V. SUMMARY AND CONCLUSION

This chapter presents a brief summary of its research along with the salient findings. Also, based on the conclusions drawn from this study, certain policy options are suggested for planners and development functionaries.

5.1 Introduction

The Indian economy is dependent mainly on agriculture. About 52 per cent of the India’s population is either fully or greatly dependent for their livelihoods on agriculture and allied activities but its contribution to the Gross Domestic Product (GDP) is hardly 13 per cent (2013-14). In spite of increased area, production and productivity of food crops due to green revolution, increased rural per capita incomes and bettered food security, India still has a large poor population. Recently the Planning Commission reported that, boosting of farm income is still a strong weapon for reducing the poverty in rural India.

With rising population, declining land-man ratio and increasing mechanization in farm operations, agriculture alone is not able to provide adequate income and employment to rural households in India. Integration of farm enterprises provides better livelihood in terms of increased food production, higher net income, improved productivity and reduced income inequality between agricultural labourer and urban factory worker. Introduction of appropriate farming systems has been proposed as one of the approaches to achieve better growth in agriculture and livelihood (National Commission on Farmers, 2005).

Therefore the present study was undertaken in Chikkaballapur and Dharwad districts of Karnataka, with the general objective to examine the livelihood status of farm households under major farming systems.

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1 According to the Planning Commission of India, 22 per cent of the India’s population is living below the poverty line in 2011-12 and the percentage of poor is higher in rural areas than in urban areas
5.2 The specific objectives of the study are:

1) To estimate the economics of different farming systems under rain fed and irrigated conditions and its impact on income and employment
2) To analyse food and nutrient intake at the farm level in rainfed and irrigated situations
3) To compare the status of health, habitat, educational security and social network security of the farm households in two agriculture situations
4) To measure the impact of Government rural development schemes on livelihood security across different types of farmers
5) To document the constraints faced by the farmers and strategies adopted by them for their livelihood.

5.3 Methodology

The present study was conducted in the Chikkaballapur and Dharwad districts because these districts are having differences with respect to farming systems practiced and products produced. Three-staged random sampling procedure was used for the selection of respondents, on the first stage four taluks were selected, in the second stage based on the reconnaissance survey, 6 villages in each taluk were considered for selecting the farmers practicing different farming systems. In the third stage from each selected village 10 farmers who are practicing farming systems were randomly selected. Totally 240 farmers were selected randomly among identified major farming systems for the study.

The data were collected from both primary and secondary sources. Personal interview method was followed to collect the primary data using a pre-tested comprehensive schedule. The primary data were collected on socio-economic conditions, cropping pattern, size of operational holdings, existing farming systems, cost of cultivation, prices of output, consumption expenses and income from livestock and other enterprises.
Secondary data on land utilization pattern, rainfall, population, sericulture, animal husbandry and irrigation were collected from State Development Departments, Directorate of Economics and Statistics and Directorate of Census. The data collected were tabulated and analysed to draw inferences for the set objectives.

5.4 Analytical techniques employed

For the purpose of achieving the objectives of the study, the data collected were subjected to statistical analyses. Cost and return analysis was done by using conventional economic concepts and tools. For the purpose of achieving the objectives of the study, data were analyzed using tabular presentation, returns to rupee of investment, multiple linear regression model, optimization of farming using linear programming analysis and minimization of total absolute deviation (MOTAD) technique. Indices like educational index and social network status index were worked out to examine the educational level and social network of the households.

5.5 Major findings

The important findings of the study are listed below:

- The average age of the respondents was higher under rainfed situation (50.50 years) as compared to irrigated situation (47.75 years) in Chikkaballapur district, thus a generally middle aged farmers were involved in farming.

- In the case of Dharwad District, the average age of the respondents was slightly higher under rainfed situation (49.08 years) than under irrigated situation (47.74 years).

- In Chikkaballapur district, it was found that the average family size was seven under both irrigated and rainfed situations. But in Dharwad district the average family sizes of the sample farmers were 6 and 7 under irrigated and rainfed situations, respectively. Thus, availability of family labour and the capacity to save and re-invest in farming is fairly good in both the districts.

- The average size of land holdings of irrigated area farmers (6.31 acres and 8.39 acres in Chikkaballapur and Dharwad districts, respectively) was more compared to rainfed area
farmers (5.65 acres and 7.72 acres in Chikkaballapur and Dharwad districts, respectively).

- It was found that in both Chikkaballapur and Dharwad districts the educational status of the sample respondents was higher under irrigated situation compared to rainfed situation.

- Livestock possession of households was found to be high in Chikkaballapur district compared to Dharwad District.

- The livestock possession was found to be higher among households belonging to irrigated situation than among rainfed area farmers of Chikkaballapur and Dharwad districts.

- Farmers under irrigated situation in both the districts have invested more on fixed assets per farm compared to farmers under rainfed situation. The higher investment by farmers under irrigated situation was due to heavy investment on bore wells, irrigation equipment, farm implements and machinery.

- Majority of the farmers in Chikkaballapur district (75% of the irrigated area farmers and 73% of the rainfed area farmers) were practicing crop combined with dairy farming systems.

- Majority of the farmers in Dharwad district were practicing crop combined with dairy farming system (50% of the irrigated area farmers and 45% of the rainfed area farmers).

- The average land holdings of irrigated area farmers under crop+dairy +sericulture farming system (10.42 acres) is more than under other farming systems identified in Chikkaballapur district (5.87 acres, 9.08 acres and 2 acres under crop+dairy, crop+sericulture and crop+sheep, respectively).

- Under both irrigated and rainfed situations, the average size of land holding was higher under crop+dairy farming system in Dharwad district, which was 11.97 acres and 9.06 acres, respectively.

- In Chikkaballapur district, under rainfed situation net returns per acre as well as returns per rupee of investment were more in crop+dairy farms in all principal crops like ragi
(Rs.4,503.81/acre), maize (Rs.13,020.94/acre) and red gram (Rs. 6,958.94/acre). In the case of irrigated situation all crops grown under crop+dairy and crop+dairy+sericulture farms are more profitable.

✓ In Dharwad district, under rainfed situation the net returns from onion (Rs.27,456.27/acre), green gram (Rs.6,446.08/acre) and bengal gram (Rs.2,916.47/acre) were more in the case of crop+dairy+poultry system. Under irrigated situation, net returns from onion (Rs.36,745.82/acre), soybean (Rs.16,097.50/acre), green gram (Rs.13,389.85/acre) and wheat (Rs.5,730.32/acre) were high in crop+dairy+poultry system.

✓ In the aggregate, the net returns from all principle crops were higher for irrigated area farmers than for rainfed area farmers. This was primarily due to higher productivity and growing of high value crops under irrigated situation.

✓ In both Chikkaballapur and Dharwad districts, the net returns per animal per annum were higher under irrigated situation (Rs.28,438.92 and Rs.1,942.43 in Chikkaballapur and Dharwad districts, respectively).

✓ In Chikkaballapur district both net returns per acre (Rs.54,820) and returns to rupee of investment (Rs.1.48) were maximum in crop+sericulture farms for every 300 DFL’s reared.

✓ In the case of irrigated situation (in Chikkaballapur), the crop+dairy+sericulture farm households realized the maximum net annual income (Rs.4,13,213.30) of which 49 per cent was from crop enterprise followed by crop+sericulture (Rs.4,09,567.72) system of which 48.74 per cent was from sericulture enterprise.

✓ In the case of rainfed situation (in Chikkaballapur) farmers realized a maximum net income of Rs.1,13,426.27 from crop+dairy system followed by Rs.65,205.43 from crop+sheep.

✓ Under irrigated situation (in Dharwad district) farmers realized the highest net income of Rs. 4,00,101.08 from crop+dairy farming system followed by Rs.3,28,204.56 from crop+dairy+sheep farming system.
The sample farmers under rainfed situation (in Dharwad district) derived highest net farm income of Rs.1,50,865.14 from crop+dairy system followed by the crop+dairy+poultry system with Rs.1,36,581.06.

The higher returns to cost ratio indicated that irrigated area farmers were more efficient than rainfed area farmers. It was also evident that as the integration of enterprise increases, the returns to cost ratio also increases.

Under the existing farming systems pursued by the irrigated area farmers in Chikkaballapur district, crop+dairy+sericulture system provided highest employment of 258 mandays and 375 womandays. In the case of rainfed area farmers, crop+dairy system provided highest employment of 286 persondays of which 122 were mandays and 164 were womendays.

Under the existing farming systems pursued by irrigated area farmers, crop+dairy system provided highest employment of 546 mandays and 832 womandays even in the case of rainfed situation, crop+dairy system provided highest employment of 315 mandays and 519 womendays.

Availability of family labour and amount of fodder produced on own farm play a crucial role on the investment pattern in farming and the nature of farming systems adopted by the farmers.

Efficient farm plan establishes increased income due to effective recycling of the produce of any one of the components as input to the other component linked in the system. It also provides flow of cash to the farmers all round the year by way of sale of milk, meat and eggs.

In the case of irrigated situation (in Chikkaballapur district), by reallocation of his existing resources the farmers income could be enhanced to the tune of Rs.3,06894.56, i.e. by about 17 per cent. The net returns at the existing level of efficiency would be Rs.3,00,000. This indicates that the irrigated area farmers in Chikkaballapur district are already working close to efficiency level as their present income varies very marginally from the optimum.
The rainfed area farmer in Chikkaballapur district with the existing farming systems is realizing an annual net income of Rs.56,277.55 per farm. By reallocation of his existing resources he could earn substantially raised income of Rs.1,37,874.30, which means more than 200 per cent rise over the current income.

The irrigated area farmer in Dharwad district was realizing an annual net income of Rs.2,59,292.72 and by re-allocating his existing resources, the farmer could earn an income of Rs.2,67,019.98 and further, under risk efficient plan the farmers could earn Rs.2,60,000.

The rainfed area farmers in Dharwad district from the existing cropping pattern, were realizing an income of Rs.1,00,376.47 per farm and this income can be increased to Rs.1,30,656.46 per farm by reorganizing the resources according to the optimum plan.

The monthly per capita consumption of all food items was more under irrigated situation than under rainfed situation. This is mainly due to the difference in income levels of the households under two situations.

In Dharwad district, the average household monthly consumption of cereals (consisting of rice, jowar and wheat) was marginally higher in the case of rainfed situation (105.13 kg) compared to irrigated situation (103.25 kg).

The per capita monthly consumption of cereals and pulses in the area under study was higher than the ICMR recommended level (13.99 kg and 1.21 kg of cereals and pulses, respectively) except in the case of rainfed situation of Chikkaballpur district (0.79 g).

In both Chikkaballapur and Dharwad districts, the expenditure on high value food items like pulses, fruits, vegetables and milk was significantly higher under irrigated situation compared to rainfed situation.

In both Chikkaballapur and Dharwad districts, the farm households under irrigated situation have better accessibility to primary health centers, 24 hour facility and speciality hospitals than those under rainfed situation in terms of time as well as distance.
✓ In Chikkaballapur district, the average monthly expenditure on health was higher under irrigated situation (Rs. 163.50) farm households than under rainfed situation (Rs. 87.19).

✓ In Dharwad district, the average monthly expenditure of the farm households on health was higher under irrigated situation (Rs. 119.32) than under rainfed situation (Rs. 93.55).

✓ The average monthly expenditure of farm households in Chikkaballapur district on health was lower under rainfed situation (Rs. 87.19) than under irrigated situation (Rs. 163.50).

✓ The average monthly expenditure of farm households on health in Dharwad district was lower under rainfed situation (Rs. 93.55) compared to that of farm households under irrigated situation (Rs. 119.32).

✓ In Chikkaballapur district 95 per cent of the households depend on public source for drinking water under irrigated situation and the remaining 5 per cent of households are dependent on own bore well. While under rainfed situation 88 per cent of the sample farm households depend on public source for drinking water.

✓ In Dharwad district, 93.33 per cent of the households depend on public source for drinking water under irrigated situation and 5 per cent of the farm households are dependent on own bore well. Under rainfed situation 96.67 per cent of the sample farm households depend on public source for drinking water.

✓ In Chikkaballapur district, more than 90 per cent of the farm households under irrigated situation were having pucca houses, while 76.67 per cent of the farm households under rainfed situation were having pucca houses.

✓ In Dharwad district, more than 70 per cent of the farm households under irrigated situation were having pucca houses, while under rainfed situation 68.33 per cent of the farm households were having pucca houses and 26.66 per cent of the farm households were having semi-pucca houses.

✓ In Chikkaballapur district, the average monthly expenditure on education was more among irrigated area farmers (Rs. 784.06) compared to rainfed area farmers (Rs. 469.33).
In Dharwa district, the average monthly household expenditure on education was more under irrigated situation (Rs.568.11) compared to that under rainfed situation (Rs.347.66).

In Chikkaballapur district, farm households’ participation in organizations like gram panchayat (3), taluk panchayat (2), Co-operatives (47) and SHG’S (41) was higher under irrigated situation than those under rainfed situation.

In Dharwad district, farm households’ participation in organizations like gram panchayat (5), taluk panchayat (2), Co-operatives (46) and SHG’s (57) was higher under irrigated situation than that under rainfed situation.

The index of social network status was higher for farm households in Chikkaballapur district compared to that in Dharwad district.

In both Chikkaballapur and Dharwad districts, the index of social network status was higher under irrigated situation than under rainfed situation.

The irrigated area farmers in the area under study are highly secured in terms of their livelihood as they got rank one according to Garrett’s ranking technique.

In Chikkaballapur district, cent per cent of the small and marginal farmers under irrigated situation were getting benefit from BPL card. This in itself is a prima-facie indicator of receiving at least the basic food supply. Therefore, the provision of food security is adequately taken care of by the Government.

In Chikkaballapur district, all marginal, small and medium scale categories of sample farm households under rainfed situation were getting benefit from the BPL card. Although most of the large farmers were not eligible for getting benefit under BPL card, two large farmers were deriving benefits by producing false documents.

In Dharwad district, cent per cent small and marginal farmers under irrigated situation were getting benefit from BPL card. Interestingly, about 79 per cent of the medium scale farmers and 12.50 per cent of large farmers were having BPL cards, though they were not
eligible. This is an indicator of the procedural lapse and false documentation in the Public Distribution System (PDS).

In Dharwad district, cent per cent small and marginal farmers and 72.22 per cent medium-scale farmers under rainfed situation were getting benefit from BPL card. Although most of the large farmers were not eligible for getting benefit under BPL card, one large farmer was deriving benefit by producing false documents.

In both Chikkaballapur and Dharwad districts, due to higher level of incomes under irrigation based farming systems, the children were sent to study in private schools, so lesser number of households availed benefit under programs like Mid-Day Meal Scheme and Kaliyuva Makkalige Bicycle.

In Chikkaballapur district, under irrigated situation relatively larger percentage of medium-scale (53.33%) and large (56.25%) farmers were deriving benefits from Department of Agriculture as compared to small (43.75%) and marginal farmers (30.77%). This indicates medium-scale and large farmers were having better social contacts and use better agricultural inputs.

About 26 per cent of the marginal farmers, 40 per cent of the small farmers 46 per cent of the medium-scale farmers and 54 per cent of large farmers were deriving benefits from the Department of Agriculture by way of subsidy on inputs.

In Dharwad district, under irrigated situation relatively larger percentage of medium-scale and large farmers (50% and 66.67% respectively) were deriving benefits from Department of Agriculture compared to small and marginal farmers (38.46% and 33.33% respectively).

In Dharwad district, under rainfed situation 58 per cent of the large farmers and 44 per cent of the medium-scale farmers were deriving benefits from the Department of Agriculture. About 30 per cent of the small and 20 per cent of the marginal farmers derived benefits from the Department of Agriculture.
In Chikkaballapur district, under irrigated situation about 20 per cent of the medium scale farmers and 31 per cent of the large farmers were getting subsidy for sprinkler and drip irrigation facilities under Micro irrigation schemes because most them grow vegetables.

In Dharwad district, under irrigated situation about 42.86 per cent of the medium farmers and 54.17 per cent of the large farmers received benefits from Horticulture Department.

In Chikkaballapur district, under irrigated situation more than 65 per cent of the farmers in all the categories were having Yashasvini cards. This is mainly due to well established milk producers co-operative societies in Chikkaballapur district. Even under rainfed situation more than 60 per cent of the farmers in all the categories were having Yashasvini cards.

In Dharwad district, under irrigated situation more than 70 per cent of the farmers in all the categories were having Yashasvini cards, while in the case of rainfed situation more than 60 per cent of the farmers in all the categories were having yashasvini cards. This is mainly due to well established co-operative societies in Dharwad district.

All categories of irrigated area farmers derived more benefits compared to rainfed area farmers both in Chikkaballapur and Dharwad districts.

Under irrigated situation in Chikkaballapur district, high wage rate for agricultural operations was the major constraint in achieving livelihood security with 0.858 relevancy rating index, while under rainfed situation irregular rainfall ranked first with a relevancy index of 0.867.

Under irrigated situation in Dharwad district, high wage rate for agricultural operations was the major constraint (with 0.972 relevancy index) in achieving livelihood, while under rainfed situation lack of remunerative prices for farm produce and price fluctuations ranked first with a relevancy index of 0.963.
### Table 5.6: Testing of hypotheses

<table>
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<th>Objectives</th>
<th>Hypothesis</th>
<th>Analytical Tools</th>
<th>Findings And Conclusions</th>
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<tr>
<td>1. To estimate the economics of different farming systems under rainfed and irrigated conditions and its impact on income and employment</td>
<td>Farming systems adopted by the rainfed farmers are more viable compared to irrigated farmers</td>
<td>Tabular analysis, Averages and proportions, Linear programming analysis, MOTAD technique</td>
<td>Hypothesis Rejected: 1. Under irrigated situation (in Dharwad), farmers realized higher net income of Rs. 4,00,101.08 from crop+dairy farming system, whereas under rainfed situation farmers realized maximum net income of Rs.1,50,865.14 from crop+dairy farming system.</td>
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</table>
| 2. To analyse food and nutrient intake at the farm level in rainfed and irrigated situations | a) Farmers who have economic security also have food security  
   b) Farmers who have adopted Integrated Farming Systems (IFS) possess higher nutritional security compared to non- IFS farmers | Tabular analysis, Averages and proportions, Multiple Linear regression analysis                    | Hypothesis Accepted: In Chikkaballapur district it was found that the total monthly per capita expenditure on food items was highest under irrigated situation (Rs.864.88) compared to rainfed situation (Rs.667.26). |
| 3. To compare the status of health, habitat, educational security and social network security of the farm households | 3. Farm households with higher economic returns have more secured in terms of health, habitat, education | Tabular analysis, Averages and proportions, Education index and                                   | Hypothesis Accepted: In Chikkaballapur, larger percentage of farm households under irrigated situation have Yashasvini card (78.33 %) than those under rainfed situation (66.67 %). The average monthly expenditure of farm households on health in |
In two agriculture situations and social security, the social network status index and Garret Ranking Technique were compared. Dharwad district was lower under rainfed situation (Rs. 93.55) compared to that of farm households under irrigated situation (Rs. 119.32).

In Dharwad district, the total value of the household assets (Television, Mobile, Phone, Fan, Almirah and Motor cycle, etc.) was more under irrigated situation (Rs. 52,640.41) compared to rainfed situation (Rs. 29,531.07).

In Chikkaballapur district, the average monthly expenditure on education was more among irrigated area farmers (Rs. 784.06) compared to rainfed area farmers (Rs. 469.33).

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<tr>
<th>4. To measure the impact of Government rural development schemes on livelihood security across different types of farmers</th>
<th>Utilization of benefits from Government programs by rainfed farmers is greater compared to irrigated farmers</th>
<th>Hypothesis Rejected: Under irrigated situation, in the large farmers category a beneficiary family derived on an average Rs. 37,955.21 and participated in 7 development programs of which maximum benefit was from schemes of Agriculture Department (23.30%), while under rainfed situation, in the large farmers category a beneficiary family derived on an average Rs. 35,672.96 and participated in 9 development programs of which maximum benefit was from BPL ration card (19.49%)</th>
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<td></td>
<td>Social network status index and Garret Ranking Technique</td>
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5.7 Policy implications

1. Diversification of enterprises and especially inclusion of livestock and other activities in the optimum plan helps not only to increase farm income but also to generate employment within the farming sector. Hence, the extension agencies need to be trained in various enterprises so as to suggest suitable enterprise mix to the farmers to reduce risk and uncertainties in the farming.

2. The crop+dairy+sericulture farming system in Chikkaballapur district and crop+dairy farming system in Dharwad district need to be popularized among farmers through extension programs of the Development Departments to strengthen the farmers’ livelihood security.

3. Efficient farming system models have indicated the potential for increased income. The designed models need to be demonstrated in the farmers’ fields to convince them about the superiority of these models over the existing ones. At the same time, appropriate extension strategies should be identified to popularize the developed models.

4. Scarcity of water is the major problem faced by rainfed area farmers in Chikkaballapur district. Since water is the most essential factor in farm production, continuous and adequate availability of water in the right form ensures the sustainability of agricultural systems. Hence, there is a strong need for soil and water conservation measures as well as appropriate cropping patterns which best suit the resource availability needs to be designed for drought-prone regions.

5. The programs already undertaken by the Government have greater implications on rainfed farming systems in Chikkaballapur district and they need to be pursued further with added vigor to strengthen the household livelihood security.

6. There is need for a long-term strategy to cope with the emerging problem of drinking water in Chikkaballapur district.
7. It is necessary for the Rural Development and Panchayat Raj Department to bring out a guide book in Kannada listing all the Government programs for rural areas, by defining eligibility criteria and procedures to be followed to avail the benefits under each program.

8. In addition to the guide book on Government programs, awareness programs regarding the procedures to be followed by farmers to avail Government benefits need to be introduced.

9. It is essential for the farmers to be in touch with members of village panchayat, who usually know about the different Government programs and the periodic updates of budget allocation and procedures. This will empower the farmers to effectively participate in the Government programs.

5.8 Conclusions

The following conclusions can be drawn from the results of the present study.

1. The cropping pattern of most of the farmers aimed at meeting their food grain needs of the households and fodder requirements of livestock through their own farm production. Their priority in cropping decisions was to provide for these needs plus a safety net to cover production risks and uncertainties. This was clearly indicated in the existing cropping pattern pursued by the sample farmers in the areas under study.

2. The farming system has provided an effective recycling of the produce of one component as input for the other component/s. It also provided flow of cash to the farmers all round the year by way of sale of milk, meat, eggs and silk cocoons.

3. The dairy and the crops components contributed higher proportion to the total income under the existing farming systems. Dairy and crop enterprises are complementary to each other and found to sustain farm income.
4. Regardless of the farm size, the existing farming systems are not efficient ones. More efficient farming systems developed through appropriate methodology exhibited potential for realizing higher income and employment.

5. An efficient farm plan, which would help in increasing the net farm income and enable efficient resource use with minimized risk could be adopted by both rainfed and irrigated area farmers.

6. The transition of the existing farming systems from subsistence to commercialization needs emphasis to increase and stabilize income from vegetable crops and other livestock enterprises as they help in reducing risks and uncertainties on one hand and increase income and employment levels of the farmers on the other hand.

7. The dietary pattern of farm households under both rainfed and irrigated situations was mainly cereal based. ragi, jowar and rice are the major food grains consumed by the farm households in the area under study.

8. Accessibility to health, education and habitat was better under irrigated situation compared to rainfed situation in both Chikkaballapur and Dharwad districts. Even the benefits derived by farmers from development programs were high under irrigated situation compared to rainfed situation.

5.9 Avenues for further research:

During the course of investigation on the various aspects of the topic under study, although several important dimensions of the problem and its peripheral areas were identified, the same could not be dealt with in detail because they were largely outside the purview of the present study. Nonetheless, for a much deeper understanding of the impact of farming systems and government programs on the livelihood security of the farmers in Karnataka certain related issues ought to be investigated exclusively. Keeping this in view, the present study has identified the following important areas within the topic for further research. The list is, however, not exhaustive.
1. The impact of climate change on farming systems: Climate changes affect livelihood of the farmers to a larger extent. Changes in temperature and rainfall tend to modify the farming systems in general and cropping pattern in particular because cropping pattern mainly depends on climate conditions and amount of rainfall in a locality. In recent years, the number of rainy days has decreased and temperature has increased in Chikkaballapur district. Due to this, the cropping pattern and the area under cultivation have altered significantly. But there is no empirical evidence to substantiate or disprove this apparent change. Thus, it is necessary to develop a statistical model to assess the impact of climate change on the cropping pattern and farming system as a whole.

2. Overall impact of government programs on farming systems: University of Agriculture Sciences Bangalore distributed sheep and poultry birds for small and marginal farmers particularly for scheduled castes and scheduled tribes in Chikkaballapur district. Further, Agriculture and Horticulture Departments provided subsidy to the same beneficiaries for purchasing seeds, sprinkler and drip irrigation equipment. However, there are no studies that evaluate the synergies associated with these government programs implemented by different agencies and their impact on their livelihood of the beneficiaries particularly the small and marginal farmers. Hence, this issue deserves further probing.