Chapter – 4
Growth Of Income And Expenditure Of Size-Wise Holdings

CHAPTER-4

GROWTH OF INCOME AND EXPENDITURE OF SIZE-WISE HOLDINGS

4.1 Introduction

This chapter represent the growth behaviour of income and expenditure of cultivators in Haryana. The objective of this chapter is to analyze the income and consumption pattern of cultivators in Haryana by their source of income. There are many sources of income and expenditure of farmers such as farm cultivation, milk and milk products, capital investment, income from miscellaneous sources, food items and non food items.[1] The income and expenditure patterns of the cultivators is analyzed according to the size of holdings such as below 2.0, 2.0-4.0, 4.0-7.5, 7.5-10.0 and 10.0 & above.

Haryana is self-sufficient state in food production and the second largest contributor to India's central pool of food grains. Haryana remarkably contributed to the green revolution in India as a result of which the country has become self-sufficient in food production. In Haryana, the availability of milk for per capita per day is 800 grams in 2013-14. It has 2nd rank in the country as against the national average of 307 grams in 2013-14.

4.2 Cultivators income sources

The cultivators earn income from various sources like farm cultivation, milk and milk product, capital investment and miscellaneous. The most important source is through farm cultivation of crops in either the land possessed by the household or in a land leased by it. It accounted for 51.71 per cent of their total income of cultivators in Haryana. The other sources of income of cultivators include milk and milk product. The cultivators normally prefer to keep buffaloes for milk production because they yield more milk as

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[1] Food items includes cereals, pulses, milk and milk products, edible oils, sugars ,vegetables ,fruits, intoxicants, meat and meat products and miscellaneous. Non –food items includes housing, clothing's, marriage, social ceremony and education etc.

compared to cows. The cows were mainly kept for the purpose of supplying male calves to be ultimately used as bullocks in the fields. The other sources of income of cultivators are income from capital investment. 18.21 per cent of the annual income of the selected households. The imputed income by way of interest from capital investment on items such as milch and drought animals, farm equipment and machinery, farm and residential buildings, cattle sheds, wells, tubewells & pumping sets and durable goods. The other sources of income of cultivators are income from miscellaneous. The contribution of miscellaneous sources to the total income of cultivators was 24.35 percent. The income from miscellaneous sources are remittances received from outside, income from leased out land, fuel, rent, manure, pension, income from family labour and honorarium for keeping records of economic of farming and family budgets.

The income sources of cultivators have been classified into following five broad categories:-

1. **Farm cultivation**

    i.   Total income of farm cultivation

    ii.   Average per household Income

    iii.   Average per capita income

    iv.   Average per adult male unit income

2. **Milk and Milk Production**

    i.   Total income of milk and milk production

    ii.   Average per household income

    iii.   Average per capita income

    iv.   Average per adult male unit income

3. Income From Capital Investment

    i.   Total income of capital investment

    ii.   Average per household income

    iii.   Average per capita income

    iv.   Average per adult male unit income

4. Miscellaneous

    i.   Total income of miscellaneous

    ii.   Average per household income

    iii.   Average per capita income

    iv.   Average per adult male unit income

5. Income of cultivators according to size of holding of all sources

    i.   Total income of all families

    ii.   Average per household total income of all families

    iii.   Average per capita total income of all families

    iv.   Average per adult male unit total income of all families

4.3 Cultivators expenditure sources

The expenditure made on food and non-food items by cultivators on annual and daily consumption of food, input and output of milk production and overall financial position of the selected cultivators.

1. **Food expenditure**

    i.   Total food expenditure

    ii.   Average per household food expenditure

    iii.   Average per capita food expenditure

    iv.   Average per adult male unit food expenditure

2. **Non-food expenditure**

    i.   Total non-food expenditure

    ii.   Average per household non-food expenditure

    iii.   Average per capita non-food expenditure

    iv.   Average per adult male unit non-food expenditure

3. **Total expenditure of all families**

    i.   Total expenditure of all families

    ii.   Average per household total expenditure

    iii.   Average per capita total expenditure

    iv.   Average per adult male unit total expenditure

4.4 Income from farm cultivation

The net income from farm cultivation comprises of the gross income and expenditure on various items of input like hired manual labour, bullock labour, seeds, fertilizers, implements & machinery, tubewells & pumping sets etc. The income of cultivators increases with the increase in the size of holdings because farmers with large holding follow better agriculture practices and purchase better inputs for better production. The growth rate of farm cultivation is analysis according to size of holdings.

Table 4.1 Total income from farm cultivation according to size of Holdings

Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below- 2.0	13.00 (0.00)	0.20 (0.00)	0.96
2.0-4.0	14.66 (0.00)	0.13 (0.00)	0.91
4.0-7.5	14.98 (0.00)	0.08 (0.00)	0.85
7.5-10.0	13.16 (0.00)	0.14 (0.00)	0.89
10.0 & above	13.29 (0.00)	0.15 (0.00)	0.90
Total	15.76 (0.00)	0.12 (0.00)	0.94
Note: Values in parentheses are P-values			

The table 4.1 shows the growth behaviour of total farm income of cultivators according to size of holdings. 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. This implies that for all cases the income (according to size of holding) trend is increasing, through the R^2 value differs across them. The annually growth in total income of farm cultivation 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 4.0-7.5 hectares. However there is no clear pattern of increasing income of farm cultivation is emerging during the study, yet it can be inferred that a total income of cultivators is increasing in Haryana.

Table 4.2 Average per capita income from farm income of cultivators according to size of holdings

Size of Holdings (Hectares)	Intercept (P-Value)	Growth Coefficients (P-Value)	R^2
Below- 2.0	10.05(0.00)	0.13(0.00)	0.90
2.0-4.0	10.94(0.00)	0.10(0.00)	0.94
4.0-7.5	11.29(0.00)	0.15(0.00)	0.97
7.5-10.0	11.89(0.00)	0.10(0.00)	0.95
10.0 & above	11.89(0.00)	0.15(0.00)	0.95
Total	13.09(0.00)	0.13(0.00)	0.89
Note: Values in parentheses are P-values			

Table 4.2 shows the average farm income per capita of cultivators according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) trend is increasing, through the R^2 value differs across them. The annually growth in total income of farm cultivation was found 13 percent annually during the study period. As per the size of holding it was found highest when size of holding is 10.0 & above hectares and lowest in size of holding 2.0-4.0 hectares. However there is no clear pattern of increasing income of farm cultivation is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

Table 4.3 Average per adult male unit income from farm income of cultivators according to size of holdings

Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below- 2.0	8.13(0.00)	0.14(0.00)	0.95
2.0-4.0	8.99(0.00)	0.11(0.00)	0.93
4.0-7.5	9.11(0.00)	0.17(0.00)	0.97
7.5-10.0	9.00(0.00)	0.19(0.00)	0.98
10.0 & above	9.65(0.00)	0.18(0.00)	0.96
Total	10.69(0.00)	0.17(0.00)	0.99

Note: Values in parentheses are P-values

Table 4.3 shows the average farm income per adult male unit of cultivators according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) trend is increasing, through the R^2 value differs across them. The annually growth in total income of farm cultivation was found 13 percent annually during the study period. As per the size of holding it was found highest when size of holding is 10.0 & above hectares and lowest in size of holding 2.0-4.0 hectares. However there is no clear pattern of increasing income of farm cultivation is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

Table 4.4 Growth rate of per households average farm income according to size of holdings

Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	8.28(0.00)	0.14(0.00)	0.94
2.0-4.0	9.23(0.00)	0.11(0.00)	0.94
4.0-7.5	9.33(0.00)	0.17(0.00)	0.97
7.5-10.0	9.47(0.00)	0.16(0.00)	0.94
10.0 & above	9.81(0.00)	0.17(0.00)	0.94
Total	11.09(0.00)	0.14(0.00)	0.87
Note: Values in parentheses are P-values			

Table 4.4 shows the average farm income per household of cultivators according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) trend is increasing, through the R^2 value differs across them. The annually growth in total income of farm cultivation was found 14 percent annually during the study period. As per the size of holding it was found highest when size of holding is 7.5-10.0 hectares and lowest in size of holding 2.0 to 4.0 hectares. However there is no clear pattern of increasing income of farm cultivation is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

4.5 Income from milk and milk production

The net income of all the selected households from milk and milk products and milch animals was 5.73 percent during 2013-14. The increases in the size of holdings enhance the income of farmers. Due to this reason farmers use better agriculture inputs. The following table indicates the total number of milch animals owned, milk produced and the income accrued therein.

Table 4.5 Total income of milk production from all families according to size of holdings			
Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient(P-Value)	R^2
Below 2.0	11.70(0.00)	0.17(0.00)	0.95
2.0-4.0	12.66(0.00)	0.12(0.00)	0.96
4.0-7.5	12.57(0.00)	0.05(0.00)	0.85
7.5-10.0	11.00(0.00)	0.06(0.00)	0.65
10.0 & above	10.63(0.00)	0.06(0.00)	0.55
Total	13.59(0.00)	0.11(0.00)	0.98
Note: Values in parentheses are P-values			

Table 4.5 shows the total income of all cultivators from milk and milk production according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of 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. However there is no clear pattern of increasing income of milk and milk product is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

Table 4.6 Average per households income from milk production according to size of holdings			
Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	8.67(0.00)	0.10(0.00)	0.88
2.0-4.0	9.02(0.00)	0.08(0.00)	0.90
4.0-7.5	9.05(0.00)	0.10(0.00)	0.83
7.5-10.0	9.46(0.00)	0.05(0.00)	0.84
10.0 & above	9.22(0.00)	0.16(0.00)	0.86
Total	10.71(0.00)	0.11(0.00)	0.98
Note: Values in parentheses are P-values			

Table 4.6 shows the average per household's income from milk and milk products of cultivators according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of 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 10.0 & above hectares and lowest in size of holding 7.5 to 10.0 hectares. However there is no clear pattern of increasing income of milk and milk products is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

Table 4.7 Per capita average income from milk production according to size of holdings			
Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	6.83(0.00)	0.12(0.00)	0.86
2.0-4.0	7.03(0.00)	0.10(0.00)	0.95
4.0-7.5	6.84(0.00)	0.11(0.00)	0.81
7.5-10.0	6.81(0.00)	0.13(0.00)	0.94
10.0 & above	7.26(0.00)	0.15(0.00)	0.87
Total	8.59(0.00)	0.12(0.00)	0.97
Note: Values in parentheses are P-values			

Table 4.8 shows the average per capita income from milk and milk products of cultivators according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of milk and milk products was found 12 percent annually during the study period. As per the size of holding it was found highest when size of holding is 10.0 & above hectares and lowest in size of holding 2.0-4.0 hectares. However there is no clear pattern of increasing income of milk and milk products is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

Table 4.8	Average per adult male unit income from milk production according to size of holdings		
Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below- 2.0	7.02(0.00)	0.11(0.00)	0.91
2.0-4.0	7.29(0.00)	0.09(0.01)	0.95
4.0-7.5	7.05(0.00)	0.11(0.00)	0.85
7.5-10.0	7.09(0.00)	0.11(0.00)	0.92
10.0 & above	7.61(0.00)	0.11(0.00)	0.91
Total	8.85(0.00)	0.11(0.00)	0.99
Note: Values in parentheses are P-values			

Table 4.8 shows the average per adult male unit income from milk and milk products of cultivators according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of 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 7.5-10.0 hectares and lowest in size of holding 2.0-4.0. However there is no clear pattern of increasing income of milk and milk products is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

4.6 Income from capital investment

The annual income of selected households was 14.60% from capital investment. The capital investment contains such items as milch and draught animals, farm equipments and machinery, farm and residential buildings, cattle sheds, wells, tubewells & pumping sets and durable goods. Cultivator income rise by increasing the size of holding. Because farmers with large holding follow better agriculture practices and purchase better inputs.

Table 4.9 Total income of capital investment according to size of holdings

Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below- 2.0	11.47(0.00)	0.24(0.00)	0.92
2.0-4.0	13.39(0.00)	0.13(0.00)	0.94
4.0-7.5	13.48(0.00)	0.08(0.00)	0.90
7.5-10.0	11.54(0.00)	0.10(0.00)	0.82
10.0 & above	11.92(0.00)	0.05(0.00)	0.87
Total	14.32(0.00)	0.12(0.00)	0.95

Note: Values in parentheses are P-values

Table 4.9 shows the total capital investment income of cultivators according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of 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. However there is no clear pattern of increasing income of capital investment is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

Table 4.10 Average per households income from capital investment according to size of holdings

Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	8.52(0.00)	0.17(0.00)	0.97
2.0-4.0	9.63(0.00)	0.11(0.00)	0.92
4.0-7.5	10.06(0.00)	0.12(0.00)	0.81
7.5-10.0	10.56(0.00)	0.03(0.00)	0.69
10.0 & above	10.51(0.00)	0.06(0.00)	0.92
Total	11.65(0.00)	0.09(0.00)	0.94

Note: Values in parentheses are P-values

Table 4.10 shows the average income per households from capital investment according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of capital investment was found 9 percent annually during the study period. As per the size of holding it was found highest when size of holding is 4.0-7.5 hectares and lowest in size of holding 7.5-10.0 hectares. However there is no clear pattern of increasing income of capital investment is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

Table 4.11 Average per capita income from capital investment according to size of holdings

Size of Holding (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	6.48(0.00)	0.20(0.00)	0.95
2.0-4.0	7.69(0.00)	0.12(0.00)	0.92
4.0-7.5	7.77(0.00)	0.12(0.00)	0.91
7.5-10.0	7.92(0.00)	0.09(0.00)	0.81
10.0 & above	8.39(0.00)	0.10(0.00)	0.97
Total	9.41(0.00)	0.12(0.00)	0.98
Note: Values in parentheses are P-values			

Table 4.11 shows the average per capita income of capital investment from cultivators according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of 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 7.5-10.0 hectares. However there is no clear pattern of increasing income of capital investment is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

Table 4.12 Average per adult male unit income from capital investment according to size of holdings

Size of Holding (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	6.82(0.00)	0.20(0.00)	0.94
2.0-4.0	7.84(0.00)	0.12(0.00)	0.92
4.0-7.5	8.03(0.00)	0.12(0.00)	0.91
7.5-10.0	7.90(0.00)	0.11(0.00)	0.91
10.0 & above	8.41(0.00)	0.14(0.00)	0.86
Total	9.53(0.00)	0.14(0.00)	0.96
Note: Values in parentheses are P-values			

Table 4.12 shows the average per adult male unit income from capital investment of cultivators according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of farm cultivation 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 7.5-10.0 hectares. However there is no clear pattern of increasing income of capital investment is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

4.7 Income from miscellaneous sources

The contribution of miscellaneous sources to the total income of the cultivators was 25.66 percent. The income of cultivators increases with the increase in the size of holdings because farmers with large holding follow better agriculture practices and purchase better inputs for better production. The income from miscellaneous sources has been classified into nine different categories. The details are presented in below table.

Table 4.13 Total income from miscellaneous sources according to size of holdings			
Size of Holding (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	13.80(0.00)	0.11(0.00)	0.86
2.0-4.0	13.39(0.00)	0.18(0.00)	0.96
4.0-7.5	13.89(0.00)	0.04(0.00)	0.89
7.5-10.0	11.17(0.00)	0.11(0.00)	0.89
10.0 & above	11.37(0.00)	0.09(0.00)	0.88
Total	14.83(0.00)	0.12(0.00)	0.96
Note: Values in parentheses are P-values			

Table 4.13 shows the total income of all families from miscellaneous according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of 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. However there is no clear pattern of increasing income of miscellaneous is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

Table 4.14 Average per households income from miscellaneous sources according to size of holdings			
Size of Holding (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	10.48(0.00)	0.07(0.00)	0.87
2.0-4.0	9.73(0.00)	0.15(0.00)	0.95
4.0-7.5	10.43(0.00)	0.10(0.00)	0.88
7.5-10.0	9.68(0.00)	0.09(0.00)	0.77
10.0 & above	10.16(0.00)	0.15(0.00)	0.90
Total	11.74(0.00)	0.11(0.00)	0.95
Note: Values in parentheses are P-values			

Table 4.14 shows the average per capita income from miscellaneous sources of cultivators according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of miscellaneous sources was found 11 percent annually during the study period. As per the size of holding it was found highest when size of holding is 10.0 & above hectares and lowest in size of holding 2.0 to 4.0 hectares. However there is no clear pattern of increasing income of miscellaneous sources is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

Table 4.15 Average per capita income from miscellaneous sources according to size of holdings

Size of Holding (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	8.24(0.00)	0.12(0.00)	0.94
2.0-4.0	7.82(0.00)	0.16(0.00)	0.94
4.0-7.5	8.07(0.00)	0.14(0.00)	0.93
7.5-10.0	7.13(0.00)	0.13(0.00)	0.71
10.0 & above	7.46(0.00)	0.13(0.00)	0.95
Total	9.43(0.00)	0.14(0.00)	0.96
Note: Values in parentheses are P-values			

Table 4.15 shows the average per capita income from miscellaneous sources of cultivators according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of miscellaneous was found 14 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 below 2.0 hectares. However there is no clear pattern of increasing income of miscellaneous is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

Table 4.16 Average per adult male unit income from miscellaneous sources according to size of holdings

Size of Holding (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	8.24(0.00)	0.14(0.00)	0.96
2.0-4.0	8.03(0.00)	0.15(0.00)	0.94
4.0-7.5	8.40(0.00)	0.11(0.00)	0.89
7.5-10.0	7.28(0.00)	0.15(0.00)	0.75
10.0 & above	7.34(0.00)	0.23 (0.00)	0.84
Total	9.53(0.00)	0.16(0.00)	0.95
Note: Values in parentheses are P-values			

Table 4.16 shows the average income per adult male unit from miscellaneous sources of cultivators according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of miscellaneous sources was found 13 percent annually during the study period. As per the size of holding it was found highest when size of holding is 10.0 & above hectares and lowest in size of holding 2.0 to 4.0 hectares. However there is no clear pattern of increasing income of miscellaneous sources is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

4.8 Income of cultivators according to size of holdings from all sources

This is observed that the size of holdings has a significant effect on the income of the cultivators. The average income of cultivators increases due to increase in the size of holdings because farmers with large holdings follow better agricultural practices and can afford a better package of inputs. The detail of income of cultivators according to size of holdings is given below.

Table 4.17 Total income of all sources according to size of holdings			
Size of Holding (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	14.03(0.00)	0.19(0.00)	0.96
2.0-4.0	15.23(0.00)	0.14(0.00)	0.97
4.0-7.5	15.43(0.00)	0.08(0.00)	0.84
7.5-10.0	13.28(0.00)	0.15(0.00)	0.96
10.0 & above	13.52(0.00)	0.12(0.00)	0.73
Total	16.25(0.00)	0.13(0.00)	0.97
Note: Values in parentheses are P-values			

Table 4.17 shows the total income of cultivators from all sources according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of all sources was found 13 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. However there is no clear pattern of increasing income of all sources is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

Table 4.18 Average per households income from cultivators of all sources according to size of holdings			
Size of Holding (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	10.95(0.00)	0.13(0.00)	0.96
2.0-4.0	11.51(0.00)	0.11(0.00)	0.97
4.0-7.5	11.88(0.00)	0.13(0.00)	0.98
7.5-10.0	12.32(0.00)	0.09(0.00)	0.92
10.0 & above	12.19(0.00)	0.16(0.00)	0.97
Total	10.93(0.00)	0.13(0.00)	0.77
Note: Values in parentheses are P-values			

Table 4.18 shows the average income per households of cultivators from all sources according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of all sources was found 13 percent annually during the study period. As per the size of holding it was found highest when size of holding is 4.0-7.5 hectares and lowest in size of holding 7.5-10.0 hectares. However there is no clear pattern of increasing income of all sources is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

Table 4.19 Average per capita income from cultivators of all sources according to size of holdings

Size of Holding (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	9.07(0.00)	0.14(0.00)	0.96
2.0-4.0	9.57(0.00)	0.12(0.00)	0.98
4.0-7.5	9.66(0.00)	0.16(0.00)	0.97
7.5-10.0	9.68(0.00)	0.16(0.00)	0.96
10.0 & above	10.07(0.00)	0.17(0.00)	0.99
Total	11.27(0.00)	0.15(0.00)	0.99
Note: Values in parentheses are P-values			

Table 4.19 shows the average income per capita of cultivators from all sources according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of all sources was found 15 percent annually during the study period. As per the size of holding it was found highest when size of holding is 10.0 & above hectares and lowest in size of holding 2.0-4.0 hectares. However there is no clear pattern of increasing income of all sources is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

Table 4.20 Average income per adult male unit of cultivators of all sources according to size of holdings

Size of Holding (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	9.27(0.00)	0.15(0.00)	0.97
2.0-4.0	9.80(0.00)	0.12(0.00)	0.98
4.0-7.5	9.93(0.00)	0.15(0.00)	0.97
7.5-10.0	9.74(0.00)	0.17(0.00)	0.93
10.0 & above	10.37(0.00)	0.15(0.00)	0.97
Total	11.50(0.00)	0.15(0.00)	0.99

Note: Values in parentheses are P-values

Table4.20 shows the average income per adult male unit of cultivators from all sources according to size of holdings. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total income of all sources was found 15 percent annually during the study period. As per the size of holding it was found highest when size of holding is 7.5-10.0 hectares and lowest in size of holding 2.0-4.0 hectares. However there is no clear pattern of increasing income of all sources is emerging during the study, yet it can be inferred that an average income of cultivators is increasing in Haryana.

4.9 Expenditure of farmers according to size of holding

The expenditure of farmers has been classified into two parts as food and non-food items on annual and daily consumption of food, input and output of milk production and overall financial position of the selected cultivators. The detailed study of the household's expenditure has been made under the eleven major heads. The broad head wise household's expenditure per family, per capita and per adult male unit is shown in below tables.

4.10 Expenditure on food items

The expenditure on food items is 51.94% of the total household. All the food items have been summarized into various broad groups which are as under cereals includes wheat and wheat products, rice, maize and other cereals, millets include jowar and bajra pulses include gram, moong, moth, mash, arhar and other pulses milk & milk products include desi ghee and milk edible oils include vegetable oils, rape & mustard oil and other edible oils Meat and poultry products include eggs and meat of all types sugar includes gur, shakkar, khandsari and sugar fruits and vegetables include. All types of fruits and vegetables Salt and spices include Salt, red chillies, turmeric and other spices intoxicants include liquor, tobacco, opium, beverages and other intoxicants miscellaneous include jams and pickles, sweets and other articles of food not included under any other head. The cultivators' household expenditure per family, per capita and per adult male unit is given in Tables.

Table 4.21 Total expenditure on food items of all families according to size of holdings

Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	13.36(0.00)	0.20(0.00)	0.96
2.0-4.0	14.21(0.00)	0.15(0.00)	0.98
4.0-7.5	14.28(0.00)	0.08(0.00)	0.76
7.5-10.0	12.80(0.00)	0.08(0.00)	0.75
10.0 & above	12.18(0.00)	0.07(0.00)	0.73
Total	15.23(0.00)	0.14(0.00)	0.96
Note: Values in parentheses are P-values			

Table 4.21 shows the total expenditure of food items of all families according to size of holding. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. 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. However there is no clear pattern of increasing food expenditure of cultivators during the study, yet it can be inferred that an average expenditure of cultivators is increasing in Haryana.

Table 4.22 Per households expenditure on food items of all families according to size of holdings (Hectares)			
Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	10.32(0.00)	0.13(0.00)	0.94
2.0-4.0	10.49(0.00)	0.13(0.00)	0.97
4.0-7.5	10.33(0.00)	0.21(0.09)	0.83
7.5-10.0	11.34(0.00)	0.06(0.04)	0.73
10.0 & above	10.71(0.00)	0.15(0.00)	0.91
Total	12.21(0.00)	0.15(0.00)	0.98
Note: Values in parentheses are P-values			

Table 4.22 shows the per households expenditure on food items from all families according to size of holding. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in food expenditure of all families was found 15 percent annually during the study period. As per the size of holding it was found highest when size of holding is 4.0–7.5 hectares and lowest in size of holding 7.5-10-0 hectares. However there is no clear pattern of increasing food expenditure of cultivators during the study, yet it can be inferred that a total expenditure of cultivators is increasing in Haryana.

Table 4.23 Per capita expenditure on food items of all families according to size of holdings (Hectares)

Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	8.45(0.00)	0.14(0.00)	0.94
2.0-4.0	8.56(0.00)	0.13(0.00)	0.97
4.0-7.5	8.49(0.00)	0.15(0.00)	0.95
7.5-10.0	8.60(0.00)	0.14(0.00)	0.94
10.0 & above	8.51(0.00)	0.17(0.00)	0.97
Total	10.13(0.00)	0.15(0.00)	0.98
Note: Values in parentheses are P-values			

Table 4.23 shows the Per capita expenditure on food items from all families according to size of holding. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total expenditure of all families was found 15 percent annually during the study period. As per the size of holding it was found highest when size of holding is 10.0 & above hectares and lowest in size of holding 2.0-4.0 hectares. However there is no clear pattern of increasing expenditure of cultivators during the study, yet it can be inferred that a total expenditure of cultivators is increasing in Haryana.

Table 4.24 Expenditure per adult mail units on food items of all families according to size of holdings (Hectares)

Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	8.65(0.00)	0.14(0.00)	0.95
2.0-4.0	8.78(0.00)	0.13(0.00)	0.98
4.0-7.5	8,77(0.00)	0.14(0.00)	0.96
7.5-10.0	8.79(0.00)	0.14(0.00)	0.92
10.0 & above	8.73(0.00)	0.15(0.00)	0.96
Total	10.36(0.00)	0.14(0.00)	0.98
Note: Values in parentheses are P-values			

Table 4.24 shows the expenditure per adult mail units on food items from all families according to size of holding. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. 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 2.0-4.0 hectares and lowest in size of holding 10 & above hectares. However there is no clear pattern of increasing expenditure of cultivators during the study yet it can be inferred that a total expenditure of cultivators is increasing in Haryana.

4.11 Expenditure on non–food items

The expenditure on non-food items is 48.06**%** of the total selected household. Among the non-food items, the clothing and housing claimed 7.73% and 10.45% respectively of the total expenditure. Hence, it is desirable to analyze the expenditure on these items in detail. The expenditure on housing includes expenditure on house construction/repairs, alterations and additions, utensils, furniture & fixtures, machinery and tools etc. Expenditure on clothing includes expenditure on readymade garments, bedding, footwear's, cosmetics and other miscellaneous items. The details of Garments include shirts, pants, dhotis, turbans, underwear's, sweaters, coats, towels, needles, thread and buttons etc. Beddings include bed sheets, bedcovers, quilts, blankets etc. Footwear's all types of leather, rubber, plastic and canvas shoes and chappals, boot polish and brush etc. are included under footwear. Cosmetics these include bathing soap, comb, tooth brush, mirror, face powder, cream, bangles etc. Miscellaneous include services rendered by tailor, barber, washer man, cobbler, drycleaner, weaver etc. The item wise breakup of the expenditure on clothing is set out in tables.

Table 4.25 Total expenditure on Non-food items of all families according to size of holdings (Hectares)

Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	12.96(0.00)	0.20(0.00)	0.97
2.0-4.0	14.46(0.00)	0.12(0.00)	0.91
4.0-7.5	14.51(0.00)	0.10(0.00)	0.98
7.5-10.0	12.25(0.00)	0.17(0.00)	0.90
10.0 & above	12.90(0.00)	0.12(0.00)	0.86
Total	15.52(0.00)	0.11(0.00)	0.95
Note: Values in parentheses are P-values			

Table 4.25 shows the total expenditure on non-food items of all families according to size of holding. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in 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. However there is no clear pattern of increasing expenditure of cultivators during the study, yet it can be inferred that a total expenditure of cultivators is increasing in Haryana.

Table 4.26 Expenditure per households on non-food items from all families according to size of holdings (Hectares)

Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	9.98(0.00)	0.13(0.00)	0.92
2.0-4.0	10.88(0.00)	0.06(0.00)	0.90
4.0-7.5	11.27(0.00)	0.09(0.00)	0.93
7.5-10.0	10.92(0.00)	0.13(0.00)	0.91
10.0 & above	11.38(0.00)	0.18(0.00)	0.91
Total	12.58(0.00)	0.13(0.00)	0.97
Note: Values in parentheses are P-values			

Table 4.26 shows the expenditure per households on non-food items of all families according to size of holding. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total expenditure of all families was found 13 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. However there is no clear pattern of increasing expenditure of cultivators during the study, yet it can be inferred that an average expenditure of cultivators is increasing in Haryana.

Table 4.27 Per capita expenditure on non-food items from all families according to size of holdings (Hectares)

Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	8.17(0.00)	0.12(0.00)	0.93
2.0-4.0	8.80(0.00)	0.10(0.00)	0.87
4.0-7.5	9.15(0.00)	0.07(0.00)	0.96
7.5-10.0	8.16(0.00)	0.19(0.00)	0.82
10.0 & above	9.25(0.00)	0.18(0.00)	0.93
Total	10.41(0.00)	0.14(0.00)	0.97

Note: Values in parentheses are P-values

Table 4.27 shows the per capita expenditure on non-food items of all families according to size of holding. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total 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 7.5-10.0 hectares and lowest in size of holding 4.0–7.5 hectares. However there is no clear pattern of increasing expenditure of cultivators during the study, yet it can be inferred that a total expenditure of cultivators is increasing in Haryana.

Table 4.28 Per adult male units expenditure on non-food items from all families according to size of holdings (Hectares)

Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	8.30(0.00)	0.14(0.01)	0.95
2.0-4.0	9.03(0.00)	0.10(0.01)	0.85
4.0-7.5	9.24(0.00)	0.14(0.00)	0.95
7.5-10.0	8.235(0.00)	0.19(0.00)	0.84
10.0 & above	9.44(0.00)	0.17(0.02)	0.94
Total	10.59(0.00)	0.15(0.00)	0.97
Note: Values in parentheses are P-values			

Table 4.28 shows the per adult male units expenditure on non-food items of all families according to size of holding. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total expenditure of all families was found 15 percent annually during the study period. As per the size of holding it was found highest when size of holding is 7.5-10.0 hectares and lowest in size of holding 2.0-4.0hectares. However there is no clear pattern of increasing expenditure of cultivators during the study, yet it can be inferred that a total expenditure of cultivators is increasing in Haryana.

Table 4.29 Total expenditure of all families according to size of holdings (Hectares)

Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	13.87(0.00)	0.20(0.00)	0.97
2.0-4.0	15.06(0.00)	0.13(0.00)	0.97
4.0-7.5	15.22(0.00)	0.07(0.00)	0.90
7.5-10.0	13.13(0.00)	0.13(0.00)	0.95
10.0 & above	13.13(0.00)	0.16(0.00)	0.95
Total	16.04(0.00)	0.13(0.00)	0.99
Note: Values in parentheses are P-values			

Table 4.29 shows the total expenditure of all families according to size of holding. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total expenditure of all families was found 13 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. However there is no clear pattern of increasing expenditure of cultivators during the study, yet it can be inferred that a total expenditure of cultivators is increasing in Haryana.

Table 4.30 Per households expenditure of all families according to size of holdings (Hectares)			
Size of Holdings (Hectares)	Intercept (P-Value)	Growth Coefficients (P-Value)	R^2
Below 2.0	10.86(0.00)	0.13(0.00)	0.94
2.0-4.0	11.31(0.00)	0.11(0.00)	0.94
4.0-7.5	11.80(0.00)	0.09(0.00)	0.91
7.5-10.0	11.83(0.00)	0.09(0.00)	0.82
10.0 & above	11.79(0.00)	0.17(0.00)	0.94
Total	13.18(0.00)	0.12(0.00)	0.97
Note: Values in parentheses are P-values			

Table 4.30 shows the per households expenditure of all families according to size of holding. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total expenditure of all families was found 12 percent annually during the study period. As per the size of holding it was found highest when size of holding is 10.0 & above hectares and lowest in size of holding 7.5-10.0 hectares. However there is no clear pattern of increasing expenditure of cultivators during the study, yet it can be inferred that a total expenditure of cultivators is increasing in Haryana.

Table 4.31 Per capita expenditure of all families according to size of holdings (Hectares)

Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	8.99(0.00)	0.14(0.00)	0.95
2.0-4.0	9.37(0.00)	0.11(0.00)	0.96
4.0-7.5	9.56(0.00)	0.13(0.00)	0.92
7.5-10.0	9.09(0.00)	0.17(0.00)	0.92
10.0 & above	9.80(0.00)	0.16(0.00)	0.91
Total	11.01(0.00)	0.14(0.00)	0.97

Note: Values in parentheses are P-values

Table 4.31 shows the per capita expenditure of all families according to size of holding. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total 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 7.5-10.0 hectares and lowest in size of holding 2.0-4.0 hectares. However there is no clear pattern of increasing expenditure of cultivators during the study, yet it can be inferred that a total expenditure of cultivators is increasing in Haryana.

Table 4.32 Expenditure per adult male unit of all families according to size of holdings (Hectares)

Size of Holdings (Hectares)	Intercept (P-value)	Growth Coefficient (P-Value)	R^2
Below 2.0	9.20(0.00)	0.14(0.00)	0.96
2.0-4.0	9.60(0.00)	0.12(0.00)	0.96
4.0-7.5	9.80(0.00)	0.12(0.00)	0.96
7.5-10.0	9.20(0.00)	0.19(0.00)	0.93
10.0 & above	10.08(0.00)	0.11(0.00)	0.8
Total	11.24(0.00)	0.13(0.00)	0.98

Note: Values in parentheses are P-values

Table 4.32 shows the expenditure per adult male unit of all families according to size of holding. The estimated coefficients as time are positive and statistically significant. This implies that for all cases the income (according to size of holding) the trend is increasing, through the R^2 value differs across them. The annually growth in total expenditure of all families was found 13 percent annually during the study period. As per the size of holding it was found highest when size of holding is 7.5-10.0 hectares and lowest in size of holding 10.0 & above hectares. However there is no clear pattern of increasing expenditure of cultivators during the study yet it can be inferred that a total expenditure of cultivators is increasing in Haryana.

4.12 Conclusion

This chapter analyzed the income and expenditure pattern of cultivators of Haryana. There are many sources of income such as farm cultivation, milk and milk production, interest on capital investment and income from miscellaneous sources. The cultivators made expenditure on food and non-food items. It was analyzed the total income through net income per household, per capita and per adult male unit of the selected cultivators. The income of cultivators is increasing with change of time. Thus, there is positive relationship between income and time. The cultivator's expenditure on items increases due to change in income. Hence there is also positive relationship between farmer's expenditure and income. Main findings-

- 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 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.

- 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 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.

- 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.