CHAPTER VII

SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSION

INTRODUCTION

The primary objective of the present study is to evaluate and appraise the operating and financial performance of co-operative sugar mills in Tamil Nadu. This study has examined the review of growth of sugar mills in Tamil Nadu along with problems faced by them. In addition, the present study analysed and appraised the performance of operational and financial aspects of co-operative sector sugar mills in Tamil Nadu which is vouched and verified by applying suitable statistical tools through hypothesis testing. The summary of major analytical findings, along with suitable suggestions to give a fresh fill up to the ailing co-operative sugar mills. These are narrated in the following paragraphs.

The major findings of this study are presented in seven sections viz.,

Section – I General findings of physical performance of co-operative sugar mills in Tamil Nadu

Section – II General problems of co-operative sugar mills in Tamil Nadu

Section – III Statistical analysis of physical performance of co-operative sugar mills in Tamil Nadu

Section – IV Findings as to financial performance of co-operative sugar mills in Tamil Nadu

Section – V Findings as to cost analysis of co-operative sugar mills in Tamil Nadu

Section – VI Statistical analysis of financial performance of co-operative sugar mills in Tamil Nadu

Section – VII Findings of comparative analysis of All India, Tamil Nadu Mills with individual mills
SECTION - I  GENERAL FINDINGS

FINDINGS OF PHYSICAL PERFORMANCE OF CO-OPERATIVE SUGAR MILLS IN TAMIL NADU

OPERATIONAL PERFORMANCE

Although there are several aspects of physical performance like output, labour, financial etc., only quantitative aspects of operational efficiency involving sugarcane yield, cane crushed, sugar production, sugar recovery, capacity utilization and comparative performance of co-operative and public sectors are considered.

Performance of labour is not included in the analysis as labour efficiency is affected to a great extent by technical improvement and technological changes. For qualitative audit of operational efficiency, the increase in average sugar recovery percentage is examined.

Production of sugarcane, can be improved by regulated irrigation, the presence of micro-nutrients and by cultivating sugarcane varieties with higher sugar content. There are also technical, chemical agricultural and engineering aspects, which contribute to increased production but are not looked into as they are beyond the ambit of the study.

i) SUGARCANE YIELD

Sugarcane yield has recorded a steady increase over the years. There is an increasing trend, yield per acre is the highest in Tamil Nadu. The year to year percentage showed a decline in 1995-96 but picked up later. As percentage of all India level the values are very high, hovering around 150 per cent.
ii) SUGARCANE CRUSHED

The quantity of sugarcane crushed is lingering between 30 to 35 lakhs tonnes per season. This is indicative of the fact that all the cane crushed does not come to the factory. It is diverted to other uses as the mill does not get remunerative prices. There is also diversion to gur and khandasari production. But the trend analysis indicates an increasing trend.

iii) PRODUCTION OF SUGAR

Production of sugar has been fluctuating. This is the case with other states also. As percentage of all India figures, the same feature is reflected. Year to year percentage also portrays the same picture. This means that because of some common problems besetting the industry and not due to poor performance on the part of the sugar industry in Tamil Nadu. Yet the equation of trend line gives an increasing trend though moderate. As ratio of all India performance, the ratios are between 3.2 and 3.7.

iv) SUGAR RECOVERY

Average sugar recovery percentage in Tamil Nadu has registered a gradual decline. When compared to other states, Maharashtra's performance is very good, around 11 per cent. But Tamil Nadu's ranges between 8.5 to 9.5 per cent. All India average is higher around 10 per cent and Tamil Nadu's performance as percentage of all India is around 90 per cent. Maharashtra's performance is very high due to the quality of soil and prevailing climatic conditions. Technical support is equally good in Tamil Nadu.

v) CAPACITY UTILIZATION

Capacity utilization shows a declining trend. But this cannot be taken on the face value. It started with excess utilization of 156 per cent and then gradually declined. But the performance is around 90 per cent for other years. Even then, its performance is higher than that of Maharashtra.
iv) **COMPARATIVE PERFORMANCE OF CO-OPERATIVE AND PUBLIC SECTOR**

A comparison of the performance of co-operative and public sector in sugar production reveals fluctuations. The equation of trend line for co-operative sector indicates a slightly declining trend. The trend line of public sector has registered a very small increase in trend.

As average sugar recovery percentage the figures for both co-operative and public sectors are fluctuating. Both the sectors exhibit a small negative trend in the trend line equations for both the sectors, though that of public sector is slightly lower than that of co-operative sector.

**SECTION – II**

**GENERAL PROBLEMS OF CO-OPERATIVE SUGAR MILLS IN TAMIL NADU**

1. The sugar industry has been severely affected by Statutory Minimum Price and State Advised Price that the mills are constrained to pay. They suffer from accumulating heavy arrears of cane price payable to farmers.

2. Even the difference between SAP and SMP paid leads to loss of around Rs 130 to 160 crores per season. Similarly, the low levy sugar price causes financial constraint to the factories.

3. Again the allocation of quotas to public distribution and free market is arbitrary and irrational. This has put the industry in severe problems.

A study of all these factors leads to the conclusion that the sugar industry has fared well in operational efficiency in spite of the above problems faced by them.
SECTION - III

STATISTICAL ANALYSIS OF PHYSICAL PERFORMANCE OF CO-OPERATIVE SUGAR MILLS IN TAMIL NADU

i) SUGAR CANE PRODUCTION AND CANE YIELD

The study reveals the correlation between area under sugarcane and production of sugarcane generated the relation of 0.93 which pictures that the operating performance between sugarcane cultivation and sugarcane production has resulted positive performance.

ii) SUGAR CANE YIELD AND NUMBER OF SUGAR FACTORIES

The study of sugarcane yield and number of sugar factories and cane crushed has achieved positive and favourable growth rate of operational performance along with positive correlation between area under sugarcane and yield of sugarcane per hectares.

iii) SUGAR PRODUCTION AND RECOVERY RATE

The study of sugar production has achieved a favourable operating performance but the recovery of operational performance growth rate is minimal.

iv) COMPARISON OF SUGAR CANE AREA IN TAMIL NADU AND ALL INDIA

The comparative study of area under sugarcane between Tamil Nadu and All India has identified that Tamil Nadu has fared better sugarcane area than all India sugarcane operational performance.

v) COMPARATIVE ANALYSIS PRODUCTION OF SUGAR CANE - TAMIL NADU AND ALL INDIA

The comparative study analysis between Tamil Nadu and All India reveals that Tamil Nadu has better operating performance and the correlation analysis has identified the positive relation between Tamil Nadu and All India in terms of sugarcane production.
vi) COMPARATIVE STUDY OF SUGARCANE YIELD IN TAMIL NADU AND ALL INDIA

The comparative operational performance reveals that Tamil Nadu has better yield of sugarcane when compared to All India yield of sugarcane. The correlation between yield of sugarcane between Tamil Nadu and All India is 0.591, the growth rate operational performance of sugarcane yield between Tamil Nadu and All India is 0.637 which is positive and favourable of operating performance between them.

vii) SUGAR RECOVERY RATE OF TAMIL NADU AND ALL INDIA

The sugar recovery performance between Tamil Nadu and All India in terms co-operative sector operational performance along with total sectoral performance indicates that All India sugar recovery performance is much better than Tamil Nadu sugar recovery performance. The correlation analysis between Tamil Nadu and All India has yielded a positive correlation between them.

viii) CANE CRUSHED IN TAMIL NADU COMPARED WITH ALL INDIA

The operating performance of the sugar industry in terms of cane crushed and sugar produced has been associated in a strong way. Hence, the alternative hypothesis is accepted and wherein a strong associated relationship between sugarcane production and cane crushed during the study period in Tamil Nadu sugar mills.

xi) PRODUCTION OF SUGARCANES AND CONSUMPTION OF SUGARCANES

The correlation analysis reveals that there is 70.7 per cent relationship between production of sugarcane and consumption of sugarcane during the study period in Tamil Nadu and sugar mills at 5 per cent level of significance. This relationship indicates that in this study the alternative hypothesis is being accepted wherein there is a unison movement between production and consumption of sugarcane.
x) GROWTH RATE OF AREA UNDER SUGARCANE IN TAMIL NADU AND ALL INDIA

The study reveals that there is no significance of operating performance of growth rate with regard to area under sugarcane between Tamil Nadu sugar mills and All India sugar mills. But there is an insignificant relation of operating performance of growth rate area under sugarcane in Tamil Nadu sugar mills and All India sugar mills which resulted in null hypothesis is being accepted.

xi) PRODUCTION OF SUGARCANE IN TAMIL NADU AND ALL INDIA

The correlation analysis reveals that there is 81.4 per cent relationship between Tamil Nadu sugar mills and All India sugar mills in terms of production of sugarcane at 0.01 per cent level (2-sided). Therefore, the null hypothesis is being rejected with the result that there is associated production of sugarcane performance between Tamil Nadu mills and All India sugar mills.

xii) SUGAR RECOVERY OF CO-OPERATIVE AND PUBLIC SECTOR MILLS

The study reveals that there is a significant difference between the operational performance of sugar recovery between co-operative sugar mills in Tamil Nadu and Public Sector sugar mills in Tamil Nadu due to which the alternative hypothesis is being accepted.

xiii) PRODUCTION VS SUGAR PRODUCTION, CONSUMPTION OF SUGAR, PER CAPITA CONSUMPTION RATE

There is no significant movements between population growth rate and Tamil Nadu production, consumption growth rate and per capita consumption rate through multiple regression analysis wherein the null hypothesis are being rejected with the result the alternative hypothesis is being accepted.
SECTION - IV

FINANCIAL PERFORMANCE ANALYSIS OF CO-OPERATIVE SUGAR MILLS IN TAMIL NADU

The review of financial performance analysis of co-operative sugar mills in Tamil Nadu reveals that they have the reasonable sales performance followed by minimal gross profit performance but the huge loss during the study period. One reason could be high cost of operation. The working capital performance is also very low due to peculiar problems of the sugar industry. The co-operative sugar mills maintained high current assets when compared to fixed assets, which is due to higher operating performance of the business.

RATIO ANALYSIS OF CO-OPERATIVE SUGAR MILLS IN TAMIL NADU

The review of ratio analysis illustrates that the co-operative sugar mills have achieved positive performance during the study period in terms of return on net worth, return on total assets, return on capital employed and gross profit ratio.

The financial performance critically finds that the co-operative sugar mills in Tamil Nadu have generated negative performance of return on equity net profit as well as loss per employee.

i) FINANCIAL AND PHYSICAL PERFORMANCE OF AMBUR CO-OPERATIVE SUGAR MILLS LTD

The financial performance of Ambur co-operative sugar mills has been far from satisfactory during the study period. Most of the financial variables have registered negative growth rates. Vital profitability ratios such as return on net worth, return on shareholders equity, return on total assets, gross profit ratio, net profit ratio have registered a poor performance during the study period. Also most of the ratios did not show any sign of improvement during the study period.
ii) **FINANCIAL PERFORMANCE OF AMARAVATHI CO-OPERATIVE SUGAR MILLS LTD.**

The balance sheet analysis pictures reasonable performance, but due to its fluctuations during the study period the performance of equity, reserve, net worth, total capital employed, working capital, assets performance is far from satisfactory. In the same manner, the ratio analysis in terms of profitability such as return on net worth, return on total assets, return on share holders equity, return on capital employed along with gross profit ratio, net profit ratio which all are declining and due to which the performance is critical in nature.

Finally, the sales per employee, profit per employee also reveal a dismal performance. The production per employee and wages are somewhat reasonable.

iii) **FINANCIAL ANALYSIS OF CHENGALVARAYAN CO-OPERATIVE SUGAR MILL LTD.**

The financial performance of this company summarises that it has not achieved better financial soundness in terms of equity, reserves, net worth, fixed assets, and total capital employed. The reasonable performance is in terms of working capital and assets movement along with volume of production.

The ratio analysis on profitability pictures in the form of return on net worth, but there is unreasonable performance in terms of losses through return on equity, gross profit ratio, net profit ratio, profit per employee, and sales per employee.

iv) **THE CHEYYAR CO-OPERATIVE SUGAR MILLS LTD.**

The financial performance of this sugar mill has shown reasonable performance in terms of equity and reserve, total capital employed, total assets, fixed assets, volume of production. But negative performance identified in net worth and working capital. The profitable performance is also not better on parameters like net worth, return on equity, net profit ratio, profit per employee.
as well sales per employee due to incurrence of loss during the study period. The reasonable performance is noticed in the form of gross profit ratio, production per employee as well as wages per crushing day.

v) THE DHARMAPURI DISTRICT CO-OPERATIVE SUGAR MILLS LTD.

The financial performance of this company summarises a reasonable performance during the study period with a little movement of equity, reserves, net worth, total capital employed, working capital, assets management coupled with volume of production. They are based on very minimal positive growth rate.

In contrast to this, the profitable performance does not show favourable trend due to incurrence of losses, which is verified, in the form of negative return on net worth, return on equity and negative sales per employee along with gross profit as well as net profit. The reasonable performance of operating performance is identified with return on total assets, profit per employee and production per employee.

vi) THE KALLAKURICHI CO-OPERATIVE SUGAR MILL LTD.

The study summarises the working of the Kallakurichi Co-operative Sugar mills, it is found that the financial position has been far from satisfactory during the study period. Most of the financial variables have registered negative growth rates. Vital profitability ratios such as return on net worth, return on share holders equity, return on total assets employed along with gross profit ratio and net profit ratio have also registered poor performance during the study period.

Also most of the ratios did not show any sign of recovery. The overall study reveals that the company is in acute financial crunch.
vii) THE SALEM CO-OPERATIVE SUGAR MILLS LTD.

The balance sheet analysis of Salem Co-operative Sugar Mills Ltd, Mohanur has not made better equity, reserve, net worth, as well as working capital wherein it had reasonable assets performance.

The ratio analysis of profitable performance reveals that the company has not earned better profits during the study period in terms of return on net worth, return on equity, return on total assets along with gross profit and net profit ratio. The sales per employee do not speak of better operating performance. The production per employee has a reasonable performance. But the wages per crushing day is insignificant. The overall performance of Salem Co-operative Sugar Mill is far from satisfactory during the study period.

viii) TIRUPATTUR CO-OPERATIVE SUGAR MILLS LTD.

The balance sheet analysis of Tirupattur Co-operative Sugar Mills Ltd has not made better equity position, reserves, net worth, as well working capital wherein it had reasonable assets performance.

The ratio analysis of profitable performance reveals that the company has not earned better profit during the study period in terms of return on net worth, return on equity, return on total assets employed along with gross profit and net profit ratio. The production per employee coupled with wages per crushing day is in a better reflection of the operating performance. The overall study of the company reveals that the company is in poor financial position as well earning capacity during the study period.

ix) N.P.K.R. RAMASAMY CO-OPERATIVE SUGAR MILLS LTD.

The balance sheet analysis of N.P.K.R. Ramasamy Co-operative Sugar Mills Ltd, has not made better equity, reserves, net worth as well as working capital wherein it had reasonable assets performance.
The ratio analysis of profitable performance reveals that the company has not earned better profits during the study period in terms of return on net worth, return on equity, return on total assets employed along with gross profit ratio and net profit ratio. The sales per employee do not speak better operating performance. The production per employee has reasonable performance coupled with wages crushing per day.

x) VELLORE CO-OPERATIVE SUGAR MILLS LTD.

The study on Vellore Co-operative Sugar Mills Ltd summarises that the company’s financial position is not sound in terms of performance of equity reserves, working capital, net worth except movement of assets and volume of production. The profitable position has not shown much progress in terms of return on net worth, return on equity, return on net worth, return of equity, return on total assets, gross profit ratio, net profit ratio due to heavy loss sustained by the company. The only plus point is profit per employee along with production per employee, but the sales per employee has shown negative growth. All these do not reveal satisfactory performances during the study period.

xi) THE MADURANTHAKAM CO-OPERATIVE SUGAR MILLS LTD.

The reasonable financial performance of business is identified based on average growth performance with a critical aspect of negative growths as well as in terms of equity, reserves, total assets and volume of production. The negative performance can be identified in terms of net worth, and working capital. The profitability performances are subject to wide fluctuations in terms of losses which has not provided favourable performance in terms of net worth, return on equity and return on total assets along gross profit as well net profit. The profit per employee and sales per employee have not generated favourable performance during the study period. A reasonable performance could be seen in terms of production per employee.
The financial position is very minimal wherein the movements of financial structures such as equity, reserves, net worth, working capital is very little with a high critical performance of negative working capital. The reasonable performance has been traced in assets movement along with volume of production. The profit has not shown any favourable performance due to its losses during the study period in terms of return on net worth, return on equity, gross profit ratio, net profit ratio and sales per employee.

SECTION - V

FINDINGS OF COST ANALYSIS OF CO-OPERATIVE SUGAR MILLS IN TAMIL NADU

i) AMBUR CO-OPERATIVE SUGAR MILLS LTD

The performance of this co-operative sugar mill was poor during the study period. The researcher on analysis has found that various cost factors such as materials cost, conversion cost and other over heads cost have increased during the study period. This is one of the important reasons as to why the company has failed to report satisfactory results during the study period. Also the mill has failed to check constant increase in various cost of production.

ii) THE AMARAVATHI CO-OPERATIVE SUGAR MILLS LTD

The study of Amaravathi Co-operative Sugar Mill reveals that they have not achieved better performance in terms of cane crushed, sugar produced as well average sugar recovery. The cost analysis finds that the major cost factors of production are material cost and overhead costs.
iii) THE MADURANTAKAM CO-OPERATIVE SUGAR MILLS LTD

The analysis of cane crushed, sugar produced and sugar recovery do not reflect better operating performance. The study of cost analysis finds that the material cost and overhead cost are the major components of the cost of production.

iv) THE CHEYYAR CO-OPERATIVE SUGAR MILLS LTD

The study of cane crushed and sugar produced has shown a minimal performance with a negative average sugar recovery performance. The cost analysis finds that the material cost and overhead costs are the major part of the cost of production.

v) THE KALLAKURICHI CO-OPERATIVE SUGAR MILLS LTD

The study of Kallakurichi Co-operative Sugar Mill concludes that this sugar mill has not achieved better performance in terms of cane crushed, sugar produced and sugar recovery. The cost analysis finds that the major cost components are material cost coupled with overhead cost.

vi) SUBRAMANIYA SIVA CO-OPERATIVE SUGAR MILLS LTD

The analysis of cane crushed, sugar produced and sugar recovery reflects a minimal performance. The study of cost analysis finds that the material cost and overhead cost are the major components of the cost of production of the mill.

vii) THE SALEM CO-OPERATIVE SUGAR MILLS LTD

The study concludes that this mill has achieved minimal operating performance of cane crushed sugar produced and as well sugar recovery during the study period. The cost analysis reveals that the major cost segment belongs to material cost along with overhead cost.
viii) **TIRUPATTUR CO-OPERATIVE SUGAR MILLS LTD**

The study concludes that this mill has achieved a minimal operating performance of cane crushed, sugar produced and as well as sugar recovery during the study period. The cost study reveals that major cost of production has been observed by material cost and overhead costs during the study period due to which the cost of production increases and the profit reflected in negative.

ix) **N.P.K.R. RAMASAMY CO-OPERATIVE SUGAR MILLS LTD**

The study of the sugar produced has shown minimal operating performance with a negative growth rate of sugar production for six years out of ten years. The cost analysis finds that the material cost is the major part of cost of production in almost all the years of the study period.

**SECTION - VI**

**COMPARATIVE ANALYSIS OF SUGAR RECOVERY WITH ALL INDIA, TAMIL NADU AND CO-OPERATIVE SUGAR MILLS**

i) **AMBUR CO-OPERATIVE SUGAR MILLS WITH ALL INDIA AND TAMIL NADU SUGAR MILLS**

The comparative analysis reveals that there is no significant difference among All India, Tamil Nadu Mills and Ambur Sugar Mill and therefore the null hypothesis has been rejected at 1% level of significance (P value 0.000 < 0.01). Hence it is concluded that statistically there is significant difference among the three sugar mills in terms of sugar recovery rates.

ii) **CHEYYAR CO-OPERATIVE SUGAR MILLS LTD**

The study observed that the null hypothesis stating that there is no significant difference among all India sugar mills, Tamil Nadu sugar mills and Cheyyar Co-operative Sugar Mills which is being rejected at 1% level of significance. Therefore, it is concluded that statistically there is significant difference between three variables with regard to sugar recovery rates.
iii) AMARAVATHI CO-OPERATIVE SUGAR MILLS LTD

The insignificance noticed from this study illustrates that the null hypothesis is being rejected at 1% level of significance as the P value 0.000 < 0.01. Therefore it is concluded that statistically there is a significant difference among the three variables in terms of sugar recovery rate.

iv) MADURANTAKAM CO-OPERATIVE SUGAR MILLS LTD

The study concludes that there is no significant difference among All India, Tamil Nadu and Madurantakam Co-operative Sugar Mill which results in the null hypothesis has been rejected at 1% level of significance (P value 0.000 < 0.01). Hence it is being ascertained that there is significant difference among the three variables compared in terms of sugar recovery.

v) KALLAKURICHI CO-OPERATIVE SUGAR MILLS LTD

The study concludes that the Kallakurichi Co-operative Sugar Mills Ltd reveals that there is no significant difference among the three variables All India, Tamil Nadu and Kallakurichi Co-operative Sugar Mills which results in the null hypothesis is being rejected at 1% level of significance. Hence it is observed that there is significant difference among the three variables compared in terms of recovery.

vi) SUBRAMANIYA SIVA CO-OPERATIVE SUGAR MILLS LTD

The insignificant values from this study illustrates that the null hypothesis is being rejected at 1% level of significance in P value 0.000 < 1. Therefore it is concluded that statistically there is a significant difference among the three variables in terms of sugar recovery rates.
vii) THE SALEM CO-OPERATIVE SUGAR MILLS LTD

The study observes that the null hypothesis stating that there is no significant difference among all India sugar mills, Tamil Nadu sugar mills and the Salem Co-operative Sugar Mills Ltd is being rejected at 1% level of significance. Therefore it is concluded that statistically there is significant difference between three variables in terms of sugar recovery rates.

viii) THIRUPPATTUR CO-OPERATIVE SUGAR MILLS LTD

The insignificant values from this study illustrates that the null hypothesis is being rejected at 1% level of significance in P value 0.00 < 0.01. Therefore it is concluded that statistically there is significant difference among the three variables in terms of sugar recovery rates.

REGRESSION AND CORRELATION

A close look at the regression and correlation matrix results indicate that the net profit has shown negative relationship with most of the cost variables of the co-operative sugar mills during the study period. The negative relationship is an indication that the cost factors have increased when the net profit has registered declining trend during the study period.

SECTION - VII
GROWTH RATE PERFORMANCE ANALYSIS

The comparative growth rate analysis on cane crushed, sugar produced, cost analysis and cost of production reveals that the reasonable ranking performances are identified in the co-operative sugar mills are:

1. Subramania Siva Co-operative Sugar
2. Salem Co-operative Sugar Mills
3. Tirupattur Co-operative Sugar Mills
4. Amaravath Co-operative Sugar Mills
5. Ambur Co-operative Sugar Mills Ltd

These mills show a positive growth performance whereas the other mills have recorded a negative growth rate performance.
SECTION - VIII

SUGGESTION

Based on analysis and evaluation of the present study the following suggestions are put forth in order to improve the performances of the co-operative sugar mills

1. Dehiscing of sugar industry in order to improve the marketing and sales performance will help to generate better revenue

2. High yield varieties should be adopted for cultivation to improve recovery

3. Irrigation techniques be improved so that higher sugar content of cane can be achieved

4. Sugarcane varieties can be selected according to soil and climatic conditions which will improve sugar recovery

5. Levy of sugar price should be increased or the mills should be compensated for the loss incurred on this account

6. Allotment of quotas to public distribution system and free market should be reasonable and effective according to market situation

7. Policy decisions must be quick and vital decisions have to be taken quickly in respect of the problems faced by the industry

8. Free export of sugar is recommended to fetch foreign exchange in order to improve performance of business

9. Modernization techniques should be adopted to improve the production and quality of sugar

10. Cost control should be exercised to reduce overhead cost, since the cost analysis carried out reveals poor performance during the study period

11. Sugar markets should be decontrolled so that the mills can get remunerative prices, which will help to generate better revenue and profit
12 Cost control mechanism should be established in order to minimize cost of production which will improve the profitable performance of business

13 It is suggested that index based or inflation based cane price (SAP & SNP) be fixed in order to ensure reasonable profit for the cane growers and farmers

14 It would be better if the Central Government promulgates a ban on import of sugar from abroad as Indian Sugar Industry is facing huge problems and sluggish movement of finished products for well over the past five to six years

15 The NABARD, commercial banks and the Government of Tamil Nadu may provide long term loans to the co-operative mills to help them to recover from their financial crunch. However, interest may be charged as most of the mills suffer due to heavy interest payment obligation

16 Sophisticated production techniques be resorted to lay the mills so as to compete with the private sector mills effectively

17 Incentives may be given to the employees so as to enable them to work with commitment and devotion

SECTION - IX

SCOPE FOR FURTHER RESEARCH

The researcher intends to suggest that further analytical studies on sugar industry may be undertaken giving mere thrust to the following areas

1 A comparative study on the performance of public, private and co-operative sugar mills could be undertaken

2 In the liberalized environment, the performance of sugar mills between the pre and post liberalization period may be analyzed

3 A study on the performance of sugar mills functioning in two or more states can be compared giving more focus on operating performances

4 Performance of government supported industry namely sugar viz., sugar, fertilizer and cement can be analyzed with emphasis on operating and financial aspects
SECTION - X

CONCLUSION

The study of physical and financial performance of sugar industry in Tamil Nadu summarises that the selected co-operative mills have achieved a reasonable and satisfactory operating performance during the study period with a critical note that the recovery performance is below the All India performance of sugar mills. The study of financial performance of selected co-operative sugar mills has not achieved reasonable and satisfactory financial performance due to losses incurred during the study period. The study has identified that one of the factors for losses of sugar mills is due to high material cost and overheads.