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Food, Fuel, and Facts:
Distributional Effects of Global Price Shocks
Executive Summary

The global economy has gone through turbulent times in the last few years. The fiscal and monetary stimulation during the pandemic, as well as the Russia-Ukraine war that followed it, has put considerable pressure on commodity prices globally. For example, the composite food price index tracked by United Nation's Food and Agriculture Organization rose by 8 per cent year-on-year in August 2022, whereas the West Texas Industrial crude oil price rose 23 percent in the same month compared to a year ago. The inflation in consumer prices that accompanied the commodity price inflation was not seen in the developed economies since the global financial crisis in 2008.

From the developing economies' perspective, there have been concerns about their susceptibility to the global shocks. Different factors such as exchange rate volatility, as well as impact on household consumption due to lack of adequate savings and access to credit, have been flagged as reasons why developing economies are particularly susceptible to global commodity price inflation. In particular poorer households for whom food and fuel could be essentials with very few substitution possibilities, may face more adverse consequences. And because in emerging economies poorer households are a larger share of the population, these distributional effects may have larger aggregate demand consequences. Such adverse consequences are cited as the reason for urgent monetary policy actions to curb inflation.

This paper is the first to measure the distributional consequences of global commodity prices on household consumption in a major developing economy – India. It documents differential responses to global food and fuel price fluctuations across the rich and poorer segments of the population. A rise in global food prices leads to a fall in consumption for all households, and the effects are larger for poorer households. Effects are also economically meaningful: average food price rise of 3 per cent leads to more than 4 per cent fall in non-durable consumption for the poorest households, more than 3 per cent for the middle income groups and more than 2.5 per cent for richer households. The food inflation following the Russia-Ukraine war lead to a consumption loss of 12 per cent for the poorer households while for the middle income groups itâs close to 10 per cent.

A rise in global oil prices have a more nuanced effect. Both ends of the income distribution, i.e., the poorest and the two richest income groups, are vulnerable to oil price increases. A 10 per cent inflation leads to a nearly 2 per cent fall in non-durable consumption loss for both these groups.

The paper identifies local wage earnings and local prices as the key channels through which the global commodity price inflation impact local consumption. The pattern of effects on wage earnings mirror that of consumption: while all households show a fall in wage earnings due to rise in global food prices, the effects are monotonically larger on poorer households. The rise in oil prices erode the earnings on the poor and the rich, with no such statistically discernible effects on the middle income groups.

Global price shocks pass-through to local prices. Global food price inflation raises the food component of CPI, which in turn affects headline CPI, and makes food and its various subcomponents relatively more expensive compared to fuel. Global oil prices raise local fuel prices. It also raises core CPI especially in urban areas and both of these lead to a rise in overall CPI. The pass-through magnitudes are larger for global food inflation, but are more broad-based for global fuel inflation.

The rest of the paper documents that standard demand structures used in the business cycles literature are at odds with the estimated responses. Importantly, relative expenditure on food shows strong patterns on non-homotheticity, wherein consumption share of food are is a constant fraction of total consumption. A rise in global food prices raises relative prices of various subcomponents of food relative to fuel. Standard expenditure switching effects under demand implies a decline in relative expenditure on food. Both the overall food to fuel expenditure ratios, and particularly some sub-components such as sugar and pulses, contrary to predictions of the standard demand structure, register a rise in relative expenditure following an increase in global food prices. It suggests that these items are ‘essentials’ in consumption not just for the poor, but often even for the rich income groups.