.200	9.900
	5	64	7.952	1.3070	5.200	9.900

MULTIPLE IMPUTATION WITH AUXILLIARY VARIABLES
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

v4

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		60	5.147	1.1877	2.500	7.800
Imputed Values	1	4	5.622	.3997	5.134	6.086
	2	4	5.340	.6771	4.460	6.095
	3	4	5.290	.8389	4.244	6.191
	4	4	5.226	1.3875	3.925	6.545
	5	4	5.361	.7543	4.330	5.972
Complete Data After Imputation	1	64	5.176	1.1585	2.500	7.800
	2	64	5.159	1.1598	2.500	7.800
	3	64	5.156	1.1644	2.500	7.800
	4	64	5.152	1.1888	2.500	7.800
	5	64	5.160	1.1623	2.500	7.800

v5

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		59	2.839	.7541	1.100	4.600
Imputed Values	1	5	2.808	.7999	1.451	3.427
	2	5	2.558	.9525	1.145	3.805
	3	5	2.780	.6485	1.745	3.347
	4	5	2.845	.7364	1.637	3.628
	5	5	2.826	.6235	1.778	3.243
Complete Data After Imputation	1	64	2.837	.7511	1.100	4.600
	2	64	2.817	.7661	1.100	4.600
	3	64	2.834	.7419	1.100	4.600
	4	64	2.839	.7469	1.100	4.600
	5	64	2.838	.7404	1.100	4.600

MULTIPLE IMPUTATION WITH AUXILLIARY VARIABLES
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

v6

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		63	2.602	.7192	1.100	4.000
Imputed Values	1	1	2.573	.	2.573	2.573
	2	1	2.650	.	2.650	2.650
	3	1	2.460	.	2.460	2.460
	4	1	2.140	.	2.140	2.140
	5	1	1.397	.	1.397	1.397
Complete Data After Imputation	1	64	2.601	.7135	1.100	4.000
	2	64	2.602	.7135	1.100	4.000
	3	64	2.599	.7137	1.100	4.000
	4	64	2.594	.7158	1.100	4.000
	5	64	2.583	.7292	1.100	4.000

v7

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		60	6.790	1.6751	1.700	9.900
Imputed Values	1	4	6.356	.9507	5.055	7.212
	2	4	6.357	1.7550	3.820	7.781
	3	4	7.070	.6553	6.249	7.755
	4	4	6.576	.7618	5.507	7.263
	5	4	7.460	1.4590	5.910	9.427
Complete Data After Imputation	1	64	6.763	1.6377	1.700	9.900
	2	64	6.763	1.6690	1.700	9.900
	3	64	6.808	1.6288	1.700	9.900
	4	64	6.777	1.6304	1.700	9.900
	5	64	6.832	1.6601	1.700	9.900

MULTIPLE IMPUTATION WITH AUXILLIARY VARIABLES
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

v8

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		60	45.967	9.4204	25.000	65.000
Imputed Values	1	4	40.397	3.3642	37.350	45.138
	2	4	40.542	8.2394	32.214	51.240
	3	4	34.894	7.4566	24.880	42.814
	4	4	39.245	5.1890	33.273	45.940
	5	4	43.842	5.3446	38.107	50.685
Complete Data After Imputation	1	64	45.619	9.2464	25.000	65.000
	2	64	45.628	9.3859	25.000	65.000
	3	64	45.275	9.6466	24.880	65.000
	4	64	45.547	9.3318	25.000	65.000
	5	64	45.834	9.2054	25.000	65.000

v9

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		60	4.798	.8194	3.300	6.200
Imputed Values	1	4	4.344	.8398	3.251	5.297
	2	4	3.829	.4982	3.107	4.237
	3	4	4.338	1.1410	2.818	5.583
	4	4	3.940	.9473	3.404	5.359
	5	4	3.712	.6934	3.114	4.686
Complete Data After Imputation	1	64	4.770	.8214	3.251	6.200
	2	64	4.738	.8346	3.107	6.200
	3	64	4.770	.8387	2.818	6.200
	4	64	4.745	.8458	3.300	6.200
	5	64	4.730	.8497	3.114	6.200

MULTIPLE IMPUTATION WITHOUT AUXILLIARY VARIABLES

MULTIPLE IMPUTATIONWITHOUT AUXILLIARYVARIABLES
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

Multiple Imputation

Imputation Specifications

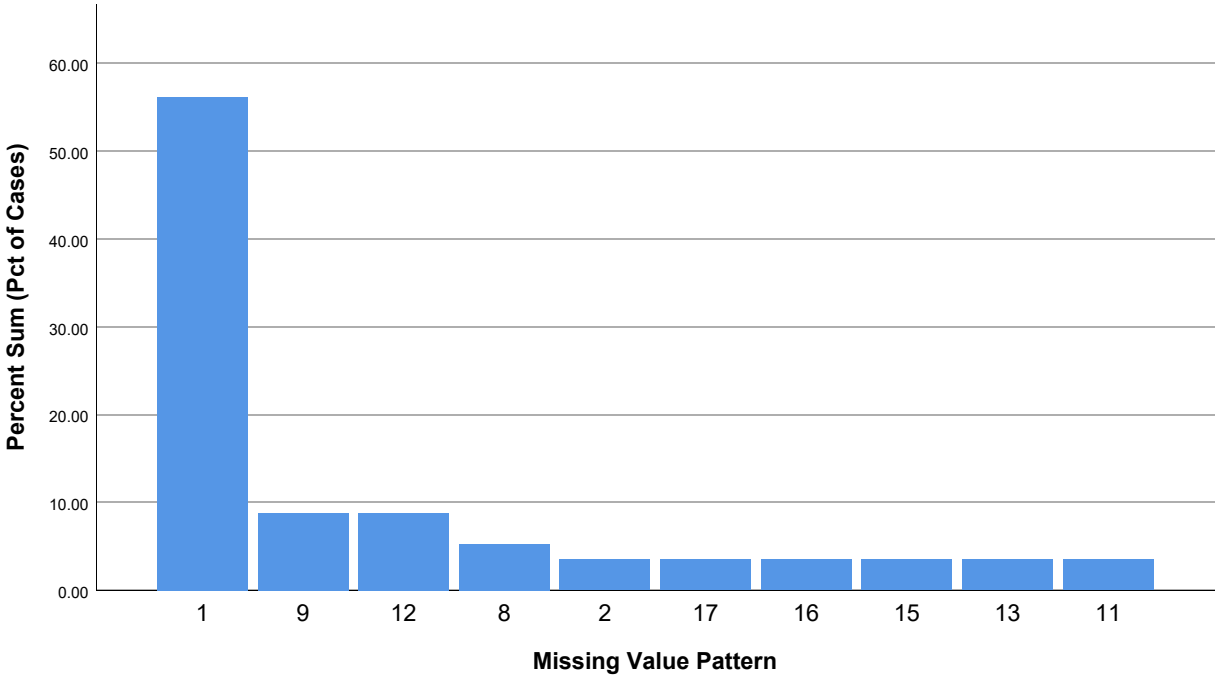
Imputation Method	Fully Conditional Specification
Number of Imputations	5
Model for Scale Variables	Linear Regression
Interactions Included in Models	(none)
Maximum Percentage of Missing Values	100.0%
Maximum Number of Parameters in Imputation Model	100

Imputation Constraints

	Role in Imputation		Imputed Values	
	Dependent	Predictor	Minimum	Maximum
V2	Yes	Yes	0	10
V3	Yes	Yes	0	10
V4	Yes	Yes	0	10
V5	Yes	Yes	0	10
V6	Yes	Yes	0	10
V7	Yes	Yes	0	10
V8	Yes	Yes	0	100
V9	Yes	Yes	0	10

Missing Values

MULTIPLE IMPUTATIONWITHOUT AUXILLIARYVARIABLES
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS



The 10 most frequently occurring patterns are shown in the chart.

Imputed Values

Imputation Results

Imputation Method		Fully Conditional Specification
Fully Conditional Specification Method Iterations		20
Dependent Variables	Imputed	v2,v3,v4,v5,v6,v7,v8,v9
	Not Imputed(Too Many Missing Values)	
	Not Imputed(No Missing Values)	
Imputation Sequence		v2,v3,v4,v5,v6,v7,v8,v9

MULTIPLE IMPUTATIONWITHOUT AUXILLIARYVARIABLES
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

Imputation Models

	Model Type	Model Effects	Missing Values	Imputed Values
V2	Linear Regression	v3,v4,v5,v6, v7,v8,v9	10	50
V3	Linear Regression	v2,v4,v5,v6, v7,v8,v9	14	70
V4	Linear Regression	v2,v3,v5,v6, v7,v8,v9	4	20
V5	Linear Regression	v2,v3,v4,v6, v7,v8,v9	5	25
V6	Linear Regression	v2,v3,v4,v5, v7,v8,v9	1	5
V7	Linear Regression	v2,v3,v4,v5, v6,v8,v9	4	20
V8	Linear Regression	v2,v3,v4,v5, v6,v7,v9	4	20
V9	Linear Regression	v2,v3,v4,v5, v6,v7,v8	4	20

Descriptive Statistics

v2

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		54	1.896	.8589	.400	3.800
Imputed Values	1	10	3.052	1.0378	1.819	5.238
	2	10	2.526	1.2231	.724	4.036
	3	10	2.768	.7462	1.730	4.288
	4	10	2.568	.7428	1.672	3.809
	5	10	2.771	.6754	1.640	3.852
Complete Data After Imputation	1	64	2.077	.9763	.400	5.238
	2	64	1.995	.9421	.400	4.036
	3	64	2.032	.8954	.400	4.288
	4	64	2.001	.8717	.400	3.809
	5	64	2.033	.8879	.400	3.852

MULTIPLE IMPUTATIONWITHOUT AUXILLIARYVARIABLES
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

v3

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		50	8.130	1.3194	5.200	9.900
Imputed Values	1	14	8.071	.9299	6.291	9.315
	2	14	8.174	.8513	6.577	9.795
	3	14	7.716	1.1076	5.276	9.334
	4	14	8.670	.7918	7.795	9.894
	5	14	8.102	1.3030	5.760	9.810
Complete Data After Imputation	1	64	8.117	1.2382	5.200	9.900
	2	64	8.140	1.2264	5.200	9.900
	3	64	8.039	1.2794	5.200	9.900
	4	64	8.248	1.2385	5.200	9.900
	5	64	8.124	1.3056	5.200	9.900

v4

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		60	5.147	1.1877	2.500	7.800
Imputed Values	1	4	5.446	.5669	4.861	6.185
	2	4	5.509	.8190	4.291	6.071
	3	4	5.047	.9355	4.187	6.357
	4	4	4.996	.6520	4.450	5.941
	5	4	4.658	1.0316	3.304	5.603
Complete Data After Imputation	1	64	5.165	1.1583	2.500	7.800
	2	64	5.169	1.1666	2.500	7.800
	3	64	5.140	1.1676	2.500	7.800
	4	64	5.137	1.1587	2.500	7.800
	5	64	5.116	1.1773	2.500	7.800

MULTIPLE IMPUTATIONWITHOUT AUXILLIARYVARIABLES
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

v5

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		59	2.839	.7541	1.100	4.600
Imputed Values	1	5	2.638	.5677	1.774	3.348
	2	5	2.449	.5836	1.416	2.831
	3	5	3.093	.9120	1.581	4.042
	4	5	3.053	.6536	2.057	3.798
	5	5	2.610	.7678	1.703	3.359
Complete Data After Imputation	1	64	2.823	.7395	1.100	4.600
	2	64	2.809	.7458	1.100	4.600
	3	64	2.859	.7623	1.100	4.600
	4	64	2.856	.7443	1.100	4.600
	5	64	2.821	.7515	1.100	4.600

v6

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		63	2.602	.7192	1.100	4.000
Imputed Values	1	1	1.214	.	1.214	1.214
	2	1	.810	.	.810	.810
	3	1	.795	.	.795	.795
	4	1	.897	.	.897	.897
	5	1	1.259	.	1.259	1.259
Complete Data After Imputation	1	64	2.580	.7343	1.100	4.000
	2	64	2.574	.7478	.810	4.000
	3	64	2.573	.7484	.795	4.000
	4	64	2.575	.7446	.897	4.000
	5	64	2.581	.7329	1.100	4.000

MULTIPLE IMPUTATIONWITHOUT AUXILLIARYVARIABLES
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

v7

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		60	6.790	1.6751	1.700	9.900
Imputed Values	1	4	7.974	1.0582	7.108	9.510
	2	4	6.792	1.9714	4.066	8.537
	3	4	7.032	.8691	5.751	7.612
	4	4	7.453	.9002	6.246	8.421
	5	4	5.714	2.4144	3.505	8.956
Complete Data After Imputation	1	64	6.864	1.6627	1.700	9.900
	2	64	6.790	1.6772	1.700	9.900
	3	64	6.805	1.6332	1.700	9.900
	4	64	6.831	1.6409	1.700	9.900
	5	64	6.723	1.7246	1.700	9.900

v8

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		60	45.967	9.4204	25.000	65.000
Imputed Values	1	4	41.653	7.4082	31.776	48.649
	2	4	47.577	5.0065	42.492	53.479
	3	4	48.497	4.0954	43.261	53.151
	4	4	40.768	4.8086	33.635	43.736
	5	4	43.666	8.0063	35.187	54.181
Complete Data After Imputation	1	64	45.697	9.3183	25.000	65.000
	2	64	46.067	9.1901	25.000	65.000
	3	64	46.125	9.1810	25.000	65.000
	4	64	45.642	9.2639	25.000	65.000
	5	64	45.823	9.2993	25.000	65.000

MULTIPLE IMPUTATIONWITHOUT AUXILLIARYVARIABLES
RESULTS WILL VARY SLIGHTLY DUE TO RANDOM COMPONENTS

v9

Data	Imputation	N	Mean	Std. Deviation	Minimum	Maximum
Original Data		60	4.798	.8194	3.300	6.200
Imputed Values	1	4	4.518	.5391	4.084	5.280
	2	4	4.124	.5895	3.611	4.849
	3	4	4.566	.7365	3.506	5.085
	4	4	4.755	.8741	4.211	6.044
	5	4	4.118	.2663	3.780	4.431
Complete Data After Imputation	1	64	4.781	.8045	3.300	6.200
	2	64	4.756	.8199	3.300	6.200
	3	64	4.784	.8110	3.300	6.200
	4	64	4.796	.8156	3.300	6.200
	5	64	4.756	.8122	3.300	6.200