

CHAPTER V
PRACTICE IN FIXING SUGAR CANE PRICE

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5.1. INTRODUCTION

In any business, price is an important factor for buying or selling of any commodity. This price is determined by the demand and supply function in a perfect market. But in practice every year Minimum Support Prices (MSP) for major agricultural products are announced by Government of India, which are fixed after taking into account **from** the recommendations of the Commission for Agricultural Costs and Prices (CACP). The CACP while recommending MSPs takes into factors such as cost of production, change in prices of inputs, demand and supply, market price trends and cost of living among other factors. The main reason why the Government of India fixes minimum support prices (MSPs) is to ensure remunerative prices to farmers and to encourage higher investment and production of agricultural commodities. Government of India organizes this MSP's by way of maintaining Price Support Schemes (PSS) of various commodities through various public and co-operative agencies such as Food Corporation of India Ltd. (FCI), Cotton Corporation of India Ltd. (CCI) and Jute Corporation of India Ltd (JCI). **Based on this practice**, at present the Government of India have declared Minimum support price for thirty six agricultural commodities based on the CACP's recommendation. Sugar cane is one of such commodity. In India the sugar cane price fixation policy is being followed by not only Co-operative sugar mills, but all the private and public sector sugar mills also. The Pricing of Sugar cane, being very critical, has to be based on transparent principles. The focus of price policy intervention in the sugar sector has to be the elimination of cyclical in production, reduction in price volatility and providing a stimulus for growth production. Various regulations in this sector needs to be examined in greater detail and the endeavor should be to remove those which have outlived their utility and are now responsible for amplifying the cyclical and price volatility in sugarcane and sugar production. However, any deregulation must provide for the protection of the farmer's interest and that of the consumers, especially the vulnerable households. In this Chapter included ANOVA Technique for change in cane price which affect **cut off recovery** , variable cost ,fixed cost and finally the profit and loss of these Co-Operative Sugar Mills.

5.2. ANALYTICAL FRAMEWORK

In this study first part of this chapter **cut off recovery** is calculated in the formula of ‘cut off recovery = variable cost per MT of cane divided by unit selling price per quintal of sugar’, then comparison has been made change in original cut off recovery if cane price policy is changed with revised cut off recovery.

And then a comparison has been made that the original profit with revised profit due to change in cane price declaration policy and over all Co-operative Sugar Mills Profit or Loss due to change in cane price also compared with original profit and loss through Two-way ANOVA and F test.

Two-way ANOVA technique is used when the data are classified on the basis of two factors. For example, the agricultural output may be classified on the basis of different varieties of seeds and also on the basis of different varieties of fertilizers used. A business firm may have its sales data classified on the basis of different salesmen and also on the basis of sales in different regions. In a factory, the various units of a product produced during a certain period may be classified on the basis of different varieties of machines used and also on the basis of different grades of labour. Similarly in this chapter cut off recovery for all the co-operative sugar mills in Tamil Nadu are classified into two groups that is before change in sugar cane price policy and after change in sugar cane price policy. And the profit or loss of these co-operative mills in Tamil Nadu are also classified into two, before declaration new sugar cane price policy and after declaration new sugar cane price policy. Such a two-way design may have repeated the measurements of each factor or may not have repeated values. The ANOVA technique is little different in case of repeated measurements where we also compute the interaction variation. It is now explained that the two-way ANOVA technique in the context of both the said designs.

ANOVA technique in context of two-way design when repeated values are not there: As we do not have repeated values, we cannot directly compute the sum of squares within samples. Therefore, we have to calculate this residual or error variation by subtraction, once we have calculated the sum of squares for total variance and for variance between varieties of one treatment as also for variance between varieties of the other treatment.

The various steps involved are as follows:

- (i) Take the total of the values of individual items in all the samples and call it T .
- (ii) Work out the correction factor as under:

$$\text{Correction factor} = \frac{(T)^2}{n}$$

(iii) Find out the square of all the item values one by one and then take its total. Subtract the correction factor from this total to obtain the sum of squares of deviations for total variance. Symbolically, we can write it as:

$$\text{Sum of squares of deviations for total variance or total } SS = \sum X_y^2 - \frac{(T)^2}{n}$$

(iv) Take the total of different columns and then obtain the square of each column total and divide such squared values of each column by the number of items in the concerning column and take the total of the result thus obtained. Finally, subtract the correction factor from this total to obtain the sum of squares of deviations for variance between columns or (*SS* between columns).

(v) Take the total of different rows and then obtain the square of each row total and divide such squared values of each row by the number of items in the corresponding row and take the total of the result thus obtained. Finally, subtract the correction factor from this total to obtain the sum of squares of deviations for variance between rows (or *SS* between rows).

(vi) Sum of squares of deviations for residual or error variance can be worked out by subtracting the result of the sum of (iv)th and (v)th steps from the result of (iii)rd step stated above. In other words,

$$\text{Total } SS - (SS \text{ between columns} + SS \text{ between rows}) = SS \text{ for residual or error variance.}$$

(vii) Degrees of freedom (d.f.) can be worked out as under:

$$\text{d.f. for total variance} = (c \cdot r - 1)$$

$$\text{d.f. for variance between columns} = (c - 1)$$

$$\text{d.f. for variance between rows} = (r - 1)$$

$$\text{d.f. for residual variance} = (c - 1)(r - 1)$$

Where c = number of columns, r = number of rows

(viii) ANOVA table can be set up as shown in Table 5.1

TABLE 5.1
Model ANOVA Table

Source of variation	Sum of squares (SS)	Degrees of freedom (d.f.)	Mean square (MS)	F-ratio
Between columns treatment	$\sum \frac{(T_j)^2}{n_j} - \frac{(T)^2}{n}$	$(c-1)$	$\frac{SS \text{ between columns}}{(c-1)}$	$\frac{MS \text{ between columns}}{MS \text{ residual}}$
Between rows treatment	$\sum \frac{(T_i)^2}{n_i} - \frac{(T)^2}{n}$	$(r-1)$	$\frac{SS \text{ between rows}}{(r-1)}$	$\frac{MS \text{ between rows}}{MS \text{ residual}}$
Residual or error	Total SS - (SS between columns + SS between rows)	$(c-1)(r-1)$	$\frac{SS \text{ residual}}{(c-1)(r-1)}$	
Total	$\sum X_{ij}^2 - \frac{(T)^2}{n}$	$(c.r-1)$		

Source:Wikipedia

In this table c = number of columns; r = number of rows and

SS residual = Total SS – (SS between columns + SS between rows).

Thus, MS residual or the residual variance provides the basis for the F -ratios concerning variation between columns treatment and between rows treatment. MS residual is always due to the fluctuations of sampling, and hence serves as the basis for the significance test. Both the F -ratios are compared with their corresponding table values, for given degrees of freedom at a specified level of significance, as usual and if it is found that the calculated F -ratio concerning variation between columns is equal to or greater than its table value, then the difference among columns means is considered significant. Similarly, the F -ratio concerning variation between rows can be interpreted. And then the hypotheses being tested by the F-test in simple regression are: $H_0: \beta_1 = 0$; $H_1: \beta_1 \neq 0$ that is if the F ratio is greater than 0.05, the results shows significance and the null hypothesis is rejected otherwise, the results show no significance and the null hypothesis is accepted.

5.3. CANE PRICE FIXATION PRACTICE

Every year, In continuation of Government of India’s announcement of SMP or FRP for Sugar Cane, Tamil Nadu Government has also declared factory wise SAP for each sugar mills based on the previous year’s average recovery, But in actual during the study period Government of Tamil Nadu has not announced SAP for 2002-03, 2003-04, 2004-05 seasons. Mill wise SMP or FRP or SAP are given in Table 5.2 for the study period from 2002-03 to 2011-12.

TABLE 5.2

Statement of Cane price Fixed by Government for Co-operative Sugar Mills in Tamil Nadu

TABLE 5.2	Year or Season									
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Minimum Recovery (%)	8.5	8.5	8.5	9	9	9	9	9.5	9.5	9.5
SMP or FRP and SAP (Rs. Per M.T)	695	730	745	1014	1025	1034	1100	1537.4	1900	2000
Ambur CSM										
Previous Season's Recovery (%)	9.70	10.40	10.20	9.10	8.90	9.00	9.40	9.83	8.80	9.10
SMP or FRP and SAP (Rs. Per M.T)	793.40	891.50	894.60	1022.80	1025.00	1034.00	1136.00	1582.61	1900.00	2000.00
Amaravathi CSM										
Previous Season's Recovery (%)	10.70	10.40	9.30	9.00	9.90	9.70	9.70	9.75	9.30	9.80
SMP or FRP and SAP (Rs. Per M.T)	875.40	891.50	815.40	1014.00	1106.00	1097.00	1163.00	1571.65	1900.00	2045.90
Salem CSM										
Previous Season's Recovery (%)	9.80	11.84	9.70	9.00	9.90	10.00	9.80	10.00	9.60	9.80
SMP or FRP and SAP (Rs. Per M.T)	801.60	1013.90	850.60	1014.00	1106.00	1124.00	1172.00	1605.90	1914.60	2045.90
KI CSM										
Previous Season's Recovery (%)	9.50	9.60	9.70	10.00	9.00	9.00	9.20	9.00	8.70	8.60
SMP or FRP and SAP (Rs. Per M.T)	777.00	823.50	850.60	1102.00	1025.00	1034.00	1118.00	1537.40	1900.00	2000.00
Dharmapuri CSM										
Previous Season's Recovery (%)	11.70	12.10	11.40	10.40	10.90	10.90	10.60	10.98	10.80	11.00
SMP or FRP and SAP (Rs. Per M.T)	957.40	1036.00	1000.20	1137.20	1196.00	1205.00	1244.00	1740.80	2089.80	2229.50
National CSM										
Previous Season's Recovery (%)	0.00	0.00	0.00	9.00	9.00	9.00	9.00	9.00	9.00	9.80
SMP or FRP and SAP (Rs. Per M.T)	695.00	730.00	745.00	1014.00	1025.00	1034.00	1100.00	1537.40	1900.00	2045.90
Vellore CSM										
Previous Season's Recovery (%)	9.70	10.20	10.60	9.70	9.20	9.00	9.30	10.00	9.30	9.80
SMP or FRP and SAP (Rs. Per M.T)	793.40	874.50	929.80	1075.60	1043.00	1034.00	1127.00	1605.90	1900.00	2045.90
Tirupathur CSM										
Previous Season's Recovery (%)	10.20	11.00	11.00	10.60	10.20	10.30	10.80	10.82	9.70	10.60
SMP or FRP and SAP (Rs. Per M.T)	834.40	942.50	965.00	1154.80	1133.00	1151.00	1262.00	1718.24	1929.20	2168.30
Chengalrayan CSM										
Previous Season's Recovery (%)	9.30	9.99	10.20	9.90	9.00	9.00	9.00	9.75	8.70	8.80
SMP or FRP and SAP (Rs. Per M.T)	760.60	856.65	894.60	1093.20	1025.00	1034.00	1100.00	1571.65	1900.00	2000.00
Tiruthani CSM										
Previous Season's Recovery (%)	8.50	9.00	8.90	8.50	9.00	9.00	9.00	9.50	7.40	8.50
SMP or FRP and SAP (Rs. Per M.T)	695.00	772.50	780.20	1014.00	1025.00	1034.00	1100.00	1537.40	1900.00	2000.00
NPKRR CSM										
Previous Season's Recovery (%)	8.60	8.90	8.50	8.90	9.00	9.00	9.00	9.50	8.00	7.90
SMP or FRP and SAP (Rs. Per M.T)	703.20	764.00	745.00	1014.00	1025.00	1034.00	1100.00	1537.40	1900.00	2000.00
MRK CSM										
Previous Season's Recovery (%)	8.91	9.61	9.60	9.70	9.00	9.00	9.00	9.50	7.60	7.50
SMP or FRP and SAP (Rs. Per M.T)	728.62	824.35	841.80	1075.60	1025.00	1034.00	1100.00	1537.40	1900.00	2000.00
Cheyar CSM										
Previous Season's Recovery (%)	9.00	9.55	10.20	9.30	9.00	9.00	9.60	9.75	8.60	8.50
SMP or FRP and SAP (Rs. Per M.T)	736.00	819.25	894.60	1040.40	1025.00	1034.00	1154.00	1571.65	1900.00	2000.00
S.Siva CSM										
Previous Season's Recovery (%)	10.50	11.50	10.40	10.40	10.40	10.40	10.60	10.83	10.80	10.40
SMP or FRP and SAP (Rs. Per M.T)	859.00	985.00	912.20	1137.20	1151.00	1160.00	1244.00	1718.93	2089.80	2137.70
k2 CSM										
Previous Season's Recovery (%)	9.70	10.20	9.90	10.50	9.70	9.30	9.70	9.00	9.00	9.20
SMP or FRP and SAP (Rs. Per M.T)	793.40	874.50	868.20	1146.00	1088.00	1061.00	1163.00	1537.40	1900.00	2000.00

Source: Secondary data.

From Table 5.2 It is inferred that during 2002-03 year, Tiruthani CSM has paid minimum cane price of Rs 695/- per M.T declared by Government of India. All the other Co-operative Sugar Mills in Tamil Nadu have paid the cane price according to their previous seasons recovery ranging from Rs.703.20 by NPKRR CSM to Rs 957.40 by Dharmapuri CSM.(Note .National CSM has not functioning during this year)

In 2003-04, All the Co-operative Sugar Mills in Tamil Nadu have paid the cane price according to their previous seasons recovery ranging from Rs.764/-by NPKRCSM to Rs.1036/- by Dharmapuri CSM. (Note .National CSM has not functioning during this year)

In 2004-05 , NPKRCSM has paid minimum cane price of Rs 745/- per M.T declared by Government of India. All the other Co-operative Sugar Mills in Tamil Nadu have paid the cane price according to their previous season's recovery ranging from Rs.780.20 by TiruthaniCSM to Rs.1000.20 by Dharmapuri CSM. (Note .National CSM has not functioning during this year)

In 2005-06 , Government of Tamil Nadu declared SAP for Sugar Cane supplied to the Sugar Mills in Tamil Nadu and the Government of India has changed the minimum recovery from 8.50% to 9.00% for Sugar Cane price declaration policy. NPKRRCSM, National CSM, Amaravathi CSM, Salem CAM have paid minimum cane price (SAP) of Rs 1014/- per M.T declared by Government of Tamil Nadu. All the other Co-operative Sugar Mills in Tamil Nadu have paid the cane price according to their previous season's recovery ranging from Rs.1022.80 by Ambur CSM to Rs.1154.80 by Tirupathur CSM.

In 2006-07 , eight out of fifteen Co-operative sugar mills in Tamil Nadu vide Ambur CSM, K1CSM, National CSM, Chengalrayan CSM, Tiruthani CSM, NPKRRCSM, MRKCSM, Cheyyaru CSM have paid only minimum cane price of Rs 1025/- per M.T declared by Government of Tamil Nadu. All the other Co-operative Sugar Mills in Tamil Nadu have paid the cane price (SAP) according to their previous seasons recovery ranging from Rs.1043/- by VelloreCSM to Rs.1196/- by Dharmapuri CSM.

In 2007-08 , nine out of fifteen Co-operative sugar mills in Tamil Nadu vide AmburCSM, K1CSM, NationalCSM, Vellore CSM, Chengalrayan CSM, Tiruthani CSM, NPKRRCSM , MRKCSM, Cheyyaru CSM have paid minimum cane price of Rs 1034/- per M.T declared by Government of Tamil Nadu. All the other Co-operative Sugar Mills in Tamil Nadu have paid the cane price according to their previous season's recovery ranging from Rs.1061/- by K2CSM to Rs.1205/- by Dharmapuri CSM.

In 2008-09 , **Government of India has changed the minimum recovery from 9.00% to 9.50%** except National CSM, Tiruthani CSM,NPKRRCSM, MRKCSM, Cheyyaru CSM, All the other Co-operative Sugar Mills in Tamil Nadu have paid the cane price according to their previous seasons recovery ranging from Rs.1118/- by K1CSM to Rs.1205/- by Tirupathur CSM.

In 2009-10 , **Government of India has changed Sugar cane price from SMP to FRP for Sugar Cane price declaration policy.** Except National CSM, Tiruthani CSM, NPKRR CSM, MRKCSM,

K2CSM, All the other Co-operative Sugar Mills in Tamil Nadu have paid the cane price according to their previous seasons recovery ranging from Rs. 1571.65 by Chengalrayan CSM and Amaravathi CSM to Rs. 1740.80 by Dharmapuri CSM.

In 2010-11 , except Salem CSM for Rs.1914.60,Tirupathur CSM for Rs.1929.92, Dharmapuri CSM for Rs.2089.80, S.SivaCSM for Rs 2089/-, All the other Co-operative Sugar Mills in Tamil Nadu have paid minimum cane price of Rs.1900/- slice their previous season's recovery is less than minimum recovery.

In 2011-12 , except Salem CSM for Rs.2045.90, National CSM for Rs.2045.90, S.SivaCSM for Rs 2137.70/-, Tirupathur CSM for Rs.2168.30 and Dharmapuri CSM for Rs.2229.50, all the other Co-operative Sugar Mills in Tamil Nadu have paid minimum cane price of Rs .2000/- slice their previous season's recovery is less than minimum recovery.

5.4. COMPARISON OF AVERAGE ACTUAL CANE PRICE WITH AVERAGE SELLING PRICE

Every year Central Government and State Government declared SMP or FRP and SAP for Sugar Cane based on recommendation of the CACP. And then Actual Sugar Cane price is Calculated for every individual Sugar mills according to their previous season performance or obtained recovery percentage. Levy price of Sugar is fixed by Central Government based on certain norms which takes into account of factors such as the average notified cane price of SMP or FRP payable by sugar mills to cane growers, the cost of conversion of cane into sugar, extra realizations made on sale of non-levy sugar stocks, and the need for ensuring a reasonable return on capital employed by the industry on disposal of the entire production of sugar. The sugar remaining after supplying as levy sugar (during the study period First 90%, then 80% and then 90%) is allowed to be sold as non-levy sugar, which is called free-sale sugar in common parlance, by way of periodic releases of monthly and then quarterly **(Note: Now the monthly release mechanism of sugar is dispensed with from first of April 2013 and levy sugar obligation for every sugar mills is also dispensed with from 2012-13 seasons onwards.)**, applicable uniformly to all sugar mills. The quantum of non-levy sugar to be released for a particular duration for domestic consumption is decided by the Central Government having regard to the production, stock, requirement and prices of sugar in the country. On the basis of the non-levy (free sale) quota decided by the Central Government, monthly release orders for sale of sugar in the open market are issued. This mechanism supposedly helps keep sugar prices in open market at a stable level. In effect, the sale of entire production of sugar which is manufactured during five to six months of the sugar season (the sugar season begins on 1st October and ends on 30th September,) is

controlled and regulated for sale and distribution in a staggered manner. A Comparative Statement SMP or FRP, Actual cane price paid, Levy Price, mixed average selling price and their change in percentage is displayed in Table 5.3

TABLE 5.3

Statement of SMP or FRP, Actual cane price paid, Levy Price, mixed average selling price and their change in percentage

	A	B	C	D	E	F	G	H	I
2	Year	SMP/FRP declared by Govt	Change in Percentage (%) (SMP/FRP)	Actual Sugar Cane Price Paid (in Rs.)	Change in Percentage (%) (Sugar Cane)	Levy Price (in Rs.)	Change in Percentage (%) (Levy Price)	Avg. Selling Price (in Rs.)	Change in Percentage (%) (Avg. selling Price)
3	2001-02	621		690		1192		980	
4									
5	2002-03	695	11.92	786.89	14.04	1259.99	5.70	1105.64	12.82
6									
7	2003-04	730	5.04	873.31	10.98	1305.92	3.65	1432.52	29.56
8									
9	2004-05	745	2.05	865.85	-0.85	1335.64	2.28	2097.95	46.45
10									
11	2005-06	795	6.71	1070.32	23.61	1335.64	0.00	1999.81	-4.68
12									
13	2006-07	803	1.01	1068.20	-0.20	1335.64	0.00	1535.72	-23.21
14									
15	2007-08	812	1.12	1073.60	0.51	1335.64	0.00	1421.67	-7.43
16									
17	2008-09	812	0.00	1152.20	7.32	1335.64	0.00	2180.37	53.37
18									
19	2009-10	1298	59.85	1594.12	38.35	1785.93	33.71	3420.66	56.88
20									
21	2010-11	1391	7.16	1928.23	20.96	1878.54	5.19	3069.18	-10.28
22									
23	2011-12	1450	4.24	2047.94	6.21	1878.54	0.00	2936.49	-4.32

Source: Secondary data

In the Table 5.3 it is expressed that in 2002-03 year the Central Government declared SMP 11.92% more than 2001-02 year, but levy price increase percentage is only 5.7%. In 2005-06 Actual average Sugar Cane price paid by mills was Rs 1070.32 which is 23.61 % increase from previous year's sugar cane price. But there is no change in levy sugar selling price and Average Free sugar selling price were decreased from Rs.2097.95 to Rs.1999.81 which is (-)4.68 % decreases from previous years selling price. In 2007-08 Government of India increase the SMP by 1.12% Actual average sugar cane price paid by mills was 0.51 % increase But there is no change in levy sugar selling price and Average Free sugar selling price were decreased from Rs.1535.72 to Rs.1421.67 which is (-)7.43% less than previous years selling price. In 2009-10 instead of SMP, FRP was declared with 59.85% increase by the Central Government. But the levy sugar price was fixed with 33.71% increase. Every year the SMP or FRP is in increasing trend except 2008-09, free price is having ups and downs trend particularly in the year 2009-10 which increased to 56.88% due to over all countries shortage in production of sugar. In 2006-07 it is very lowest (-)23.21% decrease for free

price of sugar. The free price of sugar and SMP or FRP of Sugar cane are mis-matched, which affect every mills profitability and financial performance.

5.5. EFFECT ON CHANGE IN NEW SUGAR CANE PRICE FIXATION POLICY

In this study it is expressed that the sugar cane price is fixed based on current year recovery instead of previous recovery. Then how much profitability and cut off recovery of every co-operative sugar mills is effective whether decreased or increased. Overall Comparative statement of Change in Losses for Co-operative Sugar Mills in Tamil Nadu if cane price policy changed is presented in Table 5.4.

TABLE 5.4
Statement of Profit and Loss due to change in cane price

TABLE 5.4	ACSM	AMCSM	SCSM	K1CSM	DCSM	NCSM	VCSM	TCSM	CCSM	TTCSM	NPKRCS	MRKCS	MCYSM	SSCSM	K2CSM	+	-	0
2002-03 Cur.ProfLc	-894.32	-1050.91	-385.15	-2323.70	-954.18	-1551.77	-1220.54	-945.25	-1434.05	-656.68	-1422.79	-269.32	22.03	-823.40	-914.16			
Rev.ProfLoss	-1032.08	-995.07	-1198.13	-2353.79	-1074.88	-1551.77	-1357.07	-1105.97	-1716.38	-761.23	-1501.02	-517.29	-178.67	-1174.36	-1111.78			
Change	137.76	-55.84	812.98	30.09	120.70	0.00	136.53	160.72	282.33	104.55	78.23	247.97	200.70	350.96	197.62	13	1	1
2003-04 Cur.ProfLc	-703.41	-430.66	-843.70	-625.57	-492.29	-1212.78	-143.65	-639.04	-52.89	115.39	-1530.02	439.58	372.29	-378.89	258.33			
Rev.ProfLoss	-1018.76	-246.42	-477.41	-657.07	-419.28	-1212.78	-208.66	-639.04	-127.74	134.50	-1461.35	443.12	195.70	-231.42	328.54			
Change	315.35	-184.24	-366.29	31.50	-73.01	0.00	65.01	0.00	74.85	-19.11	-68.67	-3.54	176.59	-147.47	-70.21	5	8	2
2004-05 Cur.ProfLc	-385.72	-447.15	-362.25	233.23	308.92	-1275.85	166.81	-319.14	575.65	-1028.15	-1315.20	828.21	571.99	608.77	605.08			
Rev.ProfLoss	-328.37	-435.61	-304.63	149.53	421.71	-1275.85	284.45	-290.78	671.83	-1010.51	-1352.07	801.93	754.62	608.77	430.97			
Change	-57.35	-11.54	-57.62	83.70	-112.79	0.00	-117.64	-28.36	-96.18	-17.64	36.87	26.28	-182.63	0.00	174.11	4	9	2
2005-06 Cur.ProfLc	-559.97	-936.18	-234.46	-1257.87	53.44	-1395.24	-122.81	-434.48	-828.37	-928.53	-1662.78	27.67	392.81	-122.91	918.63			
Rev.ProfLoss	-545.67	-958.02	-565.91	-902.19	-84.83	-1395.24	-4.51	-368.93	-533.82	-928.53	-1662.78	189.48	467.61	-122.91	1192.03			
Change	-14.30	21.84	331.45	-355.68	138.27	0.00	-118.30	-65.55	-294.55	0.00	0.00	-161.81	-74.80	0.00	-273.40	3	8	4
2006-07 Cur.ProfLc	-1592.20	-49.71	79.08	-2415.26	-660.68	-2000.38	-1433.47	-1311.93	-1145.53	-2082.81	-2667.53	-644.59	-305.66	57.21	380.37			
Rev.ProfLoss	-1592.20	-7.62	31.08	-2415.26	-660.68	-2000.38	-1360.84	-1335.61	-1145.53	-2082.81	-2667.53	-644.59	-305.66	57.21	550.69			
Change	0.00	-42.09	48.00	0.00	0.00	0.00	-72.63	23.68	0.00	0.00	0.00	0.00	0.00	0.00	-170.32	3	3	9
2007-08 Cur.ProfLc	-1764.65	-535.44	-1493.43	-3099.30	-2037.89	-3313.65	-2284.81	-1935.88	-3514.97	-2911.39	-3789.86	-2226.18	-928.00	-1380.97	-746.11			
Rev.ProfLoss	-1872.99	-535.44	-1385.93	-3204.08	-1915.41	-3313.65	-2418.81	-2079.84	-3514.97	-2911.39	-3789.86	-2226.18	-1258.85	-1489.31	-963.00			
Change	108.34	0.00	-107.50	104.78	-122.48	0.00	134.00	143.96	0.00	0.00	0.00	0.00	330.85	108.34	216.89	7	2	6
2008-09 Cur.ProfLc	96.00	51.49	1666.72	1016.21	1046.31	-1825.28	-65.61	489.01	331.31	-879.52	-1412.56	342.14	778.50	747.68	1118.12			
Rev.ProfLoss	10.06	42.53	1588.87	1101.16	966.71	-1825.28	-267.66	484.74	-36.43	-1000.00	-1568.55	163.67	717.50	651.42	1412.70			
Change	85.94	8.96	77.85	-84.95	79.60	0.00	202.05	4.27	367.74	120.48	155.99	178.47	61.00	96.26	-294.58	12	2	1
2009-10 Cur.ProfLc	-632.28	441.19	4459.02	2329.78	2222.45	-208.61	354.86	69.47	-304.75	-1192.29	-1157.86	904.10	2160.98	4178.68	2187.55			
Rev.ProfLoss	-591.02	441.19	4459.02	2329.78	2222.45	-208.61	459.28	239.64	-178.21	-1192.29	-1157.86	904.10	2250.67	4192.44	2187.55			
Change	-41.26	0.00	0.00	0.00	0.00	0.00	-104.42	-170.17	-126.54	0.00	0.00	0.00	-89.69	-13.76	0.00	0	6	9
2010-11 Cur.ProfLc	-925.94	-574.61	935.43	291.91	919.05	-1520.80	-472.62	-374.89	-26.82	-1461.72	-2806.02	-1166.50	67.79	565.28	635.81			
Rev.ProfLoss	-925.94	-637.47	819.11	291.91	858.04	-1581.99	-554.98	-580.08	-26.82	-1461.72	-2806.02	-1166.50	67.79	715.72	635.81			
Change	0.00	62.86	116.32	0.00	61.01	61.19	82.36	205.19	0.00	0.00	0.00	0.00	0.00	-150.44	0.00	6	1	8
2011-12 Cur.ProfLc	-1350.48	-920.83	400.83	-3125.00	-80.83	-1687.70	-949.58	-811.24	-2182.64	-1943.07	-2628.27	-1986.68	-399.66	452.36	917.67			
Rev.ProfLoss	-1350.48	-866.08	596.18	-3125.00	83.29	-1759.17	-849.33	-784.53	-2182.64	-1943.07	-2628.27	-1986.68	-399.66	417.15	917.67			
Change	0.00	-54.75	-195.35	0.00	-164.12	71.47	-100.25	-26.71	0.00	0.00	0.00	0.00	0.00	35.21	0.00	55	45	50

Source: Secondary data.

From Table 5.4, It is extracted that in 2002-03 , if the cane price policy is changed than only Amaravathi CSM's Profit or Loss has decreased to Rs 55.84. All the other CSM's Profit or Loss has not decreased.

In 2003-04 , if the cane price policy is changed then except Ambur CSM, K1CSM, Vellore CSM, Chengalrayan CSM, Cheyyaru CSM; all the other CSM's Profit or Loss have not decreased.

Similarly in 2004-05 year if the cane price policy is changed then except K1CSM, NPKRRCSM, MRKCSM, K2CSM all the other CSM's Profit or Loss have not decreased.

In 2005-06 , if the cane price policy is changed then except Amaravathi CSM, Salem CSM, Dharmapuri CSM all other CSM's Profit or Loss has decreased or no Change. In 2006-07 year if the cane price policy is changed than Amaravathi CSM for Rs 42.09 Lakhs, VelloreCSM for Rs.72.63Lakhs, K2CSM for Rs.170.32Lakhs have reduced their losses, Salem CSM and Tirupthur CSM have not changed All the other Co-operative CSM have not reduced their losses .

In 2007-08 , if the cane price policy is changed then Salem CSM Rs .107.50 Lakhs and Dharmapuri CSM Rs.122.48 Lakhs have reduced their losses Amaravathi CSM, National CSM, Chengalrayan CSM, Tiruthani CSM, NPKR CSM, MRK CSM have not changed. All the other Co-operative CSM has not reduced their losses.

In 2008-09 , if the cane price policy is changed then K1CSM for Rs.84.95Lakhs and K2 CSM for RS.294.58 Lakhs have reduced their losses. National CSM has not changed All the other Co-operative CSM have not reduced their losses.

In 2009-10 , if the cane price policy is changed then Ambur CSM for Rs.41.26Lakhs, Vellore CSM for Rs.104.42Lakhs, Tirupathur CSM for Rs.170.17Lakhs, Chengalrayan CSM for Rs.126.54Lakhs, Cheyyaru CSM for Rs.89.69Lakhs and S.Siva CSM for Rs.13.76Lakhs have reduced their losses All the other Co-operative CSM have not changed their losses.

In 2010-11 , if the cane price policy is changed then S.Siva CSM has reduced its losses for Rs 150.54 Lakhs , K1CSM, Chengalrayan CSM, Tiruthani CSM, NPKRR CSM, MRK CSM, Cheyyaru CSM and K2 CSM have not changed, All the other Co-operative CSM have not reduced their losses.

In 2011-12 , if the cane price policy is changed than Ambur CSM, K1 CSM, Chengalrayan CSM, Tiruthani CSM, NPKRR CSM,MRK CSM and Cheyyaru CSM have not changed their losses Amaravarhi CSM for Rs.54.75Lakhs, Salem CSM for Rs.195.35Lakhs, Dharmapuri CSM for Rs.164.12Lakhs, Vellore CSM for Rs.100.35Lakhs and Tirupathur CSM for Rs.26.71Lakhs have reduced their losses. In nutshell during the study period if the cane price declaration policy is changed then 50 out of 150 (33.3%) have not reduced their losses, 45 out of 150 (30%) have reduced their losses and 55 out of 150 (36.7%) have increase their losses.

Comparative statement for Change in Cut off Recovery the running Co-operative Sugar Mills in Tamil Nadu after change of cane price is indicated in Table 5.5

TABLE 5.5
Cut off Recovery for the running Co-operative Sugar Mills in Tamil Nadu

TABLE 5.5 Cut off Recovery (%)															
	ACSM	AMCSM	MSCSM	K1CSM	MDCSM	NCSM	VCSM	TCSM	CCSM	TTCSM	NPKRCSM	MRKCSM	CYSM	SSCSM	K2CSM
2002-03 Rev.	8.56	9.96	8.38	8.31	9.46	10.18	8.70	8.95	8.73	6.41	7.12	7.31	7.22	9.18	8.04
Existing	9.08	9.73	9.90	8.38	9.76	10.18	9.09	9.55	9.30	6.72	7.33	7.82	7.60	9.94	8.40
2003-04 Rev.	5.57	7.43	6.91	6.40	9.14	0.00	6.02	7.08	6.97	6.73	5.76	6.64	7.10	6.64	5.70
Existing	5.48	6.88	5.72	6.46	8.68	0.00	6.23	7.08	7.10	6.67	5.54	6.63	7.53	6.10	5.56
2004-05 Rev.	4.65	6.32	4.93	6.14	6.73	0.00	5.61	6.04	6.73	4.98	4.40	6.01	6.39	6.21	7.57
Existing	4.26	6.27	4.67	6.28	6.27	0.00	5.25	5.87	6.58	4.84	4.56	6.05	5.99	6.21	7.90
2005-06 Rev.	7.08	6.24	7.64	7.24	7.92	7.99	6.98	7.41	7.01	6.88	6.13	6.52	6.38	8.39	6.58
Existing	7.03	6.42	8.12	6.73	8.19	7.99	6.74	7.22	6.57	6.88	6.13	6.19	6.24	8.39	6.23
2006-07 Rev.	9.90	7.46	7.92	8.89	9.56	10.09	9.15	9.59	8.43	10.20	8.95	8.61	7.83	8.80	7.66
Existing	9.90	7.39	7.97	8.89	9.56	7.99	9.02	9.65	8.43	10.20	8.95	8.61	7.83	8.80	7.45
2007-08 Rev.	9.38	7.54	9.13	8.91	10.74	10.43	9.31	10.07	9.37	9.69	9.42	9.24	8.98	10.36	9.71
Existing	9.64	7.54	9.01	9.03	10.54	10.09	9.51	10.39	9.37	9.69	9.42	9.24	9.37	10.50	10.00
2008-09 Rev.	5.98	6.46	6.37	6.01	6.45	7.44	6.78	5.93	6.64	6.11	5.71	6.06	7.08	8.12	7.07
Existing	6.15	6.48	6.45	5.93	6.60	7.44	7.10	5.93	6.98	6.32	5.91	6.28	7.16	8.24	6.74
2009-10 Rev.	6.12	6.60	5.87	5.45	6.35	5.00	5.88	4.86	6.74	5.42	5.56	4.89	5.51	6.18	5.15
Existing	5.98	6.60	5.87	5.45	6.35	5.00	5.67	4.48	6.61	5.42	5.56	4.89	5.41	6.17	5.15
2010-11 Rev.	8.33	7.60	7.39	6.64	7.46	7.79	7.78	7.84	6.76	7.94	7.51	7.13	7.03	7.53	7.37
Existing	8.33	7.71	7.49	6.64	7.55	7.94	7.94	8.30	6.76	7.94	7.51	7.13	7.03	7.35	7.37
2011-12 Rev.	8.34	8.32	8.36	7.82	9.07	8.70	8.07	8.97	7.97	7.77	7.95	7.88	7.75	8.35	7.47
Existing	8.34	8.24	8.21	7.82	8.85	8.81	7.92	8.92	7.97	7.77	7.95	7.88	7.75	8.40	7.47

Source: Secondary data.

From Table 5.5 It is observed that during 2002-03 year if the cane price declaration policy is changed then except Amaravathi CSM (which has increased 9.96%) and National (which has no change) and all the other Co-operative Sugar mills in Tamil Nadu have been decreased their Cut off Recovery .

During 2003-04, if the cane price declaration policy has changed then Tirupathur CSM has no change in Cut off Recovery. Cut off Recovery has been reduced for Vellore CSM 6.23% into 6.02%, Chengalrayan CSM 7.10% into 6.97% and Cheyyaru CSM 7.53% into 7.1%. And all the other Co-operative Sugar mills in Tamil Nadu have not been decreased their Cut off Recovery.

During 2004-05, if the cane price declaration policy has changed then S.Siva CSM and National CSM have no change in Cut off Recovery. Cut off Recovery have been reduced for K1 CSM 6.28% into 6.14%, NPKRR CSM 4.56% into 4.40%, MRK 6.05% into 6.01% and K2 CSM 7.90% into 7.57% and all other Co-operative Sugar mills in Tamil Nadu have not decreased their Cut off Recovery.

During 2005-06 , if the cane price declaration policy has changed then Tiruthani CSM, NPKRR CSM and S.Siva CSM have no change in Cut off Recovery. Cut off Recovery have reduced

for Amaravathi CSM 6.43% into 6.24%, Salem CSM 8.12% into 7.64% and Dharmapuri CSM 8.19 % into 7.92% all other Co-operative Sugar mills in Tamil Nadu have not been decreased their Cut off Recovery

During 2006-07, if the cane price declaration policy has changed then Cut off Recovery has been reduced for Salem CSM 7.97% into 7.92% and Tirupathur CSM 9.65% into 9.59%. All other Co-operative Sugar mills in Tamil Nadu either no change or have not been decreased their Cut off Recovery.

During 2007-08 , if the cane price declaration policy has changed then Except Salem CSM, Dharmapuri CSM and National CSM all other Co-operative Sugar mills in Tamil Nadu either have no change or have been decreased their Cut off Recovery.

During 2008-09, if the cane price declaration policy has changed then Except K1 CSM and K2 CSM all the other Co-operative Sugar mills in Tamil Nadu either have no change or have been decreased their Cut off Recovery.

During 2009-10, if the cane price declaration policy has changed then Ambur CSM, Vellore CSM, Tirupathur CSM, Chengalrayan CSM, Cheyyaru CSM and S.Siva CSM have not been decreased their Cut off Recovery and all other Co-operative Sugar mills in Tamil Nadu have no change in their Cut off Recovery.

During 2010-11 ,if the cane price declaration policy has changed then Cut off Recovery have been decreased for Amaravathi CSM 7.71% into 7.60%, Salem CSM 7.49% into 7.39%, Dharmapuri CSM 7.55% into 7.46% National CSM 7.94%into 7.70% and Vellore CSM 8.30% into 7.84% and all other Co-operative Sugar mills in Tamil Nadu neither have no change nor have not been decreased their Cut off Recovery.

During 2011-12 , if the cane price declaration policy has changed then Dharmapuri CSM, Vellore CSM and Tirupathur CSM has no change in Cut off Recovery. Cut off Recovery has increased their Cut off Recovery and all other Co-operative Sugar mills in Tamil Nadu neither have no change nor have not been decreased their Cut off Recovery. In nutshell due to the cane price declaration policy has been changed then not only cut off recovery has changed but also their profitability also will changed in addition.

If the cane price declaration policy has changed from present system of price is fixed on the basis of previous seasons recovery into current seasons recovery whether there exist significant differences between the existing policy and new policy, as well as between the years, during the study period, the following Table 5.6 was framed and compared.

TABLE 5.6

Statement of Variable Cost per M.T of Cane for the running Co-operative Sugar Mills in Tamil Nadu

Table 5.6		Variable Cost Per MT in Rs.													
Group		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	Mean	S.D	C.V	AGR
Before Change	Ambur CSM	942.92	1059.81	1159.24	1330.64	1336.30	1301.89	1377.69	1939.33	2252.23	2383.47	1508.35	502.06	0.33	6.62
	Amaravathi CSM	1098.30	1261.32	3050.97	2717.98	1736.13	1698.11	1976.11	2908.55	3040.97	2966.10	2245.45	773.16	0.34	14.89
	Salem CSM	928.75	1057.00	1166.00	1275.12	1464.71	1449.24	1558.51	2268.23	2239.03	2650.40	1605.70	581.19	0.36	7.80
	Kallakurichi-I CSM	907.65	939.74	1168.54	1263.41	1255.73	1333.13	1324.44	1752.40	2150.40	2241.04	1433.65	464.37	0.32	6.41
	Dharmapuri CSM	1050.15	1178.07	1285.44	1295.83	1397.89	1419.02	1480.15	1860.96	2379.85	2529.92	1587.73	505.45	0.32	5.85
	National CSM	904.87	0.00	0.00	1413.79	1414.90	1375.20	1357.75	1863.95	2329.42	2387.99	1304.79	825.46	0.63	-8.46
	Vellore CSM	928.80	995.34	1217.90	1276.78	1263.84	1251.09	1340.81	1927.48	2250.33	2386.52	1483.89	514.51	0.35	6.82
	Tirupattur CSM	965.46	1074.17	1234.30	1374.01	1394.56	1414.64	1512.99	1967.85	2272.55	2489.15	1569.97	507.42	0.32	6.55
	Chengalrayan CSM	874.05	958.14	1185.22	1256.88	1242.96	1230.28	1291.31	1791.49	2167.04	2236.53	1423.39	476.06	0.33	6.87
	Tiruthani CSM	865.46	934.68	1195.26	1454.34	1290.81	1258.64	1326.87	1991.98	2278.59	2323.08	1491.97	524.32	0.35	7.99
	NPKRR CSM	814.83	864.59	967.89	1200.01	1243.02	1243.40	1278.46	1622.55	2110.14	2256.75	1360.16	493.48	0.36	7.27
	MRK CSM	832.84	941.72	1077.89	1222.59	1236.07	1237.45	1283.65	1685.17	2162.32	2218.54	1389.83	479.02	0.34	7.07
	Cheyar CSM	866.11	915.18	1265.35	1235.52	1241.70	1242.47	1340.43	1975.75	2202.41	2274.41	1455.93	508.52	0.35	7.62
	S.Siva CSM	981.77	1147.38	1246.55	1341.78	1365.94	1375.87	1441.72	1839.44	2348.71	2430.06	1551.92	493.57	0.32	6.31
	Kallakurichi-II CSM	908.89	987.06	1219.77	1302.30	1299.71	1194.43	1348.77	1754.05	2155.50	2264.74	1443.52	463.52	0.32	6.53
Mean	924.72	954.28	1229.36	1397.40	1345.62	1334.99	1415.98	1943.28	2289.30	2402.58	1523.75	540.81	0.36	7.07	
S.D	76.58	285.54	594.12	372.04	131.16	128.94	176.73	308.25	222.34	199.07	217.01	109.16	0.08	35.93	
C.V	0.08	0.30	0.48	0.27	0.10	0.10	0.12	0.16	0.10	0.08	0.142	0.20	0.22	28.83	
After Change	Ambur CSM	1000.32	1042.81	1062.44	1321.84	1336.30	1337.89	1416.39	1894.12	2252.23	2383.47	1504.78	499.27	0.33	5.92
	Amaravathi CSM	1073.70	1167.82	3024.57	2797.18	1718.13	1698.11	1980.61	2908.55	3084.77	2935.50	2238.89	796.76	0.36	16.15
	Salem CSM	1096.03	875.10	1104.40	1354.32	1473.71	1431.24	1576.51	2268.23	2268.23	2604.50	1605.23	580.44	0.36	6.51
	Kallakurichi-I CSM	915.85	948.24	1194.94	1175.41	1255.73	1351.13	1306.44	1752.40	2150.40	2241.04	1429.16	465.36	0.33	6.39
	Dharmapuri CSM	1082.95	1118.57	1197.44	1339.83	1397.89	1392.02	1514.77	1860.96	2409.05	2468.72	1578.22	504.73	0.32	5.37
	National CSM	904.87	0.00	0.00	1413.79	1414.90	1375.20	1357.75	1863.95	2373.22	2418.59	1312.23	836.05	0.64	-8.32
	Vellore CSM	969.80	1029.34	1138.70	1232.78	1245.84	1278.09	1403.81	1858.98	2294.13	2340.62	1479.21	504.37	0.34	5.96
	Tirupattur CSM	1031.06	1074.17	1199.10	1338.81	1403.56	1459.64	1514.79	1814.41	2403.95	2473.85	1571.33	510.16	0.32	5.88
	Chengalrayan CSM	930.63	975.99	1158.82	1177.68	1242.96	1230.28	1358.81	1757.24	2167.04	2236.53	1423.60	468.22	0.33	5.97
	Tiruthani CSM	906.46	926.18	1160.06	1454.34	1290.81	1258.64	1371.87	1991.98	2278.59	2323.08	1496.20	521.02	0.35	7.40
	NPKRR CSM	839.43	830.59	1003.09	1200.01	1243.02	1243.40	1323.46	1622.55	2110.14	2256.75	1367.24	490.82	0.36	6.96
	MRK CSM	890.24	940.87	1086.69	1160.99	1236.07	1237.45	1328.65	1685.17	2162.32	2218.54	1394.70	473.35	0.34	6.26
	Cheyar CSM	911.21	970.43	1186.15	1209.12	1241.70	1296.47	1353.93	1941.50	2202.41	2274.41	1458.73	495.62	0.34	6.64
	S.Siva CSM	1063.77	1053.88	1246.55	1341.78	1365.94	1393.87	1461.97	1836.01	2290.31	2445.36	1549.94	484.83	0.31	5.42
	Kallakurichi-II CSM	949.89	961.56	1272.57	1231.90	1263.71	1230.43	1285.77	1754.05	2155.50	2264.74	1437.01	463.07	0.32	6.27
Mean	971.08	927.70	1202.37	1383.32	1342.02	1347.59	1437.04	1920.67	2306.82	2392.38	1523.10	539.61	0.36	6.54	
S.D	81.44	271.74	589.39	401.75	130.38	123.41	172.65	311.57	234.91	186.99	214.43	116.23	0.08	33.59	
C.V	0.08	0.29	0.49	0.29	0.10	0.09	0.12	0.16	0.10	0.08	0.141	0.22	0.22	28.94	

Source: Secondary Data

From Table 5.6, it is seen, that before change of sugar cane price declaration policy average variable cost per ton of sugar is Rs.1523.75 per year, with a Co-efficient Variance. of 0.36 per cent, whereas, in the case of after the change of sugar cane price declaration policy is Rs.1523.10 with a Co-efficient Variance of 0.36 per cent, both stage of which are equal or much lower than before change of sugar cane price declaration policy. Also, it is seen, that the Average Growth Rate, which measures the growth rate year on year basis, shows, that the growth rate is 7.07 per cent in the case of before change of sugar cane price declaration policy, which is much higher, compared to 6.54 per cent growth attained in the variable costs, in the case of after change of sugar cane price declaration policy. When individual mills are concerned, in the before change of sugar cane price declaration

policy, the highest average variable cost is found in Amaravathi CSM (**Rs.2245.45**) and the lowest average variable cost is in NPKRR CSM (**Rs.1360.16**). Similarly, Amaravathi CSM and NPKRR CSM have maintained an average variable cost per year as **Rs.2238.89** and **Rs.1367.24** respectively, which are the highest and lowest for these mills. The reasons for such differences in the mills as well as among these two stages may be attributed as follows. For the higher variable cost, the reasons may be, that the sugarcane has been taken from long distance, the crushing days may be more, and for want of cane, the mills achieved highest recovery percent. For the lower variable cost, the reasons may be, the distance covered would be short distance, supply of cane may be more and in time, particularly the mills achieved **lowest** recovery percent. On seeing the Co-efficient Variance before change of sugar cane price declaration policy S.SivaCSM has the lowest (0.32per cent) as the variations in variable cost is only little. Considering both of these stage, After Change of sugar cane price declaration policy, the Co-efficient Variance. of Subramania Siva mill is 0.31 per cent which is very lowest. The lowest Average General Recovery for before change of sugar cane price declaration policy in Dharmapuri CSM is 5.85% whereas after change of sugar cane price declaration policy in Dharmapuri CSM is 5.37% only. It is seen from the Table 5.5, that during the study period, before change of sugar cane price declaration policy have registered an average variable cost of Rs.1523.75 and after change of sugar cane price declaration policy have registered an average variable cost of Rs.1523.10. Comparison of year wise over all Average variable cost per M.T of Cane is exhibited in

Chart .7

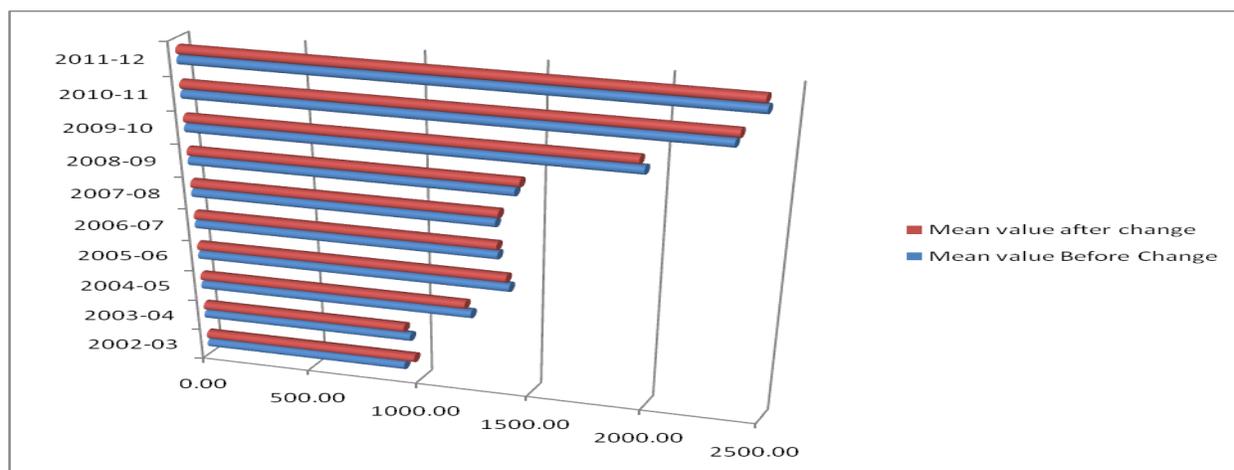


CHART.7- Mean value of Variable Cost per M.T of Cane

From **Chart.7** It is stated that except the year 2002-03, 2007-08, 2008-09 and 2010-2011 in the remaining years, the variable cost for before change of sugar cane price declaration policy is much higher than after change of sugar cane price declaration policy.

In order to see, whether there exist significant differences between before change of sugar cane price declaration policy and after the change of sugar cane price declaration policy, as well as between the years, during the study period, the following hypothesis was framed and tested. And Test of ANOVA for variable Cost per MT of cane is reported in Table 5.7.

Ho: There is no significant difference in profit or loss between before change of sugar cane price declaration policy and after change of sugar cane price declaration policy, and between years.

TABLE 5.7
ANOVA for Variable Cost per M.T of Cane

ANOVA	Table 5.7					
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Rows	13030008.66	29	449310.643	11.3411	8.11226E-32	1.5110769
Columns	71655818.13	9	7961757.57	200.96361	6.4289E-112	1.9158552
Error	10340273.7	261	39617.9069			
Total	95026100.49	299				

Source: Secondary Data

From Table 5.7, It is examined that the calculated F-ratio value between the two stages of before change of sugar cane price declaration policy and after change of sugar cane price declaration policy is 11.3411 which is higher than the table value of 1.511, at one per cent level of significance and also calculated F-ratio is higher than p-value of 8.11. The calculated F-ratio value compared between years is 200.9636, which is found to be higher than the table value of 1.91585, at one per cent level and also calculated F-ratio is higher than p-value of 6.42. Since the calculated values are higher than the table values of both - between these two stages and between years, it can be inferred, that there exist significant differences in the variable cost between before change of sugar cane price declaration policy and after change of sugar cane price declaration policy, as well as between years. Hence, the hypothesis is rejected.

The Next element of comparison between stage is Profit or Loss of account to the concerned Co-operative Sugar mills for the study period .It is one of the important tools to compare the performance of the concerned Co-operative Sugar mills, which indicate whether particular Co-operative Sugar mills function's is with efficiency or not .Table 5.8 indicates the Profit or Loss for the two stages of before change of sugar cane price declaration policy and after change of sugar cane price declaration policy.

TABLE 5.8

Statement of Profit or Loss before Cane Price Change and After Cane Price Change Cane for the running Co-operative Sugar Mills in Tamil Nadu

		Table 5.8											Rs in Lakhs			
Group		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	Mean	S.D	C.V	AGR	
Before Change	Ambur CSM	-894.32	-703.41	-385.72	-559.97	-1592.20	-1764.65	96.00	-632.28	-925.94	-1350.48	-871.30	568.10	-0.65	-63.34	
	Amaravathi CSM	-1050.91	-430.66	-447.15	-936.18	-49.71	-535.44	51.49	441.19	-574.61	-920.83	-445.28	477.04	-1.07	136.22	
	Salem CSM	-385.15	-843.70	-362.25	-234.46	79.08	-1493.43	1666.72	4459.02	935.43	400.83	422.21	1673.22	3.96	-227.04	
	Kallakurichi-I CSM	-2323.70	-625.57	233.23	-1257.87	-2415.26	-3099.30	1016.21	2329.78	291.91	-3125.00	-897.56	1859.57	-2.07	-206.22	
	Dharmapuri CSM	-954.18	-492.29	308.92	53.44	-660.68	-2037.89	1046.31	2222.45	919.05	-80.83	32.43	1188.62	36.65	-176.82	
	National CSM	-1551.77	-1212.78	-1275.85	-1395.24	-2000.38	-3313.65	-1825.28	-208.61	-1520.80	-1687.70	-1599.21	774.37	-0.48	60.30	
	Vellore CSM	-1220.54	-143.65	166.81	-122.81	-1433.47	-2284.81	-65.61	354.86	-472.62	-949.58	-617.14	835.01	-1.35	-25.66	
	Tirupattur CSM	-945.25	-639.04	-319.14	-434.48	-1311.93	-1935.88	489.01	69.47	-374.89	-811.24	-621.34	686.64	-1.11	-55.45	
	Chengalrayan CSM	-1434.05	-52.89	575.65	-828.37	-1145.53	-3514.97	331.31	-304.75	-26.82	-2182.64	-858.31	1262.47	-1.47	630.13	
	Tiruthani CSM	-656.68	115.39	-1028.15	-928.53	-2082.81	-2911.39	-879.52	-1192.29	-1461.72	-1943.07	-1296.88	847.64	-0.65	-96.61	
	NPKRR CSM	-1422.79	-1530.02	-1315.20	-1662.78	-2667.53	-3789.86	-1412.56	-1157.86	-2806.02	-2628.27	-2039.29	873.64	-0.43	15.53	
	MRK CSM	-269.32	439.58	828.21	27.67	-644.59	-2226.18	342.14	904.10	-1166.50	-1986.68	-375.16	1113.48	-2.97	-264.66	
	Cheyay CSM	22.03	372.29	571.99	392.81	-305.66	-928.00	778.50	2160.98	67.79	-399.66	273.31	834.56	3.05	67.69	
	S.Siva CSM	-823.40	-378.89	608.77	-122.91	57.21	-1380.97	747.68	4178.68	565.28	452.36	390.38	1495.85	3.83	-291.07	
Kallakurichi-II CSM	-914.16	258.33	605.08	918.63	380.37	-746.11	1118.12	2187.55	635.81	917.67	536.13	895.75	1.67	-51.94		
Mean		-988.28	-391.15	-82.32	-472.74	-1052.87	-2130.84	233.37	1054.15	-394.31	-1086.34	-531.13	862.12	-1.62	78.77	
S.D		573.34	568.82	714.82	704.86	977.83	1024.91	966.82	1791.63	1050.07	1192.57	956.57	363.01	0.38	9.91	
C.V		-0.58	-1.45	-8.68	-1.49	-0.93	-0.48	4.14	1.70	-2.66	-1.10	-1.15	3.27	-2.83	-85.16	
		Rs in Lakhs														
After Change	Ambur CSM	-756.56	-713.99	-443.07	-574.27	-1592.20	-1656.31	181.94	-673.54	-925.94	-1350.48	-850.44	559.97	-0.66	-36.76	
	Amaravathi CSM	-1106.75	-614.90	-458.69	-914.34	-91.80	-535.44	60.45	441.19	-511.75	-975.58	-470.76	487.66	-1.04	76.42	
	Salem CSM	427.83	-1152.03	-419.87	96.99	127.08	-1600.93	1744.57	4459.02	1051.75	205.48	493.99	1696.71	3.43	-195.45	
	Kallakurichi-I CSM	-2293.61	-594.07	316.93	-1613.55	-2415.26	-2994.52	931.26	2329.78	291.91	-3125.00	-916.61	1851.80	-2.02	-207.25	
	Dharmapuri CSM	-833.48	-565.30	196.13	191.71	-660.68	-2160.37	1125.91	2222.45	980.06	-244.95	25.15	1220.85	48.55	-73.26	
	National CSM	-1551.77	0.00	0.00	-1395.24	-2000.38	-3313.65	-1825.28	-208.61	-1459.61	-1616.23	-1337.08	1031.53	-0.77	46.87	
	Vellore CSM	-1084.01	-78.64	49.17	-241.11	-1506.10	-2150.81	136.44	250.44	-390.26	-1049.83	-606.47	802.35	-1.32	-43.00	
	Tirupattur CSM	-784.53	-639.04	-347.50	-500.03	-1288.25	-1791.93	493.28	-100.70	-169.70	-837.95	-596.63	640.31	-1.07	36.20	
	Chengalrayan CSM	-1151.72	21.96	479.47	-1122.92	-1145.53	-3514.97	699.05	-431.29	-26.82	-2182.64	-837.54	1287.10	-1.54	945.68	
	Tiruthani CSM	-552.13	96.28	-1045.79	-928.53	-2082.81	-2911.39	-759.04	-1192.29	-1461.72	-1943.07	-1278.05	860.23	-0.67	-114.63	
	NPKRR CSM	-1344.56	-1598.69	-1278.33	-1662.78	-2667.53	-3789.86	-1256.57	-1157.86	-2806.02	-2628.27	-2019.05	893.00	-0.44	16.96	
	MRK CSM	-21.35	436.04	854.49	-134.14	-644.59	-2226.18	520.61	904.10	-1166.50	-1986.68	-346.42	1130.69	-3.26	-182.70	
	Cheyay CSM	222.73	548.88	389.36	318.01	-305.66	-597.15	839.50	2071.29	67.79	-399.66	315.51	761.39	2.41	-106.08	
	S.Siva CSM	-472.44	-526.36	608.77	-122.91	57.21	-1272.63	843.94	4164.92	414.84	487.57	418.29	1461.65	3.49	-265.50	
Kallakurichi-II CSM	-716.54	188.12	779.19	645.23	210.05	-529.22	823.54	2187.55	635.81	917.67	514.14	813.98	1.58	-40.92		
Mean		-801.26	-346.12	-21.32	-530.53	-1067.10	-2069.69	303.97	1017.76	-365.08	-1115.31	-499.47	848.32	-1.70	256.79	
S.D		693.32	590.07	635.58	721.46	963.66	1075.60	942.37	1806.04	1053.44	1166.04	964.76	357.54	0.37	8.25	
C.V		-0.87	-1.70	-29.82	-1.36	-0.90	-0.52	3.10	1.77	-2.89	-1.05	-3.42	9.43	-2.76	73.62	

Source: Secondary Data

From the Table 5.8 it is detected that the average profit or loss, in case of before change of sugar cane price declaration policy is Rs.(-)531.13 lakhs, and in the case of after change of sugar cane price declaration policy is Rs(-)499.47 lakhs. The Co-efficient Variance for before change of sugar cane price declaration policy is (-)1.62 per cent, whereas for after change of sugar cane price declaration policy for (-)1.70 per cent. In the case of before change of sugar cane price declaration policy, the highest and the lowest profit or Loss is shown by K2 CSM and NPKRR CSM, Rs.536.13Lakhs and Rs.(-)2039.29 Lakhs respectively. In the case of after change of price policy, the highest Profit or Loss is shown by K2 CSM of Rs. 514.14Lakhs and the lowest of Rs.2069.05Lakhs are shown by NPKRR CSM.

The Co-efficient Variance of Dharmapuri CSM in before change of sugar cane price declaration policy is very high (36.65 per cent) as the variations are very more. The Average General Recovery for the before change of sugar cane price declaration policy is 78.71 per cent, while for the

after change of sugar cane price declaration policy it is 256.79 per cent. These shows that after change of sugar cane price declaration policy try to bring down the Loss. Year wise Average Profit or Loss is shown in [chart.8](#).

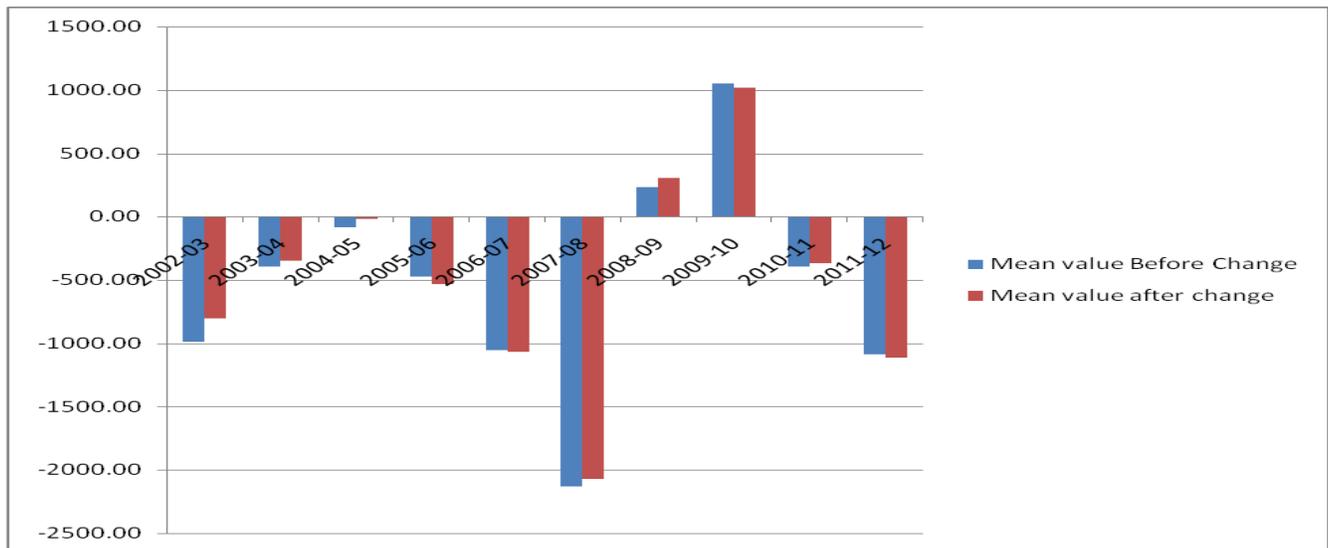


CHART.8- Profit or Loss before Cane Price Change and After Cane Price Change

From [Chart.8](#) It is studied, that during the study period, Except 2008-09 and 2009-10 in the remaining years these most of the CSM have earned loss and except the year 2006-07 ,2009-10 and 2011-2012 in the remaining years, the profit or loss for before change of sugar cane price declaration policy is much lower than after change of sugar cane price declaration policy.

In order to see, whether there exist significant differences between before change of sugar cane price declaration policy and after the change of sugar cane price declaration policy, as well as between the years, during the study period, the following hypothesis was framed and tested. And Test of ANOVA for Profit or Loss is presented in Table 5.9

Ho: There is no significant difference in profit or loss between before change of sugar cane price declaration policy and after change of sugar cane price declaration policy , and between years.

TABLE 5.9

ANOVA for Profit or Loss before Cane Price Change and After Cane Price Change

<i>ANOVA</i>	Table 5.9					
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Rows	161448511.1	29	5567190	11.16926	2.24E-31	1.5110769
Columns	197146132.8	9	21905126	43.94748	2.1E-47	1.9158552
Error	130092499.5	261	498438.7			
Total	488687143.5	299				

Source: Secondary Data

From Table 5.9, It is found that the calculated F-ratio value between the stages of before change of sugar cane price declaration policy and after change of sugar cane price declaration policy is 11.169257 which is higher than the table value of 1.51107, at one per cent level of significance and also calculated F-ratio is higher than p-value of 2.24. The calculated F-ratio value compared between years is 43.947483, which is found to be higher than the table value of 1.91585, at one per cent level and also calculated F-ratio is higher than p-value of 2.10. Since the calculated values are higher than the Table values of both between these two stages and between years, it can be inferred, that there exists significant difference in profit or loss between before change of sugar cane price declaration policy and after change of sugar cane declaration policy and between years..

Hence, the hypothesis is rejected with respect to differences between before change of sugar cane price declaration policy and after change of sugar cane price declaration policy and it can infer, that there exists significant difference between years.

5.6. SUMMARY

The Sugar cane price fixation policy and methods of sugarcane price fixation with the relevant factors which are always taken for fixation of price along with the trends in sugar cane price during the study period of 2002-03 to 2011-12 in all states of India are summed up. In this chapter, the main element of SMP and FRP while fixing sugar cane price what are in practice today in Indian States are clearly mentioned. Season-wise SMP or FRP, minimum recovery %, premium for every 0.1% increase from 2002-03 to 2012-13 seasons announced by the Central Government are mentioned in a separate statement.

In the scenario of Sugar Industries in India, suggestions given in this chapter for payment of best cane price to the cane suppliers who are supplying best cane, which keep the farmers to plant sugar cane and avoid diversion to other crops and thereby enabling the Sugar Mills with good quality cane in sufficient quantum without cyclical effect of cane supply resulting in stabilized sugar production in the country.

Abbreviation

SMP- Statutory Minimum Price

FRP- Fair Remunerative Price