

Appendix A.1
Introductory letter to research participants



Sudan University of Science & Technology Khartoum
Business College

Date: / /2011

Dear: Sir

I am PhD student of Strategic Management under the supervision of Prof. Muhammad Hussain Hafiz (at Business College, Sudan University of Science and Technology, Khartoum), and Co-supervisor Dr. Abdo-Hafiez Ali Hassaballa (Business College Sudan University for Sciences and Technology Khartoum) respectively.

My research is topic is “Enhancing sustainable competitive advantage in the Nigeria’s manufacturing industry. A moderating role of environment”

I will appreciate your cooperation and urge for your participation in my research.

This research will only be used for academic work and not for commercial purposes. The information you provided will be used for the objectives of research, it will be generalize with other's information, and thus, participative firms will not be identified. I would like to assure you that, your response will be kept strictly confidential.

For those who would like to get a copy of these research findings it will be made possible. If you have any enquiry about this research, please feel free and don't hesitate to contact me.

Thank you

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Appendix A. 2
the research Questionnaire



Sudan University of Science & Technology

College of Graduate Studies

**Impact of Strategic Management Elements in Enhancing Sustainable
Competitive Advantage in the Nigeria's Manufacturing Firms. A Moderating
role of Environment.**

TO BE COMPLETED BY A HIGH RANKING OFFICER OR SO IN THE FIRM

All information will be treated as STRICTLY CONFIDENTIAL and will be used for an academic purpose. Please feel free to contact the researcher if you may need any information concerning the questionnaire.

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Section 1: General Profile.

This section consists of general questions, which are important to understand the background of the research respondents. Please () clearly in the space that represent the most appropriate answer.

1- Please mention the type of business you are operating

2- Years after incorporation.

1. 10-20	2. 21-40	3. 41-60	4. Above 61 year

3- Your Gender:

1. Male	2. Female

4- Your marital Status:

1. Single	2. Married	3. Divorced	4. Widowed	5. Separate

5- Your Educational Level:

1. Primary school cert.	2- Secondary school cert.	3- Diploma /NCE cert.	4- University Degree	5- Masters Degree	6- Ph.D	

6- Your length of service in the firm.

1. 5-10	2. 11-16	3. 17-23	4. 24-29	5. 30 and above

7. Number of Firm's Employees

1. 11-100	2. 101-300	3. 301 and above

8. Your target market

1. 11-100	2. 101-300	3. 301 and above

Section 2: This section inquires about the strategic management elements ability to create firm's resources and capabilities.(Namely Formulation, Implementation and Control). Please tick the appropriate number.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

Formulation							
1	My company has vision	1	2	3	4	5	
2	My company has Mission	1	2	3	4	5	
3	My company has objectives	1	2	3	4	5	
4	My firm has skill workers	1	2	3	4	5	
5	My company has reasonable marker share	1	2	3	4	5	
5	My firm has strong finance	1	2	3	4	5	
7	My firm has adequate research and development facilities	1	2	3	4	5	

8	My company employs SWOT analysis technique	1	2	3	4	5
Item	Implementation					
1	My company has good organizational structure	1	2	3	4	5
2	My company employs recent technology	1	2	3	4	5
3	My company adopts good reward system	1	2	3	4	5
4	My company employs good information system	1	2	3	4	5
5	My company has good organizational culture	1	2	3	4	5
6	My company adopts good leadership styles	1	2	3	4	5
Item	Control					
1	My firm observes its budget head- head	1	2	3	4	5
2	My company adopts sound performance indicator	1	2	3	4	5
3	My firm employs emerging technology	1	2	3	4	5
4	My firm identified past planning failure	1	2	3	4	5
5	My firm takes cognizance of changing market test	1	2	3	4	5
6	My firm takes cognizance of new government regulations	1	2	3	4	5
7	My firm takes cognizance of substitute product	1	2	3	4	5

Section 3: The following part describes the firm's elements of competitive advantage in form of capabilities. (namely: value, rareness, inimitability, cost, differentiation and focus. Please tick the most appropriate number among the following sentences.

Item	Value					
1	My company produces based on market opportunities	1	2	3	4	5
2	My company always tries to neutralize threat in the firm's environment.	1	2	3	4	5
3	My firm has manufacturing efficiencies	1	2	3	4	5
4	My firm has recent facilities	1	2	3	4	5
5	My firm has strong management	1	2	3	4	5
6	My Firm has adequate resources	1	2	3	4	5
7	My firm offers superior customer value	1	2	3	4	5

Item	rareness					
1	My company possesses resources not known and owned by others	1	2	3	4	5
2	My firm has possesses superior assets	1	2	3	4	5
3	My firm has superior capabilities	1	2	3	4	5
4	My firm enjoys brand quality	1	2	3	4	5
5	My firm has the ability to adopt and learn as	1	2	3	4	5

	circumstances changes.				
6	Our resources not common among competitors	1	2	3	4
7	Our resource has no equivalent substitute	1	2	3	4
8	My company has abundant of such resources	1	2	3	4
Item	Inimitability				
1	My firm's resources are difficult to imitate	1	2	3	4
2	Other firms do not possess our resources	1	2	3	4
3	Other firm cannot acquire similar resources at comparable cost.	1	2	3	4
4	Competitors are not sure of our resources combination	1	2	3	4
5	We provide each customer with personalized services	1	2	3	4
6	It is difficult for customers to imitate us given unique social characteristics of our firm	1	2	3	4
7	Our resources are difficult to describe inters of how we create, deploy and renew them by competitors	1	2	3	4
8	My firm has historical record of difficulty of imitation by others	1	2	3	4

Item	Cost				
1	My firm has low cost of production than others	1	2	3	4
2	My company produces at maximum capacity utilization	1	2	3	4
3	My company operates low inventory	1	2	3	4
4	My company always improves its productivity	1	2	3	4
5	My firm operates low overhead cost	1	2	3	4
6	My firm exercises adequate control on supply and procurement	1	2	3	4

Item	Differentiation				
1	My firm's produces based on buyers needs	1	2	3	4
2	Our customers value rate our product high	1	2	3	4
3	Our customers respect our product price	1	2	3	4
4	My firm has unique technical expert and talented personnel	1	2	3	4
5	My firm enjoy successful brand management	1	2	3	4

Item	Focus	1	2	3	4	5
1	My firm concentrates on a particular target market	1	2	3	4	5
2	My company capitalizes on special requirement in using the product	1	2	3	4	5
3	My company concentrates on product that appeal to small number of buyers	1	2	3	4	5
4	My company concentrates on geographical area	1	2	3	4	5
5	Our customers have specialize needs	1	2	3	4	5

Section 4: The following parts describe the influence of environment in firm's sustainable competitive advantage namely: economic and social factors, political and regulation, and technology. Please tick the most appropriate number among the following sentences.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

Item	Economic and social factors	1	2	3	4	5
1	There is availability of create facilities	1	2	3	4	5
2	Customers have available disposable income to buy our product	1	2	3	4	5
3	The inters rate is low	1	2	3	4	5

4	The inflation rate is low	1	2	3	4	5
5	Buyers rate the satisfaction from our product as high	1	2	3	4	5
6	Buyers have confidence in our product	1	2	3	4	5
7	Buyers have positive attitude towards our product	1	2	3	4	5
Item	Political and regulations					
1	Globalization in form of fair-trade is in favour of our firm	1	2	3	4	5
2	Tax programs are fair	1	2	3	4	5
3	My firm adopts minimum wage policy	1	2	3	4	5
4	My firm adopts anti -trust policy	1	2	3	4	5
5	My firm observes anti-pollution policy	1	2	3	4	5
6	My firm enjoys always the government subsidy	1	2	3	4	5

Item	Technology					
1	My firm uses recent technology	1	2	3	4	5
2	The use of recent technology places our fir in a competitive business position	1	2	3	4	5
3	The use of recent technology promotes our business relation with the society	1	2	3	4	5
4	My firm's product attracts customers	1	2	3	4	5
5	My firm's product lacks defects	1	2	3	4	5

6	My firm's product has long-term dependability	1	2	3	4	5
7	My firm's product is reliable according to customers	1	2	3	4	5
8	My firm's product has additional features	1	2	3	4	5

Section 5: This section is enquires on sustainable competitive advantage by firms, namely: innovation, training and development and reward. Please tick the most appropriate number among the following sentences.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

Item	Innovation	1	2	3	4	5
1	My firm always engaged in several innovations in its production process	1	2	3	4	5
2	My firm enjoys patent right	1	2	3	4	5
3	My firm benefits technological leadership	1	2	3	4	5
4	My firm engages in resources preemption	1	2	3	4	5
5	My firm always engages in several innovation in its product	1	2	3	4	5

Item	Training and development					
1	My firm organizes on -the- job training for new employees	1	2	3	4	5
2	My firm engages in staff up grading training	1	2	3	4	5
3	My firm sends staff for off- the- job training	1	2	3	4	5
4	My firm sends employees for training when a particular training need occur	1	2	3	4	5
5	My firm sends employees for entrepreneurship courses	1	2	3	4	5
6	My firm sends employee for change and attitude change training	1	2	3	4	5
7	My firm sends employees for training on decision making	1	2	3	4	5
8	My firm sends employees for training on creativity	1	2	3	4	5
Item	Reward					
1	My firm pays good salary	1	2	3	4	5
2	My firm pays other fringe benefit	1	2	3	4	5
3	The labour market behavior is fair	1	2	3	4	5
4	My firm has favorable relation with employee union	1	2	3	4	5
5	State labour laws are fair	1	2	3	4	5
6	My firm reviews salary at reasonable interval	1	2	3	4	5

Appendix B
Factor Analysis and Reliability

- B. 1 Factor Analysis and Reliability on Strategic Management Elements**
- B. 2 Factor Analysis and Reliability on Elements of Competitive Advantage**
- B. 3 Factor Analysis and Reliability on Environmental Factor**
- B. 4 Factor Analysis and Reliability on Sustainable competitive Advantage**
- B.5 Frequency for Variables**
- B.6 Person Correlation between all the Items**

Appendix B.1

Factor Analysis and Reliability for Formulation, Implementation and Control (SME)

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.713
Bartlett's Test of Sphericity	Approx. Chi-Square	768.830
	Df	171
	Sig.	.000

Anti-image Matrices

		Formulation 1	Formulation 3	Formulation 4	Formulation 5	Formulation 6	Formulation 7	Formulation 8	Implementation 1	Implementation 2	Implementation 3	Implementation 4	Implementation 5	Implementation 6	Implementation 7	Control 1	Control 2	Control 3	Control 4	Control 5
Anti-image Covariance	Formulation 1	.582	-.086	-.206	.091	-.015	-.002	-.164	-.031	.151	-.097	-.026	.033	.032	.004	.014	.051	.015	.059	.027
	Formulation 3	-.086	.639	-.171	-.048	.067	-.095	-.050	.048	-.156	.004	.146	-.091	.053	-.016	.082	.073	.020	.037	.048
	Formulation 4	-.206	-.171	.476	-.047	-.037	-.024	.103	-.085	-.022	-.005	-.099	.043	-.077	.011	.081	.067	.019	.142	.010
	Formulation 5	.091	-.048	-.047	.696	-.122	.029	-.065	.036	-.040	-.013	.063	-.061	.070	-.037	.022	.139	.044	.075	.009
	Formulation 6	-.015	.067	-.037	-.122	.714	-.057	-.175	-.071	-.006	.057	-.014	-.041	-.070	-.075	.056	.037	.035	.039	.094
	Formulation 7	-.002	-.095	-.024	.029	-.057	.693	-.007	-.128	-.065	.025	.014	.057	-.039	-.265	.082	.054	.017	.035	.073
	Formulation 8	-.164	-.050	.103	-.065	-.175	-.007	.604	.077	-.064	-.004	-.012	-.059	-.029	.090	.030	.035	.148	.093	.108
	Implementation 1	-.031	.048	-.085	.036	-.071	-.128	.077	.500	-.038	.031	-.105	-.057	-.045	.218	.071	.065	.024	.042	.202
	Implementation 2	.151	-.156	-.022	-.040	-.006	-.065	-.064	-.038	.496	-.149	-.135	.015	.118	-.017	.090	.019	.043	.077	.001
	Implementation 3	-.097	.004	-.005	-.013	.057	.025	-.004	.031	-.149	.350	-.094	-.031	-.189	.009	.022	.016	.007	.108	.007
	implementation 4	-.026	.146	-.099	.063	-.014	.014	-.012	-.105	-.135	-.094	.496	-.025	.088	-.030	.074	.097	.034	.009	.017
	Implementation 5	.033	-.091	.043	-.061	-.041	.057	-.059	-.057	.015	-.031	-.025	.392	-.117	-.018	.086	.072	.089	.026	.121
	Implementation 6	.032	.053	-.077	.070	-.070	-.039	-.029	-.045	.118	-.189	.088	-.117	.479	-.083	.026	.052	.067	.002	.008
	Implementation 7	.004	-.016	.011	-.037	-.075	-.265	.090	.218	-.017	.009	-.030	-.018	-.083	.561	.126	.023	.026	.032	.147

		Formulation 1	Formulation 3	Formulation 4	Formulation 5	Formulation 6	Formulation 7	Formulation 8	Implementation 1	Implementation 2	Implementation 3	Implementation 4	Implementation 5	Implementation 6	Implementation 7	Control 1	Control 2	Control 3	Control 4	Control 5	Control 6	Control 7	Control 8	Control 9	Control 10	Control 11	Control 12	Control 13	Control 14	Control 15	Control 16	Control 17	Control 18	Control 19	Control 20
Anti-image Correlation	Control 1	.014	.082	-.081	-.022	-.056	.082	-.030	-.071	-.090	-.022	.074	-.086	.026	-.126	.585	-.129	.003	-.049	-.109	-.129	-.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049	
	Control 2	.051	.073	-.067	-.139	.037	-.054	.035	.065	.019	.016	-.097	-.072	-.052	.023	.129	-.129	.489	.124	.032	-.024	-.129	-.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049
	Control 3	-.015	.020	.019	.044	.035	.017	-.148	-.024	-.043	-.007	-.034	-.089	.067	-.026	.003	-.124	.421	.159	-.379	.122	-.129	.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049
	Control 4	-.059	-.037	.142	.075	.039	-.035	.093	-.042	.077	-.108	-.009	.026	-.002	-.032	.049	.032	.159	.379	.122	-.129	.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049	
	Control 5	.027	-.048	.010	-.009	.094	.073	-.108	-.202	.001	.007	.017	-.121	.008	-.147	.109	-.024	.117	.122	.517	-.129	.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049	
	Formulation 1	.597(a)	-.142	-.391	.143	-.023	-.004	-.276	-.058	.281	-.214	-.048	.069	.060	.007	.025	.096	.031	.127	.049	-.129	.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049	
	Formulation 3	-.142	.516(a)	-.311	-.072	.100	-.143	-.080	.085	-.277	.008	.259	-.182	.096	-.026	.134	.130	.039	.074	.084	-.129	.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049	
	Formulation 4	-.391	-.311	.596(a)	-.082	-.064	-.043	.193	-.175	-.046	-.012	-.205	.098	-.161	.022	-.154	.138	.042	.335	.019	-.129	.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049	
	Formulation 5	.143	-.072	-.082	.675(a)	-.173	.041	-.100	.062	-.068	-.026	.107	-.117	.121	-.059	.034	.238	.082	.146	.015	-.129	.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049	
	Formulation 6	-.023	.100	-.064	-.173	.662(a)	-.080	-.266	-.119	-.010	.114	-.024	-.077	-.120	-.119	.087	.063	.064	.075	.155	-.129	.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049	
	Formulation 7	-.004	-.143	-.043	.041	-.080	.586(a)	-.011	-.217	-.111	.050	.023	.110	-.067	-.426	.128	-.093	.032	.068	.121	-.129	.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049	
	Formulation 8	-.276	-.080	.193	-.100	-.266	-.011	.644(a)	.140	-.117	-.008	-.022	-.122	-.054	.155	.050	.064	.293	.194	.192	-.129	.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049	
	Implementation 1	-.058	.085	-.175	.062	-.119	-.217	.140	.658(a)	-.076	.075	-.211	-.128	-.092	.411	.131	.130	.052	.097	.398	-.129	.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049	
	Implementation 2	.281	-.277	-.046	-.068	-.010	-.111	-.117	-.076	.675(a)	-.359	-.273	.034	.242	-.033	.166	.038	.094	.177	.002	-.129	.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049	
	Implementation 3	-.214	.008	-.012	-.026	.114	.050	-.008	.075	-.359	.797(a)	-.225	-.083	-.462	.020	.048	.039	.018	.297	.017	-.129	.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049	
	implementation 4	-.048	.259	-.205	.107	-.024	.023	-.022	-.211	-.273	-.225	.785(a)	-.056	.181	-.057	.137	-.196	.075	.020	.034	-.129	.489	.124	.032	.024	-.124	.421	.159	-.379	.122	-.517	-.117	-.122	-.049	

		Formulation 1	Formulation 3	Formulation 4	Formulation 5	Formulation 6	Formulation 7	Formulation 8	Implementation 1	Implementation 2	Implementation 3	Implementation 4	Implementation 5	Implementation 6	Implementation 7	Control 1	Control 2	Control 3	Control 4	Control 5
Implementation 5	.069	-.182	.098	-.117	-.077	.110	-.122	-.128	.034	-.083	-.056	.853(a)	-.270	-.039	.180	-.164	.219	.067	-.269	
Implementation 6	.060	.096	-.161	.121	-.120	-.067	-.054	-.092	.242	-.462	.181	-.270	.708(a)	-.159	.049	.108	.149	.005	.017	
Implementation 7	.007	-.026	.022	-.059	-.119	-.426	.155	.411	-.033	.020	-.057	-.039	-.159	.568(a)	-.220	.043	.053	.070	.272	
Control 1	.025	.134	-.154	-.034	-.087	.128	-.050	-.131	-.166	-.048	.137	-.180	.049	-.220	.795(a)	-.241	.007	.104	.197	
Control 2	.096	.130	-.138	-.238	.063	-.093	.064	.130	.038	.039	-.196	-.164	-.108	.043	.241(a)	.273	.074	-.047	-.047	
Control 3	-.031	.039	.042	.082	.064	.032	-.293	-.052	-.094	-.018	-.075	-.219	.149	-.053	.007	.273(a)	.399	-.250	-.250	
Control 4	-.127	-.074	.335	.146	.075	-.068	.194	-.097	.177	-.297	-.020	.067	-.005	-.070	-.104	.074(a)	.399	.713	-.276	
Control 5	.049	-.084	.019	-.015	.155	.121	-.192	-.398	.002	.017	.034	-.269	.017	-.272	.197	.047	.250	.276	.634(a)	

a Measures of Sampling Adequacy(MSA)

Communalities

	Initial	Extraction
Formulation 1	1.000	.787
Formulation 3	1.000	.756
Formulation 4	1.000	.769
Formulation 5	1.000	.647
Formulation 6	1.000	.599
Formulation 7	1.000	.625
Formulation 8	1.000	.762
Implementation 1	1.000	.748
Implementation 2	1.000	.754
Implementation 3	1.000	.661
implementation 4	1.000	.693
Implementation 5	1.000	.743
Implementation 6	1.000	.697
Implementation 7	1.000	.765
Control 1	1.000	.554
Control 2	1.000	.635
Control 3	1.000	.754
Control 4	1.000	.766
Control 5	1.000	.812

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.889	25.730	25.730	4.889	25.730	25.730	3.440	18.103	18.103
2	2.056	10.823	36.554	2.056	10.823	36.554	2.078	10.934	29.037
3	1.717	9.036	45.590	1.717	9.036	45.590	1.846	9.715	38.752
4	1.466	7.715	53.305	1.466	7.715	53.305	1.659	8.734	47.486
5	1.208	6.358	59.663	1.208	6.358	59.663	1.567	8.245	55.731
6	1.134	5.970	65.633	1.134	5.970	65.633	1.538	8.096	63.827
7	1.056	5.559	71.191	1.056	5.559	71.191	1.399	7.364	71.191
8	.900	4.735	75.926						
9	.728	3.834	79.759						
10	.632	3.326	83.085						
11	.583	3.066	86.151						
12	.503	2.648	88.799						
13	.477	2.511	91.310						
14	.357	1.880	93.191						
15	.327	1.720	94.911						
16	.299	1.573	96.484						
17	.259	1.365	97.849						
18	.209	1.099	98.948						
19	.200	1.052	100.000						

Extraction Method: Principal Component Analysis

Component Matrix(a)

	Component						
	1	2	3	4	5	6	7
Implementation 5	.772	-.031	-.162	.017	.286	.094	-.167
Implementation 3	.770	-.165	.130	-.008	-.078	-.047	.124
Control 2	.648	-.018	-.403	-.108	-.127	-.152	-.033
Control 3	.646	-.296	-.240	-.220	-.063	.154	.340
implementation 4	.619	-.038	.100	-.381	-.376	-.101	-.054
Control 1	.580	.170	-.355	-.089	-.079	-.219	.014
Implementation 6	.575	-.076	.083	.328	.299	-.392	-.056
Implementation 1	.521	-.111	.407	-.208	.028	-.093	-.496
Implementation 2	.509	.342	-.050	-.212	-.441	.364	-.057
Control 5	.484	-.288	.189	.243	.278	.314	-.474
Control 4	.546	-.648	-.005	.152	-.030	.089	.128
Formulation 5	.138	.590	-.430	-.034	.136	.157	-.224
Formulation 4	.334	.561	.478	-.102	-.157	-.273	-.065
Formulation 6	.217	.559	-.164	-.001	.353	-.296	.031
Formulation 1	.335	.062	.636	-.081	.189	-.156	.447
Implementation 7	.376	.099	-.266	.708	-.153	-.027	.130
Formulation 7	.294	.235	.119	.584	-.348	-.039	.072
Formulation 8	.439	.227	-.071	-.230	.491	.320	.340
Formulation 3	.197	.419	.416	.246	-.009	.549	.083

Extraction Method: Principal Component Analysis.

a 7 components extracted.

Rotated Component Matrix(a)

	Component	
	1	4
Control 3	.810	
Control 2	.712	
Implementation 3	.616	
Implementation 7		.817
Formulation 7		.742

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 11 iterations.

Reliability

***** Method 1 (space saver) will be used for this analysis *****

-

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
X26	8.2500	1.4587	.5728	.5484
X25	8.1293	2.0092	.5291	.6146
X18	7.8793	1.8462	.4807	.6594

Reliability Coefficients

N of Cases = 116.0

N of Items = 3

Alpha = .7029

Reliability

***** Method 1 (space saver) will be used for this analysis *****

-

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
X22	3.7845	1.0575	.4271	.
X14	3.8190	.8104	.4271	.

Reliability Coefficients

N of Cases = 116.0

N of Items = 2

Alpha = .5949

Appendix B.2
Factor Analysis and Reliability for Value, Rareness and Inimitability (ECA)

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.714
Bartlett's Test of Sphericity	Approx. Chi-Square	292.959
	df	28
	Sig.	.000

Anti-image Matrices

		Inimitability 7	Inimitability 6	Inimitability 8	Inimitability 5	Rareness 8	Inimitability 1	Value 7	Rareness 5
Anti-image Covariance	Inimitability 7	.447	-.234	-.158	.097	.129	.057	-.040	.076
	Inimitability 6	-.234	.384	-.033	-.117	-.084	-.054	-.044	-.074
	Inimitability 8	-.158	-.033	.395	-.205	-.134	-.153	.091	-.058
	Inimitability 5	.097	-.117	-.205	.559	-.030	.122	-.127	-.015
	Rareness 8	.129	-.084	-.134	-.030	.751	-.131	-.027	.048
	Inimitability 1	.057	-.054	-.153	.122	-.131	.750	-.131	-.021
	Value 7	-.040	-.044	.091	-.127	-.027	-.131	.685	-.279
	Rareness 5	.076	-.074	-.058	-.015	.048	-.021	-.279	.727
Anti-image Correlation	Inimitability 7	.618(a)	-.564	-.377	.194	.223	.099	-.072	.134
	Inimitability 6	-.564	.764(a)	-.084	-.253	-.157	-.100	-.085	-.139
	Inimitability 8	-.377	-.084	.733(a)	-.435	-.247	-.281	.174	-.109
	Inimitability 5	.194	-.253	-.435	.722(a)	-.046	.189	-.205	-.024
	Rareness 8	.223	-.157	-.247	-.046	.743(a)	-.175	-.038	.065
	Inimitability 1	.099	-.100	-.281	.189	-.175	.722(a)	-.183	-.028
	Value 7	-.072	-.085	.174	-.205	-.038	-.183	.686(a)	-.396
	Rareness 5	.134	-.139	-.109	-.024	.065	-.028	-.396	.714(a)

a Measures of Sampling Adequacy(MSA)

Communalities

	Initial	Extraction
Inimitability 7	1.000	.791
Inimitability 6	1.000	.780
Inimitability 8	1.000	.762
Inimitability 5	1.000	.491
Rareness 8	1.000	.727
Inimitability 1	1.000	.564
Value 7	1.000	.723
Rareness 5	1.000	.724

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.320	41.501	41.501	3.320	41.501	41.501	2.440	30.500	30.500
2	1.198	14.975	56.477	1.198	14.975	56.477	1.585	19.810	50.310
3	1.045	13.063	69.539	1.045	13.063	69.539	1.538	19.229	69.539
4	.797	9.966	79.505						
5	.556	6.944	86.449						
6	.541	6.760	93.209						
7	.326	4.070	97.279						
8	.218	2.721	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix(a)

	Component		
	1	2	3
Inimitability 6	.829	-.223	-.208
Inimitability 8	.820	-.286	.091
Inimitability 5	.698	-.022	-.063
Inimitability 7	.654	-.459	-.392
Rareness 5	.494	.653	-.231
Value 7	.531	.635	-.194
Rareness 8	.503	-.015	.688
Inimitability 1	.517	.158	.521

Extraction Method: Principal Component Analysis.
a 3 components extracted.

Rotated Component Matrix(a)

	Component		
	1	2	3
Inimitability 7	.886	.011	-.074
Inimitability 6	.832	.232	.186
Inimitability 8	.748	.086	.441
Inimitability 5	.573	.303	.267
Rareness 5	.125	.839	.073
Rareness 8	.149	.828	.121
Value7	.144	.001	.840
Inimitability 1	.127	.204	.711

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 4 iterations.

Reliability

***** Method 2 (covariance matrix) will be used for this analysis *****

—

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

N of Cases = 115.0

Item Variances	Mean	Minimum	Maximum	Range	Max/Min
Variance	1.2581	1.1118	1.4612	.3494	1.3142
.0216					

Item-total Statistics

Alpha	Scale	Scale	Corrected	Squared
	Mean	Variance	Item-	
Item	if Item	if Item	Total	Multiple if
Deleted	Deleted	Deleted	Correlation	Correlation

X52	10.8435	8.3262	.6052	.5118
.7937				
X51	10.7565	7.4139	.7342	.5767
.7338				
X53	10.8783	7.0728	.7134	.5162
.7426				
X50	10.5391	8.4612	.5375	.3948
.8231				

Reliability Coefficients 4 items

Alpha = .8219 Standardized item alpha = .8212

Reliability

***** Method 1 (space saver) will be used for this analysis *****

-

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
X45	3.6121	1.3004	.3374	.
X46	3.8534	1.1001	.3374	.

Reliability Coefficients

N of Cases = 116.0 N of Items = 2

Alpha = .5832

Appendix B.3
Factor Analysis and Reliability for Soft and Hard Technology (Environment)

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.759
Bartlett's Test of Sphericity	Approx. Chi-Square	419.825
df		21
Sig.		.000

Anti-image Matrices

		Techno 1	Techno 2	Techno 3	Techno 5	Techno 6	Techno 7	Techno 8
Anti-image Covariance	Techno 1	.335	-.211	-.080	-.029	-.004	-.038	-.057
	Techno 2	-.211	.355	-.129	.004	-.014	.007	-.012
	Techno 3	-.080	-.129	.584	-.047	-.028	.023	.006
	Techno 5	-.029	.004	-.047	.507	-.197	.106	-.051
	Techno 6	-.004	-.014	-.028	-.197	.237	-.192	.034
	Techno 7	-.038	.007	.023	.106	-.192	.314	-.149
	Techno 8	-.057	-.012	.006	-.051	.034	-.149	.721
	Techno 1	.799(a)	-.612	-.181	-.069	-.015	-.118	-.116
Anti-image Correlation	Techno 2	-.612	.774(a)	-.284	.010	-.047	.020	-.023
	Techno 3	-.181	-.284	.899(a)	-.086	-.075	.054	.009
	Techno 5	-.069	.010	-.086	.731(a)	-.568	.265	-.084
	Techno 6	-.015	-.047	-.075	-.568	.687(a)	-.704	.082
	Techno 7	-.118	.020	.054	.265	-.704	.690(a)	-.312
	Techno 8	-.116	-.023	.009	-.084	.082	-.312	.861(a)

a Measures of Sampling Adequacy(MSA)

Communalities

	Initial	Extraction
Techno 1	1.000	.800
Techno 2	1.000	.824
Techno 3	1.000	.703
Techno 5	1.000	.518
Techno 6	1.000	.833
Techno 7	1.000	.773
Techno 8	1.000	.429

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.788	54.110	54.110	3.788	54.110	54.110	2.553	36.475	36.475
2	1.091	15.583	69.694	1.091	15.583	69.694	2.325	33.218	69.694
3	.793	11.331	81.025						
4	.531	7.583	88.608						
5	.441	6.295	94.903						
6	.214	3.058	97.961						
7	.143	2.039	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix(a)

	Component	
	1	2
Techno 6	.827	.386
Techno 1	.818	-.362
Techno 2	.774	-.475
Techno 7	.762	.438
Techno 3	.681	-.489
Techno 5	.677	.243
Techno 8	.577	.309

Extraction Method: Principal Component Analysis.

a 2 components extracted.

Rotated Component Matrix(a)

	Component	
	1	2
Techno 6	.870	
Techno 7	.858	
Techno 5	.663	
Techno 8	.634	
Techno 2		.873
Techno 3		.821
Techno 1		.820

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 3 iterations.

Reliability

***** Method 1 (space saver) will be used for this analysis *****

-

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
X98	12.0862	4.9142	.7991	.6319
X99	11.8966	5.5196	.6851	.6971
X97	12.5431	4.5981	.5400	.7871
X100	12.0431	6.1807	.4326	.8051

Reliability Coefficients

N of Cases = 116.0

N of Items = 4

Alpha = .7854

Reliability

***** Method 1 (space saver) will be used for this analysis *****

-

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
X94	8.2500	3.0065	.7683	.7267
X95	8.4052	2.5909	.6289	.8758
X93	8.2586	2.9064	.7448	.7391

Reliability Coefficients

N of Cases = 116.0

N of Items = 3

Alpha = .8389

Appendix B.4
Factor Analysis and Reliability for Innovation (SCA)

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.654
Bartlett's Test of Sphericity	Approx. Chi-Square	168.050
Df		10
Sig.		.000

Anti-image Matrices

		Innovation 2	Innovation 3	Innovation 4	Innovation 6	Innovation 7
Anti-image Covariance	Innovation 2	.739	-.204	-.021	-.035	.168
	Innovation 3	-.204	.388	-.228	-.039	-.059
	Innovation 4	-.021	-.228	.381	-.004	-.199
	Innovation 6	-.035	-.039	-.004	.979	-.015
	Innovation 7	.168	-.059	-.199	-.015	.636
Anti-image Correlation	Innovation 2	.594(a)	-.381	-.040	-.041	.246
	Innovation 3	-.381	.651(a)	-.592	-.063	-.120
	Innovation 4	-.040	-.592	.652(a)	-.007	-.404
	Innovation 6	-.041	-.063	-.007	.885(a)	-.019
	Innovation 7	.246	-.120	-.404	-.019	.685(a)

a Measures of Sampling Adequacy(MSA)

Reliability

***** Method 1 (space saver) will be used for this analysis *****

-

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
X104	11.4138	5.7577	.7395	.5615
X103	11.3017	5.4125	.7444	.5478
X107	11.2931	6.8177	.4128	.7508
X102	11.1207	7.7940	.2932	.8021

Reliability Coefficients

N of Cases = 116.0

N of Items = 4

Alpha = .7404

Appendix B.5

Frequency for Variables

Implementation 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	1	.9	.9	.9
	2 disagree	2	1.7	1.7	2.6
	3 neutral	6	5.2	5.2	7.8
	4 agree	58	50.0	50.0	57.8
	5 strongly agree	49	42.2	42.2	100.0
	Total	116	100.0	100.0	

implementation 4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 disagree	2	1.7	1.7	1.7
	3 neutral	14	12.1	12.1	13.8
	4 agree	69	59.5	59.5	73.3
	5 strongly agree	31	26.7	26.7	100.0
	Total	116	100.0	100.0	

Implementation 6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 disagree	4	3.4	3.4	3.4
	3 neutral	7	6.0	6.0	9.5
	4 agree	63	54.3	54.3	63.8
	5 strongly agree	42	36.2	36.2	100.0
	Total	116	100.0	100.0	

Control 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	1	.9	.9	.9
	2 disagree	8	6.9	6.9	7.8
	3 neutral	10	8.6	8.6	16.4
	4 agree	75	64.7	64.7	81.0
	5 strongly agree	22	19.0	19.0	100.0
	Total	116	100.0	100.0	

Control 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 disagree	6	5.2	5.2	5.2
	3 neutral	8	6.9	6.9	12.1
	4 agree	82	70.7	70.7	82.8
	5 strongly agree	20	17.2	17.2	100.0
	Total	116	100.0	100.0	

Control 5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3 neutral	5	4.3	4.3	4.3
	4 agree	61	52.6	52.6	56.9
	5 strongly agree	50	43.1	43.1	100.0
	Total	116	100.0	100.0	

Value 7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 disagree	1	.9	.9	.9
	3 neutral	6	5.2	5.2	6.0
	4 agree	36	31.0	31.0	37.1
	5 strongly agree	73	62.9	62.9	100.0
	Total	116	100.0	100.0	

Rareness 5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	1	.9	.9	.9
	2 disagree	1	.9	.9	1.7
	3 neutral	1	.9	.9	2.6
	4 agree	53	45.7	45.7	48.3
	5 strongly agree	60	51.7	51.7	100.0
	Total	116	100.0	100.0	

Rareness 8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	1	.9	.9	.9
	2 disagree	17	14.7	14.7	15.5
	3 neutral	16	13.8	13.8	29.3
	4 agree	46	39.7	39.7	69.0
	5 strongly agree	36	31.0	31.0	100.0
	Total	116	100.0	100.0	

Inimitability 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	3	2.6	2.6	2.6
	2 disagree	25	21.6	21.6	24.1
	3 neutral	13	11.2	11.2	35.3
	4 agree	48	41.4	41.4	76.7
	5 strongly agree	27	23.3	23.3	100.0
	Total	116	100.0	100.0	

Inimitability 5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	1	.9	.9	.9
	2 disagree	23	19.8	19.8	20.7
	3 neutral	8	6.9	6.9	27.6
	4 agree	49	42.2	42.2	69.8
	5 strongly disagree	35	30.2	30.2	100.0
	Total	116	100.0	100.0	

Inimitability 6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 disagree	32	27.6	27.6	27.6
	3 neutral	9	7.8	7.8	35.3
	4 agree	50	43.1	43.1	78.4
	5 strongly agree	25	21.6	21.6	
	Total	116	100.0	100.0	100.0

Inimitability 7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	3	2.6	2.6	2.6
	2 disagree	25	21.6	21.6	24.1
	3 neutral	14	12.1	12.1	36.2
	4 agree	59	50.9	50.9	87.1
	5 strongly agree	15	12.9	12.9	
	Total	116	100.0	100.0	100.0

Inimitability 8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	4	3.4	3.4	3.4
	2 disagree	32	27.6	27.6	31.0
	3 neutral	11	9.5	9.5	40.5
	4 agree	44	37.9	37.9	78.4
	5 strongly agree	25	21.6	21.6	
	Total	116	100.0	100.0	100.0

Techno 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	3	2.6	2.6	2.6
	2 disagree	3	2.6	2.6	5.2
	3 neutral	8	6.9	6.9	12.1
	4 agree	56	48.3	48.3	60.3
	5 strongly agree	46	39.7	39.7	100.0
	Total	116	100.0	100.0	

Techno 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	1	.9	.9	.9
	2 disagree	3	2.6	2.6	3.4
	3 neutral	15	12.9	12.9	16.4
	4 agree	49	42.2	42.2	58.6
	5 strongly agree	48	41.4	41.4	100.0
	Total	116	100.0	100.0	

Techno 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	7	6.0	6.0	6.0
	2 disagree	4	3.4	3.4	9.5
	3 neutral	9	7.8	7.8	17.2
	4 agree	52	44.8	44.8	62.1
	5 strongly agree	44	37.9	37.9	100.0
	Total	116	100.0	100.0	

Techno 5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	7	6.0	6.0	6.0
	2 disagree	18	15.5	15.5	21.6
	3 neutral	14	12.1	12.1	33.6
	4 agree	47	40.5	40.5	74.1
	5 strongly agree	30	25.9	25.9	100.0
	Total	116	100.0	100.0	

Techno 6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	2	1.7	1.7	1.7
	2 disagree	7	6.0	6.0	7.8
	3 neutral	6	5.2	5.2	12.9
	4 agree	63	54.3	54.3	67.2
	5 strongly agree	38	32.8	32.8	100.0
	Total	116	100.0	100.0	

Techno 7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	3	2.6	2.6	2.6
	2 disagree	1	.9	.9	3.4
	3 neutral	5	4.3	4.3	7.8
	4 agree	57	49.1	49.1	56.9
	5 strongly agree	50	43.1	43.1	100.0
	Total	116	100.0	100.0	

Techno 8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 disagree	9	7.8	7.8	7.8
	3 neutral	9	7.8	7.8	15.5
	4 agree	54	46.6	46.6	62.1
	5 strongly agree	44	37.9	37.9	100.0
	Total	116	100.0	100.0	

Innovation 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	1	.9	.9	.9
	2 disagree	18	15.5	15.5	16.4
	3 neutral	6	5.2	5.2	21.6
	4 agree	55	47.4	47.4	69.0
	5 strongly agree	36	31.0	31.0	100.0
	Total	116	100.0	100.0	

Innovation 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	1	.9	.9	.9
	2 disagree	23	19.8	19.8	20.7
	3 neutral	16	13.8	13.8	34.5
	4 agree	41	35.3	35.3	69.8
	5 strongly agree	35	30.2	30.2	100.0
	Total	116	100.0	100.0	

Innovation 4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	2	1.7	1.7	1.7
	2 disagree	19	16.4	16.4	18.1
	3 neutral	23	19.8	19.8	37.9
	4 agree	48	41.4	41.4	79.3
	5 strongly agree	24	20.7	20.7	100.0
	Total	116	100.0	100.0	

Innovation 7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 strongly disagree	1	.9	.9	.9
	2 disagree	23	19.8	19.8	20.7
	3 neutral	17	14.7	14.7	35.3
	4 agree	38	32.8	32.8	68.1
	5 strongly agree	37	31.9	31.9	100.0
	Total	116	100.0	100.0	

Correlations Appendix B.6

Correlations

		IMPLE	CONTROL	INIMITAB	RARENESS	VALUE	TECHNOLO	TECH	INNOVA
IMPLE	Pearson Correlation	1	.384(**)	.149	.370(**)	.248(**)	.129	.280(**)	.280(**)
	Sig. (2-tailed)	.	.000	.110	.000	.007	.166	.002	.002
	N	116	116	116	116	116	116	116	116
CONTROL	Pearson Correlation	.384(**)	1	.033	.122	.374(**)	.020	.291(**)	.371(**)
	Sig. (2-tailed)	.000	.	.724	.190	.000	.835	.002	.000
	N	116	116	116	116	116	116	116	116
INIMITAB	Pearson Correlation	.149	.033	1	.415(**)	.363(**)	.083	.000	.486(**)
	Sig. (2-tailed)	.110	.724	.	.000	.000	.374	.997	.000
	N	116	116	116	116	116	116	116	116
RARENESS	Pearson Correlation	.370(**)	.122	.415(**)	1	.275(**)	.085	.065	.239(**)
	Sig. (2-tailed)	.000	.190	.000	.	.003	.363	.491	.010
	N	116	116	116	116	116	116	116	116
VALUE	Pearson Correlation	.248(**)	.374(**)	.363(**)	.275(**)	1	.205(*)	.202(*)	.406(**)
	Sig. (2-tailed)	.007	.000	.000	.003	.	.027	.029	.000
	N	116	116	116	116	116	116	116	116
TECHNOLO	Pearson Correlation	.129	.020	.083	.085	.205(*)	1	.535(**)	.087
	Sig. (2-tailed)	.166	.835	.374	.363	.027	.	.000	.353
	N	116	116	116	116	116	116	116	116
TECH	Pearson Correlation	.280(**)	.291(**)	.000	.065	.202(*)	.535(**)	1	.316(**)
	Sig. (2-tailed)	.002	.002	.997	.491	.029	.000	.	.001
	N	116	116	116	116	116	116	116	116
INNOVA	Pearson Correlation	.280(**)	.371(**)	.486(**)	.239(**)	.406(**)	.087	.316(**)	1
	Sig. (2-tailed)	.002	.000	.000	.010	.000	.353	.001	.
	N	116	116	116	116	116	116	116	116

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
IMPLE	116	2.00	5.00	4.0172	.54701
CONTROL	116	2.67	5.00	4.3103	.49874
INIMITAB	116	2.00	5.00	3.5912	.90430
RARENESS	116	1.50	5.00	3.7328	.89547
VALUE	116	2.00	5.00	4.5129	.55349
TECHNOLO	116	1.00	5.00	4.0144	.82870
TECH	116	1.00	5.00	4.1523	.80983
INNOVA	116	1.25	5.00	3.7608	.81186
Valid N (listwise)	116				

Appendix C. Regression

Appendix C. 1 Regression Analysis on Strategic management elements and Elements of competitive advantage (Value)

Descriptive Statistics

	Mean	Std. Deviation	N
VALUE	4.5129	.55349	116
IMPLE	4.0172	.54701	116
CONTROL	4.3103	.49874	116

Correlations

		VALUE	IMPLE	CONTROL
Pearson Correlation	VALUE	1.000	.248	.374
	IMPLE	.248	1.000	.384
	CONTROL	.374	.384	1.000
Sig. (1-tailed)	VALUE	.	.004	.000
	IMPLE	.004	.	.000
	CONTROL	.000	.000	.
N	VALUE	116	116	116
	IMPLE	116	116	116
	CONTROL	116	116	116

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	CONTROL, IMPLE(a)	.	Enter

a All requested variables entered.

b Dependent Variable: VALUE

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics				
						F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.391(a)	.153	.138	.51400	.153	10.174	2	113	.000	1.633

a Predictors: (Constant), CONTROL, IMPLE

b Dependent Variable: VALUE

ANOVA(b)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5.376	2	2.688	10.174	.000(a)
	Residual	29.854	113	.264		
	Total	35.231	115			

a Predictors: (Constant), CONTROL, IMPLE

b Dependent Variable: VALUE

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta				Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.451	.466		5.255	.000						
	IMPLE	.124	.095	.123	1.309	.193	.248	.122	.113	.853	1.173	
	CONTROL	.363	.104	.327	3.484	.001	.374	.311	.302	.853	1.173	

a Dependent Variable: VALUE

Collinearity Diagnostics(a)

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	IMPLE	CONTROL
1	1	2.983	1.000	.00	.00	.00
	2	.010	16.990	.12	.98	.24
	3	.007	21.360	.88	.01	.76

a Dependent Variable: VALUE

Casewise Diagnostics(a)

Case Number	Std. Residual	VALUE	Predicted Value	Residual
31	-3.719	2.00	3.9115	-1.9115
75	-3.191	3.00	4.6400	-1.6400

a Dependent Variable: VALUE

Appendix C. 1 Regression Analysis on Strategic management elements and Elements of competitive advantage (Inimitability)

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
INIMITAB	3.5912	.90430	116
IMPLE	4.0172	.54701	116
CONTROL	4.3103	.49874	116

Correlations

		INIMITAB	IMPLE	CONTROL
Pearson Correlation	INIMITAB	1.000	.149	.033
	IMPLE	.149	1.000	.384
	CONTROL	.033	.384	1.000
Sig. (1-tailed)	INIMITAB	.	.055	.362
	IMPLE	.055	.	.000
	CONTROL	.362	.000	.
N	INIMITAB	116	116	116
	IMPLE	116	116	116
	CONTROL	116	116	116

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	CONTROL, IMPLE(a)	.	Enter

a All requested variables entered.

b Dependent Variable: INIMITAB

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson	
					R Square Change	F Change	df1	df2		
1	.151(a)	.023	.006	.90174	.023	1.326	2	113	.270	1.156

a Predictors: (Constant), CONTROL, IMPLE

b Dependent Variable: INIMITAB

ANOVA(b)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.156	2	1.078	1.326	.270(a)
	Residual	91.885	113	.813		
	Total	94.041	115			

a Predictors: (Constant), CONTROL, IMPLE

b Dependent Variable: INIMITAB

Coefficients(a)

Model		Unstandardized Coefficients		Beta	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error				Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.750	.818		3.361	.001					
	IMPLE	.265	.166	.160	1.589	.115	.149	.148	.148	.853	1.173
	CONTROL	-.051	.183	-.028	-.282	.779	.033	-.026	-.026	.853	1.173

a Dependent Variable: INIMITAB

Collinearity Diagnostics(a)

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	IMPLE	CONTROL
1	1	2.983	1.000	.00	.00	.00
	2	.010	16.990	.12	.98	.24
	3	.007	21.360	.88	.01	.76

a Dependent Variable: INIMITAB

Residuals Statistics(a)

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.1078	3.8501	3.5912	.13694	116
Residual	-1.8501	1.6055	.0000	.89387	116
Std. Predicted Value	-3.530	1.890	.000	1.000	116
Std. Residual	-2.052	1.780	.000	.991	116

a Dependent Variable: INIMITAB

Appendix C. 2 Regression Analysis on Elements of competitive advantage and Sustainable competitive advantage

Descriptive Statistics

	Mean	Std. Deviation	N
INNOVA	3.7608	.81186	116
INIMITAB	3.5912	.90430	116
RARENESS	3.7328	.89547	116
VALUE	4.5129	.55349	116

Correlations

	INNOVA	INNOVA	INIMITAB	RARENESS	VALUE
Pearson Correlation	1.000	.486	.239	.406	
		.486	1.000	.415	.363
			.239	.415	1.000
				.275	
Sig. (1-tailed)		.406	.363	.275	1.000
			.000	.005	.000
				.000	.000
					.001
N		.005	.000	.001	.
			.000	.001	.
				.001	.
					.001
	INNOVA	116	116	116	116
	INIMITAB	116	116	116	116
	RARENESS	116	116	116	116
	VALUE	116	116	116	116

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	VALUE, RARENESS ,	. INIMITAB(a))	Enter

a All requested variables entered.

b Dependent Variable: INNOVA

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson	
					R Square Change	F Change	df1	df2		
1	.545(a)	.297	.278	.68971	.297	15.780	3	112	.000	1.461

a Predictors: (Constant), VALUE, RARENESS, INIMITAB

b Dependent Variable: INNOVA

ANOVA(b)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	22.520	3	7.507	15.780	.000(a)
	Residual	53.279	112	.476		
	Total	75.799	115			

a Predictors: (Constant), VALUE, RARENESS, INIMITAB

b Dependent Variable: INNOVA

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error				Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.746	.544		1.371	.173					
	INIMITAB	.349	.082		.388	4.275					
	RARENESS	.005	.080		.005	.058					
	VALUE	.387	.126		.264	3.067					

a Dependent Variable: INNOVA

Collinearity Diagnostics(a)

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	INIMITAB	RARENESS	VALUE
1	1	3.924	1.000	.00	.00	.00	.00
	2	.035	10.518	.10	.66	.05	.06
	3	.033	10.933	.01	.31	.94	.02
	4	.007	23.322	.89	.03	.00	.92

a Dependent Variable: INNOVA

Casewise Diagnostics(a)

Case Number	Std. Residual	INNOVA	Predicted Value	Residual
28	-4.118	1.25	4.0906	-2.8406

a Dependent Variable: INNOVA

Residuals Statistics(a)

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.6176	4.4462	3.7608	.44253	116
Residual	-2.8406	1.8048	.0000	.68066	116
Std. Predicted Value	-2.583	1.549	.000	1.000	116
Std. Residual	-4.118	2.617	.000	.987	116

a Dependent Variable: INNOVA

Appendix C. 3 Regression Analysis on Strategic management elements and Sustainable competitive advantage

Descriptive Statistics

	Mean	Std. Deviation	N
INNOVA	3.7608	.81186	116
IMPLE	4.0172	.54701	116
INIMITAB	3.5912	.90430	116

Correlations

		INNOVA	IMPLE	INIMITAB
Pearson Correlation	INNOVA	1.000	.280	.486
Sig. (1-tailed)	INNOVA	.	.001	.000
N	INNOVA	116	116	116
	IMPLE	116	116	116
	INIMITAB	116	116	116

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	IMPLE(a)	.	Enter
2	INIMITAB(a))	.	Enter

a All requested variables entered.

b Dependent Variable: INNOVA

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta				Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.090	.541			3.863	.000					
	IMPLE	.416	.133	.280		3.117	.002	.280	.280	.280	1.000	1.000
2	(Constant)	1.029	.516			1.994	.049					
	IMPLE	.315	.120	.212		2.633	.010	.280	.240	.210	.978	1.023
	INIMITAB	.408	.072	.455		5.633	.000	.486	.468	.449	.978	1.023

a Dependent Variable: INNOVA

Excluded Variables(b)

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	INIMITAB	.455(a)	5.633	.000	.468	.978	1.023	.978

a Predictors in the Model: (Constant), IMPLE

b Dependent Variable: INNOVA

Collinearity Diagnostics(a)

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	IMPLE	INIMITAB
1	1	1.991	1.000	.00	.00	
	2	.009	14.819	1.00	1.00	
2	1	2.951	1.000	.00	.00	.01
	2	.040	8.617	.05	.09	.97
	3	.009	18.213	.95	.91	.02

a Dependent Variable: INNOVA

Casewise Diagnostics(a)

Case Number	Std. Residual	INNOVA	Predicted Value	Residual
28	-3.847	1.25	3.9222	-2.6722
60	3.029	5.00	2.8958	2.1042

a Dependent Variable: INNOVA

Residuals Statistics(a)

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.8896	4.6455	3.7608	.43002	116
Residual	-2.6722	2.1042	.0000	.68862	116
Std. Predicted Value	-2.026	2.057	.000	1.000	116
Std. Residual	-3.847	3.029	.000	.991	116

a Dependent Variable: INNOVA

Appendix C.

Appendix C. 4 Regression Analysis on Elements of competitive advantage and Sustainable competitive advantage with moderator hard technology

Descriptive Statistics

	Mean	Std. Deviation	N
INNOVA	3.7725	.82748	111
INIMITAB	3.5480	.89981	111
RARENESS	3.7027	.90045	111
VALUE	4.5135	.56189	111
TECHNOLO	4.1261	.64519	111
value*Technolo	18.7192	4.13472	111
rareness*Technolo	15.4249	4.85121	111
Inimt*Technolo	14.8146	4.84370	111

Correlation

		INNOVA	INIMITAB	RARENESS	VALUE	TECHNOLO	value*Tec hnolo	rareness*T echnolo	Inimt*Tech nolo
Pearson Correlation	INNOVA	1.000	.519	.252	.412	.058	.253	.234	.440
	INIMITAB	.519	1.000	.400	.377	.304	.410	.446	.910
	RARENESS	.252	.400	1.000	.282	.256	.328	.874	.417
	VALUE	.412	.377	.282	1.000	.267	.735	.333	.395
	TECHNOLO	.058	.304	.256	.267	1.000	.845	.681	.655
	value*Technolo	.253	.410	.328	.735	.845	1.000	.657	.670
	rareness*Technolo	.234	.446	.874	.333	.681	.657	1.000	.637
	Inimt*Technolo	.440	.910	.417	.395	.655	.670	.637	1.000
Sig. (1-tailed)	INNOVA	.	.000	.004	.000	.271	.004	.007	.000
	INIMITAB	.000	.	.000	.000	.001	.000	.000	.000
	RARENESS	.004	.000	.	.001	.003	.000	.000	.000
	VALUE	.000	.000	.001	.	.002	.000	.000	.000
	TECHNOLO	.271	.001	.003	.002	.	.000	.000	.000
	value*Technolo	.004	.000	.000	.000	.000	.	.000	.000
	rareness*Technolo	.007	.000	.000	.000	.000	.000	.	.000
	Inimt*Technolo	.000	.000	.000	.000	.000	.000	.000	.
N	INNOVA	111	111	111	111	111	111	111	111
	INIMITAB	111	111	111	111	111	111	111	111
	RARENESS	111	111	111	111	111	111	111	111
	VALUE	111	111	111	111	111	111	111	111
	TECHNOLO	111	111	111	111	111	111	111	111
	value*Technolo	111	111	111	111	111	111	111	111
	rareness*Technolo	111	111	111	111	111	111	111	111
	Inimt*Technolo	111	111	111	111	111	111	111	111

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	VALUE, RARENESS ,	.	Enter
2	INIMITAB(a) TECHNOL O(a)	.	Enter
3	Inimt*Techn olo, rareness*Te chnolo, value*Tech nolo(a)	.	Enter

a All requested variables entered.

b Dependent Variable: INNOVA

Model Summary(d)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		df2	Sig. F Change	Durbin-Watson
					R Square Change	F Change			
1	.569(a)	.324	.305	.68982	.324	17.095	3	.000	
2	.589(b)	.346	.322	.68150	.022	3.627	1	.060	
3	.659(c)	.435	.396	.64287	.088	5.374	3	.002	1.460

a Predictors: (Constant), VALUE, RARENESS, INIMITAB

b Predictors: (Constant), VALUE, RARENESS, INIMITAB, TECHNOLO

c Predictors: (Constant), VALUE, RARENESS, INIMITAB, TECHNOLO, Inimt*Technolo, rareness*Technolo, value*Technolo

d Dependent Variable: INNOVA

ANOVA(d)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	24.403	3	8.134	17.095	.000(a)
	Residual	50.916	107	.476		
	Total	75.319	110			
2	Regression	26.087	4	6.522	14.042	.000(b)
	Residual	49.231	106	.464		
	Total	75.319	110			
3	Regression	32.751	7	4.679	11.321	.000(c)
	Residual	42.568	103	.413		
	Total	75.319	110			

a Predictors: (Constant), VALUE, RARENESS, INIMITAB

b Predictors: (Constant), VALUE, RARENESS, INIMITAB, TECHNOLO

c Predictors: (Constant), VALUE, RARENESS, INIMITAB, TECHNOLO, Inimt*Technolo, rareness*Technolo, value*Technolo

d Dependent Variable: INNOVA

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error				Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.694	.548		1.268	.208					
	INIMITAB	.385	.084	.419	4.607	.000	.519	.407	.366	.764	1.309
	RARENESS	.012	.081	.013	.150	.881	.252	.015	.012	.820	1.220
	VALUE	.369	.128	.251	2.886	.005	.412	.269	.229	.837	1.194
2	(Constant)	1.203	.604		1.994	.049					
	INIMITAB	.413	.084	.450	4.926	.000	.519	.432	.387	.740	1.351
	RARENESS	.032	.080	.035	.399	.691	.252	.039	.031	.806	1.241
	VALUE	.406	.128	.276	3.178	.002	.412	.295	.250	.818	1.223
3	TECHNOLO	-.206	.108	-.161	-1.904	.060	.058	-.182	-.150	.866	1.155
	(Constant)	-3.098	3.385		-.915	.362					
	INIMITAB	-.142	.536	-.155	-.266	.791	.519	-.026	-.020	.016	61.804
	RARENESS	-1.544	.546	-1.680	-2.825	.006	.252	-.268	-.209	.016	64.418
	VALUE	3.050	.850	2.071	3.587	.001	.412	.333	.266	.016	60.761
	TECHNOLO	.837	.842	.653	.994	.322	.058	.097	.074	.013	78.546
	value*Technolo	-.638	.205	-3.187	-3.108	.002	.253	-.293	-.230	.005	191.709
	rareness*Tec	.387	.133	2.268	2.901	.005	.234	.275	.215	.009	111.435
	hnolo										
	Inimt*Technolo	.124	.124	.728	1.001	.319	.440	.098	.074	.010	96.429

a Dependent Variable: INNOVA

Excluded Variables(c)

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	TECHNOLO	-.161(a)	-1.904	.060	-.182	.866	1.155	.740
	value*Technolo	-.250(a)	-2.098	.038	-.200	.432	2.316	.432
	rareness*Tec	-.216(a)	-1.284	.202	-.124	.221	4.517	.221
	Inimt*Technolo	-.279(a)	-1.436	.154	-.138	.166	6.029	.166
2	value*Technolo	-1.605(b)	-1.656	.101	-.160	.006	154.694	.006
	rareness*Tec	1.699(b)	2.433	.017	.231	.012	82.743	.012
	Inimt*Technolo	.896(b)	1.332	.186	.129	.014	73.897	.014

a Predictors in the Model: (Constant), VALUE, RARENESS, INIMITAB

b Predictors in the Model: (Constant), VALUE, RARENESS, INIMITAB, TECHNOLO

c Dependent Variable: INNOVA

Collinearity Diagnostics(a)

Model	Dimensio	Eigenvalue	Condition Index	(Constant)	INIMITAB	Variance Proportions					
						RARENESS	VALUE	TECHNOLO	value*Tec	rareness*T	Inimt*Tech
1	1	3.923	1.000	.00	.00	.00	.00				
	2	.036	10.508	.08	.87	.00	.04				
	3	.034	10.705	.03	.10	1.00	.03				
	4	.007	23.030	.88	.03	.00	.92				
2	1	4.903	1.000	.00	.00	.00	.00	.00	.00		
	2	.040	11.120	.05	.43	.25	.03	.07			
	3	.035	11.899	.00	.53	.75	.00	.00			
	4	.015	17.965	.07	.00	.00	.23	.84			
	5	.007	26.347	.89	.04	.00	.74	.08			

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions							
				.00	.00	.00	.00	.00	.00	.00	.00
3	1	7.807	1.000	.00	.00	.00	.00	.00	.00	.00	.00
	2	.075	10.230	.00	.00	.00	.00	.00	.00	.00	.00
	3	.067	10.808	.00	.00	.00	.00	.00	.00	.00	.00
	4	.038	14.335	.00	.01	.00	.00	.00	.00	.00	.00
	5	.013	24.267	.00	.00	.00	.01	.01	.00	.00	.00
	6	.000	135.325	.08	.75	.01	.04	.08	.03	.01	.75
	7	.000	157.987	.04	.22	.96	.02	.05	.02	.96	.22
	8	7.492E-05	322.795	.87	.02	.02	.94	.86	.95	.02	.02

a Dependent Variable: INNOVA

Casewise Diagnostics(a)

Case Number	Std. Residual	INNOVA	Predicted Value	Residual
27	-3.777	1.25	3.6780	-2.4280

a Dependent Variable: INNOVA

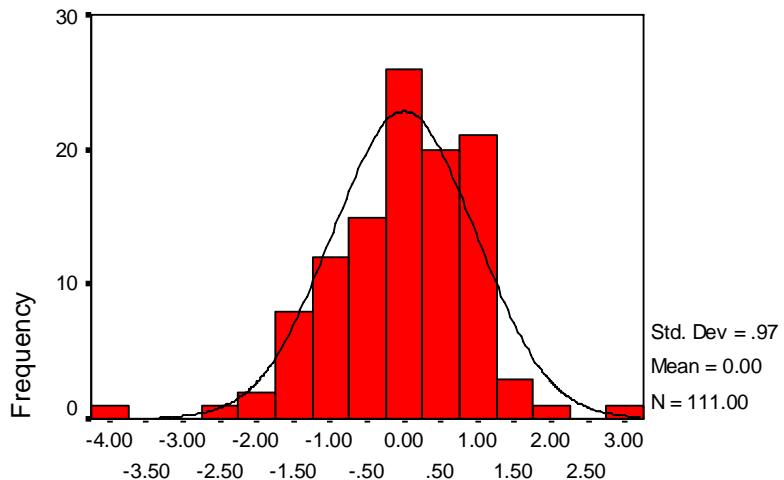
Residuals Statistics(a)

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.1358	5.0736	3.7725	.54565	111
Residual	-2.4280	1.7853	.0000	.62208	111
Std. Predicted Value	-3.000	2.384	.000	1.000	111
Std. Residual	-3.777	2.777	.000	.968	111

a Dependent Variable: INNOVA

Histogram

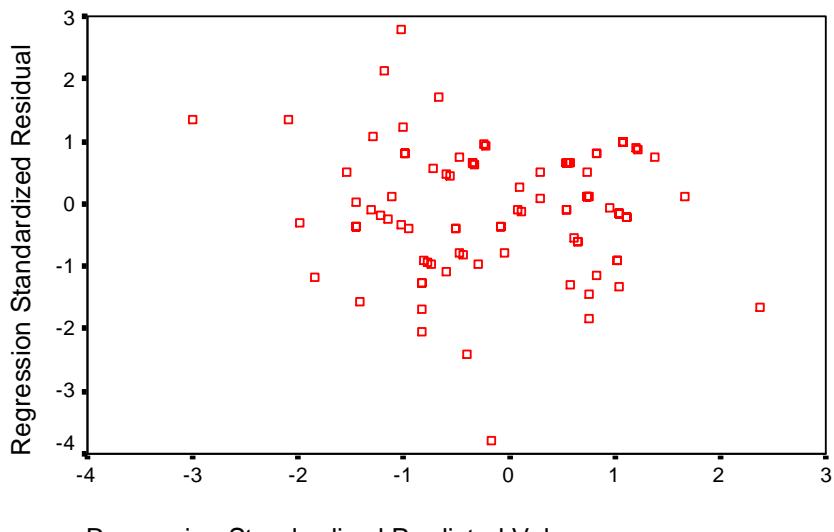
Dependent Variable: INNOVA



Regression Standardized Residual

Scatterplot

Dependent Variable: INNOVA



Regression Standardized Predicted Value

Appendix C.

Appendix C. 6 Regression Analysis on Elements of competitive advantage and Sustainable competitive advantage with moderator soft technology

Descriptive Statistics

	Mean	Std. Deviation	N
INNOVA	3.7725	.82748	111
INIMITAB	3.5480	.89981	111
RARENESS	3.7027	.90045	111
VALUE	4.5135	.56189	111
TECH	4.2553	.62918	111
value*tech	19.3033	4.11478	111
rareness*tech	15.8649	4.93373	111
inimitab*tech	15.2065	4.96649	111

Correlations

		INNOVA	INIMITAB	RARENESS	VALUE	TECH	value*tech	rareness*tech	inimitab*tech
Pearson Correlation	INNOVA	1.000	.519	.252	.412	.351	.483	.368	.588
	INIMITAB	.519	1.000	.400	.377	.194	.362	.392	.873
	RARENESS	.252	.400	1.000	.282	.194	.298	.866	.385
	VALUE	.412	.377	.282	1.000	.277	.744	.351	.428
	TECH	.351	.194	.194	.277	1.000	.841	.649	.638
	value*tech	.483	.362	.298	.744	.841	1.000	.648	.695
	rareness*tech	.368	.392	.866	.351	.649	.648	1.000	.611
	inimitab*tech	.588	.873	.385	.428	.638	.695	.611	1.000
		.	.000	.004	.000	.000	.000	.000	.000
Sig. (1-tailed)	INNOVA	.	.000	.004	.000	.000	.000	.000	.000
	INIMITAB	.000	.	.000	.000	.021	.000	.000	.000
	RARENESS	.004	.000	.	.001	.021	.001	.000	.000
	VALUE	.000	.000	.001	.	.002	.000	.000	.000
	TECH	.000	.021	.021	.002	.	.000	.000	.000
	value*tech	.000	.000	.001	.000	.000	.	.000	.000
	rareness*tech	.000	.000	.000	.000	.000	.000	.	.000
	inimitab*tech	.000	.000	.000	.000	.000	.000	.000	.
		.	.000	.000	.000	.000	.000	.000	.
N	INNOVA	111	111	111	111	111	111	111	111
	INIMITAB	111	111	111	111	111	111	111	111
	RARENESS	111	111	111	111	111	111	111	111
	VALUE	111	111	111	111	111	111	111	111
	TECH	111	111	111	111	111	111	111	111
	value*tech	111	111	111	111	111	111	111	111
	rareness*tech	111	111	111	111	111	111	111	111
	inimitab*tech	111	111	111	111	111	111	111	111
		.	.000	.000	.000	.000	.000	.000	.

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	VALUE, RARENESS ,	.	Enter
2	INIMITAB(a) TECH(a)	.	Enter
3	rareness*tech, value*tech, inimitab*tech(a)	.	Enter

a All requested variables entered.

b Dependent Variable: INNOVA

Model Summary(d)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			df2	Sig. F Change	Durbin-Watson
						F Change	df1	df2			
1	.569(a)	.324	.305	.68982	.324	17.095	3	107	.000		
2	.606(b)	.367	.343	.67049	.043	7.258	1	106	.008		
3	.625(c)	.390	.349	.66783	.023	1.282	3	103	.285	1.512	

a Predictors: (Constant), VALUE, RARENESS, INIMITAB

b Predictors: (Constant), VALUE, RARENESS, INIMITAB, TECH

c Predictors: (Constant), VALUE, RARENESS, INIMITAB, TECH, rareness*tech, value*tech, inimitab*tech

d Dependent Variable: INNOVA

ANOVA(d)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.403	3	8.134	17.095	.000(a)
	Residual	50.916	107	.476		
	Total	75.319	110			
2	Regression	27.666	4	6.917	15.385	.000(b)
	Residual	47.653	106	.450		
	Total	75.319	110			
3	Regression	29.381	7	4.197	9.411	.000(c)
	Residual	45.938	103	.446		
	Total	75.319	110			

a Predictors: (Constant), VALUE, RARENESS, INIMITAB

b Predictors: (Constant), VALUE, RARENESS, INIMITAB, TECH

c Predictors: (Constant), VALUE, RARENESS, INIMITAB, TECH, rareness*tech, value*tech, inimitab*tech

d Dependent Variable: INNOVA

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta				Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.694	.548			1.268	.208					
	INIMITAB	.385	.084	.419		4.607	.000	.519	.407	.366	.764	1.309
	RARENES	.012	.081	.013		.150	.881	.252	.015	.012	.820	1.220
	VALUE	.369	.128	.251		2.886	.005	.412	.269	.229	.837	1.194
2	(Constant)	-.081	.605			-.133	.894					
	INIMITAB	.372	.081	.404		4.562	.000	.519	.405	.352	.761	1.314
	RARENES	-.009	.079	-.010		-.111	.911	.252	-.011	-.009	.812	1.232
	VALUE	.298	.127	.202		2.341	.021	.412	.222	.181	.801	1.249
3	TECH	.288	.107	.219		2.694	.008	.351	.253	.208	.905	1.105
	(Constant)	2.939	3.425			.858	.393					
	INIMITAB	-1.097	.841	-.193		-1.305	.195	.519	-.128	-.100	.007	141.253
	RARENES	.452	.714	.491		.632	.529	.252	.062	.049	.010	101.967
	VALUE	.482	.738	.328		.654	.515	.412	.064	.050	.024	42.400
	TECH	-.418	.833	-.318		-.501	.617	.351	-.049	-.039	.015	67.808
	value*tech	-.048	.183	-.240		-.264	.792	.483	-.026	-.020	.007	139.516
	rareness*tech	-.097	.163	-.579		-.595	.553	.368	-.059	-.046	.006	159.715
	inimitab*tech	.337	.192	2.024		1.752	.083	.588	.170	.135	.004	225.356

a Dependent Variable: INNOVA

Excluded Variables(c)

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	TECH	.219(a)	2.694	.008	.253	.905	1.105	.761
	value*tech	.323(a)	2.763	.007	.259	.434	2.303	.432
	rareness*tech	.440(a)	2.786	.006	.261	.238	4.202	.238
	inimitab*tech	.489(a)	3.031	.003	.282	.226	4.427	.226
2	value*tech	.522(b)	.640	.524	.062	.009	110.936	.009
	rareness*tech	.531(b)	.694	.489	.068	.010	97.328	.010
	inimitab*tech	1.532(b)	1.874	.064	.180	.009	114.595	.009

a Predictors in the Model: (Constant), VALUE, RARENESS, INIMITAB

b Predictors in the Model: (Constant), VALUE, RARENESS, INIMITAB, TECH

c Dependent Variable: INNOVA

Collinearity Diagnostics(a)

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions						
				(Constant)	INIMITAB	RARENESS	VALUE	TECH	value*tech	rareness*tech
1	1	3.923	1.000	.00	.00	.00	.00			
	2	.036	10.508	.08	.87	.00	.04			
	3	.034	10.705	.03	.10	1.00	.03			
	4	.007	23.030	.88	.03	.00	.92			
2	1	4.903	1.000	.00	.00	.00	.00	.00		
	2	.043	10.730	.04	.44	.21	.02	.09		
	3	.035	11.912	.00	.51	.79	.00	.00		
	4	.013	19.226	.08	.03	.00	.30	.82		
	5	.007	26.314	.89	.03	.00	.68	.09		
3	1	7.804	1.000	.00	.00	.00	.00	.00	.00	.00
	2	.073	10.332	.00	.00	.00	.00	.00	.00	.00
	3	.069	10.674	.00	.00	.00	.00	.00	.00	.00
	4	.041	13.813	.00	.00	.00	.00	.00	.00	.00
	5	.013	24.812	.00	.00	.00	.01	.01	.00	.00
	6	.000	154.702	.09	.04	.35	.16	.09	.16	.38
	7	.000	215.301	.21	.71	.36	.02	.20	.02	.34
	8	8.769E-05	298.318	.69	.25	.29	.80	.71	.81	.28

a Dependent Variable: INNOVA

Casewise Diagnostics(a)

Case Number	Std. Residual	INNOVA	Predicted Value	Residual
27	-4.379	1.25	4.1745	-2.9245

a Dependent Variable: INNOVA

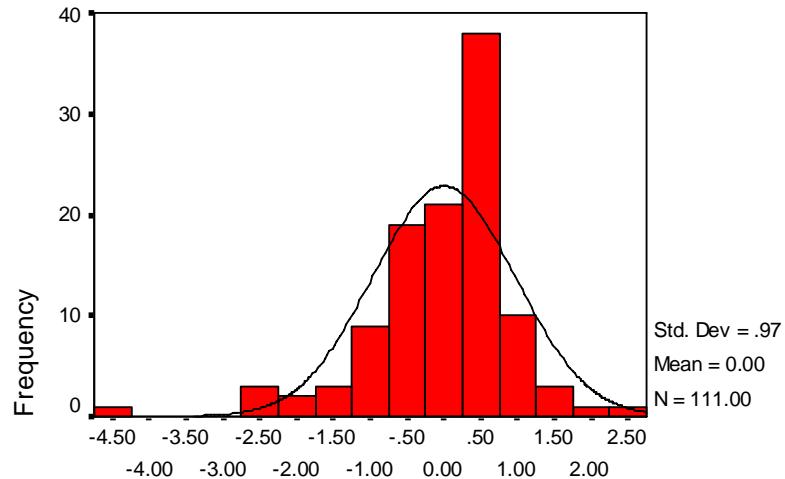
Residuals Statistics(a)

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.6486	4.7590	3.7725	.51682	111
Residual	-2.9245	1.7694	.0000	.64623	111
Std. Predicted Value	-2.175	1.909	.000	1.000	111
Std. Residual	-4.379	2.649	.000	.968	111

a Dependent Variable: INNOVA

Histogram

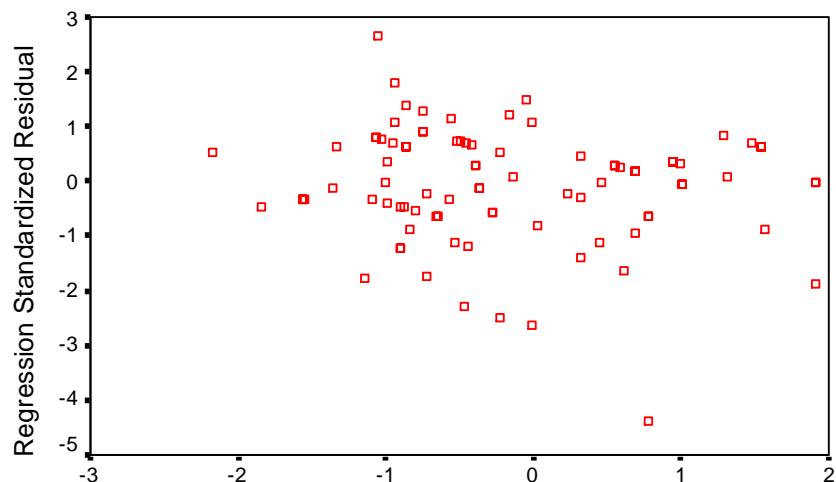
Dependent Variable: INNOVA



Regression Standardized Residual

Scatterplot

Dependent Variable: INNOVA



Regression Standardized Predicted Value