Monetary policy and the labor share - Evidence from European micro data

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Extended Abstract

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Based on the empirically robust observation that redistributive effects play a key role in the transmission of monetary policy (MP) (Auclert (2019), Cantore et al. (2020)), recent studies highlight the importance of incorporating heterogeneity of agents in economic modelling in order to fully capture transmission mechanisms (Kaplan et al., 2018). In this context, Ottonello & Winberry (2020) emphasize the crucial role of firm-level heterogeneity. Thereby, one noteworthy advantage of firm-level micro data is that the legal framework of firms provides an essential limitation to the behavioral biases of individuals.

Our study provides firm-level evidence on the response of key macroeconomic variables to a monetary policy shock: gross value added[3], nominal wages as well as the labor share itself (that is, wages divided by value added). Both value added and wages constitute the cornerstone of strategic corporate decision making. Since wages constitute the main component in income for the majority of households, they are central to both investment and consumption behavior. Moreover, from the perspective of the firm, labor compensation is typically a vital cost component of goods sold. Notwithstanding these factor's centrality, and despite the fact that the New Keynesian (NK) model features clear implications, empirical literature at firm-level of their response to MP shocks is virtually nonexistent (Galí (2015), Cantore et al. (2020)).

Our paper is thus first to test for the consistency of the NK model's theoretical predictions by investigating the change of the labor income share at highest resolution across euro area member states in response to a MP shock. We inform the current debate on the evolution of the redistribution channel of monetary policy and firm heterogeneity (Auclert (2019), Ottonello & Winberry (2020), Cantore et al. (2020)). In order to assess a nuanced interpretation of observed evolution in the labor share, wages and value added, we analyze a micro panel from 1999Q1-2017Q4 covering over 3 million firms. We find a significant and pronounced negative reaction of wages and the labor share after a contractionary MP shock. While the literature on transitory effects of firm heterogeneity focuses on fundamentals such as age (Cloyne et al. (2018)), size (Gertler & Gilchrist (1994)) or balance sheet related measures (Jeenas (2019), Ottonello & Winberry (2020)), we find that factor inputs matter predominantly for determining the cyclical firm behavior. In particular, while firms with a high labor share appear to be

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[3] where aggregate value added simply amounts to GDP

affected most by MP, firms with a lower share of labor appear able to operate more independently. In order to identify exogenous changes in monetary policy, we use information-neutral shocks developed by Jarociński and Karadi (2020). These shocks may be interpreted as exogenous with respect to credit conditions insofar as they do not contain any central bank information on the state of the economy. Following Ottonello & Winberry (2020), we break down the euro-area wide MP shocks to the micro-level by employing the leverage ratio of a given firm as an exposure measure. In a local projections regression framework, we estimate the labor share reaction, controlling for a high dimensional combination of fixed effects.

Results from this research project help design more effective governmental and central bank policies. The paper informs the discussion about fundamental questions in the field of monetary economics, including: how do low interest rates affect the distribution of income between wages and capital from the perspective of the firm? Are widely used NK models able to jointly match the response of real wages and the labor share? How do firm-specific characteristics such as financial constraints, firm age or balance sheet composition affect the transmission of MP, and what channels are at play?

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