Quickonomics

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Same inflation, different burdens by income

We all know that when prices rise, purchasing power shrinks. But, does inflation affect all income classes the same way?

To understand, consider how the three components of inflation — food, fuel and core — are moving.

Food inflation fell significantly from ~5% at the start of this fiscal to 0.7% in September. Fuel inflation rose from 8% to 13.6%. And core inflation remained sticky near 6%.

Not only did they diverge, but their burden also varied by income group, primarily because the share of spending on each of these commodity groups differs across income classes.

To show this, we segregate the population into three broad groups by expenditure — the bottom 20%, the middle 60%, and the top 20% for urban and rural — using the National Sample Survey Organisation (NSSO) data.

Then, the expenditure share of each commodity group was mapped with the relevant inflation during the last and this fiscal so far (up to September 2021). We then used these weights to calculate the overall inflation for each class (see Table 1).

We find that the urban poor felt the heat of inflation the most. While overall inflation declined for all income classes in fiscal 2022 compared with the last fiscal, urban poor (bottom 20%) bore the brunt in both time periods. The key contributors to this were fuel and food, which have the highest weights for the bottom 20%.
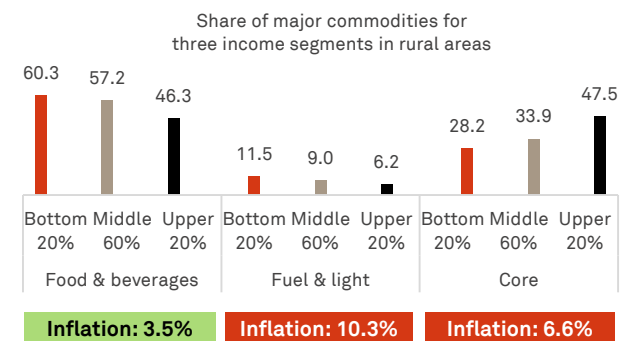
Also, urban inflation in these two commodity groups was higher than that in rural areas.

[1] inflation excluding the volatile food and fuel components
[2] 2011-12 Consumer Expenditure Survey, NSSO. Details in next page

Research

Table 1: CPI inflation across different income classes* (y-o-y %)

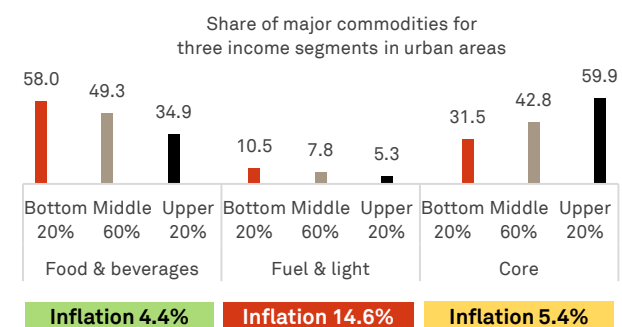| Income segment	FY21		H1FY22	
	Rural	Urban	Rural	Urban
Top 20%	5.9	6.4	5.4	5.4
Middle 60%	5.9	6.8	5.2	5.5
Bottom 20%	5.9	7.0	5.2	5.6

*with share of commodity groups in basket as weights
Source: NSSO, National Statistics Office (NSO), CEIC, CRISIL

Chart 1: Mapping consumption and inflation patterns in rural areas

Share of major commodities for three income segments in rural areas

Food & beverages			Fuel & light			Core		
Bottom 20%	Middle 60%	Upper 20%	Bottom 20%	Middle 60%	Upper 20%	Bottom 20%	Middle 60%	Upper 20%
60.3	57.2	46.3	11.5	9.0	6.2	28.2	33.9	47.5

Inflation: 3.5% | Inflation: 10.3% | Inflation: 6.6%

Note: Inflation data refers to rural CPI inflation on-year in respective categories in H1FY22
Source: NSSO, NSO, CEIC, CRISIL

Chart 2: Mapping consumption and inflation patterns in urban areas

Share of major commodities for three income segments in urban areas

Food & beverages			Fuel & light			Core		
Bottom 20%	Middle 60%	Upper 20%	Bottom 20%	Middle 60%	Upper 20%	Bottom 20%	Middle 60%	Upper 20%
58.0	49.3	34.9	10.5	7.8	5.3	31.5	42.8	59.9

Inflation 4.4% | Inflation 14.6% | Inflation 5.4%

Note: Inflation data refers to urban CPI inflation on-year in respective categories in H1FY22
Source: NSSO, NSO, CEIC, CRISIL

Finally, while all income classes in rural areas faced the same inflation level last fiscal, the burden was slightly more for the top 20% this fiscal so far because of higher core inflation.

Inflation incidence across different income groups

- To analyse the consumption patterns across different income segments, we used the NSSO's Consumer Expenditure Survey of 2011-12. This is the latest available dataset that gives detailed data on monthly per capita expenditure (MPCE) across income classes, and has also been used to calculate weights for the latest CPI 2011-12 series. The population is segregated into 12 fractiles — using a cut-off point for a given fraction of the sample set — to derive classes based on their total expenditure. For each class, commodity-wise expenditure is given. We aggregated this data into three broad categories — the bottom 20% of the population, the middle 60%, and the upper 20% — and calculated the average expenditure patterns for these three classes. The data is given separately for rural and urban areas.

- As Chart 1 shows, for rural areas, food constitutes the majority share in expenditure for the bottom 80% of the population. For the upper 20%, core takes the largest share. While the share of fuel is lower than those of food and core for all income groups, it is relatively higher for the bottom 20% than the rest.

- Overall, rural CPI inflation for food and beverages has been benign at an average 3.5% on-year in this fiscal so far, while it was high for fuel at 10.3% and core at 6.6%. Given that food constitutes the largest share for the majority of rural population, overall inflationary pressure for them has been lower relative to the upper 20% of the population — which is receiving the full force of higher core inflation.

- In urban areas, too, food and beverages is the largest expenditure item for the bottom 80% (Chart 2), though the respective shares are lower than their rural counterparts. Food inflation has also been higher in urban than rural areas this fiscal.

- Just like in the rural areas, fuel accounts for a larger expenditure share for the bottom 20% compared with other income classes in urban areas. Fuel inflation in urban areas has been higher than in rural areas in this fiscal so far.

- The relatively higher food and fuel inflation in urban areas have meant the poor in that geography are facing more heat than their rural counterparts.

- Core commodities constitute the majority of expenditure share of the upper 20% of the urban population. This share is also larger than that of their rural counterpart. Urban core inflation, however, is under 6% and lesser than in the rural areas. This shows the urban rich have not been hit as much as the rural rich.

Consumption patterns of the poor

- Table 2 lists the top 10 commodities by expenditure share for the bottom 20% of population.

- Cereals, fuel and vegetables are the top three commodities for both rural and urban areas. The pressure from high fuel inflation is likely to have been offset by lower inflation in cereals/vegetables this fiscal.

- However, six out of the 10 commodities have seen inflation above 6% in rural areas this fiscal. In urban areas, there are five such commodities. This implies inflationary pressures are still significant for the poor.

Conclusion

Containing food inflation, particularly in cereals and vegetables, is the key to saving the poor from price pressure.

The recent cooling in food inflation — even as non-food inflation remains high — would have benefited the poor more than the rich.

However, it also needs to be kept in mind that the share of fuel in total consumption is more for the poor. Hence, the double-digit fuel inflation seen for a major part of this fiscal may have offset the benefit of falling food inflation.

The urban poor have faced the double whammy of higher fuel and food inflation. But free distribution of food grains last year would have helped cushion some of the pain. The poor also receive some subsidy for LPG and kerosene. But for this fiscal, the government has halved the budget allocation towards LPG subsidy and removed the kerosene subsidy.

The poor — urban more than rural — have likely experienced inflationary pressures this fiscal primarily through fuel. The continuous rise in crude oil prices means this will remain a pressure point in the coming months.

Table 2: Inflation incidence for the bottom 20% of rural and urban population

2a. Rural areas

Top 10 commodities	Share in total expenditure (%)	Rural inflation H1FY22 (%)
Cereals	18.3	-1.7
Fuel & light	11.5	10.3
Vegetables	9.6	-13.0
Beverages	7.7	15.7
Clothing	7.2	6.8
Edible oil	5.0	34.4
Milk	4.8	1.7
Spices	4.3	5.8
Pulses	3.9	9.0
Eggs, fish & meat	3.3	10.1

2b. Urban areas

Top 10 commodities	Share in total expenditure (%)	Urban inflation H1FY22 (%)
Cereals	14.5	-1.7
Fuel and light	10.5	14.6
Vegetables	8.1	-6.4
Beverages	7.4	12.4
Milk	6.6	2.2
Clothing	6.4	4.5
Edible oil	4.8	27.5
Spices	4.3	4.3
Eggs, fish & meat	4.2	9.1
Pulses	3.7	8.8

■ CPI inflation >=6%   ■ 5%<CPI inflation <6%   ■ CPI inflation <5%

Source: NSSO, NSO, CEIC, CRISIL

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