

# Essays on Economic Expectations and Monetary Union Heterogeneity

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# Impact Paragraph

In the last decade, several questions concerning the effectiveness of monetary policy emerged in the context of the macroeconomic situation of Western economies. In particular, a disconnect between monetary policy and unemployment on the one hand and inflation on the other became apparent. This dissertation contributes to two separate strands of the broader macroeconomic literature that both have policy relevance because of this disconnect.

As traditional tools of monetary policy proved to be ineffective to stabilize the economies of the United States, the Euro Area and other Western countries, the management of economic expectations of the general public, in particular its inflation expectations, became an important issue for monetary policy makers. Additionally, Chapters 2 and 3 contribute to the literature on the potential effects of such efforts on consumption behavior of households as well as the capability of central banks to influence economic expectations in the first place. Chapters 4 and 5 discuss econometric issues that could lead to spuriously flattening Phillips Curve slopes when estimating reduced form regressions of the relationship.

Chapter 2 analyzes whether various components of households' balance sheets determine how consumption reacts to expected inflation. Two channels in particular are conceivable: an increase in inflation expectations can raise consumption through direct increases in expected real wealth, e.g. for households with nominal financial liabilities. By affecting the real interest rate, expected inflation can interact with wealth if only those households can adapt their consumption to current real interest rates that are not budget constrained or sufficiently liquid to shift funds between consumption and savings. The chapter investigates these channels empirically using household-level information on balance sheets, durable consumption, and inflation expectations from the Dutch Central Bank's Household Survey. The analysis shows that investments in risky assets as well as a household's net worth moderates the relation between expected inflation and durable spending decisions. The net

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worth effect is most pronounced for households with fixed interest rate mortgages. This chapter draws its policy relevance from repeated calls for central banks to use the steering of household inflation expectations to increase demand in a period during which short-term interest rates cannot be further lowered. The research shows that there seem to be households among which this effort could lead to increased spending on certain types of durable goods. However, the question whether this would be desirable given the dire financial situation of many of these households remains. In the contrary, the chapter raises the point that those households that seem most responsive to their inflation expectations when making consumption decisions, would rather benefit from more realistic, i.e. lower, inflation expectations. As such, the chapter contains lessons for policy makers, particularly regarding the importance of clear and direct communication about goals and strategy of monetary policy.

Chapter 3 studies the impact of the Fed's monetary policy announcements on households' expectations by comparing responses to the Survey of Consumer Expectations before and after Federal Open Market Committee (FOMC) meetings, over the period 2013-2019. The results show that Fed decisions affect expectations of interest rates on savings accounts, particularly for respondents with high financial and numerical literacy. The impact of monetary policy announcements on inflation expectations is muted, even in response to some of the most relevant meetings of the FOMC that took place during that period. Expectations of personal financial conditions are barely affected. The results stand in contrast to experimental studies that find strong effects of monetary policy and other macroeconomic news on expectations of households receiving a specific treatment, suggesting that the news naturally reaching the general population may provide weaker signals. This chapter is based on a paper co-authored with two economists from the Bank for International Settlements, an institution that brings together monetary policy makers from around the world. Therefore, the paper has received some attention after its publication as a Working Paper, for example in a speech given by the Head of the institution's Monetary and Economic Department in September 2021.<sup>1</sup> The paper

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<sup>1</sup> "Back to the future: intellectual challenges for monetary policy", Speech by Claudio Borio, Head of the BIS Monetary and Economic Department at the David Finch Lecture, University of Melbourne, 2 September 2021, <https://www.bis.org/speeches/sp210902a.htm>

holds important lessons for monetary policy makers in that it shows that despite respondents' understanding that monetary policy affects interest rate, their personal economic decisions are virtually unaffected. This means that certain transmission mechanisms of monetary policy may work less smoothly than expected.

Chapter 4 illustrates the impact of heterogeneous slopes on the estimation of the Phillips Curve slope in a monetary union. If regional slopes differ, any attempt to estimate a union wide slope either on aggregate or pooled regional data will suffer from substantial omitted variable bias. The reason is that the slope of the Phillips Curve changes the implicit weight a union member gets in the central bank's monetary policy rule. In regions with steep Phillips Curves, demand shocks will be stabilized to a larger degree than the mere size of the economy would justify as these demand shocks would impact aggregate union inflation to a larger degree than demand shocks in regions with flat Phillips Curves. The more pronounced the heterogeneity, the larger the bias to coefficients from aggregated or pooled estimations.

Chapter 5 tests whether the patterns in simulated data hold in Euro Area country-level data. First, it provides evidence on causally identified estimates of the inflation-unemployment trade-off for a group of 10 Euro Area member states. It goes on to show that applying controls for slope heterogeneity proposed by Breitung & Salish (2020) lead to an insignificant steepening of the estimated Phillips Curve slopes when analyzing the Euro period as a whole. A sub-period analysis reveals that the slope of the Euro Area Phillips Curve has steepened by more than what reduced form estimates omitting heterogeneity controls suggest in the period since 2009 and the augmenting regressor controlling for slope heterogeneity turns significant.

Reduced form estimations of the Phillips Curve remain quite prominent in the literature. The last two chapters of this dissertation draw their policy relevance from this prominence. Given the relevance of the Phillips Curve relationship for monetary policy making, sound empirical evidence on its magnitude is crucial. The goal of chapters 4 and 5 is to encourage researchers to address the issue of slope heterogeneity when estimating slopes of aggregate

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Phillips Curves. The chapters clearly demonstrate the necessity of controlling for slope heterogeneity to ensure sound reduced form evidence on the topic.