



A study of consumption pattern of rural households in Arunachal Pradesh, India

Dakli Lombi¹, Ashi Lama²

Assistant Professor, Department of Economics, Govt. College Doimukh, Arunachal Pradesh, India

Assistant Professor, Department of Economics, Rajiv Gandhi University, Itanagar, Arunachal Pradesh, India

Abstract

Consumption pattern is an important indicator of households' well-being and their standard of living. Over the years, there has been a significant transformation of the economy in the hills of North-East India. In this context, this paper attempts to analyse the level and pattern of household consumption in rural Arunachal Pradesh. The study is based on primary data collected from randomly selected 400 rural households of the State. The data were analysed by employing the descriptive statistical methods. The results showed that non-food-items dominated the household consumption expenditure, accounting for more than two-third of the total consumption expenditure. The high share of non-food expenditure was mainly due to expenditure on education and health. Among the food items, meat and rice accounted for the highest share. The distribution of households by expenditure class revealed that more than half of the surveyed households had low standard of living in terms of monthly per capita consumption expenditure. At the same time, it was found that there was a significant inequality in consumption expenditure among the households. Hence, in order to improve the consumption pattern of rural households in the State and reduce inequality, the policy should focus on strengthening of beneficiary oriented rural development programmes, skill and capacity building programmes, improve rural infrastructure, provide incentives to adopt diversification towards horticultural crops and provide market linkages.

Keywords: per capita consumption expenditure, rural households, arunachal pradesh, inequality, diversification

Introduction

Consumption is important to sustain and nourish human life. It contributes to human development by enhancing capabilities and enriching life (Geetha, 2011) [6]. Consumption is defined as the final use of goods and services for satisfaction of human wants and desire. It is the total expenditure on goods and services for the current consumption by the household sector (Henderson and Poole, 1991). Household consumption can be grouped into two categories; consumption of food items and non-food items. The former is consumption to delight the thirsty need for food and latter one is the consumption which is meant for the satisfaction of an individual like education, health, transport, cloths, entertainment, electricity etc. Because of wide economic disparities, it has been observed that in India and in other developing countries, the poorer sections of the population especially those who could not make the use of different government development schemes and programmes do not have sufficient food and nutrition suffer from various diseases and have relatively low life expectancy. The household consumption pattern is an important indicator of households' well-being. The consumption pattern of a household is influenced by social, economic and demographic factors. However, level of income is taken as a major determinant of expenditure patterns of household. The consumption pattern of household varies with change in income and people of different classes of income have different consumption structure. The poor households usually spend higher proportion of expenditure on food and basic needs, while rich households spend more on non-cereal food items and non-food items. Thus, a household consumption pattern can be used as an indicator of the level well-being.

Over the last few decades, there has been significant change in level and pattern of household consumption in the country due to rapid economic growth. There has been decline in consumption of food grains and increase in consumption of livestock products, fruits and vegetables and non-food items. The significant decline in consumption has been in case of cereal items like, barley, maize and shift towards non-cereal items like meat, fish, fruits and vegetables (Ray, 2005) [17]. The average monthly consumption of cereals have declined from 14.40 kg in 1987-88 to 12.40 kg in 2003-04 in rural areas and in urban areas it declined from 11.20 kg to 10 kg during the same period as per the NSSO 43rd and 60th Round.

Food is the foremost and basic need and so it gets priority in the consumption pattern of households. However, the access to food depends on affordability which in turn is determined by household's income and price of food items. The consumption level of food determines the nutritional security of the household. The dietary consumption pattern of the household is shaped by interaction of income, prices, individual preferences, beliefs, cultural traditions as well as geographical and environmental factors (WHO, 2003) [21]. Arunachal Pradesh is situated in the hills of North-East India. It is inhabited by the people belonging to different tribes. In this State, there are 26 major tribes and more than 110 sub-tribes. Though most communities are ethnically similar, being the descendent from a common racial stock, their geographical isolation from each other has brought among these tribes certain distinctive characteristics in food habits, language, dress and customs. Majority of the people (77 per cent as per 2011 census) live in rural areas. The people are scattered in different hills and valleys and

majority of them are engaged in subsistence agricultural practices for their livelihoods. However, the arable land is quite limited in the State due its mountainous topography and huge forest cover (79.63 per cent of the geographical area as per Forest Survey of India, 2019). In this State, only around 10 per cent of the total geographical area is suitable for cultivation (Lama, 2017) ^[17]. The farming activity is carried out in the hilly slopes and narrow valleys. The most widely practised system is the shifting cultivation (*Jhuming*). It is a slash and burn method of cultivation which uses traditional inputs and human labour. The agriculture of the State is based on the use traditional technology. The productivity is generally low in such an agriculture and just fulfil the basic subsistence need of the farming families.

The households in rural areas of the State have traditionally been subsistence oriented and they meet the consumption requirement through production of food products in their agricultural field. The jhum crops such as maize, brinjal, pumpkin, gourd, sesame, arum, yam, sweet potato, millet, chilly, wheat, ginger, sugarcane, constitute the main consumables. Apart from agriculture, they also depend on the food gathered from forests. *Jhuming* utilizes mostly the household labour as the market for wage labour in rural areas of the State is at nascent stage. Most rural households themselves produce the major part of their consumption items. They depend on market mainly for manufactured goods like salt, sugar, clothes, modern durable goods and some people also depend on market for foodstuff and spices and various food items. In the last few years, the economy of the State has undergone structural changes. The change in economic structure may have led to significant change in consumption pattern of the rural households. Since consumption pattern of households is an important indicator of households' well-being, the study is an attempt to examine the household consumption pattern in rural Arunachal Pradesh. In this context, the present study attempts to analyse the consumption pattern of the households in rural Arunachal Pradesh to understand the changes that has taken place in the consumption habits among the population. The study is expected to understand the level and pattern of household consumption and help the planners to make suitable policy for improving the well-being of rural households in the State.

Review of Literature

There are several studies which have been conducted to examine and analyse the consumption behaviour and consumption patterns of households. For example, Mukherjee and Kishore (1982) ^[8] by using data of the NSS consumer expenditure for the year 1973-74 calculated the value of minimum calorie requirement that is 2400 calorie per person per day to be Rs 37.34 per capita per month and the percentage of rural poor people falling below this minimum was worked to be 45.65 percent. Mukhopadhyay (1987) examined the characteristics of inter-state differences in the expenditure patterns of rural households. The study showed that the expenditure patterns of rural households in India for Cereals and Cereals Substitutes and all food items as reflected by Engel elasticity and ratios are considerably different across states. Sagar (1994) ^[19] analysed consumption expenditure pattern to examine inequality and poverty differences among scheduled caste and scheduled tribe households of four states by using data from NSSO.

The study found that the monthly per capita income consumption expenditure of SCs and STs were considerably less than that of other households for all state in rural and urban areas.

Deaton and Dreze (2002) ^[2] studied poverty and inequality in India by using the NSSO data. The study showed that rural-urban imbalance of per capita expenditure had increased and also inequality within urban areas. Regarding other indicators of living standards such as nutritional levels, literacy rate, health achievement, it was found that social progress has been uneven in the different fields and significant increase in economic inequality is found. Pendakur (2001) ^[16] used consumption expenditure to evaluate the rate of poverty. In this study consumption was adjusted for differences in the prices faced by different demographic characteristic of households. The study found that the consumption poverty rate was declined over the 1970s and 1980s, but the 1990s the consumption poverty rate increased by more than half in between 1992 and 1998. Rout (2009) examined the differentiation in nutritional status and food consumption of women in the state of Odisha by using the NFHS-11. The study found that 33 per cent of urban women and 48.6 percent of rural women are in the low BMI group and urban women enjoy a better position in all the food items. The nutritional status was positively related with education of respondent, education of husband, household standard of living and occupation of husband. Pavitra *et al.* (2009) analysed food consumption patterns in Karnataka by using NSSO data of 61st round 2004-05. The study found that the monthly per capita cereal consumption has declined from 13.15 kg to 10.7 kg in rural areas and from 10.87 kg to 9.7 kg. They found that the consumption of cereals has decline in Karnataka over the periods. Geeta (2011) examined the consumption patterns of the households in rural and urban areas of Coimbatore. The study revealed that there was a significant difference and inequality in consumption expenditure not only between the groups (rural vs. urban) but also within the groups. The expenditure elasticity of consumption was found to be greater than unity for fruits, vegetables and livestock products in rural areas which implied that with increase in income, rural households are likely to spend more on these items. Chudali *et al.* (2011) ^[1] reported a vast range of differences on educational expenditure in different income groups of farm households. The benefit of knowledge, Medical expenses and education goes to higher income group of rural households. The expenditure shows a direct relationship with level of income. Suresh and Jyoti (2020) analysed consumption patterns of tribal households using the surveyed data. The study showed that highest percentage of tribal expenditure on food item was spent on rice and jowar followed by vegetable and groundnut oil. The highest percent of expenditure on non-food items was spent on marriages programmed followed by clothing, medicines and festivals. The study implied that high expenditure on essential items might degrade their quality of life.

The review of literature indicated that there is lack of study on consumption patterns of rural households in the hills of North-East India. Hence, the present study was an attempt to fill the gap in knowledge.

Data Source and Methodology

The study was conducted in two districts of Arunachal Pradesh, namely West Siang and Papum Pare. The study

was mainly based on primary data. The required data were collected by conducting a field survey in the study area. The survey was carried out with the help of pre-tested questionnaire. The questionnaire was designed to collect information relating to demographic and socio-economic characteristics of the households, household assets, land, Agricultural production, sources of livelihood and consumption items and expenditure. The sample size of the study was 400 rural households. The size was determined by using the Yamane's sample selection criterion. By following the proportional sampling technique 150 households were drawn from West Siang district and 250 households were taken from Papum Pare district. However, the stratified random sampling technique was used to select the households for survey and collection of required information. The unit of observation was households. The data were analysed by using percentage, ratio and descriptive statistical methods.

Household and Household Consumption

Household consists of a single or several persons who live in the same dwelling unit and share meals. It may consist of a single family or another group of people. According to National Sample Survey Organization (NSSO) household constitutes a of a group of persons normally living together and taking food from a common kitchen. A household may contain one or more members. Members of the households may or may not be related by blood, marriage or adoption to one another (NSSO, 2001). According to 2018 United Nation database source, the mean average household size across the 153 countries is 4.0 persons per household and the median is 3.8 persons per household. In the sample study, it is reported that the average family size is 4.16 persons per household in West Siang and 5.03 persons per household in Papum Pare district. Normally, consumption expenditure of household increases with the increase size of household but not proportionately. Suppose, the expenditure of household with four members is not double than that of the household with two persons, but it is larger by a small factors. Hence, this saving in household expenditure reflects economies of scales accruing to larger household as member typically share in the consumption of household. The per capita consumption is expected to be inversely related to household size. Household consumption expenditure is the expenditure incurred by the household on domestic account during a specified period. It also includes imputed values of consumption of goods and services which are not purchased but procured otherwise for consumption. In other words, it is the sum of money value of all items (goods and services) consumed by the household on domestic account during the reference period (NSSO, 2001). The household consumption is, thus, defined as the consumption that includes goods and services obtained through (1) market purchases (2) receipt in exchange of goods and services (3) home grown stock (4) transfer receipts like borrowings charities etc and (5) free collection. It does not include any transfer payments like loans advanced, perquisite and other offerings. The households in rural Arunachal Pradesh are subsistence oriented households. They mainly meet their households' consumption requirement by growing crops in their field and collecting free goods (firewood, edible leaves and vegetables) from the community forests. They rely on market purchase only for few items like salt, edible oil, cloths and other items. In the present study, household

consumption is defined as all expenditure made by the household on market purchase of consumption goods and services, imputed value of home grown products and imputed values of consumable products collected from the forests during the reference period. The expenditure incurred towards productive household enterprises other capital expenditure are excluded from household consumer expenditure. The expenditure on purchase and construction of residential land and building, interest payment, insurance premium payments, payment of fines and penalties and expenditure on gambling including lottery tickets are also excluded. The data on household consumption expenditure were collected for two different periods. The reference periods used for collection data are; for the last month i.e. last 30 days from the date of survey and the last one year i.e. last 365 days preceding the date of the survey. It was found that the average per capita monthly consumption expenditure of the surveyed households was higher in case of former than that of the later. This may be due to recall lapse because the respondents were asked to recall and report the volume of consumption. Therefore, the monthly and yearly data have been suitably adjusted in order to arrive at the final figures. The various consumption expenditure items have been classified into two broad categories food and non-food items. Food items include Pulses, Rice, vegetables, Meat, Fish and others. The monthly data are used for rice, pulse, vegetable, fish, meat etc. Non-food items include health, education, transport, rituals and ceremonies etc. The consumption data these items were collected on a yearly basis that is the last one year preceding the time of survey.

In 2011-12, the all India estimate of average monthly per capita consumption (MPCE) was around Rs.1287.17 for the rural sector and for urban MPCE was Rs. 2477.02 by MRP method. According to NSS 68th Round of consumer expenditure survey, the average monthly per capita consumption expenditure in rural and urban sectors of Arunachal Pradesh was Rs.1782 and Rs. 2654 respectively (National Sample Survey Organisation, July 2011-June 2012). The average monthly per capita consumption expenditure (MPEC) of the surveyed households was Rs. 2049.

Results and Discussion

The consumption pattern of a household is shaped by demographic and socio-economic characteristics of the household as well as by the tradition, culture and believes of the society to which the household belongs. The State of Arunachal Pradesh is inhabited by numerous tribal groups. Each group has different customs and tradition. In rural areas, they are scattered in villages located in the isolated places and access to both labour and factor markets is limited. So, majority of the tribal households in rural areas of the State are peasant farm households and are engaged in traditional agricultural practices. The basis of their activities is subsistence of their family. Most of the items of consumption are produced in their field. However, due to inadequate facility for education and health, they often travel to towns for seeking these services. The consumption pattern of the surveyed rural households in the State is presented in the table 1.

Table 1: Composition of Per Capita Annual Consumption Expenditure of Surveyed Households

Sl. No.	Items	Per Capita Annual consumption (in Rs)	Percentage Share
1	Meat	2403	9.77
2	Rice	2003	8.14
3	Fish and Eggs	1821	7.4
4	Vegetables	1118	4.54
5	Pulses	224	0.91
6	Other food items	3.18	0.01
7	Total Food	7573	30.79
8	Education	8180	33.25
9	Health	4396	17.87
10	Transport	2489	10.12
11	Rituals& Ceremonies	1429	5.81
12	Other non-food items	527	2.14
13	Total Non-food items	17021	69.21
14	All Total (7+13)	24594	100

Source: Field Survey 2018-19

The table 1 shows the patterns of consumption expenditure among the surveyed households. The average per capita monthly consumption expenditure of the surveyed households on food and non-food items were Rs. 631 and Rs. 1418. Accordingly, the average annual per capita expenditure on food and non-food items were Rs. 7573 and 17021. It was found that the food items account for 30.79 percent of and non-food-items account for 69.21 per cent of the total household consumption expenditure. The high share of non-food expenditure was mainly due to expenditure on education and health which can be attributed to privatisation of education and health services. Among the food items, expenditure on meat accounted for the highest

share of 9.77 per cent. This is mainly due to the fact that tribal people have the habit of regular consumption of non-vegetation items to meet their dietary requirement as they are engaged in agricultural practices in the hilly slopes and also collect firewood and other heavy products which require huge energy. The second important component of food items is rice on which accounted for 8.14 percent of the total consumption expenditure among the surveyed households. Pulses constituted only 0.19 percent of total consumption expenditure. Though pulses is considered as an important food item to meet the protein requirement, it was not an important items of consumption among the surveyed households. This is because tribal households in the State are not in the habit of pulses consumption as their traditional food habit involves consumption of boiled leafy vegetables and meat. This is indicated by 4.54 per cent share of vegetables in the total consumption expenditure of surveyed households.

In the non-food items, expenditure on education accounted for the highest share (33.25 per cent) of the total consumption expenditure) followed by health expenditure (17.87 per cent), transport (10.12 per cent). Other non-food items mainly include clothing, soaps, tooth pastes etc. It is interesting to note that rituals and ceremonies accounted for 5.81 per cent of the total consumption expenditure of the surveyed households. This is because of the fact that tribal households in the State performs a number of rituals and ceremonies as they are animists and worship nature for their peaceful existence and good harvest of crops.

The per capita annual consumption expenditure of the households in the surveyed villages is presented in table 2.

Table 2: Per capita Annual Consumption Expenditure of the Households in Surveyed Villages (in Rupees)

District	Village	No. of Household	No. of persons	Per capita Consumption	Per capita Food consumption
West Siang	Lutak	20	76	12148	1671
	Lido	9	29	5247	1283
	Bopu	26	105	11135	4187
	Gadi Messi	17	54	20437	3200
	Hidum Hikar Sector	13	65	49777	13086
	Old Dari	38	167	11133	2470
	New Bomte	14	68	8053	2506
	Malini	5	28	24386	3758
Papum Pare	Lenka	15	84	31973	16673
	Mob	24	116	34346	18516
	Sakiang	23	143	39039	4613
	Upper Tarasso	30	131	27233	7062
	Bandardewa	16	84	37639	17109
	Laptap	19	91	22850	8576
	Apop	32	155	16594	2397
	Aniya	26	144	30442	11105
Papum Pare	Durpa	33	169	19225	4287
	Emchi	40	177	31486	10883

Source: sample Survey 2018-19

The table 2 shows the per capita annual consumption expenditure of the households in the surveyed villages. In the study, it was found that Hidum Hikar had the highest per capita annual consumption expenditure of households (Rs.49777) and the lowest in Lido Rs.5247 of West Siang district. Per capita food consumption was found to be the highest in the village Mob village of Papum Pare ((Rs. 18516) and it was the lowest in Lido village of West Siang district (Rs.1283). The average annual per capita

consumption of the households was Rs. 28762 in Papum Pare district and Rs. 19365 in West Siang district. The average annual per capita expenditure on food was Rs. 9394 in Papum Pare and Rs. 5426 in West Siang district. Thus, households in Papum Pare district have relatively better standard of living than the households in West Siang district. This is as expected as the households in Papum Pare district have better access to non-farm activities and market due to their proximity to State capital Itanagar.

Table 3: Per Capita Annual Consumption Expenditure by Household Size (in Rs.)

Household size	No. of households	No. of persons	Per capita Consumption
1 to 2	29	54	18395
3 to 4	159	583	23945
5 to 6	149	798	26338
7 and above	63	451	23367
Total	400	1886	24594

Source: Survey data 2018-19

Table 3 shows the consumption expenditure of surveyed households on basis of household size. The average annual per capita consumption expenditure of for all surveyed households was found estimated at Rs 24594. The analysis of average annual per capita consumption by household size showed that per capita expenditure was the lowest for household size of 1 to 2 members. It was the highest for household size of 5 to 6 members. However, the per capita consumption expenditure declined with increase in household size to 7 and above members. This implies that household size influences the level of per capita consumption. The per capita consumption expenditure decreases after certain point with increase in the size of household.

The analysis of the distribution of the surveyed households by per capita monthly consumption expenditure showed that majority of them belonged to lower expenditure category. The details are given in table 4.

Table 4: Distribution of Surveyed Households by Per Capita Monthly Consumption Expenditure (in Percentage)

Expenditure category (in Rs)	No. of household	Percentage of household
Less than 300	8	2
301 to 600	111	27.75
601 to 900	105	26.25
901 to 1200	67	16.75
1201 to 1500	39	9.75
1501 to 1800	27	6.75
1801 to 2100	15	3.75
2101 to 2400	12	3
2401 to 2700	9	2.25
2701 to 3000	2	0.5
3001 and Above	5	1.25
Total	400	100

Source: Sample Survey 2018-19

The table 4 shows that 56 per cent of the surveyed households had per capita monthly consumption expenditure in the range of up to Rs 900. Among households, 29.75 per cent had per capita monthly consumption expenditure of Rs. 600 and below. It was found that 17.5 per cent of household had per capita monthly consumption expenditure of above Rs.1500. This implies that more than half of the surveyed households have low standard of living in terms of monthly per capita consumption expenditure.

The study made an attempt to examine the inequality among the households in terms of per capita annual consumption expenditure. The inequality in consumption expenditure among the surveyed households was measured calculating cumulative distribution of households and share in consumption expenditure on the basis of expenditure group. It was found that bottom 19 per cent of households which

had per capita annual consumption expenditure up to Rs. 15000 shared only 6.7 per cent of total consumption expenditure (Table 5). On the other hand, top 19 per cent of the households which had per capita annual consumption expenditure of above Rs. 4000 shared 36.52 per cent of total consumption expenditure. The details are given in table 5.

Table 5: Cumulative Percentage Distribution of Surveyed Household and Consumption Share on the basis of Per Capita Annual Consumption Expenditure Classes.

Expenditure Class (in Rs)	Household		Consumption	
	Percentage	Cumulative percentage	Percentage	Cumulative percentage
Less Than 5000	1.69	1.69	0.26	0.26
5001 to 10000	7.58	9.27	2.06	2.32
10001 to 15000	9.76	19.03	4.38	6.70
15001 to 20000	14.48	33.51	8.83	15.53
20001 to 25000	14.06	47.57	10.9	26.43
25001 to 30000	9.82	57.39	9.28	35.71
30001 to 35000	13.09	70.48	14.7	50.41
35001 to 40000	10.07	80.55	13.07	63.48
40001 to 45000	7.31	87.86	10.74	74.22
45001 to 50000	4.13	91.99	6.69	80.91
50001 & above	8.01	100	19.09	100

Source: Sample Survey 2018-19

The table 5 shows that the cumulative distribution of households and their consumption share according to expenditure class. It is seen from the table that in the expenditure class less than Rs. 5000, there are 1.69 per cent of the households sharing only 0.26 per cent of total expenditure. At the highest level of expenditure that is above Rs. 50000, 8.01 per cent of the total households accounts for 19.09 per cent of the total expenditure on consumption. This shows that in rural areas of the State there is an inequality among the households as indicated by the distribution of households by the share in consumption expenditure.

Conclusion

The study analysed the level and pattern of household consumption in rural Arunachal Pradesh. It was found that expenditure on non-food-items account for 69.21 per cent of the total household consumption expenditure. This indicates that there has been shift in the household consumption pattern. The high share of non-food expenditure was mainly due to expenditure on education and health. Among the food items, expenditure on meat accounted for the highest share of 9.77 per cent which can be attributed to the fact that tribal people are engaged in agricultural practices in the hilly slopes and also collect firewood and other heavy products which require huge energy. The second important component of food items is the rice on which accounted for 8.14 percent of the total consumption expenditure among the surveyed households. The expenditure share of pulses was very low among the households. Among the surveyed villages, average per capita food consumption of households was found to be the highest in the village Mob village of Papum Pare and it was the lowest in Lido village of West Siang district. The average annual per capita consumption of the households was found to be higher in Papum Pare district as compared to West Siang district. Thus, households in Papum Pare district have relatively better standard of living than the households in West Siang district. This may be due to that fact that households in

Papum Pare district have better access to non-farm activities and market due to their proximity to State capital Itanagar. The analysis of average annual per capita consumption expenditure by household size showed that per capita consumption expenditure was the lowest for household size of 1 to 2 members and the highest for household size of 5 to 6 members. However, the per capita consumption expenditure declined with increase in household size to 7 and above members. This implies that per capita consumption expenditure decreases after certain point with increase in the size of household. The distribution of surveyed households by expenditure class showed that 56 per cent of the surveyed households had per capita monthly consumption expenditure in the range of up to Rs 900. This implies that more than half of the surveyed households have low standard of living in terms of monthly per capita consumption expenditure. The study also found that there is an inequality in consumption expenditure among the households in rural areas of the State. Hence, in order to improve the consumption pattern of rural households in the State and reduce inequality, the policy should focus on extending the benefits of the rural development programmes to the targeted beneficiaries, skill development and capacity building of rural households to adopt diversified livelihood activities, improve rural infrastructure, provide incentives to take up horticultural crops and market linkages.

References

1. Chudalil H, Choudhury A, Ali Md H. Socio-economic of analysis of consumption patterns of Nepalese people, *Economic affairs*,2011:56(2):213-218. June. Directorate of Economics and Statistic July 2006 to June 2007.Economic Survey (2009-10), Govt of India.
2. Deaton A, Dreze J. Poverty and inequality in India: A Re-examination, *Economic and Political Weekly*, September, 2002, 30-33.
3. Forest Survey of India State of Forest Report 2019, Ministry of Environment and Forest, Government of India, 2019.
4. Government of Arunachal Pradesh Statistical Abstract of Arunachal Pradesh, Directorate of Economics and Statistics, Itanagar, 2018.
5. Gupta DB. Consumption patterns in India, Tata Mcgraw Hill publishing co Ltd, Bombay, 1973, 36-42.
6. KT Geetha KT. Consumption patterns among selected rural and urban household in Coimbatore city, *International Journal of multidisciplinary research*,2011:1:2.
7. Lama M. Agricultural Productivity and Resource Use Efficiency in the Hills of North-East India-A Case Study of Arunachal Pradesh, *Journal of Hill Agriculture*,2017:8(3):339-343.
8. Mukherjee SM, Kishore. poverty in Himachal Pradesh, in seminar on Economic Development in Western Himalayas Department of Economics, Himachal Pradesh, University, Shimla, 1982, 102-103
9. Mukhopadya R. A study of regional patterns of consumer expenditure in rural India, *Journal of quantitative Economics*,1987:3:1.
10. NSSO Concepts and Definitions Used in NSS, Ministry of Statistics and Programme Implementation, Government of India, 2001.
11. NSS 60th Round (January-June). Household Consumption Expenditure in India, NSSO, Ministry of Statistics and Programme Implementation, Government of India, 2004.
12. NSS 66th Round (July 2009-June): Household Consumption of Various Good and Services in India, NSSO, Ministry of Statistics and Programme Implementation, Government of India, 2010.
13. NSS 68th Round (July 2011-June): Key indicators of Household Consumer Expenditure in India, NSSO, Ministry of Statistics and Programme Implementation, Government of India, 2011.
14. NSS 66th Round, Type-2 India Household Consumer Expenditure, NSSO, Ministry of Statistics and Programme Implementation, Government of India, 2016.
15. Pavithra BS, Basavaraja H, Kiresurv R, Mahajanshetly SB, Mageri SN. An Economic analysis of food consumption patterns in Karnataka, *Karnataka J. Agri. Science*,2009:22(4):840-845.
16. Pendakur K. Consumption Poverty in Canada, 1996 to 1998, *Journal of Canadian public policy*, University of Toronto press,2001:27(2):125-149.
17. Ray R. Analysis of Changes in Food Consumption and their Implications for Food Security and Undernourishment: the Indian Experience in the 1990s, Discussion Paper No. 10, University of Tasmastria, 2005.
18. Rout NR. Food Consumption Patterns and Nutritional Status of women in Orissa: A rural-urban differential, *Journal of Human Ecology*,2009:25(3):179-185.
19. Saggar M, Pan L. SCs and STs in Eastern India inequality and poverty estimates, *Economic and Political Weekly*,1994:5:567-574.
20. Suresh B, Jyothi M. Consumption patterns of tribal households: A study of Banjaras. The economic challenger; a forum for economic thinking in the 21st century,2003:05:18.
21. World Health Organisation. Diet, Nutrition and Prevention of Chronic Diseases, Technical Report Series 91 6, WHO, Geneva, 2003.