

*Chapter – 7*  
*Major Findings and*  
*Recommendations*

## **CHAPTER-7**

### **MAJOR FINDINGS AND RECOMMENDATIONS**

#### **7.1 Conclusion**

The main objective of the study is to analyze the income and consumption pattern of cultivators. Both are analyzed by the source of income and expenditure. The income of cultivators have been classified into four categories, these are following-(1) Farm cultivation (2) Milk and milk products (3) Income from capital investment (4) Income from miscellaneous. Farm cultivation income is an important part of farmer's livelihood and there are disparities of income among different farmers according to their farm size. The size of holdings is below-2.0, 2.0-4.0, 4.0-7.5, 7.5-10.0 and 10.0-above. The maximum average household size of 8 members was observed in the households belonging to the size of holding 10.0 & above hectares whereas it was minimum of 6 members in the household pertaining to holding size group of below 2.0 hectares. The size of holding such as 4.0-7.5 & 7.5-10.0 hectares have more household size while other size of holdings have less than the average household size. Farm income is an important part of farmer's livelihood and there are disparities in income of different farmers according to their farm size. The estimated coefficients as time are positive and statistically significant. The annually growth in total income of farm cultivation was found 12 percent annually during the study period. The income from milk production according to size of holdings is also an important part of cultivators. The total income from milk production of the entire selected household has been explained according to size of holdings to find out the correlation between the income from milk production and the size of holdings. The annually growth in total income of all families from milk and milk products was found 11 percent annually during the study period. As per the size of holding it was found highest when size of holding is below 2.0 hectares and lowest in size

of holding 4.0-7.5 hectares. To assess the impact of size of holdings on capital formation, the total imputed income from capital investment has further been classified according to various sizes of holdings. The income from capital investment according to size of holdings is also an important part of cultivators. The annually growth in total income of cultivators from capital investment was found 12 percent annually during the study period. As per the size of holding it was found highest when size of holding is below 2.0 hectares and lowest in size of holding 10.0 & above hectares. The income from miscellaneous sources according to size of holding is also an important part of cultivators. The annually growth in total income of all families from miscellaneous was found 12 percent annually during the study period. As per the size of holding it was found highest when size of holding is 2.0-4.0 hectares and lowest in size of holding 4.0-7.5 hectares. In the last, it is stated that the total income of cultivators according to size of holding from all sources. The highest growth coefficient in size of holding is below- 2.0 and lowest is 4.0-7.5. Another thing for analyze is consumption pattern of cultivators. The expenditure of cultivators on both items (food and non-food items) was also analysed by the size of holding. The total expenditure of all families is under different size of holdings. The annually growth in food expenditure of all families was found 14 percent annually during the study period. As per the size of holding it was found highest when size of holding is below 2.0 hectares and lowest in size of holding 10-above hectares. The annually growth in non-food total expenditure of all families was found 11 percent annually during the study period. As per the size of holding it was found highest when size of holding is below 2.0 hectares and lowest in size of holding 4.0–7.5 hectares.

The second objective of the study is to enquire into the socio-economic factors are responsible for perceived changes. This is fulfilled by the trends growth rate in consumption expenditure of all households. The consumption expenditure of cultivators

reflects their socio-economic status. If an individual person is expending more on the both items (food and non-food items), this means that his status is good and not expending more on items, it means his status is low. Consumption expenditure of cultivators is reflected by three periods – each period contains four years. All periods tells about the consumption expenditure of all household, which depicts about the socio-economic status. For knowing the socio-economic factors are responsible for perceived change, we have calculated the period consumption expenditure by simple annual growth rate method. This tells us change in periods. Another factor of analyzing the socio- economic status of all cultivators is an income. By household's income, we come to know about the change in the period. The income of the households is unequal from the source of income.

The total income of all cultivators from all sources amongst three time periods trends shows their socio-economic status. From their total income the average income is calculated of all periods. It can be concluded that income of cultivators is declining from their sources and according to size of holding. While the expenditure of cultivators on some food (edible oil, Cereals, pulses, Miscellaneous) items and non-food items (Religious ceremonies, Marriage & Soc. Ceremonies, Transport, Fuel) are also declining. The cultivators are expending more on non-food items (education, health, clothing and housing) and food items (vegetable, Meat & meat products, fruits, milk and milk product). It means the socio-economic status of cultivators is upgrading. The growth rate of all sources was 21.23 percent in 2002-03 to 2005-06 and 9.46 percent in 2010-11 to 2013-14. It means the income of cultivators declined by the rate of 55.43 percent. But overall average growth rate of cultivator increased by 14.86 percent. The trend growth rates of total farm income from farm cultivation of cultivators are in according to the size of holdings. The average income of cultivators under all the size of holdings is 30.79 in 2002-03 to 2005-06 and 8.04 percent in 2010-11 to 2013-14. And the average income of

cultivators declined by nearly 73.88 percent between both time periods. The overall average growth of total farm income of cultivators is increased by 16.56 percent. The highest average expenditure growth rates on food items in 2002-03 to 2005-06 was 14.58 percent and 14.80 percent was average expenditure growth rate on food items in 2010-11 to 2013-14 by cultivators. But in the time period 2010-11 to 2013-14 the average expenditure growth rate of farmers on food items increased by 1.54 percent. The overall average growth rate of total food items is increased 16.36 percent. The highest average expenditure growth rates on non-food items was 17.96 in 2002-03 to 2005-06 and 14.65 percent was average expenditure growth rate on it in 2010-11 to 2013-14 by cultivators. But the percentage change between these two time periods is declined by 18.43 percent. The overall total growth rate, per household growth rate, per capita growth rate and per adult male unit growth rate of non-food items like fuel, clothing, housing, lighting, health, transport, education and marriage & social ceremonies are positive. The overall total growth rate, per household growth rate, per capita growth rate and per adult male unit growth rate of food items like cereals, pulses, milk & milk products, edible oil, sugar, vegetables, fruits, intoxicants and meat & meat products are positive.

The third objective of this study is to estimate the income elasticity of demand for commodities (food and non-food). The income elasticity of demand for commodities is of twelve years. The income elasticity of demand for food and non- food commodities in Haryana is analysed and to see the relationship between income and expenditure with the help of Engel curve. The Engel curve shows the positive relationship between total income and total expenditure. If the total income increases then the total expenditure of cultivators are increases. The Income elasticity of demand for food and non-food items is different. The share of food is increasing over time period but the share of non-food is decline.

## 7.2 Major findings

- The total average household expenditure by cultivator's on food items is 47.96% and on non-food items is 52.04%.
- The average income from farm cultivation 56.47 percent and milk and milk production 6.11 percent, together accounted for 62.58 percent of the total income of the cultivator households. Out of the remaining income of 37.42 percent, income generated from imputed interest on capital investment was 14.63 percent and from other miscellaneous sources such as remittances from outside, income from labour etc was 22.79 percent.
- In non-food items education accounted for 19.68 %, housing 20.20 %, clothing 16.48 %, marriage and social ceremony 15.27 % of the total domestic expenditure. The remaining 28.37 % was on fuel, lighting, health, transport, religious ceremonies and others.
- Milk and milk products formed the major portion of normal intake of a cultivator's food as on an average 62.75 % of the total food expenditure on food items was incurred on milk & milk products, 14.28 % on cereals & pulses, 7.49 % on fruits & vegetables, 4.62 % on sugar, 0.41 % minimum expenditure on meat & meat products and remaining 10.44 % on miscellaneous and other items.
- The share of food is increasing over time period but the share of non-food is decline.
- In this study found the inverse relationship between farm size (according to size of holding) and productivity.
- In this study found the positive income elasticity of different food items. The highest income elasticity of Meat and meat products items and the lowest income elasticity of cereals. The elasticity of Milk, Meat and Meat product and Intoxicant are greater

than Unit and Pulses, Edible, Sugar, Fruits, Vegetables, and Miscellaneous are less than Unit.

- In this study found the positive Income elasticity of different non-food items. The highest income elasticity of religious ceremonies items and the lowest income elasticity of Lighting and Marriage & Soc. Ceremonies. The elasticity of transport, education, religious Ceremonies and others are greater than Unit and lighting, clothing, housing, health, Marriage & Soc. Ceremonies and total are less than Unit.
- The Engel curve shows the positive relationship between total income and total expenditure. If the total income increases then the total expenditure of cultivators also increases.
- The income of cultivators is rising up in second time period than to first time period. The total expenditure of cultivators also increase in average time then the first average time period. The socio-economic status of farmers is upgrading with the increase of cultivators income.

### **7.3 Recommendations**

Agriculture is mainstay of livelihood in rural Haryana. As reported in the findings of the study that there is an existence of disparities among the cultivators in respect of farm income. The study found no clear pattern of increasing income and expenditure, yet it can be inferred that the average income of cultivators and expenditure is increasing over the time. The socio-economic status of farmers is also upgraded with the increase of cultivator's income. Further, the Engel curve shows the positive relationship between total income and total expenditure. If the total income increases then the total expenditure of cultivators also increases. On the basis of this study, one may draw an inference that more stress needed to be given on formulation

of specific programmes for the development of cultivators. Following specific measures are recommended for addressing the issue in future.

- The magnitude of expenditure elasticity for milk and milk products is more than one except cultivator households, which implies that milk and milk products are very costly in family budgets of cultivators. The government should supply milk to these groups through cooperative dairy firms at subsidiary rates.
- As the expenditure on health has a considerable higher share in the expenditures of all the cultivators, suitable health insurance programmes should be implemented.
- As the expenditure levels on alcoholic drinks are very high in the case of both agricultural labourers and cultivators, they should be counselled against alcoholism.
- The cultivators are illiterates and their decisions are very crucial in household decision making and hence they should be provided compulsory non-formal or adult education programmes which are very much relevant to rural economy.
- The government should formulate specialised programmers and implement properly for cultivators in order to attain one of the millennium development goals of compulsory primary education for all especially for cultivators.
- Marketing is the key to success in farming marketing system should be therefore more strong and efficient to serve the interest of the farmers.
- Lack of storage, primary processing the cold chain facilities, inadequate, uncertain and untimely supply of electricity are the major problems facing the farmers of Haryana. To address these problems government should develop these infrastructural facilities.
- The majority of the items of consumption of different categories of cultivators seem to be costly where the expenditure elasticities are greater than one. Therefore, the policy makers should consider these results in framing the rural development programmes and planning strategies.



- Educational standard, social awareness and economic status should be developed among the agricultural labours in order to organize them.
- The traditional welfare and employment programmes of the government such as various rural development programme, wage employment programmes, self employment programmes, targeted public distribution system and nutrition programme should be continue.
- Government and non government organizations should come forward sincerely to help cultivators to achieve a decent living with self esteem.
- Improvement in agriculture sector must be brought by a consolidation of holdings, the spread of irrigation, the use of better seeds, fertilizers and other inputs, better transports and marketing facilities, double and multiple cropping and the development of rural sector together with a large reduction in indebtedness and increase in productivity of near landless agricultural labours and marginal farmer-cum agricultural labours that will provide employment to them all the year.
- For increasing demand of fruits, vegetables, milk and meat due to fast expenditure of cultivators are positive indicators (table 6.13). To take advantages of this increasing demand, there is need to continue the supply of these products. For this government should focus on development of infrastructure facilities such cold storage, warehouse, roads, transport etc.
- There is positive elasticity of food items on the expenditure of all families. The lowest elasticity lies in cereals and pulses (table 6.13). According to Indian council of medical research recommendation the level of consumption cereals 557 gms. per day per capita and pulses is 50gm per day per capita. The govt. should provide pulses at subsidy rate to the cultivators instead of high price rate.

#### **7.4 Limitations of the study**

There are many constraints in this study. This constraint comes in the forefront to carry out such an exercise, which does not have all the information at a single space. The

empirical study in social science, especially aggregate variables based on the secondary information to investigate the relationships cope with many problems. There are following limitations of the study:

- The aggregate data consisting of yearly data and hence will not capture the micro level information of the variable.
- This study covers the data from 2002-03 to 2013-14 on basis of availability.
- The variables taken in the study are selected on the basis of availability of data. However, the selected variables represent the phenomenon appropriately as a number of other studies have adopted almost similar variables for the purpose.
- The study is limited only Haryana state due to bound of time and resources.

#### **7.5 Further research directions**

- The present study is carried out at state level. Further the study can be conducted at more disaggregated level such as district or block level to have more micro level.
- The present study is based on the availability of data on different cultivator's development indicators. These are defiantly certain variables those have not been include in to the present study due to the non availability data. Hence one can extend this study by adding the information on the left out variables by conducting other sources of data.
- This study, further, can be extended to another state to compare their policy phenomena regarding the infrastructure development. Comparative analysis can be made among different state on the basis of this study.