Differential Pattern of Rural Household Expenditure in The Era of Economic Reforms: A Micro Level Study

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Abstract- *The era of economic reforms is associated with higher per capita income and expenditure. This particular growth phenomenon results in the differential expenditure pattern of economically differentiated households. The higher income households have larger proportion of non-food expenditure while the relatively low-income households have low proportion of the same. Economic reforms not only give rise to increasing importance of non-farm employment but also results in substantial inequality of income and expenditure across the rural households. The present study explores the differential relationships between household income and household expenditures, the households being differentiated on differential importance of rural non-farm income.*

Keywords- Employment, expenditure, income, non-farm income, self-employment.

I. INTRODUCTION

As per census 2011 about 69 percent (83.3 crore out of the total 121 crore) of total populations live in the rural India. The sustainable development of rural livelihoods depends on the pattern of rural employment, income generation and consumption pattern of rural households. All these parameters are not only inter-related but also inter dependent. As growth rate of agriculture sector is so poor that's why the non-farm sector may provide better scope for employment particularly in the droughts prone region of rural area. The era of economic reforms is associated with higher per capita income and expenditure. This particular growth phenomenon results in the differential expenditure pattern of economically differentiated households. The higher income households have larger proportion of non-food expenditure while the relatively low-income households have low proportion of the same. Economic reforms not only give rise to increasing importance of non-farm employment but also results in substantial inequality of income and expenditure across the rural households. The present study explores the differential relationships between household income and household expenditures, the households being differentiated on differential importance of rural non-farm income.

II. REVIEW OF LITERATURE

Basant (1993) and Basant (*et al*) (1998) on the basis of field survey noted that about 55 per cent of households reported non-agricultural activities as their major sources of household income. The diversification of sources of household income was a function of two processes: a) participation of household worker in single activity, and b) participation of a single worker in multiple economic activities. The number and nature of economic activities was influenced by their accesses to land and other assets, family size, nearness of the village to a town, etc.

Unni (1996) using micro level data from 30 villages in Gujarat found that older men specialize in agricultural activities while better educated men specialize in non-agriculture activities, men in households with very high value of land and other assets also tend to specialize in non-agricultural activities. Specialisation in non-agricultural activity is also encouraged by higher population density, closeness to town and in better developed villages.

Lanjouw and Shariff (2004) using data of 32000 households in 1765 villages across India showed that non-farm incomes accounted for a significant proportion of household income in rural India, with considerable variations across quintiles and across India's major states. Education, wealth, caste, village level agricultural conditions, population densities and other regional effects influenced access to non-farm occupations.

In Indian literature there are relatively few studies available that analyse micro level data at the household or individual level, statistically or econometrically, to understand the rational and processes of participation in RNFE (Unni 2000). We have hardly any such study concerning RNFE at household level in West Bengal. Moreover, in the existing micro level studies the relationship between non-farm

household income and household expenditures has not been analysed in depth. The inequality of income and expenditure of differentiated rural households engaging rural non-farm employment has hardly been explored and established.

III. OBJECTIVES OF THE STUDY

The present study set the following objectives for itself:

i) To examine the inequality of income and expenditure of differentiated rural households engaging rural non-farm employment

ii) To examine the nature of relationships between household income and household expenditures

IV. METHODOLOGY

Since secondary data available at present are not adequate to serve our purpose, we resort to primary data. Paschim Medinipur district of West Bengal is purposely chosen for this study. Multistage stratified random sampling methods are used to find ultimate sample frame. In the 1st stage of sampling three (3) droughts prone blocks are selected randomly out of the drought prone blocks of Paschim Medinipur district. After that, two (2) villages are selected randomly from each sample blocks i.e., 6 villages are selected in the 2nd stage. In addition, in the last stage, 25 households are select randomly from each village and the total numbers of sample households are 150. Questionnaire and survey methods used to collect primary data from sample households. Simple statistical techniques used to analyze the data.

V. FINDINGS OF THE STUDY

A. Pattern of Income and Expenditure of Sample Households

The distribution of non-farm income to total income of sample households is shows in **Table 1**. The share of non-farm income to total income is more than 50 percent for 74 percent households. 9.33 percent households out of total sample households entirely depend on non-farm sector for their livelihood. The share of non-farm income to total income lies between 51 percent and 75 percent for 45 percent households and between 76 percent and 99 percent for 20 percent households. On the other hand, most of the sample households (90.67 percent) recorded multiple occupations. Non-farm based households are also engaged in farm activity as a subsidiary activity. Farm activity supports non-farm activity to maximize total income. Therefore, the rural non-farm employment has a great impact by generating the income for sustainable livelihood and poverty alleviation of rural people. Households are dividing into two segments based on percentage share of noon-farm income to total income. **Segment-I** belonging to those households having noon-farm income up to 50 percent and more than 50 percent of total income belongs to the **segment-II**.

Table 1 Distribution of Sample Households of Blocks by Share of Non-Farm Income to Total Income

Share of NF Income (%)	Sankrial		Jambani		Nayagram		Total		
	Number	%	Number	%	Number	%	Number	%	
Up to 50	19	38	11	22	9	18	39	26.00	**Segment - I**
51 to 75	22	44	21	42	24	48	67	44.67	**Segment - II**
76 to 99	7	14	12	24	11	22	30	20.00	
100	2	4	6	12	6	12	14	9.33	
Total No. of Households	50	100	50	100	50	100	150	100.00	

Note: Main and Marginal workers taken together
Source: Field Survey, 2013

Per capita monthly average income is higher in segment – II (Rs. 1422) than the segment – I (Rs.1187), similarly all types of per capita expenditures are also higher in segment – II than segment – I. Therefore, income and expenditure inequality arises due to the larger share of non-farm income to total household income. The higher income households have larger proportion of non-food expenditure (**segment – II**) while the relatively low-income households (**segment – I**) have lower proportion of the same. However, the reverse circumstances are there in case of food expenditure (**Table 2).**

Distribution of consumption and income pattern of sample households differentiated on the basis of the size of operational land holdings are shown in **Table 3**. Per capita income registered highest (Rs. 1273) in those households belonging to the marginal size of land holdings followed by land less households (Rs. 1266) and the households of small & medium size of land holdings. There is no relationship of per capita income with increase of land holdings. The percentage share of per capita food expenditures in relation to per capita income decreases with the increases of size of operational land holdings. Similarly, a positive relationship is there in between the size of land holdings and total expenditures. However, a negative relationship is exists between non-food expenditures and size of land holdings.

Table 2 Distribution Pattern of Income and expenditure of sample households by Different Segment of Income Generating from Rural Non-Farm Employment

	Segment – I (No. of HHs =39) (Share of NF Income to total income up to 50 %)			Segment – II (No. of HHs =111) Share of NF Income to total income more than 50 %)			Overall (No. of HHs =150)		
Per capita Monthly Item	Average	CV (%)	% of Total Income	Average	CV (%)	% of Total Income	Average	CV (%)	% of Total Income
Income	1177	43.2	100.00	1422	33	100.00	1358.30	36.22	100.00
Food expenditure	787	23.5	66.87	835.6	19.3	58.76	822.96	21.37	60.59
Noon Food expenditure	211	55.5	17.92	322.5	52.5	22.67	293.51	54.85	21.61
Clothing expenditure	50.3	35.1	4.27	87.95	56.4	6.18	78.16	55.24	5.75
Medical expenditure	40.2	71.9	3.42	71.02	68.1	4.99	63.01	69.6	4.64
Total expenditure	1088.5	27.2	92.48	1317.07	21.3	92.62	1257.64	24.03	92.59

Source: Field Survey, 2013
Note: CV (%) denotes the coefficient of variance = SD/Mean*100

Table 3 Distribution Pattern of Income and Consumption expenditure of Sample Households Engaged in Non-Farm Activity by Size of Operational Land Holdings

Monthly per capita items	Size of land holdings								
	Landless			Marginal (0.1 to 1 Acre)			Small & medium (More than 1 Acre)		
	Average (Rs)	CV (%)	% of per capita Income	Average (Rs)	CV (%)	% of per capita Income	Average (Rs)	CV (%)	% of per capita Income
Food expenditure	851	22.25	67.23	823	21.39	64.68	779	19.23	61.87
Noon Food expenditure	255	35.86	20.12	255	51.14	20.03	291	75.04	23.08
Clothing expenditure	68	48.74	5.38	57	35.39	4.46	73	78.67	5.80
Medical expenditure	44	50.34	3.50	50	70.70	3.94	49	84.93	3.89
Total expenditure	1106	21.75	87.35	1078	23.87	84.70	1070	28.00	84.96
Income	1266	30.49	100.00	1273	37.46	100.00	1259	41.31	100.00

Note: CV denotes coefficient of variance; Source: Field survey 2013

Distribution of consumption pattern of differentiated sample households is shows in **Table 4**. The sample households are differentiated on the basis of per capita monthly income. The three groups of sample households are there in the study. The first group belongs to those sample households having per capita monthly income up to. 1000, 2nd group belongs to the household's per capita monthly income mere than Rs. 1000 to 1500, 3rd group of households having per capita monthly income mere than Rs. 1500. Percentage share of food expenditure to total expenditures decreases with the increase of the amount of per capita monthly income of the sample households. Where as the percentage share of broad heads of noon food expenditures and sub heads of clothing and medical expenditures to total expenditures increases with the increase of per capita income of the sample households.

Table 4 Distribution of Consumption Pattern of Sample Households Engaged in Non-Farm Activity by Per Capita Monthly Income

Monthly per capita items	Per Capita Monthly Income (Rs)								
	Up to Rs. 1000 N=51			1001 to 1500 N=58			more than 1500 N=41		
	Average (Rs)	CV (%)	% of Total expenditure	Average (Rs)	CV (%)	% of Total expenditure	Average (Rs)	CV (%)	% of Total expenditure
Food expenditure	655	18.37	80.97	862	10.11	76.94	973	16.21	70.8
Noon food expenditure	154	33.83	19.03	259	36.16	23.08	402	40.29	29.2
Clothing expenditure	47	32.11	5.77	66	39.08	5.88	81	64.23	5.86
Medical expenditure	33	40.42	4.09	51	60.99	4.59	63	72.53	4.55
Total expenditure	810	16.01	100.00	1120	8.74	100.03	1375	13.26	100
Income	819	16.71	101.18	1233	11.57	110.10	1875	16.56	136

Source: Field survey 2013

B. The nature of relationships between household income and household expenditures

The distribution of correlation coefficients between per capita income and different expenditure ratios of sample households having share of non-farm income up to 50 % of the total are shows in **Table 5**. The significant correlations are there between per capita income and different expenditure ratios except medical expenditure ratio and per capita income. Where as in case of food expenditure ratio in relation to different noon food expenditures ratio have significant negative correlation at 1 % level except medical expenditure ratio. There are positive significant correlations in between noon food expenditures with medical expenditures, education expenditure at 1% level of significance.

Table 5 Distribution of Correlation Coefficients of Sample Households by Share of Non-Farm Income up to 50 %

	Per capita income	Food exp to total exp	Noon-Food exp to total exp.	Clothing exp to total exp.	Medical exp to total exp	Education exp to total exp
Per capita income	1.000					
Food exp to total exp	-.418**	1.000				
Noon-Food exp to total exp.	.418**	-1.000**	1.000			
Clothing exp to total exp.	-.345*	-.246	.246	1.000		
Medical exp to total exp	.093	-.666**	.666**	.331*	1.000	
Education exp to total exp	.347*	-.580**	.580**	-.273	.306	1.000

Note: No of households = 39
** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

The distribution of correlation coefficients between per capita income and different expenditure ratios of sample households having share of non-farm income more than 50 % of the total are shows in **Table 6**. The significant correlations are there except medical expenditures and clothing expenditures to total expenditure in relation to per capita income at 1 % level of significance. Where as in case of food

expenditure ratio in relation to different noon food expenditures ratio have negative significant correlations at 1 % level of significance. There are positive significant correlations in between noon food expenditures at 1% level of significance.

Table 6 Distribution of Correlation Coefficients of Sample Households by Share of Non-Farm Income more than 50 %

	Per capita income	Food exp to total exp	Noon-Food exp to total exp.	Clothing exp to total exp.	Medical exp to total exp	Education exp to total exp
Per capita income	1.000					
Food exp to total exp	-.492**	1.000				
Noon-Food exp to total exp.	.492**	-1.000**	1.000			
Clothing exp to total exp.	-.029	-.460**	.460**	1.000		
Medical exp to total exp	.174	-.521**	.521**	.002	1.000	
Education exp to total exp	.332**	-.587**	.587**	.076	.193*	1.000

Note: No of households = 111
** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

The distribution of correlation coefficients between per capita income and different expenditure ratios of sample households have monthly per capita income up to Rs. 1000 are shows in **Table 7**. There are no significant correlations except medical expenditure to total expenditure in relation to per capita income. Where as in case of food expenditure ratio in relation to different noon food expenditures ratios have significant negative correlation at 1 % level (education expenditure 5% level). The positive significant correlations are there in between noon food expenditures with clothing expenditures, medical expenditure at 1% level of significance.

Table 7 Distribution of Correlation Coefficients of Sample Households Engaged in Non-Farm Activity by Per Capita Monthly Income up to Rs. 1000

	Per capita income	Food exp to total exp	Non-Food exp to total exp	Clothing exp to total exp	Medical exp to total exp	Education exp to total exp
Per capita income	1.000					
Food exp to total exp	.151	1.000				
Non-Food exp to total exp	-.151	-1.000**	1.000			
Clothing exp to total exp	-.275	-.697**	.697**	1.000		
Medical exp to total exp	-.315*	-.810**	.810**	.678**	1.000	
Education exp to total exp	.087	-.332*	.332*	-.145	.045	1.000

Note : Number of households =51
* Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)

The distribution of correlation coefficients between per capita income and / or different expenditure ratios of sample households has monthly per capita income more than Rs. 1000 to Rs. 1500 are shows in **Table 8**. Significant correlations are there in food, noon food expenditures to total expenditure in relation to per capita income at 1 % level of significance and medical expenditures to total expenditure in relation to per capita income at 5 % level of significance. Where as in case of food expenditure ratio in relation to different noon food expenditures ratios have negative significant correlations at 1 % level of significance and clothing expenditures to total expenditure at 5 % level of significance. The positive significant correlations are there in between noon food expenditures with education expenditures, medical expenditure at 1% level of significance.

The distribution of correlation coefficients between per capita income and / or different expenditure ratios of sample households has monthly per capita income more than Rs. 1500 are shows in **Table 9**. There are no significant correlations except medical expenditure to total expenditure in relation to per capita income. Where as in case of food expenditure ratio in relation to different noon food expenditures ratios have negative significant correlations at 1 % level of significance except medical expenditures ratio at 5% level. The positive significant correlations are there in between noon food expenditures with clothing expenditures, education expenditure at 1% level of significance.

Table 8 Distribution of Correlation Coefficients of Sample Households Engaged in Non-Farm Activity by Per Capita Monthly Income of Rs. 1001 to Rs.1500

	Per capita income	Food exp to total exp	Non-Food exp to total exp	Clothing exp to total exp	Medical exp to total exp	Education exp to total exp
Per capita income	1.000					
Food exp to total exp	-.428**	1.000				
Non-Food exp to total exp	.428**	-1.000**	1.000			
Clothing exp to total exp	-.099	-.296*	.296*	1.000		
Medical exp to total exp	.294*	-.702**	.702**	.044	1.000	
Education exp to total exp	.229	-.521**	.521**	-.167	.279*	1.000

Note : Number of households =58
** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

Table 9 Distribution of Correlation Coefficients of Sample Households Engaged in Non-Farm Activity by Per Capita Monthly Income more than Rs. 1500

	Per capita income	Food exp to total exp	Non-Food exp to total exp	Clothing exp to total exp	Medical exp to total exp	Education exp to total exp
Per capita income	1.000					
Food exp to total exp	-.195	1.000				
Non-Food exp to total exp	.195	-1.000**	1.000			
Clothing exp to total exp	-.153	-.548**	.548**	1.000		
Medical exp to total exp	.538**	-.388*	.388*	-.182	1.000	
Education exp to total exp	.156	-.623**	.623**	.263	.233	1.000

Note : Number of households = 41 ** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

VI. CONCLUSION

The era of economic reforms is associated with higher per capita income and expenditure results in the differential expenditure pattern of economically differentiated households. The higher income households have larger proportion of non-food expenditure while the relatively low-income households have low proportion of the same. Economic reforms not only give rise to increasing importance of non-farm employment but also results in substantial inequality of income and expenditure across the rural households. We have observed the differential relationships between household income and household expenditures, the households being differentiated on differential importance of rural non-farm income. The positive significant correlations are there in between non- food expenditures with education expenditures and medical expenditure at 1% level of significance.

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