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When firms commit production inputs under incomplete information, demand shocks can appear as supply shocks, steepening the Phillips curve, and affecting the pass-through of shocks between prices and quantities. We study this mechanism in a standard New Keynesian model with two realistic frictions: (i) frictions in adjusting production inputs (for example, due to hiring lags, investment lead times, supply-chain delays) and (ii) incomplete information about shocks. To isolate how information alters pass-through when it binds on quantities or also on prices, we compare two cases: in the first, firms set employment under incomplete information but prices under full information; in the second, information frictions also affect price setting. Expectations about demand then enter the New Keynesian Phillips curve analogously to a cost-push shock, shifting the natural level of output.

When information frictions affect the choice of inputs only, firms meet demand by increasing hours, which raises marginal costs and inflation. Monetary tightening then restricts pass-through to output. When information frictions also constrain pricing, demand shocks pass through more to output and less to inflation as prices are less responsive. These two cases have distinct empirical implications. We find that inflation declines after positive industrial-production surprises, consistent with the case featuring real rigidities only.

This framework suggests that the trade-off between output and inflation depends on where frictions bind and on whether nominal rigidity is independent of, or induced by, information. Under real rigidities, a steeper Phillips curve implies a more favourable sacrifice ratio. However, when pricing is also information-constrained, shocks transmit more toward output, increasing the cost of disinflation.