Poverty in India: The Rangarajan Method and the 2022–23 Household Consumption Survey

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Abstract: This paper examines data on poverty in India from the most recent Household Consumption and Expenditure Survey, who these data were released by the Government of India, reports and studies stated that the data showed a substantial decline in pove levels by using the method proposed by the Expert Group to Review the Methodology for the Measurement of Poverty chaired by D its report in 2014. Our results showed significantly higher levels of poverty in 2022–23 than previously suggested.

Keywords: Household Consumption and Expenditure Survey, consumption poverty, Consumer Price Index, rural poverty, urban pe adjustment, head-count ratio, India

The Context

The release of the Household Consumption and Expenditure Survey 2022–23 (HCES 2022–23) data by the Government of Ind poverty in India. There has been no official estimate of consumption poverty in India for any year after 2011–12.

In 2012, the head-count ratio of poverty in India was estimated to be 21.9 per cent, by applying a method to estimate poverty Review the Methodology for Estimation of Poverty chaired by Dr. Suresh Tendulkar in 2009 (hereafter Expert Group (20 Expenditure Survey 2011–12 (Press Information Bureau [PIB] 2013). When this computation of the poverty line came under cr of the Government of India appointed an Expert Group to Review the Methodology for the Measurement of Poverty chaired Expert Group (2014)), to "revisit" the methodology for the measurement of poverty (Swaminathan 2010; PIB 2013).

In its report submitted in June 2014, the Expert Group (2014) proposed an alternative method of calculating the poverty line (t later in this article), and estimated that the head-count ratio of poverty in India for 2011–12, using this method, was 29.5 per ce Government of India did not notify its official acceptance of this estimate.

Data from Consumer Expenditure Surveys (CES) carried out by the National Sample Survey Office (NSSO), that formed the ba exercises, have not been available for over a decade. A Consumer Expenditure Survey was conducted in 2017–18, but the findi quality" concerns (PIB 2019).

In this interim period, in the absence of official survey data, individual researchers' estimates of the head-count ratio of pove Himanshu (2022a), "shots in the dark."

A "factsheet" from the HCES 2022–23 data was released by the Government of India in February 2024, two months before elect the basis of this initial release, B. V. R. Subrahmanyam, the Chief Executive Officer of the Government of India's central think head-count ratio of poverty had come down to 5 per cent of the population (Dhoot 2024). Several others suggested that there poverty (Anant 2024; Natti 2024; Perumal 2024; Rajora 2024). Their method was to use the Consumer Price Index to adjus inflation and apply them to data from HCES 2022–23. Similarly, Rangarajan and Dev (2024) adjusted the Expert Group (2014) p Consumer Price Index and made a tentative estimate that 10.8 per cent of the population was below this poverty line in 2022–23

Other scholars have questioned these claims, mainly on the grounds that the HCES 2022–23 survey method was not comparable survey rounds and that other evidence on the economy did not corroborate the assertion of a steep decline in poverty (Anand 2 Jha 2024; Ghatak and Kumar 2024; Mehrotra and Kumar 2024).

This paper estimates a new poverty line from the HCES 2022–23 data by using the method proposed by Expert Group (2014) ra[...] poverty line for inflation.

Given the differences between the survey methods followed in CES 2011–12 (the last available official consumer expenditure su[...] 23, there are problems of comparability of data between the two, and we have not attempted an intertemporal study. Neverthe[...] poverty levels and a head-count ratio of poverty using HCES 2022–23 data, if only to evaluate the recent claims that this data re[...] of poverty in India.

SURVEY DIFFERENCES AND CHOICE OF METHOD

The question of comparability between CES 2011–12 and HCES 2022–23 has been the subject of much discussion since the rel[...] surveys aimed to capture the consumption pattern of a representative sample of the Indian population by canvassing inform[...] monetary value of expenditure for a list of items of consumption, we identified four major differences in survey method betwee[...] differences in terms of the items for which data were collected, though most items remain the same. The HCES 2022–23 survey[...] different millets (ragi, jowar, bajra, among others) while it disaggregated others. Unlike CES 2011–12, the new HCES 2022–23 al[...] such as free rice and free sugar supplied through the Public Distribution System. Secondly, the questionnaire employed by HC[...] follows a different order from CES 2011–12, and uses the computer-assisted personal interviewing (CAPI) technique as oppo[...] used in CES 2011–12. The third difference is in the number of visits per household. While CES 2011–12 had investigators visit [...] the data from that household, HCES 2022–23 involved three visits to each household to collect information regarding expendi[...] "durables" respectively. The fourth difference, which has received the most attention, is the change in sample design. HCES 2022[...] its sample design in two major ways. First, a portion of the rural sample is selected from villages within a 5 km distance from[...] selection criteria for the urban sample involves the ownership of non-commercial four-wheelers. Identifying the effects of th[...] expenditure data is beyond the scope of this paper. In our analysis, we have not reconciled these differences as we do not intend[...]

We have chosen the method proposed by Expert Group (2014) to estimate poverty from HCES 2022–23 data. The current official[...] Group (2009), was calculated on the basis of data from CES collected with a "mixed reference period" (Tendulkar *et al.* 2009). H[...] data using a "modified mixed reference period," making the meaningful estimation of poverty using this method unfeas[...] expenditure surveys typically ask respondents the quantity consumed and expenditure incurred for various items (such as milk,[...] past *n* days. In this case, *n* is the reference period, which can typically be 7 days, 30 days, or 365 days. The Expert Group (20[...] either 365 days or 30 days, with a 365-day recall period for low-frequency items such as clothing, footwear, and educational exp[...] other items. The HCES 2022–23 data contains a mix of three recall periods (for example, the recall period for milk consumption[...] and it is 365 days for most medical expenses). This makes it difficult to apply the Expert Group (2009) method to HCES 2022–23 [...]

The Expert Group (2014), however, proposed a method to estimate poverty that used a "modified mixed reference period" (R[...] poverty line derived by this method is higher than that derived via the method of the Expert Group (2009), it has its limi[...] Ramakumar 2014; Rangarajan and Dev 2015; Raveendran 2016). It has been argued (convincingly, we believe) that this me[...] poverty.

The Expert Group (2014) method constructs a poverty line based on three components: expenditure on food, expenditure on es[...] expenditures. The food component is based on nutritional norms. The essential non-food component is meant to be a normative[...] as being simply the median expenditure on these items (median expenditure could, of course, still be an insufficient level of expe[...] need). It is also of concern that health expenses are not considered essential. The "other expenditures" component is tied to t[...] assumes that a person that has met their food requirement is *ipso facto* capable of meeting "other expenditures." This, too, is an[...] for many persons.

Notwithstanding these criticisms, the Expert Group (2014) method can be considered the closest to an "official" method of calcu[...] We use this method to calculate, in the following section, a poverty line and poverty estimates from the HCES 22–23 data.

DATA, METHOD, AND RESULTS

We use the Household Consumption and Expenditure Survey 2022–23 (HCES 2022–23), the Periodic Labour Force Surve[nutrition intake norms prescribed by the Indian Council of Medical Research – National Institute of Nutrition in 2020 (ICMR poverty line using the Expert Group (2014) method. We repeat the same exercise with Consumer Expenditure Survey 2011–Unemployment Survey 2011–12 (EUS 2011–12), and older nutrition intake norms prescribed by ICMR – NIN (2010). The l comparison but for assessing the deviation between our estimation and the original results of the Expert Group (2014).

The Expert Group (2014) was of the view that the consumption basket that defines the poverty line should include a food question of adequate nourishment, a component that covers essential non-food items such as education, clothing, conveyance, a to address other "behaviourally determined" non-food expenditures. The method proposed by the Expert Group (2014) can average requirements for calories, proteins, and fats are calculated based on norms established by ICMR. These requirements and activity levels for rural and urban populations to determine the normative levels of nourishment. Next, a food basket that defined by identifying the consumption levels of individuals within specific fractile classes. The average monthly per capita con food for these classes is used to define the food component of the poverty line basket. Subsequently, the median expenditures on education, clothing, shelter, and conveyance are calculated. These values are treated as normative requirements for basic non-foc by the median fractile class on these items are added to the poverty line basket. Finally, other non-food expenditures observe nutritional requirements are added. The sum of these three components is the new poverty line, expressed in terms of MPCE. Th rural and urban areas. State-specific poverty lines are derived from these two lines using a relative Fisher Index, followed by the count ratios which are aggregated to arrive at the national head-count ratio for poverty (Rangarajan et al. 2014; Rangarajan and

We deviate from the Expert Group (2014) method in three main ways. First, we rely on ICMR – NIN 2020 norms for nutritic 2010 norms. Secondly, we use PLFS 2022–23 to estimate normative nutrition intake requirements, in place of a combination o used by the Expert Group (2014). This is because official age-wise population projections for rural and urban areas are not ava been carried out after 2011. Thirdly, we divided occupational groups into three activity levels – heavy, moderate, and sedentary 1, following Alagh et al. (1979), as the exact method used by Expert Group (2014) for such a classification was not available.[1]

Table 1 *Occupational groups, by levels of intensity of activity*

Activity Level	Occupational Sectors
Heavy	Cultivation, Agricultural labour, Mining and quarrying, Construction
Moderate	Livestock rearing, Forestry, Fishing, Hunting, Plantations and allied activities, Manufacturing and repairing
Sedentary	Trade and commerce, Transport, Storage, Communication and other allied services

Note: Non-workers are assigned the same nutritional requirements as those engaged in sedentary activity.
Source: Alagh et al. (1979, p. 6).

In order to estimate nutrient content in food items, we have used the nutrition chart prepared for CES 2011–12 by the *Nutrition* (NSSO 2014).[2] There are differences in food items collected in 2011–12 and 2022–23 as discussed earlier. We account for this b between items from the two periods.

The Indian Council of Medical Research prescribes normative requirements of calorie, protein, and fat for different age-sex-act NIN 2020). This is given in Table 2. First, we estimated the proportion of population in these categories using PLFS 2022–23 (T per capita nutrition requirements. We arrived at 2,120 kcal per day, 42 gm of protein per day, and 22 gm of fat per day for rura for urban areas are 1,963 kcal, 45 gm of protein, and 21gm of fat per day (Table 4). Next, we divided the estimated distribution into 20 fractile classes of MPCE, separately for rural and urban areas. We then calculated the average consumption of nutritic was captured by HCES 2022–23, for each fractile class. These values have been provided in Table 5. We aimed to find the fract estimated nutrition levels are met, allowing for a 10 per cent leeway in line with Expert Group (2014) that argues such a v adequacy.

Table 2 *ICMR Nutritional norms for different age groups, by sex and activity levels, India, 2022–23*

Categories			Nutritional Norms	
Age	Sex	Activity level	Energy (kcal/day)	Protein (gm/day)
Less than 1			610	9.3
1–3			1010	11.3
4–6			1360	15.9
7–9			1700	23.3
10–12			2140	32.3
13–14	Female		2400	43.2
13–14	Male		2860	44.9
Adult	Female	Heavy	2720	45.7
Adult	Female	Moderate	2130	45.7
Adult	Female	Sedentary	1660	45.7
Adult	Female	Non-Worker	1660	45.7
Adult	Male	Heavy	3470	54
Adult	Male	Moderate	2710	54
Adult	Male	Sedentary	2110	54
Adult	Male	Non-Worker	2110	54
Elderly	Female		1660	45.7
Elderly	Male		2110	54

Source: Indian Council for Medical Research – National Institute of Nutrition (2020).

Table 3 *Share of different age groups in the total population, by sex and activity levels, India, 2022–23* in per cent

Categories			Share of the age group in the pop
Age	Sex	Activity level	Rural
Less than 1			1.09
1–3			4.85
4–6			7.14
7–9			5.65
10–12			6.31
13–14	Female		1.81
13–14	Male		1.96
Adult	Female	Heavy	5.91
Adult	Female	Moderate	2.63
Adult	Female	Sedentary	1.39
Adult	Female	Non-Worker	20.3
Adult	Male	Heavy	14.45
Adult	Male	Moderate	3.92

Categories			Share of the age group in the pop
Age	Sex	Activity level	Rural
Adult	Male	Sedentary	5.98
Adult	Male	Non-Worker	6.35
Elderly	Female		4.88
Elderly	Male		4.88

Source: Authors' calculations based on NSSO (2023).

Table 4 *Estimated per capita nutritional norms, India, 2022–23*

Nutritional Norm
Energy requirement (kcal/day)
Protein requirement (gm/day)
Fat requirement (gm/day)
90 per cent of energy requirement (kcal/day)
90 per cent of protein requirement (gm/day)
90 per cent of fat requirement (gm/day)

Note: Expert Group (2014) argued that a deviation of 10 per cent will not affect nutrition adequacy and identified the section that met the lower bound
Source: Tables 2 and 3.

Table 5 *Estimated per capita consumption of specific nutrients, by fractile groups of monthly per capita expenditure, India, 2022*

Fractile Group of MPCE (in per cent)	Energy (kcal/day)		Protein (gm/day)	
	Rural	Urban	Rural	Urban
0–5	1558	1601	**41**	**44**
5–10	1756	1761	47	49
10–15	1849	**1854**	50	51
15–20	1907	1907	52	53
20–25	**1976**	1961	53	54
25–30	2024	1999	55	55
30–35	2054	2024	56	56
35–40	2109	2079	58	58
40–45	2134	2120	58	59
45–50	2180	2163	60	60
50–55	2218	2188	61	61
55–60	2247	2246	62	62
60–65	2311	2267	64	63
65–70	2330	2349	64	65
70–75	2386	2384	66	66
75–80	2444	2450	68	68

Fractile Group of MPCE (in per cent)	Energy (kcal/day)		Protein (gm/day)	
	Rural	Urban	Rural	Urban
80–85	2491	2541	69	70
85–90	2568	2675	71	74
90–95	2726	2828	76	78
95–100	3095	3488	86	93

Note: MPCE stands for Monthly Per Capita Expenditure.

Source: Authors' calculations based on NSSO (2024).

We then estimated the average per capita expenditure on food items, essential non-food items (namely education, clothing, she non-food items for each fractile class. This is shown in Table 6. The Expert Group (2014) method defines the poverty line as th non-food items of the median (45–50th) fractile, the expenditure on food items by the fractile that meets the nutrition norms, a food items by the same fractile that meets the nutrition norms. This line is calculated separately for rural and urban areas.

Table 6 *Estimated per capita expenditure on consumption categories, by fractile groups of monthly per capita expenditure, 2022*

Fractile Group of MPCE (in per cent)	Food		Essential Non-Food	
	Rural	Urban	Rural	Urban
0–5	744	1023	178	300
5–10	956	1288	241	431
10–15	1073	**1450**	280	520
15–20	1166	1589	311	621
20–25	**1248**	1698	338	686
25–30	1330	1799	364	773
30–35	1404	1905	391	852
35–40	1466	2015	422	949
40–45	1534	2130	458	1050
45–50	1610	2235	**480**	**1167**
50–55	1675	2334	519	1284
55–60	1751	2458	565	1394
60–65	1847	2559	603	1559
65–70	1917	2726	667	1747
70–75	2026	2876	723	1947
75–80	2143	3078	802	2176
80–85	2276	3310	906	2552
85–90	2459	3686	1044	2925
90–95	2757	4211	1277	3675
95–100	3617	6226	2166	6430

Note: Essential non-food comprises education, clothing, shelter, and conveyance expenses.

Source: Authors' calculations based on NSSO (2024).

Results

Our first result is the construction of two new poverty lines for 2022–23: Rs 2,515 per capita per month for rural areas and Rs
bounds of nutrition norms were met by the fifth fractile class in rural areas and the third fractile class in urban areas.

Next, State-specific poverty lines were derived based on a relative Fisher Index for each State. We have used the method for calc
by Expert Group (2009), which was also the method adopted by the Expert Group (2014). Based on the Fisher Index for each St
adjusted to define State-specific poverty lines. The set of State-specific poverty lines for 2022–23 is shown in Appendix Table 1.

Finally, we estimate the all-India head-count ratio of poverty as the weighted sum of State-specific head-count ratios based on S
done separately for rural and urban areas. We estimate a rural head-count ratio of 27.4 per cent, an urban head-count ratio of 2
count ratio of 26.4 per cent.

We repeated the same exercise using the Consumer Expenditure Survey 2011–12, Employment Unemployment Survey 2011–12
assess the deviation between our approach and that of the Expert Group (2014). The average per capita nutritional requireme
slightly from those of the Expert Group (2014).[4] The expenditures for the three components for each fractile class align exactl
Group (2014), allowing us to derive the same poverty line if we used the fractile classes that they identified. However, there w
nutritional intakes for the fractile classes. While we were able to match our figures with those provided in the NSSO report
2011–12, based on the same data, these values deviated from the calculations made by the Expert Group (2014). This sugges
nutritional intake employed by the Expert Group (2014) deviates from the method employed by NSSO. As a result, our a
nutritional norms are met by a higher fractile class than what was identified by the Expert Group (2014). This resulted in a hig
and in turn, a higher HCR of poverty in 2011–12 as well. The corresponding tables have been provided as Appendix Tables 2 to
from the discussion in this section have been presented in Table 7 along with the inflation adjusted poverty lines and correspond

Table 7 *Poverty lines and corresponding head-count ratios from various estimations based on the Expert Group (2014) method i*
and per cent

Source of Estimation	Poverty Line		
	Rural	Urban	Rural
Expert Group estimates, 2011–12	972	1407	30.9
Authors' estimates, 2011–12	972	1502	31.3
Inflation-adjusted estimates, 2022–23	1837	2603	12.3
Authors' estimates, 2022–23	2515	3639	27.4

Source: Expert Group (2014) and inflation-adjusted estimates from Rangarajan and Dev (2024).

Although our method largely followed the original method of the Expert Group (2014), we computed a head-count ratio of 31.
the 29.5 per cent estimated by the Expert Group (2014).

DISCUSSION AND CONCLUDING REMARKS

This paper applies the method proposed by the Expert Group to Review the Methodology for the Measurement of Poverty, chai
Group 2014), to data from Household Consumption and Expenditure Survey 2022–23 (HCES 22–23) in order to estimate a pov
of poverty from these data.

Our results indicate that more than a quarter of all households in India have a monthly per capita expenditure that is below
head-count ratio of rural poverty (27.4 per cent) is higher than the head-count ratio of urban poverty (23.7 per cent).

Further enquiry into the reasons for high poverty levels in 2022–23 is the subject of our current research and will be dealt wi
present, we note that the per capita energy consumption across quartiles of monthly per capita expenditure stagnated between (

and, in fact, declined by 2.6 per cent for the poorest quartile in rural India.[5]

The method of adjusting a prior poverty line using Consumer Price Index is inaccurate for at least two major reasons. Fir calculated using outdated base weights for items in the consumption baskets. In the absence of new consumption expenditure updated for more than a decade. The weights assigned to items in the basket represent the estimated consumption pattern, whi long period of time (Ramakumar 2014). A second and more important reason is that the Consumer Price Index, as apparent here to track poverty. The consumption pattern of and prices experienced by the people below the poverty line differ from the co experienced by the people above the poverty line.

Thus, our estimates are higher than the provisional head-count ratio of 10.8 for 2022–23 reported by Rangarajan and Dev (2024 12 poverty line of the Expert Group (2014) using the Consumer Price Index. It is also higher than estimates of poverty head-co 2024; Perumal 2024; Natti 2024; Rajora 2024). These were also obtained by adjusting the official poverty line (taken from the r chaired by Dr. Suresh Tendulkar) to current data.

Our results are also to be read in the context of evidence from research on rural wages, incomes of agricultural households, and t that there has not been a substantial growth in incomes for the rural poor. Data from the Situation Assessment Surveys of Ag and 2018–19 suggest that the average monthly incomes for agricultural households grew at 2.44 per cent per annum between 10,218 at constant prices (Bakshi 2021). Analysing data from two sources of wage rates from the Government of India – the W Periodic Labour Force Surveys – Das and Usami (2023) find that real wage rates in India stagnated between 2014–15 and 2022– new Annual Survey of Unincorporated Sector Enterprises indicates a struggling informal sector with declining number of enter and Drèze 2024; Mohanan and Kundu 2024). Additionally, wages in the lower rung of the formal economy, such as daily earn observed by Singh (2024) to have grown only by 0.6 per cent per annum between 2002–03 and 2021–22 at constant prices, based Survey of Industries.

Our calculations show that more than a quarter of India's population falls below the poverty line constructed using the method note that the method that we use is one that is likely to underestimate poverty rather than overestimate it (Ramakumar 2014). urgent and important problem in India.

NOTES

1 This has also been observed by Raveendran (2016).▲

2 This chart is prepared based on Indian Food Consumption Tables published by the Indian Council of Medical Research – National Institute of Nutri Tables have been used in India; these were published in 1937, 1951, 1971, 1989, and 2017 respectively. The data in the chart we use are based on the 19 one available.▲

3 Shelter includes house rent and bedding expenses.▲

4 The Expert Group (2014) used a combination of Census 2011 and EUS 2011–12 data for this. We have used only EUS 2011–12 to make it consistent

5 Appendix Tables 7, 8, and 9 provide some preliminary information. The per capita energy consumption across quartiles of monthly per capita exper 2011–12 and 2022–23. Appendix Tables 8 and 9 show consumption disparities between lower and upper quartiles. ▲

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APPENDIX

Appendix Table 1 *State-wise poverty lines, 2022–23* in rupees per month

State/Union Territory
All India
Andaman and Nicobar Islands (U. T.)
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chandigarh (U. T.)
Chhattisgarh
Dadra and Nagar Haveli and Daman and Diu
Delhi
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu and Kashmir
Jharkhand
Karnataka
Kerala
Ladakh (U. T.)
Lakshadweep (U. T.)
Madhya Pradesh

State/Union Territory
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Puducherry (U. T.)
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttar Pradesh
Uttarakhand
West Bengal

Source: Authors' calculations from NSSO (2024).

Appendix Table 2 *ICMR nutritional norms for sections of the population and their estimated share in the popul*

Categories			Estimated Population Share		ICMR Nutritional N	
Age	Sex	Activity level	Rural	Urban	Energy (kcal/day)	Protein
Less than 1			1.3	1.1	585	1
1–3			5.49	4.59	1060	1
4–6			6.57	5.02	1350	2
7–9			6.29	5.19	1690	2
10–12			7.52	6.22	2100	4
13–14	Female		1.97	1.78	2330	5
13–14	Male		2.31	2.07	2750	5
Adult	Female	Heavy	5.7	0.6	2850	5
Adult	Female	Moderate	1.31	1.68	2230	5
Adult	Female	Sedentary	22.06	26.08	1900	5
Adult	Female	Non-Worker	0.84	3.43	1900	5
Adult	Male	Heavy	16.77	4.08	3490	6
Adult	Male	Moderate	2.97	6.5	2730	6
Adult	Male	Sedentary	5.83	7.58	2320	6
Adult	Male	Non-Worker	4.85	16.03	2320	6

Categories			Estimated Population Share		ICMR Nutritional N	
Age	Sex	Activity level	Rural	Urban	Energy (kcal/day)	Protein
Elderly	Female		4.12	4.12	1900	5
Elderly	Male		4.11	3.93	2320	(

Source: Authors' calculations based on NSSO (2023).

Appendix Table 3 *Estimated per capita nutritional norms, 2011−12*

Nutritional Norm
Energy requirement (kcal/day)
Protein requirement (gm/day)
Fat requirement (gm/day)
90 per cent of energy requirement (kcal/day)
90 per cent of protein requirement (gm/day)
90 per cent of fat requirement (gm/day)

Note: Expert Group (2014) argued that a deviation of 10 per cent will not affect nutrition adequacy and identified the section that met the lower bound
Source: Appendix Table 2a.

Appendix Table 4 *Estimated consumption of specific nutrients by fractile groups of monthly per capita expendi*

Fractile Group of MPCE (in per cent)	Energy (kcal/day)		Protein (gm/day)	
	Rural	Urban	Rural	Urba
0−5	1634	1638	43	44
5−10	1815	1756	**48**	**48**
10−15	1904	1838	51	50
15−20	1964	1872	52	51
20−25	1979	**1915**	53	53
25−30	**2039**	1969	55	54
30−35	2080	2033	56	55
35−40	2087	2050	56	57
40−45	2147	2104	58	57
45−50	2168	2130	59	58
50−55	2220	2167	60	59
55−60	2236	2231	61	61
60−65	2268	2244	62	62
65−70	2313	2286	63	63
70−75	2362	2389	64	65
75−80	2436	2431	67	67
80−85	2526	2491	70	68
85−90	2554	2586	71	71

Fractile Group of MPCE (in per cent)	Energy (kcal/day)		Protein (gm/day)	
	Rural	Urban	Rural	Urban
90–95	2667	2805	74	77
95–100	3263	3190	91	86

Source: Authors' calculations based on NSSO (2013b).

Appendix Table 5 *Estimated expenditure on consumption categories by fractile groups of monthly per capita ex* rupees per month

Fractile Group of MPCE (in per cent)	Food		Essential Non-Food	
	Rural	Urban	Rural	Urban
0–5	316	415	54	83
5–10	401	533	71	112
10–15	452	600	80	144
15–20	493	656	88	181
20–25	516	**713**	99	204
25–30	**554**	769	102	242
30–35	586	822	111	271
35–40	612	889	120	310
40–45	640	919	132	364
45–50	678	977	**141**	**407**
50–55	710	1019	149	447
55–60	733	1096	166	507
60–65	775	1156	182	549
65–70	814	1210	195	634
70–75	861	1302	218	726
75–80	922	1384	241	831
80–85	1002	1504	279	968
85–90	1077	1650	340	1161
90–95	1216	1946	442	1592
95–100	1771	2859	834	3434

Source: Authors' calculations based on NSSO (2013b).

Appendix Table 6 *State-wise poverty lines, 2011–12* in rupees per month

State/Union Territory	Rural
All India	972
Andaman and Nicobar Islands (U. T.)	1229
Andhra Pradesh	1036
Arunachal Pradesh	1132

State/Union Territory	Rural
Assam	102?
Bihar	976
Chandigarh (U. T.)	1209
Chhattisgarh	897
Dadra and Nagar Haveli	1005
Daman and Diu	1206
Delhi	135?
Goa	1166
Gujarat	1134
Haryana	1137
Himachal Pradesh	985
Jammu and Kashmir	982
Jharkhand	940
Karnataka	921
Kerala	1031
Lakshadweep (U. T.)	1166
Madhya Pradesh	946
Maharashtra	1084
Manipur	1285
Meghalaya	1124
Mizoram	1159
Nagaland	1279
Odisha	878
Puducherry (U. T.)	1070
Punjab	1148
Rajasthan	1059
Sikkim	1090
Tamil Nadu	989
Tripura	912
Uttar Pradesh	918
Uttarakhand	984
West Bengal	971

Source: Authors' calculations based on NSSO (2013b).

Appendix Table 7 *Consumption of energy per capita by quartiles of monthly per capita expenditure, 2011–12 a*

Quartiles of MPCE (in per cent)	Rural

Quartiles of MPCE (in per cent)	2011−12	2022−23	% Change	2011−12
0−25	1859	1811	−2.6%	1804
25−50	2104	2105	0.0%	2057
50−75	2279	2305	1.1%	2264
75−100	2690	2676	−0.5%	2701

Note: MPCE stands for Monthly Per Capita Expenditure.

Source: Authors' calculations based on NSSO (2024) and NSSO (2013b).

Appendix Table 8 *Per capita expenditure on non-food items by quartiles of monthly per capita expenditure, 201* per month

| Quartiles of MPCE (in per cent) | Rural | | | |
	2011−12	2022−23	% Change	2011−12
0−25	290	913	214%	446
25−50	434	1383	219%	815
50−75	614	1951	218%	1317
75−100	1355	3846	184%	3458

Note: MPCE stands for Monthly Per Capita Expenditure.

Source: Authors' calculations based on NSSO (2024) and NSSO (2013b).

Appendix Table 9 *Per capita consumption of fats per calorie by quartiles of monthly per capita expenditure, 201* per day

| Quartiles of MPCE (in per cent) | Rural | | | |
	2011−12	2022−23	% Change	2011−12
0−25	0.015	0.022	45.5%	0.020
25−50	0.019	0.025	32.7%	0.025
50−75	0.021	0.027	24.2%	0.028
75−100	0.025	0.029	15.5%	0.030

Note: MPCE stands for Monthly Per Capita Expenditure.

Source: Authors' calculations based on NSSO (2024) and NSSO (2013b).