Dairying was a supplementary activity to the farmers in the past. But now it has grown to the status of the Industry and some times independent of Agriculture. Dairying has played a predominant role in strengthening the India’s rural economy. This contemplated that this industry can be an instrument to bring about a socio-economic transformation to the rural masses. Indeed small and marginal farmers and landless labourers derive a substantial part of economic strength by their participation in the Dairy Industry. The White Revolution in India has reformed the Indian Dairy Industry almost in all spheres. India today enjoys the distinction of being the largest producer of milk in the world the credit for which largely goes to Operation Flood that has linked both the production and consumption. Quantitatively a micro level research indicates that the Dairy industry has achieved a phenomenal success. The same thing cannot be said at the macro level qualitatively the performance of the industry leaves much to be desired. The future of the Dairy industry will have to be built on quality and quantitative services.

The present Study was carried out with the following objectives;

1. to analyze the perceptions of the Dairy co-operatives and retailers towards the working of KOMUL,

2. to examine the productivity related issues which have an influence of over all cost and revenue of KOMUL,

3. to study the marketing mechanism of milk and milk products of KOMUL,
4. to examine the efficacy of Integrated Business Plan of KOMUL and
5. to suggest policy measures in the light of the findings of the Study.

To serve as a basis for investigation with the above mentioned objectives, the following Hypotheses were set;

**Hypothesis - 1**

*Ho: Null Hypothesis*

Increase in Milk production is negatively related to the procurement measures initiated by KOMUL.

*Ha: Alternate Hypothesis*

Increase in Milk production is positively related to the procurement measures initiated by KOMUL

**Hypothesis - 2**

*Ho : Null Hypothesis*

Productivity trends are on the increase consistently with time.

*Ha: Alternate Hypothesis*

Productivity trends are on the decrease consistently with time.

**Hypotheses - 3**

*Ho: Null Hypothesis*

Dairy Retailers negatively perceive the Marketing efforts of KOMUL

*Ha: Alternate Hypothesis*

Dairy Retailers positively perceive the Marketing efforts of KOMUL

**Hypotheses - 4**

*Ho: Null Hypothesis*

Quantitative targets and achievement levels have non linear relationship

*Ha: Alternate Hypothesis*

Quantitative targets and achievement levels have linear relationship
The researcher has gathered the relevant data from primary and secondary sources. The secondary data was gathered from books, journals and the research work carried out in this area. Published reports by the milk unions at the State and the National levels have been a source for the secondary data. Further, the primary data was gathered through administering a questionnaire to randomly chosen respondents. The sample frame of the respondents is given below:

**Sample frame of Respondents**

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Actual No.</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk Co-operatives</td>
<td>1606</td>
<td>350</td>
</tr>
<tr>
<td>Dairy Agents</td>
<td>380</td>
<td>150</td>
</tr>
<tr>
<td>Total</td>
<td>1986</td>
<td>500</td>
</tr>
</tbody>
</table>

Since the socio-economic profiles of the respondents indicate that they are educated and well informed, the researcher used both the questionnaire and interview methods to gather the data. Since the universe was big, a sample of 350 Dairy Co-operative Societies, 150 Dairy Retailers were chosen as our respondents. Luckily the response from the sample members was 100 per cent. For the analysis of the survey data, SPSS Software has been used. Further, statistical tools like Likert’s scale, Graphs, Descriptive Statistics, F-Test, T-Test, Z-Test and Regression analysis have been used.

7.1. Major findings of the Study

In the following pages a brief summary of the major findings of the Study are presented. For convenience sake the findings are presented under the following headings;
1. Findings relating to the perceptions of MPCSU Members of KOMUL.
2. Findings relating to the perception of Retailers of KOMUL products.

Before presenting the findings of the study, it is worthwhile to recall in the nutshell, the contents discussed in the prelude of the thesis. Dairying is the second important subsidiary occupation of our men in countryside. The development of dairy industry in India is well known because of White Revolution which brought significant changes in the life of our farmers in general and in providing economic means in particular. Economic development is a continuously observable process achieving which has been the policy objective across the globe over time. Haunting age-old economic diseases like poverty, unemployment, inequitable distribution of income and wealth etc have to be contained with right spirit and opt policy. When Indian farmers are gambling with monsoon they should be protected with a second best alternative like dairying. Failure to protect our rural farmers will lead to the ocean of poverty for too large and the island of prosperity for too few. The Trickle Down effect to some extent as become a reality in Indian scenario chiefly because of the emphasis given to Dairy Industry.

This diagnostic study is based upon the perception of 350 respondents from dairy co-operative societies and 150 dairy retailers. Taking the sample from all representing components helps to look at a holistic way of the functioning of the MPCSU and Retailers', hence this study the same leading to findings.
A. Findings relating to MPCSU of KOMUL

1. Experience of DCS: The Study reveals that 33 per cent of the KOMUL’s MPCSU are functioning in between 10-15 years, it is about 27 per cent are in the experience range of 5-10 years. Comparatively the new entrants who have below 5 years of experience are 23 per cent. It is revealed by the study that 17 per cent of the respondents have the experience of more than 15 years. It is evident from the above that 60 per cent of the MPCSU have come under 5-15 years of experience.

2. Members in DCS: Our study reveals that 46 per cent of the KOMUL’s MPCSU have the members in the range of 1-150 who are the majority, 28 per cent have the members in between 51-100. Put together these two it will be 74 per cent which clears that 50 to 150 members size of the members is prevalent in the Study area. The members are small and marginal farmers, landless farmers, SC, STs, women members etc.,

3. Member Pourers: It is found that all the members are not regular milk pourers. Typically 53 per cent member pourers are found in the category of 101-150. Even in the remaining categories there is substantial presence of members not pouring the milk to the society. The reason may be self consumption, selling to private dairies for attractive prices etc.

4. Quantity of Milk Poured: Researcher found that 52 per cent of the respondent DCS collect 501 to 750 liters of milk. Its about 32 per cent of the societies are in the range of 251 to 500 liters. The Union average is very close to the reality which is 51 per cent. Herd size is the reason behind the quantity of milk poured to society.

5. Animal Health Services: More than 52 per cent of the respondents opined that the animal health services provided are average, while 33 per cent expressed the opinion that the animal health services are good. The
dairy organization is built upon the foundation of cross breeding and regular animal health coverage. The expectation levels of farmers are comparatively high always towards animal health services and they expect too much for too little.

6. Emergency Health Services: A close interaction of the researcher brought to light that 40 per cent of the respondents opinioned that emergency services are average. The opinion of 28 per cent is not satisfactory indicates that emergency health services are of utmost necessity for members.

7. Animal Health and Infertility Camps: The opinion of 36 per cent of the respondents towards animal health and infertility camps was average. Even 26 per cent expressed the dissatisfaction towards animal health and infertility camps.

8. Availability of Drugs: Union maintains sufficient supply of drugs and any scarcity of drug leads to dissatisfaction among the farmers. Drugs, Vaccination, De-worming drugs etc are a must in dairy industry. 76 per cent of the respondents expressed satisfaction towards the supply and availability of drugs.

9. Artificial Insemination Services: The opinion of the respondents towards Artificial insemination services was in between average and good for the parameters.

10. Supply of Cattle Feed, Mineral Mixture, Molasses Brick: Opinion of 42 per cent of the respondents is that the supply of the cattle feed, mineral mixture and molasses brick is average.

11. Modern Programmes: It is revealed by the study that the farmers have not shown much interest towards fodder development, silage making, azolla production and for the supply of fodder chopping machines.
12. **Payment made by Unions:** The opinion of the 82 per cent of the members of MPCSU is good and a very negligible number of 2 per cent expressed dissatisfaction on this issue.

13. **Subsidy and Incentives:** 86 per cent of the respondents indicated that the incentives and subsidies by government are the motivating factors.

14. **Animal Health Insurance:** It is revealed by the study that 84 per cent of the respondents expressed satisfaction towards animal health insurance.

15. **Milk Transportation:** The opinion of 32 per cent of the respondents that milk transportation is average but the opinion of 30 per cent is that it is good.

**B. Findings relating to Retailer’s of KOMUL**

1. **Experience of Retailers:** It is revealed by the study that 44 per cent of the retailers are in the range of 5-10 years in milk retailing business.

2. **Quantity of Milk Sold:** The opinion of 43 per cent of the respondents is that they sell 250 to 500 liters of milk a day.

3. **Selling Nandini Milk Products:** There is a mixed opinion among the retailers about the selling of nandini milk products. 140 respondents sell curd, 48 sell ghee, 75 retailers opined that they also sell peda.

4. **Opinion on Services by the Union:** The opinion of the 65 per cent of the respondents was in between satisfied and highly satisfied for all the services provided by the union.

5. **Supply of Milk:** It is revealed by the study that towards the supply of milk 52 per cent of the retailers expressed that it is good and 25 per cent opined it very good.
6. **Cash collections:** The opinion of 61 per cent of the retailers towards cash collections was in between good and very good.

7. **Quality of Milk:** The retailers revealed that 33 per cent expressed that the quality of the milk is good and 30.7 per cent opined that it is very good.

8. **Packing:** The finding with regard to packing is that 40 per cent of the respondents expressed that it is average and 34 per cent expressed that it is good and 21 per cent of the respondents expressed that it is very good.

9. **Margin compared to Private Dairy:** The retailers by majority of 84 per cent expressed that the margins of nandini is too low when compared to private Dairy.

10. **Promotional Measures:** It is revealed by the study that 41 percent of the retailers expressed that promotional measures are poor and the opinion of the 30 per cent is that it is average.

11. **Facilities:** The finding with regard to the facilities provided to retailers is that 66 per cent of the respondents opinion is average, 19 per cent expressed that it is poor and 12 per cent indicated that it is very poor.

12. **UHT Milk (Ultra High Temperature treated Milk):** It is found by the Study that replacement of pasteurized milk packed in regular sachets to UHT milk, packed in special packing material, was opined to the extent of 54 per cent that it is average and 30 per cent expressed that replacement is not required.

### 7.2. Suggestions

Based on the research findings the following Flow Chart has been offered for the better functioning of the Dairy industry.
The above flow chart reveals the optimum functioning of the Dairy Industry which can function optimally only with a holistic approach of involving all concerned in the dairy industry. If the holistic environment is not created the problems remain, contradictions prevail and the dairy industry looks like functioning beneath the volcano. It is due to the fact that, all the components of Dairy Industry are managed by multiple participants. Hence, it is suggested that the industry should focus on the four tenets (Source: Brahmasutra) for optimum functioning;

i. **SAMANVAYA** (equal incidence and applicability)
All the participants in the Dairy Industry must get a feeling that the functioning of the environment is *transparent, encouraging, and consistent in success and demonstrates stability*. Once such an environment (Samanvaya) is created, all participants get motivated and there will be less lapses and confusions.
ii. Avirodha (Non-contradictory)
The Study reveal that there are various issues of contradiction among the member of dairy co-operatives retailers and others. There prevails misunderstanding, sharing, caring and cooperating among each sub entity in Dairy Industry, which is leading to Virodha. All this should be extricated through the principle of Avirodha, which is possible through positive thinking, searching the innovative path not the much trodden path and collective thinking enhances Avirodha in Dairy Industry.

iii. Sadhana (Proactive Actions)
It is observed that in Dairy Industry, their prevails ambiguity, misconception, foul speaking, mud throwing on one another, all these reduce Sadhana or Proactive Actions. The strategies for Sadhana are process oriented thinking (let me do my work to my best), clear communication, inculcating the culture of doing right thing in right time, utilising right resources with right people.

iv. Phala (Results as Planned)
Every active economic entity expects Phala or Results for the efforts and deployed resources. To get Samadhana or Nemmadi or Phala in business establish a system of resource audit, provide performance based reward, involve academicians to contribute, because they carry out research and grasp latent knowledge, evaluate and budget and reach the set goal which is Phala.
Keeping in mind the perceptions of the respondents, findings of the Study and the observation of the researcher the following suggestions are offered:
I. Procurement

1. Creation of Research Wing: There is an urgent need to establish research wing at KOMUL for carrying out continuous research in Dairy industry. This research wing will take care of carrying out research on multiple aspects of Dairy Industry. Research wing will be the knowledge hub and it will serve as a backbone for KOMUL.

2. Professionalize the management of KOMUL: Presently MPCSU’s are working conventionally and they are continuing the age old practices. There is an urgent need to give professionalism to MPCSU’s so that awareness and awakening will come into system. Party politics of the members can be removed only by professionalizing the MPCSU’s.

3. Reasonable Herd Size: It is necessary to educate farmers about a viable herd size to enjoy the benefits of the Dairy Industry. There is an urgent need to educate farmers on the size of the herd which will contribute further to increase the milk production generating profit.

4. Rationalization of subsidy: The present subsidy policy of the Government is flat and not encouraging and hence rationalize the system of subsidy so that the members will become active on the line that lower the milk supply lower the subsidy and vice versa.

5. Animal Ambulance: the animal ambulance will serve the dual purpose of emergency health service to the animal in trouble and also all veterinary services should be made available to the farmers round the clock.

6. Incentive schemes: To bring in activism among field officers and societies incentive schemes can be introduced which will increase the milk production.
7. **Autonomy to Processing Units:** To encourage the processing units and to make them to stand on their own there is a need to provide autonomy in a phased manner so that they will become active, vibrant and strong.

8. **Amendments to Co-operative Laws:** Milk industry is undergoing fast and far reaching changes due to globalization and its impact can also be seen in Dairy Industry. Co-operative laws have to be amended to give more teeth to the unions and also non pourer and non active members can be removed for the effective functioning of MPCSU’s.

9. **Environmental Concern:** Presently milk processing units are not concentrating on waste disposal and concern towards environment. There is an urgent necessity in the processing units for adopting environmental concern by taking appropriate steps while releasing the effluents.

10. **Feed Management:** Cattle feed procurement and distribution policy of KOMUL has to be streamlined immediately. Private sector can be allowed to supply cattle feed because KOMUL on its own is not in a position to cater to the demand of cattle feed from members.

11. **Computerization:** The accounting process in KOMUL and MPCSU’s has to be computerized immediately. Management Information System will help in effective decision making and for solving problems of KOMUL.

II. **Working**

1. **Flow Chart:** In order to enhance productivity, milk flow chart to various sections in KOMUL has to be developed and implemented. Feedback reports on daily basis can be collected by
middle level management so that wastage and loss can be identified to take corrective action.

2. **Periodic Audit:** The Present audit practice at KOMUL has to be done away with and in its place Periodic Performance Audit by outside professional agencies will bring in the responsibility and accountability.

### III. Marketing

1. **Develop Milk Park proximity to consumer market:** There is an urgent need to establish milk parks which are close to consumption points. Introduction of mechanization, automation and latent technology will help in many folds for the growing demand in urban centers.

2. **Marketing Autonomy:** Milk unions should be given marketing autonomy so that the processing of milk and milk related products can be taken care of by the respective processing unions.

3. **Segmentation strategy:** For better marketing of milk and milk products segmentation strategy can be evolved which can take care of all types of market demand.

4. **Pricing Policy:** The present pricing policy has to be streamlined and it should be guided by market forces. The differential price policy can be implemented by KOMUL.

5. **Cost effective measures:** In procurement and distribution of milk and milk products there is a need to adopt cost effective measures including packing and transportation.
7.3. Suggested Areas for Further Research

The present study is confined to look into the Working and Performance of Milk Producers Unions - A case Study of Kolar and Chikkaballapur districts of Karnataka state. There are a good number of areas for the scholars to evince interest in the arena of Dairy industry. Independent studies can be taken up for intra unions of Karnataka. Even a comparative study can be made between AMUL and KOMUL by the researchers. The scholars can make a comparative and in-depth study on private and co-operative sector in Dairy industry. Further research can be taken up even on the marketing strategies of KOMUL in comparison with the private sector. Researchers can also look into an in-depth study on dairy products which is becoming more prominent now-a-days.

7.4. Conclusion

It is gratifying to note that the Dairy Industry in general and KOMUL in particular has grown from strength to strength over a period of time. Indeed Dairy has grown to a status of an industry. Our Study has identified the loop holes in the working of the Dairy industry in general and KOMUL in particular. Areas where loop holes are identified include procurement of milk, processing of milk, pricing the milk products, packing of milk and milk products, pricing mechanism, members complaints, subsidy policy of the government, accounting system, internal and external audit mechanism, professionalizing the management of Dairy etc.,

To plug the loop holes many suggestions have been offered in the Study. If the suggestions are taken cognizance by the policy makers, it is expected that the Indian Dairy industry will satisfy both the qualitative and
quantitative parameters set for the growth of the industry. The industry should not be dependent on individual for its growth. But it should develop such systems which takes the industry to the greater heights as the industry has brought about sweeping changes in the socio-economic life of the rural masses, government should go to the rescue of the Dairy industry. Any effort at the individual level is bound to meet with failure. The different stake holders have to collectively and in unison have to work towards a common a goal of strengthening the Dairy industry. All these stake holders have a role to play in this endeavor of nursing the Dairy industry. Indeed their roles and responsibilities are co-equal.