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Derivation of Demand and Price Elasticities for Food and Non Food Consumption in Tamil Nadu

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ABSTRACT

Food is a basic need for human life which carries enormous social, cultural, political, symbolic and nutritional significance of all societies. Rapid economic and income growth, urbanization and globalization along with technological developments lead to a dramatic shift of diets away from staples and increasingly towards livestock and dairy products, vegetable and fruit and fat and oil. The specific objectives of the study were to analyze the demand and price elasticities of food and non-food consumption pattern and to study the consumption pattern/expenditure share of the households besides conventional analysis, advanced econometric model of Almost Ideal Demand System, which formed the basis to derive the own price and expenditure elasticities was used to analyze the data. The % of food expenditure for rural worked out to 51.06, 48.93 and 48.13 % respectively, among LIG, MIG and HIGs, and it was 50.27, 48.28 and 47.62 % respectively for urban LIG, MIG and HIGs. The % of non-food expenditure was 48.94, 51.07 and 51.87 in rural and 49.73, 51.72 and 52.38 % in urban areas for LIG, MIG and HIGs, respectively. Own price elasticities for most of the food commodity indicated that any increase in the prices of food commodity had a strong income effect and reduced the intake of the food items for LIG. The expenditure elasticity for rice and other cereals followed the Engel's law of household consumption for MIG and HIG in both the sectors. The income elasticity of vegetables for LIG in both sectors was inelastic.

Key words: *Expenditure Share, Elasticity, Income, Price, Consumption Pattern*

INTRODUCTION

Recent trends indicate that the composition of nutritional intake in India is fast changing. The per capita food grain consumption has been decreasing in both rural and urban population and the non-grain crops and animal products (dairy and poultry) are increasing their share of the daily nutritional intake[7]. It is expected that the share of calorie supply of food grains, non-grain crops and animal products will change from 63:29:8 %s in 2000 to 48:36:16 %s by 2050 [6]. A much of the total grain demand increase in the future will be due to feed grain demand increase.

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The per capita total food grain consumption in the rural areas is projected to decrease from 15.30 kg month^{-1} in 2000 to 13.80 kg month^{-1} by 2050, and in the urban area food grain consumption decreases only slightly from 11.80 to 11.60 kg month^{-1}, for the same period. Due to rapid urbanization, the food grain consumption per person in India will decrease from 14.40 to 12.70 kg month^{-1} over the next 50 years. However, with the rapid increase in feed grain demand, the total food grain demand is projected to increase from 16.70 to 19.90 kg month^{-1} over the next 50 years. Of the total increase in demand, the food and feed grain demand increase comprised of 38 % and 58 %, respectively[1].

Changing crop demand would significantly increase the income opportunities of the agriculture dependent population. The total grain demand will increase from 201 million metric tonnes in 2000 to about 291 and 377 million metric tonnes by 2025 and 2050 respectively. The demand for non-grain crops is projected to increase significantly; oil crops from 42 to 115 million metric tonnes; vegetables from 70 to 180 million metric tonnes; and fruits from 40 to 106 million metric tonnes[12]. Hence an attempt is made to derive the demand and price elasticity in Tamil Nadu region. The objectives of the study are

- To derive the demand and price elasticities of food and non-food consumption pattern in Tamil Nadu
- To study the consumption pattern/expenditure share of the households in the study area
- To suggest suitable policy measures

MATERIALS AND METHODS

Coimbatore, Erode and Tiruppur districts was chosen for the study. Multistage random sampling technique was followed. In first stage, one block was selected at random from each of the districts. For the urban category, sample households residing in the city limit and around five km radius from city was selected. To compare the consumption of rural and urban households in the study area, three villages from each of the blocks were selected, again at random. The final stage of sampling unit consisted of selection of households. Totally, 180 rural and 180 urban households were selected. Based on the report "Chapter on Housing Requirement Projection for IX plan (2007-2012), the selected households were post stratified into three groups viz., Low Income Group (LIG) earning less than Rs. 7300 month per month, Middle Income Group (MIG) earning Rs. 7301-14500 per month and High Income Group HIG earning more than Rs. 14500 per month.

Tools of analysis

Empirical frame work of AIDS model

The following form of AIDS model was used in the present analysis to estimate the system of demand functions for food items like cereals, pulses, oils, fruits and vegetables, sugar, meat products, milk, spices and condiments. From the estimated demand functions price and income elasticities were derived. Following Deaton and Muellbauer[3], the linear approximate AIDS model was used.

$$W_i = a_i + \Sigma b_{ij} \ln P_j + c_i \ln (X/P^*)$$

Where, W_i - Average budget share of the i^{th} commodity, P_j - Price of the j^{th} commodity

X - Expenditure per capita on food commodities (rice, other cereals, pulses, oil and fat, vegetables, fruits, meat, milk, sugar, processed food and health drinks, others)

Ln P^* - Price Index, b_{ij}, c_i – Parameters, i…. j - 1, 2……..11

For the Aids to be consistent with the properties of consumer demand theory the structural parameters of AIDS model were estimated subjected to Engel aggregation, homogeneity and symmetry restrictions.

RESULTS AND DISCUSSION

Household consumption expenditure on food and non-food commodities

The consumption expenditure on food items as well as on non-food items was a direct function of income and it varies among income groups. In the present analysis, consumption expenditure was worked out for 11 major food and 11 non-food items (Table 1). Saving was assumed as exogenous and the total expenditure was used as a proxy for

income. In both the sectors, the proportion of food expenditure to total consumption expenditure was more in LIG than in MIG and HIG, while the proportion of non-food expenditure was more in middle and high income groups. It could be seen that the high and middle income groups in both rural and urban sectors, spent relatively larger per cent of income on non-food commodities. Moreover, as income increased, the per cent of expenditure on food items had decreased. This is the well known Engel Phenomenon. It could be observed that food expenditure accounted for Rs. 1732, Rs. 5040 and Rs. 9291 month^{-1} in LIG,MIG and HIG, respectively, in the rural sectors and out of which, they spent Rs. 211, Rs. 774 and Rs. 1238 for rice and other cereals alone. Thus, rice and other cereals accounted for 6.23 %, 7.52 % and 6.41 % to the total food budget in the LIG, MIG and HIG, respectively which was 5.90 %, 7.24 % and 6.56 % in urban sector. LIG availed major portion of food grain (rice) by free rice supply scheme through Public Distribution System. The government encourages the food security through PDS by distributing rice free of cost to LIG.

In general, the proportion of food expenditure is less and the absolute level of expenditure on total food is more in the urban sector in all the three income groups. Because of the urbanization, the consumption of oil, fruits and vegetables, milk, processed food and health drinks and meat were more in urban than in rural. One had to bear in mind that one more element which enhanced the urban household budget was the higher priced they paid i.e. they bought high quality product at premium price. On the contrary, rural people consumed substantially their farm produced products especially in case of rural MIG and rural HIG. In the non-food items, the expenditure on beverage, narcotics and alcohol were more among the low income groups in both the sectors. Expenditure on education, fuel, transport and social and religious activities were high in middle and high income groups of both the sectors indicated the better quality of life they enjoyed. The established consumer theory indicated that the expenditure on non-food items increased with income. Absolute level of expenditure on non-food items were more in the urban sector than in the rural sector among the income groups. In a similar study by Dzioubinski and Chipman[4] on "Trends in Consumption and Production: Household Energy Consumption", they found that there had been a clear shift in recent decades from the grain consumption to non grain food and animal products consumption. The per capita grain consumption had shown a declining trend since 1980's because of increasing income, changes in life style, changes in relative prices and availability of non grain food at affordable cost etc.

Expenditure shares

The proportion of expenditure made on food and non-food items are reported in Table 2. It is evident from the table that the budget share on food items was more in LIG, while the share of non-food expenditure was more in the MIG and HIG in both sectors. The income group-wise expenditure shares revealed that the per cent of food expenditure was 51.06, 48.93 and 48.13 in the rural sector and 50.27, 48.28 and 47.62 % in the urban sector among the low, middle and high income groups, respectively. The average budget share on non-food commodities also increased with income. One striking feature was that the rural LIG spent 6.23 % on other cereals, whereas, all other groups incurred only 2.92 % to 3.87 % for other cereals. Wheat was the major cereal among other cereals, and its supply was made through Public Distribution System (PDS). As regards milk, the proportion of per capita expenditure spent on milk remained almost similar across groups. In the case of oil also, the figures did not exhibit much difference among groups.

The expenditure share on vegetable increased with income and the urban people spent more than the rural groups. The expenditure share on processed food and health drinks was more in the urban sector than in the rural sector. The prices of these items were moderately higher in the rural than in the urban sector, because the rural traders

purchase only in urban centres and offer for sale at higher price. The expenditure share of meat, fish and eggs were approximately six per cent of the total expenditure, irrespective of the income groups. The meat price was more or less same in both rural and urban sectors. It is observed that the low income people consumed more quantity of less priced meat like pork and beef but the high income groups consumed high priced meat such as goat and chicken. Hence expenditure share for meat and meat products were more or less the same, but it was significantly different in absolute values (Table 1). The expenditure on non-food items ranged from 48.94 % to 51.07 % in rural sector. It ranged from 49.73 % to 52.38 % in the urban sector among income groups. Also, the % of expenditure on non-food items to total consumption expenditure, increased with the enhancement in income, while the per cent of food expenditure declined with the increase in income. Thus it is in conformity with the Engel's propositions. Rao[11], in his study on "Declining demand for food grains in rural India: Causes and Implications", where they found that there had been a clear shift in recent decades from the grain consumption to non grain food and animal products consumption.

Distribution of food expenditure

The food budget share is reported in Table 3. An average household spent about 12 to 15 % of the total food expenditure on food grains. Thus, among the other cereals, wheat occupied the most important position. In the total food expenditure animal product (meat products) occupied 11.12 to 12.87 % followed by fruits (11.14 to 12.58 %) and vegetables with 11.20 % to 12.39 % across household groups in both areas. The rural LIG spent 12.20 % for other cereals and their counterpart in urban areas spent about 6.07 %. The expenditure on pulses was more (9.65 %) in urban LIG. Lowest per cent of spending was done by the rural and urban HIG. This is because high income group in the rural and urban would spend more on animal protein, which substitutes the pulses. As one expects, the consumption of milk, milk products and meat and meat products increased with income levels. In the case of milk, the share was only 10.28 % in rural LIG as against 11.34 % among the urban HIG. In high income groups, the processed food and health drinks constituted 8.62 to 8.88 % of food expenditure in both the areas. The expenditure share on sugar was high in both LIG compared to MIG and HIG.

The table 4 summarizes the expenditure behaviour of the households on non-food commodities. Fuel, transport, clothing and education were by far the most important non-food commodities in the total non-food budget. These items accounted about 19 % to 30 % of the household expenditure in all the income groups both in urban and rural areas. There was a remarkable similarity across income groups in the budget shares on electricity. Surprisingly, the share of expenditure on medical expenses tended to decrease with increased income. The LIG spends 7.74 % and 6.82 % in rural and urban sectors, respectively, on social and religious functions which was higher than that in the MIG. But in absolute terms MIG spent more than the LIG. The major expenditure incurred by LIG on recreation was towards cinema. But the MIG and HIG people spent on newspapers, cinema, weekly magazine and purchase of video and audio cassettes.

In general, LIG in both the sectors spent more on beverages and narcotics than the HIG. Since more number of people in the LIG consumes liquor and resort to smoking, the expenditure on beverages and narcotics were higher. MIG and HIG spent more on education, religious and social functions. In a study by Jain and Patel (1996) on "Consumption Pattern of Food and Non-Food items in Haryana state using NSSO data, found that the average per capita expenditure of urban households was higher compared to rural households. The expenditure share on food was 71 % and 64 %, respectively in the two above mentioned sections

Derivation of income elasticities

The income elasticities based on AIDS for major food and non food commodities are reported in Table 5. It could be seen from the

table that the income elasticities for rice in rural sector were 1.2275 and 1.0715 for MIG and HIG, respectively. The LIG availed rice at free of cost from Public Distribution System. The results confirmed to the demand theory that the income elasticity (expenditure elasticity) for basic necessities decline at the higher income levels. The rural expenditure elasticities were consistently higher than those of urban, for rice. As could be expected, the expenditure elasticity for rice was elastic for MIG in both the sectors. It was inelastic in HIG. It followed the Engel's law of household consumption. Similar trend was observed in other cereals. It was showed the prevalence of cereal consumption in rural than in urban. It was a remarkable and expected result and the income elasticity was as low as 0.5261 for urban HIG, implied that their group preferred higher quality cereals and better quality food items. In general, pulses were income elastic for all expenditure groups. These elasticities were higher in urban when compared to rural. It might due to the awareness shown by the urban people on the nutritive value of pulses. For oil, the income elasticities were higher in MIG, indicated that one per cent increase in income would increase the more than one per cent of oil consumption.

The income elasticity of vegetables for LIG in both sectors was inelastic and elastic in the MIG. It was also high in HIG. The expenditure elasticity for fruits was elastic in all the income groups. It was very high in the urban sector than in the rural sector in the respective income groups. In urban sector, the MIG and HIG had high elasticity and LIG had relatively low elasticities. This shows importance given by the urban sector people for fruits. The income elasticity on meat and meat products was elastic for urban HIG. The elasticities for milk and milk products were higher for all income groups. It indicated the importance given by all categories of people for milk and milk products. The positive impact of well organized supply system of milk through operation flood programme might recognized by the policy makers in the evolution of policies relating to milk industry.

The inelastic nature of sugar for rural LIG showed that they were not increasing their expenditure on sugar as the income increased. It was due to the fact that their needs were met by subsidy sugar itself. The elasticities for processed food and health drinks were highly elastic and almost same for the HIG in both the sectors. But, the average value of budget share referred in Table 5 on processed food and health drinks were more in the urban sector. In general income elasticities for most of the food items in all the expenditure class were positive and elastic. This implied that an increased in household income was led to an increased in household expenditure on each and every item.

The expenditure elasticity on beverages was negative in the LIG in both the sectors and it was high (1.3351) for the urban MIG. Except the rural MIG, the income elasticity on narcotics was inelastic. The income elasticity on clothing was inelastic for rural LIG since it is a necessity for that group. The expenditure elasticities were elastic for other groups who were more conscious in the use of good dresses.

The income elasticities on fuel were elastic for all groups. The urban groups tend to use more of fuel as their income increased as in the case of rural, this might be due to the availability of substitutes for fuel. Transport and electricity were expenditure inelastic in the rural sector. However it was expenditure elastic in urban sector, showed higher demand for transport and electricity. As could be expected education were inelastic among the rural LIG and MIG; elastic in HIG and LIG, MIG, HIG in the urban sector. The expenditure on health was elastic in all, except LIG in urban. It shows the fact that the LIG in urban had accessibility towards public health. For the social and religious expenses, MIG and HIG were elastic and the low income groups inelastic in both the sectors.

Derivation of own price elasticities

The direct price elasticities were also computed at the mean level and given in Table 6. The direct price response was high in the urban than the rural for other cereals and it needed some explanation. In this category, the urban people consumed mainly wheat but rural people take other cereals and subsidy wheat. Hence any rise in the price of wheat would shift the consumption of wheat mainly in the urban. The own price elasticity on pulses were

rather mixed among the different income groups. It was high among rural LIG and urban HIG. That was changed in the prices of pulses had real income effect for this groups. There was much responsiveness for the change in the price of oil on the part of the LIG of both sectors and urban MIG.

For milk and milk products the direct price elasticity was positive in the urban HIG and however it was inelastic. The direct price elasticities for processed food and health drinks and meat and meat products followed the law of demand. The demand for sugar had negative relationship with price of all in income groups except urban MIG. The own price elasticity was positive only for rural LIG because it was a necessity. The direct price elasticity for fuel was positive in LIG in both the sectors. However, the coefficients were small. This shown one per cent increase in price of fuel, the consumption of fuel would increase less than one per cent. The cost of education had no effect on HIG and urban MIG. Since these groups were prepare to invest on education by sending their wards to private institutions for social reasons even at high incremental cost. Similar results were obtained in a study by Samad and Hossain[13] on "Estimation of Income and Expenditure Elasticities for Major Consumption Items in Bangladesh" for both rural and urban categories over two periods between 1985-86 and 1988-89. The study revealed that meat and sugar were found to be high elastic consumption items. The corresponding elasticities in the case of urban area also showed an increase over those in rural area.

Table 1: Monthly food and non-food consumption expenditure (Rupees/Household)

Food items	Rural			Urban		
	LIG	**MIG**	**HIG**	**LIG**	**MIG**	**HIG**
A. Total food	1732	5040	9291	2051	5869	10721
Rice	0	375	674	0	427	831
Other cereals	211	399	564	241	453	646
Pulses	167	445	653	202	545	795
Oil and fat	166	504	944	201	605	1139
Vegetables	194	604	1136	232	712	1328
Fruits	193	610	1152	233	722	1349
Meat	193	590	1177	232	714	1380
Milk	178	543	1041	213	650	1216
Sugar	139	425	888	198	391	840
Processed food and Health drinks	141	432	801	169	507	952
Others	150	113	261	129	143	245
B. Total non food	1660	5261	10013	2029	6287	11793
Beverages	165	375	555	191	366	559
Narcotics	142	263	357	131	239	423
Alcohol	189	416	790	256	472	801
Clothing	143	546	1144	190	768	1454
Fuel	185	781	1482	244	891	1698
Transport	191	791	1485	230	867	1623
Electricity	142	416	983	166	513	1056
Education	152	799	1678	177	1151	2141
Health	129	293	477	138	274	509
Social and Religious	106	435	801	177	507	946
Others	116	146	261	129	239	583
Total Expenditure (A+B)	3392	10301	19306	4080	12156	22514

Table 2: Share of food and non - food consumption expenditure(%)

Food items	Rural			Urban		
	LIG	MIG	HIG	LIG	MIG	HIG
A. Total food	51.06	48.93	48.13	50.27	48.28	47.62
Rice	0	3.65	3.49	0	3.51	3.69
Other cereals	6.23	3.87	2.92	5.90	3.73	2.87
Pulses	4.92	4.32	3.38	4.95	4.48	3.53
Oil and fat	4.88	4.89	4.89	4.92	4.98	5.06
Vegetables	5.72	5.86	5.89	5.72	5.86	5.90
Fruits	5.69	5.92	5.97	5.7	5.93	5.99
Meat	5.68	5.73	6.10	5.72	5.87	6.13
Milk	5.25	5.27	5.39	5.21	5.35	5.40
Sugar	4.11	4.13	4.6	4.87	3.22	3.73
Processed food and Health drinks	4.17	4.19	4.15	4.13	4.17	4.23
Others	4.41	1.1	1.35	3.15	1.18	1.09
B. Total non food	48.94	51.07	51.87	49.73	51.72	52.38
Beverages	4.89	3.64	2.88	4.69	3.01	2.48
Narcotics	4.20	2.55	1.85	3.24	1.97	1.88
Alcohol	5.56	4.04	4.09	6.29	3.88	3.56
Clothing	4.21	5.3	5.93	4.65	6.32	6.46
Fuel	5.46	7.58	7.68	5.97	7.33	7.54
Transport	5.63	7.68	7.69	5.63	7.13	7.21
Electricity	4.2	4.04	5.09	4.06	4.22	4.69
Education	4.47	7.76	8.69	4.33	9.47	9.51
Health	3.79	2.84	2.47	3.39	2.25	2.26
Social and religious	3.12	4.22	4.15	4.33	4.17	4.2
Others	3.41	1.42	1.35	3.15	1.97	2.59
C. Total expenditure share (A+B)	100.00	100.00	100.00	100.00	100.00	100.00
Share of total expenditure to total income	94.98	84.99	72.01	95.02	85.00	72.00

Table 3: Share of expenditure on food commodities (%)

Food items	Rural			Urban		
	LIG	MIG	HIG	LIG	MIG	HIG
Rice	0.00	7.46	7.25	0	7.27	7.75
Other cereals	12.20	7.91	6.07	11.74	7.73	6.03
Pulses	9.64	8.83	7.02	9.85	9.28	7.41
Oil and Fat	9.56	9.99	10.16	9.79	10.31	10.63
Vegetables	11.20	11.98	12.24	11.38	12.14	12.39
Fruits	11.14	12.10	12.40	11.34	12.28	12.58
Meat	11.12	11.71	12.67	11.38	12.16	12.87
Milk	10.28	10.77	11.20	10.36	11.08	11.34
Sugar	8.05	8.44	9.56	9.69	6.67	7.83
Processed food and health Drinks	8.17	8.56	8.62	8.22	8.64	8.88
Others	8.64	2.25	2.81	6.25	2.44	2.29
Total	100.00	100.00	100.00	100.00	100.00	100.00

Table 4: Share of expenditure on non-food commodities (%)

Non Food	Rural			Urban		
	LIG	MIG	HIG	LIG	MIG	HIG
Beverages	9.99	7.13	5.55	9.43	5.82	4.73
Narcotics	8.58	4.99	3.57	6.52	3.81	3.59
Alcohol	11.36	7.91	7.89	12.65	7.50	6.80
Clothing	8.60	10.38	11.43	9.35	12.22	12.33
Fuel	11.16	14.84	14.81	12.00	14.17	14.39
Transport	11.50	15.04	14.83	11.32	13.79	13.76
Electricity	8.58	7.91	9.81	8.16	8.16	8.95
Education	9.13	15.19	16.75	8.71	18.31	18.16
Health	7.74	5.56	4.76	6.82	4.35	4.31
Social and religious	6.38	8.26	8.00	8.71	8.06	8.02
Others	6.98	2.79	2.60	6.33	3.81	4.96
Total	100.00	100.00	100.00	100.00	100.00	100.00

Table 5: Expenditure elasticities derived from AIDS for different socio economic groups

Commodity	Rural			Urban		
	LIG	MIG	HIG	LIG	MIG	HIG
A. Food groups						
Rice	-	1.0375	0.7105	-	1.0416	0.5912
Other cereals	1.0279	1.0186	1.0179	1.0007	1.0811	0.5261
Pulses	1.2797	1.2381	1.0264	1.6347	1.2720	1.7282
Oil and Fat	1.0356	1.7703	1.0766	1.0416	1.6750	1.0241
Vegetables	1.0746	1.2935	1.6282	1.0211	1.7788	2.3963
Fruits	1.0746	1.1445	1.1495	1.0921	1.1171	1.8456
Meat	1.0118	1.0250	1.3042	1.0430	1.0325	1.5306
Milk	1.0009	1.0344	1.0010	1.6254	2.1714	1.6770
Sugar	0.9881	1.2624	1.1310	1.0956	0.9245	1.9548
Processed food and Health drinks	0.8056	1.0152	1.0961	0.0856	0.5435	1.2104
Others	0.9558	0.9868	1.0620	1.4226	1.1049	0.9950
B. Non-food groups						
Beverages	1.1226	1.1461	1.2652	1.3333	1.3351	1.0283
Narcotics	0.9118	1.2049	0.5111	0.3810	0.8952	0.8644
Alcohol	0.6013	1.8500	1.0858	1.1184	1.8435	1.7027
Clothing	0.9108	1.6538	3.6316	1.0517	1.7671	1.8950
Fuel	1.0552	1.0386	1.1204	1.1261	1.5708	1.7797
Transport	0.9977	1.0286	1.3333	1.1711	0.4105	1.1203
Electricity	0.0846	1.0145	1.9979	1.0184	1.9043	2.5159
Education	0.7041	0.9547	1.1818	1.0969	1.3637	1.8140
Health	1.1654	1.2190	1.6117	0.9252	1.2806	1.7303
Social and religious	0.7136	1.6735	1.7143	0.8455	1.6705	2.0792
Others	0.6880	0.7899	0.8876	0.0709	1.3043	1.4901

Table 6: Own price elasticities based on the AIDS for different socio economic groups

Commodity	Rural			Urban		
	LIG	MIG	HIG	LIG	MIG	HIG
A. Food groups						
Rice	-	-0.5257	-0.4761	-	-0.1330	-0.2801
Other cereals	-0.4868	-0.6688	-0.7868	-0.5095	-0.9806	-1.4948
Pulses	-0.8512	-0.7115	-0.5348	-0.6922	-0.8744	-1.4286
Oil and Fat	-1.1215	-0.5868	-0.6033	-0.9954	-1.1738	-0.7012
Vegetables	-0.7620	-1.0259	-1.4808	-1.0894	-1.4531	-1.2128
Fruits	-0.4930	-0.5300	-0.2196	-0.0508	-0.8353	-5.1237
Meat	-1.0899	-1.1867	-1.1912	-1.2973	-1.1440	-1.3696
Milk	-0.2008	-0.9176	-0.1017	-1.8290	-1.2258	0.5620
Sugar	-1.1777	-0.2830	-1.0127	-0.6784	0.9550	-0.9852
Processed food and Health drinks	-0.5875	-0.9067	-1.2349	-1.0291	-0.9980	-1.3718
Others	-0.8982	-0.9882	-1.0727	-1.0669	-0.8455	-0.8910
B. Non Food groups						
Beverages	-0.5426	-1.7701	-0.9809	-1.2857	-2.0448	-1.0159
Narcotics	-0.4343	-0.7061	3.0556	-10.5438	-0.8309	0.8668
Alcohol	-0.4486	-0.7583	-0.8831	-0.8191	-0.4012	-0.2603
Clothing	0.4028	-9.7318	-1.5193	-9.3560	-0.2611	-0.9289
Fuel	0.4618	-0.9410	-1.7945	0.5517	-1.0490	-0.9027
Transport	-0.0443	-45.2264	-1.0118	-0.2813	-5.3270	-0.4931
Electricity	-1.0068	-0.9791	-4.9958	-0.7282	-1.2692	-0.5270
Education	-1.0889	-0.2039	1.0021	-0.9882	1.6123	1.6345
Health	-1.5091	-1.6010	-0.9779	-0.7611	-1.2157	-1.4418
Social and religious	-0.2491	-0.4232	1.6010	-0.2023	-0.2291	1.5434
Others	-0.4963	-0.8159	-0.1375	-0.6850	-0.7041	-0.3326

CONCLUSION

The present study was undertaken to derive the demand and price elasticities in Tamil Nadu. The expenditure pattern of rural and urban households was studied by estimating the % share of expenses on rice, other cereals, pulses, oil, vegetables, fruits, meat and meat products, milk and milk products, sugar, processed food and health drinks and others in the food groups. And in the non-food group, it included the beverages, narcotics, alcohol, clothing, fuel, transport, electricity, education, health, social and religious functions and others. As expected, the results of expenditure pattern had revealed that as income increased the per cent of expenditure on food commodities decreased and non-food commodities increased. The rice was supplied at subsidized (zero) price for LIG and hence no expenditure elasticity was estimated. The expenditure elasticity for rice was elastic for MIG in both the sectors. It was inelastic in HIG. It followed the Engel's law of household consumption. Similar trend was observed in other cereals. It showed the more prevalence of cereal consumption in rural than in urban areas. The own price elasticities behaved in an expected manner with negative signs except in a very few cases. The own price elasticities numerically decreased from LIG to HIG in both the sectors for most of the food items. This indicated that any increase in the price of food commodity had a strong income effect and reduced the intake of the food items for LIG.

POLICY IMPLICATIONS

- To have a better quality of life, their expenditure towards on non-food items should be enhanced. This could be accomplished by providing more income and employment generating opportunities to the poor. Anti-poverty programmes and employment generating programmes such as TRYSEM, NREP and IRDP could be strengthened further to accomplish this task.

- To generate self employment for poor in both rural and urban sectors, the institutional financing should be liberally provided with more flexibility.
- Poor households met their total rice consumption through Free Rice Scheme by the Government of Tamil Nadu. Further strengthening of this scheme would ensure food and nutritional security at the grass root level population.
- Pulses were the predominant and cheapest source of calorie and vegetable protein for the majority of the poor households. Hence the quantity of pulses supplied through PDS should be enhanced to ensure adequate intake of nutrition by the people.
- In poor households, the expenditure share on alcohol, beverages and narcotics was found more. So, impositions of regulatory measures like tax indirectly reduce the expenditure on these items and divert a share of the income towards essential food commodities which would enhance the standard of living of the poor.

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