

PRIVATE FINAL CONSUMPTION EXPENDITURE ON FOOD ITEMS IN PRE AND POST REFORM PERIOD

Dr.S.Gandhimathi*

DR. P.Ambigadevi*

K. Thirubhuvana sundari, M.Phil. (Economics)**

The Government of India introduced economic reforms in various sectors of the economy in July, 1991. The economic reforms were expected to influence the national income and the standard of living of the people. There by the consumption expenditure was expected to change after the reform. The share of expenditure on food items in total aggregate consumption expenditure had declined from 53.7 per cent in 1970-71 to 48.4 per cent at the end of the pre reform period. In the post reform period also, the food expenditure had declined from 49.9 per cent in 1991-92 to 35.4 per cent in 2004-2005. Indian households had prepared to spend this extra money on non food items namely gross rent, fuel and power and transport and communication. At the end of the pre reform period, the expenditure on gross rent, fuel and power was Rs.32619 crore. It was the major expenditure share in the pre reform period. But in the post reform period, the expenditure on transport and communication dominated in the expenditure share of non food items. The percentage contribution of it was 11.5 per cent in 1991-1992 which increased to 18.2 per cent in 2004-2005. It indicates the desirousness of consumers towards fast movement of communication era (National Accounts Statistics, 1975, 2005).

* Assistant Professor of Economics, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore – 641 043.

** Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore – 641 043.

The above comparative discussion on aggregate national income and aggregate consumption expenditure between pre and post economic reform period indicates that there was significant difference in them. In this backdrop, an attempt was made to identify the factors determining consumption expenditure in the pre and post reform period.

The discriminant analysis shows that the major factors that differentiated consumption expenditure between pre and post reform period were Lagged Net National Product, Net National Product and Lagged Private Final Consumption Expenditure.

DETERMINANTS OF CONSUMPTION EXPENSES IN PRE AND POST REFORM PERIOD

The Government of India introduced economic reforms in various sectors of the economy in July, 1991. The economic reforms were expected to influence the national income and the standard of living of the people. There by the consumption expenditure was expected to change after the reforms.

The aggregate consumption in India, based on National Accounts Statistics (NAS) showed that there had been an increasing trend in income and expenditure of the households both in real and constant terms in the post reform period, when compared with the pre reform period.

In India, in the pre reform period, the Net National Product (NNP) at factor cost was ranged between Rs.439975 crore and Rs.986461 crore at constant prices (1999-2000 prices), whereas at the beginning of the post-reform period, the amount of the Net National Product was Rs.991716 crore. It increased to Rs.2121245 crore in 2004-2005 at constant prices (1999-2000 prices) (NAS, various issues).

The Private Final Consumption Expenditure was amounted to Rs.304183 crore at constant prices at the end of the pre reform period. It started to increase Rs.352494 crore in the beginning of the post reform period. It reached Rs.1730316 crore in 2004-2005 (NAS, various issues). The analysis of aggregate consumption expenditure pattern revealed that the people in rural area had started spending more on pulses, milk and milk products, edible oils, meat, egg and fish and fruits and vegetables. It is mainly being done at the cost of inferior food items (Anitha, 2003).

The expenditure on cereals and bread dominated in the food consumption expenditure in the pre reform period. It contributed 14.3 per cent to total Private Final Consumption Expenditure at the end of the pre reform period. But in the post reform period, from 2000-2001 onwards, the major emphasis in the consumption expenditure was shifted from cereals and bread to fruits and vegetables. The expenditure on fruits and vegetables accounted to Rs.149489 crore in 2004-2005. It accounted for 8.6 per cent. The expenditure share of pulses, sugar and gur, oil and oil seeds, potato and other tubers, milk and milk products, coffee, tea and cocoa had declined in 2004-2005 when compared with beginning of the reform period.

The share of expenditure on food items in total aggregate consumption expenditure had declined from 53.7 per cent in 1970-71 to 48.4 per cent at the end of the pre reform period. In the post reform period also, the food expenditure had declined from 49.9 per cent in 1991-92 to 35.4 per cent in 2004-2005. Indian households had prepared to spend this extra money on non food items namely gross rent, fuel and power and transport and communication. At the end of the pre reform period, the expenditure on gross rent, fuel and power was Rs.32619 crore. It was the major expenditure share in the pre reform period. But in the post reform period, the expenditure on transport and communication dominated in the expenditure share of non food items. The percentage contribution of it was 11.5 per cent in 1991-1992 which increased to 18.2 per cent in 2004-2005. It indicates the desirability of consumers towards fast movement of communication era (National Accounts Statistics, 1975, 2005).

The above comparative discussion on aggregate national income and aggregate consumption expenditure between pre and post economic reform period indicates that there was significant difference in them. In this backdrop, an attempt was made to identify the factors determining consumption expenditure in the pre and post reform period

- To compare the expenditure pattern of Indian households between pre and post reform period.
- To identify the dominant factor which discriminates the consumption expenses between pre and post reform period.

Several empirical studies on consumption function in India were conducted. But the time period covered by dependent and independent variables of these studies had varied. Thus the present investigation of impact of new economic reforms on consumption function in India

covered a period from 1970-2005 and the data used in the study were purely secondary in nature. The period of the study was divided as pre reform period (1970-71 to 1990-91) and post reform period (1991-92 to 2004-2005). The annual time series data for the variables namely Private Final Consumption Expenditure (PFCE), Net National Product (NNP), Lagged Private Final Consumption Expenditure (LPFCE), Lagged Net National Product (LNNP), Population (POP) and Inflation Rate (LWPI) were collected from various records like Economic Survey, National Accounts Statistics and Hand Book of Indian Economy.

These variables were deflated in 1999-2000 prices so as to deduct the impact of price fluctuation on variables of different time period. The following econometric tools was used along with simple percentages to fulfill the objectives:

Multiple Discriminant Analysis

Multiple discriminant analysis is a multivariate technique that examines the relationship between a nominally scaled dependent variable and a set of explanatory variables. Generally, the objectives of multiple discriminant analysis is to determine whether a set of independent variables can significantly differentiate among two or more groups of the study units and if so, to determine which variables are contributing more to discrimination.

In the present study, the discriminant analysis was used to determine whether the selected variables can significantly differentiate the consumption expenditure between the pre reform and post reform period, if so, to determine which of the variables are more dominant and also to identify the relative contribution of each variables in the analysis. The linear discriminant functional form used in the analysis was

$$Z = L_1 X_1 + L_2 X_2 + L_3 X_3 + L_4 X_4 + L_5 X_5$$

where

Z = Total discriminating score of pre reform period and post reform period

X₁ = Net national product

X₂ = Net national product lagged one period

X₃ = Private final consumption expenditure lagged one period

X₄ = Inflation rate

X_5 = Population

The above test was done using SPSS package.

Private Final Consumption Expenditure on Food Items in Pre and Post Reform Period

The total private final consumption expenditure was classified as expenditure on food items and expenditure on non-food items. In order to understand the components of consumption, the food items and non-food items were separately considered under Private Final Consumption Expenditure.

The expenditure on food items include expenditure on cereals and bread, pulses, sugar and gur, oil and oil seeds, fruits and vegetables, potato and tubers, milk and milk products, meat, egg and fish, coffee, tea and cocoa and spices.

The changes in the economic indicators due to new economic reform were expected to change the consumption pattern of households. Hence, the expenditure pattern of the households were classified as pre and post reform period. The share of total expenditure on each food items in the pre-reform period at constant prices is given in Table – I.

TABLE – I

PRIVATE FINAL CONSUMPTION EXPENDITURE ON FOOD ITEMS IN PRE-REFORM PERIOD (1970-71 TO 1990-91)

(At 1999-2000 Prices)

(In Rs. crore)

S.No.	ITEMS	1970-71		1971-72		1972-73		1973-74		1974-75	
1	FOOD ITEMS	58497	(53.7)	67204	(53.5)	69257	(51.3)	85358	(53.5)	93290	(53.2)
1.1	Cereal and bread	19732	(18.1)	21902	(17.4)	24409	(17.3)	29868	(18.7)	28838	(16.4)
1.2	Pulses	2689	(2.5)	2708	(2.2)	2713	(2.0)	3786	(2.4)	4029	(2.3)
1.3	Sugar and gur	4265	(3.9)	4352	(3.5)	4020	(3.0)	5038	(3.2)	5695	(3.2)
1.4	Oil and oil seeds	5934	(5.4)	7070	(5.6)	6695	(5.0)	8915	(5.6)	10012	(5.7)
1.5	Fruits and vegetables	10467	(9.6)	13317	(10.6)	13350	(9.9)	15393	(9.6)	18851	(10.7)
1.6	Potato and other tubers	1174	(1.1)	1120	(0.9)	1361	(1.0)	1846	(1.2)	1589	(0.9)
1.7	Milk and milk products	7066	(6.5)	8887	(7.1)	9851	(7.3)	11137	(6.8)	13230	(7.5)
1.8	Meat, egg and fish	2456	(2.3)	3043	(2.4)	3461	(2.6)	4163	(2.6)	4940	(2.8)
1.9	Coffee, tea and cocoa	1011	(0.9)	974	(0.8)	664	(0.5)	1152	(0.7)	1615	(0.9)
1.10	Spices	2358	(2.2)	2535	(2.0)	2724	(2.0)	2925	(1.8)	3142	(1.8)
1.11	Other food	1345	(1.2)	1296	(1.0)	1008	(0.7)	1135	(0.7)	1349	(0.8)
Private final consumption expenditure in domestic market		108932	(100)	125585	(100)	135108	(100)	159600	(100)	175372	(100)

Note : Figures in parantheses represent percentages to the total Private Final Consumption Expenditure.

Source : National Accounts Statistics, Government of India, Various years.

(Contd...)

TABLE – I

(Contd...)

PRIVATE FINAL CONSUMPTION EXPENDITURE ON FOOD ITEMS IN PRE-REFORM PERIOD (1970-71 TO 1990-91)

(At 1999-2000 Prices)

(In Rs. crore)

S.No.	ITEMS	1975-76		1976-77		1977-78		1978-79		1979-80	
1	FOOD ITEMS	99133	(51.6)	109204	(51.3)	121362	(51.0)	136067	(50.0)	153795	(50.0)
1.1	Cereal and bread	30571	(15.9)	32210	(15.1)	34697	(14.6)	42985	(15.7)	43889	(14.2)
1.2	Pulses	4379	(2.3)	3930	(1.8)	4584	(1.9)	6947	(2.5)	6885	(2.2)
1.3	Sugar and gur	6654	(3.5)	6231	(2.9)	7292	(3.1)	8283	(3.0)	10411	(3.4)
1.4	Oil and oil seeds	8319	(4.3)	11017	(5.2)	15884	(6.6)	12060	(4.4)	12954	(4.2)
1.5	Fruits and vegetables	20669	(10.8)	24628	(11.6)	23650	(9.9)	27732	(10.1)	32656	(10.5)
1.6	Potato and other tubers	1845	(1.0)	2611	(1.2)	2560	(1.1)	2814	(1.0)	3060	(1.0)
1.7	Milk and milk products	15011	(7.8)	16413	(7.7)	18769	(7.9)	21344	(7.8)	24981	(8.1)
1.8	Meat, egg and fish	5720	(3.0)	6397	(3.0)	7342	(3.1)	8347	(3.0)	10217	(3.3)
1.9	Coffee, tea and cocoa	1282	(0.7)	1091	(0.5)	1370	(0.6)	1154	(0.4)	2633	(0.8)
1.10	Spices	3374	(1.8)	3621	(1.7)	3881	(1.6)	4176	(1.5)	4355	(1.4)
1.11	Other food	1309	(0.9)	1055	(0.5)	1333	(0.6)	1225	(0.4)	1754	(0.6)
	Private final consumption expenditure in domestic market	192094	(100)	213206	(100)	238133	(100)	273882	(100)	310028	(100)

Note : Figures in parantheses represent percentages to the total Private Final Consumption Expenditure.

Source : National Accounts Statistics, Government of India, Various years.

(Contd...)

TABLE – I

(Contd...)

PRIVATE FINAL CONSUMPTION EXPENDITURE ON FOOD ITEMS IN PRE-REFORM PERIOD (1970-71 TO 1990-91)

(At 1999-2000 Prices)

(In Rs. crore)

S.No.	ITEMS	1980-81		1981-82		1982-83		1983-84		1984-85	
1	FOOD ITEMS	173778	(49.0)	203898	(50.0)	225178	(49.1)	195410	(54.1)	200849	(54.0)
1.1	Cereal and bread	49184	(13.9)	58543	(14.3)	62584	(13.6)	59896	(16.6)	56212	(15.1)
1.2	Pulses	8672	(2.4)	7632	(1.9)	8932	(1.9)	10685	(3.0)	9875	(2.7)
1.3	Sugar and gur	10724	(3.0)	12095	(3.0)	14538	(3.2)	15131	(4.2)	14898	(4.0)
1.4	Oil and oil seeds	15854	(4.5)	19832	(4.9)	19584	(4.3)	19173	(5.3)	20295	(5.7)
1.5	Fruits and vegetables	36924	(10.4)	42396	(10.4)	48440	(10.6)	38922	(10.8)	44184	(11.9)
1.6	Potato and other tubers	3750	(1.1)	4617	(1.1)	4486	(1.0)	4478	(1.2)	4516	(1.2)
1.7	Milk and milk products	27841	(7.9)	33843	(8.3)	38300	(8.4)	26412	(7.3)	28608	(7.7)
1.8	Meat, egg and fish	11522	(3.3)	13450	(3.3)	16294	(3.6)	10994	(3.0)	11814	(3.2)
1.9	Coffee, tea and cocoa	2787	(0.8)	3350	(0.8)	3283	(0.7)	2693	(0.7)	2985	(0.8)
1.10	Spices	4814	(1.4)	5554	(1.4)	6385	(1.4)	5102	(1.4)	5207	(1.4)
1.11	Other food	1706	(0.5)	2586	(0.6)	2352	(0.5)	1924	(0.5)	2256	(0.6)
Private Final Consumption Expenditure in Domestic Market		354312	(100)	408424	(100)	458503	(100)	361141	(100)	371551	(100)

Note : Figures in parantheses represent percentages to the total Private Final Consumption Expenditure.

Source : National Accounts Statistics, Government of India, Various years.

(Contd...)

TABLE – I

(Contd...)

PRIVATE FINAL CONSUMPTION EXPENDITURE ON FOOD ITEMS IN PRE-REFORM PERIOD (1970-71 TO 1990-91)

(At 1999-2000 Prices)

(In Rs. crore)

S.No.	ITEMS	1985-86		1986-87		1987-88		1988-89		1989-90		1990-91	
1	FOOD ITEMS	208178	(53.8)	208234	(52.1)	213613	(51.7)	226228	(51.6)	236254	(51.3)	147305	(48.4)
1.1	Cereal and bread	62238	(16.0)	61112	(15.3)	62582	(15.2)	69029	(15.7)	66510	(14.4)	43703	(14.3)
1.2	Pulses	11063	(2.9)	9665	(2.4)	8910	(2.2)	11645	(2.7)	10627	(2.3)	7702	(2.5)
1.3	Sugar and gur	14769	(3.8)	14234	(3.6)	15817	(3.8)	17023	(3.9)	17777	(3.9)	11616	(3.8)
1.4	Oil and oil seeds	17829	(4.6)	19996	(5.0)	23973	(5.8)	20396	(4.6)	21093	(4.6)	15369	(5.0)
1.5	Fruits and vegetables	44010	(11.3)	44088	(11.0)	40485	(9.8)	47485	(10.8)	54110	(11.8)	18550	(6.1)
1.6	Potato and other tubers	3796	(1.0)	4434	(1.1)	4735	(1.1)	4848	(1.1)	4847	(1.0)	3738	(1.2)
1.7	Milk and milk products	32013	(8.3)	32633	(8.2)	33165	(8.0)	32328	(7.4)	34752	(7.5)	27359	(9.0)
1.8	Meat, egg and fish	12167	(3.1)	12638	(3.2)	13263	(3.2)	13543	(3.1)	14999	(3.3)	11699	(3.8)
1.9	Coffee, tea and cocoa	2945	(0.8)	2545	(0.6)	3205	(0.8)	2684	(0.6)	3531	(0.8)	2993	(1.0)
1.10	Spices	5322	(1.4)	5426	(1.4)	5533	(1.3)	5658	(1.3)	5781	(1.3)	3716	(1.2)
1.11	Other food	2026	(0.5)	1463	(0.4)	1945	(0.5)	1589	(0.1)	2228	(0.5)	860	(0.3)
Private final consumption expenditure in domestic market		387057	(100)	399272	(100)	412957	(100)	438732	(100)	460504	(100)	304183	(100)

Note : Figures in parantheses represent percentages to the total Private Final Consumption Expenditure.

Source : National Accounts Statistics, Government of India, Various years.

1. At the beginning of the pre reform period, the share of food expenditure registered 53.7 per cent. It fluctuated and reached 48.4 per cent at the end of the pre reform period.
2. The share of expenditure on cereals and bread was 18.1 per cent in 1970-71. It declined to around 17.4 per cent in 1971-72 and 17.3 per cent in 1972-73 and hiked to 18.7 per cent in 1973-74. It fluctuated and reached 14.3 per cent in 1990-91.
3. The share of pulses, sugar and gur, oil and oil seeds and spices had a share of less than 7 per cent each in the total private final consumption expenses in the beginning of the pre-reform period.
4. But the share of expenses on nutritious items such as milk and milk products, meat, egg and fish showed an increasing share at the end of the pre-reform period, though the fruits and vegetables indicated a declining share.

The details of private final consumption expenditure on food items in the post reform period are given in Table – II.

TABLE – II

PRIVATE FINAL CONSUMPTION EXPENDITURE ON FOOD ITEMS IN POST-REFORM PERIOD (1991-92 TO 2004-2005)

(At 1999-2000 Prices)

(In Rs. crore)

S.No.	ITEMS	1991-92		1992-93		1993-94		1994-95		1995-96	
1	FOOD ITEMS	175767	(49.9)	196882	(49.4)	266181	(50.4)	297320	(49.1)	340043	(49.0)
1.1	Cereal and bread	57342	(16.3)	59988	(15.1)	73461	(14.0)	83529	(13.8)	93654	(13.5)
1.2	Pulses	6935	(1.9)	8489	(2.1)	10977	(2.1)	11755	(1.9)	12437	(1.8)
1.3	Sugar and gur	12152	(3.4)	15195	(3.8)	18452	(3.5)	18836	(3.1)	19711	(2.8)
1.4	Oil and oil seeds	18032	(5.1)	19492	(4.9)	21237	(4.0)	21265	(3.5)	24611	(3.5)
1.5	Fruits and vegetables	21873	(6.2)	25737	(6.5)	57265	(10.8)	67376	(11.1)	75680	(10.9)
1.6	Potato and other tubers	4598	(1.3)	4508	(1.1)	5683	(1.1)	6060	(1.0)	8275	(1.2)
1.7	Milk and milk products	33257	(9.4)	37637	(9.4)	42643	(8.5)	49252	(8.1)	57002	(8.2)
1.8	Meat, egg and fish	13499	(3.8)	16655	(4.2)	19894	(3.8)	24509	(4.1)	28332	(4.1)
1.9	Coffee, tea and cocoa	2788	(0.8)	3136	(0.8)	5356	(1.0)	3773	(0.6)	6131	(0.9)
1.10	Spices	4287	(1.2)	4928	(1.2)	7335	(1.4)	7874	(1.3)	8932	(4.3)
1.11	Other food	1004	(0.3)	1117	(0.3)	3878	(0.7)	3091	(0.5)	5278	(0.8)
Private final consumption expenditure in domestic market		352494	(100)	398407	(100)	528445	(100)	604987	(100)	694331	(100)

Note : Figures in parantheses represent percentages to the total Private Final Consumption Expenditure.

Source : National Accounts Statistics, Government of India, Various years.

(Contd...)

TABLE – II

(Contd...)

PRIVATE FINAL CONSUMPTION EXPENDITURE ON FOOD ITEMS IN POST-REFORM PERIOD (1991-92 TO 2004-2005)

(At 1999-2000 Prices)

(In Rs. crore)

S.No.	ITEMS	1996-97		1997-98		1998-99		1999-2000		2000-2001	
1	FOOD ITEMS	422134	(51.0)	426901	(47.5)	513948	(49.3)	534450	(45.9)	536721	(43.1)
1.1	Cereal and bread	116496	(14.1)	113873	(12.7)	128951	(12.4)	148933	(12.7)	128136	(10.3)
1.2	Pulses	15788	(1.9)	14192	(1.6)	18348	(1.8)	17428	(1.5)	16212	(1.3)
1.3	Sugar and gur	26383	(3.2)	25618	(2.9)	30558	(2.9)	33334	(2.9)	36657	(2.9)
1.4	Oil and oil seeds	29906	(3.6)	24077	(2.7)	38571	(3.7)	28850	(2.5)	23456	(1.9)
1.5	Fruits and vegetables	90988	(11.0)	101054	(11.2)	118499	(11.4)	109889	(9.4)	130374	(10.5)
1.6	Potato and other tubers	10098	(1.2)	9168	(1.0)	11178	(1.1)	9908	(0.9)	10340	(0.8)
1.7	Milk and milk products	64234	(7.8)	71430	(8.0)	80122	(7.7)	96460	(8.3)	98506	(7.9)
1.8	Meat, egg and fish	33015	(4.6)	36076	(4.0)	41042	(3.9)	43832	(3.8)	46810	(3.8)
1.9	Coffee, tea and cocoa	9976	(1.2)	7117	(0.8)	10745	(1.0)	8577	(0.7)	8183	(0.7)
1.10	Spices	16972	(2.1)	18563	(2.1)	25226	(2.4)	28591	(2.5)	27954	(2.2)
1.11	Other food	8278	(1.0)	5733	(0.6)	10708	(1.0)	8648	(0.7)	10093	(0.8)
PRIVATE FINAL CONSUMPTION EXPENDITURE IN DOMESTIC MARKET		827033	(100)	898436	(100)	1042802	(100)	1163742	(100)	1244100	(100)

Note : Figures in parantheses represent percentages to the total Private Final Consumption Expenditure.

Source : National Accounts Statistics, Government of India, Various years.

(Contd...)

TABLE – II

(Contd...)

PRIVATE FINAL CONSUMPTION EXPENDITURE ON FOOD ITEMS IN POST-REFORM PERIOD (1991-92 TO 2004-2005)

(At 1999-2000 Prices)

(Rs. in crore)

S.No.	ITEMS	2001-2002		2002-2003		2003-2004		2004-2005	
1	FOOD ITEMS	595259	(43.6)	528360	(37.5)	584368	(37.1)	611949	(35.4)
1.1	Cereal and bread	145369	(10.6)	119068	(8.5)	131709	(8.6)	119993	(6.9)
1.2	Pulses	22561	(1.7)	15713	(1.1)	19687	(1.2)	18492	(1.1)
1.3	Sugar and gur	33311	(2.4)	31021	(2.2)	27699	(1.8)	33817	(2.0)
1.4	Oil and oil seeds	25532	(1.9)	27546	(2.0)	41336	(2.6)	46259	(2.8)
1.5	Fruits and vegetables	149906	(11.1)	120681	(8.6)	142463	(9.0)	149489	(8.6)
1.6	Potato and other tubers	14453	(1.1)	12490	(0.9)	11375	(0.7)	15618	(0.9)
1.7	Milk and milk products	103726	(7.6)	105084	(7.5)	109011	(6.9)	115965	(6.7)
1.8	Meat, egg and fish	51688	(3.8)	60756	(4.3)	62405	(4.0)	66923	(3.9)
1.9	Coffee, tea and cocoa	9217	(0.7)	8905	(0.6)	8863	(0.6)	12352	(0.7)
1.10	Spices	28374	(2.1)	16749	(1.2)	18826	(1.2)	18377	(1.1)
1.11	Other food	11122	(0.8)	10347	(0.7)	10994	(0.7)	14664	(0.8)
PRIVATE FINAL CONSUMPTION EXPENDITURE IN DOMESTIC MARKET		1366313	(100)	14095951	(100)	1576257	(100)	1730316	(100)

Note : Figures in parantheses represent percentages to the total Private Final Consumption Expenditure.

Source : National Accounts Statistics, Government of India, Various years.

1. In the post reform period, the share of expenditure on cereal and bread was 16.3 per cent in 1991-92, fluctuated and then reached 6.9 per cent in 2004-2005.
2. The expenditure share of pulses, sugar and gur, oil and oil seeds, potato and other tubers, milk and milk products, coffee, tea and cocoa had declined in 2004-2005 when compared with the beginning of the reform period.
3. But the expenditure share of fruits and vegetables had showed a fluctuating trend and reached 8.6 per cent in 2004-2005. But it was only 6.2 per cent in the beginning of the reform period.

To sum up, the share of food expenditure in the total Private Final Consumption Expenditure had declined from 53.7 per cent at the beginning of the pre-reform period to 48.4 per cent at the end of the pre reform period. Hence it proves the operation of Engels law in India in the pre reform period. Though the share of food expenditure had declined, the share of nutritious items had increased in the pre reform period.

In the post-reform period, the share of food expenditure had declined. The expenditure share of fruits and vegetables had increased from 6.2 per cent in the beginning to 8.6 per cent in 2004-2005.

Private Final Consumption Expenditure on Non-Food Items in the Pre and Post Reform Period

The expenditure on non-food items comprises of expenses of beverages, pan, intoxicants, tobacco and its products, hotel and restaurants, clothing and footwear, gross rent and fuel and power, furniture, furnishing appliances and services, medical care and health services, transport and communication, recreation and education and cultural services.

The details of the private final consumption expenditure on non-food items in the pre reform period at constant prices are given in the Table – III.

TABLE – III
PRIVATE FINAL CONSUMPTION EXPENDITURE ON NON FOOD ITEMS IN PRE-REFORM PERIOD (1970-71 TO 1990-91)
(At 1999-2000 Prices)

S.No.	ITEMS	(In Rs. crore)									
		1970-71		1971-72		1972-73		1973-74		1974-75	
1	NON FOOD ITEMS	50433	(46.3)	58382	(46.5)	65851	(48.7)	74242	(46.5)	82082	(46.8)
1.1	Beverages, pan and intoxicants	1254	(1.2)	1232	(0.9)	803	(0.6)	1049	(0.7)	1486	(0.8)
1.1.1	Beverages	838	(0.8)	817	(0.7)	388	(0.3)	636	(0.4)	877	(0.5)
1.1.2	Pan and other intoxicants	416	(0.4)	415	(0.3)	415	(0.3)	413	(0.3)	585	(0.3)
1.2	Tobacco and its products	2738	(2.5)	3475	(2.8)	4672	(3.5)	4944	(3.1)	4715	(2.7)
1.3	Hotels and restaurants	839	(0.8)	1023	(0.8)	1152	(0.9)	1319	(0.8)	1470	(0.8)
1.4	Clothing and footwear	6877	(6.3)	7362	(5.9)	7751	(5.7)	8438	(5.3)	9718	(5.5)
1.4.1	Clothing	6047	(5.6)	6460	(5.1)	6818	(5.0)	7425	(4.7)	8563	(4.9)
1.4.2	Footwear	829	(0.8)	902	(0.7)	933	(0.7)	1013	(0.6)	1155	(0.7)
1.5	Gross rent, fuel and power	16613	(15.3)	19412	(15.5)	21769	(16.1)	23908	(15.0)	26580	(15.2)
1.5.1	Gross rent and water charges	12255	(11.3)	14316	(11.4)	15859	(11.7)	17192	(10.8)	19189	(10.9)
1.5.2	Fuel and power	4358	(4.0)	5096	(4.1)	5910	(4.4)	6716	(4.2)	7391	(4.2)
1.6	Furniture, furnishing appliances and services	3605	(3.3)	4185	(3.3)	4766	(3.5)	5364	(3.4)	5775	(3.3)
1.7	Medicinal care and health services	4836	(4.4)	5623	(4.5)	6537	(4.8)	7598	(4.8)	8195	(4.7)
1.8	Transport and communication	4930	(4.5)	6177	(4.9)	7460	(5.5)	9357	(5.9)	10608	(6.0)
1.9	Recreation, education and cultural services	2772	(2.5)	3142	(2.5)	3570	(2.6)	4035	(2.5)	4470	(2.5)
1.10	Miscellaneous goods and services	5969	(5.5)	6750	(5.4)	7371	(5.5)	8230	(5.2)	9065	(5.2)
Private final consumption expenditure on non food items		108929	(100)	125585	(100)	135108	(100)	159600	(100)	175372	(100)

Note : Figures in the parantheses denote the percentage to the total Private Final Consumption Expenditure.

Source : National Accounts Statistics, Government of India, New Delhi, various years.

(Contd....)

TABLE – III **(Contd.)**
PRIVATE FINAL CONSUMPTION EXPENDITURE ON NON FOOD ITEMS IN PRE-REFORM PERIOD (1970-71 TO 1990-91)
(At 1999-2000 Prices)

S.No.	ITEMS	(In Rs. crore)									
		1975-76		1976-77		1977-78		1978-79		1979-80	
1	NON FOOD ITEMS	92961	(48.4)	109204	(51.2)	116771	(49.0)	136812	(50.0)	156233	(50.4)
1.1	Beverages, pan and intoxicants	1550	(0.8)	1085	(0.5)	1311	(0.6)	873	(0.3)	1719	(0.6)
1.1.1	Beverages	852	(0.4)	410	(0.2)	658	(0.3)	157	(0.1)	832	(0.3)
1.1.2	Pan and other intoxicants	698	(0.3)	675	(0.3)	653	(0.8)	717	(0.3)	887	(0.3)
1.2	Tobacco and its products	4886	(2.5)	6470	(3.0)	6588	(2.8)	9061	(3.3)	8873	(2.9)
1.3	Hotels and restaurants	1677	(0.9)	1849	(0.9)	2079	(0.9)	2515	(0.9)	3005	(1.0)
1.4	Clothing and footwear	11852	(6.2)	11746	(5.5)	12964	(5.4)	15836	(5.8)	19351	(6.2)
1.4.1	Clothing	10451	(5.4)	10266	(4.8)	11210	(4.7)	13468	(4.9)	17377	(5.6)
1.4.2	Footwear	1401	(0.7)	1480	(0.7)	1754	(0.7)	2368	(0.9)	1974	(0.6)
1.5	Gross rent, fuel and power	29241	(15.2)	32522	(15.3)	35928	(15.1)	39376	(14.4)	43675	(14.1)
1.5.1	Gross rent and water charges	21183	(11.0)	23252	(11.0)	25295	(10.6)	27606	(10.0)	30801	(9.9)
1.5.2	Fuel and power	8058	(4.2)	9270	(4.3)	10634	(4.5)	11769	(4.3)	12873	(4.2)
1.6	Furniture, furnishing appliances and services	6572	(3.4)	7252	(3.4)	7712	(3.2)	9129	(3.3)	11159	(3.6)
1.7	Medicinal care and health services	8288	(4.3)	8720	(4.1)	9644	(4.0)	11828	(4.3)	12411	(4.0)
1.8	Transport and communication	12854	(6.7)	16168	(7.6)	19493	(8.2)	23793	(8.7)	27436	(8.8)
1.9	Recreation, education and cultural services	4934	(2.8)	5896	(2.8)	6860	(2.9)	8271	(3.0)	9357	(3.0)
1.10	Miscellaneous goods and services	11107	(5.8)	12294	(5.8)	14193	(6.0)	16134	(5.9)	19247	(6.2)
Private final consumption expenditure on non food items		192094	(100)	213206	(100)	238133	(100)	273882	(100)	310028	(100)

Note : Figures in the parantheses denote the percentage to the total Private Final Consumption Expenditure.

Source : National Accounts Statistics, Government of India, New Delhi, various years.

(Contd...)

TABLE – III (Contd.)
PRIVATE FINAL CONSUMPTION EXPENDITURE ON NON FOOD ITEMS IN PRE-REFORM PERIOD (1970-71 TO 1990-91)
(At 1999-2000 Prices)

(In Rs. crore)

S.No.	ITEMS	1980-81		1981-82		1982-83		1983-84		1984-85	
1	NON FOOD ITEMS	180534	(51.0)	204526	(50.0)	233325	(53.2)	165734	(45.9)	170702	(45.9)
1.1	Beverages, pan and intoxicants	3393	(1.0)	4936	(1.2)	5101	(1.1)	3111	(0.8)	3721	(1.00)
1.1.1	Beverages	2114	(0.6)	3278	(0.8)	2813	(0.6)	1315	(0.4)	1838	(0.5)
1.1.2	Pan and other intoxicants	1279	(0.4)	1657	(0.4)	2288	(0.5)	1796	(0.5)	1884	(0.5)
1.2	Tobacco and its products	10617	(3.0)	9750	(2.4)	12955	(2.8)	14307	(4.0)	12990	(3.5)
1.3	Hotels and restaurants	3477	(1.0)	4015	(1.0)	4669	(1.0)	3028	(0.8)	3102	(0.8)
1.4	Clothing and footwear	21838	(6.2)	23530	(5.8)	26337	(5.7)	21459	(5.9)	22094	(5.9)
1.4.1	Clothing	18630	(5.3)	20961	(5.1)	23407	(5.1)	18539	(5.1)	18972	(5.1)
1.4.2	Footwear	3207	(0.9)	3310	(0.8)	2930	(0.6)	2920	(0.8)	3122	(0.8)
1.5	Gross rent, fuel and power	48018	(13.6)	52690	(12.9)	57768	(12.6)	46592	(12.9)	48143	(13.0)
1.5.1	Gross rent and water charges	33850	(9.6)	37316	(9.1)	41120	(9.0)	32608	(9.0)	33679	(9.1)
1.5.2	Fuel and power	14168	(4.0)	15373	(3.8)	16648	(3.6)	13984	(3.9)	14465	(3.9)
1.6	Furniture, furnishing appliances and services	12437	(3.5)	13267	(3.2)	14072	(3.1)	11647	(3.2)	11909	(3.2)
1.7	Medicinal care and health services	13452	(3.8)	14703	(3.6)	16069	(3.5)	14585	(4.0)	14889	(4.0)
1.8	Transport and communication	34773	(9.8)	43151	(10.6)	51615	(11.3)	24679	(6.8)	26998	(7.3)
1.9	Recreation, education and cultural services	11051	(3.1)	12979	(3.2)	14628	(3.2)	8557	(2.4)	8821	(2.4)
1.10	Miscellaneous goods and services	21478	(6.1)	25505	(6.2)	30110	(6.6)	17769	(4.9)	18037	(4.9)
Private final consumption expenditure on non food items		354312	(100)	408424	(100)	458503	(100)	361141	(100)	371551	(100)

Note : Figures in the parantheses denote the percentage to the total Private Final Consumption Expenditure.

Source : National Accounts Statistics, Government of India, New Delhi, various years.

(Contd...)

TABLE – III

(Contd.)

PRIVATE FINAL CONSUMPTION EXPENDITURE ON NON FOOD ITEMS IN PRE-REFORM PERIOD (1970-71 TO 1990-91)

(At 1999-2000 Prices)

(In Rs.crore)

S.No.	ITEMS	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91
1	NON FOOD ITEMS	178879 (46.2)	191038 (47.8)	199344 (48.3)	212504 (48.4)	224250 (48.7)	156878 (51.6)
1.1	Beverages, pan and intoxicants	3638 (0.9)	2839 (0.7)	3103 (0.6)	2398 (0.5)	3599 (0.8)	4939 (1.6)
1.1.1	Beverages	1616 (0.4)	762 (0.2)	895 (0.2)	890 (0.2)	1194 (0.3)	2800 (0.9)
1.1.2	Pan and other intoxicants	2022 (0.5)	2077 (0.5)	2208 (0.5)	2309 (0.5)	2404 (0.5)	2140 (0.7)
1.2	Tobacco and its products	11436 (3.0)	13437 (3.4)	13024 (3.2)	15458 (3.5)	13824 (3.0)	6779 (2.2)
1.3	Hotels and restaurants	3293 (0.9)	3462 (0.9)	3654 (0.9)	4001 (0.9)	4431 (1.0)	3307 (1.1)
1.4	Clothing and footwear	23897 (6.2)	24641 (6.2)	25547 (6.2)	28140 (6.4)	28236 (6.1)	33998 (11.2)
1.4.1	Clothing	20592 (5.3)	22165 (5.6)	22029 (5.3)	24098 (5.5)	25077 (5.4)	30720 (10.1)
1.4.2	Footwear	3305 (0.9)	2477 (0.6)	3518 (0.9)	4042 (0.9)	3159 (0.9)	3278 (1.1)
1.5	Gross rent, fuel and power	49696 (12.8)	51562 (12.9)	53343 (12.9)	55238 (12.6)	56982 (12.4)	32619 (10.7)
1.5.1	Gross rent and water charges	34786 (9.0)	35935 (9.0)	37129 (9.0)	38364 (8.7)	39648 (8.6)	18881 (6.2)
1.5.2	Fuel and power	14920 (3.9)	15627 (3.9)	16213 (3.9)	16875 (3.8)	17334 (3.8)	13738 (4.5)
1.6	Furniture, furnishing appliances and services	12952 (3.3)	13768 (3.4)	13779 (3.3)	13887 (3.2)	15235 (3.3)	10745 (3.5)
1.7	Medicinal care and health services	15206 (3.9)	15515 (3.9)	15842 (3.8)	16196 (3.7)	16564 (3.6)	7561 (2.5)
1.8	Transport and communication	28892 (7.5)	33420 (8.4)	36801 (8.9)	40189 (9.2)	44436 (9.6)	32650 (10.7)
1.9	Recreation, education and cultural services	9110 (2.4)	10541 (2.6)	11278 (2.7)	12514 (2.9)	13349 (2.9)	10884 (3.6)
1.10	Miscellaneous goods and services	20759 (5.4)	21853 (5.5)	22973 (5.6)	24482 (5.6)	27595 (6.0)	13396 (4.4)
Private final consumption expenditure on non food items		387057 (100)	399272 (100)	412957 (100)	438732 (100)	460504 (100)	304183 (100)

Note : Figures in the parantheses denote the percentage to the total Private Final Consumption Expenditure.

Source : National Accounts Statistics, Government of India, New Delhi, various years.

In the pre-reform period, the expenditure on non-food items reveals the following facts :

- (i) The total expenditure on non-food items showed a fluctuating trend and it was found to be 46.3 per cent in 1970-71 and reached 51.6 per cent in 1990-91.
- (ii) Among the non-food items, the first major component (except in the year 1990-91) was gross rent, fuel and power which ranged between 16.1 per cent to 10.7 per cent.
- (iii) The expenditure on clothing and footwear and transport and communication were the next major components. They fluctuated between 5.3 to 11.2 per cent and 4.5 to 11.3 per cent respectively.
- (iv) The percentage expenditure on medical care and health services was ranged between 4.8 per cent in 1973-74 to 2.5 per cent in 1990-91.
- (v) The expenditure share of other items was less than 4 per cent in the pre-reform period.

The details of the private final consumption expenditure on non-food items in the post reform period at constant prices are given in the Table – IV.

TABLE – IV
PRIVATE FINAL CONSUMPTION EXPENDITURE ON NON FOOD ITEMS IN POST REFORM PERIOD (1991-92 TO 2004-2005)
(At 1999-2000 Prices)

(In Rs. crore)

S.No.	ITEMS	1991-92	1992-93	1993-94	1994-95
1	NON FOOD ITEMS	176727 (50.1)	201525 (50.5)	262264 (49.6)	307667 (50.9)
1.1	Beverages, pan and intoxicants	5947 (1.7)	6809 (1.7)	5446 (1.0)	4311 (0.7)
1.1.1	Beverages	3070 (0.9)	3245 (0.8)	2606 (0.5)	1095 (0.2)
1.1.2	Pan and other intoxicants	2877 (0.8)	3564 (0.9)	2749 (0.5)	3216 (0.5)
1.2	Tobacco and its products	7627 (2.2)	9236 (2.3)	11265 (2.1)	17538 (2.9)
1.3	Hotels and restaurants	3818 (1.1)	4441 (1.1)	5621 (1.1)	6541 (1.1)
1.4	Clothing and footwear	35342 (10.0)	39697 (10.0)	32031 (6.1)	37504 (6.2)
1.4.1	Clothing	31959 (9.1)	36704 (9.2)	28314 (5.4)	33666 (5.6)
1.4.2	Footwear	3383 (0.9)	2994 (0.8)	3718 (0.7)	3838 (0.6)
1.5	Gross rent, fuel and power	35804 (10.1)	39149 (9.8)	64860 (12.3)	71631 (11.8)
1.5.1	Gross rent and water charges	20814 (5.9)	22936 (5.8)	45288 (8.6)	49380 (8.2)
1.5.2	Fuel and power	14990 (4.3)	16213 (4.1)	19572 (3.7)	22251 (3.7)
1.6	Furniture, furnishing appliances and services	11061 (3.1)	11488 (2.9)	16117 (3.0)	18149 (3.0)
1.7	Medicinal care and health services	8263 (2.3)	9032 (2.3)	17886 (3.4)	23336 (3.9)
1.8	Transport and communication	40519 (11.5)	48532 (12.1)	59483 (11.2)	70189 (11.6)
1.9	Recreation, education and cultural services	12433 (3.5)	13936 (3.5)	16132 (3.1)	19057 (3.1)
1.10	Miscellaneous goods and services	15911 (4.5)	19206 (4.8)	33423 (6.3)	39411 (6.5)
Private final consumption expenditure on non food items		352494 (100)	398407 (100)	528445 (100)	604981 (100)

Note : Figures in the parantheses denote the percentage to the total Private Final Consumption Expenditure.

Source : National Accounts Statistics, Government of India, New Delhi, various years.

(Contd....)

TABLE – IV (Contd.)
PRIVATE FINAL CONSUMPTION EXPENDITURE ON NON FOOD ITEMS IN POST REFORM PERIOD (1991-92 TO 2004-2005)
(At 1999-2000 Prices)

(In Rs.crore)

S.No.	ITEMS	1995-96	1996-97	1997-98	1998-99	1999-2000
1	NON FOOD ITEMS	354288 (51.0)	404899 (49.0)	471535 (52.5)	528854 (50.4)	629292 (54.0)
1.1	Beverages, pan and intoxicants	6554 (0.9)	9477 (1.1)	6562 (0.7)	13743 (1.3)	15932 (1.4)
1.1.1	Beverages	3219 (0.5)	5820 (0.7)	2266 (0.3)	8871 (0.9)	8511 (0.7)
1.1.2	Pan and other intoxicants	3335 (0.5)	3657 (0.4)	4296 (0.5)	4872 (0.5)	7421 (0.6)
1.2	Tobacco and its products	16516 (2.4)	14783 (1.8)	28925 (3.2)	20317 (1.9)	31379 (2.7)
1.3	Hotels and restaurants	8464 (1.2)	9876 (1.2)	11342 (1.3)	13368 (1.3)	15531 (1.3)
1.4	Clothing and footwear	45025 (6.5)	47003 (5.7)	52381 (5.8)	47629 (4.6)	55386 (4.8)
1.4.1	Clothing	40730 (5.9)	42304 (5.1)	47171 (5.3)	42142 (4.0)	47999 (4.1)
1.4.2	Footwear	4295 (0.6)	4700 (0.6)	5211 (0.6)	5488 (0.5)	7387 (0.6)
1.5	Gross rent, fuel and power	77427 (11.2)	81568 (9.9)	92711 (10.3)	103595 (9.9)	118724 (10.2)
1.5.1	Gross rent and water charges	53954 (7.8)	55324 (6.9)	59707 (6.6)	67589 (6.5)	77385 (6.6)
1.5.2	Fuel and power	23472 (3.4)	26245 (3.2)	33003 (3.7)	36005 (3.5)	41341 (3.6)
1.6	Furniture, furnishing appliances and services	22206 (3.2)	24432 (3.0)	26948 (3.0)	30431 (2.9)	32658 (2.8)
1.7	Medicinal care and health services	27646 (4.0)	34175 (4.1)	42007 (4.7)	59845 (5.7)	77206 (6.6)
1.8	Transport and communication	81164 (11.7)	100422 (12.1)	114996 (12.8)	131203 (12.6)	146187 (12.6)
1.9	Recreation, education and cultural services	22446 (3.2)	25510 (3.1)	30488 (3.4)	34970 (3.4)	39825 (3.4)
1.10	Miscellaneous goods and services	46842 (6.7)	57653 (7.0)	65174 (7.3)	73754 (7.1)	96463 (8.3)
Private final consumption expenditure on non food items		694331 (100)	827033 (100)	898436 (100)	1042802 (100)	310028 (100)

Note : Figures in the parantheses denote the percentage to the total Private Final Consumption Expenditure.

Source : National Accounts Statistics, Government of India, New Delhi, various years.

(Contd...)

TABLE – IV (Contd.)
PRIVATE FINAL CONSUMPTION EXPENDITURE ON NON FOOD ITEMS IN POST REFORM PERIOD (1991-92 TO 2004-2005)
 (At 1999-2000 Prices)

(In Rs. crore)

S.No.	ITEMS	2001-2002		2002-2003		2003-2004		2004-2005	
1	NON FOOD ITEMS	771054	(56.4)	881231	(62.5)	991889	(62.9)	1118367	(64.6)
1.1	Beverages, pan and intoxicants	19991	(1.5)	27778	(2.0)	30525	(1.9)	37410	(2.2)
1.1.1	Beverages	14459	(1.2)	18690	(1.3)	20963	(1.3)	27348	(1.6)
1.1.2	Pan and other intoxicants	5532	(0.4)	9088	(0.6)	9562	(0.6)	10062	(0.6)
1.2	Tobacco and its products	29280	(2.1)	22227	(1.6)	21134	(1.3)	18403	(1.1)
1.3	Hotels and restaurants	18951	(1.4)	26934	(1.9)	30105	(1.9)	34678	(2.0)
1.4	Clothing and footwear	56329	(4.1)	73086	(5.2)	80982	(5.1)	89378	(5.2)
1.4.1	Clothing	48297	(3.5)	65681	(4.7)	72941	(4.6)	80123	(4.6)
1.4.2	Footwear	8032	(0.6)	7405	(0.5)	8042	(0.5)	9255	(0.5)
1.5	Gross rent, fuel and power	157087	(11.5)	184449	(13.1)	198217	(12.6)	211654	(12.2)
1.5.1	Gross rent and water charges	96676	(7.1)	120508	(8.5)	129748	(8.2)	139668	(8.0)
1.5.2	Fuel and power	60411	(4.4)	63941	(4.5)	68470	(4.3)	71986	(4.2)
1.6	Furniture, furnishing appliances and services	39266	(2.9)	47450	(3.4)	52461	(3.3)	59285	(3.4)
1.7	Medicinal care and health services	104716	(7.7)	80816	(5.7)	93219	(5.9)	107481	(6.2)
1.8	Transport and communication	176046	(12.9)	223592	(15.9)	264746	(16.8)	314393	(18.2)
1.9	Recreation, education and cultural services	49309	(3.6)	52436	(3.7)	59599	(3.8)	68916	(4.0)
1.10	Miscellaneous goods and services	120079	(8.8)	142462	(10.1)	160901	(10.2)	176769	(10.2)
Private final consumption expenditure on non food items		1366313	(100)	1409591	(100)	1576257	(100)	1730316	(100)

Note : Figures in the parantheses denote the percentage to the total Private Final Consumption Expenditure.

Source : National Accounts Statistics, Government of India, New Delhi, various years.

In the post reform period, the expenditure on non-food items reveals the following facts.

- (i) The total expenditure on non-food items showed a fluctuating trend and it was found to be 50.1 per cent in 1991-92 and reached 64.6 per cent in 2004-2005.
- (ii) The major component among the expenditure on non food items was found to be transport and communication (except for the year 1994-95) which contributed 11.5 per cent in 1991-92, fluctuated and had reached 18.2 per cent at the end of the reform period.
- (iii) The gross rent, fuel and power accounted as a second major item (except for the year 1992-93) in the private final consumption expenses. It did not increase steadily, fluctuated and accounted for 12.2 per cent in 2004-2005. At the beginning of the reform period, it was only 10.1 per cent.
- (iv) Though the clothing and footwear registered a third major non food item till the year 1997-98, it had declined from 10 per cent in 1991-92 to 5.2 per cent in 2004-2005. From 1998-99 onwards, the medical care and health services was the third major item.
- (v) All the other items showed slight changes in the post reform period and contributed less than 5 per cent to total final consumption expenditure except miscellaneous goods and services.

On the whole, in the pre reform period, gross rent, fuel and power was the major non food component in the total private final consumption expenses. But in the post reform period, the emphasis was shifted to transport and communication expenses. It shows that Indians were shifting their expenses towards transport and communication in the post-reform period.

Determinants of Consumption Expenditure in the Pre and Post Reform Period – Discriminant Analysis

Discriminant analysis was used to determine whether consumption expenditure differed in the post reform period from that of pre-reform period and to identify the relative contribution of the variables such as Net National Product, Lagged Net National Product, Lagged Private Final

Consumption Expenditure, inflation rate and population. The second level difference of the above variables were taken for the analysis to avoid serial correlation. Before carrying out discriminant analysis, the mean and standard deviation of the independent variables in the pre and post reform period were calculated and given in the Table – V.

TABLE – V
MEAN AND STANDARD DEVIATION OF SELECTED VARIABLES

Variables	Pre-reform period		Post-reform period	
	Mean	Standard deviation	Mean	Standard deviation
Net national product (In Rs. crore)	642193.3000	167523.5652	1431757.5385	311739.94975
Lagged net national product (In Rs. crore)	614869.0000	152290.9919	1431756.5385	311738.94782
Lagged private final consumption expenditure (In Rs. crore)	316350.2000	138166.8184	931302.9231	403540.94782
Inflation rate (In per cent)	8.72000	6.7259	6.9692	3.45536
Population (In millions)	689.4000	88.75478	964.5385	71.00659

From the Table – V, it is evident that there was significant differences in the mean of Net National Product, Lagged Net National Product, Lagged Private Final Consumption, inflation rate and population between the pre and post reform period.

The effectiveness of discriminant function can be tested by three tests namely, Wilk's lambda (U-statistic), univariate F-test and the canonical correlation. Initially to test the mean differences between the two groups, the Wilk's lambda (U-statistic) and its equivalent univariate 'F'-test (one way analysis of variance) were calculated. The value of Wilk's lambda and 'F'-ratio for the independent variables are shown under Table – VI.

TABLE – VI
WILK'S LAMBDA (U-STATISTIC) AND MINIMUM D-SQUARE
OF THE VARIABLES

Variables	Wilk's lambda	'F'-ratio	Significant level
Net National Product	0.257	89.598	0.000**

Lagged Net National Product	0.234	101.432	0.000**
Lagged Private Final Consumption Expenditure	0.437	39.866	0.394
Inflation Rate	0.976	0.747	0.000**
Population	0.261	87.972	0.000**

** Significant at 1 per cent level.

The Table – VI indicates that Wilk's lambda and minimum D-square of all the variables except for lagged private final consumption expenditure were found to be significant at one per cent level, which indicates that the above variables were significant to classify the Private Final Consumption Expenditure between the pre and post reform period.

The other alternative way of examining the effectiveness of discriminant function is through canonical correlation and the percentage of cases classified correctly.

The canonical correlation was found to be 0.96, which is the measure of degree of association between the discriminant score and the group.

The percentage of cases classified was also used as an index of the effectiveness of the discriminant function. The Table – VII shows the classification results obtained from the multiple discriminant analysis.

TABLE – VII
CLASSIFICATION OF SAMPLE CASES

Classification	Number of cases in	
	Group I	Group II
1. Derived	20	13
2. Actual (observed)	21	14

The Table – VII indicates that 94.29 percentage of the items were correctly classified, only remaining 6 percentage of the items was misclassified.

Canonical co-efficients of standardized co-efficient in the discriminant function was calculated to indicate the relative contribution of the variables to the discriminant function. The results are shown in Table – VIII.

TABLE – VIII
CANONICAL COEFFICIENTS

Variables	Coefficient	Ranking
Net National Product	8.117	2
Lagged Net National Product	11.377	1
Lagged Private Final Consumption Expenditure	3.076	3
Inflation Rate	0.100	5
Population	0.176	4

The Table – VIII shows the standardized co-efficients of the variables included in the analysis and their ranking which is based on the magnitude of the co-efficients after excluding the sign. The magnitude of the coefficient indicates that Lagged Net National Product (11.377) had the highest contribution to the discriminant function, which was followed by Net National Product with a co-efficient of 8.117 in the function.

Based on the group means, the unstandardized canonical discriminant function which represent a linear composite of the original data that maximizes the ratio of among group variability to within group variability was estimated as :

$$Z = -0.946 + 0.0001 \text{ NNP} + 0.000 \text{ LNNP} - 0.017 \text{ inflation} \\ + 0.002 \text{ population} + 0.0001 \text{ LPFCE}$$

In the above function, the variables Net National Product (NNP), population, Lagged Private Final Consumption Expenditure (LPFCE) and Lagged Net National Product (LNNP) had positive sign, which indicates that these variables had higher discriminating power in discriminating the consumption expenditure between the pre and post reform period. In short, increase in Net National Product (NNP), Lagged Net National Product, Lagged Private Final Consumption Expenditure and population would cause favourable impact on consumption expenditure. However, the negative sign for inflation rate indicates that it acted as a suppressor variable, causing a reduction in consumption expenditure.

The relative significance of the predictor variable is shown in Table – IX.

TABLE – IX
RELATIVE IMPORTANCE OF THE VARIABLES IN DETERMINING CONSUMPTION
EXPENDITURE

(In per cent)

S.No.	Variables	Relative importance
1.	Net National Product	35.45
2.	Lagged Net National Product	36.68
3.	Lagged Private Final Consumption Expenditure	27.61
4.	Inflation Rate	0.01
5.	Population	0.25
	Total	100.0

From the Table – IX, it is evident that out of five variables introduced in the discriminant function, 99.74 per cent of the total discrimination was accounted by three variables namely Lagged Net National Product, Net National Product and Lagged Private Final Consumption Expenditure. Out of total variation in consumption expenditure between pre and post reform period, around 37 per cent of the variation was accounted by Lagged Net National Product, 35 per cent by Net National Product and 28 per cent by Lagged Private Final Consumption Expenditure. From this, it can be concluded that the major factors that differentiated consumption expenditure between pre and post reform period were Lagged Net National Product, Net National Product and Lagged Private Final Consumption Expenditure.

Conclusion

The share of expenditure on food items in total aggregate consumption expenditure had declined from 53.7 per cent in 1970-71 to 48.4 per cent at the end of the pre reform period. In the post reform period also, the food expenditure had declined from 49.9 per cent in 1991-92 to 35.4 per cent in 2004-2005. Indian households had prepared to spend this extra money on non food items namely gross rent, fuel and power and transport and communication. At the end of the pre reform period, the expenditure on gross rent, fuel and power was Rs.32619 crore. It was the major expenditure share in the pre reform period. But in the post reform period, the expenditure on transport and communication dominated in the expenditure share of non food items. The

percentage contribution of it was 11.5 per cent in 1991-1992 which increased to 18.2 per cent in 2004-2005. The discriminant analysis shows that the major factors that differentiated consumption expenditure between pre and post reform period were Lagged Net National Product, Net National Product and Lagged Private Final Consumption Expenditure.

References

- Anitha, (2003), "An Empirical Analysis of Aggregate Consumption Function in India (1970-2000)" M.Phil., Economics, Submitted to Avinashilingam University for Women, Coimbatore.
- Central Statistical Organisation, (2007), Ministry of Statistics and Programme Implementation, National Accounts Statistics, 2007, Government of India, New Delhi Publications.
- Economic Survey, 1970-71 to 2004-2005, Ministry of Finance, Government of India, New Delhi Publications.
- Handbook of Indian Economy, (2008), Reserve Bank of India Bulletin, Mumbai Publications.
- National Sample Survey Organisation, (2008), Government of India, New Delhi Publications.
- National Accounts Statistics, 1970-2005, Various issues, Government of India, New Delhi.