Appendix: I
A Brief about Upstream Oil Industry in India

Oil & Gas sector has a long history in India. The discovery of oil and natural gas with major milestones in the history of India is given briefly as under:

- 1987 Oil struck at Makum near Margherita in Assam.
- 1989 First commercial oil discovery in Digboi, Assam.
- 1899 Assam Oil Company was formed and systematic exploration and production of oil/ gas started.
- 1947 Domestic oil 250 kilo tones per annum.
- 1954 Petroleum was declared core sector by government of India.
- 1956 Oil and Natural Gas Commission was set up.
- 1958 First oil and Gas pool was discovered in Jwalamukhi, Punjab and Cambay, Gujarat. Oil India Limited was set up.
- 1974 Bombay High, a giant oilfield was discovered.
- 1991 Liberalization of oil sector started.
- 1999 New Exploratory Licensing Policy (NELP) was announced by Government of India, where public sector, private sector and multinational corporations can participate in open international bidding of oil/gas blocks offered by the government for exploration and production.

India has significant oil and gas reserves. An area of 1.79 million square kilometer covering onland and offshore (upto 200 meter isobaths). Deepwater beyond 200 isobath ahs an additional area of 1.35 million square kilometer. Thus total sedimentary area covering 3.14 million square kilometer, which is 4 per cent of world' sedimentary area, is available for exploration and production of oil and natural gas.

- Exploration has been initiated so far in 15 out of 26 basins.
- India has so far discovered oil/gas reserves of 27 billion metric tones (prognostic reserves) and 9 billion metric tones (established reserves).

* * *

Appendix: II

Research Questionnaire

Objective: To study and design Enterprise Performance Measurement System incorporating Flexibility Framework for Strategic Decision Making in Upstream Oil industry in India.

Sir/Madam,

It is our pleasure to inform you that University School of Management Studies (USMS), an on-campus school of GGSIP University, Delhi, is a premier B-school in the country to offer MBA and Doctoral programmes.

Mr. Mohammad Akhtar, a research scholar at USMS is working on the above topic under the joint supervision of the undersigned.

You will appreciate that designing of Enterprise Performance Measurement System (EPMS) is not an easy job as it involves many perspectives, dimensions and tools to be adopted for measuring performance and feedback to the top management. In this study, strategic perspective of Enterprise Performance Measurement (EPM) with multiple dimensions (such as Customers, Employees, Vendors & Suppliers, Business Process & Systems of the organization, Shareholders, Regulators etc) along with Strategic and Information System Flexibility are being studied. (It may be noted that Key Performance Indicators (KPI) and Measures have been used inter-changeably. Similarly Strategic Goals and Strategic Objectives).

To cover the above aspects, a questionnaire has been designed to get feedback and opinion from the top and senior executives of national and private upstream oil companies in India as a part of this research.

We request you to kindly help Mr. Akhtar by filling up the Questionnaire and giving your objective assessment about different issues in the research problem. Your co-operation will go a long way in achieving the research objectives of the study by the researcher and will contribute to the knowledge base on the topic.

We assure you that the data so collected and your valuable inputs/opinion on different issues related with the research problem will be used for academic purposes and will not be revealed anywhere. We once again request you to kindly help Mr Akhtar in collecting the data and oblige.

With warm regards,

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Research Questionnaire

Research Objective: ***To Study the Enterprise Performance Measurement & Flexibility for Strategic Decision Making in Upstream Oil industry in India.***

Respondent Personal Data:

Name :	Designation:
Position:	Dept :
Work Centre:	Years of Experience:
Qualification:	Age :
Phone No. :	Email ID :

Score:

Marking :	**Strongly Disagree……..……Strongly Agree**
Score/Weightage :	**1 2 3 4 5 6**

Note: Score of **1** means **Strongly Disagree** (one extreme) and score of **6** means **Strongly Agree** (other extreme) and others scores such as 2, 3, 4, 5 are between these two boundaries. Please tick (√) best choice according to your experience related to your organization.

(1) Strategy Planning: *Extent of Strategy Planning has sound bearing on strategy implementation and its performance measurement. Please comment how it is being done in* your organization.

		Strongly. Disagree……...					Strongly Agree
	SCORE >	**1**	**2**	**3**	**4**	**5**	**6**
1	There is clear definition of Vision & Mission statement in your organization.						
2	Vision & Mission are realistic & attainable.						
3	Enterprise level Strategic Plans are being cascaded down to SBU/ Department/ operational plans.						
4	Strategic Goals & Objectives are developed with consensus and not by too few people at the top.						

(2) Strategic Flexibility: *There are many forces & factors responsible for strategic direction and success of an organization. Please rate how these forces has affected your organization:*

	SCORE >	**1**	**2**	**3**	**4**	**5**	**6**
1	Government Policies & Control acting favourable for continuance of organizational strategies.						
2	Sufficient organizational infrastructure exists, which is favourable to business growth and profitability.						
3	In-house Technological capability is excellent.						
4	Technically skilled manpower exists, which is providing competitive advantage.						
5	Globalization has provided additional strategic global opportunity to expand operations Overseas.						
6	Global competition for your company due to Globalization.						
7	In Liberalization & Reforms era, core competence has provided strategic advantage & business opportunities.						
8	Liberalization has provided diversification opportunity.						

9	Global competition has forced your organization to adopt competitive strategy.						
10	E-business like e-tendering, e-procurement etc has provided flexibility and cost advantage.						
11	Merger & Acquisition has provided competitive advantage to your company.						
12	Market forces (such as increased demand of product, better operating margin etc) has helped in achieving higher targets and financial objectives.						
13	Govt. policies (such as NELP, Tax rebate etc) have impacted business opportunities and profitability.						

(3) Strategy Implementation: ***Strategy implementation is affected by many factors. Please comment how strategy is being implemented*** **in your organization.**

		SCORE >	1	2	3	4	5	6
1	Sharing of Organization's Vision & Mission is excellent.							
2	Clear understanding of Enterprise/ Corporate strategy at operational levels.							
3	Clear & correctly identifiable Strategic Goals & Objectives in each area of Operation /domain.							
4	Good Action Plans for strategy implementation.							
5	Clearly defined Ownership of Strategic Goals& Objectives.							
6	Clear Communication of Strategic Plans throughout the organization.							
7	Budgeting Process are dependent on Strategic Plans in each area of operations.							
8	Adequate Resources Allocation (*financial, physical, manpower etc*) to achieve Strategic Objectives.							
9	For strategy implementation, there is active involvement of various stakeholders (*Employees, Suppliers, Customers, Shareholders*).							
10	Management is sensitive to Time and Cost overruns for success of strategic initiatives and projects.							

(4) Performance Measurement System (PMS) Design: **M*any factors are responsible for good design of Strategic Performance Measurement System. Please comment which of the followings factors impacting PMS design*** **in your organization.**

		SCORE >	1	2	3	4	5	6
1	Adequate Dimensions of Measurement are selected.							
2	There is clear understanding and expectations from PMS.							
3	All domains/functional areas of the organization have been duly considered in designing Strategic PMS.							
4	Various MIS & PMS in use are aligned & integrated.							
5	Key Success Factors identified and considered in PMS design.							
6	Various types of Performance **Measures /** Key Performance Indicators(**KPI**) (*such as Leading vs. Lagging, Financial vs. Non-Financial, Internal vs. External, Objective vs. Subjective, Accounting vs. Market etc.)* have been suitably selected in PMS design.							

7	Chosen Measures are Strategically Aligned /Mapped.						
8	Customised PMS are being used.						
9	KPI designed are able to highlight improvement of a unit & reflect strategic planned success.						
10	Measures related to different stakeholder's (*investor, customer, employee, vendor, regulator, society and pressure group*) interest have been rightly selected.						
11	There is sufficient clarity of relationship among Measure. (*i.e. how few related measures together will reflect achievement of strategic goals).*						
12	Review of the Measures and PMS design is done over a period of time & with change of strategy.						
13	There is Clear Uniform definition and understanding of Measures across various levels of the organization.						
14	Ownership of each Measures/KPI clearly defined.						
15	Right Weightage and Score assigned to each Measure keeping in view the importance of corresponding strategy.						

(5) Information System Flexibility: ***Information System Flexibility provides added advantage and better ROI on system development. Please comment about Information System flexibility in*** **your Organization.** **SCORE > 1 2 3 4 5 6**

1	Computerization of various PMS has helped in better decision making.						
2	PMS in-use are providing full fledged functionality to cover all real-life situations.						
3	Sufficient flexibility of access to the system exists (*such as GUI based, web based, mobile access).*						
4	Sufficient System processing capability exists to process PMS/ user requests without performance loss.						
5	The designed PMS system is flexible to support change after initial implementation.						
6	Minimal investment will be needed to change PMS later, if so required.						
7	There is sufficient flexibility of IT personnel Skills for PMS implementation & maintenance.						

(6) Performance Analysis & Feedback Mechanism: ***Performance analysis provides a clear picture where Enterprise stands and where and why it lacked. Feedback to the Planning Process helps in knowing the reasons for failure and suitably modifying/changing strategy and thereby completing the planning loop. Please comment how it exists in*** **your organization** **SCORE > 1 2 3 4 5 6**

1	Analysis of achievements against targets are being carried out meticulously.						
2	Performance Benchmark against each Measure has been adopted.						
3	Analysed results of PMS are taken as feedback input to Strategic Planning process.						
4	Strategic Goals and Initiative are reviewed / refined based on the feedback as above.						
5	Review of PMS & Measures/ KPI are being done annually.						

(7) PMS Management Issues: ***There are PMS management issues starting from design to implementation, its effectiveness in measuring & monitoring and constraints/ obstacles. Please comment in relevance*** **to your Organization.**

		SCORE >	1	2	3	4	5	6
1	PMS is being used as Tool for strategic decision making in your organization.							
2	Management Processes & Activities are supporting PMS.							
3	There is good acceptance of PMS in your organization.							
4	Acceptability of PMS is good due to good organizational Culture.							
5	Sufficient Training to employees on PMS is given to reduce resistance to PMS implementation.							
6	There is concern for Quality of data collection.							
7	There is Smooth and Timely flow of data to PMS.							
8	Right and Adequate number of Measures (KPIs) have been selected in PMS.							
9	Powerful IT Tools are being used for deployment of PMS.							
10	PMS Champions with clear roles have been designated.							
11	PMS implementation is directly under CEO in your organization.							
12	Synergetic approach has been adopted in PMS implementation.							
13	PMS implementation with due sincerity and dedication.							
14	Good PMS Usage by Top Management.							
15	Good Ownership & Support by Top Management in PMS implementation.							
16	There exist Effective Incentive Schemes aligned with PMS.							

(8) PMS Effectiveness Issues: ***PMS effectiveness is measured on number of factors. Please comment in relevance to your Organization.***

a) Better Strategic Alignment:

		SCORE >	1	2	3	4	5	6
1	PMS implementation has resulted into Strategic Focused organization.							
2	Better Strategic Alignment (Strategic Goals to Mission / PMS to Strategy).							
3	PMS has been able to drive Superior Performance.							
4	Increase in Strategic Flexibility to adapt to the changing situations.							

b) Better Strategic Monitoring & Decision Making:

		SCORE >	1	2	3	4	5	6
1	PMS is facilitating in Strategic decision making.							
2	PMS has been able to measure Strategic Planned Success & highlight improvements.							
3	Improved Timeliness in Performance Reporting.							
4	Effective monitoring of meaningful activities and results.							
5	Reduction in gap in information sought and received by the management.							
6	Improved & Effective budget Utilization.							

c) Better Attainment of Strategic Objectives:

i Financial Perspective:

		SCORE >	1	2	3	4	5	6
1	Increased Market Share.							
2	Increase in Wealth Creation.							
3	Enhanced Production growth.							
4	Better Overseas growth & capability.							
5	Increased Profitability.							

ii Customer Perspective:

		SCORE >	1	2	3	4	5	6
1	Better Value Creation for customers.							
2	Improved Customer Satisfaction.							
3	Better Quality of Product & Services.							
4	Gain in Competitive advantage.							
5	Increase in Company reputation.							

iii Internal Business Process Perspective:

		SCORE >	1	2	3	4	5	6
1	Provided information on cost reduction and changing spending levels.							
2	Improved processes and new process adoption.							
3	Incorporation of Flexibility in Processes and Systems.							
4	Newer Technology induction.							
5	Wastage reduction.							
6	Improvement in Productivity.							
7	Better Resources Utilization.							
8	Improvement in Suppliers' delivery performance.							
9	Effective Incentive Scheme aligned with PMS.							
10	Performance linked Awards and Recognition.							

iv Learning & Growth Perspective:

		SCORE >	1	2	3	4	5	6
1	Better application of Creativity & Innovation.							
2	Skill up-gradation & new skill development.							
3	Improved learning & growth opportunities to Employees.							
4	Enhanced Workforce Excellence.							
5	Increased Employee satisfaction.							
6	Progressive Organization culture.							
7	Increase in R& D budget.							

(9) PMS Status: ***Current status of Performance Measurement System in use in your organisation.***

1	Which type of **Strategic Plans** exist in your organization: ➢ More than 5 years Plan…….. ➢ 5 years Plan…….. ➢ Yearly Plan……... ➢ All of the above……		
2	Which of the following **Business Performance Measurement Tools & Systems** are being used in your organization	**Being Used (PleaseTick)**	**Rate Effectiveness on Scale 1-5**
	MOU: Target vs. Achievement		
	Performance Benchmarking		
	Six Sigma		
	Total Quality Management (**TQM**)		
	ISO Certifications		
	Activity Based Costing (**ABC**)		
	Balanced Scorecard (**BSC)**		
	Performance Contract/Service Level Agreement(**SLA)**		
	Management Audit		
	European Foundation for Quality Management(**EFQM)**		
	Risk Assessment & Management		
	Any other, please mention		
3	Periodicity of Measurement & Review of Performance is: ➢ Monthly…… ➢ Quarterly…….. ➢ Annually……		

Thanks for participation and patience. Please send the completed Questionnaire to the Location Coordinator or to me at the following address:

157, Azad Apartment,
I.P. Extension, Patparganj,
Delhi -110092, India

Regards,

(Mohammad Akhtar)
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Appendix: III
Details of Factor Analysis

Factor Analysis

```
/VARIABLES SP1 SP2 SP3 SP4
/MISSING MEANSUB
/ANALYSIS SP1 SP2 SP3 SP4
/PRINT INITIAL CORRELATION SIG KMO EXTRACTION ROTATION FSCORE
/PLOT ROTATION
/CRITERIA MINEIGEN(0.7) ITERATE(25)
/EXTRACTION PC
/CRITERIA ITERATE(25)
/ROTATION VARIMAX
/METHOD=CORRELATION .
```

Correlation Matrix

		SP1	SP2	SP3	SP4
Correlation	SP1	1.000	.561	.507	.310
	SP2	.561	1.000	.531	.386
	SP3	.507	.531	1.000	.458
	SP4	.310	.386	.458	1.000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.756
Bartlett's Test of Sphericity	Approx. Chi-Square	145.985
	df	6
	Sig.	.000

Communalities

	Initial	Extraction
SP1	1.000	.784
SP2	1.000	.716
SP3	1.000	.672
SP4	1.000	.939

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.387	59.668	59.668	2.387	59.668	59.668
2	.724	18.090	77.758	.724	18.090	77.758
3	.459	11.484	89.242			
4	.430	10.758	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix(a)

	Component	
	1	2
SP1	.778	-.422
SP2	.814	-.230
SP3	.818	.058
SP4	.671	.699

Extraction Method: Principal Component Analysis.
a 2 components extracted.

Rotated Component Matrix(a)

	Component	
	1	2
SP1	.882	.081
SP2	.805	.261
SP3	.648	.502
SP4	.169	.954

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

Component Transformation Matrix

Component	1	2
1	.831	.556
2	-.556	.831

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

Factor Analysis

/VARIABLES SI1 SI2 SI3 SI4 SI5 SI6 SI7 SI8 SI9 SI10

Correlation Matrix

	SI1	SI2	SI3	SI4	SI5	SI6	SI7	SI8	SI9	SI10
SI1	1.000	.622	.525	.560	.498	.623	.345	.326	.492	.481
SI2	.622	1.000	.717	.616	.681	.634	.404	.440	.512	.506
SI3	.525	.717	1.000	.666	.751	.593	.481	.394	.479	.485
SI4	.560	.616	.666	1.000	.728	.761	.565	.606	.650	.566
SI5	.498	.681	.751	.728	1.000	.708	.593	.538	.524	.509
SI6	.623	.634	.593	.761	.708	1.000	.535	.537	.626	.573
SI7	.345	.404	.481	.565	.593	.535	1.000	.647	.487	.485
SI8	.326	.440	.394	.606	.538	.537	.647	1.000	.655	.425
SI9	.492	.512	.479	.650	.524	.626	.487	.655	1.000	.503
SI10	.481	.506	.485	.566	.509	.573	.485	.425	.503	1.000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.910
Bartlett's Test of Sphericity	Approx. Chi-Square	907.074
	df	45
	Sig.	.000

Communalities

	Initial	Extraction
SI1	1.000	.650
SI2	1.000	.760
SI3	1.000	.719
SI4	1.000	.762
SI5	1.000	.728
SI6	1.000	.735
SI7	1.000	.701
SI8	1.000	.821
SI9	1.000	.644
SI10	1.000	.500

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.048	60.478	60.478	6.048	60.478	60.478
2	.973	9.725	70.203	.973	9.725	70.203
3	.661	6.611	76.814			
4	.558	5.576	82.390			
5	.429	4.294	86.684			
6	.393	3.930	90.614			
7	.302	3.016	93.630			
8	.249	2.488	96.118			
9	.210	2.097	98.215			
10	.179	1.785	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix(a)

	Component	
	1	2
SI1	.702	-.397
SI2	.794	-.360
SI3	.791	-.306
SI4	.872	.028
SI5	.849	-.085
SI6	.855	-.061
SI7	.707	.448
SI8	.712	.561
SI9	.761	.254
SI10	.707	-.006

Extraction Method: Principal Component Analysis.
a 2 components extracted.

Rotated Component Matrix(a)

	Component	
	1	2
SI1	.792	.151
SI2	.838	.239
SI3	.801	.278
SI4	.647	.586
SI5	.702	.485
SI6	.692	.507
SI7	.250	.799
SI8	.180	.888
SI9	.416	.686
SI10	.543	.453

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

Component Transformation Matrix

Component	1	2
1	.763	.647
2	-.647	.763

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

Factor Analysis

/VARIABLES SM1 SM2 SM3 SM4 SM5 SM6 SM7 SM8 SM9 SM10 SM11 SM12 SM13 SM14 SM15

Correlation Matrix

	SM1	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9	SM10	SM11	SM12	SM13	SM14	SM15
SM1	1.000	.779	.788	.734	.772	.746	.653	.390	.679	.549	.675	.687	.672	.608	.722
SM2	.779	1.000	.759	.762	.747	.760	.686	.424	.678	.649	.699	.655	.722	.612	.663
SM3	.788	.759	1.000	.785	.796	.774	.699	.353	.753	.600	.764	.685	.670	.677	.701
SM4	.734	.762	.785	1.000	.798	.775	.675	.401	.751	.709	.809	.702	.764	.642	.690
SM5	.772	.747	.796	.798	1.000	.839	.770	.410	.739	.705	.737	.695	.675	.689	.762
SM6	.746	.760	.774	.775	.839	1.000	.809	.405	.809	.711	.777	.737	.694	.682	.732
SM7	.653	.686	.699	.675	.770	.809	1.000	.434	.749	.700	.753	.706	.683	.652	.664
SM8	.390	.424	.353	.401	.410	.405	.434	1.000	.433	.441	.428	.437	.505	.386	.416
SM9	.679	.678	.753	.751	.739	.809	.749	.433	1.000	.713	.812	.749	.744	.724	.714
SM10	.549	.649	.600	.709	.705	.711	.700	.441	.713	1.000	.752	.622	.690	.615	.681
SM11	.675	.699	.764	.809	.737	.777	.753	.428	.812	.752	1.000	.710	.768	.670	.715
SM12	.687	.655	.685	.702	.695	.737	.706	.437	.749	.622	.710	1.000	.799	.759	.744
SM13	.672	.722	.670	.764	.675	.694	.683	.505	.744	.690	.768	.799	1.000	.725	.743
SM14	.608	.612	.677	.642	.689	.682	.652	.386	.724	.615	.670	.759	.725	1.000	.818
SM15	.722	.663	.701	.690	.762	.732	.664	.416	.714	.681	.715	.744	.743	.818	1.000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.956
Bartlett's Test of Sphericity	Approx. Chi-Square	1997.912
	df	105
	Sig.	.000

Communalities

	Initial	Extraction
SM1	1.000	.729
SM2	1.000	.722
SM3	1.000	.802
SM4	1.000	.784
SM5	1.000	.811
SM6	1.000	.824
SM7	1.000	.719
SM8	1.000	.891
SM9	1.000	.778
SM10	1.000	.666
SM11	1.000	.782
SM12	1.000	.730
SM13	1.000	.774
SM14	1.000	.670
SM15	1.000	.737

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.610	70.731	70.731	10.610	70.731	70.731
2	.808	5.387	76.118	.808	5.387	76.118
3	.620	4.136	80.255			
4	.549	3.663	83.918			
5	.406	2.704	86.622			
6	.358	2.386	89.008			
7	.307	2.049	91.057			
8	.237	1.580	92.637			
9	.218	1.452	94.090			
10	.207	1.378	95.467			
11	.174	1.158	96.625			
12	.150	.997	97.622			
13	.132	.883	98.505			
14	.114	.760	99.265			
15	.110	.735	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix(a)

	Component	
	1	2
SM1	.835	-.179
SM2	.845	-.093
SM3	.865	-.233
SM4	.879	-.104
SM5	.890	-.140
SM6	.900	-.120
SM7	.848	.005
SM8	.524	.785
SM9	.882	.000
SM10	.806	.126
SM11	.884	-.009
SM12	.852	.070
SM13	.863	.172
SM14	.818	.036
SM15	.858	.007

Extraction Method: Principal Component Analysis.
a 2 components extracted.

Rotated Component Matrix(a)

	Component	
	1	2
SM1	.838	.162
SM2	.814	.246
SM3	.887	.125
SM4	.850	.249
SM5	.874	.220
SM6	.875	.243
SM7	.778	.337
SM8	.174	.928
SM9	.812	.345
SM10	.692	.432
SM11	.817	.338
SM12	.756	.398
SM13	.727	.496
SM14	.738	.354
SM15	.787	.343

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

Component Transformation Matrix

Component	1	2
1	.920	.392
2	-.392	.920

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

Factor Analysis

/VARIABLES PR1 PR2 PR3 PR4 PR5

Correlation Matrix

		PR1	PR2	PR3	PR4	PR5
Correlation	PR1	1.000	.750	.712	.743	.736
	PR2	.750	1.000	.738	.722	.679
	PR3	.712	.738	1.000	.886	.702
	PR4	.743	.722	.886	1.000	.740
	PR5	.736	.679	.702	.740	1.000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.863
Bartlett's Test of Sphericity	Approx. Chi-Square	598.616
	df	10
	Sig.	.000

Communalities

	Initial	Extraction
PR1	1.000	.782
PR2	1.000	.761
PR3	1.000	.826
PR4	1.000	.848
PR5	1.000	.747

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.965	79.299	79.299	3.965	79.299	79.299
2	.368	7.368	86.667			
3	.324	6.486	93.153			
4	.233	4.663	97.816			
5	.109	2.184	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix(a)

	Component
	1
PR1	.884
PR2	.872
PR3	.909
PR4	.921
PR5	.864

Extraction Method: Principal Component Analysis.

a 1 components extracted.

Rotated Component Matrix(a)

a Only one component was extracted. The solution cannot be rotated.

Factor Analysis

/VARIABLES SF1 SF2 SF3 SF4 SF5 SF6 SF7 SF8 SF9 SF10 SF11 SF12 SF13

Correlation Matrix

	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8	SF9	SF10	SF11	SF12	SF13
SF1	1.000	.421	.223	.312	.220	.122	.184	.317	.186	.153	.137	.295	.399
SF2	.421	1.000	.545	.595	.471	.425	.503	.576	.489	.448	.330	.541	.310
SF3	.223	.545	1.000	.730	.389	.398	.441	.471	.348	.256	.322	.395	.277
SF4	.312	.595	.730	1.000	.582	.476	.623	.599	.477	.432	.401	.493	.312
SF5	.220	.471	.389	.582	1.000	.709	.680	.575	.559	.355	.318	.458	.399
SF6	.122	.425	.398	.476	.709	1.000	.747	.603	.620	.255	.523	.467	.314
SF7	.184	.503	.441	.623	.680	.747	1.000	.708	.670	.334	.445	.495	.286
SF8	.317	.576	.471	.599	.575	.603	.708	1.000	.701	.484	.497	.567	.402
SF9	.186	.489	.348	.477	.559	.620	.670	.701	1.000	.506	.477	.542	.396
SF10	.153	.448	.256	.432	.355	.255	.334	.484	.506	1.000	.415	.429	.357
SF11	.137	.330	.322	.401	.318	.523	.445	.497	.477	.415	1.000	.609	.398
SF12	.295	.541	.395	.493	.458	.467	.495	.567	.542	.429	.609	1.000	.494
SF13	.399	.310	.277	.312	.399	.314	.286	.402	.396	.357	.398	.494	1.000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.869
Bartlett's Test of Sphericity	Approx. Chi-Square	982.989
	df	78
	Sig.	.000

Communalities

	Initial	Extraction
SF1	1.000	.855
SF2	1.000	.717
SF3	1.000	.868
SF4	1.000	.823
SF5	1.000	.752
SF6	1.000	.850
SF7	1.000	.827
SF8	1.000	.731
SF9	1.000	.757
SF10	1.000	.894
SF11	1.000	.838
SF12	1.000	.717
SF13	1.000	.726

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.456	49.658	49.658	6.456	49.658	49.658
2	1.229	9.453	59.112	1.229	9.453	59.112
3	1.086	8.353	67.465	1.086	8.353	67.465
4	.858	6.596	74.061	.858	6.596	74.061
5	.728	5.599	79.660	.728	5.599	79.660
6	.590	4.538	84.197			
7	.440	3.388	87.585			
8	.415	3.191	90.776			
9	.340	2.612	93.387			
10	.272	2.094	95.481			
11	.235	1.807	97.288			
12	.205	1.577	98.866			
13	.147	1.134	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix(a)

	Component				
	1	2	3	4	5
SF1	.391	.704	-.118	.430	-.087
SF2	.730	.268	-.257	-.125	-.174
SF3	.638	.133	-.511	-.288	.315
SF4	.781	.078	-.400	-.206	.073
SF5	.755	-.240	-.116	.308	-.126
SF6	.757	-.439	.002	.262	.127
SF7	.810	-.355	-.125	.161	-.055
SF8	.839	-.062	.017	.018	-.149
SF9	.784	-.205	.201	.024	-.243
SF10	.588	.151	.315	-.462	-.460
SF11	.646	-.058	.438	-.217	.423
SF12	.746	.159	.274	-.089	.229
SF13	.560	.405	.386	.269	.161

Extraction Method: Principal Component Analysis.
a 5 components extracted.

Rotated Component Matrix(a)

	Component				
	1	2	3	4	5
SF1	.065	.197	.014	.048	.900
SF2	.316	.576	.068	.402	.346
SF3	.195	.887	.196	.012	.069
SF4	.390	.763	.154	.214	.139
SF5	.802	.217	.088	.115	.202
SF6	.846	.183	.316	-.032	-.005
SF7	.827	.307	.165	.140	.037
SF8	.619	.313	.253	.381	.200
SF9	.671	.102	.276	.460	.090
SF10	.148	.149	.238	.888	.062

SF11	.258	.184	.840	.171	-.047
SF12	.300	.281	.651	.257	.242
SF13	.199	-.005	.562	.129	.595

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 6 iterations.

Component Transformation Matrix

Component	1	2	3	4	5
1	.656	.460	.411	.347	.263
2	-.579	.198	.076	.159	.771
3	-.070	-.705	.632	.315	.002
4	.448	-.424	-.166	-.519	.569
5	-.170	.271	.631	-.697	-.116

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

Factor Analysis

/VARIABLES IF1 IF2 IF3 IF4 IF5 IF6 IF7

Correlation Matrix

	IF1	IF2	IF3	IF4	IF5	IF6	IF7
IF1	1.000	.713	.662	.614	.601	.439	.461
IF2	.713	1.000	.649	.672	.754	.537	.475
IF3	.662	.649	1.000	.700	.601	.456	.462
IF4	.614	.672	.700	1.000	.739	.553	.558
IF5	.601	.754	.601	.739	1.000	.652	.600
IF6	.439	.537	.456	.553	.652	1.000	.676
IF7	.461	.475	.462	.558	.600	.676	1.000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.883
Bartlett's Test of Sphericity	Approx. Chi-Square	608.201
	df	21
	Sig.	.000

Communalities

	Initial	Extraction
IF1	1.000	.756
IF2	1.000	.780
IF3	1.000	.745
IF4	1.000	.744
IF5	1.000	.775
IF6	1.000	.827
IF7	1.000	.804

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.608	65.831	65.831	4.608	65.831	65.831
2	.823	11.750	77.581	.823	11.750	77.581
3	.424	6.052	83.633			
4	.400	5.720	89.353			
5	.313	4.473	93.826			
6	.244	3.492	97.318			
7	.188	2.682	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix(a)

	Component	
	1	2
IF1	.793	-.356
IF2	.852	-.231
IF3	.800	-.323
IF4	.858	-.094
IF5	.878	.065
IF6	.752	.511
IF7	.735	.513

Extraction Method: Principal Component Analysis.
a 2 components extracted.

Rotated Component Matrix(a)

	Component	
	1	2
IF1	.845	.206
IF2	.815	.341
IF3	.830	.237
IF4	.735	.452
IF5	.653	.591
IF6	.280	.865
IF7	.265	.856

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

Component Transformation Matrix

Component	1	2
1	.789	.614
2	-.614	.789

Factor Analysis

/VARIABLES MI1 MI2 MI3 MI4 MI5 MI6 MI7 MI8 MI9 MI10 MI11 MI12 MI13 MI14 MI15 MI16

Correlation Matrix

	MI1	MI2	MI3	MI4	MI5	MI6	MI7	MI8	MI9	MI10	MI11	MI12	MI13	MI14	MI15	MI16
MI1	1.00	.788	.746	.663	.644	.510	.640	.685	.655	.644	.607	.658	.671	.740	.727	.529
MI2	.788	1.00	.783	.731	.648	.475	.696	.735	.660	.627	.584	.765	.712	.771	.761	.582
MI3	.746	.783	1.00	.847	.704	.513	.734	.700	.705	.646	.568	.733	.720	.689	.735	.611
MI4	.663	.731	.847	1.00	.723	.431	.658	.686	.691	.650	.569	.722	.754	.705	.783	.710
MI5	.644	.648	.704	.723	1.00	.483	.795	.713	.669	.697	.558	.693	.752	.666	.728	.632
MI6	.510	.475	.513	.431	.483	1.00	.600	.502	.481	.439	.473	.511	.475	.516	.534	.493
MI7	.640	.696	.734	.658	.795	.600	1.00	.698	.675	.646	.557	.692	.753	.667	.705	.612
MI8	.685	.735	.700	.686	.713	.502	.698	1.00	.628	.747	.519	.729	.758	.681	.720	.519
MI9	.655	.660	.705	.691	.669	.481	.675	.628	1.00	.715	.621	.722	.727	.758	.727	.590
MI10	.644	.627	.646	.650	.697	.439	.646	.747	.715	1.00	.563	.695	.704	.658	.676	.544
MI11	.607	.584	.568	.569	.558	.473	.557	.519	.621	.563	1.00	.749	.705	.731	.733	.537
MI12	.658	.765	.733	.722	.693	.511	.692	.729	.722	.695	.749	1.00	.814	.750	.829	.668
MI13	.671	.712	.720	.754	.752	.475	.753	.758	.727	.704	.705	.814	1.00	.815	.840	.685
MI14	.740	.771	.689	.705	.666	.516	.667	.681	.758	.658	.731	.750	.815	1.00	.898	.659
MI15	.727	.761	.735	.783	.728	.534	.705	.720	.727	.676	.733	.829	.840	.898	1.00	.706
MI16	.529	.582	.611	.710	.632	.493	.612	.519	.590	.544	.537	.668	.685	.659	.706	1.00

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.937
Bartlett's Test of Sphericity	Approx. Chi-Square	2231.950
	df	120
	Sig.	.000

Communalities

	Initial	Extraction
MI1	1.000	.685
MI2	1.000	.753
MI3	1.000	.792
MI4	1.000	.772
MI5	1.000	.751
MI6	1.000	.952
MI7	1.000	.794
MI8	1.000	.777
MI9	1.000	.697

MI10	1.000	.689
MI11	1.000	.829
MI12	1.000	.814
MI13	1.000	.827
MI14	1.000	.847
MI15	1.000	.880
MI16	1.000	.611

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.066	69.161	69.161	11.066	69.161	69.161
2	.703	4.395	73.556	.703	4.395	73.556
3	.702	4.386	77.942	.702	4.386	77.942
4	.592	3.702	81.644			
5	.540	3.376	85.021			
6	.388	2.425	87.445			
7	.358	2.240	89.685			
8	.325	2.033	91.718			
9	.287	1.795	93.514			
10	.251	1.572	95.085			
11	.185	1.153	96.238			
12	.174	1.090	97.328			
13	.143	.896	98.224			
14	.120	.751	98.975			
15	.103	.647	99.622			
16	.061	.378	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix(a)

	Component		
	1	2	3
MI1	.822	-.064	.065
MI2	.856	-.140	.040
MI3	.863	-.142	.162
MI4	.856	-.197	.011
MI5	.838	-.089	.203
MI6	.623	.666	.346
MI7	.837	.087	.292
MI8	.832	-.180	.229
MI9	.832	-.036	-.066
MI10	.803	-.185	.103
MI11	.758	.243	-.443
MI12	.886	.020	-.171
MI13	.899	-.044	-.131
MI14	.884	.060	-.248
MI15	.915	.042	-.203
MI16	.757	.165	-.101

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

Rotated Component Matrix(a)

	Component		
	1	2	3
MI1	.662	.436	.237
MI2	.715	.460	.174
MI3	.774	.371	.234
MI4	.734	.469	.114
MI5	.745	.335	.289
MI6	.246	.261	.907
MI7	.689	.306	.476
MI8	.801	.292	.226
MI9	.597	.549	.199
MI10	.728	.369	.152
MI11	.233	.852	.221
MI12	.562	.673	.211
MI13	.623	.637	.183
MI14	.506	.741	.206
MI15	.558	.721	.223
MI16	.420	.574	.323

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 6 iterations.

Component Transformation Matrix

Component	1	2	3
1	.729	.608	.314
2	-.535	.220	.816
3	.427	-.763	.486

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

Appendix: IV
Reliability Analysis

Reliability
Scale: All Independent Macro Variables

```
VARIABLES=SP SI SM PR SF IF MI
/SCALE(ALPHA)=ALL
/MODEL=ALPHA  /ICC=MODEL(MIXED) TYPE(CONSISTENCY) CIN=95 TESTVAL=0 .
```

Case Processing Summary

		N	%
Cases	Valid	139	100.0
	Excluded (a)	0	.0
	Total	139	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.924	7

Reliability
Scale: All Independent Micro Factor Variables

```
/VARIABLES=SP1 SP2 SI1 SI2 SM1 SM2 PR1 SF1 SF2 SF3 SF4 IF1 IF2 MI1 MI2 MI3
/SCALE(ALPHA)=ALL
/MODEL=ALPHA  /ICC=MODEL(MIXED) TYPE(CONSISTENCY) CIN=95 TESTVAL=0 .
```

Case Processing Summary

		N	%
Cases	Valid	139	100.0
	Excluded (a)	0	.0
	Total	139	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.928	16

Reliability
Scale: All dependent Micro Variables

```
/VARIABLES=ESA ESM EFP ECP EBP ELP
/SCALE(ALPHA)=ALL
/MODEL=ALPHA  /ICC=MODEL(MIXED) TYPE(CONSISTENCY) CIN=95 TESTVAL=0 .
```

Case Processing Summary

		N	%
Cases	Valid	139	100.0
	Excluded (a)	0	.0
	Total	139	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.915	6

Reliability
Scale: All Variables

```
/VARIABLES=SP SI SM PR SF IF MI ESA ESM EFP ECP
/SCALE(ALPHA)=ALL
/MODEL=ALPHA  /ICC=MODEL(MIXED) TYPE(CONSISTENCY) CIN=95 TESTVAL=0 .
```

Case Processing Summary

		N	%
Cases	Valid	139	100.0
	Excluded (a)	0	.0
	Total	139	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.954	13

Appendix: V
Descriptive Statistics

Descriptive Statistics
Macro Independent Variables

Statistics

		SP	SF	SI	SM	IF	PR	MI
N	Valid	139	139	139	139	139	139	139
	Missing	0	0	0	0	0	0	0
Mean		4.5252	4.4654	4.3453	3.8201	4.2652	3.8475	3.7653
Median		4.5000	4.5385	4.5000	3.8667	4.2857	4.0000	4.0000
Std. Deviation		.79531	.77014	.83086	.99889	.91644	1.17549	1.06303
Minimum		2.25	2.38	1.70	1.00	1.86	1.40	.00
Maximum		6.00	5.92	6.00	5.93	6.00	6.00	5.88

Descriptive Statistics
Macro Dependent Variables

Statistics

EFF

N	Valid	139
	Missing	0
Mean		4.0644
Median		4.2432
Std. Deviation		.90429
Minimum		1.32
Maximum		5.97

Descriptive Statistics
Micro Independent Variables

Statistics

		SP1	SP2	SF1	SF2	SF3	SF4	SI1	SI2
N	Valid	139	139	139	139	139	139	139	139
	Missing	0	0	0	0	0	0	0	0
Mean		4.7146	3.9568	4.5986	4.5012	4.3189	4.5396	4.3443	4.3477
Median		4.6667	4.0000	4.8000	4.6667	4.3333	5.0000	4.5714	4.6667
Std. Deviation		.81508	1.19704	.90265	.98161	1.01270	1.08525	.86927	.92893
Minimum		2.33	1.00	2.00	1.67	.00	.00	1.86	1.33
Maximum		6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00

Micro Independent Variables …

Statistics

		SM1	SM2	IF1	IF2	PR1	MI1	MI2	MI3
N	Valid	139	139	139	139	139	139	139	139
	Missing	0	0	0	0	0	0	0	0
Mean		3.8450	3.4245	4.2676	4.2590	3.8475	3.7770	3.6942	4.0863
Median		4.0000	4.0000	4.4000	4.5000	4.0000	4.0000	4.0000	4.0000
Std. Deviation		1.02515	1.39865	.96746	1.05011	1.17549	1.06494	1.18509	1.21275
Minimum		1.00	.00	1.00	1.00	1.40	.00	.00	.00
Maximum		5.92	6.00	6.00	6.00	6.00	5.89	5.83	6.00

Descriptive Statistics
Micro Dependent Variables …

Statistics

		ESA	ESM	EFP	ECP	EBP	ELP
N	Valid	139	139	139	139	139	139
	Missing	0	0	0	0	0	0
Mean		3.9227	4.0168	4.2633	4.1942	3.9820	4.0689
Median		4.0000	4.3333	4.4000	4.4000	4.1000	4.1429
Std. Deviation		1.12242	1.08835	1.12959	1.33252	.96062	.89137
Minimum		.75	1.00	.00	.00	2.00	1.14
Maximum		6.00	5.83	6.00	6.00	6.00	6.00

Appendix: VI
Correlation Analysis

Correlations
Macro Independent Variables and Macro Dependent Variables

```
/VARIABLES=SP SI SM PR SF IF MI EFF
/PRINT=TWOTAIL NOSIG
/STATISTICS DESCRIPTIVES
/MISSING=PAIRWISE
```

Correlations

	SP	SI	SM	PR	SF	IF	MI	EFF
SP	1	.814**	.593**	.543**	.433**	.516**	.450**	.531**
SI	.814**	1	.643**	.536**	.471**	.589**	.499**	.608**
SM	.593**	.643**	1	.816**	.650**	.714**	.802**	.787**
PR	.543**	.536**	.816**	1	.662**	.680**	.820**	.759**
SF	.433**	.471**	.650**	.662**	1	.679**	.682**	.725**
IF	.516**	.589**	.714**	.680**	.679**	1	.781**	.782**
MI	.450**	.499**	.802**	.820**	.682**	.781**	1	.852**
EFF	.531**	.608**	.787**	.759**	.725**	.782**	.852**	1

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

Correlations
Micro Independent Variables and Micro Dependent Variables

```
/VARIABLES=SP1 SP2 SI1 SI2 SM1 SM2 PR1 SF1 SF2 SF3 SF4 IF1 IF2 MI1 MI2 MI3
      ESA ESM EFP ECP EBP ELP
/PRINT=TWOTAIL NOSIG
/MISSING=PAIRWISE .
```

Correlations

	SP1	SP2	SI1	SI2	SM1	SM2	PR1	SF1	SF2	SF3	SF4
SP1	1	.463**	.765**	.613**	.541**	.202(*)	.455**	.321**	.296**	.293**	.336**
SP2	.463**	1	.622**	.428**	.486**	.258**	.513**	.334**	.321**	.223**	.263**
SI1	.765**	.622**	1	.715**	.636**	.254**	.536**	.342**	.379**	.402**	.314**
SI2	.613**	.428**	.715**	1	.538**	.250**	.428**	.289**	.345**	.326**	.476**
SM1	.541**	.486**	.636**	.538**	1	.438**	.826**	.554**	.549**	.552**	.457**
SM2	.202(*)	.258**	.254**	.250**	.438**	1	.308**	.251**	.196(*)	.245**	.220**
PR1	.455**	.513**	.536**	.428**	.826**	.308**	1	.585**	.572**	.518**	.408**
SF1	.321**	.334**	.342**	.289**	.554**	.251**	.585**	1	.619**	.577**	.393**
SF2	.296**	.321**	.379**	.345**	.549**	.196(*)	.572**	.619**	1	.521**	.427**
SF3	.293**	.223**	.402**	.326**	.552**	.245**	.518**	.577**	.521**	1	.407**
SF4	.336**	.263**	.314**	.476**	.457**	.220**	.408**	.393**	.427**	.407**	1
IF1	.492**	.403**	.575**	.549**	.755**	.350**	.724**	.521**	.587**	.539**	.503**
IF2	.324**	.286**	.395**	.348**	.438**	.339**	.409**	.393**	.396**	.534**	.417**
MI1	.371**	.412**	.494**	.399**	.815**	.325**	.812**	.546**	.625**	.581**	.402**
MI2	.363**	.401**	.447**	.359**	.754**	.307**	.796**	.533**	.538**	.551**	.430**
MI3	.243**	.342**	.456**	.387**	.511**	.256**	.413**	.335**	.373**	.418**	.262**
ESA	.462**	.394**	.532**	.453**	.757**	.276**	.757**	.553**	.524**	.547**	.438**
ESM	.482**	.386**	.521**	.474**	.810**	.350**	.783**	.598**	.539**	.569**	.403**
EFP	.391**	.372**	.492**	.419**	.649**	.239**	.601**	.481**	.431**	.538**	.276**
ECP	.313**	.341**	.424**	.379**	.510**	.323**	.426**	.287**	.327**	.573**	.267**
EBP	.394**	.401**	.483**	.445**	.675**	.346**	.690**	.572**	.582**	.590**	.347**
ELP	.402**	.390**	.579**	.547**	.673**	.248**	.644**	.473**	.528**	.547**	.441**

Correlations …

	IF1	IF2	MI1	MI2	MI3	ESA	ESM	EFP	ECP	EBP	ELP
SP1	.492**	.324**	.371**	.363**	.243**	.462**	.482**	.391**	.313**	.394**	.402**
SP2	.403**	.286**	.412**	.401**	.342**	.394**	.386**	.372**	.341**	.401**	.390**
SI1	.575**	.395**	.494**	.447**	.456**	.532**	.521**	.492**	.424**	.483**	.579**
SI2	.549**	.348**	.399**	.359**	.387**	.453**	.474**	.419**	.379**	.445**	.547**
SM1	.755**	.438**	.815**	.754**	.511**	.757**	.810**	.649**	.510**	.675**	.673**
SM2	.350**	.339**	.325**	.307**	.256**	.276**	.350**	.239**	.323**	.346**	.248**
PR1	.724**	.409**	.812**	.796**	.413**	.757**	.783**	.601**	.426**	.690**	.644**
SF1	.521**	.393**	.546**	.533**	.335**	.553**	.598**	.481**	.287**	.572**	.473**
SF2	.587**	.396**	.625**	.538**	.373**	.524**	.539**	.431**	.327**	.582**	.528**
SF3	.539**	.534**	.581**	.551**	.418**	.547**	.569**	.538**	.573**	.590**	.547**
SF4	.503**	.417**	.402**	.430**	.262**	.438**	.403**	.276**	.267**	.347**	.441**
IF1	1	.657**	.810**	.741**	.532**	.733**	.796**	.680**	.554**	.735**	.735**
IF2	.657**	1	.528**	.503**	.375**	.402**	.447**	.379**	.355**	.448**	.435**
MI1	.810**	.528**	1	.888**	.614**	.817**	.852**	.695**	.497**	.788**	.743**
MI2	.741**	.503**	.888**	1	.588**	.769**	.775**	.632**	.427**	.747**	.644**
MI3	.532**	.375**	.614**	.588**	1	.507**	.500**	.550**	.401**	.528**	.540**
ESA	.733**	.402**	.817**	.769**	.507**	1	.877**	.625**	.420**	.788**	.719**
ESM	.796**	.447**	.852**	.775**	.500**	.877**	1	.670**	.496**	.796**	.726**
EFP	.680**	.379**	.695**	.632**	.550**	.625**	.670**	1	.664**	.724**	.669**
ECP	.554**	.355**	.497**	.427**	.401**	.420**	.496**	.664**	1	.568**	.513**
EBP	.735**	.448**	.788**	.747**	.528**	.788**	.796**	.724**	.568**	1	.751**
ELP	.735**	.435**	.743**	.644**	.540**	.719**	.726**	.669**	.513**	.751**	1

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

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

Appendix: VII
Regression Analysis of Macro Variables of EPMS Effectiveness

Regression- Macro Variable EFF as Dependent Variable

```
REGRESSION
/MISSING LISTWISE
/STATISTICS COEFF OUTS CI R ANOVA CHANGE
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT EFF
/METHOD=STEPWISE SP SI SM PR SF IF MI  /RESIDUALS HIST(ZRESID) NORM(ZRESID)
/SAVE PRED ZPRED
```

Variables Entered/Removed(a)

Model	Variables Entered	Variables Removed	Method
1	MI	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	SI	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	SF	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	IF	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a Dependent Variable: EFF

Model Summary(e)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.852(a)	.725	.723	.47586	.725	361.358	1	137	.000
2	.877(b)	.769	.766	.43746	.044	26.101	1	136	.000
3	.891(c)	.794	.789	.41490	.025	16.198	1	135	.000
4	.895(d)	.800	.794	.41001	.006	4.236	1	134	.042

a Predictors: (Constant), MI
b Predictors: (Constant), MI, SI
c Predictors: (Constant), MI, SI, SF
d Predictors: (Constant), MI, SI, SF, IF
e Dependent Variable: EFF

ANOVA(e)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	81.826	1	81.826	361.358	.000(a)
	Residual	31.022	137	.226		
	Total	112.848	138			
2	Regression	86.821	2	43.410	226.834	.000(b)
	Residual	26.027	136	.191		
	Total	112.848	138			
3	Regression	89.609	3	29.870	173.521	.000(c)
	Residual	23.239	135	.172		
	Total	112.848	138			
4	Regression	90.321	4	22.580	134.319	.000(d)
	Residual	22.527	134	.168		
	Total	112.848	138			

a Predictors: (Constant), MI
b Predictors: (Constant), MI, SI
c Predictors: (Constant), MI, SI, SF
d Predictors: (Constant), MI, SI, SF, IF
e Dependent Variable: EFF

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.337	.149		8.970	.000	1.042	1.632
	MI	.724	.038	.852	19.009	.000	.649	.800
2	(Constant)	.577	.202		2.852	.005	.177	.977
	MI	.621	.040	.730	15.364	.000	.541	.701
	SI	.264	.052	.243	5.109	.000	.162	.367
3	(Constant)	.024	.236		.104	.918	-.442	.491
	MI	.510	.047	.599	10.787	.000	.416	.603
	SI	.223	.050	.205	4.443	.000	.124	.322
	SF	.258	.064	.220	4.025	.000	.131	.385
4	(Constant)	-.022	.234		-.095	.924	-.486	.441
	MI	.447	.056	.526	8.017	.000	.337	.558
	SI	.188	.052	.172	3.581	.000	.084	.291
	SF	.222	.066	.189	3.371	.001	.092	.352
	IF	.140	.068	.142	2.058	.042	.005	.275

a Dependent Variable: EFF

Excluded Variables(e)

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	SP	.185(a)	3.877	.000	.316	.797
	SI	.243(a)	5.109	.000	.401	.751
	SM	.293(a)	4.124	.000	.333	.356
	PR	.186(a)	2.415	.017	.203	.328
	SF	.270(a)	4.731	.000	.376	.535
	IF	.301(a)	4.474	.000	.358	.390

2	SP	.014(b)	.193	.847	.017	.335
	SM	.164(b)	2.123	.036	.180	.278
	PR	.098(b)	1.321	.189	.113	.307
	SF	.220(b)	4.025	.000	.327	.512
	IF	.205(b)	2.964	.004	.247	.337
3	SP	-.002(c)	-.024	.981	-.002	.334
	SM	.119(c)	1.594	.113	.136	.271
	PR	.041(c)	.574	.567	.050	.294
	IF	.142(c)	2.058	.042	.175	.313
4	SP	-.003(d)	-.044	.965	-.004	.333
	SM	.114(d)	1.541	.126	.132	.271
	PR	.047(d)	.660	.510	.057	.293

a Predictors in the Model: (Constant), MI
b Predictors in the Model: (Constant), MI, SI
c Predictors in the Model: (Constant), MI, SI, SF
d Predictors in the Model: (Constant), MI, SI, SF, IF
e Dependent Variable: EFF

Appendix: VIII

Regression Analysis of Micro Variables of EPMS Effectiveness

Regression- Micro Variable ESA as dependent Variable

REGRESSION
/MISSING LISTWISE /STATISTICS COEFF OUTS CI R ANOVA CHANGE /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN
/DEPENDENT ESA
/METHOD=STEPWISE **SP1 SP2 SI1 SI2 SM1 SM2 PR1 SF1 SF2 SF3 SF4 IF1 IF2 MI1 MI2**

Variables Entered/Removed(a)

Model	Variables Entered	Variables Removed	Method
1	MI1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	SP1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	PR1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a Dependent Variable: ESA

Model Summary(d)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.817(a)	.667	.665	.64983	.667	274.706	1	137	.000
2	.835(b)	.696	.692	.62289	.029	13.108	1	136	.000
3	.843(c)	.710	.704	.61108	.014	6.309	1	135	.013

a Predictors: (Constant), MI1
b Predictors: (Constant), MI1, SP1
c Predictors: (Constant), MI1, SP1, PR1
d Dependent Variable: ESA

ANOVA(d)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	116.003	1	116.003	274.706	.000(a)
	Residual	57.853	137	.422		
	Total	173.856	138			
2	Regression	121.089	2	60.545	156.046	.000(b)
	Residual	52.767	136	.388		
	Total	173.856	138			
3	Regression	123.445	3	41.148	110.195	.000(c)
	Residual	50.411	135	.373		
	Total	173.856	138			

a Predictors: (Constant), MI1
b Predictors: (Constant), MI1, SP1
c Predictors: (Constant), MI1, SP1, PR1
d Dependent Variable: ESA

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.671	.204		3.292	.001	.268	1.074
	MI1	.861	.052	.817	16.574	.000	.758	.964
2	(Constant)	-.253	.321		-.786	.433	-.888	.383
	MI1	.789	.054	.748	14.710	.000	.683	.895
	SP1	.254	.070	.184	3.620	.000	.115	.392
3	(Constant)	-.159	.317		-.501	.617	-.787	.469
	MI1	.625	.084	.593	7.476	.000	.460	.791
	SP1	.203	.072	.147	2.829	.005	.061	.344
	PR1	.198	.079	.208	2.512	.013	.042	.355

a Dependent Variable: ESA

Excluded Variables(d)

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	SP1	.184(a)	3.620	.000	.296	.862
	SP2	.069(a)	1.284	.201	.109	.830
	SI1	.170(a)	3.098	.002	.257	.756
	SI2	.152(a)	2.894	.004	.241	.841
	SM1	.272(a)	3.306	.001	.273	.335
	SM2	.012(a)	.235	.815	.020	.895
	PR1	.274(a)	3.368	.001	.277	.341
	SF1	.153(a)	2.649	.009	.221	.702
	SF2	.022(a)	.353	.724	.030	.610
	SF3	.110(a)	1.826	.070	.155	.662
	SF4	.131(a)	2.470	.015	.207	.839
	IF1	.209(a)	2.537	.012	.213	.345
	IF2	-.040(a)	-.687	.493	-.059	.722
	MI2	.209(a)	1.972	.051	.167	.212
	MI3	.008(a)	.129	.898	.011	.623
2	SP2	.001(b)	.012	.990	.001	.719
	SI1	.060(b)	.759	.449	.065	.364
	SI2	.071(b)	1.154	.250	.099	.591
	SM1	.175(b)	1.946	.054	.165	.269
	SM2	-.005(b)	-.092	.927	-.008	.887
	PR1	.208(b)	2.512	.013	.211	.314
	SF1	.124(b)	2.213	.029	.187	.686
	SF2	.003(b)	.051	.959	.004	.605
	SF3	.089(b)	1.532	.128	.131	.655
	SF4	.094(b)	1.791	.076	.152	.798
	IF1	.122(b)	1.419	.158	.121	.302
	IF2	-.075(b)	-1.327	.187	-.113	.703
	MI2	.181(b)	1.770	.079	.151	.211
	MI3	.004(b)	.063	.950	.005	.623
3	SP2	-.038(c)	-.664	.508	-.057	.670

SI1	.042(c)	.536	.593	.046	.361
SI2	.063(c)	1.052	.295	.090	.589
SM1	.099(c)	1.005	.317	.086	.222
SM2	-.012(c)	-.234	.815	-.020	.884
SF1	.094(c)	1.634	.105	.140	.639
SF2	-.016(c)	-.258	.796	-.022	.596
SF3	.079(c)	1.383	.169	.119	.652
SF4	.082(c)	1.582	.116	.135	.790
IF1	.100(c)	1.180	.240	.101	.299
IF2	-.063(c)	-1.130	.260	-.097	.697
MI2	.121(c)	1.158	.249	.100	.196
MI3	.035(c)	.576	.565	.050	.598

a Predictors in the Model: (Constant), MI1
b Predictors in the Model: (Constant), MI1, SP1
c Predictors in the Model: (Constant), MI1, SP1, PR1
d Dependent Variable: ESA

Regression- Micro Variable ESM as dependent Variable

REGRESSION
/MISSING LISTWISE /STATISTICS COEFF OUTS CI R ANOVA CHANGE
/CRITERIA=PIN(.05) POUT(.10) /NOORIGIN
/DEPENDENT ESM
/METHOD=STEPWISE **SP1 SP2 SI1 SI2 SM1 SM2 PR1 SF1 SF2 SF3 SF4 IF1 IF2 MI1 MI2 MI3**

Variables Entered/Removed(a)

Model	Variables Entered	Variables Removed	Method
1	MI1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	SM1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	IF1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	SF1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
5	IF2	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
6	SF2	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a Dependent Variable: ESM

Model Summary(g)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.852(a)	.727	.725	.57119	.727	364.023	1	137	.000
2	.875(b)	.766	.762	.53047	.039	22.838	1	136	.000
3	.885(c)	.783	.778	.51288	.017	10.486	1	135	.002
4	.891(d)	.793	.787	.50199	.011	6.924	1	134	.010
5	.895(e)	.801	.794	.49395	.008	5.398	1	133	.022
6	.899(f)	.808	.799	.48750	.007	4.540	1	132	.035

a Predictors: (Constant), MI1
b Predictors: (Constant), MI1, SM1
c Predictors: (Constant), MI1, SM1, IF1
d Predictors: (Constant), MI1, SM1, IF1, SF1
e Predictors: (Constant), MI1, SM1, IF1, SF1, IF2
f Predictors: (Constant), MI1, SM1, IF1, SF1, IF2, SF2
g Dependent Variable: ESM

ANOVA(g)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	118.764	1	118.764	364.023	.000(a)
	Residual	44.697	137	.326		
	Total	163.461	138			
2	Regression	125.191	2	62.595	222.444	.000(b)
	Residual	38.270	136	.281		
	Total	163.461	138			
3	Regression	127.949	3	42.650	162.135	.000(c)
	Residual	35.512	135	.263		
	Total	163.461	138			
4	Regression	129.694	4	32.423	128.668	.000(d)
	Residual	33.767	134	.252		
	Total	163.461	138			
5	Regression	131.011	5	26.202	107.392	.000(e)
	Residual	32.450	133	.244		
	Total	163.461	138			
6	Regression	132.090	6	22.015	92.632	.000(f)
	Residual	31.371	132	.238		
	Total	163.461	138			

a Predictors: (Constant), MI1
b Predictors: (Constant), MI1, SM1
c Predictors: (Constant), MI1, SM1, IF1
d Predictors: (Constant), MI1, SM1, IF1, SF1
e Predictors: (Constant), MI1, SM1, IF1, SF1, IF2
f Predictors: (Constant), MI1, SM1, IF1, SF1, IF2, SF2
g Dependent Variable: ESM

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.727	.179		4.056	.000	.372	1.081
	MI1	.871	.046	.852	19.079	.000	.781	.961
2	(Constant)	.406	.179		2.266	.025	.052	.761
	MI1	.586	.073	.573	7.998	.000	.441	.731
	SM1	.364	.076	.342	4.779	.000	.213	.514
3	(Constant)	.081	.200		.406	.685	-.315	.478
	MI1	.450	.082	.440	5.461	.000	.287	.613
	SM1	.294	.077	.277	3.837	.000	.142	.446
	IF1	.259	.080	.231	3.238	.002	.101	.418
4	(Constant)	-.290	.242		-1.201	.232	-.768	.188
	MI1	.424	.081	.415	5.230	.000	.264	.585
	SM1	.256	.076	.241	3.351	.001	.105	.407
	IF1	.238	.079	.211	3.015	.003	.082	.393
	SF1	.153	.058	.127	2.631	.010	.038	.269
5	(Constant)	-.164	.244		-.672	.503	-.646	.318
	MI1	.434	.080	.424	5.423	.000	.275	.592
	SM1	.229	.076	.216	3.016	.003	.079	.380
	IF1	.333	.088	.296	3.794	.000	.159	.506
	SF1	.168	.058	.140	2.918	.004	.054	.283
	IF2	-.125	.054	-.121	-2.323	.022	-.232	-.019
6	(Constant)	-.042	.247		-.170	.865	-.531	.447

	MI1	.472	.081	.462	5.833	.000	.312	.633
	SM1	.222	.075	.209	2.961	.004	.074	.371
	IF1	.356	.087	.316	4.077	.000	.183	.528
	SF1	.223	.062	.185	3.568	.001	.099	.346
	IF2	-.128	.053	-.123	-2.398	.018	-.233	-.022
	SF2	-.129	.060	-.116	-2.131	.035	-.248	-.009

a Dependent Variable: ESM

Excluded Variables(g)

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	SP1	.192(a)	4.238	.000	.342	.862
	SP2	.042(a)	.864	.389	.074	.830
	SI1	.132(a)	2.628	.010	.220	.756
	SI2	.159(a)	3.390	.001	.279	.841
	SM1	.342(a)	4.779	.000	.379	.335
	SM2	.082(a)	1.747	.083	.148	.895
	PR1	.268(a)	3.654	.000	.299	.341
	SF1	.188(a)	3.693	.000	.302	.702
	SF2	.011(a)	.186	.853	.016	.610
	SF3	.112(a)	2.059	.041	.174	.662
	SF4	.073(a)	1.497	.137	.127	.839
	IF1	.307(a)	4.283	.000	.345	.345
	IF2	-.004(a)	-.074	.941	-.006	.722
	MI2	.088(a)	.910	.364	.078	.212
	MI3	-.037(a)	-.655	.514	-.056	.623
2	SP1	.122(b)	2.487	.014	.209	.693
	SP2	-.021(b)	-.447	.656	-.038	.763
	SI1	.033(b)	.619	.537	.053	.593
	SI2	.087(b)	1.768	.079	.150	.706
	SM2	.017(b)	.372	.711	.032	.805
	PR1	.135(b)	1.669	.097	.142	.261
	SF1	.143(b)	2.878	.005	.240	.666
	SF2	-.012(b)	-.221	.825	-.019	.605
	SF3	.073(b)	1.422	.157	.121	.644
	SF4	.021(b)	.450	.654	.039	.789
	IF1	.231(b)	3.238	.002	.268	.318
	IF2	-.008(b)	-.159	.874	-.014	.721
	MI2	.039(b)	.430	.668	.037	.209
	MI3	-.043(b)	-.811	.419	-.070	.623
3	SP1	.087(c)	1.745	.083	.149	.645
	SP2	-.030(c)	-.640	.523	-.055	.761
	SI1	-.009(c)	-.174	.862	-.015	.556
	SI2	.037(c)	.728	.468	.063	.620
	SM2	.006(c)	.141	.888	.012	.800
	PR1	.117(c)	1.495	.137	.128	.259
	SF1	.127(c)	2.631	.010	.222	.659
	SF2	-.039(c)	-.753	.453	-.065	.590
	SF3	.057(c)	1.137	.257	.098	.637
	SF4	-.022(c)	-.466	.642	-.040	.726

	IF2	-.104(c)	-1.955	.053	-.166	.559
	MI2	.024(c)	.267	.790	.023	.209
	MI3	-.055(c)	-1.079	.283	-.093	.619
4	SP1	.082(d)	1.695	.092	.145	.644
	SP2	-.039(d)	-.866	.388	-.075	.756
	SI1	-.005(d)	-.091	.927	-.008	.555
	SI2	.042(d)	.840	.402	.073	.619
	SM2	.005(d)	.103	.918	.009	.800
	PR1	.078(d)	.996	.321	.086	.248
	SF2	-.113(d)	-2.045	.043	-.175	.492
	SF3	.013(d)	.256	.799	.022	.559
	SF4	-.042(d)	-.907	.366	-.078	.707
	IF2	-.121(d)	-2.323	.022	-.197	.552
	MI2	.001(d)	.015	.988	.001	.207
	MI3	-.053(d)	-1.067	.288	-.092	.619
5	SP1	.088(e)	1.852	.066	.159	.642
	SP2	-.033(e)	-.739	.461	-.064	.753
	SI1	.007(e)	.130	.897	.011	.550
	SI2	.045(e)	.919	.360	.080	.619
	SM2	.026(e)	.588	.558	.051	.767
	PR1	.057(e)	.723	.471	.063	.244
	SF2	-.116(e)	-2.131	.035	-.182	.491
	SF3	.055(e)	1.014	.313	.088	.508
	SF4	-.028(e)	-.595	.553	-.052	.693
	MI2	.013(e)	.152	.880	.013	.206
	MI3	-.048(e)	-.972	.333	-.084	.618
6	SP1	.089(f)	1.880	.062	.162	.642
	SP2	-.030(f)	-.683	.496	-.060	.752
	SI1	.013(f)	.247	.805	.022	.548
	SI2	.054(f)	1.104	.271	.096	.615
	SM2	.020(f)	.466	.642	.041	.764
	PR1	.060(f)	.776	.439	.068	.244
	SF3	.068(f)	1.268	.207	.110	.502
	SF4	-.013(f)	-.282	.778	-.025	.677
	MI2	-.008(f)	-.095	.924	-.008	.203
	MI3	-.051(f)	-1.043	.299	-.091	.617

a Predictors in the Model: (Constant), MI1
b Predictors in the Model: (Constant), MI1, SM1
c Predictors in the Model: (Constant), MI1, SM1, IF1
d Predictors in the Model: (Constant), MI1, SM1, IF1, SF1
e Predictors in the Model: (Constant), MI1, SM1, IF1, SF1, IF2
f Predictors in the Model: (Constant), MI1, SM1, IF1, SF1, IF2, SF2
g Dependent Variable: ESM

Regression- Micro Variable EFP as dependent Variable

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REGRESSION
/MISSING LISTWISE  /STATISTICS COEFF OUTS CI R ANOVA CHANGE
/CRITERIA=PIN(.05) POUT(.10)  /NOORIGIN
/DEPENDENT EFP
/METHOD=STEPWISE SP1 SP2 SI1 SI2 SM1 SM2 PR1 SF1 SF2 SF3 SF4 IF1 IF2 MI1 MI2 MI3
```

Variables Entered/Removed(a)

Model	Variables Entered	Variables Removed	Method
1	MI1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	IF1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	MI3	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	SF3	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
5	IF2	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a Dependent Variable: EFP

Model Summary(f)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.695(a)	.482	.479	.81566	.482	127.667	1	137	.000
2	.723(b)	.522	.515	.78629	.040	11.427	1	136	.001
3	.737(c)	.543	.533	.77233	.020	5.960	1	135	.016
4	.747(d)	.558	.545	.76175	.016	4.776	1	134	.031
5	.760(e)	.577	.561	.74831	.019	5.856	1	133	.017

a Predictors: (Constant), MI1
b Predictors: (Constant), MI1, IF1
c Predictors: (Constant), MI1, IF1, MI3
d Predictors: (Constant), MI1, IF1, MI3, SF3
e Predictors: (Constant), MI1, IF1, MI3, SF3, IF2
f Dependent Variable: EFP

ANOVA(f)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	84.937	1	84.937	127.667	.000(a)
	Residual	91.146	137	.665		
	Total	176.083	138			
2	Regression	92.002	2	46.001	74.406	.000(b)
	Residual	84.081	136	.618		
	Total	176.083	138			
3	Regression	95.557	3	31.852	53.400	.000(c)
	Residual	80.526	135	.596		
	Total	176.083	138			
4	Regression	98.328	4	24.582	42.364	.000(d)
	Residual	77.755	134	.580		
	Total	176.083	138			
5	Regression	101.607	5	20.321	36.291	.000(e)
	Residual	74.476	133	.560		
	Total	176.083	138			

a Predictors: (Constant), MI1
b Predictors: (Constant), MI1, IF1
c Predictors: (Constant), MI1, IF1, MI3
d Predictors: (Constant), MI1, IF1, MI3, SF3
e Predictors: (Constant), MI1, IF1, MI3, SF3, IF2
f Dependent Variable: EFP

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.481	.256		5.789	.000	.975	1.987
	MI1	.737	.065	.695	11.299	.000	.608	.866
2	(Constant)	.887	.303		2.931	.004	.289	1.486
	MI1	.444	.107	.418	4.145	.000	.232	.655
	IF1	.398	.118	.341	3.380	.001	.165	.631
3	(Constant)	.676	.310		2.184	.031	.064	1.289
	MI1	.342	.113	.322	3.023	.003	.118	.566
	IF1	.377	.116	.323	3.246	.001	.147	.606
	MI3	.168	.069	.181	2.441	.016	.032	.304
4	(Constant)	.358	.338		1.057	.293	-.312	1.027
	MI1	.280	.115	.264	2.434	.016	.053	.508
	IF1	.342	.116	.293	2.957	.004	.113	.571
	MI3	.155	.068	.167	2.280	.024	.021	.290
	SF3	.174	.080	.156	2.185	.031	.017	.332
5	(Constant)	.488	.337		1.450	.149	-.178	1.155
	MI1	.252	.114	.238	2.219	.028	.027	.477
	IF1	.477	.126	.408	3.768	.000	.226	.727
	MI3	.159	.067	.171	2.373	.019	.026	.292
	SF3	.233	.082	.209	2.841	.005	.071	.396
	IF2	-.204	.084	-.190	-2.420	.017	-.371	-.037

a Dependent Variable: EFP

Excluded Variables(f)

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	SP1	.154(a)	2.365	.019	.199	.862
	SP2	.103(a)	1.540	.126	.131	.830
	SI1	.198(a)	2.870	.005	.239	.756
	SI2	.168(a)	2.558	.012	.214	.841
	SM1	.247(a)	2.370	.019	.199	.335
	SM2	.015(a)	.229	.819	.020	.895
	PR1	.109(a)	1.038	.301	.089	.341
	SF1	.144(a)	1.987	.049	.168	.702
	SF2	-.004(a)	-.052	.959	-.004	.610
	SF3	.202(a)	2.741	.007	.229	.662
	SF4	-.004(a)	-.057	.955	-.005	.839

	IF1	.341(a)	3.380	.001	.278	.345
	IF2	.018(a)	.250	.803	.021	.722
	MI2	.074(a)	.550	.584	.047	.212
	MI3	.199(a)	2.606	.010	.218	.623
2	SP1	.089(b)	1.313	.191	.112	.756
	SP2	.076(b)	1.161	.248	.099	.816
	SI1	.134(b)	1.871	.063	.159	.667
	SI2	.093(b)	1.308	.193	.112	.693
	SM1	.163(b)	1.539	.126	.131	.309
	SM2	-.019(b)	-.297	.767	-.026	.872
	PR1	.044(b)	.421	.674	.036	.328
	SF1	.109(b)	1.522	.130	.130	.684
	SF2	-.051(b)	-.661	.510	-.057	.591
	SF3	.170(b)	2.352	.020	.198	.649
	SF4	-.086(b)	-1.252	.213	-.107	.747
	IF2	-.115(b)	-1.466	.145	-.125	.569
	MI2	.037(b)	.285	.776	.025	.211
	MI3	.181(b)	2.441	.016	.206	.619
3	SP1	.090(c)	1.356	.177	.116	.756
	SP2	.059(c)	.904	.368	.078	.805
	SI1	.103(c)	1.412	.160	.121	.638
	SI2	.064(c)	.899	.370	.077	.670
	SM1	.163(c)	1.566	.120	.134	.309
	SM2	-.029(c)	-.461	.645	-.040	.869
	PR1	.099(c)	.951	.343	.082	.314
	SF1	.111(c)	1.583	.116	.135	.683
	SF2	-.045(c)	-.598	.551	-.052	.590
	SF3	.156(c)	2.185	.031	.186	.644
	SF4	-.085(c)	-1.264	.209	-.109	.747
	IF2	-.124(c)	-1.611	.110	-.138	.568
	MI2	.002(c)	.015	.988	.001	.208
4	SP1	.083(d)	1.250	.213	.108	.753
	SP2	.066(d)	1.033	.303	.089	.803
	SI1	.087(d)	1.203	.231	.104	.631
	SI2	.055(d)	.784	.435	.068	.668
	SM1	.136(d)	1.304	.195	.112	.303
	SM2	-.035(d)	-.569	.570	-.049	.867
	PR1	.079(d)	.768	.444	.066	.311
	SF1	.064(d)	.851	.396	.074	.591
	SF2	-.088(d)	-1.149	.253	-.099	.558
	SF4	-.119(d)	-1.763	.080	-.151	.717
	IF2	-.190(d)	-2.420	.017	-.205	.518
	MI2	-.018(d)	-.145	.885	-.013	.207
5	SP1	.080(e)	1.233	.220	.107	.753
	SP2	.073(e)	1.163	.247	.101	.802
	SI1	.085(e)	1.194	.235	.103	.631
	SI2	.047(e)	.678	.499	.059	.666
	SM1	.094(e)	.900	.370	.078	.293
	SM2	-.014(e)	-.229	.819	-.020	.848
	PR1	.037(e)	.359	.720	.031	.302
	SF1	.059(e)	.801	.425	.070	.590
	SF2	-.097(e)	-1.294	.198	-.112	.557
	SF4	-.107(e)	-1.604	.111	-.138	.712

MI2	-.009(e)	-.075	.941	-.006	.207

a Predictors in the Model: (Constant), MI1
b Predictors in the Model: (Constant), MI1, IF1
c Predictors in the Model: (Constant), MI1, IF1, MI3
d Predictors in the Model: (Constant), MI1, IF1, MI3, SF3
e Predictors in the Model: (Constant), MI1, IF1, MI3, SF3, IF2
f Dependent Variable: EFP

Regression- Micro Variable ECP as dependent Variable

```
REGRESSION
/MISSING LISTWISE  /STATISTICS COEFF OUTS CI R ANOVA CHANGE
/CRITERIA=PIN(.05) POUT(.10)  /NOORIGIN
/DEPENDENT ECP
/METHOD=STEPWISE SP1 SP2 SI1 SI2 SM1 SM2 PR1 SF1 SF2 SF3 SF4 IF1 IF2 MI1 MI2 MI3
```

Variables Entered/Removed(a)

Model	Variables Entered	Variables Removed	Method
1	SF3	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	IF1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	SF1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	SP2	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a Dependent Variable: ECP

Model Summary(e)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.573(a)	.329	.324	1.09564	.329	67.123	1	137	.000
2	.643(b)	.413	.405	1.02799	.085	19.626	1	136	.000
3	.660(c)	.436	.423	1.01212	.022	5.296	1	135	.023
4	.678(d)	.459	.443	.99446	.024	5.838	1	134	.017

a Predictors: (Constant), SF3
b Predictors: (Constant), SF3, IF1
c Predictors: (Constant), SF3, IF1, SF1
d Predictors: (Constant), SF3, IF1, SF1, SP2
e Dependent Variable: ECP

ANOVA(e)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	80.577	1	80.577	67.123	.000(a)
	Residual	164.459	137	1.200		
	Total	245.035	138			
2	Regression	101.317	2	50.658	47.938	.000(b)
	Residual	143.719	136	1.057		

	Total	245.035	138			
3	Regression	106.742	3	35.581	34.733	.000(c)
	Residual	138.293	135	1.024		
	Total	245.035	138			
4	Regression	112.516	4	28.129	28.443	.000(d)
	Residual	132.520	134	.989		
	Total	245.035	138			

a Predictors: (Constant), SF3
b Predictors: (Constant), SF3, IF1
c Predictors: (Constant), SF3, IF1, SF1
d Predictors: (Constant), SF3, IF1, SF1, SP2
e Dependent Variable: ECP

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.935	.408		2.290	.024	.128	1.743
	SF3	.755	.092	.573	8.193	.000	.572	.937
2	(Constant)	-.036	.442		-.082	.935	-.910	.837
	SF3	.509	.103	.387	4.963	.000	.306	.712
	IF1	.476	.107	.346	4.430	.000	.263	.688
3	(Constant)	.476	.488		.974	.332	-.490	1.442
	SF3	.614	.111	.467	5.541	.000	.395	.833
	IF1	.554	.111	.402	4.988	.000	.334	.774
	SF1	-.282	.123	-.191	-2.301	.023	-.525	-.040
4	(Constant)	.224	.491		.456	.649	-.747	1.195
	SF3	.631	.109	.480	5.784	.000	.415	.847
	IF1	.474	.114	.344	4.162	.000	.249	.700
	SF1	-.333	.122	-.225	-2.721	.007	-.575	-.091
	SP2	.190	.078	.170	2.416	.017	.034	.345

a Dependent Variable: ECP

Excluded Variables(e)

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	SP1	.158(a)	2.192	.030	.185	.914
	SP2	.224(a)	3.225	.002	.267	.950
	SI1	.231(a)	3.112	.002	.258	.838
	SI2	.215(a)	2.989	.003	.248	.894
	SM1	.278(a)	3.441	.001	.283	.695
	SM2	.195(a)	2.759	.007	.230	.940
	PR1	.176(a)	2.180	.031	.184	.732
	SF1	-.065(a)	-.753	.453	-.064	.668
	SF2	.039(a)	.477	.634	.041	.729
	SF4	.040(a)	.519	.604	.044	.834
	IF1	.346(a)	4.430	.000	.355	.709
	IF2	.068(a)	.820	.413	.070	.715
	MI1	.247(a)	2.956	.004	.246	.662
	MI2	.160(a)	1.930	.056	.163	.697
	MI3	.196(a)	2.592	.011	.217	.825

2	SP1	.039(b)	.512	.609	.044	.757
	SP2	.137(b)	1.935	.055	.164	.838
	SI1	.106(b)	1.313	.191	.112	.658
	SI2	.091(b)	1.159	.248	.099	.698
	SM1	.088(b)	.847	.398	.073	.400
	SM2	.123(b)	1.765	.080	.150	.873
	PR1	-.055(b)	-.564	.574	-.048	.453
	SF1	-.191(b)	-2.301	.023	-.194	.605
	SF2	-.129(b)	-1.526	.129	-.130	.597
	SF4	-.090(b)	-1.163	.247	-.100	.721
	IF2	-.151(b)	-1.669	.097	-.142	.523
	MI1	-.024(b)	-.205	.838	-.018	.315
	MI2	-.100(b)	-.986	.326	-.085	.418
	MI3	.080(b)	1.015	.312	.087	.693
3	SP1	.052(c)	.700	.485	.060	.752
	SP2	.170(c)	2.416	.017	.204	.813
	SI1	.107(c)	1.349	.180	.116	.658
	SI2	.088(c)	1.142	.256	.098	.697
	SM1	.142(c)	1.362	.175	.117	.383
	SM2	.133(c)	1.945	.054	.166	.870
	PR1	.011(c)	.112	.911	.010	.413
	SF2	-.065(c)	-.722	.472	-.062	.511
	SF4	-.071(c)	-.927	.356	-.080	.712
	IF2	-.160(c)	-1.798	.074	-.153	.522
	MI1	.015(c)	.129	.897	.011	.309
	MI2	-.063(c)	-.625	.533	-.054	.407
	MI3	.081(c)	1.043	.299	.090	.692
4	SP1	-.006(d)	-.073	.942	-.006	.673
	SI1	.009(d)	.098	.922	.009	.472
	SI2	.040(d)	.508	.612	.044	.644
	SM1	.077(d)	.717	.475	.062	.352
	SM2	.114(d)	1.676	.096	.144	.855
	PR1	-.075(d)	-.713	.477	-.062	.369
	SF2	-.078(d)	-.875	.383	-.076	.509
	SF4	-.082(d)	-1.089	.278	-.094	.709
	IF2	-.168(d)	-1.926	.056	-.165	.522
	MI1	-.025(d)	-.215	.830	-.019	.302
	MI2	-.101(d)	-1.002	.318	-.087	.398
	MI3	.051(d)	.663	.508	.057	.673

a Predictors in the Model: (Constant), SF3
b Predictors in the Model: (Constant), SF3, IF1
c Predictors in the Model: (Constant), SF3, IF1, SF1
d Predictors in the Model: (Constant), SF3, IF1, SF1, SP2
e Dependent Variable: ECP

Regression- Micro Variable EBP as dependent Variable

REGRESSION
/MISSING LISTWISE /STATISTICS COEFF OUTS CI R ANOVA CHANGE
/CRITERIA=PIN(.05) POUT(.10) /NOORIGIN
/DEPENDENT EBP
/METHOD=STEPWISE **SP1 SP2 SI1 SI2 SM1 SM2 PR1 SF1 SF2 SF3 SF4 IF1 IF2 MI1 MI2 MI3**

Variables Entered/Removed(a)

Model	Variables Entered	Variables Removed	Method
1	MI1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	SF1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	IF1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a Dependent Variable: EBP

Model Summary(d)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.788(a)	.621	.619	.59332	.621	224.746	1	137	.000
2	.806(b)	.650	.645	.57247	.029	11.161	1	136	.001
3	.818(c)	.669	.662	.55853	.019	7.876	1	135	.006

a Predictors: (Constant), MI1
b Predictors: (Constant), MI1, SF1
c Predictors: (Constant), MI1, SF1, IF1
d Dependent Variable: EBP

ANOVA(d)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79.117	1	79.117	224.746	.000(a)
	Residual	48.228	137	.352		
	Total	127.345	138			
2	Regression	82.775	2	41.387	126.287	.000(b)
	Residual	44.570	136	.328		
	Total	127.345	138			
3	Regression	85.231	3	28.410	91.073	.000(c)
	Residual	42.114	135	.312		
	Total	127.345	138			

a Predictors: (Constant), MI1
b Predictors: (Constant), MI1, SF1
c Predictors: (Constant), MI1, SF1, IF1
d Dependent Variable: EBP

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.297	.186		6.968	.000	.929	1.665
	MI1	.711	.047	.788	14.992	.000	.617	.805
2	(Constant)	.683	.257		2.659	.009	.175	1.191
	MI1	.611	.055	.678	11.192	.000	.503	.719

	SF1	.215	.064	.202	3.341	.001	.088	.343
3	(Constant)	.410	.269		1.527	.129	-.121	.942
	MI1	.450	.078	.498	5.728	.000	.294	.605
	SF1	.187	.064	.175	2.928	.004	.061	.313
	IF1	.238	.085	.240	2.806	.006	.070	.406

a Dependent Variable: EBP

Excluded Variables(d)

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	SP1	.117(a)	2.090	.039	.176	.862
	SP2	.092(a)	1.612	.109	.137	.830
	SI1	.124(a)	2.077	.040	.175	.756
	SI2	.155(a)	2.777	.006	.232	.841
	SM1	.096(a)	1.054	.294	.090	.335
	SM2	.101(a)	1.830	.069	.155	.895
	PR1	.147(a)	1.641	.103	.139	.341
	SF1	.202(a)	3.341	.001	.275	.702
	SF2	.147(a)	2.214	.029	.186	.610
	SF3	.200(a)	3.197	.002	.264	.662
	SF4	.036(a)	.634	.527	.054	.839
	IF1	.280(a)	3.232	.002	.267	.345
	IF2	.044(a)	.708	.480	.061	.722
	MI2	.224(a)	1.987	.049	.168	.212
	MI3	.070(a)	1.049	.296	.090	.623
2	SP1	.091(b)	1.664	.098	.142	.842
	SP2	.067(b)	1.198	.233	.103	.813
	SI1	.106(b)	1.819	.071	.155	.749
	SI2	.140(b)	2.565	.011	.216	.834
	SM1	.032(b)	.351	.726	.030	.318
	SM2	.085(b)	1.586	.115	.135	.887
	PR1	.068(b)	.751	.454	.064	.312
	SF2	.067(b)	.930	.354	.080	.500
	SF3	.141(b)	2.121	.036	.180	.567
	SF4	-.006(b)	-.099	.921	-.009	.796
	IF1	.240(b)	2.806	.006	.235	.336
	IF2	.015(b)	.243	.808	.021	.706
	MI2	.181(b)	1.639	.104	.140	.209
	MI3	.070(b)	1.089	.278	.093	.623
3	SP1	.046(c)	.799	.425	.069	.748
	SP2	.051(c)	.923	.357	.080	.804
	SI1	.059(c)	.969	.334	.083	.666
	SI2	.093(c)	1.568	.119	.134	.692
	SM1	-.033(c)	-.363	.717	-.031	.298
	SM2	.065(c)	1.224	.223	.105	.868
	PR1	.030(c)	.331	.741	.029	.304
	SF2	.044(c)	.616	.539	.053	.492
	SF3	.125(c)	1.917	.057	.163	.562
	SF4	-.059(c)	-1.012	.313	-.087	.721
	IF2	-.074(c)	-1.125	.263	-.097	.565

	MI2	.161(c)	1.495	.137	.128	.208
	MI3	.057(c)	.901	.369	.078	.619

a Predictors in the Model: (Constant), MI1
b Predictors in the Model: (Constant), MI1, SF1
c Predictors in the Model: (Constant), MI1, SF1, IF1
d Dependent Variable: EBP

Regression- Micro Variable ELP as dependent Variable

REGRESSION
/MISSING LISTWISE /STATISTICS COEFF OUTS CI R ANOVA CHANGE
/CRITERIA=PIN(.05) POUT(.10) /NOORIGIN
/DEPENDENT ELP
/METHOD=STEPWISE **SP1 SP2 SI1 SI2 SM1 SM2 PR1 SF1 SF2 SF3 SF4 IF1 IF2 MI1 MI2 MI3**

Variables Entered/Removed(a)

Model	Variables Entered	Variables Removed	Method
1	MI1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	SI2	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	IF1	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a Dependent Variable: ELP

Model Summary(d)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.743(a)	.552	.548	.59905	.552	168.543	1	137	.000
2	.791(b)	.626	.621	.54898	.075	27.131	1	136	.000
3	.801(c)	.642	.634	.53924	.016	5.957	1	135	.016

a Predictors: (Constant), MI1
b Predictors: (Constant), MI1, SI2
c Predictors: (Constant), MI1, SI2, IF1
d Dependent Variable: ELP

ANOVA(d)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	60.483	1	60.483	168.543	.000(a)
	Residual	49.164	137	.359		
	Total	109.647	138			
2	Regression	68.660	2	34.330	113.911	.000(b)
	Residual	40.987	136	.301		
	Total	109.647	138			
3	Regression	70.392	3	23.464	80.694	.000(c)
	Residual	39.255	135	.291		
	Total	109.647	138			

a Predictors: (Constant), MI1
b Predictors: (Constant), MI1, SI2
c Predictors: (Constant), MI1, SI2, IF1
d Dependent Variable: ELP

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.721	.188		9.160	.000	1.349	2.092
	MI1	.622	.048	.743	12.982	.000	.527	.716
2	(Constant)	.854	.239		3.567	.000	.381	1.328
	MI1	.522	.048	.624	10.911	.000	.428	.617
	SI2	.286	.055	.298	5.209	.000	.177	.394
3	(Constant)	.715	.242		2.953	.004	.236	1.193
	MI1	.384	.074	.458	5.202	.000	.238	.529
	SI2	.225	.059	.235	3.791	.000	.108	.342
	IF1	.217	.089	.236	2.441	.016	.041	.393

a Dependent Variable: ELP

Excluded Variables(d)

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	SP1	.147(a)	2.426	.017	.204	.862
	SP2	.101(a)	1.622	.107	.138	.830
	SI1	.280(a)	4.558	.000	.364	.756
	SI2	.298(a)	5.209	.000	.408	.841
	SM1	.202(a)	2.071	.040	.175	.335
	SM2	.008(a)	.126	.900	.011	.895
	PR1	.120(a)	1.230	.221	.105	.341
	SF1	.095(a)	1.402	.163	.119	.702
	SF2	.105(a)	1.445	.151	.123	.610
	SF3	.175(a)	2.536	.012	.212	.662
	SF4	.170(a)	2.785	.006	.232	.839
	IF1	.389(a)	4.236	.000	.341	.345
	IF2	.060(a)	.883	.379	.076	.722
	MI2	-.072(a)	-.575	.566	-.049	.212
	MI3	.135(a)	1.882	.062	.159	.623
2	SP1	-.019(b)	-.286	.775	-.025	.605
	SP2	.007(b)	.119	.906	.010	.747
	SI1	.132(b)	1.678	.096	.143	.438
	SM1	.016(b)	.165	.869	.014	.282
	SM2	-.033(b)	-.590	.557	-.051	.877
	PR1	.031(b)	.332	.740	.029	.328
	SF1	.066(b)	1.050	.296	.090	.696
	SF2	.060(b)	.880	.380	.076	.599
	SF3	.135(b)	2.097	.038	.178	.652
	SF4	.067(b)	1.087	.279	.093	.720
	IF1	.236(b)	2.441	.016	.206	.284
	IF2	.003(b)	.048	.962	.004	.699
	MI2	-.078(b)	-.688	.492	-.059	.212
	MI3	.070(b)	1.034	.303	.089	.599
3	SP1	-.047(c)	-.693	.490	-.060	.590
	SP2	.008(c)	.128	.899	.011	.747
	SI1	.114(c)	1.460	.147	.125	.433

	SM1	-.016(c)	-.163	.871	-.014	.277
	SM2	-.049(c)	-.876	.383	-.075	.867
	PR1	.002(c)	.026	.979	.002	.323
	SF1	.046(c)	.744	.458	.064	.683
	SF2	.039(c)	.573	.568	.049	.588
	SF3	.120(c)	1.888	.061	.161	.645
	SF4	.038(c)	.614	.540	.053	.689
	IF2	-.076(c)	-1.118	.266	-.096	.568
	MI2	-.103(c)	-.920	.359	-.079	.211
	MI3	.071(c)	1.070	.286	.092	.599

a Predictors in the Model: (Constant), MI1
b Predictors in the Model: (Constant), MI1, SI2
c Predictors in the Model: (Constant), MI1, SI2, IF1
d Dependent Variable: ELP

Appendix: IX

Terminology and Nomenclature Used in Upstream Oil Industry

URR : Ultimate Recoverable Reserve. A portion of oil reserve which can be produced through primary and secondary recovery methods out of total reserve (IIH).

IIH : Initial in-place reserve of oil/gas.

Oil Block: A portion of prospective land probably containing oil/gas reserve available for exploration of oil/gas.

NELP: New Exploratory Licensing Policy of Government of India.

Exploratory Drilling: Drilling an exploratory Oil well in new oil block to find oil/gas.

Exploratory Well: A oil well for exploration purposes.

Development Drilling: Drilling an Oil well to develop the oil/gas field for producing oil and /gas.

Development Well: A oil well drilled for development of oil/gas field

Directional Well: A non-straight well drilled at particular angle to reach a oil/gas layer in reservoir.

EOR : Enhance Oil Recovery methods applied to extract more oil/gas from underground reservoir when it has stopped producing naturally due to fall in reservoir pressure etc.

ETP : Effluent Treatment Plant

RRR : Reserve Replacement Ratio. It is ration of new reserve accretion to oil/gas produced during the year by a company.

RLI : Reserve Life Index. It is an index to show the life of a producing oil/gas reservoir. It is ratio of recoverable reserve to annual production of oil/gas from an oil/gas field. It is also known as reserve to production ratio (RPR).

MMToe: Million Metric Tonnes of Oil and Oil equivalent of hydrocarbons.

BCM : Billion Cubic Meter; used for natural gas production.

Bbl : Barrel of oil.

Accreage: It is geographical area in square kilometre/ square miles containing oil/gas prospective reserve.

VAP : Value Added Products derived from Natural Gas.

GGS : Group Gathering Station for collection of oil/gas from oil wells and processing to separate oil from water, sand and Gas.

CTF : Central tank Form for storage of oil after processing at GGS.

Process Platform: An platform/ engineering structure inside sea water for processing and storing of oil/gas produced from oil fields in high seas. It is onshore equivalent of GGS.

Drilling Rig: A rig used for drilling oil/gas wells in oilfields ranging from 1500-6000 meters depth.

Workover Rig: A rig deployed on a well for carrying out workover operations.

Workover: Various types of techniques used to repair a well when it becomes sick i.e. stopped producing temporarily.

Processing Plant: It is a plant to process oil/gas coming from offshore. Its function is more like a GGS and CTF.
Seismic Survey: Survey carried out on land and high seas to explore probable oil/gas reserve in new areas. This is primary step in oil/gas exploration. It is based on sound waves and its reflection from different layers beneath the earth.

Dry Well: A well drilled and after testing found to be showing no flow of hydrocarbons (oil/gas).

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