Financial Analysis (Balance Sheet Ratios) of the Cooperative Sugar Factories in South Gujarat for the Period 2009-10 to 2013-14

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Abstract:
The financial appraisal of cooperative sugar factories of South Gujarat has been done in this paper. For this purpose different balance sheet ratios like Total Assets Turnover Ratio (TATR), Fixed Assets Turnover Ratio (FATR), Current Assets Turnover Ratio (CATR), Working Capital Turnover Ratio (WCTR), Inventory Turnover Ratio (ITR) have been calculated from the annual reports of the companies. The paper is based on secondary data collected from different online sources annual reports of the factories mentioned in references. To test the hypothesis ANOVA tests have been applied.

Keywords: *Total Assets Turnover Ratio (TATR), Fixed Assets Turnover Ratio (FATR), Current Assets Turnover Ratio (CATR), Working Capital Turnover Ratio (WCTR), Inventory Turnover Ratio (ITR).*

1. Introduction

This research work is concerned with urban co-operative sugar factory organization that offers personalized services. The COSF uses various indicators from for measuring the financial performance through financial analysis. These indicators tell as the true financial position of the COSF. These indicators help in identifying the strengths and weakness of the COSF and suggesting improvements in its future. In other words these indicators are called ratio. The financial appraisal of COSF has been done with the help of the balance sheet ratio.

2. Objective

The objective of this paper to analyze the financial position on the basis of balance sheet ratios of cooperative sugar manufacturing units of South Gujarat from 2009-10 to 2013-14.

3. Methodology

The paper is based on secondary data collected from different online sources and annual reports of the factories mentioned in references. We have selected 11 cooperative sugar factories of South Gujarat. The period of the study is five years from 2009-10 to 20012-13.

4. List of the factories under the study

1. Shree Khedut Sahakari Khand Udyog Mandali Ltd., Bardoli
2. Shree Chalthan Vibhag Khand Udyog Sahakari Mandali Ltd., Chalthan
3. Sahkari Khand Udyog Mandali Limited, Gandevi
4. Shree Madhi Vibhag Khand Udyog Sahakari Mandli Ltd., Madhi
5. Shree Mahuva Pradesh Sahakari Khand Udyag Mandli Ltd., Bamania, Mahuva
6. Shree Maroli Vibhag Khand Udyag Sahakari Mandli Ltd., Maroli

7. Shree Khedut Sahakari Khand Udyag Mandli Ltd., Pandvai
8. Shree Sayan Vibhag Sahakari Khand Udyag Mandli Ltd., Sayan
9. Shree Valsad Sahkari Khand Udyag Mandli Ltd., Valsad
10. Shree Ganesh Sahakari Khand Udyag Mandli Ltd., Vataria
11. Shree Kamrej Vibhag Sahakari Khand Udyag Mandli Ltd., Navi Pardi

Table No 1 Total Asset Turnover Ratio

District	COSFs	2009-10	2010-11	2011-12	2012-13	2013-14	Average
Surat	Bardoli	85.29	91.56	99.01	91.62	83.00	90.10
	Chalthan	86.82	95.88	95.22	67.20	91.13	87.25
	Gandevi	69.00	95.15	76.57	77.70	99.95	83.67
	Kamrej	82.64	66.49	87.76	58.55	91.56	77.40
	Madhi	79.95	80.79	92.67	69.73	177.41	100.11
	Mahuva	68.32	77.73	104.26	54.42	78.84	76.71
	Sayan	92.06	84.73	98.23	80.31	86.39	88.34
Valsad	Maroli	78.61	47.98	73.19	73.52	60.44	66.75
	Valsad	58.10	39.32	85.48	60.33	49.27	58.50
Bharuch	Pandvai	80.23	60.28	89.60	82.06	78.25	78.08
	Vataria	67.77	67.03	74.13	69.52	128.29	81.35
Average		77.16	73.36	88.74	71.36	93.14	

(Source: Computed from the Published Annual Reports of the COSFs)

From the above table no 1 it is found that the Total Asset Turnover Ratio was 77.16 during 2009-10. It increased to 73.36 in 2010-11. Again Total asset turnover increased to 88.74 during 2011-12. It further decreased to 71.36% during 2012-13 but again it increased to 93.14% in 2013-14. So it can be concluded that the total asset turnover ratio had fluctuating trend during the period of the study.

Table no 2 Fixed Asset Turnover Ratios

District	COSFs	2009-10	2010-11	2011-12	2012-13	2013-14	Average
Surat	Bardoli	477.26	409.58	464.95	431.88	383.53	433.44
	Chalthan	403.30	310.30	279.60	229.27	316.42	307.78
	Gandevi	210.21	255.14	227.95	257.47	289.14	247.98
	Kamrej	291.90	198.79	241.98	186.89	244.97	232.91
	Madhi	276.69	236.04	260.10	215.26	214.24	240.47
	Mahuva	248.65	320.10	304.01	175.84	229.26	255.57
	Sayan	416.17	311.33	345.12	280.87	284.28	327.55
Valsad	Maroli	108.35	68.69	105.86	98.31	81.08	92.46
	Valsad	112.56	94.40	178.38	117.27	98.15	120.15
Bharuch	Pandvai	267.82	213.42	274.92	255.87	249.70	252.35
	Vataria	215.71	205.86	239.00	230.30	374.50	253.07
Average		275.33	238.51	265.62	225.38	251.39	

(Source: Computed from the Published Annual Reports of the COSFs)

From the table no 2 it is found that the average Fixed Asset Turnover Ratio was good as it was above 200 all years under the study. It was 265.62 during 2011-12. The Fixed Asset Turnover was 275.33 during 2009-10 and 238.51 during 2010-11. It was 225.38 during 2012-13 and 251.39 during 2013-14.

Table no 3 Current Asset Turnover Ratio

District	COSFs	2009-10	2010-11	2011-12	2012-13	2013-14	Average
Surat	Bardoli	105.17	119.81	127.64	117.26	107.25	115.43
	Chalthan	112.68	142.64	148.77	97.18	130.63	126.38
	Gandevi	102.86	151.97	115.44	111.40	152.93	126.92
	Kamrej	116.50	101.19	139.56	86.15	148.12	118.30
	Madhi	113.69	124.45	145.88	104.23	108.54	119.36
	Mahuva	95.66	112.77	161.66	79.81	121.79	114.34
	Sayan	95.39	116.49	137.42	112.54	124.18	117.20
Valsad	Maroli	288.28	159.78	237.92	292.71	238.21	243.38
	Valsad	120.66	67.61	164.79	124.78	99.33	115.43
Bharuch	Pandvai	115.10	84.35	133.51	121.30	114.38	113.73
	Vataria	98.95	99.52	107.58	99.68	195.33	120.21
Average		124.09	116.42	147.29	122.46	140.06	

(Source: Computed from the Published Annual Reports of the COSFs)

From the table no 3 it can be seen that Current Asset Turnover was 124.09 in 2009-10. It decreased to 116.42 during 2010-11. It can be seen that the Current Asset Turnover increased to 147.29 in 2011-12 but again decreased to 122.46 in 2012-13. It increased to 140.06 in 2013-14. It can be seen that there was fluctuating trend in Current Asset Turnover during the period under study.

Table no 4 Working Capital Turnover Ratio (WCTR)

District	COSFs	2009-10	2010-11	2011-12	2012-13	2013-14	Average
Surat	Bardoli	4290.59	-5713.65	-2633.58	-1855.38	3445.30	-493.34
	Chalthan	-106968.00	-1494.38	-890.09	-802.99	-3711.67	-22773.43
	Gandevi	569.05	684.15	658.15	732.00	1266.73	782.02
	Kamrej	700.34	579.84	2030.95	526.19	2889.81	1345.43
	Madhi	894.66	880.07	3534.34	910.78	489.44	1341.86
	Mahuva	614.06	399.08	609.47	300.73	458.19	476.31
	Sayan	417.06	327.57	556.21	640.82	440.36	476.40
Valsad	Maroli	-156.40	-135.84	-213.40	-177.40	-132.44	-163.10
	Valsad	291.62	143.91	400.41	266.17	215.67	263.56
Bharuch	Pandvai	498.04	178.17	577.34	1075.79	611.51	588.17
	Vataria	217.46	206.93	225.21	217.11	470.47	267.44
Average		-8966.50	-358.56	441.36	166.71	585.76	

(Source: Computed from the Published Annual Reports of the COSFs)

From the table no 4 it can be seen that except the factory in Bardoli, Chalthan and Maroli the other factories have maintained positive performance. The Working Capital Turnover was 166.71 and 585.76 during 2012-13 and 2013-14 respectively. It is due to highly negative performance of the Maroli and Valsad units during those two years.

Table no 5 Inventory Turnover Ratios (ITR)

District	COSFs	2009-10	2010-11	2011-12	2012-13	2013-14	Average
Surat	Bardoli	24.00	25.60	34.60	29.40	20.60	26.84
	Chalthan	2.00	1.90	2.00	1.30	1.70	1.78
	Gandevi	1.30	1.50	1.30	1.20	1.40	1.34
	Kamrej	1.20	1.00	1.20	0.90	1.00	1.06
	Madhi	1.20	1.10	1.30	1.00	0.90	1.10
	Mahuva	1.10	1.00	1.40	0.90	1.00	1.08
	Sayan	1.40	1.30	1.40	1.00	1.00	1.22
Valsad	Maroli	3.80	2.40	2.40	2.80	3.20	2.92
	Valsad	1.00	0.60	1.00	1.00	0.80	0.88
Bharuch	Pandvai	1.10	0.90	1.30	1.10	1.00	1.08
	Vataria	1.00	0.90	1.00	0.90	1.90	1.14
Average		3.55	3.47	4.45	3.77	3.14	

(Source: Computed from the Published Annual Reports of the COSFs)

From the table no 5 it can be seen that Inventory Turnover during 1.34 during 2009-10. It increased to 3.47 during 2010-11. It was 4.45 in 2011-12 and 3.77 in 2012-13. It was 3.14 in 2013-14. So it can be concluded that there was fluctuating trend as far as Inventory Turnover is concerned.

Further the following hypotheses were tested using one way ANOVA tests.

5. Null hypotheses

1. H0: There is significant no difference within Total Asset Turnover ratio of the various Districts.
2. H0: There is significant no difference within Fixed Asset Turnover ratio of the various Districts.
3. H0: There is significant no difference within Operating margin ratio of the various Districts.
4. H0: There is significant no difference within Working Capital Turnover ratio of the various Districts.
5. H0: There is significant no difference within Inventory Turnover ratio of the various Districts.

6. Alternative Hypotheses

1.H1: There is significant difference within Total Asset Turnover ratio of the various Districts.
2.H1: There is significant difference within Fixed Asset Turnover ratio of the various Districts.
3.H1: There is significant difference within Operating margin ratio of the various Districts.
4.H1: There is significant difference within Working Capital Turnover ratio of the various Districts.
5.H1: There is significant difference within Inventory Turnover ratio of the various Districts.

Table no 6 Summary of ANOVA tests:

Sr No	Name of the Ratios	Degrees of Freedom	Calculated F	P Values
1	Total Asset Turnover	10	8.133	0.012
2	Fixed Asset Turnover	10	6.870	0.018
3	Current Asset Turnover	10	2.854	0.116
4	Working Capital Turnover	10	0.186	0.834
5	Inventory Turnover	10	0.215	0.811

7. Interpretation

1. From the above table it can be seen that p value for Total Asset Turnover ratio is 0.012 which is lower than 0.05 so null hypothesis will be rejected i.e There is significant difference within Total Asset Turnover ratio of the various Districts.

2. It is found that that p value for Fixed Asset Turnover ratio is 0.018 which is greater than 0.05 so null hypotheses will be rejected i.e There is significant difference within Fixed Asset Turnover ratio of the various Districts.
3. The p value for Operating Margin ratio is 0.116 which is greater than 0.05 so null hypotheses will be accepted i.e There is no significant difference within Operating margin ratio of the various districts.
4. The p value for Working Capital Turnover is 0.834 which is greater than 0.05 so null hypotheses will be accepted i.e there is no significant difference within Working Capital Turnover of the various Districts.
5. The p value for Inventory Turnover ratio is 0.811 which is greater than 0.05 so null hypotheses will be accepted i.e there is no significant difference within Inventory Turnover ratio of the various Districts.

8. Conclusion

The sugar units of the South Gujarat is going through a bad stage as far as the period under the study is concerned. It can be concluded that cooperative sugar units of South Gujarat are functioning not well far as balance sheet ratios are concerned. A considerable operational efficiency is required to run the cooperative factories, but from our analysis it can be seen that the units are not able to maintain the stability in their financial standings at required level. The reason behind this is high cost of production and borrowed capital. The inefficiency of management to tackle this can be one of the reasons for this during the period under the study.

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