# Chapter – 5
# Trends Of Income And Expenditure Of Cultivators

# Chapter 5

## TRENDS OF INCOME AND EXPENDITURE OF CULTIVATORS

### 5.1 INTRODUCTION

The main aim of this chapter is to figure out trends and patterns of consumption expenditure across consumption classes over the study period. It is fact that high growth in India had been accompanied by increasing income inequalities. A vast majority of Indian population depends on agriculture for its income and employment. Per capita income, the standard of living, the level of consumption etc are some of the important determinants of the economic status of the society. The standard of living of a household can be understood from the consumption pattern, and the quality of consumption budget clearly indicates the level of welfare of the household. Consumption clearly contributes to human development when it enlarges the capabilities and enriches the lives of people without adversely affecting the well-being of others India's faster economic growth over 1990s has raised per capita income (expenditure and has significantly impacted its food consumption patterns by causing a change in the structure of food consumption patterns observed earlier during pre-reforms period. This raises the relevance of looking at the composition of India's food consumption basket. They provide estimates of how food consumption is affected by changes in prices, income, and taxation policies (Dunne and Edkins, 2005). The benefits of knowledge and education go to higher income groups of rural households. Similarly in case of medical expenses and other necessary expenses are far away from these deprived masses which show a direct relationship with level of income. The present study relates the consumption patterns of households to show the frequent changes in both food and non-food consumption expenditure due to the changes in standard of living, income of the people and modernity of the society, especially due to the impact of Liberalization, Privatization Globalization (LPG) plans and policies.

Consumption is not the domain in which income inequalities are captured rather more the economy attains higher levels of development, inequalities in consumption across income classes is expected to decline. The rising income inequalities impact upon consumption expenditure of various groups of people. In simplistic notion that income levels solely determined consumption patterns of individuals nor we hold the reduction that individual consumption patterns are homogeneous within income classes.

## 5.2 Trend growth rate of cultivator's income

The main sources of income of cultivators are following as farm cultivation, milk & milk production, income from capital investment and miscellaneous. The trend growth rate of cultivators are according to total income, average income per household, average income per capita and average income per adult male unit.

| Table 5.1 Trend growth rate of total income from all income sources | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sources | I | II | III | Overall growth rate (2002-14) | Change* between I & II | Change* between II & III | Change* between III & I |
| Farm cultivation | 35.21 | 13.22 | 6.35 | 16.72 | -62.46 | -51.99 | -81.98 |
| Milk & milk production | 15.70 | 10.11 | 10.32 | 11.71 | -35.61 | 2.05 | -34.29 |
| Capital investment | 7.75 | 17.48 | 18.75 | 15.29 | 125.58 | 7.31 | 142.07 |
| Miscellaneous | 5.56 | 23.46 | 11.17 | 14.11 | 321.67 | -52.40 | 100.73 |
| Total | 21.23 | 15.49 | 9.46 | 14.86 | -27.03 | -38.92 | -55.43 |
| I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14 *In Percentage **Sources: Researcher calculations** | | | | | | | |

The table 5.1 depicts the trend growth rate of total income from all income sources of cultivators such as farm cultivation, milk and milk production, capital investment and miscellaneous during the period of 2002-03 to 2013-14. The growth rate of all sources of cultivators was calculated into three time periods and the percent change is also presented

among them. In the first period (2002-03 to 2005-06), the highest growth rate of farm cultivation is 35.21 and the lowest of miscellaneous is 5.56. And in the same way the total growth rate of all sources is 21.23 in this period due to backward technology and not use of HYV seeds because of the economic condition of cultivators was poor. In the second period (2006-07 to 2009-10), the highest growth rate of miscellaneous is 23.46 and lowest of milk and milk product is 10.11. And the total average growth rate of all sources in second period is 15.49. In the third time period (2010-11 to 2013-14), the highest growth rate of capital investment is 18.75 and lowest of farm cultivation is 6.35 in this period due to increasing storage needs from emanating from higher farm production and the use of farm machinery and other farm equipments. The average growth rate of all sources in this period is 9.46. Thus in the same way the overall growth rate is also calculated of all sources, the highest overall growth of farm cultivation is 16.72 and lowest of milk and milk product is 11.71. So the overall growth rate of all sources of households is positively. Thereafter the percent change is also shown among the time periods, first percent change is calculated between first and second time period. Between this percent change is declined by 27.03. And the percent change between second and third time period that is declined by 38.92 percent. The third percent change between first and third time period that is declined by 55.43 percent. And in the last it can be stated that the percent change of households total growth rate in all three time periods is declining. This table is also shown in the diagram.

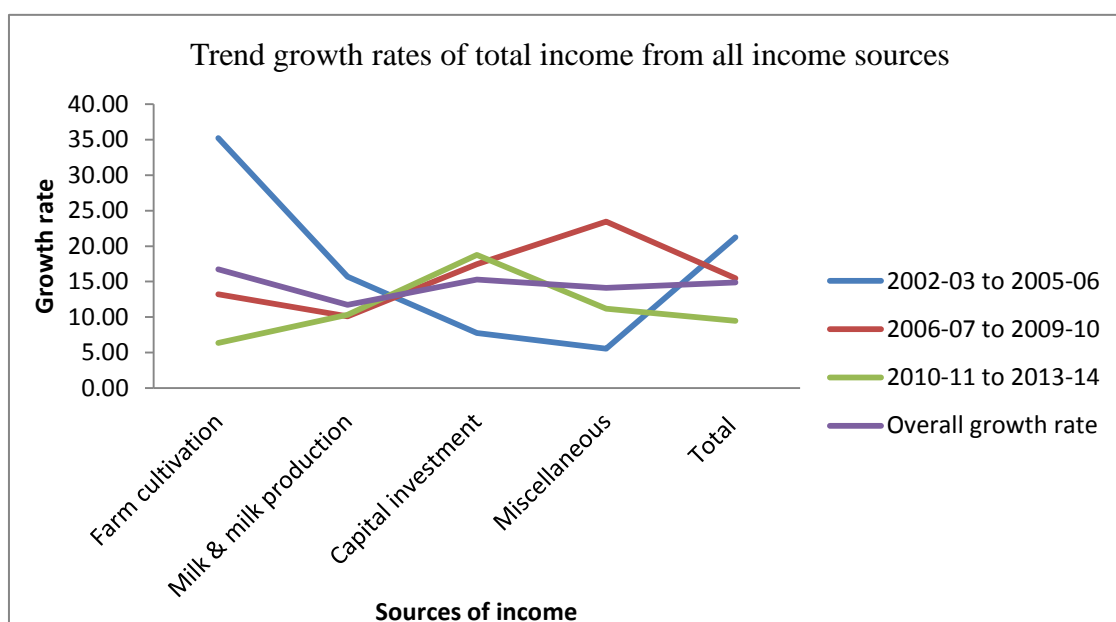**Figure 5.1 Trend growth rates of total income from all income sources**



Trend growth rates of total income from all income sources

| Table 5.2 Trend growth rate of average per household income from all income sources | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sources | I | II | III | Overall growth rate (2002-14) | Change* between I & II | Change* between II & III | Change* between III & I |
| Farm cultivation | 17.96 | 12.71 | 6.15 | 11.76 | -29.23 | -51.66 | -65.79 |
| Milk & milk production | 1.52 | 9.64 | 8.93 | 7.17 | 533.77 | -7.41 | 486.79 |
| Capital investment | 3.59 | 12.62 | 16.44 | 11.55 | 251.53 | 30.23 | 357.80 |
| Miscellaneous | 6.47 | 13.69 | 11.08 | 10.77 | 111.59 | -19.09 | 71.21 |
| Total | 7.38 | 15.15 | 8.93 | 10.77 | 105.20 | -41.05 | 20.96 |
| I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14 <br> *In Percentage <br> **Sources: Researcher calculations** | | | | | | | |

The table 5.2 depicts the trend growth rate of average per household income from all income sources of cultivators such as farm cultivation, milk and milk production, capital investment and miscellaneous during the period of 2002-03 to 2013-14. The growth rate of all sources of cultivators was calculated into three time periods and the percent change is also presented among them. In the first period (2002-03 to 2005-06), the highest growth rate of farm cultivation is 17.96 and lowest of capital investment is 3.59. The growth rate of capital investment increased in time to time because increasing storage needs from emanating from higher farm production and the use of farm machinery and other farm equipments. And in the same way the total growth rate of all sources is 7.38 in this period. In the second period (2006-07 to 2009-10), the highest growth rate of miscellaneous is 13.69 and lowest of milk and milk product is 9.64 in the period because 80% cultivators have livestock's. And the total average growth rate of all sources in second period is 15.15. In the third time period (2010-11 to 2013-14), the highest growth rate of capital investment is 16.44 and lowest of farm cultivation is 6.15. The average growth rate of all sources in this period is 8.93. Thus in the same way the overall growth rate is also calculated of all sources, the highest overall growth of farm cultivation is 11.76 and lowest of milk and milk product is 7.17. So the overall growth rate of all sources of households is positive. Thereafter the percent change is also shown among the time periods, first percent change is calculated between first and second time period. Between this percent change is increased by 105.20. And the percent change between second and third period that is declined by 41.05 percent. The third percent change between first and third time period that is increased by 20.96 percent. And in the last it can be stated that the percent change is fluctuating across three time periods. This table is also shown in the diagram.

**Figure 5.2 Trend growth rate of average per household income from all income sources**
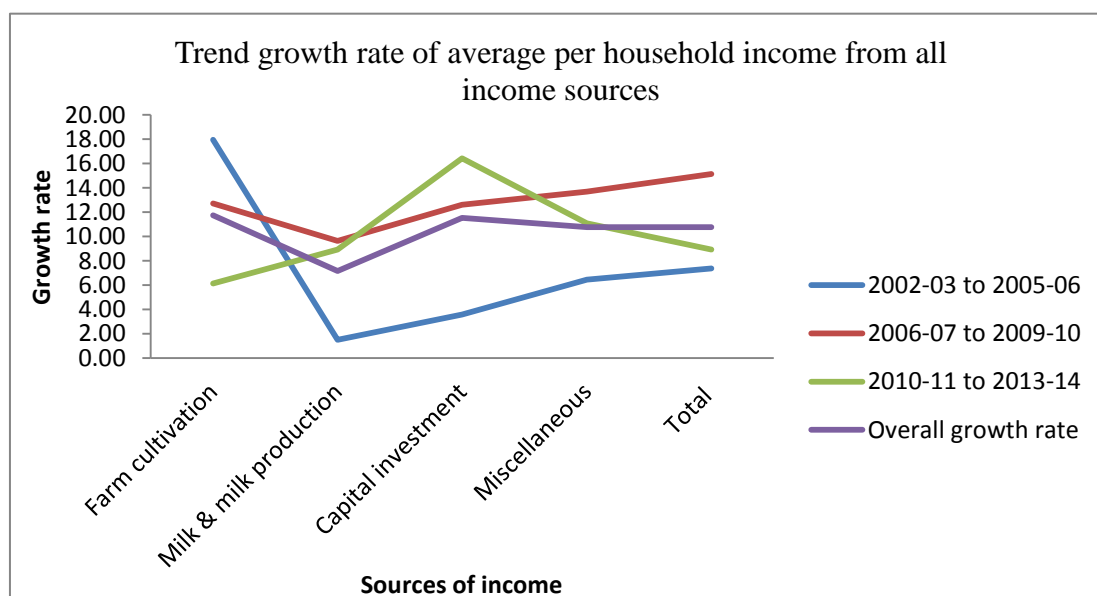


Trend growth rate of average per household income from all income sources

Table 5.3 Trend growth rate of average per capita income from all income sources

| Sources | I | II | III | Overall growth rate (2002-14) | Change* between I & II | Change* between II & III | Change* between III & I |
|---|---|---|---|---|---|---|---|
| Farm cultivation | 18.24 | 17.34 | 7.27 | 13.92 | -4.97 | -58.06 | -60.15 |
| Milk & milk production | 2.34 | 14.01 | 11.14 | 9.78 | 500.09 | -20.48 | 377.17 |
| Capital investment | 8.73 | 21.96 | 19.68 | 17.52 | 151.46 | -10.39 | 125.34 |
| Miscellaneous | 9.76 | 18.35 | 12.29 | 13.90 | 88.01 | -33.03 | 25.91 |
| Total | 10.70 | 19.75 | 10.44 | 13.89 | 84.58 | -47.15 | -2.46 |
| I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14 | | | | | | | |
| *In Percentage | | | | | | | |
| **Sources: Researcher calculations** | | | | | | | |

The table 5.3 depicts the trend growth rate of average per capita income from all income sources of cultivators such as farm cultivation, milk and milk production, capital investment and miscellaneous during the period of 2002-03 to 2013-14. The growth rate of all sources of cultivators was calculated into three time periods and the percent change is also presented among them. In the first period (2002-03 to 2005-06), the highest growth rate of farm cultivation is 18.24 and lowest of milk and milk product is 2.34. And in the

same way the total growth rate of all sources is 10.70 in this period. In the second period (2006-07 to 2009-10), the highest growth rate of capital investment is 21.96 and lowest of milk and milk product is 14.01. And the total average growth rate of all sources in second period is 19.15. In the third time period (2010-11 to 2013-14), the highest growth rate of capital investment (19.68) and lowest of farm cultivation is 7.27. The average growth rate of all sources in this period is 10.44. Thus in the same way the overall growth rate is also calculated of all sources, the highest overall growth of capital investment is 17.52 and lowest of milk and milk product is 9.78. So the overall growth rate of all sources of households is positive. Thereafter the percent change is also shown among the time periods, first percentage change is calculated between first and second time period. Between this percent change is increased by 84.58. And the percent change between second and third period that is declined by 47.15 percent. The third percent change between first and third time period that is declined by 2.46 percent. And in the last it can be stated that the percent change is fluctuating across three time periods. This table is also shown in the diagram.

**Figure 5.3 Trend growth rate of average per capita income from all income sources**
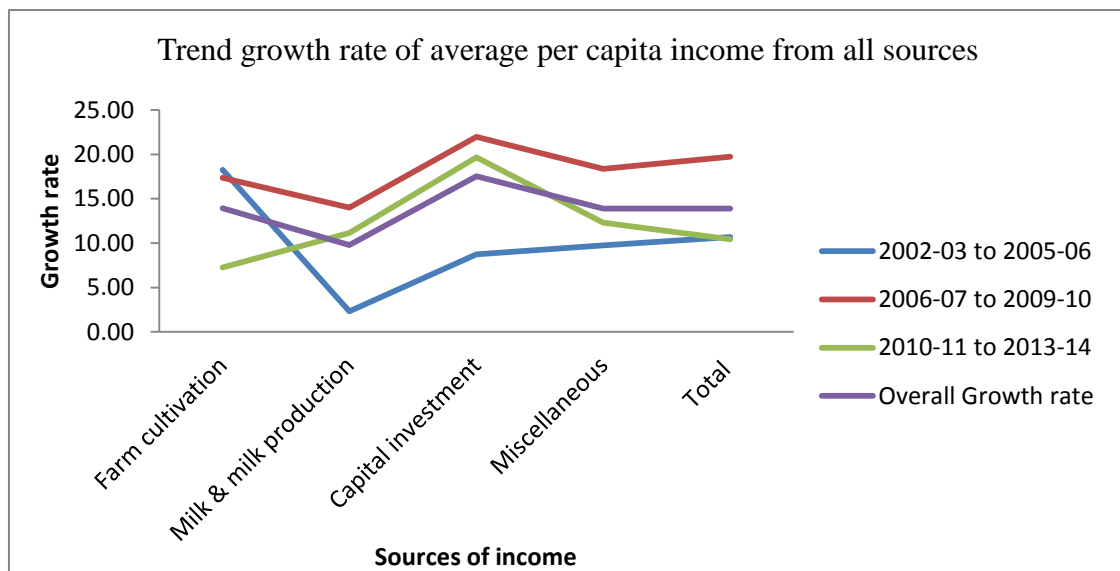
**Table 5.4  Trend growth rates of average per adult male unit income from all income sources**

| Sources of income | I | II | III | Overall growth rate (2002-14) | Change* between I & II | Change* between II & III | Change* between III & I |
|---|---|---|---|---|---|---|---|
| Farm cultivation | 19.56 | 16.07 | 7.14 | 13.77 | -17.85 | -55.60 | -63.52 |
| Milk & milk production | 3.01 | 12.88 | 10.94 | 9.48 | 328.36 | -15.10 | 263.69 |
| Capital investment | 6.36 | 11.06 | 19.95 | 13.01 | 73.95 | 80.41 | 213.84 |
| Miscellaneous | 2.26 | 20.17 | 12.24 | 12.40 | 791.34 | -39.32 | 440.89 |
| Total | 10.53 | 16.99 | 10.36 | 12.82 | 61.36 | -39.02 | -1.60 |
| I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14 *In Percentage **Sources: Researcher calculations** | | | | | | | |

The table 5.4 depicts the trend growth rate of average per adult male unit income from all income sources of cultivators such as farm cultivation, milk and milk production, capital investment and miscellaneous during the period of 2002-03 to 2013-14. The growth rate of all sources of cultivators was calculated into three time periods and the percent change is also presented among them. In the first period (2002-03 to 2005-06), the highest growth rate of farm cultivation is 19.56 and lowest of miscellaneous is 2.26. And in the same way the total growth rate of all sources is 10.53 in this period. In the second period (2006-07 to 2009-10), the highest growth rate of miscellaneous is 20.17 and lowest of capital investment is 11.06. And the total average growth rate of all sources in second period is 16.99. In the third time period (2010-11 to 2013-14), the highest growth rate of capital investment is 19.95 and lowest of farm cultivation is 7.14. The average growth rate of all sources in this period is 10.36. Thus in the same way the overall growth rate is also calculated of all sources, the highest overall growth of farm cultivation is 13.77 and lowest of milk and milk product is 9.48. So the overall growth rate of all sources of households is positive. Thereafter the percent change is also shown among the time

periods, first percent change is calculated between first and second time period. Between this percent change is increased by 61.36 percent. And the percent change between second and third period that is declined by 39.02 percent. The third percent change between first and third time period that is declined by 1.60 percent. And in the last it can be stated that the percent change is fluctuating across three time periods. This table is also shown in the diagram.

**Figure 5.4    Trend growth rates of average per adult male unit income from cultivators**
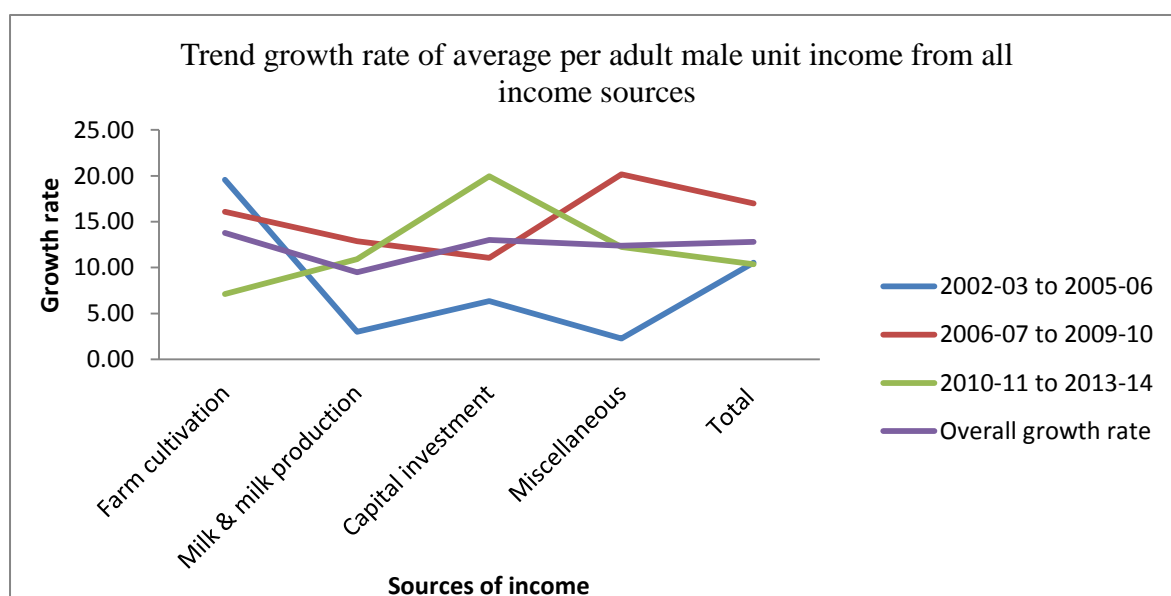


**5.3 Trends growth rate of household's income according to size of holding**

The income of cultivators is according to size of holdings (in hectares) like below 2.0, 2.0-4.0, 4.0-7.5, 7.5-10.0 and 10.0 & above. The impact of size of holdings on the total farm income of a household, the size-wise average income per household, per capita and per adult male unit have been worked out. The net income from farm cultivation has been worked out after taking into account the gross income and expenditure on various items of input like hired manual labour, bullock, seeds, fertilizers, implements & machinery,

tubewells & pumping sets etc. This shows the trend growth rate of income of household according to size of holdings.

| Size of holdings (in hectares) | I | II | III | Overall growth rate (2002-14) | Change* between I & II | Change* between II & III | Change* between III & I |
|---|---|---|---|---|---|---|---|
| Below 2.0 | 26.82 | 29.64 | 18.55 | 24.84 | 10.50 | -37.41 | -30.84 |
| 2.0-4.0 | 27.87 | 15.41 | 7.01 | 15.75 | -44.71 | -54.53 | -74.86 |
| 4.0-7.5 | 31.76 | 13.21 | 4.19 | 14.99 | -58.41 | -68.28 | -86.81 |
| 7.5-10.0 | 39.29 | 14.29 | 12.17 | 20.34 | -63.62 | -14.85 | -69.03 |
| 10.0 & above | 33.20 | 8.61 | 6.98 | 14.72 | -74.08 | -18.84 | -78.96 |
| Total | 30.79 | 14.41 | 8.04 | 16.56 | -53.19 | -44.20 | -73.88 |

**Table 5.5 Trend growth rate of total income from farm cultivation (size-wise)**

I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14
*In Percentage
**Sources: Researcher calculations**

The table 5.5 shows the trend growth rate of total farm income from farm cultivation of cultivators according to the size of holdings ( in hectares) such as below-2.0, 2.0-4.0, 4.0-7.5, 7.5-10.0 and 10 & above during the period of 2002-03 to 2013-14. The growth rate of all sources of cultivators was calculated into three time periods and the percent change is also presented among them. In the first period (2002-03 to 2005-06), the highest growth rate of 7.5-10.0 is 39.29 and lowest of below 2.0 (that is 26.82). And in the same way the total growth rate of all size of holdings is 30.79 in this period. In the second period (2006-07 to 2009-10), the highest growth rate of below-2.0 (that is 29.64) and lowest of 10 & above (that is 8.61). And the total average growth rate of all size of holdings in second period is 14.41. In the third time period (2010-11 to 2013-14), the highest growth rate of below 2.0 hectares (that is 18.55) and lowest of 4.0-7.5 (that is 4.19). The average growth rate of all size of holdings in this period is 8.04. Thus in the same way the overall growth rate is also calculated of all size of holdings, the highest overall growth of below- 2.0 (that is 24.84) and lowest is of 10.0 & above (14.72). The main reason growth rate

increased of income is crop productivity per unit of land declined with an increase in farm size (Bardhan, 1973 and Berry, 1972) which provided strong support for land reforms, land ceiling and various other policies to support smallholders on ground of efficiency and growth. Subsequently, various analysts started exploring reasons or factors for higher productivity of smallholders (Raghbendra et al, 2000) and some of them even questioned the inverse relationship between farm size and productivity (Kadapatti and Bagalkoti, 2014). The percent change is also shown among the time periods, first percent change is calculated between first and second time period. Between this percent change is decreased by 53.19 percent. And the second percent change between second and third period that is declined by 44.20 percent. The third percent change between first and third time period that is declined by 73.88 percent. And in the last it can be stated that the percent change is declining across three time periods. This table is also shown in the diagram.

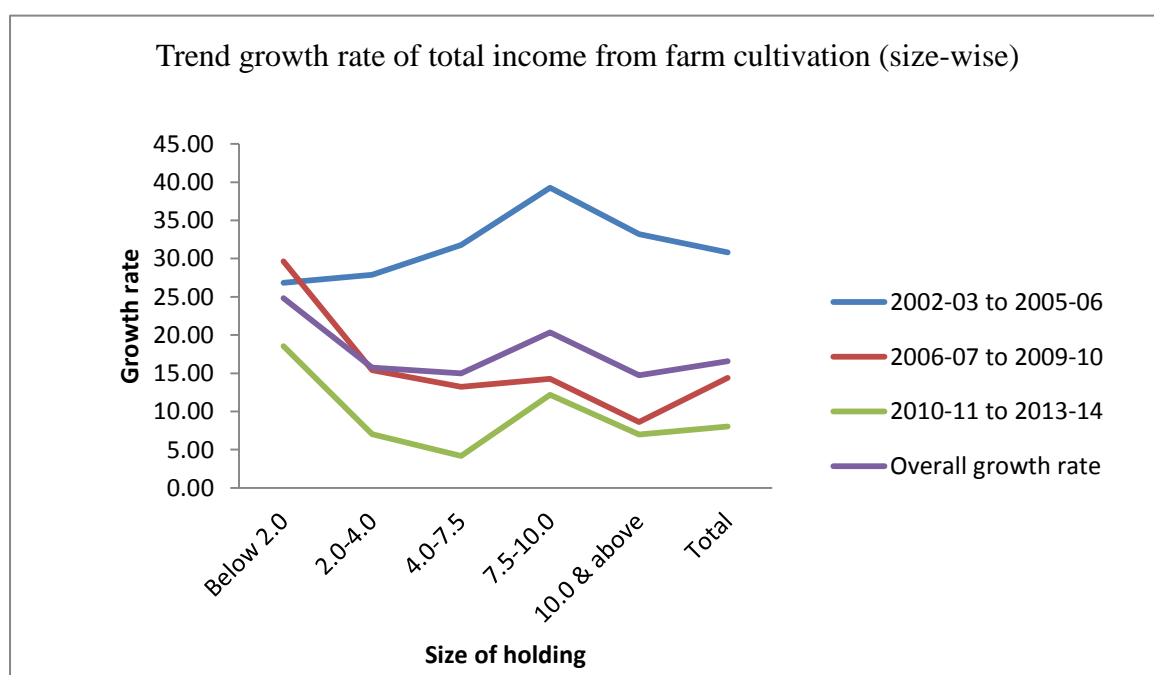**Figure 5.5 Trend growth rate of total income from farm cultivation (size-wise)**



Trend growth rate of total income from farm cultivation (size-wise)

**Table 5.6  Trend growth rate of average per household incomes from farm cultivation (size-wise)**

| Size of holdings (in hectares) | I | II | III | Overall growth rate (2002-14) | Change* between I & II | Change* between II & III | Change* between III & I |
|---|---|---|---|---|---|---|---|
| Below 2.0 | 16.86 | 25.99 | 12.28 | 18.51 | 54.20 | -52.75 | -27.14 |
| 2.0-4.0 | 10.10 | 13.57 | 9.44 | 11.12 | 34.37 | -30.44 | -6.54 |
| 4.0-7.5 | 19.61 | 21.15 | 10.31 | 16.79 | 7.84 | -51.24 | -47.41 |
| 7.5-10.0 | 16.03 | 19.73 | 7.39 | 14.23 | 23.11 | -62.54 | -53.88 |
| 10.0 & above | 22.56 | 13.00 | 15.33 | 16.46 | -42.38 | 17.88 | -32.07 |
| Total | 18.01 | 15.98 | 11.15 | 14.78 | -11.28 | -30.25 | -38.12 |

 I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14

*In Percentage

**Sources: Researcher calculations**

The table 5.6 shows the trend growth rate of average per household income from farm cultivation of cultivators according to the size of holdings (in hectares) such as below-2.0, 2.0-4.0, 4.0-7.5, 7.5-10.0 and 10 & above during the period of 2002-03 to 2013-14. The growth rate of all sources of cultivators was calculated into three time period and percent change is also presented among them. In the first period (2002-03 to 2005-06), the highest growth rate of 10.0 & above is 22.56 and lowest of 2.0-4.0 (that is 10.10). And in the same way the total growth rate of all size of holdings is 18.01 in this period. In the second period (2006-07 to 2009-10), the highest growth rate of below-2.0 (that is 25.99) and lowest of 10 & above (that is 13.00). And the total average growth rate of all size of holdings in second period is 15.98. In the third time period (2010-11 to 2013-14), the highest growth rate is of 10.0 & above (15.33) and lowest of 7.5-10.0 is 7.39. The average growth rate of all size of holdings in this period is 11.15. Thus in the same way the overall growth rate is also calculated  of all size of holdings, the highest overall growth is of below- 2.0 (18.51) and lowest of 2.0-4.0 (that is 11.22). Thereafter the percent change is also shown among the time periods, first percent change is calculated between first and second time period. Between this percent change is decreased by 11.28 percent. And the

percent change between second and third period that is declined by 30.25 percent. The third percent change between first and third time period that is declined by 38.12 percent. And in the last it can be stated that the percent change is declining across three time periods. This table is also shown in the diagram.

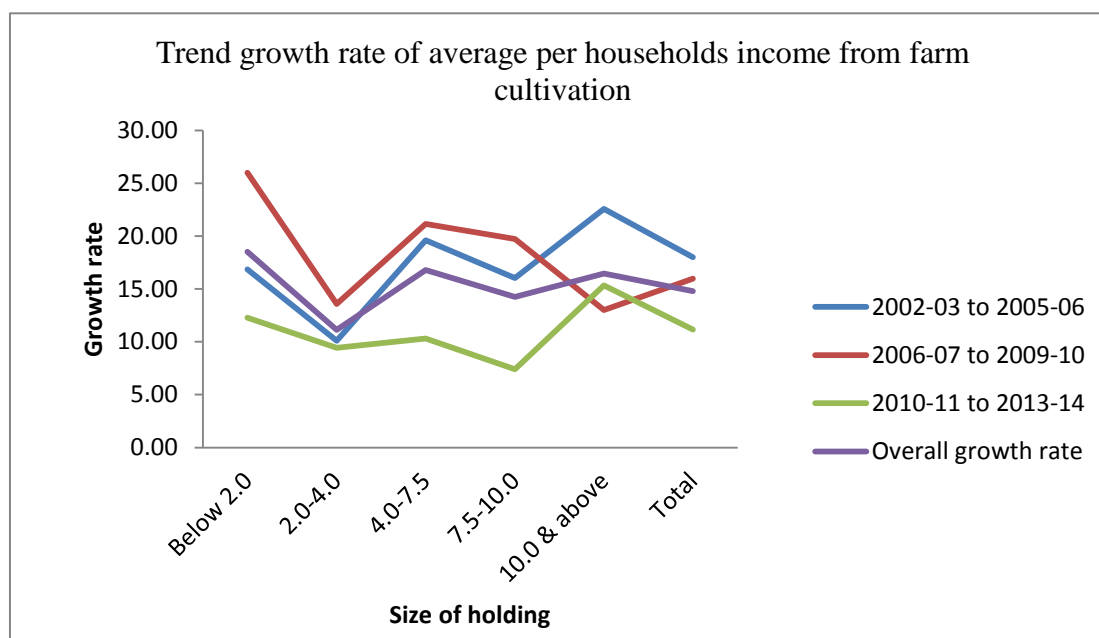**Figure 5.6 Trend growth rate of average per household incomes from far cultivation**



Trend growth rate of average per households income from farm cultivation

**Table 5.7  Trend growth rate of average per capita incomes from farm cultivation (size-wise)**

| Size of holdings (in hectares) | I | II | III | Overall growth rate (2002-14) | Change* between I & II | Change* between II & III | Change* between III & I |
|---|---|---|---|---|---|---|---|
| Below 2.0 | 16.62 | 29.01 | 9.17 | 18.42 | 74.54 | -68.38 | -44.81 |
| 2.0-4.0 | 12.15 | 15.18 | 10.23 | 12.55 | 25.00 | -32.61 | -15.76 |
| 4.0-7.5 | 14.94 | 27.07 | 12.99 | 18.64 | 81.13 | -52.02 | -13.09 |
| 7.5-10.0 | 21.14 | 33.49 | 9.31 | 21.33 | 58.43 | -72.21 | -55.98 |
| 10.0 & above | 30.84 | 17.21 | 13.69 | 19.65 | -44.19 | -20.45 | -55.60 |
| Total | 22.31 | 21.58 | 11.64 | 18.16 | -3.29 | -46.03 | -47.80 |
| I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14 *In Percentage **Sources: Researcher calculations** | | | | | | | |

The table 5.7 shows the trend growth rate of average per capita income from farm cultivation of cultivators according to the size of holdings (in hectares) such as below-2.0, 2.0-4.0, 4.0-7.5, 7.5-10.0 and 10 & above during the period of 2002-03 to 2013-14. The growth rate of all sources of cultivators was calculated into three time period and percent change is also presented among them. In the first period (2002-03 to 2005-06), the highest growth rate of 10.0 & above is 30.84 and lowest of 2.0-4.0 (that is 12.15). And in the same way the total growth rate of all size of holdings is 22.31 in this period. In the second period (2006-07 to 2009-10), the highest growth rate of 7.5-10.0 (that is 33.49) and lowest of 2.0-4.0 (that is 15.18). And the total average growth rate of all size of holdings in second period is 21.58. In the third time period (2010-11 to 2013-14), the highest growth rate of 10.0 7 above (that is 13.69) and lowest of below-2.0 is 9.17. The average growth rate of all size of holdings in this period is 11.64. Thus in the same way the overall growth rate is also calculated of all size of holdings, the highest overall growth of 7.5-10.0 is 21.33 and lowest of 2.0-4.0 (that is 12.55). Thereafter the percent change is also shown among the time periods, first percent change is calculated between first and second time period. Between this percent change is decreased by 3.29 percent. And the second percent change between second and third period that is declined by 46.03 percent. The third percent change between first and third time period that is declined by 47.80 percent. And in the last it can be stated that the percent change is declining across three time periods. This table is also shown in the diagram.

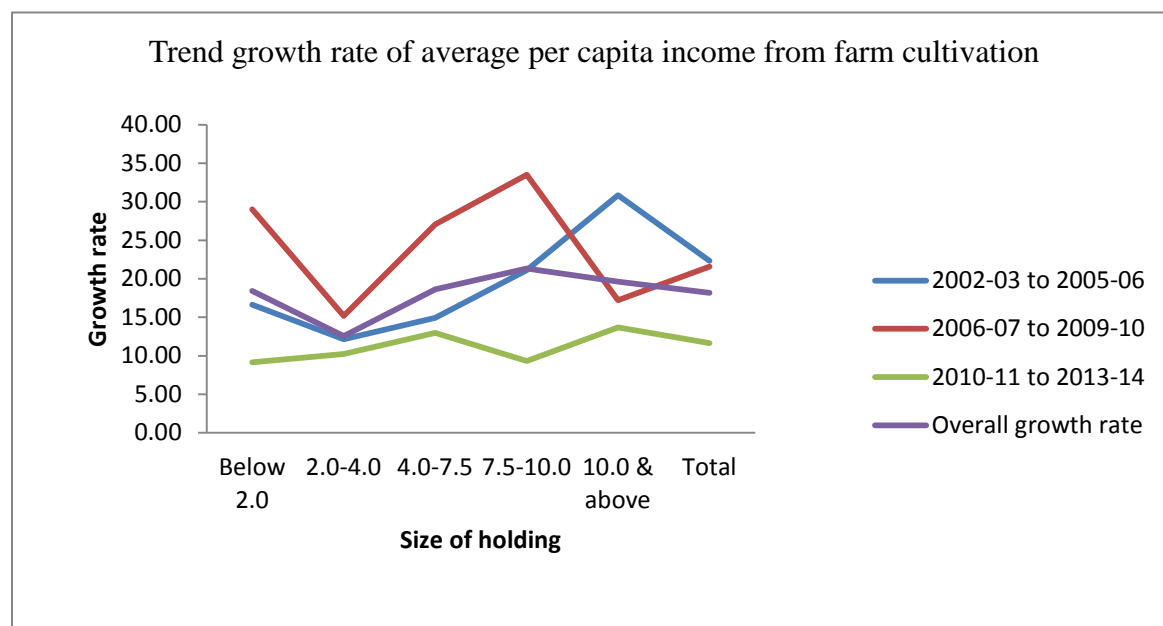**Figure 5.7      Trend growth rates of average per capita incomes from farm cultivation (size-wise)**



Trend growth rate of average per capita income from farm cultivation

**Table 5.8  Trend growth rate of average per adult male unit incomes from farm cultivation**

| Size of holdings (in hectares) | I | II | III | Overall growth rate (2002-14) | Change* between I & II | Change* between II & III | Change* between III & I |
|---|---|---|---|---|---|---|---|
| Below 2.0 | 19.28 | 21.32 | 10.20 | 16.72 | 10.54 | -52.16 | -47.12 |
| 2.0-4.0 | 13.03 | 14.38 | 9.75 | 12.33 | 10.42 | -32.22 | -25.16 |
| 4.0-7.5 | 19.85 | 24.63 | 12.89 | 19.06 | 24.04 | -47.64 | -35.05 |
| 7.5-10.0 | 22.49 | 31.18 | 16.82 | 23.59 | 38.61 | -46.05 | -25.21 |
| 10.0 & above | 28.90 | 14.27 | 19.32 | 20.10 | -50.60 | 35.38 | -33.12 |
| Total | 21.87 | 20.37 | 14.51 | 18.65 | -6.83 | -28.76 | -33.62 |

I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14
*In Percentage
**Sources: Researcher calculations**

The table 5.8 shows the trend growth rate of average per adult male unit income from farm cultivation of cultivators according to the size of holdings (in hectares) such as below-2.0, 2.0-4.0, 4.0-7.5, 7.5-10.0 and 10 & above during the period of 2002-03 to 2013-14. The growth rate of all sources of cultivators was calculated into three time period and percent change is also presented among them. In the first period (2002-03 to

2005-06), the highest growth rate of 10.0 & above is 28.90 and lowest is of 2.0-4.0 (that is 13.03). And in the same way the total growth rate of all size of holdings is 21.87 in this period. In the second period (2006-07 to 2009-10), the highest growth rate of 7.5-10.0 (that is 31.18) and lowest of 10 & above (that is 14.27). And the total average growth rate of all size of holdings in second period is 20.37. In the third time period (2010-11 to 2013-14), the highest growth rate of 10.0 & above (19.32) and lowest of 2.0-4.0 is 9.75. The average growth rate of all size of holdings in this period is 14.51. Thus in the same way the overall growth rate is also calculated of all size of holdings, the highest overall growth of 7.5-10.0 is 23.59 and lowest of 2.0-4.0 (that is 12.33). Thereafter the percent change is also shown among the time periods, first percent change is calculated between first and second time period. Between this percent change is decreased by 6.83 percent. And the percent change between second and third period that is declined by 28.76 percent. The third percent change between first and third time period that is declined by 33.62 percent. And in the last it can be stated that the percent change is declining across three time periods. This table is also shown in the diagram.

**Figure 5.8**     **Trend growth rate of average per adult male unit incomes from farm cultivation**
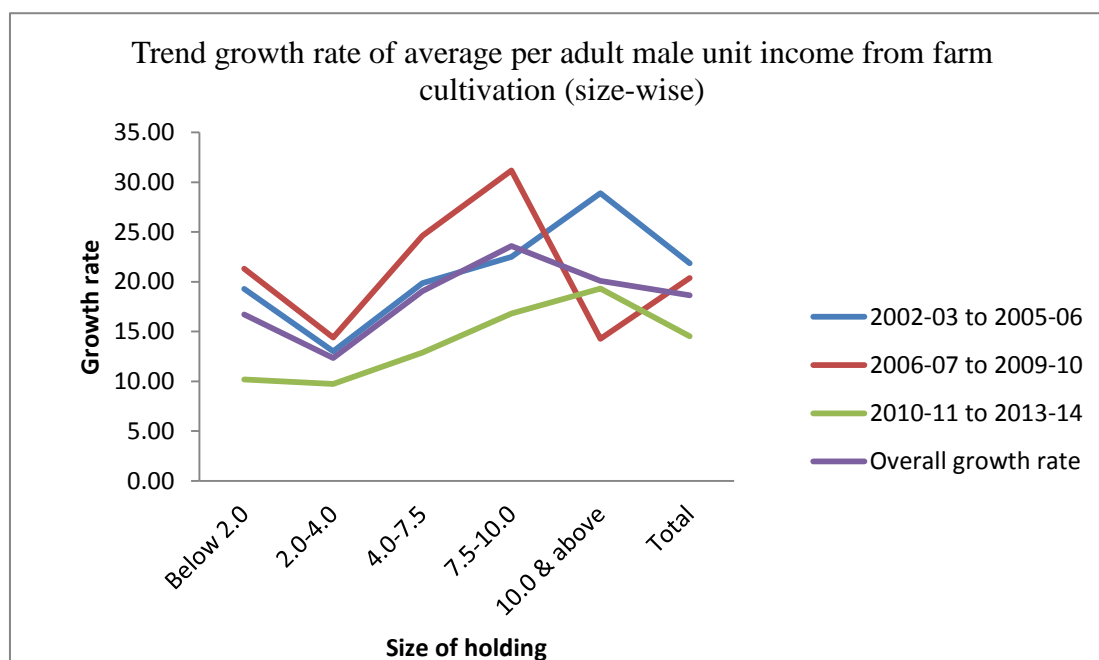
## 5.4 Trends growth rate of households Expenditure on food items

This shows the expenditure of cultivators on food items like cereals, pulses, sugar, milk & milk products, edible oil, vegetables, fruits, Intoxicants, Meat & meat products etc. The total food expenditure by cultivators is analyzed by calculating the following items such as per household, per capita and per adult male units. The total growth rate in expenditure during the 2002 to 2014 is shown.

| Table 5.9   Trend growth rate of  total expenditure on food items (all families) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Items | I | II | III | Overall growth rate (2002-14) | Change* between  I & II | Change* between II & III | Change* between III & I |
| Cereals | 12.88 | 8.76 | 5.04 | 8.51 | -31.93 | -42.49 | -60.85 |
| Pulses | 17.61 | 13.59 | 1.37 | 9.98 | -22.87 | -89.94 | -92.24 |
| Milk & milk products | 13.62 | 19.53 | 18.60 | 19.77 | 43.41 | -4.79 | 36.54 |
| Edible | 8.22 | 12.24 | 9.34 | 10.32 | 48.98 | -23.68 | 13.70 |
| Sugar | 24.04 | 10.55 | 3.84 | 11.79 | -56.11 | -63.59 | -84.02 |
| Vegetables | 18.07 | 11.84 | 9.55 | 12.71 | -34.51 | -19.28 | -47.13 |
| Fruits | 45.90 | 32.96 | 10.74 | 27.88 | -28.19 | -67.42 | -76.60 |
| Intoxicants | 22.83 | 7.84 | 15.24 | 14.32 | -65.64 | 94.32 | -33.23 |
| Meat & meat products | 6.49 | 20.12 | 12.07 | 13.10 | 209.96 | -40.00 | 85.99 |
| Miscellaneous | 13.25 | 10.07 | 12.40 | 11.75 | -24.00 | 23.13 | -6.42 |
| Total | 14.58 | 15.84 | 14.80 | 16.36 | 8.63 | -6.53 | 1.54 |
| I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14 *In Percentage **Sources: Researcher calculations** | | | | | | | |

The table 5.9 shows overall growth rate of total expenditure on food items from all cultivators. In food items, it includes cereals, pulses, milk and milk products, edible, sugar, vegetables, fruits, intoxicants, meat and meat products and miscellaneous. The growth rate of all food items of cultivators was calculated into three time periods and the percent change is also presented among them. In the first period (2002-03 to 2005-06), the highest growth rate of fruits is 45.90 and lowest of meat & meat products (that is 6.49). And in the same way the total growth rate of all food items is 14.58 in this period.

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In the second period (2006-07 to 2009-10), the highest growth rate of fruits (that is 32.96) and lowest of intoxicants is 7.84. And the total average growth rate of all food items in second period is 15.84 percent. In the third time period (2010-11 to 2013-14), the highest growth rate of milk and milk products (that is 18.60) and lowest of pulses is 1.37. The average growth rate of all food items in this period is 14.80. Thus in the same way the overall growth rate is also calculated of all food items, the highest overall growth of fruits is 27.88 and lowest of cereals is 8.51 because the cereals are important ingredients for the calories and hence nutrition of the people, it is worthwhile to discuss the trends of cereals consumption expenditure. In Haryana as well as in India the share of cereals and particularly the coarse cereals have shown a drastic decline over time. Though there are various factors – price and non price, the main factors behind the decline in cereal expenditure are change in taste and preference of the people (Meenakshi 1996, Mittel 2007, Priyabrata Sahoo, 2014). The main reason of high expenditure of fruit and vegetable is the maintaining the same level of nutrition with a declining cereal intake requires quite a high supplementary consumption of meat, fish, egg, fruits and vegetable and since these replacements in adequate amount are beyond the capacity of the poor, the change is likely to result in a fall in their nutrition levels (Satyaki Roy, 2011). These data are also shown through figure. The percent change is also shown among the time periods, first percent change is calculated between first and second time period. Between this percent change is increased by 8.63 percent. And the percent change between second and third period that is declined by 6.53 percent. The third percent change between first and third time period that is increased by 1.54 percent. And in the last it can be stated that the percent change is fluctuating across three time periods. This table is also shown in the diagram.

**Figure 5.9    Trend growth rate of total expenditure on food items (all families)**
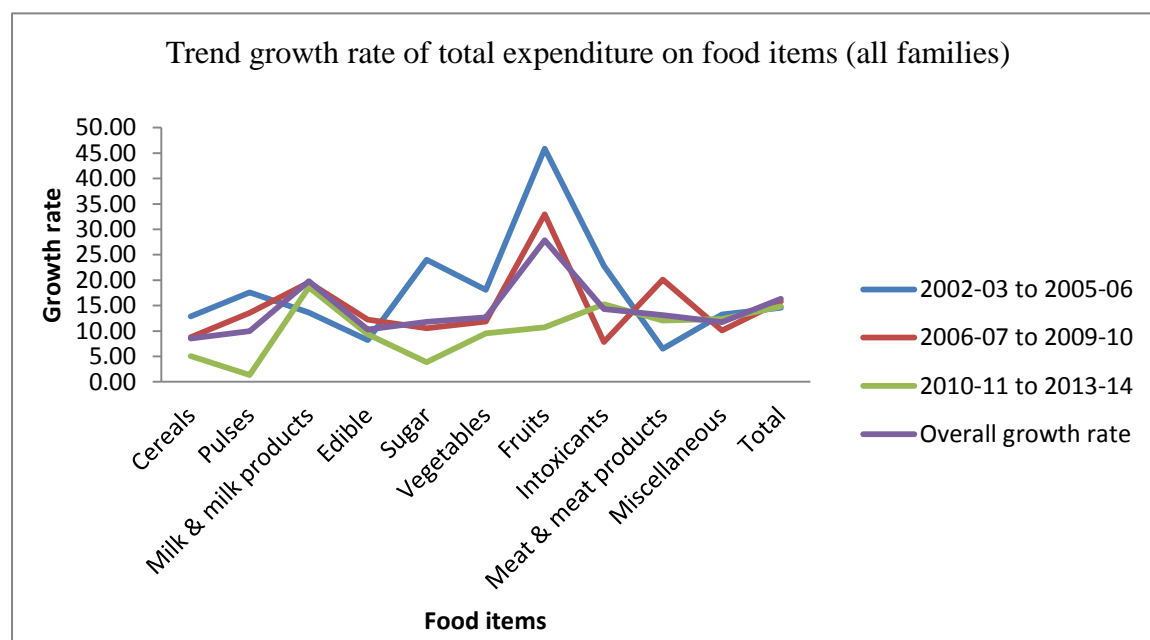


Trend growth rate of total expenditure on food items (all families)

| Table 5.10 Trend growth rate of  per household expenditure on food items (all families) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Items | I | II | III | Overall growth rate (2002-14) | Change* between  I & II | Change* between II & III | Change* between III & I |
| Cereals | 3.36 | 8.24 | 5.14 | 5.78 | 145.56 | -37.59 | 53.26 |
| Pulses | 5.70 | 13.13 | 7.90 | 9.20 | 130.43 | -39.85 | 38.60 |
| Milk & milk products | 7.98 | 19.04 | 18.33 | 15.76 | 138.39 | -3.72 | 129.53 |
| Edible | 5.65 | 11.79 | 8.82 | 9.04 | 108.70 | -25.19 | 56.12 |
| Sugar | 8.01 | 12.01 | 3.67 | 7.89 | 49.95 | -69.44 | -54.17 |
| Vegetables | 4.42 | 11.23 | 9.30 | 8.67 | 154.28 | -17.23 | 110.47 |
| Fruits | 26.82 | 31.73 | 9.48 | 22.30 | 18.29 | -70.13 | -64.66 |
| Intoxicants | 7.81 | 14.91 | 6.44 | 9.89 | 90.91 | -56.83 | -17.58 |
| Meat & meat products | 10.63 | 19.89 | 11.59 | 14.35 | 87.12 | -41.77 | 8.97 |
| Miscellaneous | 3.28 | 7.27 | 7.31 | 6.20 | 121.87 | 0.47 | 122.91 |
| Total | 6.59 | 15.46 | 14.20 | 12.58 | 134.78 | -8.16 | 115.61 |

 I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14
*In Percentage
**Sources: Researcher calculations**

The table 5.10 shows overall growth rate of per household expenditure on food items from all cultivators. In food items, it includes cereals, pulses, milk and milk products, edible, sugar, vegetables, fruits, intoxicants, meat and meat products and miscellaneous. The growth rate of all food items of cultivators was calculated into three time periods and the percent change is also presented among them. In the first period (2002-03 to 2005-06), the highest growth rate of fruits is 26.82 and lowest of miscellaneous (that is 3.28). And in the same way the total growth rate of all food items is 6.59 in this period. In the second period (2006-07 to 2009-10), the highest growth rate of fruits (that is 31.73) and lowest of miscellaneous is 7.27. And the total average growth rate of all food items in second period is 15.46 percent. In the third time period (2010-11 to 2013-14), the highest growth rate of milk and milk products is 18.33 and lowest of sugar is 3.67. The average growth rate of all food items in this period is 14.20. Thus in the same way the overall growth rate is also calculated of all food items, the highest overall growth of fruits (that is 22.30) and lowest of cereals is 5.78. The highest average percentage expenditure increased by cultivators on fruits due to high expenditure on fruits is to maintain the same level of nutrition. The lowest average expenditure on cereals because change in taste and preference of the people (Meenakshi 1996, Mittel 2007, Priyabrata Sahoo, 2014). The percent change is also shown among the time periods, first percent change is calculated between first and second time period. Between this percent change is increased by 134.78 percent. And the second percent change between second and third period that is declined by 8.16 percent. The third percent change between first and third time period that is increased by 115.61 percent. And in the last it can be stated that the percent change is fluctuating across three time periods. This table is also shown in the diagram.

**Figure 5.10    Trend growth rates of per household expenditure on food items (all families)**
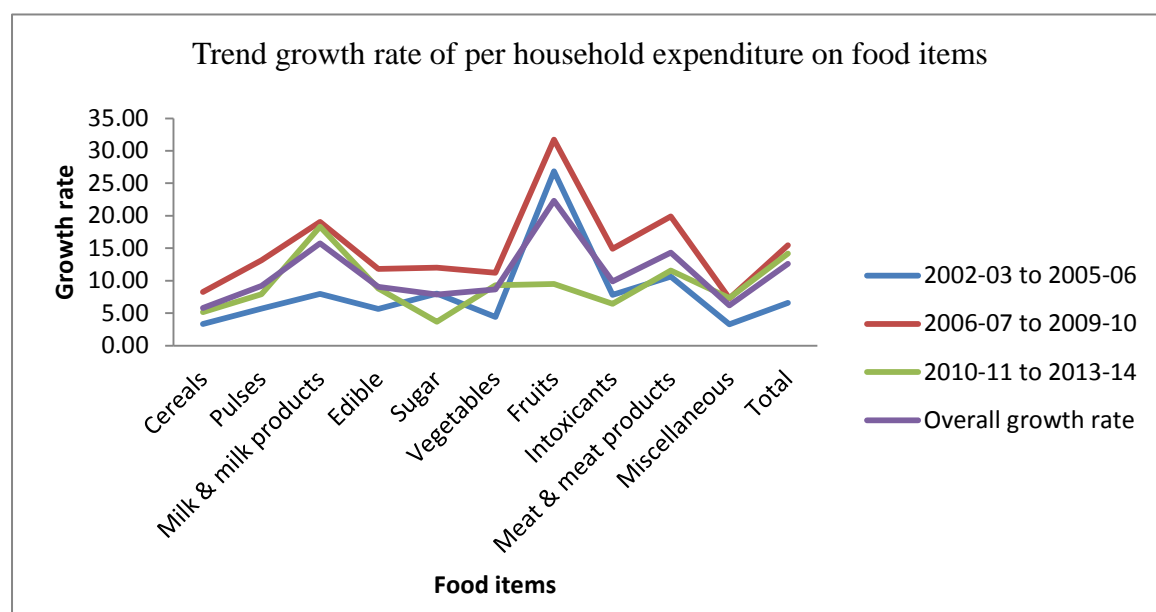


Trend growth rate of per household expenditure on food items

| Table 5.11 Trend growth rate of per capita expenditure on food items (all families) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Items | I | II | III | Overall growth rate (2002-14) | Change* between I & II | Change* between II & III | Change* between III & I |
| Cereals | 3.22 | 12.69 | 6.21 | 7.75 | 293.57 | -51.10 | 92.45 |
| Pulses | 4.23 | 17.60 | 6.02 | 9.74 | 315.94 | -65.82 | 42.17 |
| Milk & milk products | 8.75 | 23.62 | 19.51 | 18.07 | 169.97 | -17.39 | 123.01 |
| Edible | 11.73 | 12.23 | 1.82 | 8.31 | 4.30 | -85.11 | -84.47 |
| Sugar | 19.18 | 10.31 | 3.12 | 10.11 | -46.27 | -69.77 | -83.76 |
| Vegetables | 5.32 | 15.64 | 10.39 | 10.92 | 193.90 | -33.61 | 95.11 |
| Fruits | 43.94 | 31.25 | 10.51 | 27.17 | -28.88 | -66.36 | -76.07 |
| Intoxicants | 8.75 | 15.90 | 11.22 | 12.25 | 81.64 | -29.44 | 28.16 |
| Meat & meat products | 12.77 | 17.09 | 13.00 | 14.42 | 33.87 | -23.98 | 1.77 |
| Miscellaneous | 1.35 | 13.99 | 10.42 | 9.08 | 936.30 | -25.49 | 672.16 |
| Total | 7.75 | 19.35 | 15.32 | 14.72 | 149.66 | -20.85 | 97.61 |
| I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14 | | | | | | | |
| *In Percentage | | | | | | | |
| **Sources: Researcher calculations** | | | | | | | |

The table 5.11 shows the trend growth rate of per capita expenditure on food items (cereals, pulses, milk & milk products, edible, sugar, vegetables, fruits, meat and meat products, intoxicants etc.) by cultivators. The growth rate of all food items of cultivators was calculated into three time period and percent change is also presented among them. In the first period (2002-03 to 2005-06), the highest growth rate of fruits is 43.94 and lowest of miscellaneous (that is 1.35). And in the same way the total growth rate of all food items is 7.75 in this period. In the second period (2006-07 to 2009-10), the highest growth rate of fruits (that is 31.25) and lowest of sugar is 10.31. And the total average growth rate of all food items in second period is 19.35 percent. In the third time period (2010-11 to 2013-14), the highest growth rate of milk and milk products (that is 19.51) and lowest of edible oil is 1.82. The main reason of lowest expenditure by cultivators on edible oil is increased the price. The average growth rate of all food items in this period is 15.32. Thus in the same way the  overall growth rate is also calculated  of all food items, the highest overall growth is of fruits (27.17) and lowest of cereals (7.75). Thereafter the percent change is also shown among the time periods, first percent change is calculated between first and second time period. Between this percent change is increased by 149.66 percent. And the second percent change between second and third period that is declined by 20.85 percent. The third percent change between first and third time period that is increased by 97.61 percent. And in the last it can be stated that the percent change is fluctuating across three time periods. Due to increase the expenditure by cultivators it means the socio-economic status of cultivators is increased. This table is also shown in the diagram.

**Figure 5.11 Trend growth rate of per capita expenditure on food items (all families)**
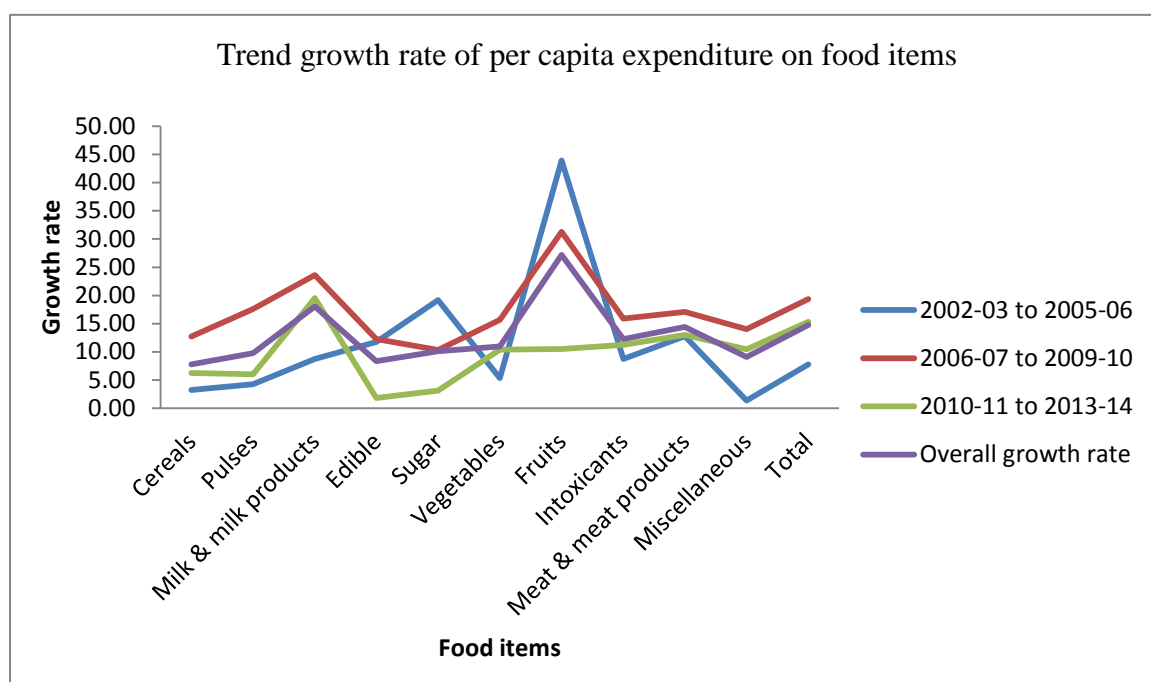


**Table 5.12 Trend growth rate of per adult male unit expenditure on food items (all families)**

| Items | I | II | III | Overall growth rate (2002-14) | Change* between I & II | Change* between II & III | Change* between III & I |
|---|---|---|---|---|---|---|---|
| Cereals | 6.08 | 11.55 | 5.63 | 7.91 | 89.86 | -51.22 | -7.39 |
| Pulses | 4.94 | 16.49 | 4.85 | 9.11 | 233.48 | -70.57 | -1.87 |
| Milk & milk products | 9.58 | 22.39 | 15.57 | 16.41 | 133.84 | -30.48 | 62.56 |
| Edible | 11.73 | 11.98 | 2.26 | 8.38 | 2.10 | -81.15 | -80.76 |
| Sugar | 13.26 | 12.48 | 4.61 | 9.83 | -5.86 | -63.03 | -65.19 |
| Vegetables | 6.28 | 14.64 | 10.06 | 10.69 | 132.97 | -31.29 | 60.07 |
| Fruits | 5.35 | 29.04 | 10.16 | 15.72 | 442.51 | -65.02 | 89.79 |
| Intoxicants | 9.66 | 6.16 | 19.58 | 11.99 | -36.30 | 218.00 | 102.58 |
| Meat & meat products | 4.47 | 14.70 | 13.33 | 11.41 | 229.05 | -9.31 | 198.41 |
| Miscellaneous | 6.79 | 9.25 | 12.83 | 9.88 | 36.36 | 38.65 | 89.07 |
| Total | 8.43 | 18.04 | 12.90 | 13.55 | 114.03 | -28.52 | 52.99 |

I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14
*In Percentage
**Sources: Researcher calculations**

Table 5.12 shows the trend growth rate of per adult male unit expenditure on food items (cereals, pulses, milk & milk products, edible, sugar, vegetables, fruits, meat and meat products and intoxicants etc.) by cultivators. The growth rate of all food items of cultivators was calculated into three time periods and the percentage change is also presented among them. In the first period (2002-03 to 2005-06), the highest growth rate of sugar is 13.26 and lowest of meat & meat products (that is 4.47). And in the same way the total growth rate of all food items is 8.43 in this period. In the second period (2006-07 to 2009-10), the highest growth rate of fruits (that is 29.04) and lowest of intoxicants is 6.16. And the total average growth rate of all food items in second period is 18.04 percent. In the third time period (2010-11 to 2013-14), the highest growth rate of intoxicants is 19.58 and lowest of edible oil is 2.26. The average growth rate of all food items in this period is 12.90. Thus in the same way the overall growth rate is also calculated of all food items, the highest overall growth of milk & milk products (16.41) and lowest of cereals (that is 7.91). Thereafter the percent change is also shown among the time periods, first percent change is calculated between first and second time period. Between this percent change is increased by 114.03 percent. And the percent change between second and third period that is declined by 28.52 percent. The third percent change between first and third time period that is increased by 52.99 percent. And in the last it can be stated that the percent change is fluctuating across all three time periods. This table is also shown in the diagram.

**Figure 5.12    Trend growth rate of per adult male unit expenditure on food (all families**
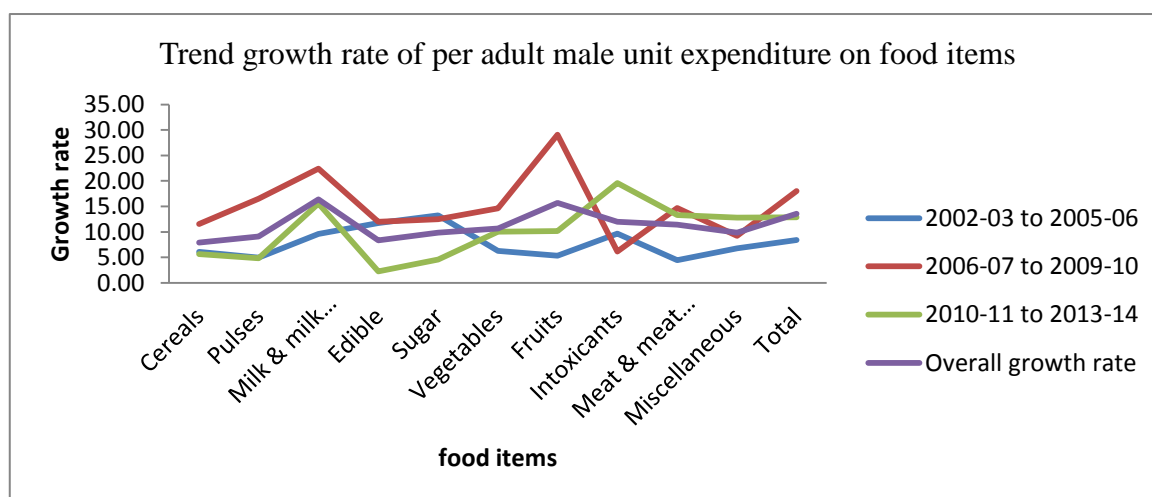
**5.5 Trend growth rate of households Expenditure on non-food items**

This shows the expenditure of cultivators on non-food items like fuel, clothing, housing, lighting, health, transport, education and marriage & social ceremonies. The total non-food expenditure by cultivators are analyzed by the fallowing items such as total expenditure, per household, per capita and adult male units. The annual growth rate in expenditure during the 2002 to 2014 is shown.

| Table 5.13 Trend growth rate of total expenditure on non-food items (all families) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Items | I | II | III | Overall growth rate (2002-14) | Change* between I & II | Change* between II & III | Change* between III & I |
| Fuel | 15.12 | 2.22 | 8.57 | 8.63 | -85.33 | 286.47 | -43.31 |
| Clothing | 15.89 | 10.03 | 10.57 | 12.16 | -36.89 | 5.45 | -33.45 |
| Housing | 27.58 | 2.02 | 22.44 | 17.34 | -92.68 | 1010.78 | -18.65 |
| Lighting | 11.43 | 7.06 | 8.32 | 8.94 | -38.19 | 17.77 | -27.21 |
| Health | 19.03 | 11.12 | 28.20 | 19.45 | -41.57 | 153.62 | 48.18 |
| Transport | 17.06 | 26.55 | 9.58 | 17.73 | 55.62 | -63.93 | -43.87 |
| Education | 23.92 | 9.44 | 34.40 | 22.59 | -60.56 | 264.60 | 43.79 |
| Religious ceremonies | 23.36 | 38.24 | 1.76 | 21.12 | 63.70 | -95.39 | -92.46 |
| Marriage & Soc. Ceremonies | 7.36 | 9.49 | 4.25 | 7.03 | 28.96 | -55.25 | -42.29 |
| Others | 40.03 | 17.89 | 2.69 | 20.20 | -55.30 | -84.99 | -93.29 |
| Total | 17.96 | 8.62 | 14.65 | 13.74 | -52.00 | 69.95 | -18.43 |
| I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14 <br> *In Percentage <br> **Sources: Researcher calculations** | | | | | | | |

The table 5.13 shows the trend growth rate of total expenditure of selected cultivators on non-food items (non-food items are includes fuel, clothing, housing, lighting, health, transport, education and religious ceremonies etc.). The growth rate of all non-food items of cultivators was calculated into three time periods and the percent change is also presented among them. In the first period (2002-03 to 2005-06), the highest growth rate in

non-food items of others is 40.03 and lowest is of marriage & social ceremonies (that is 7.36). And in the same way the total growth rate of all non-food items is 17.96 in this period. In the second period (2006-07 to 2009-10), the highest growth rate of religious ceremonies (that is 38.24) and lowest of housing is 2.02. And the total average growth rate of all non-food items in second period is 8.62 percent. In the third time period (2010-11 to 2013-14), the highest growth rate of education (that is 34.40) and lowest of religious ceremonies is 1.76. The average growth rate of all non- food items in this period are 14.65. Thus in the same way the overall growth rate is also calculated of all non-food items, the highest overall growth of education is 22.59 and lowest of marriage & social ceremonies (that is 7.03). The main reason for high expenditure on education by cultivators is to positive effect on economic growth or promoting equal opportunities as well as social mobility and inclusion (Roshan Kishor, 2015) and concern proposals for reforms of educations of education polices and systems and raises questions as to the development of labour force skills for the future, for the benefit of individuals (Planning articles, 2015). Thereafter the percent change is also shown among the time periods, first percent change is calculated between first and second time period. Between this percent change is decreased by 52 percent. And the percentage change between second and third period that is increased by 69.95 percent. The third percent change between first and third time period that is decreased by 18.43 percent. And in the last it can be stated that the percent change is fluctuating across three time periods. Due to increase the expenditure by cultivators it means the socio-economic status of cultivators is increased. This table is also shown in the diagram.

**Figure 5.13 Trend growth rate of total expenditure on non-food items (all families)**
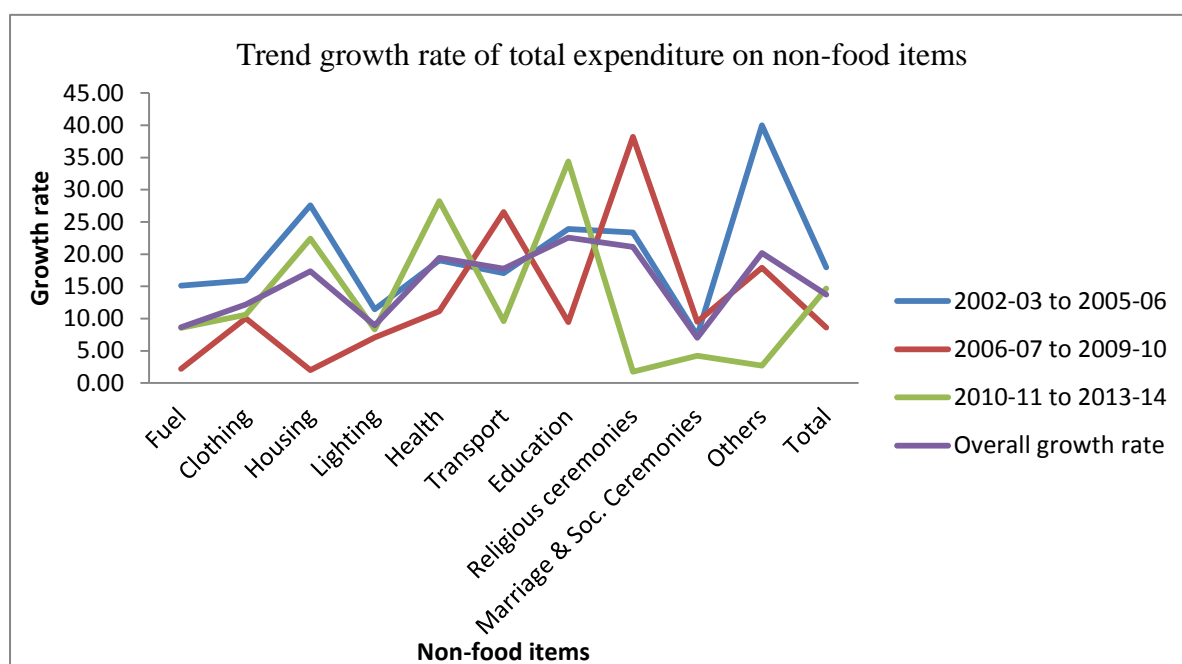


Trend growth rate of total expenditure on non-food items

| Table 5.14 Trend growth rate of per household expenditure on non-food items (all families) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Items | I | II | III | Overall growth rate (2002-14) | Change* between I & II | Change* between II & III | Change* between III & I |
| Fuel | 3.04 | -1.50 | 10.29 | 4.03 | -149.35 | -785.86 | 238.44 |
| Clothing | 2.07 | 11.45 | 8.32 | 7.75 | 452.54 | -27.35 | 301.43 |
| Housing | 10.27 | 2.38 | 22.20 | 11.74 | -76.86 | 833.58 | 116.05 |
| Lighting | 3.18 | 3.20 | 10.24 | 5.75 | 0.69 | 219.98 | 222.20 |
| Health | 4.87 | 17.71 | 6.42 | 10.10 | 263.94 | -63.77 | 31.86 |
| Transport | 14.03 | 26.05 | 7.76 | 16.12 | 85.69 | -70.23 | -44.71 |
| Education | 8.26 | 30.84 | 6.16 | 15.71 | 273.36 | -80.01 | -25.38 |
| Religious ceremonies | 16.31 | 28.31 | 3.17 | 15.90 | 73.53 | -88.81 | -80.57 |
| Marriage & Soc. Ceremonies | 11.29 | 2.18 | 6.26 | 6.15 | -80.69 | 187.43 | -44.49 |
| Others | 9.91 | 9.80 | 8.85 | 9.49 | -1.13 | -9.62 | -10.64 |
| Total | 7.61 | 10.23 | 9.33 | 9.19 | 34.39 | -8.74 | 22.64 |
| I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14 *In Percentage **Sources: Researcher calculations** | | | | | | | |

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The table 5.14 shows the trend growth rate of per household expenditure of selected cultivators on non-food items (non-food items are includes fuel, clothing, housing, lighting, health, transport, education, Religious ceremonies etc.). The growth rate of all non-food items of cultivators was calculated into three time periods and the percent change is also presented among them. In the first period (2002-03 to 2005-06), the highest growth rate in non-food items of religious ceremonies is 16.31 and lowest of clothing (that is 2.07). And in the same way the total growth rate of all non-food items is 7.61 in this period. In the second period (2006-07 to 2009-10), the highest growth rate of education (that is 30.84) and lowest of fuel (is declined by 1.50 percent). And the total average growth rate of all non-food items in second period is 10.23 percent. In the third time period (2010-11 to 2013-14), the highest growth rate of housing is 22.20 and lowest of religious ceremonies is 3.17. The average growth rate of all non- food items in this period are 9.33. Thus in the same way the overall growth rate is also calculated of all non-food items, the highest overall growth of transport is 16.12 and lowest of fuel (that is 4.03). Thereafter the percent change is also shown among the time periods, first percent change is calculated between first and second time period. Between this percent change is increased by 34.39 percent. And the second percent change between second and third period that is decreased by 8.74 percent. The third percent change between first and third time period that is increased by 22.64 percent. And in the last it can be stated that the percent change is fluctuating across all three time periods. This table is also shown in the diagram.

**Figure 5.14    Trend growth rate of per household expenditure on non-food items (all families)**
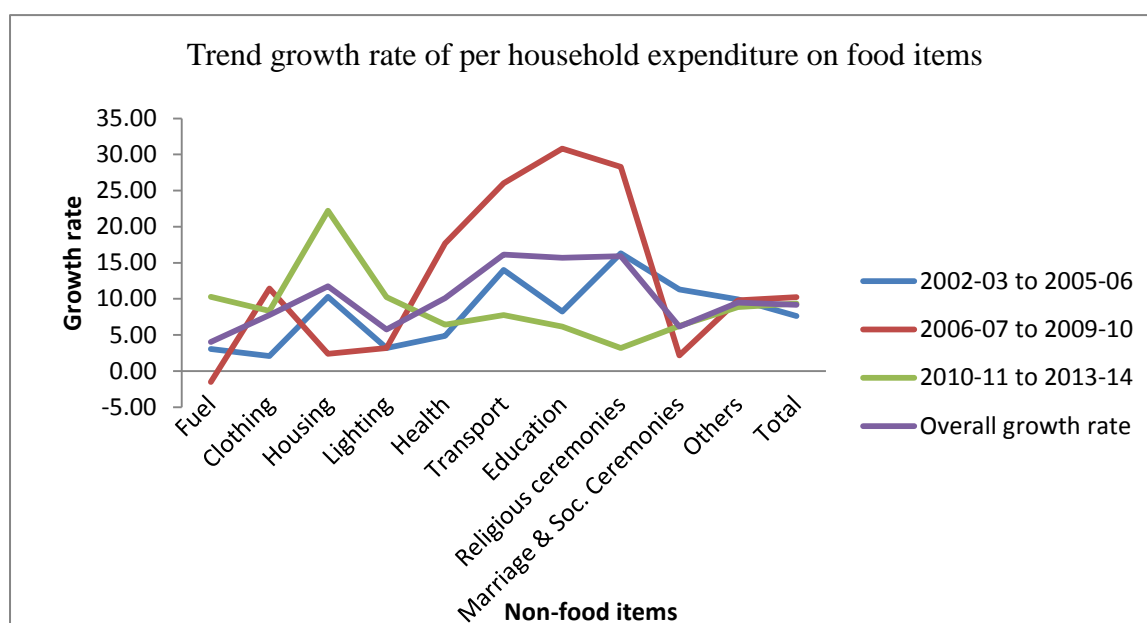


Trend growth rate of per household expenditure on food items

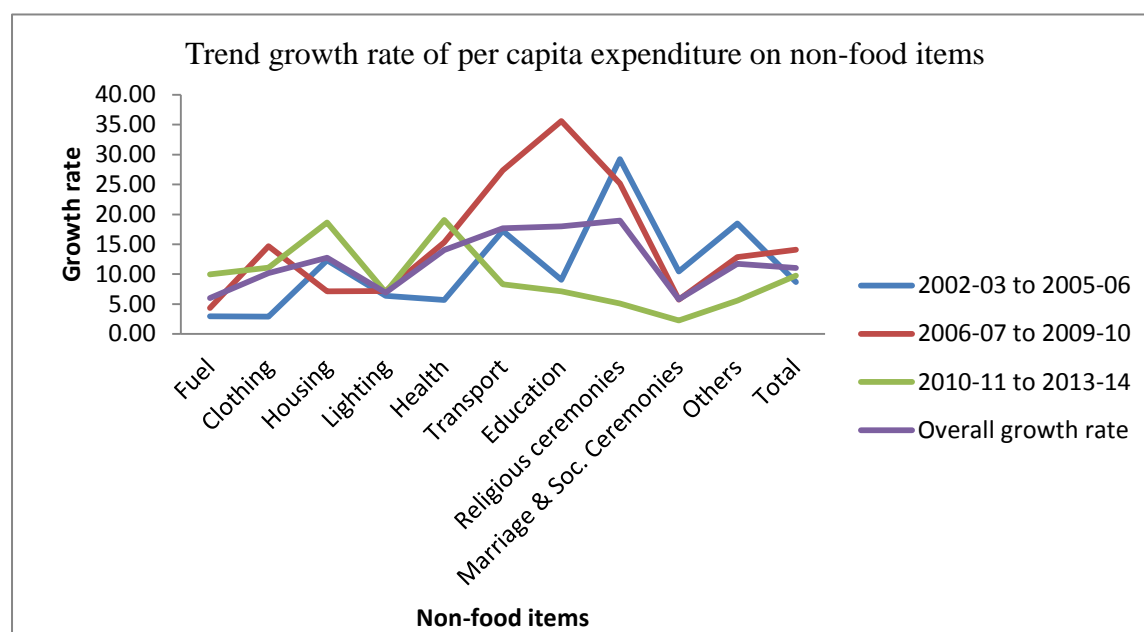| Table 5.15 Trend growth rate of per capita expenditure on non-food items (all families) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Items | I | II | III | Overall growth rate(2002-14) | Change* between I & II | Change* between II & III | Change* between III & I |
| Fuel | 2.93 | 4.35 | 9.94 | 6.00 | 48.32 | 128.47 | 238.86 |
| Clothing | 2.91 | 14.65 | 11.11 | 10.16 | 403.05 | -24.17 | 281.45 |
| Housing | 12.31 | 7.12 | 18.66 | 12.73 | -42.13 | 162.00 | 51.63 |
| Lighting | 6.37 | 7.18 | 6.97 | 6.88 | 12.65 | -2.85 | 9.44 |
| Health | 5.67 | 15.30 | 19.08 | 14.05 | 170.03 | 24.66 | 236.62 |
| Transport | 17.26 | 27.35 | 8.28 | 17.67 | 58.43 | -69.73 | -52.04 |
| Education | 9.04 | 35.60 | 7.13 | 18.00 | 293.68 | -79.97 | -21.13 |
| Religious ceremonies | 29.23 | 25.18 | 5.09 | 18.98 | -13.84 | -79.77 | -82.57 |
| Marriage & Soc. Ceremonies | 10.45 | 5.74 | 2.25 | 5.76 | -45.02 | -60.79 | -78.44 |
| Others | 18.49 | 12.87 | 5.58 | 11.75 | -30.42 | -56.65 | -69.84 |
| Total | 8.67 | 14.07 | 9.74 | 11.02 | 62.20 | -30.77 | 12.30 |
| I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14 *In Percentage **Sources: Researcher calculations** | | | | | | | |

The table 5.15 shows the trend growth rate of per capita expenditure of selected cultivators on non-food items (non-food items are includes fuel, clothing, housing, lighting, health, transport, education, Religious ceremonies etc.). The growth rate of all non-food items of cultivators was calculated into three time periods and the percentage change is also presented among them. In the first period (2002-03 to 2005-06), the highest growth rate in non-food items of religious ceremonies is 29.23 and lowest of clothing (that is 2.91). And in the same way the total growth rate of all non-food items is 8.67 in this period. In the second period (2006-07 to 2009-10), the highest growth rate of education (that is 35.60) and lowest of fuel is 4.35. And the total average growth rate of all non-food items in second period is 14.07 percent. In the third time period (2010-11 to 2013-14), the highest growth rate of health is 19.08 and lowest of marriage & social ceremonies (that is 2.25). The average growth rate of all non- food items in this period are 9.74. Thus in the same way the  overall growth rate is also calculated  of all non-food items, the highest overall growth of religious ceremonies is 18.98 and lowest of marriage & social ceremonies (that is 5.76). Thereafter the percent change is also shown among the time periods, first percent change is calculated between first and second time period. Between this percent change is increased by 62.20 percent. And the percent change between second and third period that is decreased by 30.77 percent. The third percent change between first and third time period that is increased by 12.30 percent. And in the last it can be stated that the percent change is fluctuating across three time periods. This table is also shown in the diagram.

**Figure 5.15 Trend growth rate of per capita expenditure on non-food items (all families)**



Trend growth rate of per capita expenditure on non-food items

| Table 5.16 Trend growth rate of per adult male unit expenditure on non-food items (all families) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Items | I | II | III | Overall growth rate (2002-14) | Change* between I & II | Change* between II & III | Change* between III & I |
| Fuel | 2.76 | 2.91 | 11.24 | 5.92 | 5.37 | 286.43 | 307.19 |
| Clothing | 3.77 | 13.68 | 10.63 | 9.84 | 262.75 | -22.30 | 181.85 |
| Housing | 14.79 | 3.64 | 19.14 | 12.49 | -75.37 | 425.58 | 29.44 |
| Lighting | 1.46 | 6.08 | 11.29 | 6.64 | 316.44 | 85.71 | 673.38 |
| Health | 6.59 | 13.69 | 16.81 | 12.89 | 107.88 | 22.77 | 155.22 |
| Transport | 8.64 | 27.49 | 12.10 | 16.75 | 218.32 | -55.98 | 40.13 |
| Education | 9.82 | 34.53 | 6.96 | 17.55 | 251.56 | -79.84 | -29.14 |
| Religious ceremonies | 51.04 | 15.84 | 4.81 | 21.43 | -68.97 | -69.63 | -90.58 |
| Marriage & Soc. Ceremonies | 10.89 | 0.97 | 1.42 | 3.63 | -91.13 | 46.60 | -86.99 |
| Others | 10.63 | 13.72 | 9.96 | 11.68 | 29.03 | -27.40 | -6.32 |
| Total | 8.97 | 11.82 | 10.27 | 10.47 | 31.82 | -13.08 | 14.59 |
| I = Time period 2002-03 to 2005-06, II = Time period 2006-07 to 2009-10, III = Time period 2010-11 to 2013-14 | | | | | | | |
| *In Percentage | | | | | | | |
| **Sources: Researcher calculations** | | | | | | | |

The table 5.16 shows the trend growth rate of per adult male unit expenditure of selected cultivators on non-food items (non-food items are includes fuel, clothing, housing, lighting, health, transport, education, Religious ceremonies etc.) .The growth rate of all non-food items of cultivators was calculated into three time periods and the percentage change is also presented among them. In the first period (2002-03 to 2005-06), the highest growth rate in non-food items of religious ceremonies is 51.04 and lowest of lighting (that is 1.46). And in the same way the total growth rate of all non-food items is 8.97 in this period. In the second period (2006-07 to 2009-10), the highest growth rate of education (that is 34.53) and lowest of marriage & social ceremonies is 0.97. And the total average growth rate of all non-food items in second period is 11.82 percent. In the third time period (2010-11 to 2013-14), the highest growth rate of housing (that is 19.14) and lowest of marriage & social ceremonies is 1.42. The average growth rate of all non- food items in this period are 10.27. Thus in the same way the  overall growth rate is also calculated of all non-food items, the highest overall growth of religious ceremonies  is 21.43 and lowest of marriage & social ceremonies (that is 3.63). Thereafter the percent change is also shown among the time periods, first percent change is calculated between first and second time period. Between this percent change is increased by 31.82 percent.  And the percentage change between second and third period that is increased by 13.08 percent. The third percent change between first and third time period that is increased by 14.59 percent. And in the last it can be stated that the percent change is fluctuating across three time periods. Due to increase the expenditure by cultivators it means the socio-economic status of cultivators is increased. These data are also shown through figure. This table is also shown in the diagram.

**Figure 5.16    Trend growth rate of per adult male unit expenditure on non-food items (all families)**



Trend growth rate of per adult male unit expenditure on non-food items
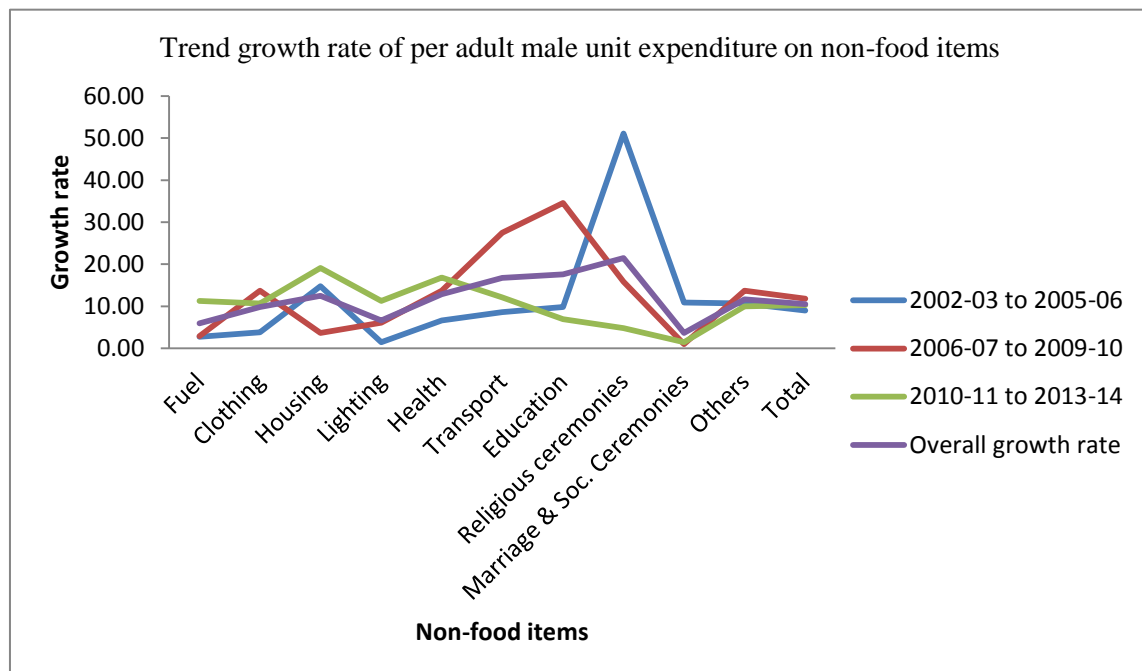
## 5.6 Reason of Small landholder's cultivator's high income growth

1.  The advantages of smallholders disappear as countries develop and more efficient to have progressively larger and more mechanized farms.

2.  In experience shows that there are ways to eliminate poverty even with high concentration of workforce in agriculture and predominance of smallholders.

3.  Irrigation coverage on smallholdings was 39%. As landholding increased, the percentage of area under irrigation decreased.

4.  The small land holders use the fertilizer per hectare of areas remained the highest in the bottom category of farm size and it declined with an increase in farm size.

5.  Small holders made higher use of fertilizer because of higher coverage of irrigation.

6.  The lower size of holdings in Haryana have been using higher doses of inputs, making more intensive use of land and adopting new technology on a much larger scale compared to farms in the large size categories.

**5.7 Conclusion**

On the basis of figure analysis 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.

Main findings –

- 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 rate of total farm income from farm cultivation of cultivators 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 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.