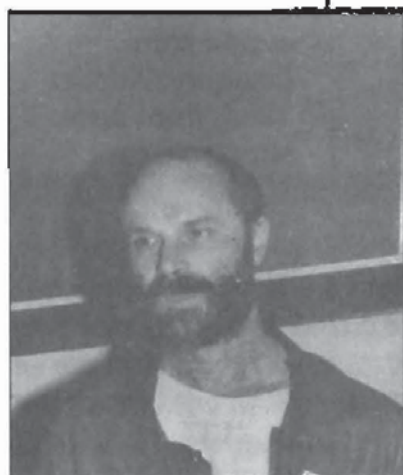


# Inflation: what counts?

INFLATION



ROB REES and

NEVA

SEIDMAN

MAKGETLA

challenge the

way inflation is

calculated in

South Africa.

They show that

South African

workers are worse

off than previously

thought.

**I**N 1994, the official consumer inflation rate, as measured by the Consumer Price Index (CPI), ran at 9%. Union

members argued, however, that in their experience these figures were too low. Our research finds that in 1994, the official inflation rate understates the actual increase in prices for the low-income group by up to 3,5% a year. Moreover, the official figures underestimated inflation for at least four of the past five years.

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**Calculating inflation**

The CPI measures the change in the level of prices experienced by the average consumer. It gives the ratio between the price levels in specific years, while the inflation rate gives the percentage rate of change over a given period.

The question becomes: given figures on price changes for individual goods, how do we estimate the overall inflation rate? The Central Statistical Services (CSS) uses surveys of household expenditure to estimate the share in total expenditure by expenditure category. It then weights price changes — derived from price surveys — for the different categories according to these weights. Table 1 illustrates the process for the low-income CPI for 1994. We have combined the expenditure weights into five major categories.

**Table 1. Calculating the low-income CPI for August 1994 (1990=100)**

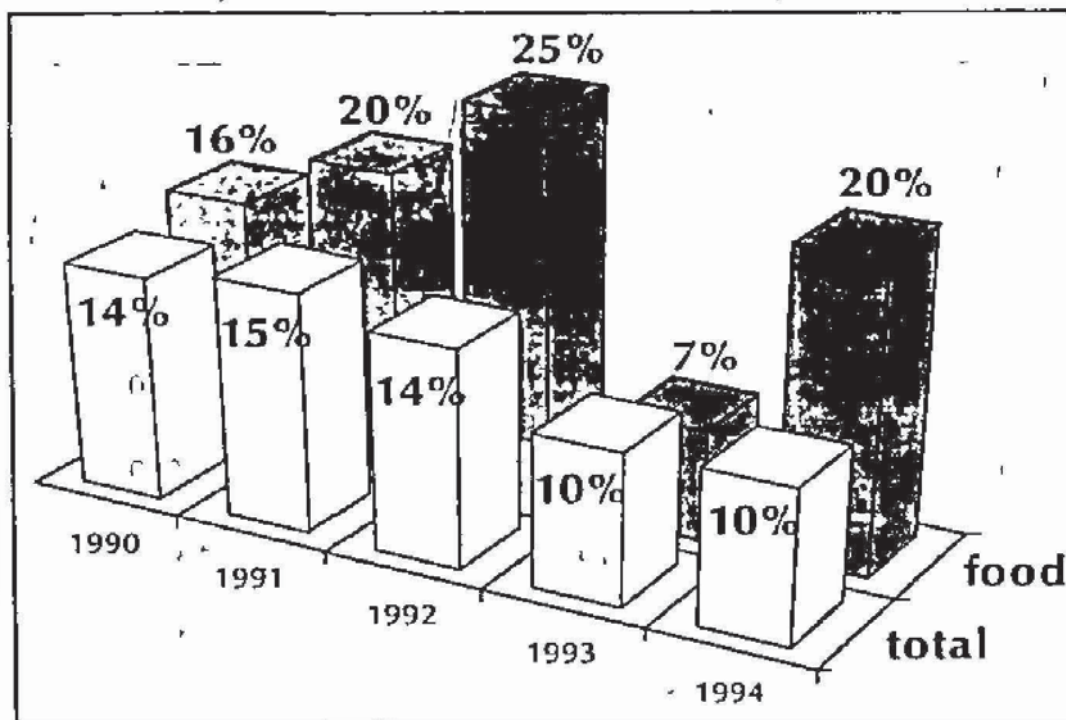
	CSS low-income weights, from 1990 expenditure survey (A)	Price index by expenditure category, August 1994, from price surveys (B)	Calculation of CPI (A x B)
Food	0,25	190	48
Housing	0,16	114	18
Clothing and footwear	0,11	137	15
Transport	0,09	170	15
Other	0,39	166	64
<b>Total</b>	<b>1,00</b>		<b>160</b>

The structure of household spending varies substantially with income. Where price changes differ greatly for the different categories of consumer goods, then, inflation may diverge for different income groups. The CSS expenditure survey therefore divides households according to income level, as well as race. On this basis, it estimates how high, middle and low income households experience inflation.

**How much do the poor spend on food?**

Since 1990, food prices have risen 90%, compared to 60% for all other goods (See Table 2). The CSS has consistently underestimated the share of food in spending by poor households. As a result, its CPI figures for the low-income group understate the actual inflation rate.

Table 2. Increases in food prices compared to consumer inflation

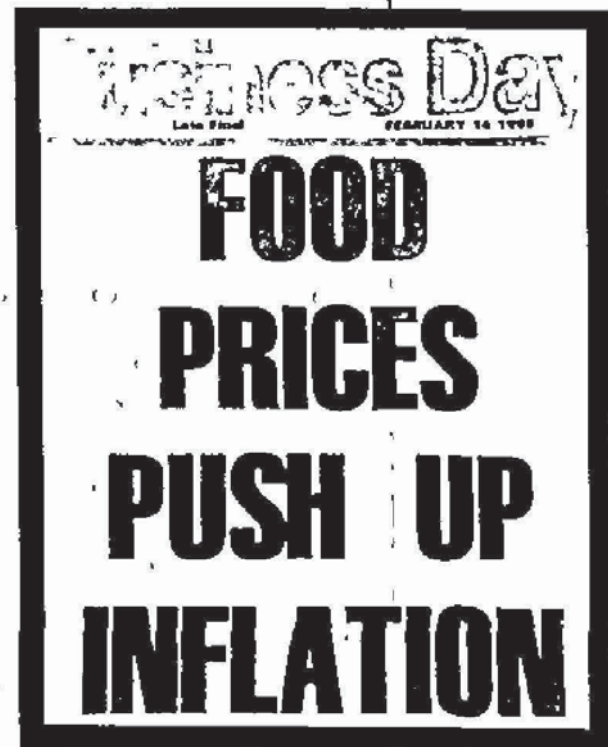


In the Third World, food typically takes up between a third and two thirds of household spending (World Bank 1990, p196, quoted in Unisa, 1993, p25). In South Africa, the recent SALDRU poverty study found African households as a whole spend around 50% of their income on food. A survey by Unisa's Bureau of Market Research in 1991 says food accounted for 43% of spending by the low-income group.

In contrast, the CSS gave food a weight of only 25% for the low-income group. Its figure is low because it effectively includes a large number of middle-income households in the low-income category. As the share of food in expenditure falls at higher income levels, this practice ensures a substantial reduction in the food weighting reported for the low-income group.

#### Specifically:

First, the CSS did not use total income to categorise households, so it included some middle-income households in the low-income group. It categorised households by regular income — wages, pensions, and so on. But white households in the lower categories received other kinds of income. As a result, their total expenditure far exceeded the low-income group — and food was a far lower share (Table 3). For low-income African households in the CSS survey, the share of food in total spending came to 33%.



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Table 3. Average annual income of white and African households in 1990 rands, according to CSS expenditure survey.

AVERAGE INCOME		
Income groups	White households	African households
0-3,999	20,520	3,330
4,000-5,999	9,150	5,570
6,000-9,999	11,700	8,560
10,000-15,999	19,210	13,100
16,000-24,999	25,640	20,660
25,000-39,999	41,380	32,530
40,000-59,999	57,880	50,300
60,000-99,999	87,970	78,740
100,000 and over	180,250	191,830

● Source: CSS, 1991, Table 1, Figures rounded off to nearest R10.

Second, the CSS defined a fairly high income level as the maximum for its low-income group. It set a sum of around R2 000 a month in 1995 Rand — more than the earnings of over four fifths of African households, according to SALDRU's survey (SALDRU 1995, p.326). A more realistic designation of low-income households — say, around R500 a month — would cover a third of the population. At R500 a month, according to the CSS survey, the share of food in expenditure rises to 38%.

The relatively high income levels defined for the nominally low-income group essentially reflect the CSS's historic failure to include the black community in its data. Expenditure surveys included Africans for the first time in 1990. But the CSS continued to define poor in terms of white household incomes, which averaged ten times as high as black households incomes (CSS, 1991, Table 1).

Finally, in the CSS sample, almost a third of respondents lived in single-sex hostels. Support for relatives accounted for close to 10% of household spending by Africans in the survey. If that sum had been broken down according to expenditure categories, the relative weighting of,

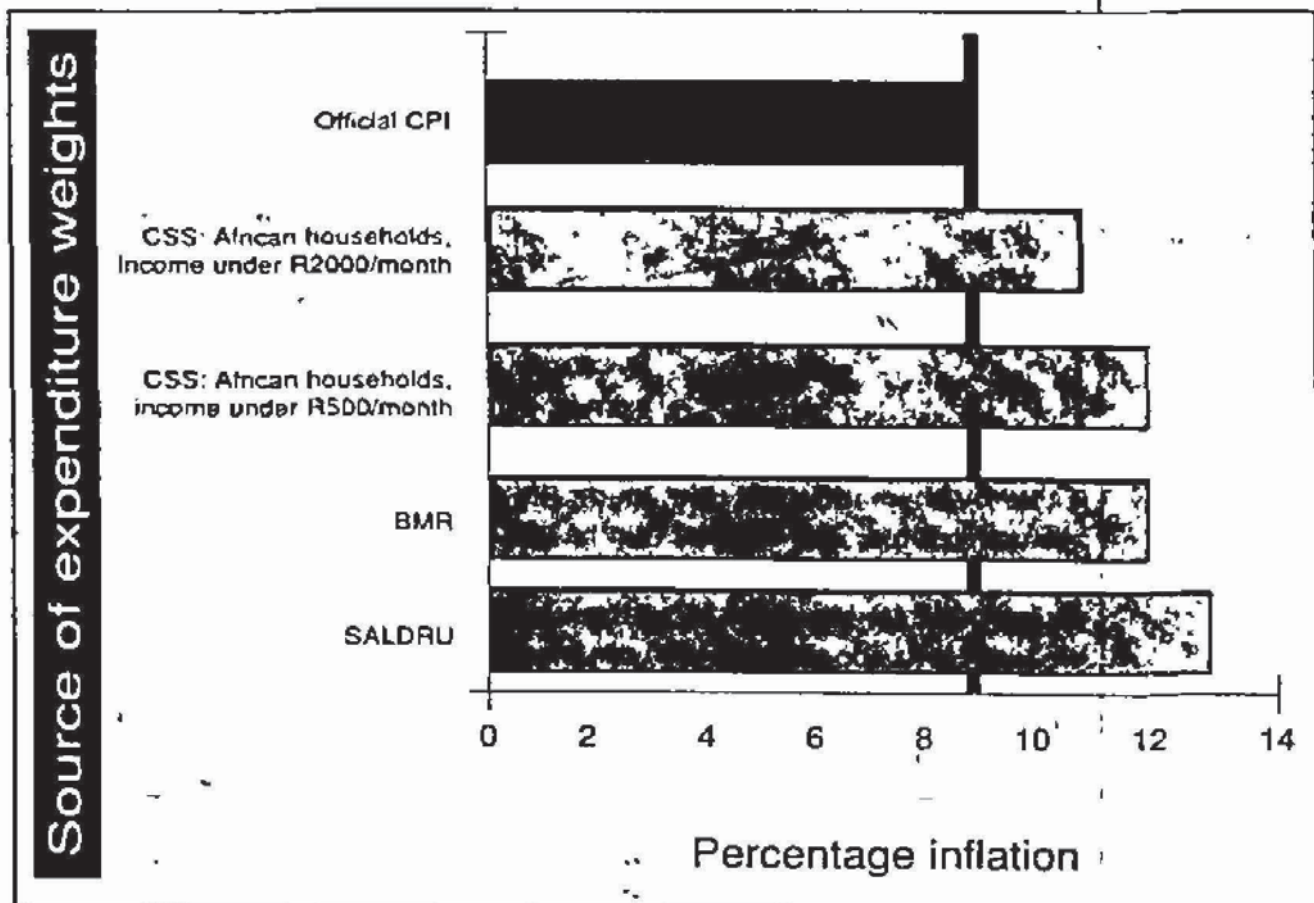
food would have risen. Surveys show that up to 45% of remittances to the rural areas go for food (BMR 1994a, pp59 and 63). But the CSS treated migrants as single-person households, with a higher income per person and proportionately lower spending on food.

To illustrate the importance of the CSS' low weight for food, Table 4 shows inflation rates calculated using

- other expenditure surveys, and
- the CSS figures on African households earning under R20 000 a month and R6 000 a month.

Because the surveys use slightly different categories of expenditure, however, these figures serve only to portray the discrepancy, rather than providing realistic estimates of inflation.

Table 4. Alternative estimates of inflation for the year to August 1994



Note: All figures in 1994 rand.

### The composite index

The composite CPI, the figure most often used to reflect overall inflation, serves particularly poorly as a presentation of inflation as experienced by most South Africans. Again, the problem lies in the weightings. The CSS, following European practice, weights the composite CPI according to the share of each income group in total expenditure, and not according to the number of households in each group.

The CSS approach works reasonably well where the majority of both

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income and households lie in the middle-income group. But South Africa probably suffers the most unequal income distribution in the world. The rich therefore account for an unusually high share of total expenditure. In consequence, the low-income CPI has little impact on the total, even though it represents inflation for the vast majority of households. Table 5 shows the difference in the share of income groups in the population and in total expenditure.

**Table 5. Share of households classified low income in total expenditure and in population, according to CSS expenditure surveys**

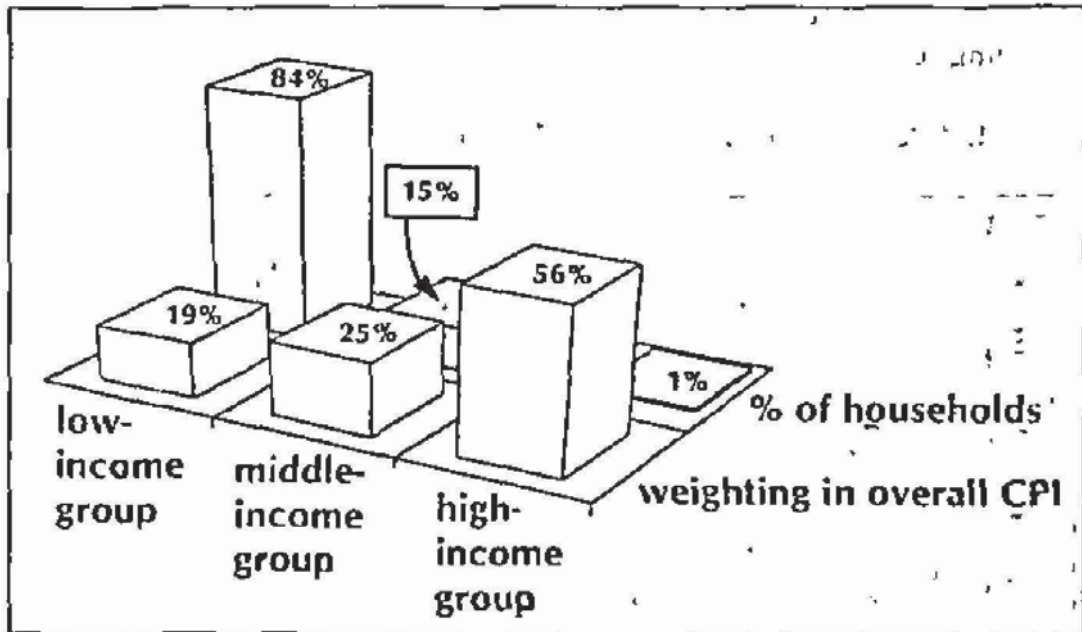
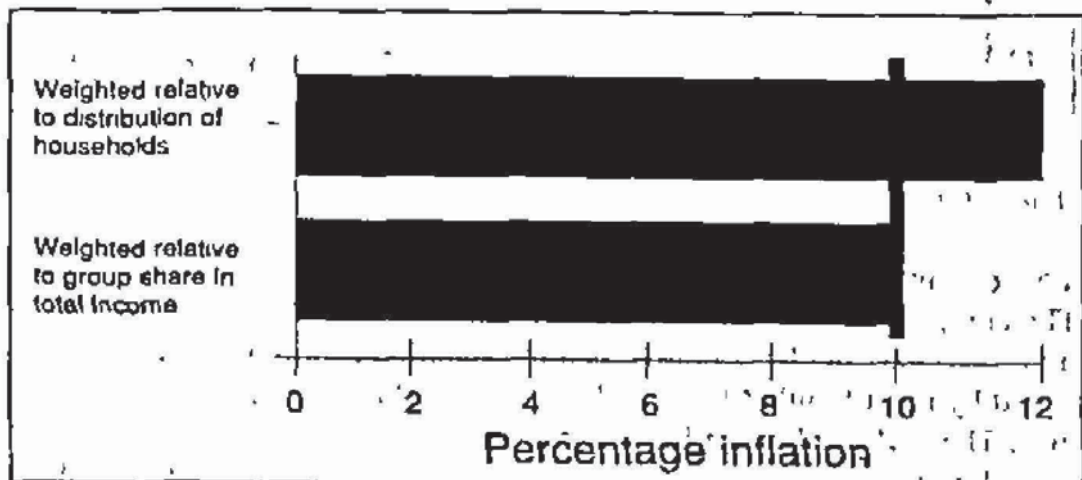


Table 6 shows inflation rates using the CSS weights for the different income groups, and weights that reflect the share of the different income groups in households nation-wide. Because of the inappropriate classification of white households, as discussed above, in the low-income group we used inflation calculated for African households only.

**Table 6. Estimates of composite CPI with alternative weighting systems (a)**



a. The figures for the low-income CPI are calculated using weights from the CSS 1990 expenditure survey for the African low-income group only.

### **How good are the surveys?**

A number of problems emerged with the expenditure and price surveys that feed into the CPI.

#### ***Urban bias***

The CPI uses expenditure surveys of the metropolitan areas only. We do not, then, know the inflation rate for smaller towns and rural areas. But the majority of the very poor live in the countryside. According to SALDRU, the average rural household spent 55% of its budget on food, compared to 45% in the metropolises (SALDRU 1994, p236). Inflation, then, should run higher for them — but the CPI won't tell us.

#### ***Household types***

Hostel-dwellers, informal settlements and township residents have very different spending patterns. An accurate expenditure sample must allocate respondents appropriately between these groups. In the event, the 1990 household expenditure survey included in the sample of Africans (CSS 1990, p13):

- 55% in formal housing
- 31% in hostels
- 8% in shacks

Estimates of the proportion of the African population living in the metropolitan areas in informal settlements in the early 1990s range from 50% (SAIRR, 1993) to over 30% (SALDRU 1994, p68; DBSA, 1994, p23). The SALDRU study found that only 7% of metropolitan households lived in hostels (SALDRU 1994, p68).

#### ***Rent and service boycotts***

At the time of the survey in 1990, the CSS assumed that rent and service boycotts were a passing phenomenon. Instead of finding out how much the affected households actually spent in these categories, interviewers asked respondents to estimate how much they would spend if there was no boycott.

This method means that the CPI will not capture the cost of ending the boycotts to low-income households.

#### ***Price monitoring***

The CSS monitors most prices, not by sending inspectors to shops, but by mailing some 6 000 questionnaires to outlets in large and small towns. This approach automatically rules out informal sellers, whether on street corners or in spaza shops, as well as most cafes. Moreover, the quality of the data depends on the willingness of the seller to fill out the form. The effects on the CPI depend on whether the rate of change differs for various retailers.

#### ***Conclusion***

Published data do not permit the calculation of a more accurate inflation rate. Still, these findings have important implications. Official inflation

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statistics provide a benchmark in negotiating and determining wage increases. Unreliable statistics could undermine the bargaining process. Further, this analysis indicates that the decline in real average wages in the past two years has in fact been substantially larger than the CSS figure of around 2%.

The higher inflation rate reflects the unusually rapid increases in food prices, rather than macroeconomic inflationary pressure. This conclusion points to the need to review the structures of food production and marketing, rather than seeking to control demand as a whole. Raising interest rates will only increase prices further for many consumers, without getting at the root of the inflationary pressures in the food sector.

The analysis indicates that the CSS must restructure the way it compiles the CPI. The problems identified basically result from the failure of the CSS to adapt its methods and categories to the conditions of the black majority. Indeed, it included Africans in its expenditure surveys only in 1990. The fundamental solution is to ensure a more representative, decentralised statistical function.

**Specific Improvements in the CPI would Include:**

1. Redefining "low income" to reflect real poverty levels. This change seems particularly important in a context of reconstruction and development that seeks to change conditions for the poor.
  2. Classifying households according to actual income, not regular income alone.
  3. Publishing two figures for the composite CPI: one based on each income group's share in total expenditure, as at present; and one based on the share of each income group in all households. The former figure could feed into international comparisons, while the latter better reflects the impact of inflation on households.
  4. Better coverage of informal areas, and the extension of the survey to smaller towns and rural areas.
  5. Monitoring township retail outlets and rural outlets for price changes.
- Finally, we need an acceptable inflation measure against which to negotiate wages. Until the CPI is corrected, a negotiating process at national level should agree on basic economic statistics prior to each negotiating round. In the process, it could come up with a more acceptable estimate of inflation for the low-income group. ☆

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