

Consumer Expenditure Behaviour of Households in Rural Haryana: A Decadal Analysis

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Abstract

The present study aims to analyse the Consumer Expenditure Behaviour of Households in Rural Haryana and also investigate the relationship between household income and consumption expenditure. The secondary data, collected from the published reports of NSS 50th-68th round ranging from the period of 1993 to 2012, is used for estimating and analysing the specific objectives of the study. Statistical tools like regression and compound annual growth rate is used to analyse the results. Regression analysis is used to measure the relationship between household income and consumption expenditure in Haryana. Findings revealed that both rural and urban household percentage share of food expenditure is decreasing during the study period on the other hand non-food expenditure is increasing in both rural and urban household. The compound annual growth rate of food expenditure is greater in urban Haryana. But the compound growth rate of non-food expenditure is noticed greater in the rural Haryana. The regression outcome shows that there is a significant relationship between Household Consumption Expenditure and Household Income in Haryana.

Keywords: Per Capita Income, Consumption Expenditure, Regression Analysis, Compound Average Growth Rate, Rural Household

Introduction

India is a rapid developing and agricultural dominant economy which has introduced many changes in the socio economic life of its people since independence. Due to dissimilarities in natural resources endowments; climatic and physical conditions; economic factors like income, prices and the extent of magnetization; demographic factors like degree of urbanization and size of household and cultural factors are probable to impact consumption expenditure pattern. Such various socio-economic, cultural and demographic elements are reflected in the inequality in the distribution of consumption expenditure as it is discovered by the national sample survey

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organization data on consumption expenditure in India (Rao and Saheb, 2012)

Consumption is an important concept in terms of economy and many social sciences. Household consumption expenditures consist of the market prices of all goods and services purchased by households to satisfy their needs and wants. It includes all durable and nondurable goods such as cars, household washing machines, television etc. Household consumption expenditures excludes purchases of residences but includes owner-occupied residences imputed rent (Tapsin and Hepsag, 2014). With the social and economic development of the nation the slight enlargement of basic human needs which a society would expect for its citizen may be likely to keep expanding. These changes in the basic needs of the society may be affordable by the level of income. The level of income of the households ensures the minimum standard of living in the society. The consequence of income is the most important determinant of consumption. Income gives people the ability to pay for motorized transport instead of

walking, to pay for health care and education for their families, to buy miscellaneous, nutritious foods instead of eating only their own crops, to pay for water from a tap instead of walking for many hours to collect it from a well. The increasing dependence of consumption on private income means that changes in income have a dominant influence on changes in consumption. When incomes rise gradually consumption rises for most of the population. But for the same reason, when incomes decline, consumption also falls sharply, with devastating consequences for human wellbeing. The rural households derive their income from various sources like agriculture, wages, livestock, poultry and other self-employed activities. Consumption expenditure and household income are two direct monetary measures used in assessing the economic welfare of a population. However, consumption expenditure is referred to income as it imitates long-term economic status of the household, particularly in low income countries.

This paper makes an effort to throw light on the Consumer Expenditure Behaviour of Rural Household in Haryana. It is organised into eight sections. The next section of the paper discusses a brief review of literature, followed by research gap, objective, hypothesis, Research Methodology, Results and discussion, Conclusion in the subsequent sections.

Review of Literature

Various researches are available relating to the income and consumption of households. Some of the relevant studies are discussed as follows:

Income

Pradhan et al. (2000) evaluated the pattern of income distribution, basic sources of income; consumption pattern and rural urban inequality in India and found that there is a large disparity in rural and urban India. Thakur et al. (2001) analyzed pattern of income distribution and rural poverty of Bihar during 1996-97 and concluded that modern technology of agriculture has not much influence on the income distribution. Janaiah, Bose and Agarwal (2001) analyzed household income distribution and rural

poverty in Chhattisgarh in Madhya Pradesh over the 1996-97 period through regression analysis. The study revealed that income in irrigated area is higher as compared to rain fed area. The major portion of income is derived from land and capital.

Millanovic and Yitzhaki (2002) evaluated the change in world income distribution pattern to find out the wealth of country. Gini measurement has been used to determine the inequality. The study found high disparity in Latin America's country as compared to the other countries of the world. Joshi (2004) evaluated the changes in level of farm income, consumption and investment in rural household Punjab over the 1970 to 2001 period. The study revealed that increased production and income caused by the green revolution have consequence in higher farm household investment and consumption. Millanovic (2005) investigated the effect of direct foreign investment and free trade on income distribution in developed and underdeveloped countries and found that with increase in income, low income countries get benefit from globalization than the poor and middle class countries. Safa (2005) investigated the socio economic factors influencing the small scale agroforestry farms income in hill country areas in Yamen. The study concluded that there income is influenced by area of land, education, family size, and livestock holding. The study also found that the farmers need financial and technical support from government to increase their income. Bala and Sharma (2005) investigated the effect of changing crop pattern on income and employment in Kullu district of Himachal Pradesh over the pre-commercialization (1990-91) and post-commercialization (2002-03). The study concluded that there is additional employment possibility in vegetable crops in the rural area. Income, employment and living standard increased over the period. Paramaiah (2006) investigated the income, consumption and savings pattern of rural farm households in Andhra Pradesh. The study found that the income and household expenditure are steadily higher in the West Godavari district and lowest in the Srikakulam district. Liang (2006) examined the relationship between financial development and income inequality in rural household of China. The result revealed that there was inverse and linear relationship between the finance and income inequality.

Bhakaretal(2007) examined the pattern of income and employment in rural household of Chhattisgarh for the year 2002-2003. The study concluded that kharif crops are the main source of income and employment is mainly generated through non-farm activities. Dachin and Mosora (2012) examined the cross regional disparity of household income in Romania during the period 2000-2008. The study found that the GDP per capita and change in jobs rate are the main impact factors on household income. Tiwari et al. (2013) examined the relationship among the rural urban income inequality and financial development in India during 1965 to 2008. The study found that the rural urban inequality is negatively related to financial development, economic growth and inflation. Naranpanwa et al. (2013) assessed the income distribution of different income groups and estimated the income and poverty inequalities in Shri Lanka. The study found that there is disparity in all income groups.

Consumption Expenditure

Ersado at al. (2000) investigated the household consumption and saving behavior change before and after economic shock in Zimbabwe. The result found that households consume the most of their permanent income and save from their temporary income and they utilize it to smooth consumption. Gangopadhyay and Wadhwa (2004) analyzed the changing consumption expenditure behavior in India during 1983 to 2000. The study found that poverty can be decreased through enhancing the expenditure. Enhancement of per capita total consumption expenditure is reflected in lower portion of necessities become higher with quality of life. Ngullie and Mishra (2009) investigated the structural relationship between income and consumption expenditure of households in Kohima, Nagaland. The study concluded that increase in per capita income of the households brings out structural changes in the pattern of consumption expenditure.

Chudali et al. (2011) investigated the pattern of consumption and compared with the income and employment of people in 5 village in Nepal during 2008-09. The study found that a large change in expenditure of education has been examined in different income groups. Sethi and Pradhn (2012) assessed the consequence of income and occupation

over the expenditure of rural household and found that bulk of household having low states of education are rapid about their importance of their health standards are suggested to replace alcoholic items with nutrition food items. Rao and Saheb (2012) examined the pattern of consumption expenditure in rural household of Guntur district of Andhra Pradesh. The study concluded that socio- economic factors affect the consumption pattern and cultivator household's consumption is highest. Oldiges(2012) examined the relationship between per capita cereal consumption and per capita income in India. The study found that per capita cereal consumption is unrelated to per capita income but it is influenced by other factors.

Research Gap

On the basis of review of literature it is found that various studies are conducted on issues like income distribution pattern, basic source of income, relationship among the rural urban income inequality, factors affecting the income, relationship between income and consumption, pattern of consumption expenditure etc. Somehow income is studied separately. None of the study has been conducted to measure or analyse trend of income of household in India especially at state level. There exist a literature gap in this area. So the current research paper seeks to analyse the Consumer Expenditure Behaviour of Households in Rural Haryana.

Objective

1. To examine the rural and urban consumer expenditure behaviour on food and non-food items in Haryana during 1993-2012.
2. To examine the relationship between consumption expenditure and household income in Haryana during 1993 to 2012.

Hypothesis

H₀: There is no significant difference between urban and rural consumer expenditure behaviour in Haryana.

H₁: There is no significant relationship between household consumption expenditure and household income in Haryana.

Research Methodology

The present study uses secondary data for estimating and analysing the specific objectives of the study. The time series data of estimated per capita consumption expenditure on items and corresponding total consumer expenditure separately for rural and urban households have been taken from the published reports of NSS 50th-68th round. Time period of the study is 1993 to 2012. The statistical data on household consumer expenditure is collected and compiled by the National Sample Survey Organization of India during its various rounds of investigations. The data collected are tabulated and analysed. The tools used for analysis of data are presented and discussed below. Tabular analysis is used to analyse the changes in food and non-food consumption expenditure behaviour. Over years percentage change in Monthly Per Capita Total Expenditure and percentage change in Monthly Per Capita Income shares are worked out for the

income consumption expenditure relation. Compound annual growth rate is estimated as below.

$$CAGR = (V_{t_n} / V_{t_0})^{1/(t_n - t_0)} - 1$$

CAGR= Compound annual growth rate; V_{t_n} = last value; V_{t_0} = start value; t_n = last time period; t_0 = start time period.

Relationship between household income and household consumption expenditure is analysed with the help of Regression Analysis

Regression Equation

$$C_e = a + b_1 X_1$$

a = intercept

C_e = Household Expenditure (food + non-food items)

X_1 = Household income

Results and Discussion

Rural and Urban consumption expenditure behaviour

Table-1: % Share of Rural Food Expenditure and Non- Food Expenditure in Total Expenditure

Years	Rounds	Total Expenditure	Food exp.	% Share	Non-Food exp.	% Share
1993-94	50th	385	231.2	60.05	153.8	39.95
1994-95	51th	396.53	224.9	56.72	171.63	43.28
1995-96	52nd	491.49	273.17	55.58	218.32	44.42
1997	53rd	536.21	306.01	57.07	230.2	42.93
1998	54th	545.96	310.36	56.85	235.6	43.15
1999-2000	55th	714.38	396.55	55.51	317.83	44.49
2000-2001	56th	682.28	360.18	52.79	322.1	47.21
2001-2002	57th	705.77	361.88	51.27	343.89	48.73
2002	58th	702.62	371.37	52.86	331.26	47.15
2004	60th	790.85	421.41	53.29	369.45	46.72
2005	61st	862.89	419.34	48.60	443.55	51.40
2006	62nd	742.65	378.07	50.91	364.58	49.09
2007	63rd	1012.73	480.03	47.40	532.7	52.60
2008	64th	1034.45	517.68	50.04	516.76	49.96
2009-10	66th	1509.91	815.2	53.99	694.71	46.01
2011-12	68th	2176.04	1133.34	52.08	1042.7	47.92

Source: National Sample Survey Organisation

The Table no. 1 shows the percentage share of food items expenditure in total consumption expenditure in rural area. The share of food and non-food in Total Consumption Expenditure was 60.05% and 39.95% in rural Haryana during 1993-94. But the share of food and non-food in total consumption

expenditure was 52.08 %and 47.92% during 2011-12. There is a continued decline in the share of food in total consumption expenditure while the non-food expenditure shows continued increase during the study period (maximum being in year 2005).

Table-2: % Share of Urban Food Expenditure and Non- Food Expenditure in Total Expenditure

Years	Rounds	Food	% Share	Non food	% Share	Total
1993-94	50th	255.3	53.87	218.6	46.13	473.9
1994-95	51th	279.19	57.13	209.53	42.87	488.72
1995-96	52nd	316.65	48.91	330.72	51.09	647.38
1997	53rd	332.08	50.68	323.17	49.32	655.25
1998	54th	306.21	51.85	284.32	48.15	590.53
1999-2000	55th	418.37	45.87	493.7	54.13	912.08
2000-2001	56th	406.74	45.30	491.18	54.70	897.91
2001-2002	57th	426.31	40.99	613.83	59.01	1040.14
2002	58th	449.87	40.05	673.3	59.95	1123.17
2004	60th	502.83	43.88	643.02	56.12	1145.85
2005	61st	472.65	41.38	669.7	58.62	1142.35
2006	62nd	459.07	39.71	696.17	60.22	1156
2007	63rd	526.07	39.37	810.02	60.63	1336.09
2008	64th	639.73	39.31	987.85	60.69	1627.57
2009-10	66th	1001.26	43.13	1320.24	56.87	2321.49
2011-12	68th	1494.72	39.16	2322.62	60.84	3817.33

Source: National Sample Survey Organisation

The above table shows the percentage share of food items expenditure in total consumption expenditure in urban Haryana. Both table 1 and 2 shows that there has been a decline in the share of food in total

consumption expenditure in both urban and rural areas. The proportion of expenditure on non- food items has increased from 46.13% to 60.84% in urban Haryana.

Table-3: Compound Growth Rate of Expenditure on Food and Non- Food Items (1983-2012)

Years	Rural		Urban	
	Food Items (%)	Non-Food Items (%)	Food Items (%)	Non-Food Items (%)
1993-2014	10.44	12.70	11.67	15.91

Source: Researcher calculation

The compound rate of growth of Rural and Urban households' expenditure on non- food items is 12.70% and 15.91% respectively. This table shows that the rate of growth of urban household's food expenditure is greater than growth rate of rural households, reason being of rural migration towards urban areas.

The analysis of the household consumption expenditure.

For urban and rural area of Haryana shows that the rural household's consumption expenditure has smooth behaviour than the urban household's consumption expenditure.

Table-4: Household Income and Consumption Expenditure (1993-2012)

Year	Income (Per Capita)	Total Expenditure (Per Capita)	Yearly Change In Income (%)	Yearly Change In Consumption Expenditure (%)
1993-1994	11079	858.9	-	-
1994-1995	12879	885.25	16.25	3.06
1995-1996	14213	1138.87	10.36	28.64
1997	16611	1191.46	16.87	4.61
1998	17530	1136.49	5.53	-4.61
1999-2000	23222	1626.46	32.47	43.11
2000-2001	25583	1580.19	10.17	-2.84
2002	28022	1745.91	9.53	10.48
2004	34085	1936.7	21.64	10.92
2005	37842	2005.24	11.02	3.53
2006	42133	1898.65	11.34	-5.31
2007	49892	2348.82	18.42	23.71
2008	56917	2662.02	14.08	13.33
2010	82037	3831.4	44.13	43.92
2012	107051	5993.37	30.49	56.42

Source: Researcher calculation

This table indicate the variations of income and consumption expenditure.

Household Income and Consumption Expenditure Relation

Table-5: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.980 ^a	.960	.957	276.96430	.960	311.528	1	13	.000	1.197

a. Predictors: (Constant), income

b. Dependent Variable: consumption

Model Summary Table provides the R and R² values. The R value represents the simple correlation and is 0.980. The total variation in Consumption

Expenditure as is explained by Income is 96.0% (R²= 0.960), which is very large.

ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2.390E7	1	2.390E7	311.528	.000 ^a
Residual	997219.895	13	76709.223		
Total	2.489E7	14			

a. Predictors: (Constant), income

b. Dependent Variable: consumption

As per ANOVA table value of P is 0.000(which is less than 0.05) and therefore significant. Hence regression

model statistically significantly predicts the outcome variable.

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
	B	Std. Error	Beta			Zero-order	Partial	Part
1 (Constant)	277.927	123.540		2.250	.042			
income	.048	.003	.980	17.650	.000	.980	.980	.980

a. Dependent Variable: consumption

Coefficient table indicates value of p is less than 0.05 and hence significant. Therefore Null hypothesis is rejected. Hence there is a significant relationship between Household Consumption Expenditure and Household Income in Haryana. The Consumption Expenditure can be predicted from Income through following regression equation.

$$C_e = 277.92 + 0.48 (\text{income})$$

Conclusion

This study highlights the consumer expenditure behaviour on food and non-food items of rural household in Haryana during 1993-2012. The main objectives of this study is to examine the rural and

urban consumer expenditure behaviour on food and non-food and to examine the relationship between consumption expenditure and household income in Haryana during 1993 to 2012. Investigational facts shows that the both rural and urban household % share of food expenditure is decreased during the study period on the other hand non-food expenditure is increased in both rural and urban household. The compound growth rate of food expenditure is detected greater in the urban Haryana than rural. But the compound growth rate of non-food expenditure is noticed greater in the rural Haryana than urban. The regression outcome shows that there is a significant relationship between Household Consumption Expenditure and Household Income in Haryana.

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