CHAPTER VII

CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

In the last two chapters the discussion was around the HOPCOMS and fruits and vegetable marketing (Chapter V) and the Producers’ and Consumers’ Perspectives on the HOPCOMS (Chapter VI). In the fifth chapter, the nature and extent of fruits and vegetables marketing at the HOPCOMS outlets in the city of Bangalore in respect of procurement from the farmer-producers, both members and non-members of the HOPCOMS, and markets and sales of the fruits and vegetables as well as other products was discussed. The chapter also looked at the turnover and profits of the HOPCOMS, farmers’ arrival at the HOPCOMS for sale of their produce and also the arrivals of fruits and vegetables from the different districts of Karnataka, particularly the six districts of our study, and other States as well. The chapter focused on the top 10 fruits and vegetables marketed by the HOPCOMS in the city. In the sixth chapter, the focus was essentially on the data collected from the farmer-producers and the consumers using two custom-designed questionnaires and on the results of the simple frequency and percentage analysis of the two datasets to understand what the producers and consumers perceived of the services of the HOPCOMS in their own contexts as producers and buyers. Their perspectives were discussed from all possible angles of fruits and vegetables marketing and with regard to their benefits and profits/savings from selling and buying the products from the HOPCOMS. In effect the two chapters were the core chapters discussing the essence of this thesis.

In the present chapter, however, the purpose is to summarize the entire thesis commissioned in seven chapters, including this chapter, and speak of the findings and conclusions of the study, implications of the study for horticultural development, fruits and vegetables marketing and for policy and research. Recommendations are made on the basis of the perspectives gained from the study and the problems perceived by the scholar, the producers and the consumers as regards fruits and vegetables production and marketing. Suggestions for further research are also made.
from the understanding and analysis of the problem of the study and the directions the studies could take from where the scholar leaves off.

7.2 Summary of the Thesis

The thesis has been commissioned in seven chapters, keeping in view the need to provide an understanding of both the theoretical understandings and underpinnings of marketing through cooperatives and particularly the HOPCOMS in the state, from its inception in 1969 and through the years until today and the empirical study reported in the thesis in all its important aspects, notably the HOPCOMS or the Society as it is generally called, the farmers who produced fruits and vegetables for the Society and the consumers who bought the fruits and vegetables from the HOPCOMS outlets in the city and in some of the districts of study as well. The theoretical aspects were dealt with in the first three chapters and the empirical aspects were dealt with in the last three chapters, including this chapter, Conclusion and Recommendations. The fourth chapter on Research Methodology was designed as a bridge between the theoretical and empirical aspects, as the chapter explained the methodology adopted in the study in all its rationale and relevance, particularly the questionnaire surveys conducted with the farmer-producers of fruits and vegetables and the consumers who bought them and benefitted in a variety of ways because of the HOPCOMS’ cooperative effort at bringing the producers and consumers together, one benefitting the other in some deep ways.

7.3 Findings and Conclusions

The findings and conclusions here are mostly from three chapters of the thesis, namely, Chapters V and VII which discussed HOPCOMS’ role in fruits and vegetables marketing in the State of Karnataka, particularly in the city of Bengaluru and the six districts of our study: Bangalore Urban, Bangalore Rural, Chikkaballapura, Kolar, Ramanagaram and Tumkur. While the fifth chapter discussed the HOPCOMS outlets and their role in marketing fruits and vegetables, it focused principally on the top 10 fruits and vegetables marketed to the consumers at the city. On the other hand, the sixth chapter discussed the perspectives of the producers (farmers in the six districts) and the consumers, mainly in the city of Bengaluru. Only very important findings and conclusions are encapsulated in this chapter, to provide a good summary of the findings and conclusions one would need to know and
appreciate. The findings and conclusions given in a nutshell are given as points such that the readers get a large number of findings and the conclusions thereof.

7.4 HOPCOMS and Fruits and Vegetable Marketing

- With a new rule of the HOPCOMS in force, three classes of ‘members’ - A Class (Farmers), B Class (Government), and C Class (associated members including cooperative societies and other institutions, and merchants) – were part of the Society.

- An earlier notification of the HOPCOMS in 2010 indicated that the C Class membership was of the State Government and B Class membership was of the associated members, cooperative societies, and merchants.

- The share of A Class membership was Rs. 250 to a share, B Class membership was Rs. 1,000 to a share, and C Class membership was 96 per cent of all the shares. In March 31, 2010, the share capital of the Society was Rs. 26.6 million, which, as of March 31, 2014, remained the same.

- There were a total of 12,680 members on the rolls of the Society at that time (2010). There were 11,835 farmer members, with a share of Rs. 2.932 million; the Government of Karnataka as a member had a share of Rs. 22.81 million; and other members who were 844 strong had a share of Rs. 0.85 million. The total share amount was Rs. 26.6 million.

- Members have privileges and received dividends from the profits of the HOPCOMS, in proportion to their shares. Farmer-members have other privileges also in that they have preferential treatment when they bring in their produce for sale at the Society’s procurement centres in the city and elsewhere. The Society also provides transport and other services at nominal rates for bringing their produce to the market.

- During the 15-year period of 1999-2000 to 2013-14, the compounded annual growth for the fruits handled by the Society was -3.3 per cent, whereas its monetary value over the years was 4.48 per cent. This meant that the fruits handled over the 15-year period was widely fluctuated in tonnage handled and marketed and showed a declining annual growth rate. The value of fruits
showed similar fluctuations but saved for increasing prices of fruits, had
shown an increasing annual growth rate overall.

- The tonnage of fruits handled over the years showed 15,920.78 tonnes in
  1999-2000 to 16,384.41 tonnes two years later, but plunged to 10,910.43
  tonnes in 2006-07 and then to 9,618.95 tonnes in 2013-14.

- Vegetables tonnage and money value showed more or less similar, fluctuating
trends over the 15-year period, of course with some delectable differences.
The tonnage in 1999-2000 was 14,444.5 tonnes, which rose to 16,659.54
tonnes two years later, and then only to decline over the years to 12,903.21
tonnes in 2004-05 and to 11,106.72 tonnes in 2013-14, with even dramatic
increases and decreases in tonnage over the intervening period.

- The compounded annual growth rate computed for the period was -1.74 per
  cent, much less than that observed for fruits. The money value of vegetables
showed similar fluctuating trends but the prices held on well over the years
that the compounded annual growth rate was 7.26 per cent, relatively better off
than that of CAGR estimated for fruits.

- The monetary value of vegetables for the corresponding tonnage was Rs.
  101.09 million for 1999-2000, Rs. 112.14 million for the following year, Rs.
  124.34 million for the year 2001-02, Rs. 124.13 million for 2004-05 and then
with ups and down in the intervening years to Rs. 289.08 million in 2013-14.

- The tonnage of fruits and vegetables procured from the markets showed
  fluctuations, in fact ups and downs right through, at 4 spells in the 15 years:
3,282.59 tonnes in 1999-2000 to 4,887.12 tonnes the next year; to 4,643.99
  tonnes in the next year to 4,865.29 tonnes the following year; hopping then to
3,422.79 tonnes in 2004-05 only to rise to 4,849.72 tonnes in 2007-08 through
a dip and then to a rise to 5,508.52 tonnes in 2011-12 to fall once again to
4,506.63 tonnes in 2013-14. The compounded annual growth rate computed
for the tonnage procured from the markets was 2.14 per cent, a better growth
than that for tonnage from the farmers.
• The CAGR for the monetary value of fruits and vegetables procured from the market was high at 9.72 per cent, which by comparison with the farmers was very good. The value of fruits and vegetables procured from the markets gradually increased from Rs. 55.37 million in 1999-2000 to Rs. 88.89 million in 2003-04 but then dropped steeply to Rs. 64.2 million in the very next year to wade through ups and downs and ups to Rs. 198.69 million in 2011-12 and Rs. 225.65 million in 2013-14.

• The share of the fruits and vegetables procured from the farmers remained high throughout between 76.6 per cent in 2008-09 and 89.19 per cent in 1999-2000. There were however fluctuations in the share of fruits and vegetables procured from the farmers in the 15-year period, never being the same at any one given year. Comparatively however the tonnage procured from the markets remained low between 10.81 per cent in 1999-2000 and 23.4 per cent in 2008-09.

• The sales value of the procured fruits and vegetables from the market showed a CAGR of 5.91 per cent. The value of procured fruits and vegetables increased from Rs. 280.58 million in 1999-2000 to Rs. 331.05 million in 2002-03 and to Rs. 291.45 million in 2005-06. Thereafter, there was a steady upward trend from Rs. 318.69 million in 2006-07 to Rs. 635.38 million in 2013-14, a doubling of value of procured fruits and vegetables from markets over an 8-year period.

• The Society as a major fruits and vegetables seller in Bangalore city faced considerable risk of loss of profits.

7.5 Producer Perspectives

• As many as 280 farmer-producers were interviewed for the survey, from the six districts of the study area: 40 producer-farmers each from Bangalore Rural, Bangalore Urban and Ramanagara districts; 50 farmers each from Kolara and Tumkur districts and 60 producer-farmers from Chikkaballapur district. Three districts accounted thus for 14.3 per cent each of the interviewed respondents; two districts for 17.9 per cent each; and one district for 21.4 per cent of the interviewed farmer-producers of fruits and vegetables respectively.
Conclusion and Recommendations

- Nearly a third (32.5 per cent) of the interviewed farmer-producers had no schooling whereas 45 per cent of them had attained primary to higher secondary education, 19.3 per cent of them pre-university and/or graduate education and a very small proportion of 3.2 per cent had obtained certificates and diplomas, particularly technical such as engineering and industrial training.

- A large majority of 81.8 per cent of the farmer-producers was in agriculture-horticulture profession while 17.9 per cent of them were employed in private and public sector undertakings and institutions and 14.6 per cent of them were in business. Although agriculture-horticulture was somewhat profitable, the farmer-producers needed supplementary occupations to supplement their incomes.

- The average number of children to a family was about 3 (standard deviation 2), which again made the family rather small, with a minimum of 2 children and a maximum of 3 children, boys or girls or a mix of both. Average family size was 5.5

- Irrigated lands owned by the farmer-households interviewed averaged to 4.77 acres (standard deviation 1.45) with a minimum of 2 acres and a maximum of 8 acres.

- Dryland owned averaged to 7.71 acres (SD 1.98) with a minimum of 3 acres and a maximum of 13 acres to a household.

- The total land owned averaged to 12.5 acres (SD 2.06) with a minimum of 6 acres and a maximum of 18 acres.

- In the last cropping season (2013) the area under irrigation averaged to 2.21 acres (SD 0.99), with a minimum of 1 acre and a maximum of 5 acres under different crops. Dry area under cultivation averaged to 2.45 acres (SD 0.90) with 1 acre as minimum and 4 acres as maximum.

- As for as the total land under cropping, the area averaged to 4.56 acres (SD 1.71) with a minimum of 1 acre and a maximum of 9 acres.
• Production from irrigated areas averaged to 5.97 tonnes (SD 1.64), from dry areas averaged to 5.93 tonnes (SD 1.59) and the total production averaged to 11.54 tonnes (SD 3.32).

• The minimum production from irrigated areas was 2 tonnes, from dry areas was 1 tonne; the maximum production from irrigated areas was 9 tonnes, dry areas was also 9 tonnes and the total production was 17 tonnes to a household.

• The yield averaged to 2.19 tonnes / acre for irrigated areas and 1.84 tonnes / acre for dry cropped areas. The maximum yield recorded for irrigated areas was 7 tonnes/acre and for dry areas was 5 tonnes/acre of the farmer-households interviewed.

• In the second most important crop of the last season, the area under irrigated crops averaged to 1.71 acres (SD 0.73), the area under dry crops averaged to 2.24 acres (SD 1.01) while the maximum under irrigation amounted to 5 acres and under dry crops amounted to 8 acres. The total area under second crop averaged to 3.91 acres (SD 1.48) with a maximum area of 8 acres to a farmer-household.

• Production averaged to 5.66 tonnes for irrigated crops (SD 1.79) and to 4.64 tonnes for dry crops (SD 2.61), with an average of 10.16 tonnes to an acre (SD 3.76) of the total production to a household.

• The yield per acre averaged to 2.37 tonnes/acre for irrigated crops (SD 1.38), 2.3 tonnes/acre for dry crops (SD 1.30).

• Income from agriculture averaged to Rs. 250,714 to a producer-farmer family with a standard deviation of Rs. 108,754. The minimum agricultural income was Rs. 100,000 and the maximum was Rs. 500,000.

• Household income from all sources averaged to Rs. 343,214 with a standard deviation of Rs. 115,270. While the minimum is Rs. 100,000, the maximum is Rs. 700,000.

• The income from other sources averaged to Rs. 158,140 (standard deviation Rs. 73,136) with a minimum of Rs. 100,000 and a maximum of Rs. 300,000.
Conclusion and Recommendations

• Total income of the producer-farmer households averaged to Rs. 618,214 (standard deviation Rs. 142,898) with a minimum of Rs. 300,000 and a maximum of Rs. 900,000 to a household.

• Most farmer-producers of fruits and vegetables in the six districts of the study area make their ends meet well enough with the agricultural, horticultural and other incomes. It is only the bottom 5 per cent who make little money but even their households are not very poor.

• The quantities sold for a year by each of the farmers amounted to a minimum of 1,000 tonnes and a maximum of 9,000 tonnes at an average price of Rs. 1.0 to a kg to Rs. 12 to a kg of products. The maximum value added ranged from Rs. 36,000 to Rs. 81,000 and the minimum from Rs. 1,000 to Rs. 25,000 to a farmer-producer.

• There were storage facilities at the field according to 44.6 per cent of the farmers. The farmers visited the HOPCOMS for the sale of their produce regularly: 17.09 per cent of them visited daily; 48.74 per cent of them on a weekly basis and 34.17 per cent of them twice a week.

• Friends were the sources of information on prices at the HOPCOMS for 51.07 per cent of the farmers and the local markets were the sources for 48.93 per cent of them.

• Lack of good road facility bothered 83.6 per cent of the farmers while high haul cost worried 82.5 per cent of them. Lack of alternative facility (71.6 per cent), inadequate transport facility (70 per cent), inefficient transport facility (61.4 per cent) and on-availability of certain modes of transport (58.6 per cent) were the most important of the problems of transport causing loss of income to the farmers.

• Most farmers (84.3 per cent) believed that they would continue to grow the same fruits and vegetables. Better yield was the reason for doing so by 83.2 per cent of them and good income from fruits and vegetables was considered as the reason for continuing to grow the same fruits and vegetables by 72.5 per cent of them.
Cooperatives such as the HOPCOMS (83.6 per cent) and the moneylenders (83.2 per cent) top the list with very high proportions of the farmers taking credit from them. The very purpose of establishing HOPCOMS and cooperative societies in the state, and in the country, was for the purpose of weaning the farmers from the moneylenders. But the moneylenders still hold sway over the farmers is reiterated by our data. Local businesses (81.8 per cent) also funded the horticultural farmers because of the high value crops of fruits and vegetables. A good majority of 70 per cent of the farmers sought credit from the commercial banks whereas 31.4 per cent of them sought from other sources.

All the farmers interviewed were members of the HOPCOMS: A good number of them (41.4 per cent) for 5-10 years, while 37.1 per cent of them for 10-15 years, and 13.6 per cent of them for more than 15 years. Only a small percentage of the farmers (7.9 per cent) however were members in the last 5 years.

Only 80.7 per cent of the farmers interviewed are satisfied with the present system at HOPCOMS and this means that they do want changes in the system towards better performances. All of them received some sort of financial assistance from the Society and also services.

Better prices was quoted as the top main reason by 79.3 per cent of the farmers for selling their produce to HOPCOMS and better services by a slightly lower percentages of the farmers (66.1 per cent) for the same.

In the opinion of 81.8 per cent of the farmers, transport provided by the HOPCOMS needed improvement, for that is the most important function in the haul of fruits and vegetables. Storage also needed improvement in the opinion of 80.7 per cent of the farmers. Those who suggested improvements in other services of the HOPCOMS were: grading 78.9 per cent, processing 67.9 per cent, exporting 61.8 per cent and other services 57.9 per cent.

Asked for suggestions to improve the procurement, distribution and marketing of fruits and vegetables by the Government (Horticultural Department) and the HOPCOMS, the suggestions by a majority of farmers
except in one or two suggestions were: quality 75.7 per cent, prices 67.5 per cent, transport 66.8 per cent, storage 52.1 per cent, packaging 45 per cent, grading 78.9 per cent, advertisements 64.6 per cent, and display of products 25 per cent. There were other suggestions by negligible proportions of the farmers interviewed.

- Asked to rate the HOPCOMS from their experiences with the Society, 39.6 per cent of them rated it as very good, 63.6 per cent as good but among them more than fourth of them rated additionally as ‘not bad’ as well.

7.6 Consumer Perspectives

- Among the 356 consumers interviewed, a majority of 50.8 per cent have engaged in business activities and a good majority of 52.2 per cent were engaged in subsidiary occupations. About 6 per cent were engaged in agricultural cropping and 6.7 per cent in horticultural cropping.

- The average size of consumer-households was 5.3. While women outnumbered men in the households, boys outnumbered girls in them, too. Most of the households were small (3-4 members) some proportion of them were medium as well (4 plus members).

- Income from agriculture and horticulture was quite good and that 3.4 per cent of them reaped an income of Rs. 1.0 million each and 2.8 per cent of them got as much as Rs. 2.0 million each from agriculture. Those with Rs. 1.0 million each as income from horticulture constituted 3.7 per cent and those with Rs. 2.0 million each constituted 3 per cent.

- Nearly 82 per cent of the consumer-households were within 1.0 km, 4.2 per cent of them are at 2.0 km, 1.7 per cent at 3.0 km and progressively smaller and negligible proportions were away at more than 4.0 km. About 2 per cent of them were at 12.0 km whereas 8.4 per cent of them were ‘just next door’ to the outlets.

- More than 11 per cent of the customer-households were quite close to procurement centres as well, in the city of Bengaluru. More than a fifth (22.5 per cent) of the consumers were at within 10 km; as much as a fourth of them
were between 10 km and 20 km; and 44.3 per cent were of them were between 20 km and 30 km. The rest of them were beyond 30 km. This information afforded the knowledge of where the fruits and vegetables came from for the consumer-households’ kitchen.

- As for mode transport choices, a small proportion of 6.7 per cent went by bicycles yet in the city whereas 42.4 per cent of them go by two-wheelers and this was the preferred and quick mode of visits to HOPCOMS outlets; as much as 36.2 per cent of the customers went to buy fruits and vegetables in their four-wheelers; and 8.4 per cent of them in auto-rickshaws with considerable costs for travel. A smaller proportion of 6.4 per cent as yet went by walk to buy fruits and vegetables from the nearby HOPCOMS outlets.

- As much as 27.2 per cent of the consumers on a daily basis, for they would prefer to have fresh vegetables and fruits for diet. Of those stocking fruits and vegetables in the refrigerators, 38.2 per cent of them bought weekly. A good proportion of 31.2 per cent of the consumer-households bought twice weekly and 13.5 per cent of them only twice a month.

- About 20 per cent of the consumers spent as much as Rs. 100 to Rs. 150; about 32 per cent between Rs. 150 and Rs. 200; 24.4 per cent between Rs. 200 and Rs. 250; 18 per cent between Rs. 250 and Rs. 300; and 5.4 per cent between Rs. 300 and Rs. 350 a week on fruits.

- About 17 per cent of the households spent as much as Rs. 100 (3.1 per cent) to Rs. 150 (13.5 per cent) week; 37.6 per cent of the households spent between Rs. 150 and Rs. 200 a week each; 21.9 per cent between Rs. 200 and Rs. 250; 16.9 per cent between Rs. 250 and Rs. 300; and 5.3 per cent between Rs. 300 and Rs. 350 a week each on vegetables.

- Among the consumer-households, grapes (50.3 per cent), apples (45.5 per cent), sweet limes (42.7 per cent), mangoes (40.7 per cent), papayas (40.3 per cent) and watermelons (35.4 per cent) were the fruits bought by large proportions of consumers whereas oranges (30.3 per cent), bananas (14 per cent), pomegranates (9.6 per cent) and sapotas (8.4 per cent) were bought by less than a third of the consumers.
Conclusion and Recommendations

- Tomatoes (45.6 per cent), potatoes (44.9 per cent), carrots (39.9 per cent), beans (39.6 per cent), cucumbers (35.7 per cent) and onions (32.9 per cent) were the vegetables bought by large proportions of consumer-households whereas those bought by less than 30 per cent of the households were: coconuts (22.8 per cent), cabbages (22.2 per cent) and ash pumpkins (21.9 per cent).

- Consumers reported of 10 per cent (47.5 per cent), 20 per cent (37.4 per cent) and 25 per cent (15.2 per cent) of savings when they buy the HOCOMS products.

- As much as 96.3 per cent of the customers reported of all required vegetables available at the HOPCOMS outlets and only the rest (3.7 per cent) feel that what they require are not available in the HOPCOMS outlets they visit.

- They consumers bought up their fruits and vegetables at More Supermarket (18.3 per cent), weekly shandies (16.6 per cent), from hawkers (16.3 per cent), street mobile vendors (22.2 per cent) and local markets (35.1 per cent), as all of these afforded ease of access to households in that they were either quite close or were at their doorsteps on a regular basis.

- The consumers purchasing fruits and vegetables in the last 6 months accounted for 87.9 per cent; between 6 months and a year 10.7 per cent and for more than a year 1.4 per cent.

- The reasons for purchasing fruits and vegetables from the HOPCOMS were: the choices of preferred varieties of fruits and vegetables 37.9 per cent; better product quality 36.2 per cent; fresh and new stocks 25.8 per cent; availability of specific products only 4.5 per cent; better services 45.5 per cent; one-stop shopping 41 per cent; varieties 34.8 per cent; close-to-house 50 per cent; close-to-workplace 41.6 per cent; it saves time 38.8 per cent of the consumers; goodwill (that is, consumer knows the shopkeeper) 36.2 per cent; home delivery 22.8 per cent; and other reasons 5.6 per cent.

- Sources of price information for the consumers were: Neighbours 14.6 per cent; local markets 41.6 per cent; television and newspapers 37.4 per cent; and traders 10.1 per cent.
7.7 Implications of the Study

The study proved that the horticultural development in the six districts of our study was appreciable, from the points of view of area, production and yield. The study also proved that both the farmer-producers and the consumers benefitted from the functions of the HOPCOMS. They both were also satisfied greatly with the working of the HOPCOMS. There were some shortcomings, though, from both the producer and consumer points of view. The functioning of the HOPCOMS was a lesson in the art and state-of-the-art of fruits and vegetable marketing in the country. The scholar learned quite well the nature and functioning of the HOPCOMS in the context of his research as well as in the social, economic and cooperative contexts as well. It was in all aspects a well-organized institution of horticultural marketing that it contributed immensely to the economy of Karnataka state and in the services of the producers and consumers. It is an exemplary institution, worth emulating elsewhere in the country.

7.8 Implications for Policy and Research

- Farmers in most of the States of the Indian Union prefer traditional marketing channels. Punjab and Karnataka are the two States that have been practicing direct marketing models, the latter State through HOPCOMS. The direct market models are the best because the producer’s share in consumer’s rupee is ensured at a higher percentage and would eliminate middlemen completely.

- India opened up post – 1990, a number of new public markets adopting direct market models with forward linkages for fruits and vegetables in the WTO regime. The main functions of farmers markets are to eliminate middlemen, link producers and consumers directly, reduce price spread, and enhance producer shares in consumer rupee. Forward and Futures markets are the important tools of price stabilization and risk management. Commodity exchanges for futures trading narrows the marketing, storage and processing margins, thereby benefiting both growers and consumers.

- E-Trading is based on buying and selling of electronic warehouse receipts and providing the latest price information. The economic reforms have also led to the emergence, a number of new private super markets operating direct marketing
model with backward linkages. Their number and scale of operations have been undergoing a phenomenal growth in the past few years.

- The present study therefore concludes that the marketing model adopted by private markets, particularly Reliance and Subhiksha, is more efficient than the Government-run markets such as the Rythu bazaar (in Andhra Pradesh) because the marketing agency directly goes to the farmers’ field and collect fruits and vegetables resulting in reduced marketing cost, transport cost and other incidental charges.

- HOPCOMS is a good model therefore to emulate in other States of India and in developing countries. Markets adopting direct marketing models with backward linkages such as the HOPCOMS and the one in Punjab would save farmers from market cost and other charges and complete elimination of middlemen.

- Farmers who supply to super markets, for example, have many advantages: it includes technical guidance, market information on prices, perfect weights and spot payments, just as HOPCOMS. The opportunities include development of high value commodities marketing supply chain.

- Based on our results, we suggest that, for effective marketing efficiency of fruits and vegetables, supermarkets may purchase the entire quantity brought by the farmers, irrespective of grading, Export linkage is suggested, with the Government regulation of prices, and the Governments could open and operate retail outlets such as those of the HOPCOMS. The Governments may however assess production and consumption levels and announce the MSP accordingly.

- Even the farmers of the most States in the country may adopt traditional marketing channels. The study suggests that modern direct marketing models are better and advantageous to the producers as well as consumers.

- Therefore, there is immediate need to replicate the HOPCOM model on a much larger scale within the State of Karnataka and cover not only the cities but also the villages in the State.

- The study also advocates that it is necessary to amend outdated laws restricting the establishment of markets to allow cooperatives and private entrepreneurs to set
up modern markets, both public and private retail markets, which could benefit both the farmers and the consumers alike.

7.9 Recommendations

The farmer-producers of the six district of our study rated the HOPCOMS from their experiences with the Society: nearly 40 per cent of them rated it as ‘very good’, and 60 per cent of them as ‘good’. The consumers of fruits and vegetables in Bengaluru city as well as in some of the districts rated the HOPCOMS as benefitting them high at 99 per cent; grading high at 94 per cent; pricing reasonable and moderate at 98 per cent; products freshness better and high at 99 per cent; packaging moderate at 10 per cent; comparative advantage however low at 60 per cent; supply awareness moderate at 1 per cent; credit moderate at 44 per cent; advertisements moderate at 44 per cent; good shop-keeper behaviour moderate at 89 per cent; direct marketing moderate at 44 per cent; food and diet moderate at 42 per cent; high-tech infrastructure low at 43 per cent; organized attraction moderate at 44 per cent; aims and objectives of HOPCOMS moderate at 44 per cent; and staff responses to suggestions high at 5 per cent. And so, the HOPCOMS was appreciably good for both the producers of fruits and vegetables and for consumers. Yet from their observations and experiences with the HOPCOMS, the following recommendations are imminent:

- The farmer-producers greatly felt the need to build the infrastructure for helping them to take advantage of such developments in their horticultural pursuits, particularly in the fruits and vegetables production and marketing.

- Quality is the key to marketing success. Price and quality are synonymous in fruit and vegetable production. Unfortunately, it is always not easy to know what is meant by ‘high quality’ and quality judgment often varies from person to person, and may be from time to time and year to year. There are absolutely no grade standards for horticultural crops, much less fruits and vegetables. A worker of the HOPCOMS, or a farmer or even a customer is not sure as to what is ‘good quality’, in the absence of a standard set down by any national standards institution.

- It is necessary therefore to work towards grading standards for individual fruits and vegetables and those ‘standards’ must be given to the farmers and
consumers for use and reaping benefits. People working with horticultural crops such as agricultural scientists, nutritionists and market specialists must come together to devise grade standards which are easy to know, for the farmers and consumers to adopt.

- And in the opinion of 81.8 per cent of the farmers, transport provided by the HOPCOMS needed improvement, for that was the most important function in the haul of fruits and vegetables.

- Storage also needed improvement in the opinion of 80.7 per cent of the farmers. Of those farmers who suggest improvements in other services of the HOPCOMS were: grading 78.9 per cent, processing 67.9 per cent, exporting 61.8 per cent and other services 57.9 per cent. As such in all of these areas, concerted efforts must be made to improve the situation so that the farmer-producers are better served by the HOPCOMS, which in turn could serve the consumers even better.

- The farmers also recommended improvements in the procurement, distribution and marketing of fruits and vegetables by the Government (Horticultural Department) and the HOPCOMS. The recommendations by a majority of the farmer-producers, except in one or two, were: quality 76 per cent, prices 68 per cent, transport 67 per cent, storage 52 per cent, packaging 45 per cent, grading 79 per cent, advertisements 65 per cent, and display of products 25 per cent.

### 7.10 Suggestions for Further Research

Having done the study, the scholar feels that the study of HOPCOMS could be extended in several areas but particularly in two areas: Towards a business plan and a marketing plan for HOPCOMS so that HOPCOMS could run as a business making a profit for both the farmer-producers and for itself. On the other, it would be appropriate to design a marketing plan for HOPCOMS in the context of fruits and vegetables on the one hand and the fruits and vegetables based consumer products on the other. As such the two focuses, the business and marketing focuses, could form two very important areas for research. Some very innovative business and marketing practices could be designed such that the HOPCOMS is even more effective than
what it is, in the current context. There is also an additional need to look at the structural as well as human resources part of the HOPCOMS, for most staffs are not permanent nor on the payrolls of the HOPCOMS. A research could go into the human capital improvements within the HOPCOMS even as another research could probe into the structural changes possible for making it even more effective and efficient in fruits and vegetables marketing.