PRELUDE

Genesis : The investigator since his studies at the SARDAR PATEL UNIVERSITY was attracted by the revolutionary role played by the Amul dairy in the neighbourhood of the University. The role of the co-operative organisation primarily appeared to the investigator as a social reformer since irrespective of caste, colour or creed poor villagers could go to the Amul through its affiliated primaries and sell their milk which in turn through scientific processing was placed by the Amul as a marketable commodity to all consumers, who forgot the main source of milk supply and remembered the Amul as the central source. This social revolutionary role of the Amul Dairy was the chief feature of attraction. As a student of Commerce Discipline, the investigator began to apply his mind to the AMUL DAIRY from still more closer scientific aspect rather than a social angle. This further widened his horizon and began to view the entire dairy industry and its expansion in Gujarat from the commercial points of view - i.e. its economy including its profitability.

This later on tempted him to study the present problem in a more systematic and scientific manner.
Objectives: Dairy industry to-day has assumed gigantic proportion. It is now trekking new areas in production, processing and marketing of milk and milk products. After the experience of the ANUL, development of dairying on co-operative lines has widely been recognised not only in Gujarat but elsewhere in our country. Of course, Gujarat has remained in the forefront in the growth and development of dairy industry. Though dairying is one of the most ancient industries in India, scientific research studies pertaining to its financial aspects have remained limited and, therefore, need further probing. This may be due to the rural-approach to the industry initially with a service attitude. But, the same service-centre approach needs scientific treatment in all its dimensions.

Independent research studies relating to co-operative dairy industry conducted by academic institutions such as university departments, university teachers and other research scholars are far more limited. Under the circumstances and with a limited digging into the research areas the problem of studying the profitability trends of the DDCs may sound new and the investigation may seem to be a new dimension.
The main objectives of the present study are as under:

1. To review the evaluation and growth of District Dairy Co-operatives in Gujarat and India.

2. To ascertain the levels of profitability of the DDCs in Gujarat.

3. To examine in detail, important factors affecting profitability of DDCs in Gujarat.

4. To suggest ways and means to improve their profitability.

The present study covers a period of twenty years from 1960-61 to 1979-80 as 1960 was the year of the formation of the Gujarat State and, hence, was taken as the base year for the study.

Scope and Approach: Liquid milk processing and milk product manufacturing are the two main aspects of dairy industry. The investigator proposes to study the profitability trends of the DDCs and the factors affecting profitability of these Unions, therefore, issues connected with milk production at village level are beyond the scope of the present study.
Secondly this study is confined to the DDCs in Gujarat State only, and it does not cover other States. The co-operatives in dairy industry have shown an accelerated growth in the State of Gujarat as compared with other States in India. Gujarat, therefore, naturally assumes a leading role in Indian co-operative dairy sector. The study at the outset appears regional would prove to be very significant.

Eighteen of the nineteen districts in the State have District Co-operative Milk Producers' Union registered in each district. All of them still do not possess modern dairy plant. At present, eight districts have their own dairies, run by the respective district co-operative milk producers' union. The Gujarat Dairy Development Corporation established with the objective of creating co-operative milk infrastructure in the districts which were not so developed, operates in six districts i.e. Amroli, Surendranagar, Jamnagar, Bhavnagar, Junagadh and Kutch. These unions are not within the scope of this study. In the districts of Bulsar, the Panchmahals and Gandhinagar modern dairy plants are under construction by the respective DDCs.

Twelve district co-operative milk producers' unions having the following similarity of characteristics
are within the purview of the present study:

(1) All the DCIFUs are owned and managed by the respective district level co-operative organisations.

(2) Basic objectives of those DCIFUs are uniform, viz.,

(i) to sustain the growth of the milk co-operatives,
(ii) to provide a package of technical inputs to the members to enhance milk production,
(iii) to develop the marketing facilities for all the milk which the milk producer-members of their affiliated primaries want to sell.

For the purpose of studying the factors affecting profitability of the DCIFUs, the study is restricted mainly to the seven unions - the Kaira, the Mahesna, the Bareda, the Surat, the Sabarkantha, the Banaskantha and the Bharuch, which installed dairy plants. Though, the basic technology of these plants was the same, the following main differences were noticed:

(i) There was considerable 'size' variation in the installed processing capacity of the plants.
(ii) There was wide variation in the age structure of the plants.

(iii) Production pattern of these plants was not homogeneous. The liquid milk processing plants located in urban areas did not have regular production of milk products in the sense that their manufacturing milk products was mainly based on surplus milk in the flush season. The plants located in rural areas had regular targets of production of milk products.

(iv) Product mix of these plants were different and varying in nature and quantum.

Chapterisation Scheme: The thesis is divided into seven chapters. In chapter I evaluation and growth of EDCs in Gujarat and India are reviewed. Necessary background of dairy economy of Gujarat and India is provided, specially with reference to importance, progress, problems and planning of dairy development. It also reviews in detail the growth and development of milk co-operatives in Gujarat. Further it describes the framework of dairy co-operatives and high lights the role of IDC and NDDB in the growth of dairy industry.
The analysis of levels of profitability of the
DCMFUs is presented in the second chapter. Profit
performance as well as profitability trend analysis
with the help of various tools of profitability analysis
have been dealt in detail.

The third chapter describes and analyses the
availability of the main raw material (milk). Impact
of seasonal fluctuations on availability of milk and
the quantitative trends of milk procurement is examined.
Analysis of seasonal fluctuations of milk procurement
and its impact on capacity utilisation of dairy plants
is presented. Finally, the factors affecting supply of
milk to dairy plants have also been dealt with.

Important production processes in the dairy plants
of Gujarat have been described and the need for smooth
running of these processes have been emphasised in the
fourth chapter. Efficient handling of plants and
equipments and the need for avoiding wastages have been
emphasised.

In the fifth chapter, efforts have been made to
identify the important elements of cost of production
and their share in the total costs of dairy products of
each union. Attempts have also been made to study each
element of cost over a period of time with a special view to examining the possibility of controlling these costs.

Chapter six examines the marketing of milk and milk products in DCMFPUs in light of the current marketing situation. Comparative study of different methods of retail distribution of milk have been made. The objectives and achievements of CCMP in promoting the marketing of milk and milk products have been examined. The sales turn over and product mix of DCMFPUs have been analysed. The need for pricing policy that would make the DCMFPUs viable and commercially profitable have been emphasised.

The final seventh chapter presents an overview of the study. Here main contents of each chapter have been briefly summarised and important conclusions of the study have been presented in an integrated form.

Methodology: There are very limited sources of published data regarding the co-operative dairy industry of Gujarat in general and specifically pertaining to the individual district co-operative milk producers' union. However, there are two main sources of published data available:
(1) Year-wise statistical statements relating to the Co-operative Movement in India Part II (Non-credit) Reserve Bank of India.

(2) Annual Reports and Accounts of the respective District Co-operative Milk Producers' Unions.

The statistical statements relating to the co-operative movement could be used in a limited sense for the present study because they do not provide in detail any data pertaining to individual district co-operative milk unions.

The Annual Reports and Accounts of each DCKPU are the only useful and reliable source of data as far as empirical analysis of profitability trends of these DCKPUs are concerned. However, there are certain relevant facts and data which are very essential for the study have obviously been missing in these annual reports and accounts.

To overcome these limitations and to facilitate detail analysis, the missing data and information were collected by repeat visits of DDCs in each district, and discussions in the meetings with the office bearers, workers and others as discussed elsewhere hereafter.
Other sources of secondary data and information like published books, reports, pamphlets, leaflets, periodicals and journals were also used as the requisite tools for the collection of the data.

The information and data were collected assimilated and interpreted mainly in four stages.

In the first stage, primary information regarding district co-operative milk producers' unions was collected through personal visits to the office of the Registrar, Co-operative Societies, Ahmedabad.

As the Annual Reports and Accounts are the primary, authentic recognised documents for the study of profitability trends, at the second stage a short questionnaire with a request letter to send published/cyclostyled copy of annual reports and accounts since the beginning of the union was sent to all the district unions. It was indeed a satisfactory response in the sense that with an exception of three unions all the rest responded to the request. Even the cyclostyled copies of the reports were received later on by the investigator. This was a greater impetus to the investigator. Many unions could not supply a copy of their old annual reports because they did not have spare copies. So in
order to collect the remaining annual reports and accounts, personal visits were paid to the office of the district unions and some of the annual reports and accounts and other relevant information was copied from there. The office of the Registrar, Co-operative Societies was also requested to help in the matter, and some of the annual reports and accounts were also copied from there. Much of the time was taken away by the collection of information from old records of annual reports and accounts, but the investigator was glad to make note that he was able to collect all the information in respect of annual reports and accounts of all the unions for the period covered under the study. In all, 174 annual reports and accounts of twelve district co-operative milk producers' unions in Gujarat were collected as primary source of data. These annual reports and accounts were studied thoroughly and another questionnaire, in detail, was prepared and used for the purpose.

It was observed that the financial years of the annual reports and accounts of some of the unions were ending in June initially, but later on except the Rajkot Union, other district unions have changed their financial year and made it March ending. The details of such changes are presented below:
<table>
<thead>
<tr>
<th>Name of Union</th>
<th>June ending up to the year</th>
<th>March ending from the year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaira</td>
<td></td>
<td>Since beginning</td>
</tr>
<tr>
<td>Ahmedabad</td>
<td>1969-70</td>
<td>1970-71</td>
</tr>
<tr>
<td>Mehsana</td>
<td>1964-65</td>
<td>1965-66</td>
</tr>
<tr>
<td>Baroda</td>
<td>1969-70</td>
<td>1970-71</td>
</tr>
<tr>
<td>Surat</td>
<td>1969-70</td>
<td>1970-71</td>
</tr>
<tr>
<td>Sabarkantha</td>
<td>1969-70</td>
<td>1970-71</td>
</tr>
<tr>
<td>Banaskantha</td>
<td>1970-71</td>
<td>1971-72</td>
</tr>
<tr>
<td>Rajkot</td>
<td>Till date</td>
<td></td>
</tr>
<tr>
<td>Bharuch</td>
<td>1972-73</td>
<td>1973-74</td>
</tr>
<tr>
<td>Gandhinagar</td>
<td>1971-72</td>
<td>1972-73</td>
</tr>
<tr>
<td>Panchmahals</td>
<td></td>
<td>Since beginning</td>
</tr>
<tr>
<td>Bulsar</td>
<td>1975-76</td>
<td>1976-77</td>
</tr>
</tbody>
</table>

At the third stage, an effort was made to collect information as required in the questionnaire from all the district unions. Standards were fixed and wherever required adjustments were made in the annual reports and accounts with a view to making them comparable. Tables for working out profitability ratios were prepared, inferences were drawn on the basis of analysis of these tables and notes were prepared indicating the differences between different unions.
At the fourth stage, additional information and explanations were sought through personal visits/discussions with the different cadres of executives of the DCMPUs and their milk producer-members. Personal visits were also paid to study milk procurement, transportation, system, production processes, and sales organisation. Special visit was also paid to the "Experimental Dairy" at the Dairy Science College, Khatiwadi Campus, Anand with a view to understanding of the technical processes and the problems of dairy plants. Detail discussions were also carried out with the top level executives of the Gujarat Milk Marketing Federation with special reference to their marketing activities.

In short, the inferences on profitability trends and the suggestions or recommendations for improvement are based on the information gathered through primary data and detail discussions with executives of the district co-operative milk producers’ unions in Gujarat and other organisations, institutions and authorities associated and/or concerned with them.

The investigator has been obliged to use a system of codes in the foot-notes since the supporting references
have been often numerous. These codes have been serialised by sections of the Bibliography.

The lists of (i) abbreviations used (ii) the map, graphs, diagrams and charts and (iii) the tables used follow this.