The impact of news on US household inflation expectations

Shih-Kang Chao*
Wolfgang Karl Härdle*²
Jeffrey Sheen*³
Stefan Trück*³
Ben Zhe Wang*³

BERLIN

ECONOMIC RISK

SFB 649

*Purdue University, United States of America
*²Humboldt-Universität zu Berlin, Germany
*³Macquarie University, Australia

The impact of news on US household inflation expectations

Shih-Kang Chao[a], Wolfgang Karl Härdle[b], Jeffrey Sheen[c], Stefan Trück[c], Ben Zhe Wang[c,*]

[a]Purdue University
[b]Humboldt-Universität zu Berlin and Sim Kee Boon Institute for Financial Economics,
Singapore Management University
[c]Macquarie University

Abstract

Analysis of monthly disaggregated data from 1978 to 2016 on US household inflation expectations reveals that exposure to news on inflation and monetary policy helps to explain inflation expectations. This remains true when controlling for household personal characteristics, their perceptions of the effectiveness of government policies, their expectations of future interest rates and unemployment, and their sentiment levels. We find evidence of an asymmetric impact of news on inflation expectations particularly after 1983, with news on rising inflation and easier monetary policy having a stronger effect in comparison to news on lowering inflation and tightening monetary policy.

Keywords: Inflation expectations, news impact, forecast disagreement
JEL Classification: D83, D84, E31

1. Introduction

Inflation expectations play a major role in modern macroeconomics, with rational expectations ubiquitous as the modelling device for a representative agent. However, the literature provides both theoretical models and empirical observations that can explain how different economic agents form inflation expectations and why they might disagree on their forecasts. For example, Mankiw et al. (2004) document a considerable degree of disagreement in surveys of US inflation expectations. This disagreement is time-varying and exhibits covariation with macroeconomic variables. Mankiw and Reis (2002) construct a formal model and attribute disagreements to information rigidity. The idea is that the dissemination of new

---

*Corresponding author (Tel: +61 2 9850 8500)

Email addresses: skchao74@purdue.edu (Shih-Kang Chao), stat@wiwi.hu-berlin.de (Wolfgang Karl Härdle), jeffrey.sheen@mq.edu.au (Jeffrey Sheen), stefan.trueck@mq.edu.au (Stefan Trück), ben.wang@mq.edu.au (Ben Zhe Wang)

information occurs gradually between people.

One way households acquire information is through media reports, which we refer to as 'news' in this paper. News can directly impact on household inflation expectations by directly informing the consumer about the possible future path of inflation (e.g. through expert forecasts), or indirectly through impacting on household perceptions of current inflation. Lamla and Maag (2012) find that the disagreement in household inflation expectations in Europe depends on the reporting intensity and the 'tone' of the news about inflation, while Dräger (2015) finds that the media has a small but significant impact on inflation expectations in Sweden. Carroll (2003) uses an epidemiology model and finds that professional forecasts as a proxy for news have predictive power for household forecasts in the US.

However, all the aforementioned studies use aggregated news measures obtained from a separate source than that for the measure of inflation expectations. One drawback with this approach is that the news measures do not necessary reflect the news heard by the individual household, and thus may not necessarily be attributable to household inflation expectation formation.

We contribute to the literature by exploring the details of the Michigan survey of consumers (MSC) data, directly estimating the news impact on household inflation expectations using this database with a long time series of cross-sectional data. The MSC data presents the answers of respondents concerning their inflation expectations and asking whether they have heard particular news in the past few months, and if they have, to provide the news content.

In this paper we focus on two particular items of news that are likely to be highly relevant for forecasting future inflation: news of inflation and monetary policy. Our tests show that households raise their inflation expectations when they are exposed to news of rising inflation and contractionary monetary policy. We find that this result is robust after controlling for household demographics, their perception of the effectiveness of government policies, their expectations of future interest and unemployment rates, and their sentiment. We also find an asymmetric impact of news on rising inflation (contractionary monetary policy) compared to news on falling inflation (expansionary monetary policy). Finally, our results indicate that this asymmetric impact started to become significantly stronger in the early 1990s. We find that the absolute impact of news on higher inflation became statistically greater than news on lower inflation after 1991, while after 1999 news on easing monetary policy had a significantly greater impact on inflation expectations than contractionary monetary policy.

The subsequent paper is organized as follows. Section 2 describes the applied model and the data used. Section 3 examines the impact of news on households inflation expectations. Section 4 tests if the content of news has an asymmetric impact on inflation expectations. Section 5 concludes.

2

2. The model and data

Since 1978, around 500 adults in households have been surveyed each month on their one-year-ahead inflation expectations by the University of Michigan (Survey of Consumers). The data exhibits a considerable degree of disagreement among these US households in any month. In addition to inflation expectations, the survey also asks respondents whether they have heard news about current economic conditions, and also for their evaluations of current and expected future paths of the economy as well as their personal financial situation.

We test if news plays a role in explaining household inflation expectations by estimating equation (1) using pooled ordinary least squares (OLS):

$$\pi_{it}^e = \alpha + TD_t\theta' + \phi^\pi N_{it}^\pi + \phi^r N_{it}^r + C_{it}\gamma' + \epsilon_{it} \tag{1}$$

where π_{it}^e is the one-year ahead inflation expectation of household i at time t, α is a constant, and TD_t collects monthly time dummies that are invariant among households at a given month. Since our focus is on investigating the impact of news on individual inflation expectations, we include these time dummies to account for aggregate developments of the economy in each month that might have an impact on household inflation expectations.

N_{it}^π and N_{it}^r indicate whether household i has been exposed to any news of inflation and monetary policy, respectively. If no particular news has been heard, the respective variable has a value of 0; N_{it}^π is set to a value of 1 if household i has been exposed to news about higher inflation, and -1 in the case of news about lower inflation. In the same manner, N_{it}^r takes on a value of 1 if household i has heard news about tighter monetary policy (higher interest rates or tighter credit conditions), and -1 for exposure to news about expansionary monetary policy (lower interest rates or easier credit conditions). ϕ^π and ϕ^r measure the impact of inflation news and monetary policy news on household inflation expectations, which is a key focus of this paper.

$C_{it} \in [D_{it}, P_{it}, E_{it}CS_{it}]$ represents control variables for the characteristics of household i. Hereby, D_{it} denotes economic and demographic variables for respondent i, including log income, age, gender (1 for a female), and level of education (measured on a scale between 1 to 6, with 6 indicating the highest level of education). P_{it} denotes household perceptions on the effectiveness of government policies in managing inflation or unemployment, taking a value of 1 if the government is perceived to have done a good job, 0 for a fair job, and -1 for a poor job. E_{it} collects household expectations on the future course of interest rates and unemployment over the next year, with 1 indicating that household i expects the future respective rate will increase, 0 that it stays the same, and -1 indicates that the household expects the rate to be reduced. CS_{it} is the measure from the Michigan Survey for consumer sentiment. It is constructed from five qualitative questions about the household's current and future expected personal financial situation, its current buying attitude regarding large ticket household items, and its expectation of short and medium term business conditions.

Our monthly sample starts from January 1978 and ends in February 2016, containing 208,777 individual records in total. The cross-sectional inflation expectations data ranges from 0 to (a cap at) 50 percent. We follow the literature, see e.g. Curtin (1996), and restrict our sample to those respondents who gave inflation expectations below 30 percent, on the grounds that such outliers are likely to be frivolous. Since our sample covers the high inflation episode in the late 1970s, and there are possible structural breaks in the inflation expectations series, we test for structural breaks in median household inflation expectations following Bai and Perron (2003). The results suggest a structural break in median household inflation expectations in September 1983 so we split our sample into pre- and post-September 1983 periods.

3. News impact on household inflation expectations

We test if exposure to direct news of inflation and monetary policy affects household inflation expectations. Model 1 considers only the impact of news of inflation without controlling for characteristics of household i, thus serving as a benchmark. The subsequent five models extend the benchmark specification: Model 2 controls for the additional impact of demographic characteristics D_{it}; Model 3 controls for the additional impact of perceptions of the effectiveness of government policies P_{it}; Model 4 controls for the additional impacts of expectations about interest rates and unemployment; Model 5 controls for the additional impacts of consumer sentiment on inflation expectations ICS_{it}; and Model 6 considers all explanatory variables jointly. We report results in Table 1, with the top panel of the table showing the results for January 1978 to September 1983, while the bottom panel focuses on October 1983 to February 2016. Since we have 457 monthly time dummies and their interpretations do not necessarily relate to news effects, we omit results for the time dummies in the table.

3.1. The first sub-sample—January 1978 to September 1983

Results for the first sub-sample show news of inflation and monetary policy having a strong impact on household expectations. In this relatively high inflation period, Model 1 shows that hearing news of higher inflation led an average household to increase their inflation expectations by 0.98 per cent. Hearing news of contractionary monetary policy induced households to expect 0.49 per cent higher inflation, indicating households understood that higher interest rates are a result of central banks' concern with higher future inflation. Therefore the average household expectations *appear* to be informed by the central bank's response function, for example a Taylor rule (as suggested by Carvalho and Nechio (2014)), rather than households concerning themselves with the expected future contractionary effect of the interest rate change on inflation. The results from Model 1 are consistent with earlier findings using *aggregate* data from the media having a role in driving household inflation expectations (Lamla and Maag, 2012; Dräger, 2015). Our results are also consistent with the information rigidity hypothesis, which suggests that households' private information sets (through news) play a role in explaining disagreements in inflation expectations (Mankiw and Reis, 2002; Madeira and Zafar, 2015).

	Sub-sample 1: 1978:01 − 1983:09					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	4.48***	4.43***	4.56***	4.47***	6.08***	4.04***
News: inflation(ϕ^π)	0.98***	0.94***	0.83***	0.83***	0.87***	0.67***
News: monetary policy(ϕ^r)	0.49***	0.47***	0.37***	0.35***	0.40***	0.22***
Log income	–	0.07	–	–	–	0.21***
Age	–	-0.03***	–	–	–	-0.03***
Female	–	0.26***	–	–	–	0.06
Education	–	0.15***	–	–	–	0.19***
Perception: government policy	–	–	-1.08***	–	–	-0.73***
Expectation: interest rate	–	–	–	0.82***	–	0.72***
Expectation: unemployment rate	–	–	–	0.82***	–	0.48***
Consumer sentiment	–	–	–	–	-0.02***	-0.01***
Adjusted-R^2	0.624	0.628	0.629	0.633	0.628	0.642
	Sub-sample 2: 1983:10 − 2016:02					
Constant	3.19***	9.04***	3.08***	2.92***	4.92***	8.87***
News: inflation(ϕ^π)	0.62***	0.61***	0.52***	0.50***	0.43***	0.39***
News: monetary policy(ϕ^r)	0.35***	0.32***	0.26***	0.18***	0.17***	0.08**
Log income	–	-0.45***	–	–	–	-0.35***
Age	–	-0.01***	–	–	–	-0.01***
Female	–	0.66***	–	–	–	0.54***
Education	–	-0.14***	–	–	–	-0.11***
Perception: government policy	–	–	-0.75***	–	–	-0.33***
Expectation: interest rate	–	–	–	0.47***	–	0.40***
Expectation: unemployment rate	–	–	–	0.73***	–	0.35***
Consumer sentiment	–	–	–	–	-0.02***	-0.01***
Adjusted-R^2	0.521	0.532	0.529	0.532	0.535	0.549

Notes: 1. The sample size is 43,599 between January 1978 and September 1983, and 165,178 between October 1983 and February 2016.
2. *, **, *** represent significance at 10%, 5% and 1% levels of significance.

Table 1: Regression results for inflation expectations

Model 2 confirms results in the earlier literature that households with different demographic backgrounds disagree on inflation expectations, see, for example, Bryan and Venkatu (2001a,b) for the US, Blanchflower and MacCoille (2009) for the UK, Easaw et al. (2013) for Italy, and Jonung (1981) for Sweden. Households with different demographics may purchase different consumption bundles. In particular, we find that those who are younger, female, and better educated tended to forecast higher inflation levels. The impact of education on inflation forecasts is a puzzle. Perhaps only better educated households could have understood the severity of the implications of oil price shocks on inflation in the 1970s, realizing that monetary policy would need to be strategically accommodative to minimize the effects of the rise in the relative oil price. This accommodative monetary policy did not increase the nominal interest rate more than inflation, thus reducing the real interest rate and making monetary policy expansionary, as argued by Clarida et al. (2000).

Perceiving government policies to be effective in managing the business cycle significantly reduced inflation expectations by 1.08 per cent (Model 3). This appears to imply that the government can reduce household inflation expectations by influencing household perceptions on the effectiveness of its policies.

Expecting a rise in interest rates over the next year was associated with higher inflation expectations (Model 4). This confirms the findings in Model 1 and suggests that households understood monetary policy responds to inflation now and in the near future, so that higher expected inflation is associated with higher current and expected future interest rates. Also higher expected future unemployment was associated with higher inflation expectations. These results suggest that the average household seemed not to be concerned with the implied negative correlation between expected inflation and expected unemployment of an expectations-augmented Phillips curve, instead associating higher expected inflation with a higher expected future unemployment rate.

The negative and significant consumer sentiment parameter estimate (Model 5) shows that more optimistic households expected slightly lower inflation than the average. These results indicate that households' perception and sentiment—reflecting their interpretation of their private information set—help to explain why they disagreed in their inflation expectations.

Model 6 includes all regressors and shows that the impact of news about inflation and monetary policy, perceptions on the effectiveness of government policies, expectations of future interest rates and the unemployment rate as well as consumer sentiment were all important factors for explaining the heterogeneity of inflation expectations. Adding perceptions on government policies, expectations and sentiment induced a magnification of the impacts of income, while gender had a lessened impact. Therefore in the first sub-sample, those who were richer tended to expect higher inflation, owing to their perceptions, expectations and sentiment being less positive than those of poorer households.

3.2. The second sub-sample—October 1983 to February 2016

Many of the aforementioned results remain true in the second sub-sample. But there are some notable differences. First, the impacts on inflation expectations of news about both inflation and monetary policy were smaller, although they remain significant. This lower impact of news in the second sub-sample reflects the fact that inflation had fallen and stabilised during this period, making news of inflation and monetary policy less salient for households, and thus reducing their impact on inflation expectations. Second, the signs of the impact of household income changed to be negative, and was much larger in absolute size. Third, the sign on education also reversed so that now better than average educated households expected lower inflation. These two sign reversals mean that households with higher income and better education forecasted lower inflation than the average household in this sub-period. Fourth, gender played a much larger role, possibly reflecting the increased

6

participation of women in the labour force.

In summary over the whole sample, our results indicate that exposure to news of lower inflation and easier monetary policy significantly reduced household inflation expectations. This result is robust across sample periods, and holds even after controlling for household demographic characteristics, their perceptions on the effectiveness of government policies, their expectations about interest rates and unemployment, and their sentiment. Among macroeconomic theories, information rigidity models have been widely used to explain cross-sectional disagreements of inflation expectations, see, for example Mankiw and Reis (2002) and Mankiw et al. (2004). These models typically assume information is costly to acquire, so people have a different information set when forecasting future paths of the economy. Our results indicate that households who had a larger news exposure expected different inflation rates (*ceteris paribus*), thus supporting the information rigidity theory. The fact that the estimated news effect (ϕ^π and ϕ^r) between Model 1 and 2 are very similar suggests that household demographics and news almost independently explain inflation expectations. This means that the demographic impacts on inflation expectations were not due to the different demographic groups' exposure to news.

Controlling for the perception of the effectiveness of government policies, for expectations on future interest and unemployment rates and for consumer sentiment reduces the impact of news on household inflation expectations. These findings suggest that news of inflation and monetary policy impacted on inflation expectations partially through these household perceptions about policy effectiveness, their expectations of future interest rates and unemployment, and their sentiments about current economic conditions.

4. The asymmetric impact of news

News on the movements of underlying economic variables may have an asymmetric impact on inflation expectations. This may arise if one particular direction of movement of the variable has a more salient effect on expectations than the other at the time of making the expectation decision. For example, due to diminishing marginal utility, higher inflation can erode household wealth and reduce utility more than it would increase it, if inflation fell by the same amount–households may thus pay more attention to news of higher inflation than of lower inflation. Households may also have experienced the high inflation episodes in the 1970s and understand high inflation may indicate unsuccessful policies and have long lasting effects on future paths of inflation (Madeira and Zafar (2015)) compared to lower inflation. Thus, it may be reasonable to assume a bigger impact of high inflation on future inflation expectations. Using aggregated data, Lamla and Maag (2012) and Dräger (2015) indeed find the content of media reports have an asymmetric impact on inflation expectations.

Utilising the cross-sectional nature of the MSC inflation expectations and news data, we investigate whether news content has an asymmetric impact on household inflation expectations at the disaggregated level. For each of the news variables N_{it}^π and N_{it}^r considered,

we construct two dummy variables according to the content of the news. An upward arrow $\uparrow$ denotes news that corresponds to an increasing value of the underlying variable, while a downward arrow $\downarrow$ relates to news decreasing the value of the underlying variable. For example, news of rising inflation would result in a value of 1 for $N_{it}^{\pi} \uparrow$ and a value 0 for $N_{it}^{\pi} \downarrow$; $N_{it}^{r} \downarrow= 1$ indicates news about easing monetary policy and $N_{it}^{r} \uparrow= 1$ indicates news about contractionary monetary policy. We thus replace N_{it}^{π} and N_{it}^{r} in Equation (1) with $N_{it}^{\pi} \downarrow, N_{it}^{r} \downarrow$ and $N_{it}^{\pi} \uparrow, N_{it}^{r} \uparrow$:

$$\pi_{it}^{e} = \alpha + \phi_{\downarrow}^{\pi} N_{it}^{\pi} \downarrow +\phi_{\uparrow}^{\pi} N_{it}^{\pi} \uparrow +\phi_{\downarrow}^{r} N_{it}^{r} \downarrow +\phi_{\uparrow}^{r} N_{it}^{r} \uparrow +C_{it}\gamma' + TD_t\theta' + \epsilon_{it} \tag{2}$$

For $j \in \{\pi, r\}$, we expect $\phi_{\downarrow}^{j}$ to have the opposite impact on inflation expectations to $\phi_{\uparrow}^{j}$. We are interested in testing whether or not increases and decreases have the same absolute impact on inflation expectations. To test this, we calculate the z-score between the two estimated parameters and test whether the null hypothesis $\phi_{\downarrow}^{j} = -\phi_{\uparrow}^{j}$ is rejected:

$$z^{j} = \frac{\phi_{\downarrow}^{j} - (-\phi_{\uparrow}^{j})}{\sqrt{\text{Var}(\phi_{\downarrow}^{j} - (-\phi_{\uparrow}^{j}))}} \tag{3}$$

	Sub-sample 1 1978:01 − 1983:09	Sub-sample 2 1983:10 − 2016:02
Constant	4.07***	8.84***
News: lower inflation($\phi_{\downarrow}^{\pi}$)	-0.49**	-0.22***
News: higher inflation($\phi_{\uparrow}^{\pi}$)	0.70***	0.46***
News: easing monetary policy($\phi_{\downarrow}^{r}$)	-0.08	-0.15***
News: tightening monetary policy($\phi_{\uparrow}^{r}$)	0.31***	-0.00
Perception: government policy	-0.73***	-0.33***
Expectation: interest rate	0.72***	0.40***
Expectation: unemployment rate	0.48***	0.35***
Consumer sentiment	-0.01***	-0.01***
Log income	0.20***	-0.35***
Age	-0.03***	-0.01***
Female	0.07	0.54***
Education	0.19***	-0.11***
Adjusted-R^2	0.642	0.549
Hypothesis: $\phi_{\downarrow}^{\pi} = -\phi_{\uparrow}^{\pi}$	0.95	2.72***
Hypothesis: $\phi_{\downarrow}^{r} = -\phi_{\uparrow}^{r}$	1.37	-1.96*

Notes: 1. Sub-sample 1 is from January 1978 to September 1983, with sample size 43,599.
   Sub-sample 2 is between October 1983 and February 2016, with sample size 165,178.
   2. *, **, *** represent significance at 10%, 5% and 1% levels of significance.
   3. The estimation results for the monthly time dummy are omitted from the table.

Table 2: Regression results for asymmetric news impacts

Table 2 shows the estimation results of equation (2) with the columns giving the estimation

results for the two sub-samples. The results are broadly consistent with those presented in Table 1. Consistent with our expectations, the two directions of news content had opposite effects on household inflation expectations. This result is robust across both inflation and monetary policy news and across sample periods.

Both news of rising and declining inflation had significant impacts on household inflation expectations across both sub-samples. Hearing news of higher inflation in the first sub-sample increased inflation expectations by 0.70 per cent on average, and hearing news of lower inflation reduced inflation expectations by 0.49 per cent on average in this high inflation period. Hearing news on higher inflation in the second sub-sample increased household inflation expectations by 0.46 per cent on average, but being exposed to news on lower inflation only reduced inflation expectations by 0.22 per cent. This result indicates that households respond to news on higher inflation more than to news on lower inflation in general, though the effect of inflation news was much weaker in the second sub-sample. This is especially true for news on lower inflation, where the impact is more than halved in the second sub-sample. The second row of the lower panel of Table 2 shows the the significance of the z-score test of equation (3) in terms of inflation news ($\phi_\downarrow^\pi = -\phi_\uparrow^\pi$). Consistent with previous results, the test indicates that the symmetric effect of news on inflation cannot be rejected for the first sub-sample period, while the effect became significantly asymmetric in the second sub-sample, where news of higher inflation had a bigger absolute impact than news of lower inflation.

News on easing monetary policy did not significantly alter household inflation expectations in the high inflation period (sub-sample 1), but significantly reduced inflation expectations in the second sub-sample. On the other hand, news of tightening monetary policy significantly increased household inflation forecasts in the first sub-sample but was irrelevant in the second sub-sample.[1] The third row of the lower panel of Table 2 shows the significance of the z-score test of $\phi_\downarrow^r = -\phi_\uparrow^r$: we find that the symmetric effect of news on monetary policy could not be rejected for the first sub-sample, even though only tightening monetary policy was significant. However news on monetary policy became asymmetric in the second sub-sample, when easing monetary policy had a much bigger absolute impact on inflation expectations than tightening monetary policy.

Since the asymmetries became significant in the second sub-sample, we are interested to know how they evolved over time. We do this by conducting an expanding window estimation of z^j (equation (3)) starting in October 1983. Figure 1 shows the evolution of z^j for both inflation and monetary policy news, with the horizontal black line indicating significance at the 10 per cent level. It is interesting that both news of increase and decrease on

---

[1]Our credibility interpretation remains valid after distinguishing easing and tightening of monetary policy news in the second sub-period. Though the average household reduces inflation expectations when hearing news on easing monetary policy, those who perceive effective government policies understand the implication of monetary policy and forecast higher inflation. The detailed results on this are available on request.
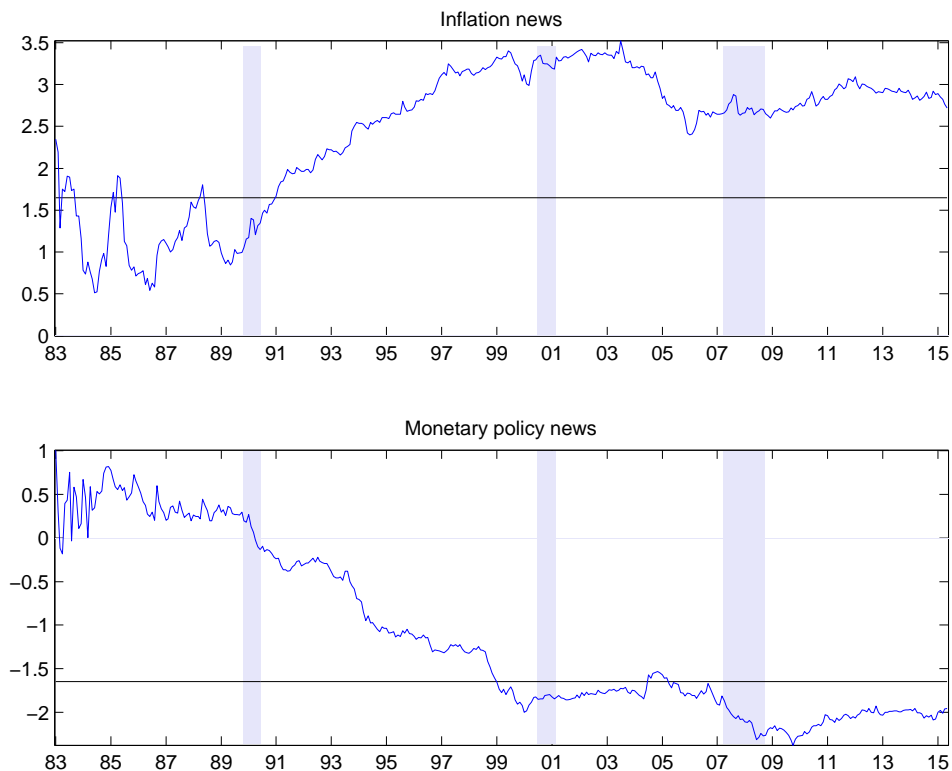
Figure 1: Time-varying asymmetries—z-score tests.

inflation (monetary policy) had similar absolute impacts on household inflation expectations for most of the 1980s. However, both news on inflation and monetary policy started to become increasingly asymmetric in the early 1990s, with the absolute impact of news on higher inflation becoming statistically greater than news on lower inflation after 1991 (top panel of Figure 1), and news on easing monetary policy having a greater impact than contractionary monetary policy after 1999 (bottom panel).

One explanation for this interesting evolution of asymmetric news may be rational inattention to information (Sims, 2003). Since information is costly to process, households may only pay attention to news information that they regarded as relatively important. A general consensus developed in the 1980s and 1990s was that high inflation was bad and needed to be avoided. Presumably then, high inflation news came to represent unfavourable information for households. As a consequence, low and stable inflation became a norm in the late 1980s and households inflation expectations became firmly anchored around 3 per cent. Even though inflation became a lesser concern, household paid disproportionate attention to news on higher inflation that was regarded as unfavourable. Households may also consider that higher inflation (above the norm) tends to be more persistent compared to lower inflation, thus regarding higher inflation as unfavourable. After 2008, however, there may

10

well have been a growing relative unease about the risks of deflation, but we see no evidence of that in Figure 1, since the z-score tests remained flat. With regards to monetary policy, we find that there is consistently significant evidence since 2007 of a greater impact of news on easing monetary policy in comparison to news on contractionary monetary policy. One interpretation of this result could be that news on upcoming cuts in the federal funds rate (that started to occur in late 2007) as well as on quantitative easing by the Federal Reserve (that started in November 2008) had a noticeably strong impact on inflation expectations.

In summary, we find evidence that rising inflation news and easing monetary policy impacts on household inflation expectations significantly more than does lower inflation and tightening monetary policy. This is true in particular for the relatively lower inflation period (sub-sample 2: 1983:10-2016:02). Extending window estimation shows that the impact of news on higher inflation (easing monetary policy) increasingly became bigger compared to lower inflation (contractionary monetary policy) during the 1990s. These asymmetries on both news persisted through the remaining sample.

5. Conclusions

We have examined the impact of news on household inflation expectations. Using monthly US consumer inflation expectations data between January 1978 and February 2016, we find that exposure to news on inflation and monetary policy significantly helps to explain household inflation expectations. This remains true even after controlling for households demographic characteristics, their perception of the effectiveness of government policies in managing business cycles, their expectations of future interest and unemployment rates, and their sentiment. This result tells us that the average effect of news is unaffected by the controls. To understand better other distributional aspects of the response, we would need to consider empirical non-linearities, which we leave for future research.

We find evidence that news on inflation and monetary policy had an asymmetric impact on household inflation expectations. In particular, households responded to news of higher inflation and easing monetary policy significantly more than news of lower inflation and tightening monetary policy. This was especially true in the relatively low inflation period after 1983, and probably was a result of the broad persuasion by public figures about the dangers of high inflation. The more unfavourable perception of risks of higher inflation remained valid also after 2008, even though, also, the impact of news on a deflation threat has likely increased since then. If this deflation threat is actually becoming more relevant and households have not yet realized its significance, there is a case for policy-makers, political leaders and opinion-makers to become more active to warn about its consequences. From 2007, the significant asymmetric impact favouring easier as opposed to tighter monetary policy suggests that the aggressive conventional and unconventional monetary policy pursued by the FED was working in the desired direction.

11

6. Reference

Bai, J., Perron, P., 2003. Computation and analysis of multiple structural change models. Journal of Applied Econometrics 18 (1), 1–22.

Blanchflower, D. G., MacCoille, C., 2009. The formation of inflation expectations: an empirical analysis for the UK. Tech. rep., National Bureau of Economic Research.

Bryan, M. F., Venkatu, G., 2001a. The curiously different inflation perspectives of men and women. Economic Commentary.

Bryan, M. F., Venkatu, G., 2001b. The demographics of inflation opinion surveys. Economic Commentary.

Carroll, C. D., 2003. Macroeconomic expectations of households and professional forecasters. The Quarterly Journal of Economics 118 (1), 269–298.

Carvalho, C., Nechio, F., 2014. Do people understand monetary policy? Journal of Monetary Economics 66, 108 – 123.

Clarida, R., Gali, J., Gertler, M., 2000. Monetary Policy Rules and Macroeconomic Stability: Evidence and Some Theory. The Quarterly Journal of Economics 115 (1), 147–180.

Curtin, R., 1996. Procedure to estimate price expectations. University of Michigan Survey Research Center.

Dräger, L., 2015. Inflation perceptions and expectations in Sweden–Are media reports the missing link? Oxford Bulletin of Economics and Statistics 77(5), 681–700.

Easaw, J., Golinelli, R., Malgarini, M., 2013. What determines households inflation expectations? theory and evidence from a household survey. European Economic Review 61, 1–13.

Jonung, L., 1981. Perceived and expected rates of inflation in Sweden. The American Economic Review, 961–968.

Lamla, M. J., Maag, T., 2012. The Role of Media for Inflation Forecast Disagreement of Households and Professional Forecasters. Journal of Money, Credit and Banking 44 (7), 1325–1350.

Madeira, C., Zafar, B., 2015. Heterogeneous inflation expectations and learning. Journal of Money, Credit and Banking 47(5), 867–896.

Mankiw, N. G., Reis, R., 2002. Sticky Information Versus Sticky Prices: A Proposal To Replace The New Keynesian Phillips Curve. The Quarterly Journal of Economics 117 (4), 1295–1328.

Mankiw, N. G., Reis, R., Wolfers, J., 2004. Disagreement about Inflation Expectations. In: NBER Macroeconomics Annual 2003, Volume 18. NBER Chapters. National Bureau of Economic Research, Inc, pp. 209–270.

Sims, C. A., April 2003. Implications of rational inattention. Journal of Monetary Economics 50 (3), 665–690.

SFB 649 Discussion Paper Series 2017

For a complete list of Discussion Papers published by the SFB 649, please visit http://sfb649.wiwi.hu-berlin.de.