

# Monetary Policy and Sectoral Heterogeneity

## - A Structural Network-VAR Approach

by Rudolf Faininger (TU Chemnitz) and Juan Michelsen Pezantes (TU Berlin)

### Abstract

The analysis of monetary policy surprises is a central topic in macroeconomic research, particularly as economies face increasing volatility and structural uncertainty. In recent years, one strand of the macroeconomic literature has increasingly moved beyond homogeneous, one-sector models toward frameworks that account for sectoral heterogeneity. Pasten et al. (2020) demonstrate that in a multi-sector economy, the real effects of monetary policy are significantly amplified by the interplay of sectoral differences in price rigidity, sectoral size and input-output linkages. Disaggregation increases real effects substantially, even when inflation responses remain similar. These findings build upon the work of Acemoglu et al. (2012), who show that asymmetric input-output networks amplify idiosyncratic shocks through cascading effects.

This paper develops a structural network vector autoregressive (SNVAR) framework to analyze the heterogeneous real effects of monetary policy surprises across a disaggregated economy. As our main contribution, we incorporate multiple Canadian sectors and an intersectional input-output network into a structural VAR model. To the best of our knowledge, this is the first empirical study to conduct a structural analysis of monetary policy surprises in a multi-sector setting within a SVAR framework.

Our preliminary results reveal that the real effects of monetary policy shocks are highly heterogeneous across sectors, both in magnitude and persistence. This heterogeneity underscores the importance of a multi-sector framework.

### Literature

Acemoglu, Daron, Ali Ozdaglar, and Alireza Tahbaz-Salehi. 2012. "The Network Origins of Aggregate Fluctuations." *Econometrica* 80: 1977–2016.

Pasten, Ernesto, Raphael Schoenle, Michael Weber. 2020. "The propagation of monetary policy shocks in a heterogeneous production economy." *Journal of Monetary Economics* 116: 1–22.