

[Energy Shocks, Consumption Inequality & Fiscal Policy Design](#)

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Sharp increases in energy prices pose distinct macroeconomic and distributional challenges. While the aggregate effects of energy shocks on inflation and output are well understood, less is known about how these shocks affect consumption across households. This paper studies how supply-driven energy price shocks affect consumption patterns across the income distribution in the United States, and evaluates the effectiveness of alternative fiscal policies in reducing consumption inequality.

Using household expenditure data from the U.S. Consumer Expenditure Survey, the paper constructs income-group-specific measures of inflation and real consumption across all income deciles. The data show that households in the lowest income decile allocate more than twice as much of their expenditure to energy as households in the highest decile. As a result, energy price movements generate substantial differences in inflation exposure across income groups. The resulting inflation gap varies over time and is linked primarily to energy price movements, rather than to food or core inflation.

To estimate the causal effects of energy shocks on consumption, the paper uses an instrumental-variable local projection approach. Energy inflation is instrumented with oil supply news shocks based on high-frequency movements in oil futures prices around OPEC announcements. This isolates energy price increases driven by global supply conditions rather than domestic demand.

The results show that supply-driven energy price shocks generate substantial consumption inequality. A one percentage point increase in energy prices reduces consumption of households in the lowest income decile by around 0.5 percent, while consumption of those in the highest decile remains unchanged. This differential response persists for up to one year and reflects both higher energy expenditure shares and tighter liquidity constraints among low-income households. The adjustment is not confined to energy spending. Lower-income households reduce both energy and non-energy consumption after the shock, suggesting that higher energy costs crowd out wider expenditure as households absorb the increase in the cost of necessities.

The paper then develops a two-agent New Keynesian model with energy and non-energy sectors and non-homothetic preferences. The model replicates the empirical patterns and provides a framework for policy analysis. At a comparable fiscal cost, targeted cash transfers are more effective than energy subsidies at reducing the increase in consumption inequality following an energy shock, because they allow constrained households to allocate support across all consumption categories.