

## CHAPTER - 7

## RESULTS AND DISCUSSIONS - I

(i) Creation and Management of Economic Leverage variables :-

To test the hypothesis that "Economic Leverage is deliberately created and managed", the time-trend model explained in Chapter - 6 was applied to the following 'performance variables' ( $y_s$ ) and Economic Leverage variables (ELs):

Performance variables :- Sales revenue,  $y_1$ , gross profits,  $y_2$ , net sales revenue,  $y_3$ , net operating profits,  $y_4$ , profits before tax,  $y_5$ , profits after tax,  $y_6$ , and total income,  $y_7$ .

Economic Leverage variables :- Direct labour costs, EL1, administrative costs, EL2, selling costs, EL3, total operating expenses, EL4, machanisation expenditure, EL5, office modernisation expenditure, EL6, research and development expenditure, EL7, inventory at all stages, EL8, investment in subsidiaries, EL9, total investment outside, EL10, staff and workmen welfare expenditure, EL11, public services expenditure, EL12, travel expenses, EL13, perquisites, EL14, deferred revenue expenses, EL15, accounts receivables, EL16,

advertising expenditures, EL17, remuneration of managing directors, EL18, total manufacturing costs, EL19, commission paid to the managing directors/agents, EL20, and net operating expenditures, EL21.

The results of the analysis are summarised in Table-7.1. The table depicts the number of firms showing significant positive correlation between various 'performance variables',  $y_s$ , and Economic Leverage variables, ELs.

From the results the following conclusions may be derived : (i) firms smooth all the 'performance variables and (ii) they manipulate all the 21 Economic Leverage variables hypothesised in the study to smoothen the  $y_s$ .

Table-7.1 was again condensed into Table-7.2 to give the firms' preferences over the 'performance variables',  $y_s$ , which were ranked based on the following criterion. The first rank was given to that  $y$  variable the correlation of which is significant with the EL variables in maximum number of firms. The second rank was given to that  $y$  variables the correlation of which is significant with EL variables in the second maximum number of firms and so on.

Table-7.1: Creation and Management of Economic Leverage variables.

y EL	Number of firms						
	y1	y2	y3	y4	y5	y6	y7
4	30	20	27	18	17	16	27
19	30	20	30	25	13	18	26
21	26	18	30	20	22	20	26
1	27	15	27	23	17	21	26
2	19	16	21	15	16	18	26
3	27	15	23	16	14	20	18
5	14	16	16	12	12	13	15
6	19	16	14	15	15	21	12
7	4	5	7	6	7	8	10
8	26	16	28	23	17	21	22
9	6	7	9	8	6	10	10
10	20	13	21	16	14	13	18
11	23	20	21	20	18	25	25
12	15	5	13	11	13	13	13
13	10	9	13	13	12	12	18
14	19	12	15	16	13	18	17
15	4	3	4	2	4	3	6
16	21	14	24	17	16	25	19
17	8	8	7	5	8	6	8
18	25	15	20	17	11	17	19
20	10	13	12	14	11	16	18

Table-7.2: Ranking of 'performance' variables according to preferences.

Rank	y1	y2	y3	y4	y5	y6	y7
1	8	2	6		1	4	8
2	6		10	1	2	4	6
3	3	3	2	6	3	4	3
4	1	4		9	1	5	3
5	1	5	3	4	5	2	
6	1	4			8	2	1
7	1	3		1	1		
	8	8	10	15	13		8

The results show that the performance variables—sales revenue and total income were preferred by 8 firms as their first choice for smoothing. Similarly 10 firms preferred net sales revenue as their second choice, 6 firms preferred net operating profits as third choice, whereas 9 firms preferred the same as the fourth choice, 5 firms chose gross profits and profits before tax as the fifth, 8 firms preferred profits before tax as the sixth and 3 firms preferred gross profits as the seventh. Among these 'performance variables', a further ranking based on the number of firms, reveals that net operating profits, profits before tax and net sales revenue get the first three ranks respectively whereas sales revenue, gross profits and total income get the equal rank, the fourth. From this table it may be inferred that

- (i) firms chose net operating profits, y4, profits before tax, y5, and net sales revenue, y3, as the first three preferences respectively,
- (ii) sales revenue, y1, gross profits, y2, and total income, y7, were preferred equally as the fourth choice,
- (iii) firms did not choose profits after tax, y6, and
- (iv) of the seven performance variables tested in the study, six of them were found to be chosen by the firms.

From the Tables 7.1 and 7.2 it may be concluded that the firms smooth sales revenue, gross profits, net sales revenue, net operating profits, profits before tax and total income by manipulating the given 21 Economic Leverage variables. Though all the firms were not smoothing all the six y variables, it was found that every firm smoothed at least one y variable. This supports the hypothesis that 'firms create and manipulate Economic Leverage variables to smoothen the y variables'.

(ii) Best smoothing order and the smoothing constants :-

First order, Second order and Third order exponential smoothing models were used to find the smoothing order and the smoothing constants, the firms used. These three smoothing models were applied to all the seven performance variables - sales revenue, gross profits, net sales revenue, net operating profits, profits before tax, profits after tax and total income.

The procedure involved the following steps :

- (i) the first two values of the observed y variables were taken on the forward moving pattern as the initial values and the next values were calculated by applying the smoothing models.

- (ii) The differences between the observed values and the calculated values were found out.
- (iii) The total sum of the observed values and the differences between the observed and the calculated values were computed.
- (iv) If the sum of the differences between the observed values and the calculated values was less than or equal to one percent and ten percent of the total sum of the observed values then the 'error limits' were considered to be 1 percent and 10 percent respectively.

The results in Tables-7.3 and 7.4 show that the performance variables  $y_1, y_2, y_3, y_4, y_5, y_6,$  and  $y_7$  were smoothed at 1 % error limit by 1, 3, 3, 6, 6, 7 and 3 firms respectively whereas at 10 % the number of firms were 10, 13, 9, 15, 12, 11 and 8 respectively. Though all the firms were using all the three exponential smoothing models, mostly Second order smoothing model was found to be applied.

Table-7.5 shows the distribution of the exponential smoothing orders by  $y$  variable-wise at two error limits. At 1 % error limit sales revenue,  $y_1$ , was smoothed by 1 firm, gross profits by 1 firm, net sales revenue by 3 firms, net operating profits by 6 firms,

Table-7.3 : Best smoothing order and smoothing constants.

Error Limit	%	S.No.	1	2	3	4	5	6	7	8	9	10	11
y1	1				3		2	2	1		2	2	
	10				.415		.135	.11	.585		.1	.03	
y2	1			3			2	2	2		2	3	3
	10			.41			.13	.01	.01		.12	.395	.035
y3	1		1										
	10		.18										
	1		3										
	10		.48										
y4	1			1									
	10			.005			1	1			2	.125	
							.72	.515			2	.14	
											2	.135	
y5	1												
	10				3		3	.425		2	.105		
					.56								
					.42								
y6	1			3									
	10			.48			2	.28			2	.11	
							1	.505			2	.35	
							2	.115			2	.105	
							1	.15			2	.045	
y7	1												
	10												

- table continues -





Table-7.4: Number of firms exhibiting  
smoothing behaviour.

Performance variables	Error Limits %	Number of firms
y1	1	1
	10	10
y2	1	3
	10	13
y3	1	3
	10	9
y4	1	6
	10	15
y5	1	6
	10	12
y6	1	3
	10	11
y7	1	3
	10	8

Table-7.5: Exponential smoothing orders and the Error Limits.

Performance variables	I		II		III		Total	
	1%	10%	1%	10%	1%	10%	1%	10%
y1		1	1	7		2	1	10
y2	1	2		8		3	1	13
y3	1	1	2	5		3	3	9
y4	4	9	1	4	1	2	6	15
y5	5	6	1	4		2	6	12
y6	1	3	1	6	1	2	3	11
y7	1	2	2	4		2	3	8

profits before tax by 6 firms, profits after tax by 3 firms and total income by 3 firms. At 10 % error limits 10 firms smoothed sales revenue, 13 firms gross profits, 9 firms net sales revenue, 15 firms net operating profits, 12 firms profits before tax, 11 firms profits after tax and 8 firms total income. From the table it may be inferred that most of the firms smooth the performance variables at 10 % error limit. If ranked net operating profits and profits before tax assume the first rank, net sales, profits after tax and total income assume the second rank equally and sales revenue and gross profits assume the third rank equally at 1 % error limit. Whereas at 10 % error limit maximum number of firms smooth net operating profits. It is interesting to infer that at both 1 % and 10 % error limits maximum number of firms smooth the net operating profits.

The range in which the values of the exponential smoothing constants fall has been tabulated in Table-7.6 for 1 % and 10 % error limits respectively. At 1 % error limit 6 of the 7 performance variables, sales revenue,  $y_1$ , gross profits,  $y_2$ , net sales revenue,  $y_3$ , profits before tax,  $y_5$ , profits after tax,  $y_6$ , and total income,  $y_7$  were smoothed by the smoothing constants which fell in between 0.1 and 0.2. Whereas at 10 %

Table-7.6: The range of the values of smoothing constants at 1% and 10% error limits.

Error Limit %	Intervals							
	$.0 < a \leq .1$	$.1 < a \leq .2$	$.2 < a \leq .3$	$.3 < a \leq .4$	$.4 < a \leq .5$	$.5 < a \leq .6$	$.6 < a \leq .7$	$.7 < a \leq .8$
y1	1		1					
	10	6	2		1	1		
y2	1	1	1					1
	10	7	3	1	1	1		
y3	1	2	1					
	10	3	2	1		2	1	
y4	1	2			1		1	1
	10	10	1	1		1	1	1
y5	1		1		2		1	1
	10	3	4			3	1	1
y6	1	1	1		1			
	10	4	2	1		2	1	1
y7	1		1	1	1			
	10	3	3	1	1			

a = exponential smoothing constant

error limit all the 7 performance variables were smoothed by the smoothing constants which fell in-between 0.0 and 0.1. Here also it is of interest to note that profits after tax was smoothed by 10 firms with a smoothing constant which fell inbetween 0.0 and 0.1. Table-7.7 shows the distribution of the minimum, maximum and the frequent values of the smoothing constants by performance variable-wise at two error limits. This supplementary information although not directly related with the primary hypothesis, **strengthens** the conclusions drawn with other techniques tested earlier.

Table-7.8 explains the distribution of the number of firms according to the number of y variables each firm smoothed. Out of 32 firms 13 firms smoothed only one performance variable whereas 6 firms smoothed 2  $y_s$ , 5 firms 3  $y_s$ , 3 firms 4  $y_s$ , 1 firm 5  $y_s$ , 3 firms 6  $y_s$  and 1 firm 7  $y_s$ .

(iii) Estimation of the amount of Economic Leverage

The approximate amount of Economic Leverage was estimated using the model explained in Chapter-4 except for the deviation that for the present analysis the independent variable was only one namely

Table-7.7: Range of smoothing constants.

Error Limit	%	Minimum		Maximum		Frequent	
		1	10	1	10	1	10
y1		.105	.005	.105	.585	.1	.1
y2		.04	.005	.71	.41	.1	.03
y3		.025	.005	.18	.55	.5	.4
y4		.005	.005	.745	.72	.5	.01
y5		.005	.005	.75	.72	.5	.5
y6		.06	.005	.42	.74	.1	.5
y7		.115	.015	.46	.35	.35	.1

Table-7.8: Number of 'performance' variables smoothed.

Number of performance variables smoothed	0	1	2	3	4	5	6	7
Number of firms	3	13	6	5	3	1	3	1

the time, whereas in that model the independent variables were two namely production level and the time. For estimation purposes, production level had to be omitted because of (i) problems involved in treating outputs of different dimensions and (ii) the lack of sufficient data on the production levels of all the firms in monetary terms. Thus the model used for the analysis is :

$$EL19 = a + b t \quad ; \quad t = \text{year}$$

The results given in Table-7.9 indicate that although 11 firms show a significant estimated parameter coefficients 34 out of the total of 35 firms showed a significant relationship. The coefficient of determination,  $R^2$ , of 18 firms were significant at 1 % level of significance, whereas in 8 firms it was 2.5 % , in 5 firms at 5 % and in 3 firms it was at 10 %. This has been shown in Table-7.10.

The results given in Table-7.11 showed that on an average the amount of Economic Leverage fell inbetween 0 and 5 % of the total manufacturing costs, EL19, in 3 firms whereas it was inbetween 5 and 10 % in 16 firms, 10 and 15 % in 8 firms, 15 and 20 % in 7 firms and above 25 % in 1 firm. It is of interest to note that 16 firms had an average amount of Economic Leverage which fell inbetween 5 and 10 % of the total manufacturing costs.

Table-7.9: Estimation of the amount of Economic Leverage.

S.No.	$\hat{B}_0$	$\hat{B}_1$	$t_{\hat{B}_1}$	$R^2$	Signifi- cant at %	Average a/m of Economic Leverage(EL)	Standard Deviation of EL
1.	13261	5334	0.537	0.743	5	18.545	7.608
2.	16096	4174	1.639	0.964	1	4.364	2.307
3.	57198	15493	1.173	0.932	1	8.455	6.387
4.	8507	1451	0.329	0.52	10	16.818	10.895
5.	5625	5871	0.789	0.861	2.5	17.545	13.513
6.	10094	2902	1.323	0.946	1	7.455	6.542
7.	390	7712	1.135	0.928	1	14.3	13.237
8.	5288	4991	1.497	0.958	1	7.727	4.308
9.	2788	2859	1.748	0.968	1	8.636	6.124
10.	38722	7899	0.915	0.892	2.5	9.0	6.578
11.	1669	2998	1.592	0.962	1	9.364	9.127
12.	11263	4220	1.24	0.939	1	7.0	4.671
13.	15296	3128	0.95	0.9	1	6.273	5.832
14.	51620	2467	0.323	0.51	10	10.545	7.703
15.	14402	5737	1.161	0.931	1	8.364	5.032
16.	23343	8895	1.406	0.952	1	7.091	5.664
17.	25228	7059	1.707	0.967	1	6.182	3.157
18.	-15948	25486	0.35	0.55	10	10.182	5.828

- table continues -

-Table continues- (F.C)

S.No.	$\hat{B}_0$	$\hat{B}_1$	$t \frac{\hat{S}}{\hat{B}_1}$	$R^2$	Significant at %	Average a/m of Economic Leverage(EL)	Standard Deviation of EL
19.	5106	7200	1.349	0.938	1	17.5	13.887
20.	29632	14382	0.866	0.861	2.5	16.9	10.034
21.	-24602	9665	0.476	0.651	5	19.4	11.603
22.	7873	2714	0.598	0.747	5	13.4	10.855
23.	1200	4399	0.973	0.863	2.5	22.22	14.374
24.	63119	8802	0.579	0.691	5	12.556	11.644
25.	-5476	5654	1.674	0.936	1	13.625	7.516
26.	12109	5381	0.888	0.805	2.5	15.125	9.185
27.	24126	6270	2.401	0.968	1	5.0	3.162
28.	-3034	22184	1.688	0.938	1	9.625	10.39
29.	53261	6893	1.076	0.859	2.5	7.625	4.27
30.	23430	8159	1.322	0.902	1	6.25	5.472
31.	65863	23542	1.09	0.826	2.5	12.714	6.943
32.	83818	16593	6.736	0.993	1	1.833	1.067
33.	162161	22622	1.147	0.793	5	6.0	4.83
34.	10524	44841	1.672	0.848	2.5	12.8	8.863
35.	79142	-448	-0.074	0.011	-	6.6	3.382

Table-7.10 : Estimation of Economic Leverage.

Significant at %	1	2.5	5	10	Total
Number of firms	18	8	5	3	34

Table-7.11 : Average and Standard Deviation of the amount of Economic Leverage.

Interval	Number of firms	
	Average	Standard Deviation
0 > < 5	3	9
5 > < 10	16	16
10 > < 15	8	10
15 > < 20	7	-
20 > < 25	1	-
Total	35	35

The distribution of the standard deviation of the amount of Economic Leverage is also given in Table-7.10. In 9 firms the standard deviation was less than 5 % whereas in 16 firms it was inbetween 5 % and 10 %,in 10 firms it was inbetween 10 % and 15%.

Results show that the series of net operating profits was smoother (lower standard deviation) than profits after tax,gross profits smoother than total income,net operating profits smoother than net operating costs,EL21,and profits after tax smoother than that of total income. This has been given in Table-7.12.

(v) Determinants of the amount of Economic Leverage:-

The determinants of the amount of Economic Leverage were examined using the following linear regression model :

$$EL = a + b XX_j$$

where EL is Economic Leverage; $XX_j$  are the independent variables;a and b are parameters. In this case  $XX_j$  variables are : sales revenue,y1,profits after tax,y6, gross block,v12,total income,y7,net worth,v1,total funds employed,v3,total manufacturing costs,EL19,lagged y1,y6,y7 and EL19. The results are summarised in

Table-7.12 : Standard deviation of 'performance' variables,  $y_2$ , and net operating costs, EL21.

S.No.	$y_2$	$y_4$	$y_6$	$y_7$	EL21
1.	1866	1400	22862	14372	12652
2.	988	1109	1404	11778	11725
3.	3745	44193	2931	47897	44956
4.	5993	3283	5825	6941	2490
5.	1392	1733	6144	17996	16921
6.	808	1367	2713	9060	8551
7.	2541	1839	2296	23786	21295
8.	608	1098	3416	1447	13923
9.	1079	1311	760	8281	7327
10.	3662	4265	4120	23608	21895
11.	482	484	424	7484	7263
12.	1084	690	1124	9232	9527
13.	2071	1497	2018	13349	12334
14.	1001	1841	2091	11692	10171
15.	2403	18266	53324	19315	17062
16.	9898	7782	11058	35009	25596
17.	2725	2229	5055	17302	19243
18.	6161	8391	6483	102460	98430
19.	2188	1888	3266	22469	23403
20.	30063	5652	30822	47061	3678
21.	29511	4949	31573	22418	31944
22.	1683	4934	1224	8636	8131
23.	2092	848	1828	12028	11826
24.	4683	4200	5035	22349	19177
25.	494	660	11390	11173	11107
26.	1930	29472	55727	14777	15919
27.	2729	2683	2469	15113	12612
28.	12463	3688	3634	55264	51228
29.	9808	7646	10843	15553	14397
30.	2452	1400	2297	21558	19679
31.	63463	3360	133874	110395	51773
32.	1585	1315	3102	30325	29003
33.	41785	13199	58614	73193	32710
34.	40955	653	3869	37604	71369
35.	2902	2271	17279	8051	5995

Table - 7.13 and Table-7.14 which show that 19 firms showed a significant influence of sales revenue, gross block, total income, total manufacturing costs, total funds employed, and one year lagged profits after tax,  $y6_{j-1}$  on the amount of Economic Leverage. Of the 19 firms it is interesting to note that profits after tax,  $y6$ , and  $y6_{j-1}$  were significant determinants in 10 firms ( 5 firms each ). However for 29 firms the coefficient of determination,  $R^2$ , was found to be less than 0.45.

(vi) Size of the firm and the amount of Economic Leverage :

The influence of the size of the firm on the amount of Economic Leverage was tested by the following simple linear regression model :

$$EL = f ( \text{size of the firm} )$$

$$EL = f ( \text{total income} )$$

$$EL = a + b y7 \quad ; \quad a, b \text{ are parameters.}$$

In this analysis total income,  $y7$ , of the firm was taken as a proxy for the size of the firm. The results given in Table-7.15 show that only 4 firms exhibited a coefficient of determination higher than 0.4.

Table - 7.13  $EL = F (XX j)$ 

S.No.	$\hat{B}_0$	$\hat{B}_1$	$R^2$
1.	-10668 +	6145 v3	0.321
	-11649 +	2573 EL19	0.257
2.	-32402 +	2.87 y10	0.369
3.	-8261 +	0.3188 v3	0.333
	-8261 +	0.48 EL19	0.48
4.	356 +	1.704 y10	0.596
5.	2867 -	2.725 y6j-1	0.575
6.	-25475 +	0.462 y1j-1	0.426
	-24628 +	0.436 y7	0.403
7.	776 +	0.061 y6	0.391
	60843 -	0.454 v1	0.419
	8242 -	0.3573v3	0.474
8.	-3715 +	0.152 v12	0.3
	-3608 +	0.1259v1	0.3
	-4342 +	0.11 v3	0.3
9.	-70560 +	0.577 y1	0.469
	-67719 +	0.522 y7	0.49
	-61588 +	0.45 EL19	0.45
10.	-1525 +	0.956 y6j-1	0.3
11.	-10296 +	0.379 y1j-1	0.4
	-2658 -	0.48 y6	0.502
	-9894 +	0.767 v3	0.3
	-9961 +	0.349 EL19	0.4
	-10304 +	0.63 y1j-1	0.3
	-10231 +	0.538 y7j-1	0.3
	-9785 +	0.574 y1j-1	0.31
12.	-8573 +	0.378 y6j-1	0.46
	1405 -	0.029 y1j-1	0.351
13.	8763 -	0.407 v3j-1	0.3
14.	-33043 +	0.44 y1	0.4
	-32733 +	0.426 y7	0.34
	-33129 +	0.309 EL19	0.31
15.	278 +	0.188 y6j-1	0.33
16.	-1793 -	0.092 y6j-1	0.601
17.	-14377 +	0.197 y1j-1	0.3
	-3388 +	0.492 y6j-1	0.464
18.	-4776 +	2.336 y6j-1	0.66
19.	-22559 +	0.147 y1	0.3
	-5128 +	0.11 y6	0.4
	-115190+ 14.934	v1	0.43
	18015 +	5.087 y6j-1	0.703

-Table continues-

- Table continued- (7.13)

S.No.	$\hat{\beta}_0$	$\hat{\beta}_1$	$R^2$	
20.	-11831	+ 0.185	$y_6$	0.32
21.	-358758	+ 11.757	$v_3^{j-1}$	0.46
22.	-42780	+ 0.672	$y_1$	0.77
	-49830	+ 0.751	$y_7$	0.81
	-28677	+ 3.811	$v_1$	0.33
	-76943	+ 0.989	EL19	0.989
	-2380	+ 0.333	$y_6^{j-1}$	0.706

Table-7.14 :  $R^2$  of  $EL = f(X_{j-1})$ .

Variable	$R^2 > 0.45$	$R^2 < 0.45$
y1	2	5
y1 <sub>j-1</sub>	-	3
y6	5	3
y6 <sub>j-1</sub>	5	2
y7	2	3
y7 <sub>j-1</sub>	-	1
EL19	3	3
EL19 <sub>j-1</sub>	-	-
v1	-	3
v3	2	5
v12	-	1

Table-7.15 : Size of the firm and Economic Leverage.

S.No.	$B_0$		$B_1$ y7	$R^2$
1.	1702	+	0.8843	0.429
2.	127	+	605	0.465
3.	744	+	0.739	0.403
4.	3544	+	0.8258	0.4

(vii) Correlation between Economic Leverage and miscellaneous variables :

The relationship of Economic Leverage with the following variables was examined by using the simple correlation coefficient technique: sales revenue,  $y_1$ , net operating profits,  $y_4$ , total income,  $y_7$ , equity capital,  $v_2$ , total funds employed,  $v_3$ , total manufacturing costs,  $EL_{19}$ , degree of financial leverage,  $v_4$ , net operating expenditures,  $EL_{21}$ , financial leverage,  $v_5$ , net profits margin,  $v_6$ , net return on assets,  $v_7$ , operating profit margin,  $v_8$ , return on worth,  $v_9$ , total income minus profits after tax ( $y_7 - y_6$ ),  $v_{10}$ , and gross profits minus profits after tax ( $y_2 - y_6$ ),  $v_{11}$ .

The results, summarised in Table-7.16 and Table-7.17 show that in 11 firms the amount of Economic Leverage,  $EL$ , was positively and significantly related with net operating profits, degree of financial leverage and financial leverage; in 10 firms the amount of  $EL$  had a significant positive correlation with total funds employed and total income minus profits after tax; 9 firms showed a significant positive correlation with total manufacturing costs, net operating expenditures and operating profits margin; in 8 firms it was with net profits margin, net return

Table-7.16 : Correlation of some variables with Economic Leverage.

S.No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
variables																				
y1	10																			
y4		10								1										
y7	10					10							10	2.5	2.5		10	2.5		
v2														2.5	1					
v3	5			5	10					10				1	5					
EL19	10			1									10	1						
v4	10			10									10	10	2.5					
EL21	10			1										2.5				1		
v5	1			1				10		10			1						10	
v6						5				2.5					2.5					
v7			5			10				2.5				10	2.5					
v8			10	5		5				1				2.5	2.5					
v9			10							1				2.5	2.5	10				
v10				1	5									2.5	2.5					
v11	10						5											1		2.5

- table continues -

- table continued - (7.16)

variables	S.No. 21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
y1	5			5					10						5
y4				2.5						5				2.5	
y7		2.5		5					10						2.5
v2			10	1							1	10		5	
v3	10		10											5	
EL19	5	10		10									10		1
v4	1	2.5								5	10	10			
EL21	5	5		10									10		1
v5	10	10	5				10		10						
v6	2.5			10			10			2.5	10				
v7	1									5	10				
v8	1			1			5								
v9	2.5									5	10				
v10	5	2.5		10							10				
v11	2.5	1						2.5			10			34	

Table-7.17 : Significance levels of the correlation coefficients.

Variables	Significance levels				Total number of firms
	1%	2.5%	5%	10%	
y1	-	2	3	2	7
y4	1	4	1	5	11
y7	1	3	1	2	7
EL19	3	1	1	4	9
EL21	3	1	2	3	9
v2	3	-	1	3	7
v3	1	-	4	5	10
v4	2	2	1	6	11
v5	3	-	1	7	11
v6	-	4	1	3	8
v7	1	2	2	3	8
v8	4	1	3	1	9
v9	1	2	1	4	8
v10	2	3	2	3	10
v11	1	4	1	2	8

on assets, return on worth and gross profits minus profits after tax; whereas in 7 firms it was with sales revenue, total income and equity capital.