

5. CONSUMPTION EXPENDITURE SURVEYS

The National Sample Survey Organization (NSSO), a permanent survey organization, set up in the Department of Statistics of the Government of India in 1950, collects data on various facets of the Indian economy through nationwide large-scale sample surveys to assist in socio-economic planning and policy making. The NSSO has been carrying out Consumer Expenditure Surveys quinquennially since 1972-73 (27th, 32nd, 38th, 43rd, 50th, 55th and 61st rounds of NSS, at roughly 5-year intervals). A two-stage stratified sampling design was used and at the household selection stage those belonging to the affluent section and others were sampled separately. This survey provides information on consumption expenditure on food and non-food items. Consumption expenditure of food items on per capita and per consumption units are provided using two reference periods of 7 and 30 days immediately preceding the day of the survey. The survey is carried out in sub rounds covering the four seasons. The results presented in the report are based on the 30-day reference period.

As part of these quinquennial surveys data on monthly per capita expenditure on food consumption at the national and state level are collected. The seventh of such surveys was carried out during July 2004-June 2005. The survey covered all the States and UTs in the country. The data were collected from a sample of 79298 rural and 45346 urban households spread over 7999 villages and 4602 urban blocks respectively. The number of persons surveyed was 4, 03,207 in rural areas and 2, 06,529 in urban areas.

NSSO provides data on

- consumption expenditure on food and non food items:
- average quantity of consumption of different foodstuffs per 30 days.
- food security at the household level
- per capita and per consumption unit consumption of calorie, protein and fat per day.
- percentage of total intake of protein and calorie from different groups of food item
- distribution of households and individuals by calorie intake level
- cross-tabulations of the above by monthly expenditure classes at national and state levels in urban and rural areas.

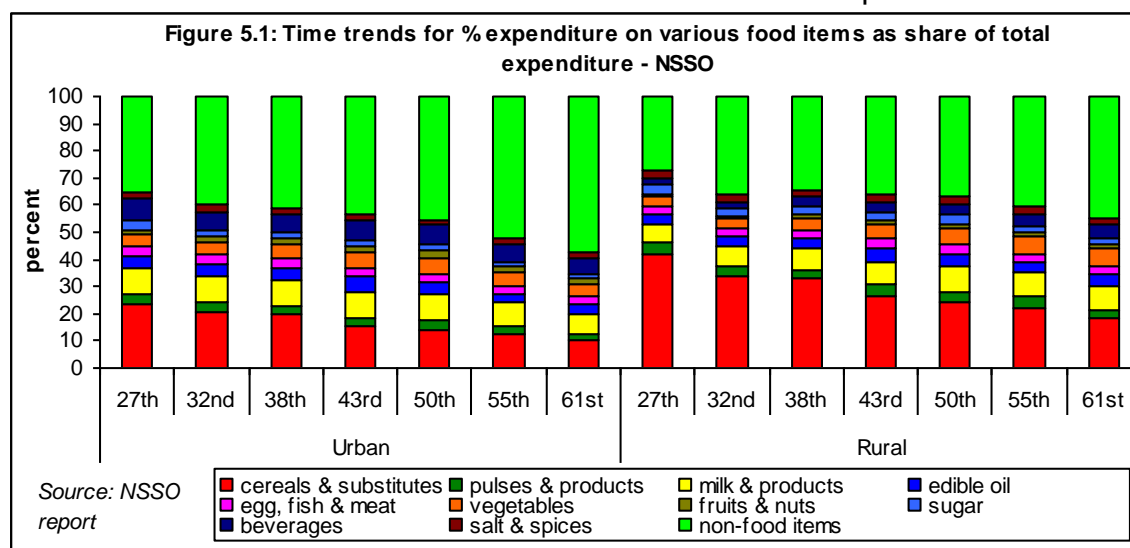
NSSO surveys provide time-series data of expenditure on food and non-food items in different income groups, residence (rural & urban) and state. Taking into account the cost of food in the corresponding year, NSSO computes and reports household level of consumption of different food items.

The dietary data from NSSO, though strong on sampling design, sample size, explicitly stated estimation procedure, national coverage and length of reference period (7 and 30 days) has a potential shortcoming namely, the reliability and validity of data collected on consumption expenditure by a single interview with a reference period of 30 days. Another major problem is that while it captures

expenditure of household on food items and derives household consumption of foodstuffs, it does not provide any insight into the critical intrafamilial distribution or food consumption of individuals.

Time trends in consumer expenditure

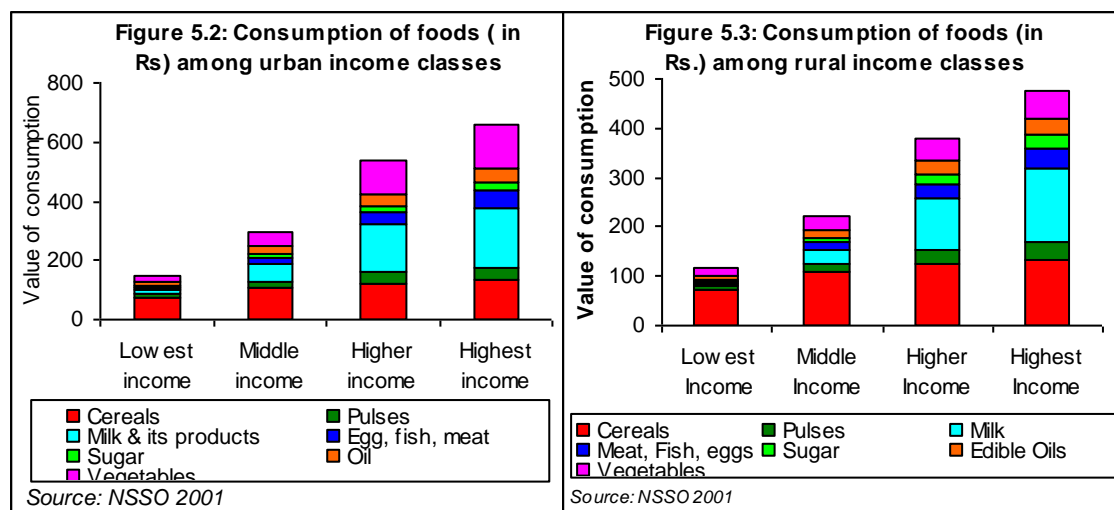
There has been a decline in the proportion of expenditure on food items in last three decades in both urban and rural areas. The proportion of expenditure on non-food items has increased from 24% to 37.7%. However, the expenditure on food remained higher in rural areas as compared to urban areas (Figure 5.1). Between 1972-73 and 2004-05, the share of food in total consumer expenditure has fallen from 73% to 55% in rural areas and from 64% to 42% in urban areas. The share of cereals has fallen from 41% of consumer expenditure to 18% in



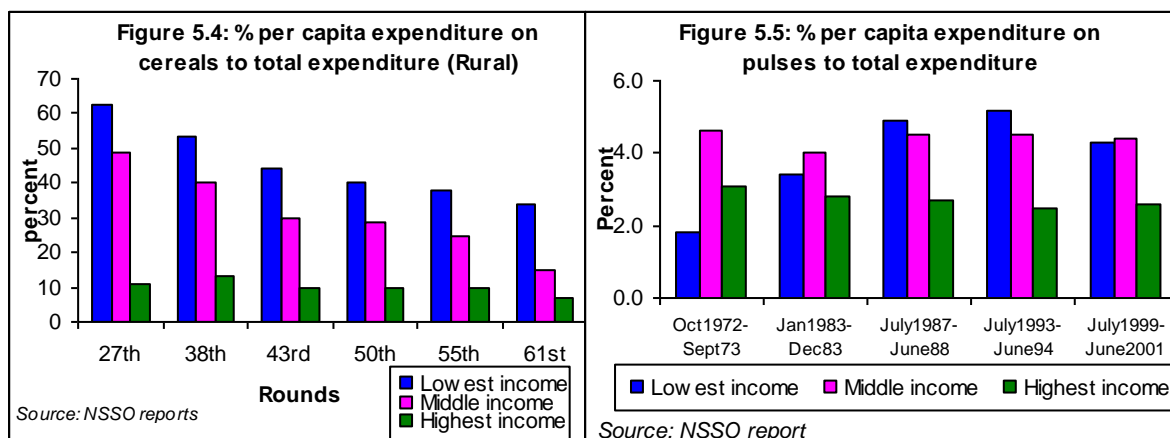
rural India and from 23% to 10% in urban India over the same period (Figure 5.1). The decline in consumption expenditure on food items has mainly due to low cost of cereals; in addition there has been a decline in cereal consumption especially among the middle and high-income group. Over years diet has become more diverse especially in the middle and upper income groups. In urban areas expenditure on vegetables, oil and sugar has decreased after 50th round whereas in rural areas expenditure on vegetables had increased and expenditure on beverages has almost doubled. The percentage of households reporting milk consumption has grown in both rural and urban areas between 1993-94 and 2004-05 by 5 percentage points – 66% to 71% in rural areas and 80% to 85% in urban areas. Per capita consumption of edible oil has risen over the eleven years following 1993-94 (50th round) by as much as 30% in rural India and about 18% in urban India. Over the same period the expenditure on beverages has nearly doubled from 2.4 % to 4.5 % in rural areas. The growing oil consumption is a matter of concern in view of the increasing overnutrition, diabetes and CVD risks factors. If the expenditure on beverages and tobacco are used for purchase of vegetables and fruits, there can be substantial benefit in terms of micronutrient intake.

Dietary diversification and an increase in vegetable intake is the only sustainable method of improving micro nutrient status of the population. One of the major factors responsible for the low consumption of vegetables is the non-availability of vegetables; especially green leafy vegetables through out the year at an affordable cost both in urban and rural areas. Data from NNMB also shows that over this period there has not been any significant increase in the intake of vegetables and micro nutrients (vitamin – A, iron and folic acid). The Tenth Plan envisaged a paradigm shift from food security to nutrition security to meet the needs of macro, micro and phyto nutrients through dietary diversification. In order to ensure sustained increase in vegetable consumption, it is important to improve availability, affordability, access and awareness about the need for increased vegetable intake. Focus on cultivation of low cost vegetables at home and in wasteland areas can go a long way in meeting vegetable needs of rural poor. Horticulture products provide higher yield per hectare and are economically viable options for small farmers especially when backed up by appropriate storage, processing and transportation facilities. If sustained, it would also improve access to vegetables at an affordable cost throughout the year in urban and rural areas. A small increase in expenditure on vegetable and phytonutrient may ensure that there is increased vegetable consumption to meet the nutritional needs of the population.

Consumption expenditure in different income groups



Dietary diversification increases with increasing family income. Consumption of milk and animal products increases with increase in income. In the highest income group, they are the major sources of protein in the diet (Figure 5.2 and 5.3). There is also an increase in the intake of vegetables with increasing family income. However, the current high levels of consumption of sugar and oil in the highest income group are a matter of concern. Health education efforts are underway to reduce the current high levels of consumption of “empty” calories.



Data from NSSO surveys from 1972 to 2005 shows that in the lowest and middle-income groups, the expenditure on cereal had declined. In the highest income group expenditure on cereals form relatively low proportion of the total expenditure and the proportion have remained essentially unaltered over the last three decades except in 2004-05 where it showed a decline (Figure 5.4). Figure 5.5 shows that between 1972-2001 there has been a substantial increase in the proportion of expenditure on pulses to total expenditure in the lowest income group. Expenditure on pulses has remained relatively unaltered in the middle and the highest income group. In spite of continued high expenditure on pulses there has been a fall in amount of pulses consumed because of escalating cost of pulses.

Time trends in consumption expenditure on different food items compiled from the National Accounts Statistics (NAS) are given in is given in (Table 5.1). Data from NAS indicates that expenditure on cereals and pulses have remained essentially unaltered, expenditure on sugar and oil fluctuates. There is a

Table 5.1: Percapita private final consumption expenditure at 1993-94 prices (Rs)

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000
Cereals	900.86	908.87	907.48	966.27	855.43	898.00	894.34
Pulses	134.61	139.94	122.59	138.34	124.59	136.85	116.95
Sugar & Gur	226.29	211.57	215.95	254.57	228.81	251.62	268.79
Oil & Oilseeds	260.43	239.79	252.08	288.20	211.65	337.09	268.20
Fruits & Veg.	702.24	743.25	742.94	729.53	783.95	837.35	861.69
Potato & tubers	69.69	67.47	70.40	83.67	66.56	78.46	75.97
Milk & milk products	522.94	537.33	587.82	621.78	651.48	668.94	752.62
Meat, egg & fish	243.96	257.14	263.46	275.57	273.45	285.82	291.91

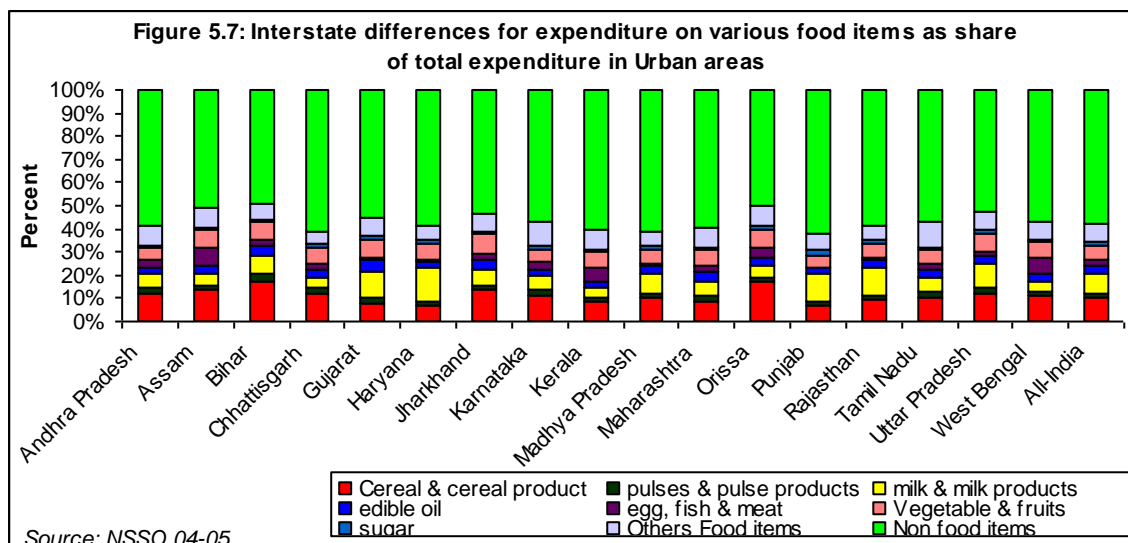
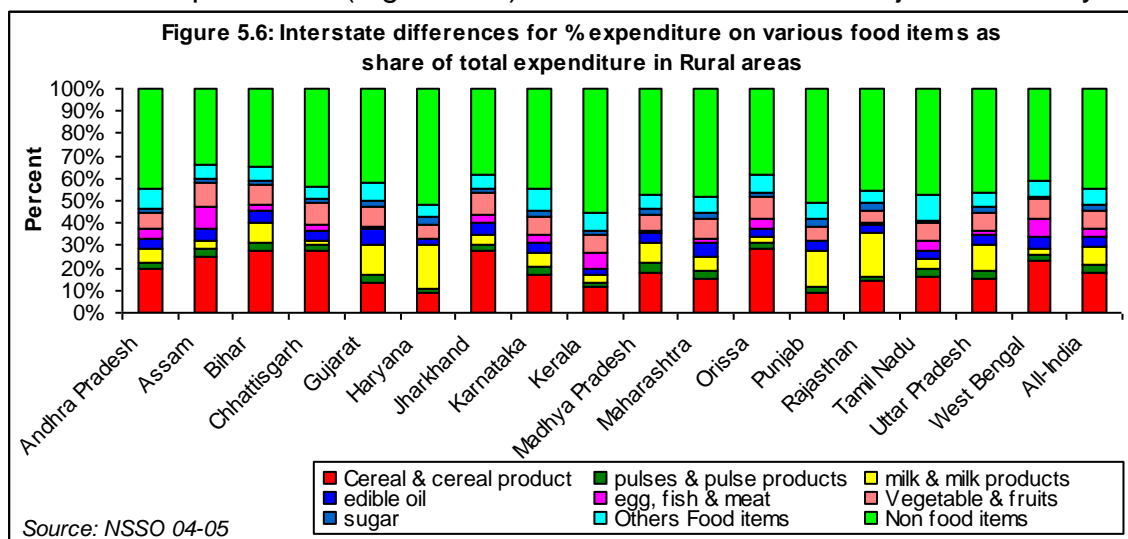
Source: Computed from National Accounts Statistics, CSO

considerable increase in the consumption expenditure on vegetables and fruits and milk and milk products. This is an encouraging trend suggesting that the people are aware of the need for dietary diversification in order to meet the nutritional needs (macro, micro and phyto nutrients) and are making efforts to diversify their dietary intake. It is important to improve access to the vegetables, fruits, dairy products at affordable cost through out the year in urban and rural areas in all states, because this trend towards dietary diversification is the first

step towards sustainable food based intervention for prevention of macro and micronutrient deficiencies.

Interstate differences in consumption expenditure

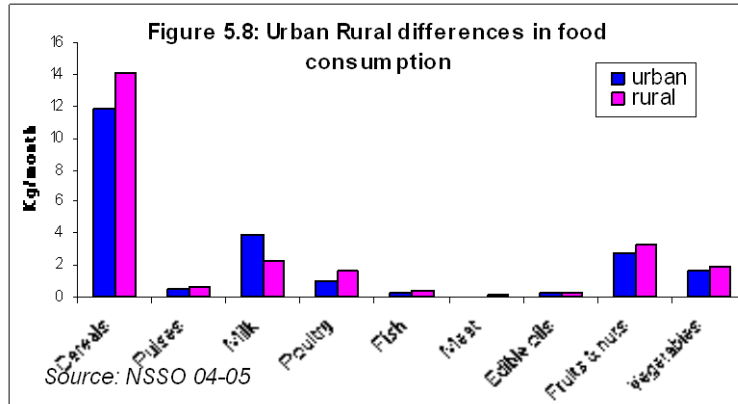
In rural areas of Haryana and Punjab, expenditure on cereals in 2004-05 formed only 9% of total consumer expenditure. But in rural areas of West Bengal and Assam cereals contributed 23% or more to total consumer expenditure, and in rural areas of Orissa, Chhattisgarh, Jharkhand and Bihar, they formed 27-28% of consumer expenditure (Figure 5.6). In urban areas of Punjab and Haryana



cereals took up 6-7% of the household (consumption) budget in 2004-05; in urban areas of Bihar and Orissa they took up 17% (Figure 5.7). Differences in states are partly due to differences in the food and non-food expenditures and partly to the food basket consumed. For instance the low food expenditure in Punjab and Haryana are due to more diverse food basket while in rural Orissa and Bihar with higher poverty rates and low per capita income, cereals formed the major food item.

Consumption pattern of foodstuffs

From the data on expenditure on food and local cost of food, NSSO computes consumption pattern of food stuffs at national, state and household level. Data on consumption pattern of food stuffs in the most recent quinquennial survey is presented here below.



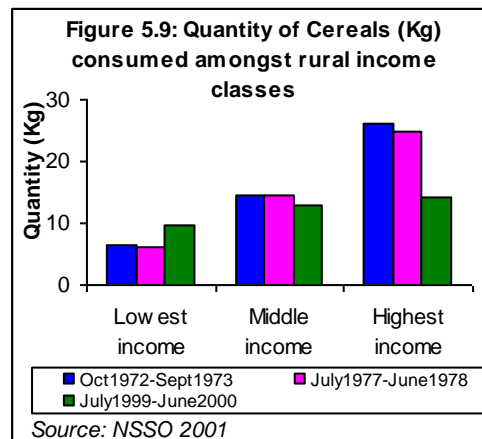
In 2004-05, cereals formed the largest component of the diet. Consumption of pulses was very low; this may be due to increasing prices of pulses. Consumption of milk, fruits and vegetables, and animal food continue to be quite low (Figure 5.8). Consumption of all

foodstuffs increases with increasing income. This is especially true for sugar, oil, milk and animal products. Data from NNMB also indicate that energy consumption in highest income group is higher than the lower income groups. The higher energy intake combined with lower energy expenditure in these income groups accounts for the observed increase in overweight and obesity especially in affluent segments of population.

Interstate differences

The interstate differences in consumption pattern of various foodstuffs in 2004-05 are given in (Annexure 5.1 and 5.2). Cereal forms the main portion of the diet in both urban and rural areas followed by milk and fruits. There are huge urban rural and interstate differences in the monthly per capita consumption even in cereals. Some of these differences are due to access to other foods for eg. fish consumption in Lakshadweep, Andaman and Nicobar Islands, Goa; and others are related to percapita income such as higher consumption of milk and fruit intake in Punjab. However some urban rural differences such as cereal consumption in urban and rural UP (5kg vs. 8 kg) are difficult to explain either on the basis of percapita income or on the basis of food availability. The reason for very low vegetable consumption in semi tropical rural India producing plenty of vegetables and fruits is another poorly understood phenomenon.

Cereals



Analysis of data in time trends in consumption of cereal by lowest, middle and higher income groups shows that quantity (in kg) of cereals consumed by lowest income group has increased inspite of reduction in the proportion of expenditure on cereals (Figure 5.9), because over the years there has been a reduction in relative cost of cereals especially that supplied through the Public Distribution System (PDS). Data on time trends in cereal intake from NNMB surveys confirm that there has been a reduction in the percentage of individuals consuming less than 70% of RDI for cereals. NSSO surveys showed that there has been a small decline in the household consumption of cereals in middle-income groups. The reported per capita “consumption” of cereals in high-income households in rural area was 26.2 kg (about 1kg/day). This has declined to 14.4kg in 1999-2000. Data from diet surveys conducted by NNMB have shown that average dietary intake of cereals even in the highest income group never exceeded 400g/day.

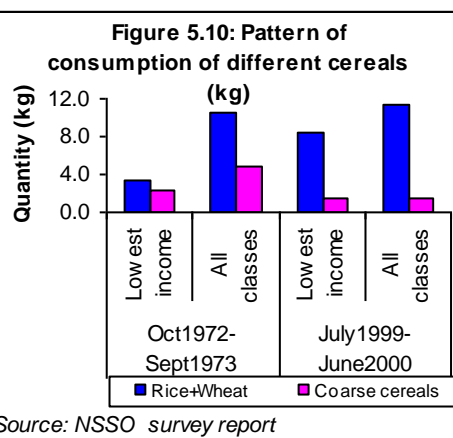
Table 5.2: Changes in per capita cereal consumption in quantity terms over the last decade in different percentile classes of population ranked by MPCE

Year	Rural					
	0-5 p	5-10 p	10-20 p	20-30 p	30-40 p	40-50 p
1993-94	9.68	11.29	12.03	12.63	13.19	13.33
1999-2000	9.78	11.15	11.64	12.27	12.56	12.89
2004-05	9.88	10.87	11.33	11.70	11.98	12.16
Year	50-60 p	60-70 p	70-80 p	80-90 p	90-95 p	95-100 p
	50-60 p	60-70 p	70-80 p	80-90 p	90-95 p	95-100 p
1993-94	13.72	14.07	14.41	14.59	14.98	15.78
1999-2000	13.03	13.36	13.45	13.67	13.73	14.19
2004-05	12.37	12.61	12.77	12.72	12.77	13.50
Year	Urban					
	0-5 p	5-10 p	10-20 p	20-30 p	30-40 p	40-50 p
1993-94	8.91	10.11	10.61	10.75	10.89	10.99
1999-2000	8.99	10.15	10.25	10.75	10.61	10.8
2004-05	9.25	10.04	10.09	10.24	10.12	10.25
Year	50-60 p	60-70 p	70-80 p	80-90 p	90-95 p	95-100 p
	50-60 p	60-70 p	70-80 p	80-90 p	90-95 p	95-100 p
1993-94	10.91	10.95	10.73	10.68	10.19	10.29
1999-2000	10.69	10.66	10.50	10.52	9.94	9.72
2004-05	10.08	10.09	9.97	9.63	9.50	9.10

Source: NSSO reports

cereal consumption in the last ten years in both urban and rural areas. Average quantity of cereals consumed per person per month in 2004-05 was 12.1 kg in rural areas and 9.9 kg in urban areas. The cereal consumption remained high in middle and high income groups in rural area as compared to low income group, this may be due to sharing of food is still prevalent in the rural areas of the country. However, in urban areas there is not much difference in consumption of cereals in

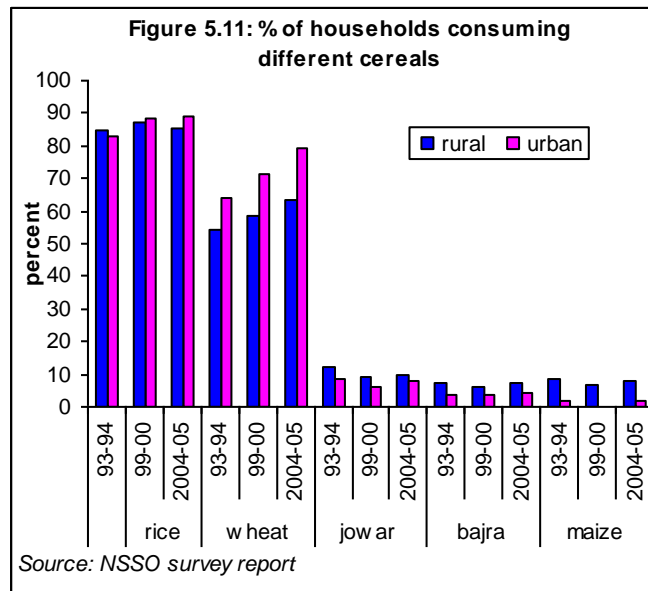
It would therefore appear that reported high cereal consumption among highest income group households, especially, in rural areas might be due to food sharing with guests, relatives and servants. The change in life style over the last two decades may perhaps account for the steep reduction in “consumption” of cereals in high-income group households. Analysis of NSSO data on cereal consumption by different income groups in urban and rural areas are from the last three surveys (1993-94 – 2004-2005) is given in Table 5.2. There has not been much change in per capita



terms of quantity across the income levels (Table 5.2).

There has been a change in the type of cereals consumed among the lowest income group. With the availability of wheat and rice through PDS the poorer segments of population have changed over to rice and wheat as staple cereals. Coarse cereals such as bajra, ragi, maize and jowar which are rich in micronutrients and minerals are no longer being consumed in substantial quantity by the lowest income group (Figure 5.10). Data from last three NSSO surveys show over the last decade there has been a progressive increase in wheat

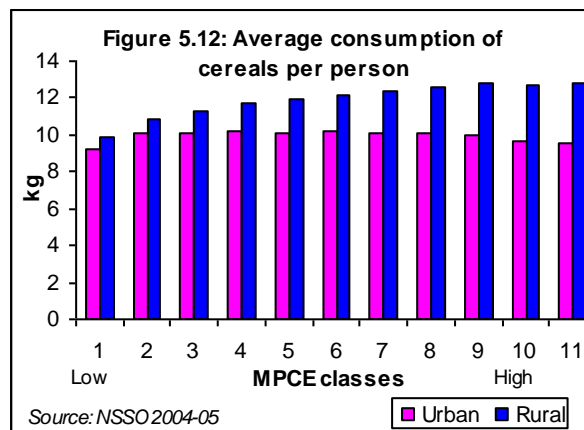
consumption and reduction in consumption of coarse cereals (Figures 5.10 and 5.11). It was seen that cereal consumption per person per month has declined from 13.4 kg to 12.1 kg (by nearly 10%) between 1993-94 and 2004-05 in rural India and from 10.6 kg to 9.9 kg in urban India (by 6-7%). Though rice and wheat, individually, experienced a fall in consumption per capita since 1993-94, the decline was less marked than for cereals as a whole. On the other hand, consumption of *jowar* and its



products appears to have dropped by over 40% in both rural and urban areas. In rural areas, consumption of *bajra* and its products, too, has fallen since 1993-94, the absolute fall in monthly per capita consumption being of the order of 0.1 kg (Figure 5.11).

Data from NSSO 61st round showed that even in 2004-05 urban population

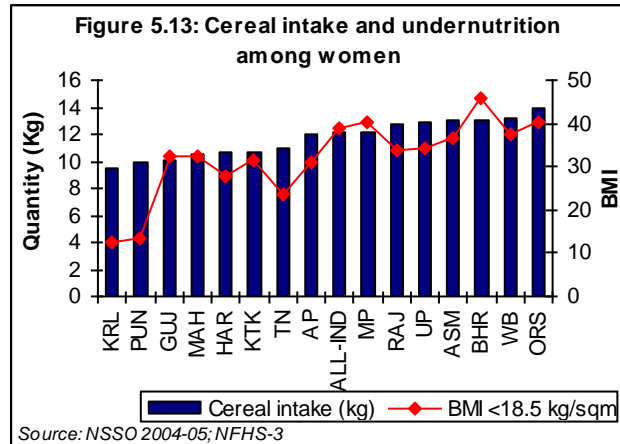
consumed less cereal than rural population (Figure 5.12). In rural areas, amount of cereals consumed increased with increase in income. In addition to higher consumption by the household members it is possible that higher “consumption” may be due to guests and servants sharing the food prepared at home in rural high income group families. Coarse cereals traditionally used in different regions can be provided to the BPL families at a subsidised cost through TPDS. This will encourage local production, procurement and distribution right in rural areas.



This may substantially bring down subsidy cost without any reduction in the calories provided. This will also improve targeting, as only the most needy are likely to buy these coarse grains. Millets are rich in micronutrients and hence their increased consumption will improve the micronutrient intake among the poorest segments of the population.

Interstate differences

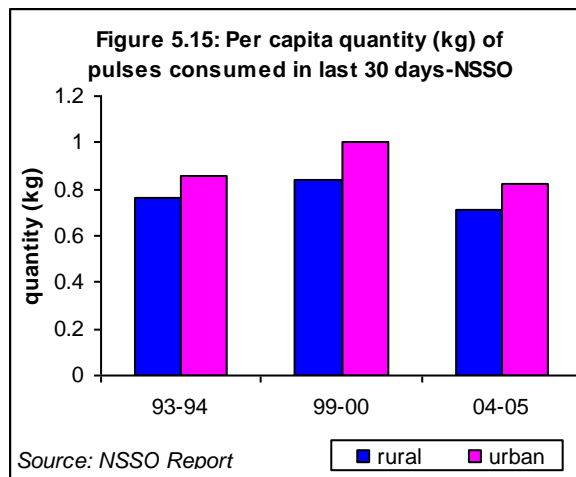
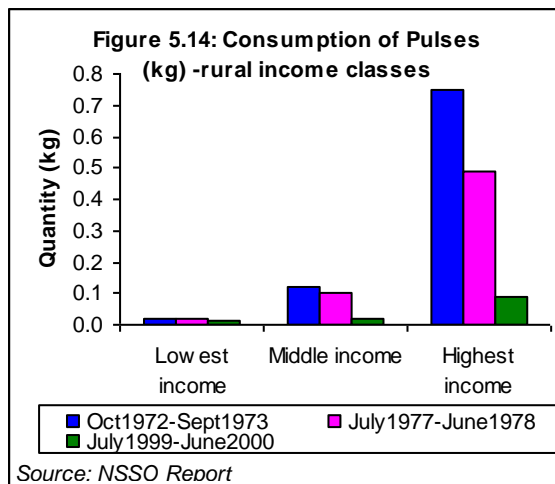
NSSO provides data on state wise consumption expenditure on foodstuffs (Annexure 5.3 and 5.4). Cereals remain to be the major sources of energy in adults both in urban and rural areas. The average per capita cereal consumption has decreased in all the states over the last ten years in both urban and rural areas (Annexure 5.5 & 5.6).



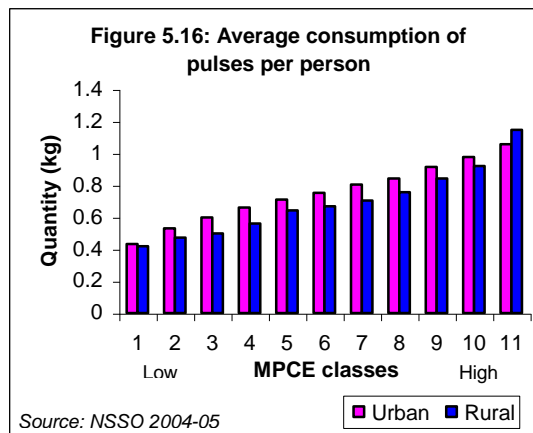
Cereal consumption as assessed by NSSO-2004-05 in different states along with data on undernutrition in women (by NFHS-III) is shown in (Figure 5.13). It is obvious that in states like Kerala with low cereal consumption and relatively low energy intake, under-nutrition rates are very low. In states like MP and Orissa, cereal consumption and intake of energy is high but undernutrition rates are also high. This is perhaps due to high energy expenditure among poor in these states among manual labour.

Pulses

Pulses are the major source of protein in the Indian diet especially in the lowest income group. In spite of increased expenditure on pulses, there is a decline in household “consumption” of pulses in all the income groups both in the urban

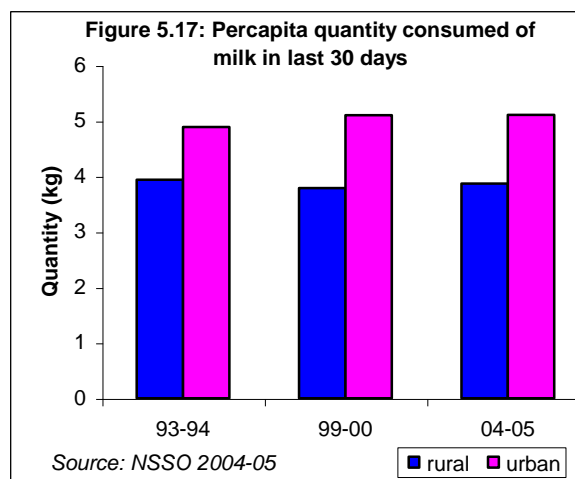


and rural areas (Figure 5.14 and 5.15). There was nearly a three fold difference in pulses consumption between income groups both in urban and rural areas in 2004-05 (Figure 5.16). In the lowest income group, this might be attributable to the steep increase in prices of pulses over the years. Data from NNMB survey also indicates that the pulse consumption, which has always been far below the RDI, has further declined over the years. In order to ensure adequate protein intake in this group, it is essential to invest in steps to increase cultivation of a wide variety of pulses, which could be made available at an affordable cost to the poorer segments of population, perhaps through PDS.



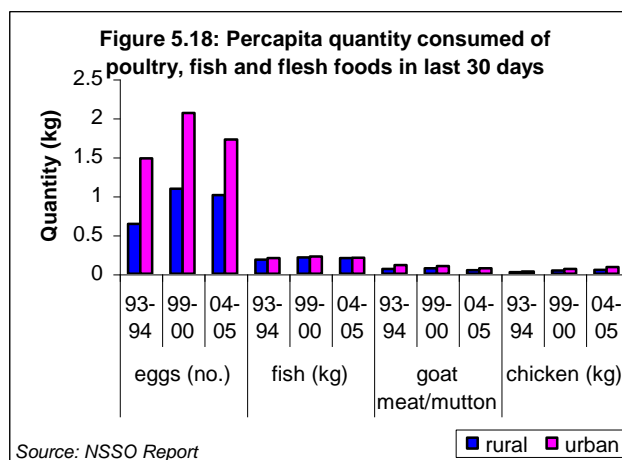
Milk and milk products

There was no change in per capita consumption of milk and milk products in the last ten years in both urban and rural areas (Figure 5.17). However, the percentage of households reporting milk consumption has grown in both rural and urban areas between 1993-94 and 2004-05 by 5 percentage points – 66% to 71% in rural areas and 80% to 85% in urban areas.



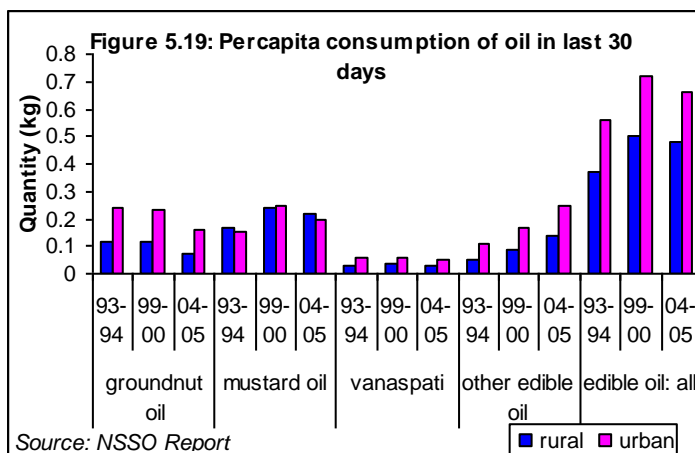
Poultry, Fish and meat

The consumption of eggs, fish, meat/mutton and chicken is higher in urban areas as compared to rural areas. The consumption of eggs has increased in the last ten years. Per capita egg consumption in rural India – about 1 egg per month in 2004-05 – has increased by nearly 60% since 1993-94 (Figure 5.18).



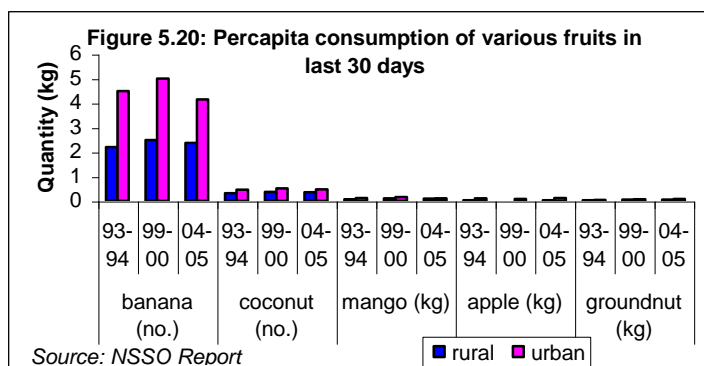
Edible oil

Per capita consumption of edible oil has risen over the last eleven years by as much as 30% in rural India and about 18% in urban India. In both rural and urban India, per capita consumption of oil other than groundnut oil, mustard oil, *vanaspati* and coconut oil has more than doubled. The newer oils such as sunflower oil, soyabean oil, other vegetable oil and rice bran oil are used along with traditionally used sesame, mustard, groundnut and coconut oil. The percentage of urban households using groundnut oil dropped in 2004-05 to 21%, one-half of what it was in 1993-94 (40%). Among rural households the percentage in 2004-05 fell to 14% from a 1993-94 level of 30% (Figure 5.19).



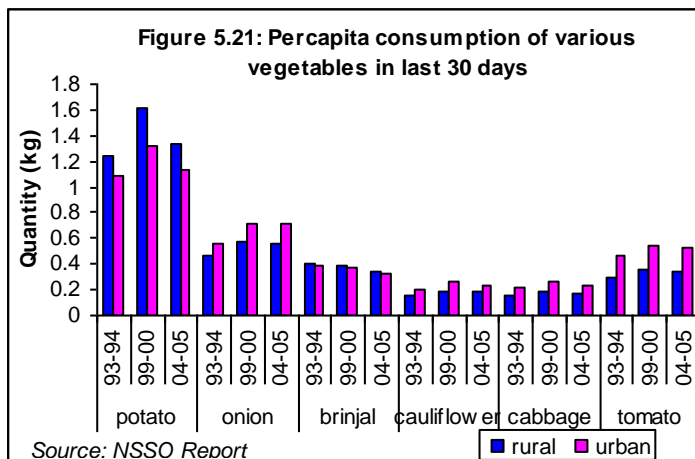
Fruits and nuts

There is no change in consumption of fruits in last 10 years in both urban and rural areas. The consumption of fruits is much higher in urban areas as compared to rural areas (Figure 5.20).



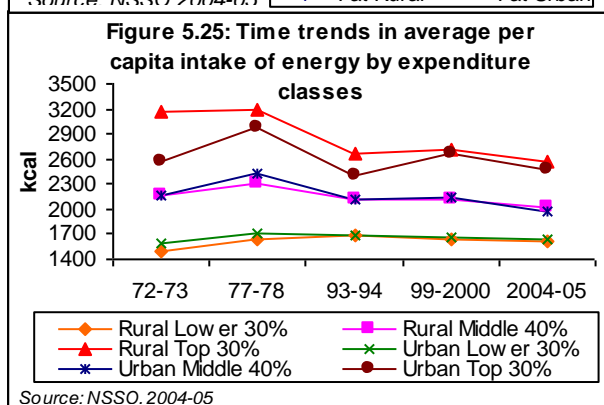
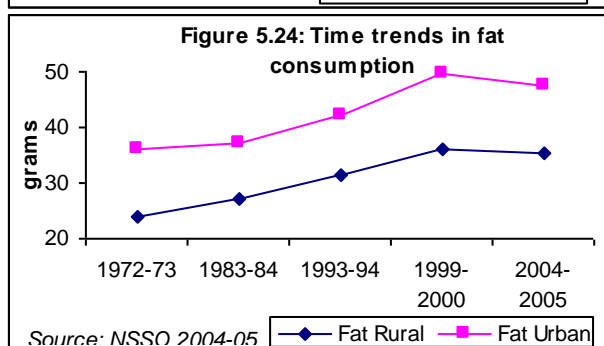
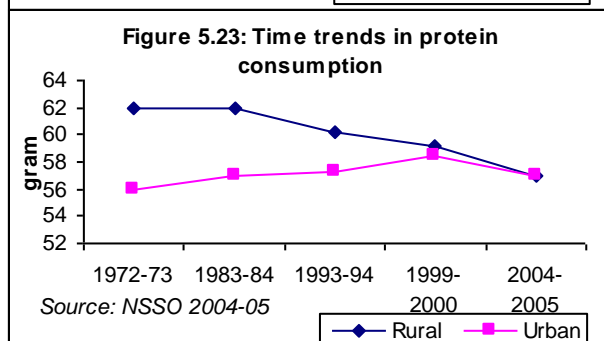
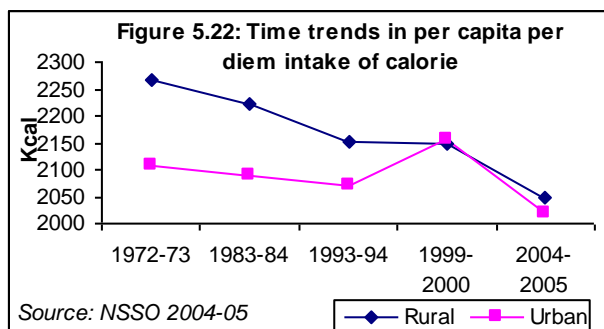
Vegetables

The consumption of potatoes is much higher than any other vegetables; consumption of potato is higher in rural areas. Potato consumption in urban and rural areas declined in 2004-05 as compared to 1999-2000. All other vegetables are consumed more in urban areas; there is not much change in the vegetable consumption in last 10 years. The percentage of households consuming a particular vegetable in a 30-day period has however improved in the eleven years after 1993-94 by 3-6 percentage points for potatoes, onions and brinjal, 8-10 percentage points for cabbages and nearly 12 percentage points for



cauliflowers and tomatoes in urban areas, and 15 percentage points for tomatoes in rural areas (Figure 5.21).

Nutrient intake computed from NSSO surveys



Poverty and lack of purchasing power have been identified as the two major factors responsible for the low dietary intake in India. The concern over the economic factors resulting in chronic under-nutrition led to the use of calorie intake as the basis of estimating poverty. Data from NSSO surveys (Figure 5.22, 5.23 and 5.24) indicate that over the last three decades the overall calorie and protein intake in rural areas has shown a small decline; dietary intake in urban areas has remained unaltered. However, when the data is analysed by income (Figure 5.25), the calorie intake has shown a small increase in both urban and rural poor and a decline among the urban and rural rich. In the urban areas, the variation in intake over the years is much smaller.

Interstate and urban rural differences in percapita calorie, protein and fat intake is given in Annexure 5.7 – 5.10. In spite of the fact that calorie intake has not increased, there is a rise in overnutrition; this is mainly because of changes in life style and consequent reduction in energy expenditure. Over the last three decades, there has been a substantial increase in the fat intake in both rural and urban areas. In view of adverse nutrition (obesity) and health (non communicable

diseases) implications of increased fat intake especially among the affluent group, this has to be curtailed through appropriate nutrition education. In view of the known massive interstate differences in the dietary intake and nutritional

status, it is important to analyse the state-wise data on intake and nutritional status and modify the interventions programmes to cope with the problems.

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