CHAPTER 7

SUMMARY OF IMPORTANT FINDINGS, POLICY SUGGESTIONS AND CONCLUSION

7.1 INTRODUCTION

The term financial analysis refers to “the process of determining financial strengths and the weakness of an enterprise by establishing strategic relationship between the items of the balance sheet, profit and loss account and other operative information”.

The main aim of financial analysis is to diagnose the information contained in financial statements so as to judge the profitability and financial soundness of the firm. Just like a doctor examines his patient by recording his body temperature, blood pressure and so on before making his conclusion regarding the illness and before giving his treatment, a financial analyst analyses the financial statements with tools of analysis before commenting upon the financial health or weakness of an enterprise. There are many tools amongst which ratio analysis is one of the most important tools of financial analysis.

A ratio is known as a symptom like blood pressure, the pulse rate or the temperature of an enterprise. It is with the help of ratios that the financial statements can be analyzed more clearly and various decisions can be made from such analysis. Financial analysis is essential to bring out the mystery behind the figures in financial statements. In this context, an attempt is made to study analysis of financial statements of sugar industries in north Karnataka in order to derive conclusion about the financial health, profitability and efficiency of sugar industries and also to compare the private sugar industries with co-operative sugar industries. This helps to determine the significance and meaning of the financial statement data so that forecast may be made of the future earnings, ability to pay sugar cane price and debt maturities both current and long term, profitability of a sound dividend policy. This study is linked to a technique of x-raying the financial position as well as the process of sugar industries.
The important objectives for the purpose of present study are to study the trends and patterns of share capital, fixed assets, current assets, current liabilities, investment and borrowings by co-operative and private sugar industries, to evaluate the financial performance of the co-operative and private sugar industries, to assess the profitability and economic sustainability of the co-operative and private sugar industries, to explore the problems faced by co-operative and private sugar industries in management of administration and financial aspects and to offer policy suggestions for sustained development of sugar industry in India.

This study is sample study of three co-operative and three private sugar factories from north Karnataka region. Two units from Belgaum district, three units from Bagalkot district and one unit from Bijapur district are selected for study. For the present study, the data is collected from secondary sources such as annual reports inclusive of balance sheet, income statements etc. Secondary data for study was collected from the sample co-operative and private sector sugar industries. The data base for the financial analysis was obtained through said published sources. Personal discussions have been also made with the officials concerned of the sugar industries for collection of additional and supplementary information to support the annual reports. Besides these, other pertinent information has been obtained from the relevant research studies, books, magazines, sugar journals, sugar India year books, district statistical reports and directory of the Indian sugar factories.

Therefore, the problem chosen for the study has been entitled as “Financial Analysis of Sugar Industries in North Karnataka-A Comparative Study”. This study helps in improving the financial process and financial sustainability of the sugar industries. The problem was selected for the research
as many gaps have been identified in the research studies conducted earlier in this area.

7.2 SUMMARY OF IMPORTANT FINDINGS

From the analysis of data collected, the major findings of the study are summarized as below:

7.2.1 Socio-Economic Profile of the Case Study Area

- In selection of sugar factories for the purpose of evaluating the financial analysis, secondary data under random sampling procedure has been adopted.

- In north Karnataka region, three districts viz. Belgaum, Bagalkot and Bijapur are selected for the research study. Belgaum district has 17 sugar factories which ranked first with respect to total number of working sugar factories and is the first largest producer of sugar and sugarcane crusher in the state. Bagalkot district has 11 sugar factories which is also second largest producer of sugar and sugarcane crusher in the state. Sugarcane is grown largely in Bijapur district even though there were only two sugar factories and majority cane is being supplied to factories situated in adjacent Bagalkot and Belgaum districts. Hence, in Bijapur district only one old and sound co-operative sugar factory (NSM) has been selected for the case study. Recently, more number of sugar factories are operating in that area, signaling their importance in the economic growth of the districts under study in particular and state in general. Hence, Belgaum, Bagalkot and Bijapur districts have been selected for the present study.

- The average rainfall of these districts are 835.45 mm, 578.75 mm and 494.5 mm respectively with an average number of rainy days 54.65, 37.35 and 35.5 in Belgaum, Bijapur and Bagalkot districts respectively.

- The short fall in the revenue of other sectors except agriculture was mainly due to the continued dependence of the people in these districts on
agriculture. This leads to development of sugar factories in these districts of study.

- The per capita income is Rs.8953 in Belgaum district, Rs.12297 in Bijapur district and Rs.18783 in Bagalkot district respectively.

- It is also found that the farmers in the case study area are getting water from the nearest rivers through pipelines. These districts are drained by three major rivers – Krishna, Ghataparabha and Malaprabha.

- It is clear in table 3.9 that 10.50 percentage of the cropped area was under sugarcane cultivation in Belgaum district during the year 2008-09. In Raibag taluka, a maximum of 26.77 % cropped area is under cultivation of sugarcane followed by Chikkodi 22.62%, Gokak 15.16%, Khanapur 12.29%, Hukkeri 10.64%, Belgaum 9.53% and so on. Area under sugarcane cultivation is considerably less in Soundatti, Ramadurg and Bailhongal talukas. Sugarcane was dominated over other crops in this district.

- It is clear from the table 3.10 that 3.31 % of the cropped area was under sugarcane cultivation in Bijapur district during the year 2008-09. In Indi taluka, a highest 8.88 % area was under sugarcane cultivation followed by Bijapur 3.16% and Sindagi 2.68%. Area under sugarcane cultivation was considerably less in Basavana-Bagewadi and Muddebihal talukas. It shows that sugarcane cultivation was less dominated over other crops in this district.

- Table 3.11 reveals that 11.31% of the cropped area was under sugarcane cultivation in Bagalkot district during the year 2008-09. In Jamkhandi taluka, a maximum of 30.13 % cropped area was under cultivation of sugarcane followed by Mudhol taluka 22.59% and Bilagi taluka 18.23% respectively.
• It is also found that the Belgaum district has highest i.e. 17 sugar factories as on 31-03-2009 of which 04 units in Athani taluka, 4 units in Chikkodi taluka, 02 units in Bailhongal taluka and 03 units in Gokak taluka and remaining 04 talukas have only one unit respectively. The said 17 units in the district have generated 26602 number of employment.

• It indicates that 17 sugar factories are operating in the Belgaum district. Out of which 09 sugar factories are in co-operative and 06 sugar factories are in private sector and 02 factories will be starting their operation of crushing shortly.

• It can be noted that the Bijapur district has 03 sugar units as on 31-03-2009, out of which 01 unit in Bijapur taluka under co-operative and 02 units in Indi taluka under private management.

• The Bagalkot district has 11 sugar factories as on 31-03-2009 of which 04 units in Mudhol taluka, 02 units in Jamkhandi taluk, 02 units in Bilagi taluka, 01 unit in Bagalkot taluka and 02 units in Badami taluka respectively.

• It is shown that out of 11 sugar factories, 10 units are under private sector and only 01 unit is under co-operative sector. It shows that liberalization, privatization and globalization (LPG) policy influenced upon the establishment of private sugar units. Bagalkot district is well known for private sugar factories.

7.2.2 Profile of the Selected Sugar Factories

• Table 4.1 reveals that the world production of sugar was 1481.22 lakh tones in 2003-04 which increased to 1624.97 lakh tones in 2008-09. Thus world production of sugar has increased near about 10.4 times during the study period.

• Table 4.1 reveals that production of sugar in India has ranged from 217.02 lakh tones in 2003-04 to 259.36 lakh tones in 2008-09 and an
average production of sugar during the said period was 186.44 lakh tones. India’s production of sugar increased during the said period to the extent of 14.45 percent. Its share in world production of sugar is 12.75 percent. This shows that India ranks second in production of sugar in the world.

- Table 4.3 reveals the trends in export and import of sugar India. India was net exporter of sugar in the year 2003-04 due to increase in production of sugar. Excepting 2004-05 and 2005-06, India has demonstrated large scale exports competing successfully with leading sugar exporters in the world.

- India has demonstrated an ability of exhibiting large scale exports and competing successfully with the leading sugar exporters like Australia, Brazil and Thailand in the Middle East and South Asian markets. The country is not expected to become a permanent and sustainable source of sugar supply to the world market over the medium to larger term.

- Sugar industry is the second largest agro-processing industry in the country after cotton-textiles. There are 634 sugar factories are operating in India. Amongst which 62 are public limited companies, 254 are private sugar factories and 318 are co-operative sugar factories.

- Karnataka rank’s third in sugar industry having 62 factories, out of which 36 are private sugar factories, 3 are public companies and 23 are co-operative factories. So Karnataka state is famous for private sugar factories.

- The sugarcane growers have diverted part of sugarcane to the profitable gur and khandsari during the said period. 35.47% of the sugarcane is used for the production of gur and khandsari and the sugar mills have crushed only 64.53 % of the sugarcane produced in India.

- A comparative analysis of sugar mills in the world revealed that India has 582 sugar mills, followed by Brazil 258 and China 235 sugar mills
respectively. Thus, India has the largest number of sugar mills in the world. Its share in the world number of sugar industries is 27.12 percent.

7.2.3 Performance of Ugar Sugar Works Ltd. Ugar Khurd (USW)

It can be observed from Table 4.7 that the performance of the Ugar Sugar Works Ltd. Ugar Khurd is as below;


- The sugar production increased from 8.48 lakh QTL in 2003-04 to 12.71 lakh QTL in 2008-09, with CAGR of 6.98 percent per annum. Its average annual sugar production was 14.56 lakh QTL. It shows the fluctuation in sugar production during the period under study.

- The recovery percentage of sugar from sugarcane increased from 10.15% in 2003-04 to 10.96% in 2008-09. It ranged between 10.15% in 2003-04 and 11.05% in 2005-06. On an average, the sugar recovery percentage was satisfactory throughout the study period. It was also highest (11.47%) which shows the efficiency of the factory in recovery of the sugar constantly over the study period.

- The quantity of molasses production rose from 3.99 lakh QTL in 2003-04 to 7.07 lakh QTL in 2006-07 with CAGR of 3.06 percent per annum. Its average annual molasses production was 5.56 lakh QTL.

7.2.4 Performance of Godavari Bio Refineries Ltd. Sameerwadi (GBR)

It can be observed from Table No 4.8 that the performance of the Godavari Bio – Refineries Ltd. Sameerwadi is as under;

- The quantity of cane crushed by GBR Ltd., increased from 12.08 lakh M.T during 2003-04 to 13.06 lakh M.T during the 2008-09, with CAGR of 1.99 percent per annum. Its average cane crushing was

- The sugar production of GBR Ltd. increased from 12.96 lakh Qtl in 2003-04 to 14.85 lakh Qtl in 2008-09, with CAGR of 2.29 percent per annum. Its sugar production ranged between 12.96 lakh Qtl in 2003-04 and 21.35 lakh Qtl in 2005-06 with an annual average production of 17.22 lakh Qtl.

- The recovery percentage of sugar from sugarcane ranged between 10.42% in 2004-05 and 11.09% in 2007-08. The average recovery percentage of sugar was 11.02%. The sugar recovery percentage of this factory was satisfactory throughout the study period. The average recovery in the factory was the highest (11.65%) during 2005-06 which indicates the technical efficiency of the factory in recovering the sugar constantly over the study period.

- The quantity of molasses production rose from 5.18 lakh Qtl in 2003-04 to 6.50 lakh Qtl in 2005-06 with CAGR of 2.39 percent per annum. Its average annual molasses production was 3.96 lakh Qtl.

7.2.5. Performance of Shri Prabhulingeshwar Sugar & Chemicals Ltd, Siddapur (PSCL)

It can be observed from Table 4.9 that the performance of Shri Prabhulingeshwar Sugars & Chemicals Ltd, Siddapur is under;


- Sugar production increased from 3.88 lakh Qtl in 2003-04 to 6.07 lakh Qtl in 2008-09, with CAGR of 7.74 percent per annum. Its sugar
production ranged between 3.88 in 2003-04 and 11.86 lakh Qtl in 2007-08, with an annual average sugar production of 7.58 lakh Qtl.

- The recovery percentage of sugar from sugarcane ranged between 10.17% in 2004-05 to 12.35% in 2007-08. On an average, the sugar recovery percentage of 11.17% was satisfactory throughout the study period. The average recovery in this factory was also the highest (12.35%) which indicates the technical efficiency of the factory in recovering the sugar constantly over the study period. This is despite of the negative growth and non significant growth rate over the study period.

- The quantity of molasses production rose from 1.34 lakh Qtl in 2003-04 to 3.50 lakh Qtl in 2006-07 with CAGR of 10.80% per annum. Its average annual molasses production was 2.55 lakh Qtl.

7.2.6. Performance of Nandi Sahakari Sakkare Karakhane Niyamit, Hosur (NSM)

It can be observed from Table 4. 10 that the performance of Nandi S.S.K. Niyamit, Hosur is as under;

- The quantity of cane crushed has increased from 3.66 lakh M.T in 2003-04 to 4.00 lakh M.T in 2008-09, with CAGR of 1.49 percent per annum. Its average cane crushing was 5.23 lakh M.T during the said period.

- The production of sugar has increased from 4.15 lakh Qtl in 2003-04 to 4.25 lakh Qtl in 2008-09, with CAGR of 0.40 percent per annum. Its sugar production raised between 4.15 lakh Qtl in 2003-04 and 8.81 lakh Qtl in 2006-07 with an annual average production was 6.01 lakh Qtl.

- The recovery percentage of sugar from sugarcane rose between 10.65% in 2008-09 and 12.28% in 2007-08. The recovery percentage of sugar from sugarcane has decreased from 11.30% in 2003-04 to 10.65% in 2008-09. On an average the sugar recovery percentage was 11.39%
which was satisfactory during the period under study. The average recovery was also the highest (11.39%) which indicates the technical efficiency of the factory in recovering the sugar constantly over the study period. This is despite of the negative growth and non-significant growth.

- The molasses production has increased from 2.05 lakh Qtl in 2003-04 to 2.96 lakh Qtl in 2007-08 with CAGR of 1.56% per annum. Its average annual molasses production was 2.12 lakh Qtl during the study period.

7.2.7 Performance of Shree Doodhaganga Krishna Sahakari Sakkare Karakhane Niyamit, Chikkodi (SDK)

It can be observed from Table 4.11 that the Performance of the Shree Doodhaganga Krishna S. S. K Niyamit, Chikkodi is as under;

- The cane crushed has increased from 3.95 lakh M.T in 2003-04 to 6.03 lakh M.T in 2008-09, with CAGR of 7.31 percent per annum. Its average cane crushing was 4.08 lakh M.T during the period under study. It ranged between 3.95 lakh M.T in 2003-04 and 9.34 lakh M.T in 2006-07.

- The sugar production increased from 4.14 lakh Qtl. in 2003-04 to 6.74 lakh Qtl in 2008-09, with CAGR of 8.46 percent per annum. Its average annual sugar production was 7.50 lakh Qtl.

- The recovery percentage of sugar from sugarcane has increased from 10.20 percent in 2003-04 to 11.16 percent in 2008-09. On an average the sugar recovery percentage was 11.18% and satisfactory during the period under study. It ranked second in recovery percentage of sugar (11.85%) in Karnataka during 2005-06.

- The molasses production rose from 1.52 lakh Qtl. in 2003-04 to 2.42 lakh Qtl in 2008-09, with CAGR of 8.06 percent per annum. Its average annual molasses production was 2.63 lakh Qtl.
7.2.8. Performance of Ryatar Sahakari Sakkare Karkhane Niyamit, Timmapur (RSSK)

It can be observed from table 4.12 that Performance of the Ryatar Sahakari Sakkare Karkhane Niyamit, Timmapur is as under;

- The quantity of cane crushed has increased from 1.15 lakh M.T in 2003-04 to 2.38 lakh M.T in 2008-09, with CAGR of 12.89 percent per annum. Its average cane crushed was 2.85 lakh M.T during the same period. It ranged between 1.06 lakh M.T in 2004-05 and 5.20 lakh M.T in 2006-07.

- The sugar production has increased from 1.27 lakh Qtl in 2003-04 to 2.55 lakh Qtl in 2008-09, with CAGR of 12.32 percent per annum. Its sugar production ranged between 1.16 lakh Qtl in 2004-05 and 6.08 lakh Qtl in 2006-07, with an annual average production of 3.25 lakh Qtl. The sugar production was highly fluctuated during the period under study.

- The recovery percentage of sugar from sugarcane has decreased from 10.68 percent in 2003-04 to 10.48 percent in 2008-09, Its sugar recovery percentage was satisfactory throughout the study period.

- The molasses production has increased from 0.84 lakh Qtl in 2003-04 to 1.12 lakh Qtl in 2008-09, with CAGR of 4.91 percent per annum. It’s ranged between 0.84 lakh Qtl in 2003-04 and 2.80 lakh Qtl in 2006-07, with an average annual production was 1.39 lakh Qtl. It shows the fluctuation in the molasses production.

7.3 TRENDS AND PATTERNS OF EXPENDITURE OF PRIVATE AND CO-OPERATIVE SUGAR INDUSTRIES

- It is observed from table 5.1 that the average fixed expenses for the individual sugar factories were Rs.6789.75 lakhs in USW, Rs.9237.98 lakhs in GBR, Rs.2785.54 lakhs in PSCL, Rs.1328.6 lakhs in NSM, Rs.1779.74 lakhs in SDK and Rs.1008.45 lakhs in RSSK respectively. It can be noted that average fixed expenses varies from factory to factory.
because of their crushing capacity. It is observed that the average fixed expenses of private sector was higher than co-operative sector.

- It is observed from table 5.2 that an average per quintal fixed expenses for the individual factory were Rs.441.79 lakhs in USW, Rs.556.62 lakhs in GBR, Rs.464.47 lakhs in PSCL, Rs.246.08 lakhs in NSM, Rs.252.82 lakhs in SDK and Rs.488.21 lakhs in RSSK respectively. It can be seen that average per quintal fixed expenses varies from factory to factory because of difference in installed capacity and crushing capacity. This results in variation in fixed expenses. Average fixed expenses per quintal of sugar production in private sugar factories is more than co-operative sugar factories.

- The table 5.3 shows the breakup of variable expenses of sugar into cost of sugarcane and conversion cost. The growth rates of cost of sugarcane were 5.06 percent in USW, 26.76 percent in GBR, 15.98 percent in PSCL, 11.94 percent in NSM, 8.08 percent in SDK and 2.44 percent in RSSK respectively during the study period. It is observed that the average growth of cost of sugarcane of private sugar factories was more than co-operative sugar factories except in USW.

- It is observed from table 5.3 that the growth rates of conversion cost were 3.29% in USW, 13.96% in GBR, 6.50% in PSCL, 17.03% in NSM, 6.48% in SDK and 4.26% in RSSK respectively. It can be noted that the cost of sugarcane was higher than conversion cost in all the selected sugar factories. It is because of sugarcane price was the important component of variable expenses.

- It observed from table 5.4 that the average variable expenses were Rs.19659.97 lakhs in USW, Rs.28673.90 lakhs in GBR, Rs.10684.56 lakhs in PSCL, Rs.19663.37 lakhs in NSM, Rs.6875.70 lakhs in SDK and Rs.4898.13 lakhs in RSSK respectively. It can be noted that the variable
expenses varies from factory to factory because of their difference in production capacity.

- It is observed in table 5.5 that an average per quintal of variable expenses of production for the individual sugar factories were Rs.1404.60 lakhs in USW, Rs.1469.85 lakhs in GBR, Rs.1584.26 lakhs in PSCL, Rs.1533.60 lakhs in NSM, Rs.1554.80 lakhs in SDK and Rs.1898.46 lakhs in RSSK respectively. It can be noted that the average of per quintal variable expenses vary from sugar factory to factory depending upon their production capacity, amount paid for sugarcane and expenses incurred by the management. It is seen that co-operative sugar factories have higher variable expenditure per quintal of sugar production as compared to private sugar factories.

- As compared to private sugar factories, it is seen that there was no control over certain expenses incurred by co-operative sugar factories. It indicates that private sugar industries have full control over the variable expenses like over burden of workers, maintenance, repairs and so on.

**7.4 PERFORMANCE OF PRIVATE AND CO-OPERATIVE SUGAR INDUSTRIES: A COMPARATIVE ANALYSIS**

**7.4.1 Physical Indicators**

The performance indicators of selected sugar units are physical indicators, financial indicators and ratio analysis. These indicators are shown in table 6.1 and are explained as under;

- In the case of USW, the average capacity utilization was to the extent of 86.17 lakh tones. It ranged between 63.07 lakh tones in 2003-04 and 92.05 lakh tones 2006-07, with CAGR of 4.38 percent during the period under study.

- In the case of PSCL, the average capacity utilization was 82.63 lakh tones during the period of 2003-04 to 2008-09. It ranged between 59.49 lakh
tones in 2007-08 and 98.77 lakh tones in 2005-06, with CAGR of 5.32 percent per annum.

- The average capacity utilization of GBR was 82.47 lakh tones during the study period. It ranged between 69.85 lakh tones in 2003-04 and 107.47 lakh tones in 2007-08, with CAGR of 0.06 percent per annum. It had utilized only 70.12 lakh tones crushing capacity during 2008-09, due to inadequate supply of sugarcane as a result of drought.

- In case of NSM, the average capacity utilization was 74.77 lakh tones during the period under study. It has ranged between 64.85 lakh tones in 2003-04 and 81.19 lakh tones in 2006-07, with CAGR of 2.05 percent per annum.

- The average capacity utilization of SDK was 86.42 lakh tones under study period. It has increased from 64.58 lakh tones in 2003-04 to 88.20 lakh tones in 2008-09, with CAGR of 5.53 percent per annum.

- In case of RSSK, average capacity utilization was 79.61 lakh tones during the period under study. It ranged between 67.23 lakh tones in 2003-04 and 97.04 lakh tones in 2006-07, with CAGR of 1.48 percent per annum.

- In selected sugar factories, the highest average capacity utilization was 86.42 lakh tones in SDK and lowest average capacity utilization was 74.77 lakh tones in NSM. But with respect to the CAGR, SDK ranked first and RSSK ranked last. The private sector sugar factories capacity utilization was more as compared to co-operative sugar factories.

- It is observed from table 6.2 that average annual sugar productions were 14.56 lakh QtL in USW, 17.22 lakh QtL in GBR, 7.58 lakh QtL in PSCL, 7.50 lakh QtL in SDK, 6.01 lakh QtL in NSM and 3.25 lakh QtL in RSSK respectively. The CAGR’s of these factories were 6.98%, 2.29%, 7.74%, 8.46%, 0.40% and 12.32% respectively. It is seen that the highest average
sugar production was found in case of RSSK and lowest average sugar production was found in case of NSM. The co-operative sugar factories have achieved sugarcane production growth rate higher than private sector sugar factories.

- It is observed from table 6.3 that the growth rates of recovery percentages were 1.29%, 0.25%, -0.11%, 1.51%, -0.98% and -0.31% per annum for USW, GBR, PSCL, SDK, NSM, and RSSK respectively. On an average the sugar recovery percentage of all sugar industries were satisfactory during the period under study. The average recovery (11.39%) in NSM was highest which indicates the technical efficiency of the mill in recovering the sugar constantly over the study period. This is despite of the negative growth and non significant growth rate over the study period.

- It is observed from table 6.4 that the fluctuations in the molasses production were maximum i.e. 8.49 lakh Qtl in case of GBR and minimum in case of 0.39 lakh Qtl in RSSK. The average molasses production was highest (6.36 lakh Qtl) in GBR and lowest (1.39 lakh Qtl) in RSSK. But growth rate of molasses production was highest (10.80 lakh Qtl) in PSCL and lowest in NSM & GBR. The private sector sugar factories have performed well in production of molasses as compared with co-operative sector sugar factories.

7.4.2 Financial Indicators

- It is observed table 6.6 that the average share capital was Rs.760.54 lakhs in USW, Rs.4357.41 lakhs in GBR, Rs.2216.66 lakhs in PSCL, Rs.1130.63 lakhs in SDK, Rs.1360.63 lakhs in NSM and Rs.2185.95 lakhs in RSSK respectively. The share capital of GBR was higher, followed by PSCL, RSSK, NSM, and SDK and lowest in USW. The growth rate of USW was higher of all the growth rates in the selected
sugar factories. Share capital of private sector was higher than co-operative sector except in case of USW.

- As observed in table 6.7 the average reserve fund of USW was higher (Rs.5328.62 lakhs) and lowest (Rs.4512.55 lakhs) in case of RSSK. There was a wide range of fluctuation in the accumulation of reserve funds of all the selected sugar industries during the study period. Reserve fund of private sector was higher than co-operative sector. In the balance sheet of PSCL 00.00 indicates that this factory has expanded its crushing capacity by using entire reserve fund and hence, there was no reserve fund in this factory during the study period.

- It is observed from table 6.8 that the average owned funds were Rs.6598.68 lakhs in USW, Rs.5270.14 lakhs in GBR, Rs.5890.64 lakhs in PSCL, Rs.2297.83 lakhs in SDK, Rs.5890.64 lakhs in NSM and Rs.3038.36 lakhs in RSSK respectively. The level of owned funds was higher in the case of USW and was lower in case of SDK. The level of owned funds of private sector was higher than co-operative sector.

- It is observed from the table 6.9 that the average current assets were Rs.9044.48 lakhs in USW, Rs.4087.55 lakhs in GBR, Rs.6971.84 lakhs in PSCL, Rs.4082.64 lakhs in SDK, Rs.1124.53 lakhs in NSM and Rs.722.25 lakhs in RSSK respectively. It indicates that the growth rate of current assets of NSM, SDK and USW were significant and GBR, PSCL and RSSK were non significant. The proportion of current assets of private sector was higher than co-operative sector.

- It is observed from table 6.10 that the average fixed assets were Rs.8094.03 lakhs in USW, Rs.18331.26 lakhs in GBR, Rs.1096.31 lakhs in PSCL, Rs.4167.78 lakhs in SDK, Rs.3912.22 lakhs in NSM and Rs.5650.83 lakhs in RSSK respectively. It indicates that the growth rate of fixed assets of USW, GBR and PSCL were significant,
where as SDK, NSM and RSSK were non significant. The proportion of fixed assets of private sector was higher than co-operative sector.

- From the observations made in table 6.11, it indicates that there were a steadily increase in the total assets. All these assets of all selected sugar factories had positive growth rates, indicating a sound assets position. The proportion of total assets of private sector was more than co-operative sector.

- It is observed from table 6.12 that the average current liabilities were Rs.9993.01 lakhs, Rs.7430.37 lakhs, Rs.3202.06 lakhs, Rs.937.66 lakhs, Rs.2389.82 lakhs and Rs.2425.10 lakhs in USW, GBR, PSCL, SDK, NSM and RSSK respectively. The proportion of current liabilities of private sector was more than co-operative sector.

- It is observed from table 6.13 that the average borrowings were Rs.14396.93 lakhs in USW, Rs.31295.43 lakhs in GBR, Rs.11725.70 lakhs in PSCL, Rs.7043.37 lakhs in SDK, Rs.5402.40 lakhs in NSM and Rs.5677.92 lakhs in RSSK respectively. The proportion of total borrowings of private sector was more than co-operative sector.

- It is observed from tables 6.9, 6.10 and 6.11 that the assets position was sound in the case of USW, GBR and PSCL as private sugar factories had higher liabilities, resulting in better management of assets and liabilities. Whereas NSM, SDK and RSSK as co-operative sugar factories had lower liabilities, resulting in good management of assets and liabilities. The current assets of USW, GBR, PSCL, SDK and NSM were sufficient to meet their current liabilities. The current liability was highest in private sugar factory (USW) during 2008-09 and was lowest in co-operative factory (SDK) during 2006-07.

- It is observed from table 6.15 that the average sales was highest (Rs.50640.44 lakhs) in case of GBR, followed by USW (Rs.27985.48 lakhs) and PSCL (Rs.10491.08 lakhs). SDK had significant positive
growth rate with respect to total sales due to higher production of sugar and maintenance of sugar inventory.

- It is observed from table 6.16 that the average gross income were Rs.29529.25 lakhs in USW, Rs.52960.79 lakhs in GBR, Rs.10490.8 lakhs in PSCL, Rs.7972.64 lakhs in SDK, Rs.1496.99 lakhs in NSM and Rs.1078.16 lakhs in RSSK respectively. It is evident that there was much inters factory variation in respect of an average gross income. It can be noted that an average gross income was highest (Rs.52960.79 lakhs) in case of GBR and lowest (Rs.1078.16 lakhs) in case of RSSK. Gross income of private sector was higher than co-operative sector.

- The private sector sugar factories had sound assets position as compared to the co-operative sector indicating higher investment in the assets. It is a healthy sign for USW to meet the increased volume of crushing over the years.

- The borrowings were increasing at significant growth rate in private sector. But co-operatives sector has negative growth rate with respect to borrowings.

- In considering the assets and liabilities position, the volume of business and sugar production, the private sector had higher gross income and total expenses as compared to co-operative sector. The net profit were positive during the study period in the case of USW, GBR, NSM and SDK. On the other hand, PSCL and RSSK incurred net loss during the year 2004-05 and from 2006-07 and 2007-08 because of incurring heavy expenses over and above the gross income. But it is significant to note that all the selected sugar factories earned profits during 2008-09 as observed in table 6.18. The increase in the net profit of these factories is a welcoming feature.
• It is observed from table 6.19 that the average share capital, reserve fund, owned funds, current assets, fixed assets, gross income, current liabilities, borrowings, total sales, total expenditure and net profit per unit of private sugar factories is higher than co-operative sugar factories.

7.4.3 Ratio Analysis

• It is observed from table 6.20 that the current ratio was highest (5.77) in SDK during 2004-05 followed by PSCL (4.02) during 2004-05 and USW (2.70) during 2006-07. The average current ratio was greater than 2 for SDK and PSCL, indicating their ability to meet current obligations. Where as it was less than unity in case of USW, GBR, NSM and RSSK indicating their delicate position to meet their current obligations. A high current ratio in case of SDK and PSCL may not be favorable due slow moving of stocks, non-satisfactory debt collection and idle cash/bank balances or insufficient investment opportunities. A low current ratio in case of other sugar factories may be due lack of sufficient funds to pay off liabilities and the sugar factories may be trading beyond its capacity.

• It is observed from table 6.21 that the average liquid ratio or acid test ratio of GBR, NSM and RSSK were unsatisfactory against the current ratio. This indicates the higher share of inventories in the current assets. The average acid test ratio was highest in the case of SDK followed by PSCL and USW. This indicates that these sugar factories had maintained adequate cash balance to meet their day to day transactions.

• It is observed from table 6.22 that the average of current assets to total assets ratio was highest (0.47) in USW followed by SDK (0.45) and lowest (0.10) in RSSK. USW registered the highest value reflecting its preference for higher working capital rather than investing all its capital in acquiring fixed assets.
• It is clear from the table 6.23 that the average inventory ratio were 1.28 in USW, 1.27 in GBR and 0.95 in PSCL during the period from 2003-04 to 2008-09. The inventory ratio of USW and GBR had been more than unity except in PSCL throughout the study period indicates that private sugar factories depend much on the net working capital to form their current assets. The average inventory ratio of NSM was 0.91, SDK was 1.39 and RSSK was 0.59 during the period 2003-04 to 2008-09. The inventory ratio had been less than unity throughout the study period except in case of SDK, indicating that co-operative sugar factories did not depend much on the net working capital to form their current assets.

• It is observed from tables 6.20, 6.21, 6.22 and 6.23 that the results of liquidity ratio's of USW, GBR and SDK shows that they have maintained an adequate current assets, where inventories constituted the major portion. Hence, these factories relied on inventories to meet their short term obligations. Particularly, it is observed from table 6.20 and 6.21 that the liquidity position of private sugar factories is found to be lower than that of co-operative sugar factories.

• With the expansion of cane crushing and development activities, the owned funds of the factories were found to be insufficient. It is observed from table 6.24 that debt- equity ratio was above the standard norm of 3:1 in case of USW, private sugar factory, where as in case of all the co-operative factories, this ratio was below standard norm of 3:1. This indicates the more financial soundness regarding the debt and equity position in case of USW and other private sector sugar factories as compared to co-operative sugar factories.

• It is observed from table 6.25 that an average of total liabilities to owned funds ratio were 3.63 in USW, 4.10 in GBR, 3.49 in PSCL and 3.56 in SDK. These ratios were above the prescribed norm of 3:1 except in NSM and RSSK in all the years of the study period which indicates the poor
financial structure regarding total liabilities and owned funds. This gap between total liabilities and owned funds was mainly due to increased total liabilities against the constant owned funds. As comparison, this ratio indicates that private sector sugar factories had higher values than co-operative sector which showed the dependence of more on external funds.

• It is observed from table 6.26 that fixed assets to owned funds ratio reflected fluctuating trend with an average of 1.21 in USW, 10.48 in GBR, 2.56 in PSCL, 0.67 in NSM, 0.82 in SDK and 2.04 in RSSK respectively. This ratio was more than unity in case of USW & SDK and whereas it was more than two in case of GBR, PSCL and RSSK. This was mainly due to decrease in investment of owned funds in fixed assets and heavy accumulated losses over the study period.

• It is observed in table 6.27 that the average working capital turnover ratio of private factories shows the efficiency in utilizing the working capital as compared to co-operative sector. This is an indication of good management of working capital in case of private factories under study.

• It is observed from table 6.28 that the total assets turnover ratio indicates the fluctuating trend with an average of 3.45 in USW, 2.96 in GBR, 0.54 in PSCL, 1.34 in NSM, 1.58 in SDK and 1.00 in RSSK over the study period. This ratio was higher in private sector except PSCL as compared to co-operative sector which shows higher efficiency of turnover.

• It is observed from table 6.29 that the net profit to owned funds ratio indicates the fluctuating trend with an average of 0.05 in USW, 1.06 in GBR, 0.25 in PSCL, 0.09 in NSM, and 0.18 in SDK and -0.01 in RSSK over the study period. This ratio shows that private sectors has utilized its owned funds effectively to get returns on equity as compared to co-operative sectors.
• It is observed from table 6.30 that the net profit to total assets ratio indicates the fluctuating trend with an average of 0.02 in USW, 0.10 in GBR, -0.25 in PSCL, 0.10 in NSM, and -0.09 in SDK and 0.00 in RSSK over the study period. This ratio for private sector factories of USW and GBR were positive except PSCL which was negative indicates that these private factories were efficient in utilizing their assets during the study period as compared to co-operative sector sugar factories.

• It is observed from table 6.31 that the net profit to total sales ratio indicates the fluctuating trend with an average of 0.01 in USW, 0.04 in GBR, -0.79 in PSCL, 0.04 in NSM, and -0.12 in SDK and 0.07 in RSSK over the study period. The comparison of the average of the profitability ratios revealed that on an average, the profitability ratios of private sector sugar factories were satisfactory during the study period against the co-operative sector sugar factories.

• It is observed from table 6.35 that the return on investment ratio indicates the fluctuating trend with an average of 131.84 in USW, 61.43 in GBR, 14.40 in PSCL, 8.14 in NSM, and 8.07 in SDK and 13.19 in RSSK over the study period. This ratio of private sugar factories has a good return on investment as their average shown was much higher than the bank rate. But co-operative sugar factories did not have a good return on investment, as their average shown was much lower than the bank rate. Increase in production cost had a great impact on these factories. Uncontrolled use of indirect expenses had resulted in lower return on investment.

• It is observed from table 6.36 that average earnings per share ratio were 0.43 in USW, 2.42 in GBR, 1.31 in PSCL, 11.52 in NSM, 0.97 in SDK and 5.14 in RSSK respectively. The earnings per share was less than Rs.1 in USW and SDK shows that share holders are not getting even Rs.1 per share they invested and same was dangerous. Where as in case of other factories, earnings per share was better.
7.5 POLICY SUGGESTIONS

The role played by the sugar factories under study offer a scope for giving a few suggestions as they are going to play a major role in the social and economic development of north Karnataka region in the coming years. Considering the same, a few suggestions based on secondary data, findings and observations are summarized as under. The important policy suggestions can be classified into two parts. The first part consists of suggestions for improving financial position of sugar factories and second part is concerned with general development of the sugar factories under study in particular and India in general.

7.5.1 Policy Suggestions for Improving Financial Position of the Sugar Factories

The current ratio of USW, GBR, NSM and RSSK is below standard norm indicates that the working capital position of these factories is not satisfactory. So these sugar factories should try to maintain an adequate quantity of net current assets in relation to current liabilities to avoid consequences of inadequate working capital.

♦ The quick ratio or liquid ratio of GBR, NSM and RSSK is considering the decreasing trend of quick assets. These sugar factories should increase the level of quick assets in relation to current liabilities. Liquid ratio of USW, PSCL and SDK is above the standard which indicates that liquid assets are sufficient to cover liquid liabilities. These sugar factories should try to maintain an adequate sales turnover.

♦ Both sector sugar factories maintained overall control over liquidity position. They should give special attention to the management of current assets and all the relevant techniques of current assets should be employed.

♦ Debt-equity ratio of both sectors is much below the standard norm except in USW which shows that selected sugar factories are more
conservative as regards to raising long term debt. These sugar factories should try to provide the benefits of trading on equity to equity shareholders.

♦ The selected sugar factories must make every effort to tighten their debt collection policy. To improve the quality of debtors and to reduce the amount tied up in debtors, a periodical report of over dues may be suitably prepared and effective action may be taken by the management from time to time to speed up its collection.

♦ Capital structure of private sugar factories was share capital (65.50%) and debt capital (22.5%). Similarly, capital structure of co-operative sugar factories was share capital (49%) and debt capital (35%). These figures signify that private sugar factories have financed its requirements more through owned capital, whereas co-operative sugar factories had financed more through borrowed capital. Therefore, financial position of private sugar factories is better than co-operative sugar factories. Co-operative sugar factories should try to raise capital from issue of shares instead of borrowed capital which is costly source.

♦ Though the association between liquidity and profitability of the selected sugar factories were more positive, it was statistically insignificant indicating low degree of influence of liquidity on its profitability. Hence, overall state of liquidity should be improved so as to have a favorable impact on the profitability of selected sugar factories.

♦ The selected sugar factories had maintained a reasonable level of inventory except in RSSK and may require maintaining this level in future. However, the inventory of slow moving items if any should be reduced to the maximum possible extent.
♦ The overall solvency ratios of sugar factories under study were satisfactory. However, they should try to reduce fixed assets ratio by selling useless and obsolete assets.

♦ The operating expenses of co-operative sugar factories have increased by a larger margin than the increase in sugar sales. The co-operative sugar factories should control over the variable expenses like over burden of workers, maintenance, repairs etc. There is an urgent need of operating cost control measures for improving profitability of the sugar factories.

♦ Co-operative sugar factories should try to make all the possible efforts to come out from the situation of financing their long term need out of working capital.

♦ Sugar factories should initiate urgent steps to convert stock of sugar into cash in order to improve liquidity position.

♦ All the selected sugar factories depended on borrowings for financing their working capital need which results in over burden of interest charges. The sugar factories should strengthen their equity base by increasing the equity share capital, accumulated reserves and owned funds by ploughing back profits, mobilize deposits from sugarcane suppliers and introduce attractive deposit schemes.

♦ The factories should reduce cane cost, conversion cost, overheads and sugar losses. The factories should achieve maximization of cane crush, increase in sales realization per quintal and production of exportable quality of sugar to improve the profitability.

♦ The factories should motivate the farmers to increase the yield per acre of sugarcane.

♦ Non operating expenses in case of co-operative sugar factories should need to be controlled.
7.5.2 Policy Suggestions for Improving the General Development of Sugar Industry

- The farmers may be encouraged to produce sufficient sugarcane in the vicinity of the factory area for the economic sustainability of sugar factories.
- Scientific approach of cane area will have a direct impact on the economy of sugar industry.
- Sugar factories may enter into direct contract with the growers like in other states and execute tri-partite agreements with banks and farmers for procurement of sugarcane and to facilitate use of Kisan Credit Cards and availability of soft loans to farmers.
- In order to ensure the research and development, the efforts of the existing institutions may be adequately strengthened for increasing productivity in the fields as also in the mills by introduction of new technology and also by effective extension mechanism. Sugar development fund may also assist project linked extension activities of these institutions.
- Sugarcane farmers should adopt eco-farming, use bio fertilizer and pesticide leading to better environment in order to supply good quality of sugarcane.
- Indian sugar industry should achieve global standards on environment compliance and plant safety.

7.6 CONCLUSION

The present research has been undertaken with an objective of studying the financial analysis of sugar industries in north Karnataka, a comparative study with special reference to Belgaum, Bagalkot and Bijapur districts. It has been arrived with the study of various facets of sugar factories the financial performance provided in case study area and socio-economic development under taken more particularly development of agricultural sector in north Karnataka region.
From the observation of this study, it is found that the average current ratio was greater than two for SDK and PSCL indicating their ability to meet current obligations where as it was less than unity in case of USW, GBR, NSM and RSSK indicating their delicate position to meet their current obligations. The average liquid ratio was highest in case of USW, PSCL and SDK. This indicates that these sugar factories had maintained adequate cash balance to meet their day to day transactions. The inventory ratio was more than unity in USW, GBR and SDK throughout the study period indicates that these private sugar factories depend much on the net working capital to form their current assets.

The debt- equity ratio was above the standard in case of private sugar factories as compared to co-operative sugar factories. This indicates their financial soundness regarding their debt and equity position. The total liabilities to owned funds ratio was above the prescribed norm in all sugar factories under study except in NSM and RSSK during the study period which indicates the poor financial structure regarding total liabilities and owned funds. In comparison, debt-equity ratio indicates that private sector sugar factories had higher values which show more dependence on external funds.

The fixed asset to owned funds ratio was more than unity in case of USW and SDK where as it was more than two in case of GBR, PSCL and RSSK. This was mainly due to decrease in investment of owned funds in fixed assets and heavy accumulated losses over this period.

The working capital turnover ratio of private sector shows the efficiency in utilizing the working capital as compared to co-operative sector. This is an indication of good management of working capital in case of private sector.

The return on investment ratio of private sugar factories shows a good return on investment as their average was much higher than the bank rate. But co-operative sugar industries did not have a good return on investment, as their
average ratio shown was much lower than the bank rate. Increase in production cost had a great impact on these factories. Uncontrolled use of indirect expenses had resulted in lower return on investment.

It can be noted that net profit position was sound in case of private sugar factories which are able to control direct and indirect expenses. But net profit position was not good in co-operative sugar factories due to uncontrolled indirect expenses like over burden of workers, maintenance and repairs etc.

The study was initiated with four hypotheses. From the observations of table numbers 6.20 and 6.21, it is seen that co-operative sugar factories have a favorable liquidity position. The current ratio and liquid ratio of co-operative sugar factories are higher than private sugar factories. It indicates that co-operative sugar factories have ability to meet their current obligations as compared to private sugar factories. But in the present study, these two ratios are not favourable to private sugar factories and hence it is proved that liquidity position of private sugar factories is lower than that of co-operative sugar factories.

The average share capital of private sugar factories were Rs.760.54 lakhs in USW, Rs.4357.41 lakhs in GBR and Rs.2216.16 lakhs in PSCL respectively. But that of co-operative sugar factories were Rs.1130.65 lakhs in SDK, Rs.1360.63 lakhs in NSM and Rs.2185.95 lakhs in RSSK respectively. It is observed that share capital of private sugar factories is higher than that co-operative sugar factories. Likewise the other indicators viz. reserve fund, owned funds, current assets, fixed assets, gross income and net profit per quintal of sugar production etc. in the second hypotheses are also proved.

In this study, it is revealed that cost of per quintal of sugar production was 47.20% in case of private sugar factories and 52.80% in case of co-operative sugar factories. In comparison, the cost production of private sugar factories is
less than co-operative sugar factories. In indicates that private sugar factories have full control over the variables expenses like over burden of workers, maintenance, repairs and so on as compared to co-operative sugar factories. Hence it is proved that private sugar factories have lower expenditure per unit of sugar production as compared to co-operative sugar factories.

The study finds that overall performance of private sugar factories is better than co-operative sugar factories. It shows that the management of private sugar factories excelled the race by showing better performance in solvency, activity and profitability as compared to co-operative sugar factories except liquidity. Thus the above hypotheses have been successfully proved by virtue of this research study. But the liquidity position in respect of current ratio and liquid ratio in case of private sugar factories is little bit lower as compared to co-operative sugar factories due to large scale production of sugar in case of private sugar factories.

A reorientation of policies towards professionalization of staff and management and more scientific approach of the government in its pricing and general policies towards these units would help to develop the sugar factories on sound lines.

On the basis of the above analysis, it can be concluded that overall financial position in co-operative sugar industry is not satisfactory as compared to private sugar industry. The suggestions made on the basis of the findings and policy implications if implemented in good faith, would definitely help in strengthening the financial position of sugar industries in the north Karnataka region consisting of Belgaum, Bagalkot and Bijapur districts of case study area.

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