

[Energy Prices and Household Heterogeneity: Monetary Policy in a Gas-TANK](#)

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We highlight the demand side effects of an energy price shock in a model with household heterogeneity. Energy prices affect aggregate demand through a heterogeneous impact on households depending on their sources of income and access to borrowing. We show that the implications for aggregate demand and inflation depend on how the cost of the energy price shock is distributed between the labor share and profit share of total income.

Compared to the representative household in the canonical New Keynesian model, credit constrained households will experience a stronger consumption response following an energy price shock because of its inability to smooth consumption by borrowing. The magnitude of these channels depends on the degree of price rigidity and the elasticity of substitution between energy and labor. Assuming production inputs are sufficiently difficult to substitute or that prices are sufficiently flexible, an energy price shock has a self-correcting effect, as the consequent contraction in aggregate demand dampens inflationary pressures.

Relative to a representative agent model, optimal monetary policy is less contractionary in a model with household heterogeneity. The negative impact of higher energy prices on aggregate demand mitigates inflationary pressures, which requires a milder increase in the interest rate. When the share of credit constrained households increases, optimal policy can be expansionary in the presence of an adverse supply shock.

While similar in their effects on the production side, alternative shocks to supply (e.g., a disturbance to firms TFP) differ in their demand side effect relative to the energy shock.

As the nature of shocks crucially affects the way resources redistribute in the economy, no generalization can be made about the effects of supply shocks on aggregate demand.