CHAPTER IV

RESULTS

The results of data analysis are presented in this chapter. The data collected from the sampled subjects was statistically analysed. The correlations of predictor variables and the criterion (performance) were calculated. The inter - correlations between the predictor variables were calculated. Factor analysis of predictor variables was made on the basis of their inter-correlation values for all executive group. Independent variables were constituted. Step wise multiple regression analysis was made. The proposed hypotheses stated in the previous Chapter were tested with statistical techniques namely, t - test and F - test.

Means and Standard Deviations of the predictor variables for all executives and executives in Scales II, III and IV are given in Table 11. It also gives the mean and standard deviation of scores of criterion variable (work performance) in each category.

It is seen from Table 11 that the mean values for each predictor was marginally different. The Scale IV group of executives scored consistently high on most of the variables. Even their rating on work performance was better than those of other categories. They were particularly better scorers on judgement, practical temperament, shrewdness, objectivity, conceptual ability and risk taking ability. In contrast, the

Table 11 : Means ($\bar{X}$) and Standard Deviations (SD) of predictor and criterion variables' score for different executive categories

Sr. No.	Predictor variables	Mean($\bar{X}$) SD	All Executives (N=138)	Scale - II (N=66)	Scale - III (N=38)	Scale - IV (N=34)
1	Judgement (J)	$\bar{X}$	131.5	129.5	128.6	138.4
		SD	24.9	27.0	24.3	20.6
2.	Emotional stability	$\bar{X}$	16.0	15.6	16.1	16.8
	(C)	SD	3.6	4.1	2.7	3.5
3.	Tough mindedness (I)	$\bar{X}$	10.6	10.0	11.3	10.8
		SD	3.6	4.1	2.7	3.5
4.	Practical temperament	$\bar{X}$	12.4	11.3	11.9	14.7
	(I)	SD	9.7	3.2	3.3	19.4
5.	Shrewdness (N)	$\bar{X}$	12.5	11.2	11.6	16.3
		SD	9.7	2.2	3.5	19.3
6.	Self-assuredness (O)	$\bar{X}$	11.0	11.0	11.5	10.7
		SD	3.6	3.8	3.6	3.4
7.	Critical thinking(Q1)	$\bar{X}$	8.5	8.4	8.4	8.8
		SD	2.8	2.7	3.0	2.5
8.	Resourcefulness (Q2)	$\bar{X}$	10.3	10.2	10.1	10.7
		SD	3.3	3.2	3.5	3.4
9.	Executive initiative	$\bar{X}$	33.2	32.5	33.9	33.5
	(EI)	SD	3.4	3.5	3.9	2.7
10.	Objectivity (V)	$\bar{X}$	4.7	4.7	2.6	8.0
		SD	7.4	7.4	7.3	6.3
11.	Achievement	$\bar{X}$	5.9	5.8	5.8	6.0
	Motivation (n-Ach)	SD	1.4	1.3	1.4	1.5
12.	Conceptual ability	$\bar{X}$	39.7	36.7	38.9	47.7
	(CA)	SD	26.0	26.3	25.3	6.2
13.	Ability and readiness	$\bar{X}$	4.3	4.2	4.2	4.4
	to learn (ARL)	SD	0.6	0.6	0.6	0.5
14.	Knowledge (K)	$\bar{X}$	4.2	4.2	4.2	4.3
		SD	0.7	0.6	0.6	0.9
15.	Decision making (DM)	$\bar{X}$	3.9	3.8	3.8	4.2
		SD	0.7	0.8	0.5	0.5
16.	Stress tolerance (ST)	$\bar{X}$	4.1	4.0	4.1	4.0
		SD	0.6	0.5	0.5	0.8
17.	Relational skills	$\bar{X}$	4.2	4.2	4.1	4.3
	(RS)	SD	0.5	0.6	0.5	0.5
18.	Risk taking ability	$\bar{X}$	3.8	3.6	3.9	4.8
	(RTA)	SD	0.9	1.1	0.9	0.5
19.	Creativity and	$\bar{X}$	3.8	3.8	3.8	3.9
	innovativeness (CAI)	SD	1.0	1.2	0.9	0.5
20.	Dependability (D)	$\bar{X}$	4.3	4.2	4.2	4.5
		SD	0.6	0.6	0.5	0.4
	Criterion	$\bar{X}$	4.00	4.00	4.00	4.1
	(work performance)	SD	0.43	0.47	0.44	0.35

Scale - III group scored comparatively lower on many variables Their score on objectivity was the lowest.

Intergroup variability seemed to be quite high on many of the variables. Even though the executives in Scale - IV group scored the highest (16.3) among groups in shrewdness the variability of the score also was high (19.3). The variability of scores on this variable in Scale - II group was only 2.2.

On comparison of these scores with the standardized data given by the test constructor of the respective tests used in the study it was found that these groups were more or less comparable with the population on which the Scale was standardized. As for example, the mean scores of these groups on the achievement motivation ranged from 5.8 to 6.0 while the scores of two criterion groups of managers reported by Lynn (1969) were 5.9 and 6.2. However, in respect of conceptual ability the mean scores of these groups were somewhat lower.

In order to study the ability of predictor variables they were correlated with the criterion variable, i.e , performance. Table 12 gives the correlations between predictor variables and the criterion (performance) for all executives.

Out of the 20 predictors under analysis, 55% were significantly correlated with the criterion at .01 level and 10% at .05 level. Dependability was found to be correlated maximally

Table 12 : CORRELATION (r) BETWEEN PREDICTOR VARIABLES AND PERFORMANCE OF ALL EXECUTIVES

(N=138)

Sr. No.	Predictor variables	r - values
1	Judgement (J)	0.36*
2.	Emotional stability (C)	0.05
3.	Tough mindedness (I)	-0.24*
4.	Practical temperament (I)	0.1
5.	Shrewdness (N)	0.06
6.	Self-assuredness (O)	0.02
7.	Critical thinking(Q1)	0.17@
8.	Resourcefulness (Q2)	0.09
9.	Executive initiative (E1)	0.09
10.	Objectivity (V)	0.04
11.	Achievement Motivation (n-Ach)	0.25*
12.	Conceptual ability (CA)	0.18@
13.	Ability and readiness to learn (ARL)	.78*
14.	Knowledge (K)	.58*
15.	Decision making (DM)	.58*
16.	Stress tolerance (ST)	.59*
17.	Relational skills (RS)	.70*
18.	Risk taking ability (RTA)	.47*
19.	Creativity and innovativeness (CAI)	.50*
20.	Dependability (D)	.83*

* P < .01 ;@ P < .05

(r=.83) with performance. The next highest r value obtained was between ability and readiness to learn and performance. The variables showing high correlations ($p<$ 01), ranging from .40 to. 70, were relational skills, stress tolerance, knowledge, decision making, creativity and innovativeness, and risk taking ability. Judgement, achievement motivation, conceptual ability and critical thinking ability also showed statistically significant positive correlation. Tough - mindedness was the only variable which showed negative but statistically significant correlation with performance. The remaining 7 predictor variables failed to show any relationship with the criterion.

Table 13 gives the correlations between predictor variables and the criterion for executives of Scales II, III and IV.

The values in the table reveal that 50% of the predictor variables were having statistically significant correlation with performance in the Scale - II executives group, of which 40% were found to correlated with performance at .01 level As in the previous case, dependability was the highest correlated (r=.88) variable followed by ability and readiness to learn (r=.81),knowledge (r=.77) and relational skills (r=.75). The other substantially correlated variables were stress tolerance, decision making and creativity and innovativeness. The variable which showed slightly low positive correlation significant at .01 level was risk taking ability. The correlation of judgement with

Table 13 : CORRELATION (r) VALUES BETWEEN PREDICTOR VARIABLES AND PERFORMANCE FOR EXECUTIVES BELONGING TO II,III,IV.

Sr. No.	Predictor variables	r - VALUES		
		GR/SC II	GR/SC III	GR/SC IV
1	Judgement (J)	0.32 @	0.38 @	0.38 @
2.	Emotional stability (C)	-0.04	0.2	0.15
3.	Tough mindedness (I)	0.33 @	0.17	0.03
4.	Practical temperament (I)	0.18	0.03	0.15
5.	Shrewdness (N)	-0.22	0.06	0.15
6.	Self-assuredness (O)	0.01	0.2	-0.14
7.	Critical thinking(Q1)	0.16	0.24	-0.15
8.	Resourcefulness (Q2)	0.17	0.3	-0.08
9.	Executive initiative (E1)	0.05	0.12	0.23
10.	Objectivity (V)	-0.12	0.12	0.25
11.	Achievement Motivation (n-Ach)	0.04	0.43 *	0.51 *
12.	Conceptual ability (CA)	0.21	0.05	0.22
13.	Ability and readiness to learn (ARL)	0.81 *	0.71 *	0.79 *
14.	Knowledge (K)	0.77 *	0.71 *	0.28 *
15.	Decision making (DM)	0.48 *	0.79 *	0.81 *
16.	Stress tolerance (ST)	0.69 *	0.72 *	0.46 *
17.	Relational skills (RS)	0.75 *	0.67 *	0.59 *
18.	Risk taking ability (RTA)	0.38 *	0.6 *	0.79 *
19.	Creativity and innovativeness (CAI)	0.44 *	0.59 *	0.68 *
20.	Dependability (D)	0.88 *	0.81 *	0.74 *

* P < .01 ; @ P < .05

criterion was positive and significant at .05 level. Tough-mindedness was the only variable which showed negative but significant correlation at .05 level. The remaining 10 variables did not show any significant correlation.

In Scale-III executive group correlation of 9 variables reached the level of significance at 1% and correlation of one more was significant at 5% level. Again, dependability was found to be correlated maximally (r= .81) with performance.

Decision making, stress tolerance, ability and readiness to learn and knowledge were other variables which were highly correlated with performance. Relational skills, risk taking ability, creativity and innovativeness, and achievement motivation were substantially correlated ($P<.01$) with the criterion variable. Judgement showed slightly low positive correlation with the criterion which was significant at .05 level.

In Scale - IV executive group, 40% of the predictor variables were significantly correlated with the criterion at 1% level and one more variable showed significant correlation at 5% level. Decision making was found to be correlated to the highest (r=.81) with the criterion. The next highest correlation (r=.79) were those of ability and readiness to learn and risk taking ability. The other highly correlated variable (r=.74) was dependability. The variables which correlated with the criterion

and were significant at 1% level were creativity and innovativeness, relational skills, achievement motivation and stress tolerance. Judgement showed statistically significant positive correlation ($P<.05$) with the criterion variable. The other 55% of the predictor variables failed to show significant relationship with the criterion. Knowledge, which was significantly correlated in other groups dropped to the level of insignificance in this category.

The above analysis supported the hypothesis that there were identifiable predictors of potentialities of executives. The potentialities were different for different groups of executives.

The results of the analysis showed that dependability, ability and readiness to learn, decision making, relational skills, risk taking ability, creativity and innovativeness, stress tolerance and judgement were the common significant predictors of potentialities in all the groups. Knowledge was the significant predictor in Scales II and III groups of executives Achievement motivation was the significant predictor in executive groups in Scales II and IV. Tough mindedness was a significant variable for Scale II group of executives only. For the entire group ($N=138$) critical thinking ability and conceptual ability were also significant.

Inter correlations between Predictors

The inter-correlations between predictor-variables for all executives are presented in Table 14. It shows that 66 (35%) correlation values were statistically significant. The highest correlation (r=.89) was between practical temperament and shrewdness. Judgement was highly correlated (p<.01) with ability and readiness to learn, knowledge, stress tolerance, relational skills, risk taking ability, creativity and innovativeness, and dependability. It was also correlated (p<.05) with conceptual ability. Ability and readiness to learn was highly correlated (p<.01) with knowledge,decision making, stress tolerance, relational skills, risk taking ability, creativity and innovativeness, dependability, achievement motivation and conceptual ability. It was also correlated (p<.05) positively with critical thinking ability and negatively with tough-mindedness. Knowledge was highly correlated (p<.01) with decision making, stress tolerance, relational skills, risk taking ability, creativity and innovativeness, and dependability. Decision making was highly correlated (p< .01) with stress tolerance, relational skills, risk taking ability, creativity and innovativeness, and dependability. It was also correlated (p <.05) with achievement motivation and conceptual ability. Stress tolerance was higly correlated (p< .01) with relational skills, risk taking ability, creativity and innovativeness, and dependability. It was also significantly correlated (p<.05) with

Pred - itor	J	ARL	K	DM	ST	RS	RTA	CAI	D	C	I	M	N	O	Q1	Q2	EI	V	n-Ach	CA
(J)	1																			
(ARL)	0.35 *	1																		
(K)	0.23 *0.57 *	1																		
(DM)	0.13 *0.47 *0.46 *	1																		
(ST)	0.24 *0.51 *0.37 *0.32 *	1																		
(RS)	0.24 *0.62 * 0.4 *0.52 *0.59 *	1																		
(RTA)	0.23 * 0.3 * 0.3 * 0.4 * 0.3 * 0.38 *	1																		
(CAI)	0.25 *0.31 *0.25 *0.28 *0.32 * 0.35 *0.85 *	1																		
(D)	0.23 *0.73 *0.58 *0.53 *0.47 * 0.58 *0.42 * 0.4 *	1																		
(C)	0.00 0.05 0.05 0.02 0.12 -0.02 0.07 0.02 0.09	1																		
(I)	-0.10 -0.2 @-0.1 -0.0 -0.1 -0.10 -0.0 -0.1 -0.2 *-0.1 @	1																		
(M)	0.15 0.05 0.01 0.05 0.00 0.01 0.02 0.03 0.11 -0.0 0.23 *	1																		
(N)	0.10 -0.0 -0.0 0.04 -0.0 -0.03 0.05 0.04 0.05 -0.0 0.23 *0.89 *	1																		
(O)	-0.02 -0.0 -0.0 0.02 -0.0 0.06 -0.0 0.03 0.02 -0.4 *0.07 -0.1 -0.0	1																		
(Q1)	0.13 0.18 @0.16 0.11 0.22 @ 0.12 0.06 0.07 0.15 0.05 -0.2 @-0.1 0.13 0.00	1																		
(Q2)	0.14 0.11 0.06 0.07 0.17 @ 0.00 0.10 0.16 0.10 -0.2 @-0.0 0.12 0.13 0.17 @0.18 @	1																		
(EI)	0.04 0.06 0.08 0.16 -0.0 0.13 0.14 0.12 0.09 0.15 -0.0 0.02 -0.0 0.03 0.05 -0.0	1																		
(V)	0.02 0.13 0.08 -0.0 0.01 -0.06 0.08 0.06 0.08 0.46 *-0.0 0.12 0.01 -0.4 0.14 -0.1 -0.0	1																		
(n-Ach)	0.08 0.25 *0.13 0.21 @0.22 @ 0.16 0.12 0.13 0.24 *-0.0 0.01 0 0.02 0.03 -0.0 0.12 0.07 -0.0	1																		
(CA)	0.21 @0.23 *0.10 0.19 @0.07 0.18 @0.14 0.17 @0.16 -0.0 -0.0 0.00 -0.0 -0.0 0.13 0.26 *0.14 0.06 0.17 @	1																		

* p < .01 ; @ p < .05

critical thinking ability, resourcefulness and achievement motivation. Relational skill was highly correlated ($p<.01$) with risk taking ability, creativity and innovativeness, and dependability. It was also correlated ($p<.05$) with conceptual ability. Risk taking ability was highly correlated ($p<.01$) with creativity and innovativeness and dependability. Creativeness and innovativeness variable was highly correlated ($p<.01$) with dependability and its correlation with conceptual ability was also significant ($p<.05$). Dependability was highly correlated ($p<.01$) with tough - mindedness and achievement motivation. Emotional stability was highly correlated ($p<.01$) positively with objectivity and negatively with self - assuredness. It was also correlated ($p<.05$) positively with resourcefulness and negatively with tough - mindedness. Tough - mindedness was highly correlated ($p<.01$) positively with practical temperament and shrewdness. It was also correlated negatively with citical thinking ability ($p<.05$). Self - assuredness was negatively correlated ($p<.01$) with objectivity. It was also correlated ($p<.05$) with resourcefulness. Critical thinking ability was correlated ($p<.05$) with resourcefulness. Resourcefulness was correlated ($p<.05$) with conceptual ability. Achievement motivation was correlated ($p<.05$) with conceptual ability.

Table 15 shows the inter - correlations between predictor - variables for Scale II executives. Out of 190 possible correlations 51 (27%) were statistically significant. The highest

Predictor	J	ARL	K	DM	ST	RS	RTA	CAI	D	C	I	M	N	O	Q1	Q2	EI	V	n-Ach	CA
(J)	1																			
(ARL)	0.39 *	1																		
(K)	0.38 *	0.79 *	1																	
(DM)	0.04	0.37 *	0.57 *	1																
(ST)	0.24 @	0.52 *	0.47 *	0.25 @	1															
(RS)	0.14	0.64 *	0.59 *	0.52 *	0.62 *	1														
(RTA)	0.17	0.21	0.40 *	0.28 @	0.16	0.34 *	1													
(CAI)	0.20	0.30 @	0.44 *	0.19	0.25 *	0.36 *	0.90 *	1												
(D)	0.28 @	0.81 *	0.77 *	0.45 *	0.57 *	0.68 *	0.39 *	0.44 *	1											
(C)	0.02	0.00	-0.03	-0.12	0.10	-0.06	0.00	-0.04	0.05	1										
(I)	-0.15	-0.27 @	-0.22	0.06	-0.16	-0.13	-0.07	-0.08	-0.30 @	-0.21	1									
(M)	0.35 @	0.21	0.11	-0.06	0.12	0.10	0.06	0.10	0.18	0.14	0.12	1								
(N)	-0.21	-0.19	0.24 @	-0.18	-0.28 @	-0.02	-0.04	-0.05	-0.22	0	0.27 @	-0.03	1							
(O)	-0.10	-0.04	0.00	0.10	-0.07	0.02	-0.03	0.01	0.00	-0.64 *	0.06	-0.25 @	-0.07	1						
(Q1)	0.12	0.14	0.11	0.03	0.27 @	0.09	0.05	0.02	0.21	0.10	-0.08	-0.10	-0.37 *	-0.03	1					
(Q2)	0.26 @	0.14	0.17	0.09	0.19	0.04	0.15	0.20	0.19	-0.26 @	0.07	0.02	0.00	0.23	0.24 @	1				
(EI)	-0.03	-0.01	0.03	0.12	0.02	0.04	0.24 @	0.21	0.11	0.16	-0.05	0.09	-0.18	-0.04	0.09	0.04	1			
(V)	0.12	-0.03	-0.12	-0.24 @	0.03	-0.10	0.00	0.03	-0.05	0.54 *	-0.07	0.21	-0.14	-0.40 *	0.22	-0.34 *	0.13	1		
(n-Ach)	-0.15	0.03	0.09	0.10	0.00	0.03	-0.03	-0.02	0.09	-0.18	0.15	0.00	0.12	-0.03	-0.20	0.13	-0.03	-0.21	1	
(CA)	0.32 @	0.34 *	0.25	0.14	0.09	0.26 @	0.05	0.10	0.19	-0.04	-0.02	0.26 @	-0.02	0.01	0.09	0.33 @	0.18	-0.04	0.15	1

* p < .01 ; @ p < .05

correlation (r = .90) was between risk taking ability and creativity and innovativeness. The next highest was between dependability and ability and readiness to learn (r = .81) Judgement was highly correalted ($p<.01$) with ability and readiness to learn, knowledge and practical temperament. It was also correlated ($p<.05$) with stress tolerance, dependability, resourcefulness and conceptual ability. Ability and readiness to learn was highly correlated ($p<.01$) with knowledge, decision making, stress tolerance, relational skills, and conceptual ability. It was also correlated ($p< 05$) with creativity and innovativeness. It was negatively correlated ($p<.05$) with tough - mindedness. Knowledge was highly correlated ($p<.01$) with decision making, stress tolerance, relational skills, risk taking ability, creativity and innovativeness, and dependability. it was also correlated ($p<.05$) with shrewdness and conceptual ability Decision making was highly correlated ($p<.01$) with dependability. It was als correlated ($p<.05$) with stress tolerance and risk atking ability. It was negatively correlated ($p<.05$) with objectivity. Stress tolerance was highly correlated ($p<.01$) with relational skill and dependability. It was also correlated ($p<.05$) with creativity and innovativeness and critical thinking It was negatively correlated ($p<.05$) with shrewdness. Relational skill was found to be correlated ($p<.01$) with risk taking ability, creativity and innovativeness, and dependability. Risk taking ability was correlated with dependability ($p<.01$) and

initiative ($p<.05$). Creativity and innovativeness was highly correlated ($p<.01$) with dependability. Dependability was negatively correlated ($p<.05$) with tough - mindedness. Emotional stability was negatively correlated with self - assuredness ($p<.01$) and resourcefulness ($p<.05$). Tough - mindedness was correlated ($p<.05$) with shrewdness. Practical temperament was correlated ($p<.05$) positively with conceptual ability and negatively with self - assuredness. Shrewdness was negatively correlated ($p<.01$) with critical thinking. Critical thinking was correlated ($p<.05$) with resourcefulness. Resourcefulness was correalted with objectivity and conceptual ability.

Table 16 gives the inter - correlations between predictor variables for Scale III executives. It shows that our of 190 correlations 38 (20%) were statistically significant. The highst correlation was between creativity and innovativeness and risk taking ability ($r = .82$). Judgement was correlated ($p<.05$) with relational skills. Ability and readiness to learn was highly correlated ($p<.01$) with knowledge, decision making, stress tolerance, relational skills and achivement motivation. It was also correlated ($p<.05$) with risk taking ability. Knowledge was highly correlated ($p<.01$) with decision making, stress tolerance, dependability and objectivity. It was also found to be correlated ($p<.05$) with relational skills. Decision making was highly correlated ($p<.05$) with stress tolerance, relational skills, risk taking ability, creativity and innovativeness, dependability and

Predictor	J	ARL	K	DM	ST	RS	RTA	CAI	D	C	I	M	N	O	Q1	Q2	EI	V	n-Ach	CA
(J)	1																			
(ARL)	0.26	1																		
(K)	0.19	0.76 *	1																	
(DM)	0.26	0.63 *	0.6[illegible] *	1																
(ST)	0.26	0.67 *	0.5[illegible] *	0.56 *	1															
(RS)	0.35 @	0.60 *	0.3[illegible] @	0.54 *	0.68 *	1														
(RTA)	0.30	0.32 @	0.2[illegible]	0.50 *	0.69 *	0.45 *	1													
(CAI)	0.26	0.24	0.2[illegible]	0.45 *	0.59 *	0.34 @	0.82 *	1												
(D)	0.15	0.71 *	0.6[illegible] *	0.66 *	0.62 *	0.66 *	0.32 @	0.25	1											
(C)	0.10	0.02	0.2[illegible]	0.16	0.13	0.00	0.02	0.11	0.04	1										
(I)	-0.14	0.28	-0.0[illegible]	-0.24	-0.24	-0.12	-0.08	-0.21	-0.16	0.01	1									
(M)	0.20	0.11	0.1[illegible]	0.09	-0.14	-0.15	-0.19	-0.10	0.11	0.26	0.01	1								
(N)	-0.06	-0.21	-0.1[illegible]	0.06	0.09	0.03	0.20	0.26	-0.04	0.04	0.05	-0.21	1							
(O)	0.05	0.04	-0.0[illegible]	-0.03	0.08	0.06	0.06	0.14	0.08	-0.17	0.00	-0.35 @	0.04	1						
(Q1)	0.25	0.20	0.1[illegible]	0.21	0.08	-0.03	0.07	0.16	0.11	-0.12	-0.53 *	-0.18	-0.15	0.11	1					
(Q2)	0.07	0.17	0.0[illegible]	0.07	0.16	-0.10	0.09	0.22	0.02	0.01	-0.42 *	-0.20	0.17	0.20	0.32 @	1				
(EI)	0.16	0.08	0.0[illegible]	0.13	-0.02	0.15	-0.17	-0.09	0.10	0.09	-0.02	-0.06	-0.26	0.04	-0.17	-0.01	1			
(V)	-0.07	0.24	0.4[illegible] *	0.18	0.14	-0.12	0.09	0.09	0.12	0.33 @	-0.09	0.32 @	-0.40 *	-0.50 *	0.20	-0.04	0.09	1		
(n-Ach)	0.16	0.42 *	0.2[illegible]	0.40 *	0.28	0.35 @	0.32 @	0.27	0.39 @	-0.11	-0.25	0.00	0.07	0.29	0.15	0.36 @	0.22	0.05	1	
(CA)	0.04	-0.03	0.[illegible]	0.13	0.01	-0.03	0.16	0.29	0.06	-0.04	-0.10	0.20	0.19	-0.12	0.03	0.21	0.05	0.10	0.21	1

* p < .01 ; @ p < .05

achievement motivation. Stress tolerance w2as highly correlated ($p<.01$) with relational skills, creativity and innovativeness, risk taking ability and dependabilty. Relational skill was highly correlated ($p<01$) with risk taking ability and dependability. It was also correlated ($p<.05$) with creativity and innovativeness, and achievement motivation. Dependability was correlated ($p<.05$) with achievement motivation. Emotional stability was correlated ($p<.05$) with objectivity. Tough - mindedness was negatively correlated ($p<.01$) with critical thinking. Similarly, practical temperament was negatively correlated ($p<.05$) with self - assuredness, but positvely with objectivity. Shrewdness was negatively correlated with objectivity. Self - assuredness was also negatively correlated with objectivity. Critical thinking ability was correlated with resourcefulness and resourcefulness was corrleated with achievement motivation.

The matrix of inter - correlation between predictor - variables for Scale IV executives is given in Table 17. The matrix revealed that 43 (23%) inter - correlations were statistically significant. The highest correlations ($r = .97$) was between practical temperament and shrewdness. The next highest correlation was between decision making and risk taking ability. Judgement was highly correlated ($p<.01$) with achievement motivation. It was also correlated ($p<.05$) with risk taking ability. Ability and readiness to learn was also correlated ($p<.01$) with achievement motivation. Besides, it was correlated

Table 17 : MATRIX OF INTER CORRELATION BETWEEN PREDICTOR VARIABLES FOR SCALE IV CALCULATED

Predictor	J	ARL	K	DM	ST	RS	RTA	CAI	D	C	I	M	N	O	QI	Q2	EI	V	n-Ach	CA
(J)	1																			
(ARL)	0.29	1																		
(K)	0.04	0.19	1																	
(DM)	0.19	0.65 *	0.33 @	1																
(ST)	0.27	0.48 *	0.24	0.42 @	1															
(RS)	0.29	0.61 *	0.22	0.53 *	0.53 *	1														
(RTA)	0.36 @	0.58 *	0.29	0.79 *	0.44 *	0.49 *	1													
(CAI)	0.41 @	0.58 *	-0.11	0.58 *	0.41 @	0.35 @	0.62 *	1												
(D)	0.14	0.56 *	0.31	0.68 *	0.32	0.23	0.59 *	0.56 *	1											
(C)	-0.27	0.12	0.05	0.31	0.18	0.03	0.35 @	0.16	0.19	1										
(I)	0.09	-0.08	-0.12	-0.20	-0.09	0.10	-0.22	-0.09	-0.09	-0.43 *	1									
(M)	0.24	-0.05	-0.03	0.07	0.00	-0.07	0.00	0.03	0.11	-0.29	0.50 *	1								
(N)	0.27	-0.03	-0.04	0.05	0.01	-0.14	-0.01	0.03	0.11	-0.28	0.45 *	0.97 *	1							
(O)	0.20	0.12	-0.07	-0.17	-0.11	0.15	-0.11	-0.01	0.11	-0.38 @	0.15	-0.13	-0.13	1						
(QI)	-0.14	0.20	0.29	0.22	0.31	0.34 @	0.05	0.05	0.18	-0.05	-0.23	-0.21	-0.22	-0.07	1					
(Q2)	-0.09	-0.13	-0.06	-0.05	0.20	0.07	-0.18	-0.07	-0.11	-0.37 @	0.19	0.27	0.20	0.04	-0.12	1				
(EI)	-0.10	0.16	0.22	0.24	-0.10	0.33 @	0.15	0.09	0.11	0.12	-0.07	-0.01	-0.08	-0.15	0.23	-0.16	1			
(V)	0.30	0.18	0.05	0.41 @	-0.02	0.11	0.28	0.05	0.09	0.47 *	0.04	0.07	0.05	-0.37 @	-0.08	-0.09	0.08	1		
(n-Ach)	0.52 *	0.51 *	0.10	0.43 *	0.49 *	0.31	0.38 @	0.60 *	0.46 *	0.13	-0.08	0.00	0.01	-0.14	0.09	-0.21	0.08	-0.10	1	
(CA)	0.05	0.17	-0.03	0.26	0.09	0.14	0.24	0.27	0.03	-0.20	0.00	-0.16	-0.16	-0.21	0.37 @	0.13	0.15	0.08	0.16	

* p < .01 ; @ p < .05

(p<.01) with dependability, creativity and innovativeness, risk taking ability, relational skills, stress tolerance and decision making Knowledge was correlated (p< 05) with decision making. Decision making was correlated (p<.01) with relational skills, risk taking ability, creativity and innovativeness, dependability and achievement motivation It was also correlated (p<.01.5) with stress tolerance and objectivity Stress tolerance was correlated (p< 01) with relational skills, risk taking ability and achievmement motivation. It was also correlated (p<.05) with creativity and innovativeness. Relational skill was correlated (p<.01) with risk taking ability. It was also correlated with (p<.05) with creativity and innovativeness, critical thinking ability and initiative Risk taking ability was correlated (p<.01) with creativity and innovativeness, and dependability. It was also correlated (P<.05) with emotional stability and achievement motivation. Creativity and innovativeness was correlated (P< .01) with dependability and achievement motivation. Dependability was correlated (P<.01) with achievement motivation. Emotional stability was correlated (P<.01) with objectivity. It was negatively correlated with tough-mindedness, self-assuredness and resourcefulness. Tough-mindedness was correlated (P<.01) with practical temperament and shrewdness Self-assuredness was negatively correlated (P<.05) with objectivity. Critical thinking was correlated (P<.05) with conceptual ability.

Factor Analysis of Variables

The above analysis of correlation matrices revealed that the predictor variables were correlated with each other in varying degrees and complex ways. For examining the patterns of correlations among the variables and reducing them into unique independent variables, factor analysis was resorted to.

Principal factor extraction technique was used through SPSS package to extract factors. It resulted in extraction of 20 factors of which 7 were having eigen value of more than 1. Table 18 gives the eigen values of factors and percentage of variance in variables explained by them.

TABLE 18 :

Eigen values of Factors and the percentage of variance explained by the Factors

Factor	Eigen Value	(%) of Var.	Cum (%)
1.	5.38625	24.5	24.5
2.	2.08170	9.5	34.0
3.	1.70230	7.7	41.7
4.	1.41363	6.4	48.1
5.	1.32006	6.0	54.1
6.	1.24264	5.6	59.6
7.	1.04029	4.7	64.3

Table 19 : Matrix of factor loading after varimax rotation

	FACTORS						
	1	2	3	4	5	6	7
Dependability (D)	0.82	0.18	0.04	0.10	0.07	0.07	0.04
Ability and readiness to learn (ARL)	0.82	0.06	0.05	0.15	0.12	0.21	-0.04
Relational skills (RS)	0.79	0.15	-0.04	0.02	0.01	-0.03	0.04
Knowledge (K)	0.68	0.08	0.06	0.08	-0.01	0.17	0.03
Decision making (DM)	0.67	0.15	0.01	-0.05	0.18	-0.16	0.21
Stress tolerance (ST)	0.64	0.13	0.04	0.26	0.00	0.09	-0.15
Risk taking ability (RTA)	0.30	0.88	0.07	0.01	0.04	-0.01	0.06
Creativity and innovativeness (CAI)	0.26	0.89	0.01	0.06	0.06	0.07	0.03
Emotional stability (C)	0.03	0.03	0.82	0.13	-0.13	-0.04	0.07
Self-assuredness (O)	0.05	0.02	-0.80	0.01	-0.03	-0.14	-0.03
Critical thinking(QI)	0.13	0.02	-0.04	0.77	0.01	0.07	0.13
Tough mindedness (I)	-0.19	0.01	-0.24	-0.62	0.04	0.16	0.08
Conceptual ability (CA)	0.08	0.07	0.01	0.05	0.81	0.18	0.07
Resourcefulness (Q2)	-0.06	0.16	-0.38	0.36	0.48	0.26	-0.06
Achievement Motivation (n-Ach)	0.34	0.01	-0.06	-0.15	0.44	-0.12	0.05
Practical temperament (M)	0.10	-0.06	0.16	-0.35	0.04	0.72	0.15
Judgement (J)	0.24	0.19	-0.04	0.21	0.08	0.48	-0.07
Objectivity (V)	0.13	-0.01	0.46	0.05	0.13	0.47	-0.18
Initiative (E1)	0.05	0.11	0.10	-0.02	0.16	-0.08	0.87
Shrewdness (N)	-0.05	0.19	0.14	-0.23	0.43	-0.35	-0.56

It shows that the 7 factors together explained 64.3% of common variance, of which Factor 1 was the largest factor accounting for 24.5% of variance. To facilitate proper interpretation orthogonal varimax rotation was performed. The obtained factor loadings after rotation, are given in Table 19. The communalities of variables given in Table 20 shows the importance of each factor. It shows that more than 50% variance in a variable could be predicted from the factors underlying it, except for achievement motivation.

The above analysis showed that the 7 factors extracted were distinguishable and well defined by the variables.

Constitution of Independent Variables

Variables were grouped by factor and sorted according to their size of loading. A cutoff point of .44 was used for including a variable in a factor. Scores of variables in each factor were summed to arrive at factor scores, after transforming them into standard scores. These factors were converted into composite variables which were used as independent variables in the regression analysis that followed.

Thus, the first independent variable (IV) was composed of 6 of the 20 variables, namely dependability, ability and readiness to learn, relational skills, knowledge, decision making and

Table 20 : Communalities of variables

Variables	Communality
Dependability (D)	0.73
Ability and readiness to learn (ARL)	0.76
Relational skills (RS)	0.65
knowledge (K)	0.5
Decision making (DM)	0.59
Stress tolerance (ST)	0.52
Risk taking ability (RTA)	0.88
Creativity and innovativeness (CAI)	0.88
Emotional stability (C)	0.71
Self-assuredness (O)	0.66
Critical thinking(QI)	0.64
Tough mindedness (I)	0.51
Conceptual ability (CA)	0.71
Resourcefulness (Q2)	0.6
Achievement Motivation (n-Ach)	0.35
Practical temperament (M)	0.7
Judgement (J)	0.39
Objectivity (V)	0.5
Initiative (E1)	0.8
Shrewdness (N)	0.73

stress tolerance. The second independent variable (IV) was constituted by creativity and innovativeness and risk taking ability. Emotional stability and self-assuredness constituted the third independent variable (IV). Critical thinking and tough-mindedness together formed the fourth independent variable. The fifth was composed of conceptual ability, resourcefulness and achievement motivation. The sixth independent variable (IV) was constituted by practical temperament, judgement and objectivity. The seventh independent variable (IV) was constituted by initiative and shrewdness.

Correlation between Independent Variables (IV) and the Criterion

Table 21 displays correlation between the independent variables and the criterion, along with their level of significance for all executives. It is seen from the table that the highest correlation (r = .88) was existed between the independent variables IV-1 and the criterion followed by the correlation of independent variable (IV)-2. Besides, these only 2 more variables, IV-5 and IV-6 were significantly correlated with the dependent variable

In Table 21, inter-correlations between the independent variables (IV) for all executives are presented. The inter-correlation matrix reveled that substantial correlation was found between IV-1 and IV-2 . IV-1 was also correlated with IV-5 and IV-6. IV-2 was correlated with IV-5, IV-6 and IV-7. IV-5 was

TABLE 21: MATRIX OF INTER CORRELATION BETWEEN INDEPANDENT VARIABLES (IV) AND THE CRITERION FOR ALL EXECUTIVES

	IV-1	IV-2	IV-3	IV-4	IV-5	IV-6	IV-7
INDEPENDENT VARIABLES 1	1						
INDEPENDENT VARIABLES 2	0.45 *	1					
INDEPENDENT VARIABLES 3	0.07	0.04	1				
INDEPENDENT VARIABLES 4	0.01	0.02	-0.05	1			
INDEPENDENT VARIABLES 5	0.27 *	0.23 *	-0.1	0.08	1		
INDEPENDENT VARIABLES 6	0.30 *	0.15 @	-0.07	0.03	0.17 @	1	
INDEPENDENT VARIABLES 7	0.06	0.19 *	0.06	-0.06	0.17 @	-0.05	1
CRITERION	0.88 *	0.47 *	0.09	-0.04 *	0.24	0.31 *	0.05

* P < .01
@ P < .05

correlated with IV-6 and IV-7 Such moderate inter correlations were natural since in natural independent variables are hardly found in isolation.

Table 22 shows only IV-1, IV-2 and IV-6, were having significant relationship with the dependent variable (DV) for scale II executives. The inter-correlations between these IVs can be found in Table 22. Only IV-1 was found to be having significant correlations with IV-2, IV-5 and IV-6.

The relationship between the independent variables (IVs) and the dependent variable (DV) for scale III executives is presented at Table 23. It was found that IV-1 and IV-2 were highly correlated with DV IV-3 and IV-6 were having correlation with DV in a lesser degree but they were significant. As in previous group IV-1 was correlated with IV-2 as seen from inter-correlation matrix, for scale-III executives, given at Table 23. IV-2 was also having significant relationship with IV-5. IV-5 was negatively correlated with IV-7 Table 24 gives the correlations between the IVs and the DV for Scale IV executives. The independent variables 1,2,5 and6 were significantly correlated with dependent variable. From Table 24 the inter-correlations between the IVS can be observed.

The IV-1 was significantly correlated with IV-2 and IV-6. and IV-2 was significantly correlated with IV-5.

TABLE 22: MATRIX OF INTER CORRELATION BETWEEN INDEPENDENT VARIABLES (IV) AND THE CRITERION FOR SCALE II EXECUTIVES

	INDEPENDENT VARIABLES						
	IV-1	IV-2	IV-3	IV-4	IV-5	IV-6	IV-7
INDEPENDENT VARIABLES 1	1						
INDEPENDENT VARIABLES 2	0.37 *	1					
INDEPENDENT VARIABLES 3	-0.05	-0.06	1				
INDEPENDENT VARIABLES 4	-0.08	-0.03	-0.07	1			
INDEPENDENT VARIABLES 5	0.21 @	0.12	-0.19	0.12	1		
INDEPENDENT VARIABLES 6	0.22 @	0.04	-0.06	0.05	0.19	1	
INDEPENDENT VARIABLES 7	-0.07	0.17	0.08	-0.02	0.14	-0.17	1
CRITERION	0.91 @	0.36 *	-0.04	-0.17	0.16	0.24 @	-0.11

* P < .01
@ P < .05

TABLE 23 : MATRIX OF INTER CORRELATION BETWEEN INDEPENDENT VARIABLES (IV) AND THE CRITERION FOR SCALE III EXECUTIVES

	INDEPENDENT VARIABLES						
	IV-1	IV-2	IV-3	IV-4	IV-5	IV-6	IV-7
INDEPENDENT VARIABLES 1	1						
INDEPENDENT VARIABLES 2	0.51 ‡	1					
INDEPENDENT VARIABLES 3	0.16	0.15	1				
INDEPENDENT VARIABLES 4	-0.04	0.06	0.03	1			
INDEPENDENT VARIABLES 5	0.23	0.34 @	0.11	-0.05	1		
INDEPENDENT VARIABLES 6	0.43 ‡	0.26	-0.11	0.01	0.22	1	
INDEPENDENT VARIABLES 7	0.02	0.10	0.13	-0.28 @	0.21	0.04	1
CRITERION	0.91 ‡	0.63 ‡	0.31 @	0.09	0.24	0.41 ‡	0.14

‡ P < .01
@ P < .05

TABLE 24 : MATRIX OF INTER CORRELATION BETWEEN INDEPENDENT VARIABLES (IV) AND THE CRITERION FOR SCALE IV EXECUTIVES

	INDEPENDENT VARIABLES						
	IV-1	IV-2	IV-3	IV-4	IV-5	IV-6	IV-7
INDEPENDENT VARIABLES 1	1						
INDEPENDENT VARIABLES 2	0.74	1					
INDEPENDENT VARIABLES 3	0.16	0.09	1				
INDEPENDENT VARIABLES 4	0.26	0.01	-0.18	1			
INDEPENDENT VARIABLES 5	0.40 *	0.50 *	-0.31 @	0.06	1		
INDEPENDENT VARIABLES 6	0.32 @	0.42 *	-0.08	-0.06	0.25	1	
INDEPENDENT VARIABLES 7	0.19	0.26	-0.16	-0.13	0.01	0.05	1
CRITERION	0.78 *	0.84 *	0.06	0.18	0.40 *	0.32 @	0.20

* P < .01
@ P < .05

Multiple Regression Analysis

For the purpose of identifying the crucial independent variables associated with performance of executives step wise multiple regression analysis was run, for each group of executives separately, using the SPSS package in computer. The objective was also to find out the relative predictive efficiency of each independent variable. The step wise method was preferred because in this method a variable was considered for inclusion into the regression equation on the basis of its efficiency to add to prediction accuracy (i.e. multiple regression coefficient) The order of entry was decided by the computer as per the importance of each variable.

The appraisal rating was used as the score for the independent variable i.e., performance and the composite scores were used as the scores for the 7 independent variables.

One of the statistical criteria fixed for inclusion of a variable was that a variable would be entered only if the F-ratio of the regression coefficient (B) of the variable when entered would be significant at .05 level.

Significant IV for all executives

For all executives group after the second step the limit of the parameter was reached. IV-1 was first to enter the equation, followed by IV-2.

Below are reported the results of regression analysis for all executives :

TABLE : 25

Partial regression coefficient in step-wise multiple regression for all executives.

Order of Entry	Variable entered	B	SE-B	95% confidence Interval of B	Beta	SE of Beta
1	IV - 1	.070	.004	.062 to .077	.839	.045
2	IV - 2	.015	.007	.001 to .029	.093	.045
	Constant	4.032	.017			

The figures in Table 25 show that only variables 1 and 2 contributed significantly to regression and the possible contribution of other variables, if entered would be negligible. The table gives the unstandardized regression coefficients (B), its standard error (SE), standardized regression coefficient (BETA) and its standard error (SE) for each variable. The F value for partial regression on coefficient (B) of IV-1 obtained was 4.97, $P<.001$ and for B of IV-2 it was 4.4, $P < .04$ with 1, 136 and 2,135 df. respectively.

The 95% confidence limits for the unstandardized regression coefficients of the variables entered are given in the above table. Since neither of the confidence limits included zero the two variables were found to be significant.

The multiple regression coefficient (R), multiple regression coefficient square (R^2), adjusted R^2, test of significance and squared semi-partial correlation (Sr^2) after entry of each variable are displayed in Table 26.

TABLE : 26

Results of step-wise multiple regression for all executives.

Step	R	R^2	Adjusted R^2	F	P	Sr^2	F_i	P
1	.881	.777	.775	473.7	<.001	.777	485.6	<.01
2	.885	.784	.781	244.8	<.001	.007	4.4	<.05

After step 1,F (1,136) for multiple correlation coefficient was 473.7 which was significant at .001 level. The bivariate correlation between IV-1 and DV was .88 (see Table 21). Because of this correlation the IV-1 accounted for 77.7% (R^2 = .777) of the variance of executive performance At the end of step 2, when variable 2 was added to variable 1, in the equation F (2,135)= 244.8, P < .001, R = .89. The coefficient of multiple determination (R^2) was .784. Thus, the two variables together accounted for 78.4% of the variance. The adjusted R^2 given in the table was the squared multiple correlation adjusted for the degrees of freedom. There was not much difference between R^2 and

adjusted R^2. The squared semi-partial correlation (Sr^2) given in the table reflects the unique contribution of each variable with influence of other variable under control. F (1,135)= 485.6, P <.01 for variable 1 and $F(1,135) = 4.4$, $P< .05$ for variable 2.

Thus the unique contribution of each of these variables was significant. To know the significance of increase in R^2 with the addition of variable 2 to variable 1 in the equation incremental F ratio (F_{inc}) was calculated. It was equal to the F value for Sr^2 IV-2 (4.4) as there was only one variable prior to it in the equation.

From the table (Table 21) of correlations between the independent variables and the criterion it was seen that the correlation between IV-2 and the criterion was .47 which was significant at .001 level. But it could contribute only 0.7% to the regression. The bivariate relationship between IV-2 and DV seems to have been mediated by the relationship between IV-1 and the criterion. Similarly, the correlations of IV-5 and IV-6 with the DV were .24 ($P<.02$) and .31 ($P<.001$) respectively. However, they did not make any significant contribution to the regression, as their bivariate relationships were made redundant in presence of IV-1 and IV-2.

Significant IVS for Scale II Executives

Step wise multiple regression of 7 independent variables

(IV) on executive performance in Scale II resulted in only IV coming out significant. Only IV-1 entered the regression and the F-values for all other variables were insignificant. Table 27 gives the unstandardized regression coefficient (B) standard error of B standardized regression coefficient (Beta) and its standard error for the variable 1.

TABLE : 27

Partial regression coefficient in step-wise multiple regression for Scale II executives.

Order of Entry	Variable entered	B	SE-B	95% confidence Interval of B	Beta	SE of Beta
1	IV - 1	.077	.004	.068 to .086	.91	.052
	Constant	4.069	.024			

The F value for the partial regression coefficient was 302.8 with 1 and 63 df, which was significant at .001 level. It was a case of bivariate regression. Hence the beta value was equal to the correlation coefficient of the IV-1 as seen from the Table 22.

From the 95% confidence limits for the unstandardized regression coefficient given in the table the variable was found to be significant. Multiple regression coefficient (R),

coefficient of multiple determination (R^2), adjusted R^2 and test of significance are given in table.

TABLE : 28

Results of step-wise multiple regression for Scale II executives.

Step	R	R^2	Adjusted R^2	F	p	Sr^2	Fi	p
1	.910	.827	.825	301.9	<.001	.827	650.1	<.001

Since only one independent variable was in the equation, the squared semi-partial correlation was equal to its correlation coefficient which was also equal to the multiple regression coefficient. It was the most significant variable (r=.91) for the group, which explained 83%, of the variance in the criterion variable. From the table of correlation of IVS with the DV, it was seen that IV-2 (r=.36) and IV-6 (r=.24) were having significant relationship with the dependent variable. But they could not make any significant contribution in regression. Apparently, it was the effect of high inter-correlations of IV-1 with IV-2 (r= .37) and IV-6 (r = .22).

Significant IVS for Scale III Executives

Three independent variables (IVS) namely, IV-1, IV-2 and IV-3 emerged as significant variables as a result of step wise

multiple regression analysis for Scale III executives. The weights to be assigned to their scores is given in Table 29, in the form of partial regression coefficients (B). Table 29 gives the order of entry of each variable, standard error of B, 95% confidence interval of B, standardized regression coefficient (Beta) and its standard error for each variable found place in the regression equation.

TABLE 29 :

Partial regression coefficients (B) in step-wise multiple regression for Scale III executives.

Order of Entry	Variable entered	B	SE-B	95% confidence Interval of B	Beta	SE of Beta
1	IV - 1	.067	.006	.055 to .078	.775	.068
2	IV - 2	.037	.012	.013 to .060	.214	.068
3	IV - 3	.060	.025	.013 to .107	.154	.059
	Constant	3.988	.027			

The F ratios for the regression coefficients was 131 3 for IV-1, with 1 and 36 df, 10.1 for IV-2, with 1 and 35 df. and 6.8 for IV-3, with 1 and 34 df. which were statistically significant. The standard errors of the regression coefficients are shown against each

Table 30 shows R, R^2, adjusted R^2, test of significance of R^2, Sr^2 and F- ratios after entry of each variable in regression.

TABLE 30 :

Results of step-wise multiple regresion for Scale III executives.

Step	R	R^2	Adjusted R^2	F	p	Sr^2	F_i	p
1	.910	.825	.820	169.2	<.001	.825	260.5	<.01
2	.929	.863	855	110 4	<.001	.038	11.7	<.01
3.	.941	.886	.876	88.1	< 001	.023	6.9	<.05

As the correlation between IV-1 and the criterion was .91 this variable accounted for 82.5% (R^2 = .825) of the variance of executive performance. The unique contribution of IV-1 was highly significant as seen from the F test of its Sr^2. At the end of step 2, when IV-2 was added to IV-1, the prediction efficiency (R^2) increased to .863. F (2,35) was 110.4 which was significant at .001 level. The coefficient of determination was increased by.038 which was the unique contribution of IV-2, and it was found to be significant at .01 level. The significance of this increase was tested by calculating $F_{inc.}$ (1,36) was 10.0, $P<.01$. Thus there was significant increase in R^2 with the addition of IV-2. Even though the correlation between IV-2 and the DV was.63, its contribution to overall predictability was only about 4%. The

apparent cause for its low contribution was its high inter-correlation with IV-1 which was already in the regression equation.

At step 3, IV-3 was added to the equation. The relative importance of this variable was examined through F test. Its unique contribution was 2.3%, which raised the R^2 to .886. It was a statistically significant contribution to R^2. F_{inc2} (1,34) for increases in R^2 was equal to the F- ratio for Sr for this variable which was also significant. Thus, the increase in prediction of executive performance due to addition of IV-3 even after the IV-1 and IV-2 were in the equation, was notable. Its correlation with the criterion was .31. The variability explained by the 3 variables together was about 89%.

Significant IVS for Scale IV Executives

The most significant variable for this category was IV-2. The weightage to be given to the score of this variable when performance would have to be predicted is given at Table 31, in the form of partial regression coefficient (B). Along with this, only one more variable, i.e. IV-1 found place in the equation, which entered at the second step. The table displays B value; SE-B, 95% confidence interval of B, Beta and SE-Beta for each of these variables.

TABLE 31 :

Partial regression coefficients in step-wise multiple regression for Scale IV executives.

Order of Entry	Variable entered	B	SE-B	95% confidence Interval of B	Beta	SE of Beta
1	IV - 2	.174	038	.096 to .252	.586	.129
2	IV - 1	.027	.010	.006 to .048	.342	.129
	Constant	3.934	.039			

F (1,33)for regression coefficient of IV-2 was 20.5, p <.0001 and F (1,32) for regression coefficient of IV-1 was 7, p <.01. The 95% confidence interval of B for either of the variables did not include zero. Hence the variables were significant.

R, R^2, adjusted R^2 after entry of each IV and Sr^2 of each IV are displayed at Table 32. R^2 was significantly different from zero at the end of each step as found from F values given in the table.

TABLE 32 :

Results of step-wise multiple regression for Scale IV executives.

Step	R	R^2	Adjusted R^2	F	p	Sr^2	F_i	p
1	.838	.702	.694	78 1	< 001	.702	92.3	<.01
2	.870	.757	.741	49 7	<.001	.053	7.2	<.05

The IV-2 accounted for 70.2% (R^2 = .702) of the variance of executive performance. It was due to the bivariate relationship between the IV-2 and the criterion (r = .84). The coefficient of determination was increased to .757 when IV 1 was added to IV 2 in the equation The IV-1 accounted for 5.3% variance of performance. Even though there was high correlation between the IV-1 and performance ratings (r = .78) the relative contribution was substantially reduced because of multi-collinearity between IV-1 and IV-2 (r = .74). The addition of IV-1 to IV-2 reliably improved R^2 as F_{inc} (1,33) was 7.2, $p < .05$.

Results of step wise Multiple regression at various executive levels (categories)

A comparative picture of the results of multiple regression of independent variables on executive performance in different groups is presented in Table 33. The comparison of results of

Table 33: Stepwise multiple regression analysis results for all categorise of exucutives.

Category of Exucutives	Independent Variables (iv) IV-1	IV-2	IV-3	R
ALL EXECUTIVES:				0.784
Correlation with Criterion (r)	0.88	0.47	0.09	
Squared semi-partial correlation (Sr 2)	0.777	0.007	-	
Partial Regression coefficient (B)	0.07	0.015	-	
Order	1	2	N.S.	
Scale II Executives				0.827
Correlation with Criterion (r)	0.91	0.36	-0.04	
Squared semi-partial correlation (Sr 2)	0.827	-	-	
Partial Regression coefficient (B)	0.077	-	-	
Order	1	N.S.	N.S.	
Scale III Executives				0.886
Correlation with Criterion (r)	0.91	0.63	0.31	
Squared semi-partial correlation (Sr 2)	0.825	0.038	0.023	
Partial Regression coefficient (B)	0.067	0.037	0.06	
Order	1	2	3	
Scale IV Executives				0.757
Correlation with Criterion (r)	0.78	0.84	0.07	
Squared semi-partial correlation (Sr 2)	0.053	0.702	-	
Partial Regression coefficient (B)	0.027	0.174	-	
Order	2	1	N.S.	

N.S. Not significant in regression

multiple regression in different executive categories support the hypothesis that there were identifiable variables associated with executive performance. They were some what different for different categories. In all regression analyses except for Scale IV executives, IV-1 emerged as the best single predictor of performance. This could be seen by examining the partial regression coefficients. In case of Scale IV executives.

Both IV-1 and IV-2 were highly correlated with the criterion and at the same time they were highly correlated between themselves. As IV-2 was a little better associated with the criterion than IV-1, IV-2 had taken its place. IV-2 stood second in relative merit in predicting performance for all categories except Scale II and Scale IV groups of executives. Because of high inter-correlation between IV-1 and IV-2 in these categories IV-2's contribution in regression was relatively reduced. The importance of IV-2 could be observed from its regression coefficient when it entered first in regression equation for Scale IV executives. It carried the highest weight (.174) among all regression coefficients in all equations. A very satisfactory situation was observed in the regression of Scale III executives, where the level of predictive efficiency reached the highest (R^2 = .886) due to the collective contributions of significant independent variables. It was probably due to additional contribution of a third independent variable, namely, IV-3, to

the extent of 6% to R^2. In all categories, more than 75% of the variance was explained by the variables in equation.

In all categories, except Scale-IV, the contribution of IV-1 ranged from 78 to 83% and that of IV-2 ranged from 1 to 4%. In Scale IV, the position was reversed by the IV-2 which contributed 70% allowing IV-1 to contribute only 5%. Because of very high correlation between IV-1 and the criterion, the step wise regression equation either accepted IV-1 or a variable related to it. There was a slight trend of reduction of the importance of IV-1 in higher grades while importance of IV-2 was observed to be increasing simultaneously. It was however observed that the proportion of reduction of contribution of IV-2 was not equal to the proportion of increase of importance in the IV-2. As IV-3 was having consistently low correlation with the criterion in all categories except for Scale III executives, it could not make any contribution in those categories. Once it reached a noticeable level of correlation (.31) in Scale III executive category, its contribution was significant. In relation to its correlation its contribution was relatively high In contrast, the IV-2 which had .47 correlation made 0.7% contribution in all executives category and in Scale II executive category it had .36 correlation but could not make any contribution in regression.

Influence of background variables on predictors

Some times surrounding and personal conditions of an

individual affect the predictors. The sample was divided into high potential and low potential groups, against each variable, according to the scores on each predictor variable. Executives scoring more than the median score were put in high performance group and those scoring less than the median score were put in low performance group. The influence of four background variables namely, age, eduction, length of experience in bank and length of experience as officer in bank on each predictor variable was tested with the use of chi-square test. Tables 34 to 37, display the results of the significance test. Chi-square was significant in respect of influence of age on creativity and innovativeness (Chi-square = 14, $p < .01$) and shrewdness (Chi-square = 13.5 $p < .01$). As regards influence of education Chi-square was significant for ability and readiness to learn (Chi-square = 6.9, $p < .05$) knowledge (Chi-square =7.1, $p < .05$) and decision making (Chi-square =8.9 $p < .05$). Chi-square was significant in respect of influence of length of experience in bank for stress tolerance (Chi-square = 8.2, $p < .05$), creativity and innovativeness (Chi-square =11.5, $p < .01$) and shrewdness (Chi-square =16.9, $p < .01$) Influence of length of experience as officer in bank was significant for judgement (Chi-square =7.8, $p < .05$), decision making (Chi-square =8.7, $p < .05$) and shrewdness (Chi-square =12.5, $p < .01$). Thus, the results showed that older executives were more creative ,innovative and shrewd. Executives with higher education were displaying higher banking and professional

Table 34 : Chi-square test for influence of age on predictors

Sr. No.	Predictor variable	Low Scores %	High Scores %	Chi-Square	Df.
1	Ability and readiness to learn (ARL)	49.5	50.5	2.4	3
2	Knowledge (K)	52.8	47.2	4.3	3
3	Decision making (DM)	49.1	50.1	1.5	3
4	Stress tolerance (ST)	37.4	62.6	6.3	3
5	Relational skills (RS)	58.7	41.3	4.9	3
6	Risk taking ability (RTA)	58.3	41.7	0.5	3
7	Creativity and innovative -ness (CAI)	59.6	40.4	14.0 *	3
8	Depandability (D)	53.4	46.6	4.1	3
9	Emotional stability (C)	47.9	52.1	1.7	3
10	Tough - mindedness (I)	49.6	50.4	4.6	3
11	Practical temperament (M)	50.4	49.6	4.3	3
12	Shrewdness (N)	55.6	44.4	13.5 *	3
13	Self-assuredness (O)	50.0	50.0	2.0	3
14	Critical thinking ability (Q1)	45.3	54.7	6.3	3
15	Resourcefulness (Q2)	44.2	55.8	0.4	3
16	Objectivity (V)	49.6	50.4	2.2	3
17	Achievement motivation (n-Ach)	46.9	53.1	1.2	3
18	COnceptual ability (CA)	49.6	50.4	0.7	3
19	Judjement (J)	48.9	51.1	5.0	3
20	Initiative (E1)	43.4	56.6	4.2	3

* $p < .01$

Table 35 : Chi-square test for influence of education on predictors

Sr. No.	Predictor variable	Low Scores %	High Scores %	Chi-Square	Df.
1	Ability and readiness to learn (ARL)	48.1	51.9	6.9 @	2
2	Knowledge (K)	45.3	54.7	7.1 @	2
3	Decision making (DM)	49.1	50.9	8.9 @	2
4	Stress tolerance (ST)	28.9	71.1	2.6	2
5	Relational skills (RS)	57.7	42.3	1.7	2
6	Risk taking ability (RTA)	57.1	42.9	4.0	2
7	Creativity and innovative -ness (CAI)	53.2	46.8	2.5	2
8	Depandability (D)	55.2	44.8	6.2	2
9	Emotional stability (C)	44.1	55.9	1.3	2
10	Tough - mindedness (I)	49.3	50.7	2.3	2
11	Practical temperament (M)	55.7	44.3	1.0	2
12	Shrewdness (N)	63.8	36.2	0.3	2
13	Self-assuredness (O)	50.0	50.0	2.1	2
14	Critical thinking ability (Q1)	47.4	52.6	0.2	2
15	Resourcefulness (Q2)	44.1	55.9	2.6	2
16	Objectivity (V)	35.6	64.4	1.5	2
17	Achievement motivation (n-Ach)	43.3	56.7	0.1	2
18	Conceptual ability (CA)	44.2	55.8	3.1	2
19	Judjement (J)	46.9	53.1	1.9	2
20	Initiative (E1)	53.7	46.3	2.5	2

@ $p < .05$

Table 36 : Chi-square test for influence of length of experience in the bank (in years)on predictors

Sr. No.	Predictor variable	Low Scores %	High Scores %	Chi-Square	Df.
1	Ability and readiness to learn (ARL)	49.5	50.5	3.4	3
2	Knowledge (K)	52.8	47.2	7.6	3
3	Decision making (DM)	49.1	50.9	2.5	3
4	Stress tolerance (ST)	37.4	62.6	8.2 @	3
5	Relational skills (RS)	58.7	41.3	4.8	3
6	Risk taking ability (RTA)	58.3	41.7	0.3	3
7	Creativity and innovative -ness (CAI)	59.6	40.4	11.5 ‡	3
8	Dependability (D)	53.4	46.6	4.4	3
9	Emotional stability (C)	47.9	52.1	1.6	3
10	Tough - mindedness (I)	49.6	50.4	1.3	3
11	Practical temperament (M)	50.4	49.6	2.7	3
12	Shrewdness (N)	55.6	44.4	16.9 ‡	3
13	Self-assuredness (O)	50.0	50.0	1.0	3
14	Critical thinking ability (Q1)	45.3	54.7	7.2	3
15	Resourcefulness (Q2)	44.2	55.8	0.8	3
16	Objectivity (V)	49.6	50.4	1.3	3
17	Achievement motivation (n-Ach)	46.9	53.1	3.4	3
18	COnceptual ability (CA)	49.6	50.4	1.6	3
19	Judgement (J)	48.9	51.1	1.1	3
20	Initiative (E1)	43.4	56.6	1.2	3

‡ $p < .01$; @ $p < .05$

Table 37 : Chi-square test for influence of length of experience as officer in the bank (in years)on predictors.

Sr. No.	Predictor variable	Low Scores %	High Scores %	Chi-Square	Df.
1	Ability and readiness to learn (ARL)	49.5	50.5	6.9	3
2	Knowledge (K)	53.3	46.7	4.0	3
3	Decision making (DM)	49.1	50.9	8.7 @	3
4	Stress tolerance (ST)	38.0	62.0	5.6	3
5	Relational skills (RS)	59.1	40.9	5.4	3
6	Risk taking ability (RTA)	58.7	41.3	3.9	3
7	Creativity and innovative -ness (CAI)	59.6	40.4	7.1	3
8	Depandability (D)	53.8	46.2	5.6	3
9	Emotional stability (C)	48.4	51.6	5.5	3
10	Tough - mindedness (I)	50.0	50.0	7.3	3
11	Practical temperament (M)	50.4	49.6	3.3	3
12	Shrewdness (N)	55.6	44.4	12.5 ‡	3
13	Self-assuredness (O)	50.0	50.0	5.5	3
14	Critical thinking ability (Q1)	45.3	54.7	4.0	3
15	Resourcefulness (Q2)	44.2	55.8	1.2	3
16	Objectivity (V)	49.6	50.4	5.3	3
17	Achievement motivation (n-Ach)	46.9	53.1	3.4	3
18	COnceptual ability (CA)	49.6	50.4	5.1	3
19	Judgement (J)	48.9	51.1	7.8 @	3
20	Initiative (E1)	43.4	56.6	4.2	3

‡ $p < .01$; @ $p < .05$

knowledge at work. They were also better decision makers. Executives with longer years of banking experience were found to show more stress tolerance and shrewdness. Executives with longer years of experience as officer in bank were better decision makers and shrewd. It was notable that age, general experience in bank and experience as an officer had great influence on shrewdness. Apparently this trait was highly associated with maturity. Age is a determining factor for increasing length of experience in bank and length of experience as officer in bank. However, directly recruited officer would have longer years of officer experience than promotee-officers. Thus, directly recruited officers were seemingly better decision makers among all executives.