Chapter – VII

CONCLUSIONS AND SUGGESTIONS

7.1 Major Findings of the Study

The major findings of the study are summarized as below:

1. The financial operation of the APMC has a direct impact on the quality of the services and the infrastructure provided for agricultural marketing operation.

2. Data of the period of study reveals that income of the APMC during 1990-91 to 2010 is increased with CGR of 4.99%. Whereas total expenditure has increased (CGR 8.56%) clearly indicating that the growth in expenditure was more than growth of income.

3. Total income of APMC, Gadhinglaj has increased at Rs. 12.31 lakh in 1990-91 to Rs. 34.33 lakh in 2000-01 and further increased upto Rs. 67.27 lakh in 2009-10, on the other hand total expenditure increased from Rs. 86.34 lakh in 1990-91 to Rs. 20.90 lakh in 1995-96. It further increased to Rs. 59.45 lakh in 2009-10.

4. Five yearly growth in income as collected indicates that of the total income of the APMC, Gadhinglaj the most important source of income is market fee.

5. During the period under study, next to market fee, other charges are the second important source of income of APMC, Gadhinglaj. During the period under study, it is found that, next to market fee, other charges are the second important source of income of APMC, Gadhinglaj.

6. During the period of study, it is noticed that total expenditure of APMC, Gadhinglaj is showing continuous increase.
7. Establishment expenditure has increased (CGR of 10.74) during the period of study clearly indicating that it is the main cause of growth of total expenditure. As a percentage total expenditure share of establishment expenditure is the major component. And this percentage share is continuously increasing during the period of study.

8. Our analysis of expenditure trend reveals that during the period of study, total expenditure is continuously increased and the growth of establishment expenditure and other expenditure are the major reasons for the rises in total expenditure.

9. Due to the Chitri project, on Hiranyakeshi river irrigation facility has increased. This resulted in farmers undertaking sugarcane cultivation and a shift to decline the cereals production in the villages in Gadchinglaj taluka is noticeable.

10. In recent years it is found that, infrastructural development is improved by the government of Karnataka, for development of agricultural commodity market yard. This development also contributing to the flow and quantity agricultural commodity market arrival at the APMC at Gadchinglaj.

11. Paddy, rice, jowar, bajra and maize are the major cereals crops, that comes to the APMC, Gadchinglaj. Our data also reveals that there are fluctuations in the crop paddy, rice, jowar, bajra and maize arrivals during the period of study.

12. Five yearly paddy arrival analysis relies fluctuating trends from 1990-91 to 1994-95 the CGR is –18.30 and for the period 1995-2000 the arrivals have again decreased. The CGR is –17.78 for the five year period. Paddy arrival shows increasing trend having a CGR is grown 21.70 but for subsequent 2005-10 the arrival again shows decline in the CGR is –1.03.
13. Trends in the five yearly arrivals of rice in the APMC, Gadhinglaj reveals that from (1990-91 to 1994-95) the arrival shows CGR of 18.80 and next five year (1995-96 to 1999-2000) CGR is 20.61 and five years (2000-01 to 2004-05) arrival have increased. The CGR is 38.37 but for next 5 years the (2005-06 to 2009-10) arrival shows decline in CGR is –16.76.

14. Jowar arrivals at the APMC at Gadhinglaj during the period of study shows a study trend with lesser year to year fluctuations.

15. Five yearly analysis of jowar arrival shows that in the period of 1990-91 to 1994-95, jowar CGR is 17.66 and the next five year 1995-96 to 1999-2000 arrival decline CGR is 2.19. Five year 2000-01 to 2004-2005 jowar shows CGR 34.99 but in subsequent five years jowar arrival was decline. The CGR is –7.41 (minus).

16. Bajra arrival at the APMC, Gadhinglaj are relatively showing increase and this may be because of its average rainfall taluka.

17. Five yearly analyses of bajra arrivals shows that for the first five year (1990-91 to 1994-95) CGR grow is 39.9, for 1995-96 to 1999-2000 CGR is 40.52 and during 2000-01 to 2004-05 as the bajra arrivals increased. The CGR is 120.40. But in the last five year the CGR comes to –24.01 (minus).

18. Five yearly crop analysis of maize shows CGR of – 8.21 during period 1990-91 to 1994-95 and next five year crop arrivals was declined with CGR –36.08. However, in the next five year 2000-01 to 2004-05 maize arrival was increased with the CGR 12.31. Arrival in 2005-06 to 2009-10 shows the increase with great extent.
19. In total arrival of agricultural arrivals at AMPC, Gadhinglaj the percentage of arrival of wheat was 0.55% in 1993-1994, whereas 0.15% in 1996-1997 and 10.47% in 2006-07.

20. Paddy and Rice along with jowar are the major cereal crop arrival to APMC, Gadhinglaj.

21. Bajra arrival is relatively less form a minor share of the total crop arrivals.

22. Jowar is another cereal whose arrivals are noticed but their arrivals shows fluctuating trend.

23. Maize arrivals form a relatively lesser share from the total crop arrivals.

24. Due to growth of irrigation facilities in the villages in and around APMC, Gadhinglaj sugarcane cultivation has increased and resulted into increased production of jaggery in villages.

25. Five year arrivals data in 1990-91 to 1994-95, shows the increase. The CGR is 5.17. In the next five year 1994-95 to 1999-2000, their arrival was increased. The CGR is 9.47. In the next five year period 2000-01 to 2004-05 jaggery arrivals shows a decline with the CGR at –15.51. Next five year 2005-06 to 2009-10, jaggery market arrivals were declined with the CGR at –2.91. In spite of decline in quantity of jaggery arrival over study, indicates that jaggery is most important commodity, as per the study of APMC, Gadhinglaj.

26. Five yearly analysis of market arrival of chilli also show that a five year arrival of chilli was declined in the period of 1990-91 to 1994-95, with the CGR –44.57. In 1995-96 to 1999-2000 the CGR is again –8.50 and in the subsequent years 2000-01 to 2004-05 the CGR is –18.98, and in 2005-06 to 2009-10 CGR is 3.10.
27. Our study realize that of the cash crop arrival, jaggery is the most important agricultural commodity which is traded at the APMC, Gadhinglaj and its percentage share in the total agricultural commodity arrival at APMC, Gadhinglaj is the highest. This is mainly because of sugarcane cultivating and jaggery manufacturing activity in and around Gadhinglaj.

28. Groundnut and soyabean are the oil seeds, which are being transacted in the market yard of Gadhinglaj. Out of other produces, at Gadhinglaj APMC, the groundnut and soyabean transaction plays important role in the agricultural economy of the APMC.

29. Thus in relative term, the arrival of groundnut was increased by 11.31% during 1990-1991. And it was further raised by 27.4% during 1997-1998 and 0.88% in 2009-2010. Groundnut arrival during the period of study shows the CGR-10.17. Five yearly arrivals data of groundnut show variations during the five years.

30. Soyabean is another oil seed. It’s arrival in APMC, Gadhinglaj notices from year 1990-1991. But there are slight fluctuations are observed.

31. Masoor and Moong are the Major pulses that come to the APMC market, Gadhinglaj. Our data also reveals that there are fluctuations in the arrivals during the period of study.

32. Due to the crop diversification and inter cropping pattern of the market arrivals, the other crops are also noticed at the APMC, Gadhinglaj. Tamarind, Onion, Potato and during the period under study, Ratali, Banana and to some extent vegetables arrival was also found their arrival to the APMC, Gadhinglaj, but with fluctuation in their arrival.

33. The onion arrival shows the yearwise fluctuation. Its share of total agricultural commodity arrival is also very less.
34. As a percentage share of market share total arrival of potato shows insignificance.

35. Ratali is another crop whose arrivals in APMC, Gadlinglaj was noticed from year 1995-96. But their arrivals show yearly fluctuations. As a share of Ratali in market, this crop is also very insignificant.

36. Banana arrivals are noticeable after 1999-2000. However, their arrivals also have a lot of yearly fluctuations.

37. Vegetables arrival at the APMC, Gadlinglaj are noticeable from year 2001-02, but quantity is very small.

38. The arrival of other crops in APMC, Gadlinglaj show diversification but their arrival shows a great deal of year to year fluctuation. Tamarind and to some extent Banana are two commercial crops which shows market arrival but their share of total agricultural commodity is not significant.

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40. The data collected realises that total price received for most of the agriculture related to the arrivals. There is a fluctuation in arrivals and also in the total price realized.

41. The sale of particular crop and these fluctuation's are not interrelated with one another. This trend is noticed in the case of all the agricultural commodities traded Gadlinglaj APMC.

42. As far as cash crop trading is concerned at Gadlinglaj APMC, it was found that jaggery, chilli and cashew were the major cash crops that were traded here. The arrival,
however shows year to year fluctuation and this has affected the price received.

43. The market arrivals of these cereals are characterized by the yearly fluctuation and this is resulted in fluctuations in total price received. Price received per quintal was increasing.

44. Data regarding trading of cereal at the Gadhinglaj, APMC. We noticed a year to your fluctuation in the arrival, which results in the fluctuation in total price received from the trading of cereal price received per quintal showing increased trend.

45. The cultivation of pulses in the area under study is less and therefore Moong and Masoor are the only important pulses. Their arrivals for trading at Gadhinglaj APMC are noticed, however, there are yearly fluctuations in their arrivals and this has affected the price received.

46. Barley is another agricultural commodity which was started to arrive at Gadhinglaj APMC, but only after 1990-91 and it was stopped after 2003-04.

47. Banana arrivals for trading at Gadhinglaj APMC began from 2001-02, but there was a yearwise fluctuation in its arrival, which had affected its price received.

48. Trading of soyabean at APMC, Gadhinglaj was helpful to the soyabean growing farmers to get good prices per quintal for the sale of soyabean.

49. By and large no strong co-relation is found between prices and market arrivals at Gadhinglaj APMC during the period of study.

50. Strong co-relation is found in case of soyabean, cashew nut, rice, paddy, jowar and to some extent chilli. Between the prices and arrivals, the R-square value is being 0.92 for soyabean, 0.75 for cashew nut, 0.38 for jowar, 0.13 for chilli, for paddy 0.15 and for rice for 0.54.
51. In case of jaggery, groundnut and Bajra the prices haven’t any influence on the market arrival of these crops.

52. By and large, the farmers surveyed had not so proper housing facilities.

53. By and large, the farmers surveyed had not so proper housing facilities.

54. 30 farmers (14.02%) did not have any amenities like bicycle, TV etc. of which 16 farmers were from the talukas of Belgaum district, while of the 70 farmers in Kolhapur district talukas under study, 14 farm households lacked these facilities.

55. 33 farm households (15.43%) did have bicycle as a mean of transport.

56. 20 (9.35%) farm household of the total 214 household surveyed had a possession of TV and bicycle, of which 10 were from the talukas of Belgaum district and 10 in the talukas of Kolhapur district under study.

57. TV and phone connection was available with 10 farmers (4.67%) of sample under study.

58. Only one farmer owned TV/phone and a four-wheeler. It is quite possible that in later years of study after 2005 cellular (mobile) phone connectivity may have misread as this connectivity growth is more in recent years. The farmers under study, hence, rely more on basic facilities provided by state government and local voluntary mandals for news etc.

59. The total 213 farm households surveyed 70 (32.71%) belonged to 2 to 5 acres land holding size and 28.50% of farmers surveyed had land holdings of the size between 5 to 10 acres.
60. Better irrigation facilities do help the farmers to increase marketable surplus as well as to undertake cash crop cultivation and improve farm productivity.

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62. Well, tube wells and to some extent lift irrigation were the major source of water supply.

63. Type of irrigation and water availability determine crop pattern and shift in it. Thus, the water availability is one of the important factors.

64. Sugarcane was the most important crop and accepted for 71.52% of the area. Cashew nuts, soyabean, rice, jowar were the other important crops, grown by the farmers under survey. Pulses were less under cultivated, as regards changes in the cropping pattern. The primary data realises that area under flower culture and fruits like grapes are slightly increased.

65. The cropping pattern of the farmers under survey shows that the sugarcane is the most important crop. The total production of sugarcane increased from 13574.8 tonnes in 1990-2000 to 19468.7 tonnes in 2000-01 and was 16709.9 tonnes in 2001-02.

66. No farmer in Karnataka was producing tobacco.

67. Production of chilli by the farmers surveyed in Maharashtra was more than the farmers surveyed in Karnataka.

68. In Maharashtra soyabean production increased from 233 quintals in 1999-2000 to 321 quintals in 2001-02.

69. The total production of groundnut increased from 271 quintals in 1999-2000 to 426.9 quintals in 2001-02.
70. Total production of tur increased from 41.3 quintals in 1999-2000 to 62.2 quintals in 2001-02. This production figures are related with Karnataka only.

71. The total production of flowers increased in the year 2000-01 from 1003 quintals in earlier year to 10003 quintals. But it decreased in the next year 2001-02 upto 1000 quintals.

72. The production of grapes is not taken in Maharashtra.

73. The cropping survey of potato shows that the total production increased.

74. The total production increased from 479 quintals in 1999-2000 upto 419 quintals in 2001-02.

75. The total production of wheat increased from 129 quintals in 1999-2000 to 199 quintals in 2001-02. The production of wheat was nil in Maharashtra.

76. The total average price of sugarcane, tobacco, soyabean, groundnut, tomato, potato, rice, wheat, received by the farmers under the survey increased per tonne in 2001-02.

77. Total average price of chilli and grape remained somewhat constant.

78. Average price for tur received by the farmers under survey was slightly decreased.

79. As regard to the sugarcane, per farmer income increased.

80. As regard to cotton, the total income showed fluctuations.

81. As regarded to the crop of tomato the per farmer total income was decreased.

82. Farmers in Karnataka perhaps have sufficient marketed surplus, whereas the farmers surveyed in Maharashtra, perhaps did not have any marketed surplus.
83. Sugarcane becoming the important crop. The production of which sent to the sugar factories and hence use of regulated market facilities are lesser.

84. Out of 75 farmers who gave the response, 51 farmers (60\%) stated that proper sale system, better prices, proper transport, and godown facilities are the reasons for the sale of their surplus at Gadhinglaj regulated market.

7.2 Guidelines

The Findings of the study are quite useful for stimulating the growth of agricultural regulating markets, which can encourage ultimately the growth of agricultural sector in India.

1. Regulated markets are highly beneficial only when it helps in centralizing the market forces. But this is possible only when certain integrated marketing services are offered, including facilitative services. This requires several market development programmes. It is difficult to achieve all these together. This necessitates the need together. This necessitates the need for greater specificity and selectively in the approach. An individual farmer should have the option to have any marketing services and it should be made available by regulated markets. This kind of sale intervention will help in developing not only agricultural sector but also in developing and transforming the rural economy.

2. Market should try to attract maximum number and quantities of agricultural commodities. Moreover, farmers should prefer for their sale of agricultural commodities in the market yard rather than private market.

3. Following provisions may be made in ‘Bye-laws’ of the Market committee.
a) To obtain various monitory funds from banks for the infrastructure development of APMC.

b) To undertake transaction between bidder and producer and make up the arrangements with banks for recovery from producers. State governments may take initiative for connecting market yards with villages through the development of transport facilities.

4. Amenities may be provided to the sellers and bidders and other market functionaries, by the way of rest houses, canteen, staff quarters etc.

5. Market yards should enlarge their activities to cover marketing of agricultural inputs like seeds, fertilizers, insecticides. Top priority should be given to the construction of the farm to market roads. Market yards may be provided with godown/warehouses, cold storages etc. to accommodate the unsold stocks depending on area with specific requirements. To fetch remunerative prices to the farmers, presale value addition services like cleaning grading, sorting, standardization etc. may be provided along with this, the real estates of all the APMCs and sub-markets should be maintained properly.

6. Side by side, the marketing & transactions be started at the nearby centers like Halkarni, Nesari & Murgud.

7. Functioning of the regulated produce markets should be improved, especially to guarantee proper weighing of the produce, flow of market information through modern media should be upgraded. To eliminate chances of faulty weighing, electronic weighing machines, weighbridges may be provided. Necessary fire fighting equipments may be provided. More attention should be paid to proper grading
and packing of produce particularly for the exporting. To keep the market yard fully appraised with latest information about prices, the computer and internet facilities may be provided anyhow this will be possible for the storing and analyzing the data. This will facilitate in future to link with all the major markets.

8. Private sector should be encouraged to build and operate more storage facilities for agricultural produce, particularly for the perishables commodities like vegetables, fruits and flowers, and to build the vermi-composting centers.

9. The Ministry of Agriculture has suggested a Public Private Partnership (PPP) mode for the Site Specific Soil Testing Programmers (SSSP) to improve the yielding capacity of the land by using fertilizers under Site Specific Nutrient Management (SSNM). The Gujarat government has set up such laboratories to help the farmers. Similarly, Haryana government has set up 30 static soil testing labs and more mobile soil testing labs through the PPP mode. The PPP mode means the public private partnership mode with the fertilizer companies, is also a significant suggestion of ministry of Agriculture. Tamilnadu government also implemented this suggestion, establishing agriculture cum mini soil testing labs. Which are run by unemployed youth with the bank-loan support and Govt. subsidy. Such implementations should be made in the APMCs of Gadhinglaj.

10. Other than the agriculture produce the cattle markets under the control of specific Grampanchayats and Nagarpalikas like Murgud, Kowad, Adkur, Turkewadi, Ajara etc. in Gadhinglaj APMC regions should be brought under the control of Gad APMC, as per the request of the farmers.
11. Like Rice and Soybean auctioning the market for the produce of Bamboo, should be made available at the Gadhinglaj APMCs sub markets like Ajara and Changed, as per the request of the farmers.

12. Auctioning of Green-chilli Potato and Ratali, be Started in the nearby sub markets like Turkewadi. Likewise the open auctions for vegetables and cashew nuts be stated at the Gadhinglaj APMC.

7.3 Agricultural Marketing Policy Vision for 2020

Keeping in view the significance of agricultural marketing some provisions are made in the Agricultural Marketing Policy Vision for 2020.

1. Ensuring food and nutritional security.

2. Increasing efficiency of existing APMC marketing system through the professional management, scientific operation & handling of agricultural produce.

3. Creation of necessary infrastructure for value addition services at the rural area.

4. Development of cool chain & cold storage facilities for the perishables produces.

5. Development of rural periodic market in the country for increasing the easy market access for the producers. (farmers)

6. Up gradation & improvement of wholesale markets, handing foodgrains, fruits, and vegetables, floriculture, livestock fisheries etc.

7. Modernization of mega markets & developing specialized physical markets for promotion of the exporting.

8. Strengthening and improving the retail market chain to safeguard the consumers interests.
9. Expanding domestic quality assurance like grading network to ensure purity and quality of edible products consumed by common men in their daily life.

10. Strengthening marketing extension, special emphasis should be on production, planning, standardization, healthy hygienic environment friendly package of practices right from farmer to the consumer.

11. Promotion of rural storage facilities providing financial facilities for ensuring minimum support price benefits to the small and marginal farmers.

12. Easy accessibility of institutional credit to meet marketing needs of the farmers.

13. Promotions of group marketing to secure the price benefits based on latest market information.

14. Development of facilities for quick transport and communication system for inter market linkage, pesticides etc. to increase their incomes.