

Navigating the housing channel of monetary policy across euro area regions*



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This analysis assesses the role of the housing market in the transmission of conventional and unconventional monetary policy across euro area regions. By exploiting a novel regional dataset, we show that monetary policy propagates effectively to economic activity and house prices, albeit in a heterogeneous fashion across regions. Although the housing channel plays a minor role in the transmission of monetary policy to the economy on average, its importance increases in the case of unconventional monetary policy. In addition, we find that unconventional monetary policy has been a key driver of economic activity and house prices since 2013. We also explore the determinants of the diverse transmission of monetary policy to economic activity across regions, finding a larger impact in areas with lower labour income. An expansionary monetary policy can thus be effective in mitigating regional inequality via its stimulus to the economy.

*The views expressed in this paper are those of the authors and do not necessarily represent those of the European Central Bank.

Introduction

Profound economic and institutional differences across regions have long challenged the effective transmission of monetary policy in the euro area. This unequal geography of the transmission of monetary policy has also stoked concerns about its possible side effects on regional inequality, especially owing to the unconventional measures conducted by the European Central Bank over the last decade. In this context, the housing market—in light of its role in the propagation of shocks, its distributional implications and its local dimension—has often come to the front of the media and policy debate on the intended and unintended effects of monetary policy across euro area regions.

Using a novel regional dataset and a high-frequency identification of monetary policy shocks, this work contributes to this debate by assessing empirically the role of the housing market in the conventional and unconventional transmission of monetary policy across regions in the first two decades of the euro area.¹

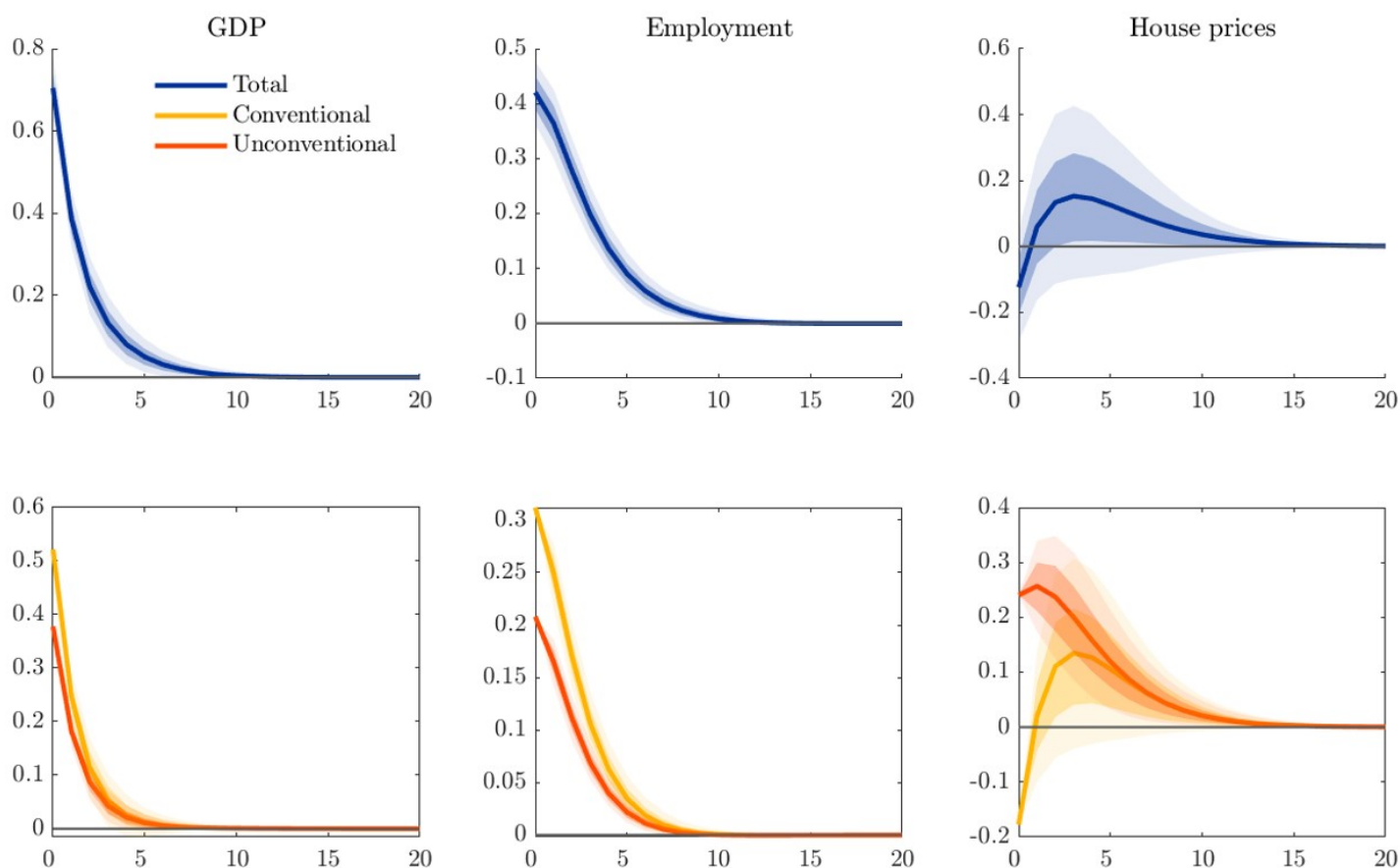
The housing channel of monetary policy

Monetary policy propagates to the real economy through several direct and indirect channels. Specifically, we consider two main channels, corresponding to two important sources of household income: housing wealth, proxied by house prices and capturing the housing channel of monetary policy, and labour income, proxied by employment and capturing the employment channel. Our focus on the comparison between the housing and the employment channels is motivated by the evidence in the literature pointing to a larger role for labour income relative to housing wealth in transmitting monetary policy to the real economy.

A structural panel vector autoregression (SPVAR) model allows us to assess the role played by the housing and employment channels of conventional and unconventional monetary policy. Based on a panel of 106 euro area regions between 2000 and 2018, the mean-group estimates of our model document the responses of GDP, employment and house prices to an expansionary monetary policy shock (Figure 1). As suggested by economic theory, GDP, employment, and house prices increase after a monetary policy easing shock. Yet, house prices exhibit a delayed, hump-shaped reaction, with a response on impact not statistically different from zero. When looking at the share of the GDP response explained by house prices and employment, we find that, on average, monetary policy transmits mainly through the employment channel, with only a rather limited role for the housing channel.

However, monetary policy may affect different sectors of the economy through various mechanisms, based on the specific measure implemented by the central bank. We distinguish two main transmission mechanisms, namely conventional and unconventional, depending on whether monetary policy affected mainly the short (3 months) or the long (10 years) end of the risk-free yield curve, respectively. This comparison is motivated by the evidence in the literature suggesting a larger impact of unconventional monetary policy on long-term consumption and investment incentives, such as those underlying households' spending decisions on housing.

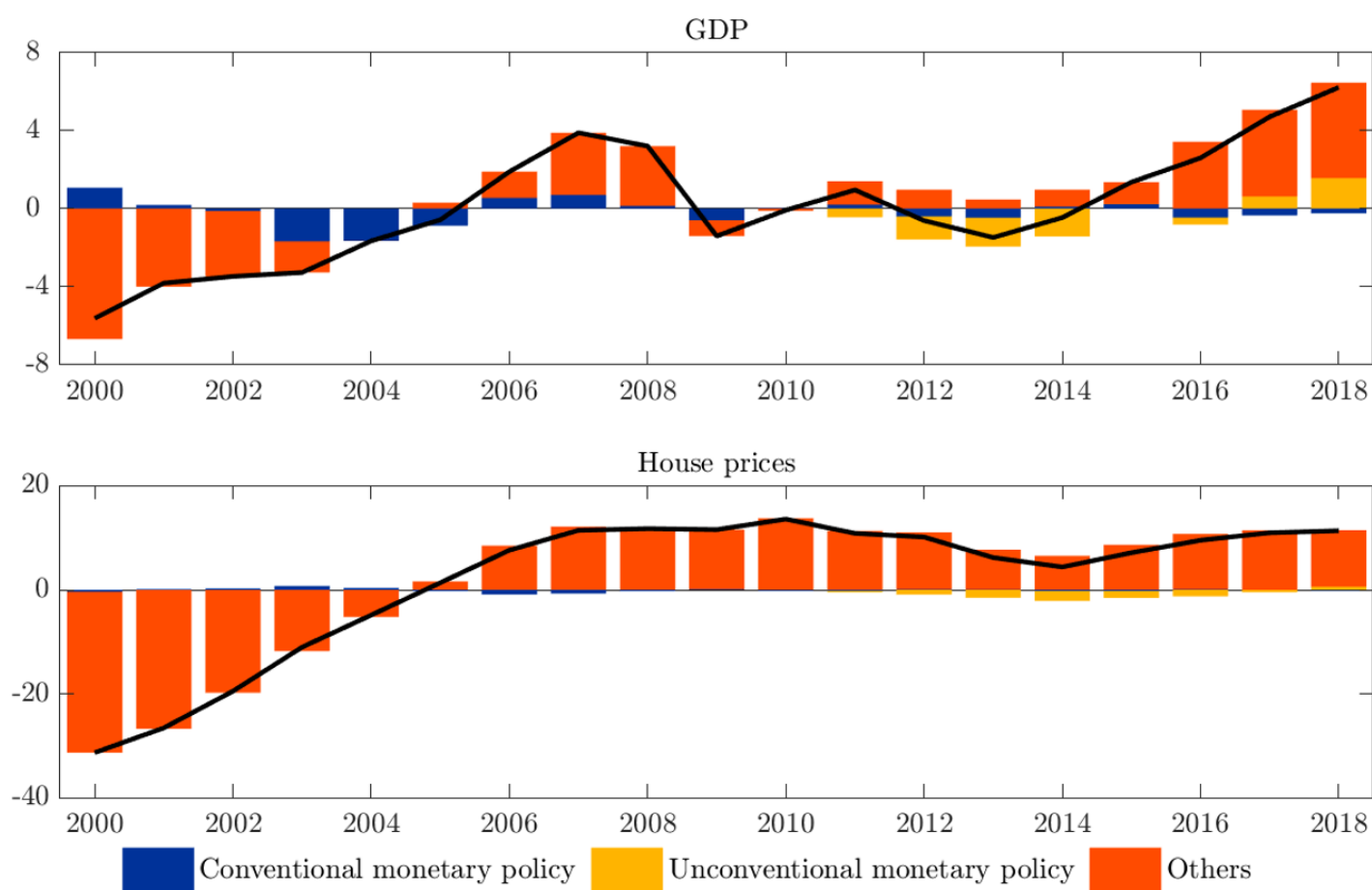
¹This analysis is based on Battistini et al. (2022), to which the reader may refer for more details on the data, the methodology and further results.

Figure 1: Impulse response functions to an expansionary monetary policy shock


Notes: The size of the monetary policy shock is calculated as its mean absolute value, which is 5.2 basis points for the total, 4.6 basis points for the conventional and 1.7 basis points for the unconventional monetary policy shock. The y-axis reports the percentage change in (detrended) levels of each variable over the considered horizon. The x-axis reports the years. Solid lines denote point estimates and light (dark) shaded areas 95 percent (68 percent) confidence bands.

When we introduce the two separate measures of monetary policy shocks, our SPVAR model shows that conventional and unconventional monetary policy have a significantly different impact on all the variables. In particular, the effect of unconventional monetary policy shocks on house prices is around twice at its peak compared to conventional shocks. In addition, monetary policy appears to explain a relatively larger share of GDP and house price fluctuations in the later years of the sample, when the European Central Bank embarked on its large-scale asset purchase programmes to fight a prolonged period of low inflation. Indeed, a historical decomposition indicates that the unconventional transmission of monetary policy contributed to about 40 percent of the total increase in the level of GDP and house prices between 2013 and 2018 (Figure 2).

Overall, our results are in line with the small average multipliers of house price changes on consumption typically found in the empirical macroeconomic literature. Our results also contribute to the evidence on the relatively larger impact of unconventional monetary policy on house prices.

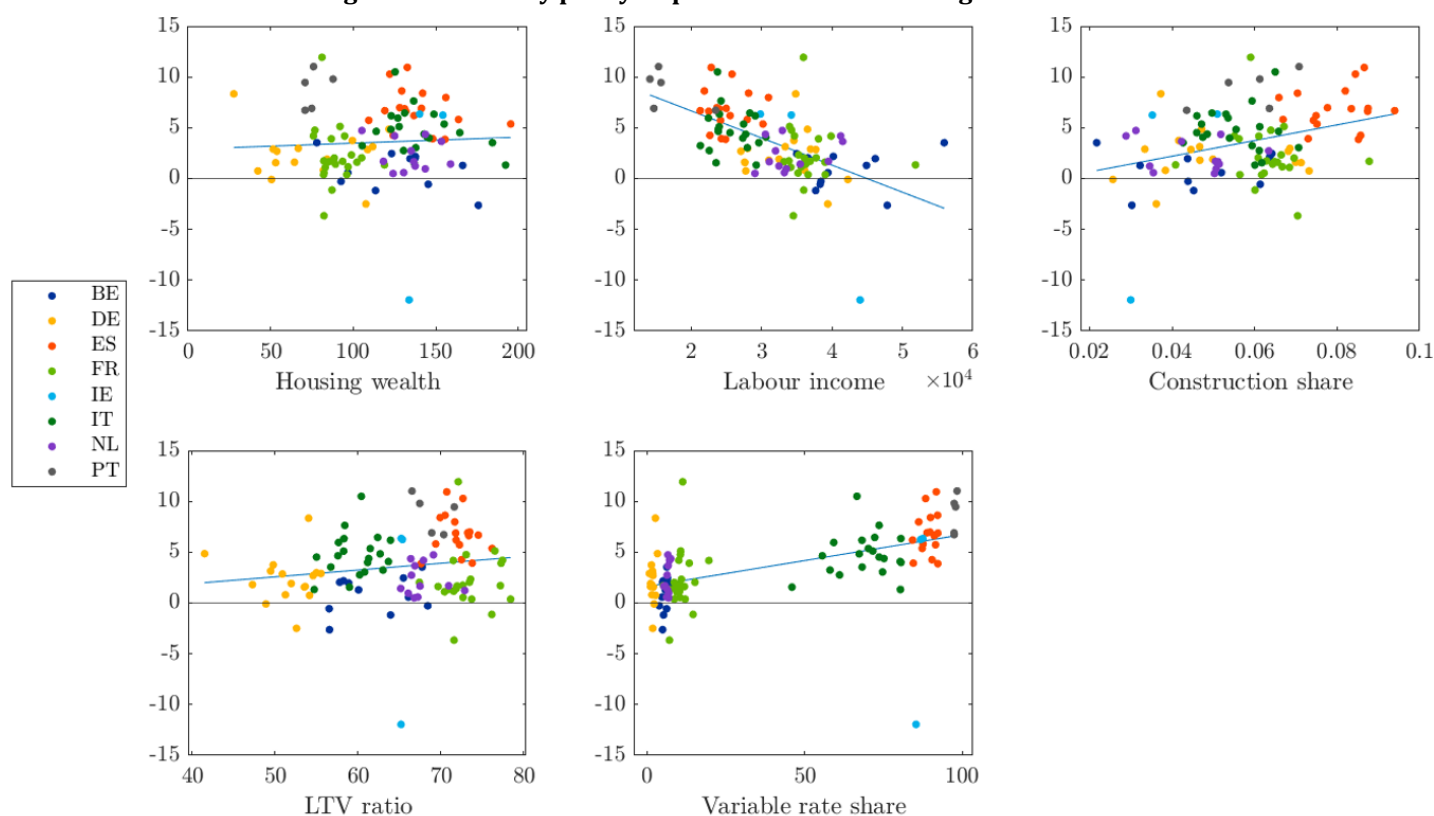
Figure 2: Historical decomposition of GDP and house prices


Notes: The y-axis reports the (detrended) level of (cross-regional average) GDP (upper chart) and house prices (lower chart) as well as the contributions of conventional and unconventional monetary policy shocks and other (unidentified) factors.

The regional heterogeneity of housing markets: An anatomy

We then explore how the effectiveness of monetary policy relates to different economic and institutional characteristics across regions. The relationship between these long-run factors and the estimated monetary policy impact on GDP is depicted in Figure 3. One can notice that the transmission of monetary policy to the economy is particularly heterogeneous across euro area regions and exceeds the cross-country perspective.

A potentially important long-run driver of the heterogeneous impact of monetary policy across euro area regions is household income. We again focus on housing wealth and labour income, considering their average levels over the sample. While housing wealth only displays a weak positive correlation with the GDP impact of monetary policy, labour income exhibits a clear negative correlation. Hence, monetary policy seems to be more effective in lower-income regions (Figure 3, first and second panel, respectively). These findings are confirmed by an econometric analysis, which shows that the coefficient of labour income is found to be statistically significant across all model specifications. This suggests that monetary policy easing has an overall beneficial impact on regional inequality via its stimulus to economic activity. Our results add to a growing literature on monetary policy and inequality (Coibion et al., 2017; Casiraghi et al., 2018; Hauptmeier et al., 2020; Lenza and Slacalek, 2021).

Figure 3: Monetary policy impact on real GDP and regional factors


Notes: The y-axis reports the cumulative percentage change in (detrended) levels for GDP 5 years after an accommodative monetary policy shock. The x-axis reports the regional housing wealth (thousand euros per household), labour income (euros per employee, at 2015 prices), construction share (percent of value added), LTV ratio (percent), share of variable-rate loans (percent of total loans). Each dot represents a region.

When considering the production structure of the economy, we find that the share of the construction and manufacturing sectors relative to the overall economy is positively correlated with the impact of monetary policy on real economic activity. This result is in line with the evidence that sectors producing durable goods are key in the transmission of monetary policy, for instance via the user-cost-of-capital and interest-rate channels. We also investigate how household indebtedness relates to the impact of monetary policy, finding only a weak positive correlation. Finally, the impact of monetary policy on GDP is found to be larger in regions with a higher share of variable-rate loans, as in these regions policy-induced changes in interest rates tend to have an almost immediate effect on households' cash flows.

Conclusion

In this analysis we find that the housing channel plays a limited role in the propagation of monetary policy to the economy on average, but its contribution is amplified in the case of unconventional monetary policy. In addition, we show that unconventional monetary policy has been a key driver of economic activity and house prices since 2013. The transmission of monetary policy to the economy is found to be heterogeneous across regions, with a larger impact in areas with lower labour income. This suggests that poorer regions stand to benefit the most from monetary policy accommodation. While the easing of monetary policy is found to mitigate regional inequality through its stimulus to the economy, the unintended consequences of the ongoing monetary policy normalisation warrant close monitoring by policymakers, particularly in the case of resurgent fragmentation risks. ■

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