CHAPTER I

INTRODUCTION AND DESIGN OF THE STUDY

1.1 INTRODUCTION

Sugar industry occupies an important place among the major industries in India. Sugar industry is one of the prospective agro-based industries in India. It has been instrumental in resource mobilization, employment generation, income generation and creating social infrastructure in rural areas by contributing to the nation’s development. Indeed, sugar industry has facilitated and accelerated the growth of rural industrialization. The sugar sector offers employment opportunities not only for the learned professionals, but also offers employment opportunities to the uneducated, belonging to rural India. The production unit supports the standard of living.

Sugar production in India has been cyclic in nature. An estimated 75 per cent of the population depends on the sector either directly or indirectly. Sugar industry is also expected to develop further, thereby offering more employment opportunities to people. The sugar industry also supports diversified ancillary activities and skills that support the local economy. The dependent population creates substantial demand for local goods and services. The sector also has major social and economic impact on the nation as it is a green industry and is largely self-sufficient in energy needs through utilization of bagasse for generating electricity and steam. In fact, the sugar industry generates surplus exportable energy through cogeneration and contributes to reducing the energy deficit that India is currently facing. Any changes in the sector, due to its dominance will translate to changes in the whole economy. Hence, further investment in this sector remains a priority. Agro-processing is now regarded as the sunrise sector of the Indian economy in view of its large potential for growth and likely socio-economic impact specifically on employment and income generation.
The fall in production coincided with national scenario where predominant sugar producing States reported a fall in sugar production due to adverse weather conditions and labour shortage causing delay in sugar cane crushing.

Sugar cane is grown in semi-tropical region and accounts for around two-third of world sugar production. Above all, this industry offers employment opportunities to a number of semi-skilled and skilled workers in the rural areas of the country thereby contributing towards their development. Since sugar cane is used as the input for the manufacture of sugar, sugar industry is getting large production from sugar cane growing states in India namely Andhra Pradesh, Tamil Nadu, Gujarat, Karnataka, Maharashtra and Uttar Pradesh.

Indian sugar production is on an upswing from 2010-2011 seasons as domestic sugar stock position is expected to once again turn surplus in the current season with the sugar output likely to outstrip domestic consumption. India’s output is likely to see a 30-35 per cent growth to over 26 million tons, driven mainly by improved cane acreage; adequate rainfall and the consequent increase in sugar production. With demand of around 22 million tons - making it the world's biggest consumer - India has already allowed exports of 2.60 million tons of sugar and is a larger surplus of 4 million tons in 2011-2012 from its expected sugar production of over 26.0 million tons, versus 24.2 million tons for the 2010-2011 season\(^1\). Indian sugar production is poised to increase to 29.8 million metric tons (raw value basis) in 2012-2013 due to an expected increase in sugar cane production. Anticipating surplus sugar production and strong export demand for 2012-2013, India will continue to be a net exporter of sugar for the second consecutive year, with exports likely to reach as much as 2.5 million tons. Continued strong demand from bulk consumers will push sugar consumption to 26.5 million tons\(^2\).

\(^1\) Union Budget 2012-2013.
\(^2\) USDA foreign Agriculture service, Sugar Annual Report - 2012
Indian sugar consumption is set to rise in 2012-2013 to 26.5 million tons on improved domestic supplies and strong demand from bulk consumers\(^3\). In the recent 2012-2013 Union Budget announcement, the Government of India (GOI) reduced the import duty on corn syrup from 30 percent to 20 per cent for the fiscal year 2012-2013. Lowering the import duty will encourage imports of HFCS (High Fructose Corn Syrup) for commercial use. Local sweet shops consume most of India’s Khandsari sugar. Gur is mostly consumed in rural areas for household consumption and feed use.

Sugar prices in India’s domestic wholesale market range from $540 to $600 per ton. Sugar prices in the upcoming 2012-2013 season are expected to remain range-bound on prospects of improved domestic supplies, although international price movements can influence domestic prices.\(^4\)

### 1.2 STATEMENT OF THE PROBLEM

Finance plays an important role in any business activity especially the sugar industry. Sugar industry is one of the leading industries in India. It is in need of enough funds for its operations. There are around 45 million sugar cane growers in India and a larger portion of rural labours in the country largely rely upon this industry. Sugar industry is one of the agriculture-based industries. Since, in India sugar is produced only from sugar cane as a raw material based industry, the sugar cane being an agriculture crop is subject to the change in nature, yielding either a bumper crop or a massive shortfall in cultivation from year to year. The industry is cyclical and seasonal in nature. Each and every industry has strength as well as weaknesses. The Indian sugar industry is the largest producer in the world but the country is still not led with the modern utilization of resources, which will earn profit. The profit is a great reward for any organization to function effectively and efficiently.

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\(^3\) Economic Survey of India, 2012  
\(^4\) Global Agricultural Information, 2012
A serious problem for the industry has been its frequent instability. There has been alteration of increases or decreases in production and prices over short periods, resulting in widespread difficulties for producers and consumers. Sugar production in India has fallen, as farmers over years shifted to better paying food crops. The ordinance holds a huge financial implication for the sugar industry. The ordinance takes effect from 1974 when the levy pricing of sugar has been a subject of controversy resulting in legal proceedings. There are broad areas of public intervention that regulate the sugar market in India. First, both the Central and the State Governments set a price support for sugar cane. In general, the Central Government announces a price level, referred to as the statutory minimum price for sugar (SMP), the SMP was replaced by the concept of Fair and Remunerative Price (FRP), which takes into account “reasonable margins” for growers of sugar cane at which sugar factories are legally required to pay farmers for their sugar cane. The SMP is then raised by State Governments to account for differences notably in productivity and transportation cost. The second area of intervention is through restrictions on sugar quantities to be sold in the market, as well as imposing on the sugar factories a so-called sugar levy, by which they are required to sell at below market price to the public distribution centers. In addition, the government regulates sugar trade via export limitations and marketing restrictions, such as limits on private stockholdings.

Initially, the government introduced these polices to sustain the income of sugar cane farmers while at the same time protecting consumers from sugar price inflation. Reconciling these objectives is a challenge as fixed sugarcane prices are disconnected from the relatively market based sugar prices. In the years of surplus production, sugar factories are caught in a price-cost squeeze with low sugar prices and relatively elevated fixed sugar cane costs. As sugar mills struggle to pay farmers at the obligatory price, growers eventually substitute alternative crops for sugar cane. As cane area is reduced and input use on standing cane is reduced,
cane production falls significantly. The downfall in production shifts the sugar balance into the deficit phase and provides an upward support to sugar prices. Eventually, sugar factories become solvent and begin to repay arrears to growers. As the incidence of default declines, sugar cane cultivation becomes attractive once more, shifting the domestic sugar balance into the upside phase of the cycle. Hence, the accumulation of arrears, brought about by a lack of instantaneous alignment between sugar cane and sugar prices, is causing, to a great extent, the cyclical nature of sugar production in India. Further, inelastic supply in the short-run, because of the permanent nature of sugar cane, means that farmers cannot adjust quickly to the realities of the market, hence prolonging the upside and downside phases of the cycle.

Although wide fluctuations in production are not new for this agro-based industry, which depends solely on the supply of a perishable crop like sugarcane, the present situation is, to say the last, highly critical. Weather patterns of course are a key factor as sugar cane yields are greatly affected by the level of rainfall, notably during the critical monsoon season. But, domestic sugar polices amplify the cycle through their effect on incentives along the sugar value chain, including for farmers and sugar factories. The diversion of sugar cane to alternative sweeteners like Gur and Khandsari has also been responsible for some-what low production. Sugar cane cropping has not received due attention at the hands of the centre whereas wheat and paddy received great care. The mills were unable to cover even their conversion costs; this caused losses for the sugar industry. Consequently arrears began to accumulate in payment from sugar mills to sugar cane farmers. The major problems faced by the sugar industry are insufficiency of credit limits, government policy, cyclical fluctuations, higher cost of production, low sugar prices, sugar imports, diversion of sugar cane etc.. Against this backdrop, a study of performance of the Indian sugar industry’s productivity and its growth, places its significant factor. Sugar industry is in need of enough funds
for its operations. Though the general enactment of the study unit has been highly prosperous, in regard to financial performance being an agro-industry, sugar industry is facing some problems. Hence, the researcher wants to know the answers for the following questions:

1. What is the growth and trend of the sugar companies?
2. What is the productivity of sugar companies in India?
3. Is the financial efficiency of the sugar industry in India viable?

1.3 OBJECTIVES OF THE STUDY

1. To study the history and process of sugar industry.
2. To analyze the Growth and Trend of select sugar companies in India.
3. To study the productivity of select sugar companies in India.
4. To analyze the financial strength of select sugar companies in India.
5. To offer findings and suggestions for improving the sugar companies in India.

1.4 METHODOLOGY AND TOOLS USED

It is a way to systematically solve the given problem. In order to achieve the objectives the following methodology has been used:

1.4.1 Sources of data

The study is mainly based on secondary data. The most widely-used empowered Capitaline database built by Capital Market India Pvt Ltd, Mumbai forms the source of data. In addition, other required information was collected through various journals, magazines etc. They are also used as a secondary source of information for the study.

1.4.2 Period of the study

The study covers a period of 10 years from the year 2001-2002 to 2010-2011.
1.4.2 Sampling Techniques

The first step in selecting companies has been the identification of a universal set of 119 sugar companies compiled by the Capitaline database of which only 34 sugar companies have financial data available for a continuous period of 10 years namely 2001-2002 to 2010-2011. The study proceeded by filtering the data on sugar companies based on the availability of the data as such, a Convenience sampling technique has been adopted and a sample of 34 companies were selected for the study.

1.4.4 Tools of Analysis

In the course of analyzing this study, various Accounting and statistical techniques have been made:

The Accounting tool uses the various financial ratios. The data were appropriately tabulated and classified to analyze the statistical tools like arithmetic mean, co-efficient of variation, kurtosis, skewness, and Annual compound growth rate, trend analysis by method of least squares, ANOVA and Z-Score Analysis. To ascertain its impact on variables the Multiple Regression analysis were used and they were tested by 5% level of significance. The productivity ratios and the production function using Solow model were also used.

1.5 SCOPE OF THE STUDY

The present study aims to access mainly the productivity and efficiency of the select sugar companies in India. The study includes the financial facts of the select companies from 2001-2002 to 2010-2011. In India the growth of the sugar industry plays an important role in achieving its productivity among the world. It also encompasses the history and manufacturing process in general. The scope of financial effects is very wide and the study is based on accounting information.
1.6 NEED OF THE STUDY

The Indian sugar industry as green industry its future determines the livelihood of millions of farmers. The growth of these companies plays a prominent role in the economic development of the nation. The growth of an industry is based on its success and productivity. It is the primary test of the success of an industry. The consumers and the government are directly or indirectly involved in this industry. The greater the productivity the more will be the technological innovations and thereby the higher will be the economic growth. The productivity and efficiency mainly depend upon the size, age and region of the industry. The study helps to ascertain the policy implications which would be of immense use to the planners and policy makers. Productivity and better efficiency help to set the industry in the pace of its higher growth. The analysis of productivity has necessities to increase certain industries’ economic position. The trend and growth have resulted in the development of an industry in present and in future. Finally, the financial problem is the main reason for unsatisfactory performance of sugar mills. So, the researcher conducts this study and an attempt was made to focus its measures by growth, productivity and financial soundness of the companies.

1.7 LIMITATIONS OF THE STUDY

The study covers only 10 years ranging from 2001-2002 to 2010-2011 and the data before and after the period are excluded for the study.

The relevant data for the study collected from the secondary source were taken from the published annual reports and Capitaline database of select sugar companies and as such its findings depend entirely on the accuracy of such data.

The present study is largely based on ratio analysis which has its own limitations.
1.8 ORGANIZATION OF THE CHAPTER

The study has been organized into eight chapters.

The First chapter deals with the Introduction and Design of the study and it consists of the Introduction of the study, Statement of the problem, Objectives of the study, Hypotheses, Scope, Methodology and tools used in the study, limitations of the study and chapter scheme.

The Second chapter reviews in brief the literature available in the area of the study.

In the Third chapter, research methodology is presented.

The Fourth chapter describes the history and process of sugar industry in India.

The Fifth chapter implies the growth and trend of select sugar companies in India.

The Sixth chapter deals with the productivity ratios and also reveals the production function of select sugar companies in India.

The Seventh chapter covers the analysis of financial efficiency of select sugar companies in India.

The Eighth chapter recapitulates the findings of the study and offers suitable suggestions and conclusion.