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Financial Performance of Select Sugar Companies in Tamil Nadu

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Abstract: *The research study titled “A Study on Financial Performance Analysis of Sugar Companies in Tamil Nadu” is a piece of research work done in order to assess the financial stability, profitability, long term solvency, efficiency in asset utilization of the five major sugar companies operating in the state of Tamil Nadu. The study has been conducted during 2006-07 to 2010-11 which is clear that the Ministry of Company Affairs, Ministry of Finance – Government of India, as well as the Reserve Bank of India are seriously thinking together for further liberalization, and to reduce the bank rate of interest on the welfare of the companies and the banking agencies were coming forward to support these industries financially to improve the productivity and giving direct and indirect employment for the common man. Since, these type of industries basically depends upon agricultural production and the same in turn depends on the geographical and climate conditions of a State which is above the hands of an common man. Knowingly the researcher has made an attempt to find that whether these white elephants are healthy and financially strong enough to run on its own leg, the researcher had made an attempt to critically analyze the financial strengths. It is found that on an average all the units considered for the study are at average to the industry standards and to the rule of thumb. While making with the Motaal’s Comprehensive Test Kothari Sugars state in the first place where all the sugar companies considered for study should learn a lesson from Kothari Sugars. Rajshree Sugars shows a weak ratio and implies that it is to be bankrupted. It is a warning for other companies to be at most clever. This researcher concludes that all the five major sugar companies considered for study shows an average productivity which can be increased provided these industries in particular depends upon agricultural production where the concerned central and state Government has to answer whether these industries will be at a Survival.*

Key Words : *Sugar Industry, Financial Performance,*

I. INTRODUCTION

The focus of financial analysis is a key factor in determining the fate of any company. The analysis of financial statements is a process of evaluating relationship between components of financial statements to obtain a better understanding in the firm’s performance. Financial statement analysis involves analyzing the firm’s financial statements to extract information that can facilitate decision-making activity. An analysis of the financial statement can reveal whether the firm will be able to meet its long-term debt commitment, or financially distressed, company uses its physical assets efficiently and optimal financing mix is maintained, whether firm is generating adequate return to its shareholders and whether it can sustain its competitive advantage. While the information used is historical, the intention is to clearly arrive with recommendations and forecasts for the future rather than provide a “picture of the past”.

II. SUGAR INDUSTRY - PROFILE

Sugar industry is very important to the Indian national economy due to its multiple contributions in the shape of employment and provision of raw materials to other industries. It had been rightly pointed out by late Shri. Fakhruddin Ali

Ahmed who was the then minister for food and agriculture. In his eleventh annual general meeting of the national federation of co-operative factories limited he addressed that “the co-operative sugar factories in some parts of the country have become the symbol of industrialization in the development of ancillary industries providing opportunities of employment to the village folk”. The industry provides employment to about 35 million cultivations and 3.6 lakhs skilled and unskilled workers. Further, it accounts for providing employment to crores of thousands in the sugar trade, transporting of sugarcane and sugar etc. Its by-products are used as raw materials in industries such as alcohol, plastics, synthetics, rubber, and fiberboard pharmaceuticals, paper, etc. The sugar industry in recent years has begun to export sugar, thus earning valuable foreign exchange besides it provides Rs.300 crores as tax to the government. Consisting these facts of importance it is ranked second among the major consumer industries of this country, next only cotton, textile industry. In India, major sugarcane growing states includes Uttar Pradesh, Maharashtra, Karnataka, Gujarat, Tamil Nadu, and Andhra Pradesh. These six states contribute more than 85% of total sugar production in the country. Uttar Pradesh and Maharashtra together contribute more than 57% of total production.

III. STATEMENT OF THE PROBLEM

India is the fourth low cost sugar producers in the world after Australia, Brazil and Thailand. India's cost of sugar production is one-fourth of that in Europe. India's sugar sector faces a fall in prices, rising raw material costs, limited export capacity and a lack of flexibility to produce ethanol for biofuel, analyst Licht said. Sugar is the second largest agro-based industry in India. The industry provides employment to about two million skilled and semi-skilled workers besides those who are employed in ancillary activities, mostly from rural areas. Though the industry contributes a lot to the socioeconomic development of the nation, it is plagued with a number of problems such as cyclical fluctuations, high support prices payable to farmers, lack of adequate working capital, partial decontrol and the uncertain export outlook. Global sugar prices have fallen sharply because of a huge glut of production driven by the world's leading producers such as Brazil, India and Thailand.

The Sugar Industry in Tamil Nadu plays a vital role in the economic development of the State, particularly in rural areas. Tamil Nadu is one of the leading producers of sugar in the country and its contribution is about 7% of the country's total sugar production. At present, there are 47 sugar mills in Tamil Nadu of which 16 sugar mills are in cooperative sector, 3 in public sector and 28 in private sector. At present 44 sugar mills are functioning and the remaining 2 mills viz., Madura Sugars and Arunachalam Sugar Mills Limited are not functioning. The Agro based sugar mills play an important role in the economic growth of rural areas with the sole aim to generate large scale direct employment. Apart from that, a lot of indirect employment to rural population is also provided. Tamil Nadu Sugar industry is responsible for about 10% of the total sugar production in India. At present, the sugar industry in Tamil Nadu stands in a total mess similar to that of the other rural industries.

IV. SCOPE OF THE STUDY

The study 'Financial Statement Analysis of sugar companies in Tamil Nadu' is an maiden attempt to analyze various financial aspects of sugar companies. It analyses various aspects such as liquidity, solvency, turn-over etc of the year 2006-07, 2007-08, 2008-09, 2009-10, 2010-11. It is a specific study which is confined to financial aspects only and is purely based on secondary data which also limits the scope of the study. The study highlights the financial position of the sugar companies in Tamil Nadu for the study period. The study helps to understand the financial position and provides suitable suggestion to improve their financial performance.

V. METHODOLOGY

The source of data for the study is collected from the annual Reports and balance Sheet of select 5 sugar companies in Tamil Nadu. The Companies considered are Bannari Amman Sugars(BAS), Ponni Sugars(PS), EID Parry(EID), Kothari Sugars(KS) and Rajshree Sugars(RS) all these are located and operating in Tamil Nadu only. The objective of this paper is to analyze and compare the Profitability, Liquidity, Long Term Solvency position and Efficiency in Asset Utilization of sugar companies under study and to offer findings and suggestion to improve the financial position of sugar companies. The tool used

for the study includes Ratio Analysis, Comparative Financial statement, Common Size statement, Motaal's Comprehensive Test, Z – Score Ratio, Trend Analysis and Correlation and to understand the actual financial position, trend projection made to projected for the following three years based on the actual position. Study was made for just five years and the current year was excluded on account of the non availability of the data. It is based is on secondary data, were it is affected by the inherent limitations of the secondary data.

VI. REVIEW OF LITERATURE

Title of the Study	Authored	Year	Findings of the Study
Structure of Indian industries	Metha.M	1961	Lavational pattern of the Sugar Industry
Profit, Variability of Profits & Firm Size	Samuels & Smith	1968	Profit and Firm Size are inversely related
Profitability and growth of Chemical Industries	Subramaniam & Popola	1971	Relationship between profitability and growth of firms
Profitability in sugar in Punjab and Haryana	Kewal Raj Pawar	1984	The important in recovery and avoid of abnormal expansion can also be along way in improving profitability ratio in the sugar industry in Punjab and Haryana .
Financial Appraisal of salem Co-operative sugar mills Ltd, Mohanur	Vijaya kumar	2002	Mill's over reliance on external funds which results in interest burden
'Z' Score analysis for evaluation of financial health of textile mills	Mansur A. Mulla	2002	Companies took efforts to increase the profitability by increasing the size for higher technology
Determinations of profitability A- Firm level study of sugar industry of Tamil Nadu	Vijaya kumar	2002	Efficiency in inventory management and current assets are important to improve profitability
Agriculture statistics at a glance	Samar K. Datta	2002	Compound growth rate of production of sugarcane was only 2.70 and yield of sugarcane was only 0.82 during 1991-92 to 2000- 01.

VII. FINDINGS

7. 1. Liquidity ratio

It was found that the overall performance , Bannari Amman Sugars shows high with 1.65 as average current ratio whereas Rajshree sugars low with 0.89 during the study period. It was found that the overall performance of EID Parry was shows 1.32 liquidity ratio whereas Ponni sugars low at 0.39 against the standard norm of 05. Performance of Kothari Sugars is good by 6.03 as against Bannari Amman Sugars low 2.86 with regard to inventory turnover ratio. It was found that the overall performance , Ponni sugars was showing 312.48 as an average debtors turnover ratio whereas EID Parry low with 35.21.

7. 2. Long Term Solvency ratio

Rajasree sugars performs good with regard to Debt equity ratio (14) and Long term debt equity ratio (2.46) and low in the case of interest coverage ratio (1.96). Bannari amman sugars a low degree with 0.55 in the case of debt equity ratio as well as in the case interest coverage ratio it is found to be as high as 18.32. Ponni sugars has performed quite good during the study period in the case of return on long term fund with 147.21 and as low as 0.21 in the case of long term debt equity ratio. Rajshree sugars shows a high average of 2.46 in long term debt equity ratio and Kothari sugars with 42.77 as average low on long term fund ratio.

7. 3. Activity Ratio

It was found that the overall performance of debt equity ratio found to be high in the case of Rajshree Sugars (14) as an average debt equity ratio whereas Bannari amman Sugars low with 0.55. Ponni sugars was showing high with 2.94 as an average fixed asset turnover ratio whereas EID Parry low with 0.95. It is understood that the overall performance of Ponni Sugars is 2.05 as an average total asset turnover ratio whereas EID Parry with 0.63. It was found that the overall performance of EID Parry was showing high with 1.18 and Rajshree Sugars low with 0.35 return on net worth ratio.

7. 4. Profitability Ratio in relation to sale

Operating ratio is concerned it is observed that Bannari Amman Sugars was shows high value of 98.74 as EID Parry low with 31.29. Gross Profit Ratio is found to be good in the case of Bannari Amman Sugars by 15.07 whereas EID Parry is low with 2.24. Average profit ratio is concerned it is understood that EID Parry shows high 23.02 and Rajshree sugars with 2.60. Bannari Amman Sugars posses 14.09 as average profit before interest and tax ratio whereas EID Parry with -0.01.

7. 5. Profitability Ratio in relation to investment

Earning per share ratio is high with Bannarii Amman sugars Rs.77.85 and Kothari Sugars low of Rs.1.14. Dividend pay out ratio to net profit is concerned it is found that EID Parry shows high 30.62 whereas Kothari Sugars has not paid dividend to its share holders throughout the study period which has to be taken in to account. It was found that the overall performance of EID Parry was shown high with 26.47 as average dividend payout ratio cash profit whereas Kothari Sugars has not paid dividend to its share holders throughout the study period. Investment turn over ratio is concerned it is found that Kothari Sugars shows high with 6.56 times whereas Bannari Amman Sugars low with 2.86.

7. 6. Common Size Statement

Common size balance sheet shows that the current liabilities and current assets shows fluctuation in its respective percentage to total liabilities and total assets when compared each year. In the year 2008 Rajshree sugars percentage of total current asset to its total asset is (21%) less then the percentage of total current liabilities to its total liabilities(31%).While comparing the five companies for five years the percentage of reserve has increased except Rajshree sugars and Bannarii amman sugars.

Common size income statement when compared to the then yester four year's Bannarii amman sugars total income has increased at 132 % against its total sales in the year 2011 and total expenses increased at 114% to its total sales. Compared with other years the operating profit of EID Parry has decreased at -5% to its sales in the year 2008 due to decrease in total income at 109% on its total sales. The Operating profit of Ponni sugars in the year 2010 has increased at 31% to its total sales to total income at 110% which decreased at 85% to its total sales on total expenditure.

7. 7. Comparative Statement

Comparative balance sheet is found that the Bannary Amman sugars total liability has decreased to -2% during the year compare then its previous year. cash and bank balance of Rajshree sugars increased to 1231 times during the year 2010.The percentage of capital work in progress has increased 1006 times during the year 2008. Kothari sugars reserves has increased to 258% during the year 2010 compare then its previous year 2009.Sundry debtors of Ponni sugars has increased 1187 times during the year 2008. Total asset and liabilities of Ponni sugars has decreased to -10% during the year 2011. **Comparative income statement** is found to increase in net sales to 78% during the year 2010 due to increase in total income 6% to 8%. Even though there has been no change in total expenses during the year 2009. -4273 time decrease in net profit during the year 2009 of EID Parry. Kothari sugars net profit has increased 1256 times during the year 2010 compared to its previous year 2009 Kothari sugars net profit has decreased to -43% during the year 2008 due to increases in its miscellaneous expenses to 1887 times.

7. 8. Trend Projection

It was found to be negatively performed with a net profit towards the companies showing fluctuation trend. Sales of companies considered for the study gradually increased and was steady in all projected periods i.e. 2013-14 to 2014-15 except Bannari Amman Sugars & Kothari Sugars. In the case of reserve & surplus it is learnt that there was a positive trend of all the five companies except Rajshree Sugars. Sundry Debtors is concerned companies considered such as Ponni Sugars and Kothari Sugars are well maintained. Rajshree Sugars trend was healthy and positive towards fixed asset for the entire projected period.

7. 9. Z-Score

Altman's Z- Score reveals Ponni Sugars, Bannarii Amman Sugars, EID Parry and Kothari Sugars shows Healthier except Rajshree sugars. Ponni Sugars shows healthy zone during 2009 -10 with a score of 4.29 and Rajshree Sugars shows a bankruptcy signal during the year 2007-08 whose score is 0.99. All the companies are found to be in the healthy zone and it is certain that financial health of the companies considered are good and high except Rajshree Sugars where necessary steps to be taken for recovery of this poor financial position.

7. 10. Motaal's Comprehensive Test

During 2006 - 07 the said companies were ranked as 1st except Kothari Sugars. In the year 2007 - 08 2nd rank was achieved by EID Parry, Kothari Sugars and Rajshree Sugars. In the year 2008 – 09 Bannarii Amman Sugars, Kothari Sugars and Rajshree Sugars achieved 4th rank. In the year 2009 – 10 1st rank was achieved by Kothari Sugars. EID Parry and Rajshree Sugars were achieved 5th rank in the year 2010 – 11. It is evident from the above test that the sugar companies considered for the study are equally doing good.

7. 11. Correlation

There exist a positive correlation between current asset and debt equity ratio except EID Parry (-0.24108). There is a positive correlation between inventory turnover ratio and net profit ratio, current asset and inventory turnover ratio, quick ratio and return on capital employed of all the five companies considered for the study.

VIII. SUGGESTION

Liquidity position of Ponni Sugars shows poor performance hence the company has to take necessary steps to improve its liquidity position by maintaining the sufficient current assets. While taking the Long Term Solvency position in to consideration Ponni Sugars performance seems to be low the company has to concentrate on long term investments to improve its long term solvency position. EID Parry's activity ratio is low, and to overcome this company has to concentrate on its activity position by deploying more funds on its fixed assets as well as total assets. Profitability position of EID Parry shows poor performance. The company has to improve its sales by reducing operating expenses to earn more profit. Motaal's Comprehensive test reveals that the EID Parry achieved 5th rank during the year 2010 – 11 the company has to concentrate to improve its liquidity position. Rajshree Sugars situation in the case of Z – score test is in bankruptcy situation, to safeguard the company from this situation it has to concentrate on its all activities. There is negative Correlation between current asset and debt equity ratio of EID Parry. Hence the current assets do not influence the debt equity ratio of EID Parry.

IX. CONCLUSION

The study has been conducted during 2006-07 to 2010-11 which is clear that the Ministry of Company Affairs, Ministry of Finance – Government of India, as well as the Reserve Bank of India are seriously thinking together for further liberalization, and to reduce the bank rate of interest on the welfare of the companies and the banking agencies were coming forward to support these industries financially to improve the productivity and giving direct and indirect employment for the common man. Since, these type of industries basically depends upon agricultural production and the same in turn depends on the geographical and climate conditions of a State which is above the hands of an common man. It is found that on an average all the units

considered for the study are at average to the industry standards and to the rule of thumb. While making with the Motaal's Comprehensive Test Kothari Sugars state in the first place where all the sugar companies considered for study should learn a lesson from Kothari Sugars. Rajshree Sugars shows a weak ratio and implies that it is to be bankrupted. It is a warning for other companies to be at most clever. This researcher concludes that all the five major sugar companies considered for study shows an average productivity which can be increased provided these industries in particular depends upon agricultural production where the concerned central and state Government has to answer whether these industries will be at a Survival.

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Tables showing the results of ratio analysis of sugar companies:

BANNARI AMMAN SUGARS					
S.No	RATIO	Mean	SD	CV(%)	CAGR(%)
1	CR	1.65	0.53	32.14	7.94
2	LR	0.94	0.19	20.79	1.93
3	ITR	2.86	0.83	29.14	-19.6
4	DTR	56.24	18.52	32.94	-0.63
5	DER	0.55	0.2	35.73	13.1
6	LTDER	0.44	0.16	36.66	13.1
7	ICR	18.32	13.08	71.37	-40
8	RLFR	76.87	26.09	33.94	-24.28
9	FATR	1.16	0.53	45.83	-23.93
10	TATR	0.93	0.22	24.17	-16.23
11	ROCE	14.45	6.97	48.25	-24.21
12	RNWR	0.79	8.82	1110.73	-22.91
13	OPR	98.74	32.71	33.13	-2.16
14	GPR	15.07	6.49	43.08	-17.4
15	N PR	11.37	4.5	39.56	-13.21
16	PBITMR	14.09	6.21	44.08	-11.82
17	EPSR	77.85	33.77	43.38	-12.31
18	InvTR	2.86	0.83	29.14	-19.6
19	DPRNP	9.46	2.07	21.91	9.66
20	DPR-CP	16.05	6.89	42.92	24.27

(Source: Computed from the data collected)

Tables showing the results of ratio analysis of sugar companies:

E.I.D.PARRY					
S.No	RATIO	Mean	SD	CV(%)	CAGR(%)
1	CR	1	0.16	16.33	2.32
2	LR	1.32	0.46	35	13.36
3	ITR	5.52	1.64	29.65	23.27
4	DTR	35.21	11.79	33.47	39
5	DER	0.69	0.23	33.44	-3.6
6	LTDER	0.42	0.13	30.3	-0.74
7	ICR	3.74	2.73	73.07	-16.96
8	RLFR	43.41	15.6	35.95	-12.74
9	FATR	0.95	0.22	23.6	-7.29
10	TATR	0.63	0.07	10.44	2.67
11	ROCE	7.62	5.91	77.56	-11.72
12	RNWR	1.18	27.46	2320.95	-26.73
13	OPR	31.29	12.87	41.13	56
14	GPR	2.24	9.62	430.28	-2.41
15	N PR	23.02	27.06	117.57	-28.15
16	PBITMR	-0.01	7.17	-89656.2	49.89
17	EPSR	24.22	29.38	121.28	-24.75
18	InvTR	5.53	1.62	29.3	22.72
19	DPRNP	26.47	7.26	27.43	-15.85
20	DPR-CP	30.62	16.69	54.51	-6.34

(Source: Computed from the data collected)

Tables showing the results of ratio analysis of sugar companies:

KOTHARI SUGARS					
S.No	RATIO	Mean	SD	CV(%)	CAGR(%)
1	CR	1.4	0.51	35.99	-0.28
2	LR	1.16	0.3	26.06	-11.72
3	ITR	6.03	1.61	26.75	-10.67
4	DTR	158.07	52.31	33.09	-17
5	DER	2.05	0.4	19.41	3.22
6	LTDER	1.79	0.48	27.01	14.72
7	ICR	10.53	11.25	106.84	-30.79
8	RLFR	42.77	14.8	34.59	-21.83
9	FATR	1.43	0.78	54.86	-26.01
10	TATR	1.02	0.24	23.93	-10.79
11	ROCE	8.52	4.45	52.27	-20.39
12	RNWR	0.54	8.39	1545.12	-25.51
13	OPR	37.32	12.69	34.02	-8.08
14	GPR	5.61	6.6	117.8	-30.14
15	N PR	5.08	3.84	75.46	-29.97
16	PBITMR	3.61	4.27	118.17	-21.93
17	EPSR	1.14	0.66	57.62	-19.15
18	InvTR	6.56	2.25	34.34	-14.25

Tables showing the results of ratio analysis of sugar companies:

PONNI SUGARS					
S.No	RATIO	Mean	SD	CV(%)	CAGR(%)
1	CR	0.93	0.33	35.09	18.53
2	LR	0.39	0.16	39.5	48.85
3	ITR	3.52	0.6	17.04	7.77
4	DTR	312.48	116.4	37.25	66.6
5	DER	0.66	0.37	56.19	-30.05
6	LTDER	0.21	0.11	50.55	-24.58
7	ICR	17.58	19.49	110.85	14.02
8	RLFR	147.21	56.8	38.59	-11.09
9	FATR	2.94	0.74	25.04	3.36
10	TATR	2.05	0.26	12.94	2.65
11	ROCE	22.79	22.35	98.06	-6.89
12	RNWR	0.99	18.57	1878.5	11.74
13	OPR	60.45	22.46	37.15	-11.45
14	GPR	9.84	11.54	117.2	-15.72
15	N PR	6.58	5.45	82.85	18.02
16	PBITMR	10.42	10.82	103.83	-11.61
17	EPSR	16.49	15.43	93.54	37.98
18	InvTR	3.6	0.58	16.22	4.89

19	DPRNP	0	0	0	0
20	DPR-CP	0	0	0	0

(Source: Computed from the data collected)

19	DPRNP	9.49	5.38	56.63	-5.89
20	DPR-CP	11.95	7.08	59.27	-11.64

(Source: Computed from the data collected)

Tables showing the results of ratio analysis of sugar companies:

RAJSHREE SUGARS					
S.No	RATIO	Mean	SD	CV(%)	CAGR(%)
1	CR	0.89	0.5	56.23	27.39
2	LR	0.74	0.19	25.8	6.26
3	ITR	4.12	0.44	10.66	5.32
4	DTR	106.46	35.09	32.96	2.6
5	DER	3.14	0.65	20.87	17.86
6	LTDER	2.46	0.93	37.64	31.77
7	ICR	1.96	0.86	43.89	-31.02
8	RLFR	72.2	24.87	34.45	-27.09
9	FATR	1.24	0.44	35.28	-13.71
10	TATR	0.92	0.18	19.03	-4.89
11	ROCE	11.44	5.7	49.87	-21.75
12	RNWR	0.35	22.05	6354.77	6.25
13	OPR	77.04	26.07	33.84	-13.12
14	GPR	11.61	6.52	56.12	-18.93
15	N PR	2.6	5.37	206.36	8.68
16	PBITMR	11.75	6.45	54.92	-21.03
17	EPSR	4.24	11.95	281.72	17.47
18	InvTR	4.3	0.51	11.76	0.15
19	DPRNP	9.53	10.39	109.04	-100
20	DPR-CP	14.27	15.13	106.02	-100

(Source: Computed from the data collected)

Abbreviations used for Ratios in the study		
No.	RATIOS USED FOR STUDY	ABBR
1	Current Ratio	CR
2	Liquidity Ratio	LR
3	Inventory Turnover Ratio	ITR
4	Debtors Turnover Ratio	DTR
5	Debt Equity Ratio	DER
6	Long Term Debt Equity Ratio	LTDER
7	Interest Coverage Ratio	ICR
8	Return on Long Term Fund Ratio	RLFR
9	Fixed Asset Turnover Ratio	FATR
10	Total Asset Turnover Ratio	TATR
11	Return on Capital Employed	ROCE
12	Return on Net Worth Ratio	RNWR
13	Operating Profit Ratio	OPR
14	Gross Profit Ratio	GPR
15	Net Profit Ratio	N PR
16	PBIT Margin Ratio	PBITMR
17	Earnings Per Share Ratio	EPSR
18	Investment Turnover Ratio	InvTR
19	Dividend Payout Ratio Net Profit	DPRNP
20	Dividend Payout Ratio to Cash Profit	DPR-CP

Table Showing Trend Projection of the Sugar Companies in Tamil Nadu (in %)

Coy	BAS		EID		KS		PS		RS	
	FA	Sales	FA	Sales	FA	Sales	FA	Sales	FA	Sales
2011-12	712.95	677.24	715.9	1472.43	161.78	131.75	41.57	334.28	486.59	806.82
2012-13	712.39	607.96	682.4	1580.8	150.65	61.87	39.75	360.54	520.94	901.88
2013-14	711.83	538.68	648.9	1689.17	139.52	-8.01	37.93	386.8	555.29	996.94

(Source: Computed from the data collected)

Table showing Correlation, Motal Comprehensive Test (MCT) and Z-Score Results

Tools	Year	EID	BMS	KS	PS	RS
CA x DE	2006 - 07	-0.241	0.6153	0.72655	0.60373	0.02919
MCT		11	11	7	11	11
z-Score		2.2994	3.0337	1.6772	3.8001	1.5384
ITR x NP	2007 - 08	0.1198	0.6883	0.52567	0.40552	0.96139
MCT		10	10	9	8	10
z-Score		1.5929	2.1454	2.2072	3.1401	0.9961
CA x ITR	2008 - 09	0.8866	0.8963	0.4448	0.2634	0.2965
MCT		9	8	8	9	8
z-Score		2.922	2.467	2.2106	3.481	1.4453
QR x CE	2009 - 10	0.5221	0.856	0.93503	0.30768	0.1422
MCT		8	7	11	9	9
z-Score		1.9211	2.744	2.4553	4.2901	1.5886
DER x NPR	2010 - 11	0.9052	0.9069	0.35435	0.69043	0.68202
MCT		7	9	10	7	7

(Source: Computed from the data collected)